Report By:

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

Report: TAB REPORT

Function: Test, Adjust, & Balance

Date: 09/23/2025

Completed By: National TAB

PROJECT

06-23-25 KROGER #014-811 BEAVERCREEK, OH

3165 DAYTON XENIA RD

BEAVERCREEK, OH 45434

Client

Kroger Division 014

150 Tri-County Parkway

Cincinnati, OH 45246

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Project: 06-23-25 KROGER #014-811 BEAVERCREEK, OH

Table Of Contents

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.

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.

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.

Bakery Exhaust Fans

The bakery exhaust fans were measured by traversing the B-vent ductwork. The average velocity of these readings was multiplied by the cross-sectional area of the duct to calculate airflow. Adjustments were made to the fan speed so that the airflow is within tolerance.

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 and that the pressure measurement coincides with the actual and design net airflow. Any deviations from these standards are noted throughout the report.

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Project: 06-23-25 KROGER #014-811 BEAVERCREEK, OH

System/Unit: AHU/RTU

Asset: RTU18 AREA:

Unit Data		
	Design	**Actual**
MFG	NA	AAON
Serial Num	-	201007-APGD03130
Model Num	NA	HB-004-3-V
Type	-	RTU
Configuration	-	VERTICAL
Num OA Filters 1	-	0
OA Filter Size 1	-	N/a
Num Final Filter 1	-	2
Final Filter Size 1	-	25”x20”x2”

Motor Data		
	Design	**Actual**
Horsepower	-	3/4
Motor Rpm	-	1625
Phase	-	1
Rated Voltage	-	230
Rated Amperage	-	6.2

Test Data		
	Design	**Actual**
SF CFM	1600	1716
RA CFM	1360	1485
OA CFM	240	231
RL Voltage	-	230
RL Amperage	-	4.1
SF Rotation	-	CCW
SF System SetPt	-	HIGH
Min OA Damper Position	-	3-1/2”
Min OA Damper Type	-	MANUALLY SET

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.71”
Fan Suction SP	-	-1.12”
Fan Discharge SP	-	0.32”
Total ESP	-	1.03”
Fan Total SP	-	1.44”

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

Completed By: Gabe Merk on 08/06/2025

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Project:06-23-25 KROGER #014-811 BEAVERCREEK, OH

AHU/RTU

Diffuser Supply (GRD)

RTU18/

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	PHARMACY	CD	8"	200	1	207	211	211	105.5
SGRD2	PHARMACY	CD	8"	200	1	194	212	212	106.0
SGRD3	PHARMACY	CD	8"	200	1	218	216	216	108.0
SGRD4	PHARMACY	CD	8"	200	1	241	209	209	104.5
SGRD5	PHARMACY	CD	8"	200	1	220	217	217	108.5
SGRD6	PHARMACY	CD	8"	200	1	228	215	215	107.5
SGRD7	PHARMACY	CD	8"	150	1	162	164	164	109.3
SGRD8	STORAGE 110A	CD1	8"	150	1	189	163	163	108.7
SGRD9	COUNSEL 110B	CD1	8"	100	1	122	109	109	109.0
Total				1600		1781	1716	1716	107.25%

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Project: 06-23-25 KROGER #014-811 BEAVERCREEK, OH

System/Unit: AHU/RTU

Asset: RTU19 AREA:

Unit Data		
	Design	**Actual**
MFG	NA	AAON
Serial Num	-	201007-APGE03129
Model Num	NA	HB-005-3-V
Type	-	RTU
Configuration	-	VERTICAL
Num OA Filters 1	-	0
OA Filter Size 1	-	N/a
Num Final Filter 1	-	2
Final Filter Size 1	-	24”x20”x2”
Num Final Filter 2	-	
Final Filter Size 2	-	

Motor Data		
	Design	**Actual**
Motor MFG	-	
Frame	-	
Horsepower	-	3/4
Motor Rpm	-	1625
Phase	-	1
Rated Voltage	-	230
Rated Amperage	-	6.2

