

Report By:

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Report: CULVERS - DECATUR, AL TAB RPT
Function: Test, Adjust, & Balance
Date: 6/1/2022

PROJECT
05-09 CULVERS - DECATUR, AL

2009 6TH AVE SE

DECATUR, AL 35601

Client

Accurex

400 Ross Ave

Schofield, WI 54476



National TAB

Project: 05-09 CULVERS - DECATUR, AL

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05-09 CULVERS - DECATUR, AL

Project Issue Information

Issue Name : PRV1 conduit too short

Description : Conduit is too short to tilt fan back. Can only tilt fan an inch from curb

Created By : National TAB

Assigned To : National TAB - Will Turnbough

Status : Open

Originated Date : 05/09/2022 - Wendy Biggs - National TAB

Project Issue File Details



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Project Summary

Preface

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 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.

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). Any equipment that fell outside of this tolerance is noted throughout the report.

Kitchen Exhaust Hood & Associated Fans

Each kitchen exhaust fan was measured at the hood filter bay utilizing a velocity matrix and a manufacturer's correction factor. Each filter velocity is multiplied by the manufacturer's corrected area. The sum of these readings equals the total flow of the exhaust fans. The total flow of the exhaust was then adjusted to +/-10% of the engineer's 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 +/-10% of design. Each terminal device was balanced to within +/-10% 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.







STOREFRONT



RTU1 DINING

Unit picture



RTU2 KITCHEN

Unit picture



PRV1 RESTROOMS

Unit picture





PRV2 GRIDDLE

Unit picture



PRV3 FRYER

Unit picture



ROOFTOP



HD1 GRIDDLE

Unit picture





HD2 FRYER

Unit picture



EF1A EMPLOYEE RESTROOM

Unit picture



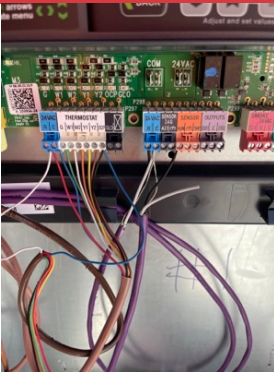
EF1A MOP ROOM

Unit picture

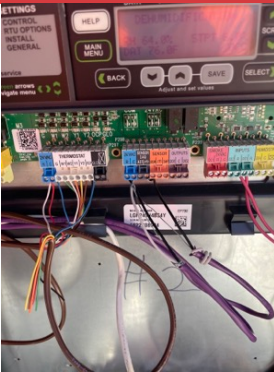


THERMOSTATS





RTU1 HUMIDITY WIRING

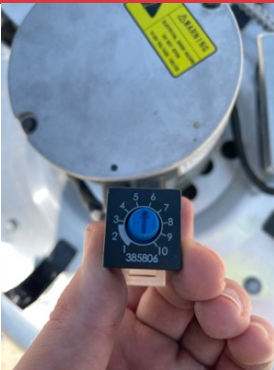


RTU2 HUMIDITY WIRING



EF1A RR SETPOINT

Set point for speed controller on the exhaust fan in the employee restroom. Set to max



PRV1 RR SETPOINT

Speed Setpoint for restroom exhaust fan





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05-09 CULVERS - DECATUR, AL

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 // Diffuser 1-4 was not installed on further inspection. This was resolved by mechanical.
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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05-09 CULVERS - DECATUR, AL

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?	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 // BELTS ARE TOO TIGHT. WILL NEED A BIGGER SIZE
If direct drive unit is the speed controller working.	N/A
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 PRV3. NO PRV2 CANNOT TILT FAN BACK



Flex conduit is long enough so that fan can be completely tilted back?	YES PRV2 PRV3 NO PRV1
There is no major leakage around base of fan?	YES, NO MAJOR LEAKAGE
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?	CANNOT VISIBLY SEE BACKDRAFT DAMPER DUE TO CONDUIT BEING SHORT ON PRV1. MECHANICAL SAYS IT IS INSTALLED
Unit free of noticeable noise and vibration?	NO PRV2 GRINDS WHEN TURNING // MECHANICAL HAS FIXED THIS ISSUE 5/11/22
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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05-09 CULVERS - DECATUR, AL

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 :





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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	Griddle. No oil in fryer
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	05/11/2022
TAB tech name / Firm	Jacob Davidson
Site super name / Firm	John Moryn
Owner representative name / Firm (if Applicable)	Campbell Construction
Building pressure at front & back doors (All Systems On)	

ADDITIONAL

Do actual net building airflow, design net building airflow, and pressure coincide? If not why? (All three should either be positive or negative)	
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?	
Parameter 117 set to the same % as OA minimum position?	

