Environmental Balance Company
P.O. Box 4236
Lexington, KY 40544
1-606-278-7203

TEST AND BALANCE REPORT

Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

Location LEXINGTON, KENTUCKY

Architect BICKEL GIBSON ASSOCIATES, INC.

Engineer PROTOR/DAVIS/RAY CONSULTING ENGINEERS, INC.

Contractor R & W CONSTRUCTION

Project Number _____

AIR DISTRIBUTION SYSTEM HAS BEEN COMPLETELY BALANCED AS PER REQUIREMENTS OF SPECIFICATIONS AND RESULTS OF TESTS HEREIN LISTED.

Kevin Lear KEVIN LEAR
Test & Balance Field Technican

Date 10-2-87

Ralph Chinn RALPH CHINN
Test & Balance Supervisor

EBCO INC.

EBCO INC.

INDEPENDENT TEST AND BALANCING
AIR · HYDRONICS

INDEX

INSTRUMENTATION

DWYER INCLINE MENOMETER-MODEL 400-10
MAGNEHELIC DIFFERENTIAL PRESSURE GAUGES
ALNOR VELOMETER, MODELS 6000P and 6000 AP
BACHARACK AIR VELOCITY METERS, 0-1000 FPM, 0-3000 FPM
FLOW HOOD, MODEL CFM 80
MARSH DIFFERENTIAL PRESSURE GAUGES, 0"-200"
DIFFERENTIAL GAUGE SET (ORIFICE AND VENTURI STATIONS)
ELECTRO-THERM TC-100
JAQUET's SPEED INDICATOR, MODEL 2302
AMPROBE, RS-3

AIR HANDLER TEST REPORT

EBCO INC.

PROJECT MAXWELL H. GLUCK EQUINE RESEARCH CENTER

SYSTEM VAV-1

LOCATION NORTH PENTHOUSE

SHEET NO. 1

DATE 4-5-87

INDEPENDENT TEST AND BALANCING

	DESIGN SPECIFICATIONS	INSTALLED EQUIPMENT	ACTUAL TEST DATA
Manufacturer	McQUAY	McQUAY	
Model No.	MMM-172	MMM-172DH	
Serial No.	--	3RF00061-04	
Size or Type	--	HORIZONTAL DRAW-THRU	
C.F.M.	40,000	OUTLET TOTAL 39,633	38,273
Return Air C.F.M.	16,500	INLET TOTAL 16,467	17,318
Outside Air C.F.M.	23,500	23,166	20,955
Fan R.P.M.	1,152	1,223	1,223
Total S.P.	6.00"	6.27"	5.70"
Suction S.P.	--	--	2.00"
Discharge S.P.	--	--	3.70"
Motor Mfg.	--	CENTURY	CENTURY
Motor H.P.	75	75	75
Motor R.P.M.	--	1770	1773
Motor Volts	208	200-208	200
Motor Amps	--	200-192	180/160/175
Heaters Size/RTG	--	NOT AVIALABLE	
Fan Sheave	--	BROWNING	4R5V140 x 2 15/16"
Motor Sheave	--	BROWNING	4R5V97 x 2 3/8"
Belts	--	OPTIBELT	5V x 1180
Phase	3	3	3

Environmental Balance Company

Date 6-8-87

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

DUCT TRAVERSE ZONE TOTALS

System Zone/Branch	Duct Size	Area Sq. Ft.	Design		Test			
			FPM	CFM	Test 1 FPM	Test 2 FPM	CFM	Static Pressure
VAV-1								
SUPPLY	48"x34"	11.33	3530	40,000	3131	3378	38,273	2.25"
RETURN	70"x22"	10.69	1543	16,500	1800	1620	17,318	1.20"
MAX-COOLING								
ATB-82	16"Ø	1.4	821	1150	964	892	1249	.22"

Remarks

AIR HANDLER TEST REPORT

EBCO INC.

PROJECT MAXWELL H. GLUCK EQUINE RESEARCH CENTER

SYSTEM RF-1

LOCATION NORTH PENTHOUSE

SHEET NO. 3

DATE 4-5-87

INDEPENDENT TEST AND BALANCING

	DESIGN SPECIFICATIONS	INSTALLED EQUIPMENT	ACTUAL TEST DATA
Manufacturer	McQUAY	McQUAY	
Model No.	LYF-1280	LYF128DH	
Serial No.	--	3RF00055-04	
Size or Type	--	HORIZONTAL DRAW-THRU	
C.F.M.	--	--	--
Return Air C.F.M.	16,500	INLET TOTAL 16,467	17,318
Outside Air C.F.M.	--	--	--
Fan R.P.M.	1,587	1,849	1,849
Total S.P.	EXT. 1.50"	EXT. 1.50"	EXT. 1.45"
Suction S.P.	--	--	1.30"
Discharge S.P.	--	--	.15"
Motor Mfg.	--	CENTURY	CENTURY
Motor H.P.	15	15	15
Motor R.P.M.	--	1750	1757
Motor Volts	208	200-208	220
Motor Amps	--	44-44	38/40/42
Heaters Size/RTG	--	CUTLER-HAMMER	1047/39.0-41.0
Fan Sheave	--	BROWNING 3TB70 x 2 3/16"	
Motor Sheave	--	" " 3TB74 x 1 5/8"	
Belts	--	OPTIBELT B 65	
Phase	3	3	3

Environmental
Balance
COmpany

Date 6-9-87

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System RF-1 (NORTH) Floor # 4th-3rd-2nd

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
1	407	R-34	24"x24"	*		110	115	150	110		110
2	400	R-44	"	*		500	415	580	490		490
3	"	"	"	*		500	580	720	500		500
4	421	R-65	"	*		375	170	200	340		340
5	423	"	"	*		375	170	215	350		350
6	427	R-26	"	*		200	120	160	205		205
7	429	R-26	"	*		200	115	160	210		210
8	300	R-44	"	*		500	790	475	475		475
9	307	R-24	12"x12"	*		115	195	120	120		120
10	300	R-85	24"x24"	*		1045	920	1050	1050		1050
11	317	R-84	"	*		360	420	360	360		360
12	300-B	R-44	"	*		500	495	500	500		500
13	319	R-26	"	*		200	185	200	200		200
14	320	R-32	"	*		135	125	140	140		140
15	321	R-26	"	*		200	170	210	210		210
16	323	"	"	*		200	130	180	180		180
17	325	"	"	*		200	140	180	180		180
18	202	R-89	"	*		450	500	460	460		460

Remarks * READ WITH FLOW HOOD.

Environmental Balance COmpany

Date 6-9-87

Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System RF-1 (NORTH) Floor # 1st & 2nd

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
19	202	R-89	24"x24"	*		450	540	450	450		450
20	"	R-90	"	*		300	435	290	290		290
21	"	R-89	"	*		450	490	440	440		440
22	204	R-92	"	*		400	560	580	415		415
23	200	R-88	"	*		400	--	NOT	INSTALLED		--
24	"	"	"	*		400	280	320	375		375
25	202	R-91	12"x12"	*		75	--	NOT	INSTALLED		--
26	200	"	"	*		75	--	"		"	--
27	"	R-87	24"x24"	*		385	280	400	380		380
28	206	R-79	"	*		715	840	720	720		720
29	"	R-92	"	*		400	415	420	420		420
30	100-A	R-59	12"x12"	*		275	340	250	250		250
31	100-C	R-63	24"x24"	*		800	860	720	720		720
32	106	R-40	"	*		720	860	650	650		650
33	108	R-20	"	*		255	340	235	235		235
34	108-C	R-59	12"x12"	*		275	295	250	250		250
35	100-D	R-55	24"x24"	*		75	90	70	70		70
36	"	R-27	"	*		600	440	540	540		540

Remarks * READ WITH FLOW HOOD.

Environmental Balance COmpany

Date 6-9-87

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System RF-1 (NORTH) Floor # 1st

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
37	108-A	R-45	24"x24"	*		700	710	630	630		630
38	108-B	R-19	"	*		325	405	300	300		300
39	100-E	R-17	12"x12	.80	188	150	320	180	180	180	144
40	108-D	R-32	24"x24"	*		135	145	130	130		130
41	100-D	R-27	"	*		600	390	540	540		540
42	103	R-29	"	*		220	140	190	190		190
43	105	"	"	*		220	130	180	180		180
44	107	R-34	"	*		110	90	110	110		110
45	109	R-37	"	*		792	210	300	300		300 +
						16,467					14,809

Remarks * READ WITH FLOW HOOD.

+ EB-1-BOX IS FUULY OPEN. .08" S.P. AT BOX

Environmental Balance Company

INDEPENDENT TEST AND BALANCING

Date 6-8-87

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Project MAXWELL GLUCK EQUINE RESEARCH CENTER

TERMINAL UNITS

System VAV-1

Manufacturer TEMPMASTER

CONSTANT		VARIABLE	X	SINGLE		DUAL	

Box Number	Location	Mode	Size	DESIGN / ACTUAL S.P.	Min. CFM Design	Max. CFM Design	Min. CFM Actual	Max. CFM Actual
ATB-59	402-B	COOLING	A	.48"/.45"	-	289	-	285
EB-59	404	"	B	.23"/.28"	-	318	-	310
ATB-59	404-B	HEATING	A	+ /.06"	100	-	100	-
EB-59	404	"	B	+ /.065"	130	-	140	-
ATB-49	402	HOOD ON COOLING	E	* / *	-	1200	-	*
EB-49	"	"	F	- / -	1100	-	*	-
ATB-49	"	HOOD OFF HEATING	E	* / *	1200	-	*	-
EB-49	"	"	F	*/ *	-	1500	-	*
ATB-49	"	HOOD ON HEATING	E	*/ *	-	432	-	*
EB-49	"	"	F	- / -	332	-	*	-
ATB-49	"	HOOD OFF HEATING	E	- / -	432	-	*	-
EB-49	"	"	F	- / -	732	-	*	-
ATB-61	406-A	COOLING	A	.48"/	-	284	-	*
EB-61	406	"	"	.54"/.48"	-	311	-	295
ATB-61	406-A	HEATING	"	.10"/ *	146	-	*	-
EB-61	406	"	"	.18"/.27"	173	-	165	-
ATB-34	404	COOLING	E	.45"/.45"	-	1176	-	1180
EB-34	"	"	F	.47"/.37"	-	1295	-	1296

Remarks: Ø-STATIC PRESSURE BELOW "0" MAGNEHELIC GAUGE.

+-MINIMUM STATIC PRESSURE DESIGN IS NOT INDICATED ON LINE GRAPH

*-SEE COMMENT SHEET.

Environmental Balance Company

INDEPENDENT TEST AND BALANCING

Date 6-8-87

Project MAXWELL GLUCK EQUINE RESEARCH CENTER

TERMINAL UNITS

System VAV-1

Manufacturer TEMPMASTER

CONSTANT		VARIABLE	X	SINGLE		DUAL	

Box Number	Location	Mode	Size	DESIGN / ACTUAL S.P.	Min. CFM Design	Max. CFM Design	Min. CFM Actual	Max. CFM Actual
ATB-34	404	HEATING	E	+ / Ø	202	-	200	-
EB-34	"	"	F	+ /.025"	321	-	331	-
ATB-33	406	COOLING	E	.28"/.24"	-	884	-	890
EB-33	"	"	E	.34"/.36"	-	975	-	975
ATB-33	"	HEATING	"	+ / Ø	250	-	250	-
EB-33	"	"	"	+ /.06"	338	-	341	-
ATB-31	412	#2 HOOD ON COOLING	G	.42"/.23"	-	1740	-	1690
EB-31	"	"	"	.17"/.18"	-	1200	-	1214
ATB-31	"	#2 HOOD ON HEATING	"	+ / Ø	540	-	565	-
EB-31	"	"	"	0 / 0	0	-	0	-
ATB-31	"	HOOD OFF HEATING	"	+ / Ø	440	-	435	-
EB-31	"	"	"	+ / .07"	620	-	637	-
ATB-31	"	HOOD OFF COOLING	"	.42"/.23"	-	1740	-	1690
EB-31	"	"	"	.48"/.43"	-	1920	-	1936
ATB-48	400	COOLING	"	.25"/.33"	-	1400	-	1425
ATB-48	"	HEATING	"	.25"/.33"	1400	-	1425	-
ATB-87	400	COOLING	E	1.1"/.27"	-	1150	-	1249
"	"	HEATING	"	0 / 0	0	-	0	-

Remarks: Ø STATIC PRESSURE BELOW "0" MAGNEHELIC GAUGE.

\+ MINIMUM STATIC PRESSURE DESIGN IS NOT INDICATED ON LINE GRAPH.

Environmental Balance Company

INDEPENDENT TEST AND BALANCING

Date 6-8-87

Project MAXWELL GLUCK EQUINE RESEARCH CENTER

TERMINAL UNITS

System VAV-1

Manufacturer TEMPMASTER

CONSTANT		VARIABLE	X	SINGLE		DUAL	

Box Number	Location	Mode	Size	DESIGN / ACTUAL S.P.	Min. CFM Design	Max. CFM Design	Min. CFM Actual	Max. CFM Actual
ATB-30	416	#2 HOOD ON COOLING	G	.42"/.34"	-	1740	-	1670
EB-30	"	"	"	.17"/.25"	-	1200	-	1194
ATB-30	"	#2 HOOD ON HEATING	"	+ / Ø	540	-	515	-
EB-30	"	"	"	Ø / 0	0	-	0	-
ATB-30	"	HOOD OFF HEATING	"	+ / Ø	440	-	430	-
EB-30	"	"	"	+ /.05"	620	-	637	-
ATB-30	"	HOOD OFF COOLING	"	.42"/.34"	-	1740	-	1670
EB-30	"	"	"	.48"/.50"	-	1920	-	1977
ATB-81	416-B	COOLING	A	.23"/.33"	-	200	-	200
EB-81	"	"	"	.25"/.30"	-	220	-	225
ATB-81	"	HEATING	"	- / Ø	100	-	105	-
EB-81	"	"	"	- / .10"	120	-	120	-
ATB-69	422-A	COOLING	G	.65"/.50"	-	2250	-	1840
EB-69	416-A	"	H	.52"/.64"	-	2475	-	2485
ATB-69	422-A	HEATING	G	- / Ø	335	-	330	-
EB-69	416-A	"	H	- / .04"	560	-	567	-
ATB-73	400	COOLING	F	.35"/.25"	-	1200	-	1230
"	"	HEATING	"	.35"/.25"	1200	-	1230	-

Remarks: Ø STATIC PRESSURE BELOW "0" ON MAGNEHELIC GAUGE.

\+ MINIMUM STATIC PRESSURE DESIGN IS NOT INDICATED ON LINE GRAPH.

Environmental Balance Company

INDEPENDENT TEST AND BALANCING

Date 6-8-87

Project MAXWELL GLUCK EQUINE RESEARCH CENTER

TERMINAL UNITS

System VAV-1

Manufacturer TEMPMASTER

CONSTANT		VARIABLE	X	SINGLE		DUAL	

Box Number	Location	Mode	Size	DESIGN / ACTUAL S.P.	Min. CFM Design	Max. CFM Design	Min. CFM Actual	Max. CFM Actual
ATB-60	416	COOLING	B	.38"/.42"	-	370	-	375
EB-60	422-A	"	"	.46"/.55"	-	407	-	405
ATB-60	416	HEATING	"	.38"/.42"	370	-	375	-
EB-60	422-A	"	"	.46"/.55"	407	-	405	-
ATB-46	421	COOLING	C	.33"/.20"	-	480	-	490
"	"	HEATING	"	+ / Ø	240	-	245	-
ATB-70	423	COOLING	"	.33"/.20"	-	480	-	485
"	"	HEATING	C	+ / Ø	240	-	250	-
ATB-83	427	COOLING	"	.28"/.17"	-	450	-	455
"	"	HEATING	"	+ / Ø	225	-	235	-
ATB-71	308-B	COOLING	D	.23"/.32"	-	532	-	530
EB-71	308-A	"	"	.26"/.55	- -	385	-	590
ATB-71	308-B	HEATING	"	+ / Ø	105	-	105	-
EB-71	308-A	"	"	+ / .06"	158	-	160	-
ATB-17	302	HOOD OFF COOLING	F	.55"/.34"	-	1408	-	1335
EB-17	"	"	"	.65"/.80"	-	1548	-	1534
ATB-17	"	HOOD OFF HEATING	"	+ / Ø	400	-	400	-
EB-17	"	"	"	+ / .09"	540	-	555	-

Remarks: Ø-STATIC PRESSURE BELOW "0" ON MAGNEHELIC GAUGE

+ MINIMUM STATIC PRESSURE DESIGN IS NOT INDICATED ON LINE GRAPH.

Environmental Balance Company

INDEPENDENT TEST AND BALANCING

Date 6-8-87

Project MAXWELL GLUCK EQUINE RESEARCH CENTER

TERMINAL UNITS

System VAV-1

Manufacturer TEMPMASTER

CONSTANT		VARIABLE	X	SINGLE		DUAL	

Box Number	Location	Mode	Size	DESIGN / ACTUAL S.P.	Min. CFM Design	Max. CFM Design	Min. CFM Actual	Max. CFM Actual
ATB-17	302	HOOD ON COOLING	F	.55"/.34"	-	1408	-	1335
EB-17	"	"	"	.17"/.25"	828	-	836	-
ATB-17	"	HOOD ON HEATING	"	- / Ø	580	-	590	-
EB-17	"	"	"	- / Ø	0	-	0	-
ATB-19	304	COOLING	A	.24"/.32"	-	214	-	215
EB-19	"	"	"	.28"/.40"	-	235	-	240
ATB-19	"	HEATING	"	- / Ø	105	-	110	-
EB-19	"	"	"	- / .14"	126	-	125	-
ATB-80	306	COOLING	B	.49"/	-	412	-	130 *
EB-80	"	"	C	.28"/.40"	-	453	-	453
ATB-80	"	HEATING	B	- / Ø	105	-	105	-
EB-80	"	"	C	- / .01"	146	-	150	-
ATB-29	308	COOLING	C	.48"/.50"	-	588	-	580
EB-29	"	"	D	.32"/.36"	-	647	-	652
ATB-29	"	HEATING	C	.18"/.18"	363	-	370	-
EB-29	"	"	D	.14"/.15"	422	-	423	-
ATB-25	300	COOLING	E	.35"/.20"	-	995	-	930
"	"	HEATING	"	.35"/.20"	995	-	930	-

Remarks: Ø-STATIC PRESSURE BELOW "0" ON MAGNEHELIC GAUGE

+ MINIMUM STATIC PRESSURE DESIGN IS NOT INDICATED ON LINE GRAPH.

* SEE COMMENT SHEET.

Environmental Balance Company

INDEPENDENT TEST AND BALANCING

Date 6-8-87

Project MAXWELL GLUCK EQUINE RESEARCH CENTER

TERMINAL UNITS

System VAV-1

Manufacturer TEMPMASTER

CONSTANT		VARIABLE	X	SINGLE		DUAL	

Box Number	Location	Mode	Size	DESIGN / ACTUAL S.P.	Min. CFM Design	Max. CFM Design	Min. CFM Actual	Max. CFM Actual
ATB-39	312	HOOD OFF COOLING	E	.10"/.10"	-	715	-	655
EB-39	"	"	D	.45"/.45"	-	780	-	707
ATB-39	"	HOOD ON COOLING	E	.40"/.20"	-	1075	-	755 ++
EB-39	"	"	D	0 / 0	-	0	-	0
ATB-39	"	HOOD ON HEATING	E	.40"/.20"	1075	-	755	- ++
EB-39	"	"	D	0 / 0	0	-	0	-
ATB-39	"	HOOD OFF HEATING	E	+ / Ø	105	-	110	-
EB-39	"	"	D	+ / Ø	170	-	175	-
ATB-14	318	HOOD OFF COOLING	H	* / *	-	2408	-	*
EB-14	"	"	"	* / *	-	2650	-	*
ATB-14	"	HOOD OFF HEATING	H	* / *	363	-	*	-
EB-14	"	"	"	* / *	605	-	*	-
ATB-14	"	HOOD ON COOLING	H	* / *	-	2650	-	*
EB-14	"	"	"	* / *	-	1932	-	*
ATB-14	"	HOOD ON HEATING	"	* / *	718	-	*	-
EB-14	"	"	"	* / *	0	-	*	-

Remarks: Ø-STATIC PRESSURE BELOW "0" ON MAGNEHELIC GAUGE

+ MINIMUM STATIC PRESSURE DESIGN IS NOT INDICATED ON LINE GRAPH.

++ BOX FULLY OPEN.

Environmental Balance Company

INDEPENDENT TEST AND BALANCING

Date 6-8-87

Project MAXWELL GLUCK EQUINE RESEARCH CENTER

TERMINAL UNITS

System VAV-1

Manufacturer TEMPMASTER

CONSTANT		VARIABLE	X	SINGLE		DUAL	

Box Number	Location	Mode	Size	DESIGN / ACTUAL S.P.	Min. CFM Design	Max. CFM Design	Min. CFM Actual	Max. CFM Actual
ATB-75	318-A	COOLING	A	.50"/.70"	-	300	-	295
EB-75	"	"	"	.14"/.19"	-	165	-	170
ATB-75	"	HEATING	"	.125/.13"	150	-	155	-
EB-75	"	"	"	.12"/.04"	90	-	95	-
ATB-72	324	HOOD ON COOLING	G	.35"/.50"	-	1776	-	1655
EB-72	"	"	"	.19"/.31"	-	1232	-	1248
ATB-72	"	HOOD ON HEATING	"	+ / Ø	544	-	545	-
EB-72	"	"	"	0 / 0	0	-	0	-
ATB-72	"	HOOD OFF HEATING	"	+ / Ø	363	-	360	-
EB-72	"	"	"	+ / .05"	539	-	545	-
ATB-72	"	HOOD OFF COOLING	G	.35"/.50"	-	1776	-	1655
EB-72	"	"	"	.49"/.70"	-	1952	-	1956
ATB-26	300-A	COOLING	E	.27"/.18"	-	875	-	865
"	"	HEATING	"	+ / Ø	443	-	425	-
ATB-74	300-A	COOLING	F	.35"/.20"	-	1200	-	1110
"	"	HEATING	"	.10"/Ø	600	-	595	-
ATB-73	300-B	COOLING	B	.55"/.32"	-	450	-	405
"	"	HEATING	"	.14"/Ø	225	-	225	-

Remarks: Ø-STATIC PRESSURE BELOW "0" ON MAGNEHELIC GAUGE

+ MINIMUM STATIC PRESSURE DESIGN IS NOT INDICATED ON LINE GRAPH.

