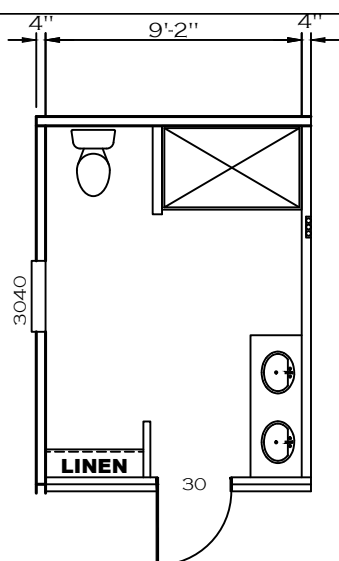
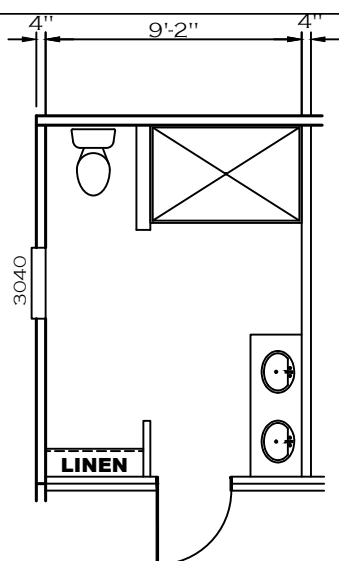
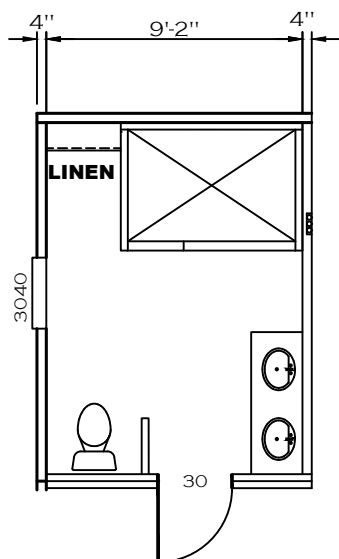




PRIMARY BATH 60" SHOWER ONLY



OPT. PRIMARY BATH 65" SHOWER



PRIMARY BATH 72" SHOWER ONLY

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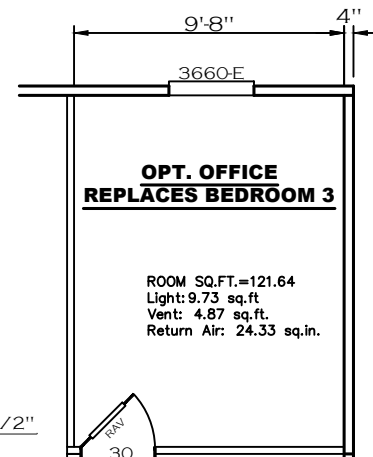
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JUNE 22 2026

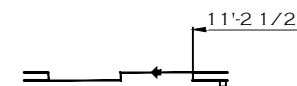
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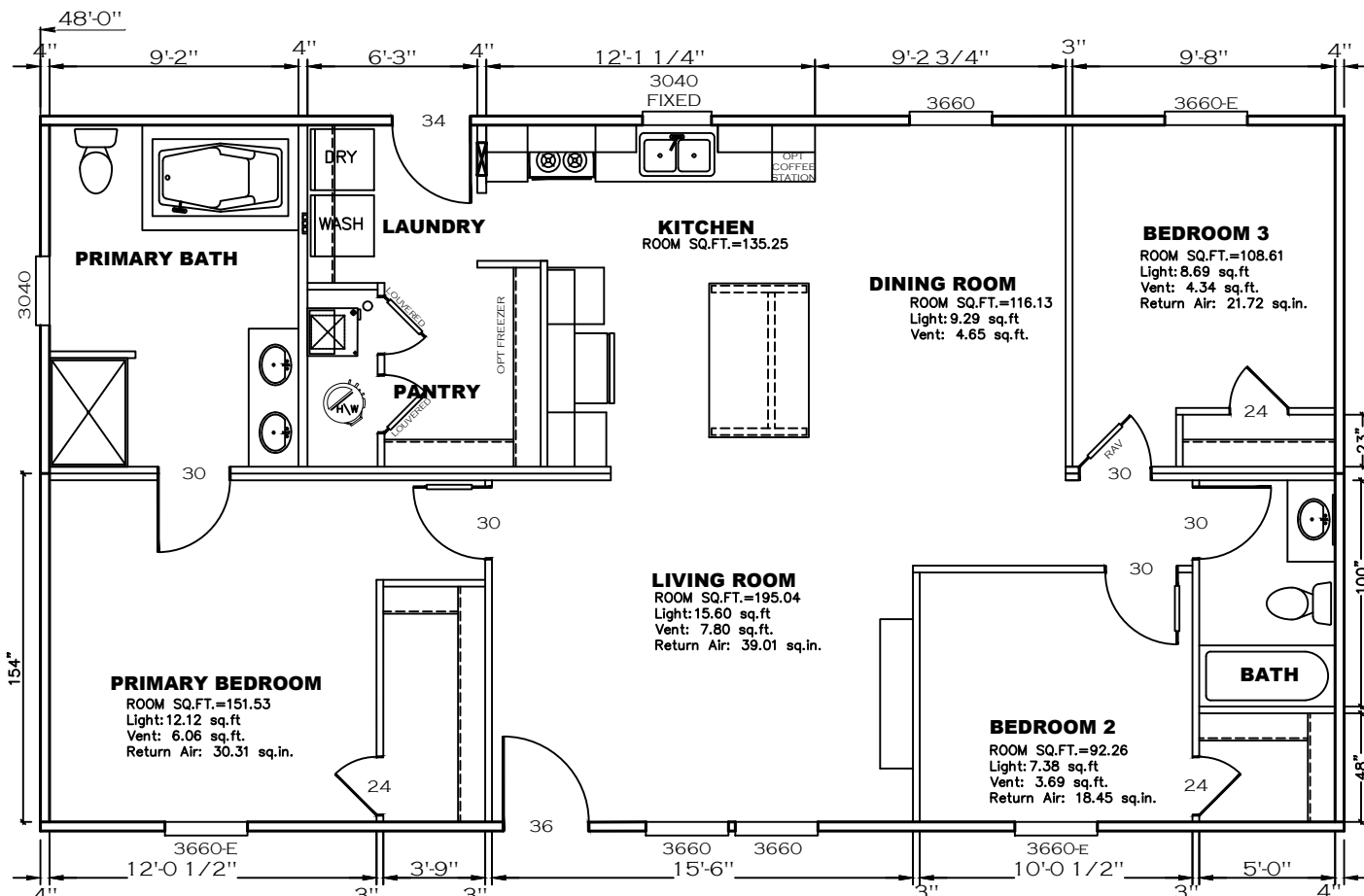


**OPT. OFFICE
REPLACES BEDROOM 3**

ROOM SQ.FT.=121.64
Light: 9.73 sq.ft.
Vent: 4.87 sq.ft.
Return Air: 24.33 sq.in.



OPT. DINING ROOM SGD



PRIMARY BATH

LAUNDRY

KITCHEN
ROOM SQ.FT.=135.25

DINING ROOM
ROOM SQ.FT.=116.13
Light: 9.29 sq.ft.
Vent: 4.65 sq.ft.

BEDROOM 3
ROOM SQ.FT.=108.61
Light: 8.69 sq.ft.
Vent: 4.34 sq.ft.
Return Air: 21.72 sq.in.

LIVING ROOM
ROOM SQ.FT.=195.04
Light: 15.60 sq.ft.
Vent: 7.80 sq.ft.
Return Air: 39.01 sq.in.

PRIMARY BEDROOM
ROOM SQ.FT.=151.53
Light: 12.12 sq.ft.
Vent: 6.06 sq.ft.
Return Air: 30.31 sq.in.

BEDROOM 2
ROOM SQ.FT.=92.26
Light: 7.38 sq.ft.
Vent: 3.69 sq.ft.
Return Air: 18.45 sq.in.

BATH

SHEET:

FP

FLOOR PLAN

Clayton
home building group

Clayton Clayton - 934
1420 Mountain Rd, Andersonville, TN 37705
PH: 865.494.7800 FAX: 865.494.0243

HILBORN, WERNER, CARTER,
AND ASSOCIATES, INC.
1627 SOUTH MYRTLE AVE.
CLEARWATER, FL. 33756

DRAWING #: 34M400-FP

MODEL #: MTN28483A

DATE: 4/29/2026

SCALE: N.T.S.

MODEL: MOUNTAINEER 48 (28'x48')

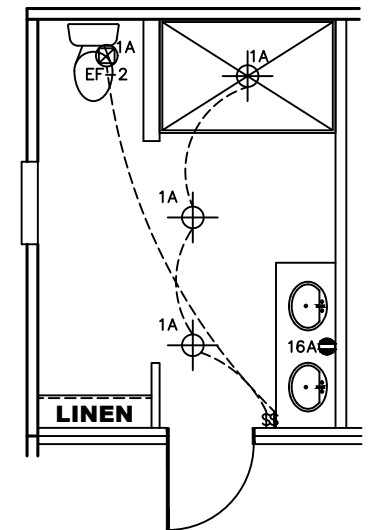
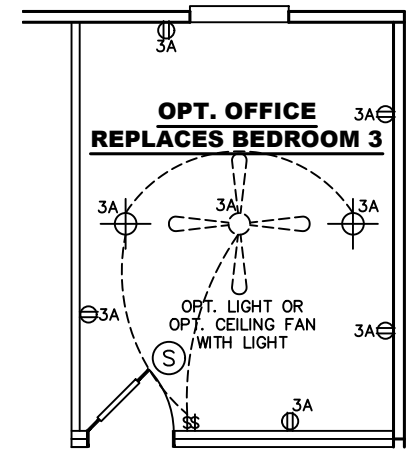
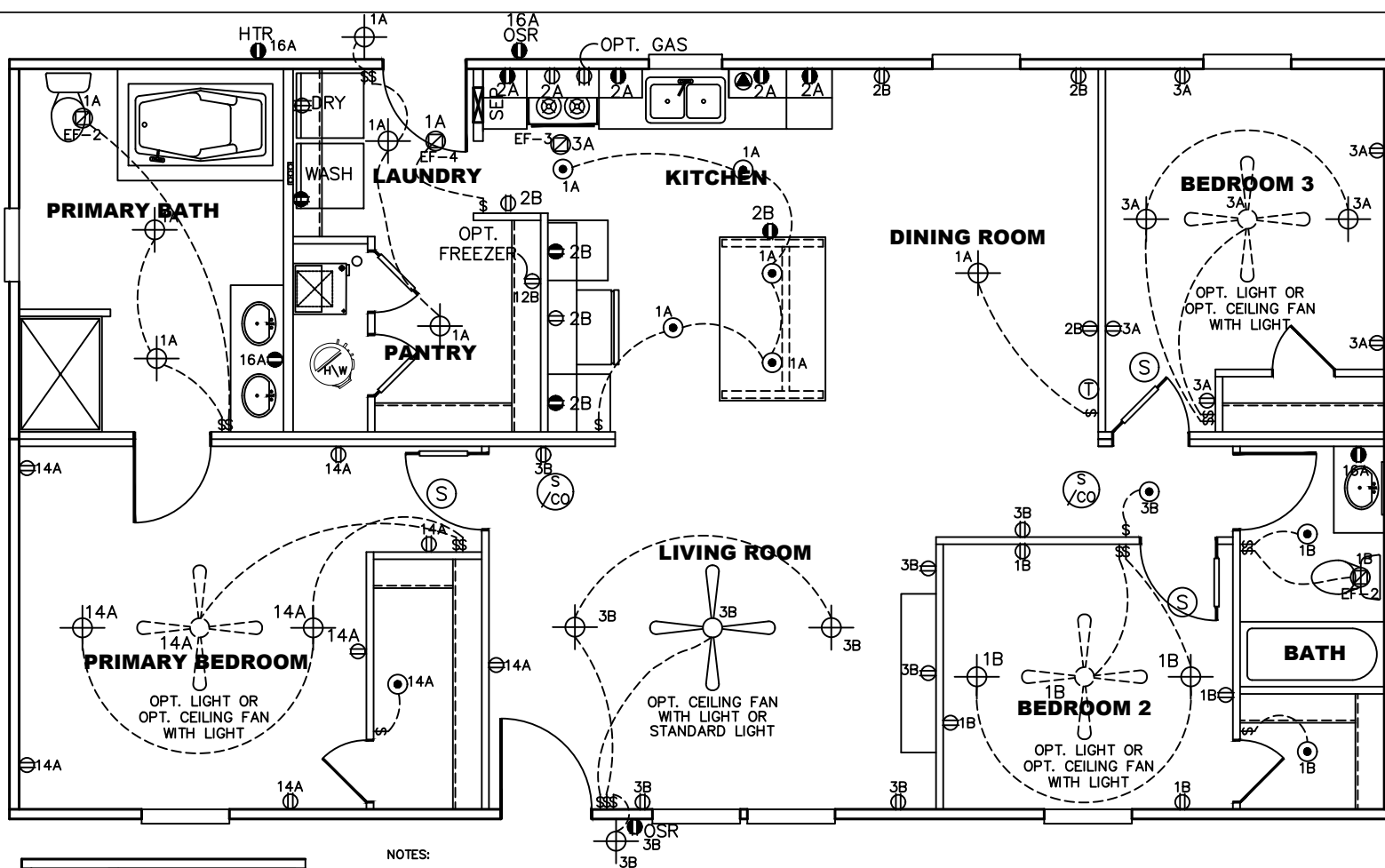
SERIES: MOUNTAINEER