Notes/Comments :

Thermostats are programmed, however temperature sensor seems not to be functioning properly. Have to leave in cooling



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Project: 05-09 CULVERS - DECATUR, AL

System/Unit: AHU/RTU



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Asset: RTU1

AREA:DINING

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5622C08928
Model Num	LGH-240-H4B	LGH-240-H4BS4Y
Configuration	-	RTU
Num OA Filters 1	-	3
OA Filter Size 1	-	14X23
Num OA Filters 2	-	
OA Filter Size 2	-	
Num Final Filter 1	-	6
Final Filter Size 1	-	24X24X2
Num Final Filter 2	-	
Final Filter Size 2	-	

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

Drive Data		
	Design	Actual
Motor Sheave Size	-	1VP60
Motor Bore Size	-	1 1/8"
Motor Sheave SetPt	-	1 TURN OUT
Fan Sheave Size	-	BK100
Fan Sheave Bore	-	1 3/16"
Belt CL Distance	-	20.75"
Num of Belts	-	1
Belt Size	-	B61
Belt Alignment	-	GOOD

Test Data		
	Design	Actual
SF CFM (Initial)	-	
SF CFM	6700	6391
SF RPM (Initial)	-	802
SF RPM	-	868
RA CFM	4745	4402
OA CFM	1955	1989
RL Voltage	-	208/209/209
RL Amperage Initial	-	9.7/9.5/9.1
RL Amperage	-	11.2/10.9/10.3
SF Rotation	-	CCW
VFD Max SetPt	-	
VFD Min SetPt	-	
RA Damper Position	-	41%
OA Damper Position	-	
OA Damper Type	-	ECONOMIZER
Min OA Damper Position	-	41%
OA Enthalpy Setpt	-	
Brake Horse Power	-	

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.57"
Fan Suction SP	-	-1.11"
Fan Discharge SP	-	0.23"
Total ESP	-	0.80"
Fan Total SP	-	1.34"

General		
	Design	Actual
Unit free of Damage	-	
Unit Completely Assembled	-	
Unit Leveled	-	
Curb & Unit Installed Air Tight	-	
Controls Complete	-	
Unit Filters Clean	-	YES
Evap Coil Clean	-	
Condensor Coil Clean	-	
Condensor Fins Straight	-	
Condensate Drain Installed	-	YES

Completed By: Wendy Biggs

Notes:Balanced for total flow and comfort due to time constraints



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Project:05-09 CULVERS - DECATUR, AL
AHU/RTU



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Diffuser Supply (GRD)



RTU1/DINING

Asset							
	Location	Type	Size	DESIGN CFM	CFM(1)	CFM(2)	FINAL CFM
SGRD1	MAIN ENTRY	SD4	8"	150	199		170
	% to design						
	113.3						
SGRD2	MENS RR	SD4	8"	150	167		147
	% to design						
	98.0						
SGRD3	WOMENS RR	SD4	8"	150	43		111
	% to design						
	74.0						
SGRD4	HALL	SD1	12"	450	65		251
	% to design						
	55.8						
SGRD5	DINING	SD1	8"	150	139		128
	% to design						
	85.3						
SGRD6	DINING	SD1	8"	150	214		201
	% to design						
	134.0						
SGRD7	DINING	SD1	8"	150	176		161
	% to design						
	107.3						
SGRD8	DINING	SD1	8"	150	194		160
	% to design						
	106.7						
SGRD9	DINING	SD1	8"	150	186		130
	% to design						
	86.7						
SGRD10	DINING	SD1	8"	150	38		144
	% to design						
	96.0						
SGRD11	DINING	SD1	8"	150	41		193
	% to design						
	128.7						
SGRD12	DINING	SD1	8"	150	184		185
	% to design						
	123.3						
SGRD13	DINING	SD1	8"	150	135		159
	% to design						
	106.0						
SGRD14	DINING	SD1	8"	150	157		146
	% to design						



