INTERNATIONAL CODE COUNCIL®

TESTING • INSPECTION • ENGINEERING

305 N. OAKLAND AVE. • P.O. BOX 490 • NAPPANEE, IN 46550 • P: 574.773.7975 • F: 574.773.2732 • ICC-NTA.ORG

November 20, 2020

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

RE: Crestline Custom Builders
Model: 16-CP-68' BROWN-NC

Dear Mr. Hamm,

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

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

Sincerely,

Kip Whitehead

Kip Whitehead
Account Manager
ICC-NTA LLC

NORTH CAROLINA			
MODULAR PLANS REVIEW CHECKLIST			
		PAGE 1 of 3	revised May 2011
Manufacturer		Manis & Crestline Custom Builders	
Model number/name		16-CP-68' BROWN	
3rd Party		ICC NTA LLC	
Review Date		11-20-2020	
Reviewer		Kip Whitehead	
		Plan Sheet Page # and NOTES	
	QC MANUAL (current and complete)	Ok	
	APPENDIX B (required and attached)	not required	
	PLAN SHEETS		
	Each plan sheet third-party stamped with approver's name	Yes	
	Each plan sheet is numbered and/or indexed	Yes	
	GENERAL (cover sheet)		
	Code References	1	
	Statement regarding connection to public utilities	1	
	Statement regarding bathrooms if not included	not required	
	Construction type	1	
	Occupancy classification	1	
	Fire resistance ratings (if required)	not required	
	Floor live load	1	
	Roof live load	1	
	Design wind velocity	1	
	Seismic information (commercial projects)	1	
	Thermal zones	3	
	Notice to inspections department regarding items to be site installed	2	
	FLOOR PLANS		
	Interior and exterior wall layouts	5	
	Door and window schedule	5.1	
	Light and Ventilation requriements	5, 5.1	
	Attic access (size and locaiton)	5	
	Non-prescriptive headers	5	
	Safety glazing requirements	5, 5.1	
	Fire rating of Exterior walls (if applicable)	not required	
	EXTERIOR ELEVATIONS		
	Exterior materials	4, 11	
	Attic ventilation requirements	3, 11	
	PLUMBING		
	Plan	7, 8	
	All fixtures furnished by mfg. shown on plans	7	
	Materials (water supply & distribution, DWV, storm drainage)	7,8	
	Supply and waste risers, including DWV system (generic) beneath the building	7,8	
	Water heater (type and capacity)	6, 6.1, 7	

NORTH CAROLINA
MODULAR PLANS REVIEW CHECKLIST

 revised May 2011

	Plan Sheet Page # and NOTES
MECHANICAL	
Design calculations	3, 10
Installed unit capacity	not required
Supply and returns (locations and sizes)	5, 5.1, 10
Duct sizes	10
Specifications (units, ducts)	10
All appliances furnished by mfg. shown on plans	5
ELECTRICAL	
Plan	6
Location of all electrical boxes	6
Electrical panel location	5, 6
Note regarding main disconnect (if applicable)	2, 6, 6.1
Exterior lighting and receptacles	6
Ground level receptacles (if applicable)	6
Smoke detector location(s)	6
Electrical load calculations	6.1
Electrical panel layout (breaker and wire sizes, circuit schedule)	6
Panel and service entrance sizes	2, 6.1
All fixtures furnished by mfg. shown on plans	6
ACCESSIBILITY	
(for other than 1 & 2 family dwellings)	
Entrances and means of egress	not required
Doors, doorways, and door hardware	not required
Stairs and handrails	not required
Toilet rooms, plumbing fixtures, grab bars, etc	not required
Bathrooms and shower rooms	not required
Occupancy specific requirements	not required
Multi-family dwellings: Type A and B units	not required
FLOOR X-SECTION	
Joist and beam sizes and spacing	11
Materials species and grade	11
Sheathing, decking, and concrete as applicable	11
Fastening instructions	11
Insulation	11
Details as required for clarification	11
WALL X-SECTION	
Stud and column sizes and spacing	11
Materials species and grade	11
Sheathing and bracing	11
Headers and lintels	11
Finishes	11
Fastening instructions	11
Insulation	11
Details as required for clarificaiton	11

NORTH CAROLINA
MODULAR PLANS REVIEW CHECKLIST

 revised May 2011

		Plan Sheet Page # and NOTES
	CEILING/ROOF X-SECTION	
	Truss, rafter, and beam spacing	11
	Lumber species and grade	11
	Sheathing and decking	11
	Finishes	11
	Fastening instructions	11
	Insulation	11
	Details including NC sealed truss designs or manual reference	11
	FOUNDATION PLAN	
	Footings, pier, and curtain wall locations and specifications	9, 9.1
	X-sections with dimensions	9, 9.1
	Anchorage - sill plate to piers and curtain wall	9.1
	Anchorage - building to sill plate	9.1
	Anchorage - tie downs (lateral and longitudinal)	9
	Soil bearing capacity	9.1
	Minimum concrete compressive strength	9.1
	Motar type	9.1
	Ventilation requirements (with and without vapor barrier)	3, 9, 9.1
	Crawl space access requirements	9, 9.1
	ENERGY COMPLIANCE	
	Demonstrate compliance	3
	SET-UP INSTRUCTIONS	
	Floor and ceiling connections	11
	Marriage wall connections	11
	Roof set-up connections	11
	Plumbing connections	11
	Mechanical connections	11
	Electrical connections	11
	Fire stopping	11
	Air infiltration elimination	11
	Notice to inspections department attachment if set-up instructions are by attachment	1
	ITEMS NOT INSPECTED IN PLANT	
	List of items not inspected by 3rd. Party	2
	Notice to inspections department	2

APPROVAL PLANS INDEX

SHEET	DESCRIPTION
1.0	INDEX AND CRITERIA SHEET
2.0	SITE INSTALLED DATA & SERVICE DISCONNECT
3.0	ENERGY CODE DATA & Ventilation
4.0	ELEVATION
5.0	FLOOR PLAN LAYOUT BRACED FLOOR PLAN DETAILS & NOTES
5.1	FLOOR PLAN, WINDOW & DOOR SCHEDULES, AND PLUMBING FIXTURE SCHEDULES
6.0	ELECTRICAL LAYOUT
6.1	ELECTRICAL SCHEDULES
7.0	SUPPLY PLUMBING
8.0	DWV PLUMBING
9.0-9.1	FOUNDATION PLAN & NOTES
10.0	HVAC LAYOUT
11.0	CROSS-SECTION
11.1	ENERGY CODE COMPLIANCE DETAILS
ATTACHED ONLY WHEN NEEDED	MODEL SPECIFIC CALCULATIONS

N. C. BUILDING DESIGN CRITERIA

CODES:

NC RESIDENTIAL CODE - 2018 EDITION
NC PLUMBING CODE - 2018 EDITION
NC MECHANICAL CODE - 2018 EDITION
NC ENERGY CONSERVATION CODE - 2018 EDITION.
NC FIRE & FUEL GAS CODES - 2018 EDITION
NC ELECTRICAL CODE - 2017 EDITION

DUAL LABELED STOCK NOTE:
WHEN DUAL LABELING A STOCK MODEL; THE HOME WILL BE BUILT TO INCLUDE BOTH REQUIRED CONSTRUCTION METHODS OF BRACING. WHEN OVERLAPPING OCCURS, THE WORSE CASE METHOD WILL GOVERN.

TYPES:

CONSTRUCTION TYPE: VB, UNPROTECTED

OCCUPANCY TYPE: RESIDENTIAL

NOTE: THIS HOME IS DESIGNED FOR A MAXIMUM MEAN ROOF HEIGHT OF 30'.

LOADS:	ROOF LOAD:	FLOOR LOAD:	WIND LOAD:
	30 PSF GSL 20 PSF DL	40 PSF LL 1st & 2nd FLOOR if applicable	Vult=150 MPH EXPOSURE C
NOTE: MEETS CH. 45 REQUIREMENTS!			
NOTE: THIS MODEL IS NOT BUILT FOR COASTAL HIGH HAZARD OR OCEAN HAZARD AREAS!		20 PSF LL ATTIC FLOOR, 40 IF HABITABLE ATTIC	SEISMIC ZONE: C CRITERIA USED IS ASCE-7 10

APPROVED THIRD PARTY AND OTHER APPLICABLE SEALS:

NTA 11/20/2020

Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws

Kip Whitehead

NOTES:
ATTENTION LOCAL INSPECTION DEPT.
1) SET-UP INSTRUCTIONS FOR OUR MODULAR HOMES ARE INCLUDED BY ATTACHMENT TO THESE PLANS. ANY PLAN SET WHICH DOES NOT INCLUDE AN ATTACHMENT ENTITLED: "SETUP/CONSTRUCTION GUIDELINES" IS INCOMPLETE. SEE THE X-SECTION FOR ALL REQUIRED PAGE NUMBER REFERENCES.
2) THIS UNIT MUST BE CONNECTED TO A PUBLIC WATER SUPPLY AND SEWER SYSTEM IF THESE ARE AVAILABLE.
3) THIS PLAN MAY BE FLIPPED END-TO-END.
4) STATE LABEL LOCATED INSIDE KITCHEN SINK CABINET.

NOTE TO LOCAL INSPECTION DEPARTMENT:
IF THIS STRUCTURE IS IN A THERMAL ZONE MORE STRINGENT THAN THAT LISTED ON THESE PLANS, IS SET ON A FULL OR PARTIAL ABOVE GROUND BASEMENT ENCLOSURE, OR IS SET ON PILINGS, 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.

