Report By:

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

NATIONAL TAB

Comfort. Under control.

Report: UCM Skyhaven (Warrensburg, MO)
Function: Test, Adjust, & Balance
Date: 04/18/2023

PROJECT

UCM Skyhaven (Warrensburg, MO)

NW 251 Road

Warrensburg, MO 64019

Client

Metro Air Conditioning

8151 McCoy

Shawnee, KS 66227

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Project: UCM Skyhaven (Warrensburg, MO)

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CERTIFICATION

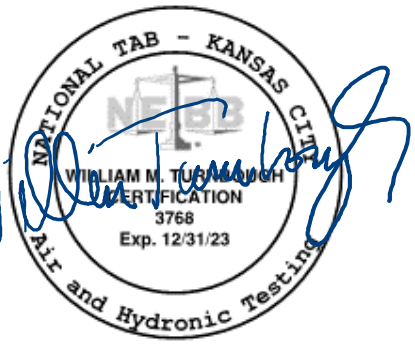
PROJECT: UCM Skyhaven (Warrensburg, MO)

The data presented in this report is a record of system measurements and final adjustments that have been obtained in accordance with the current edition of the NEBB Procedural Standard for Testing, Adjusting and Balancing of Environmental Systems. The measurements shown, and the information given, in this report are certified to be accurate and complete, at the time and date information was gathered. Any variances from design quantities, which exceed NEBB tolerances, are noted in the TAB report project summary.

NEBB TAB FIRM: National TAB - Kansas City
REGISTRATION NO: 3768
CERTIFIED BY: Will Turnbough
DATE: 4/18/2023

Submitted and Certified by:

NEBB TAB FIRM: National TAB - Kansas City
TAB PROFESSIONAL: Will Turnbough
REGISTRATION NO: CP-24289
CERTIFICATION EXP: 12/31/2023



Function		Range	Minimum Accuracy	Instrument Information	Calibration Date	Date Due
AIR	AIR PRESSURE	0 in wg to 10 in wg	2% +/- 0.001 in wg	TSI EBT731 EBT732117009	8/12/2022	8/12/2023
	AIR VELOCITY INSTRUMENT	50 fpm to 3900 fpm	+/- 5 % +/- 7 fpm	Evergreen Telemetry CH-15D 1600185	5/20/2022	5/20/2023
	DIRECT HOOD READING	100 cfm to 2000 cfm	+/- 5 % +/- 7 cfm	Evergreen Telemetry CH-15D 1600185	5/20/2022	5/20/2023
TEMPERATURE	AIR METER	-20 F to 240 F	+/- .5 % 2 F	Cooper SRH77A S/N 100516003	8/12/2022	8/12/2023
	AIR PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper SRH77A S/N 100516003	8/12/2022	8/12/2023
	IMMERSION METER	-20 F to 240 F	+/- .5 % 2 F	Cooper SRH77A S/N 100516003	8/12/2022	8/12/2023
	IMMERSION PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper SRH77A S/N 100516003	8/12/2022	8/12/2023
	CONTACT METER	-20 F to 240 F	+/- .5 % 2 F	Cooper SRH77A S/N 100516003	8/12/2022	8/12/2023
	CONTACT PROBE	-20 F to 240 F	+/- .5 % 2 F	Cooper SRH77A S/N 100516003	8/12/2022	8/12/2023
HUMIDITY	HUMIDITY PROBE	10 % RH to 90 % RH	3% of reading	Cooper SRH77A S/N 100516003	8/12/2022	8/12/2023
ELECTRICAL	VOLTAGE MEASUREMENT	0 VAC to 600 VAC	2 % reading +/- 5 digits	Fluke 323 S/N 35491023WS	8/11/2022	8/11/2023
	AMPERAGE MEASUREMENT	0 Amperers to 100 Amperes	2 % reading +/- 5 digits	Fluke 323 S/N 35491023WS	8/11/2022	8/11/2023
ROTATION	ROTATION MEASUREMENT	60 rpm to 5000 rpm	2 % reading 2 rpm	Shimpo DT 207Lp S/N D1690029R	8/11/2022	8/11/2023
HYDRONIC	PRESSURE MEASUREMENT	-30 in Hg to 200 psi	±2% of reading +/- 1 psi	Hydronic Manometer - Dwyer 490W-6-HKIT S/N: 359515093207912	8/12/2022	8/12/2023
	DIFFERENTIAL PRESSURE MEASUREMENT	0 psi - 80 psi	±2% of reading +/- 1 psi	Hydronic Manometer - Dwyer 490W-6-HKIT S/N: 359515093207912	8/12/2022	8/12/2023