Environmental
Balance
COmpany

Date 6-8-87

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV-1 Floor # 4th

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-59	COOLING										
1	402-B	S-73	48"	*		164	130	160			160
2	404-A	S-24	24"	*		125	145	125			125
						289					285
EB-59											
2	404-A	R-75	7"Ø	1.0		138	175	135			135
3	402-B	R-72	"	"		180	135	175			175
						318					310
CORR.						29					25
ATB-59	HEATING										
1	402-B	S-73	48"	*		56	60	60			60
2	404-A	S-24	24"	*		44	40	40			40
						100					100

Remarks * READ WITH FLOW HOOD.

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV-1 Floor # 4th

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
EB-59											
2	404-A	R-75	7"Ø	1.0		55	60	60			60
3	404-B	R-72	"	"		75	80	80			80
						130					140
CORR.						30					40
ATB-49	HOOD "ON" COOLING										
3	402	S-48	48"	*		200	140	185			185
4	"	"	"	*		200	120	180			180
5	"	"	"	*		200	140	190			190
6	"	"	"	*		200	140	190			190
7	"	"	"	*		200	165	200			200
8	"	"	"	*		200	140	185			185
						1200					1130
EB-49											
1	402	R-74	16"Ø	1.04		1100	800	1000			1040

Remarks * READ WITH FLOW HOOD.

REFER TO EXHAUST FAN SHEET 189 FOR CLARIFICATION TO THE HOOD READINGS ON ROOM 402.

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV-1 Floor # 4th

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
HOOD	402	EH-2	8"Ø	.35	1143	400	210	250		250	88
CORR.	402					300					2
ATB-49		HOOD	OFF COOLING								
3	402	S-48	48"	*		200	125	140			140
4	"	"	"	*		200	115	110			110
5	"	"	"	*		200	140	140			140
6	"	"	"	*		200	120	140			140
7	"	"	"	*		200	165	165			165
8	"	"	"	*		200	145	140			140
						1200	810	835			835
EB-49											
1	402	R-74	16"Ø	1.039		1500	1200	1040			1081
HOOD	402					0					0

Remarks * READ WITH FLOW HOOD

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV-1 Floor # 4th

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
CORR.	402					300					246
ATB-49	HOOD "ON" HEATING										
3	402	S-48	48"	*		72	50				75
4	"	"	"	*		72	50				70
5	"	"	"	*		72	60				70
6	"	"	"	*		72	60				70
7	"	"	"	*		72	60				70
8	"	"	"	*		72	65				75
						432					430
EB-49											
1	402	R-74	16"Ø	*		332	280				330
HOOD	402	EH-2	8"Ø	.35	1143	400	210	250		250	88
CORR.	402					300					12

Remarks * READ WITH FLOW HOOD

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV-1 Floor # 4th

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-49	HOOD OFF. HEATING										
3	402	S-48	48"	*		72	20	50			75
4	"	"	"	*		72	20	60			70
5	"	"	"	*		72	40	60			70
6	"	"	"	*		72	40	60			70
7	"	"	"	*		72	40	60			70
8	"	"	"	*		72	20	65			75
						432	285				430
EB-49											
1	402	R-74	16"Ø	1.02		732	580	730			745
HOOD	402					0					0
CORR.	402					300					315

Remarks * READ WITH FLOW HOOD

Environmental Balance COmpany

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV - 1 Floor # Fourth

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB -	61 +	COOLING									
9	406A	S-13	48"	*		164					
10	412B	S-68	"	*		120					
						284					
EB-61											
6	412B			1.0		132	120	135			135
7	406A	R-70	9"Ø	1.0		179	125	160			160
						311					295
ATB -	61 +	HEATING									
9	406A	S-73	48"	*		84					
10	412B	S-68	"	*		62					
						146					
EB-61											
6	412B	R-70	9"Ø	1.0		74	70				70
7	406A	R-70	9"Ø	1.0		99	95				95
						173					165
CORR	406A					H15/C15					

Remarks * READ WITH FLOWHOOD

\+ SEE COMMENT SHEET, FB BOX IS DRAWING AIR FROM CORRIDOR

Environmental
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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV - 1 Floor # Fourth

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
CORR.	412B					H12/C12					
ATB -	34	COOLING									
11	404	S-47	48"	*		392	400	430			430
12	"	"	"	*		392	325	375			375
13	"	"	"	*		392	325	375			375
						1176					1180
EB-34											
4	404	R-71	16"Ø	1.062		1295	1480	1350	1220		1296
CORR.						119					116
ATB -	34	HEATING									
11	404	S-47	48"	*		67.33	220	70			70
12	"	"	"	*		67.33	180	65			65
13	"	"	"	*		67.33	180	65			65
						202					200

Remarks * READ WITH FLOWHOOD

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV - 1 Floor # Fourth

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
EB-34											
4	404	R-71	16"Ø	1.003		321	520	330			331
CORR.						119					131
ATB-	33	COOLING									
14	406	S-76	48"	*		221	230	230			230
15	"	"	"	*		221	260	230			230
16	"	"	"	*		221	200	220			220
17	"	"	"	*		221	200	210			210
						884					890
EB -	33										
5	406	R-73	14"Ø	1.037		972	1180	1040	940		975
CORR.						88					85

Remarks * READ WITH FLOWHOOD

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV - 1 Floor # Fourth

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB -	33	HEATING									
14	406	S-76	48"	*		62.5	100	65			65
15	"	"	"	*		62.5	100	65			65
16	"	"	"	*		62.5	90	60			60
17	"	"	"	*		62.5	85	60			60
						250					250
EB-33											
5	406	R-73	14"Ø	1.003		338	480	340			341
CORR.						88					91
ATB -	31	NO. 2	HOOD	ON -	COOLING						
18	412	S-77	48"	*		290	230	275			275
19	"	"	"	*		290	220	260			260
20	"	"	"	*		290	210	265			265
21	"	"	"	*		290	215	285			285
22	"	"	"	*		290	270	330			330
23	"	"	"	*		290	220	275			275
						1740					1690

Remarks * READ WITH FLOWHOOD

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Balance
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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV - 1 Floor # Fourth

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
EB-31											
8	412	R-69	14"Ø	1.012		600	420	590			597
9	"	"	"	"		600	430	610			617
						1200					1214
HOOD	412	EH-1	50-1/4" x 14"	4.89	147	720	263	155		155	758
CORR.						180					244
ATB-31	NO. 2	HOOD	- ON -	HEATING							
18	412	S-77	48"	*		90	90				90
19	"	"	"	*		90	95				95
20	"	"	"	*		90	90				90
21	"	"	"	*		90	90				90
22	"	"	"	*		90	100				100
23	"	"	"	*		90	100				100
						540					565

Remarks * READ WITH FLOWHOOD

Environmental Balance COmpany

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV - 1 Floor # Fourth

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
EB-31											
8	412	R-69	14"Ø	1.0		0	0	0			0
9	"	"	"	"		0	0	0			0
HOOD	412	EH-1	50-1/4" x 14"	4.89	147	720	263	155		155	758
CORR.						180					193
ATB-31	HOOD	- OFF	- HEATING								
18	412	S-77	48"	*		73.33	110	75			75
19	"	"	"	*		73.33	120	70			70
20	"	"	"	*		73.33	100	70			70
21	"	"	"	*		73.33	120	75			75
22	"	"	"	*		73.33	110	75			75
23	"	"	"	*		73.34	100	70			70
						440					435

Remarks * READ WITH FLOWHOOD

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV - 1 Floor # Fourth

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
EB-31											
8	412	R-69	14"Ø	1.002		310	770	315			316
9	"	"	"	"		310	780	320			321
						620					637
HOOD						0					0
CORR.						180					202
ATB-31	HOOD -	OFF -	COOLING								
18	412	S-77	48"	*		290	210	240	275		275
19	"	"	"	*		290	200	225	260		260
20	"	"	"	*		290	210	230	265		265
21	"	"	"	*		290	205	245	285		285
22	"	"	"	*		290	280	290	330		330
23	"	"	"	*		290	210	240	275		275
						1740					1690

Remarks * READ WITH FLOWHOOD

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV - 1 Floor # Fourth

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
EB-31											
8	412	R-69	14"Ø	1.035		960	770	940			973
9	"	"	"	"		960	760	930			963
						1920					1936
HOOD						0					0
CORR.						180					246
ATB-48		COOLING									
24	413	S-71	24"	*		150	170	150			150
25	411	"	"	*		150	170	150			150
26	400	S-51	48"	*		300	235	300			300
26A	408	S-17	"	*		100	150	105			105
27	407	"	"	*		100	180	100			100
28	400	S-41	"	*		300	255	310			310
28A	"	"	"	*		300	230	310			310
						1400					1425

Remarks * READ WITH FLOWHOOD

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV - 1 Floor # Fourth

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-	48	HEATING									
24	413	S-71	24"	*		150	150				150
25	411	"	"	*		150	150				150
26	400	S-51	48"	*		300	300				300
26A	408	S-17	"	*		100	105				105
27	407	"	"	*		100	100				100
28	400	S-51	"	*		300	310				310
28A	"	"	"	*		300	310				310
						1400					1425
ATB-82		COOLING									
29	309	S-81	30"	*		575	NOT ACCESSIBLE - SEE TRAVERSE				
30	"	"	"	*		575	SHEET NO. 2				
						1150					1249
ATB-82		HEATING									
29	309	S-81	30"	*		0	0				0
30	"	"	"	*		0	0				0

Remarks * READ WITH FLOWHOOD

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV - 1 Floor # Fourth

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-30	NO.	2 - HOOD -		ON -	COOLING						
31	416	S-78	48"	*		435	340	400	450		450
32	"	"	"	*		435	325	365	420		420
33	"	"	"	*		435	345	345	400		400
34	"	"	"	*		435	375	345	400		400
						1740					1670
EB-30											
10	416	R-69	14"Ø	1.012		600	580				587
11	"	"	"	"		600	600				607
						1200					1194
HOOD	416	EH-1	50-1/4" x 14"	4.89	147	720	267	146		146	714
CORR.						180					238

Remarks * READ WITH FLOWHOOD

Environmental
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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV - 4 Floor # Fourth

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-30	NO.2	HOOD -	ON -	HEATING							
31	416	S-78	48"	*		135	100	125			125
32	"	"	"	*		135	110	125			125
33	"	"	"	*		135	115	135			135
34	"	"	"	*		135	105	130			130
						540					515
EB-30											
10	416	R-69	14"Ø	*		0	0				0
11	"	"	"	*		0	0				0
HOOD	416	EH-1	50-1/4" x 14"	4.89	147	720	267	146		146	714
CORR.						180					199

* READ WITH FLOWHOOD

Remarks

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV-1 Floor # Fourth

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-30	HOOD	- OFF	- HEATING								
31	416	S-78	48"	*		110	180	105			105
32	"	"	"	*		110	190	110			110
33	"	"	"	*		110	190	105			105
34	"	"	"	*		110	200	110			110
						440					430
EB-30											
10	416	R-69	14"Ø	1.002		310	420	315			316
11	"	"	"	"		310	410	320			321
						620					637
HOOD						0					0
CORR.						180					207

Remarks * READ WITH FLOWHOOD

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV - 1 Floor # Fourth

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-30	HOOD	- OFF	- COOLING								
31	416	S-78	48"	*		435	385	440	450		450
32	"	"	"	*		435	355	410	420		420
33	"	"	"	*		435	330	380	400		400
34	"	"	"	*		435	340	390	400		400
						1740					1670
EB-30											
10	416	R-69	14"Ø	1.035		960	680	940			973
11	"	"	"	"		960	720	970			1004
						1920					1977
HOOD						0					0
CORR.						180					307

Remarks * READ WITH FLOWHOOD

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV - 1 Floor # Fourth

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-81		COOLING									
31	416B	S-75	48"	*		200	295	200			200
EB-81											
12	416B	R-29	8"Ø	1.0		220	260	225			225
CORR.						20					25
ATB-81		HEATING									
35	416B	S-75	48"	*		100	180	105			105
EB-81											
12	416B	R-29	8"Ø	1.0		120	140	120			120
CORR.						20					15

* READ WITH FLOWHOOD

Remarks

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV - 1 Floor # Fourth

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-69	++	COOLING									
36	426	S-79	48"	*		375	280				280
37	"	"	"	*		375	335				335
38	"	"	"	*		375	315				315
39	"	"	"	*		375	320				320
40	"	"	"	*		375	315				315
41	"	"	"	*		375	275				275
						2250					1840
EB-69											
16	426	R-66	16"Ø	1.055		1237.5	1120	1175			1240
17	"	"	"	"		"	1140	1180			1245
						2475					2485
CORR.						225					645

Remarks * READ WITH FLOWHOOD

++ BOX FULLY OPEN, .75" ENTERING S.P.

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV - 1 Floor # Fourth

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test--FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-69		HEATING									
36	426	S-79	48"	*		55.83	210	50			50
37	"	"	"	*		"	210	50			50
38	"	"	"	*		"	210	55			55
39	"	"	"	*		"	200	55			55
40	"	"	"	*		"	205	60			60
41	"	"	"	*		"	210	60			60
						335					330
EB-69											
16	426	R-66	16"Ø	1.002		280	385	285			286
17	"	"	"	"		280	390	280			281
						560					567
CORR.						225					237

Remarks * READ WITH FLOWHOOD

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV - 1 Floor # Fourth

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-23		COOLING									
42	400	S-51	48"	*		300	310				310
43	"	"	"	*		300	295				295
44	"	"	"	*		300	305				305
45	"	"	"	*		300	320				320
						1200					1230
ATB-23		HEATING									
42	400	S-51	48"	*		300	310				310
43	"	"	"	*		300	295				295
44	"	"	"	*		300	305				305
45	"	"	"	*		300	320				320
						1200					1230

Remarks * READ WITH FLOWHOOD

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Balance
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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV-1 Floor # 4th

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-60	COOLING										
46	422	S-80	48"	*		220	130	220			220
47	418	S-16	"	*		50	100	55			55
48	422-A	S-46	"	*		100	140	100			100
						370					375
EB-60											
13	422-A	R-34	6"Ø	1.0		110	120				120
14	418	R-67	"	"		55	55				55
15	422	R-68	8"Ø	1.001		242	230				230
						407					405
ATB-60	HEATING										
46	422	S-80	48"	*		220	220				220
47	418	S-16	"	*		50	55				55
48	422-A	S-46	"	*		100	100				100
						370					375

Remarks * READ WITH FLOW HOOD.

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV-1 Floor # 4th

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
EB-60											
43	422-A	R-34	6"Ø	1.0		110					120
14	418	R-67	"	"		55					55
15	422	R-68	8"Ø	1.0		242					230
						407					405
ATB-46	COOLING										
49	421	S-67	24"	*		160	250	175			175
50	"	"	"	*		160	190	155			155
51	"	"	"	*		160	210	160			160
						480					490
ATB-46	HEATING										
49	421	S-67	24"	*		80	140	90			90
50	"	"	"	*		80	120	75			75
51	"	"	"	*		80	120	80			80
						240					245

Remarks * READ WITH FLOW HOOD.

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV-1 Floor # 4th

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-70	COOLING										
52	423	S-67	24"	*		160	240	175			175
53	"	"	"	*		160	175	150			150
54	"	"	"	*		160	180	160			160
						--- 480					--- 485
ATB-70	HEATING										
52	423	S-67	24"	*		80	160	85			85
53	"	"	"	*		80	120	80			80
54	"	"	"	*		80	125	85			85
						--- 240					--- 250
ATB-83	COOLING										
55	427	S-29	24"	*		225	280	225			225
56	429	"	"	*		225	290	230			230
						--- 450					--- 455

Remarks * READ WITH FLOW HOOD.

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV-1 Floor # 4th

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-83	HEATING										
55	427	S-29	24"	*		1125	165	115			115
56	429	"	"	*		1125	170	120			120
						275					235
ATB-71	COOLING										
57	308-B	S-84	48"	*		266	210	260			260
58	"	"	"	*		266	240	270			270
						532					530
EB-71											
21	308-B	R-81	12"Ø	1.012		585	430	590			590
CORR.						53					60

Remarks * READ WITH FLOW HOOD.

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Project MAXWELL GLUCK EQUINE RESEARCH CENTER

System VAV-1 Floor # 4th

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-71	HEATING										
57	308-B	S-84	48"	*		52.5	110	55			55
58	"	"	"	*		52.5	100	50			50
						105					105
EB-71											
21	308	R-81	12"Ø	1.0		158	135	160			160
CORR.						53					55
ATB-17	COOLING HOOD		OFF								
59	302	S-83	48"	*		235	220	225			225
60	"	"	"	*		235	190	210			210
61	"	"	"	*		235	235	235			235
62	"	"	"	*		235	260	240			240
63	"	"	"	*		235	195	215			215
64	"	"	"	*		233	185	210			210
						1408					1335

Remarks * READ WITH FLOW HOOD.

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Project MAXWELL GLUCK EQUINE RESEARCH CENTER

System VAV-1 Floor # 3rd

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
EB-17											
18	302	R-82	14"Ø	1.023		774	660	760			777
19	"	"	"	1.023		774	640	740			757
						1548					1534
HOOD						0					0
CORR.						140					199
ATB-17	HEATING	HOOD	OFF								
59	302	S-83	48"	*		66.67	110	70			70
60	"	"	"	*		66.67	95	65			65
61	"	"	"	*		66.67	95	65			65
62	"	"	"	*		66.67	115	70			70
63	"	"	"	*		66.67	95	65			65
64	"	"	"	*		66.67	90	65			65
						400					400

Remarks * READ WITH FLOW HOOD.

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV-1 Floor # 3rd

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
EB-17											
18	302	R-82	14"Ø	1.0		270	210	280			280
19	"	"	"	1.0		270	200	275			275
						540					555
HOOD						0					0
CORR.						140					155
ATB-17	HOOD ON	COOLING									
59	302	S-83	48"	*		235	225				225
60	"	"	"	*		235	210				210
61	"	"	"	*		235	235				235
62	"	"	"	*		235	240				240
63	"	"	"	*		235	215				215
64	"	"	"	*		233	210				210
						1408					1335

Remarks * READ WITH FLOW HOOD.

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV-1 Floor # 3rd

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
EB-17											
18	302	R-82	14"Ø	1.007		414	290	420			423
19	"	"	"	"		414	280	410			413
						828					836
HOOD	302	EH-1	38 1/4" x 14"	3.72	194	720	227	192	203	203	755
CORR.						140					256
ATB-17	HOOD ON HEATING										
59	302	S-83	48"	*		96.67	110	100			100
60	"	"	"	*		96.67	100	95			95
61	"	"	"	*		96.67	120	100			100
62	"	"	"	*		96.67	130	105			105
63	"	"	"	*		96.67	100	100			100
64	"	"	"	*		96.67	95	90			90
						580					590

Remarks * READ WITH FLOW HOOD.

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV-1 Floor # 3rd

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
EB-17											
18	302	R-82	14"Ø	1.0		0	0				0
19	"	"	"	"		0	0				0
HOOD	302	EH-1	38 1/4" x 14"	3.72	194	720	227	192	203	203	755
CORR.						140					165
ATB-19	COOLING										
65	304	S-26	48"	*		214	210	215			215
EB-19											
20	304	R-83	8"Ø	1.0		235	150	240			240
CORR.						21					25
ATB-19	HEATING										
65	304	S-26	48"	*		105	130	110			110

Remarks * READ WITH FLOW HOOD.

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV-1 Floor # 3rd

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
EB-19											
20	304	R-83	8"Ø	1.0		126	140	125			125
CORR.						21					15
ATB-80	COOLING										
66	306	S-32	48"	*		412	130				130 +
EB-80											
22	306	R-86	10"Ø	1.007		453	360	430	450		453
CORR.						41					323
ATB-80	HEATING										
66	306	S-32	48"	*		105	120	105			105
EB-80											
22	306	R-86	10"Ø	1.0		146	195	150			150

Remarks * READ WITH FLOW HOOD.

+ SEE COMMENT SHEET.

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV-1 Floor # 3rd

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
CORR.						41					45
ATB-29	COOLING										
67	308	S-22	48"	*		294	285				285
68	"	"	"	*		294	295				295
						588					580
EB-29											
23	308	R-80	12"Ø	1.018		647	640				652
CORR.						59					72
ATB-29	HEATING										
67	308	S-22	48"	*		181.5	185				185
68	"	"	"	*		181.5	185				185
						363					370

Remarks * READ WITH FLOW HOOD.

Environmental Balance COmpany

Date 7-24-87

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Project MAXWELL GLUCK EQUINE RESEARCH CENTER

System VAV-1 Floor # 3rd

DIFFUSER AND GRILLE TEST SHEET

Terminal Number.	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
EB-29											
23	308	R-80	12"Ø	1.006		422	260	420			423
CORR.						59					53
ATB-25	COOLING										
69	311	S-71	24"	*		150	125	135			135
70	313	"	"	*		150	135	145			145
71	300	S-51	48"	*		300	250	275			275
72	"	"	"	*		300	265	285			285
73	307	S-56	24"	*		95	120	90			90
						995					930
ATB-25	HEATING										
69	311	S-71	24"	*		150	135				135
70	313	"	"	*		150	145				145
71	300	S-51	48"	*		300	275				275
72	"	"	"	*		300	285				285

Remarks * READ WITH FLOW HOOD.

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV-1 Floor # 3rd

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-25	HEATING	CONTINUED									
73	307	S-56	24"	*		95	90				90
						995					930
ATB-39	HOOD OFF	COOLING									
74	312	S-18	48"	*		357.5	380	325			325
75	"	"	"	*		357.5	385	330			330
						715					655
EB-39											
24	312	R-79	12"Ø	1.025		780	690				707
HOOD						0					0
CORR.						65					52

Remarks * READ WITH FLOW HOOD.

