

Report By:

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

NATIONAL

TAB

Comfort. Under control.

**Report: FINAL TAB REPORT
Function: Test, Adjust, & Balance
Date: 8/9/2022**

**PROJECT
07-11 CULVERS - FULSHEAR, TX**

6677 FLEWELLEN WAY

FULSHEAR, TX

Client

Accurex

400 Ross Ave

Schofield, WI 54476

National TAB

Project: 07-11 CULVERS - FULSHEAR, TX

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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 recorded at +0.011" W.C. average. This pressure falls within the recommended tolerances by the International Mechanical Code of +0.02" W.C. to -0.02" W.C. The building is designed for a net positive pressure and this measurement coincides with that requirement.

The hood capture was tested at the perimeter of the hood and the cook top level with the equipment heat "off" and 100% capture was observed. Cooking equipment was not able to be turned on while the technician was on site.

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	5908	4400	4119	1750	1789	28.5%	30.3%						
RTU-2	KITCHEN	6225	5849	4525	4102	1700	1747	27.3%	29.9%						
PRV-1	RESTROOM													300	285
PRV-2	HD1 GRIDDLE											1500	1579		
PRV-3	HD2 FRYER											1500	1607		
EF-1A(X2)	EMP. RR/MOP RM.													150	142
TOTALS		12375	11757	8925	8221	3450	3536			0	0	3000	3186	450	427

NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	3450	3536
TOTAL EXHAUST	3450	3613
NET AIRFLOW	0	-77

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H2O)
FRONT	0.01
SIDE	
REAR	0.02
AVERAGE	0.015

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:

READINGS ARE WITHIN ALLOWABLE TOLERANCE IN CUMMULATIVE READING ERROR.

07-11 CULVERS - FULSHEAR, TX

CheckList Information

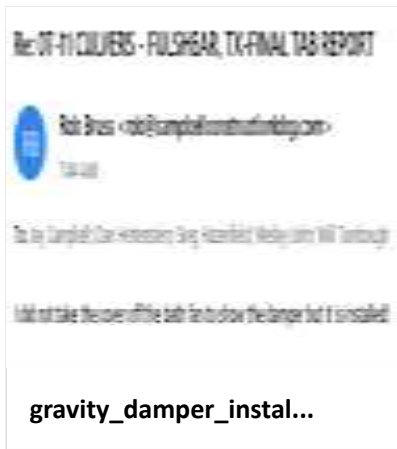
Name : REMARKS Status : NotSubmitted
Assigned Organization : National TAB Asset :
Requesting Organization : National TAB

CheckList Item Details

PRIORITY (HIGH/LOW/INFO ONLY)

HIGH (closed)

Backdraft damper is not installed for the restroom exhaust fan (closed - GC had G-Damper installed)



HIGH (closed)

Hinge kit on KEF(s) missing the tension wire to keep fan from hinging to far back (needs to be installed) - (closed - tension cable is installed)



tension_cable_install...



tension_wire_missing....

HIGH (closed)

PRV-2&3 ELECTRICAL CONDUIT RUN OVER FAN HOUSING. RECOMMEND RUNNING CONDUIT THROUGH CHASE ON SIDE OF HOUSING. (closed - electrical whip installed)



electrical_whip_issue...



electrical_whip_rerou...

HIGH (closed)

RTUS MISSING GAS PIPE GROMMET. GROMMET IS LOCATED IN FURNACE SECTION



grommets_installed.jp...

HIGH (closed)

Grease cup on KEF not installed (closed - grease cup installed)



grease_cup_not_instal...



grease_cups_installed...

Notes/Comments :



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CheckList Information

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

CheckList Item Details

STORE FRONT



IMG_8474.jpeg

RTU-1



IMG_8464.jpeg

RTU-2



IMG_8465.jpeg

PRV-1



IMG_8469.jpeg

PRV-2



IMG_8466_1_.jpeg

PRV-3



IMG_8468.jpeg

HOOD 1



HOOD1_GRIDDLE.PNG

HOOD 2



HOOD_2_FRYER_.PNG

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
On the cookline diffusers neck is there 18" (12" minimum) straight rigid duct run attached?	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.)	WIRE RUN FROM OCP TO Ec BY NTAB.
Motors are all operating below the FLA rating?	YES
Are belts tight?	YES
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?	PRV-3 GREASE CUP NOT INSTALLED



IMG_8462.jpeg

Hinge kit installed installed on hood fan?