	% to design						
	97.3						
SGRD15	Location	Type	Size	DESIGN CFM	CFM(1)	CFM(2)	FINAL CFM
	DINING	SD1	8"	150	176		178
	% to design						
	118.7						
SGRD16	Location	Type	Size	DESIGN CFM	CFM(1)	CFM(2)	FINAL CFM
	DINING	SD1	8"	150	146		134
	% to design						
	89.3						
SGRD17	Location	Type	Size	DESIGN CFM	CFM(1)	CFM(2)	FINAL CFM
	DRINKS & CONDIMENTS	SD1	10"	300	245		253
	% to design						
	84.3						
SGRD18	Location	Type	Size	DESIGN CFM	CFM(1)	CFM(2)	FINAL CFM
	DRINKS & CONDIMENTS	SD1	10"	300	223		232
	% to design						
	77.3						
SGRD19	Location	Type	Size	DESIGN CFM	CFM(1)	CFM(2)	FINAL CFM
	SIDE ENTRY	SD1	8"	150	136		156
	% to design						
	104.0						
SGRD20	Location	Type	Size	DESIGN CFM	CFM(1)	CFM(2)	FINAL CFM
	DINING	SD1	12"	450	419		435
	% to design						
	96.7						
SGRD21	Location	Type	Size	DESIGN CFM	CFM(1)	CFM(2)	FINAL CFM
	DINING	SD1	8"	150	193		185
	% to design						
	123.3						
SGRD22	Location	Type	Size	DESIGN CFM	CFM(1)	CFM(2)	FINAL CFM
	DINING	SD1	8"	150	48		211
	% to design						
	140.7						
SGRD23	Location	Type	Size	DESIGN CFM	CFM(1)	CFM(2)	FINAL CFM
	DINING	SD1	8"	150	157		134
	% to design						
	89.3						
SGRD24	Location	Type	Size	DESIGN CFM	CFM(1)	CFM(2)	FINAL CFM
	DINING	SD1	8"	150	143		115
	% to design						
	76.7						
SGRD25	Location	Type	Size	DESIGN CFM	CFM(1)	CFM(2)	FINAL CFM
	DINING	SD1	8"	150	199		184
	% to design						
	122.7						
SGRD26	Location	Type	Size	DESIGN CFM	CFM(1)	CFM(2)	FINAL CFM
	CUSTOMER SERVICE	SD1	10"	350	262		227
	% to design						
	64.9						
SGRD27	Location	Type	Size	DESIGN CFM	CFM(1)	CFM(2)	FINAL CFM
	CUSTOMER SERVICE	SD1	10"	350	315		267
	% to design						
	76.3						
SGRD28	Location	Type	Size	DESIGN CFM	CFM(1)	CFM(2)	FINAL CFM



	CUSTOMER SERVICE	SD1	10"	350	280		291
	% to design						
	83.1						
SGRD29	Location	Type	Size	DESIGN CFM	CFM(1)	CFM(2)	FINAL CFM
	CUSTOMER SERVICE	SD1	10"	350	242		249
	% to design						
	71.1						
SGRD30	Location	Type	Size	DESIGN CFM	CFM(1)	CFM(2)	FINAL CFM
	DRIVE THRU	SD1	12"	500	434		481
	% to design						
	96.2						
SGRD31	Location	Type	Size	DESIGN CFM	CFM(1)	CFM(2)	FINAL CFM
	OFFICE	SD1	8"	200	146		158
	% to design						
	79.0						
SGRD32	Location	Type	Size	DESIGN CFM	CFM(1)	CFM(2)	FINAL CFM
	DINING	SD1	8"	150	201		215
	% to design						
	143.3						

Completed By:Wendy Biggs on

Asset	Notes
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Project: 05-09 CULVERS - DECATUR, AL

System/Unit: AHU/RTU



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Asset: RTU2

AREA:KITCHEN

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	562C08934
Model Num	LGH-240-H4B	LGH-240-H4BSY
Configuration	-	VERTICAL
Num OA Filters 1	-	3
OA Filter Size 1	-	14X23
Num OA Filters 2	-	
OA Filter Size 2	-	
Num Final Filter 1	-	6
Final Filter Size 1	-	24X24X2
Num Final Filter 2	-	
Final Filter Size 2	-	

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

Drive Data		
	Design	Actual
Motor Sheave Size	-	1VP60
Motor Bore Size	-	1 1/8"
Motor Sheave SetPt	-	1 TURN OUT
Fan Sheave Size	-	BK100
Fan Sheave Bore	-	1 3/16"
Belt CL Distance	-	20.75"
Num of Belts	-	1
Belt Size	-	B61
Belt Alignment	-	GOOD

Test Data		
	Design	Actual
SF CFM (Initial)	-	
SF CFM	6225	5736
SF RPM (Initial)	-	797
SF RPM	-	849
RA CFM	4575	4018
OA CFM	1650	1718
RL Voltage	-	212/210/210
RL Amperage Initial	-	9.0/8.9/7.9
RL Amperage	-	9.9/9.7/9.1
SF Rotation	-	CCW
VFD Max SetPt	-	
VFD Min SetPt	-	
RA Damper Position	-	40%
OA Damper Position	-	
OA Damper Type	-	ECONOMIZER
Min OA Damper Position	-	40%
OA Enthalpy Setpt	-	
Brake Horse Power	-	

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.41"
Fan Suction SP	-	-0.84"
Fan Discharge SP	-	0.56"
Total ESP	-	0.97"
Fan Total SP	-	1.40"

General		
	Design	Actual
Unit free of Damage	-	
Unit Completely Assembled	-	
Unit Leveled	-	
Curb & Unit Installed Air Tight	-	
Controls Complete	-	
Unit Filters Clean	-	YES
Evap Coil Clean	-	
Condensor Coil Clean	-	
Condensor Fins Straight	-	
Condensate Drain Installed	-	YES

Completed By: Wendy Biggs

Notes:Balanced to get cookline in design. Diffusers 6 and 7 were lowered by 50 CFM from design for successful smoke capture test



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Project:05-09 CULVERS - DECATUR, AL
AHU/RTU