PLAN: N/A	PLANT: N/A
FLOORS: 1	DATE 11/12/2020

SHEET 1.0

001
ATLANTIC HOUSING / BROWN
68'-0" X 29'-6"
16-CP-68' BROWN
NC COVER SHEET
DRAWN CJR DATE 10/5/20
REV. DATE
SCALE 3/16"=1'-0"

Mans & Crestline Custom Builders
5880 Crestline Road
Laurinburg, NC 28352
1-800-772-0195
www.manscustombuilders.com www.crestlinecustombuilders.com

APPROVED BY
NTA
11/20/2020
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
Kip Whitehead

ATTENTION LOCAL INSPECTIONS DEPARTMENT

THE FOLLOWING ITEMS HAVE NOT BEEN COMPLETED BY THE MANUFACTURER, HAVE NOT BEEN INSPECTED BY NTA, INC., AND ARE NOT CERTIFIED BY THE APPLICABLE MODULAR STATE LABEL. CODE COMPLIANCE MUST BE DETERMINED AT THE LOCAL LEVEL:

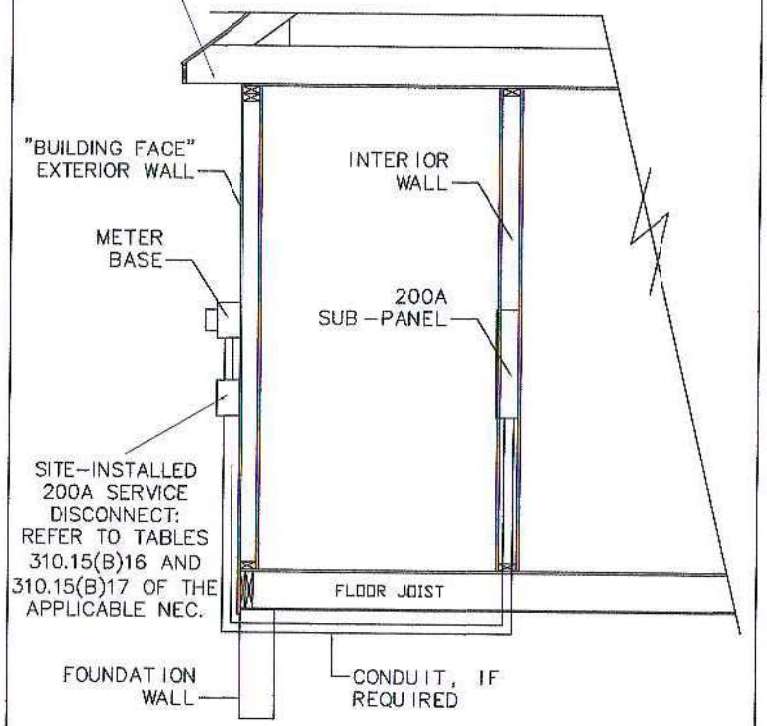
THE FOLLOWING ITEMS ARE INSTALLED ON-SITE BY OTHERS:

- FASTENING OF THE HOME TO THE FOUNDATION
- HVAC SYSTEM (EXCLUDING BOOTS, REGISTERS AND FURNACE IF SHOWN)
- ATTIC GABLE END WALLS, OSB, J-CHANNEL, SOFFIT, FASCIA & VINYL SIDING
- TRUSS COLLAR TIES AND TOP CHORD EXTENSIONS
- ROOF FELT, DRIP EDGE, SHINGLES AND RIDGE VENTS
- EXTEND W/H DRAIN PAN PIPE TO >6" & <24" OF GROUND
- 3" PLUMBING VENT THROUGH THE ROOF
- SEE PG. IN-27 OF THE SET MANUAL FOR BATH EXHAUST AND DRYER VENT
- 10 kVA ASSUMED FOR HVAC SYSTEM FOR SERVCE PANEL SIZING
- BULBS WITH 13.3 LUMENS/WATT IS RECOMMENDED TO MEET MINIMUM LIGHTING
- IF REQ'D:
  W/H THERMAL EXPANSION TANKS PER 2018 NC PLUMBING CODE, SECTION 607.3
  "ENERGY CERTIFICATE" PER 2018 NC RES. CODE, N1101.8 (WHEN REQUIRED)
- CONFIRMATION, BEFORE SET-UP, THAT INSULATION REMAINS IN CONTACT WITH FLOOR DECKING AFTER PLACED AT THE FINAL DESTINATION.
- WHEN APPLICABLE, 1st FLOOR WINDOW GUARDS OR SAFETY DEVICES PER R312.2
- ATTIC SMOKE DETECTOR PER SHEET 8 OF 101
- FOUNDATIONS BY OTHERS; SEE SHEETS 11-12 OF 101

*** NOTICE ***
THE HVAC LAYOUT SHOWN HERE IS TYPICAL AND MAY BE OMITTED!
MANUFACTURER HAS INSTALLED A TYPICAL NUMBER OF SUPPLY REGISTERS WITH FLEX DUCT RUN-OFFS AND RETURN AIR LOCATIONS. NO OTHER HVAC COMPONENTS HAVE BEEN INSTALLED. (NOTE: ADJUSTMENTS MAY BE NEEDED.) ADDITIONAL SUPPLY REGISTERS MAY BE REQUIRED AS DETERMINED BY THE LOAD AND DUCT CALCULATIONS FOR ONE- AND TWO-FAMILY DWELLINGS AND TOWNHOUSES, HEATING AND COOLING EQUIPMENT SHALL BE SIZED BASED ON BUILDING LOADS CALCULATED IN ACCORDANCE WITH ACCA MANUAL D & J OR SMACNA INSTALLATION STANDARDS FOR RESIDENTIAL HEATING AND AIR CONDITIONING SYSTEMS. THESE CALCULATIONS HAVE BEEN PERFORMED BY THE MANUFACTURER FOR DESIGN LAYOUT PURPOSES ONLY AND MUST BE COMPLETED AND PROVIDED BY A HEATING CONTRACTOR LICENSED BY THE APPLICABLE STATE BOARD OF EXAMINERS OF PLUMBING, HEATING, AND FIRE SPRINKLER CONTRACTORS.

SEE THE ADJACENT DETAIL FOR ADDITIONAL CODE REQUIREMENT NOTES.

NOTE:
SOFFITT 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, UNDERLAYMENT MATERIALS AND VENTILATION IN ACCORDANCE WITH APPLICABLE RESIDENTIAL CODE, MUST BE PROVIDED AND INSTALLED AT THE SITE AND INSPECTED BY THE LOCAL JURISDICTION.



NOTE:
2" CONDUIT TO BE SUPPORTED WITHIN 3' OF BOXES AND AT 5' MAX. INTERVALS BETWEEN BOXES.

SHEET 2.0

721
ATLANTIC HOUSING / BROWN
68'-0" X 29'-6"
16-CP-68' BROWN
PANEL DETAIL A
DRAWN CJR DATE 10/5/20
REV. DATE
SCALE 3/16"=1'-0"

Manis & Crestline Custom Builders
5880 Crestline Road
Laurinburg, NC 28352
1-800-772-0195
www.manisandcrestlinecustombuilders.com

2018 NC ENERGY COMPLIANCE			
WORSE CASE CLIMATE ZONE: 4			
ASSEMBLY	CAVITY R-VALUE	GLAZING OR DOOR U-FACTOR	SHGC VALUE
CEILING	R-30		
WALL	R-19		
WINDOWS		0.33	0.27
DOORS		0.19	
DOORS >50% GLASS		0.35	0.30
F_OOR	R-25		

NOTE: PRESCRIPTIVE PER TABLE N1102.1.2 (R402.1.2) AND FOOTNOTES L & M:
THE FULL HEIGHT OF UNCOMPRESSED R-30 INSULATION EXTENDS OVER THE WALL TOP PLATE AT THE EAVES AND PROVIDES A 1" AIR GAP. SEE DETAIL ON SHEET 11.0.

APPROVED BY
NTA
11/20/2020
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
Kip Whitehead

VENTILATION REQUIREMENTS

Model: 16-CP-78' Brown

House Size:
L (ft): 68
W (ft): 29.5

Crawl Space: Vapor barrier required
2006 sf
13.37 sf of ventilation required

Attic:
288864 sq. in

Required inlet area: 481.44 sq. in.
Provided inlet area: 1768 sq. in.
1768 sq. in. > 481.4 Therefore, OK.

Required outlet area 481.44 sq. in.
Provided outlet area:
52 sq. in. per 4' piece of Ridge Vent, so
10 Pieces required, as
10 X 52 = 520
520 sq. in. > 481.4 Therefore, OK.