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV - 1 Floor # third

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-39	++	HOOD	- ON	- COOLING							
74	312	S-18	48"	*		537.5	390				390
75	"	"	"	*		"	365				365
						1075					755
EB-39											
24	312	R-79	12"Ø	1.0		0	0				0
HOOD	312	EH-1	38-1/4" x 14"	3.72	306	1140	0	322	322	322	1198
CORR.						65					443

Remarks * READ WITH FLOWHOOD

++ BOX FULLY OPEN, .80" S.P. ENTERING

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV - 1 Floor # Third

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-39	++	HOOD	- ON -	HEATING							
74	312	S-18	48"	*		537.5	390				390
75	"	"	"	*		"	365				365
						1075					755
EB-39											
24	312	R-79	12"Ø	1.0		0	0				0
HOOD	312	EH-1		3.72	306	1140	0	322	322	322	1198
CORR.						65					443

Remarks * READ WITH FLOWHOOD

++ FULLY OPEN

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV - 1 Floor # Third

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-39		HOOD	- OFF	- HEATING							
74	312	S-18	48"	*		52.5	160	55			55
75	"	"	"	*		"	160	55			55
						105					110
EB-39											
24	312	R-79	12"Ø	1.0		170	245	175			175
HOOD						0					0
CORR.						65					65

Remarks * READ WITH FLOWHOOD

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV-1 Floor # Third

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-14		HOOD	OFF	COOLING							
76	318	S-85	48"	*		344	255				255
77	"	"	"	*		344	370				370
78	"	"	"	*		344	300				300
79	"	"	"	*		344	280				280
80	"	"	"	*		344	270				270
81	"	"	"	*		344	260				260
81A	"	"	"	*		344	260				260
						2408	1995				1995
EB-14											
25	318	R-78	16"Ø	1.065		1325	990	1180			1257
26	"	"	"	1.065		1325	1000	1140			1214
						2650					2471
HOOD	318					0					0
CORR.	318					242					476

Remarks * READ WITH FLOWHOOD

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Balance
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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV-1 Floor # THIRD

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-14		HOOD-OFF-HEATING									
76	318	S-85	48"	*		51.86	80				50
77	"	"	"	*		51.86	90				55
78	"	"	"	*		51.86	90				55
79	"	"	"	*		51.86	90				55
80	"	"	"	*		51.86	80				50
81	"	"	"	*		51.86	90				55
81-A	"	"	"	*		51.86	90				55
						363					375
EB-14											
25	318	R-78	16"Ø	1.0		302.5	440				310
26	"	"	"	"		302.5	400				300
						605	840				610
HOOD	318					0					0
CORR.	318					242					235

Remarks * READ WITH FLOW HOOD

Environmental
Balance
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Date 2-02-88

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV-1 Floor # 3rd

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-14		HOOD-ON-COOLING									
76	318	S-85	48"	*		344	250				250
77	"	"	"	*		344	370				370
78	"	"	"	*		344	290				290
79	"	"	"	*		344	270				270
80	"	"	"	*		344	250				250
81	"	"	"	*		344	260				260
81-A	"	"	"	*		344	250				250
						2408	1940				1940
EB-14											
25	318	R-78	16"Ø	1.025		845	1080	690			707
26	"	"	"	"		845	1020	685			702
						1690					1409
HOOD	318	EH-1	50 1/4" x 14"	4.89	196	960	253	215	207	207	1012
CORR.	318					242					481

Remarks * READ WITH FLOW HOOD

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV-1 Floor # THIRD

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-14		HOOD-ON-HEATING									
76	318	S-85	48"	*		102.5	90	50			105
77	"	"	"	*		102.5	20	100			100
78	"	"	"	*		102.5	20	100			105
79	"	"	"	*		102.5	20	100			105
80	"	"	"	*		102.5	20	70			100
81	"	"	"	*		102.5	20	60			105
81-A	"	"	"	*		102.5	10	50			100
						718					720
EB-14											
25	318	R-78	16"Ø	1.0		0					0
26	"	"	"	"		0					0
						0					0
HOOD	318	EH-1	50 1/4" x 14"	4.89	196	960	253	215	207	207	1012
CORR.	318					242					292

Remarks * READ WITH FLOW HOOD.

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV - 1 Floor # Third

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-75		COOLING									
82	318A	S-71	24"	*		150	135	145			145
83	320	"	"	*		150	140	150			150
						300					295
EB-75											
27	318A	R-77	7"Ø	1.0		165	155	170			170
CORR.	318A					15					25
ATB-75		HEATING									
82	318A	S-71	24"	*		75	80				80
83	320	"	"	*		75	75				75
						150					155
EB-75											
27	318A	R-77	7"Ø	1.0		90	160	95			95
CORR.	318A					15					15

Remarks * READ WITH FLOWHOOD

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Project MAXWELL H. GLÜCK EQUINE RESEARCH CENTER

System VAV - 1 Floor # Third

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-72		HOOD -	ON -	COOLING							
84	324	S-86	48"	*		444	330	390	425		425
85	"	"	"	*		444	445	495	430		430
86	"	"	"	*		444	395	425	425		425
87	"	"	"	*		444	290	340	375		375
						1776					1655
EB-72											
28	324	R-76	14"Ø	1.015		616	480	610			619
29	"	"	"	"		616	490	620			629
						1232					1248
HOOD	324	EH-1	38-1/4" x 14"	3.72	194	720	223	188	198	198	737
CORR.						176					330

Remarks * READ WITH FLOWHOOD

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV - 1 Floor # Third

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-72		HOOD -	ON -	HEATING							
84	324	S-86	48"	*		136	135	130			130
85	"	"	"	*		136	140	135			135
86	"	"	"	*		136	160	140			140
87	"	"	"	*		136	190	140			140
						544					545
EB-72											
28	324	R-76	14"Ø	1.0		0	0				0
29	"	"	"	1.0		0	0				0
HOOD	324	EH-1	38-1/4" x 14"	3.72	194	720	233	188	198	198	737
CORR.						176					197

Remarks * READ WITH FLOWHOOD

Environmental Balance COmpany

Date 7-24-87

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV - 1 Floor # Third

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-72		HOOD - OFF - HEATING									
84	324	S-86	48"	*		90.75	280	90			90
85	"	"	"	*		"	290	95			95
86	"	"	"	*		"	280	90			90
87	"	"	"	*		"	210	85			85
						363					360
EB-72											
28	324	R-76	14"Ø	1.0		269.5	300	270			270
29	"	"	"	"		"	205	275			275
						539					545
HOOD						0					0
CORR.						176					185

Remarks * READ WITH FLOWHOOD

Environmental
Balance
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Date 7-24-87

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV - 1 Floor # Third

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-72		HOOD - OFF - COOLING									
84	324	S-86	48"	*		444	425				425
85	"	"	"	*		444	430				430
86	"	"	"	*		444	425				425
87	"	"	"	*		444	375				375
						1776					1655
EB-72											
28	324	R-76	14"Ø	1.035		976	790	940			923
29	"	"	"	"		976	800	950			983
						1952					1956
HOOD						0					0
CORR.						176					301

Remarks * READ WITH FLOWHOOD

Environmental
Balance
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Date 8-19-87

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV-1 Floor # Third

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-26		COOLING									
88	317	S-17	48"	*		100	50	95			95
89	"	"	"	*		100	50	100			100
90	"	S-29	24"	*		225	290	230			230
91	319	"	"	*		225	125	210			210
92	321	"	"	*		225	280	230			230
						875					865
ATB-26		HEATING									
88	317	S-17	48"	*		50	75	45			45
89	"	"	"	*		50	75	45			45
90	"	S-29	24"	*		115	180	120			120
91	319	"	"	*		114	165	105			105
92	321	"	"	*		114	170	110			110
						443					425

* READ WITH FLOWHOOD

Remarks

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Balance
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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV - 1 Floor # Third

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-74		COOLING									
93	300A	S-51	48"	*		300	295	290			290
94	300B	"	"	*		300	265	275			275
95	300A	"	"	*		300	290	280			280
96	"	"	"	*		300	235	265			265
						1200					1110
ATB-74		HEATING									
93	300A	S-57	48"	*		150	220	155			155
94	300B	"	"	*		150	210	150			150
95	300A	"	"	*		150	220	150			150
96	"	"	"	*		150	205	140			140
						600					595

Remarks * READ WITH FLOWHOOD

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Balance
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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System 'VAV - 1 Floor # Third

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-73		COOLING									
97	325	S-29	24"	*		225	280	205			205
98	323	"	"	*		225	120	200			200
						450					405
ATB-73		HEATING									
97	325	S-29	24"	*		112.5	140	115			115
98	323	"	"	*		112.5	135	110			110
						225					225

Remarks * READ WITH FLOWHOOD

Environmental
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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV - 1 Floor # Second

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-37		COOLING									
99	202	S-103	48"	*		180	175				175
100	"	"	"	*		180	160				160
						360					335
ATB-37		HEATING									
99	202	S-103	48"	*		90	120	95			95
100	"	"	"	*		90	115	90			90
						180					185
ATB-20		COOLING									
101	202	S-79	48"	*		375	460	425	400		400
102	"	"	"	*		375	410	365	370		370
103	"	"	"	*		375	400	365	370		370
104	"	"	"	*		375	184	400	400		400
						1500					1540

Remarks * READ WITH FLOWHOOD

Environmental
Balance
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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV - 1 Floor # Second

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-20		HEATING									
101	202	S-79	48"	*		187.5	250	240			240
102	"	"	"	*		"	150	115			115
103	"	"	"	*		"	140	115			115
104	"	"	"	*		"	265	245			245
						750					715
ATB-36		COOLING									
105	206	S-79	48"	*		375	240	295	335		335
106	"	"	"	*		375	295	335	265		365
107	200	S-29	24"	*		225	290	220	220		220
						975					920
ATB-36		HEATING									
105	206	S-79	48"	*		188	165	180			180
106	"	"	"	*		188	170	185			185
107	200	S-29	24"	*		112	90	110			110
						488					475

Remarks * READ WITH FLOWHOOD

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System * VAV-1 Floor # Second

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-21		COOLING									
108	204	S-104	48"	*		250	195	225	230		230
109	"	"	"	*		250	230	265	245		245
						500					475
ATB-21		HEATING									
108	204	S-104	48"	*		125	135	125			125
109	"	"	"	*		125	140	130			130
						250					255
ATB-38		COOLING									
110	200	S-28	24"	*		175	140	155	155		155
110A	"	S-101	"	*		125	125	115	115		115
110B	205	"	"	*		125	115	125	125		125
110C	207	S-100	"	*		125	135	135	130		130
111	200	S-102	"	*		185	175	170	175		175
112	"	"	"	*		185	125	15-	155		155
113	"	"	"	*		185	125	145	150		150
						1105					1005

Remarks * READ WITH FLOWHOOD

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System * VAV-1 Floor # Second

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-38		HEATING									
110	200	S-28	24"	*		104	75	95			95
110A	"	S-101	"	*		74	55	70			70
110B	205	"	"	*		74	50	70			70
110C	207	S-100	"	*		74	60	75			75
111	200	S-102	"	*		109	100	120			120
112	"	"	"	*		109	70	95			95
113	"	"	"	*		109	75	95			95
						653					620
ATB-52		HEATING									
114	309	S-93	4"x16"	*		300	295				295
115	"	"	"	*		300	300				300
						600					595
ATB-52		COOLING									
114	309	S-93	4"x16"	*		0					0
115	"	"	"	*		0					0

* READ WITH FLOWHOOD

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV-1 Floor # Second

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-58		COOLING									
116	200	S-102	24"	*		185	145	150	170		170
117	"	"	"	*		185	165	165	180		180
118	"	S-91	48"	*		200	205	210	195		195
119	"	S-102	24"	*		185	130	130	165		165
						755					710
ATB-58		HEATING									
116	200	S-102	24"	*		127	130	100			100
117	"	"	"	*		127	160	130			130
118	"	S-91	40"	*		136	180	140			140
119	"	S-102	24"	*		127	130	120			120
						517					490

* READ WITH FLOWHOOD

Remarks

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV - 1 Floor # First

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-5		COOLING									
119A	100B	S-14	96"	*		200	380	210			210
120	100A	S-13	"	*		250	50	250			250
						450					460
ATB-5		HEATING									
119A	100B	S-14	96"	*		100	200	105			105
120	100A	S-13	"	*		125	10	120			120
						225					225
ATB-3		COOLING									
121	104	S-90	24"	*		100	135	95			95
122	102	"	"	*		100	155	100			100
123	100C	S-73	48"	*		164	170	160			160
						364					355
ATB-3		HEATING									
121	104	S-90	24"	*		50	45				45
122	102	"	"	*		50	50				50
123	100C	S-73	48"	*		82	90				90
						182					185

Remarks * READ WITH FLOWHOOD

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV - 1 Floor # First

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-78		COOLING									
124	106	S-91	48"	*		200	260	190			190
125	"	S-75	"	*		200	260	190			190
126	"	"	"	*		200	285	220			220
127	"	S-91	"	*		200	225	205			205
						800					805
ATB-78		HEATING									
124	106	S-91	48"	*		100	140	100			100
125	"	S-75	"	*		100	135	105			105
126	"	"	"	*		100	150	110			110
127	"	S-91	"	*		100	145	105			105
						400					420

* READ WITH FLOWHOOD

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV - 1 Floor # First

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-2		COOLING									
128	108A"	S-52	24"	*		133	215	140			140
129	"	S-53	"	*		133	195	135			135
130	"	"	"	*		133	210	140			140
131	"	S-52	"	*		133	215	140			140
132	"	S-53	"	*		133	185	135			135
133	"	S-52	"	*		133	190	130			130
						798					820
ATB-2		HEATING									
128	108A	S-52	24"	*		66	95	65			65
129	"	S-53	"	*		66	90	60			60
130	"	"	"	*		66	100	65			65
131	"	S-52	"	*		66	95	65			65
132	"	S-53	"	*		66	90	60			60
133	"	S-52	"	*		66	85	60			60
						396					375

Remarks * READ WITH FLOWHOOD

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System ' VAV - 1 Floor # First

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-7		COOLING									
134	108B	S-23	24"	*		90	150	95			95
135	"	"	"	*		90	135	95			95
136	"	S-25	"	*		180	210	185			185
137	100E	S-15		*		175	230	165			165
						535					540
ATB-7		HEATING									
134	108B	S-23	24"	*		45	65	45			45
135	"	"	"	*		45	65	40			40
136	"	S-25	"	*		90	110	95			95
137	100E	S-15	"	*		88	100	90			90
						268					270

Remarks * READ WITH FLOWHOOD

Environmental
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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV - 1 Floor # First

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-47		COOLING									
138	108	S-60	24"	*		70	100	75			75
139	"	"	"	*		70	95	75			75
140	"	"	"	*		70	90	70			70
141	"	"	"	*		70	75	65			65
142	108D	S-62	"	*		75	115	80			80
143	"	"	"	*		75	120	80			80
144	108C	S-61	"	*		150	180	155			155
145	"	"	"	*		150	175	155			155
						730					755
ATB-47		HEATING									
138	108	S-60	24"	*		35	40				40
139	"	"	"	*		35	40				40
140	"	"	"	*		35	35				35
141	"	"	"	*		35	35				35
142	108D	S-62	"	*		37.5	40				40
143	"	"	"	*		37.5	40				40
144	108C	S-61	"	*		75	80				80

Remarks * READ WITH FLOWHOOD

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System • VAV - 1 Floor # First

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-47	- HEATING - continued										
145	108C	S-61	24"	*		75	80				80
						365					390
ATB-6		COOLING									
146	100D	S-88	48"	*		263	315	270			270
147	"	"	"	*		263	310	265			265
						526					535
ATB-6		heating									
146	100D	S-88	48"	*		131.5	150	135			135
147	"	"	"	*		"	150	135			135
						263					270
ATB-18		COOLING									
148	100F	S-51	48"	*		300	365	310			310
ATB-18											
148	100F	S-51	48"	*		150	175	145			145

Remarks * READ WITH FLOWHOOD

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System * VAV - 1 Floor # First

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-79		COOLING									
149	100D	S-51	48"	*		300	220	280			280
150	"	"	"	*		300	220	275			275
151	"	"	"	*		300	210	270			270
						900					825
ATB-79		HEATING									
149	100D	S-51	48"	*		150	170	150			150
150	"	"	"	*		150	165	150			150
151	"	"	"	*		150	160	145			145
						450					445

* READ WITH FLOWHOOD

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System VAV - 1 Floor # First

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-77		COOLING									
152	105	S-87	24"	*		100	150	110			110
153	103	"	"	*		100	150	110			110
154	"	"	"	*		100	155	110			110
155	105	"	"	*		100	140	95			95
156	107	"	"	*		100	145	105			105
						500					530
ATB-77		HEATING									
152	105	S-87	24"	*		50	110	55			55
153	103	"	"	*		50	110	55			55
154	"	"	"	*		50	110	55			55
155	105	"	"	*		50	95	50			50
156	107	"	"	*		50	105	50			50
						250					265

* READ WITH FLOWHOOD

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System VAV - 1 Floor # First

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-1		HOOD	- OFF	- COOLING							
157	109	S-54	48"	*		360	322	345			345
158	"	"	"	*		360	400	345			345
						720					690
EB-1											
45	109	R-37	14"Ø	1.025		792	300				300
HOOD	109	BH-1	38-1/4" x 14"	3.72		0	0				0
CORR.	109					72					390

* READ WITH FLOWHOOD

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System VAV - 1 Floor # First

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-1		HOOD	- OFF	- HEATING							
157	109	S-54	48"	*		180	230	180			180
158	"	"	"	*		180	220	180			180
						360					360
EB-1	++										
45	109	R-37	14"Ø	1.006		432	300				300
HOOD	109					0					0
CORR.	109					72					60

Remarks * READ WITH FLOWHOOD

++-BOX FULLY OPEN.

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System . VAV - 1 Floor # First

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-1		HOOD -	ON -	COOLING							
157	109	S-54	48"	*		360	345				345
158	"	"	"	*		360	345				345
						720					690
EB-1											
45	109	R-37	14"Ø	1.0		72	160	80			80
HOOD	109	EH-1	38-1/4" x 14"	3.72	194	720	174	200	202	202	751
CORR.						72					141

* READ WITH FLOWHOOD

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System 'VAV - 1 Floor # First

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-1		HOOD	- ON -	HEATING							
157	109	S-54	48"	*		360	345				345
158	"	"	"	*		360	345				345
						720					690
EB-1											
45	109	R-37		1.0		72	80				80
HOOD	109	EH-1		3.72	194	720	174	200	202	202	751
CORR.						72					141

* READ WITH FLOWHOOD

Remarks

EBCO INC.

INDEPENDENT TEST AND BALANCING
AIR · HYDRONICS

MAXWELL H. GLUCK EQUINE RESEARCH CENTER

COMMENTS

1) ATB-35 "HOOD OFF COOLING"

EB box is fully open for maximum CFM drawl. ATB set to a lower CFM to create a negative pressure in room. ATB box will supply the required CFM's.

2) ATB-54

This box is fully open for maximum CFM flow.

AIR HANDLER TEST REPORT

EBCO INC.

PROJECT MAXWELL GLUCK EQUINE RESEARCH CENTER

SYSTEM VAV-2

LOCATION SOUTH PENTHOUSE

SHEET NO. 82

DATE 4-5-87

INDEPENDENT TEST AND BALANCING

	DESIGN SPECIFICATIONS	INSTALLED EQUIPMENT	ACTUAL TEST DATA
Manufacturer	McQUAY	McQUAY	
Model No.	MMM-172	MMM-172 DH	
Serial No.	--	3RF0006204	
Size or Type	--	HORIZONTAL DRAW-THRU	
C.F.M.	40,000	43,031	38,269
Return Air C.F.M.	8,000	INLET TOTAL 7,780	8,145
Outside Air C.F.M.	32,000	35,251	30,124
Fan R.P.M.	1,163	1,232	12,232
Total S.P.	6.00"	6.43"	5.5 "
Suction S.P.	--	--	2.3"
Discharge S.P.	--	--	3.2"
Motor Mfg.	--	MARATHON	MARATHON
Motor H.P.	75	75	75
Motor R.P.M.	--	1775	1780
Motor Volts	--	200	200
Motor Amps	--	214	180/185/185
Heaters Size/RTG	--	NOT AVAILABLE	
Fan Sheave	--	BROWNING 4R5V140 x 2 15/16"	
Motor Sheave	--	BROWNING 4R5V97 x 2 3/8"	
Belts	--	OPIBELT 5Vx1180	
Phase	--	3	3

Environmental Balance Company

Date 5-27-87

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

DUCT TRAVERSE ZONE TOTALS

System Zone/Branch	Duct Size	Area Sq. Ft.	Design		Test			
			FPM	CFM	Test 1 FPM	Test 2 FPM	CFM	Static Pressure
SUPPLY	44"Ø	10.56	3788	40,000	3378	3624	38,269	.78"
RETURN	36"x26"	6.5	1200	7800	1171	1253	8145	.68"
RM-446	AIR FLOWS TO RECIRCULATION ROOMS							
SUPPLY								
16-A	8"Ø	.35	614	215	1420	620	217	.10"
16-A2	"	"	"	"	1510	624	218	.41"
16-1	"	"	614	215	1710	657	228	.42"
16-2	"	"	"	"	1650	680	238	.69"
10-A	"	"	614	215	1620	643	225	.66"
10-B	"	"	614	215	1540	682	239	.64"
11-A & B	10"Ø	.55	781	430	1875	814	448	.60"

Remarks

Environmental Balance Company

Date 5-22-87

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Project MAXWELL GLUCK RESEARCH CENTER VAV-2

DUCT TRAVERSE ZONE TOTALS

System Zone/Branch	Duct Size	Area Sq. Ft.	Design		Test			
			FPM	CFM	Test 1 FPM	Test 2 FPM	CFM	Static Pressure
EXHAUST								
2-A	8"Ø	.35	614	215	1100	656	230	.37"
2-B	"	"	614	215	1285	634	222	.36"
2-C	"	"	614	215	1320	628	220	.38"
2-D	8"Ø	.35	614	215	1265	646	226	.41"
2-E	"	"	614	215	1875	678	237	.43"
2-F	"	"	"	215	1480	641	224	.44"
2-G	"	"	"	215	1275	638	233	.40"
2-H	"	"	"	215	1125	629	220	.36"

Remarks

AIR HANDLER TEST REPORT

EBCO INC.