YES BUT HINGE KITS ARE MISSING WIRE TO KEEP FROM HINGING ALL THE WAY.



IMG_8467.jpeg

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?

RESTROOM FAN MISSING BACKDRAFT DAMPER.

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?

KITCHEN EQUIPMENT NOT STARTED AT TIME OF BALANCE.

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 :

PRV-2&3 ELECTRICAL CONDUIT RUN OVER FAN HOUSING. RECOMMEND RUNNING CONDUIT THROUGH CHASE ON SIDE OF HOUSING. RTUS MISSING GAS PIPE GROMMET. GROMMET IS LOCATED IN FURNACE SECTION.



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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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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	NONE
List smoke candle type used	45 SECOND SMOKE CARTRIDGE
Smoke test capture - Perimeter of hood	100%
Smoke test capture - Top of cooking surface	100%

WITNESS

Date test was completed	07/12/2022
TAB tech name / Firm	WESLEY JOHN / NATIONAL TAB
Site super name / Firm	ROB BRUSS / CAMPBELL CONSTRUCTION
Owner representative name / Firm (if Applicable)	N/A
Building pressure at front & back doors (All Systems On)	FRONT 0.002" / BACK 0.001"

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: 07-11 CULVERS - FULSHEAR, TX

System/Unit: AHU/RTU



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Asset: RTU1

AREA:DINING

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5622C08920
Model Num	LGH-240-H4B	LGH240H4BS4Y
Type	-	RTU
Configuration	-	VERTICAL DISCHARGE
Num OA Filters 1	-	3
OA Filter Size 1	-	16x24
Num Final Filter 1	-	6
Final Filter Size 1	-	24x24x2

Motor Data		
	Design	Actual
Motor MFG	-	US MOTORS
Frame	-	184TZ
Horsepower	-	5
Motor Rpm	-	1765
Phase	3	3
Rated Voltage	208/230	208
Rated Amperage	-	13.8

Drive Data		
	Design	Actual
Motor Sheave Size	-	1VP50
Motor Bore Size	-	1 1/8"
Motor Sheave SetPt	-	1.0 TURN OPEN
Fan Sheave Size	-	BK100
Fan Sheave Bore	-	1 3/16"
Belt CL Distance	-	20 1/2"
Num of Belts	-	1
Belt Size	-	BX61
Belt Alignment	-	CORRECT

Test Data		
	Design	Actual
SF CFM	6150	5908
SF RPM	-	870
RA CFM	4400	4119
OA CFM	1750	1789
RL Voltage	-	207/209/210
RL Amperage	-	9.7/9.6/9.9
SF Rotation	-	CCW
RA Damper Position	-	66%
Min OA Damper Position	-	34%
Min OA Damper Type	-	OPPOSED BLADE

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.76"
Fan Suction SP	-	-1.02"
Fan Discharge SP	-	0.51"
Total ESP	-	1.27"
Fan Total SP	-	1.53"

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

Completed By: Wesley John

Notes:

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Project:07-11 CULVERS - FULSHEAR, TX

AHU/RTU



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Diffuser Supply (GRD)

RTU1/DINING

Asset							
Asset Name	Location	Type	DESIGN CFM	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	MAIN ENTRY	SD4	150	192	202	143	95.3
SGRD2	MENS RR	SD4	150	252	259	158	105.3
SGRD3	WOMENS RR	SD4	150	228	244	157	104.7
SGRD4	HALL	SD1	450	510	537	439	97.6
SGRD5	DINING	SD1	150	237	255	152	101.3
SGRD6	DINING	SD1	150	139	140	143	95.3
SGRD7	DINING	SD1	150	155	166	140	93.3
SGRD8	DINING	SD1	150	140	147	137	91.3
SGRD9	DINING	SD1	150	152	160	162	108.0
SGRD10	DINING	SD1	150	102	108	138	92.0
SGRD11	DINING	SD1	150	155	164	160	106.7
SGRD12	DINING	SD1	150	114	119	136	90.7
SGRD13	DINING	SD1	150	43	45	137	91.3
SGRD14	DRINKS & CONDIMENT S	SD1	300	253	275	305	101.7
SGRD15	SIDE ENTRY	SD1	150	249	258	157	104.7
SGRD16	CUSTOMER ORDER AREA	SD1	450	327	339	411	91.3
SGRD17	DINING	SD1	150	192	204	153	102.0
SGRD18	DINING	SD1	150	215	223	148	98.7
SGRD19	DINING	SD1	150	141	143	139	92.7
SGRD20	DINING	SD1	150	188	197	157	104.7
SGRD21	DINING	SD1	150	179	188	160	106.7
SGRD22	DINING	SD1	150	114	120	137	91.3
SGRD23	CUSTOMER SERVICE	SD1	350	328	347	322	92.0
SGRD24	CUSTOMER SERVICE	SD1	350	392	408	319	91.1
SGRD25	CUSTOMER SERVICE	SD1	350	137	144	328	93.7
SGRD26	CUSTOMER SERVICE	SD1	350	215	223	320	91.4
SGRD27	DRIVE THRU	SD1	500	256	267	461	92.2
SGRD28	OFFICE	SD1	200	176	182	189	94.5