PRODUCT DESIGNER: BRIAN K RIFFEY

STD PLAN "CONDITIONED": 1,264 FT²

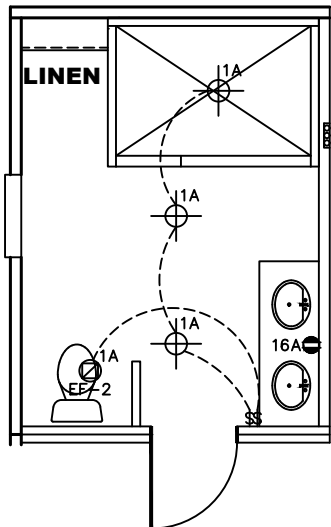
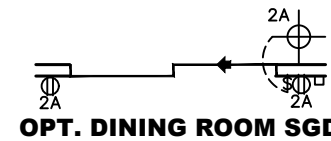
REV. BY:

REV. DATE:



NOTES:

- ALL CIRCUITS SHOWN ARE FOR REFERENCE AND MAY BE CHANGED BASED ON OPTIONAL COMPONENTS INSTALLED IN THE HOME.
- REFER TO DAPIA MANUAL FOR SYMBOL CHART.
- EITHER LIGHT OR RECEPTACLE MUST CONNECT TO SWITCH.
- EF-1= 50 CFM EXHAUST FAN REQUIRED FOR THERMAL ZONE III THERMAL ZONES I & II MAY USE FAN OR WINDOW W/1.5 SQ. FT. OPENABLE GLASS.
- EF-2= 50 CFM EXHAUST FAN REQUIRED THERMAL ZONE I, II, AND III.
- EF-3= 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
- EF-4= WHOLE HOUSE VENTILATION REQUIREMENTS PER DAPIA MANUAL.
- REFER TO DAPIA MANUAL OR THE MFG. INSTALLATION INSTRUCTIONS FOR PROPER WIRE SIZE AND BREAKER SIZE FOR SPECIFIC APPLIANCE AND MODEL BEING INSTALLED.
- ALL SMOKE ALARMS TO BE LOCATED ON THE CEILING.
- CARBON MONOXIDE ALARMS ARE ONLY REQUIRED WHEN HOME HAS EITHER FUEL BURNING APPLIANCES, IS GARAGE READY OR IS BASEMENT READY. REFERENCE DAPIA MANUAL FOR ADDITIONAL INFORMATION.
- DIMENSIONS SHOWN ON PRINT ARE APPROXIMATE AND TO BE USED ONLY AS A GUIDELINE.
- LOUVERED DOORS SERVE AS RETURN AIR GRILL.



PRIMARY BATH 72" SHOWER ONLY

CIRCUIT	CIRCUIT #	WIRE	BREAKER	CIRCUIT	CIRCUIT #	WIRE	BREAKER	CIRCUIT	CIRCUIT #	WIRE	BREAKER
LIGHT/RECEP	1A,1B,3A,3B,14A	14-2	15-SP	WATER HEATER	4A,6B	SEE NOTE #8		BATHROOM	16A	12-2	20-SP
KITCHEN/DINING	2A,2B	12-2	20-SP	RANGE	5B,7A	SEE NOTE #8		OPT G/DISP	9B	SEE NOTE #8	
WASHER	15B	12-2	20-SP	FURNACE	6A,8A,B,10A,B	SEE NOTE #8		OPT SPA/ WP/JAC	11A,B	SEE NOTE #8	
DRYER	5A,7B	SEE NOTE #8		OPT D/WASH	9A	SEE NOTE #8		FREEZER	12B	SEE NOTE #8	
				SMOKE ALARM	4B	SEE NOTE #8					

SHEET:

EL

ELECTRICAL
PLAN

Clayton
home building group

Clayton Clayton - 934
1420 Mountain Rd, Andersonville, TN 37705
PH: 865.494.7800 FAX: 865.494.0243

HILBORN, WERNER, CARTER,
AND ASSOCIATES, INC.
1627 SOUTH MYRTLE AVE.
CLEARWATER, FL. 33756

DRAWING #: 34M400-EL

MODEL #: MTN28483A

DATE: 4/29/2026 SCALE: N.T.S.

MODEL: MOUNTAINEER 48 (28'x48')

SERIES: MOUNTAINEER

PRODUCT DESIGNER: BRIAN K. RIFFEY

STD PLAN "CONDITIONED": 1,264 FT²

REV. BY:

REV. DATE:

OPT. PRIMARY BATH 65" SHOWER

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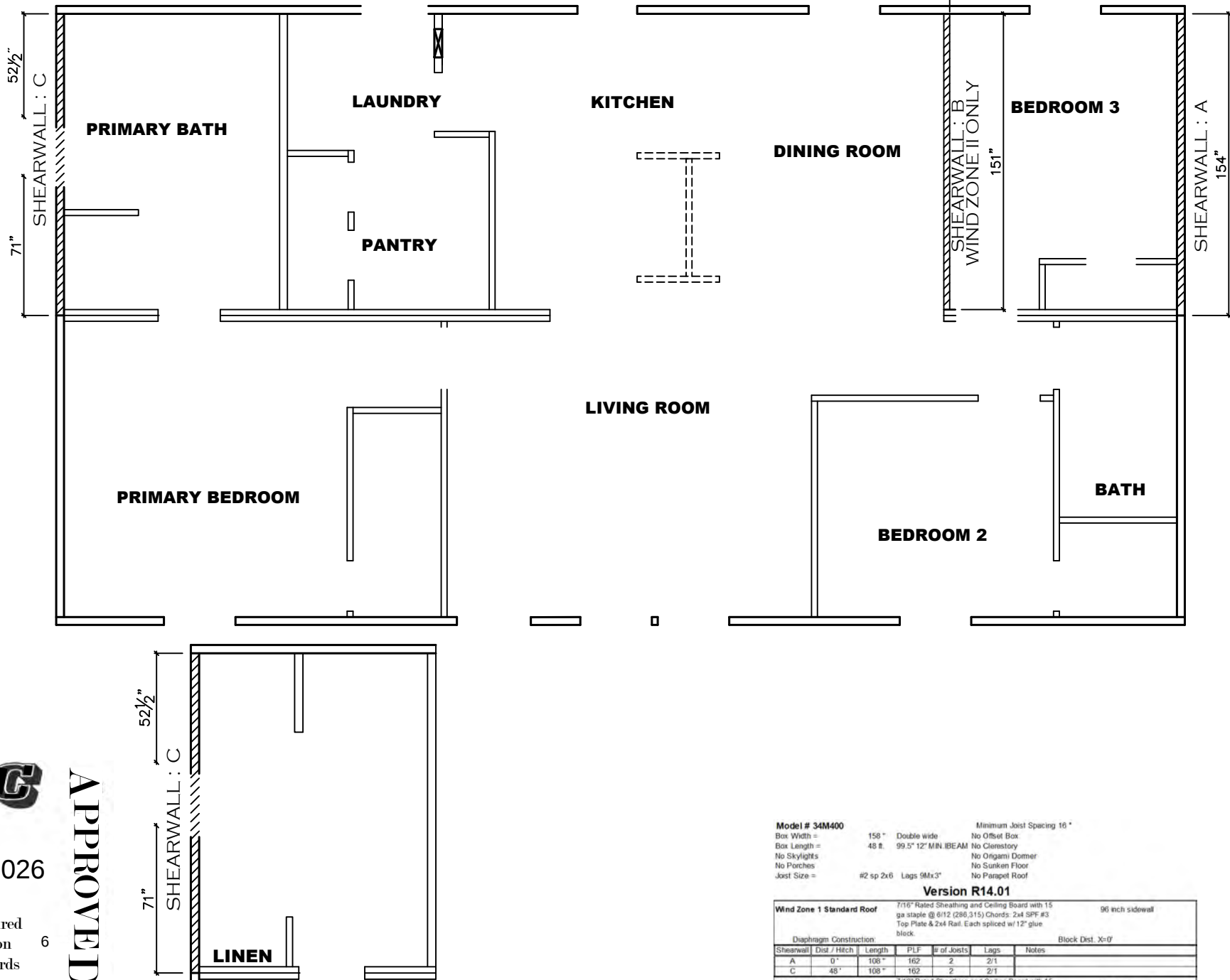


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PRIMARY BATH 60" SHOWER ONLY

Model # 34M400
Box Width = 158" Double wide
Box Length = 48 ft. 99.5" 12" MIN. IBEAM
No Skylights
No Porches
Joist Size = #2 sp 2x6 Lags 9Mx3"

Minimum Joist Spacing 16"
No Offset Box
No Clearestory
No Origami Domes
No Sunk Floor
No Parapet Roof

Version R14.01

Wind Zone 1 Standard Roof			7/16" Rated Sheathing and Ceiling Board with 15 ga staple @ 6/12 (286,315) Chords: 2x4 SPF #3 Top Plate & 2x4 Rail. Each spliced w/12" glue block.				96 inch sidewall	
Diaphragm Construction						Block Dist. X=0'		
Shearwall	Dist / Htch	Length	PLF	# of Joists	Lags	Notes		
A	0'	108'	162	2	2/1			
C	48'	108'	162	2	2/1			
Wind Zone 2 Standard Roof			7/16" Rated Sheathing and Ceiling Board with 15 ga staple @ 6/12 (286,315) Chords: 2x4 SPF #3 Top Plate & 2x4 Rail. Each spliced w/12" glue block.				96 inch sidewall	
Diaphragm Construction						Block Dist. X=0'		
Shearwall	Dist / Htch	Length	PLF	# of Joists	Lags	Notes	SW1/SW2	% over
A	0'	96'	162	2	1/1			
B	10'	F.U.	300	2	3/3			0.66
C	48'	123.5'	300	2	3/3	Split Shearwall	71.5/2.5	

SHEET:

SW

SHEARWALL
PLAN

Clayton
home building group

Clayton Clayton - 934
1420 Mountain Rd, Andersonville, TN 37705
PH: 865.494.7800 FAX: 865.494.0243

HILBORN, WERNER, CARTER,
AND ASSOCIATES, INC.
1627 SOUTH MYRTLE AVE.
CLEARWATER, FL. 33756

DRAWING #: 34M400-SW

MODEL #: MTN28483A

DATE: 4/29/2026

SCALE: N.T.S.