Drive Data	
	Actual
Motor Sheave Size	
Motor Bore Size	
Motor Sheave SetPt	
Fan Sheave Size	
Fan Sheave Bore	
Belt CL Distance	
Num of Belts	
Belt Size	
Belt Alignment	

Test Data		
	Design	**Actual**
SF CFM	-	
SF RPM	-	
RA CFM	-	
OA CFM	-	
RL Voltage	-	
RL Amperage	-	
SF Rotation	-	
SF System SetPt	-	
RA Damper Position	-	
Min OA Damper Position	-	
Min OA Damper Type	-	
OA Enthalpy Setpt	-	

Performance Data		
	Design	**Actual**
MA Plenum SP	-	
Fan Suction SP	-	
Fan Discharge SP	-	
Total ESP	-	
Fan Total SP	-	

General	
	Actual
Fan Rotation Correct	
Unit Filters Clean	
Condensate Drain Installed	

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Project:06-23-25 KROGER #014-811 BEAVERCREEK, OH

AHU/RTU

Diffuser Supply (GRD)

RTU19/

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	CD		320	320					-
SGRD2	CD		320	320					-
SGRD3	CD		320	320					-
SGRD4	CD		320	320					-
SGRD5	CD		320	320					-
Total				1600		0	0	0	0%

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Project: 06-23-25 KROGER #014-811 BEAVERCREEK, OH

System/Unit: AHU/RTU

Asset: RTU20 AREA:

Unit Data		
	Design	**Actual**
MFG	NA	AAON
Serial Num	-	201007-APGB03131
Model Num	NA	HB-002-3-V
Type	-	RTU
Configuration	-	VERTICAL
Num OA Filters 1	-	0
OA Filter Size 1	-	N/a
Num Final Filter 1	-	2
Final Filter Size 1	-	24”x20”x2”

Motor Data		
	Design	**Actual**
Horsepower	-	3/4
Motor Rpm	-	1625
Phase	-	1
Rated Voltage	-	230
Rated Amperage	-	6.2

Test Data		
	Design	**Actual**
SF CFM	800	1595
RA CFM	680	1459
OA CFM	120	136
RL Voltage	-	INACCESSIBLE
RL Amperage	-	3.7
SF Rotation	-	CCW
SF System SetPt	-	HIGH
Min OA Damper Position	-	2"
Min OA Damper Type	-	MANUALLY SET

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.43”
Fan Suction SP	-	-0.72”
Fan Discharge SP	-	0.64”
Total ESP	-	1.07”
Fan Total SP	-	1.36”

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

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Project:06-23-25 KROGER #014-811 BEAVERCREEK, OH

AHU/RTU

Diffuser Supply (GRD)

RTU20/

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	CLINIC	CD1	6"	75	1	191	187	170	226.7
SGRD2	CLINIC RR	CD2	6"	50	1	40	93	116	232.0
SGRD3	MED PREP	CD1	8"	125	1	387	372	274	219.2
SGRD4	PATIENT CARE RM 1	CD1	8"	250	1	401	376	409	163.6
SGRD5	PATIENT CARE RM 2	CD1	8"	150	1	442	397	317	211.3
SGRD6	PATIENT CARE RM 2	CD1	8"	150	1	115	350	309	206.0
Total				800		1576	1775	1595	199.38%

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Project: 06-23-25 KROGER #014-811 BEAVERCREEK, OH

System/Unit: AHU/RTU

Asset: RTU-BANK1 AREA:

Unit Data		
	Design	**Actual**
MFG	NA	YORK
Serial Num	-	N1K0296543
Model Num	NA	D23NZ036N05625A
Type	-	RTU
Configuration	-	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	14”x16”
Num Final Filter 1	-	1
Final Filter Size 1	-	20”x20”x1”
Num Final Filter 2	-	
Final Filter Size 2	-	

Motor Data		
	Design	**Actual**
Motor MFG	-	
Frame	-	
Horsepower	-	3/4
Motor Rpm	-	
Phase	-	1
Rated Voltage	-	208
Rated Amperage	-	6.0