PROJECT MAXWELL GLUCK EQUINE RESEARCH CENTER

SYSTEM RF-2

LOCATION SOUTH PENTHOUSE

SHEET NO. 85

DATE 4-5-87

INDEPENDENT TEST AND BALANCING

	DESIGN SPECIFICATIONS	INSTALLED EQUIPMENT	ACTUAL TEST DATA
Manufacturer	McQUAY	McQUAY	
Model No.	LYF-122D	LYF122DH	
Serial No.	--	3RF00056-04	
Size or Type	--	HORIZONTAL DRAW-THRU	
C.F.M.	--	--	--
Return Air C.F.M.	7,800	INLET TOTAL 7,780	8,145
Outside Air C.F.M.	--	--	--
Fan R.P.M.	1,258	1,148	1,368
Total S.P.	EXT. 1.50"	EXT. 1.50"	EXT. 1.00"
Suction S.P.	--	--	.85"
Discharge S.P.	--	--	.15"
Motor Mfg.	--	CENTURY	CENTURY
Motor H.P.	7 1/2	7.5	7.5
Motor R.P.M.	--	1750	1789
Motor Volts	208	200-208	200
Motor Amps	--	23-23	16.5/16.5/16.0
Heaters Size/RTG	--	CULTER HAMMER 1043/22.9-24.5	
Fan Sheave	--	BROWNING 2TB70 x 1 15/16"	
Motor Sheave	--	BROWNING 2VP60 x 1 3/8"	
Belts	--	OPTIBELT B60	
Phase	3	3	3

Environmental
Balance
COmpany

Date 6-15-87

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Project MAXWELL GLUCK EQUINE RESEARCH CENTER

System RF-2 Floor # 3rd, 4th

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
1	400	R-44	14"Ø	*		500	400	455	450		450
2	445	R-26	8"Ø	*		200	235	270	195		195
3	443	R-26	8"Ø	*		200	240	275	180		180
4	441	R-26	"	*		200	230	260	190		190
5	439	R-26	"	*		200	200	230	180		180
6	437	R-26	"	*		200	200	225	185		185
7	435	R-26	"	*		200	130	150	180		180
8	400	R-44	14"Ø	*		500	330	420	465		465
9	433	R-26	8"Ø	*		200	125	140	185		185
10	431	R-26	"	*		200	125	145	185		185
11	343	R-26	"	*		200	220	230	180		180
12	300	R-44	14"Ø	*		500	580	580	460		460
13	341	R-26	8"Ø	*		200	250	260	180		180
14	339	R-26	"	*		200	230	240	180		180
15	-	R-49	6"Ø	*		90	110	110	90		90
16	337	R-26	8"Ø	*		200	220	220	180		180
17	300	R-44	14"Ø	*		500	380	380	455		455
18	335	R-26	8"Ø	*		200	130	130	180		180

Remarks * READ WITH FLOW HOOD.

Environmental
Balance
COmpany

Date 6-15-87

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Project MAXWELL GLUCK EQUINE RESEARCH CENTER

System RF-2 Floor # 3rd, 4th

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
19	333	R-26	8"Ø	*		200	100	120	185		185
20	331	R-26	"	*		200	90	125	180		180
21	330	R-18	6"Ø	*		70	50	50	70		70
22	329	R-26	8"Ø	*		200	100	125	180		180
23	327	R-26	8"Ø	*		200	100	120	180		180
24	100-F	R-64	"	*		200	250	210	195		195
25	100-F	R-63	14"Ø	*		800	880	800	750		750
25-A	129	R-26	8"Ø	*		200	360	210	200		200
26	127	R-26	"	*		200	245	220	180		180
27	125	R-26	"	*		200	235	210	190		190
28	123	R-26	"	*		200	230	220	190		190
29	121	R-26	"	*		200	220	210	195		195
30	119	R-29	"	*		220	180	240	200		200
						7780					7195

Remarks * READ WITH FLOW HOOD.

Environmental Balance Company

INDEPENDENT TEST AND BALANCING

Date 6-23-87

Project MAXWELL GLUCK EQUINE RESEARCH CENTER

TERMINAL UNITS

System VAV-2

Manufacturer TEMPMASTER

CONSTANT		VARIABLE	X	SINGLE		DUAL	

Box Number	Location	Mode	Size	DESIGN / ACTUAL S.P.	Min. CFM Design	Max. CFM Design	Min. CFM Actual	Max. CFM Actual
ATB-28	448	NO HOOD COOLING	G	.34"/.25"	-	1600	-	1445
EB-28	"	"	"	.39"/.44"	-	1760	-	1756
ATB-28	"	HEATING	G	+ / Ø	251	-	245	-
EB-28	"	"	"	+ /.05"	411	-	417	-
ATB-63	450	NO HOOD COOLING	"	.29"/.25"	-	1500	-	1460
EB-63	"	"	"	.35"/.40"	-	1650	-	1663
ATB-63	"	HEATING	"	+ / Ø	279	-	270	-
EB-63	"	"	"	+ / .05"	429	-	418	-
ATB-4	446	COOLING	E	.37"/.25"	-	1028	-	980
EB-4	"	"	"	.40"/.35"	-	1130	-	1134
ATB-4	"	HEATING	"	+ / .01"	372	-	380	-
EB-4	"	"	"	+ / .09"	478	-	459	-
ATB-62	444	NO HOOD COOLING	G	.29"/.43"	-	1500	-	1405
EB-62	"	"	"	.35"/.35"	-	1650	-	1696
ATB-62	"	HEATING	"	+ / Ø	257	-	255	-
EB-62	"	"	"	+ / .05"	401	-	397	-
ATB-45	440	NO HOOD COOLING	"	.29"/.27"	-	1500	-	1485
EB-45	"	"	"	.35"/.35"	-	1650	-	1652

Remarks: Ø - STATIC PRESSURE BELOW "0" ON MAGNEHELIC GAUGE.

+ - MINIMUM STATIC PRESSURE DESIGN IS NOT INDICATED ON LINE GRAPH.

Environmental Balance Company

INDEPENDENT TEST AND BALANCING

Date 6-24-87

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Project MAXWELL GLUCK EQUINE RESEARCH CENTER

TERMINAL UNITS

System VAV-2

Manufacturer TEMPMASTER

CONSTANT		VARIABLE	X	SINGLE		DUAL	

Box Number	Location	Mode	Size	DESIGN / ACTUAL S.P.	Min. CFM Design	Max. CFM Design	Min. CFM Actual	Max. CFM Actual
ATB-45	440	HEATING	G	+ / Ø	362	-	370	-
EB-45	"	"	"	+ / .02"	512	-	520	-
ATB-40	400	COOLING	B	.56"/.35"	-	450	-	450
"	"	HEATING	"	.14"/.01"	225	-	215	-
ATB-42	400	COOLING	E	.35"/.20"	-	1000	-	925
"	"	HEATING	"	.35"/.20"	1000	-	925	-
ATB-44	436	COOLING	E	.42"/.25"	-	1140		1035
EB-44	"	"	F	.41"/.30"	-	1260		1274
ATB-44	"	HEATING	E	+ / Ø	362	-	380	-
EB-44	"	"	F	+ /.05"	474	-	479	-
ATB-64	400	COOLING	D	.35"/.30"	-	675	-	690
ATB-64	"	HEATING	"	+ / Ø	340	-	335	-
ATB-32	400	COOLING	"	.35"/.20"	-	675	-	640
ATB-32	"	HEATING	"	+ / Ø	340	-	335	-
ATB-41	436	COOLING	E	.28"/.24"	-	900	-	895
ATB-41	"	HEATING	"	.28"/.24"	900	-	895	-
ATB-43	430	COOLING	G	.55"/.24"	-	2076	-	1885
EB-43	"	"	"	.68"/.74"	-	2282	-	2107

Remarks: Ø - STATIC PRESSURE BELOW "0" ON MAGNEHELIC GAUGE

+ - MINIMUM STATIC PRESSURE DESIGN IS NOT INDICATED ON LINE GRAPH.

Environmental Balance Company

INDEPENDENT TEST AND BALANCING

REVISED
Date 11-11-88

Project MAXWELL GLUCK EQUINE RESEARCH CENTER

TERMINAL UNITS

System VAV-2

Manufacturer TEMPMASTER

CONSTANT		VARIABLE	X	SINGLE		DUAL	

Box Number	Location	Mode	Size	DESIGN / ACTUAL S.P.	Min. CFM Design	Max. CFM Design	Min. CFM Actual	Max. CFM Actual
ATB-43	430	HEATING	G	+ / Ø	558	-	595	-
EB-43	"	"	"	+ / Ø	764	-	760	-
ATB-8	346-A	COOLING	A	+ /.05"	-	118	-	120
EB-8	"	"	"	.20"/.15"	-	130	-	130
ATB-8	"	HEATING	"	+ / Ø	59	-	6	-
EB-8	"	"	"	+ /.04"	71	-	70	-
ATB-27	346	HOOD ON COOLING	F	.34"/.62"	-	1256	-	1240
EB-27	"	"	"	+ / .10"	-	422	-	472
ATB-27	"	HOOD ON HEATING	"	.20"/ Ø	834	-	835	-
EB-27	"	"	"	Ø / Ø	0	-	0	-
ATB-27	"	HOOD OFF HEATING	"	+ / Ø	270	-	270	-
EB-27	"	"	"	.09" / Ø	396	-	351	-
ATB-27	"	HOOD OFF COOLING	"	.34"/.62"	-	1256	-	1015
EB-27	"	"	"	.45"/.82"	-	1382	-	1350
ATB-55	346-B	COOLING	A	.18"/.10"	-	184	-	185
EB-55	"	"	"	.21"/.42"	-	192	-	190
ATB-55	"	HEATING	"	+ / Ø	78	-	75	-
EB-55	"	"	"	+ / .10"	86	-	85	-

Remarks: Ø- STATIC PRESSURE BELOW "0" ON MAGNEHELIC GAUGE.

+- MINIMUM STATIC PRESSURE DESIGN IS NOT INDICATED ON LINE GRAPH.

Environmental Balance Company

INDEPENDENT TEST AND BALANCING

Date REVISED 11-11-88

Project MAXWELL GLUCK EQUINE RESEARCH CENTER

TERMINAL UNITS

System VAV-2

Manufacturer TEMPMASTER

CONSTANT		VARIABLE	X	SINGLE		DUAL	

Box Number	Location	Mode	Size	DESIGN / ACTUAL S.P.	Min. CFM Design	Max. CFM Design	Min. CFM Actual	Max. CFM Actual
ATB-65	344	HOOD ON COOLING-HTG	C	1.15"/.42"	904	-	-	895
EB-65	"	"	E	Ø / Ø	0	-	0	-
ATB-65	"	HOOD OFF HEATING	C	+ / Ø	168	-	170	-
EB-65	"	"	E	+ /.09"	224	-	220	-
ATB-65	"	HOOD OFF COOLING	C	.45"/.07"	-	560	-	565
EB-65	"	"	E	.14"/.63"	-	616	-	610
ATB-50	340	COOLING	F	.33"/.30"	-	1136	-	1150
EB-50	"	"	F	.34"/.40"	-	1159	-	1155
ATB-50	"	HEATING	"	- / Ø	132	-	140	-
EB-50	"	"	"	- / Ø	155	-	155	-
ATB-13	336	COOLING	H	.53"/.51"	-	2400	-	2195
EB-13	"	"	"	.65"/.56"	-	2640	-	2435
ATB-13	"	HEATING	"	+ / Ø	251	-	250	-
EB-13	"	"	"	+ / Ø	491	-	515	-
ATB-54	340-A	HOODS OFF COOLING	E	.37"/.28"	-	1014	-	1215
EB-54	"	"	"	.36"/.54"	-	1105	-	1050
ATB-54	"	HOODS OFF HEATING	"	+ / Ø	132	-	135	-
EB-54	"	"	"	+ / Ø	223	-	225	-

Remarks: Ø - STATIC PRESSURE BELOW "0" ON MAGNEHELIC GAUGE.

+ - MINIMUM STATIC PRESSURE DESIGN IS NOT INDICATED ON LINE GRAPH.

Environmental Balance Company

INDEPENDENT TEST AND BALANCING

Date 6-29-87

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Project MAXWELL GLUCK EQUINE RESEARCH CENTER

TERMINAL UNITS

System VAV-2

Manufacturer TEMPMASTER

CONSTANT		VARIABLE	X	SINGLE		DUAL	

Box Number	Location	Mode	Size	DESIGN / ACTUAL S.P.	Min. CFM Design	Max. CFM Design	Min. CFM Actual	Max. CFM Actual
ATB-54	340-A	HOODS ON COOLING	E	.37"/.28"	-	1014	-	770
EB-54	"	"	"	+ / *	*	-	*	-
ATB-54	"	HOODS ON HEATING	"	.37"/.28"	-	1014	-	770
EB-54	"	"	"	+ / *	*	-	*	-
ATB-22	HALLWAY	COOLING	B	.45"/.45"	-	400	-	375
ATB-22	"	HEATING	"	.45"/.45"	400	-	375	-
ATB-51	300	COOLING	E	.17"/.21"	-	695	-	750
ATB-51	"	HEATING	"	.17"/.21"	695	-	750	-
ATB-68	341	COOLING	D	.34"/.28"	-	675	-	630
ATB-68	"	HEATING	D	+ / Ø	340	-	345	-
ATB-24	300	COOLING	E	.34"/.24"	-	975	-	900
ATB-24	"	HEATING	"	.28"/.24"	900	-	900	-
ATB-67	335	COOLING	D	.34"/.30"	-	675	-	650
ATB-67	"	HEATING	D	+ / Ø	340	-	335	-
ATB-66	329	COOLING	D	.34"/.30"	-	675	-	650
ATB-66	"	HEATING	D	+ / Ø	340	-	350	-
ATB-84	332	BOTH HOOD ON COOLING/HTG	F	.71"/.34"	-	1680	-	1670
EB-84	"	"	F	0 / 0	U	-	0	-

Remarks: Ø- STATIC PRESSURE BELOW "0" ON MAGNEHELIC GAUGE.

+- MINIMUM STATIC PRESSURE DESIGN IS NOT INDICATED ON LINE GRAPH.

*-EB-54 DOES NOT HAVE A CONTROLLER TO RUN BOX FULLY CLOSED WHILE HOODS ARE ON.

Environmental Balance Company

INDEPENDENT TEST AND BALANCING

Date 6-29-87

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Project MAXWELL GLUCK EQUINE RESEARCH CENTER

TERMINAL UNITS

System VAV-2

Manufacturer TEMPMASTER

CONSTANT		VARIABLE	X	SINGLE		DUAL	

Box Number	Location	Mode	Size	DESIGN / ACTUAL S.P.	Min. CFM Design	Max. CFM Design	Min. CFM Actual	Max. CFM Actual
ATB-84	332	#1 HOOD ON HEATING	F	.10"/ Ø	600	-	605	-
EB-84	"	"	"	0 / 0	0	-	0	-
ATB-84	"	#1 HOOD ON COOLING	"	.35"/.11"	-	1200	-	1220
EB-84	"	"	"	.10"/.10"	600	-	598	-
ATB-84	"	#2 HOOD ON HEATING	"	.26"/.04"	960	-	965	-
EB-84	"	"	"	0 / 0	0	-	0	-
ATB-84	"	#2 HOOD ON COOLING	"	.35"/.11"	-	1200	-	1220
EB-84	"	"	"	+ /.04"	240	-	250	-
ATB-84	"	HOODS OFF HEATING	"	+ / Ø	280	-	285	-
EB-84	"	"	"	+ / .06"	400	-	400	-
ATB-84	"	HOODS OFF COOLING	"	.35"/.11"	-	1200	-	1220
EB-84	"	"	"	.44"/.68"	-	1320	-	1325
ATB-53	332-A	COOLING	C	.44"/.65"	-	556	-	540
EB-53	"	"	"	.51"/.46"	-	612	-	622
ATB-53	"	HEATING	"	+ / Ø	126	-	115	-
EB-53	"	"	"	+ / .10"	182	-	180	-
ATB-35	328	HOOD ON COOLING	G	.34"/.48"	-	1676	-	1675
EB-35	"	"	"	.16"/.20"	-	1124	-	1053

Remarks: Ø- STATIC PRESSURE BELOW "0" ON MAGNEHELIC GAUGE.

+ - MINIMUM STATIC PRESSURE DESIGN IS NOT INDICATED ON LINE GRAPH

Environmental Balance Company

INDEPENDENT TEST AND BALANCING

Date 6-29-87

Project MAXWELL GLUCK EQUINE RESEARCH CENTER

TERMINAL UNITS

System VAV-2

Manufacturer TEMPMASTER

CONSTANT		VARIABLE	X	SINGLE		DUAL	

Box Number	Location	Mode	Size	DESIGN / ACTUAL S.P.	Min. CFM Design	Max. CFM Design	Min. CFM Actual	Max. CFM Actual
ATB-35	328	HOOD ON HEATING	G	+ / Ø	552	-	560	-
EB-35	"	"	"	0 / 0	0	-	0	-
ATB-35	"	HEAT OFF HEATING	"	+ / Ø	338	-	340	-
EB-35	"	"	G	+ /.05"	506	-	520	-
ATB-35 *	"	HOOD OFF COOLING	"	.34"/.07"	-	1676	-	1000
EB-35 *	"	"	"	.41"/.20"	-	1844	-	1092
ATB-87	126	COOLING	H	.59"/.58"	-	2505	-	2490
EB-87	"	"	"	.69"/.75"	-	2756	-	2756
ATB-87	"	HEATING	"	.14"/.10"	1250	-	1300	-
EB-87	"	"	"	.21"/.30"	1501	-	1486	-
ATB-88	136	COOLING	B	.60"/.55"	-	460	-	475
EB-88	"	"	C	.35"/.55"	-	502	-	499
ATB-88	"	HEATING	B	+ / .06"	148	-	155	-
EB-88	"	"	C	+ / .09"	190	-	200	-
ATB-76	138	COOLING	F	.36"/.24"	-	1260	-	1250
EB-76	"	"	"	.50"/.65"	-	1386	-	1380
ATB-76	"	HEATING	"	+ / Ø	86	-	85	-
EB-76	"	"	"	+ / .05"	212	-	210	-

Remarks: Ø- STATIC PRESSURE BELOW "0" ON MAGNEHELIC GAUGE.

+ - MINIMUM STATIC PRESSURE DESIGN IS NOT INDICATED ON LINE GRAPH

Environmental Balance Company

INDEPENDENT TEST AND BALANCING

Date 6-29-87

Project MAXWELL GLUCK EQUINE RESEARCH CENTER

TERMINAL UNITS

System VAV-2

Manufacturer TEMPMASTER

CONSTANT		VARIABLE	X	SINGLE		DUAL	

Box Number	Location	Mode	Size	DESIGN / ACTUAL S.P.	Min. CFM Design	Max. CFM Design	Min. CFM Actual	Max. CFM Actual
ATB-15 *	100-H	COOLING	D	.27"/*	-	600	-	615
"	"	HEATING	"	+ / *	300	-	300	-
ATB-11 *	1261	COOLING	F	.54"/ *	-	1430	-	1365
"	"	HEATING	"	.14" / *	715	-	700	-
ATB-10	129	COOLING	D	.44" /.42"	-	775	-	765
"	"	HEATING	"	.12"/.12"	393	-	380	-
ATB-9	123	COOLING	"	.34"/.37	-	675	-	690
"	"	HEATING	"	.10"/.06"	345	-	350	-
ATB-85	122	COOLING	E	.26"/	-	872	-	870
EB-85	"	"	"	.32"/.33"	-	960	-	963
ATB-85 *	"	HEATING	"	+ / *	468	-	485	-
EB-85	"	"	"	.12"/.15"	556	-	557	-
ATB-86	117	COOLING	B	1.0"/.77"	-	600	-	545
"	"	HEATING	"	.25"/.30"	300	-	295	-
ATB-12	114	HOOD OFF COOLING	H	.18"/.15"	-	1300	-	1270
EB-12	"	"	F	.55"/.60"	-	1452	-	1458
ATB-12	"	HOOD OFF HEATING	H	+ / Ø	293	-	295	-
EB-12	"	"	F	+ /.05"	445	-	444	-

Remarks: Ø- STATIC PRESSURE BELOW "0" ON MAGNEHELIC GAUGE.

+ - MINIMUM STATIC PRESSURE DESIGN IS NOT INDICATED ON LINE GRAPH

*ATB-15, NO PRESSURE PORTS ON HIGH SIDE TO INDICATE PRESSURE.

*ATB-11, PRESSURE TAPS NOT ACCESSIBLE DUE TO HIGH CEILING.

*ATB-85, THE ATB INSELF IS IN A HIGH CEILING AGAINST A WALL, WITH A LONG SINK BASEN ALONG THE WALL. TAPS WERE NOT ACCESSIBLE BY LIFT.

Environmental Balance Company

INDEPENDENT TEST AND BALANCING

Date 6-29-87

Project MAXWELL GLUCK EQUINE RESEARCH CENTER

TERMINAL UNITS

System VAV-2

Manufacturer TEMPMASTER

CONSTANT		VARIABLE	X	SINGLE		DUAL	

Box Number	Location	Mode	Size	DESIGN / ACTUAL S.P.	Min. CFM Design	Max. CFM Design	Min. CFM Actual	Max. CFM Actual
ATB-12	114	HOOD ON COOLING	H	.18"/.15"	-	1300	-	1270
EB-12	"	"	F	+ / Ø	372	-	372	-
ATB-12	"	HOOD ON HEATING	H	+ / .02"	928	-	900	-
EB-12	"	"	F	0 / 0	0	-	0	-
ATB-12	"	BOTH HOODS ON COOLING	H	.40"/.37"	-	2008	-	1800
EB-12	"	"	F	0 / 0	0	-	0	-
ATB-12	"	BOTH HOODS ON HEATING	H	.40"/.37"	-	2008	-	1800
EB-12	"	"	F	0 / 0	0	-	0	-
ATB-57	114	COOLING	C	.25"/.25"	-	430	-	430
EB-57	118	"	"	.32"/.40"	-	473	-	475
ATB-57	114	HEATING	"	+ / Ø	215	-	220	-
EB-57	118	"	"	.10"/.10"	258	-	265	-
ATB-16	114	COOLING	D	.28"/.25"	-	620	-	615
EB-16	"	"	"	.34"/.45"	-	682	-	645
ATB-16	"	HEATING	"	+ / Ø	310	-	315	-
EB-16	"	"	"	+ / .12"	341	-	330	-
ATB-56	114-C	HOOD OFF COOLING	E	.34"/.35"	-	980	-	950
EB-56	"	"	"	.41"/.64"	-	1080	-	1087

Remarks: Ø- STATIC PRESSURE BELOW "0" ON MAGNEHELIC GAUGE.

