

Report By:

**National TAB
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SUITE 4210
CINCINNATI, OH 45246**



Report: G1 & G3 Preliminary Report

Function: Test, Adjust, & Balance

Date: 04/19/2024

PROJECT

Westover Hills (San Antonio, TX)

3011 W Loop 1604 N

San Antonio, TX

Client

Robins & Morton

2015 Ayrley Town Blvd Suite 203

Charlotte, NC 28273

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Project: Westover Hills (San Antonio, TX)

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Project: Westover Hills Baptist Hospital
Address: San Antonio, TX

Asset: AHU-G-1

Area: GENERAL

Supply Side
Unit Data

Manufacturer	TRANE
Model Number	CSAA050UAM00
Serial Number	H23B20200
Configuration	VERTICAL
No. Pre Filters / Size	36 / 20x20x4
No. Final Filters / Size	5 / 12x24x12
No. Final Filters / Size	10 / 24x24x12

Return Side
Unit Data

Manufacturer	TRANE
Model Number	CSAA050UAM00
Serial Number	H23B20200
Configuration	VERTICAL
No. Pre Filters / Size	
No. Final Filters / Size	
No. Final Filters / Size	

Motor Data X 4

Motor MFG / Frame	BALDOR / 256T
Horsepower / RPM	20 / 1765
Rated Volts / Phase	460 / 3
Rated Amperage / SF	24.0 / 1.15

Motor Data X 4

Motor MFG / Frame	BALDOR / 184T
Horsepower / RPM	5.0 / 1750
Rated Volts / Phase	460 / 3
Rated Amperage / SF	6.6 / 1.15

Test Data

	Design	Actual
Total CFM	20250	21418
Min OA CFM	7550	7481
Fan RPM	3290	2677
VFD Speed HZ	111	91.0 Hz
RL Voltage	460	367/367/366
RL Amperage		39.4/40.9/41.3
Motor B.H.P. combined	48.085	33.78

Test Data

	Design	Actual
Total CFM	12700	13937
Fan RPM	1803	1488
VFD Speed HZ	61	51.0 Hz
RL Voltage	460	290/291/290
RL Amperage		10.5/10.3/10.5
Motor B.H.P. combined	7.642	7.90

Performance Data

	Design	Actual
Suction S.P.		-0.92"
Discharge S.P.		3.21"
Total SP	9.097	4.13"
CW Coil P.D.	0.796	0.56"
HW Coil P.D.	0.013	0.13"
Pre Filters P.D.	0.787	0.06"
Final Filters P.D.	1.500	1.21"
System Set Point		1.66"
Total ESP	4.4	2.17"

Performance Data

	Design	Actual
Suction S.P.		-0.94
Discharge S.P.		-0.09
Total SP	2.145	0.85
CW Coil P.D.		
HW Coil P.D.		
Pre Filters P.D.		
Final Filters P.D.		
System Set Point		
Total ESP		

Connected load 21900
 ATU-G-1-30 and 31 are served by AHU-G3. Connected load is 20250.
 FLOW STATION CALIBRATION FACTOR 2.184



