

Report By:
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19803 Ralston Street
Orlando, FL 32833.



Comfort. Under control.

For :
National TAB
1329 E. Kemper Road
Suite 4210
Cincinnati, OH 45246

Report: TAB REPORT
Function: Test, Adjust, & Balance
Date: 01/25/2023

PROJECT

**01-23-23 CHIPOTLE # 09-4133 BRANDON
CAUSEWAY, FL (BRANDON)**

11137 Causeway Blvd

BRANDON, FL 33511

Client

Chipotle Mexican Grill
1401 Wynkoop Street, Suite 500

Denver, CO 80202

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) w/ Diffusers

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. . Any EF's that fell outside of this tolerance is noted throughout the report.

MUA (Make Up Air Unit) w/ PSP

Total flow for the MAU (Make-up Air Unit) unit was measured by readings taken at the discharge of the hood's perforated supply plenum. Readings taken with a velocity matrix were averaged and multiplied by a manufacturer's corrected area. Adjustments to the fan speed were made in order to bring the unit to within design tolerance. Any MUA's that fell outside of this tolerance is noted throughout the report.

General Exhaust Fans w/ Grilles

The general exhaust fans were measured by reading each air device with a flow hood. The total airflow for each fan is equivalent to the sum of these readings. Fan speed was then adjusted so that the airflow was within tolerance of design. Each terminal device was balanced to within tolerance of the design volume using the installed volume dampers. Any equipment that fell outside of this tolerance is noted throughout the report.

Final Building Tests

After completing the test and balance the final building pressure was measured. It was confirmed that the building pressure fell within acceptable tolerances of $-0.02''$ wc to $+0.02''$ wc and that the pressure measurement coincides with the actual and design net airflow. Any deviations from these standards are noted throughout the report.

The hood capture was tested at the perimeter of the hood and the cook top level with the equipment heat on to ensure satisfactory hood capture and containment.

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	KITCHEN	3400	3401	2800	2768	600	633	17.6%	18.6%						
RTU-2	DINING	4000	4035	3100	3102	900	933	22.5%	23.1%						
MUA-1	KITCHEN HOOD									1950	1942				
EF-1	KITCHEN HOOD											3200	3276		
EF-2	RESTROOM													150	158
TOTALS		7400	7436	5900	5870	1500	1566			1950	1942	3200	3276	150	158

NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	3450	3508
TOTAL EXHAUST	3350	3434
NET AIRFLOW	100	74

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H2O)
FRONT	0.011
SIDE	0.007
REAR	0.008
AVERAGE	0.0087

FINAL CHECKS

- ACTUAL NET AIRFLOW COINCIDES WITH DESIGN: ✓

- MEASURED PRESSURES COINCIDES WITH ACTUAL NET AIRFLOW: ✓

- PRESSURE FALLS WITHIN IMC TOLERANCE OF +/-0.02" W.C. ✓

NOTES:



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01-23-23 CHIPOTLE # 09-4133 BRANDON CAUSEWAY, FL (BRANDON)

CheckList Information

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

CheckList Item Details

STORE FRONT



STTORE.JPEG

RTU-1



RTU_1.JPEG

RTU-2



RTU_2.JPEG

MAU-1



MAU.JPEG

EF-1



EF1.JPEG

EF-2



EF2.JPEG

HOOD-1



HOOD.JPEG

Notes/Comments :

Project: Chipotle #4133 - Brandon, FL

System: RTU-1 (Kitchen)

Unit Data	
Manufacturer	Carrier
Model Number	48HCDD09A2M5A6F4J0
Serial Number	3622P62888
Fan Sheave Diam.	AFD74
Fan Sheave Bore	1"
Belt Size	A48
Number of Belts	1
Filter Size	20X20X2
Number of Filters	4

Motor Data			
Manufacturer	Frame	MARATHON	56HZ
HP	RPM	2.4	1670
Volts	Phase	208	3
Amps	S.F.	6.7	1.15
Eff.	P.F.	NL	NL
Motor Sheave Dia.	VP40		
Motor Sheave Bore	5/8"		
Centerline Distance (C.D.)	16"		

Test Data	Design	Actual
Supply CFM	3400	3401
Return Air CFM	2800	2768
Outside Air CFM	600	633
Outlet CFM (total)	3400	3401
Fan RPM	-	893
Motor RPM	1670	1648
Operating Amperage	6.7	6.4/6.2/5.5
Operating Voltage	208	212/210/211
Motor BHP	-	2.18

Test Data	Design	Actual
External Discharge S.P.	-	0.74"
External Suction S.P.	-	-0.93"
Total External S.P.	0.8"	1.67"
Total S.P.	-	1.97"
Fan Suction S.P.	-	-1.23"
O.A. Damper %	-	21%H/29%L
R.A. Damper %	-	79%H/71%L
Economizer Output (VDC)	-	3.7H/4.35L