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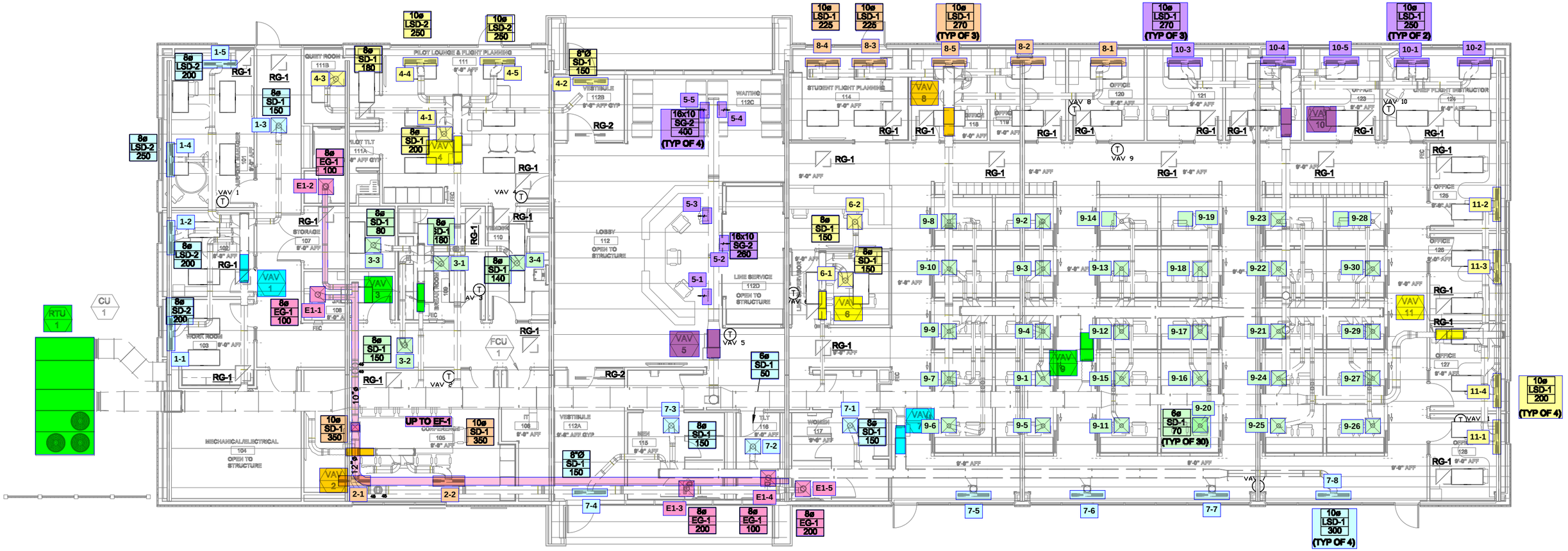
Abbreviation List