National TAB

Project: Westover Hills Baptist Hospital
Address: San Antonio, TX

Asset: AHU-G-1 VAV's

Asset	Area Served	Type	Size	Design Max CFM	Actual Max CFM	Design Min CFM	Actual Min CFM	Design Heat CFM	Actual Heat CFM	Ak (max)
ATU-G-1-01	H.01L02	HEAT	8	650	653	165	169	575	575	0.72
ATU-G-1-02	H.0117	HEAT	16	1800	1786	820	812	900	906	0.80
ATU-G-1-03	H.0119	HEAT	6	150	149	40	42	95	91	0.64
ATU-G-1-04	H.01C02	HEAT	8	650	662	430	434	430	434	0.75
ATU-G-1-05	H.0101 HALL	HEAT	8	600	594	215	219	300	302	0.71
ATU-G-1-06	H.0101	HEAT	8	300	295	85	88	150	145	0.70
ATU-G-1-07	H.0107	HEAT	8	600	591	145	142	300	302	0.73
ATU-G-1-08	H.00C01	HEAT	6	250	247	150	148	150	151	0.61
ATU-G-1-09	H.01C04	HEAT	10	1100	1076	630	645	1000	959	0.76
ATU-G-1-10	H.0114	HEAT	8	500	488	120	118	250	245	0.74
ATU-G-1-11	H.0112	HEAT	10	1000	992	125	129	500	503	0.75
ATU-G-1-12	H.01C02	HEAT	8	700	703	400	405	400	398	0.71
ATU-G-1-13	H.0404	HEAT	8	650	654	390	394	390	384	0.70
ATU-G-1-14	H.0415	HEAT	10	1000	998	1000	1007	1000	1003	0.73
ATU-G-1-15	H.0423	HEAT	8	300	303	0	0	150	154	0.74
ATU-G-1-16	H.0424	HEAT	8	700	702	90	93	350	342	0.72
ATU-G-1-17	H.0427	HEAT	8	700	690	375	379	425	419	0.69
ATU-G-1-18	H.0422	HEAT	8	650	654	115	119	325	321	0.75
ATU-G-1-19	H.0417	HEAT	8	550	555	480	483	480	476	0.74
ATU-G-1-20	H.04E01	HEAT	8	550	556	0	0	275	281	0.80
ATU-G-1-21	H.04C02	HEAT	6	200	206	50	53	100	97	0.67
ATU-G-1-22	H.0413	HEAT	6	250	253	90	90	155	151	0.68
ATU-G-1-23	H.0414	HEAT	10	900	892	395	400	460	459	0.80
ATU-G-1-24	H.0407	HEAT	8	400	394	400	402	400	399	0.74
ATU-G-1-25	H.0409	HEAT	8	300	301	90	87	150	148	0.72
ATU-G-1-26	H.0410	HEAT	8	650	646	85	81	325	322	0.73
ATU-G-1-27	H.0320	HEAT	8	650	678	170	168	645	640	0.77
ATU-G-1-28	H.03T01	COOL	14	1700	1717	0	0	850	856	0.87
ATU-G-1-29	H.03M01	HEAT	14	1700	1712	0	0	850	847	0.96

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Project: Westover Hills Baptist Hospital
Address: San Antonio, TX

Asset: AHU-G-1 SUPPLY

Asset	Area Served	Type	Size	DESIGN CFM	Prelim CFM	FINAL CFM	% to design
G101-1	H.0121	S1	6	50	43	52	1.04
G101-2	H.01C01	S1	8	100	95	106	1.06
G101-3	H.01L02	S1	10	250	144	242	0.97
G101-4	H.01L02	S1	10	250	159	253	1.01
ATU-G-1-01				650	441	653	1.00
G102-1	H.0117	S1	8"	150	212	138	0.92
G102-2	H.0118	S1	8"	150	234	141	0.94
G102-3	H.0119	S1	10"	250	345	253	1.01
G102-4	H.0120	S1	10"	250	189	229	0.92
G102-5	H.0121	S1	10"	250	333	249	1.00
G102-6	H.0122	S1	10"	250	371	268	1.07
G102-7	H.0123	S1	10"	250	338	262	1.05
G102-8	H.0124	S1	10"	250	318	246	0.98
ATU-G-1-02				1800	2340	1786	0.99
G103-1	H.0119	SO	12X	150	147	149	0.99
ATU-G-1-03				150	147	149	0.99
G104-1	H.01C01	S1	8	160	167	172	1.08
G104-2	H.01C01A	S1	8	170	138	170	1.00
G104-3	H.0005	S1	8	160	213	161	1.01
G104-4	H.0005	S1	8	160	138	159	0.99
ATU-G-1-04				650	656	662	1.02
G105-1	H.0103	S1	8	100	127	103	1.03
G105-2	H.0104	S1	8	125	147	130	1.04
G105-3	H.0104	S1	8	125	124	119	0.95
G105-4	H.0104	S1	8	125	106	114	0.91
G105-5	H.0104	S1	8	125	150	128	1.02
ATU-G-1-05				600	654	594	0.99
G106-1	H.0101	S1	8	150	182	149	0.99
G106-2	H.0102	S1	8	150	158	146	0.97
ATU-G-1-06				300	340		#VALUE!