Manis & Crestline Custom Builders
5880 Crestline Rd.
Laurinburg, NC 28352
(910) 276-0195

SHEET 3.0

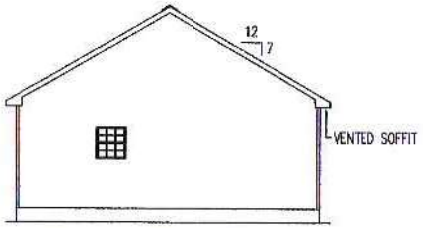
Manis & Crestline Custom Builders
5880 Crestline Road
Laurinburg, NC 28352
1-800-772-0195
www.manniscustombuilders.com www.crestlinecustombuilders.com

DRAWN CJR DATE 10/5/20
REV. DATE
SCALE 3/16"=1'-0"

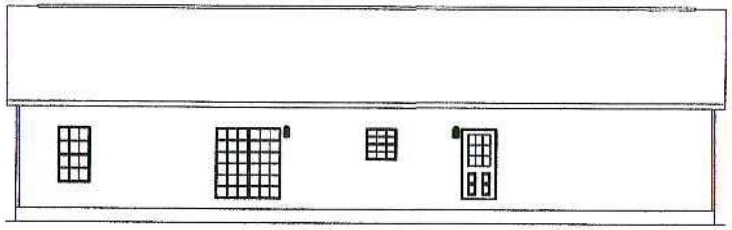
PANEL DETAIL B

ATLANTIC HOUSING / BROWN
68'-0" X 29'-6"
16-CP-68' BROWN

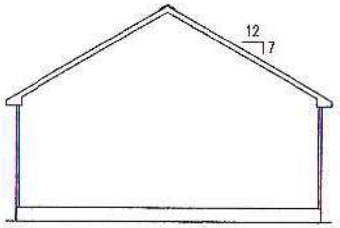
722



LEFT SIDE ELEVATION
SCALE: 3/32" = 1'-0"



REAR ELEVATION
SCALE: 3/32" = 1'-0"



RIGHT SIDE ELEVATION
SCALE: 3/32" = 1'-0"

APPROVED BY
NTA
11/20/2020

Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
Kip Whitehead

FRONT ELEVATION

SHEET 4.0

FRONT ELEVATION	ATLANTIC HOUSING / BROWN 101
	68'-0" X 29'-6"
	16-CP-68' BROWN
DRAWN CJR DATE 10/5/20	
REV. DATE	
SCALE 3/16"=1'-0"	

Manis & Crestline Custom Builders
5880 Crestline Road
Laurinburg, NC 28352
1-800-772-0195
www.manischestercustombuilders.com
www.crestlinecustombuilders.com

140-150mph NOTES FOR EXTERIOR BRACED WALLS USING THE WSP CONTINUOUSLY SHEATHED WOOD STRUCTURAL PANEL METHOD:

1) ALL EXTERIOR WALLS ARE BRACED WALLS WITH 7/16" OSB SHEATHING FASTENED WITH 7/16"x1¾"x15ga STAPLES AT 2"oc STAGGERED ALONG HORIZONTAL EDGES, 3"oc ALONG VERTICAL EDGES, AND 4"oc IN THE FIELD. ALL EXTERIOR WALLS WITH LESS THAN 50% OF SHEATHING, BUT MORE THAN 25% SHEATHING REQUIRE BLOCKING AT JOINTS AND MUST BE FASTENED WITH 8d (2½"x0.131"d) NAILS AT 3"oc ALONG THE EDGES AND 6"oc IN THE FIELD. LESS THAN 25% SHEATHING REQUIRES A P.E. DESIGN.
2) SEE SHEET 5.1 FOR ADDITIONAL BRACED WALL NOTES AND DETAILS.
3) ALL EXTERIOR BRACED WALLS ARE BLOCKED AT JOINTS.

NOTES:
1) MINIMAL ADJUSTMENTS MAY BE REQUIRED FOR BATH COIL FLEX AND WILL BE DETERMINED PER PLAN.
2) FOR VENTED RANGE HOOD USE 100 CFM.
3) EXTEND ALL EXHAUST VENTS THROUGH EAVE SIDES ONLY. AIR FLOW DIRECTION IS TOWARD THE EXTERIOR.
4) EXHAUST VENTS CANNOT TERMINATE OVER DOORS & WINDOWS.
5) EXHAUST FANS SHALL USE CLASS 0 OR CLASS 1 DUCT IN ACCORDANCE WITH UL 181.
6) ALL GLASS SHOWER DOORS ARE TEMPERED.

TRUSS CONNECTIONS NOTE FOR A 30' MAX. MEAN ROOF HEIGHT:
INTERIOR AND EXTERIOR ZONE TRUSSES ARE SECURED TO THE EXTERIOR TOP PLATES WITH (3)¼"x6" SIMPSON SDS SCREWS OR (4) #10x5" SCREWS FOR PITCHES OF 3/12 THROUGH 12/12 AND (7)#10x5" SCREWS FOR A 5/12 PITCH.

140-150mph NC NOTE FOR 5/12 THRU 9/12 PITCH ROOFS:
PER SECTION R602.10.5.5, SOLID 2x BLOCKING IS INSTALLED, BETWEEN TRUSSES, ABOVE ALL SHEATHED SECTIONS OF EAVE WALL EQUAL TO AND GREATER THAN 24" WIDE AND IS ATTACHED TO THE TOP PLATES WITH 8d NAILS @ 6"oc ALONG THE LENGTH. THIS BLOCKING IS NOT REQUIRED ABOVE DOOR, WINDOW, AND OTHER SIMILAR OPENINGS.

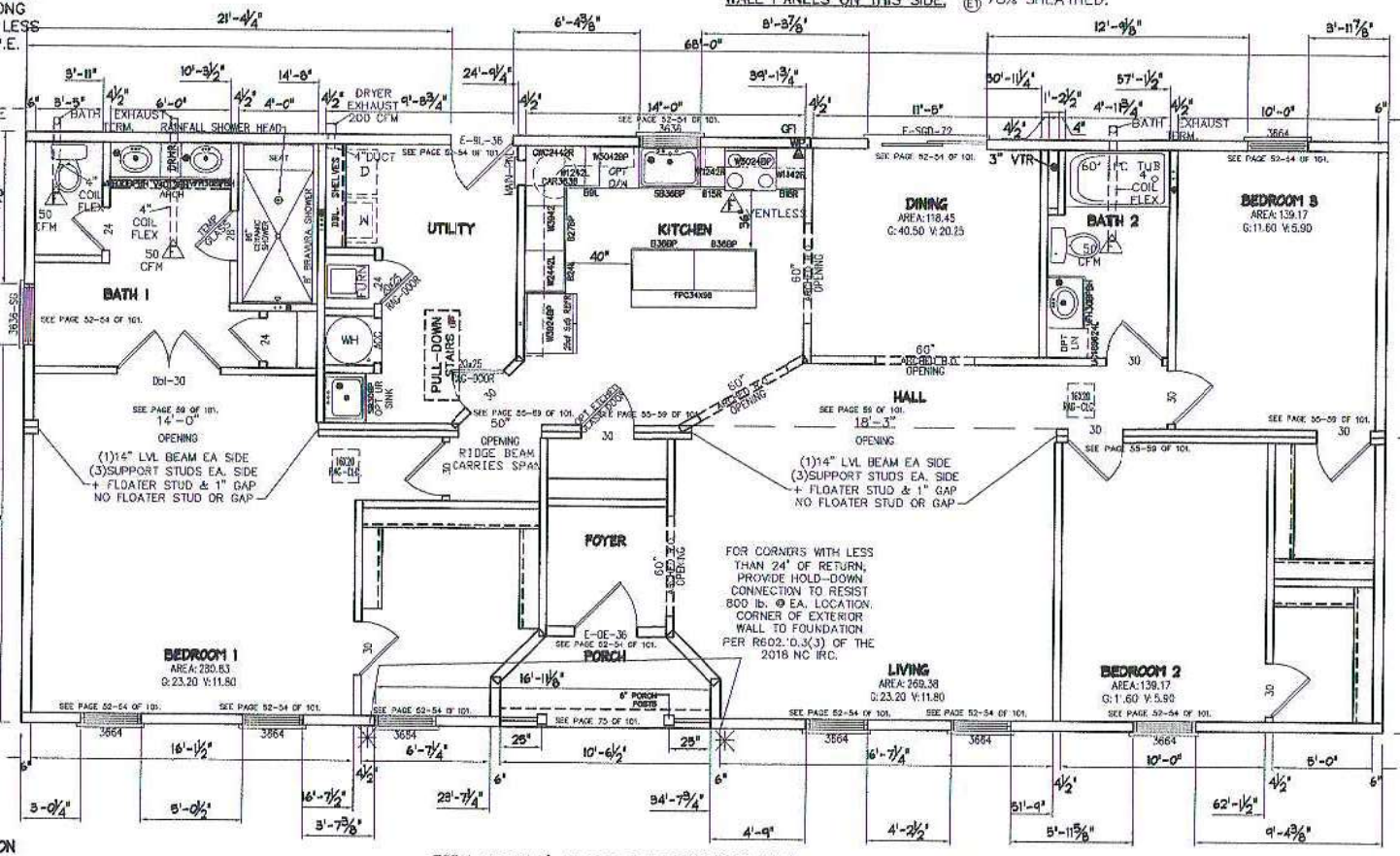
14'-9" MAX	LENGTH OF BRACED WALL 1			
PITCH	3/12 w/10' EAVE-TO-RIDGE HT.			
WALL	EAVE 1	EAVE 2	GABLE 1	GABLE 2
LEGEND	(E1)	(E2)	(G1)	(G2)
LENGTH OF PERP. SIDE	29.5'	29.5'	68.0'	68.0'
MIN. LENGTH REQ'D. 2	5.6'	5.6'	11.5'	11.5'
TOTAL PROVIDED	52.8'	36.0'	26.5'	29.5'

1. FROM TABLE R602.10.3 WITH A TYPICAL 130 MPH DESIGN USING 1.3 FACTOR FOR EXPOSURE C & 0.95 FACTOR FOR 9' CEILINGS.
2. REQUIRED LENGTHS DERIVED FROM WORSE CASE COLUMN FROM TABLE R602.10.3 I.O. INTERPOLATION.

TOTAL OF 52.8' OF OSB BRACED BRACED WALL; WALL PANELS ON THIS SIDE, (E1) 78% SHEATHED.

TOTAL OF 26.5' OF OSB BRACED BRACED WALL; WALL PANELS ON THIS SIDE, (G1) 90% SHEATHED.

TOTAL OF 29.5' OF OSB BRACED BRACED WALL; WALL PANELS ON THIS SIDE, 100% SHEATHED.