Test Data		
	Design	**Actual**
SF CFM	1200	1113
SF RPM	-	
RA CFM	1020	
OA CFM	180	
RL Voltage	-	208
RL Amperage	-	
SF Rotation	-	
SF System SetPt	-	
RA Damper Position	-	
Min OA Damper Position	-	
Min OA Damper Type	-	
OA Enthalpy Setpt	-	

Performance Data		
	Design	**Actual**
MA Plenum SP	-	
Fan Suction SP	-	
Fan Discharge SP	-	
Total ESP	-	
Fan Total SP	-	

General	
	Actual
Fan Rotation Correct	
Unit Filters Clean	
Condensate Drain Installed	

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Project:06-23-25 KROGER #014-811 BEAVERCREEK, OH

AHU/RTU

Diffuser Supply (GRD)

RTU-BANK1/

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	CLINIC	CD1	8"	160	1	155	155	155	96.9
SGRD2	DESK	CD1	8"	160	1	147	147	147	91.9
SGRD3	SECURE STORAGE	SR1	12"	300	0.545	273	273	273	91.0
SGRD4	SECURE STORAGE	SR1	10"	300	0.545	277	277	277	92.3
SGRD5	WOMENS RR	SR	6"	50	1	47	47	47	94.0
SGRD6	HALL A	SR	6"	100	1	93	93	93	93.0
SGRD7	MENS RR	SR	6"	80	1	73	73	73	91.3
SGRD8	CLEANING CLOSET	SR	6"	50	1	48	48	48	96.0
Total				1200		1113	1113	1113	92.75%

Completed By: Gabe Merk on 06/23/2025

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System/Unit: FAN - Exhaust

Asset: EF1 AREA:

Unit Data		
	Design	**Actual**
MFG	NA	CAPTIVEAIRE
Model Num	NA	DR12HFA
Serial Num	-	42811
Type	-	CRE DOWNBLAST
Configuration	-	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	FASCO
Horsepower	-	0.18
Motor Rpm	-	1625
Phase	-	1
Voltage (rated)	-	115
Amperage (rated)	-	2.0

Test Data		
	Design	**Actual**
CFM	350	368
Fan Rotation	-	CCW
System SetPt	-	DIAL
RL Voltage	-	82
RL Amperage	-	2.3
Total ESP	-	0.45”
Fan Inlet SP	-	-0.45”

Completed By: Gabe Merk on 08/06/2025

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Project:06-23-25 KROGER #014-811 BEAVERCREEK, OH

