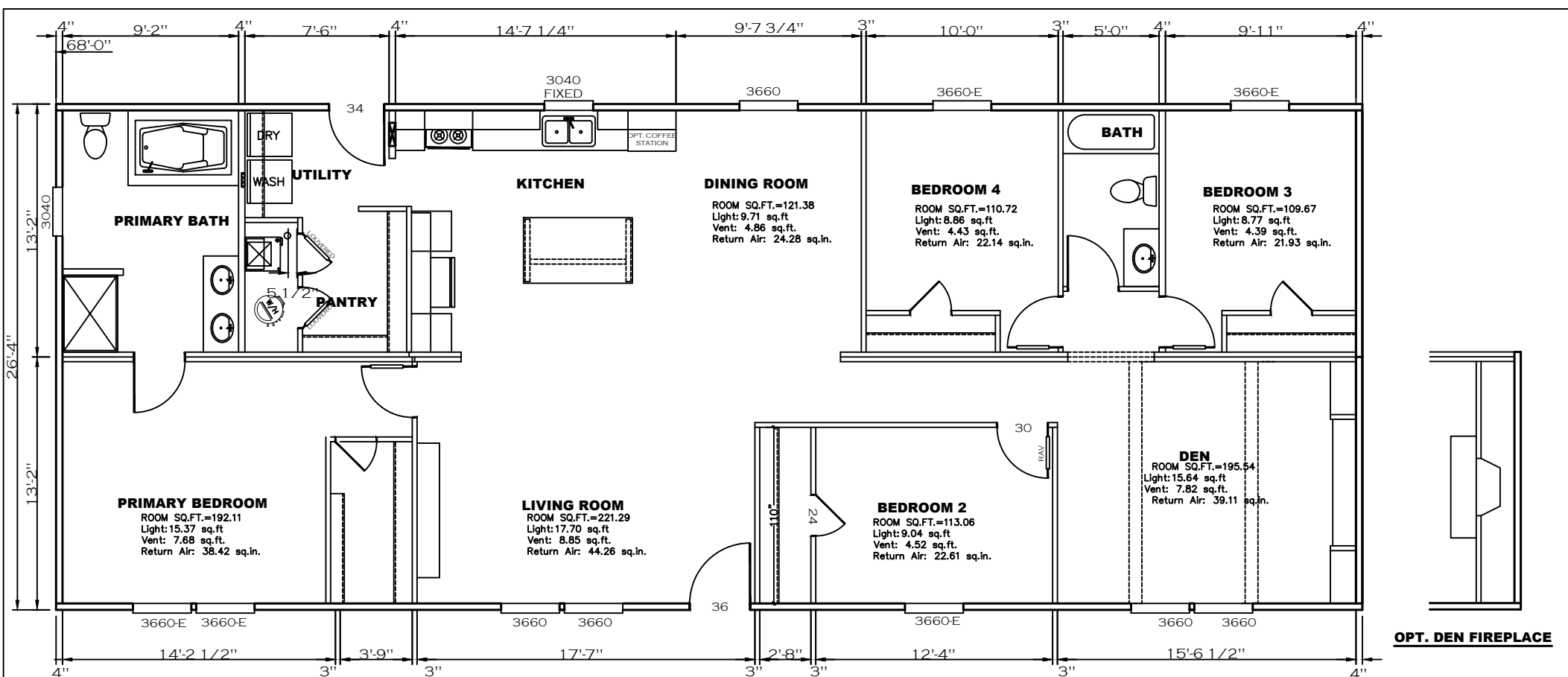
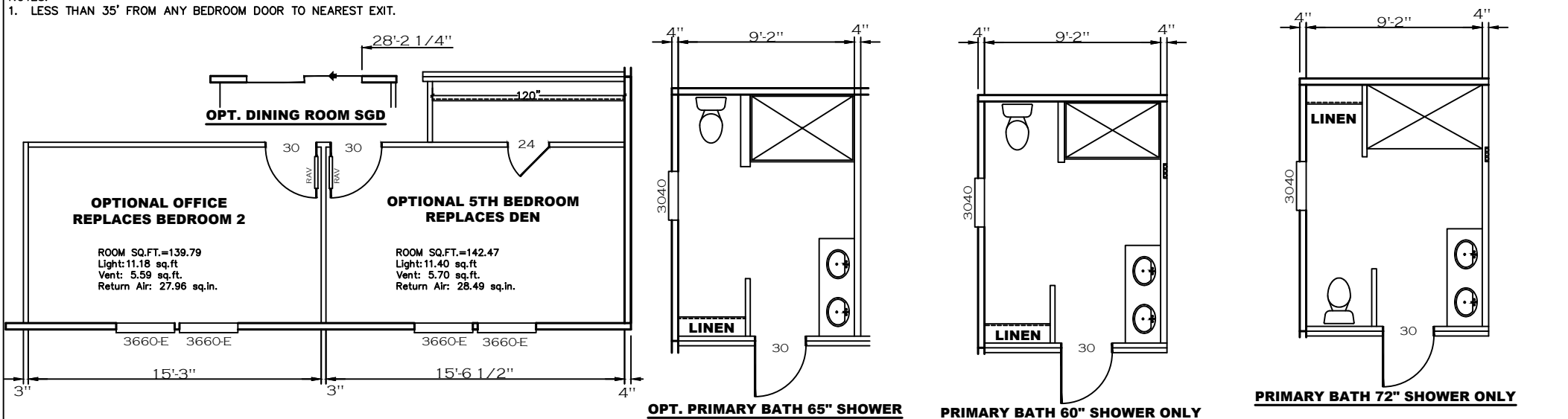
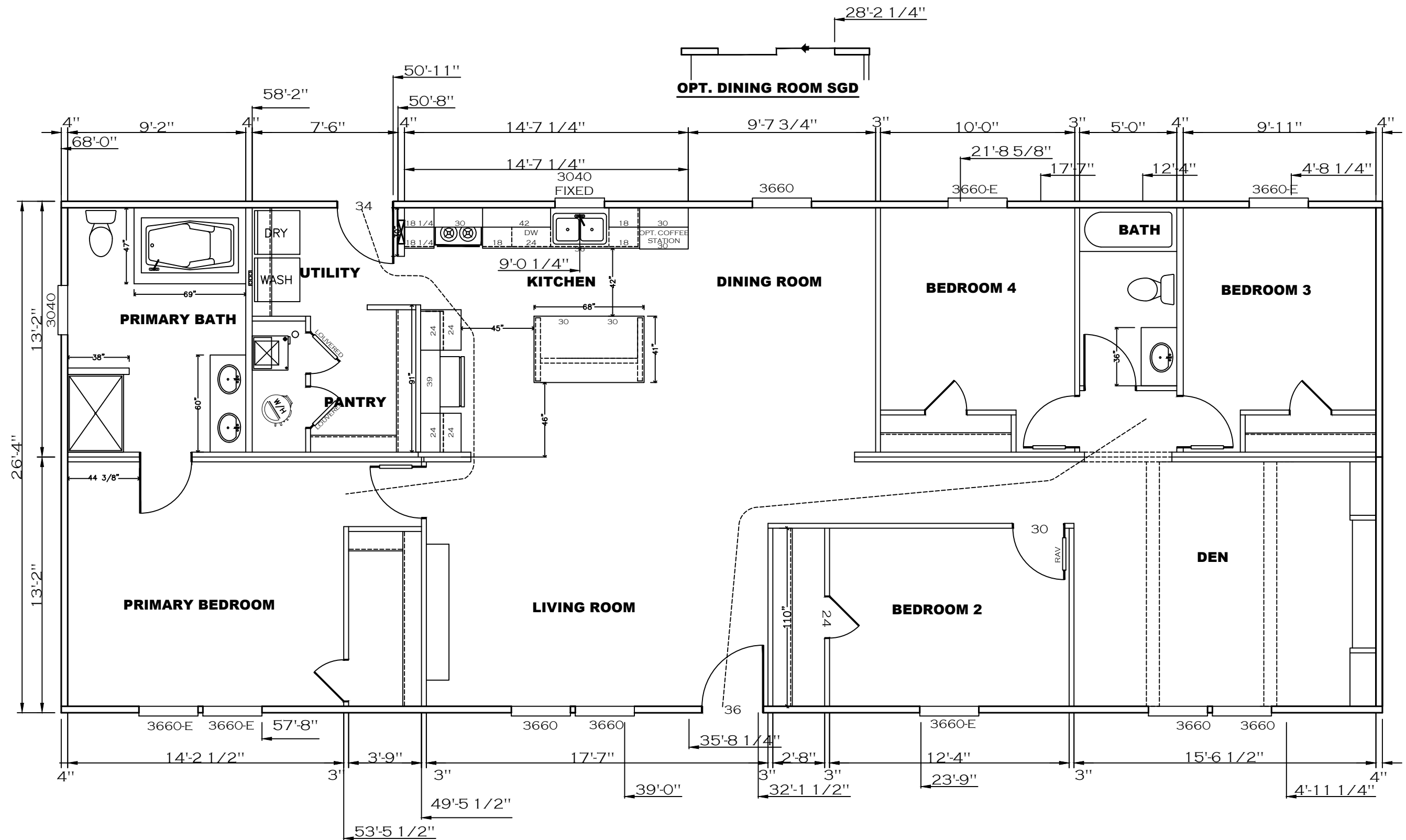




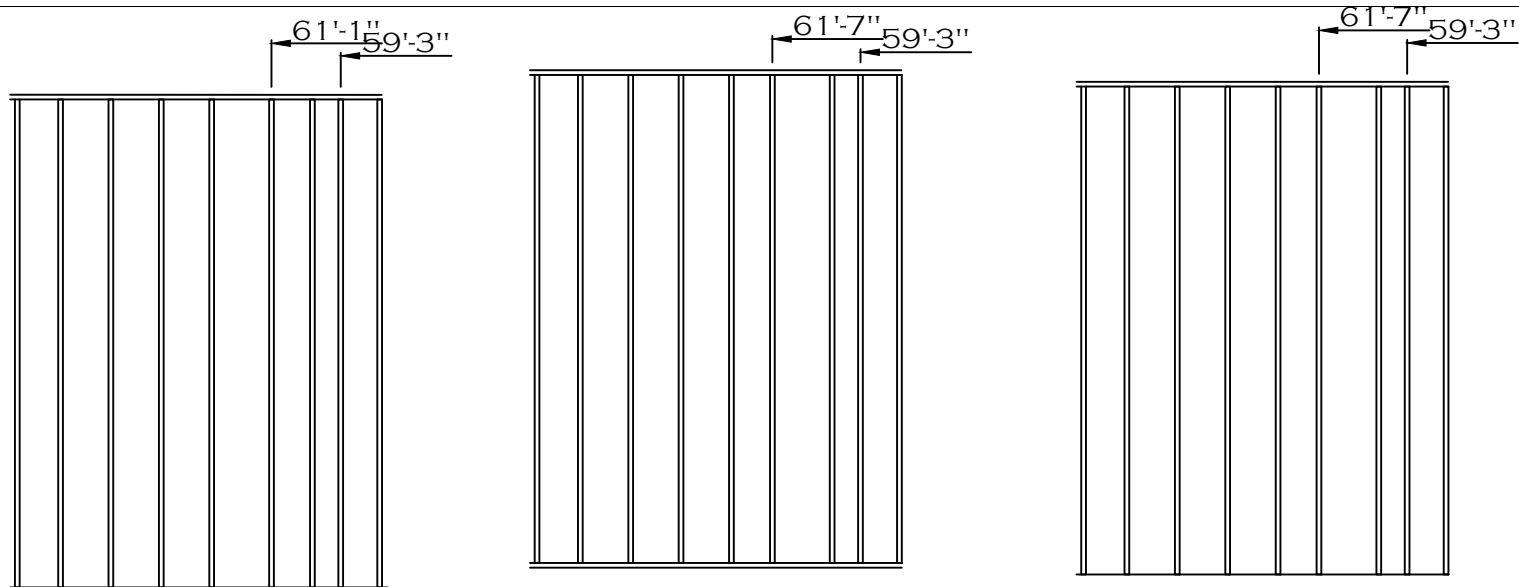
NOTES:
1. LESS THAN 35' FROM ANY BEDROOM DOOR TO NEAREST EXIT.



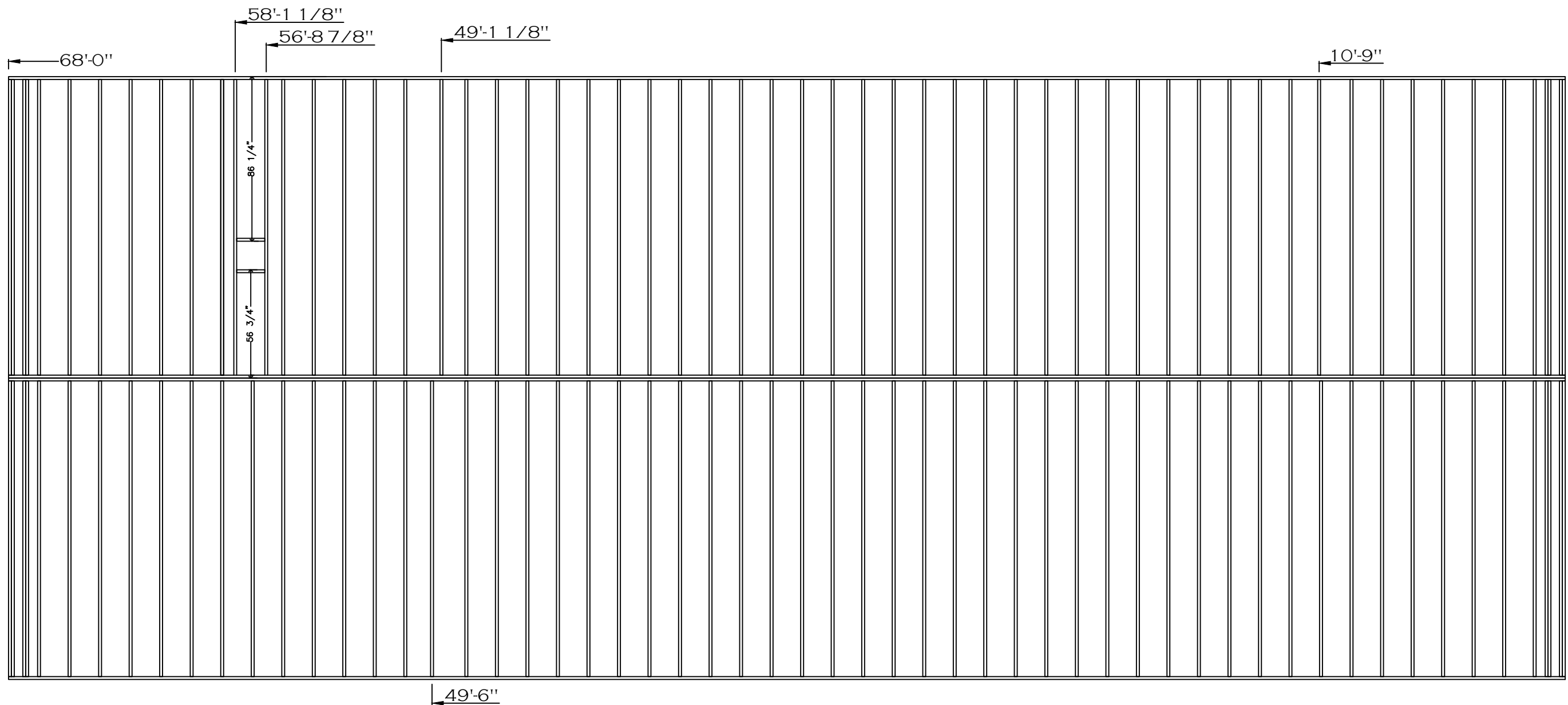
SHEET: FP	FLOOR PLAN	Clayton - 934 1420 Mountain Rd. Andersonville, TN 37705 PH: 865.494.7800 FAX: 865.494.0243	HILBORN, WERNER, CARTER, AND ASSOCIATES, INC. 1627 SOUTH MYRTLE AVE. CLEARWATER, FL. 33756	DRAWING #: 34M405-FP MODEL #: MTN28684A26 DATE: 06/16/2026	SCALE: N.T.S.	MODEL: 28'X68' MOUNTAINEER SERIES: MOUNTAINEER PRODUCT DESIGNER: BRIAN K. RIFFEY	NOTES: STD PLAN *CONDITIONED*: 1,790 FT² REV. BY: REV. DATE:
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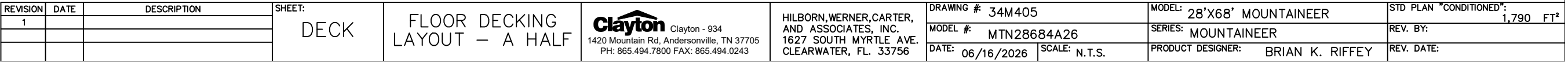
SHEET: SHOP	CONSTRUCTION FLOOR PLAN	 Clayton - 934 1420 Mountain Rd, Andersonville, TN 37705 PH: 865.494.7800 FAX: 865.494.0243	HILBORN, WERNER, CARTER, AND ASSOCIATES, INC. 1627 SOUTH MYRTLE AVE. CLEARWATER, FL. 33756	DRAWING # 34M405 MODEL # MTN28684A26 DATE: 06/16/2026 SCALE: N.T.S.	MODEL: 28'X68' MOUNTAINEER SERIES: MOUNTAINEER PRODUCT DESIGNER: BRIAN RIFFEY	STD PLAN "CONDITIONED": 1,790 FT ² REV. BY: REV. DATE:
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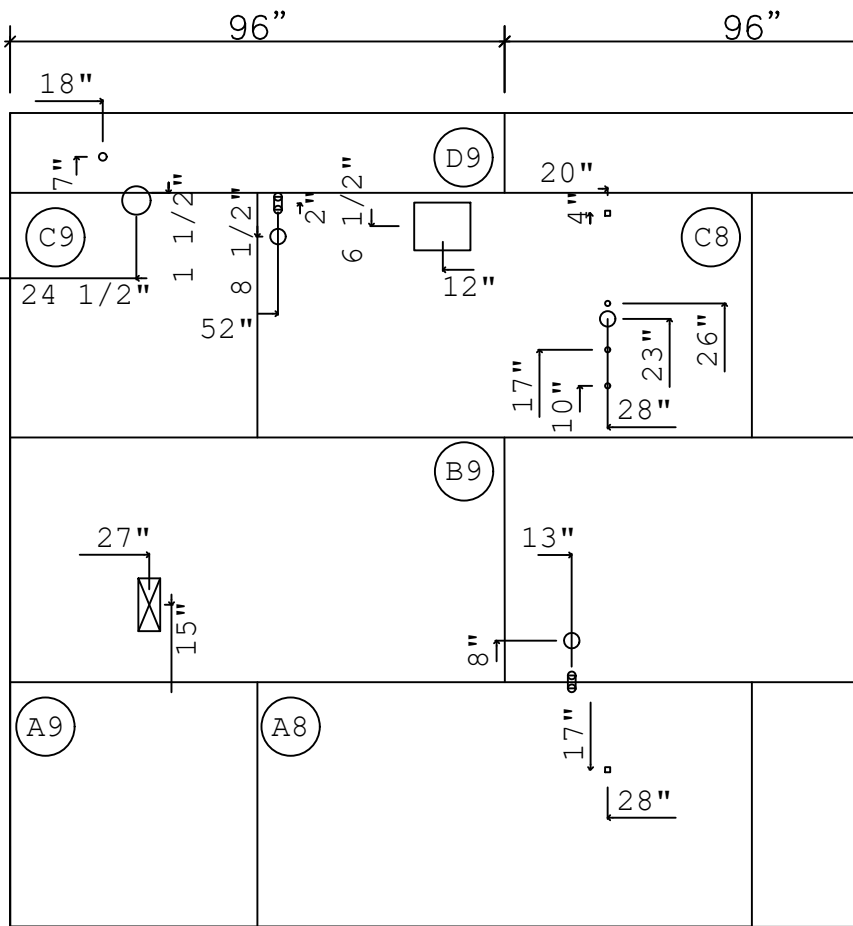
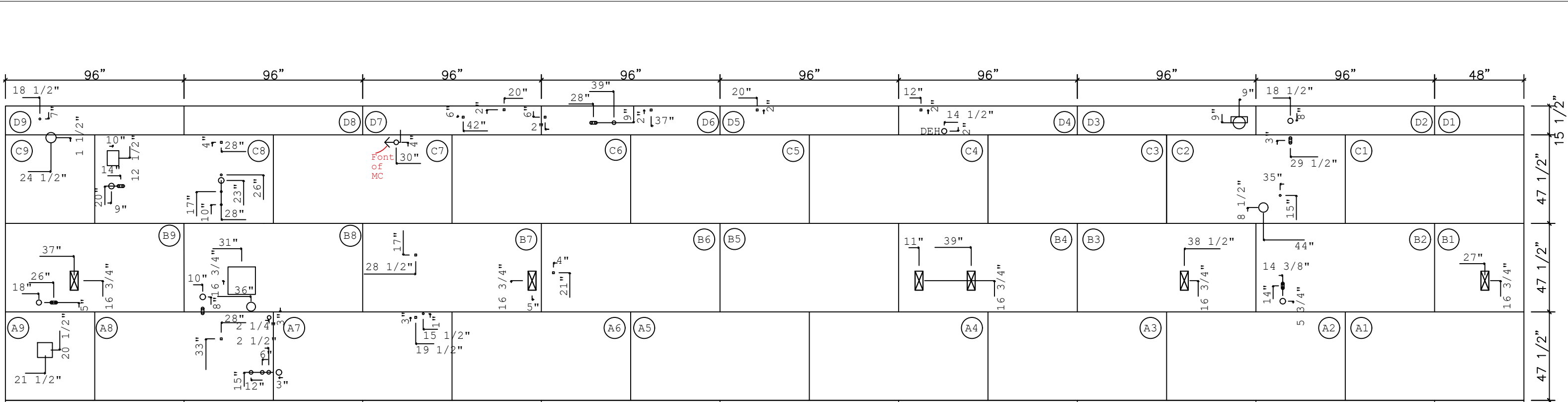


PRIMARY BATH 72" SHOWER ONLY OPT. PRIMARY BATH 65" SHOWER PRIMARY BATH 60" SHOWER ONLY

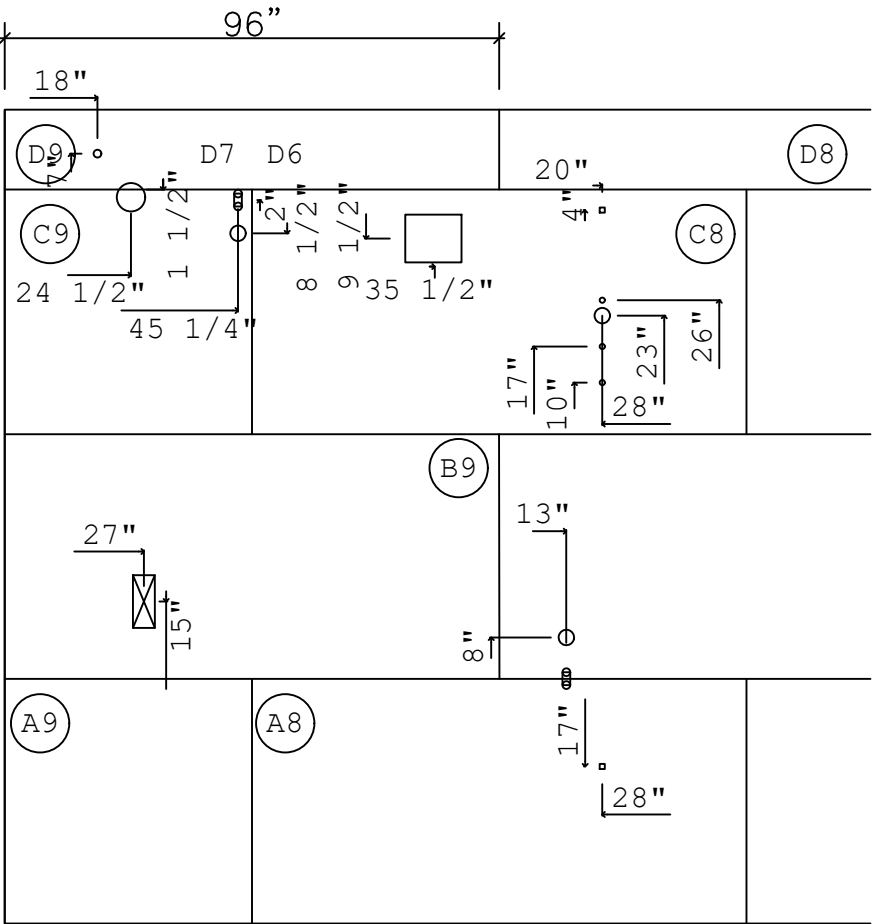


SHEET: FJIG	FLOOR JOIST LAYOUT	 Clayton - 934 1420 Mountain Rd, Andersonville, TN 37705 PH: 865.494.7800 FAX: 865.494.0243	DRAWING #: 34M405		MODEL: 28'X68' MOUNTAINEER	STD PLAN *CONDITIONED*: 1,369 FT²
			MODEL #: MTN28684A26		SERIES: MOUNTAINEER	REV. BY:
			DATE: 06/16/2026	SCALE: N.T.S.	PRODUCT DESIGNER: BRIAN RIFFEY	REV. DATE:

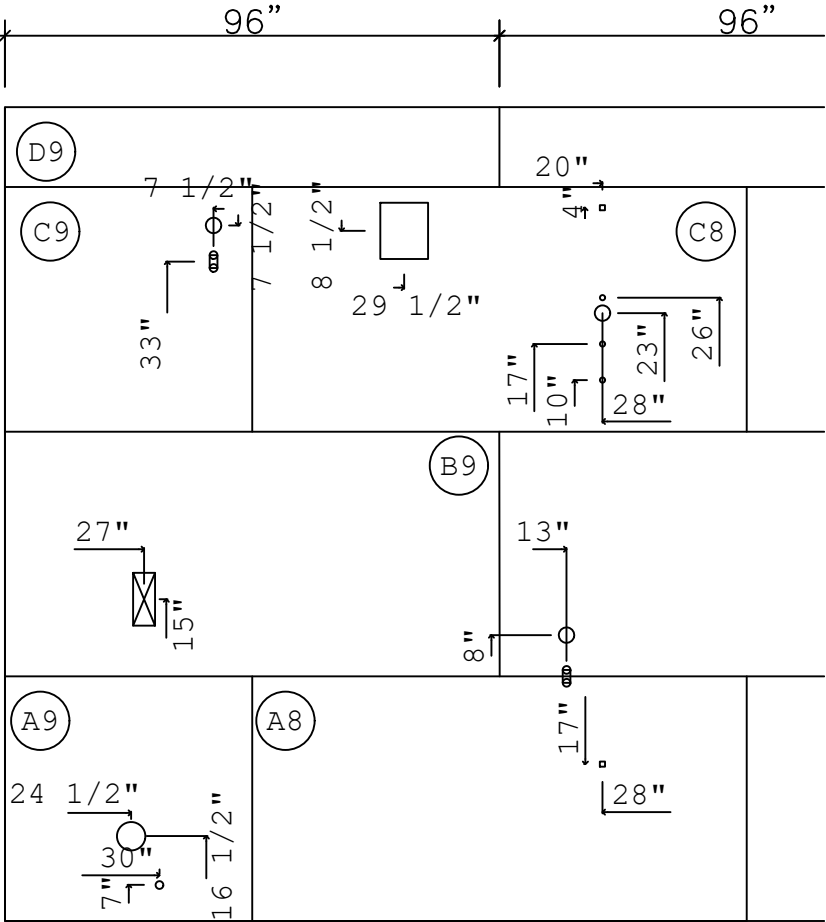




PRIMARY BATH 60" SHOWER ONLY

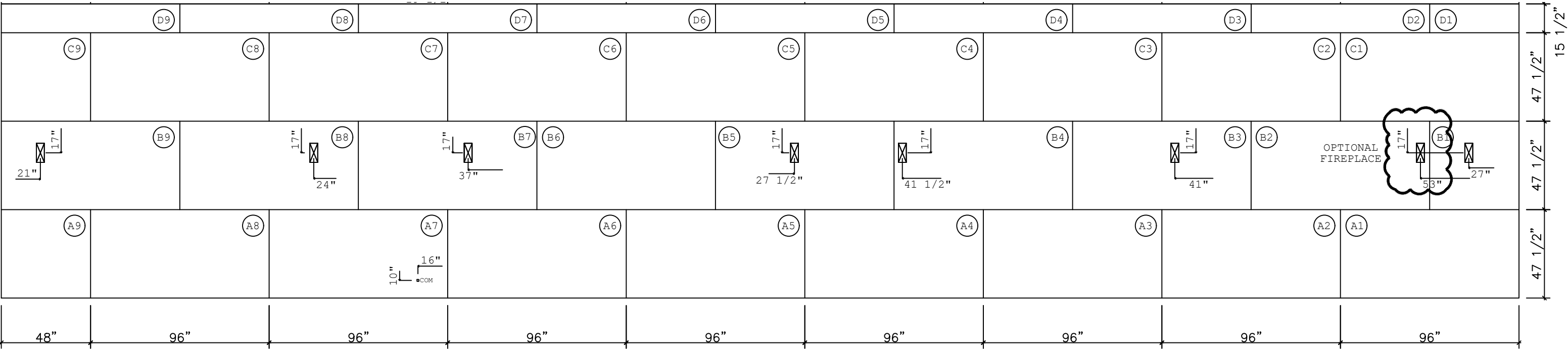


OPT. PRIMARY BATH 65" SHOWER



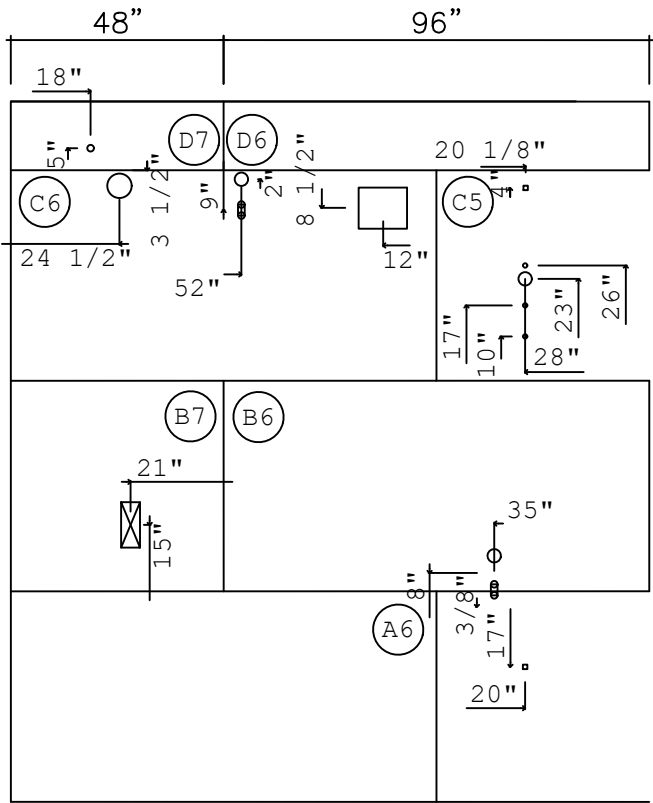
PRIMARY BATH 72" SHOWER ONLY

REVISION	DATE	DESCRIPTION	SHEET:		FLOOR DECKING LAYOUT – B HALF	 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 #: 34M405		MODEL: 28'X68' MOUNTAINEER		STD PLAN *CONDITIONED*: 1,740 FT²		
			DECK					MODEL #: MTN28684A26	SCALE: N.T.S.	SERIES: MOUNTAINEER	REV. BY:			
								DATE: 06/16/2026	PRODUCT DESIGNER: BRIAN K. RIFFEY	REV. DATE:				

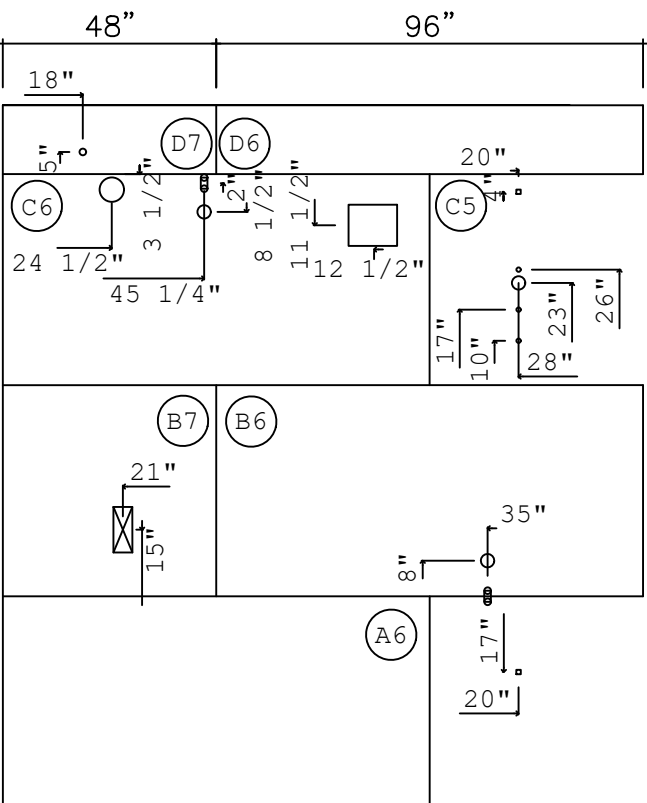


REVISION	DATE	DESCRIPTION	SHEET:		Clayton Clayton - 934 1420 Mountain Rd, Andersonville, TN 37705 PH: 865.494.7800 FAX: 865.494.0243	HILBORN, WERNER, CARTER, AND ASSOCIATES, INC. 1627 SOUTH MYRTLE AVE. CLEARWATER, FL. 33756	DRAWING #: 34M405		MODEL: 28'X68' MOUNTAINEER	STD PLAN *CONDITIONED*:
1							MODEL #: MTN28684A26		SERIES: MOUNTAINEER	REV. BY:
							DATE: 06/16/2026	SCALE: N.T.S.	PRODUCT DESIGNER: BRIAN K. RIFFEY	REV. DATE:

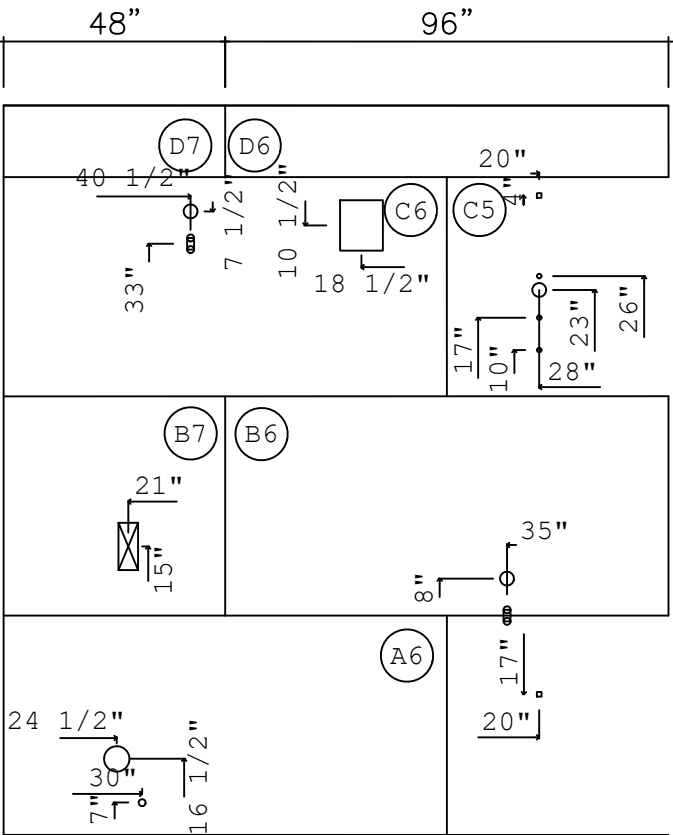
2X6 FLOOR DECKING
LAYOUT – A HALF



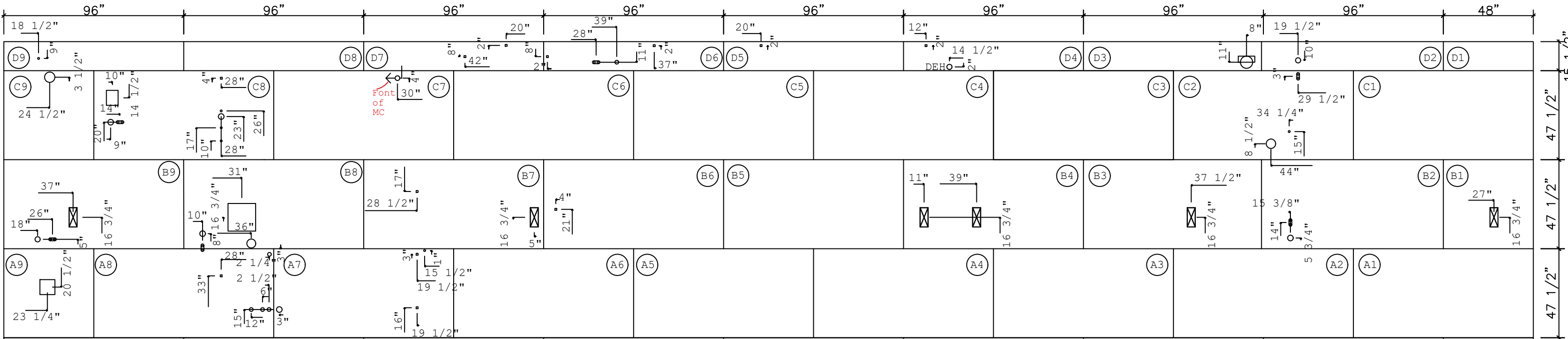
PRIMARY BATH 60" SHOWER ONLY



PRIMARY BATH 65" SHOWER ONLY



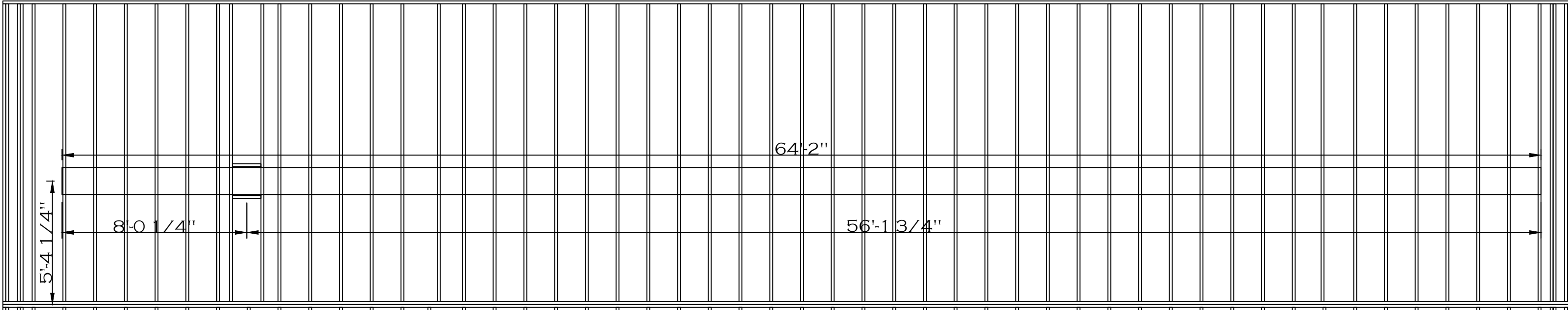
PRIMARY BATH 72" SHOWER ONLY



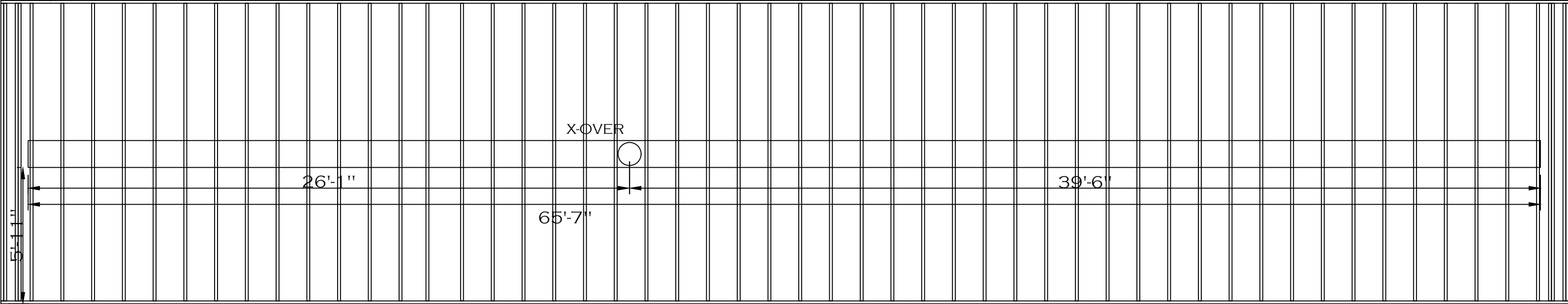
REVISION	DATE	DESCRIPTION	SHEET:	2X6 FLOOR DECKING LAYOUT – B HALF	DRAWING # 34M405	MODEL # MTN28684A26	DATE 06/16/2026	SCALE: N.T.S.	MODEL: 28'X68' MOUNTAINEER	SERIES: MOUNTAINEER	PRODUCT DESIGNER: BRIAN K. RIFFEY	STD PLAN *CONDITIONED*: 1,740 FT²
			DECK									

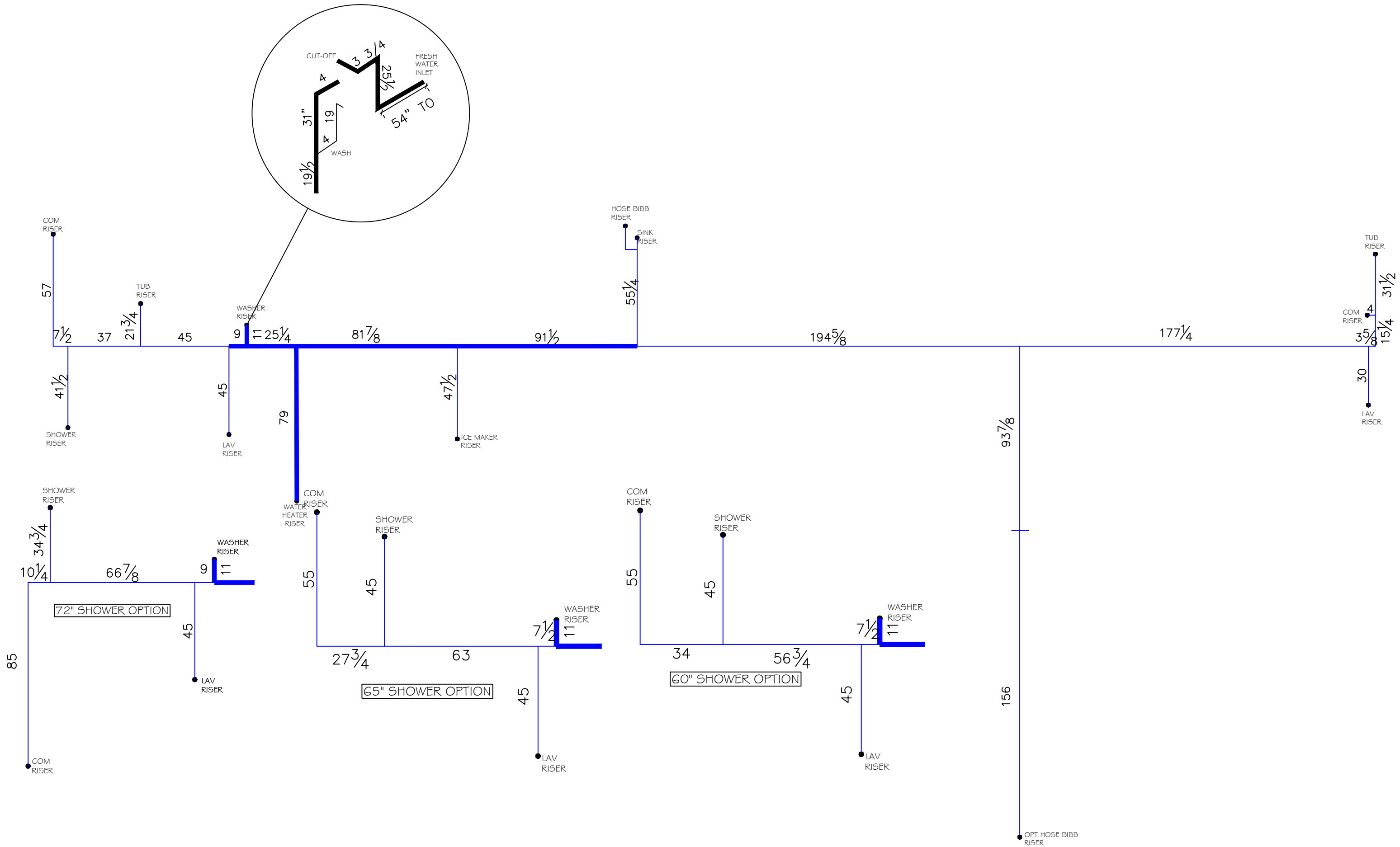
Clayton Clayton - 934
1420 Mountain Rd, Andersonville, TN 37705
PH: 865.494.7800 FAX: 865.494.0243

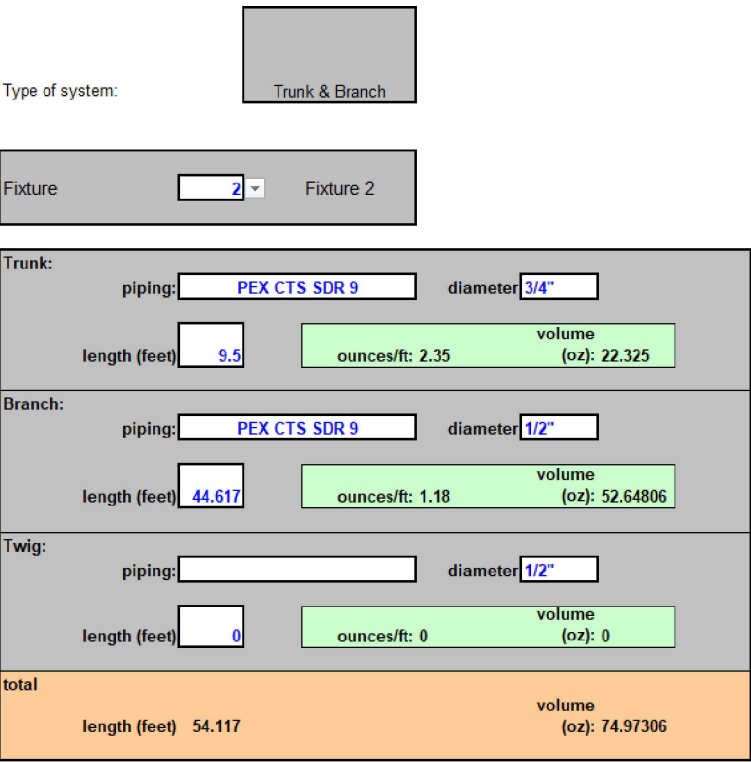
HILBORN, WERNER, CARTER,
AND ASSOCIATES, INC.
1627 SOUTH MYRTLE AVE.
CLEARWATER, FL. 33756

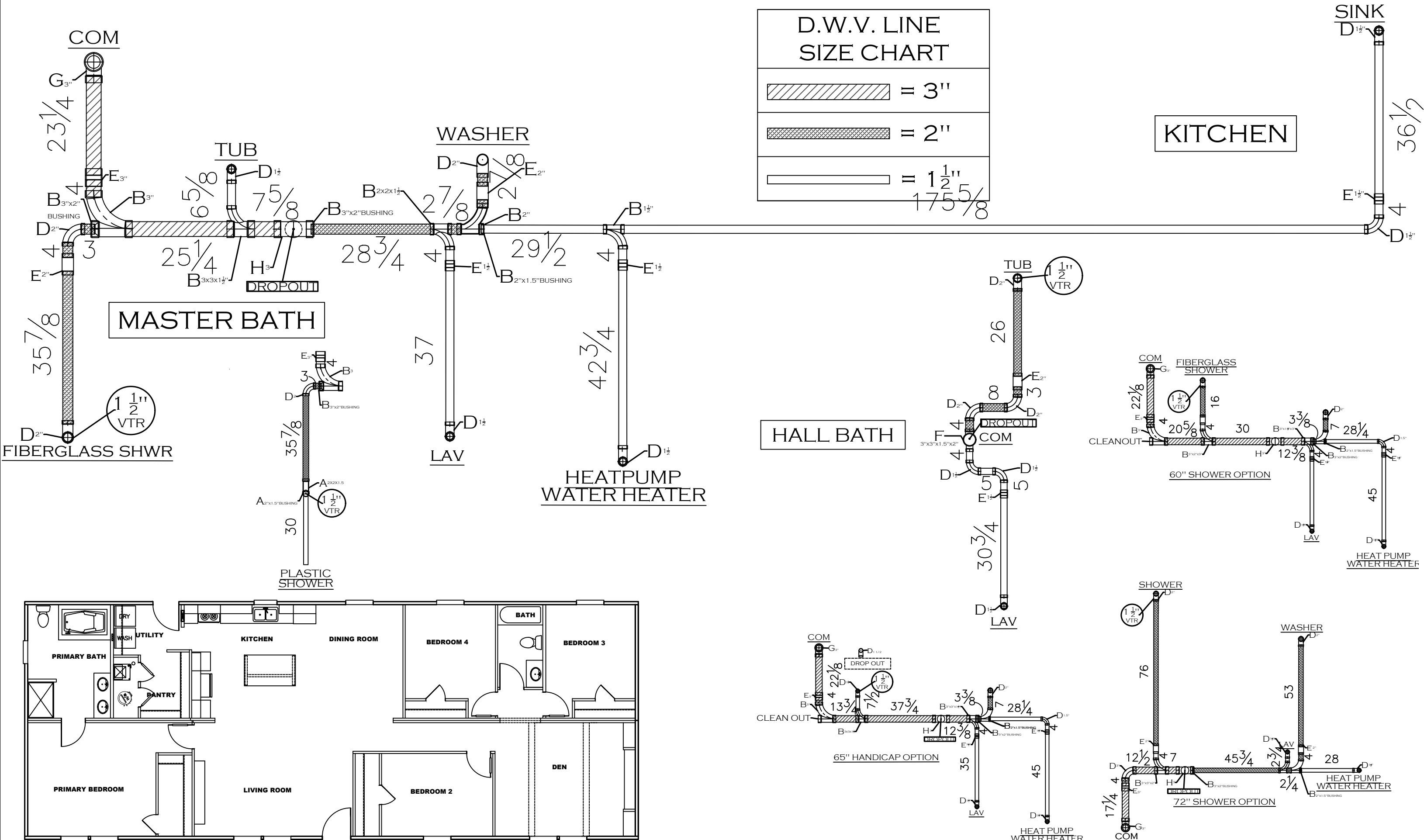


SHEET:	HVAC DUCT		 Clayton - 934 1420 Mountain Rd, Andersonville, TN 37705 PH: 865.494.7800 FAX: 865.494.0243	HILBORN, WERNER, CARTER, AND ASSOCIATES, INC. 1627 SOUTH MYRTLE AVE. CLEARWATER, FL. 33756	DRAWING #: 34M405		MODEL: 28'X68' MOUNTAINEER	STD PLAN *CONDITIONED*: 1,790 FT²
					MODEL #: MTN28684A26		SERIES: MOUNTAINEER	REV. BY:
					DATE: 06/16/2026	SCALE: N.T.S.	PRODUCT DESIGNER: BRIAN RIFFEY	REV. DATE:





PRINT DATE: 7/22/2024



SHEET:

DRAIN

2D DRAIN LINES
2X4

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 # 34M405

MODEL # MTN28684A26

DATE: 06/16/2026 SCALE: N.T.S.

MODEL: 28'X68' MOUNTAINEER

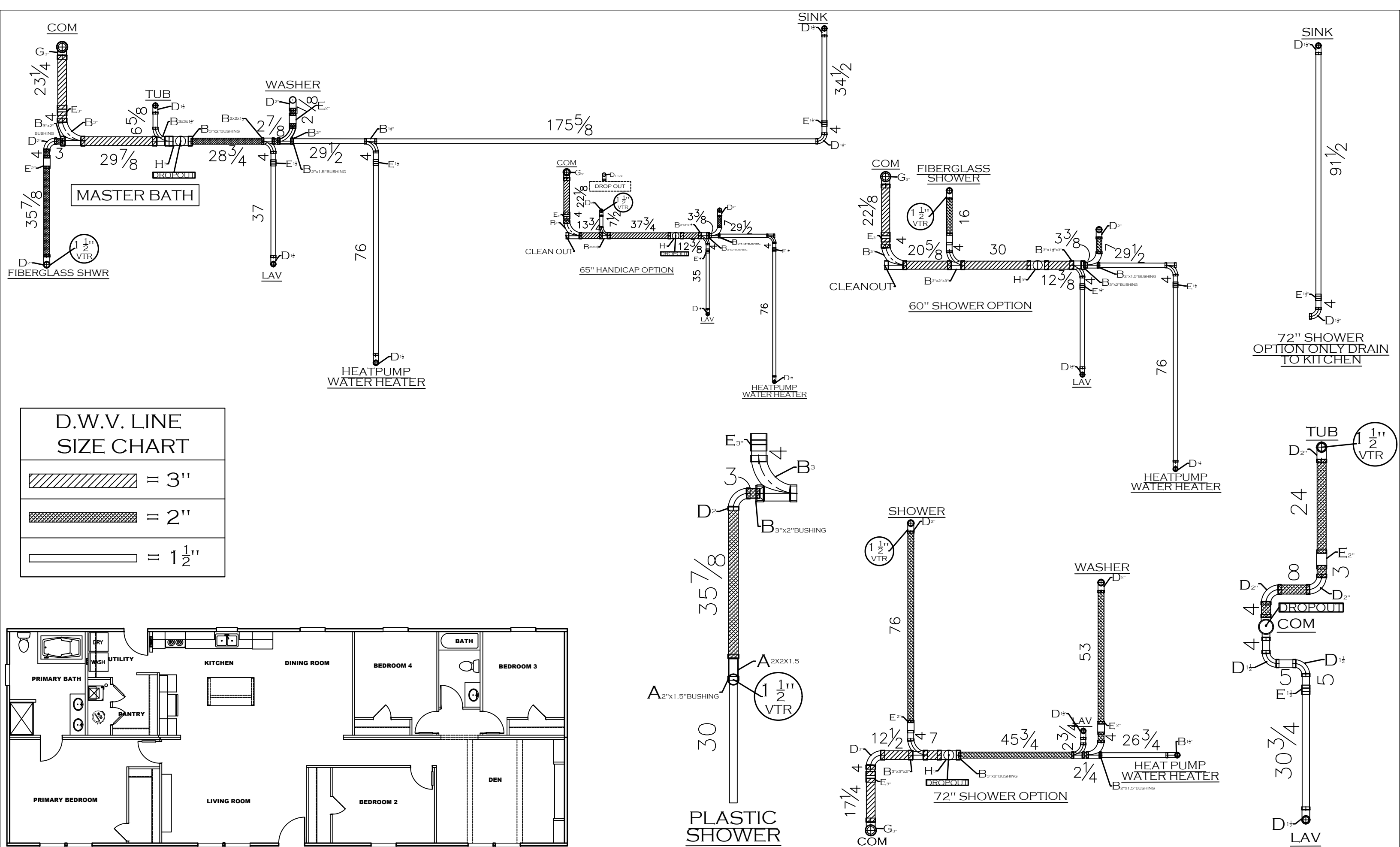
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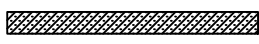
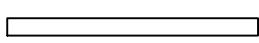
PRODUCT DESIGNER: BRIAN K. RIFFEY