RTU1/DINING

Asset							
Asset Name	Location	Type	DESIGN CFM	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	MAIN ENTRY	SD4	150	192	202	143	95.3
SGRD2	MENS RR	SD4	150	252	259	158	105.3
SGRD3	WOMENS RR	SD4	150	228	244	157	104.7
SGRD4	HALL	SD1	450	510	537	439	97.6
SGRD5	DINING	SD1	150	237	255	152	101.3
SGRD6	DINING	SD1	150	139	140	143	95.3
SGRD7	DINING	SD1	150	155	166	140	93.3
SGRD8	DINING	SD1	150	140	147	137	91.3
SGRD9	DINING	SD1	150	152	160	162	108.0
SGRD10	DINING	SD1	150	102	108	138	92.0
SGRD11	DINING	SD1	150	155	164	160	106.7
SGRD12	DINING	SD1	150	114	119	136	90.7
SGRD13	DINING	SD1	150	43	45	137	91.3
SGRD14	DRINKS & CONDIMENT S	SD1	300	253	275	305	101.7
SGRD15	SIDE ENTRY	SD1	150	249	258	157	104.7
SGRD16	CUSTOMER ORDER AREA	SD1	450	327	339	411	91.3
SGRD17	DINING	SD1	150	192	204	153	102.0
SGRD18	DINING	SD1	150	215	223	148	98.7
SGRD19	DINING	SD1	150	141	143	139	92.7
SGRD20	DINING	SD1	150	188	197	157	104.7
SGRD21	DINING	SD1	150	179	188	160	106.7
SGRD22	DINING	SD1	150	114	120	137	91.3
SGRD23	CUSTOMER SERVICE	SD1	350	328	347	322	92.0
SGRD24	CUSTOMER SERVICE	SD1	350	392	408	319	91.1
SGRD25	CUSTOMER SERVICE	SD1	350	137	144	328	93.7
SGRD26	CUSTOMER SERVICE	SD1	350	215	223	320	91.4
SGRD27	DRIVE THRU	SD1	500	256	267	461	92.2
SGRD28	OFFICE	SD1	200	176	182	189	94.5

Diffuser Supply (GRD)

RTU1/DINING

Asset							
Asset Name	Location	Type	DESIGN CFM	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	MAIN ENTRY	SD4	150	192	202	143	95.3
SGRD2	MENS RR	SD4	150	252	259	158	105.3
SGRD3	WOMENS RR	SD4	150	228	244	157	104.7
SGRD4	HALL	SD1	450	510	537	439	97.6
SGRD5	DINING	SD1	150	237	255	152	101.3
SGRD6	DINING	SD1	150	139	140	143	95.3
SGRD7	DINING	SD1	150	155	166	140	93.3
SGRD8	DINING	SD1	150	140	147	137	91.3
SGRD9	DINING	SD1	150	152	160	162	108.0
SGRD10	DINING	SD1	150	102	108	138	92.0
SGRD11	DINING	SD1	150	155	164	160	106.7
SGRD12	DINING	SD1	150	114	119	136	90.7
SGRD13	DINING	SD1	150	43	45	137	91.3
SGRD14	DRINKS & CONDIMENT S	SD1	300	253	275	305	101.7
SGRD15	SIDE ENTRY	SD1	150	249	258	157	104.7
SGRD16	CUSTOMER ORDER AREA	SD1	450	327	339	411	91.3
SGRD17	DINING	SD1	150	192	204	153	102.0
SGRD18	DINING	SD1	150	215	223	148	98.7
SGRD19	DINING	SD1	150	141	143	139	92.7
SGRD20	DINING	SD1	150	188	197	157	104.7
SGRD21	DINING	SD1	150	179	188	160	106.7
SGRD22	DINING	SD1	150	114	120	137	91.3
SGRD23	CUSTOMER SERVICE	SD1	350	328	347	322	92.0
SGRD24	CUSTOMER SERVICE	SD1	350	392	408	319	91.1
SGRD25	CUSTOMER SERVICE	SD1	350	137	144	328	93.7
SGRD26	CUSTOMER SERVICE	SD1	350	215	223	320	91.4
SGRD27	DRIVE THRU	SD1	500	256	267	461	92.2
SGRD28	OFFICE	SD1	200	176	182	189	94.5