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Diffuser Supply (GRD)



RTU2/KITCHEN

Asset							
	Location	Type	Size	DESIGN CFM	CFM(1)	CFM(2)	FINAL CFM
SGRD1	SUNDAE SERVICE	SD1	12"	600	453	451	533
	% to design						
	88.8						
SGRD2	SUNDAE SERVICE	SD1	12"	600	451	406	537
	% to design						
	89.5						
SGRD3	GRIDDLE	SD5	10"	275	421	259	267
	% to design						
	97.1						
SGRD4	GRIDDLE	SD5	10"	250	315	278	251
	% to design						
	100.4						
SGRD5	FOOD PREP	SD5	12"	400	405	343	396
	% to design						
	99.0						
SGRD6	FOOD PREP	SD5	12"	400	642	378	355
	% to design						
	88.8						
SGRD7	FRYER	SD5	12"	375	614	256	331
	% to design						
	88.3						
SGRD8	FRYER	SD5	10"	200	472	193	196
	% to design						
	98.0						
SGRD9	FOOD PREP	SD5	12"	350	57	534	339
	% to design						
	96.9						
SGRD10	DISHWASHING	SD5	12"	350	362	433	313
	% to design						
	89.4						
SGRD11	DISHWASHING	SD5	12"	350	247	265	351
	% to design						
	100.3						
SGRD12	DRY GOODS	SD1	12"	600	424	449	677
	% to design						
	112.8						
SGRD13	DRY GOODS	SD1	10"	200	335	308	202
	% to design						
	101.0						
SGRD14	TOILET	SD4	6"	75	70	88	89



	% to design						
	118.7						
SGRD15	Location	Type	Size	DESIGN CFM	CFM(1)	CFM(2)	FINAL CFM
	DRY GOODS	SD1	12"	600	319	332	402
	% to design						
	67.0						
SGRD16	Location	Type	Size	DESIGN CFM	CFM(1)	CFM(2)	FINAL CFM
	UTILITY ROOM	SD1	12"	600	390	412	497
	% to design						
	82.8						

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Asset	Notes
RTU2	Balanced to get cookline in design. Diffusers 6 and 7 were lowered by 50 CFM from design for successful smoke capture test
RTU2	Balanced to get cookline in design. Diffusers 6 and 7 were lowered by 50 CFM from design for successful smoke capture test
RTU2	Balanced to get cookline in design. Diffusers 6 and 7 were lowered by 50 CFM from design for successful smoke capture test



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Project: 05-09 CULVERS - DECATUR, AL

System/Unit: Kitchen Hood Type I



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Asset: HD1

AREA:GRIDDLE

Unit Data		
	Design	Actual
MFG	ACCUREX	ACCUREX
Model Num	XGEP-64-S	XGEP-64-S
Job / Serial Num	-	19453532
Type	TYPE I LOW PROXIMITY	TYPE I LOW PROXIMITY
Hood length	64"	64"
Hood Width	23"	23"
Hood Height	-	
Num of EXH Risers	-	
EXH Riser size 1	-	
EXH Riser Size 2	-	
Num of Supply Risers	-	
Supply Riser Size	-	
Supply Plenum Type	-	
Supply Plenum Width	-	
Supply Plenum Length	-	

Test Data Supply		
	Design	Actual
Plenum SP	-	
AK factor	-	
Total AK Area	-	
Kv factor (Vel)	-	
Num of Readings	-	
Reading1 FPM	-	
Reading2 FPM	-	
Reading3 FPM	-	
Reading4 FPM	-	
Reading5 FPM	-	
Reading6 FPM	-	
Reading7 FPM	-	
Reading8 FPM	-	
Reading9 FPM	-	
Reading10 FPM	-	
Reading11 FPM	-	
Reading12 FPM	-	
Reading13 FPM	-	
Reading14 FPM	-	
High FPM(corr)	-	
Low FPM(corr)	-	
Ave FPM(corr)	-	
CFM	-	

Test Data Exhaust		
	Design	Actual
Filter Type	GREASE GRABBER	GREASE GRABBER
Filter Size 1	16X16	16X16
Filter Size 2	-	
Filter Qty 1	4	4
Filter Qty 2	-	
Filter AK factor size 1	1.53	1.53
Filters AK factor size 2	-	
Filter Total AK Area	6.12	6.12
Kv factor (Vel)	-	
Plenum SP	-	
Riser SP	-	
Filter1 FPM	-	277
Filter2 FPM	-	246
Filter3 FPM	-	257
Filter4 FPM	-	242
Filter5 FPM	-	
Filter6 FPM	-	
Filter7 FPM	-	
Filter8 FPM	-	
Filter9 FPM	-	
Filter10 FPM	-	
Filter11 FPM	-	
Filter12 FPM	-	
Filter High FPM(corr)	-	
Filter Low FPM (corr)	-	
Filter Ave FPM(corr)	-	255
CFM	1500	1561



