



Manual S Compliance Report

Entire House

Strada Services



Job: Lot 39 1980 A-RHG-N
Date: 9/6/24
By: NMS
Plan: 1820

531 Codisco Way, Sanford, FL 32771 Phone: 877-906-1113 Web: StradaServices.com License: CAC043953

Project Information

For: Lot 39 Preserve @ Laurel Lake, Adams Homes
593 SW Bellflower Dr, Lake City, FL 32771

Cooling Equipment

Design Conditions

Outdoor design DB:	92.4°F	Sensible gain:	25223 Btuh	Entering coil DB:	76.4°F
Outdoor design WB:	75.8°F	Latent gain:	4415 Btuh	Entering coil WB:	63.2°F
Indoor design DB:	75.0°F	Total gain:	29638 Btuh		
Indoor RH:	50%	Estimated airflow:	1167 cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Carrier	Model:	GH5SAN53600AA0+FJ5ANXB36L00
Actual airflow:	1167 cfm		
Sensible capacity:	28361 Btuh	112% of load	
Latent capacity:	5496 Btuh	124% of load	
Total capacity:	33857 Btuh	114% of load	SHR: 84%

Heating Equipment

Design Conditions

Outdoor design DB:	33.3°F	Heat loss:	29283 Btuh	Entering coil DB:	70.0°F
Indoor design DB:	70.0°F				

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Carrier	Model:	GH5SAN53600AA0+FJ5ANXB36L00
Actual airflow:	0 cfm		
Output capacity:	35600 Btuh	122% of load	Capacity balance: 30 °F
Supplemental heat required:	0 Btuh		Economic balance: -99 °F

Backup equipment type:	Elec strip		
Manufacturer:	n/a	Model:	n/a+n/a
Actual airflow:	0 cfm		
Output capacity:	6.7 kW	78% of load	Temp. rise: 26 °F

Meets all requirements of ACCA Manual S.



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2025-Aug-15 13:42:20

Page 1



Project Summary

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Project Information

For: Lot 39 Preserve @ Laurel Lake, Adams Homes
593 SW Bellflower Dr, Lake City, FL 32771

Notes: LS 8/15/25 MAC

Design Information

Weather: Gainesville, FL, US

Winter Design Conditions

Outside db 33 °F
Inside db 70 °F
Design TD 37 °F

Ventilation Method MJ8

Heating Summary

Structure 26499 Btuh
Ducts (R-6.0) 2784 Btuh
Central vent (0 cfm) 0 Btuh

Humidification 0 Btuh
Piping 0 Btuh
Equipment load 29283 Btuh

Infiltration

Method Simplified
Construction quality Average
Fireplaces 0

	Heating	Cooling
Area (ft²)	1816	1820
Volume (ft³)	23495	23495
Air changes/hour	0.38	0.20
Equiv. AVF (cfm)	149	78

Heating Equipment Summary

Make Carrier
Trade 15 SEER2 HP
Model GH5SAN53600AA0
AHRI ref 214101828

Efficiency 7.5 HSPF2
Heating input
Heating output 35600 Btuh @ 47°F
Temperature rise 0 °F
Actual air flow 0 cfm
Air flow factor 0 cfm/Btuh
Static pressure 0.50 in H2O
Space thermostat
Capacity balance point = 30 °F

Backup: n/a n/a
Input = 7 kW, Output = 22713 Btuh, 100 AFUE

Summer Design Conditions

Outside db 92 °F
Inside db 75 °F
Design TD 17 °F
Daily range M
Relative humidity 50 %
Moisture difference 43 gr/lb

Sensible Cooling Equipment Load Sizing

Structure 19285 Btuh
Ducts (R-6.0) 5938 Btuh
Central vent (0 cfm) 0 Btuh

Blower 0 Btuh

Use manufacturer's data y
Rate/swing multiplier 1.00
Equipment sensible load 25223 Btuh

Latent Cooling Equipment Load Sizing

Structure 3305 Btuh
Ducts 1111 Btuh
Central vent (0 cfm) 0 Btuh

Equipment latent load 4415 Btuh

Equipment Total Load (Sen+Lat) 29638 Btuh
Req. total capacity at 0.75 SHR 2.8 ton

Cooling Equipment Summary

Make Carrier
Trade 15 SEER2 HP
Cond GH5SAN53600AA0
Coil FJ5ANXB36L00
AHRI ref 214101828

Efficiency 12.0 EER2, 14.5 SEER2
Sensible cooling 26250 Btuh
Latent cooling 8750 Btuh
Total cooling 35000 Btuh
Actual air flow 1167 cfm
Air flow factor 0.046 cfm/Btuh
Static pressure 0.50 in H2O
Load sensible heat ratio 0.85

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.