FAN - Exhaust

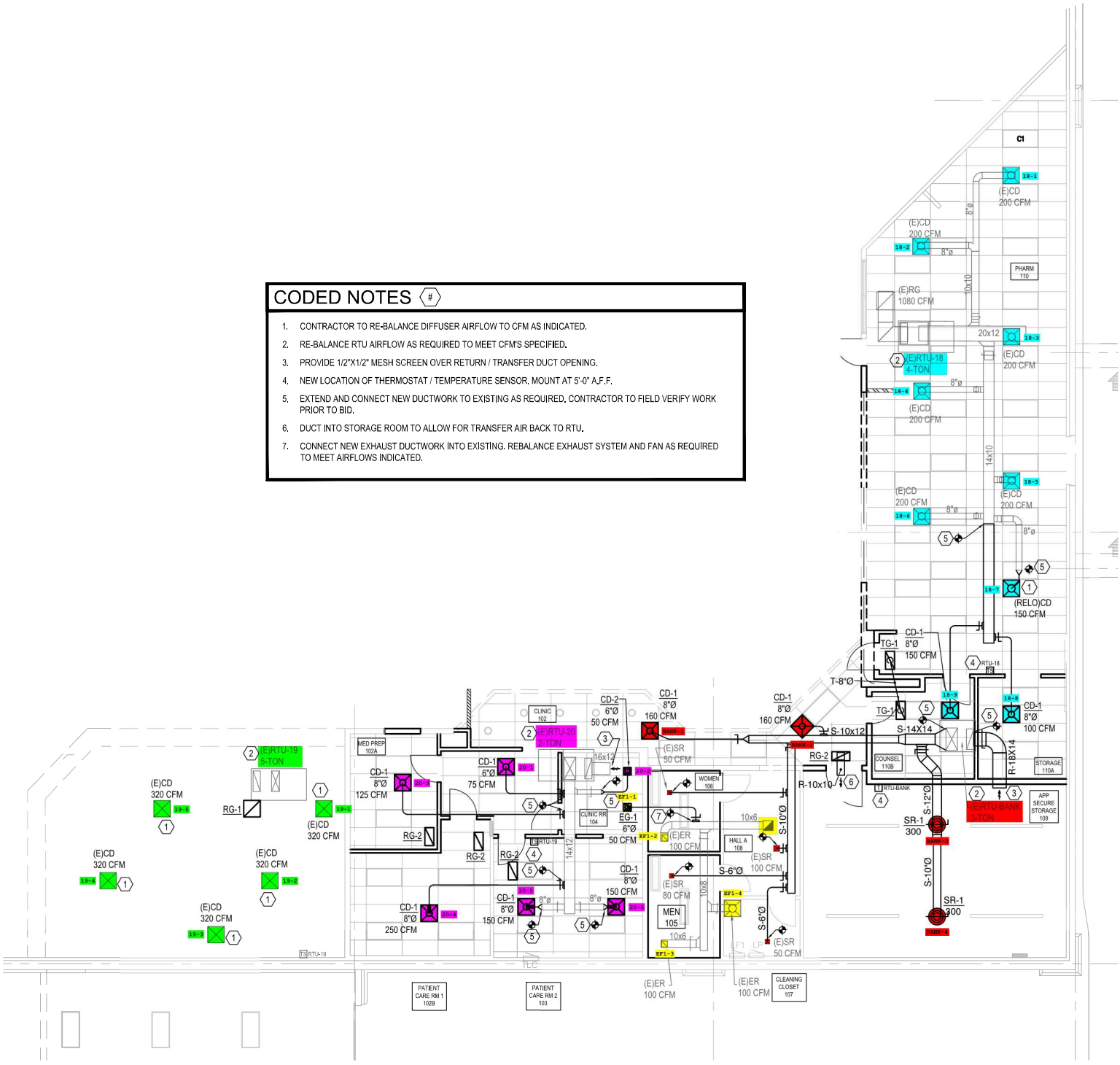
Diffuser Ret/Exh (GRD)

EF1/

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
EGRD1	CLINIC RR	EG1	6"	50	1	134	95	55	110.0
EGRD2	WOMENS RR			100	1	144	91	110	110.0
EGRD3	MENS RR			100	1	158	117	105	105.0
EGRD4	CLOSET			100	1	126	110	98	98.0
Total				350		562	413	368	105.14%

CODED NOTES

1. CONTRACTOR TO RE-BALANCE DIFFUSER AIRFLOW TO CFM AS INDICATED.
2. RE-BALANCE RTU AIRFLOW AS REQUIRED TO MEET CFM'S SPECIFIED.
3. PROVIDE 1/2"X1/2" MESH SCREEN OVER RETURN / TRANSFER DUCT OPENING.
4. NEW LOCATION OF THERMOSTAT / TEMPERATURE SENSOR. MOUNT AT 5'-0" A.F.F.
5. EXTEND AND CONNECT NEW DUCTWORK TO EXISTING AS REQUIRED. CONTRACTOR TO FIELD VERIFY WORK PRIOR TO BID.
6. DUCT INTO STORAGE ROOM TO ALLOW FOR TRANSFER AIR BACK TO RTU.
7. CONNECT NEW EXHAUST DUCTWORK INTO EXISTING. REBALANCE EXHAUST SYSTEM AND FAN AS REQUIRED TO MEET AIRFLOWS INDICATED.



MECHANICAL NEW PLAN

SCALE: 1/8" = 1'-0"

2 M1.1

N