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Report: 05-30 CULVERS - PLYMOUTH, IN
Function: Test, Adjust, & Balance
Date: 7/8/2022

PROJECT

05-30 CULVERS - PLYMOUTH, IN

2100 N MICHIGAN ST

PLYMOUTH, IN

Client

Accurex

PO Box 410

Schofield, WI 54476

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Project: 05-30 CULVERS - PLYMOUTH, IN

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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 possible suggestions for each of your systems after testing has been performed. Our focus is to work with the trades to remedy any issues or deficiencies during the actual field balancing and not after the balancing has occurred. Our focus is to achieve a positive environment and outcome. The level of success is determined by the availability of the trades, possible parts needed, or time constraints. Also, enclosed are pictures of building assets and items listed below that will provide your team with more insight

Facility Identification and TAB Requirements

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

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 engineers 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.

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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	Dirning	6150	6243	4400	4399	1750	1844	28.5%	29.5%						
RTU-2	Kitchen	6150	6355	4450	4570	1700	1785	27.6%	28.1%						
PRV-1	Restroom													375	369
PRV-2	HD1 Griddle											1500	1592		
PRV-3	HD2 Fryer											1500	1554		
EF-1A	Mop Room													75	70
TOTALS		12300	12598	8850	8969	3450	3629			0	0	3000	3146	450	439

NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	3450	3629
TOTAL EXHAUST	3450	3585
NET AIRFLOW	0	44

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H20)
FRONT	0.009
SIDE	0.009
REAR	0.009
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:

Storefront

Kitchen

Hood

Hood

Rooftop Equipment

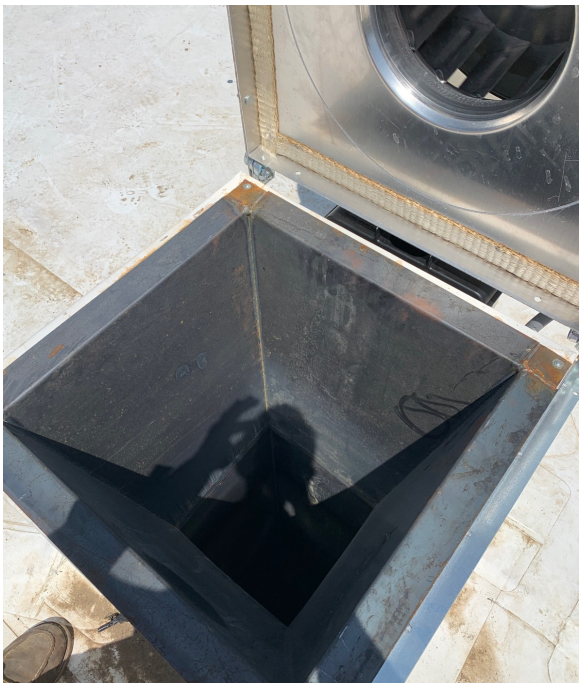
Grease Exhaust Fans

Kitchen Rtu

Dining Rtu

Grease Duct 1

Grease Duct 2



Ceiling Mop Fan

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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?	na
On the cookline diffusers neck is there 18" (12" minimum) straight rigid duct run attached?	Confirmed

Notes/Comments :

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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
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?	CONFIRMED
Is the motor operating below the motor FLA rating?	CONFIRMED
For restroom fan(s) is the back draft damper installed and can it fully open?	No, backdraft damper is not installed.
Unit free of noticeable noise and vibration?	Yes- all.
The hood exhaust fans are installed in correct positions and are not switched?	Correct
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 :

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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	NOT READY
List smoke candle type used	45 SEC SMOKE BOMB
Smoke test capture - Perimeter of hood	100%
Smoke test capture - Top of cooking surface	100%
WITNESS	
Date test was completed	05/24/2022
TAB tech name / Firm	NICK / NATIONALTAB
Site super name / Firm	DION / CAMPBELL CO
Owner representative name / Firm (if Applicable)	NA
Building pressure at front & back doors (All Systems On)	+0.009"
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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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: 05-30 CULVERS - PLYMOUTH, IN