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2025-Aug-15 13:42:20

Page 1

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1	Room name						Entire House				M.Bed			
2	Exposed wall						12.7 ft				37.5 ft			
3	Room height						d				heat/cool			
4	Room dimensions						1843.8 ft²				1.0 x 209.2 ft			
5	Room area										209.2 ft²			
	Ty	Construction number	U-value (Btuh/ft²·°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12C-0sw	0.091	n	3.34	2.27	209	151	505	343	0	0	0	0
	G	2A-2ov	0.330	n	12.11	9.16	33	0	396	299	0	0	0	0
	G	2A-2ov	0.330	n	12.11	9.16	5	0	64	49	0	0	0	0
	D	11J0	0.600	n	22.02	17.97	20	20	440	359	0	0	0	0
11	W	12C-0sw	0.091	e	3.34	2.27	632	583	1947	1324	102	102	339	230
	G	2A-2ov	0.330	e	12.11	23.84	49	0	594	1169	0	0	0	0
	W	12C-0sw	0.091	s	3.34	2.27	383	286	956	650	118	88	295	200
	G	10C-m	0.570	s	20.92	11.60	18	18	374	207	0	0	0	0
	G	2A-2ov	0.330	s	12.11	9.18	30	30	363	275	30	30	363	275
	G	2A-2ov	0.330	s	12.11	9.26	16	15	198	151	0	0	0	0
	G	2A-2ov	0.330	s	12.11	9.16	33	33	396	299	0	0	0	0
	W	12C-0sw	0.091	w	3.34	2.27	619	563	1880	1278	132	116	386	263
	G	2A-2ov	0.330	w	12.11	27.81	7	0	84	193	0	0	0	0
	G	2A-2ov	0.330	w	12.11	23.84	49	0	594	1169	16	0	198	390
	P	12C-0sw	0.091	-	3.34	1.37	205	187	625	256	0	0	0	0
	D	11D0	0.390	n	14.31	11.68	18	18	256	209	0	0	0	0
	C	16B-30ad	0.032	-	1.17	1.71	2872	2872	3373	4912	353	353	415	604
	F	22A-lpl	0.989	-	36.30	0.00	1844	206	7474	0	209	38	1361	0
6	c) AED excursion									0				-67
	Envelope loss/gain								20518	13143			3357	1896
12	a) Infiltration								5981	1492			1141	285
	b) Room ventilation								0	0			0	0
13	Internal gains: Occupants @ 230 Appliances/other						5			1150 3500	2			460 600
	Subtotal (lines 6 to 13)								26499	19285			4498	3240
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								26499	19285			4498	3240
15	Duct loads						11%	31%	2784	5938	11%	31%	473	998
	Total room load								29283	25223			4971	4238
	Air required (cfm)								0	1167			0	196

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

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1	Room name						Great Room				Kitchen			
2	Exposed wall						23.0 ft				29.5 ft			
3	Room height						13.5 ft				12.2 ft			
4	Room dimensions						1.0 x 475.1 ft				1.0 x 274.6 ft			
5	Room area						475.1 ft²				274.6 ft²			
	Ty	Construction number	U-value (Btuh/ft²·°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12C-0sw	0.091	n	3.34	2.27	65	40	133	90	14	14	48	32
	G	2A-2ov	0.330	n	12.11	9.16	0	0	0	0	0	0	0	0
	G	2A-2ov	0.330	n	12.11	9.16	5	0	64	49	0	0	0	0
	D	11J0	0.600	n	22.02	17.97	20	20	440	359	0	0	0	0
11	W	12C-0sw	0.091	e	3.34	2.27	0	0	0	0	44	44	145	99
	G	2A-2ov	0.330	e	12.11	23.84	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	s	3.34	2.27	135	84	282	192	0	0	0	0
	G	10C-m	0.570	s	20.92	11.60	18	18	374	207	0	0	0	0
	G	2A-2ov	0.330	s	12.11	9.18	0	0	0	0	0	0	0	0
	G	2A-2ov	0.330	s	12.11	9.26	0	0	0	0	0	0	0	0
	G	2A-2ov	0.330	s	12.11	9.16	33	33	396	299	0	0	0	0
	W	12C-0sw	0.091	w	3.34	2.27	24	24	80	54	136	103	345	235
	G	2A-2ov	0.330	w	12.11	27.81	0	0	0	0	0	0	0	0
	G	2A-2ov	0.330	w	12.11	23.84	0	0	0	0	33	0	396	779
	P	12C-0sw	0.091	-	3.34	1.37	30	30	100	41	100	100	334	137
	D	11D0	0.390	n	14.31	11.68	0	0	0	0	0	0	0	0
	C	16B-30ad	0.032	-	1.17	1.71	538	538	631	920	445	445	523	761
	F	22A-lpl	0.989	-	36.30	0.00	475	23	835	0	275	30	1071	0
6	c) AED excursion									-167				238
	Envelope loss/gain								3335	2045			2861	2281
12	a) Infiltration								727	181			629	157
	b) Room ventilation								0	0			0	0
13	Internal gains: Occupants @ 230 Appliances/other						0			0 900	0			0 1200
	Subtotal (lines 6 to 13)								4062	3126			3490	3638
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								11	9			0	0
14	Subtotal								4074	3135			3490	3638
15	Duct loads						11%	31%	428	965	11%	31%	367	1120
	Total room load								4502	4101			3857	4758
	Air required (cfm)								0	190			0	220