Cooking Equipment		
	Design	Actual
Item 1	-	Griddle
Item 2	-	
Item 3	-	
Item 4	-	
Item 5	-	
Item 6	-	
Item 7	-	
Item 8	-	
Item 9	-	
Item 10	-	

Performance Data		
	Design	Actual
Exh-Supply Net CFM	-	
Smoke Generation Type	-	45 SECOND SMOKE
Cooking Equip Heat On	-	YES
Hood Capture %	-	100%
Smoke Capture @ Equip Surface %	-	
Smoke Capture @ Perim of Hood %	-	
Heat Loss (Box Shadow) %	-	
Rated Heat of Equip	-	
Supply Re-Entrainment %	-	
Exh Riser1 Pos (Left End)	-	
Exh Riser2 Pos (Right End)	-	
End Panels Installed (Y/N)	-	YES
Space Offset Temp Riser 1	-	
Heat Sensor High SetPt Riser 1	-	
Space Offset Temp Riser 2	-	
Heat Sensor High SetPt Riser 2	-	
Space Offset Temp Riser 3	-	
Heat Sensor High SetPt Riser 3	-	
Space Offset Temp Riser 4	-	
Heat Sensor High SetPt Riser 4	-	
Riser Temp F (idle) Riser 1	-	
Riser Temp F (idle) Riser 2	-	
Riser Temp F (idle) Riser 3	-	
Riser Temp F (idle) Riser 4	-	
Ambient Room Temp	-	
100% override functional	-	
electronic Gas Valve shut- off f(x)	-	

General		
	Design	Actual
Third Party Witness	-	John Moryn
Third Party Company	-	Campbell Construction
Tech Witness	-	Jacob Davidson
Tech Company	-	
Code Official Witness	-	
Jurisdiction	-	
Service/Startup Performed By	-	

Completed By: Wendy Biggs

Notes:

Asset	Notes



National TAB

Project: 05-09 CULVERS - DECATUR, AL

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-S
Job / Serial Num	-	19453531
Type	TYPE I LOW PROXIMITY	TYPE I LOW PROXIMITY
Hood length	83"	83"
Hood Width	23"	23"
Hood Height	-	
Num of EXH Risers	-	
EXH Riser size 1	-	
EXH Riser Size 2	-	
Num of Supply Risers	-	
Supply Riser Size	-	
Supply Plenum Type	-	
Supply Plenum Width	-	
Supply Plenum Length	-	

Test Data Supply		
	Design	Actual
Plenum SP	-	
AK factor	-	
Total AK Area	-	
Kv factor (Vel)	-	
Num of Readings	-	
Reading1 FPM	-	
Reading2 FPM	-	
Reading3 FPM	-	
Reading4 FPM	-	
Reading5 FPM	-	
Reading6 FPM	-	
Reading7 FPM	-	
Reading8 FPM	-	
Reading9 FPM	-	
Reading10 FPM	-	
Reading11 FPM	-	
Reading12 FPM	-	
Reading13 FPM	-	
Reading14 FPM	-	
High FPM(corr)	-	
Low FPM(corr)	-	
Ave FPM(corr)	-	
CFM	-	

Test Data Exhaust		
	Design	Actual
Filter Type	X TRACTOR	X TRACTOR
Filter Size 1	16X16	16X16
Filter Size 2	-	
Filter Qty 1	5	5
Filter Qty 2	-	
Filter AK factor size 1	1.53	1.53
Filters AK factor size 2	-	
Filter Total AK Area	7.65	7.65
Kv factor (Vel)	-	
Plenum SP	-	
Riser SP	-	
Filter1 FPM	-	219
Filter2 FPM	-	188
Filter3 FPM	-	201
Filter4 FPM	-	199
Filter5 FPM	-	208
Filter6 FPM	-	
Filter7 FPM	-	
Filter8 FPM	-	
Filter9 FPM	-	
Filter10 FPM	-	
Filter11 FPM	-	
Filter12 FPM	-	
Filter High FPM(corr)	-	
Filter Low FPM (corr)	-	
Filter Ave FPM(corr)	-	203
CFM	1500	1553



Cooking Equipment		
	Design	Actual
Item 1	-	Fryers
Item 2	-	
Item 3	-	
Item 4	-	
Item 5	-	
Item 6	-	
Item 7	-	
Item 8	-	
Item 9	-	
Item 10	-	