System/Unit: AHU/RTU

Asset: RTU1 AREA:DINING

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5622C08751
Model Num	LGH-180-H4B	LGH-180-H4B
Type	-	RTU
Configuration	-	Vertical
Num OA Filters 1	-	3
OA Filter Size 1	-	15X25
Num Final Filter 1	-	6
Final Filter Size 1	-	24x24x2

Motor Data		
	Design	**Actual**
Motor MFG	-	Interlink
Frame	-	56
Horsepower	-	3
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	208/230	208
Rated Amperage	-	8

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	VL40
Motor Bore Size	-	7/8”
Motor Sheave SetPt	-	4 TURNS OUT
Fan Sheave Size	-	Bk72
Fan Sheave Bore	-	1-3/16”
Belt CL Distance	-	21.5”
Num of Belts	-	1
Belt Size	-	Bx55
Belt Alignment	-	Good

Test Data		
	Design	**Actual**
SF CFM	6150	6243
SF RPM	-	777
RA CFM	4400	4399
OA CFM	1750	1844
RL Voltage	-	480/479/484
RL Amperage	-	6.5/6.2/6.3
SF Rotation	-	CCW CORRECT
RA Damper Position	-	65%
Min OA Damper Position	-	35%
Min OA Damper Type	-	ECONOMIZER
OA Enthalpy Setpt	-	10 (LOWEST)
Brake Horse Power	-	2.4

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.56"
Fan Suction SP	-	0.91"
Fan Discharge SP	-	0.45"
Total ESP	-	1.01"
Fan Total SP	-	1.36"

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

Completed By: Nick Payne

Notes:

Diffuser Supply (GRD)

RTU1/DINING

Asset							
SGRD1	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	ENTRY	SD3	8"	150		263	
	FINAL CFM	% to design					
	137	91.3					
SGRD2	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	MENS RR	SD4	8"	150		202	
	FINAL CFM	% to design					
	142	94.7					
SGRD3	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	WOMENS RR	SD4	8"	150		245	
	FINAL CFM	% to design					
	139	92.7					
SGRD4	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	HALL	SD1	12"	450		546	
	FINAL CFM	% to design					
	462	102.7					
SGRD5	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	DINING	SD1	8"	150		268	
	FINAL CFM	% to design					
	165	110.0					
SGRD6	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	DINING	SD1	8"	150		342	
	FINAL CFM	% to design					
	162	108.0					
SGRD7	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	DINING	SD1	8"	150		1	
	FINAL CFM	% to design					
	155	103.3					
SGRD8	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	DINING	SD1	8"	150		177	
	FINAL CFM	% to design					
	152	101.3					
SGRD9	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	DINING	SD1	8"	150		239	
	FINAL CFM	% to design					
	158	105.3					
SGRD10	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	DINING	SD1	8"	150		207	
	FINAL CFM	% to design					
	146	97.3					
SGRD11	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	DINING	SD1	8"	150		193	
	FINAL CFM	% to design					
	160	106.7					

SGRD12	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
		SD1	8"	150		187	
	FINAL CFM	% to design					
	161	107.3					
SGRD13	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	DINING	SD1	8"	150		165	
	FINAL CFM	% to design					
	154	102.7					
SGRD14	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	DINING	SD1	8"	150		203	
	FINAL CFM	% to design					
	155	103.3					
SGRD15	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	DINING	SD1	8"	150		246	
	FINAL CFM	% to design					
	152	101.3					
SGRD16	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	DINING	SD1	8"	150		186	
	FINAL CFM	% to design					
	140	93.3					
SGRD17	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	DINING	SD1	8"	150		198	
	FINAL CFM	% to design					
	154	102.7					
SGRD18	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	DINING	SD1	8"	150		156	
	FINAL CFM	% to design					
	151	100.7					
SGRD19	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	DINING	SD1	8"	150		215	
	FINAL CFM	% to design					
	156	104.0					
SGRD20	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	DRINKS & CONDIMENTS	SD1	10"	300		342	
	FINAL CFM	% to design					
	322	107.3					
SGRD21	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	ENTRY	SD1	8"	150		315	
	FINAL CFM	% to design					
	158	105.3					
SGRD22	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	CUSTOMER ORDER AREA	SD1	12"	450		559	
	FINAL CFM	% to design					
	489	108.7					
SGRD23	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	CUSTOMER SERVICE	SD1	10"	350		207	
	FINAL CFM	% to design					
	340	97.1					
SGRD24	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	CUSTOMER SERVICE	SD1	10"	350		328	
	FINAL CFM	% to design					
	346	98.9					
SGRD25	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	CUSTOMER SERVICE	SD1	10"	350		336	