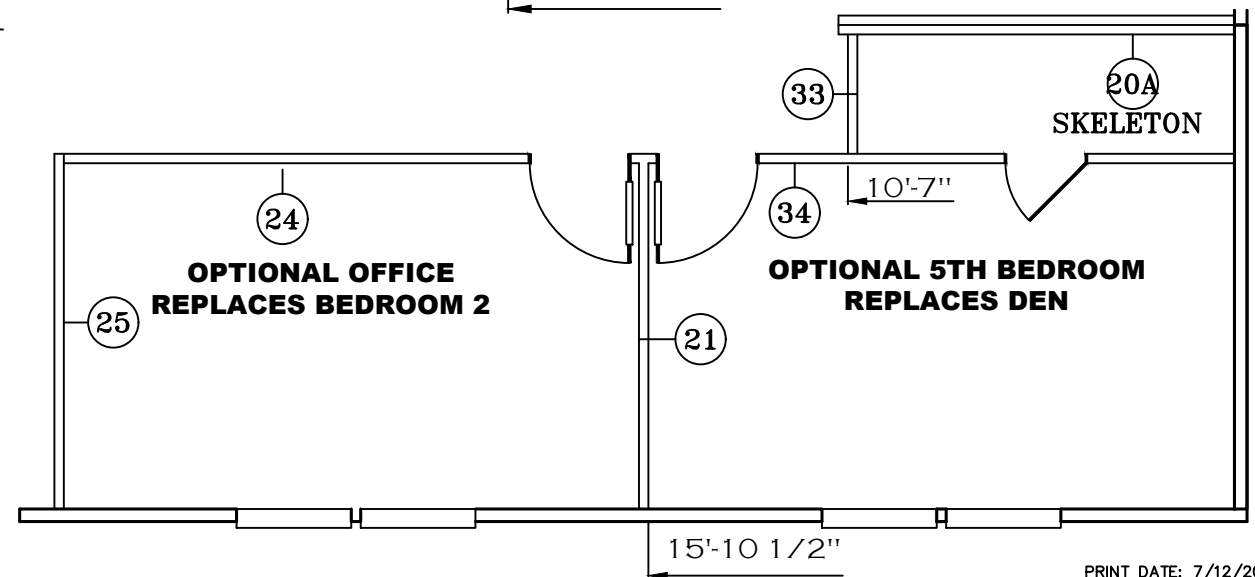
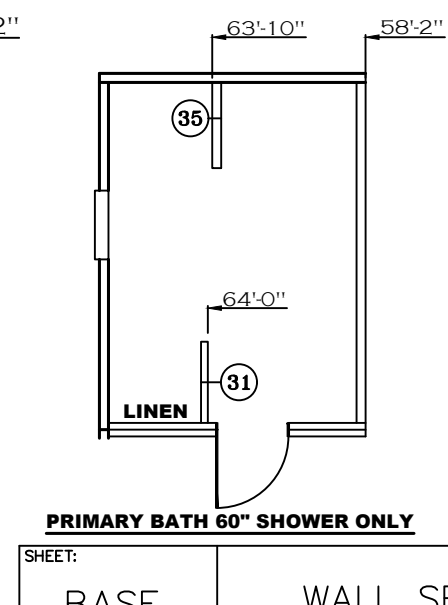
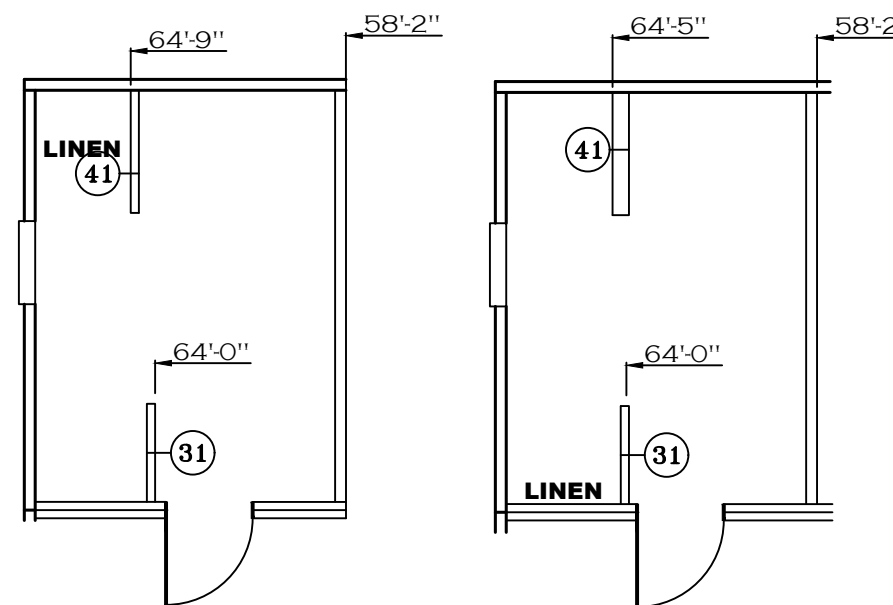
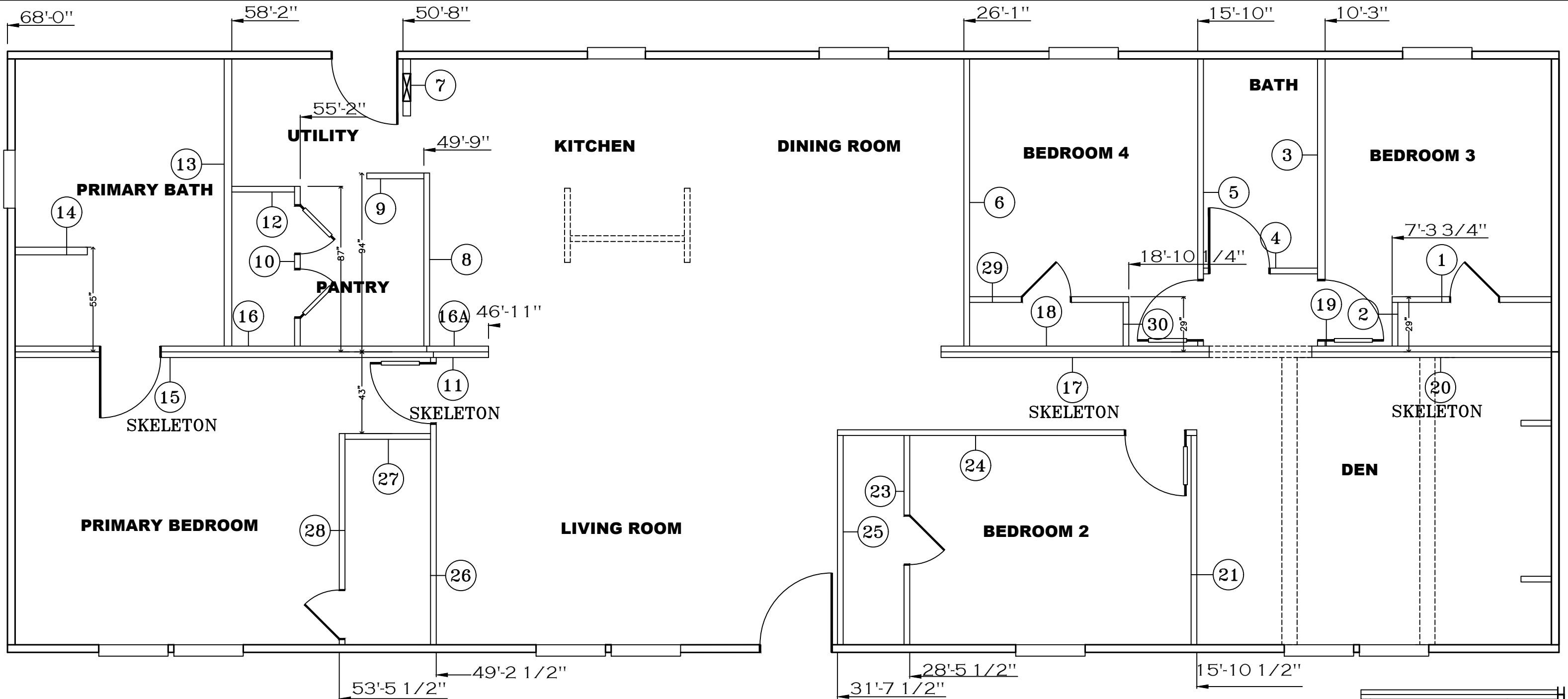
STD PLAN *CONDITIONED*: 1,790 FT²

REV. BY:

REV. DATE:



D.W.V. LINE SIZE CHART	
	= 3"
	= 2"
	= 1 1/2"



PRIMARY BATH 72" SHOWER ONLY

OPT. PRIMARY BATH 65" SHOWER

PRIMARY BATH 60" SHOWER ONLY

SHEET:

BASE

WALL SET

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 # 34M405

MODEL # MTN28684A26

DATE: 06/16/2026 SCALE: N.T.S.

MODEL: 28'X68' MOUNTAINEER

SERIES: MOUNTAINEER

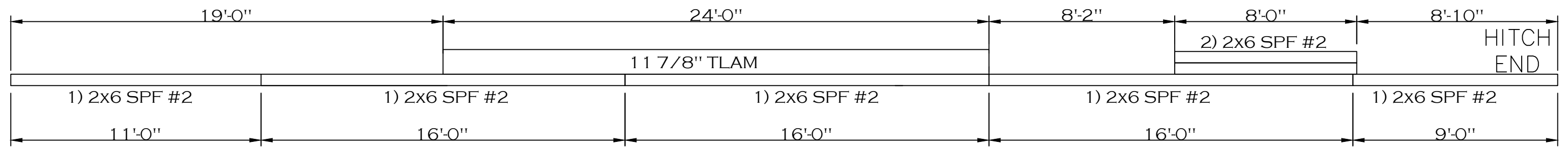
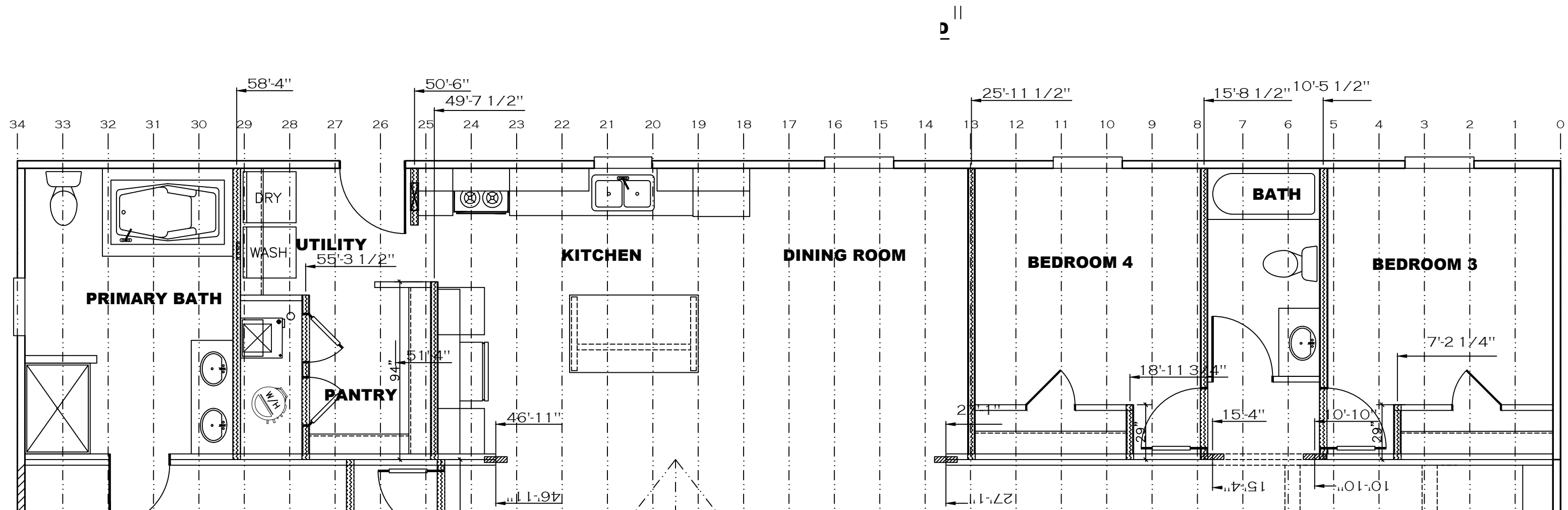
PRODUCT DESIGNER: BRIAN K. RIFFEY

PRINT DATE: 7/12/2024

STD PLAN *CONDITIONED*: 1,790 FT²

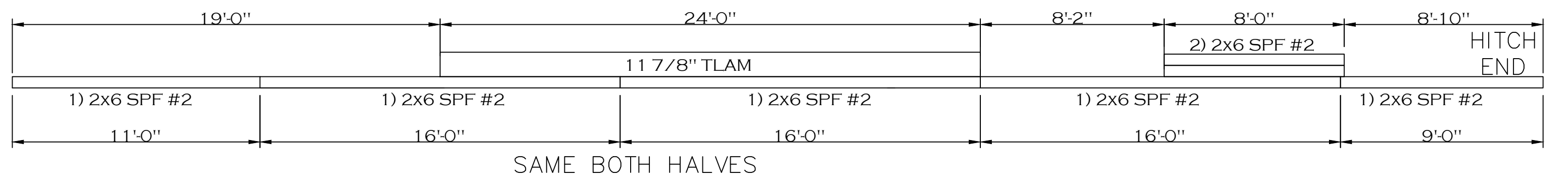
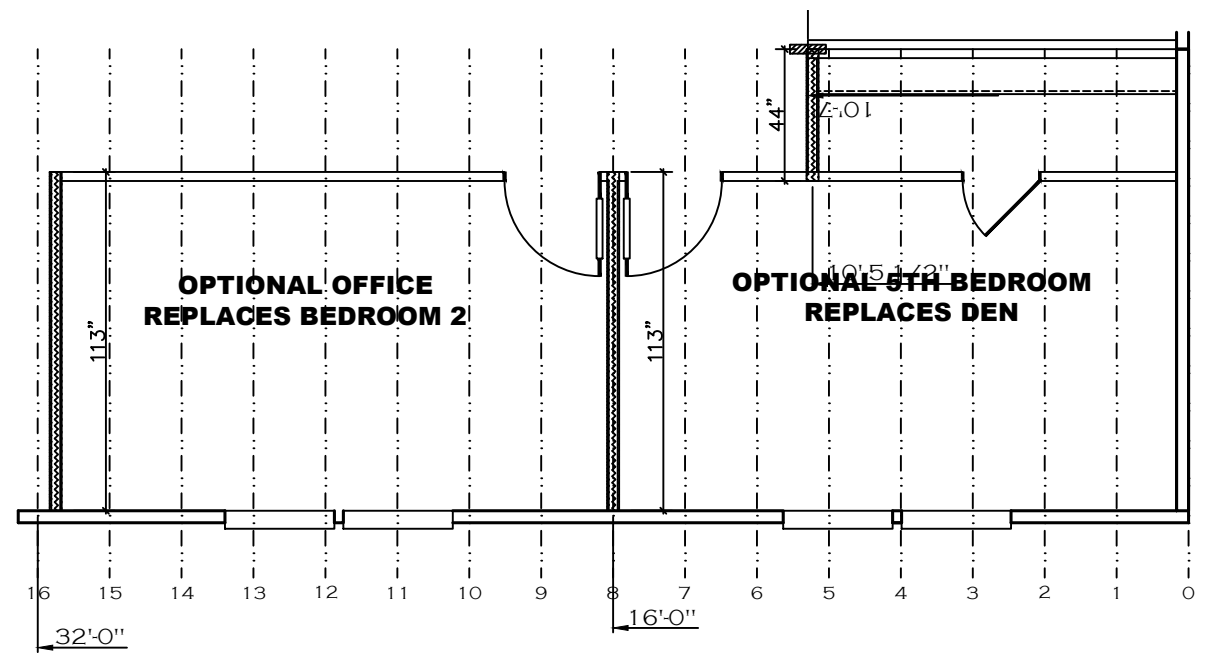
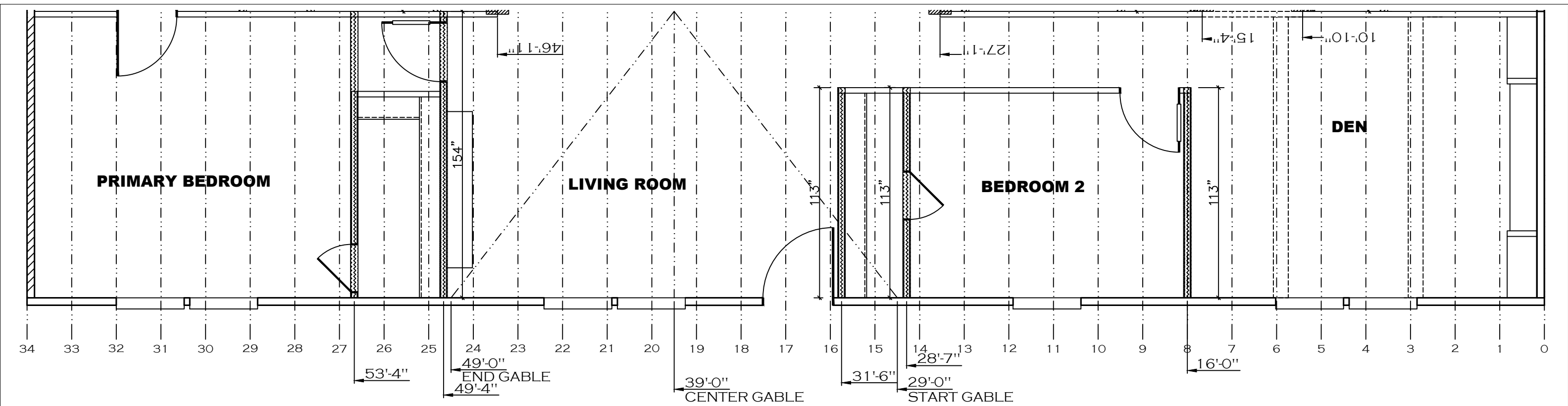
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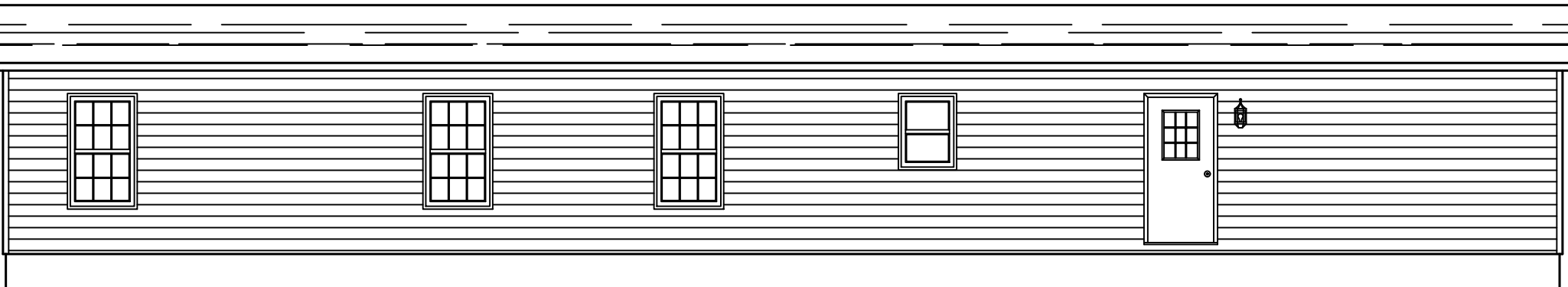
REV. DATE:



SAME BOTH HALVES

SHEET: CJIG	RAFTER & RIDGEBEAM LAYOUT A HALF	 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 #: 34M405		MODEL: 28'X68' MOUNTAINEER	STD PLAN *CONDITIONED*: 1,790 FT²
				MODEL #: MTN28684A26		SERIES: MOUNTAINEER	REV. BY:
				DATE: 06/16/2026	SCALE: N.T.S.	PRODUCT DESIGNER: BRIAN K. RIFFEY	REV. DATE:





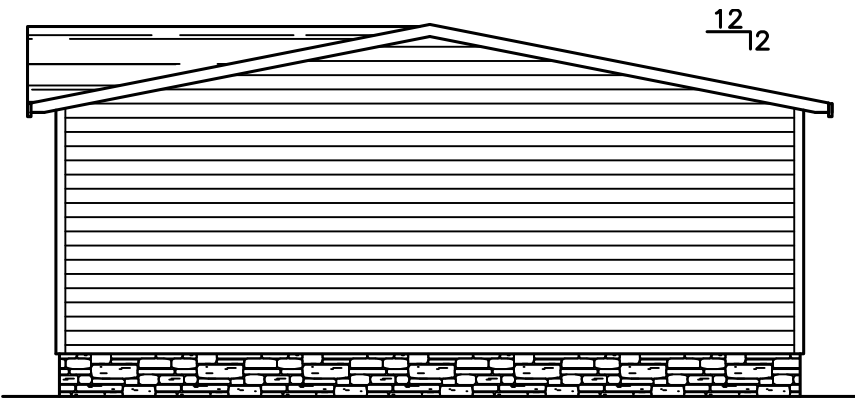
REAR ELEVATION

68'-0"



LEFT SIDE ELEVATION

26'-4"



RIGHT SIDE ELEVATION

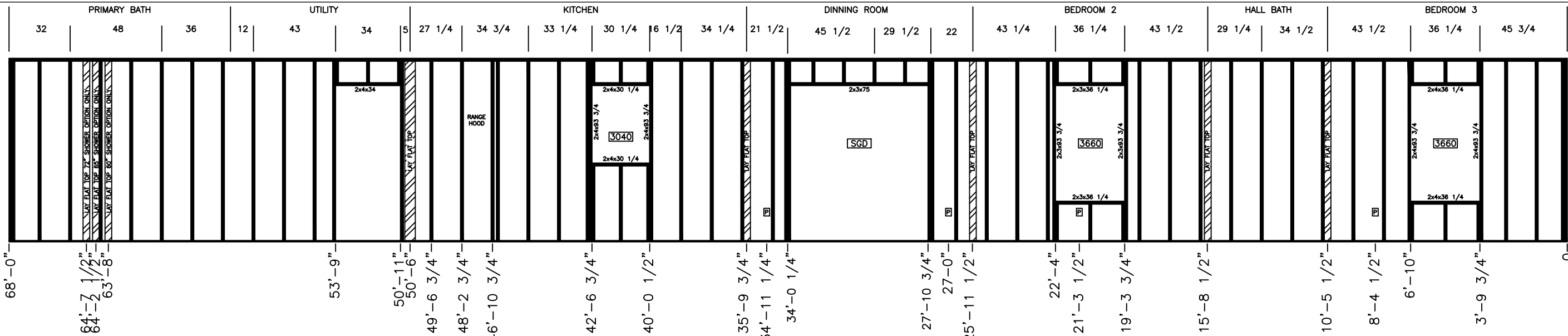
26'-4"



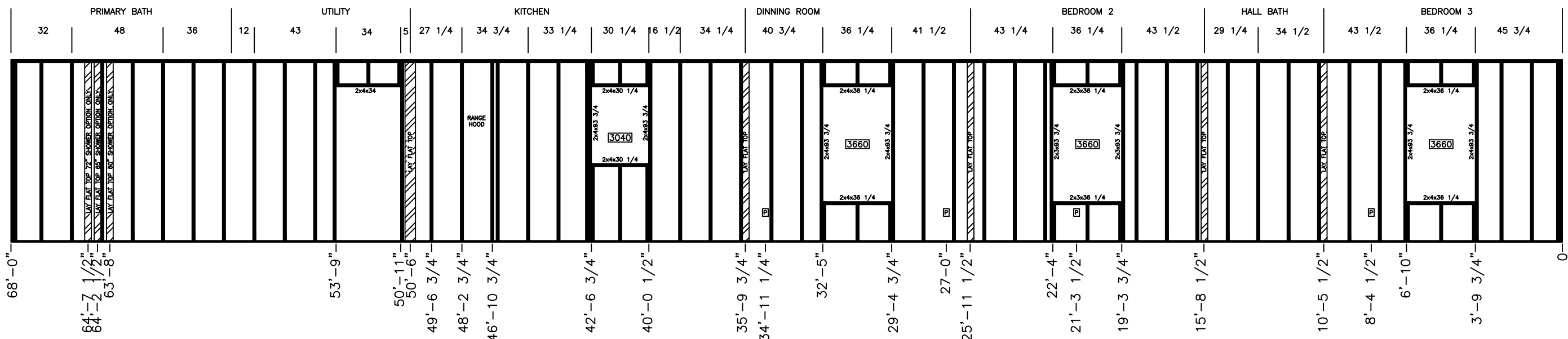
FRONT ELEVATION

68'-0"

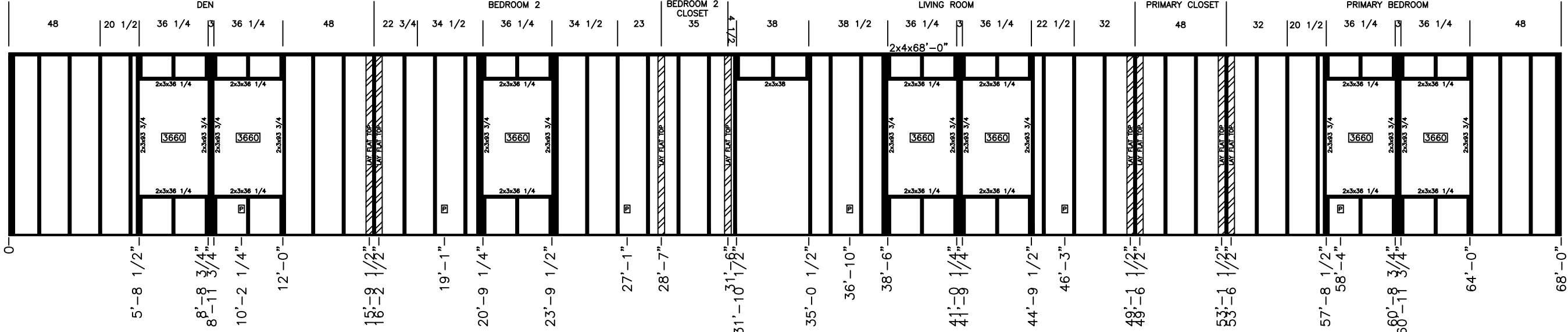
SHEET: ELEV	ELEVATION	 Clayton - 934 1420 Mountain Rd, Andersonville, TN 37705 PH: 865.494.7800 FAX: 865.494.0243	HILBORN, WERNER, CARTER, AND ASSOCIATES, INC. 1627 SOUTH MYRTLE AVE. CLEARWATER, FL. 33756	DRAWING #: 34M405 MODEL #: MTN28684A26 DATE: 06/16/2026 SCALE: NTS	MODEL: 28'X68' MOUNTAINEER SERIES: MOUNTAINEER PRODUCT DESIGNER: BRIAN K. RIFFEY	STD PLAN "CONDITIONED": 1,790 FT² REV. BY: REV. DATE:
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B-Half SGD OPTION