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1	Room name					Bed 3					Bth 2				
2	Exposed wall					13.5 ft					5.5 ft				
3	Room height					12.4 ft					13.0 ft				
4	Room dimensions					1.0 x 156.5 ft					9.0 x 5.5 ft				
5	Room area					156.5 ft²					49.5 ft²				
	Ty	Construction number	U-value (Btuh/ft²·°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)		
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool	
6	W	12C-0sw	0.091	n	3.34	2.27	15	15	50	34	0	0	0	0	
11	G	2A-2ov	0.330	n	12.11	9.16	0	0	0	0	0	0	0	0	
	G	2A-2ov	0.330	n	12.11	9.16	0	0	0	0	0	0	0	0	
	D	11J0	0.600	n	22.02	17.97	0	0	0	0	0	0	0	0	
	W	12C-0sw	0.091	e	3.34	2.27	108	92	306	208	44	44	147	100	
	G	2A-2ov	0.330	e	12.11	23.84	16	0	198	390	0	0	0	0	
	W	12C-0sw	0.091	s	3.34	2.27	14	14	45	31	0	0	0	0	
	G	10C-m	0.570	s	20.92	11.60	0	0	0	0	0	0	0	0	
	G	2A-2ov	0.330	s	12.11	9.18	0	0	0	0	0	0	0	0	
	G	2A-2ov	0.330	s	12.11	9.26	0	0	0	0	0	0	0	0	
	G	2A-2ov	0.330	s	12.11	9.16	0	0	0	0	0	0	0	0	
	W	12C-0sw	0.091	w	3.34	2.27	26	26	89	60	0	0	0	0	
	G	2A-2ov	0.330	w	12.11	27.81	0	0	0	0	0	0	0	0	
	G	2A-2ov	0.330	w	12.11	23.84	0	0	0	0	0	0	0	0	
	P	12C-0sw	0.091	-	3.34	1.37	0	0	0	0	0	0	0	0	
	D	11D0	0.390	n	14.31	11.68	0	0	0	0	0	0	0	0	
	C	16B-30ad	0.032	-	1.17	1.71	274	274	322	468	106	106	125	181	
	F	22A-tpl	0.989	-	36.30	0.00	156	14	490	0	50	6	200	0	
	6	c)AED excursion								44				-16	
	Envelope loss/gain							1499	1235			471	265		
12	a) Infiltration							529	132			143	36		
	b) Room ventilation							0	0			0	0		
13	Internal gains: Occupants @ 230					1			230	0			0	0	
	Appliances/other														
	Subtotal (lines 6 to 13)							2028	1597			614	301		
14	Less external load							0	0			0	0		
	Less transfer							0	0			0	0		
	Redistribution							23	18			0	0		
	Subtotal							2051	1615			614	301		
15	Duct loads					11%	31%	215	497	11%	31%	64	93		
	Total room load							2267	2112			678	394		
	Air required (cfm)							0	98			0	18		