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Project: Westover Hills Baptist Hospital
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Asset: AHU-G-1 SUPPLY

Asset	Area Served	Type	Size	DESIGN CFM	Prelim CFM	FINAL CFM	% to design
G107-1	H.0108	S1	8	100	95	103	1.03
G107-2	H.0107	S1	10	200	169	189	0.95
G107-3	H.0107	S1	10	200	172	192	0.96
G107-4	H.0107	S1	8	100	135	107	1.07
ATU-G-1-07				600	571	591	0.99
G108-1	H.00C01	S1	8	100	86	97	0.97
G108-2	H.00C01	S1	8	100	122	101	1.01
G108-3	H.0012	S1	6	50	27	49	0.98
ATU-G-1-08				250	235	247	0.99
G109-1	H.01C04	S1	8	175	159	160	0.91
G109-2	H.0109	S1A	6	50	105	48	0.96
G109-3	H.01C02	S1	8	150	189	146	0.97
G109-4	H.01C02	S1	8	150	149	141	0.94
G109-5	H.01C04	S1	8	175	191	180	1.03
G109-6	H.01L01	S1	10	200	284	182	0.91
G109-7	H.01L01	S1	10	200	314	219	1.10
ATU-G-1-09				1100	1391	1076	0.98
G110-1	H.0114	S1	10	250	297	251	1.00
G110-2	H.0115	S1	8	150	146	145	0.97
G110-3	H.0114A	S1	8	100	163	92	0.92
ATU-G-1-10				500	606	488	0.98
G111-1	H.0113	S1	10	300	216	294	0.98
G111-2	H.0113	S1	10	300	225	307	1.02
G111-3	H.0110	S1	10	200	228	197	0.99
G111-4	H.0110	S1	10	200	235	194	0.97
ATU-G-1-11				1000	904	992	0.99

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Project: Westover Hills Baptist Hospital
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Asset: AHU-G-1 SUPPLY

Asset	Area Served	Type	Size	DESIGN CFM	Prelim CFM	FINAL CFM	% to design
G112-1	H.02C01	S1	8	100	146	104	1.04
G112-2	H.02C01	S1	10	200	126	189	0.95
G112-3	H.0219	S1	10	200	135	207	1.04
G112-4	H.02C01	S1	10	200	133	203	1.02
ATU-G-1-12				700	540	703	1.00
G113-1	H.0404	S1	8	150	107	144	0.96
G113-2	H.04C01	S1	10	200	239	204	1.02
G113-3	H.0404	S1	8	150	150	157	1.05
G113-4	H.04C01	S1	8	150	133	149	0.99
ATU-G-1-13				650	629	654	1.01
G114-1	H.0415	S1	10	200	179	194	0.97
G114-2	H.04C01	S1	10	200	264	209	1.05
G114-3	H.0420	S1	8	150	135	140	0.93
G114-4	H.0421	S1	10	250	170	247	0.99
G114-5	H.04C01	S1	10	200	229	208	1.04
ATU-G-1-14				1000	977	998	1.00
G115-1	H.0423	S1	10	300	356	303	1.01
ATU-G-1-15				300	356	303	1.01
G116-1	H.0424	S1	12	350	295	365	1.04
G116-2	H.0424	S1	12	350	355	337	0.96
ATU-G-1-16				700	650	702	1.00
G117-1	H.04C04	S1	8	150	154	141	0.94
G117-2	H.04C04	S1	8	150	119	149	0.99
G117-3	H.0427	S1	10	250	199	241	0.96
G117-4	H.0428	S1	8	150	129	159	1.06
ATU-G-1-17				700	601	690	0.99

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Project: Westover Hills Baptist Hospital
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Asset: AHU-G-1 SUPPLY