TRUSS CONNECTIONS NOTE FOR A 30' MAX. MEAN ROOF HEIGHT:
INTERIOR AND EXTERIOR ZONE TRUSSES ARE SECURED TO THE EXTERIOR TOP PLATES WITH (3)¼"x6" SIMPSON SDS SCREWS OR (4) #10x5" SCREWS FOR PITCHES OF 3/12 THROUGH 12/12 AND (7)#10x5" SCREWS FOR A 5/12 PITCH.

NOTES:
1) CLOTHES DRYER TRANSITION DUCTS ARE LIMITED TO 8 FEET IN LENGTH AND MAY NOT PASS THROUGH ANY PORTION OF THE BUILDING CONSTRUCTION.
2) MUST COMPLY WITH THE 2018 NC MECHANICAL CODE SECTION 504.6.
3) MUST HAVE BACKDRAFT DAMPER REQUIRED PER M1502.3.

ALL APPLIANCES ARE SHOWN FOR REPRESENTATION ONLY. INSTALLATION AND/OR SHIPPING OF APPLIANCES DEPENDS ON SALES ORDER.

TOTAL AREA =2006sf
LIVING – 1963sf
PORCH – 43sf

NOTES:
1) • - DENOTES A PLUMBING VENT.
2) AIR ADMITTANCE VALVES ARE USED.
3) o - PVC CHASE PIPES ARE FOR FIELD USE ONLY.
4) RANGE HOODS AND FIREPLACES ARE VENTLESS.

TOTAL OF 36.0' OF OSB BRACED BRACED WALL; WALL PANELS ON THIS SIDE, (E2) 53% SHEATHED.

NC NOTE:
COMPLIES WITH CH. 45, TABLE 4506.2. ATTACHED CALC PAGE CN-1C SHOWS ALLOWANCE FOR A STAPLE SUBSTITUTION.

SEE NEXT PAGE FOR ADDITIONAL NOTES!

9' CEILING | SHEET 5.0

211
ATLANTIC HOUSING / BROWN
68'-0" X 29'-6"
16-CP-68' BROWN
1st AREA CALCS
DRAWN: CJR DATE: 10/5/20
REV: DATE:
SCALE: 3/16"=1'-0"

Manis & Crestline Custom Builders
5880 Crestline Road
Laurinburg, NC 28352
1-800-772-0195
www.monicustombuilders.com www.crestlinecustombuilders.com

DOOR SCHEDULE							
QTY	STYLE	NOMINAL SIZE	R.O. WIDTH	R.O. HEIGHT	GLASS S.F.	VENT S.F.	DESCRIPTION
1	E-9L-36	3'-0"x8'-8"	3'-2"	6'-10 1/2"	5.340	0.000	Exterior 9 lite steel
1	E-OE-36	3'-0"x8'-8"	3'-2"	6'-10 1/2"	6.780	0.000	Exterior oval etched
1	E-SGD-72	6'-0"x6'-8"	6'-0"	6'-10 1/2"	40.500	20.250	Exterior sliding glass
1	ACC		2'-3"	5'-0"	0.000	0.000	Interior cased opening
1	OPENING		4'-2"	6'-10 1/2"	0.000	0.000	Interior cased opening
4	OPENING		5'-0"	6'-10 1/2"	0.000	0.000	Interior cased opening
1	OPENING		14'-0"	6'-10 1/2"	0.000	0.000	Interior cased opening
1	OPENING		18'-3"	6'-10 1/2"	0.000	0.000	Interior cased opening
1	Dbl-30	2--2'-6'-0"x6'-8"	5'-2"	6'-10 1/2"	0.000	0.000	Interior double six panel hollow core
3	24	2'-0"x6'-8"	2'-2"	6'-10 1/2"	0.000	0.000	Interior six panel hollow core
1	28	2'-0"x6'-8"	2'-6"	6'-10 1/2"	0.000	0.000	Interior six panel hollow core
9	30	2'-6"x6'-8"	2'-8"	6'-10 1/2"	0.000	0.000	Interior six panel hollow core

WINDOW NOTE:
WHEN USED; ALL PICTURE, OCTAGON, & TRANSOM WINDOWS ARE SAFETY GLAZED.

WINDOW SCHEDULE						
QTY	STYLE	R.O WIDTH	R.O. HEIGHT	GLASS S.F.	VENT S.F.	DESCRIPTION
1	3636	3'-0 1/4"	3'-0 1/4"	5.900	2.900	?
1	3636-SG	3'-0 1/4"	3'-0 1/4"	5.900	2.900	?
7	3664	3'-0 1/4"	5'-4 1/4"	11.600	5.900	?
1	MAIN-PNL	1'-2 1/2"	2'-5 1/2"	0.000	0.000	?

MANUFACTURER	FIXTURE SCHEDULE	MODEL NO.
BAYMONT	TUB/SHOWER COMBO	5101 / 5102
	60" CORNER TUB	2211
	60" SHOWER	3309
MAAX	22x33 DBL BOWL SINK	2233
MANSFIELD	TOILET	130
	HANDICAPPED TOILET	137
	CHINA LAV 19x16	N/A
FIAT	UTILITY SINK	1610

WINDOW DESCRIPTION NOTES:
1) ALL WINDOWS ARE LOW-E SINGLE HUNG WITH GRIDS UNLESS SPECIFIED OTHERWISE ON THE CUSTOMERS ORDER.
SOME HOME SERIES' USE DOUBLE HUNG WINDOWS AND WILL BE LISTED ON THE CUSTOMERS ORDER.
2) PER THE LATEST RESIDENTIAL CODE AND/OR NCRC SECTION 312.2, ANY SECOND STORY WINDOWS WILL HAVE SAFETY DEVICES INSTALLED AT THE PLANT BEFORE SHIPMENT.

WINDOW EGRESS NOTE:
ALL WINDOWS WITH 5.0 SQ. FT. OF FREE AREA OR MORE ARE CONSIDERED EGRESS WINDOWS FOR THE GROUND LEVEL FLOOR. UPPER LEVEL WINDOWS SHALL HAVE A MINIMUM OF 5.7 SQ. FT. OF FREE AREA TO MEET EGRESS REQUIREMENTS.

NOTES:
1) COMPLIES WITH R308.4 FOR SAFETY GLAZING.
2) WINDOWS LABELED WITH SG ARE SAFETY GLAZED.
3) ALL SIDELIGHTS AT EXTERIOR DOORS WILL BE SAFETY GLAZED.
4) ALL WINDOWS AND DOORS HAVE A MINIMUM DESIGN PRESSURE (DP) RATING OF 50.

RETURN AIR GRILLE DATA CHART

RAG SIZE	RAG TYPE	FREE AIR AREA	FACE JET VELOCITY	400
			DUCT Ps	0.017
12" x 12"	LOUVERED	121 sq. in.	CFM	292
14" x 14"	LOUVERED	163 sq. in.	CFM	404
16" x 20"	LOUVERED	269 sq. in.	CFM	741
20" x 25"	LOUVERED	416 sq. in.	CFM	1173

1) Cubic feet per minute (CFM) based on 2 CFM per square inch of grass filter area.
2) fpm: feet per minute

RETURN AIR GRILLE NOTE:
ISOLATED RETURN AIR GRILLES ARE CONNECTED TO THE HVAC UNIT OR COMPARTMENT WITH R-8 FLEX DUCT OR OTHER APPROVED MATERIALS, ON-SITE BY OTHERS, AND IS SUBJECT TO LOCAL INSPECTION AND APPROVAL.

RETURN AIR GRILLE CHART:
DATA PROVIDED BY TRUAIRE AND EAST COAST METAL DISTRIBUTORS.

APPROVED BY
NTA 11/20/2020
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
Kip Whitehead

221
ATLANTIC HOUSING / BROWN
68'-0" X 29'-6"
16-CP-68' BROWN
1st DOOR / WINDOW SCHD
DRAWN: CJR DATE: 10/5/20
REV: DATE:
SCALE: 3/16"=1'-0"

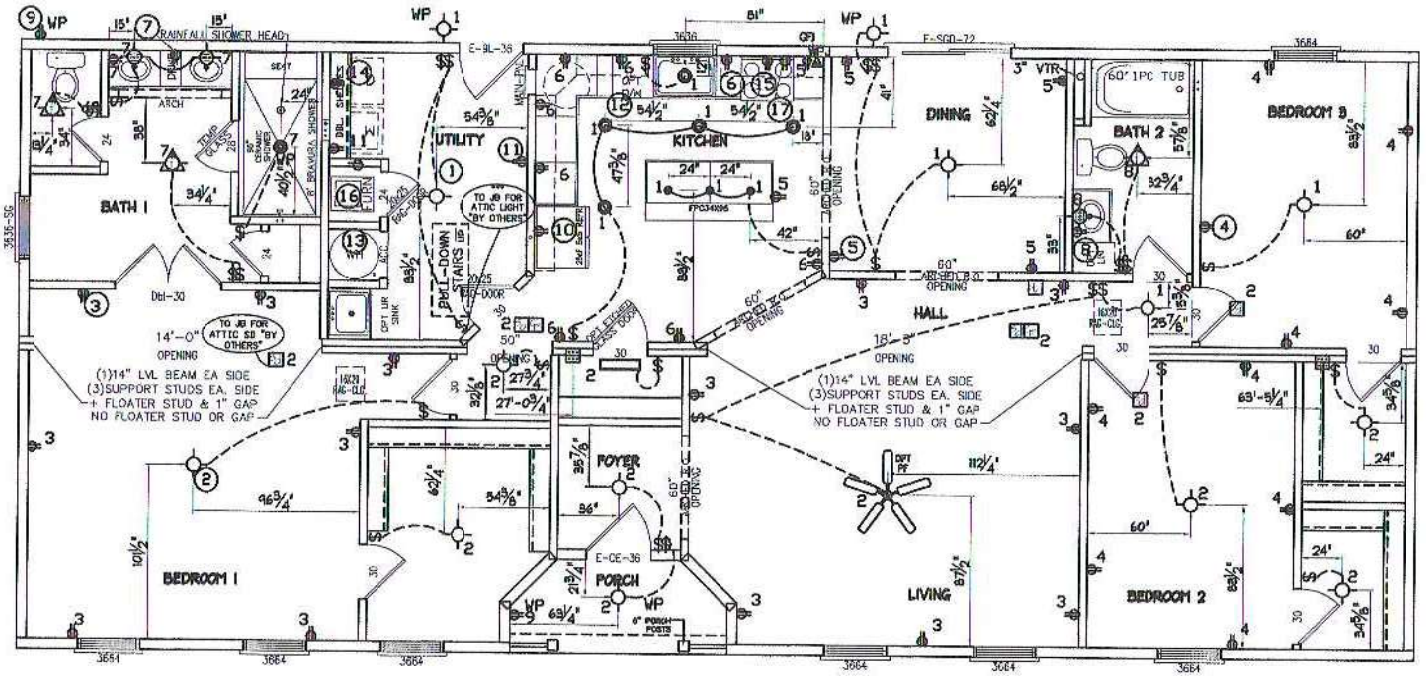
Mario & Crestine Custom Builders
5880 Crestline Road
Lawrenburg, NC 28352
1-800-772-0195
www.mariocustombuilders.com
www.crestlinecustombuilders.com