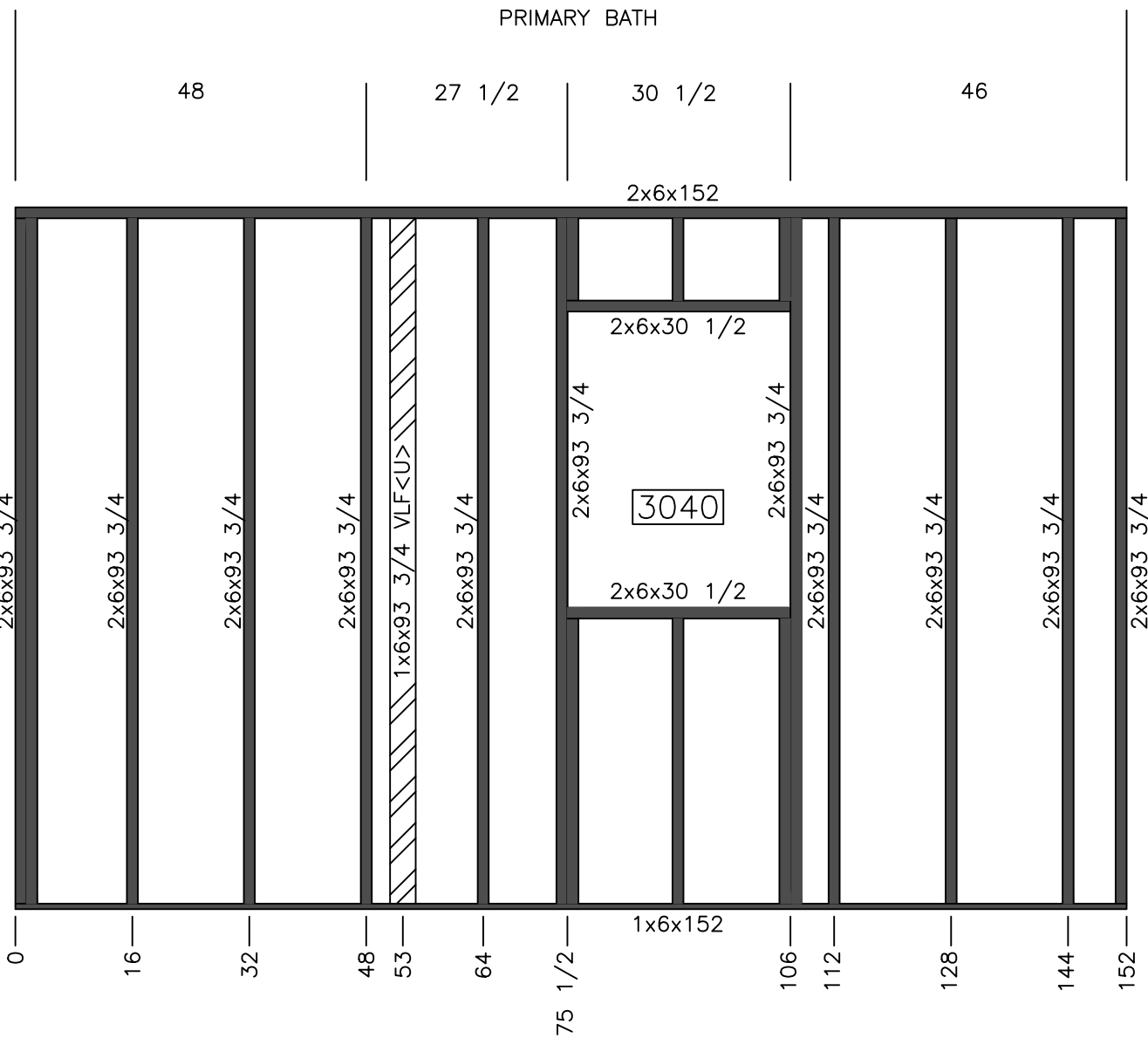
B-Half



A-Half

SHEET:				 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 #: 34M405		MODEL: 28'X68' MOUNTAINEER		STD PLAN *CONDITIONED*: 1,790 FT	
BASE		WALL SET						MODEL #: MTN28684A26		SERIES: MOUNTAINEER		REV. BY:	
								DATE: 06/16/2026		SCALE: N.T.S.		PRODUCT DESIGNER: BRIAN K. RIFFEY	

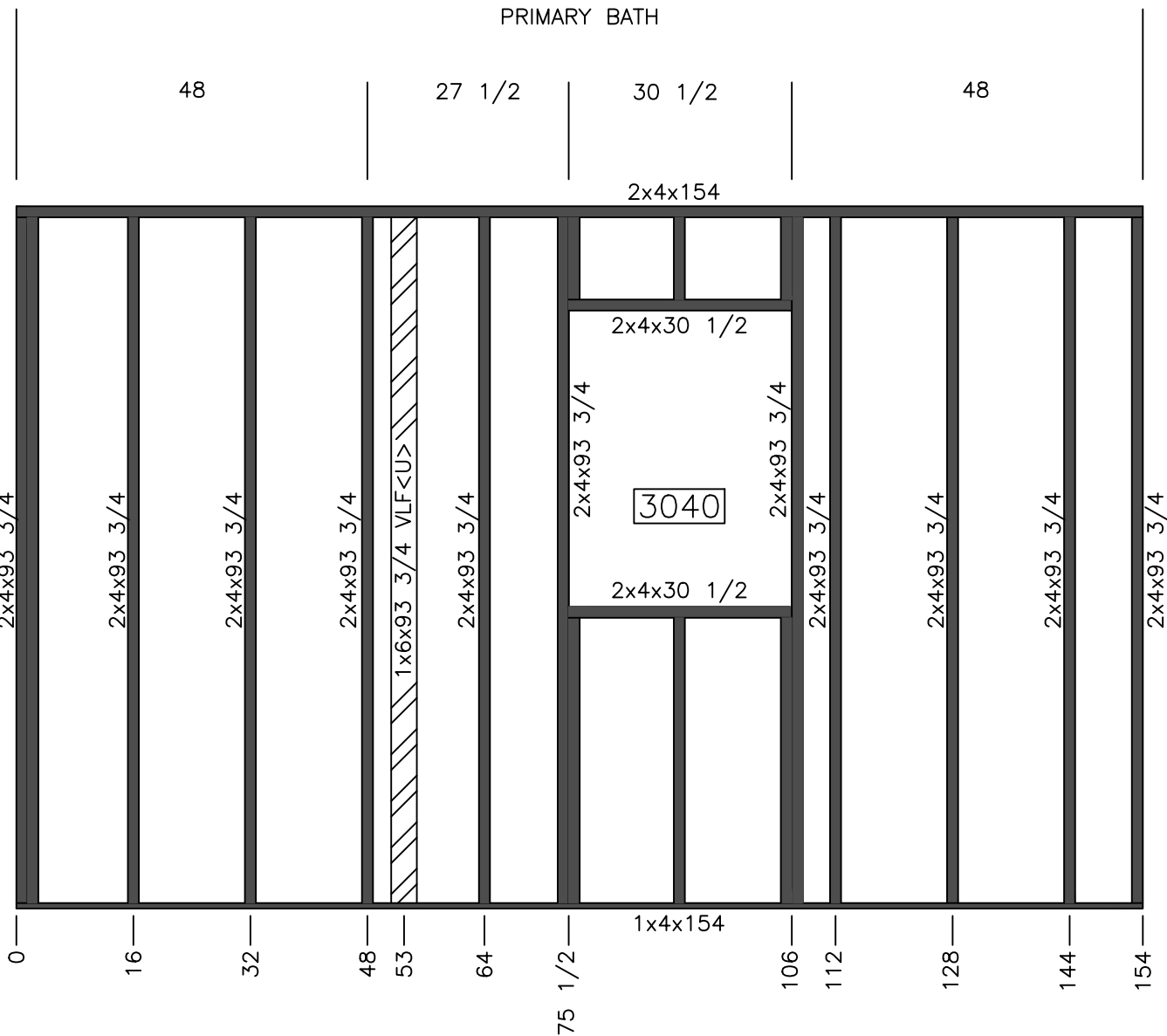
PRINT DATE: 7/23/2024



CUTLIST		
QTY	SIZE	TYPE
1	152	1x6
1	152	2x6
12	93 3/4	2x6
1	93 3/4 VLF<U>	1x6
3	11 1/2	2x6
2	30 1/2	2x6

		Model #: MTN28683A		Drawing #: 34M405
		Date: 7/28/26	Scale: N.T.S.	
Product Designer: B.K.R.	Model: 28' x 68' Mountaineer			
WALL 37			Rev:	

STUD SPACING 24"



CUTLIST		
QTY	SIZE	TYPE
1	154	1x4
1	154	2x4
12	93 3/4	2x4
1	93 3/4 VLF<U>	1x6
3	11 1/2	2x4
2	30 1/2	2x4



Model #: MTN28683A

Date: 7/28/26

Scale: N.T.S.

Drawing #:

34M405

Product Designer:

B.K.R.

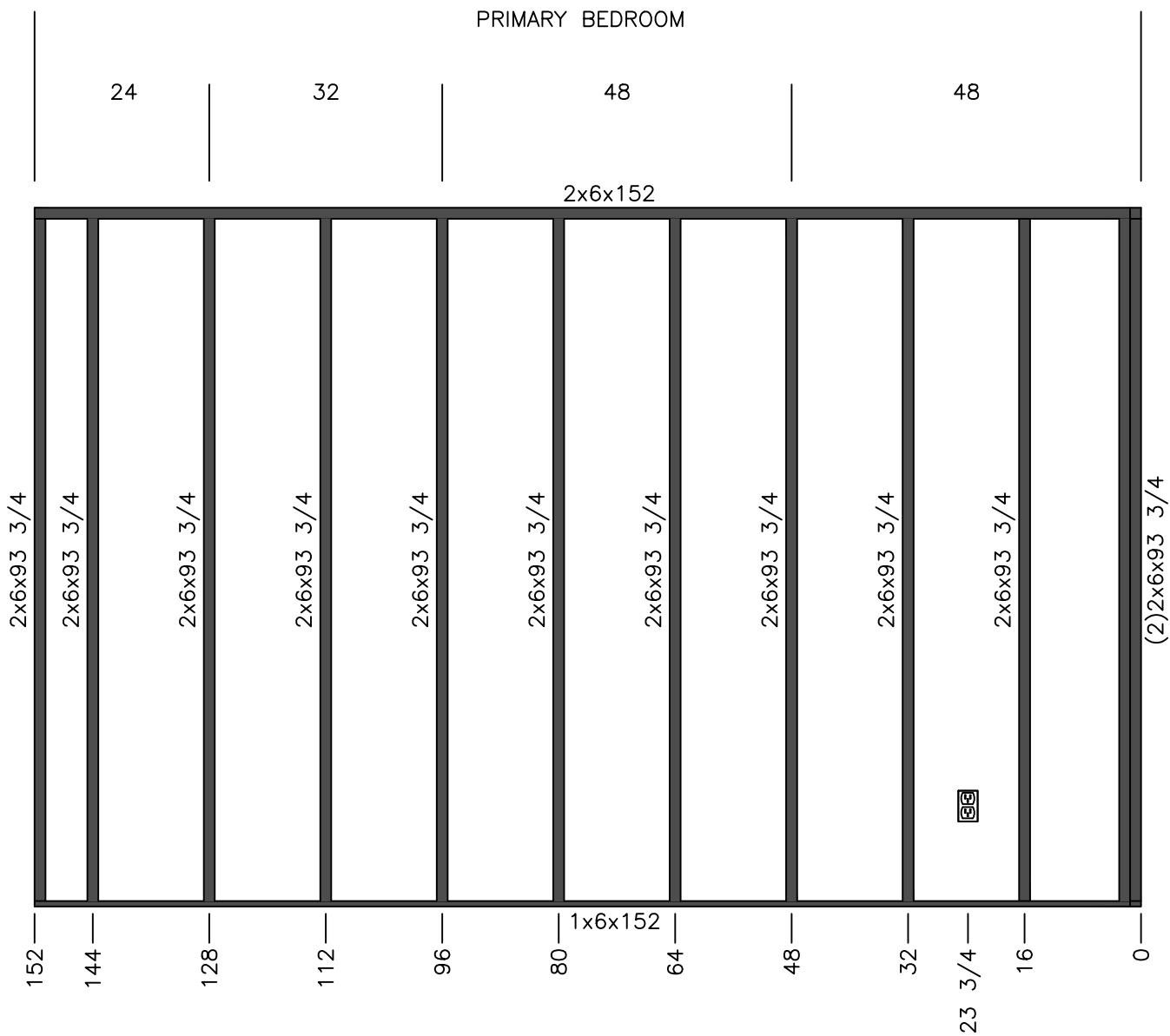
Model:

28' x 68' Mountaineer

WALL 37

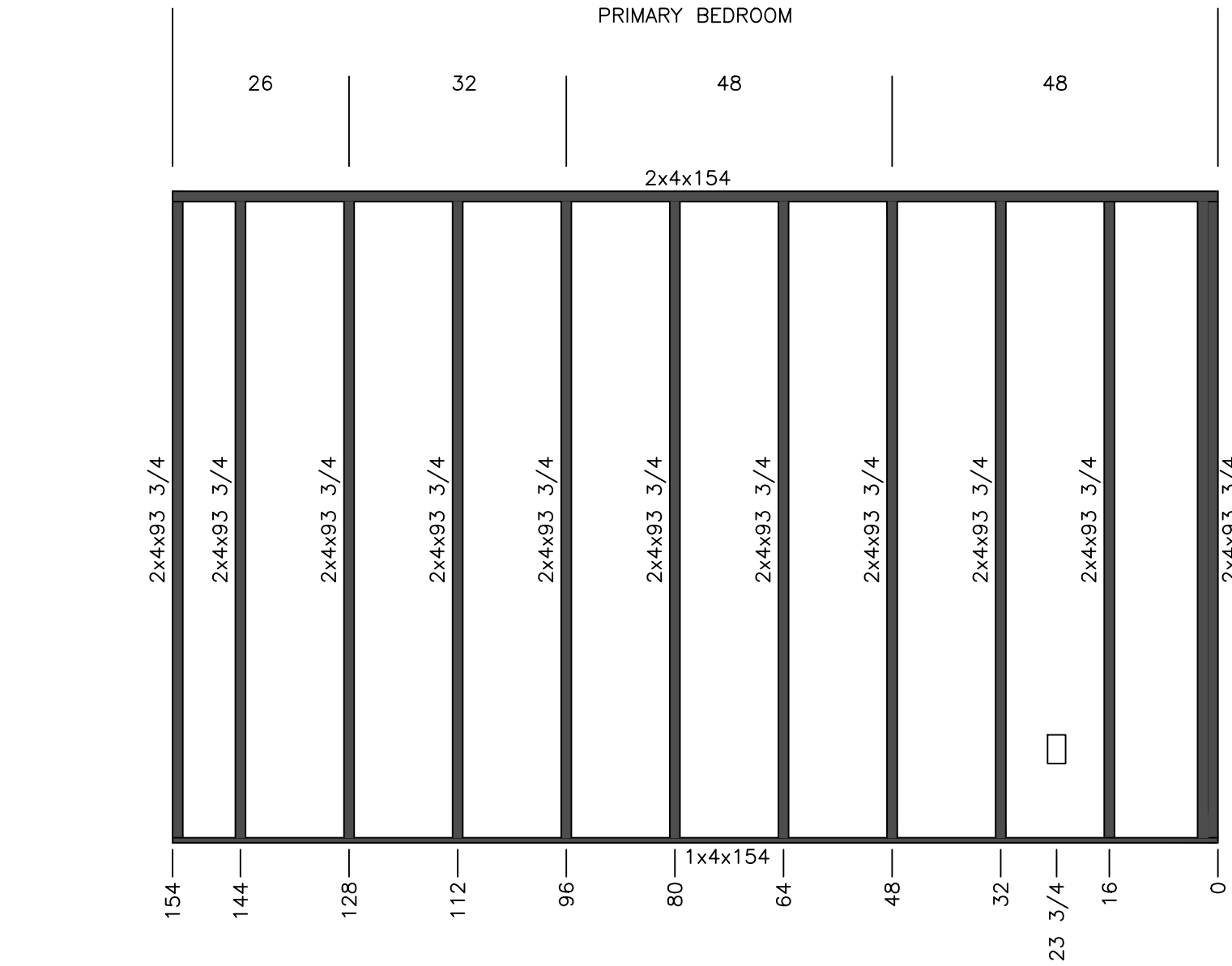
Rev:

STUD SPACING 24"



CUTLIST		
QTY	SIZE	TYPE
1	152	1x6
1	152	2x6
12	93 3/4	2x6

	Model #: MTN28683A		Drawing #: 34M405
	Date: 7/28/26	Scale: N.T.S.	
Product Designer: B.K.R.	Model: 28' x 68' Mountaineer		
WALL 39		Rev:	



CUTLIST		
QTY	SIZE	TYPE
1	154	1x4
1	154	2x4
12	93 3/4	2x4

STUD SPACING 24"



Model #: MTN28683A

Date: 7/28/26Scale: N.T.S.

Drawing #:

34M405

Product Designer:

B.K.R.

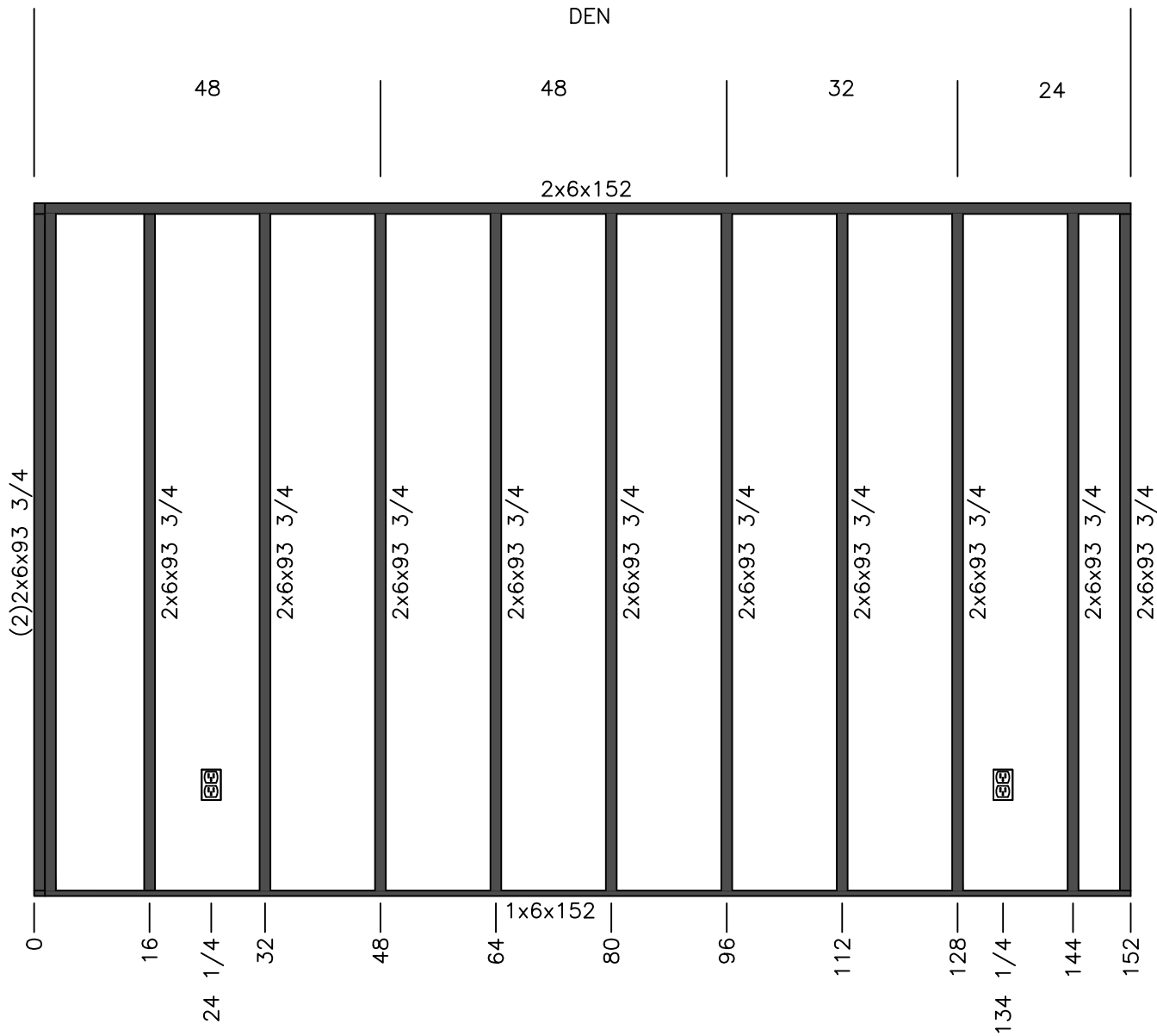
Model:

28' x 68' Mountaineer

WALL 39

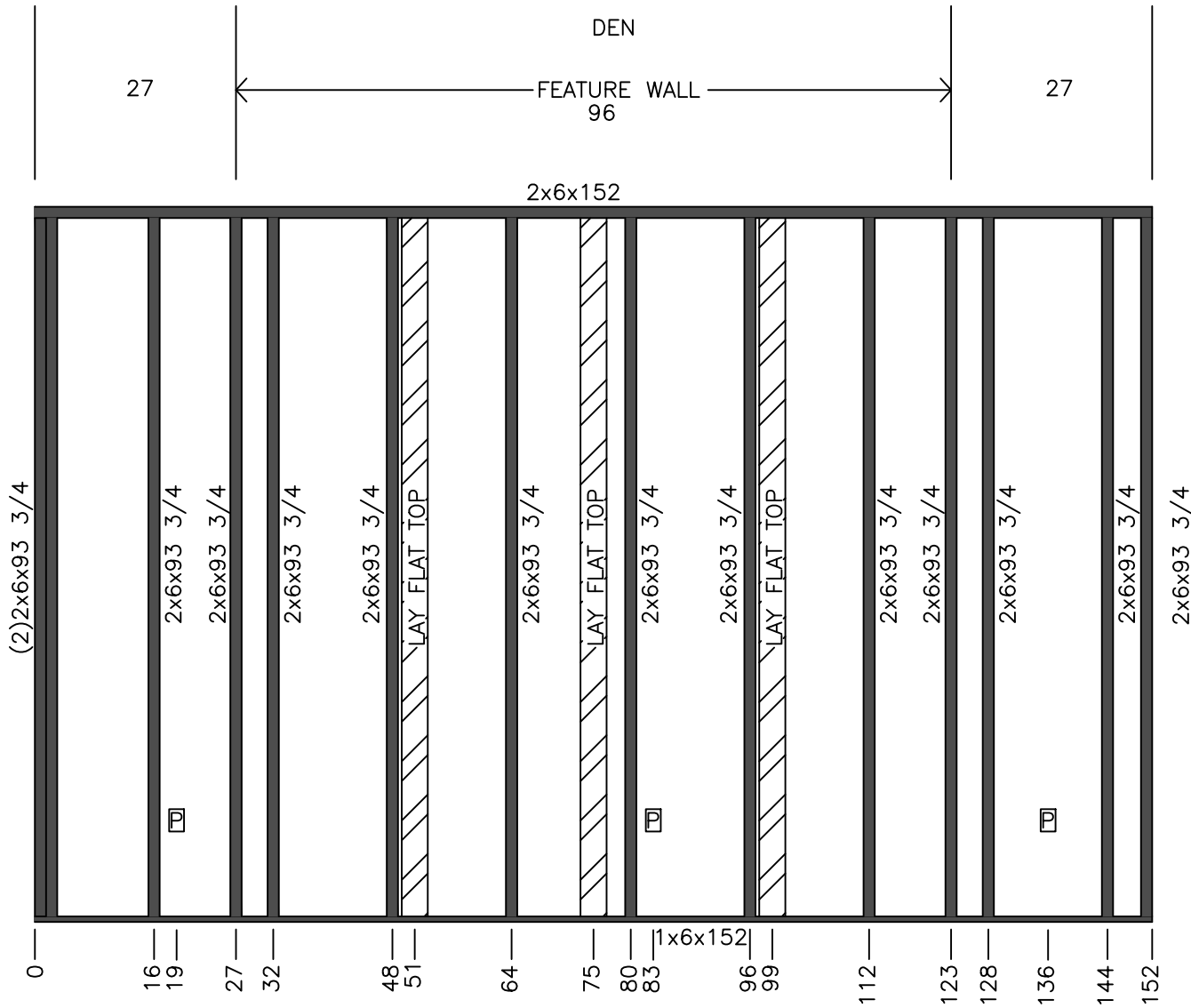
Rev:

STUD SPACING 24"



CUTLIST		
QTY	SIZE	TYPE
1	154	1x6
1	154	2x6
12	93 3/4	2x6
1	93 3/4 VLF<U>	1x4

		Model #: MTN28G83A		Drawing #: 34M405
		Date: 7/28/26	Scale: N.T.S.	
Product Designer: B.K.R.	Model: 28' x 68' Mountaineer			
WALL 40			Rev:	

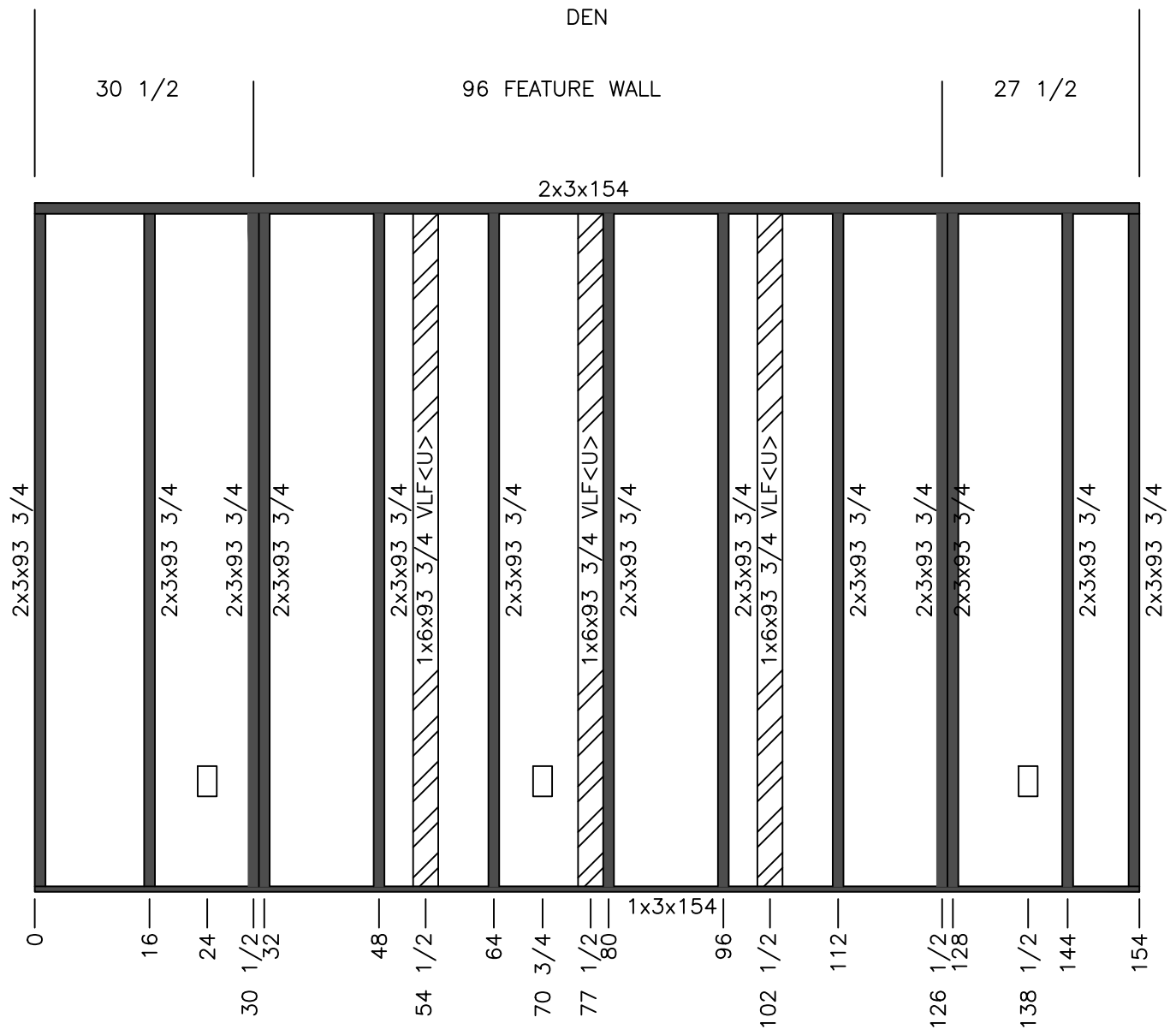


CUTLIST		
QTY	SIZE	TYPE
1	154	1x6
1	154	2x6
12	93 3/4	2x6
1	93 3/4 VLF<U>	1x4

	Model #: MTN28683A		Drawing #: 34M405
	Date: 7/28/26	Scale: N.T.S.	
Product Designer: B.K.R.	Model: 28' x 68' Mountaineer		
WALL 40A			Rev:

STUD SPACING 24"

STUD SPACING 24"



CUTLIST		
QTY	SIZE	TYPE
1	154	1x4
1	154	2x4
11	93 3/4	2x4
1	93 3/4 VLF<U>	1x4



Product Designer:
B.K.R.