MODEL: MOUNTAINEER 48 (28'x48')

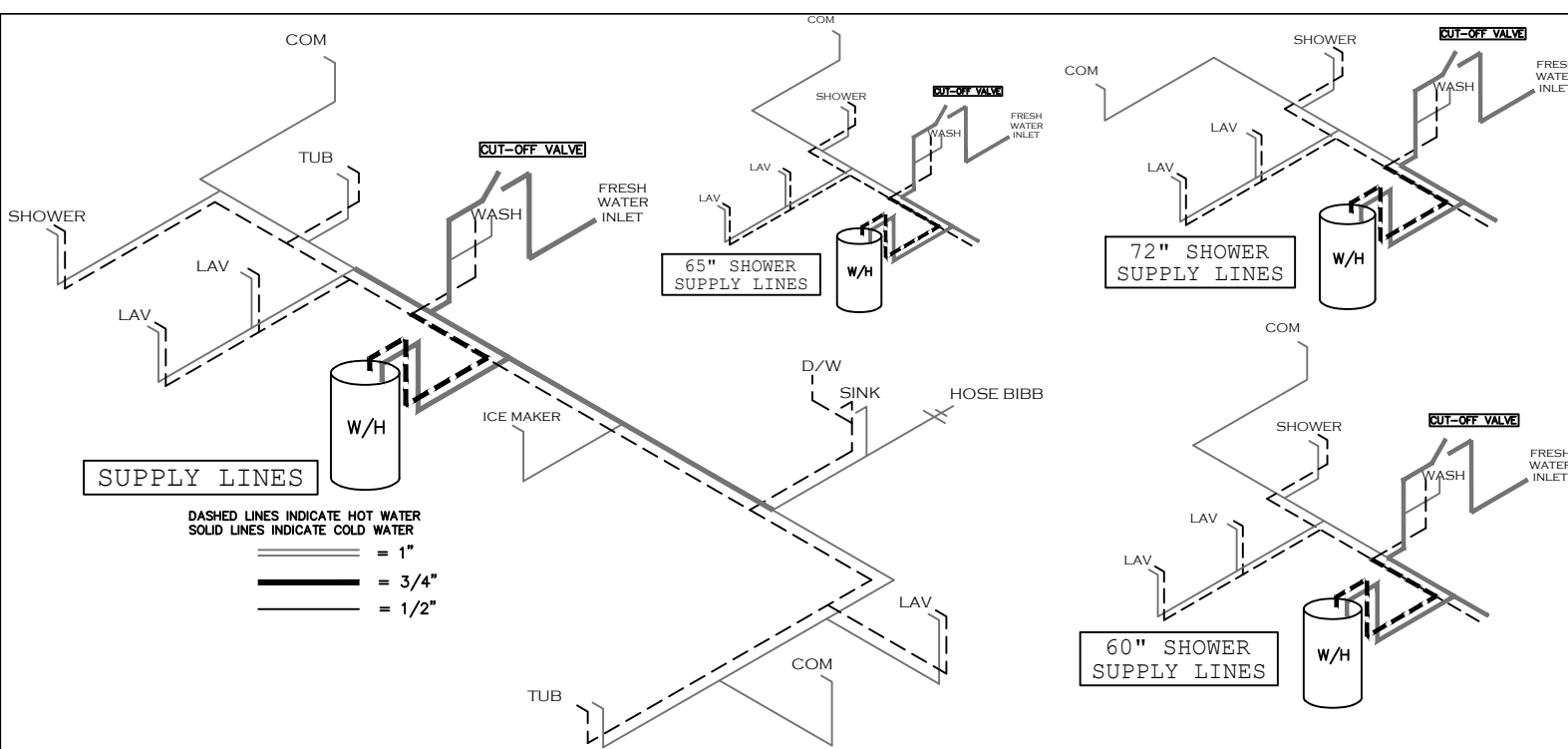
SERIES: MOUNTAINEER

PRODUCT DESIGNER: BRIAN K. RIFFEY

STD PLAN "CONDITIONED": 1,264 FT²

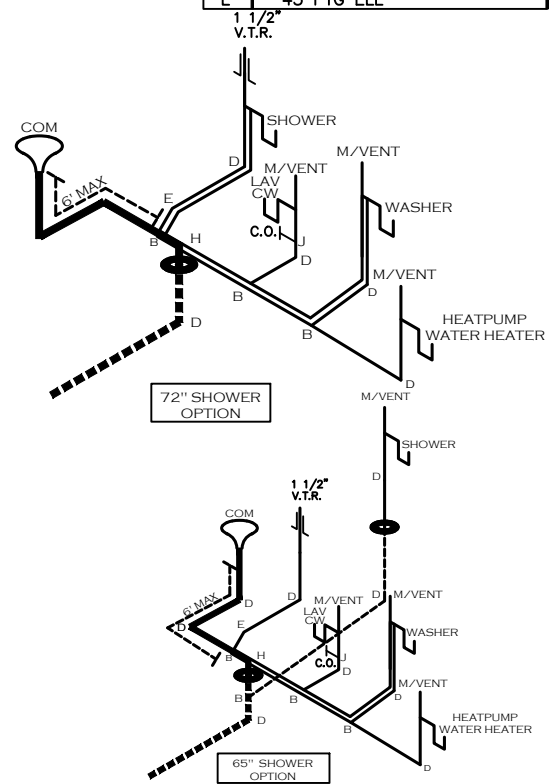
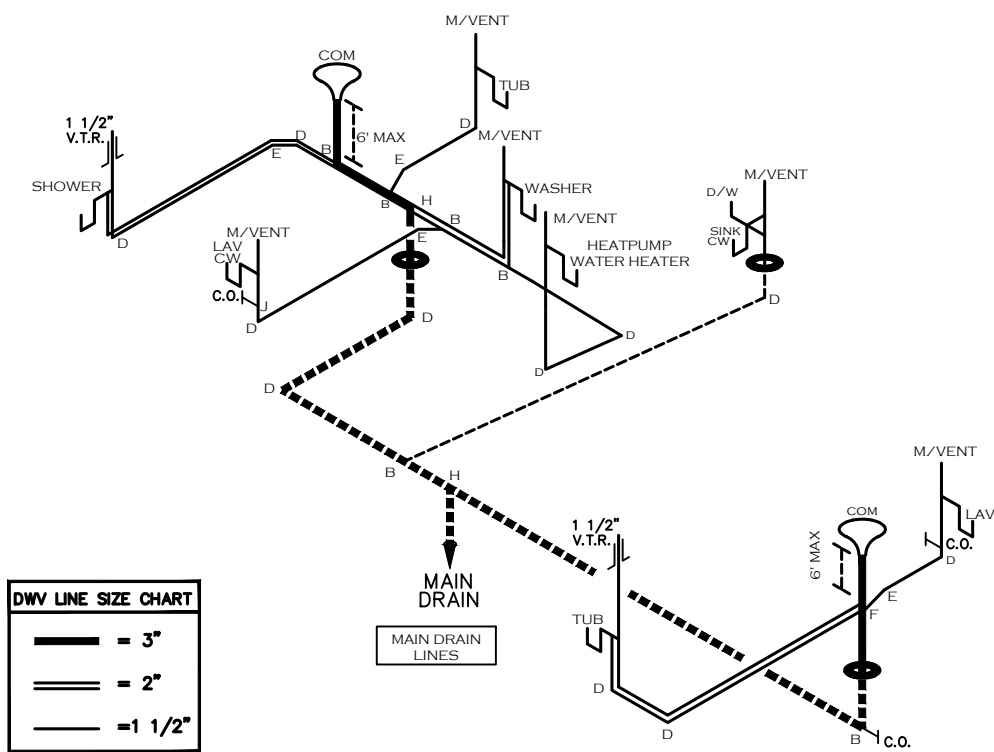
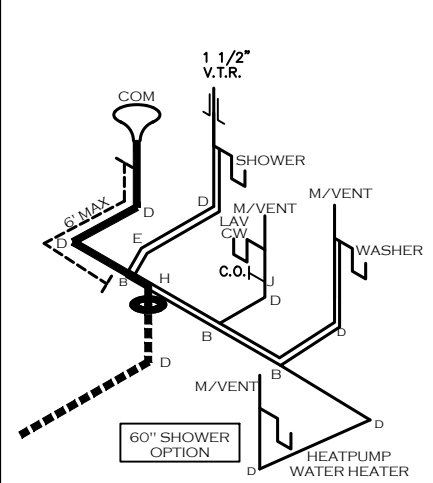
REV. BY:

REV. DATE:



SHIP LOOSE CHART	
PARTS SHIPPED LOOSE W/HOME (TO BE INSTALLED IN FIELD)	
QUANTITY	DESCRIPTION
2	④ 3" LONG SWEEP 1/4 BEND
1	③ 3"x3"x3" LONG TURN T-Y/CLEANOUT
2	③ 3"x1 1/2"x3" LONG TURN T-Y/REDUCER
1	④ 3" DBL ELL
2	1 1/2" LONG SWEEP 1/4 BEND
2	3" COUPLING
2	1 1/2" COUPLING
1	APPROVED CEMENT
3	3" ABS PIPE 20'
1	1 1/2" ABS PIPE 20'
varies	SUPPORT STRAPS

LEGEND	
A	SHORT TURN T-Y
B	LONG TURN T-Y
C	1/4 BEND
D	LONG SWEEP 1/4 BEND
E	45 ELL
F	DBL. SANITARY TEE
G	4x3 CLOSET ELL
H	DOUBLE ELL
I	22 1/2" ELL
J	45° Y
K	LONG TURN STREET ELBOW
L	45 FTG ELL



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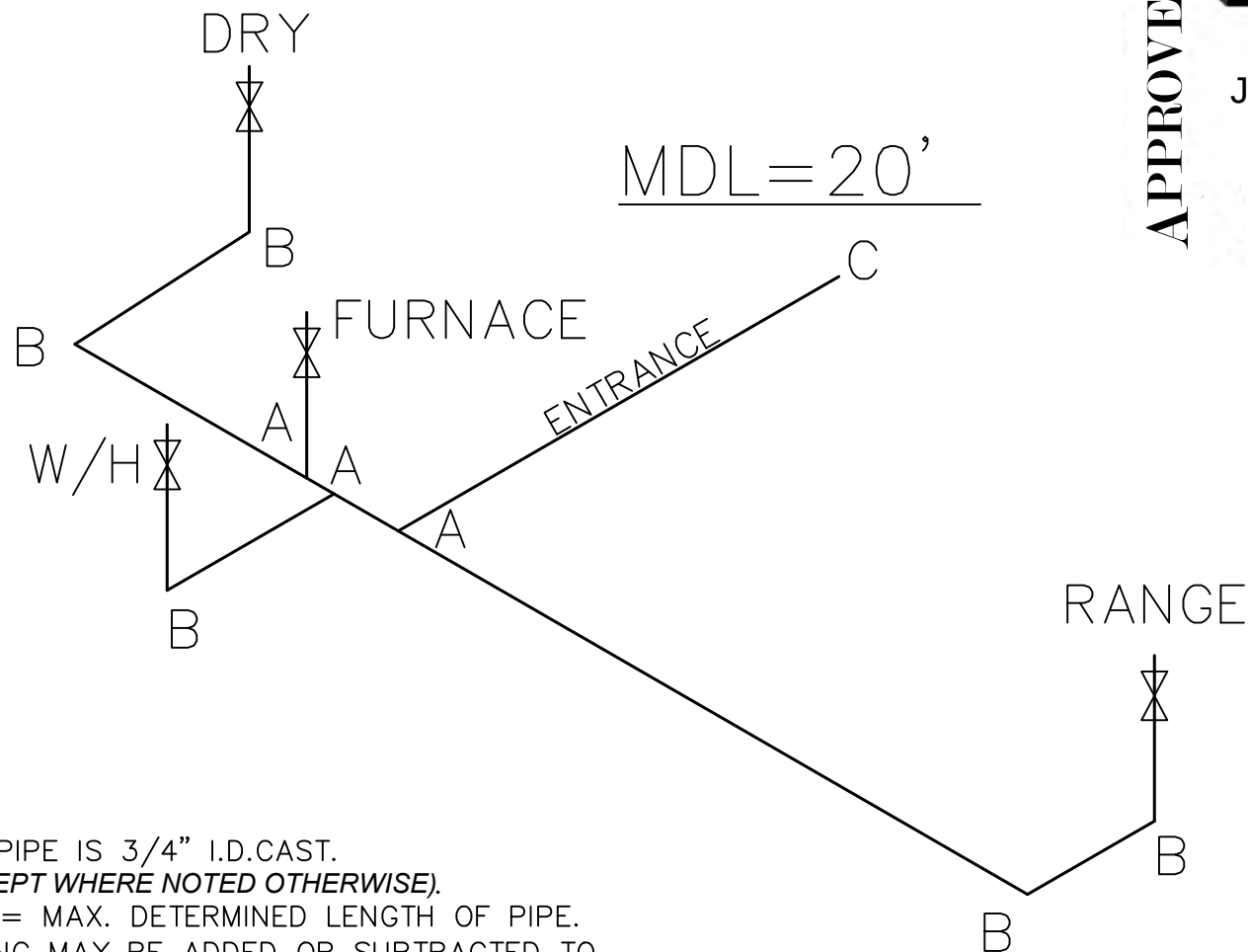
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DWV LINE SIZE CHART	
	= 3"
	= 2"
	= 1 1/2"

LEGEND		APPLIANCE BTU's RATINGS MAX. INPUT	
SYM	FITTINGS		
A	TEE	FURNACE	77,000 BTU'S
B	90 ELL	W/H	36000 BTU'S
X	VALVE	RANGE	54,000 BTU'S
C	CAP	DRYER	22,000 BTU'S



NOTES:

- 1) ALL PIPE IS 3/4" I.D.CAST.
(EXCEPT WHERE NOTED OTHERWISE).
- 2) MDL = MAX. DETERMINED LENGTH OF PIPE.
- 3) FITTING MAY BE ADDED OR SUBTRACTED TO TRAVERSE VARIATIONS IN AXLE QUANTITY, PLACEMENT, AND FRAME TYPE.
- 4) INLET LOCATION MAY VARY TO STAY WITHIN MAX. DETERMINED LENGTH.