Performance Data		
	Design	Actual
Exh-Supply Net CFM	-	
Smoke Generation Type	-	45 SECOND SMOKE
Cooking Equip Heat On	-	
Hood Capture %	-	100%
Smoke Capture @ Equip Surface %	-	
Smoke Capture @ Perim of Hood %	-	
Heat Loss (Box Shadow) %	-	
Rated Heat of Equip	-	
Supply Re-Entrainment %	-	
Exh Riser1 Pos (Left End)	-	
Exh Riser2 Pos (Right End)	-	
End Panels Installed (Y/N)	-	YES
Space Offset Temp Riser 1	-	
Heat Sensor High SetPt Riser 1	-	
Space Offset Temp Riser 2	-	
Heat Sensor High SetPt Riser 2	-	
Space Offset Temp Riser 3	-	
Heat Sensor High SetPt Riser 3	-	
Space Offset Temp Riser 4	-	
Heat Sensor High SetPt Riser 4	-	
Riser Temp F (idle) Riser 1	-	
Riser Temp F (idle) Riser 2	-	
Riser Temp F (idle) Riser 3	-	
Riser Temp F (idle) Riser 4	-	
Ambient Room Temp	-	
100% override functional	-	
electronic Gas Valve shut- off f(x)	-	

General		
	Design	Actual
Third Party Witness	-	John Moryn
Third Party Company	-	Campbell Construction
Tech Witness	-	Jacob Davidson
Tech Company	-	
Code Official Witness	-	
Jurisdiction	-	
Service/Startup Performed By	-	

Completed By: Wendy Biggs

Notes: Unable to start fryers for test

Asset	Notes



National TAB

Project: 05-09 CULVERS - DECATUR, AL
System/Unit: FAN - Exhaust



Comfort. Under control.

Asset: EF-A1

AREA:TOILET

Unit Data		
	Design	Actual
MFG	ACCUREX	Air King
Model Num	XCR-B80	AS70
Serial Num	-	2026223
Type	CEILING	CEILING
Series	-	
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	NL
Frame	-	NL
Horsepower	-	NL
Motor Rpm	900	NL
Phase	1	NL
Voltage (rated)	115	120
Amperage (rated)	-	0.9
Service Factor	-	1
Efficiency	-	
Power Factor	-	

Drive Data		
	Design	Actual
Motor Sheave MFG	-	
Motor Sheave Size	-	
Motor Bore Size	-	
Motor Sheave SetPt	-	
Fan Sheave MFG	-	
Fan Sheave Size	-	
Fan Sheave Bore	-	
Belt CL Distance	-	
Num of Belts	-	
Belt MFG	-	
Belt Size	-	
Belt Tension (deflection)	-	
Belt Alignment Verified	-	

Test Data		
	Design	Actual
CFM	75	45
Fan RPM	885	UTO
Fan Rotation	-	CW
Motor RPM	-	UTO
Motor Frequency	-	
System SetPt	-	N/A
RL Voltage	-	NOT SAFE
RL Amperage	-	NOT SAFE
Suction ESP	-	
Discharge ESP	-	
Total ESP	0.125"	UTO
Fan Inlet SP	-	UTO
Fan Discharge SP	-	UTO
Total Fan SP	-	
Brake Horse Power	-	

Completed By: Wendy Biggs

Notes:Mop Room Single Speed ceiling mounted fan Not safe to obtain volts/amps No blockage above ceiling preventing airflow

Asset	Notes



National TAB

Project: 05-09 CULVERS - DECATUR, AL

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	-	19431527
Type	CEILING	CEILING
Series	-	
Configuration	VERTICAL	VERTICAL

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

Drive Data		
	Design	Actual
Motor Sheave MFG	-	
Motor Sheave Size	-	
Motor Bore Size	-	
Motor Sheave SetPt	-	
Fan Sheave MFG	-	
Fan Sheave Size	-	
Fan Sheave Bore	-	
Belt CL Distance	-	
Num of Belts	-	
Belt MFG	-	
Belt Size	-	
Belt Tension (deflection)	-	
Belt Alignment Verified	-	

Test Data		
	Design	Actual
CFM	75	47
Fan RPM	885	900
Fan Rotation	-	CW
Motor RPM	-	900
Motor Frequency	-	
System SetPt	-	SEE PIC
RL Voltage	-	NOT SAFE
RL Amperage	-	0.14
Suction ESP	-	
Discharge ESP	-	
Total ESP	0.125"	UTO
Fan Inlet SP	-	UTO
Fan Discharge SP	-	UTO
Total Fan SP	-	
Brake Horse Power	-	

Completed By: Wendy Biggs

Notes:Single Speed Ceiling Mounted Fan Speed controller is set to max and still does not get proper airflow. See pic for speed controller position No blockage above ceiling preventing airflow

Asset	Notes
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National TAB

Project: 05-09 CULVERS - DECATUR, AL

System/Unit: FAN - Exhaust



Comfort. Under control.