RTU1/DINING

Asset							
Asset Name	Location	Type	DESIGN CFM	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	MAIN ENTRY	SD4	150	192	202	143	95.3
SGRD2	MENS RR	SD4	150	252	259	158	105.3
SGRD3	WOMENS RR	SD4	150	228	244	157	104.7
SGRD4	HALL	SD1	450	510	537	439	97.6
SGRD5	DINING	SD1	150	237	255	152	101.3
SGRD6	DINING	SD1	150	139	140	143	95.3
SGRD7	DINING	SD1	150	155	166	140	93.3
SGRD8	DINING	SD1	150	140	147	137	91.3
SGRD9	DINING	SD1	150	152	160	162	108.0
SGRD10	DINING	SD1	150	102	108	138	92.0
SGRD11	DINING	SD1	150	155	164	160	106.7
SGRD12	DINING	SD1	150	114	119	136	90.7
SGRD13	DINING	SD1	150	43	45	137	91.3
SGRD14	DRINKS & CONDIMENT S	SD1	300	253	275	305	101.7
SGRD15	SIDE ENTRY	SD1	150	249	258	157	104.7
SGRD16	CUSTOMER ORDER AREA	SD1	450	327	339	411	91.3
SGRD17	DINING	SD1	150	192	204	153	102.0
SGRD18	DINING	SD1	150	215	223	148	98.7
SGRD19	DINING	SD1	150	141	143	139	92.7
SGRD20	DINING	SD1	150	188	197	157	104.7
SGRD21	DINING	SD1	150	179	188	160	106.7
SGRD22	DINING	SD1	150	114	120	137	91.3
SGRD23	CUSTOMER SERVICE	SD1	350	328	347	322	92.0
SGRD24	CUSTOMER SERVICE	SD1	350	392	408	319	91.1
SGRD25	CUSTOMER SERVICE	SD1	350	137	144	328	93.7
SGRD26	CUSTOMER SERVICE	SD1	350	215	223	320	91.4
SGRD27	DRIVE THRU	SD1	500	256	267	461	92.2
SGRD28	OFFICE	SD1	200	176	182	189	94.5

Completed By: Dan Hertenstein on

National TAB

Project: 07-11 CULVERS - FULSHEAR, TX

System/Unit: AHU/RTU



Comfort. Under control.

Asset: RTU2

AREA: KITCHEN

Unit Data		
	Design	Actual
MFG	LENNOX	LENNOX
Serial Num	-	5622C08912
Model Num	LGH-240-H4B	LGH240H4BS4Y
Type	-	RTU
Configuration	-	VERTICAL DISCHARGE
Num OA Filters 1	-	3
OA Filter Size 1	-	16x24
Num Final Filter 1	-	6
Final Filter Size 1	-	24x24x2

Motor Data		
	Design	Actual
Motor MFG	-	US MOTORS
Frame	-	184TZ
Horsepower	-	5
Motor Rpm	-	1765
Phase	3	3
Rated Voltage	208/230	208
Rated Amperage	-	13.8

Drive Data		
	Design	Actual
Motor Sheave Size	-	1VP50
Motor Bore Size	-	1 1/8"
Motor Sheave SetPt	-	1.0 TURN OPEN
Fan Sheave Size	-	BK100
Fan Sheave Bore	-	1 3/16"
Belt CL Distance	-	20 1/2"
Num of Belts	-	1
Belt Size	-	BX61
Belt Alignment	-	CORRECT

Test Data		
	Design	Actual
SF CFM	6225	5849
SF RPM	-	871
RA CFM	4525	4102
OA CFM	1700	1747
RL Voltage	-	209/210/211
RL Amperage	-	9.0/9.0/9.3
SF Rotation	-	CCW
RA Damper Position	-	68%
Min OA Damper Position	-	32%
Min OA Damper Type	-	OPPOSED BLADE

Performance Data		
	Design	Actual
MA Plenum SP	-	-0.82"
Fan Suction SP	-	-1.09"
Fan Discharge SP	-	0.53"
Total ESP	-	1.35"
Fan Total SP	-	1.62"

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

Completed By: Wesley John

Notes:

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Project:07-11 CULVERS - FULSHEAR, TX

AHU/RTU



Comfort. Under control.