Asset	Area Served	Type	Size	DESIGN CFM	Prelim CFM	FINAL CFM	% to design
G118-1	H.04C03	S1	10	200	244	202	1.01
G118-2	H.04C03	S1	10	200	210	214	1.07
G118-3	H.0422	S1	10	250	243	238	0.95
ATU-G-1-18				650	697	654	1.01
G119-1	H.04C02	S1	8	100	149	108	1.08
G119-2	H.0417	S1	8	150	146	154	1.03
G119-3	H.0418	S1	8	150	158	151	1.01
G119-4	H.0419	S1	8	150	161	142	0.95
ATU-G-1-19				550	614	555	1.01
G120-1	H.04E41	SO	14X10	550	684	556	1.01
ATU-G-1-20				550	684	556	1.01
G121-1	H.04C02	S1	10	200	218	206	1.03
ATU-G-1-21				200	218	206	1.03
G122-1	H.0413	S1A	8	125	139	126	1.01
G122-2	H.0413	S1A	8	125	140	127	1.02
ATU-G-1-22				250	279	253	1.01
G123-1	H.0414	S1	8	100	133	103	1.03
G123-2	H.0412	S1	10	200	204	209	1.05
G123-3	H.0412	S1	10	200	245	186	0.93
G123-4	H.0412	S1	10	200	251	195	0.98
G123-5	H.0412	S1	10	200	257	199	1.00
ATU-G-1-23				900	1090	892	0.99
G124-1	H.0407	S1	10	200	228	188	0.94
G124-2	H.0405	S1	10	200	241	206	1.03
ATU-G-1-24				400	469	394	0.99

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Project: Westover Hills Baptist Hospital
Address: San Antonio, TX

Asset: AHU-G-1 SUPPLY

Asset	Area Served	Type	Size	DESIGN CFM	Prelim CFM	FINAL CFM	% to design
G125-1	H.0408	S1	8	150	162	145	0.97
G125-2	H.0409	S1	8	150	184	156	1.04
ATU-G-1-25				300	346	301	1.00
G126-1	H.0410	S1	12	325	393	344	1.06
G126-2	H.0410	S1	12	325	344	302	0.93
ATU-G-1-26				650	737	646	0.99
G127-1	H.0320	S1	10	250	320	268	1.07
G127-2	H.0320	S1	10	250	314	256	1.02
G127-3	H.0401	S1	8	150	178	154	1.03
ATU-G-1-27				650	812	678	1.04
G128-1	H.03T01	SO	16X16	1700	2092	1717	1.01
ATU-G-1-28				1700	2092	1717	1.01
G129-1	H.03M01			1700	2373	1712	1.01
ATU-G-1-29				1700	2373	1712	1.01
G130-1	H.03E01	SO	16X16	1400	1909	1392	0.99
ATU-G-1-30				1400	1909	1392	0.99
G131-1	H.0301	SO	12X8	250	260	254	1.02
ATU-G-1-31				250	260	254	1.02
G132-1	H.0321	SO	10X8	100	91	102	1.02
ATU-G-1-32				100	91	102	1.02



National TAB

Project: Westover Hills Baptist Hospital
Address: San Antonio, TX

Asset: AHU-G-3

Area: DIETARY

Supply Side
Unit Data

Manufacturer	TRANE
Model Number	CSAA080UAM00
Serial Number	H23B20232
Configuration	VERTICAL
No. Pre Filters / Size	8 / 16X20X4
No. Pre Filters / Size	48 / 20X20X4
No. Final Filters / Size	4 / 24X12X12
No. Final Filters / Size	20 / 24X24X12

Return Side
Unit Data

Manufacturer	TRANE
Model Number	CSAA080UAM00
Serial Number	H23B20232
Configuration	VERTICAL
No. Pre Filters / Size	

Motor Data X 4

Motor MFG / Frame	BALDOR / 286T
Horsepower / RPM	30 / 1775
Rated Volts / Phase	460 / 3
Rated Amperage / SF	36 / 1.15

Motor Data X 4

Motor MFG / Frame	BALDOR / 215T
Horsepower / RPM	5 / 1160
Rated Volts / Phase	460 / 3
Rated Amperage / SF	7.4 / 1.15