Asset: PRV1

AREA:RESTROOM

Unit Data		
	Design	Actual
MFG	ACCUREX	ACCUREX
Model Num	XRED-095-D	XRED-090-VG-1-17-X
Serial Num	-	19439098
Type	DOWNBLAST	DOWNBLAST
Series	-	
Configuration	HORIZONTAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	BROAD OCEAN
Frame	-	NL
Horsepower	0.0667	1/10
Motor Rpm	1550	300-1750
Phase	1	1
Voltage (rated)	115	115/208-230/277
Amperage (rated)	-	1.38/0.84/0.73
Service Factor	-	1
Efficiency	-	
Power Factor	-	

Drive Data		
	Design	Actual
Motor Sheave MFG	-	
Motor Sheave Size	-	
Motor Bore Size	-	
Motor Sheave SetPt	-	
Fan Sheave MFG	-	
Fan Sheave Size	-	
Fan Sheave Bore	-	
Belt CL Distance	-	
Num of Belts	-	
Belt MFG	-	
Belt Size	-	
Belt Tension (deflection)	-	
Belt Alignment Verified	-	

Test Data		
	Design	Actual
CFM	300	313
Fan RPM	1479	DD
Fan Rotation	-	CW
Motor RPM	-	DD
Motor Frequency	-	
System SetPt	-	5.5 SEE PIC
RL Voltage	-	NOT SAFE
RL Amperage	-	NOT SAFE
Suction ESP	-	
Discharge ESP	-	
Total ESP	0.5"	-0.224"
Fan Inlet SP	-	-0.224"
Fan Discharge SP	-	ATM
Total Fan SP	-	
Brake Horse Power	-	

Completed By: Wendy Biggs

Notes:SEE PIC FOR SPEED SETPOINT



National TAB

Project:05-09 CULVERS - DECATUR, AL

FAN - Exhaust



Comfort. Under control.

Diffuser Ret/Exh (GRD)

PRV1/RESTROOM

Asset							
EGRD1	Model Num	MFG	Type	Size	DESIGN CFM	AK	VEL(1)
	NA	RETURN	EG1	10X10	150	1	
	CFM(1)	VEL(2)	CFM(2)	FINAL CFM	% to design		
	218		180	151	100.7		
EGRD2	Model Num	MFG	Type	Size	DESIGN CFM	AK	VEL(1)
	NA	RETURN	EG1	10X10	150	1	
	CFM(1)	VEL(2)	CFM(2)	FINAL CFM	% to design		
	235		191	162	108.0		

Completed By:Wendy Biggs on

Asset	Notes



National TAB

Project: 05-09 CULVERS - DECATUR, AL

System/Unit: FAN - Exhaust



Comfort. Under control.

Asset: PRV2

AREA:HD1 GRIDDLE

Unit Data		
	Design	Actual
MFG	ACCUREX	ACCUREX
Model Num	XRUB-160XP-15	XRUB-160XP-15-1-26-6-15
Serial Num	-	19435138
Type	UPBLAST	UPBLAST
Series	-	
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	UTO
Frame	-	56
Horsepower	1.5	0.75
Motor Rpm	1725	1760
Phase	3	3
Voltage (rated)	208	208/460
Amperage (rated)	-	2.3/1.15
Service Factor	-	1.25
Efficiency	-	
Power Factor	-	

Drive Data		
	Design	Actual
Motor Sheave MFG	-	
Motor Sheave Size	-	VP44
Motor Bore Size	-	5/8"
Motor Sheave SetPt	-	3 TURNS OUT
Fan Sheave MFG	-	
Fan Sheave Size	-	4.75"
Fan Sheave Bore	-	1"
Belt CL Distance	-	6"
Num of Belts	-	1
Belt MFG	-	
Belt Size	-	AX24
Belt Tension (deflection)	-	
Belt Alignment Verified	-	

Test Data		
	Design	Actual
CFM	1500	1561
Fan RPM	2411	2030
Fan Rotation	-	CW
Motor RPM	-	1765
Motor Frequency	-	
System SetPt	-	
RL Voltage	-	209/209/210
RL Amperage	-	1.9/1.8/1.7
Suction ESP	-	UTO
Discharge ESP	-	UTO
Total ESP	2.337"	UTO
Fan Inlet SP	-	
Fan Discharge SP	-	
Total Fan SP	-	
Brake Horse Power	-	

Completed By: Wendy Biggs

Notes:Curb of take off from fan is too wide to lift up the fan to take pressures.

Asset	Notes



National TAB

Project: 05-09 CULVERS - DECATUR, AL

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-140-7-1-26-6
Serial Num	-	19435153
Type	UPBLAST	UPBLAST
Series	-	
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	Actual
Motor MFG	-	UTO
Frame	-	56
Horsepower	0.75	1.5
Motor Rpm	1725	1760
Phase	3	3
Voltage (rated)	208	230/460
Amperage (rated)	-	4.2/2.1
Service Factor	-	
Efficiency	-	
Power Factor	-	

Drive Data		
	Design	Actual
Motor Sheave MFG	-	
Motor Sheave Size	-	VP34S
Motor Bore Size	-	5/8"
Motor Sheave SetPt	-	5 TURNS OUT
Fan Sheave MFG	-	
Fan Sheave Size	-	AK39XS
Fan Sheave Bore	-	1"
Belt CL Distance	-	5.75"
Num of Belts	-	1
Belt MFG	-	
Belt Size	-	AP23
Belt Tension (deflection)	-	
Belt Alignment Verified	-	