Diffuser Supply (GRD)

RTU2/KITCHEN

Asset							
Asset Name	Location	Type	DESIGN CFM	CFM(1)	CFM(2)	FINAL CFM	% to design
SGRD1	SUNDAE SERVICE	SD1	600	421	450	572	95.3
SGRD2	SUNDAE SERVICE	SD1	600	399	453	556	92.7
SGRD3	COOKLINE	SD5	275	246	279	269	97.8
SGRD4	COOKLINE	SD5	250	146	154	234	93.6
SGRD5	FOOD PREP	SD5	400	421	449	387	96.8
SGRD6	FOOD PREP	SD5	400	147	161	381	95.3
SGRD7	COOKLINE	SD5	375	72	80	348	92.8
SGRD8	COOKLINE	SD5	200	546	583	188	94.0
SGRD9	FOOD PREP	SD5	350	508	546	342	97.7
SGRD10	DISHWASHING	SD5	350	684	735	330	94.3
SGRD11	DISHWASHING	SD5	350	413	443	329	94.0
SGRD12	EMPLOYEE RR	SD4	75	90	101	72	96.0
SGRD13	DRY GOODS	SD1	600	241	261	549	91.5
SGRD14	DRY GOODS	SD1	200	332	373	189	94.5
SGRD15	DRY GOODS	SD1	600	381	426	556	92.7
SGRD16	UTILITY ROOM	SD1	600	302	385	547	91.2

Completed By: Brianna Biggs on

National TAB

Project: 07-11 CULVERS - FULSHEAR, TX
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	-	19862130
Type	CEILING	CENTRIFUGAL
Configuration	VERTICAL	CEILING

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	-	NL

Test Data		
	Design	Actual
CFM	75	69
Fan RPM	885	900
Fan Rotation	-	CW
Motor RPM	-	900
System SetPt	-	MEDIUM
RL Voltage	-	117
RL Amperage	-	0.11
Total ESP	0.125"	NA
Fan Inlet SP	-	N/A

Completed By: Wesley John

Notes:

National TAB

Project: 07-11 CULVERS - FULSHEAR, TX
System/Unit: FAN - Exhaust



Comfort. Under control.

Asset: EF-A1

AREA:EMPLOYEE RESTROOM

Unit Data		
	Design	Actual
MFG	ACCUREX	BROAN
Model Num	XCR-B80	AE80BL-B
Serial Num	-	NL
Type	CEILING	CENTRIFUGAL
Configuration	VERTICAL	CEILING

Motor Data		
	Design	Actual
Motor MFG	-	NL
Frame	-	NL
Horsepower	-	NL
Motor Rpm	900	NL
Phase	1	1
Voltage (rated)	115	120
Amperage (rated)	-	0.5
Service Factor	-	NL

Test Data		
	Design	Actual
CFM	75	73
Fan RPM	885	DIRECT DRIVE
Fan Rotation	-	CW
Motor RPM	-	DIRECT DRIVE
System SetPt	-	SINGLE SPEED
RL Voltage	-	118
RL Amperage	-	0.34
Total ESP	0.125"	N/A
Fan Inlet SP	-	NA

Completed By: Wesley John

Notes:

National TAB

Project: 07-11 CULVERS - FULSHEAR, TX
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	-	19872570
Type	DOWNBLAST	CENTRIFUGAL
Configuration	HORIZONTAL	DOWNBLAST

Motor Data		
	Design	Actual
Motor MFG	-	BROAD-OCEAN
Frame	-	NL
Horsepower	0.0667	0.10
Motor Rpm	1550	1750
Phase	1	1
Voltage (rated)	115	115
Amperage (rated)	-	1.38
Service Factor	-	NL

Test Data		
	Design	Actual
CFM	300	285
Fan RPM	1479	DIRECT DRIVE
Fan Rotation	-	CW
Motor RPM	-	DIRECT DRIVE
System SetPt	-	6/10
RL Voltage	-	119
RL Amperage	-	1.0
Total ESP	0.5"	0.32"
Fan Inlet SP	-	-0.32"
Fan Discharge SP	-	ATM

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Notes:

National TAB

Project:07-11 CULVERS - FULSHEAR, TX

FAN - Exhaust



Comfort. Under control.