+ - MINIMUM STATIC PRESSURE DESIGN IS NOT INDICATED ON LINE GRAPH

Environmental Balance Company

INDEPENDENT TEST AND BALANCING

Date 6-29-87

Project MAXWELL GLUCK EQUINE RESEARCH CENTER

TERMINAL UNITS

System VAV-2

Manufacturer TEMPMASTER

CONSTANT		VARIABLE	X	SINGLE		DUAL	

Box Number	Location	Mode	Size	DESIGN / ACTUAL S.P.	Min. CFM Design	Max. CFM Design	Min. CFM Actual	Max. CFM Actual
ATB-56	114-C	HOOD OFF HEATING	E	+ / Ø	150	-	160	-
EB-56	"	"	E	+ / Ø	250	-	245	-
ATB-56	"	HOOD ON COOLING	"	.34"/.35"	-	980	-	950
EB-56	"	"	"	0 / 0	-	0	-	0
ATB-56	"	HOOD ON HEATING	"	.34"/.35"	-	980	-	950
EB-56	"	"	"	0 / 0	-	0	-	0
ATB-89	122-A	HOOD OFF COOLING	F	.12"/.05"	-	650	-	645
EB-89	"	"	D	.46"/.50"	-	720	-	709
ATB-89	"	HOOD OFF HEATING	F	+ / Ø	325	-	320	-
EB-89	"	"	D	.12"/.15"	395	-	389	-
ATB-89	"	HOOD ON COOLING	F	.30"/.15"	-	1010	-	985
EB-89	"	"	D	0 / 0	0	-	0	-
ATB-89	"	HOOD ON HEATING	F	.30"/.15"	-	1010	-	985
EB-89	"	"	D	0 / 0	0	-	0	-

Remarks: Ø- STATIC PRESSURE BELOW "O" ON MAGNEHELIC GAUGE.

+ - MINIMUM STATIC PRESSURE DESIGN IS NOT INDICATED ON LINE GRAPH

Environmental
Balance
COmpany

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Project MAXWELL GLUCK EQUINE RESEARCH CENTER

System VAV-2 Floor # 4th

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-28	448 COOLING +										
1	448	S-37	48"	*		400	220	355			355
2	"	S-82	30"	*		400	300	345			345
3	"	S-37	48"	*		400	275	345			345
4	"	"	"	*		400	255	400			400
						1600					1445
EB-28	448										
2	448	R-31	18"	1.115		1760	1480	1575			1756
CORR.						160					311
ATB-28	448 HEATING										
1	448	S-37	48"	*		62.75	90	60			60
2	"	S-82	30"	*		62.75	100	65			65
3	"	S-37	48"	*		62.75	90	60			60
4	"	"	"	*		62.75	85	60			60
						251					245

Remarks * READ WITH FLOW HOOD.

+ BOX FULLY OPEN. .60" S.P. AT ATB-28

Environmental
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Project MAXWELL GLUCK EQUINE RESEARCH CENTER

System VAV-2 Floor # 4th

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
EB-28	448										
2	448	R-31	18"	1.005		411	540	415			417
CORR.						160					172
ATB-63	450	COOLING									
5	450	S-81	30"	*		375	290	355			355
6	"	S-39	48"	*		375	315	380			380
7	"	"	"	*		375	485	380			380
8	"	"	"	*		375	425	345			345
						--- 1500					--- 1460
EB-63											
1	450	R-33	18"	1.101		1650	1475	1510			1663
CORR.						150					203

Remarks * READ WITH FLOW HOOD.

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Project MAXWELL GLUCK EQUINE RESEARCH CENTER

System VAV-2 Floor # 4th

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-63		HEATING									
5	450	S-81	30"	*		69.75	125	60			60
6	"	S-39	48"	*		69.75	135	65			65
7	"	"	"	*		69.75	170	70			70
8	"	"	"	*		69.75	190	75			75
						279					270
EB-63	450										
1	450	R-33	18"	1.007		429	1200	415			418
CORR.						150					148
ATB-4	446	COOLING									
9	446	S-36	48"	*		257	255	290	235		235
10	"	"	"	*		257	280	322	235		235
10-B	"	"	"	*		257	235	270	255		255
10-C	"	"	"	*		257	225	255	255		255
						1028					980

Remarks * READ WITH FLOW HOOD.

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Project MAXWELL GLUCK EQUINE RESEARCH CENTER

System VAV-2 Floor # 4th

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
EB-4	446										
5	446	R-30	14"	1.05		1130	860	1080			1134
CORR.						102					154
ATB-4	446	HEATING									
9	446	S-36	48"	*		93	125	95			95
10	"	"	"	*		93	150	100			100
10-B	"	"	"	*		93	115	95			95
10-C	"	"	"	*		93	115	90			90
						372					380
EB-4											
5	446	R-30	14"	1.008		478	540	455			459
CORR.						106					79

Remarks * READ WITH FLOW HOOD.

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Project MAXWELL GLUCK EQUINE RESEARCH CENTER

System VAV-2 Floor # 4th

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test---FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-62	444	COOLING									
12	444	S-33	48"	*		375	322	340			340
13	"	"	"	*		375	380	345			345
14	"	S-81	30"	*		375	255	375			375
15	"	S-33	48"	*		375	380	345			345
						1500					1405
EB-62	444										
6	444	R-23	18"	1.101		1650	1700	1540			1696
CORR.						150					291
ATB-62	444	HEATING									
12	444	S-33	48"	*		62.75	150	70			70
13	"	"	"	*		62.75	145	65			65
14	"	S-81	30"	*		62.75	125	55			55
15	"	S-33	48"	*		62.75	140	65			65
						251					255

Remarks * READ WITH FLOW HOOD.

Environmental Balance COmpany

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Project MAXWELL GLUCK EQUINE RESEARCH CENTER

System VAV-2 Floor # 4th

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
EB-62	444										
6	444	R-23	18"	1.005		401	470	395			397
CORR.						150					142
ATB-45	440	COOLING									
17	440	S-39	48"	*		375	355	385			385
18	"	"	"	*		375	390	380			380
19	"	"	"	*		375	420	375			375
20	"	S-81	30"	*		375	300	345			345
						1500					1485
EB-45	440										
7	440	R-22	18"	1.101		1650	1680	1500			1652
CORR.						150					167

Remarks * READ WITH FLOW HOOD.

Environmental Balance COmpany

Date 6-23-87

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Project MAXWELL GLUCK EQUINE RESEARCH CENTER

System VAV-2 Floor # 4th

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-45	440	HEATING									
17	440	S-39	48"	*		90.5	135	100			100
18	"	"	"	*		90.5	125	90			90
19	"	"	"	*		90.5	140	100			100
20	"	S-81	30"	*		90.5	110	80			80
						362					370
EB-45	440										
7	440	R-22	18"	1.01		512	680	515			520
CORR.						150					150
ATB-40	443	COOLING									
21	443	S-29	24"	*		225	270	235			235
22	445	"	"	*		225	250	215			215
						450					450

Remarks * READ WITH FLOW HOOD.

Environmental
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Date 6-23-87

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Project MAXWELL GLUCK EQUINE RESEARCH CENTER

System VAV-2 Floor # 4th

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-40		HEATING									
21	443	S-29	24"	*		112.5	125	115			115
22	445	"	"	*		112.5	110	100			100
						225					215
ATB-42		COOLING									
23	400	S-51	48"	*		300	240	265			265
24	"	"	"	*		300	295	285			285
25	447	S-87	24"	*		100	130	100			100
26	400	S-51	48"	*		300	290	275			275
						1000					925
ATB-42		HEATING									
23	400	S-51	48"	*		300	265				265
24	"	"	"	*		300	285				285
25	447	S-87	24"	*		100	100				100
26	400	S-51	48"	*		300	275				275
						1000					925

Remarks * READ WITH FLOW HOOD.

Environmental Balance COmpany

Date 6-24-87

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Project MAXWELL GLUCK EQUINE RESEARCH CENTER

System VAV-2 Floor # 4th

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-44		COOLING									
27	436	S-34	48"	*		287	260				260
28	"	"	"	*		287	255				255
29	"	"	"	*		287	255				255
30	"	"	"	*		287	265				265
						1148					1035
EB-44											
8	436	R-21	48"	1.062		1260	1245	1200			1274
CORR.						112					239
ATB-44		HEATING									
27	436	S-34	48"	*		90.5	115	100			100
28	"	"	"	*		90.5	110	90			90
29	"	"	"	*		90.5	110	90			90
30	"	"	"	*		90.5	125	100			100
						362					380

Remarks * READ WITH FLOW HOOD

Environmental
Balance
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Date 6-24-87

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Project MAXWELL GLUCK EQUINE RESEARCH CENTER

System VAV-2 Floor # 4th

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
EB-44											
8	436	R-21	48"	1.009		474	540	475			479
CORR.						112					99
ATB-64	400	COOLING									
31	437	S-29	24"	*		225	230	235			235
32	439	"	"	*		225	275	230			230
33	441	"	"	*		225	230	225			225
						---					---
						675					690
ATB-64	40	HEATING									
31	437	S-29	24"	*		113.33	150	115			115
32	439	"	"	*		113.33	145	110			110
33	441	"	"	*		113.33	140	110			110
						---					---
						340					335

Remarks * READ WITH FLOW HOOD.

Environmental
Balance
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Date 6-24-87

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Project MAXWELL GLUCK EQUINE RESEARCH CENTER

System VAV-2 Floor # 4th

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-32		HEATING									
34	431	S-29	24"	*		113.33	130	115			115
35	433	"	"	*		113.33	130	115			115
36	435	"	"	*		113.33	120	105			105
						340					335
ATB-41		COOLING									
37	400	S-51	48"	*		300	315				315
38	"	"	"	*		300	290				290
39	"	"	"	*		300	290				290
						900					895
ATB-41		HEATING									
37	400	S-51	48"	*		300	315				315
38	"	"	"	*		300	290				290
39	"	"	"	*		300	290				290
						900					895

Remarks * READ WITH FLOW HOOD.

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Project MAXWELL GLUCK EQUINE RESEARCH CENTER

System VAV-2 Floor # 4th

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-43	430	COOLING									
40	"	S-42	48"	*		346	295	315			315
41	"	"	"	*		346	210	240			240
42	"	"	"	*		346	265	320			320
43	"	"	"	*		346	300	325			325
44	"	"	"	*		346	290	345			345
45	"	"	"	*		346	300	340			340
						2076					1885
EB-43											
9	430	R-39	14"Ø	1.05		1141	552	680			692
10	"	"	20"Ø	1.05		1141	1012	1325			1415
						2282					2107
CORR.						206					222

Remarks * READ WITH FLOW HOOD

Environmental Balance COmpany

Date 6-24-87

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Project MAXWELL GLUCK EQUINE RESEARCH CENTER

System VAV-2 Floor # 4th

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-43		HEATING									
40	430	S-42	48"	*		93	150	100			100
41	"	"	"	*		93	130	90			90
42	"	"	"	*		93	145	100			100
43	"	"	"	*		93	155	105			105
44	"	"	"	*		93	150	100			100
45	"	"	"	*		93	155	100			100
						558					595
EB-43											
9	430	R-39	14"	1.005		382	290	245			245
10	"	"	20"	"		382	610	510			515
						764					760
CORR.						206					165

Remarks * READ WITH FLOW HOOD.

Environmental Balance COmpany

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Project MAXWELL GLUCK EQUINE RESEARCH CENTER

System VAV-2 Floor # 3rd

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-8		COOLING									
46	346-A	S-20	24"	*		29		30			30
47	"	"	"	*		29		30			30
48	348	S-30	48"	*		60		60			60
						118					120
EB-8											
11	346-A	R-48	6"Ø	1.0		64	80	65			65
12	348	R-18	"	"		66	85	65			65
						130					130
CORR.						12					10
ATB-8		HEATING									
46	346-A	S-20	24"	*		14.5	100	15			15
47	"	"	"	*		14.5	75	15			15
48	348	S-30	48"	*		30	120	30			30
						59					60

Remarks * READ WITH FLOW HOOD.

Environmental Balance COmpany

Date 6-25-87

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Project MAXWELL GLUCK EQUINE RESEARCH CENTER

System VAV-2 Floor # 3rd

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
EB-8											
11	346-A	R-48	6"Ø	1.0		35		35			35
12	348	R-18	"	1.0		36		35			35
						---					---
						71					70
CORR.						12					10
ATB-27	HOOD ON COOLING										
49	346	S-49	48"	*		314	280	245			280
50	"	"	"	*		314	300	280			315
51	"	"	"	*		314	290	285			310
52	"	"	"	*		314	310	280			335
						---					---
						1256					1240
EB-27											
14	346	R-46	16"Ø	1.005		422	570	470			472
HOOD	346	EH-2	50 1/4" x 14"	4.89	196	960	204	188		188	919

Remarks * READ WITH FLOW HOOD.

Environmental Balance COmpany

Date 6-25-87

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Project MAXWELL GLUCK EQUINE RESEARCH CENTER

System VAV-2 Floor # 3rd

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
CORR.						126					151
ATB-27	HOOD ON	HEATING									
49	346	S-49	48"	*		208.5	140	190			200
50	"	"	"	*		"	145	210			210
51	"	"	"	*		"	145	200			210
52	"	"	"	*		"	150	220			215
						834					835
EB-27											
14	346	R-46	16"Ø	1.0		0	30	0			0
HOOD	346	EH-2	50 1/4" x 14"	4.89	196	960	204	188		188	919
CORR.						126					84

Remarks * READ WITH FLOW HOOD.

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Project MAXWELL GLUCK EQUINE RESEARCH CENTER

System VAV-2 Floor # 3rd

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-27	HOOD OFF HEATING										
49	346	S-49	48"	*		67.5	100	70			70
50	"	"	"	*		"	110	65			65
51	"	"	"	*		"	110	70			70
52	"	"	"	*		"	115	65			65
						270					270
EB-27											
14	346	R-46	16"Ø	1.004		396	310	350			351
HOOD	346					0					0
CORR.						126					81

Remarks * READ WITH FLOW HOOD.

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REVISED
Date 11-11-88

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Project MAXWELL GLUCK EQUINE RESEARCH CENTER

System VAV-2 Floor # _____

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final		
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM	
ATB-27	HOOD OFF	COOLING										
49	346	S-49	48"	*		314	280	225			225	
50	"	"	"	*		314	300	275			275	
51	"	"	"	*		314	290	255			255	
52	"	"	"	*		314	310	260			260	
						1256					1015	+
EB-27												
14	346	R-46	16"Ø	1.07		1382	1180	1300	1350		1350	+
HOOD	346					0					0	
CORR.						126					151	

Remarks * READ WITH FLOW HOOD.

+ BOX IS FULLY OPEN

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Project MAXWELL GLUCK EQUINE RESEARCH CENTER

System VAV-2 Floor # 3rd

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-55		COOLING									
53	346-B	S-55	24"	*		92	140	90			90
54	"	"	"	*		92	150	95			95
						--- 184					--- 185
EB-55											
13	346-B	R-47	8"Ø	1.0		192	165	190			190
CORR.						8					5
ATB-55		HEATING									
53	346-B	S-55	24"	*		39	35				35
54	"	"	"	*		39	40				40
						--- 78					--- 75
EB-55											
13	346-B	R-47	8"Ø	1.0		86	85				85

Remarks * READ WITH FLOW HOOD.

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Project MAXWELL GLUCK EQUINE RESEARCH CENTER

System VAV-2 Floor # 3rd

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
CORR.						8					10
ATB-65	HOOD ON	COOLING & HEATING									
55	344	S-15	48"	*		452	285	310			450
56	344	"	"	*		452	290	300			445
						904					895
EB-65											
15	344					0					0
HOOD	344	EH-2	50 1/4" x 14"	4.89	196	960	254	182		182	890
CORR.						56					5
ATB-65	HOOD OFF	HEATING									
55	344	S-15	48"	*		84	160	130			85
56	"	"	"	*		84	160	130			85
						168					170

Remarks * READ WITH FLOW HOOD.

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DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final		
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM	
EB-65												
15	344	R-43	12"Ø	1.001		224					220	
HOOD	344	EH-2				0					0	
CORR.						56					50	
ATB-65	HOOD OFF COOLING											
55	344	S-15	48"	*		280	230	310	290		290	
56	"	"	"	*		280	230	310	275		275	
						--- 560					--- 565	+
EB-65												
15	344	R-43	12"Ø	1.01		616	610	610			610	+
HOOD	344					0					0	
CORR.						56					67	

Remarks * READ WITH FLOW HOOD.

+ BOX IS FULLY OPEN

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System VAV-2 Floor # 3rd

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-50	COOLING										
57	340	S-74	48"	*		284	250	260	265		265
58	"	"	"	*		284	285	280	290		290
59	"	"	"	*		284	285	260	295		295
60	"	"	"	*		284	420	370	300		300
						1136					1150
EB-50											
16	340	R-42	14"Ø	1.05		1159	1180	1100			1155
CORR.						23					5
ATB-50	HEATING										
57	340	S-74	48"	*		33	90	30			30
58	"	"	"	*		33	100	35			35
59	"	"	"	*		33	100	35			35
60	"	"	"	*		33	105	40			40
						132					140

Remarks * READ WITH FLOW HOOD.

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Project MAXWELL GLUCK EQUINE RESEARCH CENTER

System VAV-2 Floor # 3rd

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
EB-50											
16	340	R-42	14"Ø	1.01		155	420	155			155
CORR.						23					15
ATB-13	COOLING										
61	336	S-35	48"	*		400	340	320	360		360
62	"	"	"	*		400	330	315	370		370
63	"	"	"	*		400	400	325	370		370
64	"	"	"	*		400	360	320	365		365
65	"	"	"	*		400	360	315	360		360
66	"	"	"	*		400	370	320	370		370
						2400					2195
EB-13											
18	336	R-38	14"Ø	1.065		1320	1050	1210			1210
19	"	"	"	"		1320	1100	1225			1225
						2640					2435

Remarks * READ WITH FLOW HOOD.

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System VAV-2 Floor # 3rd

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
CORR.						240					240
ATB-13	HEATING										
61	336	S-35	48"	*		41.83	145	40			40
62	"	"	"	*		41.83	140	40			40
63	"	"	"	*		41.83	155	45			45
64	"	"	"	*		41.83	150	40			40
65	"	"	"	*		41.83	145	40			40
66	"	"	"	*		41.83	150	45			45
						251					250
EB-13											
18	336	R-38	14"Ø	1.001		245.5	340	255			255
19	"	"	"	"		245.5	350	260			260
						491					515
CORR.						240					265

Remarks * READ WITH FLOW HOOD.

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DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final		
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM	
ATB-54 +	HOODS OFF COOLING											
67	340-A	S-43	48"	*		260	250	280	320		320	
68	"	"	"	*		260	200	230	305		305	
68-A	"	"	"	*		260	210	260	315		315	
68-B	"	"	"	*		260	--	--	275		275	
						1040					1215	+
EB-54												
17	340-A	R-41	14"Ø	1.048		1105	950	1065	1050		1050	+
HOODS	340-A					0					0	
CORR.						91					346	
ATB-54	HOODS OFF HEATING											
67	340-A	S-43	48"	*		44	150	45			45	
68	"	"	"	*		44	180	50			50	
68-A	"	"	"	*		44	120	40			40	
						132					135	

Remarks * READ WITH FLOW HOOD.

+ BOX FULLY OPEN

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DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
EB-54											
17	340-A	R-41	14"Ø	1.0		223	295	225			225
HOODS	340-A					0					0
CORR.						91					90
ATB-54	HOODS ON COOLING										
67	340-A	S-43	48"	*		338	280				280
68	"	"	"	*		338	230				230
68-A	"	"	"	*		338	260				260
						1014					770
EB-54											
17	340-A					0					+
HOODS	340-A					1105	SEE EXHAUST SHEET #			183	1123

Remarks * READ WITH FLOW HOOD.

+ SEE COMMENT SHEET

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DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
CORR.						91					353
ATB-54	HOODS ON HEATING										
67	340-A	S-43	48"	*		338	280				280
68	"	"	"	*		338	230				230
68-A	"	"	"	*		338	260				260
						1014					770
EB-54											
17	340-A					0					+
HOODS						1105	SEE EXHAUST SHEET #			183	1123
CORR.						91					353

Remarks * READ WITH FLOW HOOD

+ SEE COMMENT SHEET

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DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-22	COOLING										
69	300	S-17	48"	*		100	125	100			100
69-A	300	S-51	"	*		300	165	275			275
						400					375
ATB-22	HEATING										
69	300	S-17	48"	*		100	100				100
69-A	"	"	"	*		300	275				275
						400					375
ATB-51	COOLING										
70	300	S-51	48"	*		300	325	325			325
71	345	S-56	"	*		95	140	100			100
72	300	S-51	"	*		300	270	325			325
						695					750
ATB-51	HEATING										
70	300	S-51	48"	*		300	325				325
71	345	S-56	24"	*		95	100				100

Remarks * READ WITH FLOW HOOD.

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System VAV-2 Floor # 3rd

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-51	HEATING	CONTINUED									
72	300	S-51	48"	*		300	375				375
						695					750
ATB-68	COOLING										
73	339	S-29	24"	*		225	150	195			195
74	341	"	"	*		225	250	215			215
75	343	"	"	*		225	280	220			220
						675					630
ATB-68	HEATING										
73	339	S-29	24"	*		113.33	120	110			110
74	341	"	"	*		113.33	130	115			115
75	343	"	"	*		113.33	135	120			120
						340					345

Remarks * READ WITH FLOW HOOD.