Notes

Project: Chipotle #4133 - Brandon, FL

System: RTU-1 (Kitchen)

Area Served	No.	Type	Size	Design CFM	Prelim 1	Prelim 2	Prelim 3	Final CFM	AK*	%Design	Notes
Office	1	CD1	8	150	208	254	139	139		92.7	
BOH	2	CD1	10	325	255	311	324	324		99.7	
BOH	3	CD1	10	325	272	332	319	319		98.2	
Drive-Thru	4	CD1	12	400	362	441	407	407		101.8	
Drive-Thru	5	CD1	12	400	330	402	385	385		96.3	
Serve Line	6	CD2	8	250	184	224	250	250		100.0	
Serve Line	7	CD2	8	250	175	213	244	244		97.6	
Serve Line	8	CD2	8	250	184	224	251	251		100.4	
Serve Line	9	CD2	8	250	187	228	261	261		104.4	
Hood AC	10	ACPSP	8 (x7)	798	601	733	821	821		102.9	
RTU-1				3398	2758	3363.68	3401	3401		100.1	

*If AK = 1.00, velocity information and readings are not required

Notes

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Project: Chipotle #4133 - Brandon, FL

System: RTU-2 (Dining)

Unit Data	
Manufacturer	Carrier
Model Number	48HCED11A2M5A6F4J0
Serial Number	4422P67442
Fan Sheave Diam.	AFD74
Fan Sheave Bore	1"
Belt Size	AX49
Number of Belts	1
Filter Size	20X20X2
Number of Filters	4

Motor Data			
Manufacturer	Frame	Marathon	56HZ
HP	RPM	3.7	1750
Volts	Phase	208	3
Amps	S.F.	9.2	1
Eff.	P.F.	NL	NL
Motor Sheave Dia.	VP50		
Motor Sheave Bore	7/8"		
Centerline Distance (C.D.)	17"		

Test Data	Design	Actual
Supply CFM	4000	4035
Return Air CFM	3100	3102
Outside Air CFM	900	933
Outlet CFM (total)	4000	4035
Fan RPM	-	922
Motor RPM	1750	1738
Operating Amperage	9.2	6.2/5.1/5.5
Operating Voltage	208	212/210/210
Motor BHP	NL	2.28

Test Data	Design	Actual
External Discharge S.P.	-	0.75"
External Suction S.P.	-	-0.73"
Total External S.P.	0.8"	1.48"
Total S.P.	-	1.83"
Fan Suction S.P.	-	-1.08"
O.A. Damper %	-	30%H/41%L
R.A. Damper %	-	70%H/59%L
Economizer Output (VDC)	-	4.4H/5.3L

Notes

Project: Chipotle #4133 - Brandon, FL

System: RTU-2

Area Served	No.	Type	Size	Design CFM	Prelim 1	Prelim 2	Prelim 3	Final CFM	AK*	% Design	Notes
Dining	1	SR2	18X6	400	336	419	419	419		104.8	
Dining	2	SR2	18X6	500	328	478	478	478		95.6	
Dining	3	SR1	14	800	693	821	821	821		102.6	
Dining	4	SR1	14	700	725	715	715	715		102.1	
Dining	5	SR1	14	600	755	585	585	585		97.5	
Dining	6	SR1	14	500	625	485	485	485		97.0	
Dining	7	SR1	14	500	417	532	532	532		106.4	
RTU-2				4000	3879	4035	4035	4035		100.9	

*If AK = 1.00, velocity information and readings are not required

Notes

Project: Chipotle #4133 - Brandon, FL

System: Kitchen Ventilation and RR Exhaust

Design Data/Unit Information							
Fan Designation		EF-1		EF-2		MUA-1	
Location		Roof		Roof		Roof	
Type Of Service		Hood Exhaust		RR Exhaust		Make Up Air	
Manufacturer		Captive-Aire		Captive-Aire		Captive-Aire	
Model No.		DU240HFA		DR12HFA		A12.250-15D	
Serial No.		5517759		5517759		5517759	
Motor Mfg.	Frame	TECO	213T	Telco	42Y	TECO	145T
Motor HP	RPM	3	1175	1/4	1800	2	1740
Voltage	Phase	208	3	115	1	208	3
Amperage	S.F.	10.2	1	2.9	1	6.06	1
P.F.	Eff.	NL	86.5	NL	NL	NL	86.5