	FINAL CFM	**% to design**					
	352	100.6					
SGRD26	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**
	CUSTOMER SERVICE	SD1	10"	350		235	
	FINAL CFM	**% to design**					
	338	96.6					
SGRD27	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**
	DRIVE THRU	SD1	12"	500		410	
	FINAL CFM	**% to design**					
	488	97.6					
SGRD28	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**
	OFFICE	SD1	10"	200		333	
	FINAL CFM	**% to design**					
	209	104.5					

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Asset	Notes

National TAB

Project: 05-30 CULVERS - PLYMOUTH, IN

System/Unit: AHU/RTU

Asset: RTU2 AREA:KITCHEN

Unit Data		
	Design	**Actual**
MFG	LENNOX	LENNOX
Serial Num	-	5622C08755
Model Num	LGH-210-H4B	LGH-210-H4B
Type	-	RTU
Configuration	-	VERTICAL
Num OA Filters 1	-	3
OA Filter Size 1	-	16X25
Num Final Filter 1	-	6
Final Filter Size 1	-	24x24x2

Motor Data		
	Design	**Actual**
Motor MFG	-	Interlink
Frame	-	56
Horsepower	-	3
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	208/230	208
Rated Amperage	-	8.0

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	VL40
Motor Bore Size	-	7/8”
Motor Sheave SetPt	-	CLOSED
Fan Sheave Size	-	BK90
Fan Sheave Bore	-	1-3/16”
Belt CL Distance	-	24"
Num of Belts	-	1
Belt Size	-	BX60
Belt Alignment	-	Good

Test Data		
	Design	**Actual**
SF CFM	6150	6355
SF RPM	-	788
RA CFM	4450	4570
OA CFM	1700	1785
RL Voltage	-	484/489/487
RL Amperage	-	6.8/7.2/6.9
SF Rotation	-	CCW CORRECT
RA Damper Position	-	70&
Min OA Damper Position	-	30%
Min OA Damper Type	-	ECONOMIZER
OA Enthalpy Setpt	-	10 (LOWEST)
Brake Horse Power	-	2.6

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.44"
Fan Suction SP	-	-0.95"
Fan Discharge SP	-	0.38"
Total ESP	-	0.84"
Fan Total SP	-	1.33"

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

Completed By: Nick Payne

Notes:

Diffuser Supply (GRD)

RTU2/KITCHEN

Asset							
SGRD1	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	SUNDAE SERVICE	SD1	12"	600		488	
	FINAL CFM	% to design					
	642	107.0					
SGRD2	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	SUNDAE SERVICE	SD1	12"	600		478	
	FINAL CFM	% to design					
	628	104.7					
SGRD3	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	COOKLINE	SD5	10"	200		394	
	FINAL CFM	% to design					
	207	103.5					
SGRD4	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	COOKLINE	SD5	12"	375		461	
	FINAL CFM	% to design					
	385	102.7					
SGRD5	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	FOOD PREP	SD5	12"	400		691	
	FINAL CFM	% to design					
	422	105.5					
SGRD6	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	FOOD PREP	SD5	12"	400		535	
	FINAL CFM	% to design					
	406	101.5					
SGRD7	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	COOKLINE	SD5	10"	250		617	
	FINAL CFM	% to design					
	268	107.2					
SGRD8	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	COOKLINE	SD5	10"	275		585	
	FINAL CFM	% to design					
	288	104.7					
SGRD9	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	TOILET	SD1	6"	75		108	
	FINAL CFM	% to design					
	79	105.3					
SGRD10	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	ALCOVE	SD5	8"	125		240	
	FINAL CFM	% to design					
	135	108.0					
SGRD11	Location	Type	Size	DESIGN CFM	AK	CFM(1)	CFM(2)
	FOOD PREP	SD5	12"	350		592	
	FINAL CFM	% to design					
	343	98.0					