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System VAV-2 Floor # 3rd

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-24	COOLING										
76	300	S-51	48"	*		300	720	240	270		270
77	"	"	"	*		300	270	290	280		280
77-A	330	S-64	"	*		75	120	80	75		75
78	300	S-51	"	*		300	270	290	275		275
						975					900
ATB-24	HEATING										
76	300	S-51	48"	*		277	270				270
77	"	"	"	*		277	280				280
77-A	330	S-64	"	*		70	75				75
78	300	S-51	"	*		277	275				275
						901					900
ATB-67	COOLING										
79	333	S-29	24"	*		225	215				215
80	335	"	"	*		225	220				220
81	337	"	"	*		225	215				215
						675					650

Remarks

* READ WITH FLOW HOOD.

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DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-67	HEATING										
79	333	S-29	24"	*		113.33	145	110			110
80	335	"	"	*		113.33	150	115			115
81	337	"	"	*		113.33	145	110			110
						---- 340					---- 335
ATB-66	COOLING										
82	327	S-29	24"	*		225	220				220
83	329	"	"	*		225	215				215
84	331	"	"	*		225	215				215
						---- 675					---- 650
ATB-66	HEATING										
82	327	S-29	24"	*		113.33	160	120			120
83	329	"	"	*		113.33	150	115			115
84	331	"	"	*		113.33	155	115			115
						----- 340					---- 350

Remarks * READ WITH FLOW HOOD.

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System VAV-2 Floor # 3rd

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-84	BOTH HOODS ON HEAT OR COOL										
85	332	S-41	48"	*		420	310	360			400
86	"	"	"	*		420	330	380			420
87	"	"	"	*		420	360	400			440
88	"	"	"	*		420	320	370			410
						1680					1670
EB-84											
20	332					0	0				0
HOOD-1	332	EH-1	38 1/4" x 14"	3.72	194	720	184	188		188	699
HOOD-2	"	"	"	"	290	1080	0	312		312	1161
CORR.						120					190
ATB-84	#1 HOOD ON HEATING										
85	332	S-41	48"	*		150	180				150
86	"	"	"	*		150	195				155

Remarks * READ WITH FLOW HOOD.

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System VAV-2 Floor # 3rd

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-84	#1 HOOD	ON HEATING CONTINUED									
87	332	S-41	48"	*		150	180				150
88	"	"	"	*		150	180				150
						600					605
EB-84											
20	332					0					0
HOOD-1	332	EH-1		3.72	194	720	184	188		188	699
CORR.						120					94
ATB-84	#1 HOOD	ON COOLING									
85	332	S-41	48"	*		300	300				300
86	"	"	"	*		300	300				300
87	"	"	"	*		300	320				320
88	"	"	"	*		300	300				300
						1200					1220

Remarks * READ WITH FLOW HOOD.

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Project MAXWELL GLUCK EQUINE RESEARCH CENTER

System VAV- 2 Floor # 3rd

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
EB-84											
20	332	R-36	16"Ø	1.014		600	510	590			598
HOOD-1	332	EH-1	38 1/4" x 14"	3.72	194	720	184	188		188	699
CORR.						120					77
ATB-84	#2 HOOD ON HEATING										
85	332	S-41	48"	*		240	260				235
86	"	"	"	*		240	275				245
87	"	"	"	*		240	260				245
88	"	"	"	*		240	260				240
						960					965
EB-84											
20	332					0					0
HOOD-2	332	EH-1	38 1/4" 14"	3.72	290	1080	0	312			1161
CORR.						120					196

Remarks * READ WITH FLOW HOOD.

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DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-84	#2 HOOD	ON COOLING									
85	337	S-41	48"	*		300	300				300
86	"	"	"	*		300	300				300
87	"	"	"	*		300	320				320
88	"	"	"	*		300	300				300
						1200					1220
EB-84											
20	332	R-36	16"Ø	1.0		240	400	315	250		250
HOOD-2	332	EH-1	38 1/4" x 14"	3.72	290	1080	0	312		312	1161
CORR.						120					191

Remarks * READ WITH FLOW HOOD.

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DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-84	HOODS OFF HEATING										
85	332	S-41	48"	*		70	120				70
86	"	"	"	*		70	120				70
87	"	"	"	*		70	120				75
88	"	"	"	*		70	120				70
						280					285
EB-84	332	R-36	16"Ø	1.0		400	460	430	400		400
CORR.						120					115

Remarks * READ WITH FLOW HOOD.

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DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-84	HOODS OFF COOLING										
85	332	S-41	48"	*		300	300				300
86	"	"	"	*		300	300				300
87	"	"	"	*		300	320				320
88	"	"	"	*		300	300				300
						1200					1220
EB-84											
20	332	R-36	16"Ø	1.06		1320	1080	1220	1250		1325
CORR.						120					105

Remarks * READ WITH FLOW HOOD.

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DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-53	COOLING										
89	332-A	S-40	48"	*		278	280	330	265		265
90	"	"	"	*		278	210	225	275		275
						556					540
EB-53											
21	332-A	R-35	12"Ø	1.012		612	550	615			622
CORR.						56					82
ATB-53	HEATING										
89	332-A	S-40	48"	*		63	100	55			55
90	"	"	"	*		63	110	60			60
						126					115
EB-53											
1	332-A	R-35	12"Ø	1.0		182	180				180
CORR.						56					65

Remarks * READ WITH FLOW HOOD.

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DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-35	HOOD ON	COOLING									
91	328	S-65	48"	*		419	440	440			420
92	"	"	"	*		419	395	430			415
93	"	"	"	*		419	385	425			415
94	"	"	"	*		419	445	450			425
						1676					1675
EB-35											
22	328	R-34	14"Ø	1.013		562	360	490			496
23	"	"	"	"		562	400	550			557
						1124					1053
HOOD	328	EH-1	38 1/4" x 14"	3.72	194	720	181	187		187	696
CORR.						168					74

Remarks READ WITH FLOW HOOD.

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DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-35	HOOD ON	HEATING									
91	328	S-65	48"	*		138	160				140
92	"	"	"	*		138	160				140
93	"	"	"	*		138	160				140
94	"	"	"	*		138	160				140
						552					560
EB-35											
22	328					0	0				0
23	"					0	0				0
HOOD	328	EH-1		3.72	194	720	181	187		187	696
CORR.						168					136

Remarks * READ WTIH FLOW HOOD.

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System VAV-2 Floor # 3rd

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-35	HOOD OFF HEATING										
91	328	S-65	48"	*		84.5	150				85
92	"	"	"	*		84.5	150				85
93	"	"	"	*		84.5	150				85
94	"	"	"	*		84.5	150				85
						338					340
EB-35											
22	328	R-34	14"Ø	1.0		253	540	280			280
23	"	"	"	1.0		253	510	240			240
						506					520
CORR.						168					180

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DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-35	HOOD OFF COOLING										
91	328	S-65	48"	*		419	320	420	250		250
92	"	"	"	*		419	320	420	250		250
93	"	"	"	*		419	320	420	250		250
94	"	"	"	*		419	320	420	250		250
						1676					1000
EB-35											
22	328	R-34	14"Ø	1.03		922	490	500			500
23	"	"	"	"		922	550	580			587
						1844					1092
CORR.						168					92

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Project MAXWELL GLUCK EQUINE RESEARCH CENTER

System VAV-2 Floor # 1st

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-87	COOLING										
95	126	S-50	24"	*		167	180	170			170
96	"	"	"	*		167	160	165			165
97	"	"	"	*		167	200	175			175
98	"	"	"	*		167	170	165			165
99	"	"	"	*		167	180	170			170
100	"	"	"	*		167	180	165			165
101	"	"	"	*		167	180	175			175
102	"	"	"	*		167	170	165			165
103	"	"	"	*		167	150	160			160
104	"	"	"	*		167	170	165			165
105	"	"	"	*		167	165	165			165
106	"	"	"	*		167	160	160			160
107	"	"	"	*		167	165	165			165
108	"	"	"	*		167	160	165			165
109	"	"	"	*		167	160	160			160
						2505					2490

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DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
EB-87											
36	126	R-61	16"Ø	1.07		1378	1295				1386
37	"	"	"	"		1378	1280				1370
						2756					2756
CORR.											
CORR.						251					266
ATB-87	HEATING										
95	126	S-50	24"	*		83.33	85				85
96	"	"	"	*		83.3	80				80
97	"	"	"	*		83.33	90				90
98	"	"	"	*		83.33	85				85
99	"	"	"	*		83.33	90				90
100	"	"	"	*		83.33	90				90
101	"	"	"	*		83.33	90				90
102	"	"	"	*		83.33	85				85
103	"	"	"	*		83.33	80				80
104	"	"	"	*		83.33	90				90

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DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-87	HEATING	CONTINUED									
105	126	S-50	24"	*		83.33	90				90
106	"	"	"	*		"	85				85
107	"	"	"	*		"	90				90
108	"	"	"	*		"	85				85
109	"	"	"	*		"	85				85
						1250					1300
EB-87											
36	126	R-61	16"Ø	1.025		750.5	780	730			748
37	"	"	"	"		"	770	720			738
						1501					1486
CORR.						251					186

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DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-88	COOLING										
110	136	S-17	48"	*		230	230				230
111	"	"	"	*		230	245				245
						460					475
EB-88											
25	136	R-60	48"	1.009		502	495				499
CORR.						42					24
ATB-88	HEATING										
110	136	S-12	48"	*		74	75				75
111	"	"	"	*		74	80				80
						148					155
EB-88											
25	136	R-60	48"	1.0		190	125	200			200
CORR.						42					45

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DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-76	COOLING										
112	138	S-70	48"	*		420	440				435
113	"	"	"	*		420	360				380
114	"	"	"	*		420	460				435
						1260					1250
EB-76											
24	138	R-62	48"	1.07		1386	1350	1290			1380
CORR.						126					130
ATB-76	HEATING										
112	138	S-70	48"	*		28.67	120	30			30
113	"	"	"	*		"	100	25			25
114	"	"	"	*		"	125	30			30
						86					85

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DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
EB-76											
24	138	R-62	48"	1.0		212	210				210
CORR.						126					125
ATB-15	COOLING										
115	100-H	S-28	24"	*		175	130	170			170
116	134	S-64	48"	*		75	100	80			80
116-A	"	S-27	"	*		175	230	180			180
117	"	"	"	*		175	230	185			185
						---- 600					---- 615
ATB-15	HEATING										
115	100-H	S-28	24"	*		87.5	110	85			85
116	134	S-64	48"	*		37.5	50	40			40
116-A	"	S-27	"	*		87.5	115	85			85
117	"	"	"	*		"	120	90			90
						---- 300					---- 300

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DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-11	COOLING										
118	126	S-21	24"	*		110	115	110			110
119	"	"	"	*		110	120	110			110
120	"	"	"	*		110	120	105			105
121	"	"	"	*		110	115	110			110
122	"	"	"	*		110	110	110			110
123	"	"	"	*		110	110	105			105
124	"	"	"	*		110	105	100			100
125	"	"	"	*		110	100	105			105
126	"	"	"	*		110	100	105			105
127	"	"	"	*		110	100	100			100
127-A	"	"	"	*		110	100	105			105
127-B	"	"	"	*		110	100	100			100
127-C	"	"	"	*		110	100	100			100
						1430					1365

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DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-11	HEATING										
118	126	S-21	24"	*		55	60				60
119	"	"	"	*		55	60				60
120	"	"	"	*		55	55				55
121	"	"	"	*		55	60				60
122	"	"	"	*		55	55				55
123	"	"	"	*		55	50				50
124	"	"	"	*		55	50				50
125	"	"	"	*		55	55				55
126	"	"	"	*		55	50				50
127	"	"	"	*		55	55				55
127-A	"	"	"	*		55	55				55
127-B	"	"	"	*		55	50				50
127-C	"	"	"	*		55	50				50
						---- 715					---- 700

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DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-10	COOLING										
128	129	S-29	24"	*		225	125	220			220
129	131	S-90	"	*		100	200	110			110
130	127	S-29	"	*		225	200	225			225
131	125	"	"	*		225	195	210			210
						----					----
						775					765
ATB-10	HEATING										
128	129	S-29	24"	*		131	125				125
129	131	S-90	"	*		0	0				0
130	127	S-29	"	*		131	130				130
131	125	"	"	*		131	125				125
						----					----
						393					380

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DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-9	COOLING										
132	123	S-29	24"	*		225	235				235
133	121	"	"	*		225	230				230
134	119	"	"	*		225	225				225
						---- 675					---- 690
ATB-9	HEATING										
132	123	S-29	24"	*		115	150	120			120
133	121	"	"	*		115	145	115			115
134	119	"	"	*		115	145	115			115
						---- 345					---- 350

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DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-85	COOLING										
135	122	S-63	24"	*		218	270	245	220		220
136	"	"	"	*		218	230	240	220		220
137	"	"	"	*		218	220	235	215		215
138	"	"	"	*		218	250	240	215		215
						872					870
EB-85											
26	122	R-58	24"	1.035		960	1000	930			963
CORR.						88					93
ATB-85	HEATING										
135	122	S-63	24"	*		117	55	130	120		120
136	"	"	"	*		117	50	125	120		120
137	"	"	"	*		117	50	125	120		120
138	"	"	"	*		117	55	130	125		125
						468					485

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DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
EB-85	122	R-58	24"	1.013		556	550				557
CORR.						88					72
ATB-86	COOLING										
139	117	S-71	24"	*		150	110	130			130
140	"	"	"	*		150	120	135			135
141	113	"	"	*		150	130	155			155
142	"	"	"	*		150	110	125			125
						600					545
ATB-86	117	S-71	24"	*		75	75				75
140	"	"	"	*		75	75				75
141	113	"	"	*		75	70				70
142	"	"	"	*		75	75				75
						300					295

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DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-12	HOOD OFF COOLING										
143	114	S-44	48"	*		260	265	265			265
144	"	"	"	*		260	260	260			260
145	"	"	"	*		260	240	260			260
146	"	"	"	*		260	220	250			250
147	"	"	"	*		260	200	235			235
						1300					1270
EB-12											
34	114	R-54	48"	*		1452	1300	1350			1458
CORR.						152					188
ATB-12	HOOD OFF HEATING										
143	114	S-44	48"	*		58.6	120	60			60
144	"	"	"	*		58.6	125	60			60
145	"	"	"	*		"	115	55			55
146	"	"	"	*		"	120	60			60

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DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-12	HOOD OFF HEATING										
147	114	S-44	48"	*		58.6	120	60			60
						293					295
EB-12											
34	114	R-54	48"	1.008		445	440				444
CORR.						152					149
ATB-12	HOOD ON COOLING										
143	114	S-44	48"	*		260	265				265
144	"	"	"	*		260	260				260
145	"	"	"	*		260	260				260
146	"	"	"	*		260	250				250
147	"	"	"	*		260	235				235
						1300					1270

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DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
EB-12											
34	114	R-54	48"	1.005		372	560	370			372
HOOD	114	EH-1	38 1/4" x 14"	3.72	290	1080	169	217	283	283	1053
CORR.						152					155
ATB-12	HOOD ON HEATING										
143	114	S-44	48"	*		185.6	190				190
144	"	"	"	*		"	185				185
145	"	"	"	*		"	185				185
146	"	"	"	*		"	175				175
147	"	"	"	*		"	165				165
						928					900
EB-12											
34	114					0	0				0

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DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
HOOD	114	EH-1	38 1/4" x 14"	3.72	290	1080	148	200	268	268	997
CORR.						152					97
ATB-12	BOTH HOODS ON	COOLING									
143	114	S-44	48"	*		401.6	330	390			390
144	"	"	"	*		"	330	385			385
145	"	"	"	*		"	320	390			390
146	"	"	"	*		"	250	315			315
147	"	"	"	*		"	300	320			320
						2008					1800
EB-12											
34	114					0	0				0
HOOD	114	EH-1	38 1/4" x 14"	3.72	290	1080	169	217	283	283	1053
HOOD	114	EH-1	38 1/4" x 14"	3.72	290	1080	148	200	268	268	997

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DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
CORR.						152					250
ATB-12	BOTH HOODS ON HEATING										
143	114	S-44	48"	*		401.6	390				390
144	"	"	"	*		"	385				385
145	"	"	"	*		"	390				390
146	"	"	"	*		"	315				315
147	"	"	"	*		"	320				320
						2008					1800
EB-12											
34	144					0	0				0
HOOD	114	EH-1	38 1/4" x 14"	3.72	290	1080	169	217	283	283	1053
HOOD	114	EH-1	38 1/4" x 14"	3.72	290	1080	148	200	268	268	997
CORR.						152					250

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DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-57	COOLING										
148	118	S-17	48"	*		100	140	105			105
149	116	"	"	*		100	100	100			100
150	122-C	S-45	"	*		230	210	225			225
						430					430
EB-57											
27	118	R-34	6"Ø	1.0		110	115				115
28	116	"	"	"		110	115				115
29	122-C	R-57	8"Ø	"		253	245				245
						473					475
CORR.						43					45
ATB-57	HEATING										
148	118	S-17	48"	*		50	90	50			50
149	116	"	"	*		50	105	50			50
150	122-C	S-45	"	*		115	95	120			120
						215					220

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DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
EB-57											
27	118	R-34	6"Ø	1.0		60	40	65			65
28	116	"	"	"		60	40	65			65
29	122-C	R-57	8"Ø	"		138	115	135			135
						258					265
CORR.						43					45
ATB-16	COOLING										
151	114-A	S-68	48"	*		200	140	190			190
152	114-B	S-38	"	*		220	150	215			215
153	110-A	S-46	"	*		100	90	100			100
154	"	"	"	*		100	100	110			110
						620					615
EB-16											
30	114-B	R-27	10"Ø	1.0		262	285	245			245
31	114-A	R-25	8"Ø	"		240	200	220			220

Remarks * READ WITH FLOW HOOD.

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DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
EB-16	CONTINUED.										
32	110-A	R-44	8"Ø	1.0		180	170	180			180
						---					---
						682					645
CORR.	114-B					42					30
CORR.	114-B					40					30
CORR.	110-A					20					30
ATB-16	HEATING										
151	114-A	S-68	48"	*		100	150	100			100
152	114-B	S-38	"	*		110	165	110			110
153	110-A	S-46	"	*		50	120	50			50
154	"	"	"	*		50	130	55			55
						---					---
						310					315

Remarks * READ WITH FLOW HOOD.

Environmental
Balance
COmpany

Date 7-21-87

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Project MAXWELL GLUCK EQUINE RESEARCH CENTER

System VAV-2 Floor # 1st

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
EB-16											
30	114-B	R-27	10"Ø	1.0		131	140	130			130
31	114-A	R-25	"	1.0		120	100	110			110
32	110-A	R-44	8"Ø	1.0		90	100	90			90
						341					330
CORR.	114-B					21					20
CORR.	114-A					20					10
CORR.	110-A					10					10
ATB-56	HOOD OFF COOLING										
155	114-C	S-69	48"	*		490	340	465			465
156	"	"	"	*		490	360	485			485
						980					950

Remarks * READ WITH FLOW HOOD.

Environmental
Balance
COmpany

Date 7-20-87

Page 161

Project MAXWELL GLUCK EQUINE RESEARCH CENTER

System VAV-2 Floor # 1st

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
EB-56											
35	114-C	R-28	14"Ø	1.045		1080	1180	1040			1087
CORR.						100					137
ATB-56	HOOD OFF HEATING										
155	114-C	S-69	48"	*		75	220	80			80
156	"	"	"	*		75	260	80			80
						150					160
EB-56											
35	114-C	R-28	14"Ø	1.0		250	290	245			245
CORR.						100					85

Remarks * READ WITH FLOW HOOD.

Environmental
Balance
COmpany

Date 7-20-87

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Project MAXWELL GLUCK EQUINE RESEARCH CENTER

System VAV-2 Floor # 1st

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-56	HOOD ON COOLING										
155	114-C	S-69	48"	*		490	465				465
156	"	"	"	*		490	485				485
						980					950
EB-56											
35	114-C	R-28	14"Ø	1.0		0	0				0
HOOD	114-C	EH	38 1/4" x 14"	3.72	290	1080	298			298	1107
CORR.						100					157
ATB-56	HOOD ON HEATING										
155	114-C	S-69	48"	*		490	465				465
156	"	"	"	*		490	485				485
						980					950

Remarks * READ WITH FLOW HOOD.

Environmental
Balance
COmpany

Date 7-20-87

Page 163

Project MAXWELL GLUCK EQUINE RESEARCH CENTER

System VAV-2 Floor # 1st

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
EB-56											
35	114-C	R-28	14"Ø	1.0		0	0				0
HOOD	114-C	EH	38 1/4" x 14"	3.72	290	1080	298			298	1107
CORR.						100					157
ATB-89	HOOD OFF COOLING										
157	122-A	S-59	48"	*		325	315				315
158	"	"	"	*		325	330				330
						650					645
EB-89											
33	122-A	R-40	12"Ø	.79	911	720	872	897		897	709
CORR.						70					64

Remarks

Environmental
Balance
COmpany

Date 7-20-87

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Project MAXWELL GLUCK EQUINE RESEARCH CENTER

System VAV-2 Floor # 1st

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
ATB-89	HOOD OFF HEATING										
157	122-A	S-59	48"	*		162.5	180	155			155
158	"	"	"	*		"	195	165			165
						325					320
EB-89											
33	122-A	R-40	12"Ø	.79	502	395	493			493	389
CORR.						70					69
ATB-89	HOOD ON COOLING										
157	122-A	S-59	48"	*		505	460				460
158	"	"	"	*		505	525				525
						1010					985
EB-89											
33	122-A	R-40	12"Ø	1.0		0	0				0

Remarks * READ WITH FLOW HOOD.

Environmental
Balance
COmpany

Date 7-20-87

Page 165

Project MAXWELL GLUCK EQUINE RESEARCH CENTER

System VAV-2 Floor # 1st

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
HOOD	122-A	EH-1		3.72	290	1080	246	243		243	904
CORR.						70					81
ATB-89	HOOD ON	HEATING									
157	122-A	S-59	48"	*		505	390	460			460
158	"	"	"	*		505	480	525			525
						1010					985
EB-89											
33	122-A	R-40	12"Ø	1.0		0	0				0
HOOD	122-A	EH-1	38 1/4" x 14"	3.72	290	1080	246	243		243	904
CORR.						70					81

Remarks * READ WTIH FLOW HOOD.

