

957-5400

WIND-1	DIAPHRAGM = 132 PLF	WIND-2	DIAPHRAGM = 232 PLF	WIND-3	DIAPHRAGM = 232 PLF	DIAPHRAGM =	PLF	DIAPHRAGM =	PLF	DIAPHRAGM =	PLF	DIAPHRAGM =	PLF	DIAPHRAGM =	PLF	DIAPHRAGM =	PLF	DESIGN LOADS		
SHEARWALL	DESIGN PLF	SHEAR AREA	JOISTS	SHEARWALL	DESIGN PLF	SHEAR AREA	JOISTS	SHEARWALL	DESIGN PLF	SHEAR AREA	JOISTS	SHEARWALL	DESIGN PLF	SHEAR AREA	JOISTS	SHEARWALL	DESIGN PLF	SHEAR AREA	JOISTS	WIND-ROOF PSF
A	420 PLF	88"	5	A	420 PLF	88"	5	A	420 PLF	88"	5	A	420 PLF	88"	5	A	420 PLF	88"	5	1-20
B	210 PLF	112"	2	B	210 PLF	112"	2	B	210 PLF	112"	2	B	210 PLF	112"	2	B	210 PLF	112"	2	2-20
C				C	350 PLF	120"	3	C	420 PLF	120"	3	C	420 PLF	120"	3	C	420 PLF	120"	3	3-20
D				D	350 PLF	120"	3	D	350 PLF	120"	3	D	350 PLF	120"	3	D	350 PLF	120"	3	
E				E				E				E				E				
F				F				F				F				F				
G				G				G				G				G				

RETURN AIR REQUIREMENTS		INDICATES REQUIRED NUMBER OF STUDS IN COLUMN
①	20"x16" GRILL REQUIRED	
②	4"x10" GRILL W/ 2 1/2" DOOR UNDERCUT	
③	DOOR(S) MUST BE UNDERCUT 2 1/2" MIN.	
④	4"x24" OR 6"x14" GRILL REQUIRED	

BRAND	CLAYTON
SERIES	HR16
<b>CLAYTON HOME BUILDING GROUP</b>	

REVISIONS	BY	DATE

GENERAL NOTES

CEILING HEIGHT = 96.00

REFER TO DAPIA PAGE MMP-2.0 FOR AREA LIGHT & VENT

REFER TO DAPIA PAGE EL-1.2 FOR ELEC. SYMBOL & BRANCH CIRCUIT NUMBER

FLOOR FRAMING SPACING = 16

TOTAL WINDOW SOFT = 108

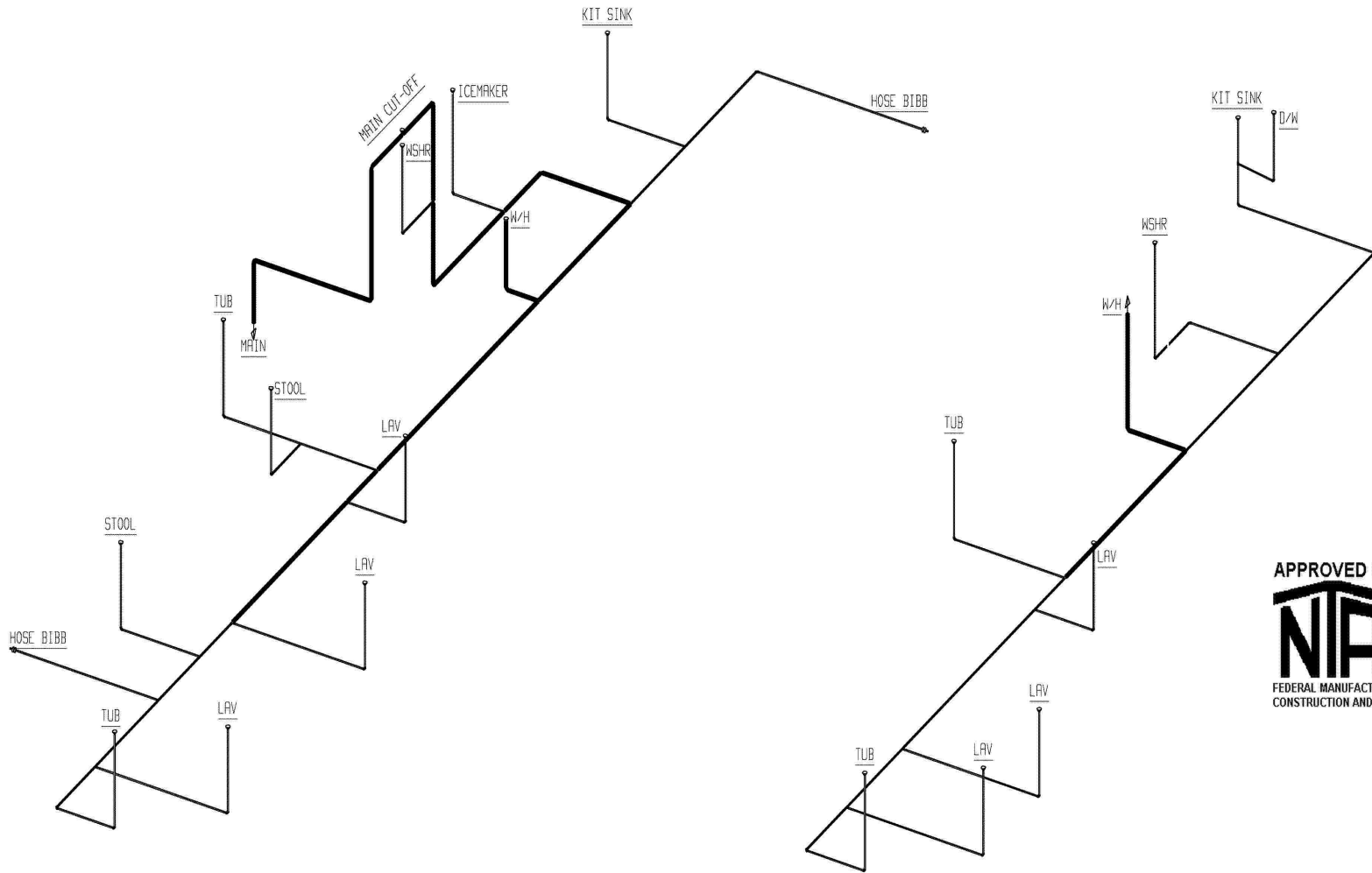
DRAWING TITLE

# MASTER PLAN

MODEL NAME		5400		SO. FT.	874
PLANT	957	DESCRIPTION	16X58.33 2BR-2BA	MODEL NO.	5400
DRAWN BY	GDB	ORIG. DATE	06/06/2023	DATE PRINTED	11/07/2023
				SHEET NO.	1-1



HOT WATER MDL'S  
 3/4" MDL = 19.67ft  
 1/2" MDL = 30.33ft  
 VOLUME (gal) = .64



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 FEDERAL MANUFACTURED HOME  
 CONSTRUCTION AND SAFETY STANDARDS

957-5400.1

COLD WATER SUPPLY PLUMBING

HOT WATER SUPPLY PLUMBING

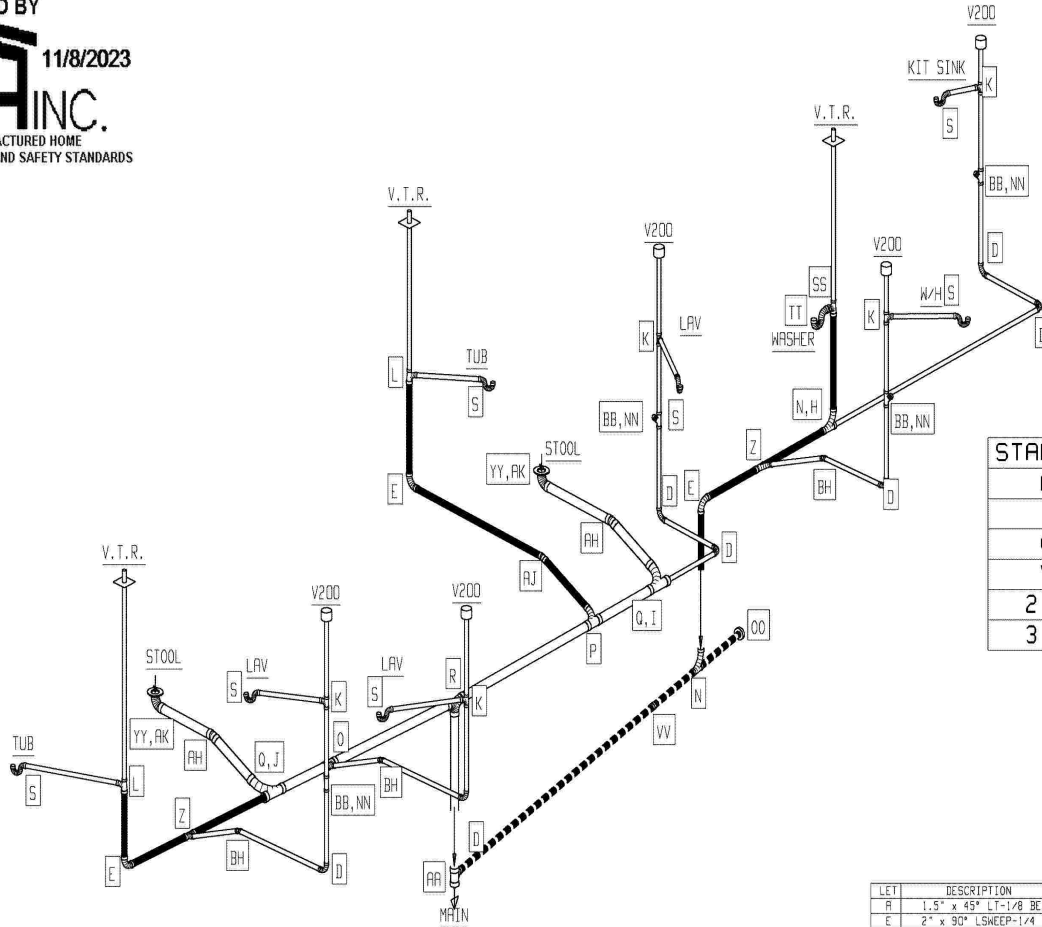
PIPE LEGEND	
	1"
	3/4"
	1/2"

BRAND CLAYTON	SERIES HR16	REVISIONS	BY	DATE	GENERAL NOTES HOSE BIBBS PER SPECS	DRAWING TITLE <b>SUPPLY PLUMBING</b>	MODEL NAME 5400	SO. FT. 874		
CLAYTON HOME BUILDING GROUP							PLANT 957	DESCRIPTION 16X58.33 2BR-2BA	MODEL NO. 5400	
							DRAWN BY GDB	ORIG. DATE 06/06/2023	DATE PRINTED 11/06/2023	SHEET NO. 9-1

PIPING AND FITTING MATERIAL TYPE TO BE:  
ABS (ACRYLONITRILE-BUTADIENE-STYRENE)  
OR PVC (POLYVINYL CHLORIDE)

PIPE LEGEND	
	1 1/2"
	2"
	3"

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CONSTRUCTION AND SAFETY STANDARDS

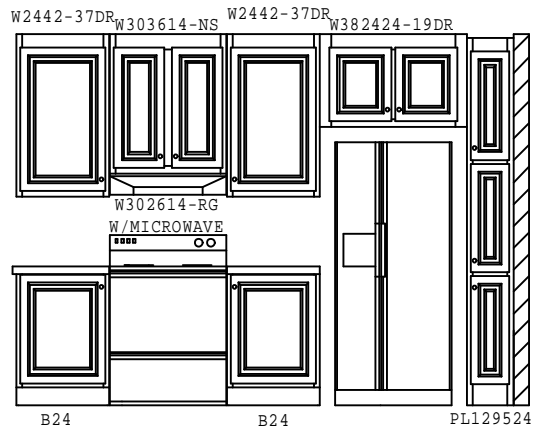


STANDARD SHIP LOOSE	
AA	1
N	1
OO	1
VV	1
2" PIPE	25 FT
3" PIPE	5 FT

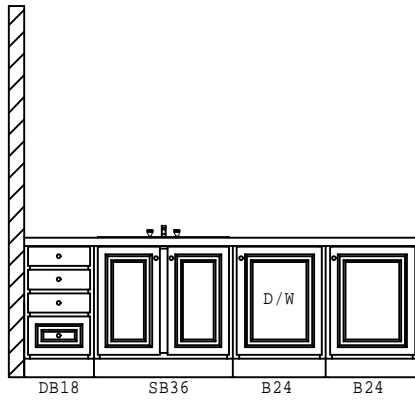
LET	DESCRIPTION	LET	DESCRIPTION	LET	DESCRIPTION	LET	DESCRIPTION
A	1.5" x 45° LT-1/8 BEND	B	2" x 45° LT-1/8 BEND	C	3" x 45° LT-1/8 BEND	D	1.5" x 90° LONG SHEEP-1/4 BEND
E	2" x 90° LSWEEP-1/4 BEND	F	3" x 90° LSWEEP-1/4 BEND	G	4" x 3" CLOSET FLANGE	H	2" x 1.5" FLUSH BUSHING
I	3" x 1.5" FLUSH BUSHING	J	3" x 2" FLUSH BUSHING	K	1.5" SANITARY TEE	L	2" x 1.5" x 1.5" SAN TEE
M	1.5" LT TY	N	2" LT TY	O	3" x 3" x 1.5" LT TY	P	3" x 3" x 2" LT TY
Q	3" LT TY	R	3" 3-WAY ELBOW	S	1.5" x 1.5" P-TRAP	T	3" x 3" x 1.5" x 1.5" DBL SAN TEE
U	3" x 3" x 1.5" SAN TEE	V	1.5" x 90° LONG SHEEP STREET	W	3" SANITARY TEE	X	3" x 3" x 1.5" WYE
Y	2" 3-WAY ELBOW	Z	2" x 2" x 1.5" LT TY	AA	3" x 3" x 2" SAN TEE	BB	1.5" x 45° WYE
CC	2" x 90° LSWEEP STREET	DD	1.5" x 45° 1/8 BEND STREET	EE	1.5" COUPLING	FF	3" COUPLING
GG	1.5" P-TRAP @ WASHER	HH	1.5" SAN TEE STREET	II	2" x 1.5" x 1.5" LT TY	JJ	2" x 1.5" x 2" LT TY
KK	2" x 1/4 BEND STREET	LL	2" x 45° WYE	MM	3" DBL SAN TEE	NN	1.5" C.O. W/PLUG
OO	2" C.O. W/PLUG	PP	3" C.O. W/PLUG	QQ	2" x 2" x 1.5" WYE REDUCING	RR	1.5" 1/4 BEND
SS	2" x 1.5" x 2" SAN TEE	TT	2" P-TRAP	UU	2" x 45° 1/8 BEND STREET	VV	2" COUPLING
WW	3" x 45° 1/8 BEND STREET	XX	2" SANITARY TEE	YY	4" CLOSET FLANGE	ZZ	4" COUPLING
AB	1.5" CONT WASTE	AC	1.5" x 22 1/2" ELBOW STREET	AD	2" x 22 1/2" ELBOW STREET	AE	3" x 3" x 2" DBL SAN TEE
AF	2" x 1.5" x 1.5" SAN TEE STREET	AG	2" x 1.5" x 1.5" 3-WAY ELBOW	AH	3" x 22 1/2" 1/16 BEND ELBOW	AI	1.5" 3-WAY ELBOW
AJ	2" x 22 1/2" 1/16 BEND ELBOW	AK	4" x 3" CLOSET BEND STR (CUT DOWN 1.5")	AL	3" x 3" x 3" WYE	AM	3" 1/4 BEND
AN	1.5" x 3" PIPE INCREASER	AO	3" x 3" x 2" WYE	AP	2" 1/4 BEND	AQ	2" x 2" x 2" DBL SAN TEE
AR	1.5" x 3" x 1.5" x 1.5" DBL SAN TEE	AS	1.5" x 1.5" x 1.5" x 1.5" DBL SAN TEE	AT	3" DOUBLE FIXTURE TEE	AU	2" x 2" x 1.5" x 1.5" DBL SAN TEE
AV	3" x 3" x 2" x 2" SAN TEE (SI) LEFT	AW	3" x 3" x 3" x 1.5" SAN TEE (SI) LEFT	AX	3" x 3" x 3" x 2" SAN TEE (SI) LEFT	AY	3" x 3" x 2" x 2" SAN TEE (SI) RIGHT
AZ	3" x 3" x 3" x 1.5" SAN TEE (SI) RIGHT	BA	3" x 3" x 3" x 2" SAN TEE (SI) RIGHT	BB	3" x 3" x 3" x 2" SAN TEE DBL (SI)	BD	3" x 3" x 3" x 1.5" x 1.5" SAN T DBL (SI)
BC	1.5" x 2" PIPE INCREASER	BF	3" x 3" x 1.5" 90° LSWEEP LOW HEEL INLET	BG	3" x 3" x 2" 90° LSWEEP LOW HEEL INLET	BH	1.5" x 22 1/2" 1/16 BEND ELBOW
BI	4" x 3" CLOSET BEND STREET	BJ	1.5" x 1.5" x .5" 45° APPLIANCE WYE	BK		BL	

957-5400.2

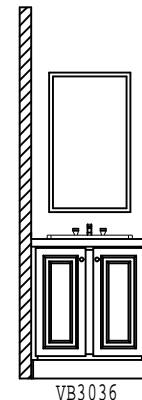
BRAND CLAYTON	SERIES HR16	REVISIONS	BY	DATE	GENERAL NOTES	DRAWING TITLE <b>DWY SCHEMATIC</b>	MODEL NAME 5400	SO. FT. 874		
CLAYTON HOME BUILDING GROUP							PLANT 957	DESCRIPTION 16X58.33 2BR-2BA	MODEL NO. 5400	
							DRAWN BY GDB	ORIG. DATE 06/06/2023	DATE PRINTED 11/06/2023	SHEET NO. 8-1



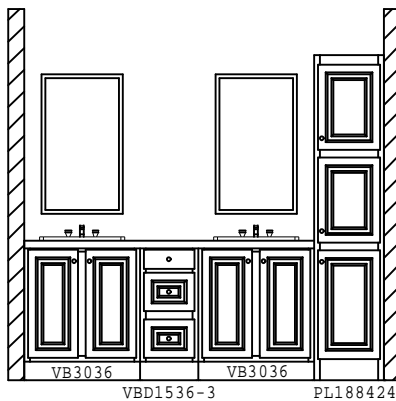
CABINET ELEVATION A



CABINET ELEVATION B



CABINET ELEVATION C

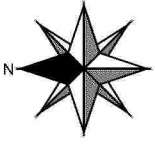


CABINET ELEVATION D

CABINET ELEVATION E

CABINET ELEVATION F

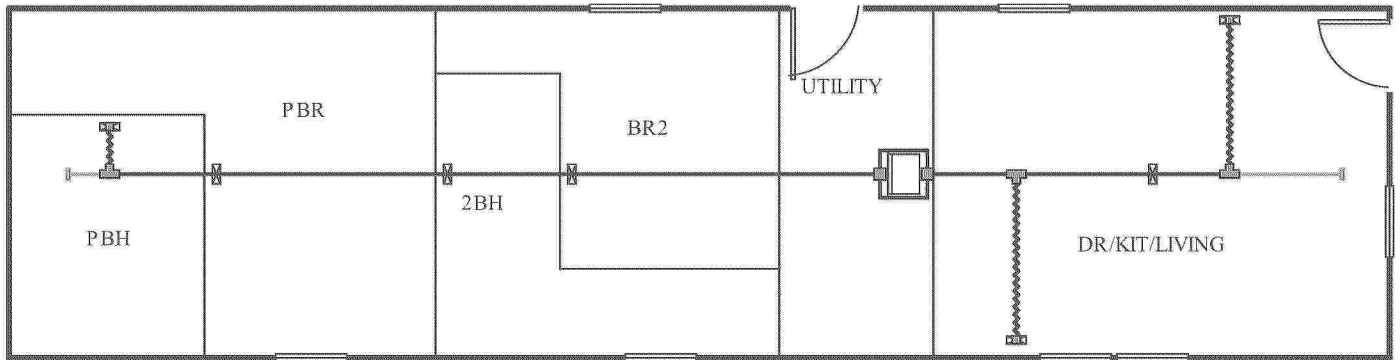
BRAND CLAYTON	SERIES HR16	REVISIONS	BY	DATE	GENERAL NOTES CAB TRIM, MIRROR TRIM & MIRROR FASTENING PER SPECS	DRAWING TITLE <b>CABINET ELEVATION-1</b>	MODEL NAME 5400	SQ. FT. 815		
CLAYTON HOME BUILDING GROUP							PLANT 957	DESCRIPTION 16X54'4 2BR-2BA	MODEL NO. 5400	
							DRAWN BY KLK	ORIG. DATE 06/06/2023	DATE PRINTED 11/09/2023	SHEET NO. 17-1



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FEDERAL MANUFACTURED HOME  
CONSTRUCTION AND SAFETY STANDARDS

Level 1



957-5400.4

**Job #: 5400 (I)**  
**Performed by CLAYTON ROCKWELL for:**  
5400 (I)  
ROCKWELL, NC

Scale: 1 : 97  
Page 1  
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### Project Information

For: 5400 (I), CLAYTON 957  
 ROCKWELL, NC

Notes: DUCT COOLING CAPACITY = 26,000 BTU/HR

APPROVED BY



### Design Information

Weather: Fort Bragg/Simmons, NC, US

#### Winter Design Conditions

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

#### Summer Design Conditions

Outside db 95 °F  
 Inside db 75 °F  
 Design TD 20 °F  
 Daily range M  
 Relative humidity 50 %  
 Moisture difference 41 gr/lb

#### Heating Summary

Structure 11246 Btuh  
 Ducts 0 Btuh  
**Central vent (45 cfm)** **2169** Btuh  
*Outside air*  
 Humidification 0 Btuh  
 Piping 0 Btuh  
 Equipment load 13415 Btuh

#### Sensible Cooling Equipment Load Sizing

Structure 10467 Btuh  
 Ducts 0 Btuh  
**Central vent (45 cfm)** **967** Btuh  
*Outside air*  
 Blower 0 Btuh  
 Use manufacturer's data n  
 Rate/swing multiplier 1.00  
 Equipment sensible load 11399 Btuh

#### Infiltration

Method Simplified  
 Construction quality Semi-tight  
 Fireplaces 0

	Heating	Cooling
Area (ft <sup>2</sup> )	859	859
Volume (ft <sup>3</sup> )	6874	6874
Air changes/hour	0.41	0.22
Equiv. AVF (cfm)	63	45

#### Latent Cooling Equipment Load Sizing

Structure 2025 Btuh  
 Ducts 0 Btuh  
**Central vent (45 cfm)** **1233** Btuh  
*Outside air*  
 Equipment latent load 3258 Btuh  
**Equipment Total Load (Sen+Lat)** 14657 Btuh  
 Req. total capacity at 0.70 SHR 1.4 ton

#### Heating Equipment Summary

Make Smart Comfort  
 Trade  
 Model  
 AHRI ref

Efficiency 100 EFF  
 Heating input 10.0 kW  
 Heating output 34121 Btuh  
 Temperature rise 40 °F  
 Actual air flow 780 cfm  
 Air flow factor 0.069 cfm/Btuh  
 Static pressure 0.30 in H2O  
 Space thermostat

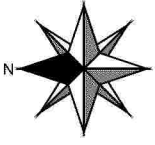
#### Cooling Equipment Summary

Make Smart Comfort  
 Trade 15 SEER2 AC  
 Cond R4A5S24\*K\*WAA\*  
 Coil FEVA0024\*\*\*+NAVA43601CK  
 AHRI ref 0  
 Efficiency 13.0 EER2, 15.5 SEER2  
 Sensible cooling 16380 Btuh  
 Latent cooling 7020 Btuh  
 Total cooling 23400 Btuh  
 Actual air flow 780 cfm  
 Air flow factor 0.075 cfm/Btuh  
 Static pressure 0.30 in H2O  
 Load sensible heat ratio 0.78

957-5400.4.1

*Bold/italic values have been manually overridden*

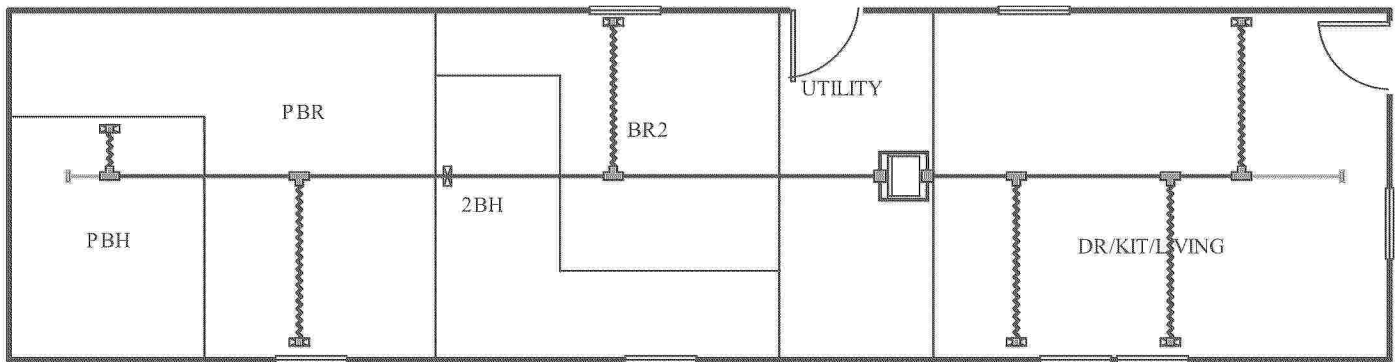
Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.



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**NIA** 11/8/2023  
**INC.**  
FEDERAL MANUFACTURED HOME  
CONSTRUCTION AND SAFETY STANDARDS

**Level 1**



957-5400.4.2

**Job #: 5400 (P)**  
**Performed by CLAYTON ROCKWELL for:**  
5400 (P)  
ROCKWELL, NC

Scale: 1 : 97  
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**Project Information**

For: 5400 (P), CLAYTON 957  
ROCKWELL, NC

Notes: DUCT COOLING CAPACITY = 26,000 BTU/HR

APPROVED BY



**Design Information**

Weather: Fort Bragg/Simmons, NC, US

**Winter Design Conditions**

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

**Summer Design Conditions**

Outside db 95 °F  
Inside db 75 °F  
Design TD 20 °F  
Daily range M  
Relative humidity 50 %  
Moisture difference 41 gr/lb

**Heating Summary**

Structure 11212 Btuh  
Ducts 0 Btuh  
**Central vent (45 cfm)** 2169 Btuh  
**Outside air**  
Humidification 0 Btuh  
Piping 0 Btuh  
Equipment load 13381 Btuh

**Sensible Cooling Equipment Load Sizing**

Structure 10449 Btuh  
Ducts 0 Btuh  
**Central vent (45 cfm)** 967 Btuh  
**Outside air**  
Blower 0 Btuh  
Use manufacturer's data n  
Rate/swing multiplier 1.00  
Equipment sensible load 11381 Btuh

**Infiltration**

Method Simplified  
Construction quality Semi-tight  
Fireplaces 0

	Heating	Cooling
Area (ft <sup>2</sup> )	859	859
Volume (ft <sup>3</sup> )	6874	6874
Air changes/hour	0.41	0.22
Equiv. AVF (cfm)	62	44

**Latent Cooling Equipment Load Sizing**

Structure 2002 Btuh  
Ducts 0 Btuh  
**Central vent (45 cfm)** 1233 Btuh  
**Outside air**  
Equipment latent load 3235 Btuh  
**Equipment Total Load (Sen+Lat)** 14616 Btuh  
Req. total capacity at 0.70 SHR 1.4 ton

**Heating Equipment Summary**

Make Smart Comfort  
Trade  
Model  
AHRI ref  
Efficiency 100 EFF  
Heating input 10.0 kW  
Heating output 34121 Btuh  
Temperature rise 40 °F  
Actual air flow 780 cfm  
Air flow factor 0.070 cfm/Btuh  
Static pressure 0.30 in H2O  
Space thermostat

**Cooling Equipment Summary**

Make Smart Comfort  
Trade 15 SEER2 AC  
Cond R4A5S24\*K\*WAA\*  
Coil FEVA0024\*\*\*+NAVA43601CK  
AHRI ref 0  
Efficiency 13.0 EER2, 15.5 SEER2  
Sensible cooling 16380 Btuh  
Latent cooling 7020 Btuh  
Total cooling 23400 Btuh  
Actual air flow 780 cfm  
Air flow factor 0.075 cfm/Btuh  
Static pressure 0.30 in H2O  
Load sensible heat ratio 0.78

*Bold/italic values have been manually overridden*

957-5400.4.3

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



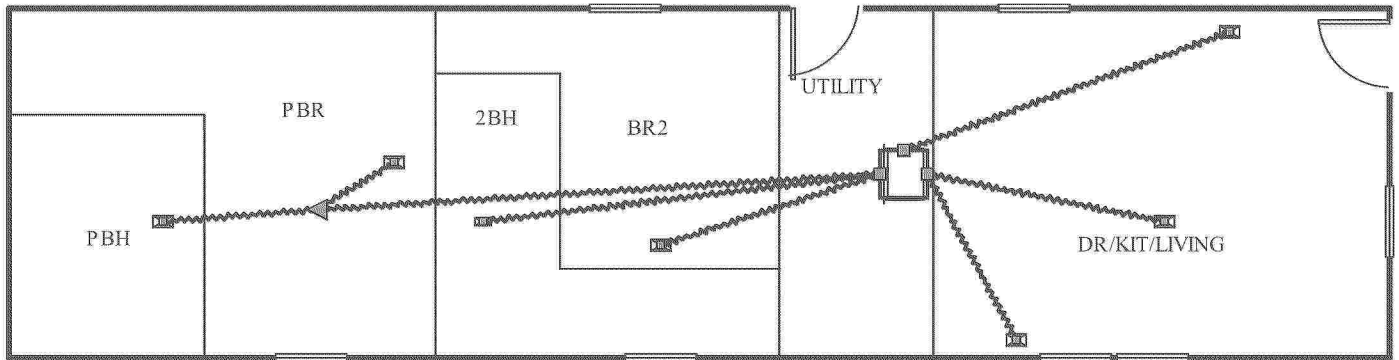
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11/8/2023

FEDERAL MANUFACTURED HOME  
CONSTRUCTION AND SAFETY STANDARDS

Level 1



957-5400.4.4

Job #: 5400 (OVERHEAD)  
Performed by CLAYTON ROCKWELL for:  
5400 (OVERHEAD)  
ROCKWELL, NC

Scale: 1 : 97  
Page 1  
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### Project Information

For: 5400 (OVERHEAD), CLAYTON 957  
 ROCKWELL, NC

Notes: DUCT COOLING CAPACITY = 26,000 BTU/HR

APPROVED BY



### Design Information

Weather: SC 55

#### Winter Design Conditions

Outside db 28 °F  
 Inside db 70 °F  
 Design TD 42 °F

#### Summer Design Conditions

Outside db 95 °F  
 Inside db 75 °F  
 Design TD 20 °F  
 Daily range M  
 Relative humidity 50 %  
 Moisture difference 34 gr/lb

#### Heating Summary

Structure 10581 Btuh  
 Ducts 0 Btuh  
**Central vent (45 cfm)** **2048** Btuh  
*Outside air*  
 Humidification 0 Btuh  
 Piping 0 Btuh  
 Equipment load 12630 Btuh

#### Sensible Cooling Equipment Load Sizing

Structure 10471 Btuh  
 Ducts 0 Btuh  
**Central vent (45 cfm)** **978** Btuh  
*Outside air*  
 Blower 0 Btuh  
 Use manufacturer's data n  
 Rate/swing multiplier 1.00  
 Equipment sensible load 11437 Btuh

#### Infiltration

Method Simplified  
 Construction quality Semi-tight  
 Fireplaces 0

	Heating	Cooling
Area (ft <sup>2</sup> )	859	859
Volume (ft <sup>3</sup> )	6874	6874
Air changes/hour	0.41	0.22
Equiv. AVF (cfm)	62	44

#### Latent Cooling Equipment Load Sizing

Structure 1813 Btuh  
 Ducts 0 Btuh  
**Central vent (45 cfm)** **1039** Btuh  
*Outside air*  
 Equipment latent load 2852 Btuh  
**Equipment Total Load (Sen+Lat)** 14290 Btuh  
 Req. total capacity at 0.70 SHR 1.4 ton

#### Heating Equipment Summary

Make Smart Comfort  
 Trade  
 Model  
 AHRI ref  
 Efficiency 100 EFF  
 Heating input 10.0 kW  
 Heating output 34121 Btuh  
 Temperature rise 40 °F  
 Actual air flow 780 cfm  
 Air flow factor 0.074 cfm/Btuh  
 Static pressure 0.30 in H2O  
 Space thermostat

#### Cooling Equipment Summary

Make Smart Comfort  
 Trade 15 SEER2 AC  
 Cond R4A5S24\*K\*WAA\*  
 Coil FEVA0024\*\*\*+NAVA43601CK  
 AHRI ref 0  
 Efficiency 13.0 EER2, 15.5 SEER2  
 Sensible cooling 16380 Btuh  
 Latent cooling 7020 Btuh  
 Total cooling 23400 Btuh  
 Actual air flow 780 cfm  
 Air flow factor 0.074 cfm/Btuh  
 Static pressure 0.30 in H2O  
 Load sensible heat ratio 0.80

957-5400.4.5

*Bold/italic values have been manually overridden*

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

# CLAYTON HOME BUILDING GROUP

## ZONES 1 & 2

Model Number	5400	Drawing Number	5400
			Version 14

BOX SIZE: 15 ft. x 58.33 ft.  
 AVG. SIDEWALL HEIGHT = 8 FEET  
 PERCENTAGE OF CEILING THAT IS VAULTED = 0%

### IN-FLOOR DUCT SYSTEM

	UNHEATED FLOOR	WALL	FLAT ROOF
<b>INSULATION VALUES</b>	R-22 FW	R-13	R-38
<b>DAPIA PAGE</b>	THP-164	THP-552	THP-2013
<b>U VALUE (BTUH/SQ.FT.-F)</b>	0.0454	0.0808	0.0297

Overhead Duct	
Diameter	Length
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
14	0
Exterior Supply	Length
14	0
16	0
Exterior Return	Length
14	0
16	0



	Area	U Value	UA
<b>Doors:</b>			
Front	22.00	0.210	4.62
Rear	22.00	0.260	5.72
Other Door	0.00	0.330	0.00
Other Door	0.00	0.330	0.00
OSB	0.00	0.000	0.00
Skylights	0.00	0.330	0.00
<b>Window Glass Area:</b>			
Standard	108.00	0.300	32.40
Option	0.00	0.300	0.00
<b>Net:</b>			
Floor	874.95	0.045	39.72
Wall	1021.28	0.081	82.52
Ceiling	874.95	0.0297	25.99
Ext. Duct	0.00	0.000	0.00
Ext. Duct	0.00	0.000	0.00
Ext. Duct	0.00	0.000	0.00
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	256.2
Th. Zone 2	109.5
Th. Zone 3	2.8

Thermal Zone	Outdoor Design Temp (F)	UA	Uo	EStar v3 & ZERH Compliant	Heatloss BTUH/F
	1	11	190.97	0.065	OK
2	0	190.97	0.065	OK	293.60
3	-14	190.97	0.065	NG	293.60

### Design Temperatures

Furnace Heating Temp (F)	Economy Outdoor Temp (F)	
-46	-11	10kW
-69	-28	12kW
-104	-52	15kW
-66	-25	40k Gas
-134	-73	60k Gas
-202	-121	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

# CLAYTON HOME BUILDING GROUP

## ZONE 3

Model Number	5400	Drawing Number	5400
			Version 14

BOX SIZE: 15 ft. x 58.33 ft.

AVG. SIDEWALL HEIGHT = 8 FEET

PERCENTAGE OF CEILING THAT IS VAULTED = 0%

### IN-FLOOR DUCT SYSTEM

	UNHEATED FLOOR	WALL	FLAT ROOF
<b>INSULATION VALUES</b>	(2) R-11 OR / R-33 BIB	R-21	R-38
<b>DAPIA PAGE</b>	THP-3004	THP-560	THP-2013
<b>U VALUE (BTUH/SQ.FT.-F)</b>	0.0389	0.0541	0.0297

Overhead Duct	
Diameter	Length
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
14	0
Exterior Supply	Length
14	0
16	0
Exterior Return	Length
14	0
16	0



	Area	U Value	UA
<b>Doors:</b>			
Front	22.00	0.210	4.62
Rear	22.00	0.260	5.72
Other Door	0.00	0.330	0.00
Other Door	0.00	0.330	0.00
OSB	0.00	0.000	0.00
Skylights	0.00	0.330	0.00
<b>Window Glass Area:</b>			
Standard	108.00	0.300	32.40
Option	0.00	0.300	0.00
<b>Net:</b>			
Floor	874.95	0.039	34.04
Wall	1021.28	0.054	55.25
Ceiling	874.95	0.0297	25.99
<b>Th. Zone 1:</b>			
Ext. Duct	0.00	0.000	0.00
<b>Th. Zone 2:</b>			
Ext. Duct	0.00	0.000	0.00
<b>Th. Zone 3:</b>			
Ext. Duct	0.00	0.000	0.00
<b>Overhead TZ 1:</b>			
Supply	0.00	0.000	0.00
<b>Overhead TZ 2:</b>			
Supply	0.00	0.000	0.00
<b>Overhead TZ 3:</b>			
Supply	0.00	0.00	0.00

Energy Star v3 & ZERH Max Glass (sq ft)	
Th. Zone 1	374.1
Th. Zone 2	243.3
Th. Zone 3	148.2

Thermal Zone	Outdoor Design Temp (F)	UA	Uo	EStar v3 & ZERH Compliant	Heatloss BTUH/F
	1	11	158.01	0.054	OK
2	0	158.01	0.054	OK	260.70
3	-14	158.01	0.054	OK	260.70

### Design Temperatures

Furnace Heating Temp (F)	Economy Outdoor Temp (F)	
-61	-22	10kW
-87	-40	12kW
-126	-67	15kW
-83	-37	40k Gas
-160	-91	60k Gas
-237	-145	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



# CLAYTON HOME BUILDING GROUP

## OVERHEAD HVAC

Model Number	5400	Drawing Number	5400
			Version 14

BOX SIZE: 15 ft. x 58.33 ft.  
 AVG. SIDEWALL HEIGHT = 8 FEET  
 PERCENTAGE OF CEILING THAT IS VAULTED = 0%

### OVERHEAD DUCT SYSTEM

	UNHEATED FLOOR	WALL	FLAT ROOF
<b>INSULATION VALUES</b>	R-22 FW	R-13	R-38
<b>DAPIA PAGE</b>	THP-164	THP-552	THP-2013
<b>U VALUE (BTUH/SQ.FT.-F)</b>	0.0454	0.0808	0.0297

Overhead Duct	
Diameter	Length
4	0
5	20
6	56
7	4
8	23
9	0
10	0
11	0
14	0
Exterior Supply	Length
14	0
16	0
Exterior Return	Length
14	0
16	0



	Area	U Value	UA	
<b>Doors:</b>	Front	22.00	0.210	4.62
	Rear	22.00	0.260	5.72
	Other Door	0.00	0.330	0.00
	Other Door	0.00	0.330	0.00
	OSB	0.00	0.000	0.00
	Skylights	0.00	0.330	0.00
	Standard	108.00	0.300	32.40
<b>Window Glass Area:</b>	Option	0.00	0.300	0.00
	Net:			
	Floor	874.95	0.045	39.72
	Wall	1021.28	0.081	82.52
	Ceiling	874.95	0.0297	25.99
Th. Zone 1:	Ext. Duct	0.00	0.000	0.00
Th. Zone 2:	Ext. Duct	0.00	0.000	0.00
Th. Zone 3:	Ext. Duct	0.00	0.000	0.00
Overhead TZ 1:	Supply	5.88	0.242	1.42
Overhead TZ 2:	Supply	5.88	0.223	1.31
Overhead TZ 3:	Supply	5.88	0.21	1.21

Energy Star v3 & ZERH Max Glass (sq ft)	
Th. Zone 1	249.7
Th. Zone 2	103.5
Th. Zone 3	0.0

Thermal Zone	Outdoor Design Temp (F)	UA	Uo	EStar v3 & ZERH Compliant	Heatloss BTUH/F
	1	11	192.39	0.066	OK
2	0	192.28	0.066	NG	294.90
3	-14	192.18	0.066	NG	294.80

### Design Temperatures

Furnace Heating Temp (F)	Economy Outdoor Temp (F)	
-46	-11	10kW
-69	-27	12kW
-103	-51	15kW
-66	-25	40k Gas
-133	-72	60k Gas
-201	-120	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