SGRD12	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**
	DISHWASHING	SD5	12"	350		492	
	FINAL CFM	**% to design**					
	332	94.9					
SGRD13	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**
	DISHWASHING	SD5	12"	350		599	
	FINAL CFM	**% to design**					
	370	105.7					
SGRD14	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**
	UTILITY ROOM	SD1	12"	600		561	
	FINAL CFM	**% to design**					
	611	101.8					
SGRD15	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**
	DRY GOODS	SD1	12"	600		389	
	FINAL CFM	**% to design**					
	630	105.0					
SGRD16	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**
	DRY GOODS	SD1	12"	600		506	
	FINAL CFM	**% to design**					
	609	101.5					

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Asset	Notes

National TAB

Project: 05-30 CULVERS - PLYMOUTH, IN

System/Unit: FAN - Exhaust

Asset: EF-A1 AREA:MOP ROOM

Unit Data		
	Design	**Actual**
MFG	ACCUREX	ACCUREX
Model Num	XCR-B80	XCR-B80
Serial Num	-	19482136
Type	CEILING	CEILING
Configuration	VERTICAL	VERTICAL

Test Data		
	Design	**Actual**
CFM	75	70
System SetPt	-	7/10
RL Voltage	-	120
RL Amperage	-	0.1

Motor Data		
	Design	**Actual**
Motor MFG	-	GREENHECK
Frame	-	48
Horsepower	-	NL
Motor Rpm	900	900
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	0.16
Service Factor	-	1

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Notes:

Asset	Notes

National TAB

Project: 05-30 CULVERS - PLYMOUTH, IN

System/Unit: FAN - Exhaust

Asset: PRV1 AREA:RESTROOM

Unit Data		
	Design	**Actual**
MFG	ACCUREX	ACCUREX
Model Num	XRED-095-D	XRED-095-D
Serial Num	-	19483906
Type	DOWNBLAST	Downblast
Configuration	HORZANTIOL	Vertical

Motor Data		
	Design	**Actual**
Motor MFG	-	Varigreen
Frame	-	48
Horsepower	0.0667	0.1
Motor Rpm	1550	1725
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	1.38
Service Factor	-	1

Test Data		
	Design	**Actual**
CFM	375	369
System SetPt	-	10/10
RL Voltage	-	122
RL Amperage	-	1.25
Total ESP	-	0.41"
Fan Inlet SP	-	-0.41"
Fan Discharge SP	-	atm

Completed By: Nick Payne

Notes:

Diffuser Ret/Exh (GRD)

PRV1/RESTROOM

Asset							
EGRD1	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**
	TOILET	EG1	8X8	75	1	33	79
	FINAL CFM	**% to design**					
	79	105.3					
EGRD2	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**
	WOMENS RR	EG1	8X8	150	1	91	142
	FINAL CFM	**% to design**					
	142	94.7					
EGRD3	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**
	MENS RR	EG1	8X8	150	1	92	148
	FINAL CFM	**% to design**					
	148	98.7					

Completed By:Brianna Biggs on

Asset	Notes

National TAB

Project: 05-30 CULVERS - PLYMOUTH, IN

System/Unit: FAN - Exhaust

Asset: PRV2 AREA:HD1 GRIDDLE

Unit Data		
	Design	**Actual**
MFG	ACCUREX	ACCUREX
Model Num	XRUB-160XP-15	XRUB-160XP-15
Serial Num	-	19483943
Type	UPBLAST	Upblast
Configuration	VERTICALE	Vertical

Motor Data		
	Design	**Actual**
Motor MFG	-	Nema
Frame	-	56
Horsepower	1.5	1.5
Motor Rpm	1725	1725
Phase	3	3
Voltage (rated)	208	208
Amperage (rated)	-	4.2
Service Factor	-	1.15

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	4.5”
Motor Bore Size	-	5/8”
Motor Sheave SetPt	-	5 TURNS OPEN
Fan Sheave Size	-	3”
Fan Sheave Bore	-	1/3-6”
Belt CL Distance	-	6”
Num of Belts	-	1
Belt Size	-	Ax24