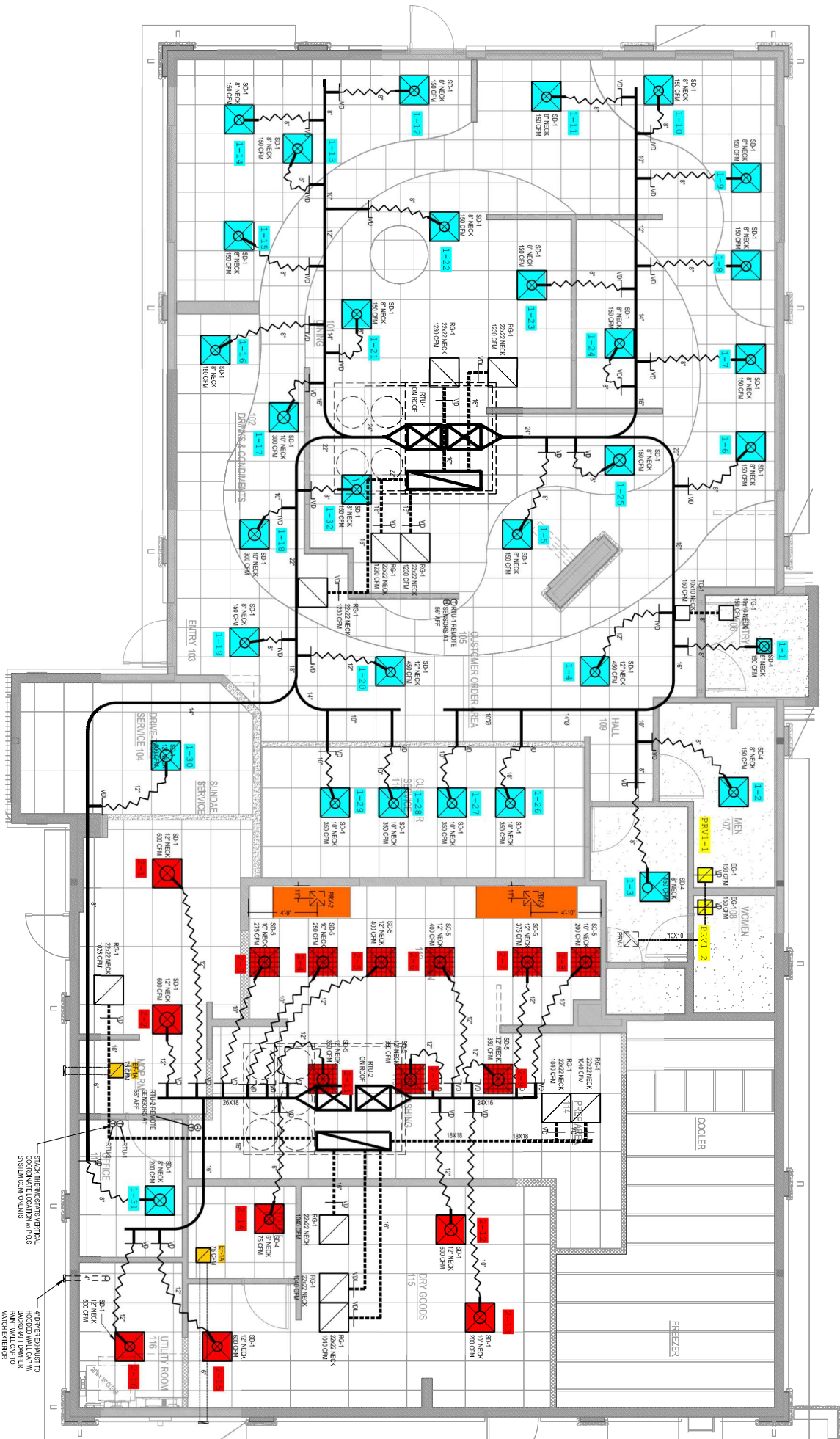
Test Data		
	Design	Actual
CFM	1500	1553
Fan RPM	1377	1055
Fan Rotation	-	CW
Motor RPM	-	1765
Motor Frequency	-	
System SetPt	-	
RL Voltage	-	210/211/211
RL Amperage	-	1.8/1.9/1.8
Suction ESP	-	-0.453"
Discharge ESP	-	ATM
Total ESP	1.0"	0.453"
Fan Inlet SP	-	
Fan Discharge SP	-	
Total Fan SP	-	
Brake Horse Power	-	

Completed By: Wendy Biggs

Notes:

Asset	Notes





STICK THROUGH'S VERTICAL
 BLOCK OFF DAMPER
 PAINT WALL CAP TO
 MATCH EXTERIOR.

4\"/>