SHEET S. 1

* - DENOTES GFI PROTECTION.
** - DENOTES ARC-FAULT PROTECTION.

CIRCUIT	LOCATION	WIRE	BREAKER
** 1	GEN. LIGHTING	14-2	1-15amp.
** 2	GEN. LIGHTING	14-2	1-15amp.
** 3	GEN. LIGHTING	12-2	1-20amp.
** 4	GEN. LIGHTING	12-2	1-20amp.
* 5	KITCHEN/DINING	12-2	1-20amp.
* 6	KITCHEN	12-2	1-20amp.
* 7	BATH 1	12-2	1-20amp.
* 8	BATH 2	12-2	1-20amp.
* 9	OUTSIDE	12-2	1-20amp.
10	REFRIGERATOR	12-2	1-20amp.
* 11	LAUNDRY	12-2	1-20amp.
12	DW	12-2	1-20amp.
13	WATER HEATER	10-2	2-25amp.
14	DRYER	10-3	2-30amp.
15	RANGE	8-3	2-40amp.
16	FURNACE	4-4-6 6-6-8	2-60amp. 2-30amp.
17	OPT MICROWAVE	12-2	1-20amp.

APPROVED BY
NTA
11/20/2020
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
Kip Whitehead



ALL APPLIANCES ARE SHOWN FOR REPRESENTATION ONLY. INSTALLATION AND/OR SHIPPING OF APPLIANCES DEPENDS ON SALES ORDER.

TOTAL AREA =2006sf
LIVING – 1963sf
PORCH – 43sf

9' CEILING

SHEET 6.0

401
1st FLOOR ELECTRICAL
ATLANTIC HOUSING / BROWN
68'-0" X 29'-6"
16-CP-68' BROWN
DRAWN CJR DATE 10/5/20
REV. DATE
SCALE 3/16"=1'-0"

Menis & Crestline Custom Builders
5880 Crestline Road
Lauriburg, NC 28352
1-800-772-0195
www.menischestomhuilders.com
www.crestlinecustombuilders.com

APPROVED BY
NTA
11/20/2020
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
Kip Whitehead

ELECTRICAL FIXTURE SCHEDULE		
MANUF.	HARD-WIRED FIXTURE	PART NO.
BROAN	VENTLESS RANGE HOOD	41300
BRK ELEC.	SMOKE/CARBON DETECTOR	4120SB
BROAN	BATH EXHAUST FAN W/ LIGHT	769RL
KENMORE	DISHWASHER	22-15242

LEGEND			
110 RECEPTACLE	RECESSED CAN LIGHT	THERMOSTAT WIRE LOCATION	
220 RECEPTACLE	JUNCTION BOX	SMOKE DETECTOR	
SWITCH	BATH FAN W/LIGHT	CARBON MONOXIDE DETECTOR	
LIGHT FIXTURE	SERVICE DISCONNECT	4' FLUORESCENT FIXTURE	
FAN	WPJ WIRED PHONE JACK	2' FLUORESCENT FIXTURE	
		ELECTRICAL CROSS-OVER	

LOAD CALCULATIONS		LEG 'A' & 'B'	
GEN. LIGHTING (2006SF)x3 =	6018w	GEN. LTNG. & SMALL APPL. =	23.5A
SMALL APPLIANCES : 1500x2 =	3000w	RANGE =	33.7A
LAUNDRY : 1500x1 =	1500w	DRYER =	24.0A
TOTAL =	10518w	FURNACE =	71.3A
FIRST 3000w @ 100% =	3000w	DISHWASHER =	3.4A
REMAINDER @ 35% =	2632w	REFRIGERATOR =	6.5A
TOTAL =	5632w	MICROWAVE =	6.9A
5632w DIV. BY 240 =	23.5A	50 gal. ELEC. W/H =	18.8A
		TOTAL STANDARD LOAD =	188.1A

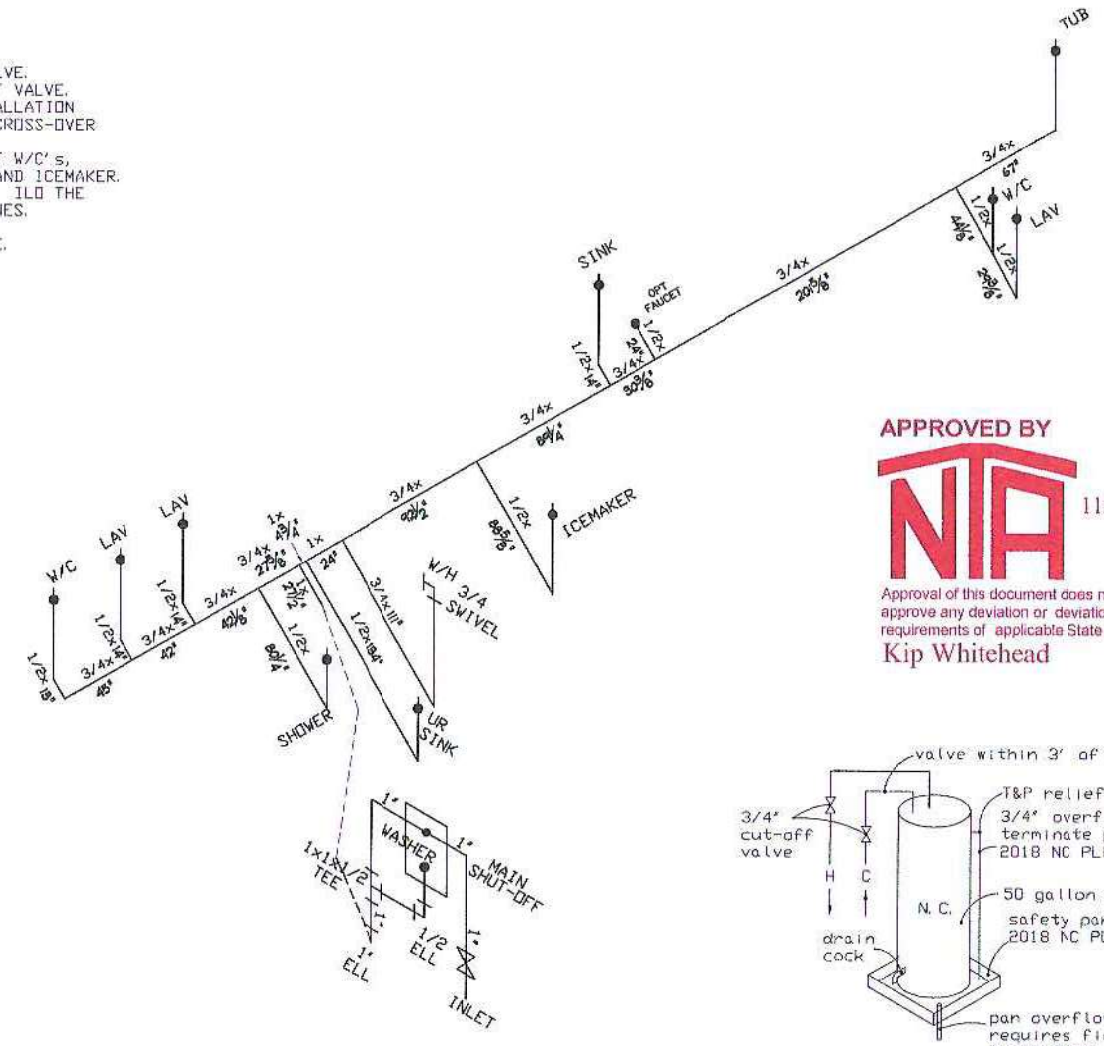
NOTES:
1) A 200A SINGLE PHASE PANEL BOX IS INSTALLED IN THIS UNIT.
2) A MIN. 12" CLEARANCE IS REQUIRED FROM THE STORAGE AREA TO AN INCANDESCENT LIGHT FIXTURE IN ALL APPLICABLE CLOTHES CLOSETS. 6" CLEARANCE IS REQUIRED FOR FLUORESCENT LIGHT FIXTURES.
3) SMOKE DETECTORS SHALL HAVE A BATTERY BACK-UP, SHALL BE ON THE SAME CIRCUIT, AND SHALL BE INTERCONNECTED FOR SIMULTANEOUS OPERATION USING 14-3 WIRE. A WIRED JUNCTION BOX IS INSTALLED IN THE ATTIC/BASEMENT, WHEN APPLICABLE,TO ALLOW THE CUSTOMER TO ADD A SMOKE DETECTOR, APPROVED FOR SUCH AREAS, AT THEIR DISCRETION.
4) WIRE IS NM TYPE.
5) A 200A PANEL BOX USES ⅔ WIRE WITH A #4 GROUND AND A 2" CONDUIT.
6) ALL 120-VOLT, SINGLE PHASE, 15 AND 20-AMPERE BRANCH CIRCUITS SUPPLYING OUTLETS INSTALLED IN DWELLING UNIT FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, OR SIMILAR ROOMS OR AREAS ARE TO BE PROTECTED BY A "COMBINATION TYPE" ARC-FAULT CIRCUIT INTERRUPTER IN ACCORDANCE WITH THE 2017 NC ELECTRICAL CODE.
7) ***- DENOTES A J-BOX IN THE ATTIC AND/OR BASEMENT FOR SITE INSTALLED LIGHT AND SWITCH; PROVIDED BY OTHERS.
8) FOR VENTED FIREPLACES WITH MOTORS, RUN WIRE FROM NEAREST RECEPTACLE AND PLACE A RECEPTACLE IN THE FIREPLACE AREA FOR A MOTOR.
9) ALL OUTLETS ON 15 AND 20-AMPERE BRANCH CIRCUITS ARE LISTED TAMPER RESISTANT IN ACCORDANCE WITH THE 2017 NC ELECTRICAL CODE.
10) EXTERIOR OUTLETS ARE LISTED WEATHER-RESISTANT PER THE 2017 NC ELECTRICAL CODE.
11) A CARBON MONOXIDE DETECTOR IS REQUIRED TO BE LOCATED OUTSIDE EACH SLEEPING AREA IN ACCORDANCE WITH THE 2018 NC RESIDENTIAL CODE
12) A PROGRAMMABLE THERMOSTAT IS REQUIRED PER THE NC 2018 ENERGY CONSERVATION CODE AND WILL BE PROVIDED ON-SITE BY OTHERS. A THERMOSTAT WIRE WILL BE PULLED TO THE WALL LOCATION FOR SITE USE.
13) ALL KITCHEN COUNTERTOP RECEPTACLES ARE GFI PROTECTED AS WELL AS ANY WALL RECEPTACLES WHICH ARE LOCATED WITHIN 6' OF THE EDGE OF THE KITCHEN SINK.
14) ALL DISHWASHERS, WHEN INSTALLED, ARE DIRECT WIRED.