AIR HANDLER TEST REPORT

EBCO INC.

PROJECT MAXWELL H. GLUCK EQUINE RESEARCH CENTER

SYSTEM AHU - 1

LOCATION AUDITORIUM

SHEET NO. 166

DATE 6-29-87

INDEPENDENT TEST AND BALANCING

	DESIGN SPECIFICATIONS	INSTALLED EQUIPMENT	ACTUAL TEST DATA
Manufacturer	McQuay	McQuay	
Model No.	LSL-106C	LSL-106CH	
Serial No.	--	3 BF00057-06	
Size or Type	--	HORIZONTAL DRAW-THRU	
C.F.M.	2400	2400	2645
Return Air C.F.M.	1650	0	0
Outside Air C.F.M.	750	2400	2645
Fan R.P.M.	1.058	NOT ACCESSIBLE	NOT ACCESSIBLE
Total S.P.	1.75"	1.75"	1.00"
Suction S.P.	--	--	.85"
Discharge S.P.	--	--	.15"
Motor Mfg.	--	MARATHON	MARATHON
Motor H.P.	1.5	1.5	1.5
Motor R.P.M.	--	1735	NOT ACCESSIBLE
Motor Volts	208	200-208	208
Motor Amps	--	5.5-5.9	5.9/5.5/6.0
Heaters Size/RTG	--	NOT AVAILABLE	NOT AVAILABLE
Fan Sheave	--	BROWNING	BK60H x 1-3/16"
Motor Sheave	--	BROWNING	IVP40 x 7/8"
Belts	--	OPTIBLET	A47
Phase	3	3	3

Environmental Balance Company

Date 6-29-87

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

DUCT TRAVERSE ZONE TOTALS

System Zone/Branch	Duct Size	Area Sq. Ft.	Design		Test			
			FPM	CFM	Test 1 FPM	Test 2 FPM	CFM	Static Pressure
AHU-1 *	22"x16"	2.4	1000	2400	1102		2645	.10"
EF 20								
RETURN	SEE EXHAUST SHEET NO.			181			2479	--

Remarks * NO DIFFUSER READINGS OR BALANCE WERE POSSIBLE. ALL CHAIRS AND CARPET WERE IN PLACE AT TIME OF BALANCE. VERIFICATION WITH MECHANICAL CONTRACTOR -ALL DIFFUSERS FULLY OPEN.

AIR HANDLER TEST REPORT

EBCO INC.

PROJECT MAXWELL H. GLUCK EQUINE RESEARCH CENTER

SYSTEM AHU - 2

LOCATION BUILDING "B", ROOM 241

SHEET NO. 168

DATE 6-22-87

INDEPENDENT TEST AND BALANCING

	DESIGN SPECIFICATIONS	INSTALLED EQUIPMENT	ACTUAL TEST DATA
Manufacturer	McQuay	McQuay	
Model No.	MSL-111C	MSL-111CH	
Serial No.	--	3RF00058-06	
Size or Type	--	HORIZONTAL DRAW-THRU	
C.F.M.	5800	5802	5620
Return Air C.F.M.	290	0	0
Outside Air C.F.M.	5510	5802	5620
Fan R.P.M.	2247	2254	2652
Total S.P.	3.50"	3.50"	5.15"
Suction S.P.	--	--	4.9"
Discharge S.P.	--	--	.25"
Motor Mfg.	--	CENTURY	CENTURY
Motor H.P.	7.5	7.5/3.3	7.5
Motor R.P.M.	--	1760/1175	1784
Motor Volts	208	200-230	220
Motor Amps	--	23/13	21/21.5/21
Heaters Size/RTG	--	FUSES	TK30R
Fan Sheave	--	BROWNING	4½"Ø x 1-3/8"
Motor Sheave	--	BROWNING	2MVP55B69 x 1-5/8"
Belts	--	OPTIBELT	B88
Phase	3	3	3
SFA/BHP		1.15/7.5	24.0/7.59

Environmental Balance COmpany

Date 6-22-87

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System AHU - 2 Floor # First

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
1	HALLWAY	S-5	7"Ø	*		150	110	135			135
2	"	"	"	*		150	110	135			135
3	"	"	6"Ø	*		150	100	160			145
4	147	S-2	2'x2'	*		350	295	325			350
5	"	"	"	*		350	320	370			350
5A	146	S-4	"	*		550	350	490			490
5B	"	"	"	*		550	400	525			525
6	149	"	"	*		350	300	310			340
7	"	"	"	*		350	310	380			350
8	151	"	"	*		350	350	370			370
9	"	"	"	*		350	335	330			330
10	153	S-3	"	*		295	250	350			290
11	"	"	"	*		295	260	310			295
12	154	S-9	7"Ø	*		162	130	180			150
13	145	S-2	2'x2'	*		350	300	360			350
14	"	"	"	*		350	310	320			340
15	143	"	"	*		350	295	315			340
16	"	"	"	*		350	310	320			335
						5802					5220

Remarks

* READ WITH FLOWHOOD

AIR HANDLER TEST REPORT

EBCO INC.

PROJECT MAXWELL H. GLUCK EQUINE RESEARCH CENTER

SYSTEM AHU - 3

LOCATION BUILDING "B", ROOM 241

SHEET NO. 470

DATE 6-22-87

INDEPENDENT TEST AND BALANCING

	DESIGN SPECIFICATIONS	INSTALLED EQUIPMENT	ACTUAL TEST DATA
Manufacturer	McQuay	McQuay	
Model No.	LHD-10BC	LHD-108CH	
Serial No.	--	3RF00059-06	
Size or Type	--	HORIZONTAL DRAW-THRU	
C.F.M.	3400	3389	3309
Return Air C.F.M.	0	0	0
Outside Air C.F.M.	3400	3389	3309
Fan R.P.M.	2086	1841	2344
Total S.P.	2.50"	2.50"	2.86"
Suction S.P.	--	--	2.6"
Discharge S.P.	--	--	.26"
Motor Mfg.	--	CENTURY	CENTURY
Motor H.P.	3.0	3/1.3	3.0
Motor R.P.M.	--	1740/1160	1776
Motor Volts	208	200-230	220
Motor Amps	--	9/4.8	8.8/8.4/8.4
Heaters Size/RTG	--	FUSES	LPN-RK-20
Fan Sheave	--	BROWNING	4-3/4"Øx1-7/16"
Motor Sheave	--	BROWNING	IVP62 x 1"
Belts	--	OPTIBELT A69	GOODYEAR A69
Phase	3	3	3

Environmental Balance Company

Date 6-22-87

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

DUCT TRAVERSE ZONE TOTALS

System Zone/Branch	Duct Size	Area Sq. Ft.	Design		Test			
			FPM	CFM	Test 1 FPM	Test 2 FPM	CFM	Static Pressure
AHU - 3								
MAIN SUPPLY	26"x18"	3.25	1046	3400	1018		3309	.23"
OUTLETS								
2 - 5	16"x12"	1.33	767	1020	782		1040	.11"
9 - 12	20"x12"	1.67	934	1560	898		1499	.10"

Remarks

Environmental
Balance
COmpany

Date 6-22-87

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System AHU - 3 Floor # First

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
1	152	S-8	6"Ø	*		126	120	120			120
2	155	S-6	9/9	.21	1214	255	1125			1125	236
3	"	"	"	"	1214	255	1204			1204	253
4	"	"	"	"	1214	255	1195			1195	251
5	"	"	"	"	1214	255	1168			1168	245
6	156	S-10	6"-Ø	*		89	110	90			90
7	158	S-11	7"Ø	*		152	145	145			145
8	142	S-12	10"Ø	*		442	480	450			450
9	159	S-7	12/12	.36	1083	390	1023			1023	368
10	"	"	"	"	1083	390	1050			1050	378
11	"	"	"	"	1083	390	1000			1000	360
12	"	"	"	"	1083	390	988			988	356
						3389					3252

Remarks * READ WITH FLOWHOOD

AIR HANDLER TEST REPORT

EBCO INC.

PROJECT MAXWELL H. GLUCK EQUINE RESEARCH CENTER

SYSTEM AHU - 4

LOCATION BASEMENT

SHEET NO. 173

DATE 7-1-87

INDEPENDENT TEST AND BALANCING

	DESIGN SPECIFICATIONS	INSTALLED EQUIPMENT	ACTUAL TEST DATA
Manufacturer	McQuay	McQuay	
Model No.	LHD-103C	LYF-106CH	
Serial No.	--	3RF00060-06	
Size or Type	--	HORIZONTAL DRAW-THRU	
C.F.M.	1400	1400	1500
Return Air C.F.M.	1250	VARIABLE	VARIABLE
Outside Air C.F.M.	150	"	"
Fan R.P.M.	1161	596	578
Total S.P.	1.00"	1.00"	--
Suction S.P.	--	--	.01"
Discharge S.P.	--	--	*
Motor Mfg.	--	CENTURY	CENTURY
Motor H.P.	1/2	3/4	3/4
Motor R.P.M.	--	1725	1761
Motor Volts	208	200-208	208
Motor Amps	--	3.3-3.2	2.4-2.5-2.6
Heaters Size/RTG	--	1028/4.2-4.1	1028/4.2-4.1
Fan Sheave	--	BROWNING	BK90H x 1-3/16"
Motor Sheave	--	BROWNING	IVL40 x 5/8"
Belts	--	OPTIBELT	4L540
Phase	3	3	3

* OPEN END DUCK, DISCHARGE PRESSURE NOT AVAILABLE.

Environmental
Balance
COmpany

Date 7-1-87

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System AHU - 4 Floor # Basement

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
1	BASEMENT	DUCT OPENING	17"x17"	2.0	700	1400	1150	750		750	1500

Remarks AT THE TIME OF BALANCE THE UNIT WAS CALLING FOR 100% OSA.

EBCO INC. INDEPENDENT TEST AND BALANCING

FAN COIL TEST SHEET

Date 8-20-87
Sheet No. 175

Job Name MAXWELL H. GLUCK EQUINE RESEARCH CENTER Address LEXINGTON, KENTUCKY

Fan No.	FCU-1								
Mfg.	McQuay								
Size	--								
Motor HP	1/25								
Voltage	115								
Amp Rating	1.1								
Actual Amp	1.0								
Actual RPM	1200								
Required SP	.30								
Actual SP	.20								
Required CFM	250								
Actual CFM	235								
Model	TSC 031	ER							

Environmental
Balance
COmpany

Date 8-20-87

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System FCU - BASEMENT Floor # Basement

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
SUPPLY											
1	005	S-99	24"x24"	*		125	115				115
2	004	"	"	*		125	120				120
						250					235
RETURN											
1	004	R-34	24"x24"	3.2	34	110	35			35	112
2	005	"	"	"	34	110	30			30	96
						220					208

* READ WITH CFM FLOWHOOD

Remarks

EBCO INC.

INDEPENDENT TEST AND BALANCING
AIR · HYDRONICS

EXHAUST FAN TEST SHEET

Date 6-26-87
Sheet No. 177

Job Name MAXWELL H. GLUCK EQUINE RESEARCH CENTER Address Lexington, Kentucky

Fan No.	EF-1		EF-2		EF-3		EF-4		EF-5
Mfg.	ACME		ACME		TWIN CITY		TWIN CITY		ACME
Size	NOT SPECIFIED		NOT SPECIFIED		245		182		NOT SPECIFIED
Model No.	PR-100-5		PN-135E-ZS		ACU-SW		ACU-SW		PN135E-ZS
Required CFM	280		480		5400		3100		2100
Actual CFM	320		497		5372		3246		1946
Required SP	--		--		--		--		--
Actual SP	--		--		--		--		--
Required RPM	1550		750		1214		1711		849
Actual RPM	DIRECT DRIVE		757		1450		1810		1228
Sheave	" "		BROWNING AK54x5/8"		BROWNING 2TB70x1-7/16"		BROWNING 2AK46Hx1-3/16"		BROWNING AK3Hx5/8"
Motor Mfg.	GENERAL ELECTRIC		GENERAL ELECTRIC		RELIANCE		RELIANCE		GENERAL ELECTRIC
H.P.	1/20		1/4-1/2		5.0		3.0		1/3-1/9
Rated Voltage	115		115		200		200		115
Actual Voltage	120		120		208		208		120
Rated Amps	2.0		4.2		16.5		9.66		5.7
Actual Amps	1.8		3.9		15.5/16/16		7.0/7.5/7.5		5.8
Required RPM	1550		1725		1735		1725		1725
Actual RPM	DIRECT DRIVE		1783		1765		1750		1770
Sheave	"	"	BROWNING IVL25 x ½"		BROWNING 2VP62x1-3/8"		BROWNING 2VP50x1-1/8"		BROWNING IVL34x5/8"
Belts	"	"	DAYCO 3L230		BROWNING A54		BROWNING A38		DAYCO 4L210
Remarks:									

EBCO INC.

INDEPENDENT TEST AND BALANCING
AIR · HYDRONICS

EXHAUST FAN TEST SHEET

Date 6-26-87
Sheet No. 178

Job Name MAXWELL H. GLUCK EQUINE RESEARCH CENTER Address LEXINGTON, KENTUCKY

Fan No.	EF-6		EF-7		EF-8		EF-9		EF-10
Mfg.	TWIN CITY		TWIN CITY		ACME		TWIN CITY		TWIN CITY
Size	907		909		NOT SPECIFIED		542		365
Model No.	RBA-SW		RBA-SW		PW100-2		BAF-SW		BCV-SW
Required CFM	620		1080		150		30,600		7,680
Actual CFM	695		1107		167		30,396		8,664
Required SP	--		--		--		--		--
Actual SP	--		--		--		--		--
Required RPM	1670		1146		1550		418		647
Actual RPM	1440		1207		DIRECT DRIVE		552		650
Sheave	BROWNING AK3DH x 1-3/16"		BROWNING AK46Hx1-3/16"		"	"	BROWNING ZBA00Rx3	"	BROWNING 2TB136x1-15/16"
Motor Mfg.	WESTINGHOUSE		BALDOR		GENERAL ELECTRIC		RELIANCE		RELIANCE
H.P.	1/2		1.0		1/40		15.0		7.5
Rated Voltage	200		208-230/460		115		230/460		230/460
Actual Voltage	208		208		120		208		480
Rated Amps	2.7		3.6-3.4/1.7		.90		36.6/18.3		18.2/9.1
Actual Amps	3.2/3.0/3.1		2.4/2.6/2.6		.60		17.1/17.1/17.2		5.4/5.8/5.4
Required RPM	1725		1725		1550		1750		1740
Actual RPM	1750		1771		DIRECT DRIVE		1794		1665
Sheave	BROWNING 1VL34x5/8"		BROWNING 1VL40x7/8"		" "		BROWNING 2VP71AX		BROWNING 2VP60x1-3/8"
Belts	BROWNING 4L250		BROWNING A30		" "		GOODRICH BX103		GOODRICH AX70
Remarks:									

EBCO INC.

INDEPENDENT TEST AND BALANCING
AIR · HYDRONICS

EXHAUST FAN TEST SHEET

Date 6-26-87
Sheet No. 179

Job Name MAXWELL H. GLUCK EQUINE RESEARCH CENTER Address LEXINGTON, KENTUCKY

Fan No.	EF-11		EF-12		EF-13		EF-14		EF-15
Mfg.	TWIN CITY		ACME		ACME		TWIN CITY		TWIN CITY
Size	NOT AVAILABLE		NOT SPECIFIED		NOT SPECIFIED		445		330
Model No.	"		PN135F		PN300H		BAF-SW		BCU-SW
Required CFM	1100		1100		5500		20,000		8000
Actual CFM	1179		1225		5313		19,561		6624
Required SP	--		--		--		--		--
Actual SP	--		--		--		--		--
Required RPM	2122		1125		400		441		699
Actual RPM	2381		1620		284		678		705
Sheave	BROWNING AK32Hx 1"		BROWNING AK34		BROWNING AK114		BROWNING 2TB184x2-7/16"		BROWNING 2TB136x1-15/16"
Motor Mfg.	U.S. ELECTRIC		GENERAL ELECTRIC		GENERAL ELECTRIC		RELIANCE		RELIANCE
H.P.	1.5		1/2-1/6		3/4-1/4		15		5
Rated Voltage	200		200		200		230/460		230/460
Actual Voltage	208		208		208		480		480
Rated Amps	5.6		2.4/1.6		3.0/1.9		36.6/18.3		12.4/6.2
Actual Amps	4.3/4.4/4.2		2.0/2.2/2.0		1.4/1.8/1.6		14/14/14		3.5/3.5/3.6
Required RPM	1740		1725/1140		1725/1140		1750		1715
Actual RPM	1765		1785		1180		1775		1820
Sheave	BROWNING 1CM40z7/8"		BROWNING 1CL34z5/8"		BROWNING 1VL40x5/8"		BROWNING 20P75x1-5/8"		BROWNING 2VP60x1-
Belts	BROWNING A26		BROWNING 42240		DAYCO AP51		GOODRICH BX85		GOODRICH A62
Remarks:									

EBCO INC.

INDEPENDENT TEST AND BALANCING
AIR · HYDRONICS

EXHAUST FAN TEST SHEET

Date 6-26-87
Sheet No. 180

Job Name MAXWELL H. GLUCK EQUINE RESEARCH CENTER Address LEXINGTON, KENTUCKY

Fan No.	EF-16		EF-17		EF-18		EF-19	EF-20	EF-21
Mfg.	ACME		ACME		ACME		ACME	TWIN CTY.	ACME
Size	NOT SPECIFIED		NOT SPECIFIED		NOT SPECIFIED		--	200	NOT SPECIFIED
Model No.	PN-1356		PN-365 H-25		FQ14F4		FQ16FA	ASL-SW	PR100-4
Required CFM	1280		9470		2400		1400	750/2400	150
Actual CFM	1400		9679		2568		1395	2429	145
Required SP	--		--		--		--	--	--
Actual SP	--		--		--		--	--	--
Required RPM	1210		410		1760		1760	750	1550
Actual RPM	1680		274		DIRECT DRIVE		DIRECT DRIVE	INLINE N/A	DIRECT DRIVE
Sheave	BROWNING AK30 x 5/8"		BROWNING AK134x1-3/8"		" "		"	7"Øx1-7/16"	"
Motor Mfg.	GENERAL ELECTRIC		GENERAL ELECTRIC		GENERAL ELECTRIC		GENERAL ELECTRIC	LEESON	GENERAL ELECTRIC
H.P.	1/2		1-1/3		1/3		3/4	1.25	1/20
Rated Voltage	200-230/460		200		115/230		200-230/460	200	115
Actual Voltage	208		208		120		220	208	115
Rated Amps	2.1/2.2/1.1		3.9/2.3		4.1/2.05		2.8-2.7/1.35	2.9	2.0
Actual Amps	2.2/2.0/1.9		2.3/2.4/2.0		3.7		2.0/2.0/2.0	3.0/3.1/3.0	1.8
Required RPM	1725		1725/1140		1725		1725	1740	1550
Actual RPM	1767		1175		DIRECT DRIVE		DIRECT DRIVE	NOT ACCESSIBLE	DIRECT DRIVE
Sheave	BROWNING IVL34x5/8"		BROWNING 8325x5/8"		" "		"	BROWNING IVL40x7/8"	"
Belts	DAYCO 4L220		DAYCO AP55		" "		"	BFG A55	"
Remarks:									

Environmental Balance Company

Date 6-9-87

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

DUCT TRAVERSE ZONE TOTALS

System Zone/Branch	Duct Size	Area Sq. Ft.	Design		Test			
			FPM	CFM	Test 1 FPM	Test 2 FPM	CFM	Static Pressure
EF-3	24"Ø	3.14	1720	5400	1651	1711	5372	3.80"
EF-4	20"Ø	2.18	1422	3100	1489	1489	3246	2.90"
EF-9	48"x44"	14.67	2086	30,600	2072	2072	30,396	.73"
EF-10	48"x22"	7.33	1048	7680	1110	1182	8664	1.3"
EF-11	14"Ø	1.07	1033	1105	1195	1102	1179	1.35"
EF-12	14"Ø	1.06	1037	1100	575	1156	1225	.40"
EF-14	30"Ø	4.91	4073	20,000	3778	3984	19,561	.08"
EF-15	30"Ø	4.91	1271	6240	986	1349	6624	.97"
EF-16	16"Ø	1.4	914	1280	824	1000	1400	.45"

Remarks

Environmental
Balance
COmpany

Date 6-26-87

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System EXHAUST FANS Floor # 1st, 2nd, Basement

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
EF-1											
1	Shower Rm "B"BLDG.		12"x12"	.8	213	170	260			260	208
2	"B"BLDG. Rm. 156	R-13	"	.8	125	100	140			140	112
						270					320
EF-2											
1	241	OPEN DUCT	10"x10"	.69	696	480	720			720	497
EF-3	SEE SHEET NO.		182								
EF-4	SEE SHEET NO.		183								
EF-5	241	OPEN DUCT	10"x10"	.69	3043	2100	2820			2820	1946
EF-6	153	OPEN DUCT	20"x20"	2.78	223	620	250			250	695
EF-7	114C	HOOD	38-1/4" x14"	3.72	290	1080	298			298	1107
EF-8	007	WALL	16"Ø	1.11	135	150	150			150	167

Remarks

Environmental
Balance
COmpany

Date 6-26-87

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System EXHAUST FANS Floor # 1st,3rd,4th & Penthouse

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
EF-9	SEE EB	TERMINAL	SHEET	WITH VAV-2 FOR		OUTLET	AND BOX	READINGS.	PAGE NO.		98 thru 165
EF-10	SEE SHEET NO.		187								
EF-11											
1	340A	HOOD	10"Ø	.55	682	375	675	690		790	380
2	"	"	"	.55	664	365	1000	680		680	374
3	"	"	"	.55	664	365	1000	670		670	369
						1105					1123
EF-12	SEE SHEET NO.		185								
EF-13	SOUTH PENTHOUSE	OPEN DUCT	30"x30"	6.25	880	5500	850			850	5313
EF-14	SEE EB	TERMINAL	SHEET	WITH VAV-1 FOR		OUTLET	AND BOX	READINGS.	PAGE NO.	17	thru 81
EF-15	SEE SHEET NO.		186								

Remarks

Environmental
Balance
COmpany

Date 6-26-87

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System EXHAUST FANS

Floor # BASEMENT, PENTHOUSE, AUDITORIUM, "C"BLDG.