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1	Room name					Bed 2 34.0 ft 12.4 ft 1.0 x 155.0 ft heat/cool 155.0 ft²					Bed 4 32.0 ft 12.0 ft 12.5 x 13.0 ft heat/cool 162.5 ft²				
2	Exposed wall														
3	Room height														
4	Room dimensions														
5	Room area														
	Ty	Construction number	U-value (Btuh/ft²·°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)		
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool	
6	W	12C-0sw	0.091	n	3.34	2.27	0	0	0	0	115	82	274	187	
	G	2A-2ov	0.330	n	12.11	9.16	0	0	0	0	33	0	396	299	
	G	2A-2ov	0.330	n	12.11	9.16	0	0	0	0	0	0	0	0	
	D	11J0	0.600	n	22.02	17.97	0	0	0	0	0	0	0	0	
11	W	12C-0sw	0.091	e	3.34	2.27	108	108	361	245	104	104	347	236	
	G	2A-2ov	0.330	e	12.11	23.84	0	0	0	0	0	0	0	0	
	W	12C-0sw	0.091	s	3.34	2.27	115	99	329	224	0	0	0	0	
	G	10C-m	0.570	s	20.92	11.60	0	0	0	0	0	0	0	0	
	G	2A-2ov	0.330	s	12.11	9.18	0	0	0	0	0	0	0	0	
	G	2A-2ov	0.330	s	12.11	9.26	16	15	198	151	0	0	0	0	
	G	2A-2ov	0.330	s	12.11	9.16	0	0	0	0	0	0	0	0	
	W	12C-0sw	0.091	w	3.34	2.27	86	86	289	196	76	76	252	171	
	G	2A-2ov	0.330	w	12.11	27.81	0	0	0	0	0	0	0	0	
	G	2A-2ov	0.330	w	12.11	23.84	0	0	0	0	0	0	0	0	
	P	12C-0sw	0.091	-	3.34	1.37	0	0	0	0	0	0	0	0	
	D	11D0	0.390	n	14.31	11.68	0	0	0	0	0	0	0	0	
	C	16B-30ad	0.032	-	1.17	1.71	267	267	314	457	253	253	297	433	
	F	22A-tpl	0.989	-	36.30	0.00	155	34	1234	0	162	32	1161	0	

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Duct System Summary

Entire House

Strada Services

Job: Lot 39 1980 A-RHG-N
Date: 9/6/24
By: NMS
Plan: 1820

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593 SW Bellflower Dr, Lake City, FL 32771

	Heating	Cooling
External static pressure	0.50 in H2O	0.50 in H2O
Pressure losses	0.16 in H2O	0.16 in H2O
Available static pressure	0.34 in H2O	0.34 in H2O
Supply / return available pressure	0.170 / 0.170 in H2O	0.170 / 0.170 in H2O
Lowest friction rate	0.256 in/100ft	0.256 in/100ft
Actual air flow	0 cfm	1167 cfm
Total effective length (TEL)	133 ft	

Supply Branch Detail Table

Name	Design (Btuh)	Htg (cfm)	Clg (cfm)	Design FR	Diam (in)	H x W (in)	Duct Matl	Actual Ln (ft)	Ftg.Eqv Ln (ft)	Trunk
Bed 2	c 2383	0	110	0.256	6.0	0x0	VIFx	32.8	100.0	st1
Bed 3	c 2112	0	98	0.277	6.0	0x0	VIFx	22.8	100.0	st1
Bed 4	c 2415	0	112	0.272	7.0	0x0	VIFx	24.9	100.0	st2
Bth 2	c 394	0	18	0.266	4.0	0x0	VIFx	27.8	100.0	st1
Dining	c 2187	0	101	0.295	6.0	0x0	VIFx	15.2	100.0	st2
Great Room-A	c 4101	0	190	0.293	8.0	0x0	VIFx	16.2	100.0	st2
Kitchen	c 4758	0	220	0.297	8.0	0x0	VIFx	14.4	100.0	st2
Laundry-A	c 1091	0	50	0.293	4.0	0x0	VIFx	16.1	100.0	st2
M.Bed	c 4238	0	196	0.263	8.0	0x0	VIFx	29.4	100.0	st1
M.Bth	c 1280	0	59	0.259	5.0	0x0	VIFx	31.1	100.0	st1
M.WIC	c 264	0	12	0.267	4.0	0x0	VIFx	27.2	100.0	st1

Supply Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
st2	PeakAVF	0	673	0.272	630	14.0	0 x 0	VinIFix	
st1	PeakAVF	0	494	0.256	629	12.0	0 x 0	VinIFix	



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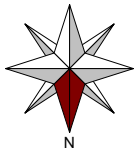
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2025-Aug-15 13:42:21