Model:
28' x 68' Mountaineer

Model #: MTN28683A

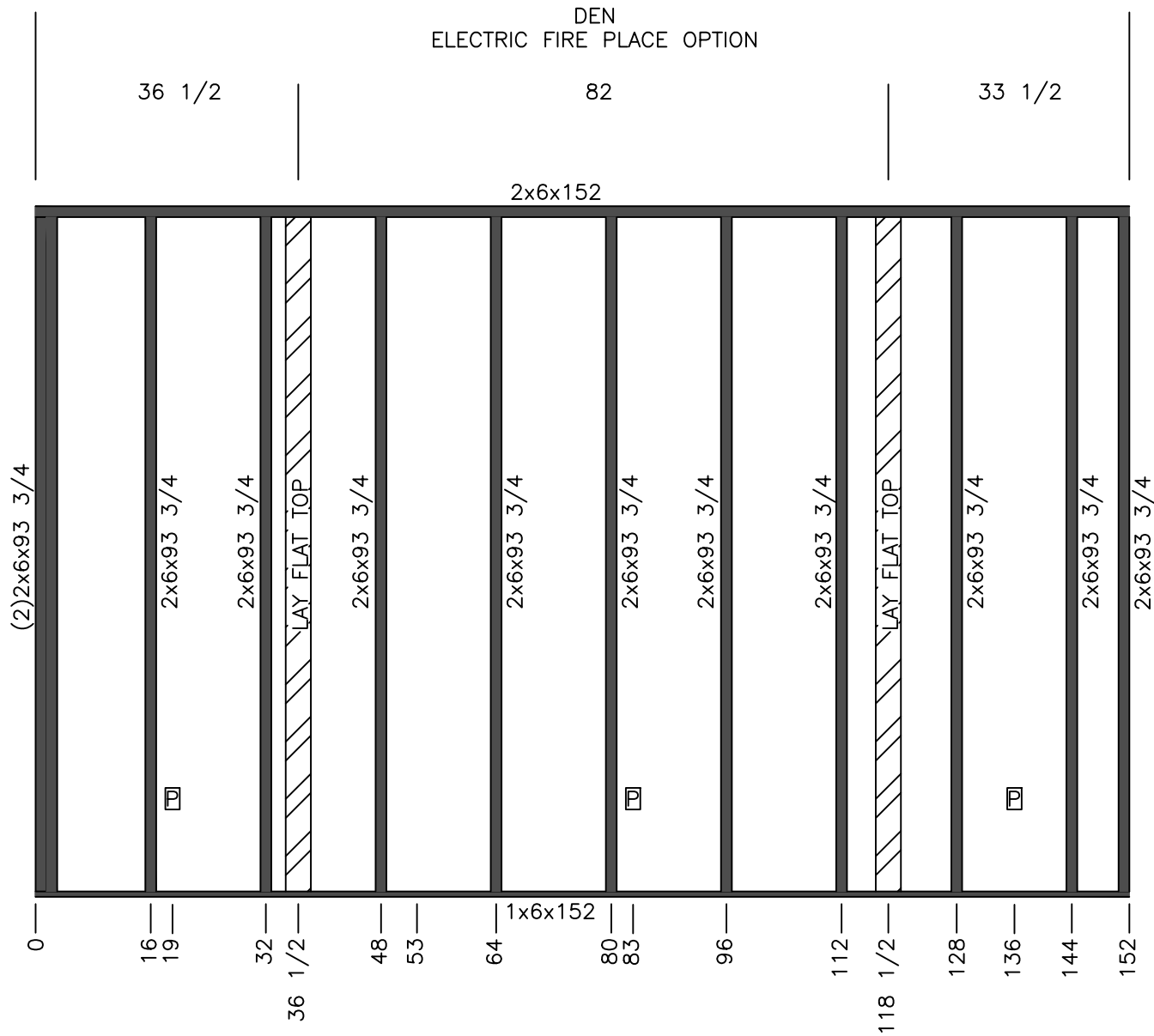
Date: 7/28/26

Scale: N.T.S.

Drawing #:
34M405

Rev:

WALL 40A



CUTLIST		
QTY	SIZE	TYPE
1	152	1x6
1	152	2x6
12	93 3/4	2x6
1	93 3/4 VLF<U>	1x4



Model #: MTN28683A

Drawing #:

Date: 7/28/26

Scale: N.T.S.

34M405

Product Designer:

Model:

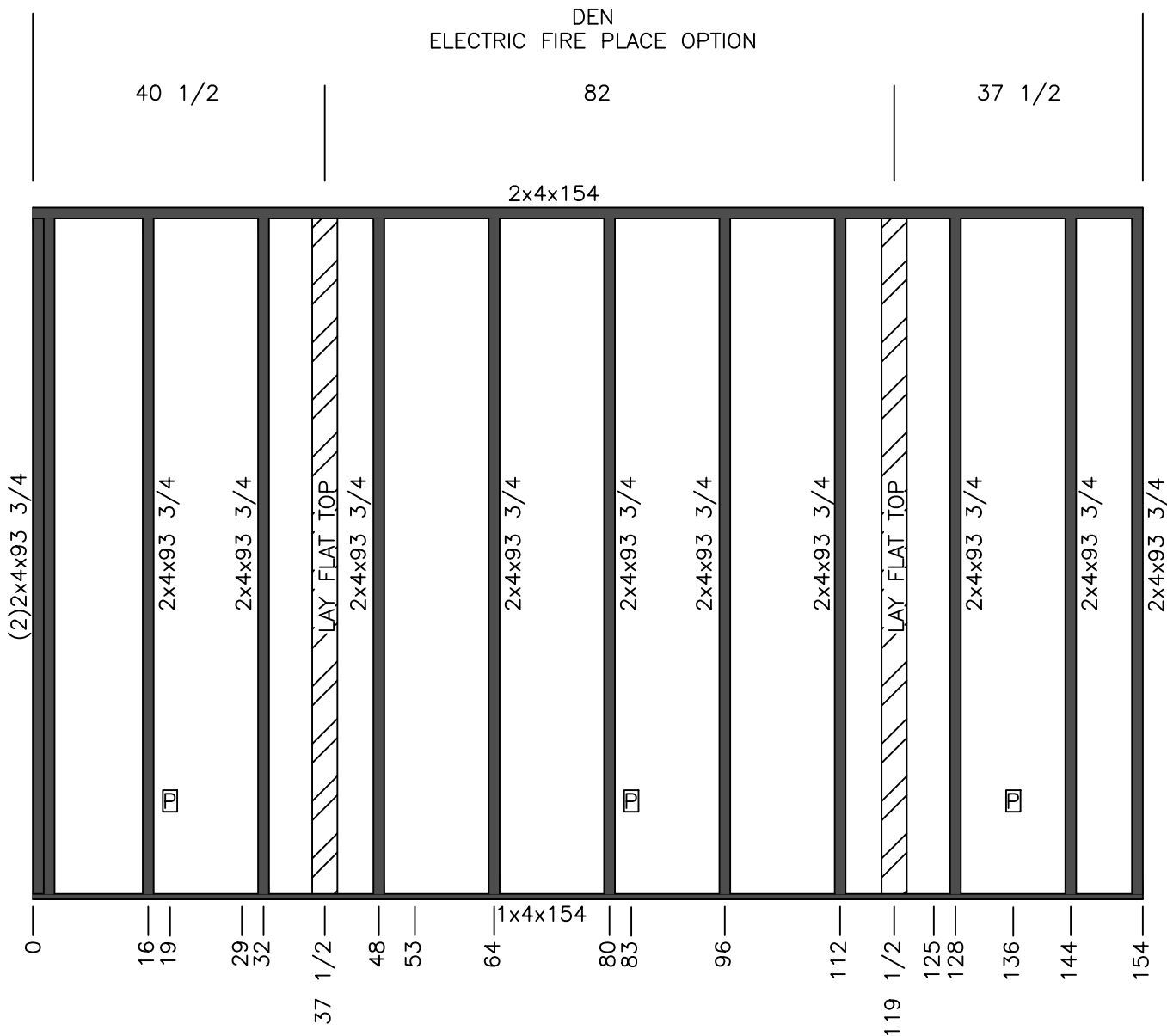
B.K.R.

28' x 68' Mountaineer

WALL 40B

Rev:

STUD SPACING 24"



CUTLIST		
QTY	SIZE	TYPE
1	154	1x4
1	154	2x4
11	93 3/4	2x4
1	93 3/4 VLF<U>	1x4



Model #: MTN28683A

Drawing #:

Date: 7/28/26

Scale: N.T.S.

34M405

Product Designer:

Model:

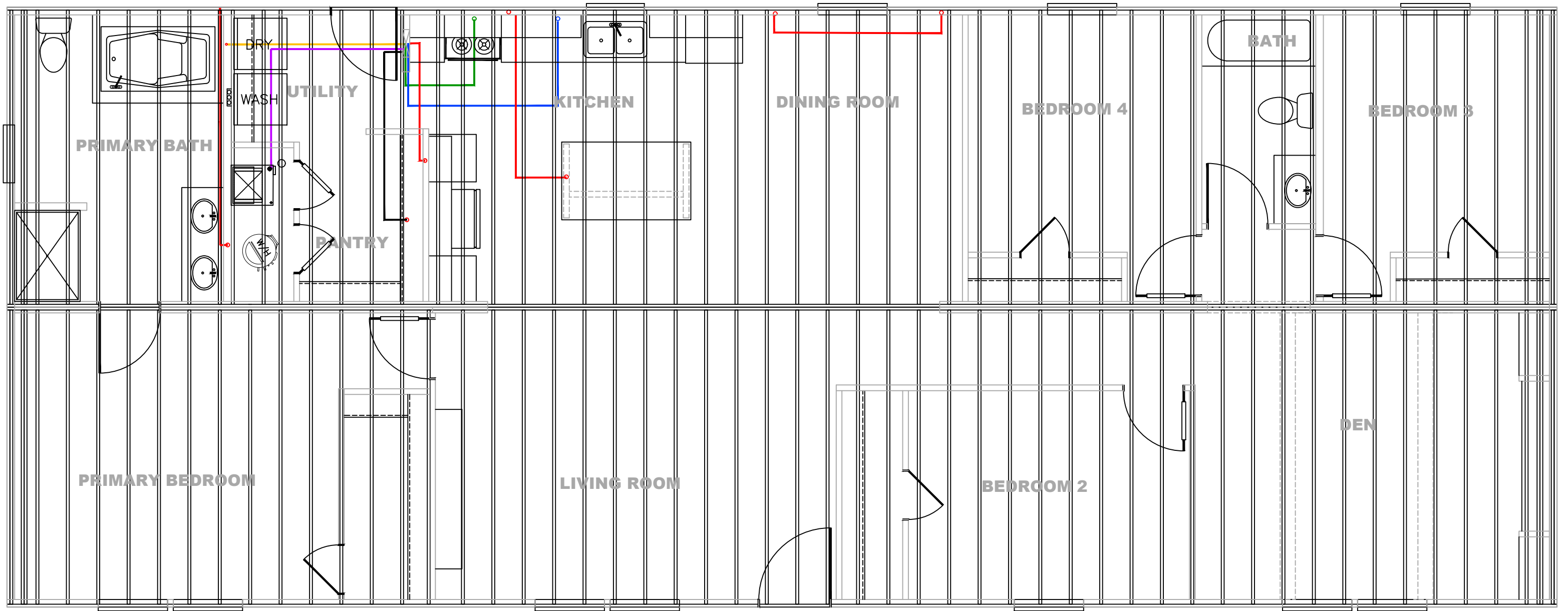
B.K.R.

28' x 68' Mountaineer

WALL 40B

Rev:

STUD SPACING 24"



- = GFI (12-2)
- = RANGE
- = FURNACE
- = DRYER
- = WATER HEATER
- = DISHWASHER (D/W)
- = REFRIGERATOR

MC = METER CENTER DROP

REV #	DATE	DESCRIPTION

SHEET:

FJIG ELEC

FLOOR JOIST
ELECTRICAL LAYOUT

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 #: 34M405

MODEL #: MTN28684A26

DATE: 06/16/2026 SCALE: N.T.S.

MODEL: 28'X68' MOUNTAINEER

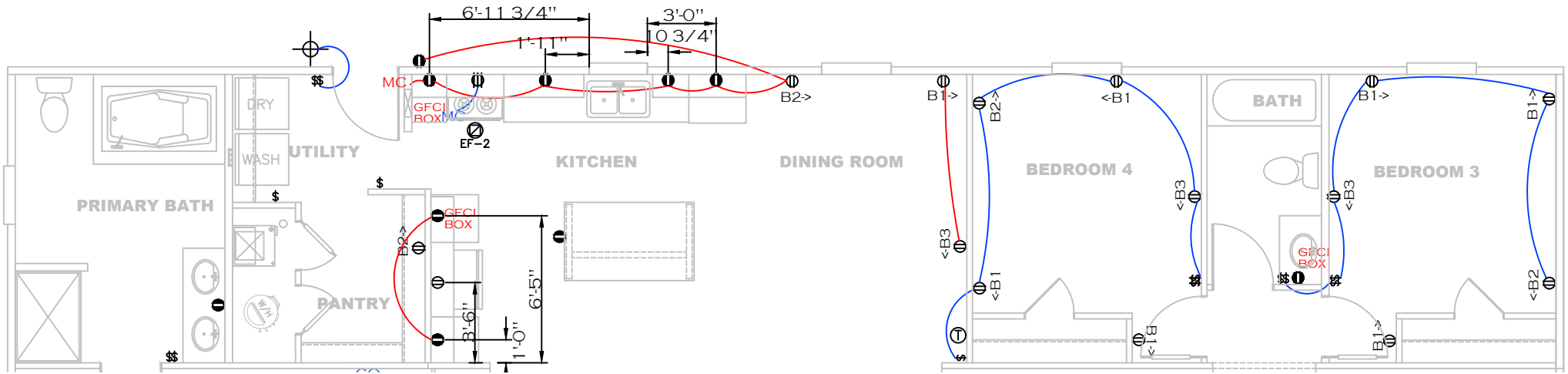
SERIES: MOUNTAINEER

PRODUCT DESIGNER: BRIAN K. RIFFEY

STD PLAN *CONDITIONED*: 1,790 FT²

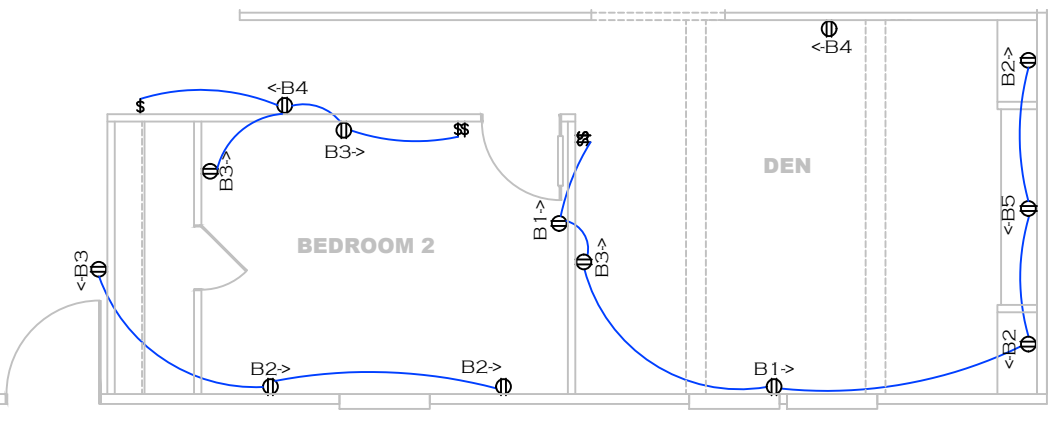
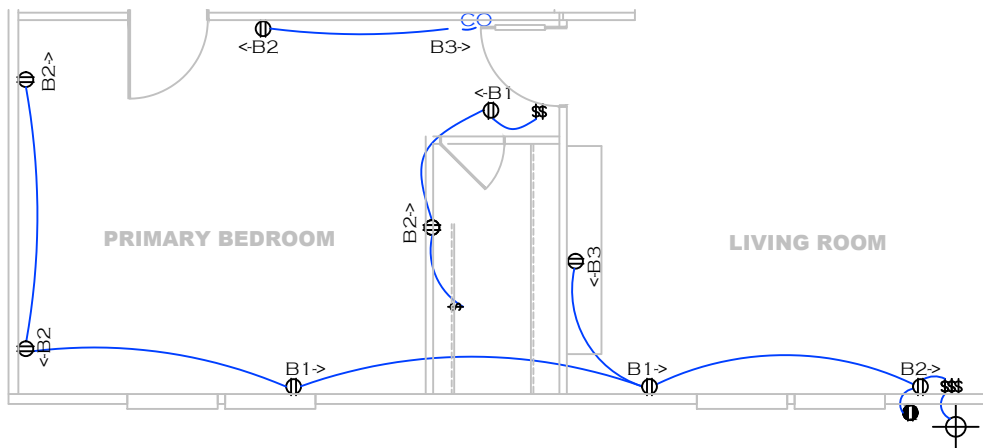
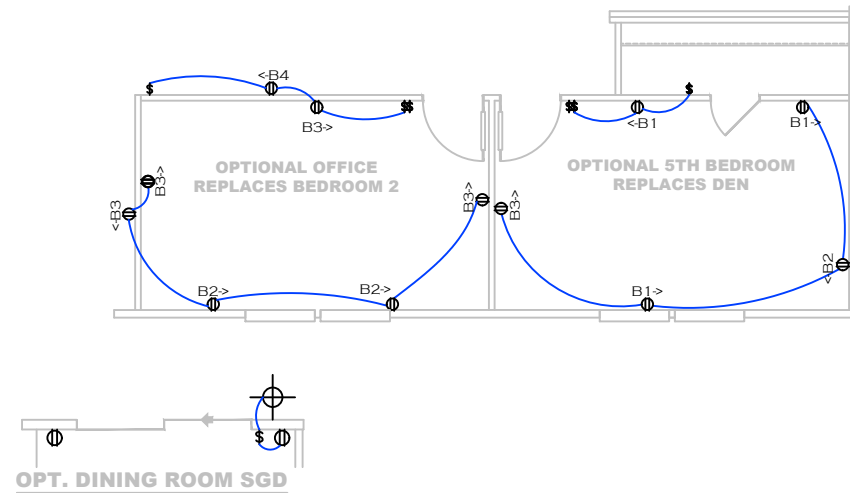
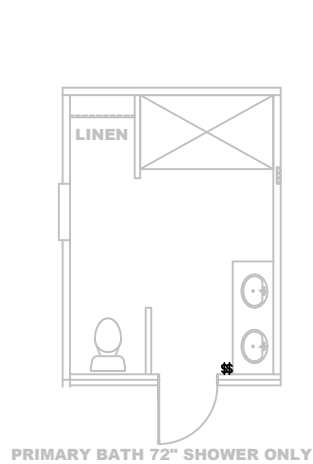
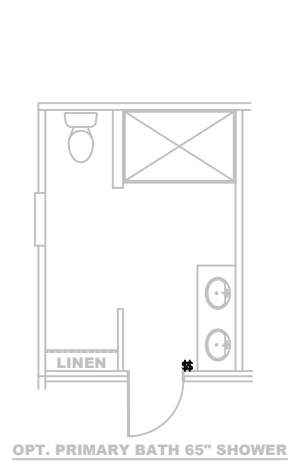
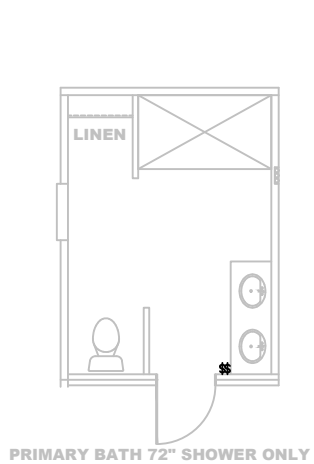
REV. BY:

REV. DATE:

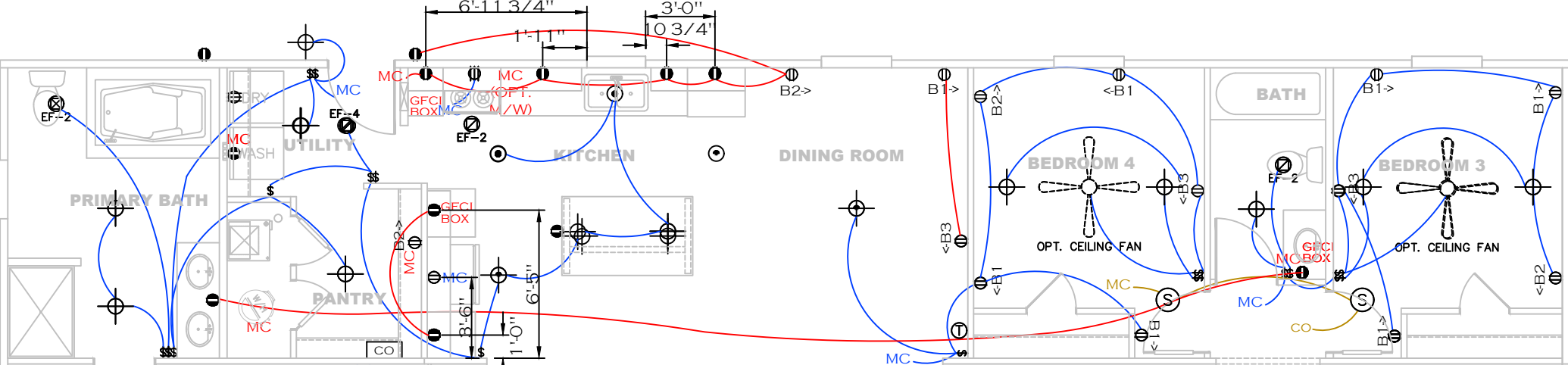


- = 14-2 WIRE (BLUE)
- = 14-2 WIRE (GREEN/LIGHTS)
- = 14-2 WIRE (ORANGE/LED)
- = 12-2 WIRE (RED)
- = 14-3 WIRE (BROWN)
- = THERMOSTAT (LIGHT GREEN)
- CO = CROSSOVER
- MC = METER CENTER DROP

- ⊕ = STANDARD LIGHT
- ⊕ = CAN LIGHT
- ⊕ = SMOKE DETECTOR
- ⊕ = 50 CFM FAN
- ⊕ = 100 CFM FAN

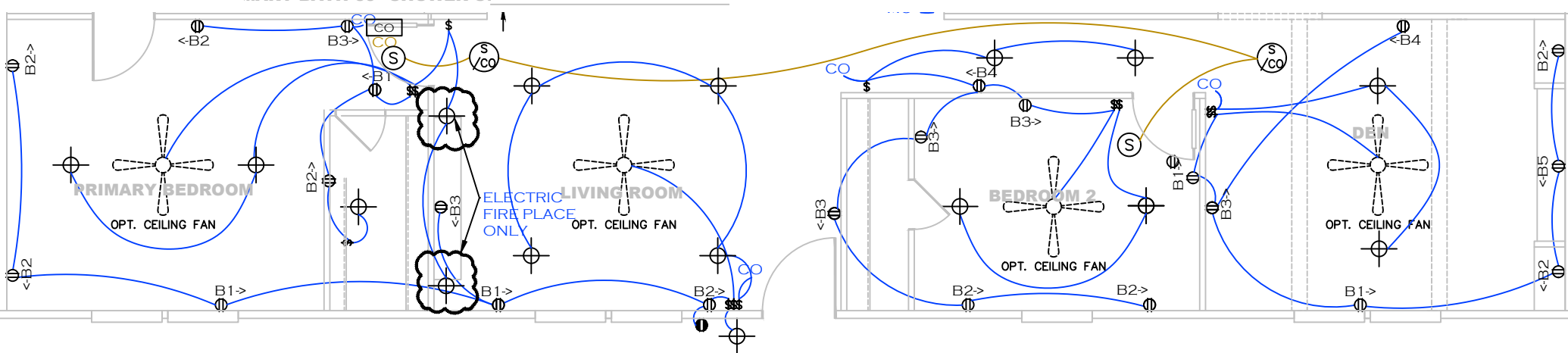
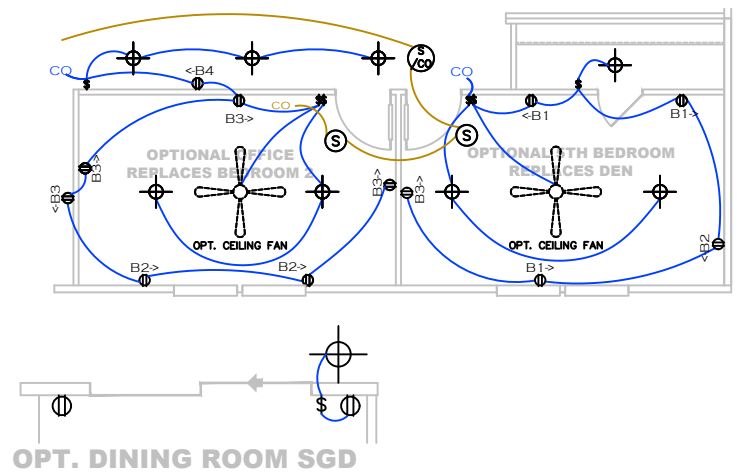
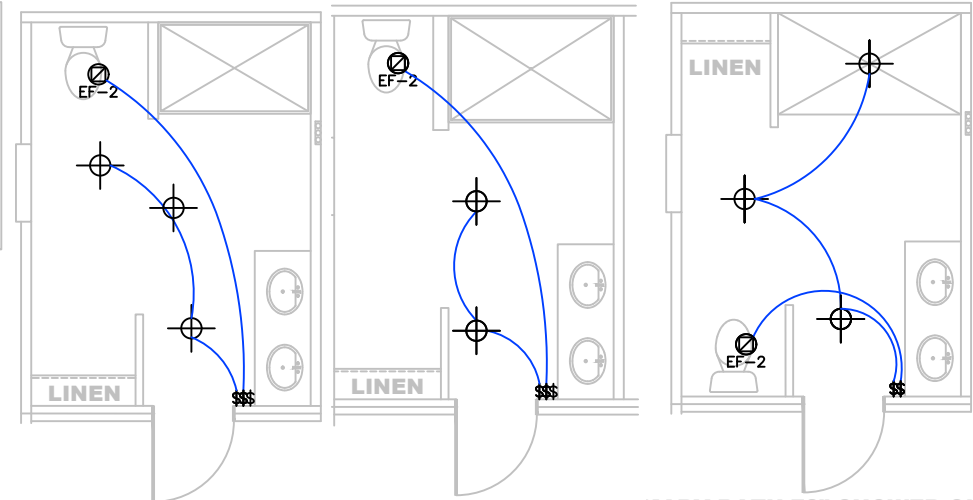


SHEET:	WIRE RUN PLAN	Clayton - 934 1420 Mountain Rd, Andersonville, TN 37705 PH: 865.494.7800 FAX: 865.494.0243	HILBORN, WERNER, CARTER, AND ASSOCIATES, INC. 1627 SOUTH MYRTLE AVE. CLEARWATER, FL. 33756	DRAWING #: 34M405 MODEL #: MTN28684A26 DATE: 06/16/2026	SCALE: N.T.S.	MODEL: 28'X68' MOUNTAINEER SERIES: MOUNTAINEER PRODUCT DESIGNER: BRIAN K. RIFFEY	STD PLAN *CONDITIONED*: 1,790 FT² REV. BY: REV. DATE:
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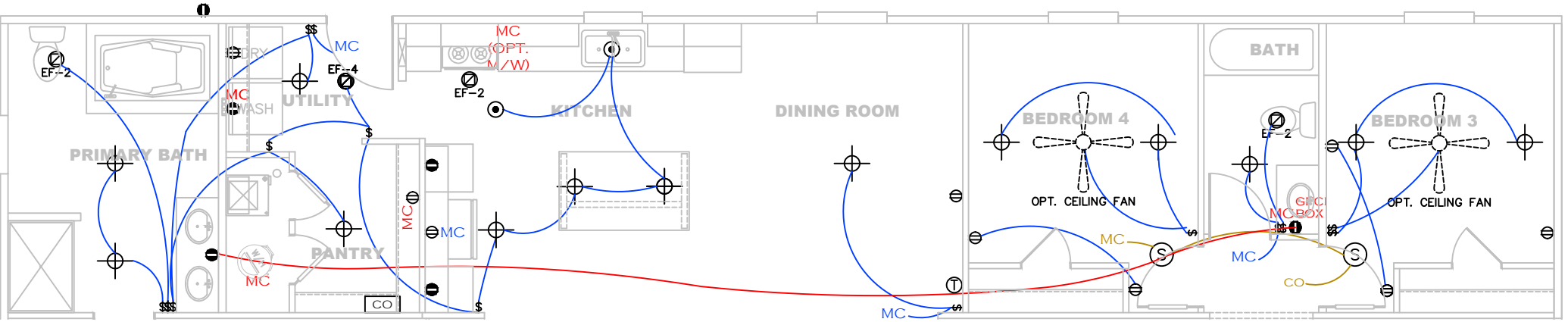


- = 14-2 WIRE (BLUE)
- = 14-2 WIRE (GREEN/LIGHTS)
- = 14-2 WIRE (ORANGE/LED)
- = 12-2 WIRE (RED)
- = 14-3 WIRE (BROWN)
- = THERMOSTAT (LIGHT GREEN)
- CO = CROSSOVER
- MC = METER CENTER DROP