A = Area (ft^2)	S.F. = Service Factor
AHU = Air Handling Unit	SF = Supply Fan
A_k = Effective Area	SP = Static Pressure
BHP = Brake Horsepower (IP) HP	SR = Supply Register
Btu = British Thermal Unit	T = Temperature
Btu/h = Btuh = BTUH = BTU/Hour	T_{ma} = Mixed Air Temperature
CL = Center Distance (used in belt formula)	T_{oa} = Outside Air Temperature
CD = Ceiling Diffuser	T_{ra} = Return Air Temperature
CF = Correction Factor	H = Head (in wc, ft wc, psi)
CFM = Volumetric Flow: Cubic Feet Per Minute	h = Enthalpy
CO2 = Carbon Dioxide	HP = Horsepower
CO = Carbon Monoxide	hr = Hour
C_v = Flow Constant	K_v = Flow constant (SI)
d = Diameter (in.) IP	kW = Kilowatt = 1000 Watts
Δ = Difference or Change (Final - Initial)	LAT = Leaving Air Temperature
DB = Dry Bulb	lb = Pounds
EA = Exhaust Air	LWT = Leaving Water Temperature
EAT = Entering Air Temperature	ma = Mixed Air
EF = Exhaust Fan	MIN = Minimum
Eff = Efficiency	MAX = Maximum
EG = Exhaust Grille	N/A = Not Applicable
ESP = External Static Pressure	NA = No Access
EWT = Entering Water Temperature	NL = Not Listed
°F = Degrees Fahrenheit, °F	NPSHA = Net Positive Suction Head Available
FPB = Fan Powered Box	NS = Not Specified
FLA = Full Load Amps	OA = Outside Air
fpm = Feet per Minute (fpm)	OAT = Outside Air Temperature
ft = Foot	PD = Sheave Pitch Diameter
gal = Gallons	P.D. = Pressure Drop
GPM = Gallons Per Minute (GPM)	PF = Power Factor
h = Enthalpy (BTU/lb dry air)	SG = Supply Grille
P = Pressure	SR = Supply Register
ppm = parts per million	TP = Total Pressure
psi = Pounds Per Square Inch	T_{ra} = Return Air Temperature
psid = PSI Differential	TS = Tip Speed (fpm) IP, (m/s) SI
r = Radius (in)	TSP = Total Static Pressure
$\%_{ra}$ = % of Return Air	V = Velocity
RA = Return Air	VAV = Variable Air Volume
RAT = Return Air Temperature	VD = Volume Damper
RF = Return Fan	VFD = Variable Frequency Drive
RG = Return Grille	W = Watt
RH = Relative Humidity	WB = Wet Bulb
RPM = Revolutions Per Minute	wg = wc = water gauge = water column
RTU = Roof Top Unit	WHP = Water Horsepower (IP)
SA = Supply Air	ω = Humidity Ratio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CU 1
FCU 1
VAV 1
VAV 2
VAV 3
VAV 4
VAV 5
VAV 6
VAV 7
VAV 8
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VAV 10
VAV 11
VAV 12
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RG-2
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10ø LSD-2 250
8ø LSD-2 200
8ø LSD-2 250
8ø SD-1 180
8ø SD-1 150
8ø SD-1 80
8ø SD-1 140
8ø EG-1 100
8ø SD-2 200
10ø SD-1 350
8ø SD-1 200
16x10 SG-2 400 (TYP OF 4)
16x10 SG-2 260
6ø SD-1 50
8ø SD-1 150
8ø EG-1 200
8ø EG-1 100
8ø SD-1 150
8ø SD-1 150
10ø LSD-1 225
10ø LSD-1 270 (TYP OF 3)
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10ø LSD-1 200 (TYP OF 4)
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9'-0" AFF
12"ø

National TAB

Project: UCM Skyhaven (Warrensburg, MO)

System/Unit: AHU/RTU

Asset: RTU-1 AREA:105

Unit Data		
	Design	**Actual**
MFG	NA	TRANE
Serial Num	-	C22E04153
Model Num	NA	TEH330BEA11B2DC400C0E00HHB
Configuration	-	HORIZONTAL
Num OA Filters 2	-	3 METAL MESH
OA Filter Size 2	-	22.5X36.5
Num PreFilter 1	-	16
PreFilter Size 1	-	16X20X2

Motor Data		
	Design	**Actual**
Motor MFG	-	BALDOR ELECTRIC
Frame	-	215T
Horsepower	-	10.0
Motor Rpm	-	1770
Phase	-	3
Rated Voltage	-	230/460
Rated Amperage	-	25/12.5
Service Factor	-	1.15

Drive Data		
	Design	**Actual**
Motor Sheave Size	-	BK67H
Motor Bore Size	-	1-3/8"
Motor Sheave SetPt	-	VFD
Fan Sheave Size	-	BK140
Fan Sheave Bore	-	1-7/16"
Belt CL Distance	-	35.5"
Num of Belts	-	1
Belt Size	-	BX103