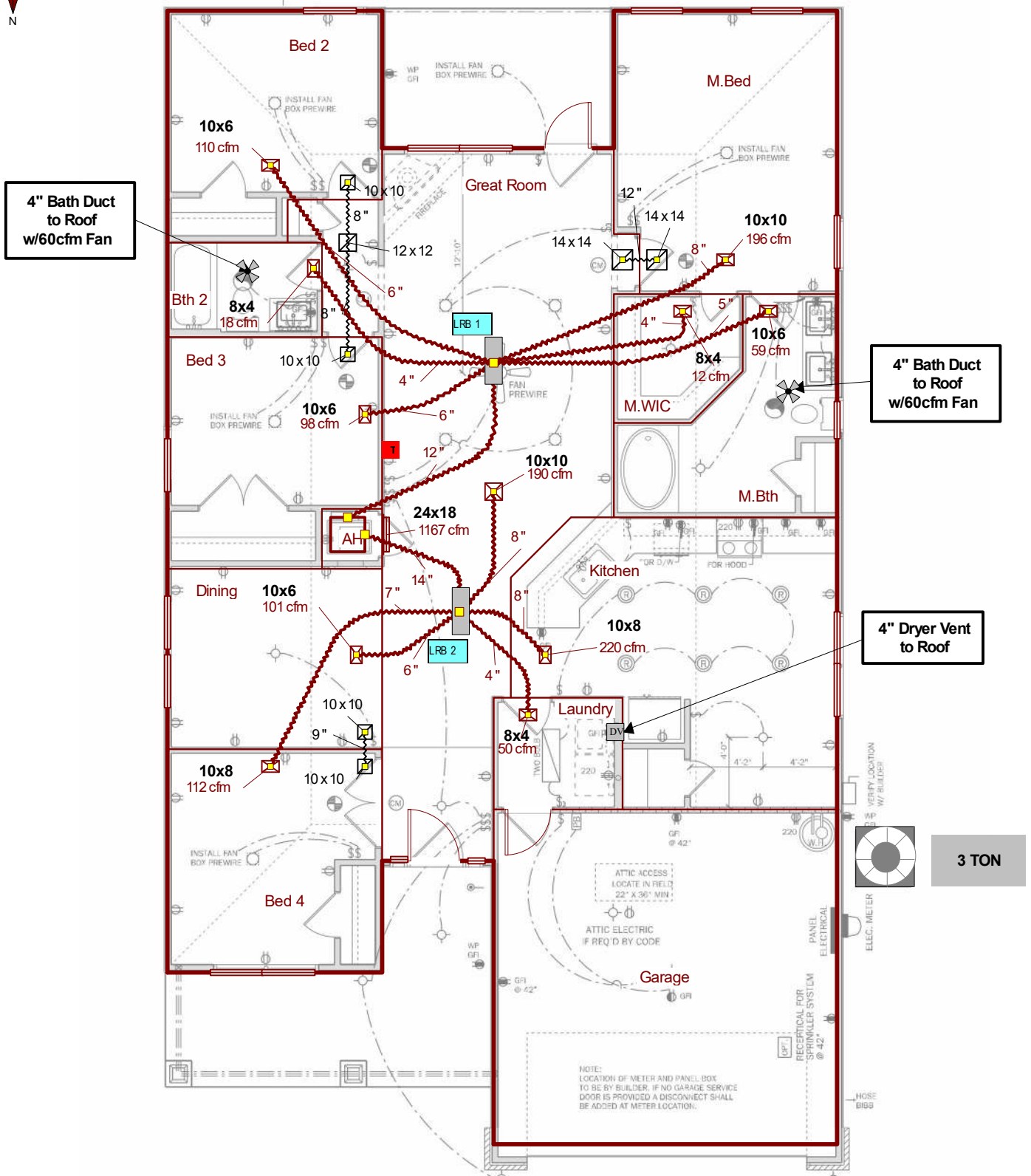
Page 1

Return Branch Detail Table

Name	Grille Size (in)	Htg (cfm)	Clg (cfm)	TEL (ft)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Stud/Joist Opening (in)	Duct Matl	Trunk
rb1	0x 0	0	1167	0	0	0	0	0x 0		VIFx	



Level 1



Job #: Lot 39 1980 A-RHG-N
Performed by NMS for:
Lot 39 Preserve @ Laurel Lake
593 SW Bellflower Dr
Lake City, FL 32771

Strada Services
531 Codisco Way
Sanford, FL 32771
Phone: 877-906-1113 License: CAC043953
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Scale: 1 : 99
Page 1
Right-Suite@ Universal 2025
25.0.01 RSU57803
2025-Aug-15 13:43:25
... A-RHG-NLot 39 1980 A-RHG-N.rup