- = STANDARD LIGHT
- = CAN LIGHT
- = SMOKE DETECTOR
- = 50 CFM FAN
- = 100 CFM FAN

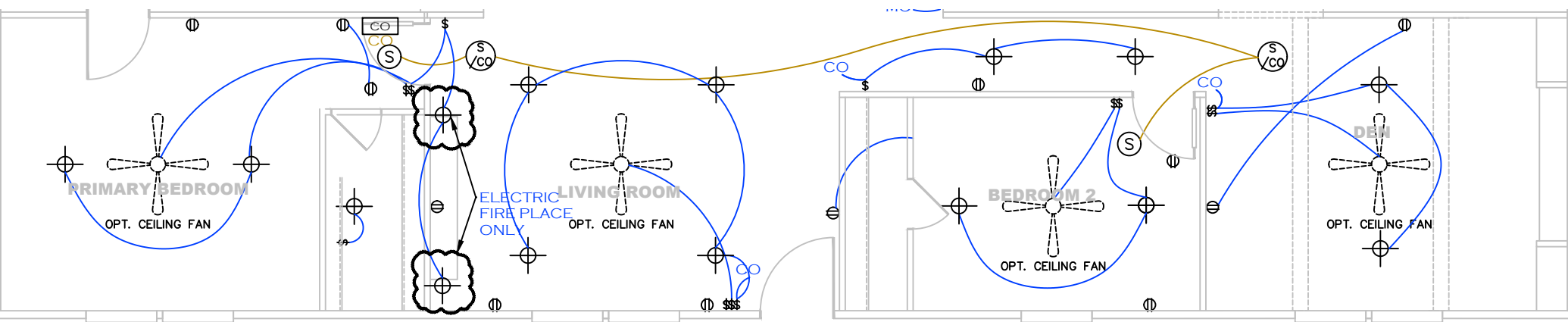
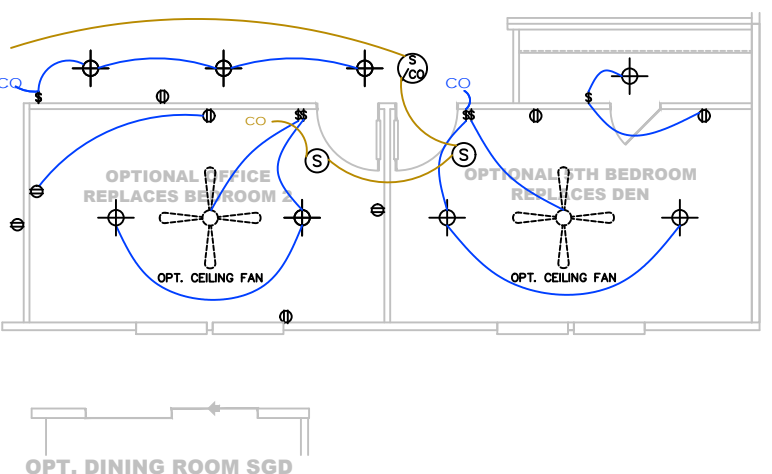
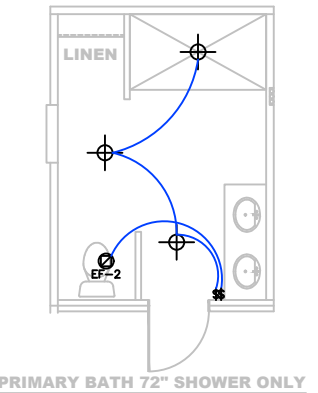
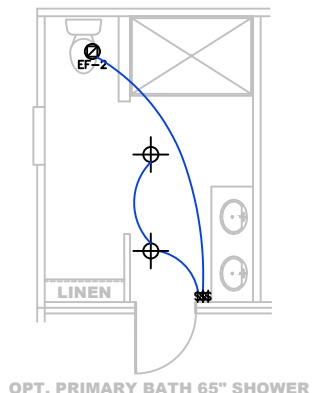
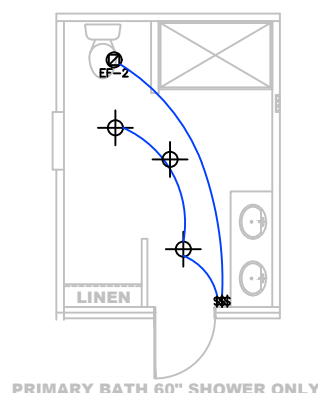


SHEET: MASTER	WIRE RUN PLAN	Clayton - 934 1420 Mountain Rd. Andersonville, TN 37705 PH: 865.494.7800 FAX: 865.494.0243	HILBORN, WERNER, CARTER, AND ASSOCIATES, INC. 1627 SOUTH MYRTLE AVE. CLEARWATER, FL. 33756	DRAWING #: 34M405 MODEL #: MTN28684A26 DATE: 06/16/2026 SCALE: N.T.S.	MODEL: 28'X68' MOUNTAINEER SERIES: MOUNTAINEER PRODUCT DESIGNER: BRIAN K. RIFFEY	STD PLAN "CONDITIONED": 1,790 FT² REV. BY: REV. DATE:
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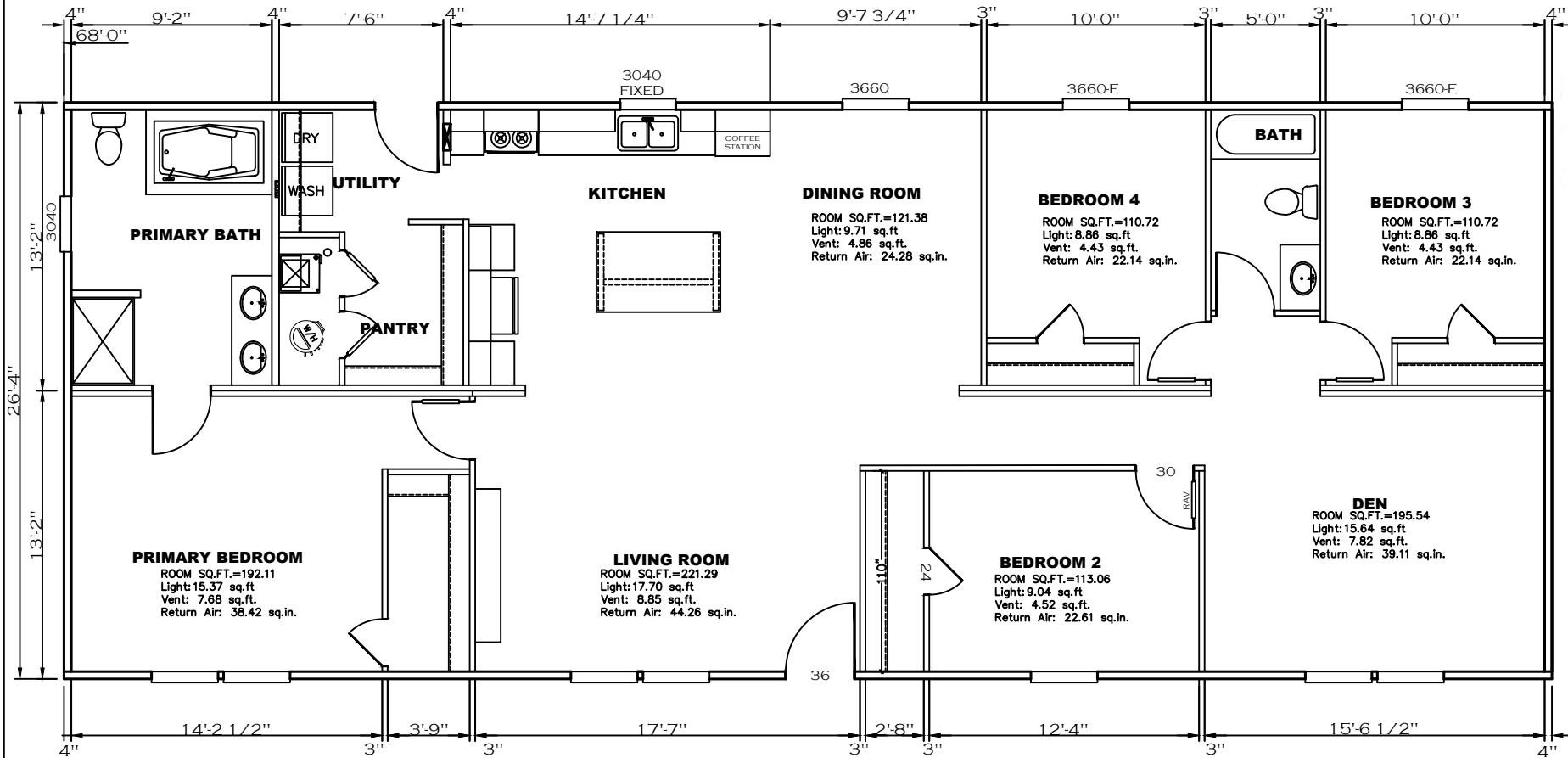


- = 14-2 WIRE (BLUE)
- = 14-2 WIRE (GREEN/LIGHTS)
- = 14-2 WIRE (ORANGE/LED)
- = 12-2 WIRE (RED)
- = 14-3 WIRE (BROWN)
- = THERMOSTAT (LIGHT GREEN)
- CO = CROSSOVER
- MC = METER CENTER DROP

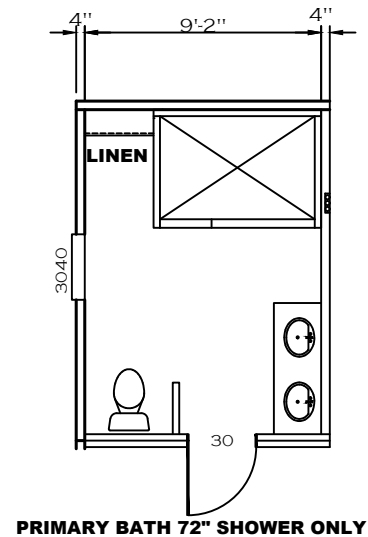
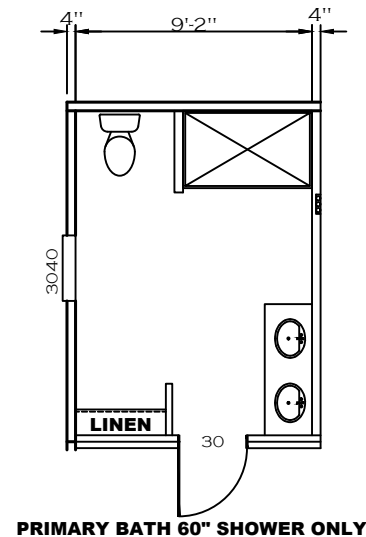
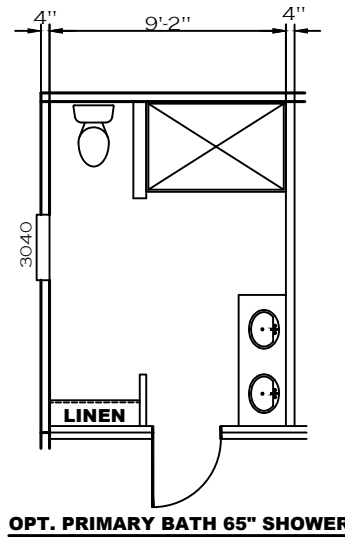
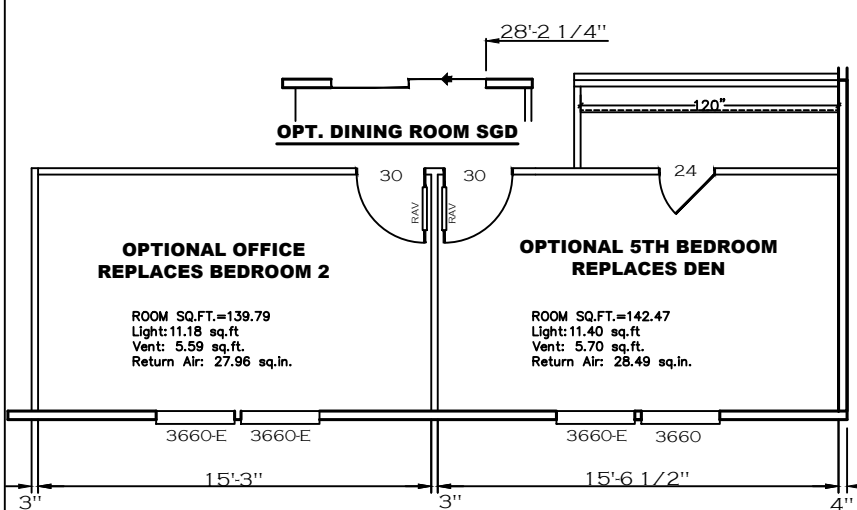
- ⊙ = STANDARD LIGHT
- ⊙ = CAN LIGHT
- ⊙ = SMOKE DETECTOR
- ⊙ = 50 CFM FAN
- ⊙ = 100 CFM FAN

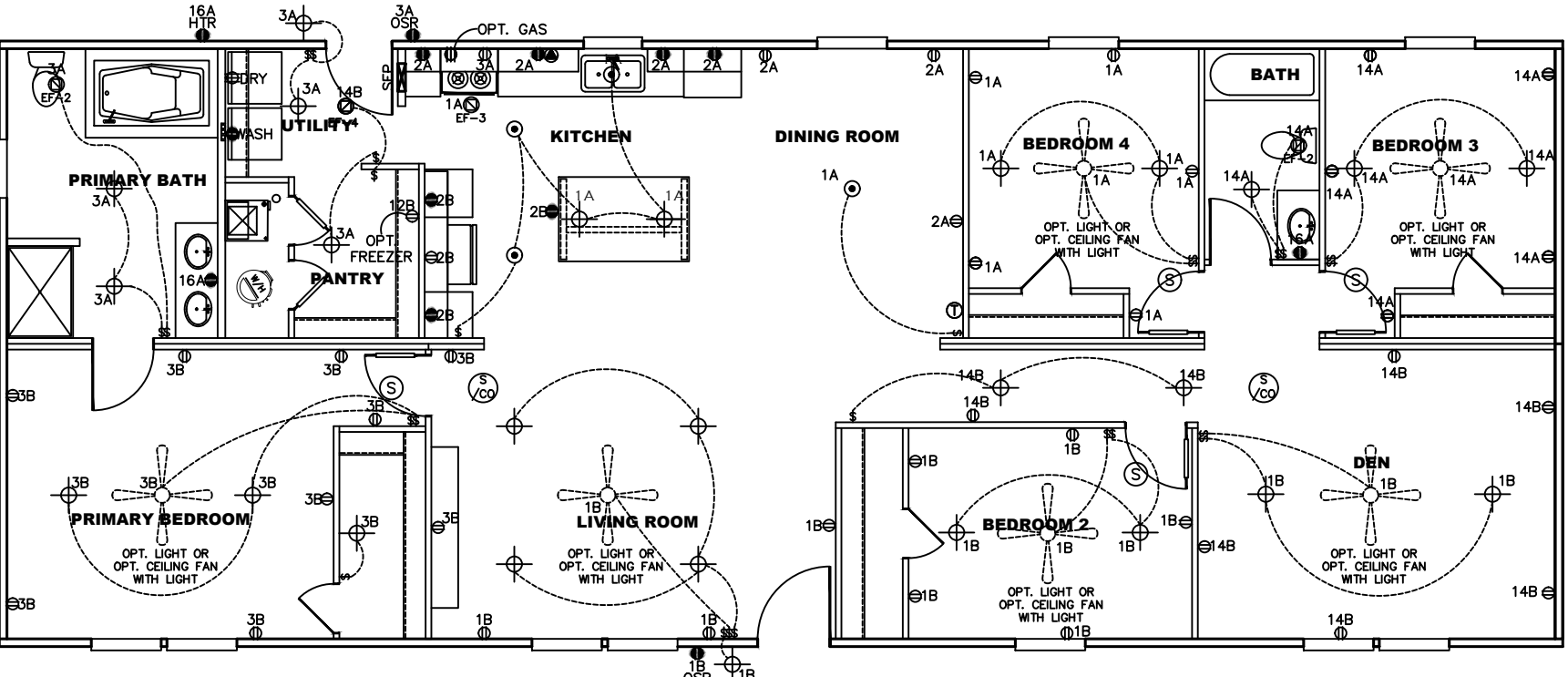


SHEET:	TOP	WIRE RUN PLAN	Clayton - 934 1420 Mountain Rd. Andersonville, TN 37705 PH: 865.494.7800 FAX: 865.494.0243	HILBORN, WERNER, CARTER, AND ASSOCIATES, INC. 1627 SOUTH MYRTLE AVE. CLEARWATER, FL. 33756	DRAWING #: 34M405 MODEL #: MTN28684A26 DATE: 06/16/2026 SCALE: N.T.S.	MODEL: 28'X68' MOUNTAINEER SERIES: MOUNTAINEER PRODUCT DESIGNER: BRIAN K. RIFFEY	STD PLAN *CONDITIONED*: 1,790 FT² REV. BY: REV. DATE:
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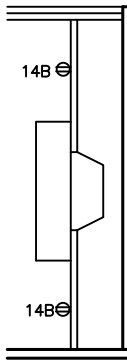


NOTES:
1. LESS THAN 35' FROM ANY BEDROOM DOOR TO NEAREST EXIT.





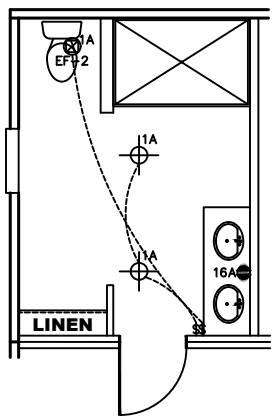
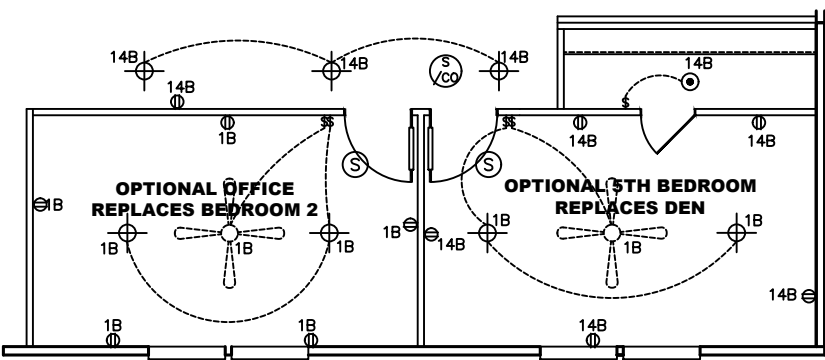
- NOTES:
1. ALL CIRCUITS SHOWN ARE FOR REFERENCE AND MAY BE CHANGED BASED ON OPTIONAL COMPONENTS INSTALLED IN THE HOME.
 2. REFER TO DAPIA MANUAL FOR SYMBOL CHART.
 3. EITHER LIGHT OR RECEPTACLE MUST CONNECT TO SWITCH.
 4. EF-1= 50 CFM EXHAUST FAN REQUIRED FOR THERMAL ZONE III THERMAL ZONES I & II MAY USE FAN OR WINDOW W/1.5 SQ. FT. OPENABLE GLASS.
 5. EF-2= 50 CFM EXHAUST FAN REQUIRED THERMAL ZONE I, II, AND III.
 6. EF-3= 100 CFM RANGE EXHAUST FAN, SWITCH AT HOOD.
 7. EF-4= WHOLE HOUSE VENTILATION REQUIREMENTS PER DAPIA MANUAL.
 8. REFER TO DAPIA MANUAL OR THE MFG. INSTALLATION INSTRUCTIONS FOR PROPER WIRE SIZE AND BREAKER SIZE FOR SPECIFIC APPLIANCE AND MODEL BEING INSTALLED.
 9. ALL SMOKE ALARMS TO BE LOCATED ON THE CEILING.
 10. 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.
 11. DIMENSIONS SHOWN ON PRINT ARE APPROXIMATE AND TO BE USED ONLY AS A GUIDELINE.
 12. LOUVERED DOORS SERVE AS RETURN AIR VENT.



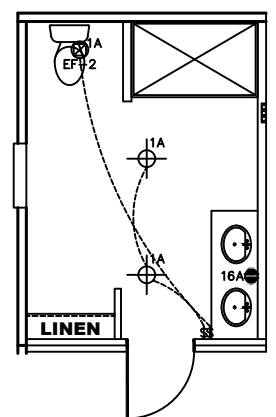
OPT. DEN FIREPLACE



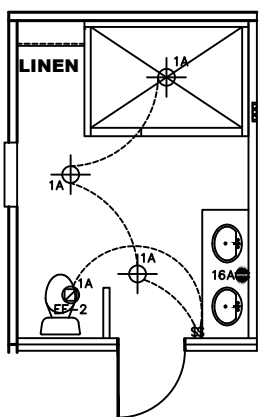
OPT. DINING ROOM SGD



OPT. PRIMARY BATH 65" SHOWER



PRIMARY BATH 60" SHOWER ONLY



PRIMARY BATH 72" SHOWER ONLY

APPROVED

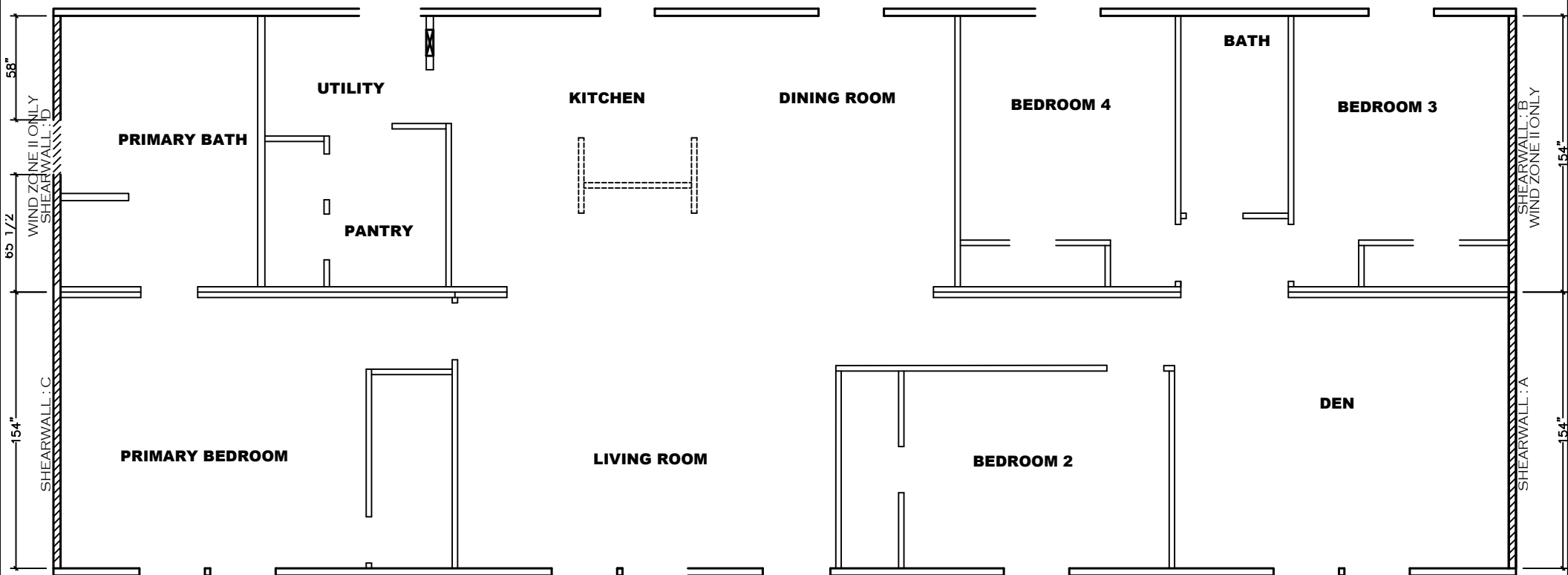
HWC

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JUNE 22 2026

Federal Manufactured
Home Construction
And Safety Standards

CIRCUIT	CIRCUIT #	WIRE	BREAKER	CIRCUIT	CIRCUIT #	WIRE	BREAKER	CIRCUIT	CIRCUIT #	WIRE	BREAKER
LIGHT/RECEP	1A,1B,3A,3B,14A,14B	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	12A	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					



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JUNE 22 2026

Federal Manufactured
Home Construction
And Safety Standards

6

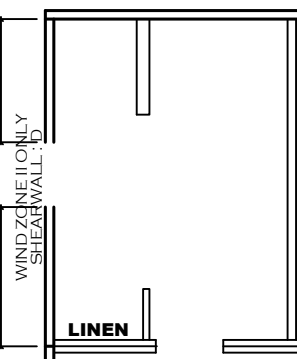
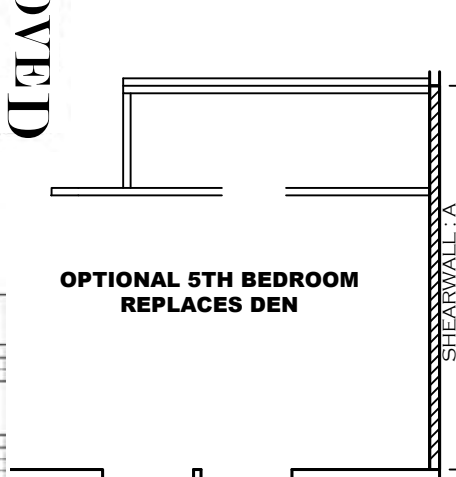
Model # 34M405

Box Width = 158" Double wide No Offset Box
Box Length = 68 ft. 99 5" 12" MIN BEAM No Clearestory
No Skylights No Original Domes No Sunken Floor
Joist Size = #2 up 2x6 Laga 3Mx3 No Parapet Roof

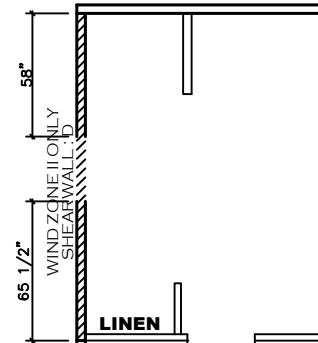
Version R14.01

Wind Zone 1 Standard Roof					
7/16" Rated Sheathing and Ceiling Board with 15 ga staples @ 5/12 (288,316) Chords 2x4 SPF #3 Top Plate & 2x4 Rail. Each applied w/ 12" glue block.					
Diaphragm Construction Black Dist. X=0					
Shearwall	Dist / Pitch	Length	PLF	# of Joists	Laga
A	0"	Full	152	2	1/1
C	68"	Full	152	2	1/1
Wind Zone 2 Standard Roof					
7/16" Rated Sheathing and Ceiling Board with 15 ga staples @ 5/12 (288,316) Chords 2x4 SPF #3 Top Plate & 2x4 Rail. Each applied w/ 12" glue block.					
Diaphragm Construction Black Dist. X=0					
Shearwall	Dist / Pitch	Length	PLF	# of Joists	Laga
A	0"	128"	250	2	3/1
B	0"	128"	250	2	3/1
C	68"	144"	250	2	3/2
D	68"	123.6"	250	2	3/3 Right Shearwall 65 5/8"

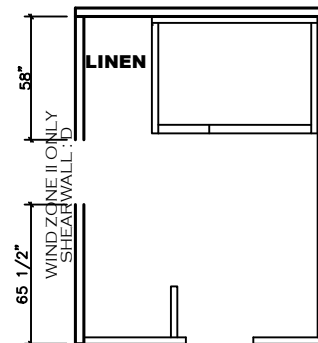
**OPTIONAL 5TH BEDROOM
REPLACES DEN**



OPT. PRIMARY BATH 65" SHOWER



PRIMARY BATH 60" SHOWER ONLY



PRIMARY BATH 72" SHOWER ONLY

SHEET:

SW

SHEARWALL

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 #: 34M405-SW

MODEL #: MTN28684A26

DATE: 06/16/2026

SCALE: N.T.S.

MODEL: 28'X68' MOUNTAINEER

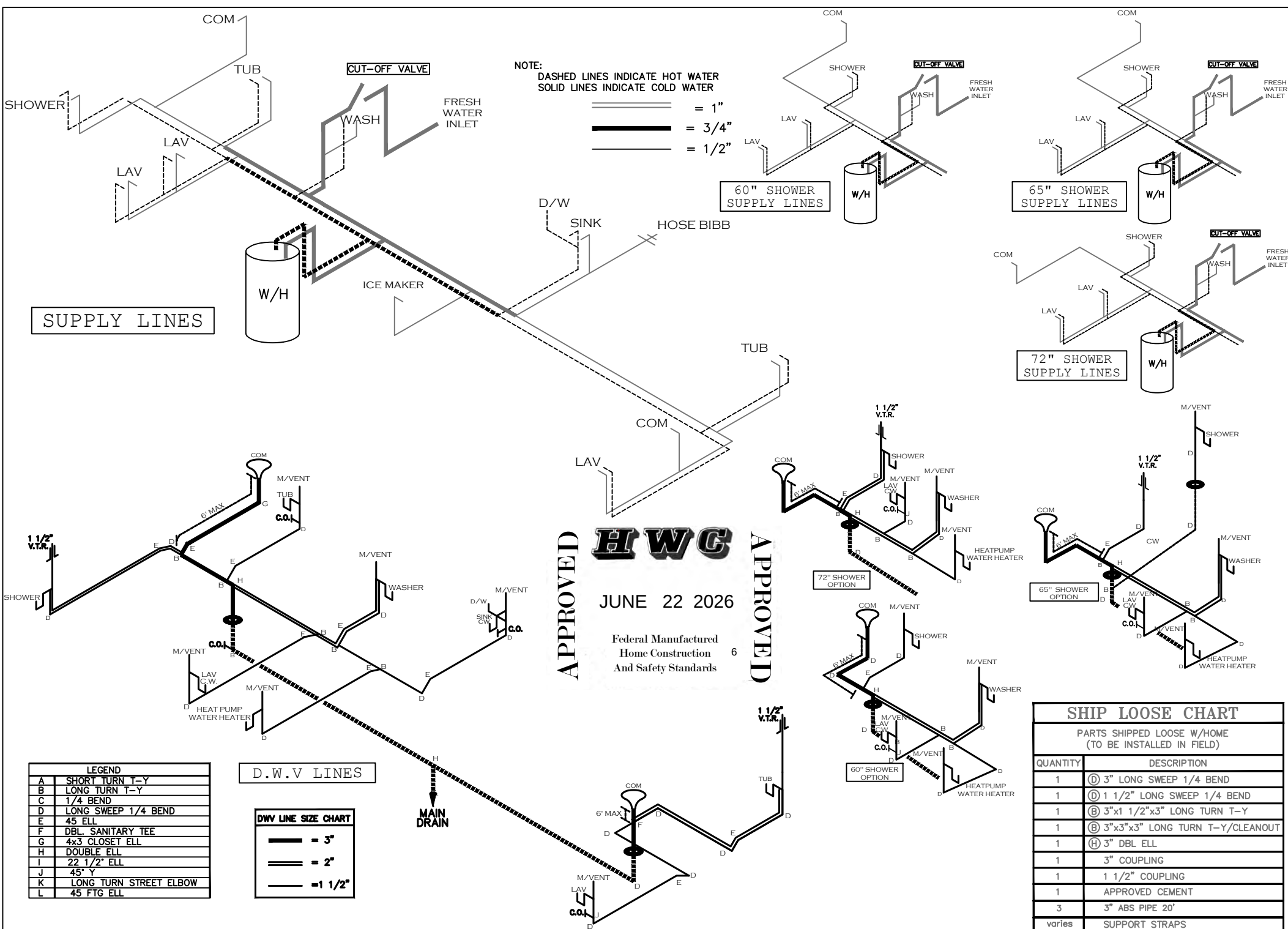
SERIES: MOUNTAINEER

PRODUCT DESIGNER: BRIAN K. RIFFEY

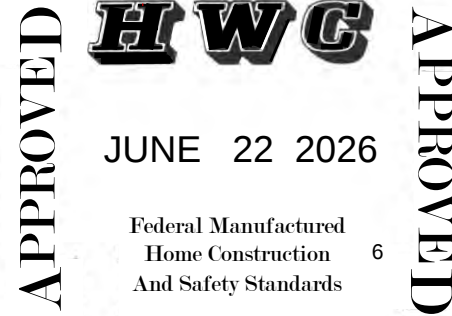
STD PLAN "CONDITIONED": 1,790 FT²

REV. BY:

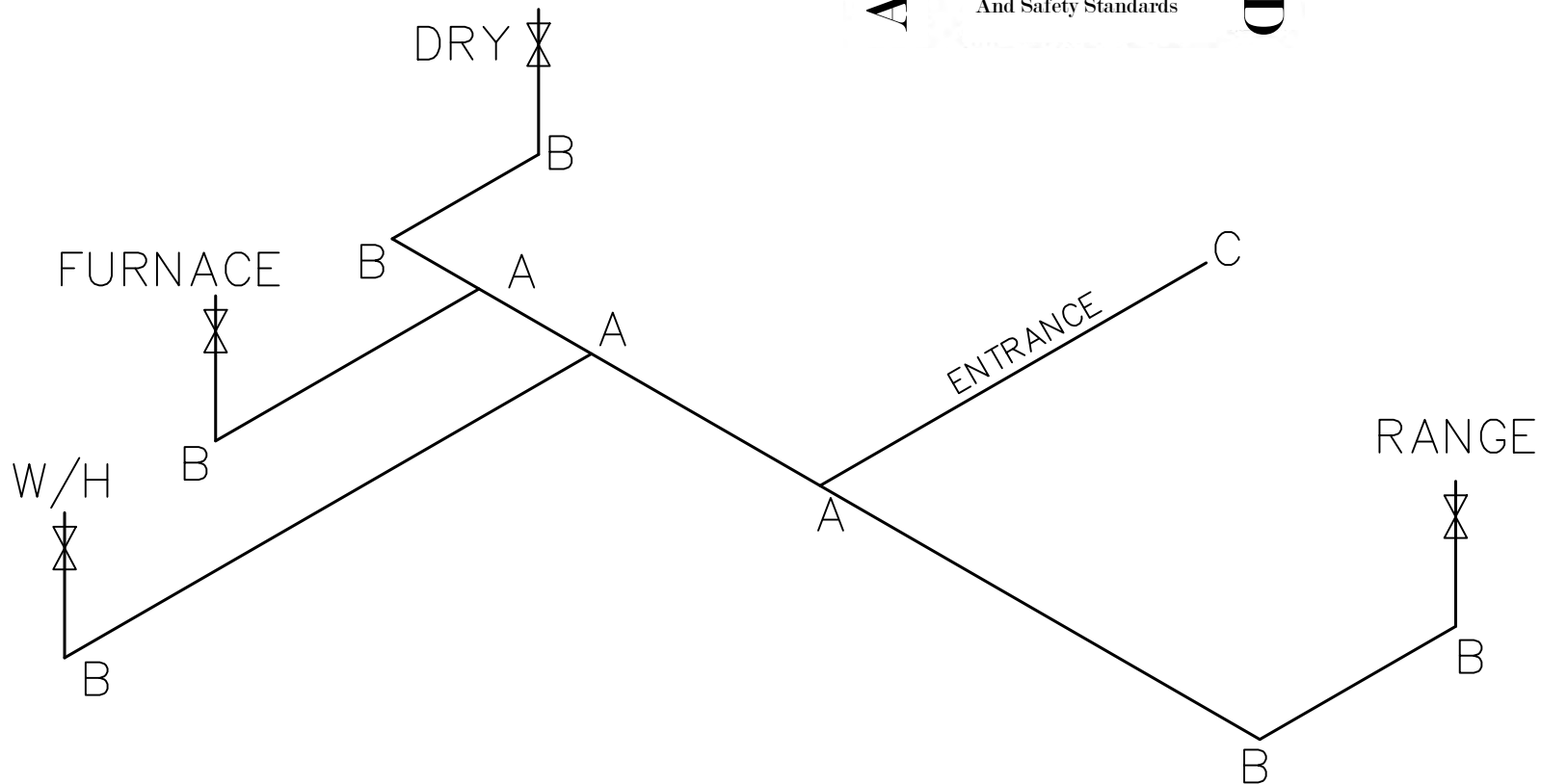
REV. DATE:



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



MDL=20'



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"

SHEET:	GL	GAS LINE DETAIL	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 #: 34M405-GL MODEL #: MTN28684A26 DATE: 06/16/2026	MODEL: 28'X68' MOUNTAINEER SERIES: MOUNTAINEER PRODUCT DESIGNER: BRIAN K. RIFFEY	STD. PLAN "CONDITIONED": 1,790 FT² REV. BY: REV. DATE:
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CLAYTON HOME BUILDING GROUP

Model Number	34MTN28684A26	Drawing Number	34M405-HEATLOSS-TZ2	Version 29
Serial Number	X	Model Name	MOUNTAINEER	

BOX SIZE: 26.33 ft. x 68 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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JUNE 22 2026

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Home Construction
And Safety Standards

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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	171.00	0.300	51.30
Option	0.00	0.300	0.00
Net: Floor	1790.67	0.032	57.30
Wall	1257.33	0.082	102.72
Ceiling	1790.67	0.0297	53.18
Th. Zone 1: Ext. Duct	78.50	0.242	18.98
Th. Zone 2: Ext. Duct	78.50	0.223	17.48
Th. Zone 3: Ext. Duct	78.50	0.206	16.14
Overhead TZ 1: Supply	0.00	0.000	0.00
Overhead TZ 2: Supply	0.00	0.000	0.00
Overhead TZ 3: Supply	0.00	0.00	0.00

Energy Star v3 & ZERH Max Glass (sq ft)	
Th. Zone 1	429.0
Th. Zone 2	270.1
Th. Zone 3	52.8

Thermal Zone	Outdoor Design Temp (F)	UA	Uo	ZERH / EStar 3.0 Compliant	Heatloss BTUH/F
1	11	307.79	0.060	OK	439.90
2	0	306.29	0.059	OK	438.40
3	-14	304.94	0.059	NG	437.00

Design Temperatures	
Furnace Heating Temp (F)	Economy Outdoor Temp (F)
-8	16
-23	5
-46	-11
-21	6
-66	-25
-112	-57

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
Clayton Homes Appalachia

Job: 34M405-FDJ-TZ1
Date: June 17, 2026
By: Brian Riffey



1420 Mountain Road, Andersonville, TN 37804 Phone: 865-494-7800 Ext. 257 Fax: 865-494-0243 Web: www.claytonhomes.com

Project Information

For: 34M405-FDJ-TZ1

JUNE 22 2026

Federal Manufactured
Home Construction 6
And Safety Standards

Design Conditions

Location:

GA 48
Elevation: 710 ft
Latitude: 35°N

Outdoor:

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

Heating

23
-
-
15.0

Cooling

91
21 (M)
75
7.5

Indoor:

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

Heating

70
47
50
42.0

Cooling

75
16
50
42.6

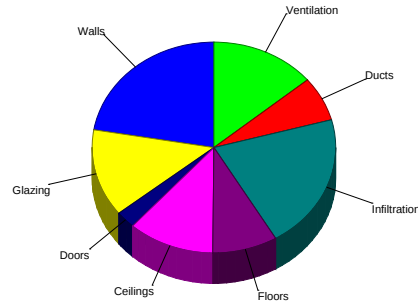
Infiltration:

Method
Construction quality
Fireplaces

Simplified
Average
0

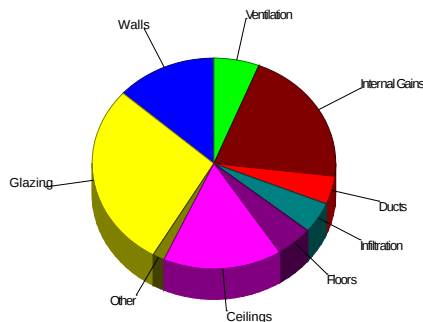
Heating

Component	Btuh/ft²	Btuh	% of load
Walls	3.9	4853	22.3
Glazing	14.1	2918	13.4
Doors	14.1	577	2.7
Ceilings	1.4	2498	11.5
Floors	1.1	1874	8.6
Infiltration	3.0	4523	20.8
Ducts		1486	6.8
Piping		0	0
Humidification		0	0
Ventilation		3030	13.9
Adjustments		0	0
Total		21759	100.0



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	1.8	2272	13.4
Glazing	23.3	4806	28.3
Doors	6.6	270	1.6
Ceilings	1.5	2681	15.8
Floors	0.5	839	4.9
Infiltration	0.5	804	4.7
Ducts		736	4.3
Ventilation		1023	6.0
Internal gains		3550	20.9
Blower		0	0
Adjustments		0	0
Total		16982	100.0



Latent Cooling Load = 4236 Btuh

Overall U-value = 0.061 Btuh/ft²-°F, Window / Floor Area = 11.7 %

Data entries checked.



Component Constructions

Entire House

Clayton Homes Appalachia

Job: 34M405-FDJ-TZ1
Date: June 17, 2026
By: Brian Riffey



1420 Mountain Road, Andersonville, TN 37804 Phone: 865-494-7800 Ext. 257 Fax: 865-494-0243 Web: www.claytonhomes.com

Project Information

For: 34M405-FDJ-TZ1

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Design Conditions

Location:			Indoor:		Heating	Cooling
GA 48			Indoor temperature (°F)		70	75
Elevation: 710 ft			Design TD (°F)		47	16
Latitude: 35°N			Relative humidity (%)		50	50
			Moisture difference (gr/lb)		42.0	42.6
Outdoor:	Heating	Cooling	Infiltration:			
Dry bulb (°F)	23	91	Method		Simplified	
Daily range (°F)	-	21 (M)	Construction quality		Average	
Wet bulb (°F)	-	75	Fireplaces		0	
Wind speed (mph)	15.0	7.5				

Construction descriptions

Walls

Construction descriptions	Or	Area ft²	U-value Btuh/ft²-°F	Insul R ft²-°F/Btuh	Htg HTM Btuh/ft²	Loss Btuh	Clg HTM Btuh/ft²	Gain Btuh
CMH - DW - R-13 Wall - THP-502 DOE: Frm wall, vnl ext, 3/8" wood	n	200	0.082	13.0	3.86	771	1.81	361
shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c.	e	446	0.082	13.0	3.86	1722	1.81	806
stud	s	208	0.082	13.0	3.86	803	1.81	376
	w	403	0.082	13.0	3.86	1556	1.81	729
	all	1257	0.082	13.0	3.86	4853	1.81	2272

Partitions

(none)

Windows

Clayton - Therompane Low-E DOE: Clayton - Therompane Low-E DOE;	n	8	0.300	0	14.1	117	7.48	62
50% blinds 45°, medium; 50% outdoor insect screen; 6.67 ft head ht	e	38	0.300	0	14.1	540	21.5	823
	e	40	0.300	0	14.1	565	21.5	861
	w	30	0.300	0	14.1	424	21.5	646
	w	90	0.300	0	14.1	1272	21.5	1937
	all	207	0.300	0	14.1	2918	21.0	4330

Doors

CMH - Standard Door DOE: CMH - Standard Door -Solid no strom DOE	e	20	0.300	0	14.1	280	6.62	131
	w	21	0.300	0	14.1	297	6.62	139
	all	41	0.300	0	14.1	577	6.62	270

Ceilings

CMH - DW - 158 box R-38 - THP1255: Attic ceiling, asphalt shingles roof		1768	0.030	38.0	1.41	2498	1.52	2681
mat, r-38 ceil ins, 1/2" gypsum board int fnsh								

Floors

CHM-DW-R-22-THP-161: Flr floor, frm flr, 6" thkns, vinyl flr fnsh, r-21 ext		1768	0.045	22.0	1.06	1874	0.47	839
ins, amb ovr								



Project Summary

Entire House

Clayton Homes Appalachia

Job: 34M405-FDJ-TZ1
Date: June 17, 2026
By: Brian Riffey

1420 Mountain Road, Andersonville, TN 37804 Phone: 865-494-7800 Ext. 257 Fax: 865-494-0243 Web: www.claytonhomes.com

Project Information

For: 34M405-FDJ-TZ1

Notes: Duct Capacity 30667

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Design Information

Weather: GA 48

Winter Design Conditions

Outside db 23 °F
Inside db 70 °F
Design TD 47 °F

Ventilation Method MJ8

Heating Summary

Structure 17244 Btuh
Ducts (R-8.0) 1486 Btuh
Central vent (60 cfm) 3030 Btuh
Outside air
Humidification 0 Btuh
Piping 0 Btuh
Equipment load 21759 Btuh

Infiltration

Method Simplified
Construction quality Average
Fireplaces 0

	Heating	Cooling
Area (ft ²)	1768	1768
Volume (ft ³)	14144	14144
Air changes/hour	0.38	0.20
Equiv. AVF (cfm)	90	47

Heating Equipment Summary

Make Smart Comfort
Trade 15 SEER2 HP
Model R5H5S30*K*AAA*
AHRI ref 215440348

Efficiency 7.5 HSPF2
Heating input
Heating output 28600 Btuh @ 47°F
Temperature rise 28 °F
Actual air flow 940 cfm
Air flow factor 0.050 cfm/Btuh
Static pressure 0.30 in H2O
Space thermostat
Capacity balance point = 20 °F

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

Summer Design Conditions

Outside db 91 °F
Inside db 75 °F
Design TD 16 °F
Daily range M
Relative humidity 50 %
Moisture difference 43 gr/lb

Sensible Cooling Equipment Load Sizing

Structure 15223 Btuh
Ducts (R-8.0) 736 Btuh
Central vent (60 cfm) 1023 Btuh
Outside air
Blower 0 Btuh
Use manufacturer's data n
Rate/swing multiplier 0.96
Equipment sensible load 16285 Btuh

Latent Cooling Equipment Load Sizing

Structure 2331 Btuh
Ducts 211 Btuh
Central vent (60 cfm) 1694 Btuh
Outside air
Equipment latent load 4236 Btuh

Equipment Total Load (Sen+Lat) 20521 Btuh
Req. total capacity at 0.70 SHR 1.9 ton

Cooling Equipment Summary

Make Smart Comfort
Trade 15 SEER2 HP
Cond R5H5S30*K*AAA*
Coil FEVB0036***+NAVA53601CK
AHRI ref 215440348
Efficiency 11.5 EER2, 14.5 SEER2
Sensible cooling 19740 Btuh
Latent cooling 8460 Btuh
Total cooling 28200 Btuh
Actual air flow 940 cfm
Air flow factor 0.059 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.



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Duct System Summary

Entire House

Clayton Homes Appalachia

Job: 34M405-FDJ-TZ1
Date: June 17, 2026
By: Brian Riffey



1420 Mountain Road, Andersonville, TN 37804 Phone: 865-494-7800 Ext. 257 Fax: 865-494-0243 Web: www.claytonhomes.com

Project Information

For: 34M405-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	0.153 in/100ft	0.153 in/100ft
Actual air flow	940 cfm	940 cfm
Total effective length (TEL)	196 ft	

Supply Branch Detail Table

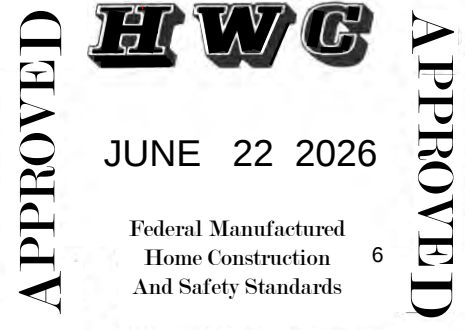
Name	Design (Btuh)	Htg (cfm)	Clg (cfm)	Design FR	Diam (in)	H x W (in)	Duct Matl	Actual Ln (ft)	Ftg.Eqv Ln (ft)	Trunk
BATH-A	h 520	26	14	0.392	5.0	0x0	VIFx	41.5	35.0	st1
BEDROOM 2-A	h 1937	97	75	0.333	6.0	0x0	VIFx	55.0	35.0	st1
BEDROOM 3	c 1028	56	61	0.455	5.0	0x0	VIFx	31.0	35.0	st1
BEDROOM 4	c 1795	90	106	0.176	6.0	0x0	VIFx	35.8	135.0	st4
DEN	h 1312	66	54	0.163	5.0	0x0	VIFx	48.8	135.0	st4
DEN-A	h 1312	66	54	0.153	6.0	0x0	VIFx	61.3	135.0	st4
KITCHEN/DIN	c 1776	80	105	0.638	5.0	0x0	VIFx	12.0	35.0	st1
KITCHEN/DIN-A	c 1776	80	105	0.556	5.0	0x0	VIFx	19.0	35.0	st1
LIVING ROOM	c 1303	56	77	0.184	4.7	5x5	ShMt	28.3	135.0	st5
LIVING ROOM-A	c 1303	56	77	0.181	6.0	0x0	VIFx	30.3	135.0	st4
PRIMARY BATH	h 2188	110	61	0.714	5.0	0x0	VIFx	7.0	35.0	st3
PRIMARY BED	h 1569	79	77	0.164	6.0	0x0	VIFx	47.8	135.0	st5
PRIMARY BED-A	h 1569	79	77	0.176	6.0	0x0	VIFx	35.3	135.0	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
st4	Peak AVF	278	290	0.153	597	7.5	5 x 14	ShtMetl	st2
st1	Peak AVF	339	359	0.333	738	6.8	5 x 14	ShtMetl	
st3	Peak AVF	110	61	0.714	226	5.0	5 x 14	ShtMetl	
st5	Peak AVF	213	230	0.164	473	7.3	5 x 14	ShtMetl	st2
st2	Peak AVF	491	520	0.153	1248	7.5	5 x 12	VinIFlx	

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	940	940	0	0	0	0	0x 0		VIFx	





Manual S Compliance Report
Entire House
Clayton Homes Appalachia

Job: 34M405-FDJ-TZ1
Date: June 17, 2026
By: Brian Riffey

1420 Mountain Road, Andersonville, TN 37804 Phone: 865-494-7800 Ext. 257 Fax: 865-494-0243 Web: www.claytonhomes.com

Project Information

For: 34M405-FDJ-TZ1

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Cooling Equipment

Design Conditions

Outdoor design DB:	90.9°F	Sensible gain:	16982 Btuh	Entering coil DB:	76.0°F
Outdoor design WB:	75.0°F	Latent gain:	4236 Btuh	Entering coil WB:	63.4°F
Indoor design DB:	75.0°F	Total gain:	21217 Btuh		
Indoor RH:	50%	Estimated airflow:	940 cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Smart Comfort	Model:	R5H5S30*K*AAA*+FEVB0036**++NAVA53601CK
Actual airflow:	940 cfm		
Sensible capacity:	19740 Btuh	116% of load	
Latent capacity:	8460 Btuh	200% of load	
Total capacity:	28200 Btuh	133% of load	SHR: 70%

Heating Equipment

Design Conditions

Outdoor design DB:	22.9°F	Heat loss:	21759 Btuh	Entering coil DB:	66.9°F
Indoor design DB:	70.0°F				

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Smart Comfort	Model:	R5H5S30*K*AAA*+FEVB0036**++NAVA53601CK
Actual airflow:	940 cfm		
Output capacity:	28600 Btuh	131% of load	Capacity balance: 20 °F
Supplemental heat required:	0 Btuh		Economic balance: -99 °F

Backup equipment type:	Elec strip		
Manufacturer:	Smart Comfort	Model:	
Actual airflow:	940 cfm		
Output capacity:	10.0 kW	157% of load	Temp. rise: 41 °F

Meets all requirements of ACCA Manual S.

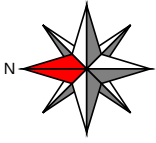


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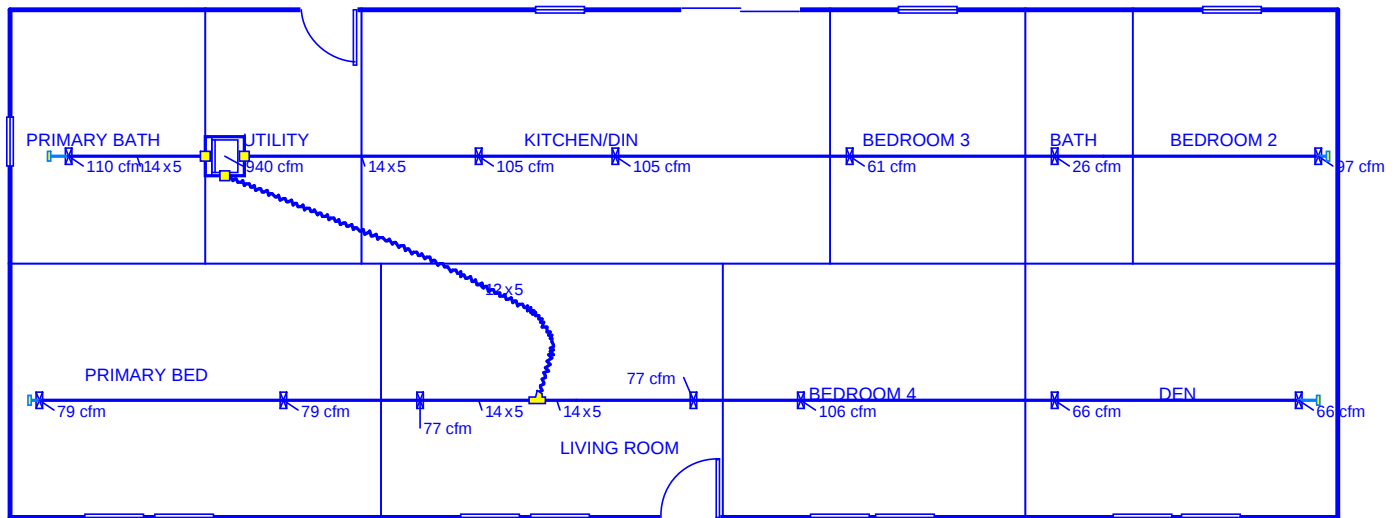
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Level 1



Job #: 34M405-FDJ-TZ1
Performed by Brian Riffey for:
34M405-FDJ-TZ1

Clayton Homes Appalachia
1420 Mountain Road
Andersonville, TN 37804
Phone: 865-494-7800 Ext. 257 Fax: 865-494-0243
www.claytonhomes.com

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Model:

34M405

Serial Number:

TZ1

Cooling Equipment Summary

Duct Capacity: 30,667 btuh

Economy Outdoor Temp (°F) = -4 = (70 - Furnace Output / Estimated Heatloss)
(Outdoor Certification Temp.)

Furnace Heating Temp (°F) = 18 = If $0.3 * \text{Design TD} > 20$ then
(Operating Econ. Cert. Temp.) $0.3 * (70 - \text{Cert. Temp.}) + \text{Cert. Temp}$
else Cert. Temp. + 20

Air Ducts in Floor: 140 sq ft

Air Ducts Outside of Home: 78.5 sq ft

v-2.0

CLAYTON HOME BUILDING GROUP

Model Number	34MTN28684A26	Drawing Number	34M405 - HEATLOSS-TZ3	Version 29
Serial Number	X	Model Name	MOUNTAINEER	

BOX SIZE: 26.33 ft. x 68 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	171.00	0.300	51.30
Option	0.00	0.300	0.00
Net:			
Floor	1790.67	0.032	57.30
Wall	1257.33	0.055	68.65
Ceiling	1790.67	0.0297	53.18
Th. Zone 1: Ext. Duct	78.50	0.242	18.98
Th. Zone 2: Ext. Duct	78.50	0.223	17.48
Th. Zone 3: Ext. Duct	78.50	0.206	16.14
Overhead TZ 1: Supply	0.00	0.000	0.00
Overhead TZ 2: Supply	0.00	0.000	0.00
Overhead TZ 3: Supply	0.00	0.00	0.00

Energy Star v3 & ZERH Max Glass (sq ft)	
Th. Zone 1	539.4
Th. Zone 2	398.0
Th. Zone 3	204.7

Thermal Zone	Outdoor Design Temp (F)	UA	Uo	ZERH / EStar 3.0 Compliant	Heatloss BTUH/F
1	11	273.72	0.053	OK	405.80
2	0	272.21	0.053	OK	404.30
3	-14	270.87	0.052	OK	402.90

Design Temperatures		
Furnace Heating Temp (F)	Economy Outdoor Temp (F)	
-14	11	10kW
-31	-1	12kW
-56	-18	15kW
-29	1	40k Gas
-78	-33	60k Gas
-127	-68	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

Clayton Homes Appalachia

Job: 34M405-FDJ-TZ2
Date: June 17, 2026
By: Brian Riffey



1420 Mountain Road, Andersonville, TN 37804 Phone: 865-494-7800 Ext. 257 Fax: 865-494-0243 Web: www.claytonhomes.com

Project Information

For: 34M405-FDJ-TZ2

JUNE 22 2026

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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

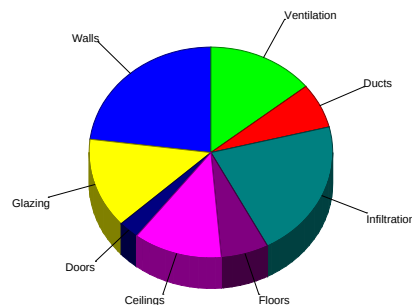
Infiltration:

Method
Construction quality
Fireplaces

Simplified
Average
0

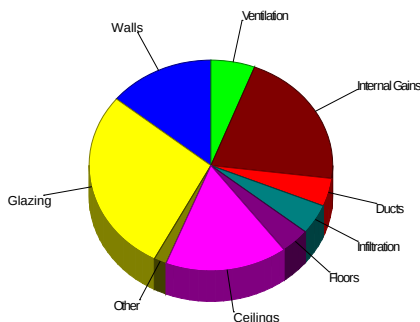
Heating

Component	Btuh/ft²	Btuh	% of load
Walls	4.0	5049	23.0
Glazing	14.7	3036	13.8
Doors	14.7	600	2.7
Ceilings	1.5	2599	11.8
Floors	0.8	1386	6.3
Infiltration	3.1	4663	21.2
Ducts		1509	6.9
Piping		0	0
Humidification		0	0
Ventilation		3123	14.2
Adjustments		0	0
Total		21965	100.0



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	1.9	2375	14.1
Glazing	22.9	4737	28.2
Doors	6.9	282	1.7
Ceilings	1.5	2734	16.3
Floors	0.4	653	3.9
Infiltration	0.5	771	4.6
Ducts		724	4.3
Ventilation		982	5.8
Internal gains		3550	21.1
Blower		0	0
Adjustments		0	0
Total		16809	100.0



Latent Cooling Load = 3550 Btuh

Overall U-value = 0.057 Btuh/ft²-°F, Window / Floor Area = 11.7 %

Data entries checked.



Component Constructions
Entire House
Clayton Homes Appalachia

Job: 34M405-FDJ-TZ2
Date: June 17, 2026
By: Brian Riffey



JUNE 22 2026

Federal Manufactured
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Project Information

For: 34M405-FDJ-TZ2

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
Average
0

Construction descriptions

Walls

CMH - DW - R-13 Wall - THP-502 DOE: 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	200	0.082	13.0	4.02	803	1.89	378
e	446	0.082	13.0	4.02	1792	1.89	843
s	208	0.082	13.0	4.02	836	1.89	393
w	403	0.082	13.0	4.02	1619	1.89	762
all	1257	0.082	13.0	4.02	5049	1.89	2375

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	8	0.300	0	14.7	121	7.31	60
e	38	0.300	0	14.7	562	21.3	817
e	40	0.300	0	14.7	588	21.3	854
w	30	0.300	0	14.7	441	21.3	640
w	90	0.300	0	14.7	1323	21.3	1921
all	207	0.300	0	14.7	3036	20.8	4293

Doors

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

e	20	0.300	0	14.7	292	6.91	137
w	21	0.300	0	14.7	309	6.91	145
all	41	0.300	0	14.7	600	6.91	282

Ceilings

CMH - DW - 158 box R-38 - THP1255: Attic ceiling, asphalt shingles roof
mat, r-38 ceil ins, 1/2" gypsum board int fnsh

	1768	0.030	38.0	1.47	2599	1.55	2734
--	------	-------	------	------	------	------	------

Floors

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

	1768	0.032	33.0	0.78	1386	0.37	653
--	------	-------	------	------	------	------	-----



Project Summary

Entire House

Clayton Homes Appalachia

Job: 34M405-FDJ-TZ2
Date: June 17, 2026
By: Brian Riffey

1420 Mountain Road, Andersonville, TN 37804 Phone: 865-494-7800 Ext. 257 Fax: 865-494-0243 Web: www.claytonhomes.com

Project Information

For: 34M405-FDJ-TZ2

Notes: Duct Capacity 30667

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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 17333 Btuh
Ducts (R-8.0) 1509 Btuh
Central vent (60 cfm) 3123 Btuh
Outside air
Humidification 0 Btuh
Piping 0 Btuh
Equipment load 21965 Btuh

Infiltration

Method Simplified
Construction quality Average
Fireplaces 0

	Heating	Cooling
Area (ft ²)	1768	1768
Volume (ft ³)	14144	14144
Air changes/hour	0.38	0.20
Equiv. AVF (cfm)	90	47

Heating Equipment Summary

Make Smart Comfort
Trade 15 SEER2 HP
Model R5H5S24*K*AAA*
AHRI ref 214277579

Efficiency 7.8 HSPF2
Heating input
Heating output 23200 Btuh @ 47°F
Temperature rise 28 °F
Actual air flow 787 cfm
Air flow factor 0.042 cfm/Btuh
Static pressure 0.30 in H2O
Space thermostat
Capacity balance point = 24 °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 15103 Btuh
Ducts (R-8.0) 724 Btuh
Central vent (60 cfm) 982 Btuh
Outside air
Blower 0 Btuh
Use manufacturer's data n
Rate/swing multiplier 0.95
Equipment sensible load 16035 Btuh

Latent Cooling Equipment Load Sizing

Structure 2041 Btuh
Ducts 184 Btuh
Central vent (60 cfm) 1325 Btuh
Outside air
Equipment latent load 3550 Btuh

Equipment Total Load (Sen+Lat) 19585 Btuh
Req. total capacity at 0.70 SHR 1.9 ton

Cooling Equipment Summary

Make Smart Comfort
Trade 15 SEER2 HP
Cond R5H5S24*K*AAA*
Coil FEVB0036***+NAVA53601CK
AHRI ref 214277579
Efficiency 12.0 EER2, 15.5 SEER2
Sensible cooling 16520 Btuh
Latent cooling 7080 Btuh
Total cooling 23600 Btuh
Actual air flow 787 cfm
Air flow factor 0.050 cfm/Btuh
Static pressure 0.30 in H2O
Load sensible heat ratio 0.83

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



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Duct System Summary

Entire House

Clayton Homes Appalachia

Job: 34M405-FDJ-TZ2
Date: June 17, 2026
By: Brian Riffey



1420 Mountain Road, Andersonville, TN 37804 Phone: 865-494-7800 Ext. 257 Fax: 865-494-0243 Web: www.claytonhomes.com

Project Information

For: 34M405-FDJ-TZ2

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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	0.153 in/100ft	0.153 in/100ft
Actual air flow	787 cfm	787 cfm
Total effective length (TEL)	196 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
BATH-A	h 516	22	11	0.392	5.0	0x0	VIFx	41.5	35.0	st1
BEDROOM 2-A	h 1963	82	63	0.333	5.0	0x0	VIFx	55.0	35.0	st1
BEDROOM 3	c 1020	46	51	0.455	5.0	0x0	VIFx	31.0	35.0	st1
BEDROOM 4	c 1769	75	88	0.176	6.0	0x0	VIFx	35.8	135.0	st4
DEN	h 1327	55	45	0.163	5.0	0x0	VIFx	48.8	135.0	st4
DEN-A	h 1327	55	45	0.153	5.0	0x0	VIFx	61.3	135.0	st4
KITCHEN/DIN	c 1765	67	88	0.638	5.0	0x0	VIFx	12.0	35.0	st1
KITCHEN/DIN-A	c 1765	67	88	0.556	5.0	0x0	VIFx	19.0	35.0	st1
LIVING ROOM	c 1291	47	64	0.184	4.4	5x5	ShMt	28.3	135.0	st5
LIVING ROOM-A	c 1291	47	64	0.181	5.0	0x0	VIFx	30.3	135.0	st4
PRIMARY BATH	h 2213	92	51	0.714	5.0	0x0	VIFx	7.0	35.0	st3
PRIMARY BED	h 1583	66	64	0.164	5.0	0x0	VIFx	47.8	135.0	st5
PRIMARY BED-A	h 1583	66	64	0.176	5.0	0x0	VIFx	35.3	135.0	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
st4	Peak AVF	233	242	0.153	498	7.5	5 x 14	ShtMetl	st2
st1	Peak AVF	283	301	0.333	619	6.8	5 x 14	ShtMetl	
st3	Peak AVF	92	51	0.714	190	5.0	5 x 14	ShtMetl	
st5	Peak AVF	179	192	0.164	396	7.3	5 x 14	ShtMetl	st2
st2	Peak AVF	412	434	0.153	1043	7.5	5 x 12	VinlFlx	

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	787	787	0	0	0	0	0x 0		VIFx	





Manual S Compliance Report
Entire House
Clayton Homes Appalachia

Job: 34M405-FDJ-TZ2
Date: June 17, 2026
By: Brian Riffey

1420 Mountain Road, Andersonville, TN 37804 Phone: 865-494-7800 Ext. 257 Fax: 865-494-0243 Web: www.claytonhomes.com

Project Information

For: 34M405-FDJ-TZ2

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And Safety Standards

Cooling Equipment

Design Conditions

Outdoor design DB:	90.4°F	Sensible gain:	16809	Btuh	Entering coil DB:	76.2°F
Outdoor design WB:	73.3°F	Latent gain:	3550	Btuh	Entering coil WB:	63.3°F
Indoor design DB:	75.0°F	Total gain:	20358	Btuh		
Indoor RH:	50%	Estimated airflow:	787	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP			
Manufacturer:	Smart Comfort	Model:	R5H5S24*K*AAA*+FEVB0036**++NAVA53601CK	
Actual airflow:	787	cfm		
Sensible capacity:	19846	Btuh	118% of load	
Latent capacity:	3788	Btuh	107% of load	
Total capacity:	23634	Btuh	116% of load	SHR: 84%

Heating Equipment

Design Conditions

Outdoor design DB:	21.0°F	Heat loss:	21965	Btuh	Entering coil DB:	66.2°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*+FEVB0036**++NAVA53601CK	
Actual airflow:	787	cfm		
Output capacity:	14845	Btuh	68% of load	Capacity balance: 24 °F
Supplemental heat required:	7120	Btuh		Economic balance: -99 °F

Backup equipment type:	Elec strip			
Manufacturer:	Smart Comfort	Model:		
Actual airflow:	787	cfm		
Output capacity:	10.0	kW	155% of load	Temp. rise: 41 °F

Meets all requirements of ACCA Manual S.

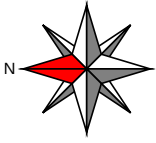


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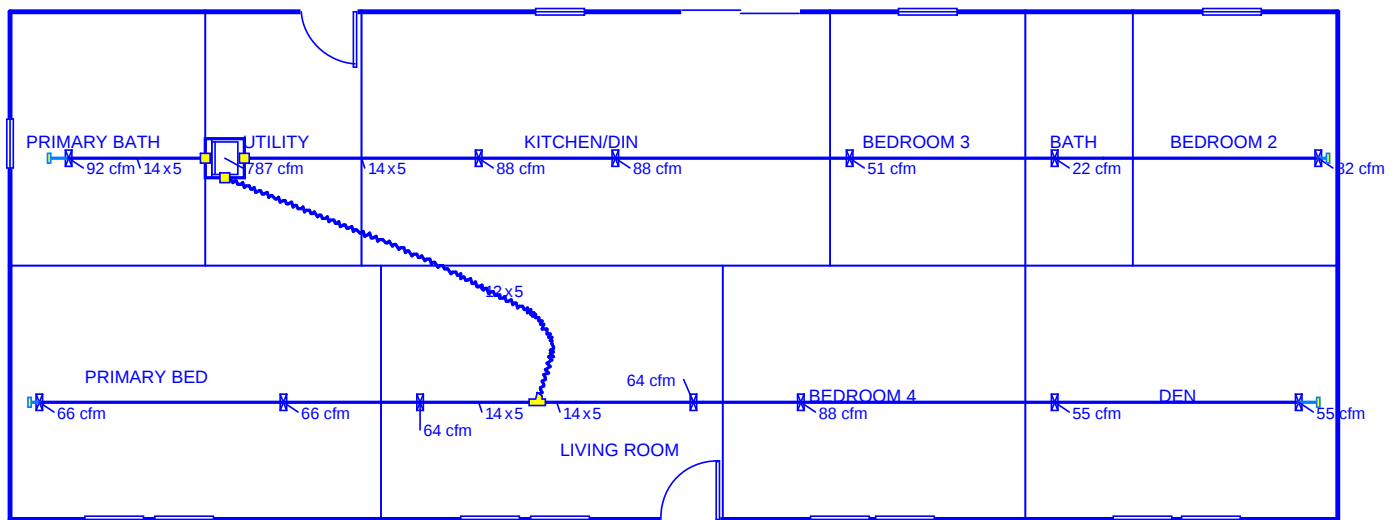
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Level 1



Job #: 34M405-FDJ-TZ2
Performed by Brian Riffey for:
34M405-FDJ-TZ2

Clayton Homes Appalachia
1420 Mountain Road
Andersonville, TN 37804
Phone: 865-494-7800 Ext. 257 Fax: 865-494-0243
www.claytonhomes.com

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Model:

34M405

Serial Number:

TZ2

Cooling Equipment Summary

Duct Capacity: 30,667 btuh

Economy Outdoor Temp (°F) = -8 = (70 - Furnace Output / Estimated Heatloss)
(Outdoor Certification Temp.)

Furnace Heating Temp (°F) = 16 = If $0.3 * \text{Design TD} > 20$ then
(Operating Econ. Cert. Temp.) $0.3 * (70 - \text{Cert. Temp.}) + \text{Cert. Temp}$
else Cert. Temp. + 20

Air Ducts in Floor: 140 sq ft

Air Ducts Outside of Home: 78.5 sq ft

v-2.0

CLAYTON HOME BUILDING GROUP

Model Number	34MTN28684A26	Drawing Number	34M405-HEATLOSS-TZ1	Version 29
Serial Number	X	Model Name	MOUNTAINEER	

BOX SIZE: 26.33 ft. x 68 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	171.00	0.300	51.30
Option	0.00	0.300	0.00
Net: Floor	1790.67	0.045	79.68
Wall	1257.33	0.082	102.72
Ceiling	1790.67	0.0297	53.18
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	326.5
Th. Zone 2	167.6
Th. Zone 3	0.0

Thermal Zone	Outdoor Design Temp (F)	UA	Uo	ZERH / EStar 3.0 Compliant	Heatloss BTUH/F
1	11	330.18	0.064	OK	462.20
2	0	328.67	0.064	NG	460.70
3	-14	327.33	0.063	NG	459.40

Design Temperatures		
Furnace Heating Temp (F)	Economy Outdoor Temp (F)	
-4	18	10kW
-19	8	12kW
-41	-8	15kW
-17	9	40k Gas
-60	-21	60k Gas
-103	-51	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
Clayton Homes Appalachia

Job: 34M405-FDJ-TZ3
Date: June 17, 2026
By: Brian Riffey



1420 Mountain Road, Andersonville, TN 37804 Phone: 865-494-7800 Ext. 257 Fax: 865-494-0243 Web: www.claytonhomes.com

Project Information

For: 34M405-FDJ-TZ3

JUNE 22 2026

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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

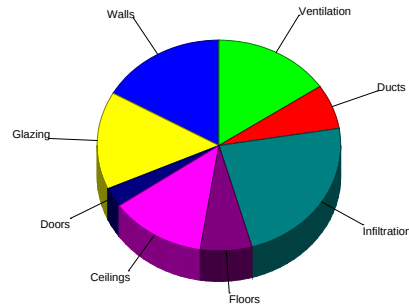
Infiltration:

Method
Construction quality
Fireplaces

Simplified
Average
0

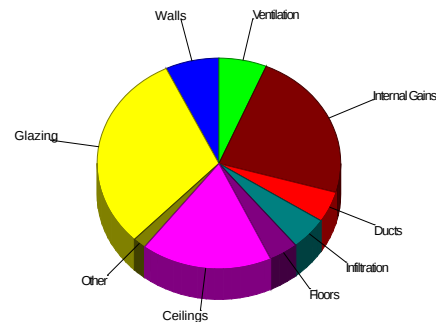
Heating

Component	Btuh/ft²	Btuh	% of load
Walls	3.3	4140	16.7
Glazing	18.0	3711	15.0
Doors	18.0	734	3.0
Ceilings	1.8	3177	12.8
Floors	1.0	1694	6.8
Infiltration	3.8	5745	23.2
Ducts		1692	6.8
Piping		0	0
Humidification		0	0
Ventilation		3848	15.6
Adjustments		0	0
Total		24742	100.0



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	0.9	1095	7.1
Glazing	22.8	4715	30.7
Doors	6.6	270	1.8
Ceilings	1.5	2681	17.4
Floors	0.3	597	3.9
Infiltration	0.5	767	5.0
Ducts		723	4.7
Ventilation		977	6.4
Internal gains		3550	23.1
Blower		0	0
Adjustments		0	0
Total		15376	100.0



Latent Cooling Load = 3553 Btuh
Overall U-value = 0.050 Btuh/ft²-°F, Window / Floor Area = 11.7 %

Data entries checked.



Component Constructions
Entire House
Clayton Homes Appalachia

Job: 34M405-FDJ-TZ3
Date: June 17, 2026
By: Brian Riffey

1420 Mountain Road, Andersonville, TN 37804 Phone: 865-494-7800 Ext. 257 Fax: 865-494-0243 Web: www.claytonhomes.com

Project Information

For: 34M405-FDJ-TZ3

JUNE 22 2026

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Design Conditions

Location:

OH 22
Elevation: 744 ft
Latitude: 40°N

Outdoor:

	Heating	Cooling
Dry bulb (°F)	10	90
Daily range (°F)	-	19 (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
60
50
48.7

Cooling

75
15
50
33.4

Infiltration:

Method	Simplified
Construction quality	Average
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		200	0.055	21.0	3.29	658	0.87	174
e		446	0.055	21.0	3.29	1469	0.87	389
s		208	0.055	21.0	3.29	685	0.87	181
w		403	0.055	21.0	3.29	1328	0.87	351
all		1257	0.055	21.0	3.29	4140	0.87	1095

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	8	0.300	0	18.0	148	7.14	59
e	38	0.300	0	18.0	687	21.1	808
e	40	0.300	0	18.0	719	21.1	846
w	30	0.300	0	18.0	539	21.1	634
w	90	0.300	0	18.0	1617	21.1	1902
all	207	0.300	0	18.0	3711	20.6	4250

Doors

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

e	20	0.300	0	18.0	356	6.61	131
w	21	0.300	0	18.0	377	6.61	139
all	41	0.300	0	18.0	734	6.61	270

Ceilings

CMH - DW - 158 box R-38 - THP1255: Attic ceiling, asphalt shingles roof
mat, r-38 ceil ins, 1/2" gypsum board int fnsh

	1768	0.030	38.0	1.80	3177	1.52	2681
--	------	-------	------	------	------	------	------

Floors

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

	1768	0.032	33.0	0.96	1694	0.34	597
--	------	-------	------	------	------	------	-----



Project Summary

Entire House

Clayton Homes Appalachia

Job: 34M405-FDJ-TZ3
Date: June 17, 2026
By: Brian Riffey

1420 Mountain Road, Andersonville, TN 37804 Phone: 865-494-7800 Ext. 257 Fax: 865-494-0243 Web: www.claytonhomes.com

Project Information

For: 34M405-FDJ-TZ3

Notes: Duct Capacity 30667

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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 19202 Btuh
Ducts (R-8.0) 1692 Btuh
Central vent (60 cfm) 3848 Btuh
Outside air
Humidification 0 Btuh
Piping 0 Btuh
Equipment load 24742 Btuh

Infiltration

Method Simplified
Construction quality Average
Fireplaces 0

	Heating	Cooling
Area (ft ²)	1768	1768
Volume (ft ³)	14144	14144
Air changes/hour	0.38	0.20
Equiv. AVF (cfm)	90	47

Heating Equipment Summary

Make Smart Comfort
Trade 15 SEER2 HP
Model R5H5S24*K*AAA*
AHRI ref 214277579

Efficiency 7.8 HSPF2
Heating input
Heating output 23200 Btuh @ 47°F
Temperature rise 28 °F
Actual air flow 787 cfm
Air flow factor 0.038 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 13676 Btuh
Ducts (R-8.0) 723 Btuh
Central vent (60 cfm) 977 Btuh
Outside air
Blower 0 Btuh
Use manufacturer's data n
Rate/swing multiplier 0.95
Equipment sensible load 14638 Btuh

Latent Cooling Equipment Load Sizing

Structure 2044 Btuh
Ducts 181 Btuh
Central vent (60 cfm) 1328 Btuh
Outside air
Equipment latent load 3553 Btuh

Equipment Total Load (Sen+Lat) 18190 Btuh
Req. total capacity at 0.70 SHR 1.7 ton

Cooling Equipment Summary

Make Smart Comfort
Trade 15 SEER2 HP
Cond R5H5S24*K*AAA*
Coil FEVB0036***+NAVA53601CK
AHRI ref 214277579
Efficiency 12.0 EER2, 15.5 SEER2
Sensible cooling 16520 Btuh
Latent cooling 7080 Btuh
Total cooling 23600 Btuh
Actual air flow 787 cfm
Air flow factor 0.055 cfm/Btuh
Static pressure 0.30 in H2O
Load sensible heat ratio 0.81

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



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Duct System Summary

Entire House

Clayton Homes Appalachia

Job: 34M405-FDJ-TZ3
Date: June 17, 2026
By: Brian Riffey

1420 Mountain Road, Andersonville, TN 37804 Phone: 865-494-7800 Ext. 257 Fax: 865-494-0243 Web: www.claytonhomes.com

Project Information

For: 34M405-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	0.153 in/100ft	0.153 in/100ft
Actual air flow	787 cfm	787 cfm
Total effective length (TEL)	196 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
BATH-A	h 555	21	10	0.392	5.0	0x0	VIFx	41.5	35.0	st1
BEDROOM 2-A	h 2104	79	60	0.333	5.0	0x0	VIFx	55.0	35.0	st1
BEDROOM 3	c 941	47	51	0.455	5.0	0x0	VIFx	31.0	35.0	st1
BEDROOM 4	c 1656	77	90	0.176	6.0	0x0	VIFx	35.8	135.0	st4
DEN	h 1449	55	43	0.163	5.0	0x0	VIFx	48.8	135.0	st4
DEN-A	h 1449	55	43	0.153	5.0	0x0	VIFx	61.3	135.0	st4
KITCHEN/DIN	c 1661	68	91	0.638	5.0	0x0	VIFx	12.0	35.0	st1
KITCHEN/DIN-A	c 1661	68	91	0.556	5.0	0x0	VIFx	19.0	35.0	st1
LIVING ROOM	c 1231	49	67	0.184	4.4	5x5	ShMt	28.3	135.0	st5
LIVING ROOM-A	c 1231	49	67	0.181	5.0	0x0	VIFx	30.3	135.0	st4
PRIMARY BATH	h 2376	89	46	0.714	5.0	0x0	VIFx	7.0	35.0	st3
PRIMARY BED	h 1733	65	63	0.164	5.0	0x0	VIFx	47.8	135.0	st5
PRIMARY BED-A	h 1733	65	63	0.176	5.0	0x0	VIFx	35.3	135.0	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
st4	Peak AVF	235	245	0.153	504	7.5	5 x 14	ShtMetl	st2
st1	Peak AVF	284	303	0.333	623	6.8	5 x 14	ShtMetl	
st3	Peak AVF	89	46	0.714	184	5.0	5 x 14	ShtMetl	
st5	Peak AVF	179	194	0.164	399	7.3	5 x 14	ShtMetl	st2
st2	Peak AVF	414	439	0.153	1053	7.5	5 x 12	VinIFlx	



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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	787	787	0	0	0	0	0x 0		VIFx	

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Manual S Compliance Report

Entire House

Clayton Homes Appalachia

Job: 34M405-FDJ-TZ3
Date: June 17, 2026
By: Brian Riffey

1420 Mountain Road, Andersonville, TN 37804 Phone: 865-494-7800 Ext. 257 Fax: 865-494-0243 Web: www.claytonhomes.com

Project Information

For: 34M405-FDJ-TZ3

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And Safety Standards

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Cooling Equipment

Design Conditions

Outdoor design DB:	90.2°F	Sensible gain:	15376 Btuh	Entering coil DB:	76.2°F
Outdoor design WB:	73.3°F	Latent gain:	3553 Btuh	Entering coil WB:	63.4°F
Indoor design DB:	75.0°F	Total gain:	18928 Btuh		
Indoor RH:	50%	Estimated airflow:	787 cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Smart Comfort	Model:	R5H5S24*K*AAA*+FEVB0036**++NAVA53601CK
Actual airflow:	787 cfm		
Sensible capacity:	19846 Btuh	129% of load	
Latent capacity:	3788 Btuh	107% of load	
Total capacity:	23634 Btuh	125% of load	SHR: 84%

Heating Equipment

Design Conditions

Outdoor design DB:	10.1°F	Heat loss:	24742 Btuh	Entering coil DB:	65.4°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*+FEVB0036**++NAVA53601CK
Actual airflow:	787 cfm		
Output capacity:	14845 Btuh	60% of load	Capacity balance: 21 °F
Supplemental heat required:	9897 Btuh		Economic balance: -99 °F

Backup equipment type:	Elec strip		
Manufacturer:	Smart Comfort	Model:	
Actual airflow:	787 cfm		
Output capacity:	10.0 kW	138% of load	Temp. rise: 41 °F

Meets all requirements of ACCA Manual S.

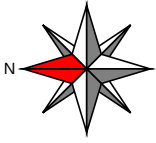


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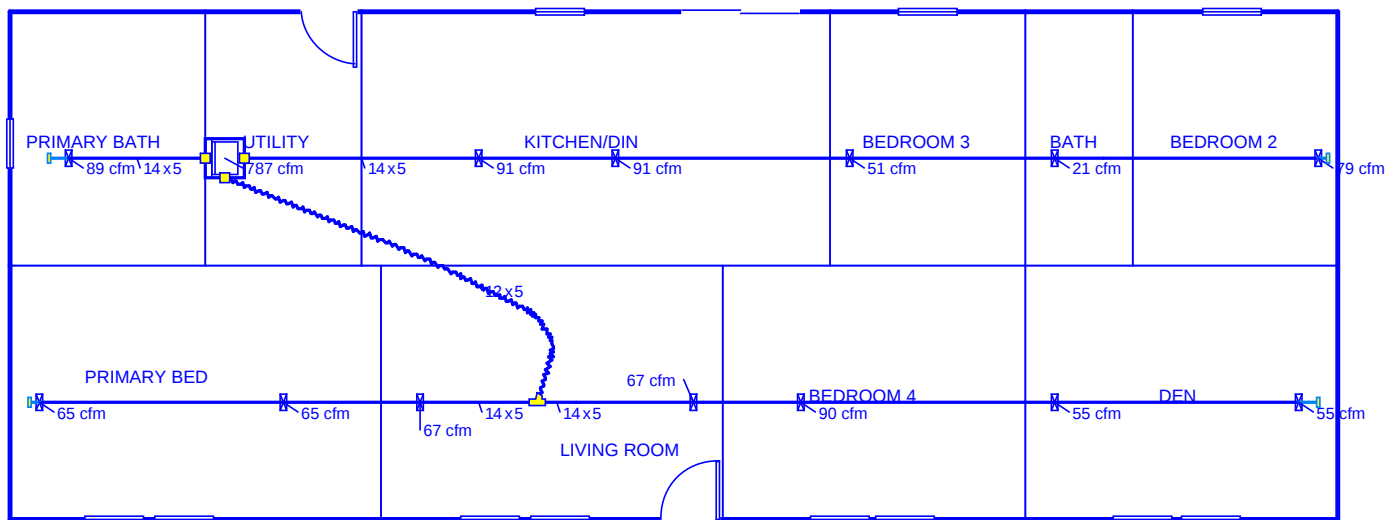
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Level 1



Job #: 34M405-FDJ-TZ3
Performed by Brian Riffey for:
34M405-FDJ-TZ3

Clayton Homes Appalachia
1420 Mountain Road
Andersonville, TN 37804
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Model:

34M405

Serial Number:

TZ3

Cooling Equipment Summary

Duct Capacity: 30,667 btuh

Economy Outdoor Temp (°F) = -14 = (70 - Furnace Output / Estimated Heatloss)
(Outdoor Certification Temp.)

Furnace Heating Temp (°F) = 11 = If $0.3 * \text{Design TD} > 20$ then
(Operating Econ. Cert. Temp.) $0.3 * (70 - \text{Cert. Temp.}) + \text{Cert. Temp}$
else Cert. Temp. + 20

Air Ducts in Floor: 140 sq ft

Air Ducts Outside of Home: 78.5 sq ft

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