Test Data		
	Design	**Actual**
SF CFM	10000	10280
SF RPM	677	709
RA CFM	9000	9268
OA CFM	1000	1012
RL Voltage	460	211/213/214
RL Amperage	12.60	18.2
SF Motor Freq(HZ)	60	59.1
SF System SetPt	-	1.20" SP
Min OA Damper Position	-	5%
Brake Horse Power	6.64	

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.15"
Fan Suction SP	-	-0.46"
Fan Discharge SP	-	1.44"
Total ESP	1.500	1.59"
Fan Total SP	2.050	1.90"
Pre-Filter P.D.	-	0.31"
Cooling Coil P.D.	-	0.31"

Completed By: Michael Gabbert

Notes:

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VAV - Single Duct

RTU-1/105

Asset											
Asset Name	**MFG**	**Model Num**	**Type**	**Inlet Size**	**Design Max CFM**	**Max CFM**	**Design Min CFM**	**Min CFM**	**Design Heat CFM**	**Heat CFM**	**Ak (max)**
VAV-1	TRANE	VCEF10000 M0DD74A	ELECTRIC HEAT	10"	1000	982	200	182	500	517	1.11 GAIN -1.36% OFFSET
VAV-2	TRANE	VCEF08000 M0DD74A	ELECTRIC HEAT	8"	700	716	140	134	350	351	1.01 GAIN 0% OFFSET
VAV-3	TRANE	VCEF06000 N0DD74A	ELECTRIC HEAT	6"	550	504	80	78	190	195	0.88 GAIN 0.08% OFFSET
VAV-4	TRANE	VCEF10000 M0DD74A	ELECTRIC HEAT	10"	1030	1040	210	193	520	516	1.01 GAIN 0% OFFSET
VAV-5	TRANE	VCEF14000 M0DD74A	ELECTRIC HEAT	14"	1860	1797	380	386	930	954	1.1 GAIN -1.75% OFFSET
VAV-6	TRANE	VCEF06000 M0DD74A	ELECTRIC HEAT	6"	300	306	60	59	150	156	0.89 GAIN 1.82% OFFSET
VAV-7	TRANE	VCEF12000 M0DD74A	ELECTRIC HEAT	12"	1700	1646	330	327	830	835	0.91 GAIN 0% OFFSET
VAV-8	TRANE	VCEF12000 M0DD74A	ELECTRIC HEAT	12"	1260	1237	260	246	630	638	0.97 GAIN 0% OFFSET
VAV-9	TRANE	VCEF14000 M0DD74A	ELECTRIC HEAT	14"	2100	2088	420	427	1050	1077	1.18 GAIN 0%OFFSET
VAV-10	TRANE	VCEF12000 M0DD74A	ELECTRIC HEAT	12"	1310	1264	270	261	660	670	1.18 GAIN 0% OFFSET
VAV-11	TRANE	VCEF08000 M0DD74A	ELECTRIC HEAT	8"	800	774	140	153	340	348	1.06 GAIN -0.82% OFFSET

Diffuser Supply (GRD)

VAV-1/102

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
1-1	103	LSD-2	8	200	221	204	102.0
1-2	102	LSD-2	8	200	248	205	102.5
1-3	HALL	SD-1	8	150	250	159	106.0
1-4	101	LSD-2	8	200	207	189	94.5
1-5	101	LSD-2	8	250	158	225	90.0

VAV-10/123

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
10-1	124	LSD-1	10	250	156	205	82.0
10-2	124	LSD-1	10	250	302	245	98.0
10-3	121	LSD-1	10	270	299	264	97.8
10-4	122	LSD-1	10	270	267	282	104.4
10-5	123	LSD-1	10	270	283	268	99.3

VAV-11/127

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
11-1	128	LSD-1	10	200	150	191	95.5
11-2	125	LSD-1	10	200	166	194	97.0
11-3	126	LSD-1	10	200	244	207	103.5
11-4	127	LSD-1	10	200	234	182	91.0

VAV-2/

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
2-1	105	SD-1	10	350	369	369	105.4
2-2	105	SD-1	10	350	347	347	99.1