GAS LINE SIZE CHART	
	= 1"
	= 3/4"

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And Safety Standards

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CLAYTON HOME BUILDING GROUP

Model Number	MTN28483A	Drawing Number	34M400-HEATLOSS-TZ1	Version 29
Serial Number	X	Model Name	MOUNTAINEER	

BOX SIZE: 26.33 ft. x 48 ft.

AVG. SIDEWALL HEIGHT = 8 FEET

PERCENTAGE OF CEILING THAT IS VAULTED = 0%

12 INCH DIAMETER XOVER DUCT AREA = 78.5 SQ.FT. MAX. WITH R-8 INSULATION

IN-FLOOR DUCT SYSTEM

	UNHEATED FLOOR	WALL	FLAT ROOF
INSULATION VALUES	R-22 FW	R-13	R-38
DAPIA PAGE	THP-161	THP-502	THP-1255
U VALUE (BTUH/SQ.FT.-F)	0.0445	0.0817	0.0297

THIS INSULATION COMBINATION COMPLIES WITH
ZONE 1 PRESCRIPTIVE ZERH REQUIREMENTS

Overhead Duct	
Diameter	Length
4	0
5	0
6	0
7	0
8	0
9	0
10	0
12	0
14	0
Exterior Supply	Length
14	0
16	0
Exterior Return	Length
14	0
16	0

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Window Glass Area:

Doors:

	Area	U Value	UA
Front	21.63	0.300	6.49
Rear	19.37	0.300	5.81
Other Door	40.00	0.300	12.00
Other Door	0.00	0.330	0.00
OSB	0.00	0.000	0.00
Skylights	0.00	0.330	0.00
Standard	94.00	0.300	28.20
Option	0.00	0.300	0.00
Net: Floor	1264.00	0.045	56.25
Wall	1014.33	0.082	82.87
Ceiling	1264.00	0.0297	37.54
Ext. Duct	78.50	0.242	18.98
Ext. Duct	78.50	0.223	17.48
Ext. Duct	78.50	0.206	16.14
Supply	0.00	0.000	0.00
Supply	0.00	0.000	0.00
Supply	0.00	0.00	0.00

Energy Star v3 & ZERH Max Glass (sq ft)	
Th. Zone 1	182.1
Th. Zone 2	67.3
Th. Zone 3	0.0

Thermal Zone	Outdoor Design Temp (F)	UA	Uo	ZERH / EStar 3.0 Compliant	Heatloss BTUH/F
1	11	248.14	0.065	OK	352.20
2	0	246.64	0.065	NG	350.70
3	-14	245.30	0.065	NG	349.40

Design Temperatures	
Furnace Heating Temp (F)	Economy Outdoor Temp (F)
-27	2
-46	-11
-75	-32
-44	-10
-100	-49
-157	-89

10kW
12kW
15kW
40k Gas
60k Gas
80k Gas

Thermal Zone	U-Value	Thermal Zone	U-Value	Thermal Zone	U-Value
Energy Star Version 2					
1-EHP-S	0.080	2-EHP-S	0.080	3-EHP-S	0.079
1-GAS-S	0.080	2-GAS-S	0.080	3-GAS-S	0.071
1-ENV-S	0.076	2-ENV-S	0.067	3-ENV-S	0.059
1-EHP-M	0.074	2-EHP-M	0.074	3-EHP-M	0.074
1-GAS-M	0.074	2-GAS-M	0.074	3-GAS-M	0.065
1-ENV-M	0.071	2-ENV-M	0.064	3-ENV-M	0.056

Energy Star Version 3 & ZERH					
1 Single	0.076	2 Single	0.065	3 Single	0.057
1 Double	0.070	2 Double	0.063	3 Double	0.054



Building Analysis

Entire House

CMH Manufacturing Appalchia

Job: 34M400-FDJ-TZ1
Date: May 1, 2026
By: Edie Long



1420 Mountain Road, Andersonville, TN 37705 Phone: 865-494-7800 Ext. 227 Fax: 865-494-0243 Web: www.claytonhomes.com

Project Information

For: 34M400-FDJ-TZ1

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Design Conditions

Location:

GA 36
Elevation: 1010 ft
Latitude: 34°N

Outdoor:

Dry bulb (°F)
Daily range (°F)
Wet bulb (°F)
Wind speed (mph)

Heating

26
-
-
15.0

Cooling

94
16 (M)
74
7.5

Indoor:

Indoor temperature (°F)
Design TD (°F)
Relative humidity (%)
Moisture difference (gr/lb)

Heating

70
44
50
39.9

Cooling

75
19
50
31.4

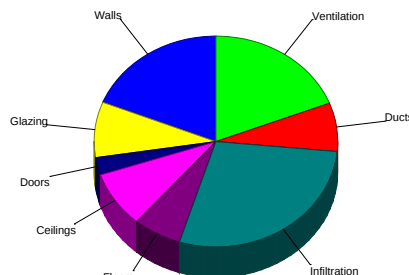
Infiltration:

Method
Construction quality
Fireplaces

Simplified
Semi-loose
0

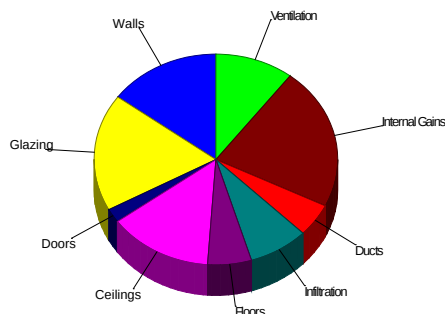
Heating

Component	Btuh/ft²	Btuh	% of load
Walls	3.6	3668	18.9
Glazing	13.1	1652	8.5
Doors	13.1	521	2.7
Ceilings	1.3	1664	8.6
Floors	1.0	1248	6.4
Infiltration	4.6	5489	28.3
Ducts		1440	7.4
Piping		0	0
Humidification		0	0
Ventilation		3699	19.1
Adjustments		0	0
Total		19380	100.0



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	2.2	2267	14.9
Glazing	21.7	2739	18.0
Doors	8.1	322	2.1
Ceilings	1.7	2116	13.9
Floors	0.7	884	5.8
Infiltration	1.0	1211	8.0
Ducts		774	5.1
Ventilation		1586	10.4
Internal gains		3320	21.8
Blower		0	0
Adjustments		0	0
Total		15220	100.0



Latent Cooling Load = 3882 Btuh

Overall U-value = 0.061 Btuh/ft²-°F, Window / Floor Area = 9.9 %

Data entries checked.



Component Constructions
Entire House
CMH Manufacturing Appalchia

Job: 34M400-FDJ-TZ1
Date: May 1, 2026
By: Edie Long

1420 Mountain Road, Andersonville, TN 37705 Phone: 865-494-7800 Ext. 227 Fax: 865-494-0243 Web: www.claytonhomes.com

Project Information

For: 34M400-FDJ-TZ1

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JUNE 22 2026

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Design Conditions

Location:

GA 36
Elevation: 1010 ft
Latitude: 34°N

Outdoor:

	Heating	Cooling
Dry bulb (°F)	26	94
Daily range (°F)	-	16 (M)
Wet bulb (°F)	-	74
Wind speed (mph)	15.0	7.5

Indoor:

Indoor temperature (°F)
Design TD (°F)
Relative humidity (%)
Moisture difference (gr/lb)

Heating

70
44
50
39.9

Cooling

75
19
50
31.4

Infiltration:

Method
Construction quality
Fireplaces

Simplified
Semi-loose
0

Construction descriptions

Walls

CMH - DW - R-13 Wall - THP-502: Frm wall, vnl ext, 3/8" wood shth,
r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud

	Or	Area ft ²	U-value Btuh/ft ² -°F	Insul R ft ² -°F/Btuh	Htg HTM Btuh/ft ²	Loss Btuh	Clg HTM Btuh/ft ²	Gain Btuh
n		206	0.082	13.0	3.58	738	2.21	456
e		304	0.082	13.0	3.58	1087	2.21	672
s		212	0.082	13.0	3.58	758	2.21	468
w		304	0.082	13.0	3.58	1085	2.21	671
all		1026	0.082	13.0	3.58	3668	2.21	2267

Partitions

(none)

Windows

Clayton - Theropanel Low-E DOE: Clayton - Therompane Low-E DOE;
50% blinds 45°, medium; 50% outdoor insect screen; 6.67 ft head ht

n	6	0.300	0	13.1	74	8.26	46
e	6	0.300	0	13.1	74	22.3	126
e	15	0.300	0	13.1	196	22.3	335
e	40	0.300	0	13.1	523	22.3	893
w	60	0.300	0	13.1	785	22.3	1339
all	126	0.300	0	13.1	1652	21.7	2739

Doors

CMH - Standard Door DOE: CMH - Standard Door -Solid no strom DOE

e	19	0.300	0	13.1	253	8.08	156
w	20	0.300	0	13.1	268	8.08	166
all	40	0.300	0	13.1	521	8.08	322

Ceilings

CMH - DW - 158 box R-38 - THP-1255: Attic ceiling, asphalt shingles
roof mat, r-38 ceil ins, 1/2" gypsum board int fnsh

	1272	0.030	38.0	1.31	1664	1.66	2116
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Floors

CMH - DW - R-22 - THP-161: Double Wide - R-22 THP-161

	1272	0.045	22.0	0.98	1248	0.70	884
--	------	-------	------	------	------	------	-----



Project Summary

Entire House

CMH Manufacturing Appalchia

Job: 34M400-FDJ-TZ1
Date: May 1, 2026
By: Edie Long

1420 Mountain Road, Andersonville, TN 37705 Phone: 865-494-7800 Ext. 227 Fax: 865-494-0243 Web: www.claytonhomes.com

Project Information

For: 34M400-FDJ-TZ1

Notes: Duct Capacity 25100 BTUH



JUNE 22 2026

Federal Manufactured
Home Construction
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Design Information

Weather: GA 36

Winter Design Conditions

Outside db 26 °F
Inside db 70 °F
Design TD 44 °F

Ventilation Method MJ8

Heating Summary

Structure 14241 Btuh
Ducts (R-8.0) 1440 Btuh
Central vent (80 cfm) 3699 Btuh
Outside air
Humidification 0 Btuh
Piping 0 Btuh
Equipment load 19380 Btuh

Infiltration

Method Simplified
Construction quality Semi-loose
Fireplaces 0

	Heating	Cooling
Area (ft ²)	1272	1272
Volume (ft ³)	10176	10176
Air changes/hour	0.70	0.36
Equiv. AVF (cfm)	119	61

Heating Equipment Summary

Make Smart Comfort
Trade 15 SEER2 HP
Model R5H5S24*K*AAA*
AHRI ref 214277535

Efficiency 7.5 HSPF2
Heating input
Heating output 22800 Btuh @ 47°F
Temperature rise 29 °F
Actual air flow 753 cfm
Air flow factor 0.048 cfm/Btuh
Static pressure 0.30 in H2O
Space thermostat
Capacity balance point = 25 °F

Backup: Smart Comfort
Input = 10 kW, Output = 34121 Btuh, 100 AFUE

Summer Design Conditions

Outside db 94 °F
Inside db 75 °F
Design TD 19 °F
Daily range M
Relative humidity 50 %
Moisture difference 31 gr/lb

Sensible Cooling Equipment Load Sizing

Structure 12859 Btuh
Ducts (R-8.0) 774 Btuh
Central vent (80 cfm) 1586 Btuh
Outside air
Blower 0 Btuh
Use manufacturer's data n
Rate/swing multiplier 0.99
Equipment sensible load 15022 Btuh

Latent Cooling Equipment Load Sizing

Structure 2058 Btuh
Ducts 175 Btuh
Central vent (80 cfm) 1648 Btuh
Outside air
Equipment latent load 3882 Btuh

Equipment Total Load (Sen+Lat) 18904 Btuh
Req. total capacity at 0.70 SHR 1.8 ton

Cooling Equipment Summary

Make Smart Comfort
Trade 15 SEER2 HP
Cond R5H5S24*K*AAA*
Coil FEVB0024***+NAVA53601CK
AHRI ref 214277535
Efficiency 12.0 EER2, 15.5 SEER2
Sensible cooling 15820 Btuh
Latent cooling 6780 Btuh
Total cooling 22600 Btuh
Actual air flow 753 cfm
Air flow factor 0.055 cfm/Btuh
Static pressure 0.30 in H2O
Load sensible heat ratio 0.80