SHEET E. 1

411
ATLANTIC HOUSING / BROWN
68'-0" X 29'-6"
16-CP-68' BROWN
1st ELECT. SCHEDULE
DRAWN CJR DATE 10/5/20
DES. DATE
SCALE 3/16"=1'-0"

Mains & Crestline Custom Builders
5880 Crestline Road
Lunenburg, NC 28352
1-800-772-0195
www.mainscustombuilders.com
www.crestlinecustombuilders.com

NOTES:
1) SUPPLY LINES ARE PEX.
2) ● - DENOTES A CUT-OFF VALVE.
3) ⊠ - DENOTES A 1" SHUT-OFF VALVE.
4) SEE PG. 13.2 OF THE INSTALLATION INSTRUCTIONS MANUAL FOR CROSS-OVER CONNECTION INFORMATION.
5) FOR HOT SUPPLY LINES OMIT W/C's, INLET, EXTERIOR FAUCETS AND ICEMAKER.
6) 3/4" SUPPLY PIPE IS USED, ILO THE 1" SHOWN, FOR THE HOT LINES.
7) SEE SHEET 5.1 FOR THE PLUMBING FIXTURE SCHEDULE.



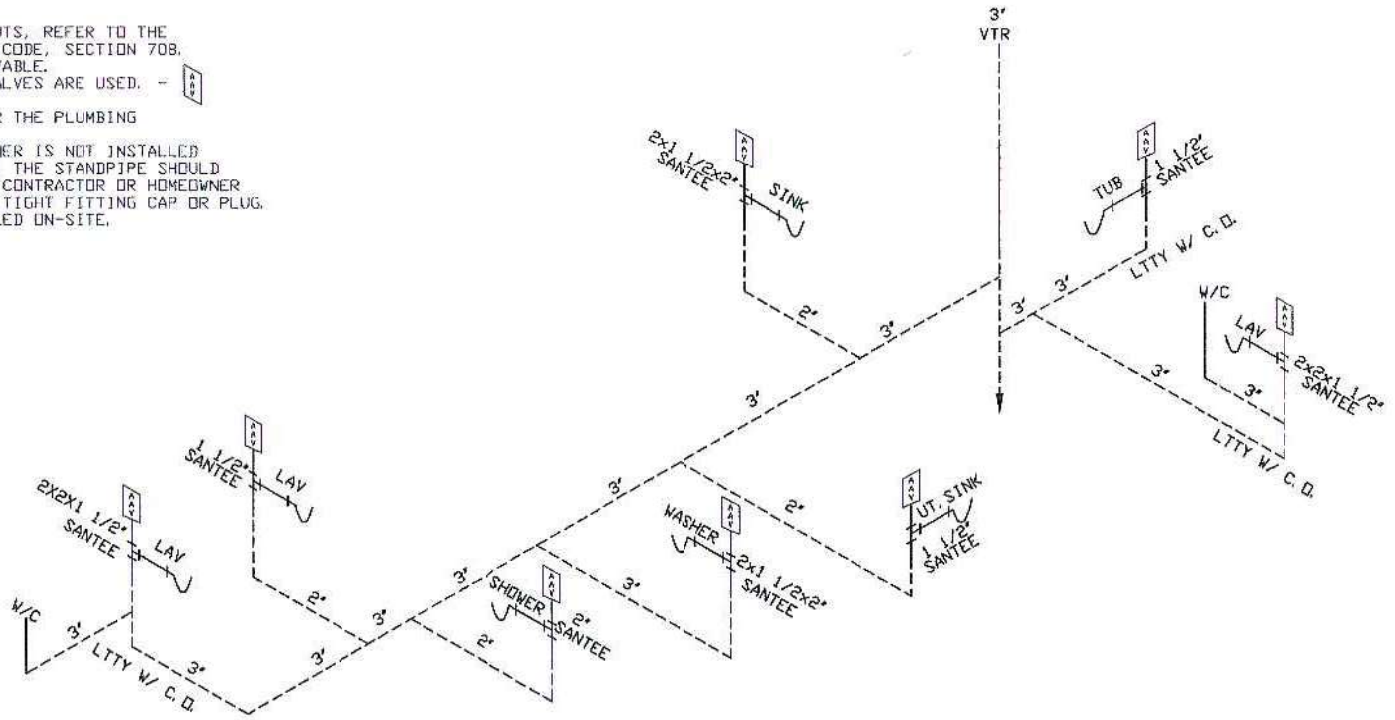
APPROVED BY
NTA
11/20/2020
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws
Kip Whitehead

SHEET 7.0

501
ATLANTIC HOUSING / BROWN
68'-0" X 29'-6"
16-CP-68' BROWN
1st PLUMBING SUPPLY
DRAWN CJR DATE 10/5/20
REV. DATE
SCALE 3/16"=1'-0"

Manis & Crestline Custom Builders
5880 Crestline Road
Louisburg, NC 28352
1-800-772-0195
www.manisscustombuilders.com
www.crestlinecustombuilders.com

NOTES:
1) FOR STACK CLEANOUTS, REFER TO THE 2018 NC PLUMBING CODE, SECTION 708.
2) P-TRAPS ARE REMOVABLE.
3) AIR ADMITTANCE VALVES ARE USED. - ADV
4) PIPE IS PVC.
5) SEE SHEET 5.1 FOR THE PLUMBING FIXTURE SCHEDULE.
6) IF A CLOTHES WASHER IS NOT INSTALLED BEFORE OCCUPANCY, THE STANDPIPE SHOULD BE SEALED BY THE CONTRACTOR OR HOMEOWNER WITH A REMOVABLE TIGHT FITTING CAP OR PLUG.
7) 3" VTR IS INSTALLED ON-SITE.



APPROVED BY
NTA
11/20/2020
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
Kip Whitehead

NC
2018 NC PLUMBING CODE, TABLE # 909.1
MAX. DISTANCE OF FIXTURE TRAP FROM VENT

SIZE OF TRAP (inches)	SLOPE (inch per foot)	DISTANCE FROM TRAP (feet)
1 1/4	1/4	5
1 1/2	1/4	6
2	1/4	8
3	1/8	12
4	1/8	16

For SI: 1 inch = 25.4 mm, 1 foot = 304.8m, 1 inch per foot = 83.3 mm/m.