VAV-3/110

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
3-1	109	SD-1	8	180	143	163	90.6
3-2	HALL	SD-1	8	150	122	136	90.7
3-3	107	SD-1	8	80	66	73	91.3
3-4	110	SD-1	8	140	130	132	94.3

VAV-4/111

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
4-1	111	SD-1	8	200	222	208	104.0
4-2	112B	SD-1	8	150	148	164	109.3
4-3	111B	SD-1	8	180	206	182	101.1
4-4	111	LSD-2	10	250	241	256	102.4
4-5	111	LSD-2	10	250	224	230	92.0

VAV-5/112C

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
5-1	112	SG-2	16X10	465	317	420	90.3
5-2	112D	SG-2	16X10	0	0	0	-
5-3	112	SG-2	16X10	465	506	448	96.3
5-4	112C	SG-2	16X10	465	550	485	104.3
5-5	112C	SG-2	16X10	465	461	444	95.5

VAV-6/112D

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
6-1	113	SD-1	8	150	202	148	98.7
6-2	112D	SD-1	8	150	105	158	105.3

VAV-7/HALL

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
7-1	117	SD-1	8	150	249	153	102.0
7-2	116	SD-1	6	50	214	53	106.0
7-3	115	SD-1	8	150	229	154	102.7
7-4	112A	SD-1	8	150	145	138	92.0
7-5	HALL	LSD-1	10	300	159	284	94.7
7-6	HALL	LSD-1	10	300	158	290	96.7
7-7	HALL	LSD-1	10	300	179	302	100.7
7-8	HALL	LSD-1	10	300	220	272	90.7

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VAV-8/118

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
8-1	120	LSD-1	10	270	224	277	102.6
8-2	119	LSD-1	10	270	297	260	96.3
8-3	114	LSD-1	10	225	230	206	91.6
8-4	114	LSD-1	10	225	186	226	100.4
8-5	118	LSD-1	10	270	291	268	99.3

VAV-9/OPEN OFFICE

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
9-1	OPEN OFFICE	SD-1	6	70	101	64	91.4
9-2	OPEN OFFICE	SD-1	6	70	91	75	107.1
9-3	OPEN OFFICE	SD-1	6	70	104	68	97.1
9-4	OPEN OFFICE	SD-1	6	70	91	64	91.4
9-5	OPEN OFFICE	SD-1	6	70	99	69	98.6
9-6	OPEN OFFICE	SD-1	6	70	72	70	100.0
9-7	OPEN OFFICE	SD-1	6	70	102	67	95.7
9-8	OPEN OFFICE	SD-1	6	70	114	66	94.3
9-9	OPEN OFFICE	SD-1	6	70	83	71	101.4
9-10	OPEN OFFICE	SD-1	6	70	34	73	104.3
9-11	OPEN OFFICE	SD-1	6	70	71	74	105.7
9-12	OPEN OFFICE	SD-1	6	70	91	73	104.3
9-13	OPEN OFFICE	SD-1	6	70	83	70	100.0
9-14	OPEN OFFICE	SD-1	6	70	89	69	98.6
9-15	OPEN OFFICE	SD-1	6	70	73	73	104.3
9-16	OPEN OFFICE	SD-1	6	70	71	74	105.7
9-17	OPEN OFFICE	SD-1	6	70	96	66	94.3
9-18	OPEN OFFICE	SD-1	6	70	84	67	95.7
9-19	OPEN OFFICE	SD-1	6	70	84	75	107.1
9-20	OPEN OFFICE	SD-1	6	70	93	66	94.3
9-21	OPEN OFFICE	SD-1	6	70	56	66	94.3
9-22	OPEN OFFICE	SD-1	6	70	52	67	95.7
9-23	OPEN OFFICE	SD-1	6	70	63	70	100.0
9-24	OPEN OFFICE	SD-1	6	70	87	75	107.1
9-25	OPEN OFFICE	SD-1	6	70	75	71	101.4
9-26	OPEN OFFICE	SD-1	6	70	75	69	98.6
9-27	OPEN OFFICE	SD-1	6	70	90	66	94.3
9-28	OPEN OFFICE	SD-1	6	70	105	67	95.7
9-29	OPEN OFFICE	SD-1	6	70	84	70	100.0
9-30	OPEN OFFICE	SD-1	6	70	78	73	104.3