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



Right-Suite® Universal 2025 25.0.05 RSU55710

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Page 1

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Duct System Summary

Entire House

CMH Manufacturing Appalchia

Job: 34M400-FDJ-TZ1
Date: May 1, 2026
By: Edie Long

1420 Mountain Road, Andersonville, TN 37705 Phone: 865-494-7800 Ext. 227 Fax: 865-494-0243 Web: www.claytonhomes.com

Project Information

For: 34M400-FDJ-TZ1

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	Heating	Cooling
External static pressure	0.30 in H ₂ O	0.30 in H ₂ O
Pressure losses	0 in H ₂ O	0 in H ₂ O
Available static pressure	0.30 in H ₂ O	0.30 in H ₂ O
Supply / return available pressure	0.150 / 0.150 in H ₂ O	0.150 / 0.150 in H ₂ O
Lowest friction rate	0.208 in/100ft	0.208 in/100ft
Actual air flow	753 cfm	753 cfm
Total effective length (TEL)	144 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
BATH1	h 2404	115	70	0.698	5.0	0x0	VIFx	8.0	35.0	st3
BATH2	h 773	37	19	0.211	5.0	0x0	VIFx	37.2	105.0	st4
BED 2	h 2054	99	88	0.226	6.0	0x0	VIFx	27.7	105.0	st4
BED3	h 2090	100	81	0.435	5.0	0x0	VIFx	34.0	35.0	st1
KITCHEN/DINING	c 1863	73	103	0.645	5.0	0x0	VIFx	11.5	35.0	st1
KITCHEN/DINING-B	c 1863	73	103	0.492	5.0	0x0	VIFx	26.0	35.0	st1
LIVING RM	c 1422	53	79	0.230	5.0	0x0	VIFx	25.2	105.0	st4
LIVING RM-A	c 1422	53	79	0.232	5.0	0x0	VIFx	24.2	105.0	st5
PRIMARY BED	h 1551	74	66	0.208	5.0	0x0	VIFx	39.2	105.0	st5
PRIMARY BED-A	h 1551	74	66	0.224	5.0	0x0	VIFx	29.2	105.0	st5

Supply Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
st3	Peak AVF	115	70	0.698	237	4.3	5 x 14	ShtMetl	st2
st4	Peak AVF	189	185	0.211	389	6.5	5 x 14	ShtMetl	
st5	Peak AVF	202	211	0.208	433	6.7	5 x 14	ShtMetl	
st1	Peak AVF	246	287	0.435	591	6.3	5 x 14	ShtMetl	
st2	Peak AVF	391	395	0.208	813	9.9	5 x 14	MetlFlx	

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	753	753	0	0	0	0	0x 0		VIFx	





Manual S Compliance Report
Entire House
CMH Manufacturing Appalchia

Job: 34M400-FDJ-TZ1
Date: May 1, 2026
By: Edie Long

1420 Mountain Road, Andersonville, TN 37705 Phone: 865-494-7800 Ext. 227 Fax: 865-494-0243 Web: www.claytonhomes.com

Project Information

For: 34M400-FDJ-TZ1

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Home Construction 6
And Safety Standards

Cooling Equipment

Design Conditions

Outdoor design DB:	93.7°F	Sensible gain:	15220 Btuh	Entering coil DB:	77.0°F
Outdoor design WB:	73.8°F	Latent gain:	3882 Btuh	Entering coil WB:	63.8°F
Indoor design DB:	75.0°F	Total gain:	19102 Btuh		
Indoor RH:	50%	Estimated airflow:	753 cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Smart Comfort	Model:	R5H5S24*K*AAA*+FEVB0024**++NAVA53601CK
Actual airflow:	753 cfm		
Sensible capacity:	17911 Btuh	118% of load	
Latent capacity:	4064 Btuh	105% of load	
Total capacity:	21975 Btuh	115% of load	SHR: 82%

Heating Equipment

Design Conditions

Outdoor design DB:	26.4°F	Heat loss:	19380 Btuh	Entering coil DB:	65.3°F
Indoor design DB:	70.0°F				

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Smart Comfort	Model:	R5H5S24*K*AAA*+FEVB0024**++NAVA53601CK
Actual airflow:	753 cfm		
Output capacity:	16673 Btuh	86% of load	Capacity balance: 25 °F
Supplemental heat required:	2708 Btuh		Economic balance: -99 °F

Backup equipment type:	Elec strip		
Manufacturer:	Smart Comfort	Model:	
Actual airflow:	753 cfm		
Output capacity:	10.0 kW	176% of load	Temp. rise: 43 °F

Meets all requirements of ACCA Manual S.



Right-Suite® Universal 2025 25.0.05 RSU55710

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Page 1

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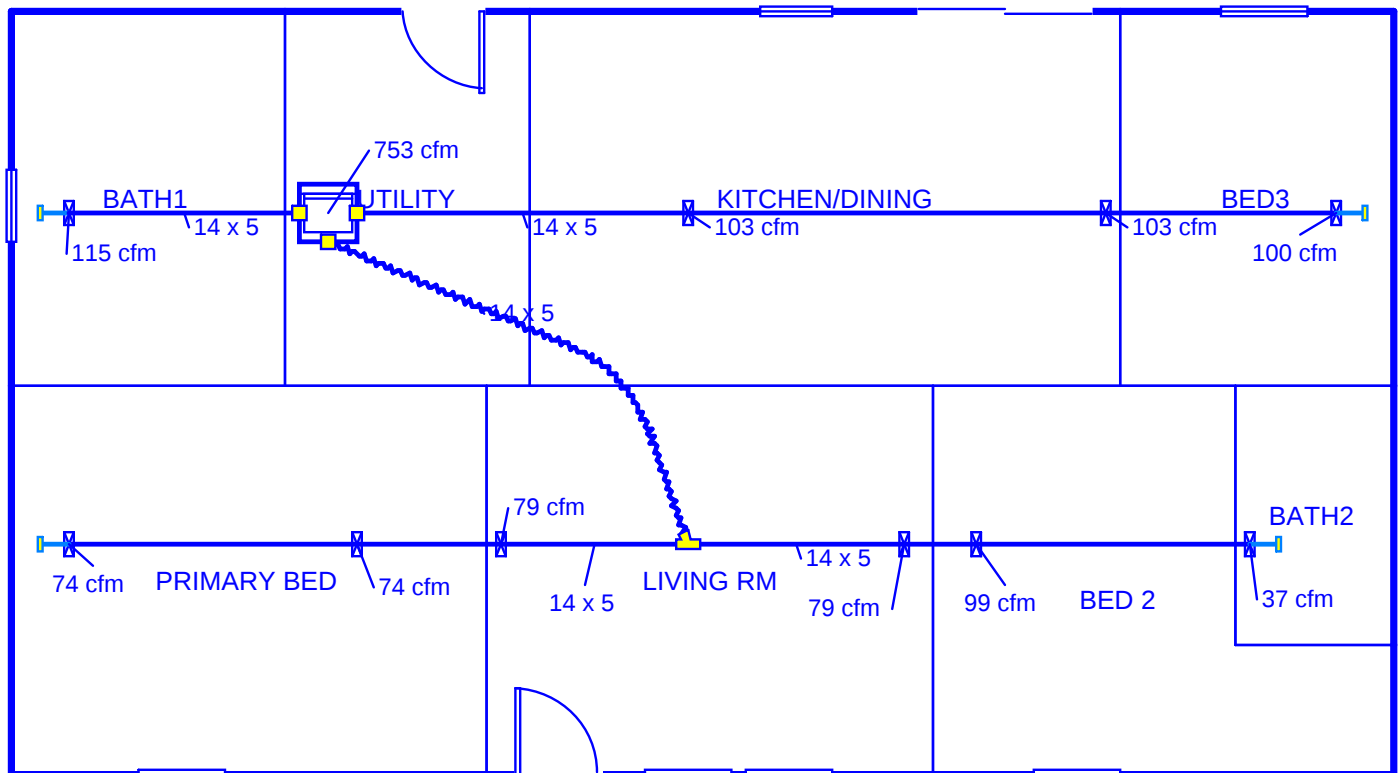
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Federal Manufactured
Home Construction 6
And Safety Standards

Level 1



Job #: 34M400-FDJ-TZ1
Performed by Edie Long for:
34M400-FDJ-TZ1

CMH Manufacturing Appalchia

1420 Mountain Road
Andersonville, TN 37705
Phone: 865-494-7800 Ext. 227 Fax: 865-494-0243
www.claytonhomes.com

Scale: 1 : 80

Page 1
Right-Suite® Universal 2025
25.0.05 RSU55710
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CLAYTON HOME BUILDING GROUP

Model Number	MTN28483A	Drawing Number	34M400-HEATLOSS-TZ2	Version 29
Serial Number	X	Model Name	MOUNTAINEER	

BOX SIZE: 26.33 ft. x 48 ft.

AVG. SIDEWALL HEIGHT = 8 FEET

PERCENTAGE OF CEILING THAT IS VAULTED = 0%

12 INCH DIAMETER XOVER DUCT AREA = 78.5 SQ.FT. MAX. WITH R-8 INSULATION

IN-FLOOR DUCT SYSTEM

	UNHEATED FLOOR	WALL	FLAT ROOF
INSULATION VALUES	R-33 FW	R-13	R-38
DAPIA PAGE	THP-221	THP-502	THP-1255
U VALUE (BTUH/SQ.FT.-F)	0.0320	0.0817	0.0297



Overhead Duct	
Diameter	Length
4	0
5	0
6	0
7	0
8	0
9	0
10	0
12	0
14	0
Exterior Supply	Length
14	0
16	0
Exterior Return	Length
14	0
16	0

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Window Glass Area:

Doors:

	Area	U Value	UA
Front	21.63	0.300	6.49
Rear	19.37	0.300	5.81
Other Door	40.00	0.300	12.00
Other Door	0.00	0.330	0.00
OSB	0.00	0.000	0.00
Skylights	0.00	0.330	0.00
Standard	94.00	0.300	28.20
Option	0.00	0.300	0.00
Floor	1264.00	0.032	40.45
Wall	1014.33	0.082	82.87
Ceiling	1264.00	0.0297	37.54
Ext. Duct	78.50	0.242	18.98
Ext. Duct	78.50	0.223	17.48
Ext. Duct	78.50	0.206	16.14
Supply	0.00	0.000	0.00
Supply	0.00	0.000	0.00
Supply	0.00	0.00	0.00

Energy Star v3 & ZERH Max Glass (sq ft)	
Th. Zone 1	254.5
Th. Zone 2	139.7
Th. Zone 3	0.0

Thermal Zone	Outdoor Design Temp (F)	UA	Uo	ZERH / EStar 3.0 Compliant	Heatloss BTUH/F
1	11	232.34	0.061	OK	336.40
2	0	230.84	0.061	OK	334.90
3	-14	229.50	0.060	NG	333.60

Design Temperatures	
Furnace Heating Temp (F)	Economy Outdoor Temp (F)
-31	-1
-52	-15
-82	-36
-49	-13
-108	-55
-168	-96

10kW
12kW
15kW
40k Gas
60k Gas
80k Gas

Thermal Zone	U-Value	Thermal Zone	U-Value	Thermal Zone	U-Value
Energy Star Version 2					
1-EHP-S	0.080	2-EHP-S	0.080	3-EHP-S	0.079
1-GAS-S	0.080	2-GAS-S	0.080	3-GAS-S	0.071
1-ENV-S	0.076	2-ENV-S	0.067	3-ENV-S	0.059
1-EHP-M	0.074	2-EHP-M	0.074	3-EHP-M	0.074
1-GAS-M	0.074	2-GAS-M	0.074	3-GAS-M	0.065
1-ENV-M	0.071	2-ENV-M	0.064	3-ENV-M	0.056

Energy Star Version 3 & ZERH					
1 Single	0.076	2 Single	0.065	3 Single	0.057
1 Double	0.070	2 Double	0.063	3 Double	0.054



Building Analysis
Entire House
CMH Manufacturing Appalchia

Job: 34M400-FDJ-TZ2
Date: May 1, 2026
By: Edie Long



1420 Mountain Road, Andersonville, TN 37705 Phone: 865-494-7800 Ext. 227 Fax: 865-494-0243 Web: www.claytonhomes.com

Project Information

For: 34M400-FDJ-TZ2

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Design Conditions

Location:

TN 25
Elevation: 962 ft
Latitude: 36°N

Outdoor:

Dry bulb (°F)
Daily range (°F)
Wet bulb (°F)
Wind speed (mph)