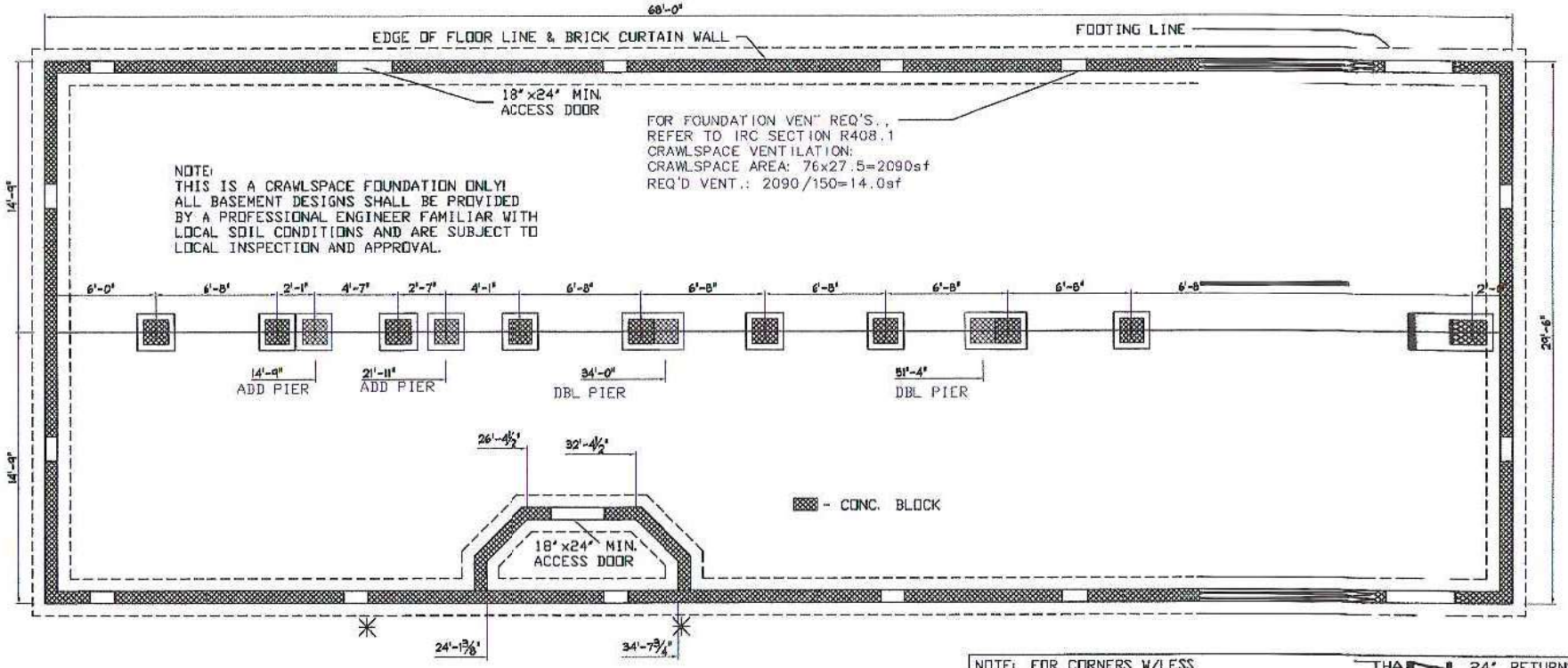
SHEET 8.0

511
ATLANTIC HOUSING / BROWN
68'-0" X 29'-6"
16-CP-68' BROWN
1st PLUMBING DRAIN
DRAWN CJR DATE 10/5/20
REV DATE
SCALE 3/16"=1'-0"

Manis & Crestline Custom Builders
5880 Crestline Road
Laurinburg, NC 28352
1-800-772-0195
www.maniscustombuilders.com www.crestlinecustombuilders.com

NOTE!
ensions reflect the exact design
s of the house. No dimensional
ce has been added for set gap.
ay be added for gaps between
es at the builder's discretion.

APPROVED BY
NTA
11/20/2020
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
Kip Whitehead



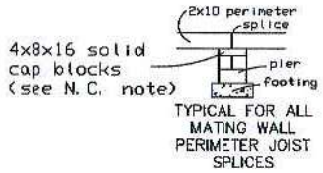
NOTE: FOR CORNERS W/LESS THA 24" RETURNS!!!
* - PROVIDE HOLD-DOWN CON NECTION TO
RESIST 800 lb. @ EA. LOC TIO J. CORNER
OF EXTERIOR WALL TO FOL NDA TION PER
R602.10.3(3) OF THE 201 NC IRC.

SHEET 9.0

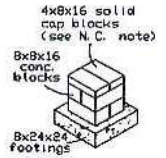
303
ATLANTIC HOUSING / BROWN
68'-0" X 29'-6"
16-CP-68' BROWN
BLOCK FOUNDATION
DATE 10/5/20
DRAWN CJR
REV. DATE
SCALE 3/16"=1'-0"

Manis & Crestline Custom Builders
5880 Crestline Road
Lawrenburg, NC 28352
1-800-772-0195
www.crestlinecustombuilders.com
www.manischristombuilders.com

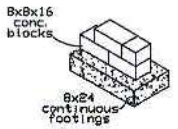
NC REQUIREMENTS:
FOR SOLID CAP BLOCKS:
FOR ALL 9/12 AND 12/12 1 STORY CAPES, A 4" SOLID CAP BLOCK MUST BE USED TO CAP ALL PIERS. FOR SALT-BOX MODELS AND 2 STORY (OR GREATER) HOMES, AN 8" SOLID CAP BLOCK MUST BE USED TO CAP ALL PIERS.
FOR USE OF SURFACE BONDING CEMENT:
MASONRY UNITS FOR STAND ALONE PIERS SHALL BE LAID IN TYPE N OR S MORTAR, OR SHALL BE COVERED WITH SURFACE BONDING CEMENT CONPLYING WITH ASTM C 887. SURFACE BONDING CEMENT SHALL BE APPLIED IN STRICT COMPLIANCE WITH THE CEMENT MANUFACTURER'S INSTRUCTIONS. BOTTOM COURSE SHALL BE LAID IN TYPE M OR S MORTAR OR SURFACE BONDING MORTAR (CEMENT). SURFACE BONDING CEMENT IS NOT PERMITTED FOR PIERS IN PIER AND CURTAIN WALL CONSTRUCTION.



TYPICAL FOR ALL MATING WALL PERIMETER JOIST SPLICES



INTERMEDIATE 16x16 PIERS



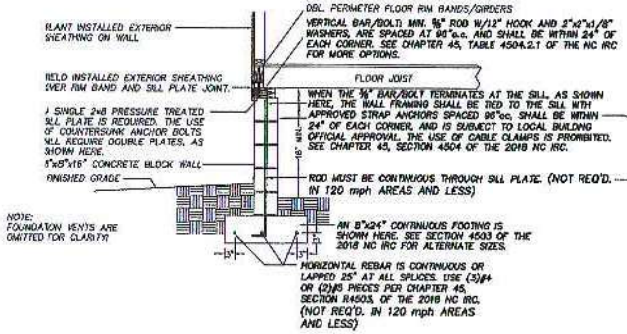
8' CONT. FOUNDATION WALL

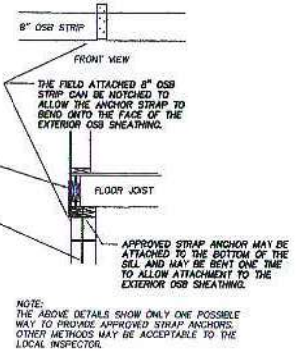
NOTES:
1.) CONCRETE SHALL HAVE A MIN. COMPRESSION STRENGTH OF 2500 PSI.
2.) BOTTOM OF FOOTINGS TO BE A MIN. OF 12" BELOW THE FINISHED NATURAL GRADE OR ENGINEERED FILL AND IN NO CASE LESS THAN THE FROST LINE DEPTH.
3.) FINISH GRADE TO HAVE A MIN. SLOPE OF 6" IN 10'-0".
4.) CRAWL SPACE TO BE CLEAN AND FREE OF DEBRIS. A 6 MIL. POLY VAPOR BARRIER IS REQUIRED FOR VA, FHA, AND IN N.C.
5.) THERE SHALL BE A POSITIVE DRAIN FROM THE CRAWLSPACE.
6.) THE WATER HEATER PAN DRAIN AND THE DRYER VENT SHALL BE EXTENDED THROUGH TO THE EXTERIOR OF THE FOUNDATION.
7.) THERE SHALL BE AN ACCESS (24" W. X 18" H. MIN.) INSTALLED BY OTHERS AT THEIR DESIRED LOCATION.
8.) FOUNDATION WALLS SHALL EXTEND AT LEAST 8" ABOVE GRADE.
9.) MORTAR SHALL BE TYPE "M" OR "S".
10.) FOUNDATION TO BE FURNISHED BY BUILDER AND SHALL COMPLY WITH APPLICABLE LOCAL BUILDING CODES.
11.) THE MIN. ASSUMED SOIL BEARING PRESSURE IS 2000 PSF.
12.) 2x TREATED BLOCKS ARE PLACED UNDER THE UNIT AT THE REQUIRED PIER LOCATIONS AND ALL SHIMS MUST BE TREATED WEDGES SIZED AS NEEDED.
13.) FOR OPENINGS IN MATING WALL 48" OR GREATER, AN EXTRA PIER IS REQUIRED TO BE CENTERED DIRECTLY UNDER THE SUPPORT COLUMNS ON EACH SIDE OF THE OPENING.
14.) THE FOUNDATION MUST MEET ALL HIGH SEISMIC DESIGN REQUIREMENTS OUT OF THE APPLICABLE BUILDING CODE(S).
15.) FOUNDATION VENTS TO BE LOCATED WITHIN 3'-0" OF CORNERS AND BE EQUAL TO 1 SQ. FT. PER 150 SQ. FT. WITH OPENINGS THAT ARE LOCATED SO AS TO PROVIDE CROSS-VENTILATION.
16.) SEE THE ADJACENT DETAIL AND SHEAR WALL NOTE FOR ZONES GREATER THAN 100 MPH (3 SEC. WIND GUST).

CONNECTION OF HOME TO THE FOUNDATION WALL IS PER CHAPTER 45 OF THE 2018 NC IRC FOR HIGH WIND ZONES (UP TO 150 MPH) AND IS SUBJECT TO LOCAL INPECTION AND APPROVAL.

HIGH WIND DETAIL (UP TO 150 MPH) BASED ON CHAPTER 45, FIGURE R4503.2(C) OF THE 2018 NC IRC; WHICH MAY BE REFERENCED FOR ALTERNATE METHODS.