Test Data		
	Design	**Actual**
CFM	1500	1592
Fan RPM	2411	2012
Fan Rotation	-	CCW CORRECT
Motor RPM	-	1717
RL Voltage	-	211/209/209
RL Amperage	-	3.4/3.5/3.6
Suction ESP	-	-0.89"
Discharge ESP	-	ATM
Total ESP	-	0.89"

Completed By: Nick Payne

Notes:

Asset	Notes

National TAB

Project: 05-30 CULVERS - PLYMOUTH, IN

System/Unit: FAN - Exhaust

Asset: PRV3 AREA:HD2 FRYER

Unit Data		
	Design	**Actual**
MFG	ACCUREX	ACCUREX
Model Num	XRUB-140-7	XRUB-140-7
Serial Num	-	19483962
Type	UPBLAST	Upblast
Configuration	VERTICALE	Vertical

Motor Data		
	Design	**Actual**
Motor MFG	-	Nema
Frame	-	56
Horsepower	0.75	0.75
Motor Rpm	1725	1725
Phase	3	3
Voltage (rated)	208	208
Amperage (rated)	-	2.3
Service Factor	-	1.15

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	VP34
Motor Bore Size	-	0.5
Motor Sheave SetPt	-	2 out
Fan Sheave Size	-	Ak39
Fan Sheave Bore	-	0.75
Belt CL Distance	-	6”
Num of Belts	-	1
Belt Size	-	Ap23

Test Data		
	Design	**Actual**
CFM	1500	1554
Fan RPM	1377	1293
Fan Rotation	-	CCW CORRECT
Motor RPM	-	1722
RL Voltage	-	212/211/210
RL Amperage	-	2.0/1.9/1.9
Suction ESP	-	-1.08"
Discharge ESP	-	ATM
Total ESP	-	1.08"

Completed By: Nick Payne

Notes:

Asset	Notes

National TAB

Project: 05-30 CULVERS - PLYMOUTH, IN

System/Unit: Kitchen Hood Type I

Asset: HD1 AREA:RIDDLE

Unit Data		
	Design	**Actual**
MFG	ACCUREX	ACCUREX
Model Num	XGEP-64-S	XGEP-64-S
Job / Serial Num	-	19491511
Type	TYPE I LOW PROXMATI	TYPE I LOW PROX
Hood length	64"	64"
Hood Width	23"	23"

Test Data Exhaust		
	Design	**Actual**
Filter Type	ACCUREX	ACCUREX
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	-	237
Filter2 FPM	-	249
Filter3 FPM	-	286
Filter4 FPM	-	246
Filter Ave FPM(corr)	-	254
CFM	-	1554

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

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

General		
	Design	**Actual**
Third Party Witness	-	DION
Third Party Company	-	CAMPBELL
Tech Witness	-	NICK

Completed By: Nick Payne

Notes:

Asset	Notes

National TAB

Project: 05-30 CULVERS - PLYMOUTH, IN

System/Unit: Kitchen Hood Type I

Asset: HD2 AREA:

Unit Data		
	Design	**Actual**
MFG	ACCUREX	ACCUREX
Model Num	XXEP-83-S	XXEP-83-S
Job / Serial Num	-	19491510
Type	TYPE I LOW PROXIMITY	TYPE I LOW PROXIMITY
Hood length	83"	83"
Hood Width	23"	23"

Test Data Exhaust		
	Design	**Actual**
Filter Type	X-TRACTOR	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	-	207
Filter2 FPM	-	212
Filter3 FPM	-	217
Filter4 FPM	-	199
Filter5 FPM	-	202
Filter Ave FPM(corr)	-	208
CFM	-	1591