Heating

21
-
-
15.0

Cooling

90
18 (M)
73
7.5

Indoor:

Indoor temperature (°F)
Design TD (°F)
Relative humidity (%)
Moisture difference (gr/lb)

Heating

70
49
50
43.6

Cooling

75
15
50
33.6

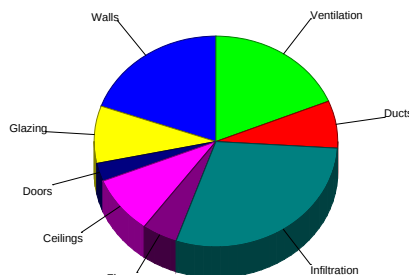
Infiltration:

Method
Construction quality
Fireplaces

Simplified
Semi-loose
0

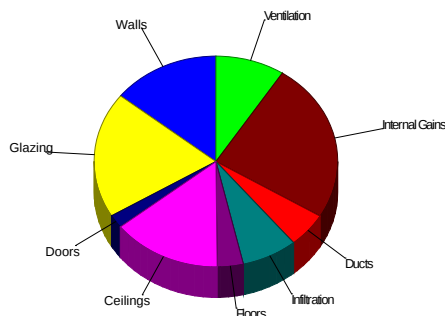
Heating

Component	Btuh/ft²	Btuh	% of load
Walls	4.0	4122	19.5
Glazing	14.7	1856	8.8
Doors	14.7	586	2.8
Ceilings	1.5	1870	8.9
Floors	0.8	997	4.7
Infiltration	5.2	6180	29.3
Ducts		1532	7.3
Piping		0	0
Humidification		0	0
Ventilation		3956	18.7
Adjustments		0	0
Total		21099	100.0



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	1.9	1939	14.3
Glazing	20.7	2617	19.3
Doors	6.9	276	2.0
Ceilings	1.5	1967	14.5
Floors	0.4	470	3.5
Infiltration	0.8	999	7.4
Ducts		722	5.3
Ventilation		1243	9.2
Internal gains		3320	24.5
Blower		0	0
Adjustments		0	0
Total		13552	100.0



Latent Cooling Load = 4008 Btuh

Overall U-value = 0.057 Btuh/ft²-°F, Window / Floor Area = 9.9 %

Data entries checked.



Component Constructions
Entire House
CMH Manufacturing Appalchia

Job: 34M400-FDJ-TZ2
Date: May 1, 2026
By: Edie Long

1420 Mountain Road, Andersonville, TN 37705 Phone: 865-494-7800 Ext. 227 Fax: 865-494-0243 Web: www.claytonhomes.com

Project Information

For: 34M400-FDJ-TZ2



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Design Conditions

Location:

TN 25
Elevation: 962 ft
Latitude: 36°N

Outdoor:

	Heating	Cooling
Dry bulb (°F)	21	90
Daily range (°F)	-	18 (M)
Wet bulb (°F)	-	73
Wind speed (mph)	15.0	7.5

Indoor:

Indoor temperature (°F)
Design TD (°F)
Relative humidity (%)
Moisture difference (gr/lb)

Heating

70
49
50
43.6

Cooling

75
15
50
33.6

Infiltration:

Method
Construction quality
Fireplaces

Simplified
Semi-loose
0

Construction descriptions

Walls

CMH - DW - R-13 Wall - THP-502: Frm wall, vnl ext, 3/8" wood shth,
r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud

	Or	Area ft ²	U-value Btuh/ft ² -°F	Insul R ft ² -°F/Btuh	Htg HTM Btuh/ft ²	Loss Btuh	Clg HTM Btuh/ft ²	Gain Btuh
n		206	0.082	13.0	4.02	829	1.89	390
e		304	0.082	13.0	4.02	1221	1.89	575
s		212	0.082	13.0	4.02	852	1.89	401
w		304	0.082	13.0	4.02	1220	1.89	574
all		1026	0.082	13.0	4.02	4122	1.89	1939

Partitions

(none)

Windows

Clayton - Therompane Low-E DOE: Clayton - Therompane Low-E DOE;
50% blinds 45°, medium; 50% outdoor insect screen; 6.67 ft head ht

n	6	0.300	0	14.7	83	7.31	41
e	6	0.300	0	14.7	83	21.3	120
e	15	0.300	0	14.7	221	21.3	320
e	40	0.300	0	14.7	588	21.3	854
w	60	0.300	0	14.7	882	21.3	1281
all	126	0.300	0	14.7	1856	20.7	2617

Doors

CMH - Standard Door DOE: CMH - Standard Door -Solid no strom DOE

e	19	0.300	0	14.7	284	6.91	134
w	20	0.300	0	14.7	301	6.92	142
all	40	0.300	0	14.7	586	6.91	276

Ceilings

CMH - DW - 158 box R-38 - THP-1255: Attic ceiling, asphalt shingles
roof mat, r-38 ceil ins, 1/2" gypsum board int fnsh

	1272	0.030	38.0	1.47	1870	1.55	1967
--	------	-------	------	------	------	------	------

Floors

CHM - DW - R-33 FW THP-221: Flr floor, frm flr, 6" thkns, vinyl flr fnsh,
r-30 ext ins, amb ovr

	1272	0.032	33.0	0.78	997	0.37	470
--	------	-------	------	------	-----	------	-----



Project Summary

Entire House

CMH Manufacturing Appalchia

Job: 34M400-FDJ-TZ2
Date: May 1, 2026
By: Edie Long

1420 Mountain Road, Andersonville, TN 37705 Phone: 865-494-7800 Ext. 227 Fax: 865-494-0243 Web: www.claytonhomes.com

Project Information

For: 34M400-FDJ-TZ2

Notes: Duct Capacity 25100 BTUH

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Design Information

Weather: TN 25

Winter Design Conditions

Outside db 21 °F
Inside db 70 °F
Design TD 49 °F

Ventilation Method MJ8

Heating Summary

Structure 15611 Btuh
Ducts (R-8.0) 1532 Btuh
Central vent (76 cfm) 3956 Btuh
Outside air
Humidification 0 Btuh
Piping 0 Btuh
Equipment load 21099 Btuh

Infiltration

Method Simplified
Construction quality Semi-loose
Fireplaces 0

	Heating	Cooling
Area (ft ²)	1272	1272
Volume (ft ³)	10176	10176
Air changes/hour	0.70	0.36
Equiv. AVF (cfm)	119	61

Heating Equipment Summary

Make Smart Comfort
Trade 15 SEER2 HP
Model R5H5S24*K*AAA*
AHRI ref 214277535

Efficiency 7.5 HSPF2
Heating input
Heating output 22800 Btuh @ 47°F
Temperature rise 29 °F
Actual air flow 753 cfm
Air flow factor 0.044 cfm/Btuh
Static pressure 0.30 in H2O
Space thermostat
Capacity balance point = 23 °F

Backup: Smart Comfort
Input = 10 kW, Output = 34121 Btuh, 100 AFUE

Summer Design Conditions

Outside db 90 °F
Inside db 75 °F
Design TD 15 °F
Daily range M
Relative humidity 50 %
Moisture difference 34 gr/lb

Sensible Cooling Equipment Load Sizing

Structure 11587 Btuh
Ducts (R-8.0) 722 Btuh
Central vent (76 cfm) 1243 Btuh
Outside air
Blower 0 Btuh
Use manufacturer's data n
Rate/swing multiplier 0.95
Equipment sensible load 12929 Btuh

Latent Cooling Equipment Load Sizing

Structure 2148 Btuh
Ducts 182 Btuh
Central vent (76 cfm) 1678 Btuh
Outside air
Equipment latent load 4008 Btuh

Equipment Total Load (Sen+Lat) 16937 Btuh
Req. total capacity at 0.70 SHR 1.5 ton

Cooling Equipment Summary

Make Smart Comfort
Trade 15 SEER2 HP
Cond R5H5S24*K*AAA*
Coil FEVB0024***+NAVA53601CK
AHRI ref 214277535
Efficiency 12.0 EER2, 15.5 SEER2
Sensible cooling 15820 Btuh
Latent cooling 6780 Btuh
Total cooling 22600 Btuh
Actual air flow 753 cfm
Air flow factor 0.061 cfm/Btuh
Static pressure 0.30 in H2O
Load sensible heat ratio 0.77

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



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Page 1



Duct System Summary

Entire House

CMH Manufacturing Appalchia

Job: 34M400-FDJ-TZ2
Date: May 1, 2026
By: Edie Long



1420 Mountain Road, Andersonville, TN 37705 Phone: 865-494-7800 Ext. 227 Fax: 865-494-0243 Web: www.claytonhomes.com

Project Information

For: 34M400-FDJ-TZ2

JUNE 22 2026

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Home Construction
And Safety Standards

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	Heating	Cooling
External static pressure	0.30 in H ₂ O	0.30 in H ₂ O
Pressure losses	0 in H ₂ O	0 in H ₂ O
Available static pressure	0.30 in H ₂ O	0.30 in H ₂ O
Supply / return available pressure	0.150 / 0.150 in H ₂ O	0.150 / 0.150 in H ₂ O
Lowest friction rate	0.208 in/100ft	0.208 in/100ft
Actual air flow	753 cfm	753 cfm
Total effective length (TEL)	144 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
BATH1	h 2638	116	66	0.698	5.0	0x0	VIFx	8.0	35.0	st3
BATH2	h 850	37	17	0.211	5.0	0x0	VIFx	37.2	105.0	st4
BED 2	h 2245	99	87	0.226	6.0	0x0	VIFx	27.7	105.0	st4
BED3	h 2301	101	80	0.435	5.0	0x0	VIFx	34.0	35.0	st1
KITCHEN/DINING	c 1720	72	105	0.645	5.0	0x0	VIFx	11.5	35.0	st1
KITCHEN/DINING-B	c 1720	72	105	0.492	5.0	0x0	VIFx	26.0	35.0	st1
LIVING RM	c 1319	53	81	0.230	6.0	0x0	VIFx	25.2	105.0	st4
LIVING RM-A	c 1319	53	81	0.232	6.0	0x0	VIFx	24.2	105.0	st5
PRIMARY BED	h 1697	75	65	0.208	5.0	0x0	VIFx	39.2	105.0	st5
PRIMARY BED-A	h 1697	75	65	0.224	5.0	0x0	VIFx	29.2	105.0	st5

Supply Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
st3	Peak AVF	116	66	0.698	238	4.3	5 x 14	ShtMetl	st2
st4	Peak AVF	189	185	0.211	389	6.5	5 x 14	ShtMetl	
st5	Peak AVF	202	211	0.208	435	6.7	5 x 14	ShtMetl	
st1	Peak AVF	246	291	0.435	598	6.3	5 x 14	ShtMetl	
st2	Peak AVF	391	396	0.208	814	9.9	5 x 14	MetlFlx	

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	753	753	0	0	0	0	0x 0		VIFx	





Manual S Compliance Report

Entire House

CMH Manufacturing Appalchia

Job: 34M400-FDJ-TZ2
Date: May 1, 2026
By: Edie Long

1420 Mountain Road, Andersonville, TN 37705 Phone: 865-494-7800 Ext. 227 Fax: 865-494-0243 Web: www.claytonhomes.com

Project Information

For: 34M400-FDJ-TZ2

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Cooling Equipment

Design Conditions

Outdoor design DB:	90.4°F	Sensible gain:	13552 Btuh	Entering coil DB:	76.6°F
Outdoor design WB:	73.3°F	Latent gain:	4008 Btuh	Entering coil WB:	63.7°F
Indoor design DB:	75.0°F	Total gain:	17560 Btuh		
Indoor RH:	50%	Estimated airflow:	753 cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Smart Comfort	Model:	R5H5S24*K*AAA*+FEVB0024**++NAVA53601CK
Actual airflow:	753 cfm		
Sensible capacity:	17911 Btuh	132% of load	
Latent capacity:	4064 Btuh	101% of load	
Total capacity:	21975 Btuh	125% of load	SHR: 82%

Heating Equipment

Design Conditions

Outdoor design DB:	21.0°F	Heat loss:	21099 Btuh	Entering coil DB:	65.0°F
Indoor design DB:	70.0°F				

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Smart Comfort	Model:	R5H5S24*K*AAA*+FEVB0024**++NAVA53601CK
Actual airflow:	753 cfm		
Output capacity:	16673 Btuh	79% of load	Capacity balance: 23 °F
Supplemental heat required:	4426 Btuh		Economic balance: -99 °F

Backup equipment type:	Elec strip		
Manufacturer:	Smart Comfort	Model:	
Actual airflow:	753 cfm		
Output capacity:	10.0 kW	162% of load	Temp. rise: 43 °F

Meets all requirements of ACCA Manual S.