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Diffuser Supply (GRD)

VAV-1/102

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
1-1	103	LSD-2	8	200	221	204	102.0
1-2	102	LSD-2	8	200	248	205	102.5
1-3	HALL	SD-1	8	150	250	159	106.0
1-4	101	LSD-2	8	200	207	189	94.5
1-5	101	LSD-2	8	250	158	225	90.0

VAV-10/123

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
10-1	124	LSD-1	10	250	156	205	82.0
10-2	124	LSD-1	10	250	302	245	98.0
10-3	121	LSD-1	10	270	299	264	97.8
10-4	122	LSD-1	10	270	267	282	104.4
10-5	123	LSD-1	10	270	283	268	99.3

VAV-11/127

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
11-1	128	LSD-1	10	200	150	191	95.5
11-2	125	LSD-1	10	200	166	194	97.0
11-3	126	LSD-1	10	200	244	207	103.5
11-4	127	LSD-1	10	200	234	182	91.0

VAV-2/

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
2-1	105	SD-1	10	350	369	369	105.4
2-2	105	SD-1	10	350	347	347	99.1

VAV-3/110

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
3-1	109	SD-1	8	180	143	163	90.6
3-2	HALL	SD-1	8	150	122	136	90.7
3-3	107	SD-1	8	80	66	73	91.3
3-4	110	SD-1	8	140	130	132	94.3

VAV-4/111

Asset							
Asset Name	Location	Type	Size	DESIGN CFM	CFM(1)	FINAL CFM	% to design
4-1	111	SD-1	8	200	222	208	104.0
4-2	112B	SD-1	8	150	148	164	109.3
4-3	111B	SD-1	8	180	206	182	101.1
4-4	111	LSD-2	10	250	241	256	102.4
4-5	111	LSD-2	10	250	224	230	92.0

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VAV-5/112C

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
5-1	112	SG-2	16X10	465	317	420	90.3
5-2	112D	SG-2	16X10	0	0	0	-
5-3	112	SG-2	16X10	465	506	448	96.3
5-4	112C	SG-2	16X10	465	550	485	104.3
5-5	112C	SG-2	16X10	465	461	444	95.5

VAV-6/112D

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
6-1	113	SD-1	8	150	202	148	98.7
6-2	112D	SD-1	8	150	105	158	105.3

VAV-7/HALL

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
7-1	117	SD-1	8	150	249	153	102.0
7-2	116	SD-1	6	50	214	53	106.0
7-3	115	SD-1	8	150	229	154	102.7
7-4	112A	SD-1	8	150	145	138	92.0
7-5	HALL	LSD-1	10	300	159	284	94.7
7-6	HALL	LSD-1	10	300	158	290	96.7
7-7	HALL	LSD-1	10	300	179	302	100.7
7-8	HALL	LSD-1	10	300	220	272	90.7

VAV-8/118

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
8-1	120	LSD-1	10	270	224	277	102.6
8-2	119	LSD-1	10	270	297	260	96.3
8-3	114	LSD-1	10	225	230	206	91.6
8-4	114	LSD-1	10	225	186	226	100.4
8-5	118	LSD-1	10	270	291	268	99.3