	Test Data					
	Design	Actual	Design	Actual	Design	Actual
Airflow	3200	3276	150	158	1950	1942
Suction SP	-	-1.13"	-	-	-	-0.24"
Discharge SP	-	ATM	-	-	-	0.50"
Total External SP	1.20"	1.13"	-	-	0.50"	0.74"
Fan RPM	774	841	-	640	2040	1646
Operating Voltage	208	148/150/149	115	123	208	202/201/201
Operating Amperage	10.2	6.6/6.7/6.5	2.9	0.1	6.06	4.3/4.2/4.2
Operating Frequency	NL	42.4	NL	38%	NL	57.3
Motor BHP	1.299	1.39	NL	0.01	1.36	1.34

Notes

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Project: Chipotle #4133 - Brandon, FL

System: EF-2

Area Served	No.	Type	Size	Design CFM	Prelim 1	Prelim 2	Prelim 3	Final CFM	AK*	Velocity	Notes
Men's RR	1	ER1	6x6	75	101	78	78	78			
Women's RR	2	ER1	6x6	75	105	80	80	80			
EF-2				150	206	158	158	158			

*If AK = 1.00, velocity information and readings are not required

Notes

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Job Name = Chipotle #4133 - Brandon, FL

PSP Number 1 Information										
PSP Length =	183	inches	Notes:							
PSP Width =	12	inches								
Number of Blanks =	2									
	Reading #1	Reading #2	Reading #3	Reading #4	Reading #5	Reading #6	Reading #7	Reading #8	Reading #9	CFM
Velocity	120	96	121	136	177	125	142	167	211	1942

PSP Number 2 Information										
PSP Length =		inches	Notes:							
PSP Width =	12	inches								
Number of Blanks =										
	Reading #1	Reading #2	Reading #3	Reading #4	Reading #5	Reading #6	Reading #7	Reading #8	Reading #9	CFM
Velocity	0									0

PSP Number 3 Information										
PSP Length =		inches	Notes:							
PSP Width =	12	inches								
Number of Blanks =										
	Reading #1	Reading #2	Reading #3	Reading #4	Reading #5	Reading #6	Reading #7	Reading #8	Reading #9	CFM
Velocity	0									0

PSP Number 4 Information										
PSP Length =		inches	Notes:							
PSP Width =	12	inches								
Number of Blanks =										
	Reading #1	Reading #2	Reading #3	Reading #4	Reading #5	Reading #6	Reading #7	Reading #8	Reading #9	CFM
Velocity	0									0

Total Supply CFM's = 1942 CFM

Job Name = Chipotle #4133 - Brandon, FL

Hood Number 1 Information												
Model =	Length =		Notes:									
	Filter #1	Filter #2	Filter #3	Filter #4	Filter #5	Filter #6	Filter #7	Filter #8	Filter #9	Filter #10	Filter #11	Total CFM
Filter Size	16" x 16" ▼	16" x 16" ▼	16" x 16" ▼	16" x 16" ▼	16" x 16" ▼	16" x 16" ▼	16" x 16" ▼	16" x 16" ▼	16" x 16" ▼	16" x 16" ▼	No Filter ▼	
Velocity	208	210	213	211	197	186	194	206	208	189		
CFM	337	340	345	342	319	301	314	334	337	306	0	3276

Hood Number 2 Information												
Model =	Length =		Notes:									
	Filter #1	Filter #2	Filter #3	Filter #4	Filter #5	Filter #6	Filter #7	Filter #8	Filter #9	Filter #10	Filter #11	Total CFM
Filter Size	No Filter ▼	No Filter ▼	No Filter ▼	No Filter ▼	No Filter ▼	No Filter ▼	No Filter ▼	No Filter ▼	No Filter ▼	No Filter ▼	No Filter ▼	
Velocity												
CFM	0	0	0	0	0	0	0	0	0	0	0	0

Hood Number 3 Information												
Model =	Length =		Notes:									
	Filter #1	Filter #2	Filter #3	Filter #4	Filter #5	Filter #6	Filter #7	Filter #8	Filter #9	Filter #10	Filter #11	Total CFM
Filter Size	No Filter ▼	No Filter ▼	No Filter ▼	No Filter ▼	No Filter ▼	No Filter ▼	No Filter ▼	No Filter ▼	No Filter ▼	No Filter ▼	No Filter ▼	
Velocity												
CFM	0	0	0	0	0	0	0	0	0	0	0	0

Hood Number 4 Information												
Model =	Length =		Notes:									
	Filter #1	Filter #2	Filter #3	Filter #4	Filter #5	Filter #6	Filter #7	Filter #8	Filter #9	Filter #10	Filter #11	Total CFM
Filter Size	No Filter ▼	No Filter ▼	No Filter ▼	No Filter ▼	No Filter ▼	No Filter ▼	No Filter ▼	No Filter ▼	No Filter ▼	No Filter ▼	No Filter ▼	
Velocity												
CFM	0	0	0	0	0	0	0	0	0	0	0	0

Total Exhasut CFM's = 3276 CFM