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Page 1

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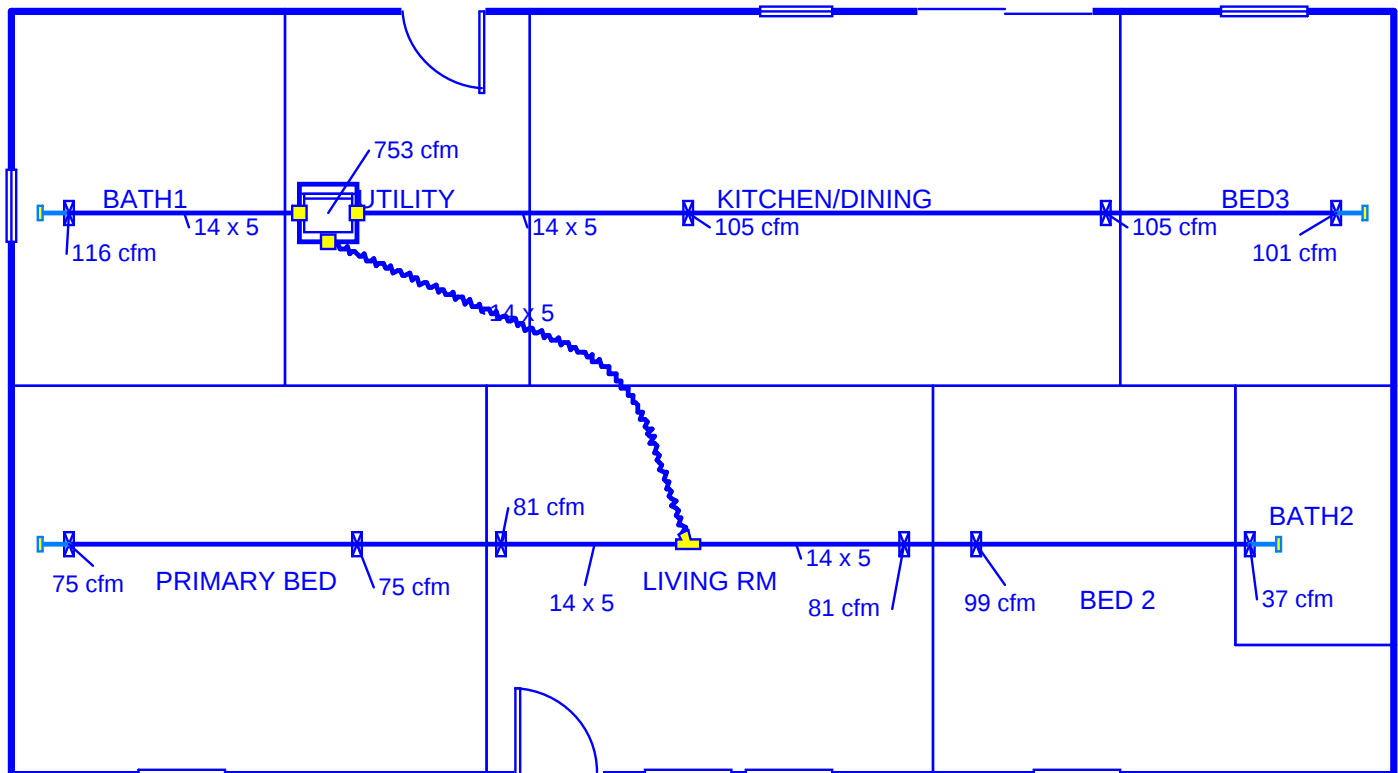
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And Safety Standards

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Level 1



Job #: 34M400-FDJ-TZ2
Performed by Edie Long for:
34M400-FDJ-TZ2

CMH Manufacturing Appalchia

1420 Mountain Road
Andersonville, TN 37705
Phone: 865-494-7800 Ext. 227 Fax: 865-494-0243
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Scale: 1 : 80

Page 1
Right-Suite® Universal 2025
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CLAYTON HOME BUILDING GROUP

Model Number	MTN28483A	Drawing Number	34M400-HEATLOSS-TZ3	Version 29
Serial Number	X	Model Name	MOUNTAINEER	

BOX SIZE: 26.33 ft. x 48 ft.

AVG. SIDEWALL HEIGHT = 8 FEET

PERCENTAGE OF CEILING THAT IS VAULTED = 0%

12 INCH DIAMETER XOVER DUCT AREA = 78.5 SQ.FT. MAX. WITH R-8 INSULATION

IN-FLOOR DUCT SYSTEM

	UNHEATED FLOOR	WALL	FLAT ROOF
INSULATION VALUES	R-33 FW	R-21	R-38
DAPIA PAGE	THP-221	THP-510	THP-1255
U VALUE (BTUH/SQ.FT.-F)	0.0320	0.0546	0.0297

THIS INSULATION COMBINATION COMPLIES WITH
ZONE 3 PRESCRIPTIVE ZERH REQUIREMENTS

Overhead Duct	
Diameter	Length
4	0
5	0
6	0
7	0
8	0
9	0
10	0
12	0
14	0
Exterior Supply	Length
14	0
16	0
Exterior Return	Length
14	0
16	0

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Window Glass Area:

Doors:

	Area	U Value	UA
Front	21.63	0.300	6.49
Rear	19.37	0.300	5.81
Other Door	40.00	0.300	12.00
Other Door	0.00	0.330	0.00
OSB	0.00	0.000	0.00
Skylights	0.00	0.330	0.00
Standard	94.00	0.300	28.20
Option	0.00	0.300	0.00
Net:			
Floor	1264.00	0.032	40.45
Wall	1014.33	0.055	55.38
Ceiling	1264.00	0.0297	37.54
Ext. Duct	78.50	0.242	18.98
Ext. Duct	78.50	0.223	17.48
Ext. Duct	78.50	0.206	16.14
Overhead TZ 1:	Supply	0.00	0.00
Overhead TZ 2:	Supply	0.00	0.00
Overhead TZ 3:	Supply	0.00	0.00

Energy Star v3 & ZERH Max Glass (sq ft)	
Th. Zone 1	348.8
Th. Zone 2	246.6
Th. Zone 3	106.1

Thermal Zone	Outdoor Design Temp (F)	UA	Uo	ZERH / EStar 3.0 Compliant	Heatloss BTUH/F
1	11	204.86	0.054	OK	308.90
2	0	203.35	0.054	OK	307.40
3	-14	202.01	0.053	OK	306.10

Design Temperatures	
Furnace Heating Temp (F)	Economy Outdoor Temp (F)
-40	-7
-63	-23
-96	-46
-59	-21
-124	-66
-189	-111

10kW
12kW
15kW
40k Gas
60k Gas
80k Gas

Thermal Zone	U-Value	Thermal Zone	U-Value	Thermal Zone	U-Value
Energy Star Version 2					
1-EHP-S	0.080	2-EHP-S	0.080	3-EHP-S	0.079
1-GAS-S	0.080	2-GAS-S	0.080	3-GAS-S	0.071
1-ENV-S	0.076	2-ENV-S	0.067	3-ENV-S	0.059
1-EHP-M	0.074	2-EHP-M	0.074	3-EHP-M	0.074
1-GAS-M	0.074	2-GAS-M	0.074	3-GAS-M	0.065
1-ENV-M	0.071	2-ENV-M	0.064	3-ENV-M	0.056

Energy Star Version 3 & ZERH					
1 Single	0.076	2 Single	0.065	3 Single	0.057
1 Double	0.070	2 Double	0.063	3 Double	0.054



Building Analysis

Entire House

CMH Manufacturing Appalchia

Job: 34M400-FDJ-TZ3
Date: June 19, 2026
By: Edie Long



1420 Mountain Road, Andersonville, TN 37705 Phone: 865-494-7800 Ext. 227 Fax: 865-494-0243 Web: www.claytonhomes.com

Project Information

For: 34M400-FDJ-TZ3

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Design Conditions

Location:

OH 22
Elevation: 744 ft
Latitude: 40°N

Outdoor:

Dry bulb (°F)
Daily range (°F)
Wet bulb (°F)
Wind speed (mph)

Heating

10
-
-
15.0

Cooling

90
19 (M)
73
7.5

Indoor:

Indoor temperature (°F)
Design TD (°F)
Relative humidity (%)
Moisture difference (gr/lb)

Heating

70
60
50
48.7

Cooling

75
15
50
33.4

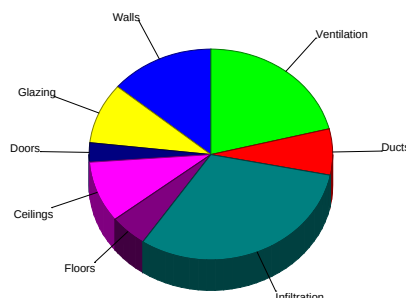
Infiltration:

Method
Construction quality
Fireplaces

Simplified
Semi-loose
0

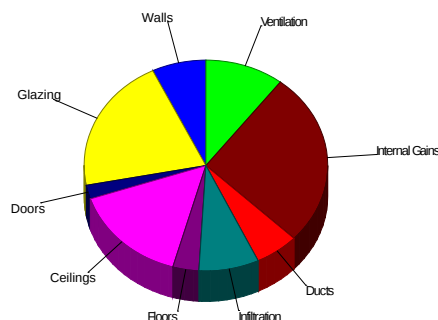
Heating

Component	Btuh/ft²	Btuh	% of load
Walls	3.3	3380	13.9
Glazing	18.0	2269	9.3
Doors	18.0	716	2.9
Ceilings	1.8	2286	9.4
Floors	1.0	1219	5.0
Infiltration	6.4	7614	31.3
Ducts		1721	7.1
Piping		0	0
Humidification		0	0
Ventilation		5131	21.1
Adjustments		0	
Total		24336	100.0



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	0.9	894	7.2
Glazing	20.5	2590	20.8
Doors	6.6	264	2.1
Ceilings	1.5	1929	15.5
Floors	0.3	429	3.5
Infiltration	0.8	994	8.0
Ducts		721	5.8
Ventilation		1302	10.5
Internal gains		3320	26.7
Blower		0	0
Adjustments		0	
Total		12444	100.0



Latent Cooling Load = 4101 Btuh

Overall U-value = 0.050 Btuh/ft²-°F, Window / Floor Area = 9.9 %

Data entries checked.



Component Constructions
Entire House
CMH Manufacturing Appalchia

Job: 34M400-FDJ-TZ3
Date: June 19, 2026
By: Edie Long



1420 Mountain Road, Andersonville, TN 37705 Phone: 865-494-7800 Ext. 227 Fax: 865-494-0243 Web: www.claytonhomes.com

Project Information

For: 34M400-FDJ-TZ3

JUNE 22 2026

Federal Manufactured
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Design Conditions

Location:

OH 22
Elevation: 744 ft
Latitude: 40°N

Outdoor:

Dry bulb (°F) 10
Daily range (°F) -
Wet bulb (°F) -
Wind speed (mph) 15.0

Heating

Cooling

Indoor:

Indoor temperature (°F) 70
Design TD (°F) 60
Relative humidity (%) 50
Moisture difference (gr/lb) 48.7

Heating

75
15
50
33.4

Cooling

Infiltration:

Method Simplified
Construction quality Semi-loose
Fireplaces 0

Construction descriptions

Walls

CMH - DW - R-21 Wall - THP-510: Frm wall, vnl ext, 5/8" wood shth,
r-21 cav ins, 5/8" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud

Or	Area ft ²	U-value Btuh/ft ² -°F	Insul R ft ² -°F/Btuh	Htg HTM Btuh/ft ²	Loss Btuh	Clg HTM Btuh/ft ²	Gain Btuh
n	206	0.055	21.0	3.29	680	0.87	180
e	304	0.055	21.0	3.29	1002	0.87	265
s	212	0.055	21.0	3.29	698	0.87	185
w	304	0.055	21.0	3.29	1000	0.87	265
all	1026	0.055	21.0	3.29	3380	0.87	894

Partitions

(none)

Windows

Clayton - Therompane Low-E DOE: Clayton - Therompane Low-E DOE;
50% blinds 45°, medium; 50% outdoor insect screen; 6.67 ft head ht

n	6	0.300	0	18.0	101	7.14	40
e	6	0.300	0	18.0	101	21.1	119
e	15	0.300	0	18.0	270	21.1	317
e	40	0.300	0	18.0	719	21.1	846
w	60	0.300	0	18.0	1078	21.1	1268
all	126	0.300	0	18.0	2269	20.5	2590