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

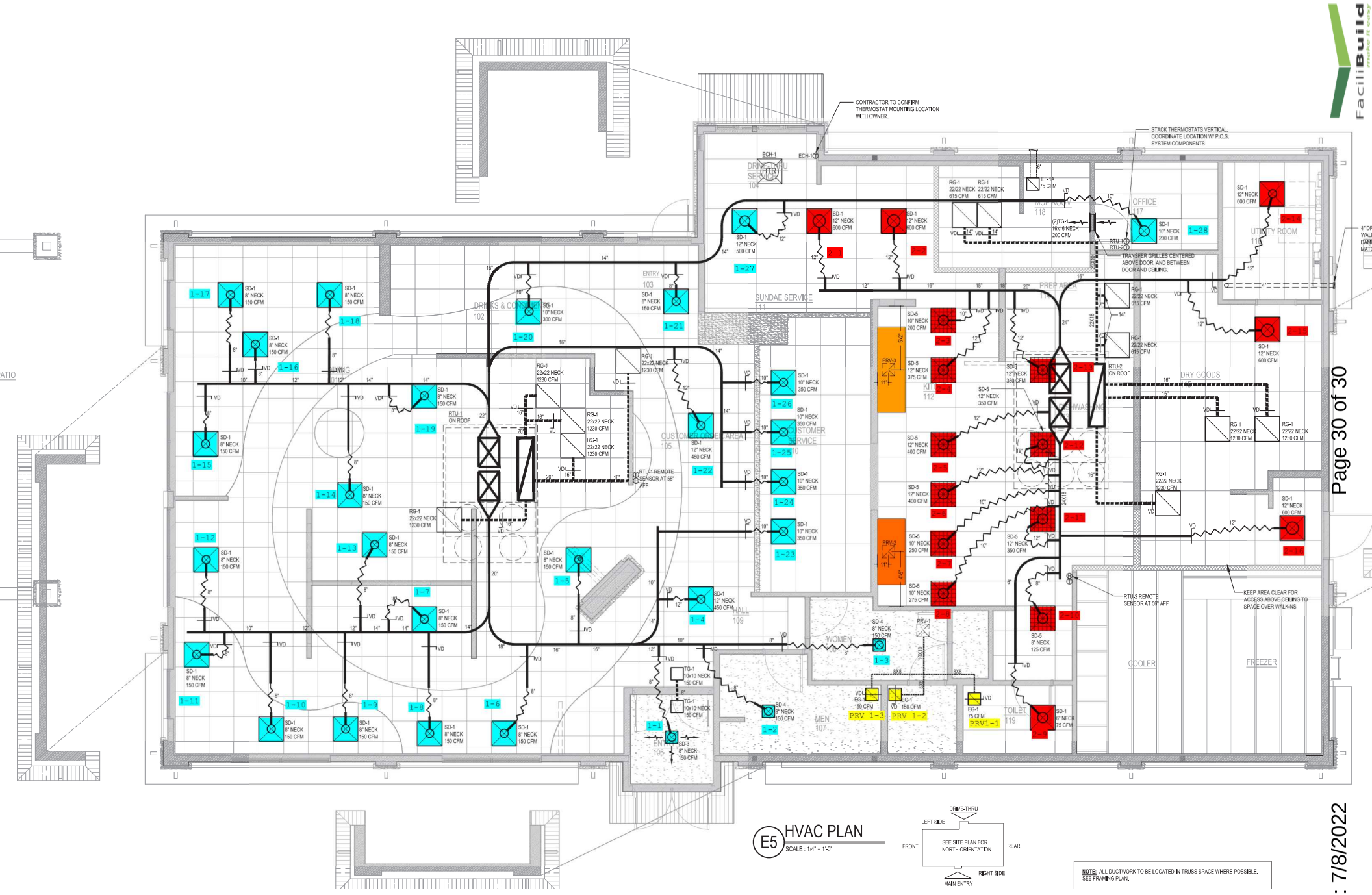
Performance Data		
	Design	**Actual**
Smoke Generation Type	-	45 SEC SMOKE
Hood Capture %	-	100%
End Panels Installed (Y/N)	-	YES

General		
	Design	**Actual**
Third Party Witness	-	DION
Third Party Company	-	CAMPBELL CO
Tech Witness	-	NICK

Completed By: Nick Payne

Notes:

Asset	Notes



E5 HVAC PLAN

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

NOTE: ALL DUCTWORK TO BE LOCATED IN TRUSS SPACE WHERE POSSIBLE. SEE FRAMING PLAN.

Date: 7/8/2022