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VAV-9/OPEN OFFICE

Asset							
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**CFM(1)**	**FINAL CFM**	**% to design**
9-1	OPEN OFFICE	SD-1	6	70	101	64	91.4
9-2	OPEN OFFICE	SD-1	6	70	91	75	107.1
9-3	OPEN OFFICE	SD-1	6	70	104	68	97.1
9-4	OPEN OFFICE	SD-1	6	70	91	64	91.4
9-5	OPEN OFFICE	SD-1	6	70	99	69	98.6
9-6	OPEN OFFICE	SD-1	6	70	72	70	100.0
9-7	OPEN OFFICE	SD-1	6	70	102	67	95.7
9-8	OPEN OFFICE	SD-1	6	70	114	66	94.3
9-9	OPEN OFFICE	SD-1	6	70	83	71	101.4
9-10	OPEN OFFICE	SD-1	6	70	34	73	104.3
9-11	OPEN OFFICE	SD-1	6	70	71	74	105.7
9-12	OPEN OFFICE	SD-1	6	70	91	73	104.3
9-13	OPEN OFFICE	SD-1	6	70	83	70	100.0
9-14	OPEN OFFICE	SD-1	6	70	89	69	98.6
9-15	OPEN OFFICE	SD-1	6	70	73	73	104.3
9-16	OPEN OFFICE	SD-1	6	70	71	74	105.7
9-17	OPEN OFFICE	SD-1	6	70	96	66	94.3
9-18	OPEN OFFICE	SD-1	6	70	84	67	95.7
9-19	OPEN OFFICE	SD-1	6	70	84	75	107.1
9-20	OPEN OFFICE	SD-1	6	70	93	66	94.3
9-21	OPEN OFFICE	SD-1	6	70	56	66	94.3
9-22	OPEN OFFICE	SD-1	6	70	52	67	95.7
9-23	OPEN OFFICE	SD-1	6	70	63	70	100.0
9-24	OPEN OFFICE	SD-1	6	70	87	75	107.1
9-25	OPEN OFFICE	SD-1	6	70	75	71	101.4
9-26	OPEN OFFICE	SD-1	6	70	75	69	98.6
9-27	OPEN OFFICE	SD-1	6	70	90	66	94.3
9-28	OPEN OFFICE	SD-1	6	70	105	67	95.7
9-29	OPEN OFFICE	SD-1	6	70	84	70	100.0
9-30	OPEN OFFICE	SD-1	6	70	78	73	104.3

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Asset	Notes
VAV-1	S/N: R22K06501
VAV-2	S/N: R22K06504
10-1	DAMPER FOR DIFFUSER IS 100% OPEN. TECH IS UNABLE TO PUSH MORE AIR TO DIFFUSER WITHOUT PUTTING OTHERS ON THE SYSTEM OUT OF DESIGN. THE DIFFUSER IS IN A ROOM WITH ANOTHER DIFFUSER AND THERE SHOULD NOT BE COMFORT ISSUES.
5-1	Design CFM increased from 400 CFM to 465 CFM
10-1	DAMPER FOR DIFFUSER IS 100% OPEN. TECH IS UNABLE TO PUSH MORE AIR TO DIFFUSER WITHOUT PUTTING OTHERS ON THE SYSTEM OUT OF DESIGN. THE DIFFUSER IS IN A ROOM WITH ANOTHER DIFFUSER AND THERE SHOULD NOT BE COMFORT ISSUES.
5-1	Design CFM increased from 400 CFM to 465 CFM

National TAB

Project: UCM Skyhaven (Warrensburg, MO)

System/Unit: FAN - Exhaust

Asset: EF-1 AREA:117

Unit Data		
	Design	**Actual**
MFG	NA	GREENHECK
Model Num	NA	G-100-4-VG-1-19-Z
Serial Num	-	21253792
Type	-	DOWNBLAST

Motor Data		
	Design	**Actual**
Motor MFG	-	BROAD OCEAN
Frame	-	NL
Horsepower	-	1/4
Motor Rpm	-	300-1725
Phase	-	1
Voltage (rated)	-	115/208-230
Amperage (rated)	-	2.85/1.7
Service Factor	-	1.25

Test Data		
	Design	**Actual**
CFM	700	721
RL Voltage	-	122V
RL Amperage	-	0.7A
Total ESP	0.5	0.17"

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Notes:

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National TAB

Project:UCM Skyhaven (Warrensburg, MO)

FAN - Exhaust

Diffuser Ret/Exh (GRD)

EF-1/117

Asset								
Asset Name	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
E1-1	EG-1	8	100	1	315	198	102	102.0
E1-2	EG-1	8	100	1	245	181	109	109.0
E1-3	EG-1	8	200	261.5CFM/572FPM=0.457	239	335	209	104.5
E1-4	EG-1	8	100	1	234	175	105	105.0
E1-5	EG-1	8	200	1	265	378	196	98.0

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