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
EF-16	SEE SHEET NO.		187								
EF-17	NORTH PENTHOUSE	OPEN DUCT	38"x38"	10.03	944	9470	965			965	9679
EF-18	007	WALL	14"Ø	1.07	2243	2400	2400			2400	2568
EF-19	007	WALL	18"x18"	2.25	622	1400	620			620	1395
EF-20											
1	AUDITORIUM	SIDE WALL	14"x14"	1.09	440	480	400	440		440	480
2	"	R-2	24"x24"	3.2	225	720	285	240		240	768
3	"	"	"	3.2	225	720	350	245		245	784
4	"	SIDE WALL	14"x14"	1.09	440	480	330	410		410	447
						2400					2479
EF-21	C BLDG.	OPEN DUCT	12"x7"	.58	258	150	250			250	145

Remarks

Environmental
Balance
COmpany

Date 8-21-87

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System EF-3, "B" BLDG. Floor # FIRST

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
1	146	R-5	2'x2'	3.2	179	575	350	180		180	576
1A	"	"	"	"	172	550	172	172		172	550
2	HALL	R-6	"	"	63	200	60	60		60	192
3	143	R-3	"	"	230	735	220	220		220	704
4	145	"	"	"	203	650	193	193		193	618
5	147	"	"	"	203	650	181	181		181	579
6	149	"	"	"	203	650	228	202		202	646
7	151	"	"	"	203	650	205	205		205	656
EF-6	153	OPEN END	--	--	--	650	SEE SHEET NO. 179				695
						5310					5216

Remarks

Environmental
Balance
COmpany

Date 6-27-87

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System EXHAUST FAN NO. 4, BUILDING "B" Floor # first

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
1	152	R-11	10"x10"	.56	268	150	150	400	270	270	151
2	158	R-14	"	.56	271	152	100	280	280	280	157
3	142	R-15	24"x24"	3.2	156	500	25	320	160	160	512
4	159	R-10	16"x16"	1.42	334	475	220	550	350	350	497
5	"	R-9	"	1.42	141	200	10	200	150	150	213
6	"	R-10	"	1.42	334	475	10	250	310	310	440
7	155	R-9	"	1.42	268	380	50	350	270	270	383
8	"	R-8	14"x14"	1.09	495	540	0	380	450	450	491
						2872					2844

Remarks

Environmental
Balance
COmpany

Date 8-17-87

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System EXHAUST FAN 10, SOUTH SIDE Floor # 1st, 3rd, 4th

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
1	450	EH-2	--	--	--	1200	TAKEN OUT				--
2	448	"	--	--	--	1200	"	"			--
3	444	"	--	--	--	1200	"	"			--
4	440	"	--	--	--	1200	"	"			--
5	346	"	50-1/4" x 14"	4.89	196	960	204	220	206	206	1007
6	344	"	"	4.89	196	960	254	231	201	201	983
7	340	EH-1	--	--	--	720	TAKEN OUT				--
8	332	"	38-1/4" x14"	3.72	290	1080	0	312	312	312	1161
9	"	"	"	3.72	194	720	184	276	204	204	759
10	328	"	"	3.72	194	720	181	275	205	205	763
11	122A	"	"	3.72	290	1080	246	272	302	302	1123
12	114	"	"	3.72	290	1080	148	236	283	283	1053
13	"	"	"	3.72	290	1080	169	254	268	268	997
						13,200					7846
					-	5,520					
						7,680					

Remarks

Environmental
Balance
COmpany

Date 6-26-87

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System EXHAUST FAN NO. 12 Floor # 1st, 3rd, 4th

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
1	447	R-24	12"x12"	.8	144	115	70	150	150	150	120
2	345	"	"	"	144	115	60	130	145	145	116
3	131	"	"	.60	192	115	200	300	200	200	120
4	134	R-49	"	"	150	90	200	220	150	150	90
5	119	Dyer	3-3/4"	.07	785	55	750	790	790	790	55
6	117	R-50	12"x12"	.60	292	175	210	295	295	295	177
7	117	"	"	"	292	175	200	290	290	290	174
8	MENS LOCKER	"	"	"	292	175	180	280	280	280	168
9	"	"	"	"	292	175	170	265	265	265	159
						1190					1179

Remarks

Environmental
Balance
COmpany

Date 8-18-87

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System EXHAUST FAN NO. 15 Floor # 1st, 3rd, 4th

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
1	402	EH-2	8"Ø	.35	1143	400	210	250		250	.88
2	412	"	--	--	--	1200	TAKEN	OUT			--
3	"	EH-1	50-1/4" x14"	4.89	147	720	263	155	155	155	758
4	416	"	"	4.89	147	720	267	150	146	146	714
5	"	EH-2	--	--	--	1200	TAKEN	OUT			--
6	302	EH-1	38-1/4" x14"	3.72	194	720	227	192	203	203	755
7	109	"	" "	"	194	720	174	200	202	202	751
8	312	EH-1	"	"	306	1140	0	322	322	322	1198
8A	318	"	50=1/4" x14"	4.89	196	960	253	215	207	207	1012
9	324	"	38-1/4" x14"	3.72	194	720	223	188	198	198	737
						8500					6013
					-	2400					
						6100					

Remarks DROP NO. 1 TIES INTO A RECIRCULATION HOOD. THE DUCT CONNECTION IS ABOVE THE RECIRCULATION FAN. THIS IS CAUSING A PRESSURE TO BE DRAWN INTO THE HOOD, INSTEAD OF GOING OUT.

Environmental
Balance
COmpany

Date 6-26-87

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

System EXHAUST FAN NO. 16 Floor # 1st, 2nd,3rd,4th

DIFFUSER AND GRILLE TEST SHEET

Terminal Number	Room Number	Terminal		Factor	Design		Test—FPM or CFM			Final	
		Type	Size		FPM	CFM	Test 1	Test 2	Test 3	FPM	CFM
1	102	R-24	6"Ø	.20	575	115	500	550		550	110
2	104	"	"	"	575	115	575	575		575	115
3	411	R-25	12"x12"	.8	219	175	220	220		220	176
4	413	"	"	"	219	175	180	210		210	168
5	313	"	24"x24"	3.2	55	175	40	60		60	192
6	311	"	"	"	55	175	45	60		60	192
7	207	"	"	"	55	175	50	55		55	175
8	205	"	"	"	55	175	50	50		50	160
						1280					1288

Remarks

Environmental Balance Company

INDEPENDENT TEST AND BALANCING

Date May 7, 1987

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

PUMP DATA SHEET

PUMP NO.	PU-3		
MANUFACTURER	BELL & GOSSETT		
SIZE	1510 4AC 6½ BF		
IMPELLER	6½		
SERVICE	HWP		
TEST DATA	**GPM**	**FT. HD.**	**BHP**
DESIGN	350	37	4.25
ACTUAL	350	38.12	4.38
DISCHARGE	44.0		
SUCTION	27.5		
Δp	16.5	x 2.31 = 38.12 FT. HD.	
BLOCK OFF			
DISCHARGE	47.0		
SUCTION	30.0		
Δp	17.0	x 2.31 = 39.27 FT. HD.	
MOTOR MFG.	U.S. ELECTRIC		
FRAME	184T		
H.P.	5.0		
RPM	1715		
AMPS	15.4	ACT: 12.5 / 12.7 / 12.3	
VOLTS	200	ACT: 220 / 220 / 220	
REMARKS:			

PUMP NO.	PU-3		
MANUFACTURER	BELL & GOSSETT		
SIZE	1510 4AC 6½ BF		
IMPELLER	6½		
SERVICE	HWP		
TEST DATA	**GPM**	**FT. HD.**	**BHP**
DESIGN	350	37	4.25
ACTUAL	375	39.27	4.77
DISCHARGE	31.0		
SUCTION	14.0		
Δp	17.0	x 2.31 = 39.27 FT. HD	
BLOCK OFF			
DISCHARGE	47.5		
SUCTION	30.0		
Δp	17.5	x 2.31 = 40.43 FT. HD.	
MOTOR MFG.	U.S.ELECTRIC		
FRAME	184T		
H.P.	5.0		
RPM	1740		
AMPS	14.8	ACT: 13.5 / 12.0 / 11.5	
VOLTS	200	ACT: 220 / 220 / 220	
REMARKS:			

Form #82060

EBCO INC.

Date May 7, 1987

Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

Manufacturer BELL & GOSSETT, ARMSTRONG

FLOW MEASURING STATION

Station NO.	Terminal Mark	Circuit Setter Size	Circuit Setter Model	Required G.P.M.	Final Valve Setting	Test		Final	
						Test 1 PD	Test 2 PD	PD	G.P.M.
1	AHU-4	3/4"		2.5	2.5	NOT INSTALLED			
2	FCU-1	"	ARMSTRONG PNZ0150	1.6	2	1.0	1.0	1.0	1.5
3	UH-5	1-1/4"	ARMSTRONG PN23150	10.1	3	1.5	1.5	1.5	9.8
4	ATB-5	3/4"	B&G	1.6	4	1.0	1.0	1.0	1.6
5	ATB-3	"	"	.8	21	1.0	1.0	1.0	.82
6	ATB-78	"	"	1.7	12	2.0	2.0	2.0	1.7
7	ATB-2	"	"	"	20	4.0	4.0	4.0	1.7
8	ATB-7	"	"	"	12	1.0	2.0	2.0	1.7
9	ATB-47	"	"	"	12	2.0	2.0	2.0	1.7
10	ATB-6	"	ARMSTRONG PN20150	"	1.5	2.0	4.0	4.0	1.8
11	ATB-18	"	"	"	1.75	2.0	2.0	2.0	1.7
12	ATB-79	"	"	2.0	2	2.0	2.0	2.0	2.1
13	ATB-77	"	"	1.7	1.75	2.0	2.0	2.0	1.7
14	ATB-1	"	B&G	1.6	4	1.0	1.0	1.0	1.6
15	ATB-86	"	"	1.7	22	5.0	5.0	5.0	1.7
16	ATB-9	"	"	1.5	22	4.0	4.0	4.0	1.55
17	ATB-10	"	"	1.7	22	5.0	5.0	5.0	1.7
18	UH-5	1-1/4"	ARMSTRONG PN23150	10.1	2.75	1.0	2.0	2.0	9.5

Remarks:

EBCO INC.

Date MAY 7,1987

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

Manufacturer ARMSTRONG

FLOW MEASURING STATION

Station NO.	Terminal Mark	Circuit Setter Size	Circuit Setter Model	Required G.P.M.	Final Valve Setting	Test		Final	
						Test 1 PD	Test 2 PD	PD	G.P.M.
19	UH-2	-	-	2.9		NOT INSTALLED			
20	AHU-3	-	-	41.5		NOT INSTALLED			
21	UH-2	-	-	2.9		NOT INSTALLED			
22	UH-1	-	-	1.3		NOT INSTALLED			
23	HC-1	1"	ARMSTRONG PN20150	4.8	2.75	5.0	1.0	1.0	4.7
24	HC-1	"	"	4.8	2.75	1.0	1.0	1.0	4.7
25	HC-4	3/4"	"	2.0	2.0	2.0	2.0	2.0	2.05
26	HC-1	1"	"	4.8	2.0	2.0	4.0	4.0	5.2
27	HC-3	"	"	4.4	2.5	1.0	1.0	1.0	4.05
28	HC-1	"	B & G	4.8	0 °	2.0	1.5	1.5	4.6
29	HC-1	"	"	4.8	0 °	1.5	1.5	1.5	4.6
30	HC-2	"	"	3.5	2 °	1.0	1.0	1.0	3.5
31	HC-5	3/4"	ARMSTRONG PN20150	1.0	0.5	3.0	7.0	7.0	1.0
32	ATB-37	"	B & G	1.7	o °	1.0	1.0	1.0	1.8
33	ATB-20	"	"	1.7	0 °	1.0	1.0	1.0	1.8
34	ATB-36	"	"	2.1	6 °	1.0	2.0	2.0	2.1
35	ATB-21	"	"	1.7	22°	2.0	5.0	5.0	1.7
36	ATB-38	"	"	2.8	0 °	2.0	2.0	2.0	2.6

Remarks:

Form #82102

EBCO INC.

Date MAY 8,1987

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

Manufacturer BELL & GOSSETT

FLOW MEASURING STATION

Station NO.	Terminal Mark	Circuit Setter Size	Circuit Setter Model	Required G.P.M.	Final Valve Setting	Test		Final	
						Test 1 PD	Test 2 PD	PD	G.P.M.
37	ATB-58	3/4"	B & G	1.9	0 °	1.0	1.0	1.0	1.8
38	ATB-52	"	"	2.6	0 °	2.0	2.0	2.0	2.6
39	AHU-1	2"	-	8.8	NOT INSTALLED				
40	ATB-56	1"	B & G	3.1	5 °	1.0	1.0	1.0	3.2
41	ATB-16	3/4"	"	1.7	22 °	2.0	5.0	5.0	1.7
42	ATB-57	"	"	0.6	42 °	3.0	8.0	8.0	.68
43	ATB-89	"	"	2.1	0 °	1.5	1.5	1.5	2.2
44	ATB-12	1"	"	2.1	31 °	3.0	4.0	4.0	2.1
45	ATB-85	3/4"	"	1.2	12 °	2.0	1.0	1.0	1.2
46	ATB-11	1"	"	1.7	39 °	3.0	7.0	7.0	1.7
47	ATB-15	3/4"	"	1.7	17 °	3.0	3.0	3.0	1.7
48	ATB-88	"	"	0.4	43°	5.0	3.0	3.0	0.4
49	ATB-76	"	"	0.3	38°	1.0	1.0	1.0	.32
50	ATB-87	1"	"	2.2	15 °	2.0	1.0	1.0	2.2
51	ATB-71	3/4"	"	1.7	2 °	1.0	1.0	1.0	1.7
52	ATB-17	"	"	2.1	2 °	1.0	1.5	1.5	2.1
53	ATB-19	"	"	0.3	50 °	5.0	8.0	8.0	0.4
54	ATB-80	"	"	1.3	22 °	3.0	3.0	3.0	1.3

Remarks:

Form #82102

EBCO INC.

Date MAY 8,1987

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

Manufacturer BELL & GOSSETT

FLOW MEASURING STATION

Station NO.	Terminal Mark	Circuit Setter Size	Circuit Setter Model	Required G.P.M.	Final Valve Setting	Test		Final	
						Test 1 PD	Test 2 PD	PD	G.P.M.
55	ATB-25	1"	B & G	2.5	12 °	1.0	1.0	1.0	2.5
56	ATB-79	3/4"	"	2.5	0 °	3.0	2.0	2.0	2.6
57	ATB-39	1"	"	1.7	28 °	4.0	2.0	2.0	1.7
58	ATB-14	"	"	2.3	20 °	1.0	1.5	1.5	2.2
59	ATB-75	3/4"	"	1.7	26 °	2.0	8.0	8.0	1.75
60	ATB-72	"	"	2.2	10 °	3.0	3.0	3.0	2.3
61	ATB-74	"	"	2.6	0 °	1.0	2.0	2.0	2.6
62	ATB-26	"	"	1.7	20 °	4.0	4.0	4.0	1.7
63	ATB-73	"	"	1.7	28 °	8.0	10.0	10.0	1.75
64	ATB-66	"	"	2.5	14 °	5.0	5.0	5.0	2.5
65	ATB-53	"	"	0.5	48 °	8.0	10.0	10.0	.52
66	ATB-35	"	"	2.1	0 °	3.0	1.5	1.5	2.3
67	ATB-84	1"	"	2.0	30 °	3.0	3.0	3.0	1.92
68	ATB-13	3/4"	"	0.9	32 °	10.0	4.0	4.0	0.9
69	ATB-54	"	"	0.5	48 °	6.0	10.0	10.0	.52
70	ATB-50	"	"	2.2	10 °	5.0	3.0	3.0	2.25
71	ATB-65	1"	"	2.2	14 °	4.0	1.0	1.0	2.2
72	ATB-55	3/4"	"	0.4	34 °	1.0	1.0	1.0	0.4

Remarks:

Form #82102

EBCO INC.

Date MAY 8,1987

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

Manufacturer BELL & GOSSETT

FLOW MEASURING STATION

Station NO.	Terminal Mark	Circuit Setter Size	Circuit Setter Model	Required G.P.M.	Final Valve Setting	Test		Final	
						Test 1 PD	Test 2 PD	PD	G.P.M.
78	ATB-68	3/4"	B & G	2.5	0 °	3.0	1.5	1.5	2.25
79	ATB-51	"	"	2.3	0 °	1.5	1.5	1.5	2.25
80	ATB-59	"	"	0.9	29 °	1.0	3.0	3.0	0.9
81	ATB-49	"	"	2.6	0 °	3.0	1.5	1.5	2.4
82	ATB-34	"	"	0.7	42 °	6.0	8.0	8.0	0.7
83	ATB-61	"	"	1.2	30 °	8.0	6.0	6.0	1.2
84	ATB-33	"	"	0.9	35 °	8.0	6.0	6.0	0.9
85	ATB-31	1"	"	3.7	20 °	1.0	4.0	4.0	3.6
86	ATB-30	"	"	3.7	0 °	2.0	1.0	1.0	3.7
87	ATB-48	"	"	2.5	12 °	3.0	1.0	1.0	2.5
88	ATB-23	"	"	2.5	12 °	1.0	1.0	1.0	2.5
89	ATB-70	3/4"	"	1.7	24 °	5.0	6.0	6.0	1.7
90	ATB-83	"	"	1.0	33 °	2.0	7.0	7.0	1.1
91	ATB-46	"	"	1.7	20 °	2.0	4.0	4.0	1.7
92	ATB-60	"	"	1.2	11 °	1.0	1.0	1.0	1.2
93	ATB-81	"	"	1.4	27 °	2.0	6.0	6.0	1.45
94	ATB-69	"	"	1.5	29 °	7.0	8.0	8.0	1.5
95	ATB-43	"	"	2.5	20 °	2.0	2.0	2.0	2.5

Remarks:

Form #82102

EBCO INC.

Date MAY 8,1987

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Project MAXWELL H. GLUCK EQUINE RESEARCH CENTER

Manufacturer BELL & GOSSETT

FLOW MEASURING STATION

Station NO.	Terminal Mark	Circuit Setter Size	Circuit Setter Model	Required G.P.M.	Final Valve Setting	Test		Final	
						Test 1 PD	Test 2 PD	PD	G.P.M.
96	ATB-32	"	"	2.5	10 °	6.0	4.0	4.0	2.6
97	ATB-41	"	"	2.9	0 °	3.0	2.0	2.0	2.6
98	ATB-64	"	"	2.5	4 °	3.0	2.5	2.5	2.5
99	ATB-44	"	"	1.7	2 °	2.0	1.0	1.0	1.7
100	ATB-45	1"	"	3.7	11 °	3.0	2.0	2.0	3.7
101	ATB-40	3/4"	B & G	1.7	24 °	3.0	6.0	6.0	1.7
102	ATB-62	1"	"	2.6	23 °	4.0	3.0	3.0	2.7
103	ATB-42	"	"	3.2	10 °	1.5	1.5	1.5	3.2
104	ATB-4	3/4"	"	1.6	18 °	3.0	3.0	3.0	1.65
105	ATB-28	1"	"	2.5	12 °	2.0	1.0	1.0	2.5
106	ATB-63	"	"	2.6	11 °	1.0	1.0	1.0	2.6
107	HU-3	"	"	6.3		NOT INSTALLED			
108	UH-4	"	"	8.1		NOT INSTALLED			

Remarks:

Form #82102

FORM NO. 12266-2-F

EBCO INC.

INDEPENDENT TEST AND BALANCING

COOLING COIL DATA SHEET

Date 8-12-87

Sheet No. 198

PROJECT: MAXWELL H. GLUCK EQUINE RESEARCH CENTER SYSTEM: CHILLED WATER

LOCATION OR SYSTEM	UNIT TYPE CODE*	Design Conditions								Actual Balance Condition							
		GPM	ENT. AIR D.B.	ENT. AIR W.B.	LV AIR D.B.	LV AIR W.B.	ENT. WATER	LV WATER	ΔP Feet	GPM	ENT. AIR D.B.	ENT. AIR W.B.	LV AIR D.B.	LV AIR W.B.	ENT. WATER	LV WATER	ΔP Feet
BASEMENT	FC-1	1.6	80	67	N/S	N/S	45	55	3.8		78	67	57	57	41	50	3.47
AUDITORIUM	AHU-1	22.1	83.4	68.0	54.0	53.1	46	56	6.7		72	59	54	53	47	58	5.78
"B" BUILDING	AHU-2	94.9	95.0	78.0	53.3	53.1	46	56.6	14.5		78.0	69.0	59	58	46	55.5	13.9
MAIN BLDG.-NORTH	VAV-1	456	85.8	71.6	54.3	54.0	46	56	23.4		83.0	66.0	59	59	42	68.0	28.0
STAIRWELL-NORTH	FCU-2	7.3	80	67	N/S	N/S	45	55	10.4		70	59	55	54	43	52	9.24
MAIN BLDG.-SOUTH	VAV-2	564	88.6	74.3	53.3	53.1	46	56.1	25.3		87.0	71.0	54	54	42	59	28.0
STAIRWELL-SOUTH	FCU-2	7.3	80	67	N/S	N/S	45	55	10.4		73	60	57	55	43	55	8.1

* N/S-NOT SPECIFIED

EBCO INC. INDEPENDENT TEST AND BALANCING

CIRCUIT SENSOR DEVICES

Date 8-31-87

Sheet No. 199

PROJECT: MAXWELL H. GLUCK RESEARCH CENTER SYSTEM: CHILL WATER

LOCATION	SIZE	SETTING	GAUGE READING	REQ. GPM	ACT. GPM
BASEMENT FCU-1	3/4"	1.75	2.0'	1.6	1.6
AHU-1 AUDITORIUM	2"	5 °	1.0'	22.1	22.1
FCU-2 STAIRWAY-SOUTH	1 1/4"	3.0	1.0'	7.3	7.6
FCU-2 STAIRWAY-NORTH	1 1/4"	2.5	2.0'	7.3	7.6
REMARKS					