Diffuser Ret/Exh (GRD)

PRV1/RESTROOM

Asset							
Asset Name	Location	Size	DESIGN CFM	CFM(1)	CFM(2)	FINAL CFM	% to design
EGRD1	MENS RR	10X10	150	152	222	140	93.3
EGRD2	WOMENS RR	10X10	150	303	234	145	96.7

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National TAB

Project: 07-11 CULVERS - FULSHEAR, TX
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-G
Serial Num	-	19873047
Type	UPLBAST	CENTRIFUGAL
Configuration	VERTICAL	UPBLAST

Test Data		
	Design	Actual
CFM	1500	1579
Fan RPM	2411	2277
Fan Rotation	-	CW
Motor RPM	-	1772
RL Voltage	-	213/211/211
RL Amperage	-	3.7/3.5/3.5
Suction ESP	-	-2.04"
Discharge ESP	-	ATM
Total ESP	2.337"	2.04"

Motor Data		
	Design	Actual
Motor MFG	-	WEG
Frame	-	NA
Horsepower	1.5	1.5
Motor Rpm	1725	1725
Phase	3	3
Voltage (rated)	208	208
Amperage (rated)	-	NA
Service Factor	-	NA

Drive Data		
	Design	Actual
Motor Sheave Size	-	4"
Motor Bore Size	-	5/8"
Motor Sheave SetPt	-	1.0 TURN OPEN
Fan Sheave Size	-	AK30
Fan Sheave Bore	-	1"
Belt CL Distance	-	6 1/4"
Num of Belts	-	1
Belt Size	-	AX24

Completed By: Wesley John

Notes:

National TAB

Project: 07-11 CULVERS - FULSHEAR, TX
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	-	19873403
Type	UPBLAST	CENTRIFUGAL
Configuration	VERTICAL	UPBLAST

Test Data		
	Design	Actual
CFM	1500	1607
Fan RPM	1377	1013
Fan Rotation	-	CW
Motor RPM	-	1783
RL Voltage	-	213/212/211
RL Amperage	-	1.5/1.7/1.8
Suction ESP	-	-0.83"
Discharge ESP	-	ATM
Total ESP	1.0"	0.83"

Motor Data		
	Design	Actual
Motor MFG	-	WEG
Frame	-	56
Horsepower	0.75	0.75
Motor Rpm	1725	1725
Phase	3	3
Voltage (rated)	208	208
Amperage (rated)	-	2.54
Service Factor	-	1.00

Drive Data		
	Design	Actual
Motor Sheave Size	-	VP34
Motor Bore Size	-	5/8"
Motor Sheave SetPt	-	5.0 TURNS OPEN
Fan Sheave Size	-	AK41
Fan Sheave Bore	-	3/4"
Belt CL Distance	-	5"
Num of Belts	-	1
Belt Size	-	AP23

Completed By: Wesley John

Notes:

National TAB

Project: 07-11 CULVERS - FULSHEAR, TX

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	-	19856085
Type	TYPE I LOW PROXIMITY	TYPE I LOW PROXIMITY
Hood length	64"	64
Hood Width	23"	23

Test Data Exhaust		
	Design	Actual
Filter Type	GREASE GRABBER	GREASE GRABBER
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	-	301
Filter2 FPM	-	218
Filter3 FPM	-	230
Filter4 FPM	-	283
Filter Ave FPM(corr)	-	258
CFM	-	1579

Cooking Equipment		
	Design	Actual
Item 1	-	GRIDDLE

Completed By: Wesley John

Notes:

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

General		
	Design	Actual
Third Party Witness	-	ROB BRUSS
Third Party Company	-	CAMPBELL CONSTRUCTION
Tech Witness	-	WESLEY JOHN

National TAB

Project: 07-11 CULVERS - FULSHEAR, TX

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	-	19856078
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 CARTRIDGE
Hood Capture %	-	100
End Panels Installed (Y/N)	-	YES

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	-	230
Filter2 FPM	-	199
Filter3 FPM	-	193
Filter4 FPM	-	191
Filter5 FPM	-	238
Filter Ave FPM(corr)	-	210
CFM	-	1607

General		
	Design	Actual
Third Party Witness	-	ROB BRUSS
Third Party Company	-	CAMPBELL CONSTRUCTION
Tech Witness	-	WESLEY JOHN

Cooking Equipment		
	Design	Actual
Item 1	-	FRYERS

Completed By: Wesley John

Notes:

