



June 17, 2022

Mr. Mike Hamm, PE
State of North Carolina
Department of Insurance
Manufactured Building Division
1202 Mail Service Center
Raleigh, NC 27699-1202

RE: CMH Manufacturing, Inc. #958
Model: 5530-28W-G-4BR-NC

Dear Mr. Hamm,

Enclosed, you will find one (1) copy with the above-mentioned project for your files.


Should you have any questions or comments, please contact me at your earliest convenience.

Sincerely,

David Richter

David Richter
Account Manager

CMH
Manufacturing, Inc.
engineering department - modular

APPROVED BY

 6/17/2022
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David Richter

Date:
 6/17/2022

TYPE : MODULAR

MODEL PLAN INDEX

Model #	5530-28W-4BR	State
Manufacturer	<i>CMH Manufacturing, Inc.</i>	NC
Brand Name	<i>CLAYTON</i>	
Unit Size	<i>26'-8" x 64'-0"</i>	
Description	<i>4 BEDROOM / 2 BATH</i>	

Category	Document Description	Page or Sheet #
<i>Index</i>	<i>Model Plan Index</i>	IX-1
<i>Technical Sheet</i>	<i>Light & Vent</i>	TS-1
<i>Technical Sheet</i>	<i>Heat Loss Calc</i>	ATTACHED
<i>Technical Sheet</i>	<i>HVAC System Calc</i>	ATTACHED
<i>Technical Sheet</i>	<i>Electrical Load Calc</i>	TS-5
<i>Model Plan</i>	<i>Cover Sheet</i>	1-0
<i>Model Plan</i>	<i>Cross Section / Fastening Schedule</i>	1-0.2
<i>Model Plan</i>	<i>Master Plan</i>	1-1
<i>Model Plan</i>	<i>HVAC Layout</i>	4-1A
<i>Model Plan</i>	<i>DWV Plumbing Schematic</i>	8-1
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<i>Model Plan</i>	<i>Exterior Elevations - Rear & Left</i>	20-2
<i>Model Plan</i>	<i>OFF Frame Foundation</i>	21-30PSF
<i>Model Plan</i>	<i>ON Frame Foundation</i>	21-PS
<i>Technical Sheet</i>	<i>OFF & ON-Frame Foundation Calculations</i>	ATTACHED
<i>Model Plan</i>	<i>Dryer Installation Details</i>	4-1
<i>Model Plan</i>	<i>Electrical Legend</i>	TS-6
<i>Technical Sheet</i>	PLUMBING PLAN	PLN-1.8
<i>Technical Sheet</i>	TRUSSES	ATTACHED
SEE APPROVED MODULAR MANUAL FOR ;		
1. SECTIONS		2. TYPICAL DETAILS
3. REQUIRED CONSTRUCTION METHODS		4. MATERIALS

CMH

Manufacturing, Inc.
engineering department - modular

REVISIONS		
DATE :	REVISION BY :	GCK
June 16, 2022	REVISION DATE :	

TECHNICAL SHEET FOR LIGHT / VENT DATA

MODEL NUMBER	5530-28W-4BR	
SIZE OF UNIT	26'-8" x 64'-0"	
WINDOW SQ. FTG. STD.		
WINDOW SQ. FTG. W/ OPT.		
FIGURED FOR :	CLAYTON WINDOWS	
PERCENTAGE OF LIGHT REQ'D.	8%	
PERCENTAGE OF VENT REQ'D.	4%	

Room	Area	Square Footage Installed		Required		Percentage of Installed		Artificial Light	Artificial Vent
		Light	Vent	Light	Vent	Light	Vent		
MASTER BEDROOM	180.8	24.4	12.4	14.5	7.2	13.5%	6.9%		
LIVING ROOM	271.4	24.4	12.4	21.7	10.9	9.0%	4.6%		
BEDROOM 2	137.5	12.2	6.2	11.0	5.5	8.9%	4.5%		
BEDROOM 3	125.8	12.2	6.2	10.1	5.0	9.7%	4.9%		
KITCHEN	177.0	10.1	2.2	14.2	7.1	5.7%	1.2%	YES	YES
DINING ROOM	118.3	12.2	6.2	9.5	4.7	10.3%	5.2%		
BEDROOM 4	156.8	24.4	12.4	12.5	6.3	15.6%	7.9%		

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Load Short Form
Entire House
Clayton Homes

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6/17/2022

Job: 5530-28W-4BR
Date: 06/16/22
By: GCK

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5000 Clayton Road, Maryville, TN 37804 Phone: 865-380-3000

Project Information

For: CZ3~In Line Duct

Design Information

	Htg	Clg	Method	Infiltration
Outside db (°F)	25	92		Simplified
Inside db (°F)	70	75	Construction quality	Semi-tight
Design TD (°F)	45	17	Fireplaces	
Daily range	-	M		
Inside humidity (%)	30	50		
Moisture difference (gr/lb)	18	35		

0

HEATING EQUIPMENT

Make	Smart Comfort
Trade	
Model	
AHRI ref	
Efficiency	100 EFF
Heating input	10.0 kW
Heating output	34121 Btuh
Temperature rise	29 °F
Actual air flow	1113 cfm
Air flow factor	0.047 cfm/Btuh
Static pressure	0.30 in H2O
Space thermostat	

COOLING EQUIPMENT

Make	Smart Comfort
Trade	13 SEER R SERIES R410A AC
Cond	R4A336GKH
Coil	FED003610+NADA43601CK
AHRI ref	0
Efficiency	11.5 EER, 13 SEER
Sensible cooling	23380 Btuh
Latent cooling	10020 Btuh
Total cooling	33400 Btuh
Actual air flow	1113 cfm
Air flow factor	0.056 cfm/Btuh
Static pressure	0.30 in H2O
Load sensible heat ratio	0.81

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
BR4	200	3466	2654	162	147
Bath2	53	679	284	32	16
Util	68	1102	1084	52	60
DinRm/Kit	316	3651	3639	171	202
M.Clo	58	584	247	27	14
M.Bath	113	2301	1504	108	83
BR2	151	2933	2035	137	113
Clo	67	0	0	0	0
BR3	144	2063	1730	96	96
LivRm	282	3572	3776	167	210
MBR	209	3446	3105	161	172
Hall	46	0	0	0	0

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



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2022-Jun-16 13:59:25

...soft HVAC1--WS--SN--WS--Models\5530-28W-4BR .rup Calc = MJB Front Door faces: N

Page 1

Entire House	1707	23796	20058	1113	1113
Other equip loads		4333	1637		
Equip. @ 0.97 RSM			21044		
Latent cooling			5197		
TOTALS	1707	28129	26241	1113	1113

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5000 Clayton Road, Maryville, TN 37804 Phone: 865-380-3000

Project Information

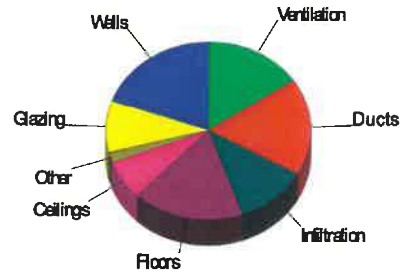
For: CZ3~In Line Duct

Design Conditions

Location:		Indoor:		Heating	Cooling
Charlotte/Douglas, NC, US		Indoor temperature (°F)		70	75
Elevation: 768 ft		Design TD (°F)		45	17
Latitude: 35°N		Relative humidity (%)		30	50
		Moisture difference (gr/lb)		17.9	34.8
Outdoor:	Heating	Cooling	Infiltration:		
Drybulb (°F)	25	92	Method	Simplified	
Dailyrange (°F)	-	19 (M)	Construction quality	Semi-tight	
Wet bulb (°F)	-	74	Fireplaces	0	
Wind speed (mph)	15.0	7.5			

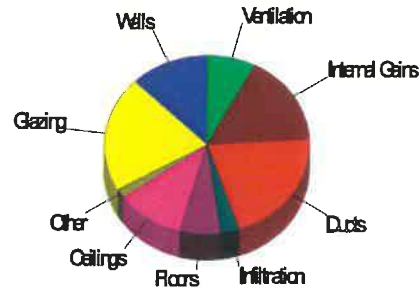
Heating

Component	Btuh/ft²	Btuh	% of load
Walls	3.9	5523	19.6
Glazing	15.8	2631	9.4
Doors	14.4	547	1.9
Ceilings	1.2	1997	7.1
Floors	2.9	4915	17.5
Infiltration	2.0	3204	11.4
Ducts		4980	17.7
Piping		0	0
Humidification		0	0
Ventilation		4333	15.4
Adjustments		0	0
Total		28129	100.0



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	1.9	2724	12.6
Glazing	27.1	4522	20.8
Doors	9.3	355	1.6
Ceilings	1.4	2338	10.8
Floors	0.8	1387	6.4
Infiltration	0.4	652	3.0
Ducts		4529	20.9
Ventilation		1637	7.5
Internal gains		3550	16.4
Blower		0	0
Adjustments		0	0
Total		21695	100.0



Latent Cooling Load = 5197 Btuh
 Overall U-value = 0.069 Btuh/ft²-°F

Data entries checked.

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5000 Clayton Road, Maryville, TN 37804 Phone: 865-380-3000

Project Information

For: CZ3~In Line Duct

Design Conditions

Location:		Indoor:		Heating	Cooling
Charlotte/Douglas, NC, US		Indoor temperature (°F)		70	75
Elevation: 768 ft		Design TD (°F)		45	17
Latitude: 35°N		Relative humidity (%)		30	50
Outdoor:		Moisture difference (gr/lb)		17.9	34.8
Heating	Cooling	Infiltration:			
Drybulb (°F)	25	92	Method	Simplified	
Dailyrange (°F)	-	19 (M)	Construction quality	Semi-tight	
Wet bulb (°F)	-	74	Fireplaces	0	
Wind speed (mph)	15.0	7.5			

Construction descriptions

	Or	Area ft²	U-value Btu/h·ft²·°F	Insul R ft²·°F/Btu	Htg HTM Btu/h/°F	Loss Btu/h	Clg HTM Btu/h/°F	Gain Btu/h
Walls								
12D-0sw: Frm wall, vnl ext, 3/8" wood shth, r-15 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	n	240	0.086	15.0	3.87	929	1.91	458
	e	481	0.086	15.0	3.87	1862	1.91	919
	s	240	0.086	15.0	3.87	929	1.91	458
	w	466	0.086	15.0	3.87	1803	1.91	889
	all	1427	0.086	15.0	3.87	5523	1.91	2724
Partitions (none)								
Windows								
Clayton - Thermopane Low-E: Clayton - Thermopane Low-E; 50% blinds 45°, medlum; 50% outdoor insect screen; 6.67 ft head ht	e	77	0.350	0	15.7	1213	26.3	2026
	w	90	0.350	0	15.8	1418	26.3	2368
	all	167	0.350	0	15.8	2631	26.3	4394
Doors								
CMH - Standard Door: CMH - Standard Door - Solid no storm	e	18	0.320	0	14.4	257	9.34	167
	w	20	0.320	0	14.4	289	9.34	188
	all	38	0.320	0	14.4	547	9.34	355
Ceilings								
16B-38ad: Attic ceiling, asphalt shingles roof mat, r-38 ceil ins, 1/2" gypsum board int fnsh		1707	0.026	38.0	1.17	1997	1.37	2338
Floors								
Floor R22: R-22 Insulation Fir floor, frm fir, 10" thkns, amb ovr		1707	0.064	22.0	2.88	4915	0.81	1387



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Project Summary
Entire House
Clayton Homes

Job: 5530-28W-4BR
Date: 06/16/22
By: GCK

5000 Clayton Road, Maryville, TN 37804 Phone: 865-380-3000

Project Information

For: CZ3-In Line Duct

Notes: R-38-15-22

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Design Information

Weather: Charlotte/Douglas, NC, US

Winter Design Conditions

Outside db 25 °F
 Inside db 70 °F
 Design TD 45 °F

Summer Design Conditions

Outside db 92 °F
 Inside db 75 °F
 Design TD 17 °F
 Daily range M
 Relative humidity 50 %
 Moisture difference 35 gr/lb

Heating Summary

Structure 18816 Btuh
 Ducts 4980 Btuh
 Central vent (90 cfm) 4333 Btuh
 Outside air
 Humidification 0 Btuh
 Piping 0 Btuh
 Equipment load 28129 Btuh

Sensible Cooling Equipment Load Sizing

Structure 15529 Btuh
 Ducts 4529 Btuh
 Central vent (90 cfm) 1637 Btuh
 Outside air
 Blower 0 Btuh
 Use manufacturer's data n
 Rate/swing multiplier 0.97
 Equipment sensible load 21044 Btuh

Infiltration

Method Simplified
 Construction quality Semi-tight
 Fireplaces 0

Latent Cooling Equipment Load Sizing

Structure 1826 Btuh
 Ducts 1297 Btuh
 Central vent (90 cfm) 2074 Btuh
 Outside air
 Equipment latent load 5197 Btuh

	Heating	Cooling
Area (ft ²)	1707	1707
Volume (ft ³)	15360	15360
Air changes/hour	0.26	0.14
Equiv. AVF (cfm)	67	36

Equipment Total Load (Sen+Lat) 26241 Btuh
 Req. total capacity at 0.70 SHR 2.5 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	29 °F
Actual air flow	1113 cfm
Air flow factor	0.047 cfm/Btuh
Static pressure	0.30 in H2O
Space thermostat	

Cooling Equipment Summary

Make Smart Comfort
 Trade 13 SEER R SERIES R410A AC
 Cond R4A336GKH
 Coil FED003610+NADA43601CK
 AHRI ref 0

Efficiency	11.5 EER, 13 SEER
Sensible cooling	23380 Btuh
Latent cooling	10020 Btuh
Total cooling	33400 Btuh
Actual air flow	1113 cfm
Air flow factor	0.056 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.





Manual S Compliance Report
Entire House
Clayton Homes

Job: 5530-28W-4BR
Date: 06/16/22
By: GCK

5000 Clayton Road, Maryville, TN 37804 Phone: 865-380-3000

Project Information

For: CZ3~In Line Duct

Cooling Equipment

Design Conditions

Outdoor design DB:	92.0°F	Sensible gain:	21695	Btuh	Entering coil DB:	78.9°F
Outdoor design WB:	74.0°F	Latent gain:	5197	Btuh	Entering coil WB:	64.4°F
Indoor design DB:	75.0°F	Total gain:	26892	Btuh		
Indoor RH:	50%	Estimated airflow:	1113	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split AC	Model:	R4A336GKH+FED003610+NADA43601CK
Manufacturer:	Smart Comfort		
Actual airflow:	1113 cfm		
Sensible capacity:	23380 Btuh	108% of load	
Latent capacity:	10020 Btuh	193% of load	
Total capacity:	33400 Btuh	124% of load	SHR: 70%

Heating Equipment

Design Conditions

Outdoor design DB:	25.0°F	Heat loss:	28129	Btuh	Entering coil DB:	64.7°F
Indoor design DB:	70.0°F					

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Elec strip	Model:			
Manufacturer:	Smart Comfort				
Actual airflow:	1113 cfm				
Output capacity:	10.0 kW	121% of load		Temp. rise:	54 °F



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Meets all requirements of ACCA Manual S.



Duct System Summary

Entire House
Clayton Homes

Job: 5530-28W-4BR
Date: 06/16/22
By: GCK

5000 Clayton Road, Maryville, TN 37804 Phone: 865-380-3000

Project Information

For: CZ3~In Line Duct

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	Heating	Cooling
External static pressure	0.30 in H2O	0.30 in H2O
Pressure losses	0 in H2O	0 in H2O
Available static pressure	0.30 in H2O	0.30 in H2O
Supply / return available pressure	0.222 / 0.078 in H2O	0.222 / 0.078 in H2O
Lowest friction rate	0.085 in/100ft	0.085 in/100ft
Actual air flow	1113 cfm	1113 cfm
Total effective length (TEL)		353 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
BR2	h 2933	137	113	0.170	7.0	0x0	VIFx	30.8	100.0	st5
BR3	h 2063	96	96	0.192	6.0	0x0	VIFx	15.8	100.0	st5
BR4	h 1733	81	74	0.125	6.0	0x0	VIFx	28.4	150.0	st3
BR4-A	h 1733	81	74	0.469	5.0	0x0	VIFx	12.3	35.0	st3
Bath2	h 679	32	16	0.540	5.0	0x0	VIFx	6.2	35.0	st3
DinRm/Kit	c 1213	57	67	0.582	5.0	0x0	VIFx	3.2	35.0	st1
DinRm/Kit-A	c 1213	57	67	0.474	5.0	0x0	VIFx	11.8	35.0	st1
DinRm/Kit-B	c 1213	57	67	0.402	5.0	0x0	VIFx	20.3	35.0	st1
LivRm	c 1888	84	105	0.198	6.0	0x0	VIFx	12.3	100.0	st5
LivRm-A	c 1888	84	105	0.177	7.0	0x0	VIFx	25.3	100.0	st4
M.Bath	h 2301	108	83	0.336	6.0	0x0	VIFx	31.2	35.0	st1
M.Clo	h 584	27	14	0.368	5.0	0x0	VIFx	25.3	35.0	st1
MBR	c 1552	81	86	0.085	6.0	0x0	VIFx	46.1	215.0	st4
MBR-A	c 1552	81	86	0.171	6.0	0x0	VIFx	29.8	100.0	st4
Util	c 1084	52	60	0.590	5.0	0x0	VIFx	2.7	35.0	st3

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	245	277	0.085	570	5.2	5 x 14	ShtMetl	st2
st5	Peak AVF	317	314	0.170	653	5.2	5 x 14	ShtMetl	st2
st2	Peak AVF	562	591	0.085	752	12.0	0 x 0	VinIFlx	
st3	Peak AVF	245	223	0.125	505	5.0	5 x 14	ShtMetl	
st1	Peak AVF	306	299	0.336	629	4.1	5 x 14	ShtMetl	



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Page 1

Return Branch Detail Table

Name	Grille Size (in)	Htg (cfm)	Clg (cfm)	TEL (ft)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Stud/Joist Opening (in)	Duct Matl	Trunk
rb2	0x0	494	509	91.5	0.085	476	14.0	0x 0		VIFx	
rb1	0x0	620	604	80.3	0.097	580	14.0	0x 0		VIFx	

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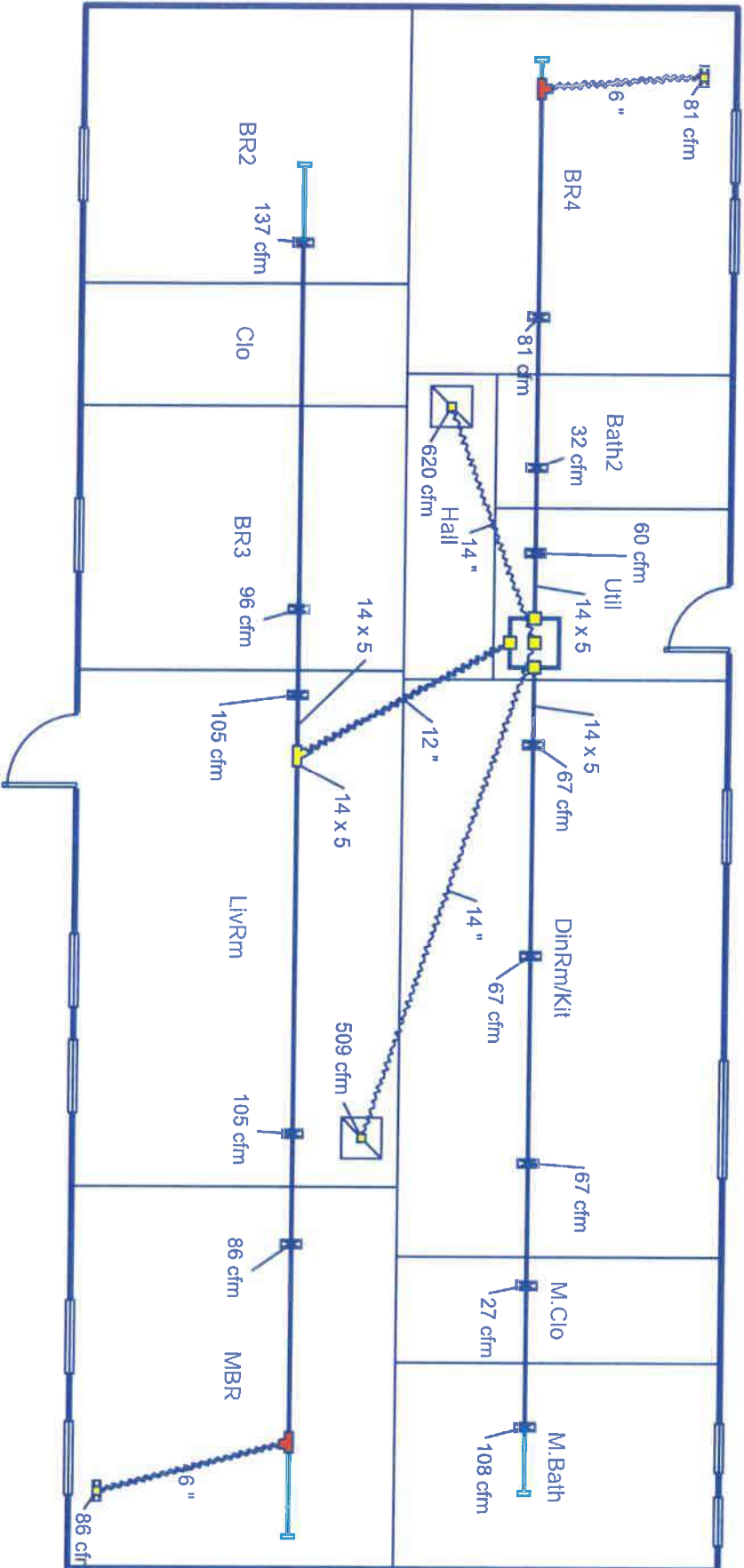
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Page 2



6/17/2022

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David Richter
First Floor



Job #: 5530-28W-4BR
Performed by GCK for:
CZ3-In Line Duct

Clayton Homes
5000 Clayton Road
Maryville, TN 37804
Phone: 865-380-3000

Scale: 1 : 80
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Right-Sub@Universal 2019
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Load Short Form
Entire House
Clayton Homes

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6/17/2022

Job: 5530-28W-4BR
Date: 06/16/22
By: GCK

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5000 Clayton Road, Maryville, TN 37804 Phone: 865-380-3000

Project Information

For: CZ4~In Line Duct

Design Information

	Htg	Clg	Method	Infiltration
Outside db (°F)	24	92		Simplified
Inside db (°F)	70	75	Construction quality	Semi-tight
Design TD (°F)	46	17	Fireplaces	
Daily range	-	M		
Inside humidity (%)	30	50		
Moisture difference (gr/lb)	19	41		

0

HEATING EQUIPMENT

Make	Smart Comfort
Trade	
Model	
AHRI ref	
Efficiency	100 EFF
Heating input	10.0 kW
Heating output	34121 Btuh
Temperature rise	28 °F
Actual air flow	1113 cfm
Air flow factor	0.045 cfm/Btuh
Static pressure	0.30 in H2O
Space thermostat	

COOLING EQUIPMENT

Make	Smart Comfort
Trade	13 SEER R SERIES R410A AC
Cond	R4A336GKH
Coil	FED003610+NADA43601CK
AHRI ref	0
Efficiency	11.5 EER, 13 SEER
Sensible cooling	23380 Btuh
Latent cooling	10020 Btuh
Total cooling	33400 Btuh
Actual air flow	1113 cfm
Air flow factor	0.055 cfm/Btuh
Static pressure	0.30 in H2O
Load sensible heat ratio	0.79

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
BR4	200	3581	2668	162	147
Bath2	53	702	286	32	16
Util	68	1138	1090	52	60
DinRm/Kit	316	3771	3656	171	202
M.Clo	58	603	249	27	14
M.Bath	113	2378	1513	108	83
BR2	151	3031	2050	137	113
Clo	67	0	0	0	0
BR3	144	2130	1741	96	96
LivRm	282	3688	3798	167	210
MBR	209	3561	3124	161	172
Hall	46	0	0	0	0

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



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...soft HVAC\---WS-SN\---WS-Models\5530-28W-4BR .rup Calc = MJ8 Front Door faces: N

Page 1

Entire House	1707	24581	20175	1113	1113
Other equip loads		4522	1696		
Equip. @ 0.97 RSM			21302		
Latent cooling			5871		
TOTALS	1707	29103	27173	1113	1113

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Project Information

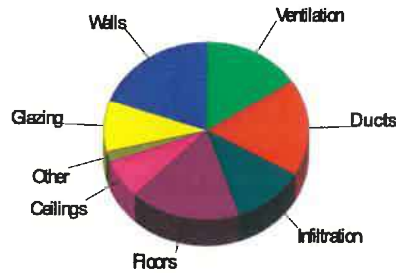
For: CZ4~In Line Duct

Design Conditions

Location:		Indoor:		Heating	Cooling
Raleigh/Raleigh-dur, NC, US		Indoor temperature (°F)		70	75
Elevation: 436 ft		Design TD (°F)		46	17
Latitude: 36°N		Relative humidity (%)		30	50
		Moisture difference (gr/lb)		18.7	40.7
Outdoor:	Heating	Cooling	Infiltration:		
Drybulb (°F)	24	92	Method	Simplified	
Dailyrange (°F)	-	19 (M)	Construction quality	Semi-tight	
Wet bulb (°F)	-	75	Fireplaces	0	
Wind speed (mph)	15.0	7.5			

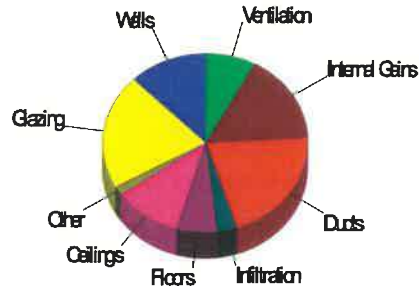
Heating

Component	Btuh/ft²	Btuh	% of load
Walls	4.0	5694	19.6
Glazing	16.2	2712	9.3
Doors	14.8	564	1.9
Ceilings	1.2	2059	7.1
Floors	3.0	5068	17.4
Infiltration	2.0	3344	11.5
Ducts		5139	17.7
Piping		0	0
Humidification		0	0
Ventilation		4522	15.5
Adjustments		0	0
Total		29103	100.0



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	1.9	2731	12.5
Glazing	27.2	4543	20.8
Doors	9.4	355	1.6
Ceilings	1.4	2341	10.7
Floors	0.8	1393	6.4
Infiltration	0.4	675	3.1
Ducts		4588	21.0
Ventilation		1696	7.8
Internal gains		3550	16.2
Blower		0	0
Adjustments		0	0
Total		21871	100.0



Latent Cooling Load = 5871 Btuh
 Overall U-value = 0.069 Btuh/ft²·°F

Data entries checked.

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5000 Clayton Road, Maryville, TN 37804 Phone: 865-380-3000

Project Information

For: CZ4~In Line Duct

Design Conditions

Location:	Raleigh/Raleigh-dur, NC, US	Indoor:	Indoor temperature (°F)	70	Heating	75
	Elevation: 436 ft		Design TD (°F)	46		17
	Latitude: 36°N		Relative humidity (%)	30		50
Outdoor:			Moisture difference (gr/lb)	18.7		40.7
	Heating	Cooling	Infiltration:			
	Drybulb (°F)	24	92	Method	Simplified	
	Dailyrange (°F)	-	19 (M)	Construction quality	Semi-tight	
	Wet bulb (°F)	-	75	Fireplaces	0	
	Wind speed (mph)	15.0	7.5			

Construction descriptions

	Or	Area ft²	U-value Btu/ft²·°F	Insul R ft²·°F/Btu	Htg HTM Btu/ft²	Loss Btu/h	Cig HTM Btu/ft²	Gain Btu/h
Walls								
12D-0sw: Frm wall, vnl ext, 3/8" wood shth, r-15 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	n	240	0.086	15.0	3.99	958	1.91	459
	e	481	0.086	15.0	3.99	1920	1.91	921
	s	240	0.086	15.0	3.99	958	1.91	459
	w	466	0.086	15.0	3.99	1859	1.91	891
	all	1427	0.086	15.0	3.99	5694	1.91	2731
Partitions (none)								
Windows								
Clayton - Thermopane Low-E: Clayton - Thermopane Low-E; 50% blinds 45°, medium; 50% outdoor insect screen; 6.67 ft head ht	e	77	0.350	0	16.2	1251	26.4	2034
	w	90	0.350	0	16.2	1462	26.4	2376
	all	167	0.350	0	16.2	2712	26.4	4410
Doors								
CMH - Standard Door: CMH - Standard Door - Solid no storm	e	18	0.320	0	14.8	265	9.36	167
	w	20	0.320	0	14.8	298	9.36	188
	all	38	0.320	0	14.8	564	9.36	355
Ceilings								
16B-38ad: Attic ceiling, asphalt shingles roof mat, r-38 ceil ins, 1/2" gypsum board int fnsh		1707	0.026	38.0	1.21	2059	1.37	2341
Floors								
Floor R22: R-22 Insulation Flr floor, frm flr, 10" thkns, amb ovr		1707	0.064	22.0	2.97	5068	0.82	1393



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Project Summary
Entire House
Clayton Homes

Job: 5530-28W-4BR
 Date: 06/16/22
 By: GCK

5000 Clayton Road, Maryville, TN 37804 Phone: 865-380-3000

Project Information

For: CZ4-In Line Duct

Notes: R-38-15-22

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Design Information

Weather: Raleigh/Raleigh-dur, NC, US

Winter Design Conditions

Outside db 24 °F
 Inside db 70 °F
 Design TD 46 °F

Summer Design Conditions

Outside db 92 °F
 Inside db 75 °F
 Design TD 17 °F
 Daily range M
 Relative humidity 50 %
 Moisture difference 41 gr/lb

Heating Summary

Structure 19442 Btuh
 Ducts 5139 Btuh
 Central vent (90 cfm) 4522 Btuh
 Outside air
 Humidification 0 Btuh
 Piping 0 Btuh
 Equipment load 29103 Btuh

Sensible Cooling Equipment Load Sizing

Structure 15588 Btuh
 Ducts 4588 Btuh
 Central vent (90 cfm) 1696 Btuh
 Outside air
 Blower 0 Btuh
 Use manufacturer's data n
 Rate/swing multiplier 0.97
 Equipment sensible load 21302 Btuh

Infiltration

Method Simplified
 Construction quality Semi-tight
 Fireplaces 0

Latent Cooling Equipment Load Sizing

Structure 1975 Btuh
 Ducts 1446 Btuh
 Central vent (90 cfm) 2450 Btuh
 Outside air
 Equipment latent load 5871 Btuh
Equipment Total Load (Sen+Lat) 27173 Btuh
 Req. total capacity at 0.70 SHR 2.5 ton

	Heating	Cooling
Area (ft ²)	1707	1707
Volume (ft ³)	15360	15360
Air changes/hour	0.26	0.14
Equiv. AVF (cfm)	67	36

Heating Equipment Summary

Make Smart Comfort
 Trade
 Model
 AHRI ref

Efficiency 100 EFF
 Heating input 10.0 kW
 Heating output 34121 Btuh
 Temperature rise 28 °F
 Actual air flow 1113 cfm
 Air flow factor 0.045 cfm/Btuh
 Static pressure 0.30 in H2O
 Space thermostat

Cooling Equipment Summary

Make Smart Comfort
 Trade 13 SEER R SERIES R410A AC
 Cond R4A336GKH
 Coil FED003610+NADA43601CK
 AHRI ref 0
 Efficiency 11.5 EER, 13 SEER

Sensible cooling 23380 Btuh
 Latent cooling 10020 Btuh
 Total cooling 33400 Btuh
 Actual air flow 1113 cfm
 Air flow factor 0.055 cfm/Btuh
 Static pressure 0.30 in H2O
 Load sensible heat ratio 0.79

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Page 1



Manual S Compliance Report
Entire House
Clayton Homes

Job: 5530-28W-4BR
Date: 06/16/22
By: GCK

5000 Clayton Road, Maryville, TN 37804 Phone: 865-380-3000

Project Information

For: CZ4~In Line Duct

Cooling Equipment

Design Conditions

Outdoor design DB:	92.4°F	Sensible gain:	21871	Btuh	Entering coil DB:	78.9°F
Outdoor design WB:	75.2°F	Latent gain:	5871	Btuh	Entering coil WB:	64.6°F
Indoor design DB:	75.0°F	Total gain:	27742	Btuh		
Indoor RH:	50%	Estimated airflow:	1113	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type: Split AC
 Manufacturer: Smart Comfort Model: R4A336GKH+FED003610+NADA43601CK
 Actual airflow: 1113 cfm
 Sensible capacity: 23380 Btuh 107% of load
 Latent capacity: 10020 Btuh 171% of load
 Total capacity: 33400 Btuh 120% of load SHR: 70%

Heating Equipment

Design Conditions

Outdoor design DB:	23.6°F	Heat loss:	29103	Btuh	Entering coil DB:	64.5°F
Indoor design DB:	70.0°F					

Manufacturer's Performance Data at Actual Design Conditions

Equipment type: Elec strip
 Manufacturer: Smart Comfort Model:
 Actual airflow: 1113 cfm
 Output capacity: 10.0 kW 117% of load Temp. rise: 53 °F



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Meets all requirements of ACCA Manual S.



Duct System Summary
Entire House
Clayton Homes

Job: 5530-28W-4BR
Date: 06/16/22
By: GCK

5000 Clayton Road, Maryville, TN 37804 Phone: 865-380-3000

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Project Information

For: CZ4~In Line Duct

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	Heating	Cooling
External static pressure	0.30 in H2O	0.30 in H2O
Pressure losses	0 in H2O	0 in H2O
Available static pressure	0.30 in H2O	0.30 in H2O
Supply / return available pressure	0.222 / 0.078 in H2O	0.222 / 0.078 in H2O
Lowest friction rate	0.085 in/100ft	0.085 in/100ft
Actual air flow	1113 cfm	1113 cfm
Total effective length (TEL)		353 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
BR2	h 3031	137	113	0.170	7.0	0x0	VIFx	30.8	100.0	st5
BR3	h 2130	96	96	0.192	6.0	0x0	VIFx	15.8	100.0	st5
BR4	h 1790	81	74	0.125	6.0	0x0	VIFx	28.4	150.0	st3
BR4-A	h 1790	81	74	0.469	5.0	0x0	VIFx	12.3	35.0	st3
Bath2	h 702	32	16	0.540	5.0	0x0	VIFx	6.2	35.0	st3
DinRm/Kit	c 1219	57	67	0.582	5.0	0x0	VIFx	3.2	35.0	st1
DinRm/Kit-A	c 1219	57	67	0.474	5.0	0x0	VIFx	11.8	35.0	st1
DinRm/Kit-B	c 1219	57	67	0.402	5.0	0x0	VIFx	20.3	35.0	st1
LivRm	c 1899	84	105	0.198	6.0	0x0	VIFx	12.3	100.0	st5
LivRm-A	c 1899	84	105	0.177	7.0	0x0	VIFx	25.3	100.0	st4
M.Bath	h 2378	108	83	0.336	6.0	0x0	VIFx	31.2	35.0	st1
M.Clo	h 603	27	14	0.368	5.0	0x0	VIFx	25.3	35.0	st1
MBR	c 1562	81	86	0.085	6.0	0x0	VIFx	46.1	215.0	st4
MBR-A	c 1562	81	86	0.171	6.0	0x0	VIFx	29.8	100.0	st4
Util	c 1090	52	60	0.590	5.0	0x0	VIFx	2.7	35.0	st3

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	245	277	0.085	570	5.2	5 x 14	ShtMetl	st2
st5	Peak AVF	317	314	0.170	653	5.2	5 x 14	ShtMetl	st2
st2	Peak AVF	562	591	0.085	753	12.0	0 x 0	VinIFx	
st3	Peak AVF	246	223	0.125	505	5.0	5 x 14	ShtMetl	
st1	Peak AVF	306	299	0.336	629	4.1	5 x 14	ShtMetl	



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
rb2	0x0	494	509	91.5	0.085	476	14.0	0x 0		VIFx	
rb1	0x0	620	604	80.3	0.097	580	14.0	0x 0		VIFx	

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Page 2



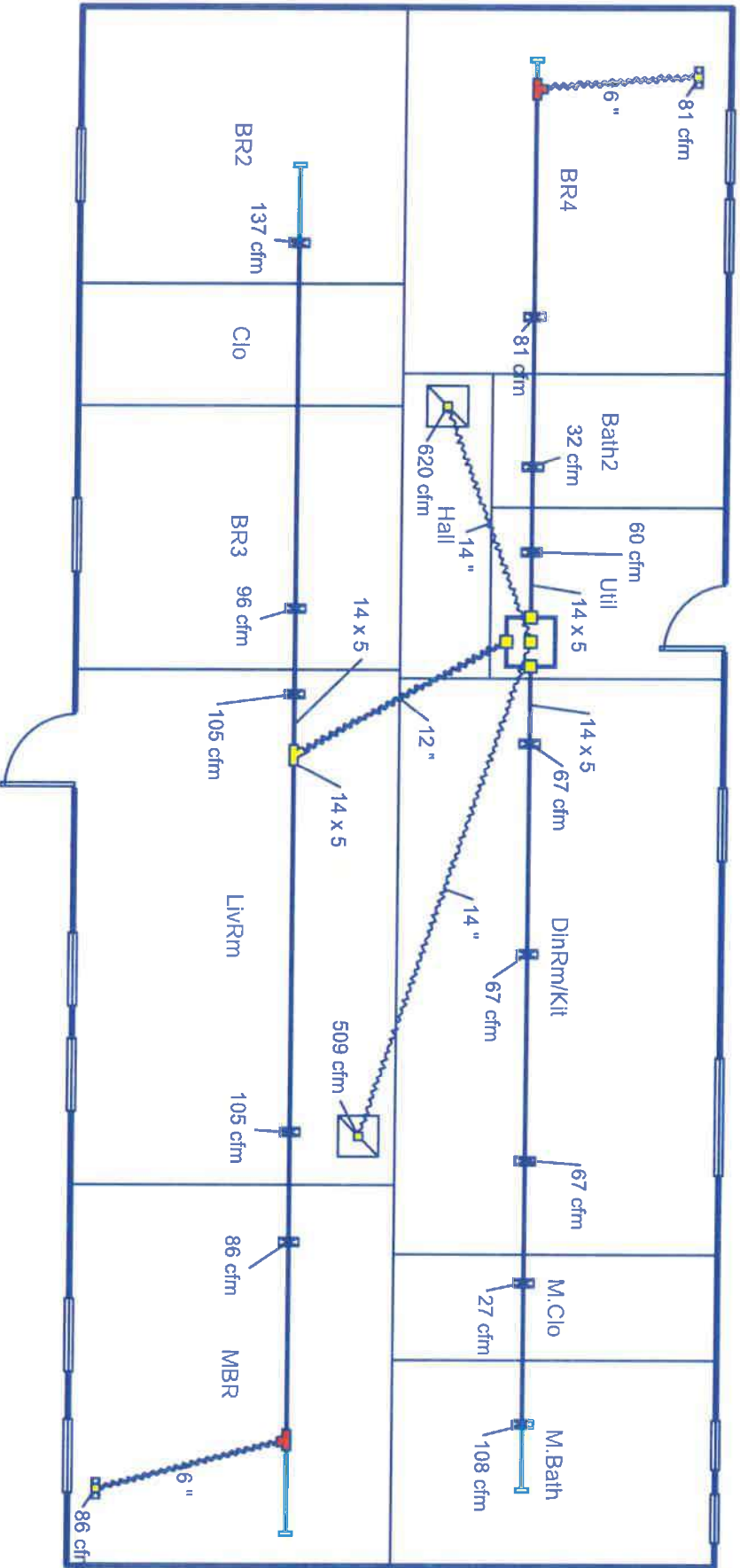
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First Floor



Job #: 5530-28W-4BR
Performed by GCK for:

C24-In Line Duct

Clayton Homes

5000 Clayton Road
Maryville, TN 37804
Phone: 865-380-3000

Scale: 1 : 80

Page 1
Right-Suite@ Universal 2019
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Load Short Form
Entire House
Clayton Homes

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Job: 5530-28W-4BR
 Date: 06/16/22
 By: GCK

5000 Clayton Road, Maryville, TN 37804 Phone: 865-380-3000

Project Information

For: CZ5~In Line Duct

Design Information

	Htg	Clg	Method	Infiltration
Outside db (°F)	19	86		Simplified
Inside db (°F)	70	75	Construction quality	Semi-tight
Design TD (°F)	51	11	Fireplaces	
Daily range	-	M		
Inside humidity (%)	30	50		
Moisture difference (gr/lb)	23	27		

HEATING EQUIPMENT

Make	Smart Comfort
Trade	
Model	
AHRI ref	
Efficiency	100 EFF
Heating input	10.0 kW
Heating output	34121 Btuh
Temperature rise	35 °F
Actual air flow	947 cfm
Air flow factor	0.042 cfm/Btuh
Static pressure	0.30 in H2O
Space thermostat	

COOLING EQUIPMENT

Make	Smart Comfort
Trade	15 SEER HIGH EER R SERIES R410...
Cond	R4A530GKB
Coil	FED003610+NADA43601CK
AHRI ref	0
Efficiency	12.2 EER, 14 SEER
Sensible cooling	19880 Btuh
Latent cooling	8520 Btuh
Total cooling	28400 Btuh
Actual air flow	947 cfm
Air flow factor	0.047 cfm/Btuh
Static pressure	0.30 in H2O
Load sensible heat ratio	0.83

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
BR4	200	3300	2551	140	120
Bath2	53	595	549	25	26
Util	68	1063	1366	45	65
DinRm/Kit	316	3327	3206	141	151
M.Clo	58	504	145	21	7
M.Bath	113	2225	1096	94	52
BR2	151	2752	2455	117	116
Clo	67	0	0	0	0
BR3	144	1862	3072	79	145
LivRm	282	3381	3139	144	148
MBR	209	3288	2467	140	116
Hall	46	0	0	0	0

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Page 1

Entire House	1707	22296	20046	947	947
Other equip loads		4666	997		
Equip. @ 0.91 RSM			19128		
Latent cooling			4162		
TOTALS	1707	26962	23291	947	947

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Page 2



Building Analysis
 Entire House
 Clayton Homes

Job: 5530-28W-4BR
 Date: 06/16/22
 By: GCK

5000 Clayton Road, Maryville, TN 37804 Phone: 865-360-3000

Project Information

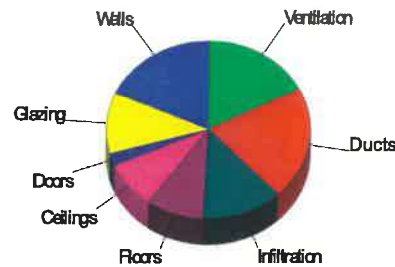
For: CZ5~In Line Duct

Design Conditions

Location:				Indoor:	Heating	Cooling
Asheville Municipal, NC, US				Indoor temperature (°F)	70	75
Elevation: 2169 ft				Design TD (°F)	51	11
Latitude: 35°N				Relative humidity (%)	30	50
				Moisture difference (gr/lb)	23.0	27.4
Outdoor:	Heating	Cooling		Infiltration:		
Drybulb (°F)	19	86		Method	Simplified	
Dailyrange (°F)	-	19 (M)		Construction quality	Semi-tight	
Wet bulb (°F)	-	71		Fireplaces	0	
Wind speed (mph)	15.0	7.5				

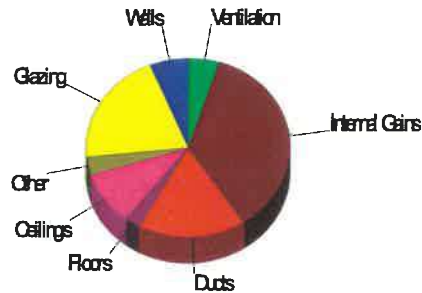
Heating

Component	Btuh/ft²	Btuh	% of load
Walls	3.5	4949	18.4
Glazing	17.9	2981	11.1
Doors	16.3	620	2.3
Ceilings	1.3	2263	8.4
Floors	1.5	2484	9.2
Infiltration	2.1	3450	12.8
Ducts		5549	20.6
Piping		0	0
Humidification		0	0
Ventilation		4666	17.3
Adjustments		0	0
Total		26962	100.0



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	0.9	1325	6.3
Glazing	25.8	4307	20.5
Doors	7.3	276	1.3
Ceilings	1.2	2052	9.8
Floors	0.3	531	2.5
Infiltration	0.2	397	1.9
Ducts		3608	17.1
Ventilation		997	4.7
Internal gains		7550	35.9
Blower		0	0
Adjustments		0	0
Total		21043	100.0



Latent Cooling Load = 4162 Btuh
 Overall U-value = 0.054 Btuh/ft²·°F

Data entries checked.

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Page 1



5000 Clayton Road, Maryville, TN 37804 Phone: 865-380-3000

Project Information

For: CZ5~In Line Duct

Design Conditions

Location:			Indoor:	Heating	Cooling
Asheville Municipal, NC, US			Indoor temperature (°F)	70	75
Elevation: 2169 ft			Design TD (°F)	51	11
Latitude: 35°N			Relative humidity (%)	30	50
Outdoor:	Heating	Cooling	Moisture difference (gr/lb)	23.0	27.4
Drybulb (°F)	19	86	Infiltration:		
Dailyrange (°F)	-	19 (M)	Method	Simplified	
Wet bulb (°F)	-	71	Construction quality	Semi-tight	
Wind speed (mph)	15.0	7.5	Fireplaces	0	

Construction descriptions	Or	Area ft²	U-value Btu/ft²·°F	Insul R ft²·°F/Btu	Htg HTM Btu/ft²	Loss Btu/h	Clg HTM Btu/ft²	Gain Btu/h
Walls								
12E-0sw: Frm wall, vnl ext, 3/8" wood shth, r-19 cav ins, 1/2" gypsum board int fnsh, 2"x6" wood frm, 16" o.c. stud	n	240	0.068	19.0	3.47	832	0.93	223
	e	481	0.068	19.0	3.47	1669	0.93	447
	s	240	0.068	19.0	3.47	832	0.93	223
	w	466	0.068	19.0	3.47	1616	0.93	432
	all	1427	0.068	19.0	3.47	4949	0.93	1325
Partitions (none)								
Windows								
Clayton - Thermopane Low-E: Clayton - Thermopane Low-E; 50% blinds 45°, medium; 50% outdoor insect screen; 6.67 ft head ht	e	77	0.350	0	17.9	1375	24.4	1878
	w	90	0.350	0	17.9	1607	24.4	2194
	all	167	0.350	0	17.9	2981	24.4	4072
Doors								
CMH - Standard Door: CMH - Standard Door - Solid no storm	e	18	0.320	0	16.3	292	7.28	130
	w	20	0.320	0	16.3	328	7.28	146
	all	38	0.320	0	16.3	620	7.28	276
Ceilings								
16B-38ad: Attic ceiling, asphalt shingles roof mat, r-38 cell ins, 1/2" gypsum board int fnsh		1707	0.026	38.0	1.33	2263	1.20	2052
Floors								
19A-30cvcp: Fir floor, frm fir, 10" thkns, carpet fir fnsh, r-30 cav ins, leaky crwl ovr		1707	0.034	30.0	1.46	2484	0.31	531

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Project Summary
Entire House
Clayton Homes

Job: 5530-28W-4BR
Date: 06/16/22
By: GCK

5000 Clayton Road, Maryville, TN 37804 Phone: 865-380-3000

Project Information

For: CZ5-In Line Duct

Notes: R-38-19-30

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Design Information

Weather: Asheville Municipal, NC, US

Winter Design Conditions

Outside db 19 °F
 Inside db 70 °F
 Design TD 51 °F

Summer Design Conditions

Outside db 86 °F
 Inside db 75 °F
 Design TD 11 °F
 Daily range M
 Relative humidity 50 %
 Moisture difference 27 gr/lb

Heating Summary

Structure 16747 Btuh
 Ducts 5549 Btuh
 Central vent (90 cfm) 4666 Btuh
 Outside air
 Humidification 0 Btuh
 Piping 0 Btuh
 Equipment load 26962 Btuh

Sensible Cooling Equipment Load Sizing

Structure 16439 Btuh
 Ducts 3608 Btuh
 Central vent (90 cfm) 997 Btuh
 Outside air
 Blower 0 Btuh
 Use manufacturer's data n
 Rate/swing multiplier 0.91
 Equipment sensible load 19128 Btuh

Infiltration

Method Simplified
 Construction quality Semi-tight
 Fireplaces 0

Latent Cooling Equipment Load Sizing

Structure 1618 Btuh
 Ducts 993 Btuh
 Central vent (90 cfm) 1551 Btuh
 Outside air
 Equipment latent load 4162 Btuh
Equipment Total Load (Sen+Lat) 23291 Btuh
 Req. total capacity at 0.70 SHR 2.3 ton

	Heating	Cooling
Area (ft ²)	1707	1707
Volume (ft ³)	15360	15360
Air changes/hour	0.26	0.14
Equiv. AVF (cfm)	67	36

Heating Equipment Summary

Make Smart Comfort
 Trade
 Model
 AHRI ref
 Efficiency 100 EFF
 Heating input 10.0 kW
 Heating output 34121 Btuh
 Temperature rise 35 °F
 Actual air flow 947 cfm
 Air flow factor 0.042 cfm/Btuh
 Static pressure 0.30 in H2O
 Space thermostat

Cooling Equipment Summary

Make Smart Comfort
 Trade 15 SEER HIGH EER R SERIES R410...
 Cond R4A530GKB
 Coil FED003610+NADA43601CK
 AHRI ref 0
 Efficiency 12.2 EER, 14 SEER
 Sensible cooling 19880 Btuh
 Latent cooling 8520 Btuh
 Total cooling 28400 Btuh
 Actual air flow 947 cfm
 Air flow factor 0.042 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.



wrightsoft

Right-Suite® Universal 2019 19.0.09 RSU24773

2022-Jun-16 14:04:29

...soft HVAC\—WS—SN\—WS—Models\5530-28W-4BR .rup Calc = MJ8 Front Door faces: N

Page 1



Manual S Compliance Report
Entire House
Clayton Homes

Job: 5530-28W-4BR
Date: 06/16/22
By: GCK

5000 Clayton Road, Maryville, TN 37804 Phone: 865-380-3000

Project Information

For: CZ5--In Line Duct

Cooling Equipment

Design Conditions

Outdoor design DB: 85.9°F	Sensible gain: 21043 Btuh	Entering coil DB: 78.5°F
Outdoor design WB: 70.6°F	Latent gain: 4162 Btuh	Entering coil WB: 64.0°F
Indoor design DB: 75.0°F	Total gain: 25206 Btuh	
Indoor RH: 50%	Estimated airflow: 947 cfm	

Manufacturer's Performance Data at Actual Design Conditions

Equipment type: Split AC	Model: R4A530GKB+FED003610+NADA43601CK
Manufacturer: Smart Comfort	
Actual airflow: 947 cfm	
Sensible capacity: 19880 Btuh	94% of load
Latent capacity: 8520 Btuh	205% of load
Total capacity: 28400 Btuh	113% of load SHR: 70%

Heating Equipment

Design Conditions

Outdoor design DB: 19.0°F	Heat loss: 26962 Btuh	Entering coil DB: 63.0°F
Indoor design DB: 70.0°F		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type: Elec strip	Model:	
Manufacturer: Smart Comfort		
Actual airflow: 947 cfm		
Output capacity: 10.0 kW	127% of load	Temp. rise: 57 °F



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David Richter

Meets all requirements of ACCA Manual S.



wrightsoft

Right-Suite® Universal 2019 19.0.09 RSU24773

...soft HVAC\--WS~SN\--WS~Models\5530-28W-4BR.rup Calc = MJ8 Front Door faces: N

2022-Jun-16 14:04:29

Page 1



Duct System Summary
Entire House
Clayton Homes

Job: 5530-28W-4BR
Date: 06/16/22
By: GCK

5000 Clayton Road, Maryville, TN 37804 Phone: 865-380-3000

APPROVED BY



6/17/2022

Project Information

For: CZ5-In Line Duct

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David Richter

	Heating	Cooling
External static pressure	0.30 in H2O	0.30 in H2O
Pressure losses	0 in H2O	0 in H2O
Available static pressure	0.30 in H2O	0.30 in H2O
Supply / return available pressure	0.222 / 0.078 in H2O	0.222 / 0.078 in H2O
Lowest friction rate	0.085 in/100ft	0.085 in/100ft
Actual air flow	947 cfm	947 cfm
Total effective length (TEL)		353 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
BR2	h 2752	117	116	0.170	7.0	0x0	VIFx	30.8	100.0	st5
BR3	c 3072	79	145	0.192	7.0	0x0	VIFx	15.8	100.0	st5
BR4	h 1650	70	60	0.125	6.0	0x0	VIFx	28.4	150.0	st3
BR4-A	h 1650	70	60	0.469	5.0	0x0	VIFx	12.3	35.0	st3
Bath2	c 549	25	26	0.540	5.0	0x0	VIFx	6.2	35.0	st3
DinRm/Kit	c 1069	47	50	0.582	5.0	0x0	VIFx	3.2	35.0	st1
DinRm/Kit-A	c 1069	47	50	0.474	5.0	0x0	VIFx	11.8	35.0	st1
DinRm/Kit-B	c 1069	47	50	0.402	5.0	0x0	VIFx	20.3	35.0	st1
LivRm	c 1569	72	74	0.198	6.0	0x0	VIFx	12.3	100.0	st5
LivRm-A	c 1569	72	74	0.177	6.0	0x0	VIFx	25.3	100.0	st4
M.Bath	h 2225	94	52	0.336	6.0	0x0	VIFx	31.2	35.0	st1
M.Clo	h 504	21	7	0.368	5.0	0x0	VIFx	25.3	35.0	st1
MBR	h 1644	70	58	0.085	6.0	0x0	VIFx	46.1	215.0	st4
MBR-A	h 1644	70	58	0.171	6.0	0x0	VIFx	29.8	100.0	st4
Util	c 1366	45	65	0.590	5.0	0x0	VIFx	2.7	35.0	st3

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	211	191	0.085	435	5.2	5 x 14	ShtMetl	st2
st5	Peak AVF	268	335	0.170	689	5.2	5 x 14	ShtMetl	st2
st2	Peak AVF	479	526	0.085	669	12.0	0 x 0	VinIFx	
st3	Peak AVF	211	211	0.125	434	5.0	5 x 14	ShtMetl	
st1	Peak AVF	257	210	0.336	529	4.1	5 x 14	ShtMetl	



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
rb2	0x0	421	350	91.5	0.085	394	14.0	0x 0		VIFx	
rb1	0x0	525	597	80.3	0.097	558	14.0	0x 0		VIFx	

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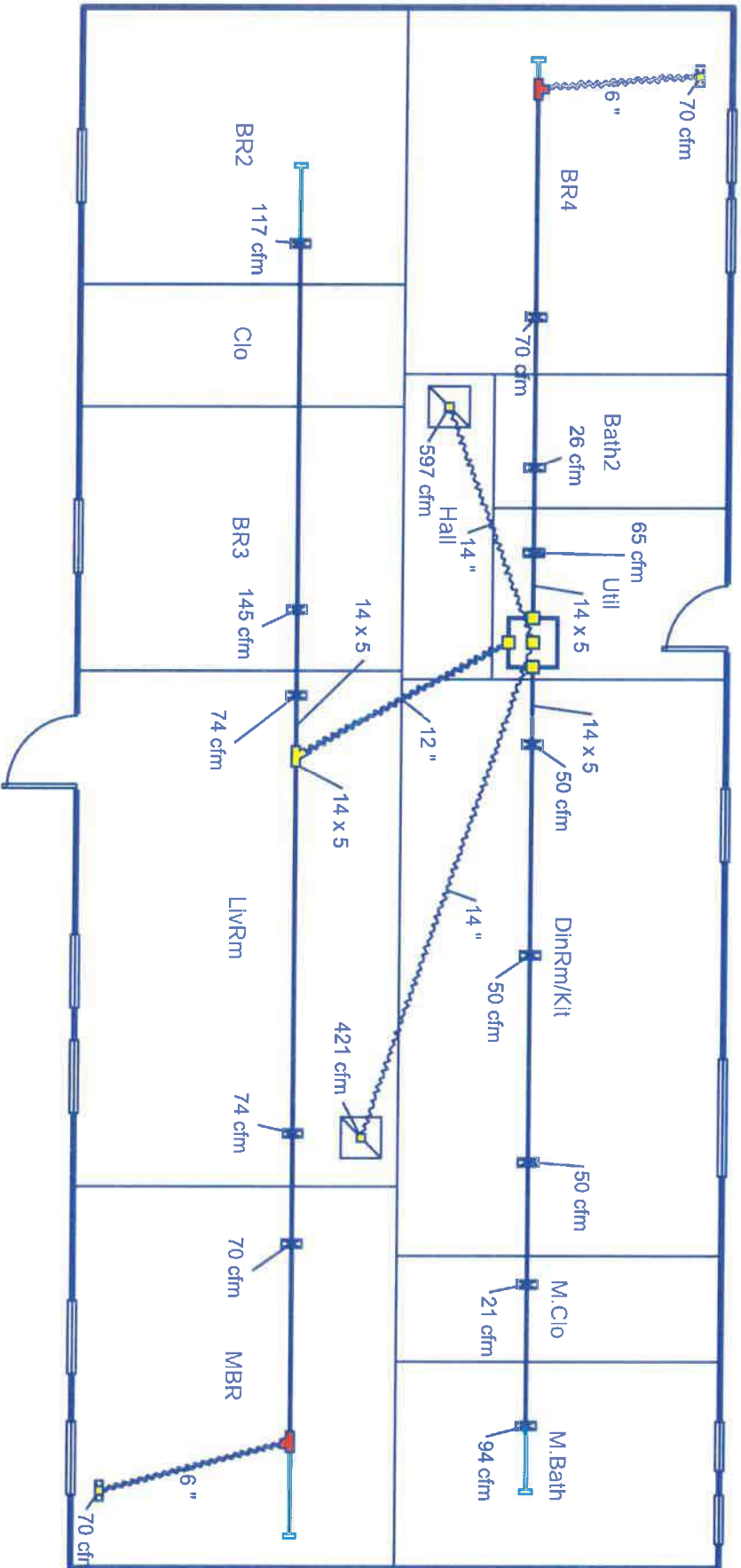




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David Richter
First Floor



Job #: 5530-28W-4BR
Performed by GCK for:
CZ5-In Line Duct

Clayton Homes

5000 Clayton Road
Maryville, TN 37804
Phone: 865-380-3000

Scale: 1 : 80

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ELECTRICAL FEEDER CALCULATION

<h2 style="margin: 0;">CMH</h2> <p style="margin: 0;">Manufacturing, Inc. engineering department - modular</p>	PAGE:	1 of 1
	DATE:	16-Jun-22
	BY:	GCK

MODEL NO.	5530-28W-4BR	Per NEC 220-30
------------------	---------------------	----------------

1. LIGHTING LOAD:					
1st floor			2nd floor		
length =	64.00	FT.	length =	0.00	FT.
width =	26.67	FT.	width =	0.00	FT.
Total area =	1706	SQ. FT.	Minimum number of 15 Amp circuits =	3	
X	3	VA			
TOTAL	5118	VA			

2. SMALL APPLIANCE LOAD:			3. LAUNDRY LOAD:		
Number of circuits	3		Number of circuits	1	
X	1500	VA	X	1500	VA
TOTAL	4500	VA	TOTAL	1500	VA

4. APPLIANCE LOAD:	
Electric Range =	12100 VA
Electric Water Heater =	5000 VA
Electric Clothes Dryer =	5600 VA
Cooktop =	0 VA
Wall Oven =	0 VA
Freezer =	1200 VA
Dishwasher & Disposal =	2376 VA
Gas furnace motor =	0 VA
Micro-wave oven	1200 VA

5. TOTAL OF OTHER LOADS (1, 2 & 3)	
	LEG A
Lighting load =	5118
Small appliance load =	4500
Laundry =	1500
Appliance load =	27476
Sub-Total =	38594
10000 VA @ 100% =	10000
Remainder @ 40% =	11438
Total =	21438 VA
	89.32 AMPS

6. HVAC LOAD:			
Lineal feet of baseboard heaters =		0	
Number of baseboard heater circuits =		0	
Total baseboard heater load =		0.0	Amps
Use 65% w/ less than 4 or 40% w/ 4 or more circuits (*)			
Electric furnace @ 65% (*)			
Circuit 1 =	60	Amps	39.00
Circuit 2 =	0	Amps	0.00
Air conditioner (*)			Amps
Total HVAC load (*- Use largest of these only) =		39.00	Amps

7. TOTAL OF ALL LOADS =	128.32	Amps
--------------------------------	---------------	-------------

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David Richter

FURN SIZE
10KW

DOOR AND WINDOW SCHEDULE

NOTE: FLOOR PLAN WINDOW SIZES WITH AN "R" DESIGNATION REPRESENTS SAFETY GLAZING REQUIRED PER IBC SECTION R309.4

SIZES	ROUGH OPENING	LIGHT (@ 8%)	VENT (@ 4%)
14 X 60 WDM.	14 1/4" X 60 1/4"	2.80	1.30
24 X36 WDM.	24 1/4" X 36 1/4"	4.10	2.10
24 X24 WDM.	24 1/4" X 24 1/4"	6.80	3.50
30 X 60 WDM.	30 1/4" X 60 1/4"	9.90	5.20
36 X 36 WDM.	36 1/4" X 36 1/4"	6.80	3.50
36 X 64 WDM.	36 1/4" X 64 1/4"	10.80	5.60
36 X 60 WDM.	36 1/4" X 60 1/4"	12.20	6.20
36 X 72 WDM.	36 1/4" X 72 1/4"	14.80	7.70
36 X 08 WDM.	36 1/4" X 08 1/4"	0.50	0.00
36 X 12 WDM.	36 1/4" X 12 1/4"	1.10	0.00
64 X 36 WDM.	64 1/4" X 36 1/4"	11.50	2.60
64 X 36 WDM.	64 1/4" X 36 1/4"	10.10	2.20
36 X 48 WDM.	36 1/4" X 48 1/4"	9.25	4.70
30 X 72 WDM.	30 1/4" X 72 1/4"	12.10	6.20
40 X 60 WDM.	40 1/4" X 60 1/4"	13.70	7.00

FATTENING REQUIREMENTS: FOR DOORS AND WINDOWS, USE EITHER # 8 X 1" SCREWS, 7/16" X 1 1/2" X 18 GA. STAPLES, OR .092 X 2 1/4" PD NAILS, AT 4" ON CENTER MAXIMUM.

DOORS	CLASSIFICATION:
2-8 X 6-8 DOOR	- USE GROUP = R3
3-0 X 6-8 DOOR	- CONSTRUCTION TYPE IS V-8 (UNPROTECTED)
PAINT DOOR	- 7-2" X 80"
ATRUM DOOR	78 1/2" X 82 1/2"

DESIGN CRITERIA

- FLOOR LIVE LOAD = 40 PSF
 - GROUND SNOW LOAD = 50/9F
 - ATTC LIVE LOAD = 10 PSF

CLASSIFICATION:

- USE GROUP = R3
 - CONSTRUCTION TYPE IS V-8 (UNPROTECTED)

SEISMIC DESIGN CATEGORY "C"
 - WIND EXPOSURE "C"
 - DESIGN WIND SPEED = 80 MPH 100MPH 120MPH
 ULTIMATE WIND SPEED = 117 MPH 130 MPH 152 MPH

ATTENTION LOCAL INSPECTION DEPARTMENT
 SET-UP INSTRUCTIONS FOR THIS MODULAR UNIT ARE INCLUDED BY ATTACHMENT TO THESE PLANS. ANY PLAN SET WHICH DOES NOT INCLUDE AN ATTACHMENT ENTITLED "SET UP MANUAL" IS INCOMPLETE SET. UP INSTRUCTIONS.

SEE SETUP MANUAL SENT WITH HOME.

REQUIREMENTS FOR FIRESTOPPING
 INSTALLATION OF NON-COMBUSTIBLE MATERIALS AROUND ALL OPENINGS THAT ARE VERTICAL PENETRATIONS IN THE FLR. AND CIG.
ATTENTION LOCAL INSPECTION DEPARTMENT
 THE FOLLOWING ITEMS LISTED HAVE NOT BEEN COMPLETED BY CMH MFG, Inc. HAVE NOT BEEN INSPECTED BY NTA, INC AND ARE NOT CERTIFIED BY THE STATE OF NORTH CAROLINA MODULAR LABEL CODE COMPLIANCE MUST BE DETERMINED BY THE LOCAL JURISDICTION FOR THE FOLLOWING:
 -HVAC SYSTEM (SITE INSTALLATION AND CONNECTIONS)
 -THIS UNIT MUST BE CONNECTED TO A PUBLIC WATER SUPPLY AND SEWER SYSTEM, IF THESE ARE AVAILABLE.

NC.

CODE COMPLIANCE

ALL PLANS MEET OR EXCEED THE FOLLOWING:
 North Carolina State Building Code Compliance:
 - NC Residential Code - 2018 Edition
 - NC Electrical Code - 2017



RIDGE BEAMS-SIZES AND MAX. SPAN CHART
 RIDGE BM. CHART-SEE MATING WALL PG. RC-00.0 FOR MAX. CALCULATIONS-SEE MATING WALL PGS. CRC SECTION

Soffit materials for this unit assume that the building face will be 10 feet or greater from the property line when installed on site. Where the building face is less than 10 feet from the property line, underpinment materials and ventilation in accordance with Section R302.1.1, NC Residential Code, must be provided and installed at the site and inspected by the local jurisdiction

THERMAL ZONE REQUIREMENT
 -INSULATION DONE PER THE NORTH CAROLINA 2018 PRESCRIPTIVE METHOD

C21: R-VALUES ARE CEILING-34, WALL-16, FLOOR-22
 C24: R-VALUES ARE CEILING-34, WALL-15, FLOOR-22
 C25: R-VALUES ARE CEILING-34, WALL-19, FLOOR-30
 U = 0.36 / SHGC = 0.21

INSULATION PACKAGES
 PER ATTACHED

MAX BTU PER ATTACHED HVAC CALCS

MODULAR MANUAL REFERENCES

ITEMS BELOW ARE REFERENCED FOR NON PRESCRIPTIVE USE

FLOOR- ON FRAME CONSTRUCTION
 DETAILS - SECTIONS ON FLOOR FOR ON FRAME: FL-800
 CALCULATIONS - SEE CFI SECTION

FLOOR- OFF FRAME CONSTRUCTION
 DETAILS - SECTIONS ON FLOOR FOR OFF FRAME: FL - 100

MARRIAGE WALLS - 2x CONSTRUCTION
 DETAILS - MW-30.0, MW-30.0, MW-40.0
 CALCULATIONS - SEE CMW SECTION

PLUMBING FIXTURES
 SEE PAGE PLM - 1.8

ANCHORAGE REQUIREMENTS
 FOUNDATION SECTIONS FOR PERIMETER ON FRAME:
 PER SETUP MANUAL

ANCHORAGE REQUIREMENTS
 FOUNDATION SECTIONS FOR PERIMETER OFF FRAME:
 PER SETUP MANUAL

TRUSSES - DETAILS / CALCULATIONS
 PER TRUSS PERMITS

ALL MODELS ARE AVAILABLE WITH FLOOR PLAN REVERSED FROM LEFT TO RIGHT AND / OR FRONT TO BACK.

MARRIAGE WALL COLUMNS SPAN CHART
 DETAIL - SEE MATING WALL COLUMNS (PAGE MW-20.0)
 CALCULATIONS - SEE CMW SECTION

INSTRUCTIONS ON FILLING OUT PLAN SET BEFORE CONSTRUCTION
 YOU MUST CHECK THE APPROPRIATE BOX OF WHAT THE STRUCTURE IS TO BE BUILT TO BEFORE PRODUCTION BEGINS. THE MARK SET MUST ACCOMPANY THE UNIT THROUGH THE PRODUCTION PROCESS.

EXTERIOR SIDEWALL HEADERS - SIZES AND MAXIMUM SPAN CHART
 HEADER CHART - SEE EXTERIOR WALL PAGE EW - 20.0
 CALCULATIONS - CEW SECTION

ATTENTION LOCAL INSPECTION DEPARTMENT:
 IF THIS STRUCTURE IS IN A THERMAL ZONE MORE STRINGENT THAN THAT LISTED ON THESE PLANS, IS SET ON PILING, OR IS INSTALLED AT A MOUNTAIN REGION OR COASTAL HIGH HAZARD SITE SUCH THAT WIND OR OTHER DESIGN PARAMETERS ARE INCREASED, THE DESIGN MUST BE DETERMINED TO BE ADEQUATE FOR ACTUAL SITE CONDITIONS. ALTERATIONS MAY BE REQUIRED TO BRING THE HOME INTO COMPLIANCE WITH THE MORE STRINGENT CONDITIONS.

"Service entrance conductors routed from their point of attachment to the service enclosure a distance horizontally not more than twice the nominal width of the service enclosure and vertically not more than the greatest of 5 feet or twice the nominal height of the service enclosure shall be considered to be in compliance with the requirements of 250-70(a) of the current National Electrical Code. Service entrance conductors may be routed in the most direct route or at right angles. Service entrance conductors in excess of these specified limits will not be allowed unless specifically authorized by special permission from the electrical inspector having jurisdiction to accommodate adverse site conditions which would not reasonably allow installation within this criteria."

This home is NOT designed for placement in Coastal High Hazard Areas or Ocean Hazard Areas.

CMH
 Manufacturing, Inc.

REVISIONS	BY	DATE	ALL MODULAR MODELS COVER SHEET 1-0

TYPICAL FASTENING SCHEDULE

EXTERIOR FASTENING

RM JOIST TO JOIST
FLOOR BLOCKING TO JOIST
MULTIPLE JOIST
DECKING TO FLOOR FRAMING

REFERENCE 'C61' - FLOOR CONSTRUCTION CALCULATIONS OF THE MANUAL.
PER FL-110 OR FL-510G IN APPROVED MANUAL
PER FL-100G IN APPROVED MANUAL
.131 x 3" NAILS @ 10" O.C. W/ SLIDE BOX
PER FL-10 IN APPROVED MANUAL

EXTERIOR WALL FASTENING

LOWER TOP PLATE &
BOTTOM PLATE TO STUD
DOUBLE TOP PLATES
HEADER TO STUDS
HEADER COMPONENTS
STUDS TO SILLS
EXTERIOR SILING
BOTTOM PLATE TO FLOOR
SIPWALL TO ENDWALL
WALL WALL TO WALL TOP PLATES
EXTERIOR WALL SHEATHING

REFERENCE 'C6W' - EXTERIOR WALL CONSTRUCTION CALCULATIONS OF THE MANUAL.
PER EW-25 IN APPROVED MANUAL DOUBLE STUDS 7/16" x 2-1/2" x 15 GA. STAPLES @ 6" O.C.
PER EW-1 IN APPROVED MANUAL
PER EW-20 CHARTS IN APPROVED MANUAL
PER EW-20 IN APPROVED MANUAL
PER EW-20 IN APPROVED MANUAL
PER THE MANUFACTURER'S SPECIFICATIONS
PER EW-31 IN APPROVED MANUAL
PER EW-30 FOR NON-SHEARWALL OR PER SW-40 FOR SHEARWALL OR PER EW-00 IN APPROVED MANUAL
3" x 6" x .035" (20 GA.) GALVANIZED STEEL PLATE W/ (6) .131 x 3" NAILS AT EACH EDGE & 12" O.C. FIELD FOR COMPOSITE WALLS. FASTEN PER EW-40 FOR SHEARWALL FASTEN PER SW-40 OR ATTACHED PAGES (IF ATTACHED). ALL MANUFACTURER'S INSTALLATION INSTRUCTIONS.
REFERENCE 'C6W' - MARRIAGE WALL CALCULATIONS OF THE MANUAL
PER MW-40 IN APPROVED MANUAL
PER MW-40 IN APPROVED MANUAL
7/16" x 2-1/2" x 15 GA. STAPLES OR .131 x 3" NAILS @ 16" O.C. TO EACH MEMBER
PER MW-20 IN APPROVED MANUAL
PER MW-40 IN APPROVED MANUAL
PER MW-31 IN APPROVED MANUAL
PER EW-30 IN APPROVED MANUAL
3" x 6" x .035" (20 GA.) GALVANIZED STEEL PLATE W/ (6) .131 x 3" NAILS AT EACH SIDE AT EACH WALL OR OVERLAPPED PLATE PER EW-0.

INTERIOR WALL FASTENING

LOWER TOP PLATE TO STUD
BOTTOM PLATE TO STUD
MULTIPLE STUDS
STANDARD COLUMN
DOUBLE TOP PLATES
BOTTOM PLATE TO FLOOR
MATING WALL TO ENDWALL
WALL TO WALL TOP PLATES

PER PT-40 IN APPROVED MANUAL
PER PT-40 IN APPROVED MANUAL
7/16" x 2-1/2" x 15 GA. STAPLES @ 16" O.C.
PER MW-20 IN APPROVED MANUAL
PER MW-40 IN APPROVED MANUAL
PER MW-31 IN APPROVED MANUAL
PER PT-40 IN APPROVED MANUAL
PER PT-40 IN APPROVED MANUAL
PER PT-40 IN APPROVED MANUAL
PER THE RESIDENTIAL BUILDING CODE TABLES
REFERENCE 'C6C' - ROOF CONSTRUCTION CALCULATIONS OF THE MANUAL
FOAM-SEAL 2100 SPRAY ADHESIVE PER THE MANUFACTURER'S SPECIFICATIONS
(2) 7/16" x 2-1/2" x 15 GA. STAPLES DIRECT
PER RC-30 IN APPROVED MANUAL
PER RC-45 IN APPROVED MANUAL
PER MW-31 CHARTS IN APPROVED MANUAL
PER MW-31 CHARTS IN APPROVED MANUAL
PER SW-40 IN APPROVED MANUAL FOR SHEARWALLS AND RC-110 FOR NON-SHEARWALLS
PER SW20 THRU SW-38E2 (IF NOT ATTACHED) IN APPROVED MANUAL
PER THE MANUFACTURER'S OR AIAA SPECIFICATIONS
PER RC-70 IN APPROVED MANUAL
REFERENCE INSTALLATION PAGES PROVIDED IN EACH APPROVAL.

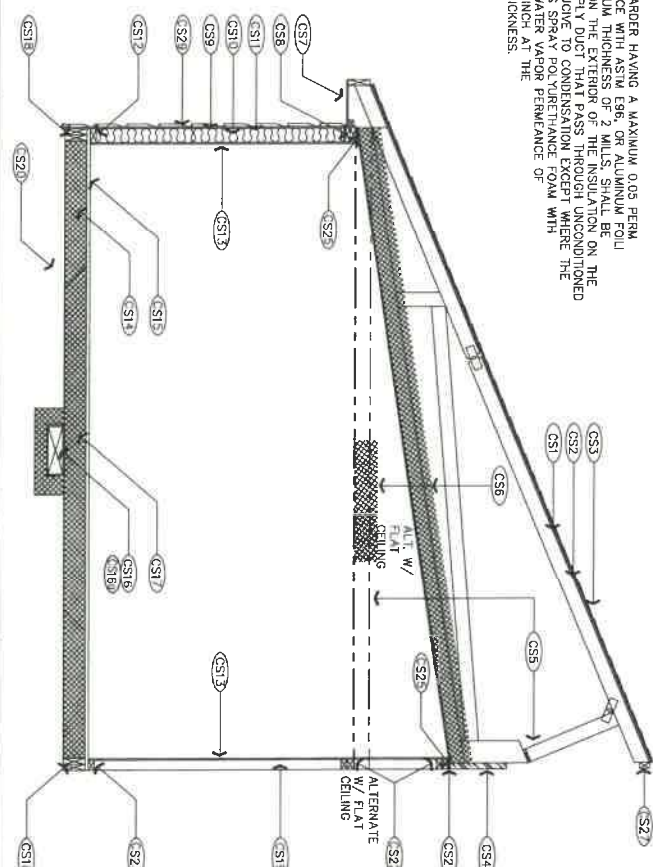
ROOF FASTENING

CEILING BOARD TO TRUSS
BLOCKING TO TRUSS
TRUSS TO SIPWALL TOP PLATE
TRUSS TO RIDGE BEAM
TRUSS TO EDGE RAIL
EDGE RAIL TO MATING WALL
TRUSS TO ENDWALL TOP PLATE
TRUSS DECKING TO TRUSS
SIPWALL TO ROOF DECKING
OUTDOORER TO TRUSS

PER PT-40 IN APPROVED MANUAL
PER PT-40 IN APPROVED MANUAL
7/16" x 2-1/2" x 15 GA. STAPLES @ 16" O.C.
PER PT-20 IN APPROVED MANUAL
PER PT-40 IN APPROVED MANUAL
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FOAM-SEAL 2100 SPRAY ADHESIVE PER THE MANUFACTURER'S SPECIFICATIONS
(2) 7/16" x 2-1/2" x 15 GA. STAPLES DIRECT
PER RC-30 IN APPROVED MANUAL
PER RC-45 IN APPROVED MANUAL
PER MW-31 CHARTS IN APPROVED MANUAL
PER MW-31 CHARTS IN APPROVED MANUAL
PER SW-40 IN APPROVED MANUAL FOR SHEARWALLS AND RC-110 FOR NON-SHEARWALLS
PER SW20 THRU SW-38E2 (IF NOT ATTACHED) IN APPROVED MANUAL
PER THE MANUFACTURER'S OR AIAA SPECIFICATIONS
PER RC-70 IN APPROVED MANUAL
REFERENCE INSTALLATION PAGES PROVIDED IN EACH APPROVAL.



- (CS1) 7/16" APA RATED ROOF DECKING 24/16 SPAN RATING.
- (CS2) 15# MIN. ROOF UNDERLAYMENT, SINGLE LAYER W/ GREATER THAN 4:12 ROOF PITCH, DOUBLE LAYER W/ 4:12 OR LESS
- (CS3) MIN. 20 YEAR SHINGLES
- (CS4) 1 1/2" WIDE ENGINEERED WOOD BEAM, EACH HALF IN OPEN SPAN AREAS GREATER THAN 48"
- (CS5) ENGINEERED WOOD TRUSSES, COMPONENTS & SPACING PER TRUSS PRINT
* FOR CONNECTION SET-UP PAGES ATTACHED TO APPROVAL
* SEE MODULE SET-UP PAGES ATTACHED TO APPROVAL
- (CS6) CEILING INSULATION, BLOWN OR BATT.
- (CS7) CONTINUOUS VENTED SOFFIT.
- (CS8) DOUBLE 2x4 TOP PLATE (MIN.).
- (CS9) 2x4 STUDS @ 16" O.C. STUD GRADE SPF (MIN.).
- (CS10) WALL INSULATION (BATT)
- (CS11) 3/8" OSB SHEATHING WITH WATER RESISTIVE BARRIER EXTERIOR. ALL EXPOSED FINISH MATERIAL REQUIRED AT ALL LOCATIONS AS SHOWN ON APPROVED MANUAL DETAILS
- (CS12) SINGLE 2x4 BOTTOM PLATE SPF #3 (MIN.).
- (CS13) 3/8" (MIN.) GYPSUM WALL BOARD.
- (CS14) FLOOR INSULATION (BATT).
- (CS15) MIN. 19/32" RATED DECKING 16" O.C. OR 32/16 SPAN RATING.
- (CS16) Duct Insulation:
1 - MIN. R-8
2 - A VAPOR BARRIER HAVING A MAXIMUM 0.05 PERM WITH A MINIMUM THICKNESS OF 2 MILS. SHALL BE INSTALLED ON THE EXTERIOR OF THE INSULATION ON THE COOLING SUPPLY DUCT THAT PASSES THROUGH UNCONDITIONED SPACE CONDUIT TO CONDENSATION EXCEPT WHERE THE INSULATION IS SPRAY POLYURETHANE FOAM WITH 3 PERM PER INCH AT THE FINISHANCE OF INSTALLED THICKNESS.
- (CS17) MAIN HEAT DUCT (MAY BE SITE INSTALLED BY OTHERS)
- (CS18) OFF FRAME PER FL-110.0
- (CS19) OFF FRAME PER FL-110.0
- (CS20) OFF FRAME PER FL-110.0
- (CS21) 2x4 (MIN.) MARRIAGE WALL STUDS @ 16" O.C.
- (CS22) LISTED BOTTOM BOARD, WHERE OCCURS.
- (CS23) 1/2" SHM FOR COMPRESSION STRIP.
- (CS24) DOUBLE 2x4 (MIN.) TOP PLATE.
- (CS25) 2x4 (MIN.) BOTTOM PLATE.
- (CS26) 1/2" (MIN.) GYPSUM BOARD CEILING.
- (CS27) WEDGE SUPPORT AT CATHEDRAL CEILING, EACH END OF TRUSS.
- (CS28) CONTINUOUS 2x3 95# #3 MINIMUM FOR TRUSS TOP RAIL FOR RIDGE CONNECTION
- (CS29) 2x FULL DEPTH BLOCKING 24" O.C. (2)
- (CS30) LAP BOARD, WOOD OR VINYL SILING, HARDI SILING, OR EXPOSED SHEATHING FOR ON SITE EXTERIOR FINISH INSTALLATION.

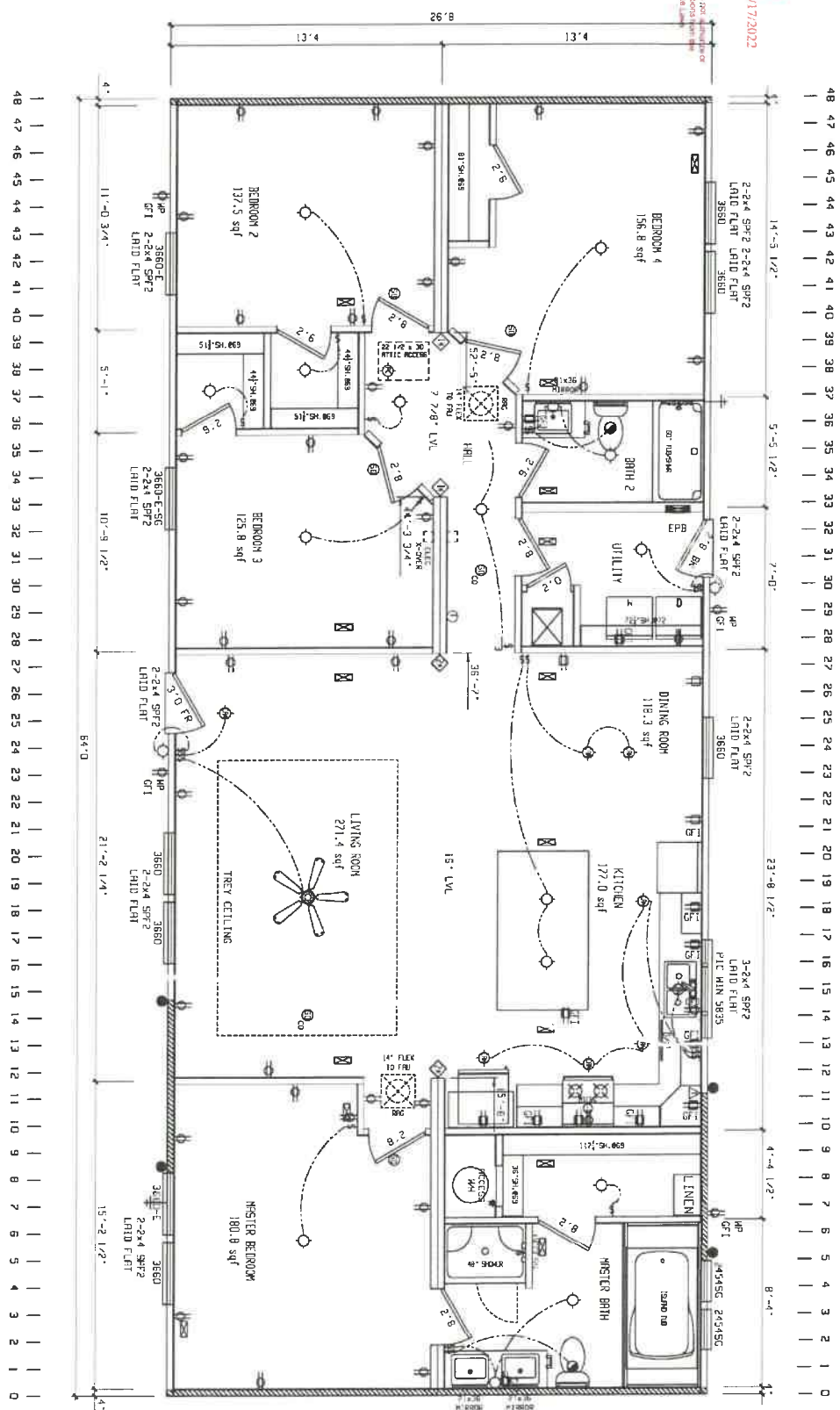


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NTP
6/17/2022
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David Richter

CMH
MANUFACTURING, INC.

TYPICAL CROSS SECTION & FASTENING SCHEDULE

PROJECT:	SERIES:	MODEL NO.:
PLANT: #958	NC/SC/DE MODULAR	ALL
DRAWN BY/DATE DRAWN: DRR 10-21-15	DESCRIPTION: OFF FRAME HINGED ROOF	
DATE PRINTED: 4-25-17		
SHEET: 1-0-2		



B-SECTION HITCH END R-SECTION HITCH END

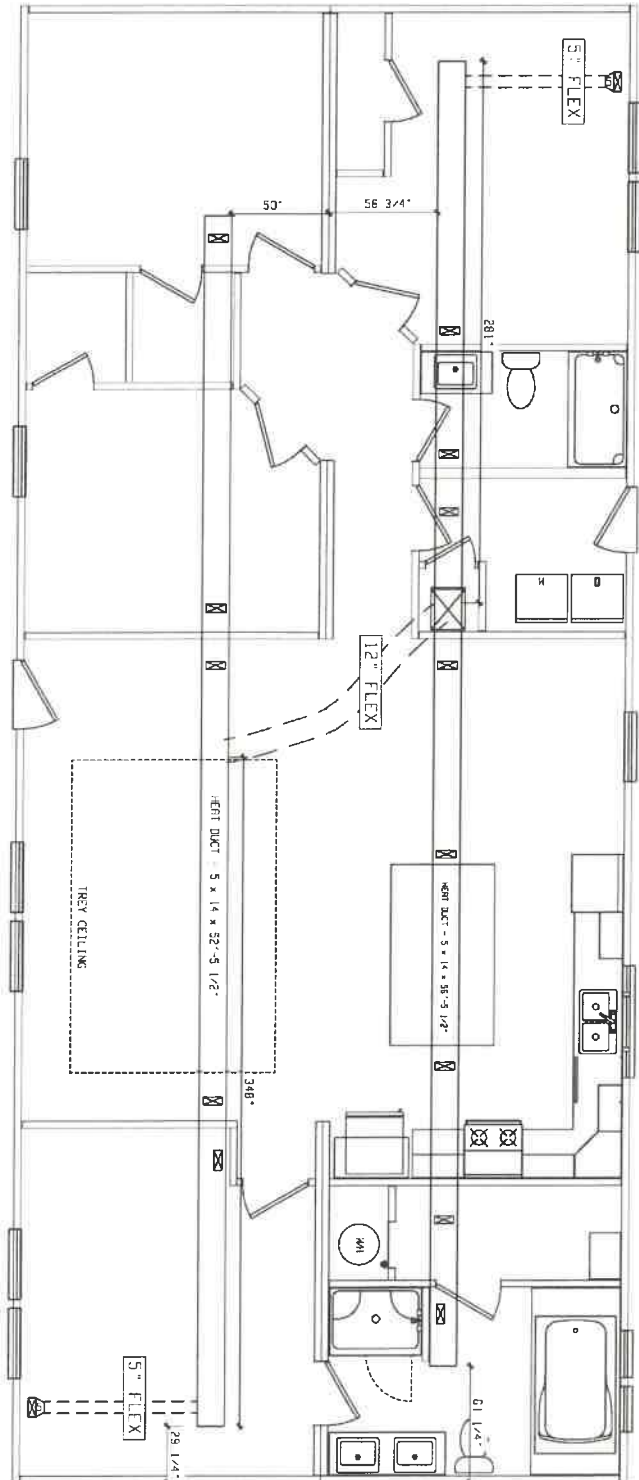
RIDGE BEAM PER: RC-60.3 R.C.M., 20
 COLUMNS PER: MK-20.3 R.G.M., 48, 20
 SIDEWALL HEADERS PER:
 (1) 20.3 R.G.C. 22.20
 (2) 20.3 R.G.C. 22.20
 (3) 20.3 R.G.C. 22.20
 (4) 20.3 R.G.C. 22.20
 (5) 20.3 R.G.C. 22.20
 (6) 20.3 R.G.C. 22.20
 (7) 20.3 R.G.C. 22.20
 (8) 20.3 R.G.C. 22.20
 (9) 20.3 R.G.C. 22.20
 (10) 20.3 R.G.C. 22.20
 (11) 20.3 R.G.C. 22.20
 (12) 20.3 R.G.C. 22.20

CLAYTON HOME BUILDING GROUP		MASTER PLAN	
BRND SCHUL T	SERIES CL28	REVISIONS	GENERAL NOTES
251'EM/ 94'SM 195PLF EFFECTIVE LENGTHS BASED ON SM-31.10., 1a.C.17., .78.1-2 ENGINEERED METHOD. UNBLOCKED DIRPRRGM SM-20-237B.1 50 MPH WIND SPEED		250'EM/ 94'SM 241PLF EFFECTIVE LENGTHS BASED ON SM-31.10., 1a.E.17., .78.1-2 ENGINEERED METHOD. UNBLOCKED DIRPRRGM SM-20-237B.1 100 MPH WIND SPEED	
272'EM/ 102'SM 366PLF EFFECTIVE LENGTHS BASED ON SM-31.10., 1a.I.17., .78.1-2 ENGINEERED METHOD. UNBLOCKED DIRPRRGM SM-20-389B.1 120 MPH WIND SPEED		INSULATION DONE PER THE NORTH CHROLIN 2018 PREScriptive METHOD C23: R-38 CEILING R-15 WALLS R-22 FLOOR C24: R-38 CEILING R-15 WALLS R-22 FLOOR C25: R-38 CEILING R-19 WALLS R-30 FLOOR U = 0.35 / SHGC = 0.28	
MODEL NO. 5530-28H-G-4BR	PLAN# 958	DESCRIPTION 28X54 4BR-2BR	MODEL NO. 5530-28H-G-4BR
DATE 06/16/2022	DATE 06/16/2022	DATE 06/16/2022	SHEET NO. 1-1

3890	SCHULT	SERIES	CL28	REVISIONS		REV	DATE	GENERAL NOTES		DRAWING TITLE		MODEL NAME	5530-20M-G-4BR	MODEL NO.	5530-20M-G-4BR	SQ. FT.	1706	
CLAYTON HOME BUILDING GROUP										INLINE HVAC-A		PLANT	DESCRIPTION	28X54 4BR-2BR	DATE PRINTED	06/16/2022	SHEET NO.	4-1R
												DESIGN BY	DATE	06/16/2022	DATE PRINTED	06/16/2022		
												CHK	DATE	06/16/2022	DATE PRINTED	06/16/2022		

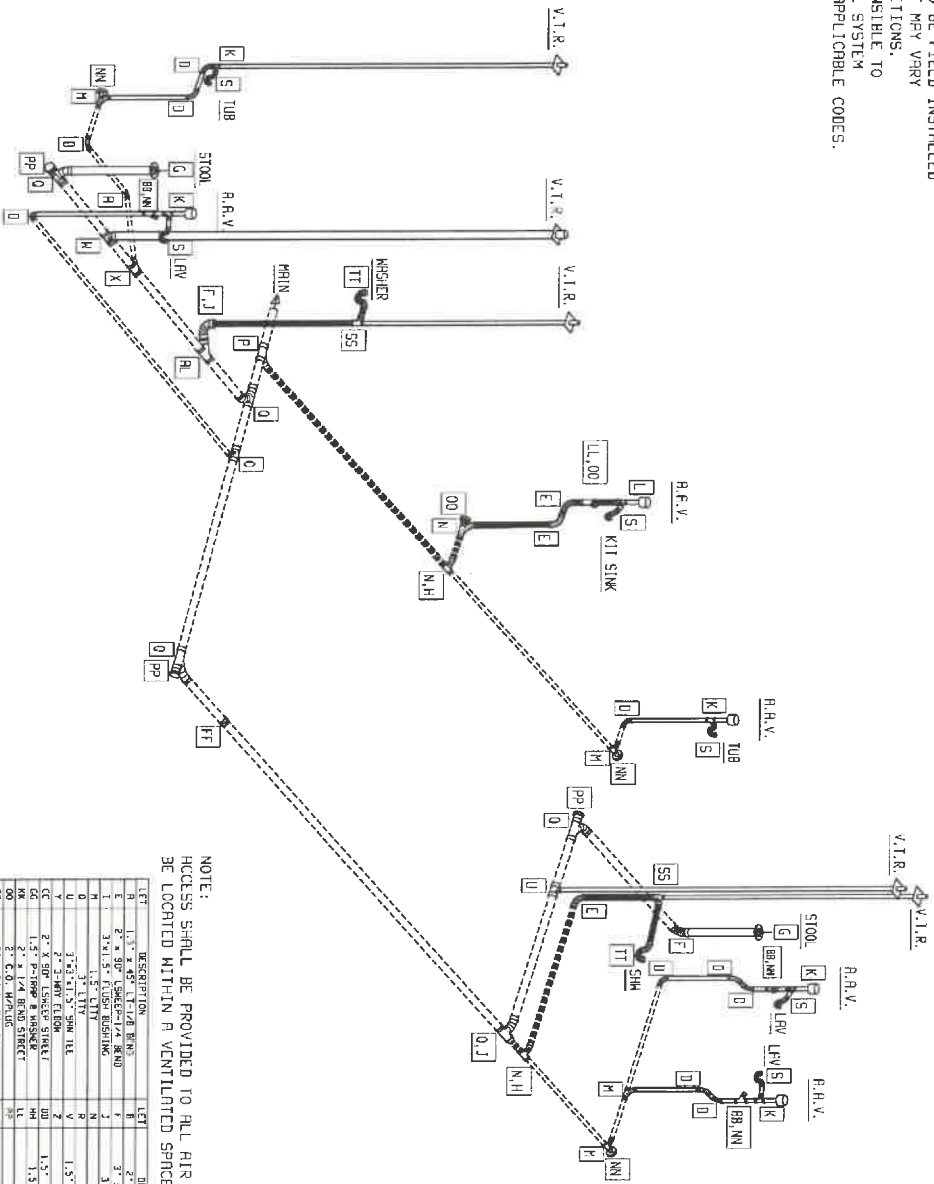
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 David Richter



B-SECTION HITCH END A-SECTION HITCH END

*NOTICE
 DASHED LINES REPRESENT BELOW
 FLOOR DWV PIPE TO BE FIELD INSTALLED
 BY OTHERS. LAYOUT MAY VARY
 DUE TO SITE CONDITIONS.
 BUILDER IS RESPONSIBLE TO
 ASSURE THAT FINAL SYSTEM
 CONFORMS TO ALL APPLICABLE CODES.



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

PIPE LEGEND

1 1/2"	1
2"	3
3"	1

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STANDARD SHIP LOOSE

R	1	1.5" x 99' L.O.	45 FT
RL	1	2" x 1.5' FLOOR JOISTING	20 FT
D	3	3" x 1.5' x 1.5' SHW TEE	1
E	1	3" x 1.5' x 1.5' SHW TEE	1
F	1	3" x 1.5' x 1.5' SHW TEE	1
F, J	1	3" x 1.5' x 1.5' SHW TEE	1
FF	1	3" x 1.5' x 1.5' SHW TEE	1
M	4	3" x 1.5' x 1.5' SHW TEE	1
N	1	3" x 1.5' x 1.5' SHW TEE	1
N, H	2	3" x 1.5' x 1.5' SHW TEE	1
NN	3	3" x 1.5' x 1.5' SHW TEE	1
O	1	3" x 1.5' x 1.5' SHW TEE	1
OO	1	3" x 1.5' x 1.5' SHW TEE	1
P	1	3" x 1.5' x 1.5' SHW TEE	1
PP	3	3" x 1.5' x 1.5' SHW TEE	1
Q	4	3" x 1.5' x 1.5' SHW TEE	1
Q, J	1	3" x 1.5' x 1.5' SHW TEE	1
U	1	3" x 1.5' x 1.5' SHW TEE	1
M	1	3" x 1.5' x 1.5' SHW TEE	1
X	1	3" x 1.5' x 1.5' SHW TEE	1

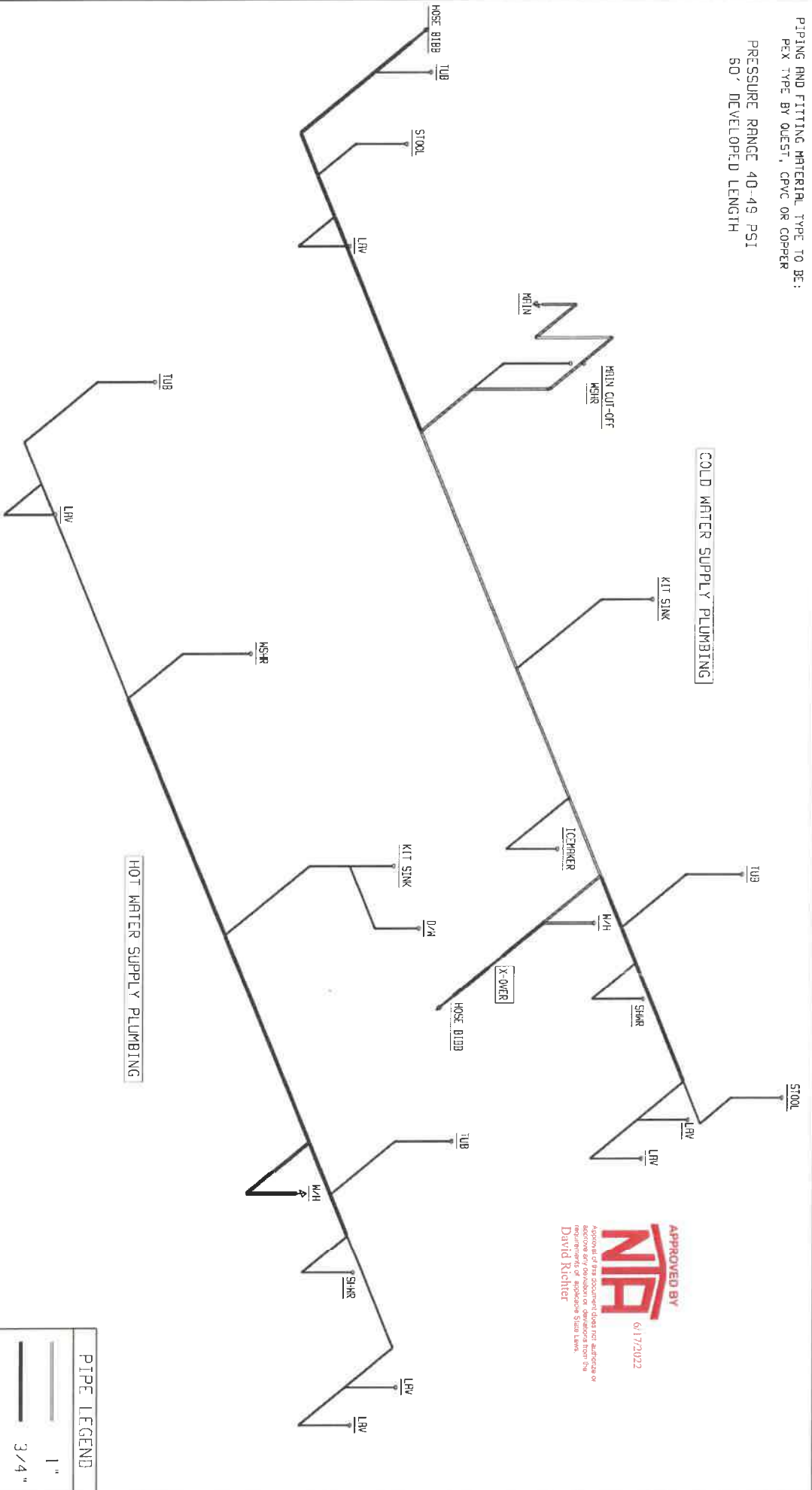
NOTE:
 ACCESS SHALL BE PROVIDED TO ALL AIR ADMITTANCE VALVES. THE VALVE SHALL
 BE LOCATED WITHIN A VENTILATED SPACE THAT ALLOWS AIR TO ENTER THE SHWLL

REV	DESCRIPTION	DATE	BY	DATE
1	1.5" x 45' L1/2B BEND			
2	2" x 30' UNDER-1/4 BEND			
3	3" x 1.5' x 1.5' SHW TEE			
4	3" x 1.5' x 1.5' SHW TEE			
5	3" x 1.5' x 1.5' SHW TEE			
6	3" x 1.5' x 1.5' SHW TEE			
7	3" x 1.5' x 1.5' SHW TEE			
8	3" x 1.5' x 1.5' SHW TEE			
9	3" x 1.5' x 1.5' SHW TEE			
10	3" x 1.5' x 1.5' SHW TEE			
11	3" x 1.5' x 1.5' SHW TEE			
12	3" x 1.5' x 1.5' SHW TEE			
13	3" x 1.5' x 1.5' SHW TEE			
14	3" x 1.5' x 1.5' SHW TEE			
15	3" x 1.5' x 1.5' SHW TEE			
16	3" x 1.5' x 1.5' SHW TEE			
17	3" x 1.5' x 1.5' SHW TEE			
18	3" x 1.5' x 1.5' SHW TEE			
19	3" x 1.5' x 1.5' SHW TEE			
20	3" x 1.5' x 1.5' SHW TEE			
21	3" x 1.5' x 1.5' SHW TEE			
22	3" x 1.5' x 1.5' SHW TEE			
23	3" x 1.5' x 1.5' SHW TEE			
24	3" x 1.5' x 1.5' SHW TEE			
25	3" x 1.5' x 1.5' SHW TEE			
26	3" x 1.5' x 1.5' SHW TEE			
27	3" x 1.5' x 1.5' SHW TEE			
28	3" x 1.5' x 1.5' SHW TEE			
29	3" x 1.5' x 1.5' SHW TEE			
30	3" x 1.5' x 1.5' SHW TEE			
31	3" x 1.5' x 1.5' SHW TEE			

CLAYTON HOME BUILDING GROUP

5530-28H-G-4BR
 DWV SCHEMATIC
 1706

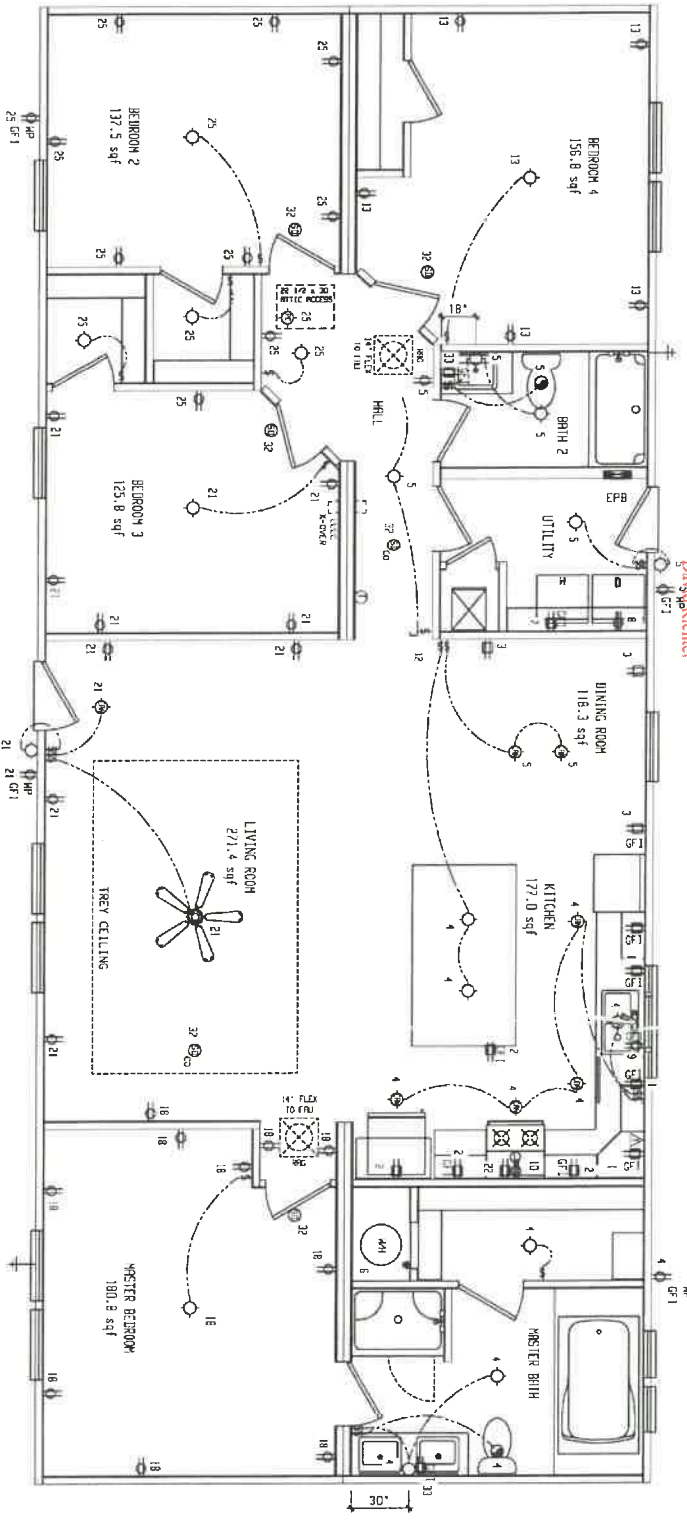
PIPING AND FITTING MATERIAL TYPE TO BE:
 PEX TYPE BY QUEST, CPVC OR COPPER
 PRESSURE RANGE 40-49 PSI
 50' DEVELOPED LENGTH



BRAND	SERIES	CL. 28	REVISIONS		GENERAL NOTES		DRAWING TITLE		MODEL INFO		SHEET NO.	
SCHULT					HOSE BUBB FOR SECS		SUPPLY PLUMBING		PLANT	DESCRIPTION	MODEL NO.	SQ. FT.
									958	28X64 4BR-2BR	5330-28H-G-4BR	1706
CLAYTON HOME BUILDING GROUP									Drawn By	DATE	DATE PRINTED	SHEET NO.
									GCK	06/16/2022	06/16/2022	9-1

PIPE LEGEND	
—	1"
—	3/4"
—	1/2"

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 6/17/2022
David Richter



B-SECTION HITCH END A-SECTION HITCH END

NOTE: ALL FAMILY, DINING, LIVING, KITCHEN, LAUNDRY, LIBRARIES, DENS, BEDROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS OR SIMILAR ROOMS OR SPACES SHALL BE PROTECTED BY A LISTED GFCI-FULLY CIRCUIT INTERRUPTER IN ACCORDANCE WITH SECTION 210.12 OF THE NEC.

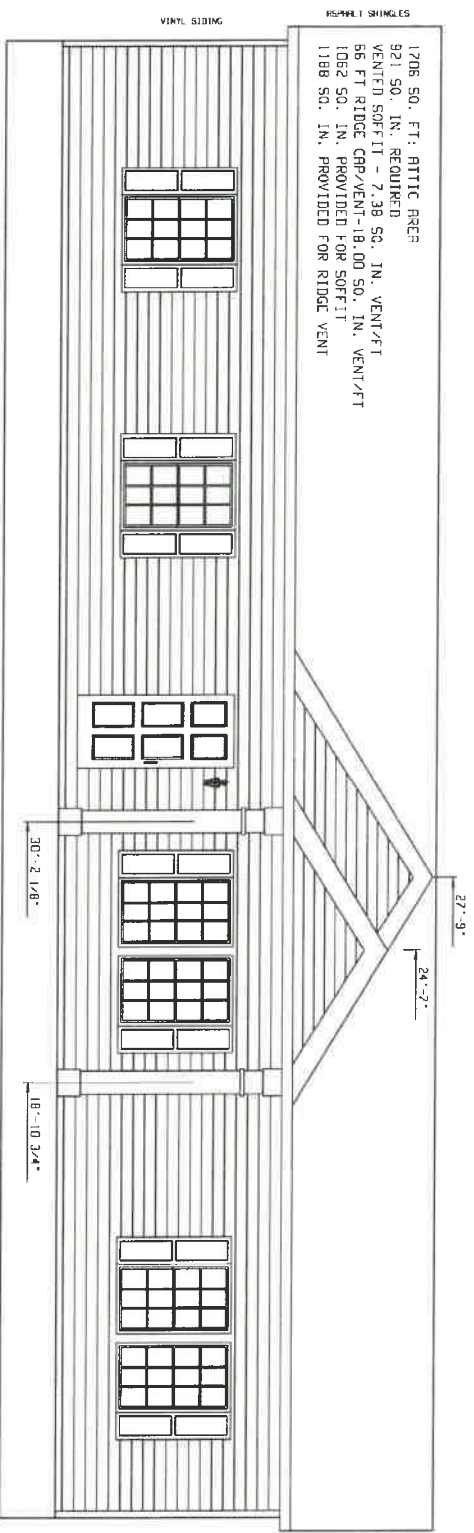
NO.	DESCRIPTION	QTY	UNIT	DESCRIPTION	QTY	UNIT	DESCRIPTION	QTY	UNIT	DESCRIPTION	QTY	UNIT
1	PORTABLE REEL LUMENS	10	100	12	12	12	12	12	12	12	12	12
2	PORTABLE REEL LUMENS	10	100	13	13	13	13	13	13	13	13	13
3	PORTABLE REEL LUMENS	10	100	14	14	14	14	14	14	14	14	14
4	GEN. LUMENS	10	100	15	15	15	15	15	15	15	15	15

SCHULT		CL28		RELATIONS		GENERAL NOTES	
DESCRIPTION	NO. <td>DESCRIPTION</td> <td>NO. <td>DESCRIPTION</td> <td>NO. <td>DESCRIPTION</td> <td>NO. </td></td></td>	DESCRIPTION	NO. <td>DESCRIPTION</td> <td>NO. <td>DESCRIPTION</td> <td>NO. </td></td>	DESCRIPTION	NO. <td>DESCRIPTION</td> <td>NO. </td>	DESCRIPTION	NO.
1	100	1	100	1	100	1	100
2	100	2	100	2	100	2	100
3	100	3	100	3	100	3	100
4	100	4	100	4	100	4	100

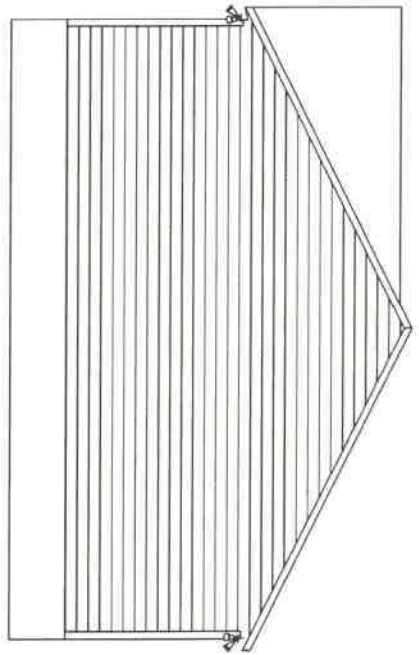
CLAYTON HOME BUILDING GROUP

ELECTRICAL PLAN

PROJECT NO.	5530-28H-G-4BR	MODEL NO.	5530-28H-G-4BR
DATE	06/16/2022	DATE PRINTED	06/16/2022
DESIGN BY	GCK	SHEET NO.	11-1
SCALE	1/8" = 1'-0"		



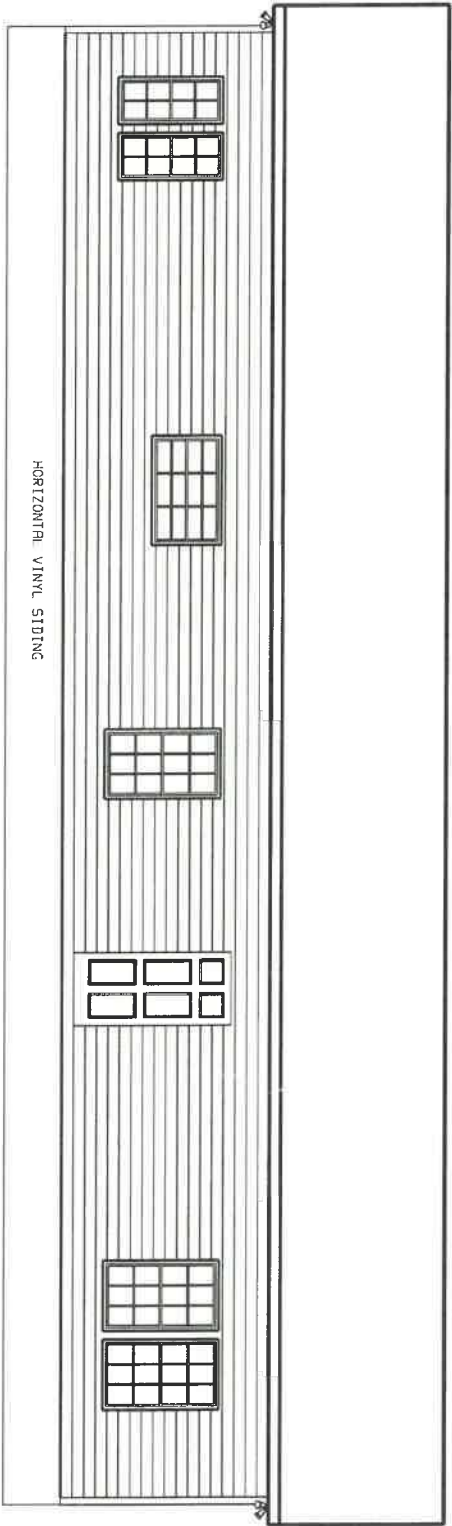
FRONT ELEVATION



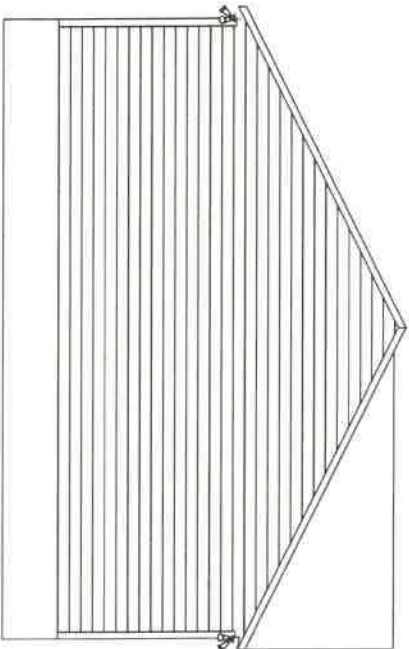
RIGHT SIDE ELEVATION

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88940	SCHULT	SERIES	CL28	REVISIONS		BY	DATE	GENERAL NOTES		OPENING TITLE	MODEL NAME	SO. FT.						
										EXTERIOR ELEVATION FRONT & RIGHT SIDE	5530-28H-G-4BR	1706						
CLAYTON HOME BUILDING GROUP											PLANET	918						
											DESCRIPTION	28X64 4BR-2BR	MODEL NO.	5530-28H-G-4BR				
											DRAWN BY	GCK	DATE	06/16/2022	DATE PRINTED	06/16/2022	SHEET NO.	20-1



BACK ELEVATION



LEFT SIDE ELEVATION

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BOARD SCHULT		SERIES CL28		REVISIONS		GENERAL NOTES		DRAWING TITLE EXTERIOR ELEVATION BACK & LEFT SIDE		MODEL NAME 5530-28H-G-4BR		SQ. FT. 1706			
CLAYTON HOME BUILDING GROUP								DRAWING BY GCK		PLANT 939		DESCRIPTION 28X64 4BR-2BR		MODEL NO. 5530-28H-G-4BR	
								DATE 06/16/2022		DATE PRINTED 06/16/2022		SHEET NO. 20-2			

**PIER SET (FRAME TIED) FOUNDATION DESIGN FOR:
26' - 8 " 2-SECTION MODULAR
1 STORY- W.O ATTIC**

Attic without storage where the maximum clear height between joist and rafter is less than 42 inches or req'd insulation depth exceeds the depth of the bottom chord.

**FRAME STRAPS & GROUND ANCHORS ARE REQUIRED TO BE USED FOR THIS SYSTEM.
SIDEWALLS & MATING WALL(S) ARE SUPPORTED (PERIMETER BLOCKED).**

BUILDING CODE INFORMATION:

IRC (2015)

ASCE 7-10

2018 NORTH CAROLINA RESIDENTIAL CODE

BUILDING SITE INFORMATION:

*MAXIMUM ULTIMATE/DESIGN WIND SPEED & EXPOSURE: 130/ 100 MPH EXPOSURE C-enclosed

MINIMUM SOIL BEARING CAPACITY: 1500 PSF

MAXIMUM GROUND SNOW(S): 20 PSF, 30 PSF

Flat roof snow load (Pg)=20.0 PSF ,23.1 PSF

SEISMIC DESIGN CATEGORY: C

DESIGN SPECTRAL RESPONSE (S_{DS}): 0.49

SEISMIC SOIL SITE CLASS: D

HOME INFORMATION:

UNIT WIDTH: 26' - 8 "

MAX. UNIT LENGTH: 76 ft.

ROOF PITCH: 6/12 to 6/12

DESIGN LOADS: 40 PSF FL. LL., 7PSF T.C.D.L., 8PSF B.C.

D.L., 8PSF FL. DL. &, 10PSF B.C.L.L

MAX. SIDEWALL HEIGHT: 108 INCHES

CHASSIS BEAM: 12"x10.8plf

ON FRAME FLOOR

PLANT NUMBER: 958

* Ultimate wind speed Vult. Per ASCE 7-10/ allowable stress design wind speed Vasd. All wind speeds are indicated as (Vasd) design speeds unless otherwise indicated.

This design is the property of CMH Manufacturing and cannot be used without authorization. This design is exclusively for use with new homes built by CMH Manufacturing. Use with homes built by other companies is strictly prohibited.

FILENAME:958N-14.R.F.E.22.22.210(4)



program version: 19.9

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PAGE DESCRIPTION	DETAIL	PAGE #
COVER		1
TABLE OF CONTENTS		2
GENERAL NOTES		3
PIER AND FOOTER DESIGN TABLE M	TABLE M	6
	TABLE P	7
PORCH AND RECESS SUPPORT AND ANCHORAGE		
KEY PLAN 11 - ON-FRAME PIER AND CURTAIN WALL SET	KEY 11	8
KEY PLAN 12 - ON-FRAME PIER SET	KEY 12	9
NON-REINFORCED MATING PIER / CRAWLSPACE ONLY (MORTAR EMBEDDED) - DETAIL D3	D3	10
MATING WALL COLUMN TIE DOWN - DETAIL D6	D6	11
FRAME PIERS WITH MORTAR	D8	12
NON-REINFORCED PERIMETER SUPPORT PIER D15	D15	13
NON-REINFORCED IN FLOOR HEAT DUCT CROSSOVER SUPPORT PIER D16	D16	14
CURTAIN WALL AND PILASTER FOUNDATION WALL D17	D17	15
TRANSVERSE TIEDOWN ANCHORAGE CHARTS		16
LONGITUDINAL TIEDOWN ANCHORAGE CHARTS		17

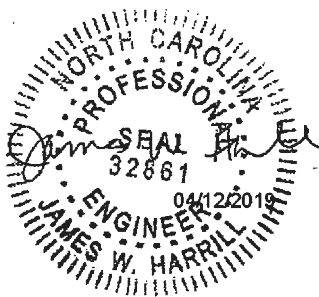
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General Notes


1. Foundation plans and details developed by CMH Manufacturing, Inc. are provided to our company owned sales centers and wholesale distribution partners. Alternate foundation systems may be used in lieu of these plans provided they are designed by a local professional Engineer or Architect familiar with the local soil and climate conditions, and are approved by the local authority having jurisdiction.

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2. All notes stating "in field" or "by owner" are obligations pertaining to owner/contractor.
3. Owner / Contractor shall remove all organic material including debris and vegetation from under home.
4. The area beneath and around home should be graded and sloped to prevent surface water from accumulating under the home.
5. Owner /Contractor shall provide complete foundation, vapor barrier, tie down anchor, and all finish work.
6. Owner/Contractor shall be responsible for performing all work in accordance with previously approved construction details and obtaining all necessary inspections as required by local or state authorities.
7. In areas likely to have collapsible, expansive, compressible, shifting or other unknown soil characteristics, the building official shall determine whether to require a soil test to determine the soil characteristics. This soil test shall be made by an approved testing agency using an approved method.
8. Pier spacing is dimensioned to centerline unless otherwise noted.
9. The foundation dimensions shown are nominal. An increase in module width should be expected due to module expansion, setting tolerances, etc... The foundation contractor should consult with the manufacturer of the modules prior to construction of the foundation to determine the amount of increase width to be added to the nominal dimensions and placement of anchors.
10. All steel support columns shall have protective coating and a load capacity equal to or greater than specified on foundation plan (k=1000 pounds).
11. All foundation construction materials and installation shall be in accordance with all state and local codes.
12. Piers laid in type M or S mortar or dry stacked above first coarse with surface bonding agent applied that meets ASTM C 887 when acceptable to local building authority. Bonding agent must be intended for use for the application and shall be installed per manufactures specifications.
13. Single stacked concrete block are oriented so that the long direction is perpendicular to the long direction of the I-beam.
14. Double and triple stacked blocks must be arranged so that each layer is at right angles to the previous layer and the concrete cap block shall be perpendicular to the I-beam.
15. Maintain a minimum clearance of 18 inches beneath the homes floor joist.
16. Maintain a minimum of 12" beneath main I-beam in areas of utility connections (waste plumbing, HVAC duct, ect.).
17. Solid cap block or cement fill required at top courses of all masonry piers or pilasters.
18. Hardwood shims maybe used between I-beam and pier to level home. Shims shall be at least 3-1/2 inches wide and 6 inches long and are not to exceed 1-1/2 inch in thickness. At least 2 shims must be per pier driven from opposite sides of the I-beam. Shims must be perpendicular to I-beam and driven tight. Shims may not occupy more than 1 inch of vertical space.

19. Wind anchorage frame tiedowns straps must be located within 2 feet of end wall and at the spacing indicated in the chart between endwall frame tie downs.
20. Designs for seismic zones A, B, or C only, unless otherwise noted on plans.
21. All piers shall be constructed of 8"x8"x16" concrete masonry units conforming to ASTM C 90.
22. All reinforcing shall be Grade 60 minimum. All splices shall be lapped 24 " minimum and splices shall be offset 30 " minimum within same footer.
23. All concrete grout shall be 3000 psi at 28 days.
24. Reference the model plan drawing for specific foundation layout.
25. Concrete footings shall have a minimum compressive strength of 5000 psi at 28 days. Except may be 2500 psi with approved admixture that provides a water & vapor resistance at least equivalent to 5000 psi. Concrete foundation walls and other concrete exposed to weather shall have a minimum compressive strength of 3000 psi at 28 days and in moderate and severe weather areas the concrete shall be air entrained no less than 5 percent and not more than 7 percent. See table R301.2(1) and R402.2 of IRC
26. All exterior footings shall be placed at least 12 " below the undisturbed ground surface. All exterior footings shall extend below the frost line or otherwise frost protected in accordance with Sections R403.1.4.1 through R403.1.4.2 of IRC or per adopted local building code.
27. Top of foundation walls shall extend a minimum of 6-1/2 " above finished adjacent grade except when a masonry veneer of 4 " minimum is used. Wood floor joist shall not be closer than 18 " from exposed ground in under floor space.
28. Contractor shall verify all site conditions and dimensions prior to starting foundation. Notify home manufacture of any discrepancies immediately.
29. The foundation must be designed and built to local codes and ordinances and must be approved and inspected by local building officials.
30. Access shall be to all under floor spaces. Access shall be a minimum of 18 " by 24 " . If mechanical equipment is installed in this area, please refer to the Mechanical Code for minimum access opening. Through wall access openings shall not be located under an exterior door.
31. Under floor space shall be ventilated with a net area ratio not less than 1 square foot for each 150 square feet of under floor space area placed in accordance with local codes. Ratio may be reduced to 1/1,500 where ground is covered with Class I vapor material.
32. Field installed wiring in basement is subject to local inspection. Basement smoke alarms must be installed and tested on site.
33. Large clear spans along mating wall require a column or pier at each end. See model specific foundation plan for required capacity and additional column requirements.
34. Basement stairs (widths, handrails, clearances, headroom, landings, fire protection, etc.) are the responsibility of the owner/contractor and must be constructed to comply with local building codes.
35. Owner/contractor shall not alter basement stair opening without written approval from CMH Manufacturing.
36. Lighting and receptacles in basement are the responsibility of owner/contractor.

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FILENAME:958N-14.R.F.E.22.22.210(4)

Page 4 of 17

37. Termite protection shall be provided per the building code and local requirements and are responsibility of owner/contractor.

38. Ground snow load is indicated on foundation plans. Snow load must be verified per locality. Building has not been designed to be located within a Tsunami design zone.

39. All connection hardware, anchor bolts, straps, hold-downs, washers and fasteners shall be minimum of ASTM A653 Type G185 zinc coated galvanized or stainless when in contact with pressure treated sill plates or other pressure treated lumber.

40. This structure has not been designed to be located within flood hazard locations. When site is located in a flood hazard area as determined by the local authority having jurisdiction or flood hazard maps. The unit shall have lowest floor elevated above the design floor elevation. Foundation and anchorage designs shall be provided by a local engineer in conformance with adopted local building code and ASCE-24--14

41. Radon control, when required by a local jurisdiction, shall be provided and installed by others in accordance with appendix F of the IRC.

42. Topographic wind effects have not been considered. Home has not been designed to be located in areas designated as having local historical data documenting structural damage to buildings wind speed-up at isolated hills, ridges and escarpments.

43.Reserved.

44. Self-closing rated doors shall be installed between garage and house (on-site by other).(R302.5.1)

45. If building is located within a wind borne debris region glazed openings shall be protected from wind borne debris. Wind Borne debris protection is the responsibility of others.

46. A 6-mil polyethylene or approved vapor retarder with joints lapped not less than 12 inches shall be placed between the concrete floor slab and the base course or the prepared subgrade.

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NIA

6/17/2022

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TABLE M - MINIMUM CONCRETE BLOCK PIER AND FOOTER SIZE

AT MATING WALL COLUMNS (REF. DETAILS D4 OR D5)				# of Uplift Ties
GROUND SNOW	20	30		
MAXIMUM MATING LINE SPAN BETWEEN MATING WALL COLUMN SUPPORTS	4'	(S) 26"x26"x9" OR 30" Dia. X 11"	(S) 26"x26"x9" OR 30" Dia. X 11"	0
	6'	(S) 26"x26"x9" OR 30" Dia. X 11"	(S) 26"x26"x9" OR 30" Dia. X 11"	0
	8'	(S) 26"x26"x9" OR 30" Dia. X 11"	(S) 26"x26"x9" OR 30" Dia. X 11"	0
	10'	(S) 26"x26"x9" OR 30" Dia. X 11"	(D) 34"x34"x9" OR 40" Dia. X 16"	0
	12'	(S) 26"x26"x9" OR 30" Dia. X 11"	(D) 34"x34"x9" OR 40" Dia. X 16"	0
	14'	(D) 34"x34"x9" OR 40" Dia. X 16"	(D) 34"x34"x9" OR 40" Dia. X 16"	0
	16'	(D) 34"x34"x9" OR 40" Dia. X 16"	(D) 34"x34"x9" OR 40" Dia. X 16"	0
	18'	(D) 34"x34"x9" OR 40" Dia. X 16"	(D) 34"x34"x9" OR 40" Dia. X 16"	1
	20'	(D) 34"x34"x9" OR 40" Dia. X 16"	(D) 34"x34"x9" OR 40" Dia. X 16"	1
	22'	(D) 34"x34"x9" OR 40" Dia. X 16"	(D) 34"x34"x9" OR 40" Dia. X 16"	1
	24'	(D) 34"x34"x9" OR 40" Dia. X 16"	(D) 34"x34"x9" OR 40" Dia. X 16"	1
	26'	(D) 34"x34"x9" OR 40" Dia. X 16"	(D) 34"x34"x9" OR 40" Dia. X 16"	1
	28'	(D) 34"x34"x9" OR 40" Dia. X 16"	(D) 34"x34"x9" OR 40" Dia. X 16"	1
	30'	(D) 34"x34"x9" OR 40" Dia. X 16"	(T) 42"x42"x13" OR 48" Dia. X 20"	1
	32'	(D) 34"x34"x9" OR 40" Dia. X 16"	(T) 42"x42"x13" OR 48" Dia. X 20"	1
34'	(D) 34"x34"x9" OR 40" Dia. X 16"	(T) 42"x42"x13" OR 48" Dia. X 20"	1	
36'	(D) 34"x34"x10" OR 40" Dia. X 16"	(T) 42"x42"x13" OR 48" Dia. X 20"	1	
46'	(T) 42"x42"x13" OR 48" Dia. X 20"	(T) 42"x42"x13" OR 48" Dia. X 20"	1	
12"x10.8pif CHASSIS BEAMS SUPPORT SPACING & PIER CONFIGURATION				
PIER SPACING	13.5' MAX	13.5' MAX		
PIER CONFIG.	(S) 26"x26"x9" OR 24" Dia.	(S) 26"x26"x9" OR 24" Dia.		
SUPPORTS UNDER MATING WALLS (PERIMETER BLOCKING)-CLEARSPANS IN FEET				
PIER SPACING	8. '	8. '		
PIER CONFIG.	(S) 26"x26"x9" OR 25" Dia.	(S) 26"x26"x9" OR 27" Dia.		
PIER SUPPORTS UNDER SIDE WALLS (PERIMETER BLOCKING)				
PIER SPACING	8' O/C MAX	8' O/C MAX		
PIER CONFIG.	(S) 26"x26"x9" OR 20" Dia.	(S) 26"x26"x9" OR 21" Dia.		

Chart Key:

(Pier Configuration) Min. footer width (Inches) x Min. footer length (Inches) x Min. footer depth (Inches)

(S)= Single stack block configuration.

(D)= Double stack block configuration.

(T)= Triple stack block configuration.

(DR)=Double stack reinforced & fully grouted configuration.

IE. For 20 psf 160" box with 14' opening:Double stack pier on a 34"x 34" sq. footer 9" deep footing.

27' 1 STORY- W.O ATTIC PIER SET (FRAME TIED) With Roof Pitch of 6/12 Min. to 6/12 Max.

NOTES: 1 DESIGNED FOR 100 MPH MAX. WIND SPEED.

2 DESIGNED FOR 1500 PSF MIN. ALLOWABLE SOIL BEARING CAPACITY.

3 DESIGN TO * Ultimate wind speed Vult. Per ASCE 7-10/ allowable stress design wind speed Vasd. All wind speeds are indicated as (Vasd) design speed

4 MAX. MATING WALL OPENINGS LISTED IN CHART ASSUME OPENING IN BOTH HALVES. IF ANCHOR IS TIED TO ONLY ONE

COLUMN (ONE HALF) THEN HALF THE OPENING SIZE CAN BE USED WHEN LOOKING UP VALUE IN TABLE ABOVE. PIER

SUPPORTS REQUIRED AT EACH SIDE OF DOOR OPENINGS AND ALL EXTERIOR WALL OPENINGS GREATER THAN 4'.

5 WHEN PIER CONFIGURATION IS NOT GIVEN IN CHART THE ACTUAL LOADS EXCEED ALL

PREDESIGNED PIERS AND A LOCAL ENGINEER MUST DESIGN THE SUPPORTS FOR THE

GIVEN LOADS (- UPLIFT/ + GRAVITY LOADS).

6 ALL PIERS SHALL BE EMBEDDED IN TYPE M OR S MORTAR.

7.Round footers or Round Piles with diameter as required above may be used as alternate to square footing or square footing and block piers.

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FILENAME:958N-14.R.F.E.22.22.210(4)

Support and anchorage for 16" Max. Recess

NON CORNER- SPANS ARE NOT LOCATED WITH 6' OF END OF HOME

PIER CONFIGURATION AND MINIMUM FOOTER SIZE UNDER SIDEWALL PORCH/ RECESS SUPPORT ^{1,4}												
GROUND SNOW			20 #		30 #							
Max. span ³	UPLIFT ¹⁰ LOAD	# Brk ²	w/ground anchors	w/concrete anchors	w/ground anchors	w/concrete anchors	w/ground	w/concrete	w/ground	w/concrete	w/ground	w/concrete
4	-128.76518 #	-1	(S) 26"x26"x9"	(S) 26"x26"x9"	(S) 26"x26"x9"	(S) 26"x26"x9"						
6	-193.14777 #	-1	(S) 26"x26"x9"	(S) 26"x26"x9"	(S) 26"x26"x9"	(S) 26"x26"x9"						
8 **	-257.53036 #	-1	(S) 26"x26"x9"	(S) 26"x26"x9"	(S) 26"x26"x9"	(S) 26"x26"x9"						
10 **	-321.91295 #	-1	(S) 26"x26"x9"	(S) 26"x26"x9"	(S) 26"x26"x9"	(S) 26"x26"x9"						
12 **	-386.29554 #	-1	(D) 34"x34"x9"	(D) 34"x34"x9"	(D) 34"x34"x9"	(D) 34"x34"x9"						

CORNER- SPANS ARE LOCATED WITH 6' OF END OF HOME

PIER CONFIGURATION AND MINIMUM FOOTER SIZE UNDER SIDEWALL PORCH/ RECESS SUPPORT ^{1,4}												
GROUND SNOW			20 #		30 #							
Max. span ³	UPLIFT ¹⁰ LOAD	# Brk ²	w/ground anchors	w/concrete anchors	w/ground anchors	w/concrete anchors	w/ground	w/concrete	w/ground	w/concrete	w/ground	w/concrete
4	-87.993493 #	-1	(S) 26"x26"x9"	(S) 26"x26"x9"	(S) 26"x26"x9"	(S) 26"x26"x9"						
6	-146.99024 #	-1	(S) 26"x26"x9"	(S) 26"x26"x9"	(S) 26"x26"x9"	(S) 26"x26"x9"						
8 **	-195.98699 #	-1	(S) 26"x26"x9"	(S) 26"x26"x9"	(S) 26"x26"x9"	(S) 26"x26"x9"						
10 **	-244.98373 #	-1	(S) 26"x26"x9"	(S) 26"x26"x9"	(S) 26"x26"x9"	(S) 26"x26"x9"						
12 **	-293.98048 #	-1	(D) 34"x34"x9"	(D) 34"x34"x9"	(D) 34"x34"x9"	(D) 34"x34"x9"						



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Support and anchorage for 48" Max. Porch Depth

NON CORNER- SPANS ARE NOT LOCATED WITH 6' OF END OF HOME

PIER CONFIGURATION AND MINIMUM FOOTER SIZE UNDER SIDEWALL PORCH/ RECESS SUPPORT ^{1,4}												
GROUND SNOW			20 #		30 #							
Max. span ³	UPLIFT ¹⁰ LOAD	# Brk ²	w/ground anchors	w/concrete anchors	w/ground anchors	w/concrete anchors	w/ground	w/concrete	w/ground	w/concrete	w/ground	w/concrete
4	-29.193373 #	-1	(S) 26"x26"x9"	(S) 26"x26"x9"	(S) 26"x26"x9"	(S) 26"x26"x9"						
6	-43.780059 #	-1	(S) 26"x26"x9"	(S) 26"x26"x9"	(S) 26"x26"x9"	(S) 26"x26"x9"						
8 **	-58.386746 #	-1	(S) 26"x26"x9"	(S) 26"x26"x9"	(S) 26"x26"x9"	(S) 26"x26"x9"						
10 **	-72.983432 #	-1	(S) 26"x26"x9"	(S) 26"x26"x9"	(S) 26"x26"x9"	(S) 26"x26"x9"						
12 **	-87.580119 #	-1	(D) 34"x34"x9"	(D) 34"x34"x9"	(D) 34"x34"x9"	(D) 34"x34"x9"						

CORNER- SPANS ARE LOCATED WITHIN 6' OF END OF HOME

PIER CONFIGURATION AND MINIMUM FOOTER SIZE UNDER SIDEWALL PORCH/ RECESS SUPPORT ^{1,4}												
GROUND SNOW			20 #		30 #							
Max. span ³	UPLIFT ¹⁰ LOAD	# Brk ²	w/ground anchors	w/concrete anchors	w/ground anchors	w/concrete anchors	w/ground	w/concrete	w/ground	w/concrete	w/ground	w/concrete
4	5.3605484 #	1	(S) 26"x26"x9"	(S) 26"x26"x9"	(S) 26"x26"x9"	(S) 26"x26"x9"						
6	8.0408227 #	1	(S) 26"x26"x9"	(S) 26"x26"x9"	(S) 26"x26"x9"	(S) 26"x26"x9"						
8 **	10.721097 #	1	(S) 26"x26"x9"	(S) 26"x26"x9"	(S) 26"x26"x9"	(S) 26"x26"x9"						
10 **	13.401371 #	1	(S) 26"x26"x9"	(S) 26"x26"x9"	(S) 26"x26"x9"	(S) 26"x26"x9"						
12 **	16.081645 #	1	(D) 34"x34"x9"	(D) 34"x34"x9"	(D) 34"x34"x9"	(D) 34"x34"x9"						

NOTES:

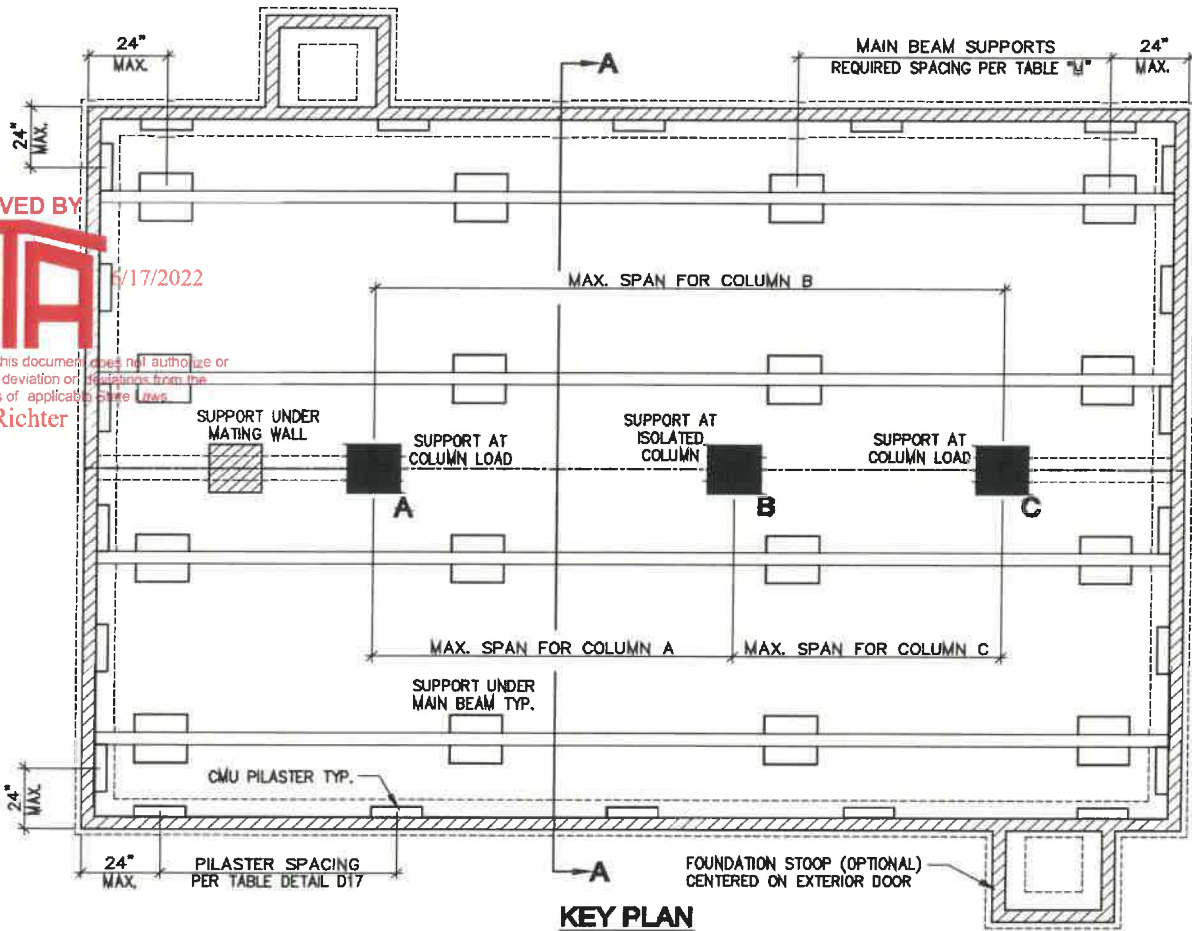
- Piers supports are required under all porch/ recess post and at intersection of sidewall (see key plan).
- # Brk- Number of uplift brackets required under the support column. Brackets per Detail D6. Brackets maybe installed individually or in pairs and must be tied to a ground anchor or concrete anchor with a minimum design capacity of 3150#. An alternate uplift connector may be used which has the required uplift load indicated above.
- NG- Indicates that uplift exceeds standard angle and tie down capacity and alternate design is require.
- Max. Span- Maximum distance between adjacent porch post or supports as measure parallel to box length.
- Piers- Indicates the minimum CMU block configuration (S)ngle, (D)ouble, (T)riple or (DR)Double (R)einforced and minimum footer size. See Detail D3 of D4 for pier configuration.
- w/ ground anchors- Minimum footer size for gravity load support at post. Uplift is taken to ground anchor anchors placed in soil.
- w/ concrete anchors- Minimum footer size based on gravity and uplift. Concrete anchors embedded into foot carry uplift load.
- pier set (frame tied) foundation design for: 26' - 8" 2-section modular
- designed for 100 mph max. wind speed.
- Design for 1500 psf min. allowable soil bearing capacity.
- Designed to the * Ultimate wind speed Vult. Per ASCE 7-10/ allowable stress design wind speed Vasd. All wind speeds are Inc #DIV/0!

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PORCH & RECESS (TABLE P)	
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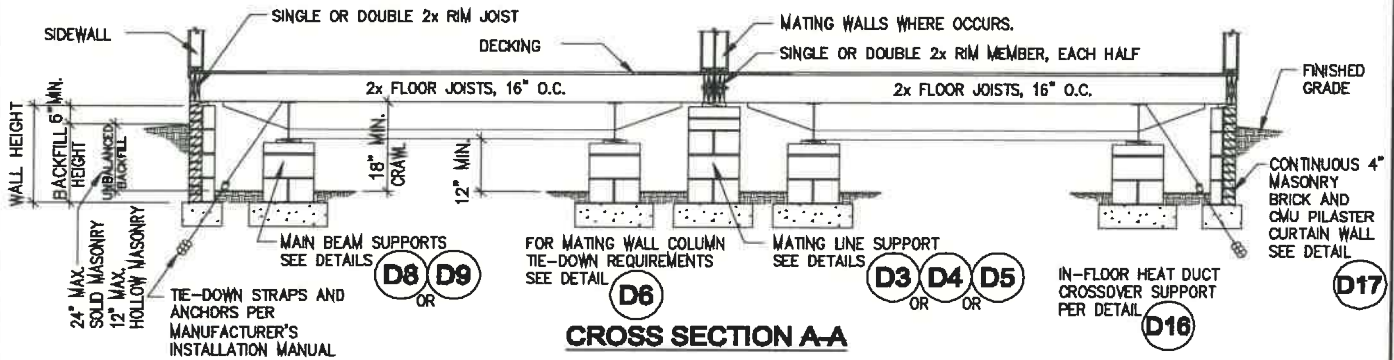
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KEY PLAN
ON-FRAME CURTAIN WALL PIER SET - 2 SECTION
 NOT TO SCALE



CROSS SECTION A-A

NOTES:

- MARRIAGE LINE SUPPORTS SHALL SUPPORT THE MARRIAGE WALL AND COLUMNS WHERE OCCURS. SUPPORTS ARE ALSO REQUIRED AT ALL INFLOOR HEAT DUCT CROSSOVER LOCATIONS. REFER TO SPECIFIC FOUNDATION LAYOUT FOR LOCATION INFORMATION.
- PERIMETER SUPPORTS REQUIRED AT EACH SIDE OF ALL SIDEWALL DOOR OPENINGS AND AT OPENINGS GREATER THAN 48". (BAY WINDOWS, RECESSED ENTRIES, PORCHES, ETC.) DOORS AND OPENINGS ON ENDWALLS DO NOT REQUIRE SUPPORTS. ADDITIONAL PERIMETER SUPPORTS SHALL BE LOCATED ALONG THE SIDEWALL AS REQUIRED BY ROOF LOADS.
- SEE GENERAL NOTES SECTION FOR VENTILATION, DRAINAGE AND OTHER FOUNDATION REQUIREMENTS.

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**KEY PLAN 11 - ON-FRAME /
 CURTAIN WALL PIER SET / 2
 SECTION**

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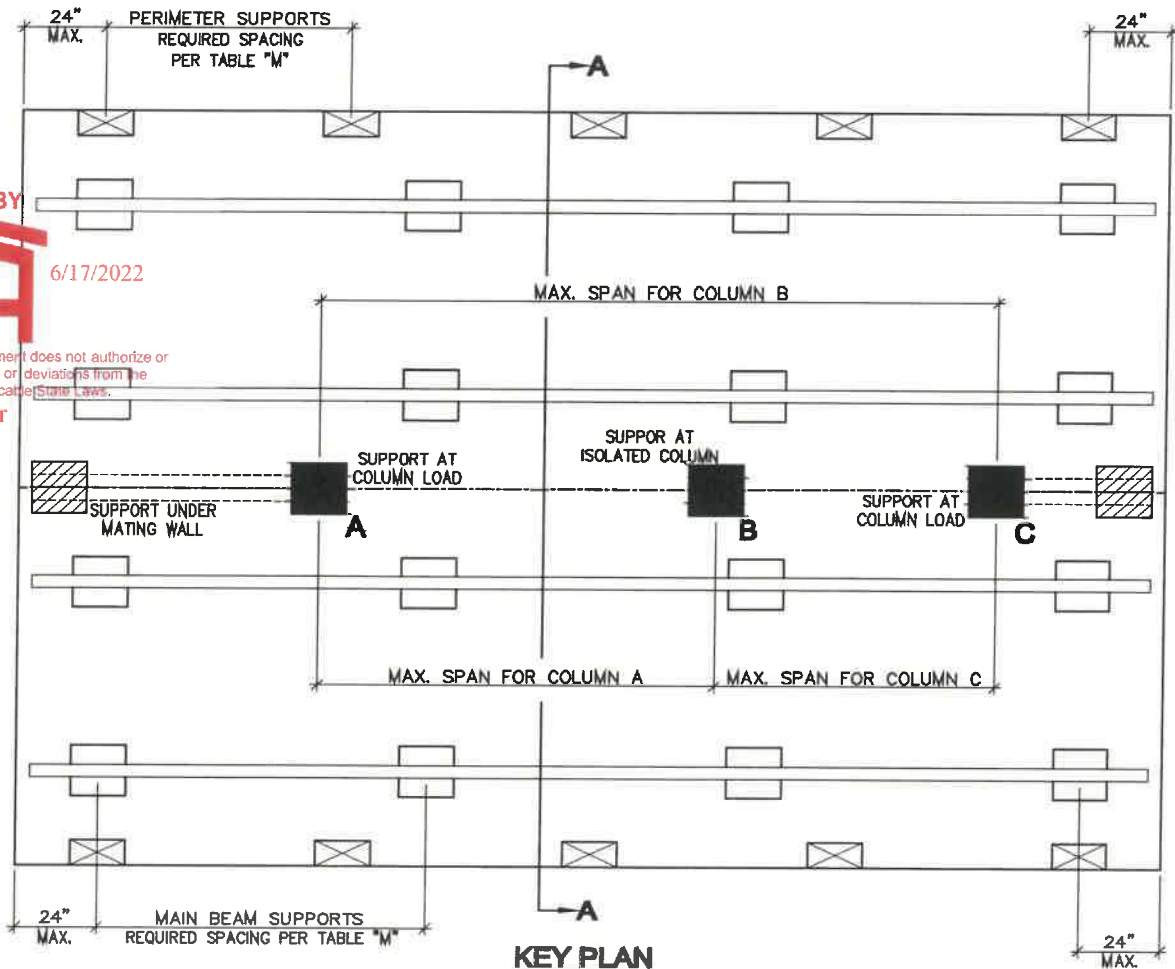
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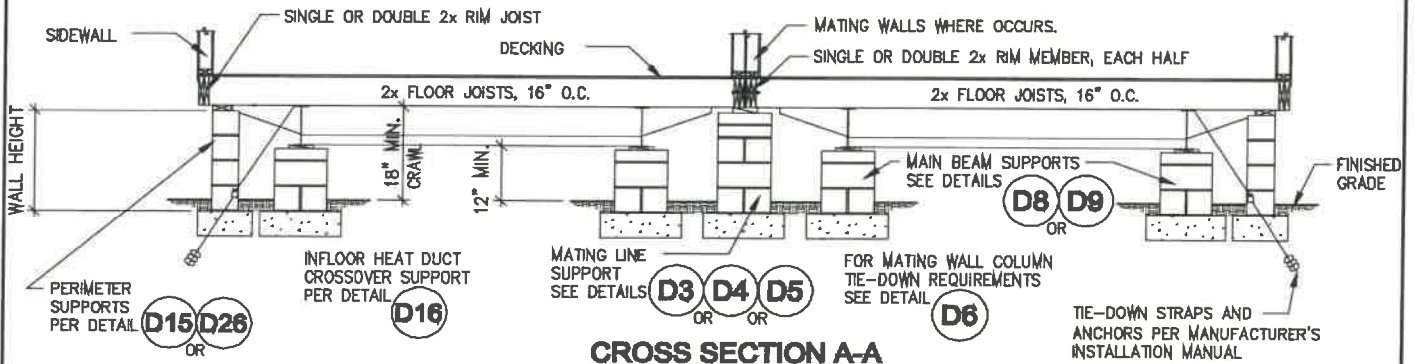
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KEY PLAN
ON-FRAME PIER SET - 2 SECTION
 NOT TO SCALE



CROSS SECTION A-A

NOTES:

- MARRIAGE LINE SUPPORTS SHALL SUPPORT THE MARRIAGE WALL AND COLUMNS WHERE OCCURS. SUPPORTS ARE ALSO REQUIRED AT ALL INFLOOR HEAT DUCT CROSSOVER LOCATIONS. REFER TO SPECIFIC FOUNDATION LAYOUT FOR LOCATION INFORMATION.
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- SEE GENERAL NOTES SECTION FOR VENTILATION, DRAINAGE AND OTHER FOUNDATION REQUIREMENTS.

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KEY PLAN 12 - ON-FRAME / PIER SET / 2 SECTION

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1/2" BOLTS, NUTS, AND WASHERS OR 3/8" LAG SCREWS REQUIRED THRU RIM JOIST GIRDER. SIZE AND SPACING PER HOME SETUP MANUAL.

MATING WALLS WHERE OCCURS.

SINGLE, DOUBLE OR TRIPLE 2x RIM MEMBER, EACH HALF

DECKING

2x FLOOR JOISTS, 16" O.C.

FILL ANY GAPS AT BOLT LOCATIONS WITH SOLID WOOD SHIMS FOR WOOD TO WOOD CONTACT.

SHIM AS NEEDED PER NOTE 4

OPTIONAL FILLER PER NOTE 3

CAP BLOCK PER NOTE 3

MATING LINE PIERS LAID IN MORTAR PER NOTE 2. SINGLE, DOUBLE OR TRIPLE STACKED. SIZE AND SPACING REQUIREMENTS PER TABLE "M".

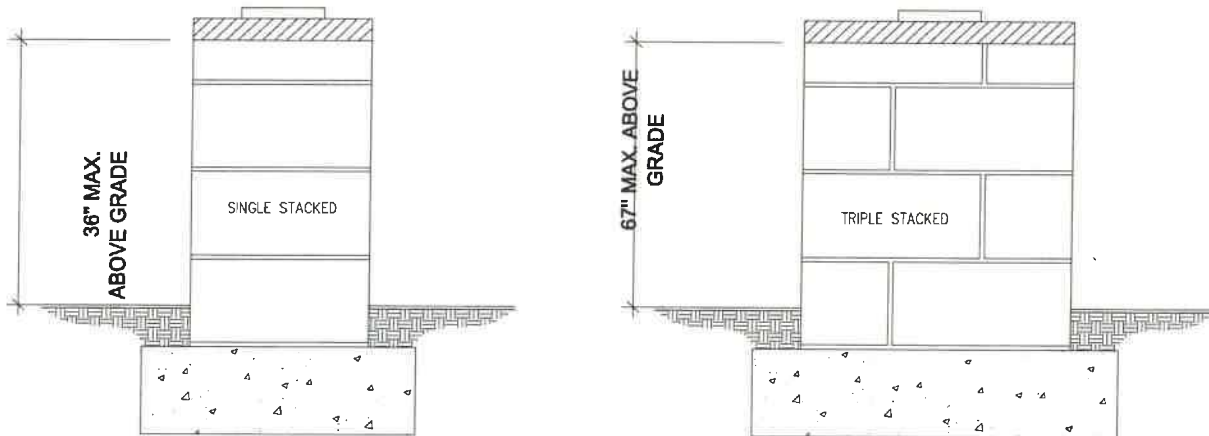
NOTE: FOR COLUMN TIE-DOWN REQUIREMENTS SEE DETAIL

D6

APPROVED VAPOR RETARDER OVER FINISH GRADE

67" MAX. ABOVE GRADE

CONCRETE FOOTING BELOW FROST LINE AND MIN. 12" BELOW FINISH GRADE. SIZE PER TABLE "M"



**NON-REINFORCED MATING WALL OR COLUMN SUPPORT PIER
CRAWL SPACE ONLY**

NOTES:

- FOOTINGS MUST BE LEVEL IN ALL DIRECTIONS. PIERS ARE TO BE PLACED CENTERED ON THE FOOTING SO THAT THE FOOTING PROJECTION FROM THE PIER IS EQUAL FROM SIDE-TO-SIDE AND FRONT-TO-BACK. PIERS MUST BE LEVEL VERTICALLY ON ALL SIDES AND SQUARE WITH THE FOOTING.
- CONCRETE BLOCKS FOR PIERS ARE 8" x 16" x 8" NOMINAL SIZE, HOLLOW CELL LOAD BEARING CMU's MANUFACTURED IN CONFORMANCE WITH ASTM C90, GRADE "N". OPEN CELLS ARE ALIGNED VERTICALLY. THE PIERS SHALL BE LAID IN RUNNING BOND WITH TYPE M OR S MORTAR OR APPROVED ALTERNATE (SEE GENERAL NOTE 12). SINGLE STACKED BLOCKS TO BE LAID WITH LONG SIDE PERPENDICULAR TO MATE LINE RIM JOISTS. DOUBLE STACKED BLOCK IS LAID WITH EACH LAYER AT A RIGHT ANGLE TO THE PREVIOUS LAYER. THE TOP COURSE OR THE CAP BLOCKS SHALL BE PERPENDICULAR TO THE MATE LINE RIM JOISTS.
- CAP BLOCKS SHALL BE 4" SOLID CONCRETE OR MASONRY BLOCK. 2x NOMINAL HARDWOOD OR 1/2" STEEL MAY BE USED AS A CAP BLOCK IF THE TOP COURSE OF THE PIER IS SOLID MASONRY OR CONCRETE OR IF THE TOP COURSE OF A HOLLOW PIER IS FILLED WITH CONCRETE OR GROUT. OPTIONAL FILLER MATERIAL MAY BE 2x NOMINAL HARDWOOD OR 2" OR 4" NOMINAL SOLID CONCRETE BLOCK. ALL CAPS AND FILLER SHALL BE OF THE SAME NOMINAL DIMENSIONS AS THE PIERS THEY REST UPON. INDIVIDUAL LENGTHS OF CAP BLOCKS AND FILLER SHALL BE PERPENDICULAR TO THE MATE LINE RIM JOISTS.
- SHIMS SHALL BE OF HARDWOOD, AT LEAST 3 1/2" WIDE AND 6" LONG AND ARE NOT TO EXCEED ONE INCH IN THICKNESS. SHIMS SHALL BE PERPENDICULAR TO MATE LINE, FITTED AND DRIVEN TIGHT BETWEEN CAP BLOCKS OR FILLER AND MATE LINE RIM JOISTS.
- MARRIAGE LINE PIERS SHALL SUPPORT THE MARRIAGE WALL AND COLUMNS WHERE OCCURS PER MODEL SPECIFIC FOUNDATION PLAN. MAXIMUM PIER SPACING PER TABLE "M".
- SEE GENERAL NOTES FOR DRAINAGE AND OTHER FOUNDATION REQUIREMENTS.

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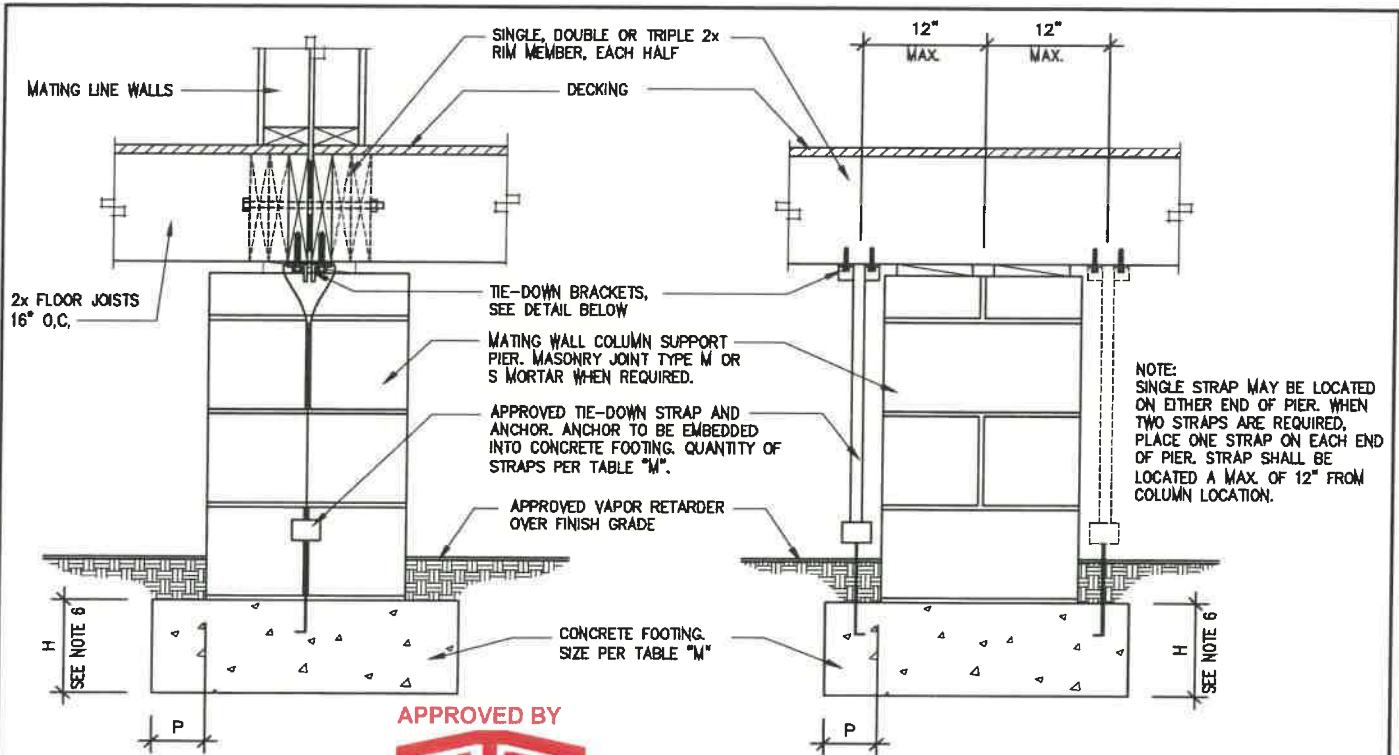
**NON-REINFORCED MATING
WALL COLUMN SUPPORT PIER
- CRAWLSPACE ONLY - DETAIL
- D3**

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NOTE:
SINGLE STRAP MAY BE LOCATED ON EITHER END OF PIER. WHEN TWO STRAPS ARE REQUIRED, PLACE ONE STRAP ON EACH END OF PIER. STRAP SHALL BE LOCATED A MAX. OF 12" FROM COLUMN LOCATION.

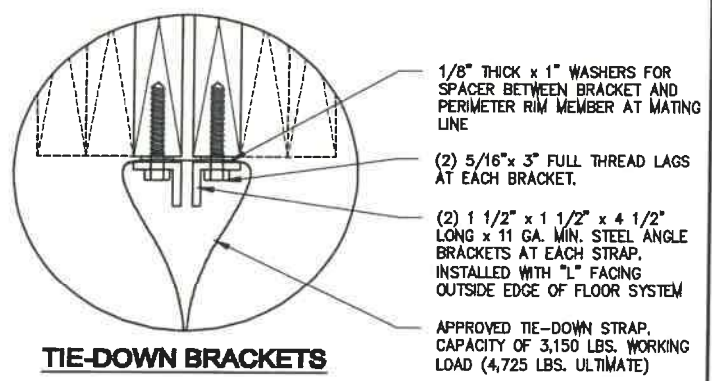
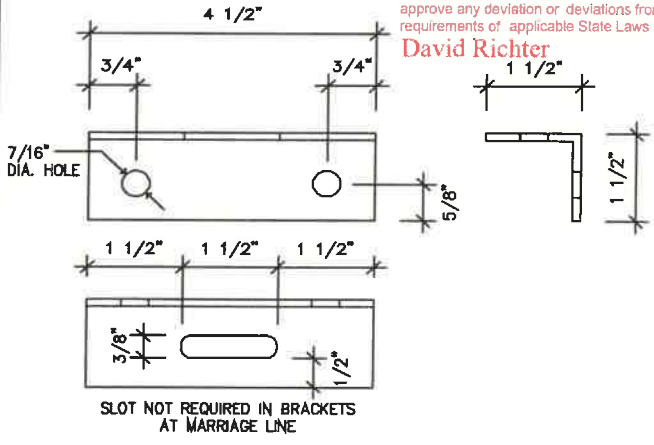
END VIEW

SIDE VIEW

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TIE-DOWN BRACKETS

MATING WALL COLUMN TIE DOWN

- NOTES:
1. ALL MARRIAGE WALL COLUMN LOCATIONS WITH OPENINGS 4 FEET OR GREATER MAY REQUIRE THE INSTALLATION OF COLUMN BRACKETS AND TIE-DOWNS. SEE TABLE "M" FOR REQUIREMENTS.
 2. EACH BRACKET IS RATED FOR AN ALLOWABLE WORKING LOAD OF 1,719 LBS.
 3. THE CAPACITY OF BOTH THE TIE-DOWN STRAP AND ANCHOR MUST BE 3,150 LBS. WORKING LOAD (4,725 LBS. ULTIMATE)
 4. USE A RADIUS CLIP FOR ALL BRACKET APPLICATIONS BY THREADING A PIECE OF STRAP OVER THE BRACKETS BEFORE LOOPING THE TIE-DOWN STRAP AROUND THE BRACKET.
 5. GROUND ANCHORS WHICH ARE LISTED FOR THE REQUIRED CAPACITY ABOVE MAY BE USED IN LIEU OF CONCRETE ANCHOR.
 6. DISTANCE FROM EDGE OF FOOTING TO FACE OF FOUNDATION WALL (P) SHALL NOT BE LESS THAN 2" AND SHALL NOT EXCEED THE FOOTING THICKNESS (H). FOOTING THICKNESS MAY BE 10" IF GROUND ANCHORS WITH AN UPLIFT CAPACITY OF 3,150 LBS. ARE USED IN PLACE OF CONCRETE ANCHORS.
 7. FOOTING SIZES PER TABLE "M" HAVE BEEN DESIGNED ASSUMING CONCRETE ANCHORS WILL BE UTILIZED. IF GROUND ANCHORS ARE UTILIZED TO TRANSMIT UPLIFT INTO GROUND SOIL, THE DEPTH OF THE FOOTING MAY BE REDUCED TO (P). WHERE (P) IS EQUAL TO THE GREATEST DISTANCE FROM EDGE OF FOOTING TO EDGE OF PIER. MINIMUM DEPTH IS 9".

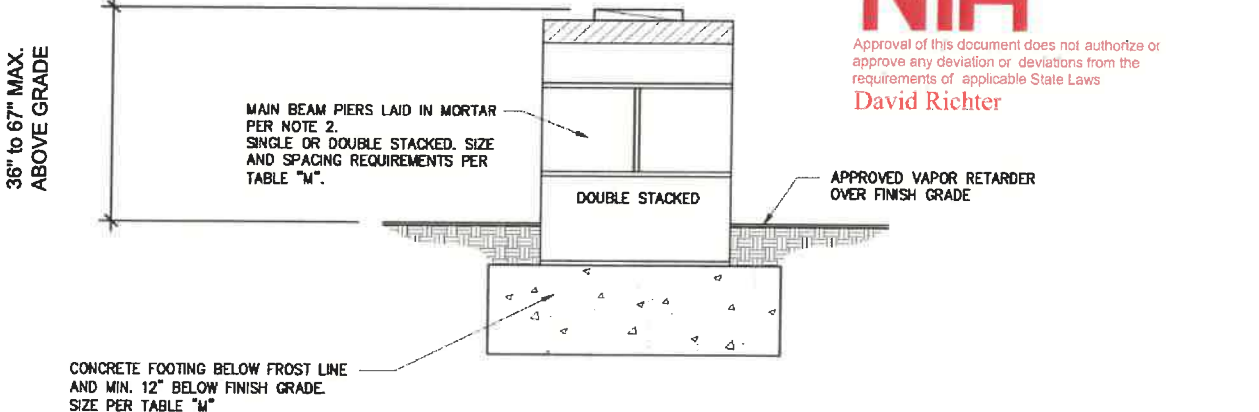
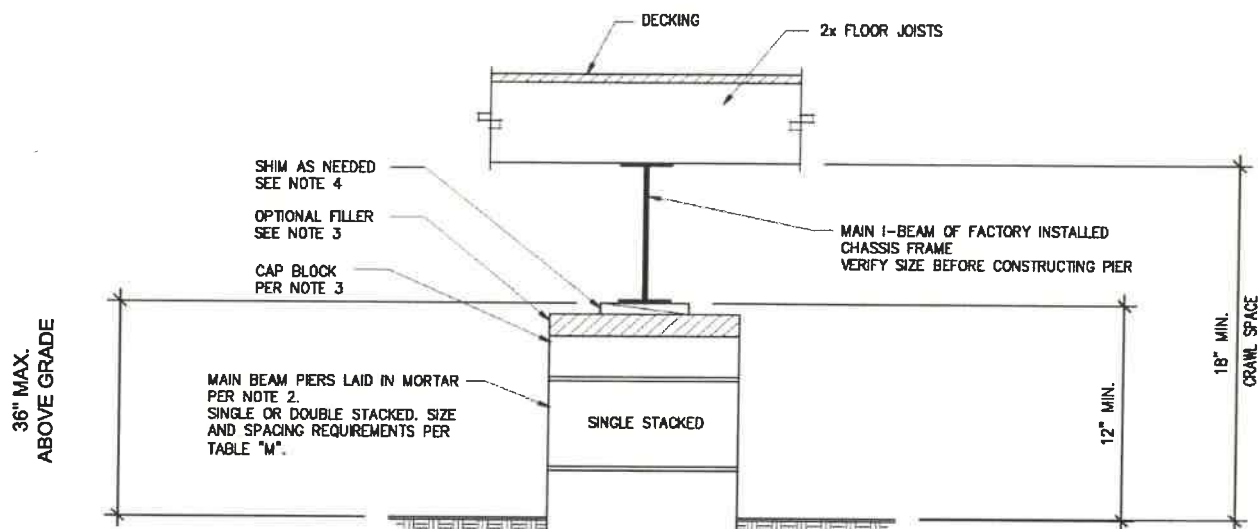
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MATING WALL COLUMN TIE DOWN - DETAIL - D6

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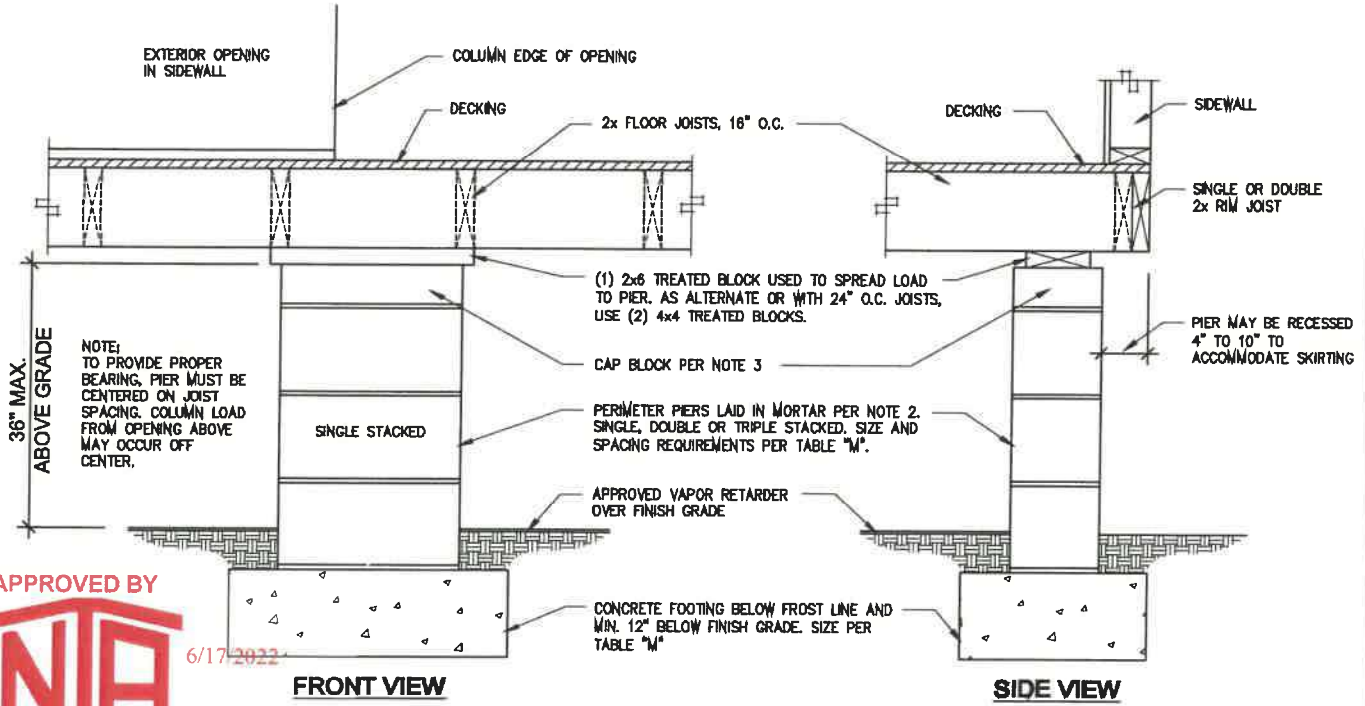
- NOTES:**
1. FOOTINGS MUST BE LEVEL IN ALL DIRECTIONS. PIERS ARE TO BE PLACED CENTERED ON THE FOOTING SO THAT THE FOOTING PROJECTION FROM THE PIER IS EQUAL FROM SIDE-TO-SIDE AND FRONT-TO-BACK. PIERS MUST BE LEVEL VERTICALLY ON ALL SIDES AND SQUARE WITH THE FOOTING.
 2. CONCRETE BLOCKS FOR PIERS ARE 8" x 16" x 8" NOMINAL SIZE, HOLLOW CELL LOAD BEARING CMU'S MANUFACTURED IN CONFORMANCE WITH ASTM C90, GRADE "N". OPEN CELLS ARE ALIGNED VERTICALLY. THE PIERS SHALL BE LAID IN RUNNING BOND WITH TYPE M OR S MORTAR OR APPROVED ALTERNATE (SEE GENERAL NOTE 12). SINGLE STACKED BLOCKS TO BE LAID WITH LONG SIDE PERPENDICULAR TO MATE LINE RIM JOISTS. DOUBLE STACKED BLOCK IS LAID WITH EACH LAYER AT A RIGHT ANGLE TO THE PREVIOUS LAYER. THE TOP COURSE OR THE CAP BLOCKS SHALL BE PERPENDICULAR TO THE MATE LINE RIM JOISTS.
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 4. SHIMS SHALL BE OF HARDWOOD, AT LEAST 3 1/2" WIDE AND 6" LONG AND ARE NOT TO EXCEED ONE INCH IN THICKNESS. SHIMS SHALL BE PERPENDICULAR TO MATE LINE, FITTED AND DRIVEN TIGHT BETWEEN CAP BLOCKS OR FILLER AND MATE LINE RIM JOISTS.
 5. MARRIAGE LINE PIERS SHALL SUPPORT THE MARRIAGE WALL AND COLUMNS WHERE OCCURS PER MODEL SPECIFIC FOUNDATION PLAN. MAXIMUM PIER SPACING PER TABLE "M".
 6. SEE GENERAL NOTES FOR DRAINAGE AND OTHER FOUNDATION REQUIREMENTS.

Schult

ON FRAME PIER - DETAIL - D8

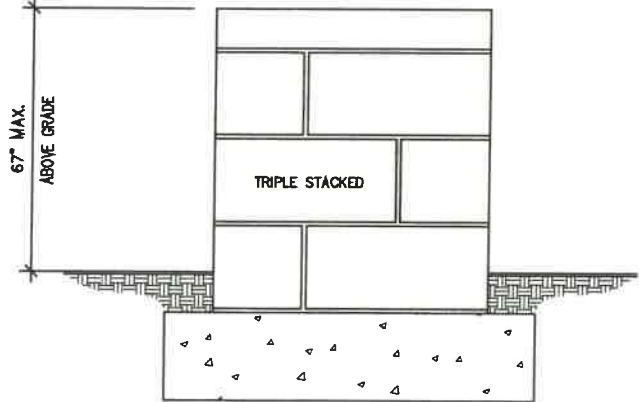
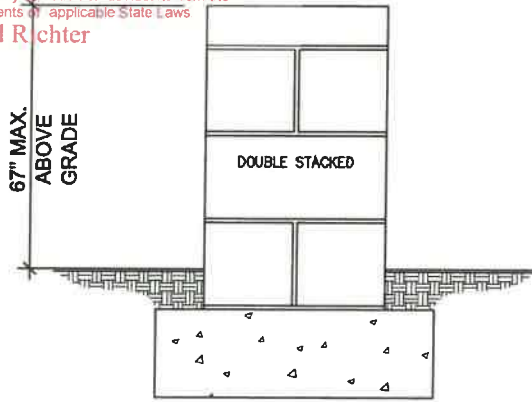
DATE: 06/13/07 958N-14.R.F.E.22.22.210(4)

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NON-REINFORCED PERIMETER OR PORCH POST SUPPORT PIER

NOTES:

1. FOOTINGS MUST BE LEVEL IN ALL DIRECTIONS. PIERS ARE TO BE PLACED CENTERED ON THE FOOTING SO THAT THE FOOTING PROJECTION FROM THE PIER IS EQUAL FROM SIDE-TO-SIDE AND FRONT-TO-BACK. PIERS MUST BE LEVEL VERTICALLY ON ALL SIDES AND SQUARE WITH THE FOOTING.
2. CONCRETE BLOCKS FOR PIERS ARE 8" x 16" x 8" NOMINAL SIZE, HOLLOW CELL LOAD BEARING CMU's MANUFACTURED IN CONFORMANCE WITH ASTM C90, GRADE "N". OPEN CELLS ARE ALIGNED VERTICALLY. SEE NOTE 7. FOR MORTAR REQUIREMENT. SINGLE STACKED BLOCKS TO BE LAID WITH LONG SIDE PERPENDICULAR TO MATE LINE RIM JOISTS. DOUBLE STACKED BLOCK IS LAID WITH EACH LAYER AT A RIGHT ANGLE TO THE PREVIOUS LAYER. THE TOP COURSE OR THE CAP BLOCKS SHALL BE PERPENDICULAR TO THE MATE LINE RIM JOISTS.
3. CAP BLOCKS SHALL BE 4" SOLID CONCRETE OR MASONRY BLOCK. 2x NOMINAL HARDWOOD OR 1/2" STEEL MAY BE USED AS A CAP BLOCK IF THE TOP COURSE OF THE PIER IS SOLID MASONRY OR CONCRETE OR IF THE TOP COURSE OF A HOLLOW PIER IS FILLED WITH CONCRETE OR GROUT. OPTIONAL FILLER MATERIAL MAY BE 2x NOMINAL HARDWOOD OR 2" OR 4" NOMINAL SOLID CONCRETE BLOCK. ALL CAPS AND FILLER SHALL BE OF THE SAME NOMINAL DIMENSIONS AS THE PIERS THEY REST UPON. INDIVIDUAL LENGTHS OF CAP BLOCKS AND FILLER SHALL BE PERPENDICULAR TO THE MATE LINE RIM JOISTS.
4. SHIMS SHALL BE OF HARDWOOD, AT LEAST 3 1/2" WIDE AND 6" LONG AND ARE NOT TO EXCEED ONE INCH IN THICKNESS. SHIMS SHALL BE PERPENDICULAR TO MATE LINE, FITTED AND DRIVEN TIGHT BETWEEN CAP BLOCKS OR FILLER AND MATE LINE RIM JOISTS.
5. MARRIAGE LINE PIERS SHALL SUPPORT THE MARRIAGE WALL AND COLUMNS WHERE OCCURS PER MODEL SPECIFIC FOUNDATION PLAN. MAXIMUM PIER SPACING PER TABLE "M".
6. SEE GENERAL NOTES FOR DRAINAGE AND OTHER FOUNDATION REQUIREMENTS.

Schult

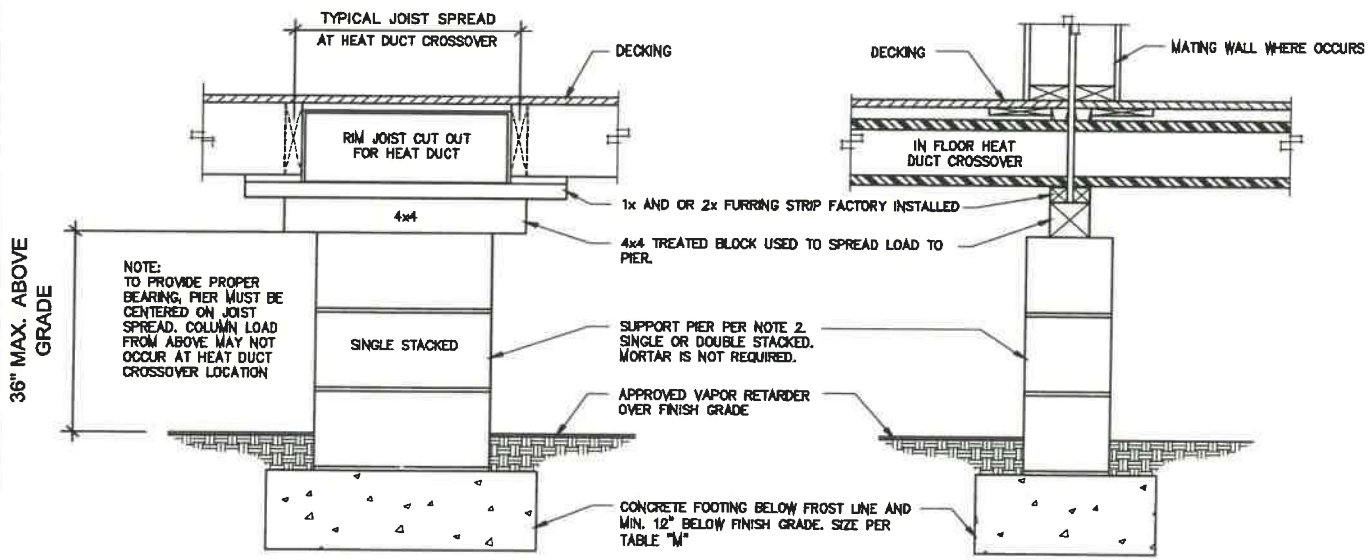
**NON-REINFORCED PERIMETER/
 PORCH POST SUPPORT PIER -
 DETAIL - D15**

DATE: 07/18/07

958N-14.R.F.E.22.22.210(4)

PAGE #:

7. THE PIERS SHALL BE LAID IN RUNNING BOND WITH TYPE M OR S MORTAR OR DRY STACKED ABOVE FIRST COARSE WITH SURFACE BONDING AGENT APPLIED THAT MEETS ASTM C887 WHEN ACCEPTABLE TO LOCAL AUTHORITY. BONDING AGENT MUST BE INTENDED FOR USE/APPLICATION AND SHALL BE INSTALLED PER MANUFACTURES SPECIFICATINS.

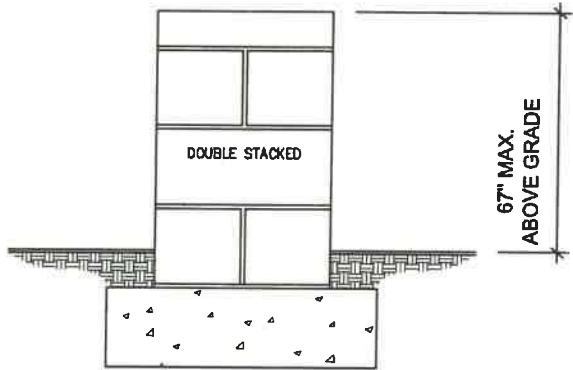


36" MAX. ABOVE GRADE

NOTE:
TO PROVIDE PROPER BEARING, PIER MUST BE CENTERED ON JOIST SPREAD. COLUMN LOAD FROM ABOVE MAY NOT OCCUR AT HEAT DUCT CROSSOVER LOCATION

FRONT VIEW

SIDE VIEW



67" MAX. ABOVE GRADE

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NON-REINFORCED IN FLOOR HEAT DUCT CROSSOVER SUPPORT PIER

NOTES:

1. FOOTINGS MUST BE LEVEL IN ALL DIRECTIONS. PIERS ARE TO BE PLACED CENTERED ON THE FOOTING SO THAT THE FOOTING PROJECTION FROM THE PIER IS EQUAL FROM SIDE-TO-SIDE AND FRONT-TO-BACK. PIERS MUST BE LEVEL VERTICALLY ON ALL SIDES AND SQUARE WITH THE FOOTING.
2. CONCRETE BLOCKS FOR PIERS ARE 8" x 16" x 8" NOMINAL SIZE, HOLLOW CELL LOAD BEARING CMU's MANUFACTURED IN CONFORMANCE WITH ASTM C90, GRADE "N". OPEN CELLS ARE ALIGNED VERTICALLY. SHALL BE LAID IN TYPE M OR S MORTAR. SINGLE STACKED BLOCKS TO BE LAID WITH THE LONG SIDE PARALLEL TO THE PERIMETER RAIL. DOUBLE STACKED BLOCK IS LAID WITH EACH LAYER AT A RIGHT ANGLE TO THE PREVIOUS LAYER. THE TOP COURSE OR CAP BLOCK SHALL BE PARALLEL TO THE PERIMETER RAIL.
3. CAP BLOCKS SHALL BE 4" SOLID CONCRETE OR MASONRY BLOCK. 2x NOMINAL HARDWOOD OR 1/2" STEEL MAY BE USED AS A CAP BLOCK IF THE TOP COURSE OF THE PIER IS SOLID MASONRY OR CONCRETE OR IF THE TOP COURSE OF A HOLLOW PIER IS FILLED WITH CONCRETE OR GROUT. ALL CAPS SHALL BE OF THE SAME NOMINAL DIMENSIONS AS THE PIERS THEY REST UPON. INDIVIDUAL LENGTHS OF CAP BLOCKS SHALL BE PARALLEL TO THE PERIMETER RAIL.
4. SHIMS SHALL BE AT LEAST 3 1/2" WIDE AND 6" LONG AND ARE NOT TO EXCEED 1" IN THICKNESS. SHIMS SHALL BE FITTED AND DRIVEN TIGHT BETWEEN SPREADER BLOCK AND RIM JOISTS.
5. SUPPORT PIER REQUIRED ALONG MATING LINE AT EACH IN FLOOR HEAT DUCT CROSSOVER LOCATION.
6. SEE GENERAL NOTES FOR DRAINAGE AND OTHER FOUNDATION REQUIREMENTS.
7. IF STANDARD MATING WALL SUPPORTS ARE NOT REQUIRED UNDER MATING WALL PER TABLE "M" THEN PIERS AND FOOTINGS SHOULD BE CONSTRUCTED AS REQUIRED FOR AN 8 FT. MATING WALL OPENING.

Schult

NON-REINFORCED IN FLOOR HEAT DUCT CROSSOVER SUPPORT PIER - DETAIL - D16

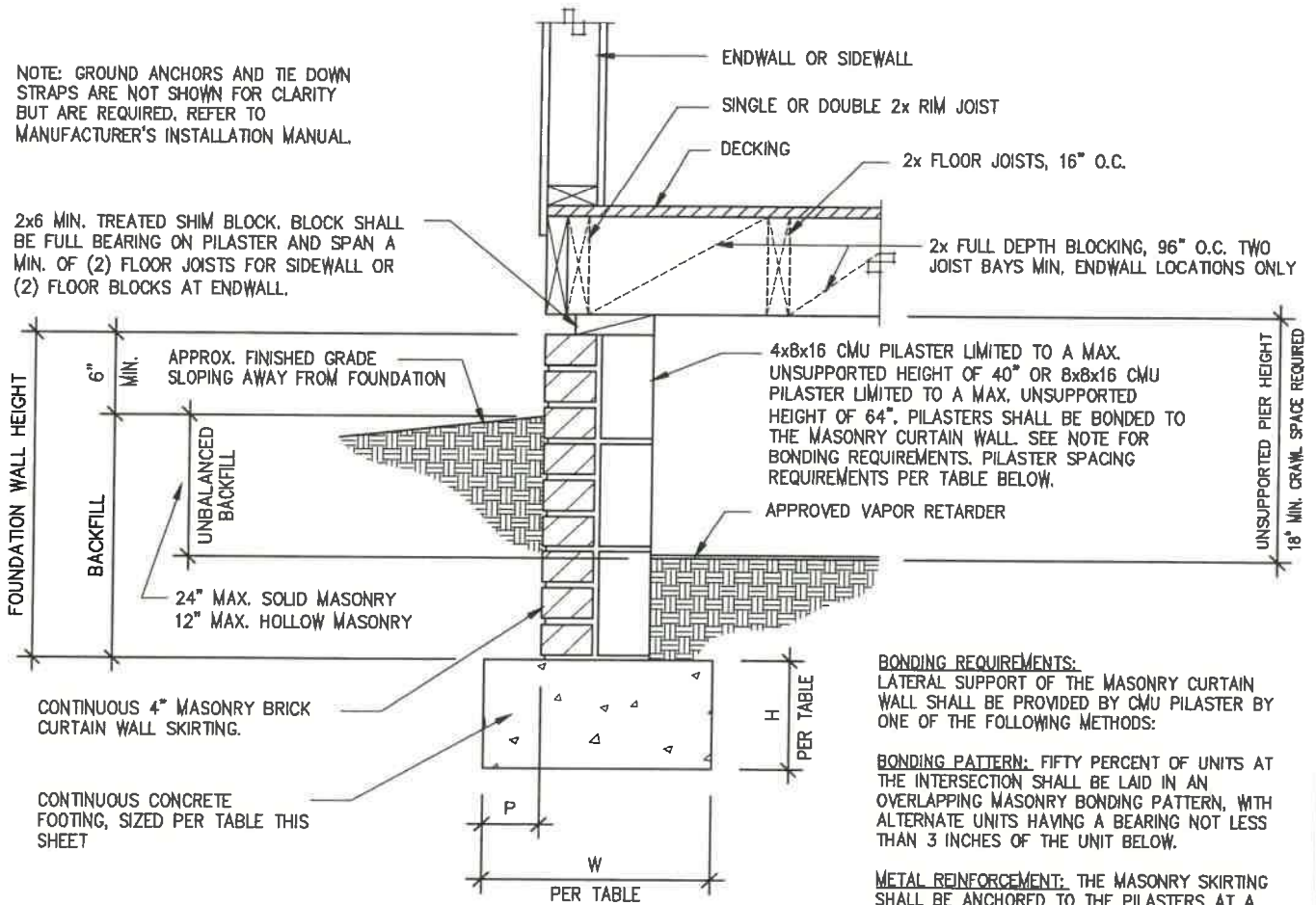
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PAGE #:

NOTE: GROUND ANCHORS AND TIE DOWN STRAPS ARE NOT SHOWN FOR CLARITY BUT ARE REQUIRED. REFER TO MANUFACTURER'S INSTALLATION MANUAL.

2x6 MIN. TREATED SHIM BLOCK, BLOCK SHALL BE FULL BEARING ON PILASTER AND SPAN A MIN. OF (2) FLOOR JOISTS FOR SIDEWALL OR (2) FLOOR BLOCKS AT ENDWALL.



BONDING REQUIREMENTS:
LATERAL SUPPORT OF THE MASONRY CURTAIN WALL SHALL BE PROVIDED BY CMU PILASTER BY ONE OF THE FOLLOWING METHODS:

BONDING PATTERN: FIFTY PERCENT OF UNITS AT THE INTERSECTION SHALL BE LAID IN AN OVERLAPPING MASONRY BONDING PATTERN, WITH ALTERNATE UNITS HAVING A BEARING NOT LESS THAN 3 INCHES OF THE UNIT BELOW.

METAL REINFORCEMENT: THE MASONRY SKIRTING SHALL BE ANCHORED TO THE PILASTERS AT A VERTICAL INTERVAL OF NOT MORE THAN 8 INCHES WITH JOINT REINFORCEMENT OF AT LEAST 9 GA., OR 1/4 INCH GALVANIZED MESH HARDWARE CLOTH

BLOCK SIZE	MAXIMUM PILASTER SPACING PER ROOF LIVE LOAD		GROUND ANCHORS ²		H/ CONCRETE ANCHORS ³	
	20	30	W	H	W	H ⁶
4"X8"X16"	6' O.C.	6' O.C.	12"	8"	12"	10"
8"X8"X16"	6' O.C.	6' O.C.	23"	10"	23"	10"

CURTAIN WALL AND PILASTER FOUNDATION WALL
27' WIDE 1 STORY- W.O ATTIC
SEISMIC ZONE C MAX. WIND SPEED OF 100 MPH
PIER SET ONLY

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NOTES:

- THIS DETAIL IS APPLICABLE FOR USE ONLY WHEN ALL OF THE FOLLOWING ARE TRUE:
 - ON FRAME FLOOR WITH PIER AND STRAP FOUNDATION AND ANCHORAGE SYSTEM.
 - SEISMIC ZONE DOES NOT EXCEED SEISMIC ZONE C.
- STRUCTURE IS ANCHORED PER OTHER DETAILS WITH STRAPS AND GROUND ANCHORS.
- STRUCTURE IS ANCHORED PER OTHER DETAILS WITH STRAPS AND CONCRETE ANCHORS EMBEDDED INTO PERIMETER FOOTING AS SIZED ABOVE. CONCRETE ANCHOR SHALL HAVE LISTED DESIGN CAPACITY OF 3150# MINIMUM.
- PILASTER CONSTRUCTION MAY SUBSTITUTE FOR PERIMETER PIER REQUIREMENTS WHEN ALL CELLULAR SPACES ARE FILLED SOLIDLY WITH CONCRETE OR TYPE M OR S MORTAR.
- HOLLOW PIERS SHALL BE CAPPED WITH 4" OF SOLID MASONRY OR CONCRETE OR THE CAVITIES OF THE TOP COURSE SHALL BE FILLED WITH CONCRETE OR GROUT.
- FOR EVERY 1 1/2" OF SOIL FILL ABOVE TOP OF FOOTER, 1" MAY BE SUBTRACTED FROM REQUIRED FOOTER DEPTH (H) FOR CONCRETE ANCHORS BUT SHALL NOT BE LESS THEN H AS SIZED FOR GROUND ANCHORS.

Schult

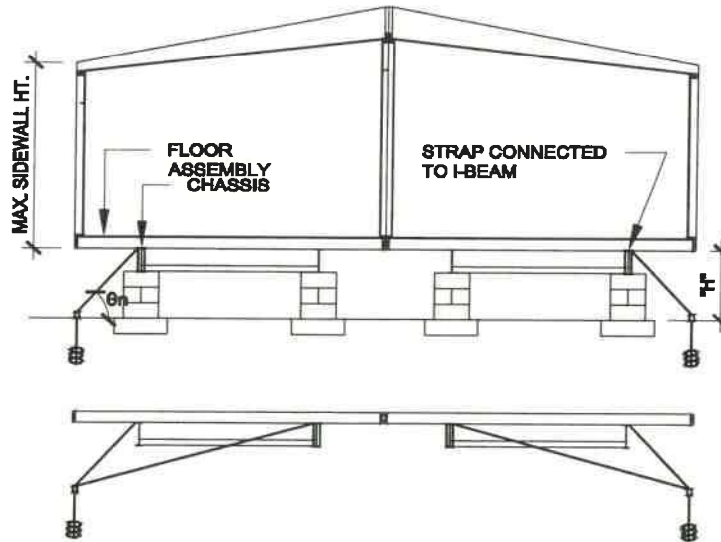
**CURTAIN WALL AND PILASTER
FOUNDATION WALL PIER SET
ONLY - DETAIL - D17**

DATE: 06/05/07

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2-SECTION MODULAR



USE:
WIND ZONE 1 OR
90 MPH WIND
WHERE
 $\theta_n \leq 60^\circ$

WIND ZONE 1 OR
90 MPH WIND
WHERE
 $\theta_n > 60^\circ$

HEIGHT T "H"	(2) BOX 160" UNIT WIDTHS	
	CONFIG. TYPE	MAX. SPACING (L2)
20 in	1	12 ft
30 in	1	12 ft
40 in	1	12 ft
50 in	3	7.71*
60 in	3	7.71*

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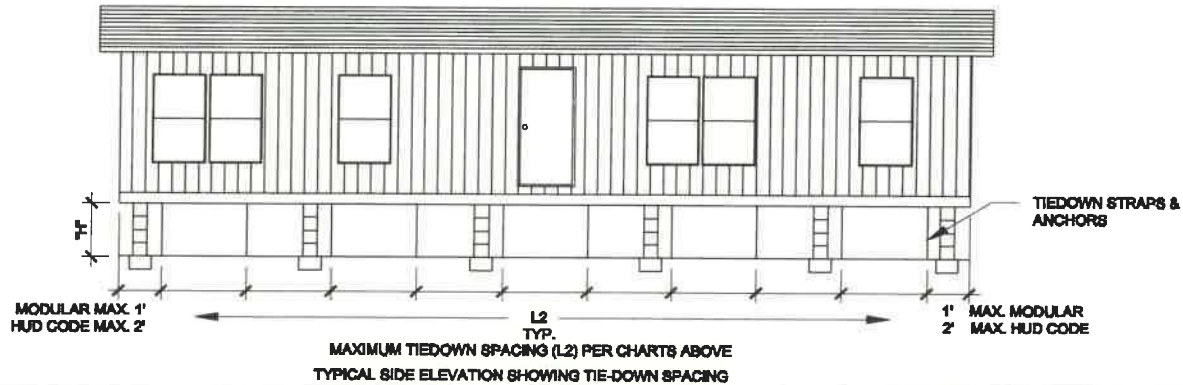


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* Additional strap must be attached to far beam frame tiedown installed since near beam strap angle exceeds 60 degrees .



NOTES:

- 1 MAXIMUM SIDEWALL HEIGHT OF 115.25 inches, & MAXIMUM OVERHANG OF 12 "
- 2 MAXIMUM ANCHOR INSET OF 6".
- 3 DESIGNED TO IRC (2015)
- 4 MAXIMUM WIND SPEED OF 100 MPH.
- 5 ANCHOR EQUIPMENT & STRAPS SHALL HAVE A LISTED DESIGN CAPACITY OF : ANCHORS=3150LBS. STRAPS=3150 LBS. & VERTICAL SIDEWALL ATTACHMENTS=1062 LBS.
- 6 CHASSIS BEAM SPACE =99.5".
- 7 RESERVED
- 8 ANCHORING EQUIPMENT SHALL BE INSTALLED PER MFG. INSTRUCTIONS AND SHALL BE CERTIFIED FOR SITE CONDITIONS INCLUDING SOIL TYPE FOR DESIGN CAPACITY OF 3150 LBS. WITH PULL APPLIED AT A 30 DEGREE MINIMUM ANGLE FROM HORIZONTAL.
- 9 SEE SETUP MANUAL FOR ALL OTHER SETUP REQUIREMENTS INCLUDING SHEARWALL TIEDOWN REQUIREMENTS.
- 10 SPACING (L2) MAY NOT BE LESS THEN TWICE THE EMBEDMENT DEPTH OF THE ANCHOR.

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TRANSVERSE TIEDOWN ANCHORAGE REQUIREMENTS

DATE 8/28/08

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MAX. PIER HEIGHT	LONGITUDINAL TIEDOWN QUANTITY SUMMARY TABLE: WIND SPEED 100 MPH								
	MINIMUM UNIT LENGTHS:								
	30'	36'	42'	48'	54'	60'	66'	72'	78'
24"	1	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
28"	1	1	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
36"	2	1	1	1	N.R.	N.R.	N.R.	N.R.	N.R.
44"	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
52"	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
64"	1	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.

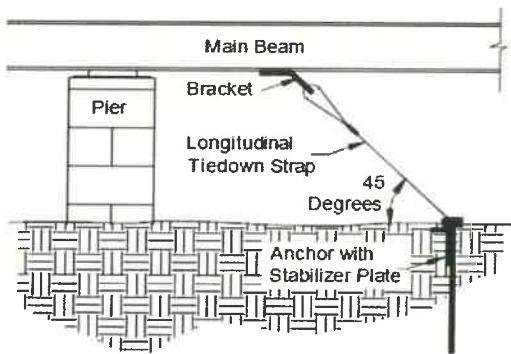
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ATTACH STRAPS TO THE BRACKET WELDED BY THE MANUFACTURER TO THE FRAME. IF NO BRACKETS HAVE BEEN INSTALLED, USE APPROVED BEAM CLAMPS DESIGNED SPECIFICALLY FOR THIS PURPOSE, AVAILABLE FROM ANCHOR SUPPLIERS OR CONNECT THE STRAP TO A SPRING HANGER OR A CROSSMEMBER (WITHIN 3" OF THE MAIN I-BEAM). CONNECT STRAPS TO ANCHORS FOLLOWING SAME PROCEDURE AS FOR SIDEWALL FRAME ANCHORS. PROTECTION OF THE STRAP AT SHARP CORNERS MUST BE PROVIDED.

NOTES:

- 1 MAXIMUM SIDEWALL HEIGHT OF 115.25 inches. & MAXIMUM OVERHANG OF 12".
- 2 MAXIMUM WIND SPEED OF 100 MPH.
- 3 DESIGNED TO IRC (2015)
- 4 MAXIMUM ROOF PITCH=8/12.
- 5 ANCHOR EQUIPMENT & STRAPS SHALL HAVE A LISTED DESIGN CAPACITY OF : ANCHORS=3150LBS. STRAPS=3150 LBS. VERTICAL SIDEWALL ATTACHMENTS=1082 LBS.
- 6 TIEDOWN STRAP ANGLE FROM HORIZONTAL SHALL NOT EXCEED 45 DEGREES.
- 7 160" MAX UNIT WIDTH DOUBLE WIDE
- 8 NUMBER OF LONGITUDINAL TIEDOWNS REQUIRED PER END OF EACH HOME PER TABLE TABLE MUST BE INSTALLED.
- 9 ANCHORING EQUIPMENT SHALL BE INSTALLED PER MFG. INSTRUCTIONS AND SHALL BE CERTIFIED FOR SITE CONDITIONS INCLUDING SOIL TYPE FOR DESIGN CAPACITY OF 3150 LBS. WITH PULL APPLIED AT A 30 DEGREE MINIMUM ANGLE FROM HORIZONTAL.
- 10 SEE SETUP MANUAL FOR ALL OTHER SETUP REQUIREMENTS INCLUDING SHEARWALL TIEDOWN REQUIREMENTS.
- 11 N.R.: NOT REQUIRED-LONGITUDINAL TIE STRAPS ARE NOT REQUIRED ON THESE CONDITIONS

Schult

LONGITUDINAL TIEDOWN ANCHORAGE REQUIREMENTS

DATE 8/28/08

958N-14.R.F.E.22.22.210(4)

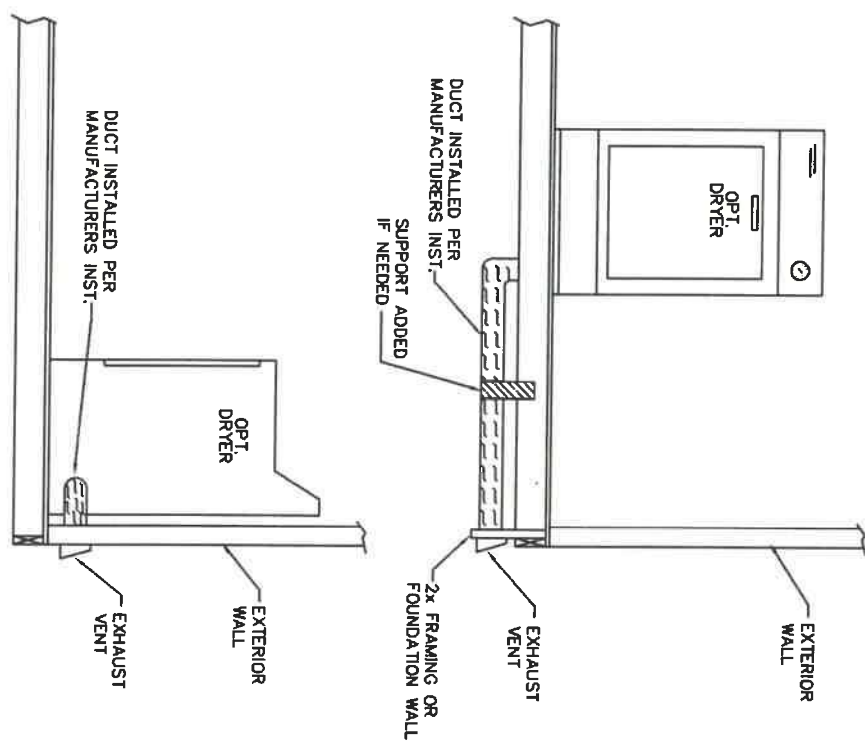
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GENERAL NOTES:

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INSTALLATION INSTRUCTIONS:

EXHAUST DUCTS FOR DOMESTIC CLOTHES DRYERS SHALL BE CONSTRUCTED OF METAL OR NONCOMBUSTIBLE MATERIAL OF EQUAL STRENGTH AND CORROSION RESISTANCE AND SHALL HAVE A SMOOTH INTERIOR FINISH. NO PART OF THE DRYER DUCT TO BE IN CONTACT WITH THE GROUND. THE DUCT TO RUN TO THE OUTSIDE OF THE UNIT AND SHALL NOT TERMINATE UNDERNEATH THE UNIT. A APPROVED DAMPER TO BE INSTALLED ON THE END OF THE DUCT.

APPROVAL SEAL:

Engineering

TITLE:
DRYER VENT INSTALLATION

Drawn by: O'Neal
Date: 4/11/07
Dwg #: _____



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ELECTRICAL LEGEND (NOT TO SCALE)			
	LIGHT		PANEL BOX
	CAN LIGHT		THERMOSTAT
	PULL CHAIN LIGHT		SWITCH
	BATH FAN		3-WAY SWITCH
	FLUORESCENT LIGHT		PHONE JACK
	CABLE JACK		CEILING MOUNT C.O. & SMOKE DETECTOR
	15 AMP RECEPT FLOOR LEVEL		CEILING MOUNT C.O. DETECTOR
	15 AMP RECEPT CABINET LEVEL		WALL MOUNT SMOKE DETECTOR
	15 AMP RECEPT SIDWAYS		CEILING MOUNT SMOKE DETECTOR
	20 AMP RECEPT FLOOR LEVEL		SWITCH LEG
	20 AMP RECEPT CABINET LEVEL		JUNCTION BOX
	20 AMP RECEPT SIDWAYS		CEILING FAN
	240 VOLT RECEPT		
	15 AMP WATERPROOF RECEPT		POT & PAN RACK
	20 AMP WATERPROOF RECEPT		HEAT TAPE RECEPT
	FURNACE		WATER HEATER
A DASHED SYMBOL REPRESENTS AN OPTION			
GFI-INDICATES A GROUND FAULT PROTECTED RECEPT			

PLUMBING FIXTURE DESCRIPTION CHART

APPLIANCE	MANUFACTURER	MODEL #	ANSI/ASME STANDARD
TOILET	BRISTOL BAY	VCEFB-03B	
SINKS	LYONS EL MUSTICE & SON PREMIUM FLOW CORESTONE & TEKA REVERE	KS01P4-TB #610 UTILITY SINGLE BOWL DOUBLE BOWL BAR SINK	
LAVATORIES	BRISTOL BAY	VCL-10	
TUB SHOWER	BAYMONT BATHWARE	5118 5100 5109	UL
SHOWER	BAYMONT BATHWARE	3309 3308 3304	UL
TUB	BAYMONT BATHWARE	2205 2272	UL

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Trenco
818 Soundside Rd
Edenton, NC 27932

Re: WPL-913-014-0815_(14W)
Schult - Richfield (MFG: 00958)

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Wood Perfect, Ltd.

Pages or sheets covered by this seal: I38241174 thru I38241175

My license renewal date for the state of North Carolina is December 31, 2019.

North Carolina COA: C-0844



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August 21, 2019

Liu, Xuegang

IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which were given to MiTek or TRENCO. Any project specific information included is for MiTek's or TRENCO's customers file reference purpose only, and was not taken into account in the preparation of these designs. MiTek or TRENCO has not independently verified the applicability of the design parameters or the designs for any particular building. Before use, the building designer should verify applicability of design parameters and properly incorporate these designs into the overall building design per ANSI/TPI 1, Chapter 2.

Job	Truss	Truss Type	Qty	Ply	Schullt - Richfield (MFG: 00958)	138241174
WPL-913-014-0815_(14W)	9481-15	HINGED TRUSS	1	1	M9481: 8/12 28 Wide MOD/HD Job Reference (optional)	

Wood Perfect, LLC, Guin, AL 33563

7.643 a Aug 16 2017 MITEK Industries, Inc. Wed Aug 21 06:10:15 2019 Page 1
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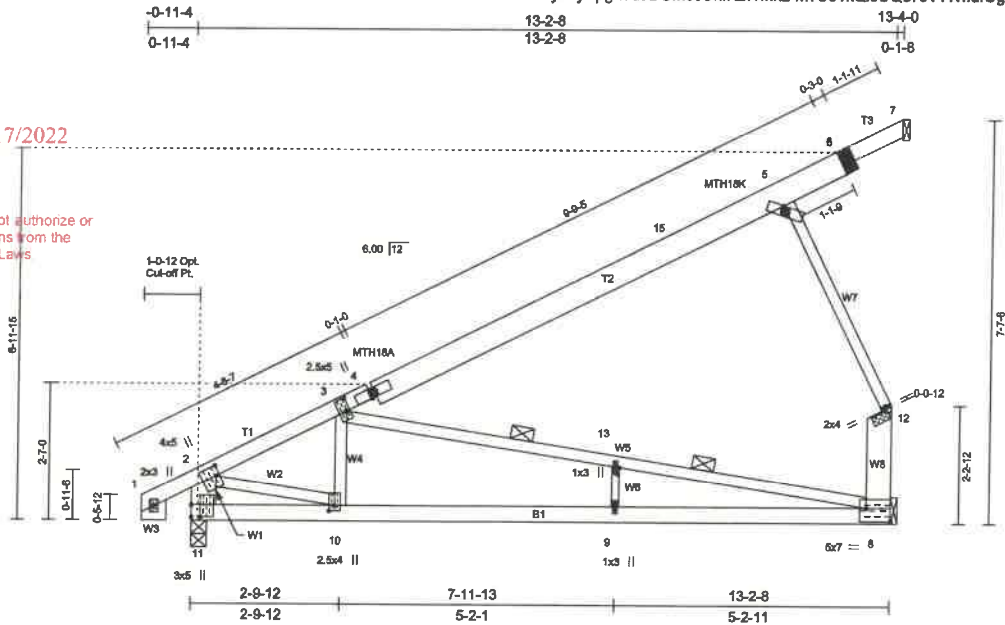


Plate Offsets (X,Y)-		[2:0-2-4,0-0-12], [3:0-3-0,0-0-12], [4:0-0-11,0-1-2], [5:0-0-11,0-1-2], [8:Edge,0-3-0], [10:0-1-4,0-1-4], [11:0-1-4,0-2-7], [11:0-2-12,0-2-0], [13:0-1-8,0-0-5]
SPACING-: 2-0-0 LOADING (psf)	SPACING-: 1-4-0 LOADING (psf)	SPACING-: 2-0-0 LOADING (psf)
TCLL 23.1 (Ground Snow=30.0)	TCLL 34.7 (Ground Snow=45.0)	Plate Grip DOL 1.15 Lumber DOL 1.15 Rep Stress Incr YES Code IBC2015/TPI2014
TCDL 11.0	TCDL 16.5	CSI TC 0.54 BC 1.00 WB 0.94 (Matrix)
BCLL 0.0 *	BCLL 0.0 *	DEFL In (loc) l/defl L/d
BCDL 10.0	BCDL 15.0	Vert(LL) -0.33 8-9 >460 240 Vert(CT) -0.60 8-9 >253 180 Horz(CT) -0.01 8 n/a n/a
		PLATES GRIP MT20 197/144 MT18HS 197/144 Weight: 60 lb FT = 0%

LUMBER- TOP CHORD 2x4 SPF No.2 *Except* 4-6: 2x6 SPF No.2 BOT CHORD 2x4 SPF No.2 WEBS 2x3 SPF Stud *Except* 8-12-2-11,1-14: 2x6 SPF Stud, 9-13: 1-8/16x1-10/16 SPF Stud/Std	RIPPED LUMBER MUST BE RE-GRADED FOR SIZES AS SHOWN	BRACING- TOP CHORD Structural wood sheathing directly applied or 5-10-10 Acurlins except and verticals. BOT CHORD Rigid ceiling directly applied or 1-4-12 cc bracing WEBS Rows at 1/3 pt JOINTS 1 Brace at Jt(s): 12
REACTIONS. (lb/size) 11=677/0, 3-8, 8=547/Mechanical, 7=0/Mechanical Max Horiz 11=401(LC 12), 7=78(LC 19) Max Uplift 11=294(LC 12), 8=455(LC 12) Max Grav 11=707(LC 19), 8=637(LC 19)		
FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown. TOP CHORD 2-3=846/281, 3-4=391/0, 4-15=402/29, 8-12=407/449, 2-11=700/358 BOT CHORD 10-11=469/141, 9-10=695/672, 8-9=695/672 WEBS 3-13=557/502, 9-13=395/434, 5-12=448/495, 2-10=235/818		

REQUIRED FIELD JOINT CONNECTIONS - Maximum Compression (lb)/ Maximum Tension (lb)/ Maximum Shear (lb)/ Maximum Moment (lb-in)
6=115/68/48/0, 12=448/495/0/0

NOTES- (16)
1) Wind: ASCE 7-10; Vult=152mph (3-second gust) Vasd=120mph @24in o.c.; TCCL=4.4psf; BCDL=4.0psf; (Alt. 180mph @18in o.c., TCDL=6.6psf; BCDL=6.0psf); h=22ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C for (2) zones and vertical left exposed; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.15; Plate Grip=1.15; Date: 10/16/18.
2) TCCL: ASCE 7-10; Pg=30.0 psf (ground snow); Ps=23.1 psf (roof snow); Category II; Exp C; Partially Exp.; Cf=1.1
3) Roof design snow load has been reduced to account for slope.
4) Unbalanced snow loads have been considered for this design.
5) This truss has been designed for greater of min roof live load of 18.0 psf or 2.00 times flat roof load of 23.1 psf on overhangs non-concurrent with other live loads.
6) As requested, plates have not been designed to provide for placement tolerances or rough handling and erection conditions. It is the responsibility of the fabricator to increase plate sizes to account for these factors.
7) All plates are MT20 plates unless otherwise indicated.
8) See HINGE PLATE DETAILS for plate placement.
9) Provisions must be made to prevent lateral movement of hinged members during transportation.
10) All additional member connections shall be provided by others for forces as indicated.
11) This truss has been designed for a 10.0 psf bottom chord live load non-concurrent with any other live loads.
12) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle of 0-10' by 2-0-0 wide will fit between the bottom chord and any other members.
13) Refer to girder(s) for bracing connections.
14) Provide mechanical connection for others of truss to bearing plate capable of withstanding 294 lb uplift at joint 11, and 455 lb uplift at joint 8.

15) Semi-rigid moment-resisting connections including beams - Member end and factory model was used in the analysis and design of this truss.

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2016 BEFORE USE.
Design valid for use only with MITEK connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSITPP1 Quality Criteria, D5B-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

TRENCO
818 Soundside Road
Edenton, NC 27932

Trenco
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Edenton, NC 27932

Re: WPL-913-014-0815_(14W)
Schult - Richfield (MFG: 00958)

The truss drawing(s) referenced below have been prepared by Truss Engineering Co. under my direct supervision based on the parameters provided by Wood Perfect, Ltd.

Pages or sheets covered by this seal: I38246504 thru I38246505

My license renewal date for the state of North Carolina is December 31, 2019.

North Carolina COA: C-0844



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NIA 6/17/2022
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David Richter

August 21, 2019

Liu, Xuegang

IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which were given to MiTek or TRENCO. Any project specific information included is for MiTek's or TRENCO's customers file reference purpose only, and was not taken into account in the preparation of these designs. MiTek or TRENCO has not independently verified the applicability of the design parameters or the designs for any particular building. Before use, the building designer should verify applicability of design parameters and properly incorporate these designs into the overall building design per ANSI/TPI 1, Chapter 2.

Job WPL-813-014-0815_(14W)	Truss 9481-15	Truss Type HINGED TRUSS	Qty 1	Ply 1	Schutt - Richfield (MFG: 00958) T9481: 8/12 28 Wide MOD/HUD Tray Job Reference (optional)	138248504
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Wood Perfect, LLC, Guin, AL 33563

7,640 s Aug 16 2017 Mitek Industries, Inc. Wed Aug 21 12:05:38 2019 Page 1
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David Richter

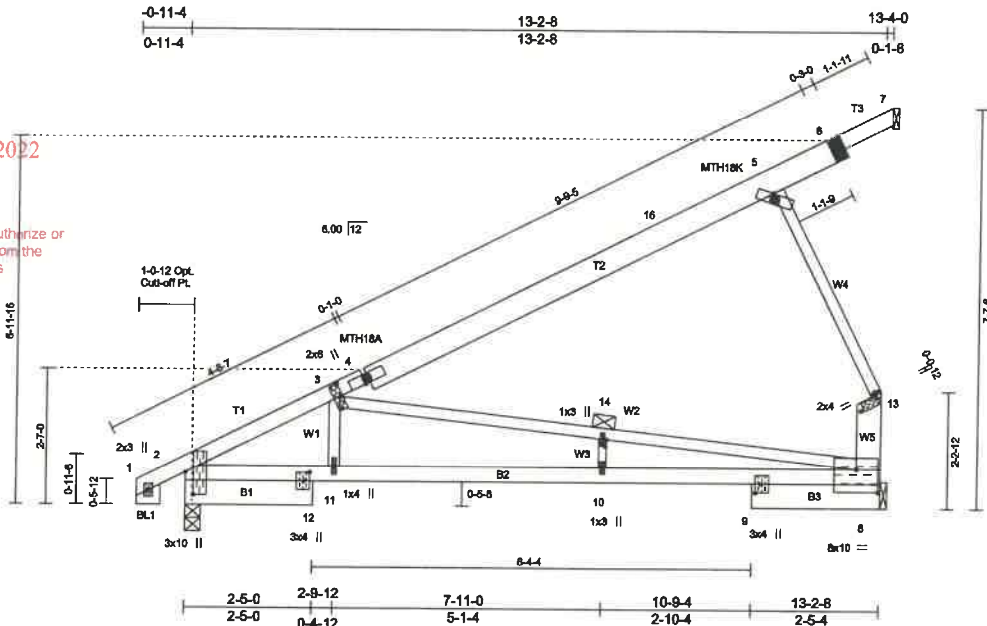


Plate Offsets (X,Y)-	[2:0-5-4,0-1-13], [3:0-3-0,0-0-8], [4:0-0-11,0-1-2], [5:0-0-11,0-1-2], [8:0-6-12,0-11-10], [8:0-5-0,0-5-4], [9:0-2-0,0-1-4], [12:0-2-0,0-1-4], [14:0-1-8,0-0-5]					
SPACING-: 2-0-0	SPACING-: 1-4-0	SPACING-: 2-0-0	CSI.	DEFL.	PLATES	GRIP
LOADING (psf)	LOADING (psf)	Plate Grip DOL	TC 0.50	in (loc)	MT20	197/144
TCLL 23.1	TCLL 34.7	Lumber DOL 1.15	BC 0.93	Vert(LL) -0.33 8-10 >468 240	MT18HS	197/144
(Ground Snow=30.0)	(Ground Snow=45.0)	Rep Stress Incr YES	WB 0.91	Vert(CT) -0.65 8-10 >239 180		
TCDL 11.0	TCDL 16.5	Code IBC2015/TPI2014	(Matrix)	Horz(CT) 0.07 8 n/a n/a		
BCLL 0.0	BCLL 0.0					
BCDL 10.0	BCDL 15.0					
						Weight: 65 lb FT = 0%

LUMBER-	TOP CHORD	2x4 SPF No.2 *Except* 4-6: 2x6 SPF No.2	BOT CHORD	2x6 SPF No.2 *Except* 2-8: 2x4 SPF No.2	WEBS	2x3 SPF Stud *Except* 3-8: 2x3 SPF No.2, 8-13: 2x6 SPF Stud 10-14: 1-8/16x1-10/16 SPF Stud/Std	OTHERS	2x6 SPF Stud			
REACTIONS.	(lb/size)	2=669/0-3-8, 8=560/Mechanical, 7=0/Mechanical Max Horz 2=425(LC 12), 7=78(LC 18) Max Uplift 2=29(LC 12), 8=459(LC 12) Max Grav 2=699(LC 19), 8=550(LC 19)	FORCES.	(lb)	Max. Comp./Max. Ten./C-All/Nodes 250 (lb) or less except when shown	TOP CHORD	2-3=1289/577, 3-4=391/9, 4-16=402/29, 8-13=407/449	BOT CHORD	2-12=935/987, 11-12=936/979, 10-11=936/979, 9-10=936/979, 8-9=932/965	WEBS	3-11=0/516, 3-14=825/741, 8-14=829/739, 5-13=448/495

REQUIRED FIELD JOINT CONNECTIONS - Maximum Compression (lb)/ Maximum Tension (lb)/ Maximum Shear (lb)/ Maximum Moment (lb-in)
6=115/68/48/0, 13=448/495/0/0

- NOTES-
- 1) Wind: ASCE 7-10; Vult=152mph (3-second gust) Vasd=120mph @24In o.c.; TCDL=4.4psf; BCDL=4.0psf; (Alt. 180mph @16in o.c.; TCDL=6.6psf; BCDL=6.0psf); h=22ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
 - 2) TCLL: ASCE 7-10; Pg=30.0 psf (ground snow); Ps=23.1 psf (roof snow); Category II; Exp C; Partially Exp.; Gf=1.1
 - 3) Roof design snow load has been reduced to account for slope.
 - 4) Unbalanced snow loads have been considered for this design.
 - 5) This truss has been designed for greater of min roof live load of 16.0 psf or 2.00 times flat roof load of 23.1 psf on overhangs non-concurrent with other live loads.
 - 6) As requested, plates have not been designed to provide for placement tolerances or rough handling and erection conditions. It is the responsibility of the fabricator to increase plate sizes to account for these factors.
 - 7) All plates are MT-20 plates unless otherwise indicated.
 - 8) See HINGE PLATE DETAILS for plate placement.
 - 9) Provisions must be made to prevent lateral movement of hinged member(s) during transportation.
 - 10) All additional member connections shall be provided by others for forces as indicated.
 - 11) This truss has been designed for a live load on the bottom chord live load nonconcurrent with any other live loads.
 - 12) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.

13) Refer to order for truss to truss connections. Continued on page 2

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE M8-7473 rev. 10/03/2015 BEFORE USE.

Design valid for use only with Mitek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSIT/PH Quality Criteria, DSB-89 and BCSI Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.

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August 21, 2019

Job	Truss	Truss Type	Qty	Ply	Schuit - Richfield (MFG: 00958)	
WPL-913-014-0815_(14W)	9481-15	HINGED TRUSS	1	1	T9481: 6/12 28 Wide MOD/HUD Tray Job Reference (optional)	I38246504

Wood Perfect, LLC, Guin, AL 33563

7,843 s Aug 16 2017 MiTek Industries, Inc. Wed Aug 21 12:05:38 2019 Page 2
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NOTES-

- 14) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 291 lb uplift at joint 2 and 458 lb uplift at joint 8.
- 15) "Semi-rigid pitchbreaks including heels" Member end fixity model was used in the analysis and design of this truss.

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6/17/2022

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David Richter

WARNING - Verify design parameters and READ NOTES ON THIS AND INCLUDED MITEK REFERENCE PAGE MII-7473 rev. 10/03/2015 BEFORE USE.

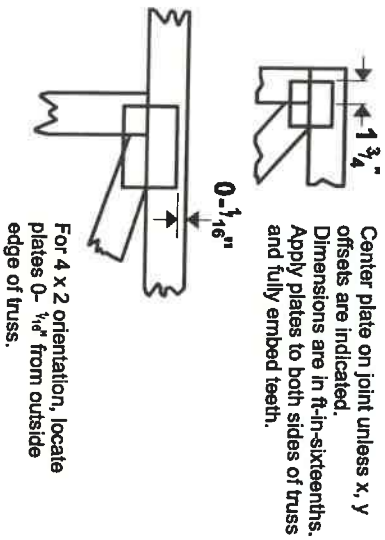
Design valid for use only with MiTek® connectors. This design is based only upon parameters shown, and is for an individual building component, not a truss system. Before use, the building designer must verify the applicability of design parameters and properly incorporate this design into the overall building design. Bracing indicated is to prevent buckling of individual truss web and/or chord members only. Additional temporary and permanent bracing is always required for stability and to prevent collapse with possible personal injury and property damage. For general guidance regarding the fabrication, storage, delivery, erection and bracing of trusses and truss systems, see ANSI/TPI1 Quality Criteria, DSB-69 and BCB1 Building Component Safety Information available from Truss Plate Institute, 218 N. Lee Street, Suite 312, Alexandria, VA 22314.



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Symbols

PLATE LOCATION AND ORIENTATION



* Plate location details available in MITek 20/20 software or upon request.

PLATE SIZE

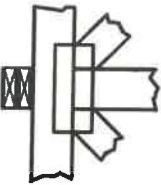
4 X 4

The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



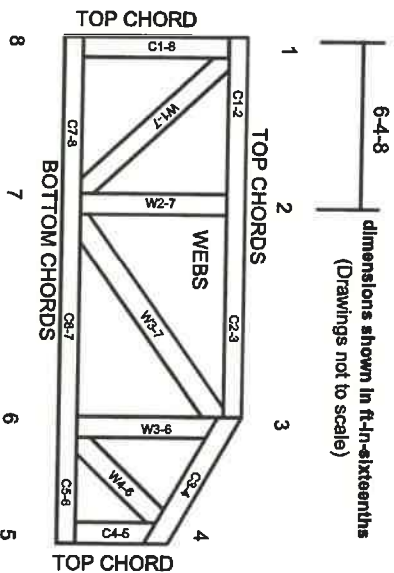
BEARING



Industry Standards:

- ANSI/ITP1: National Design Specification for Metal Plate Connected Wood Truss Construction.
- DSB-69: Design Standard for Bracing.
- BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



JOINTS ARE GENERALLY NUMBERED/CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS.

PRODUCT CODE APPROVALS

ICC-ES Reports:

ESR-1311, ESR-1352, ESR1988
ER-3907, ESR-2362, ESR-1397, ESR-3022

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6/17/2022

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Trusses are designed for wind loads in the plane of the truss unless otherwise shown.

Lumber design values are in accordance with ANSI/TP1 section 6.3. These truss designs rely on lumber values established by others.

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General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TP1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TP1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TP1 Quality Criteria.



NORTH CAROLINA MODULAR PLANS REVIEW CHECKLIST

PAGE 2 of 3

revised June 2018

Plan Sheet Page # and NOTES

MECHANICAL

Design calculations	attached
Installed unit capacity	attached
Supply and returns (locations and sizes)	4-1A
Duct sizes	4-1A
Specifications (units, ducts)	1-1, 4-1A
All appliances furnished by mfg. shown on plans	1-1, exhaust fans 11-1

ELECTRICAL

Plan	11-1
Location of all electrical boxes	11-1
Electrical panel location	11-1
Note regarding main disconnect (if applicable)	
Exterior lighting and receptacles	11-1
Ground level receptacles (if applicable)	11-1
Smoke detector location(s)	11-1
Electrical load calculations	TS-5
Electrical panel layout (breaker and wire sizes, circuit schedule)	11-1
Panel and service entrance sizes	Panel: 1-0a, SE ref in set-up on 1-0
All fixtures furnished by mfg. shown on plans	11-1

ACCESSIBILITY

(for other than 1 & 2 family dwellings)

Entrances and means of egress	
Doors, doorways, and door hardware	
Stairs and handrails	
Toilet rooms, plumbing fixtures, grab bars, etc	
Bathrooms and shower rooms	
Occupancy specific requirements	
Multi-family dwellings: Type A and B units	

FLOOR X-SECTION

Joists and beam sizes and spacing	1-0.2
Materials species and grade	1-0.2
Sheathing, decking, and concrete as applicable	1-0.2
Fastening instructions	1-0.2
Insulation	1-0.2
Details as required for clarification	1-0.2, other details ref manual on 1-0.2

WALL X-SECTION

Stud and column sizes and spacing	studs: 1-0.2; column charts: 1-0.2
Materials species and grade	1-0.2
Sheathing and bracing	1-0.2
Headers and lintels	header charts: 1-0.2
Finishes	1-0.2
Fastening instructions	1-0.2
Insulation	1-0.2
Details as required for clarification	Ref manual on 1-0.2

NORTH CAROLINA MODULAR PLANS REVIEW CHECKLIST

		PAGE 3 of 3	revised June 2018
		Plan Sheet Page # and NOTES	
CEILING / ROOF X-SECTION			
Truss, rafter, and beam spacing	1-0.2		
Lumber species and grade	1-0.2		
Sheathing and decking	1-0.2		
Finishes	1-0.2		
Fastening instructions	1-0.2		
Insulation	1-0.2		
Details including NC sealed truss designs or manual reference	man ref to trusses 1-0.2, other details man ref 1-0.2		
FOUNDATION PLAN			
Footings, pier, and curtain wall locations and specifications	21-30 PSF (OFF FRAME) & 21-PS (ON FRAME)		
X-sections with dimensions	21-30 PSF (OFF FRAME) & 21-PS (ON FRAME)		
Anchorage - sill plate to piers and curtain wall	21-30 PSF (OFF FRAME) & 21-PS (ON FRAME)		
Anchorage - building to sill plate	21-30 PSF (OFF FRAME) & 21-PS (ON FRAME)		
Anchorage - tie downs (lateral and longitudinal)	21-30 PSF (OFF FRAME) & 21-PS (ON FRAME)		
Soil bearing capacity	21-30 PSF (OFF FRAME) & 21-PS (ON FRAME)		
Minimum concrete compressive strength	21-30 PSF (OFF FRAME) & 21-PS (ON FRAME)		
Mortar type	21-30 PSF (OFF FRAME) & 21-PS (ON FRAME)		
Ventilation requirements (with and without vapor barrier)	21-30 PSF (OFF FRAME) & 21-PS (ON FRAME)		
Crawl space access requirements	21-30 PSF (OFF FRAME) & 21-PS (ON FRAME)		
ENERGY COMPLIANCE			
Demonstrated compliance	PRESCRIPTIVE		
SET-UP INSTRUCTIONS			
Floor and ceiling connections	ref to set-up manual on 1-0.2		
Marriage wall connections	ref to set-up manual on 1-0.2		
Roof set-up and connection	ref to set-up manual on 1-0.2		
Plumbing connections	ref to set-up manual on 1-0.2		
Mechanical connections	ref to set-up manual on 1-0.2		
Electrical connections	ref to set-up manual on 1-0.2		
Fire stopping	1-0.2		
Air infiltration elimination	ref to set-up manual on 1-0.2		
Notice to inspections department attachment if set-up instructions are by attachment	1-0.2		
ITEMS NOT INSPECTED IN PLANT			
List of items not inspected by 3rd. Party	1-0.2		
Notice to inspections department	1-0.2		