Test Data

	Design	Actual
Total CFM	38400	38384
Min OA CFM	16400	16205
Fan RPM	2310	1982
VFD Speed HZ	78	67.0 Hz
RL Voltage	460	398/398/398
RL Amperage		76.1/76.8/75.7
Motor B.H.P. combined	67.74	63.50

Test Data

	Design	Actual
Total CFM	22000	22179
Fan RPM	1238	1005
VFD Speed HZ	63	52.0 Hz
RL Voltage	460	292/292/293
RL Amperage		12.1/12.2/12.5
Motor B.H.P. combined	8.414	8.29

Performance Data

	Design	Actual
Suction S.P.		-1.63"
Discharge S.P.		3.42"
Total SP	8.157	5.05"
CW Coil P.D.	0.939	0.88"
HW Coil P.D.	0.014	0.13"
Pre Filters P.D.	1.0	0.12"
Final Filters P.D.	1.50	1.34"
System Set Point		1.25"
Total ESP	4.0	2.58"

Performance Data

	Design	Actual
Suction S.P.		-0.49"
Discharge S.P.		-0.39"
Total SP	1.580	0.88"

BOXES G-1-30 AND G-1-31 ARE SERVED BY AHU-G3. CONNECTED LOAD ADJUSTED TO 38400.
 AIR FLOW STATION K FACTOR 0.917

National TAB

Project: Westover Hills Baptist Hospital
Address: San Antonio, TX

Asset: AHU-G-2 SUPPLY

Asset	Area Served	Type	Size	DESIGN CFM	Prelim CFM	FINAL CFM	% to design
G301-1	VEST	S1		450	525	448	1.00
				450	525	448	1.00
G302-1	LOBBY	S1		140	126	131	0.94
G302-2	LOBBY	S1		140	145	146	1.04
G302-3	LOBBY	S1		140	193	135	0.96
G302-4	MENS RR	S1		150	150	149	0.99
G302-5	LOBBY	S1		140	178	146	1.04
G302-6	WOMENS RR	S1		150	204	145	0.97
G302-7	LOBBY	S1		140	182	154	1.10
				1000	1178	1006	1.01
G303-1		S1		200	141	205	1.03
G303-2		S1		200	143	205	1.03
				400	284	410	1.03
G304-1		S1		250	169	243	0.97
G304-2		S1		250	207	309	1.24
G304-3		S1		250	179	256	1.02
G304-4		S1		250	218	298	1.19
G304-5		S2		400	166	235	0.59
				1400	939	1341	0.96
G305-1		S1		300	200	294	0.98
G305-2		S1		200	304	191	0.96
G305-3		S1		300	241	304	1.01
G305-4		S1		200	284	206	1.03
G305-5		S1		100	191	99	0.99
G305-6		S1		200	276	218	1.09
				1300	1496	1312	1.01

National TAB

Project: Westover Hills Baptist Hospital
Address: San Antonio, TX

Asset: AHU-G-2 SUPPLY

Asset	Area Served	Type	Size	DESIGN CFM	Prelim CFM	FINAL CFM	% to design
G306-1		S1		300	248	275	0.92
G306-2		S1		300	427	279	0.93
G306-3		S1		300	354	284	0.95
G306-4		S1		200	445	212	1.06
G306-5		S1		300	529	330	1.10
G306-6		S1		300	579	321	1.07
G306-7		S1		300	439	284	0.95
G306-8		S1		300	482	299	1.00
G306-9		S1		300	476	289	0.96
				2600	3979	2573	0.99
G307-1		S1		425	261	409	0.96
G307-2		S1		225	287	232	1.03
G307-3		S1		225	274	211	0.94
G307-4		S1		225	241	220	0.98
G307-5		S1		100	344	108	1.08
G307-6		S1		225	311	240	1.07
G307-7		S1		225	350	230	1.02
G307-8		S1		225	345	219	0.97
G307-9		S1		225	356	247	1.10
				2100	2769	2116	1.01
G308-2		S1		480	391	515	1.07
G308-3		S1		480	515	473	0.99
G308-4		S1		480	512	486	1.01
G308-5		S1		480	542	449	0.94
G308-6		S1		480	561	462	0.96
				2400	2521	2385	0.99