Doors

CMH - Standard Door DOE: CMH - Standard Door -Solid no strom DOE

e	19	0.300	0	18.0	348	6.61	128
w	20	0.300	0	18.0	368	6.61	136
all	40	0.300	0	18.0	716	6.61	264

Ceilings

CMH - DW - 158 box R-38 - THP-1255: Attic ceiling, asphalt shingles
roof mat, r-38 ceil ins, 1/2" gypsum board int fnsh

1272	0.030	38.0	1.80	2286	1.52	1929
------	-------	------	------	------	------	------

Floors

CHM - DW - R-33 FW THP-221: Flr floor, frm flr, 6" thkns, vinyl flr fnsh,
r-30 ext ins, amb ovr

1272	0.032	33.0	0.96	1219	0.34	429
------	-------	------	------	------	------	-----



Project Summary

Entire House

CMH Manufacturing Appalchia

Job: 34M400-FDJ-TZ3
Date: June 19, 2026
By: Edie Long

1420 Mountain Road, Andersonville, TN 37705 Phone: 865-494-7800 Ext. 227 Fax: 865-494-0243 Web: www.claytonhomes.com

Project Information

For: 34M400-FDJ-TZ3

Notes: Duct Capacity 25100 BTUH

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Design Information

Weather: OH 22

Winter Design Conditions

Outside db 10 °F
Inside db 70 °F
Design TD 60 °F

Ventilation Method MJ8

Heating Summary

Structure 17484 Btuh
Ducts (R-8.0) 1721 Btuh
Central vent (80 cfm) 5131 Btuh
Outside air
Humidification 0 Btuh
Piping 0 Btuh
Equipment load 24336 Btuh

Infiltration

Method Simplified
Construction quality Semi-loose
Fireplaces 0

	Heating	Cooling
Area (ft ²)	1272	1272
Volume (ft ³)	10176	10176
Air changes/hour	0.70	0.36
Equiv. AVF (cfm)	119	61

Heating Equipment Summary

Make Smart Comfort
Trade 15 SEER2 HP
Model R5H5S24*K*AAA*
AHRI ref 214277535

Efficiency 7.5 HSPF2
Heating input
Heating output 22800 Btuh @ 47°F
Temperature rise 28 °F
Actual air flow 753 cfm
Air flow factor 0.039 cfm/Btuh
Static pressure 0.30 in H2O
Space thermostat
Capacity balance point = 21 °F

Backup: Smart Comfort
Input = 10 kW, Output = 34121 Btuh, 100 AFUE

Summer Design Conditions

Outside db 90 °F
Inside db 75 °F
Design TD 15 °F
Daily range M
Relative humidity 50 %
Moisture difference 33 gr/lb

Sensible Cooling Equipment Load Sizing

Structure 10420 Btuh
Ducts (R-8.0) 721 Btuh
Central vent (80 cfm) 1302 Btuh
Outside air
Blower 0 Btuh
Use manufacturer's data n
Rate/swing multiplier 0.95
Equipment sensible load 11846 Btuh

Latent Cooling Equipment Load Sizing

Structure 2152 Btuh
Ducts 178 Btuh
Central vent (80 cfm) 1771 Btuh
Outside air
Equipment latent load 4101 Btuh

Equipment Total Load (Sen+Lat) 15947 Btuh
Req. total capacity at 0.70 SHR 1.4 ton

Cooling Equipment Summary

Make Smart Comfort
Trade 15 SEER2 HP
Cond R5H5S24*K*AAA*
Coil FEVB0024***+NAVA53601CK
AHRI ref 214277535
Efficiency 12.0 EER2, 15.5 SEER2
Sensible cooling 15820 Btuh
Latent cooling 6780 Btuh
Total cooling 22600 Btuh
Actual air flow 753 cfm
Air flow factor 0.068 cfm/Btuh
Static pressure 0.30 in H2O
Load sensible heat ratio 0.75

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



Right-Suite® Universal 2025 25.0.05 RSU55710

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Page 1

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Duct System Summary

Entire House

CMH Manufacturing Appalchia

Job: 34M400-FDJ-TZ3
Date: June 19, 2026
By: Edie Long

1420 Mountain Road, Andersonville, TN 37705 Phone: 865-494-7800 Ext. 227 Fax: 865-494-0243 Web: www.claytonhomes.com

Project Information

For: 34M400-FDJ-TZ3



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	Heating	Cooling
External static pressure	0.30 in H ₂ O	0.30 in H ₂ O
Pressure losses	0 in H ₂ O	0 in H ₂ O
Available static pressure	0.30 in H ₂ O	0.30 in H ₂ O
Supply / return available pressure	0.150 / 0.150 in H ₂ O	0.150 / 0.150 in H ₂ O
Lowest friction rate	0.208 in/100ft	0.208 in/100ft
Actual air flow	753 cfm	753 cfm
Total effective length (TEL)	144 ft	

Supply Branch Detail Table

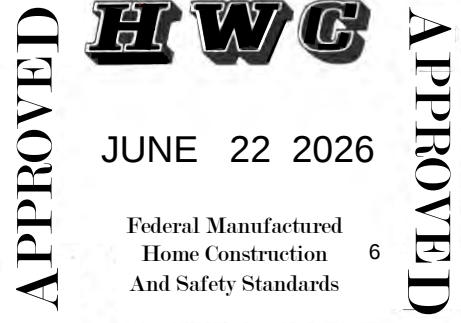
Name	Design (Btuh)	Htg (cfm)	Clg (cfm)	Design FR	Diam (in)	H x W (in)	Duct Matl	Actual Ln (ft)	Ftg.Eqv Ln (ft)	Trunk
BATH1	h 2895	114	60	0.698	5.0	0x0	VIFx	8.0	35.0	st3
BATH2	h 916	36	14	0.211	5.0	0x0	VIFx	37.2	105.0	st4
BED 2	h 2490	98	85	0.226	6.0	0x0	VIFx	27.7	105.0	st4
BED3	h 2530	99	77	0.435	5.0	0x0	VIFx	34.0	35.0	st1
KITCHEN/DINING	c 1628	75	110	0.645	5.0	0x0	VIFx	11.5	35.0	st1
KITCHEN/DINING-B	c 1628	75	110	0.492	5.0	0x0	VIFx	26.0	35.0	st1
LIVING RM	c 1265	55	86	0.230	6.0	0x0	VIFx	25.2	105.0	st4
LIVING RM-A	c 1265	55	86	0.232	6.0	0x0	VIFx	24.2	105.0	st5
PRIMARY BED	h 1873	73	63	0.208	5.0	0x0	VIFx	39.2	105.0	st5
PRIMARY BED-A	h 1873	73	63	0.224	5.0	0x0	VIFx	29.2	105.0	st5

Supply Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
st3	Peak AVF	114	60	0.698	233	4.3	5 x 14	ShtMetl	st2 st2
st4	Peak AVF	189	184	0.211	389	6.5	5 x 14	ShtMetl	
st5	Peak AVF	202	212	0.208	437	6.7	5 x 14	ShtMetl	
st1	Peak AVF	248	297	0.435	611	6.3	5 x 14	ShtMetl	
st2	Peak AVF	391	397	0.208	816	9.9	5 x 14	MetlFlx	

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	753	753	0	0	0	0	0x 0		VIFx	





Manual S Compliance Report

Entire House

CMH Manufacturing Appalchia

Job: 34M400-FDJ-TZ3
Date: June 19, 2026
By: Edie Long

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Project Information

For: 34M400-FDJ-TZ3



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Cooling Equipment

Design Conditions

Outdoor design DB:	90.2°F	Sensible gain:	12444 Btuh	Entering coil DB:	76.7°F
Outdoor design WB:	73.3°F	Latent gain:	4101 Btuh	Entering coil WB:	63.8°F
Indoor design DB:	75.0°F	Total gain:	16544 Btuh		
Indoor RH:	50%	Estimated airflow:	753 cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Smart Comfort	Model:	R5H5S24*K*AAA*+FEVB0024**++NAVA53601CK
Actual airflow:	753 cfm		
Sensible capacity:	17965 Btuh	144% of load	
Latent capacity:	4373 Btuh	107% of load	
Total capacity:	22338 Btuh	135% of load	SHR: 80%

Heating Equipment

Design Conditions

Outdoor design DB:	10.1°F	Heat loss:	24336 Btuh	Entering coil DB:	63.5°F
Indoor design DB:	70.0°F				

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Smart Comfort	Model:	R5H5S24*K*AAA*+FEVB0024**++NAVA53601CK
Actual airflow:	753 cfm		
Output capacity:	22800 Btuh	94% of load	Capacity balance: 21 °F
Supplemental heat required:	1536 Btuh		Economic balance: -99 °F

Backup equipment type:	Elec strip		
Manufacturer:	Smart Comfort	Model:	
Actual airflow:	753 cfm		
Output capacity:	10.0 kW	140% of load	Temp. rise: 42 °F

Meets all requirements of ACCA Manual S.



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Page 1

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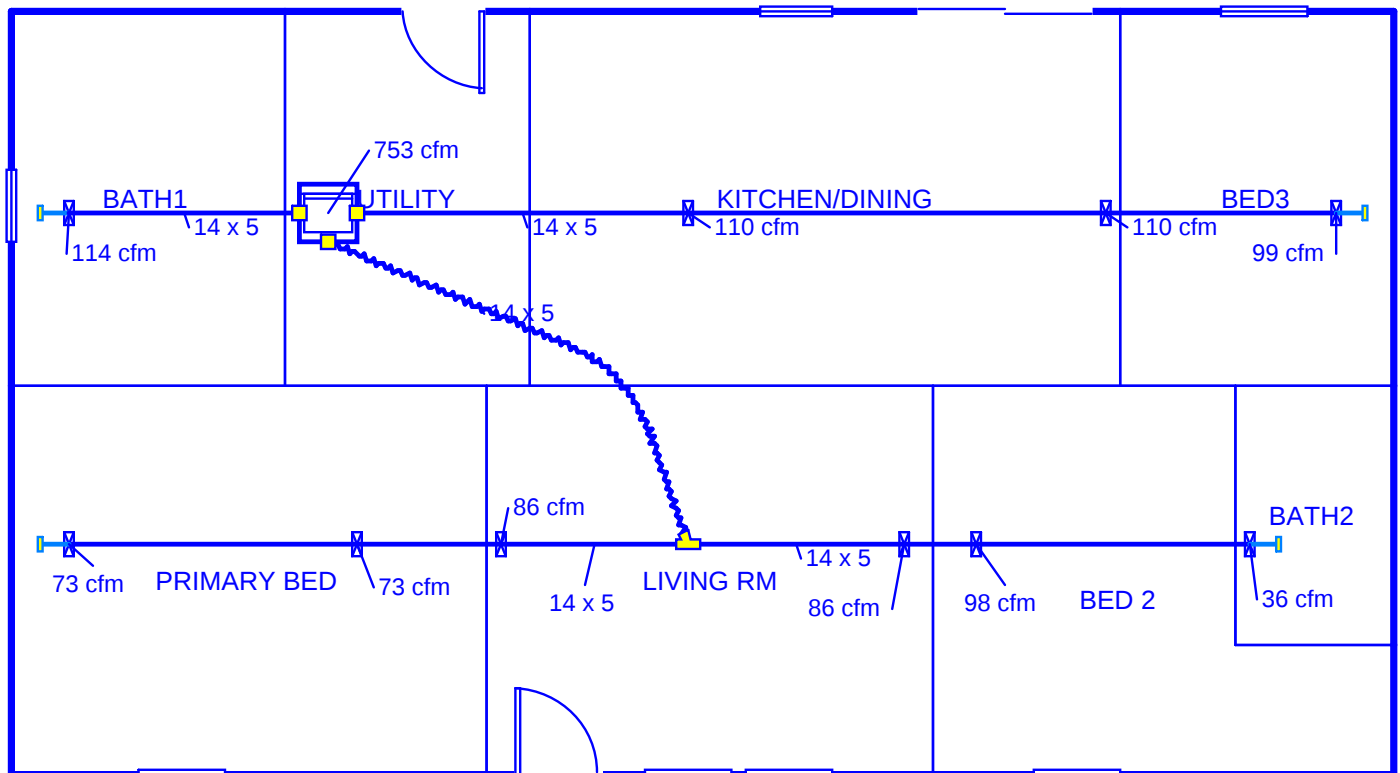
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JUNE 22 2026

Federal Manufactured
Home Construction 6
And Safety Standards

Level 1



Job #: 34M400-FDJ-TZ3
Performed by Edie Long for:
34M400-FDJ-TZ3

CMH Manufacturing Appalchia

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Andersonville, TN 37705
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Page 1
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