National TAB

Project: Westover Hills Baptist Hospital
Address: San Antonio, TX

Asset: AHU-G-2 SUPPLY

Asset	Area Served	Type	Size	DESIGN CFM	Prelim CFM	FINAL CFM	% to design
G309-1		HD		900	1215	914	1.02
G309-2		HD		900	1215	914	1.02
G309-3		HD		900	1215	914	1.02
				2700	3645	2742	1.02
G310-1		S1		450	290	431	0.96
G310-2		S1		475	520	460	0.97
G310-3		S1		475	479	497	1.05
				1400	1289	1388	0.99
G311-1		S1		300	345	299	1.00
G311-2		S1		300	402	307	1.02
G311-3		S1		300	362	323	1.08
G311-4		S1		300	341	304	1.01
G311-5		S1		300	315	283	0.94
G311-6		S1		200	403	199	1.00
				1700	2168	1715	1.01
G312-1		S1		375	407	382	1.02
G312-2		S1		375	403	370	0.99
G312-3		S1		350	506	365	1.04
				1100	1316	1117	1.02
G313-1		S1		200	221	209	1.05
G313-2		S1		250	239	241	0.96
G313-3		S1		250	249	259	1.04
G313-4		S1		200	303	195	0.98
				900	1012	904	1.00

National TAB

Project: Westover Hills Baptist Hospital
Address: San Antonio, TX

Asset: AHU-G-2 SUPPLY

Asset	Area Served	Type	Size	DESIGN CFM	Prelim CFM	FINAL CFM	% to design
G314-1		S1		300	408	314	1.05
G314-2		S1		300	342	287	0.96
G314-3		S1		300	423	325	1.08
G314-4		S1		300	345	274	0.91
G314-5		S1		300	386	290	0.97
G314-6		S1		300	405	299	1.00
				1800	2309	1789	0.99
G315-1		S1		300	263	308	1.03
G315-2		S1		300	130	320	1.07
G315-3		S1		300	493	297	0.99
G315-4		S1		300	599	276	0.92
G315-5		S1		300	452	304	1.01
G315-6		S1		300	515	287	0.96
				1800	2452	1792	1.00
G316-1		S1		350	367	358	1.02
				350	367	358	1.02
G317-1		HD		1200	1316	1228	1.02
G317-2		HD		1200	1316	1229	1.02
				2400	2632	2457	1.02
G318-1		HD		765	829	756	0.99
G318-2		HD		770	830	756	0.98
G318-3		HD		765	830	756	0.99
				2300	2489	2268	0.99
G319-1		S1		350	366	366	1.05
G319-2		S1		350	335	335	0.96
				700	701	701	1.00

National TAB

Project: Westover Hills Baptist Hospital
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Asset: AHU-G-2 SUPPLY

Asset	Area Served	Type	Size	DESIGN CFM	Prelim CFM	FINAL CFM	% to design
G320-1		S1		400	287	397	0.99
G320-2		S1		400	271	389	0.97
G320-3		S1		200	219	184	0.92
G320-4		S1		400	371	408	1.02
				1400	1148	1378	0.98
G321-1		S1		200	212	200	1.00
				200	212	200	1.00
G322-1		S1		400	315	400	1.00
G322-2		S1		400	340	390	0.98
G322-3		S1		200	271	188	0.94
G322-4		S1		400	397	411	1.03
G322-5		S1		400	309	412	1.03
G322-6		sS1		200	173	189	0.95
				2000	1805	1990	1.00
G323-1		S1A		100	122	101	1.01
G323-2		S1		125	154	128	1.02
G323-3		S1		125	143	123	0.98
				350	419	352	1.01
G324-1		S1		100	134	107	1.07
G324-2		S1		100	123	95	0.95
G324-3		S1		100	123	106	1.06
G324-4		S1		100	124	100	1.00
				400	504	408	1.02
G325-1		HD		900	1219	884	0.98
G325-2		HD		900	1220	884	0.98
G325-3		HD		900	1220	884	0.98
G325-4		HD		900	1220	884	0.98
				3600	4879	3536	0.98