NOTE:
IF IN A 130 MPH WIND ZONE, THE PRESCRIPTIVE REQUIREMENTS OF CHAPTER 45, SECTION R4504.1, OF THE 2018 NC IRC MAY BE FOLLOWED AND IS SUBJECT TO LOCAL INSPECTION AND APPROVAL. ½" BAR/BOLTS MAY BE USED, SPACED AT 48"oc, IF THIS METHOD IS CHOSEN.





THE FOUNDATION IS BUILT PRESCRIPTIVE TO CODE, PROVIDED ON-SITE BY OTHERS, AND IS SUBJECT TO LOCAL INSPECTION AND APPROVAL.

SHEET 9.1

304
ATLANTIC HOUSING / BROWN
68'-0" X 29'-6"
16-CP-68' BROWN
FOUNDATION NOTES
DRAWN CJR DATE 10/5/20
REV. DATE
SCALE 3/16"=1'-0"

Mario & Crestline Custom Builders
5880 Crestline Road
Lourinburg, NC 28352
1-800-772-0195
www.mariocustombuilders.com www.crestlinecustombuilders.com

FOR PERIMETER DUCT

NOTES:
1) RAG'S, REGISTERS, BOOTS AND INSULATED R-8 FLEX DUCT TO MARRIAGE WALL PROVIDED.
2) RUN FLEX DUCT TO DROP-OUT LOCATION 28" FROM MARRIAGE WALL ON UNIT WITHOUT THE FURNACE. RUN FLEX DUCT TOWARD DUCT TRUNK AND DROP OUT OF FLOOR 36" FROM TRUNK CENTERLINE ON UNIT WITH FURNACE.
3) FOR ALL REGISTERS WITHIN 28" OF MARRIAGE WALL, RUN FLEX DUCT TOWARD DUCT TRUNK AND DROP OUT OF FLOOR 36" FROM TRUNK CENTERLINE.
4) 4x10 FLAT PERIMETER FLOOR REGISTERS START 7" IN FROM EDGE OF FLOOR. (9" IN FOR 2x6 SIDEWALLS)
5) WALL MOUNT REGISTERS START 4.5" IN FROM EDGE OF FLOOR. (6.5" IN FOR 2x6 SIDEWALLS)
6) SITE-INSTALLED FLEX DUCT FROM RETURN AIR GRILLES WILL RUN TO THE HVAC COMPARTMENT. SEE HVAC CALCS FOR DUCT SIZE.

LEGEND

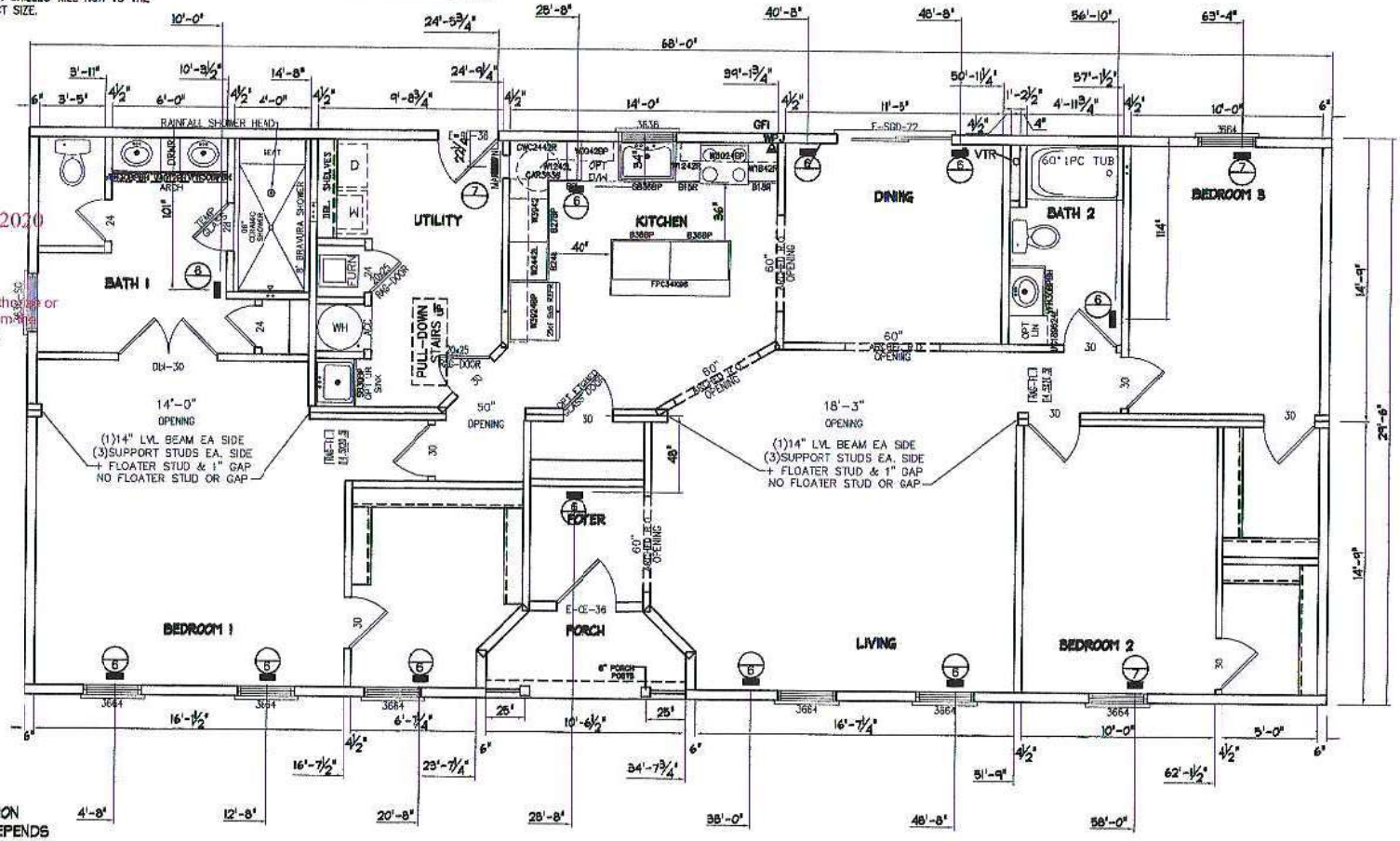
- PLASTIC BI-PARTED INSULATED R-8 FLEX DUCT DIAMETER VALUE (SIZED IN INCHES, EX. 6)
- 2x2 TOE-KICK REGISTER IN CABINET, 4x10 FLAT FLOOR REGISTER, AND 9" WALL-MOUNTED REGISTER
- 14.5"x20.5" FLOOR CUT-OUT FOR RETURN AIR WHEN APPLICABLE.
- 20.5"x20.5" PRIMARY RETURN AIR GRILLE MAY BE LOCATED ON INTERIOR WALLS OR DOORS.
- PRIMARY 16.5"x20.5" RETURN AIR GRILLE IN CEILING, AN ALTERNATE 20.5"x20.5" MAY BE USED.
- SECONDARY 14.5"x48" RETURN AIR GRILLE IN CEILING, AN ALTERNATE 12.5"x12.5" MAY BE USED.

*** NOTICE ***
THE HVAC LAYOUT SHOWN HERE IS TYPICAL AND MAY BE OMITTED MANUFACTURER HAS INSTALLED A TYPICAL NUMBER OF SUPPLY REGISTERS WITH FLEX DUCT RUN-OFFS AND RETURN AIR LOCATIONS. NO OTHER HVAC COMPONENTS HAVE BEEN INSTALLED. (NOTE: ADJUSTMENTS MAY BE NEEDED.) ADDITIONAL SUPPLY REGISTERS MAY BE REQUIRED AS DETERMINED BY THE LOAD AND DUCT CALCULATIONS. FOR ONE- AND TWO-FAMILY DWELLINGS AND TOWNHOUSES, HEATING AND COOLING EQUIPMENT SHALL BE SIZED BASED ON BUILDING LOADS CALCULATED IN ACCORDANCE WITH ACCA MANUAL D & J OR SMACNA INSTALLATION STANDARDS FOR RESIDENTIAL HEATING AND AIR CONDITIONING SYSTEMS. THESE CALCULATIONS HAVE BEEN PERFORMED BY THE MANUFACTURER, BUT MUST BE VERIFIED BY A HEATING CONTRACTOR LICENSED BY THE STATE BOARD OF EXAMINERS OF PLUMBING, HEATING, AND FIRE SPRINKLER CONTRACTORS.

*** NOTICE FOR NORTH CAROLINA ***
IT IS REQUIRED THAT A MECHANICAL CONTRACTOR BE RESPONSIBLE FOR THE COMPLETED HVAC SYSTEM.

APPROVED BY NTA 11/20/2020

Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
Kip Whitehead



ALL APPLIANCES ARE SHOWN FOR REPRESENTATION ONLY. INSTALLATION AND/OR SHIPPING OF APPLIANCES DEPENDS ON SALES ORDER.

TOTAL AREA =2006sf
LIVING – 1963sf
PORCH – 43sf

9' CEILING

SHEET 10.0

552
ATLANTIC HOUSING / BROWN
68'-0" X 29'-6"
16-CP-68' BROWN
1st OFF-FRAME HVAC
DRAWN CJR DATE 10/5/20
REV. DATE
SCALE 3/16"=1'-0"

Mark & Crestline Custom Builders
5880 Crestline Road
Lourmburg, NC 28352
1-800-772-0195
www.crestlinecustombuilders.com
www.marksustomhomebuilders.com

Job	Truss	Truss Type	Qty	Ply	
84927	CC278017	HINGED ATTIC	1	1	Crestline Homes 315 #261 Ref.#3157054

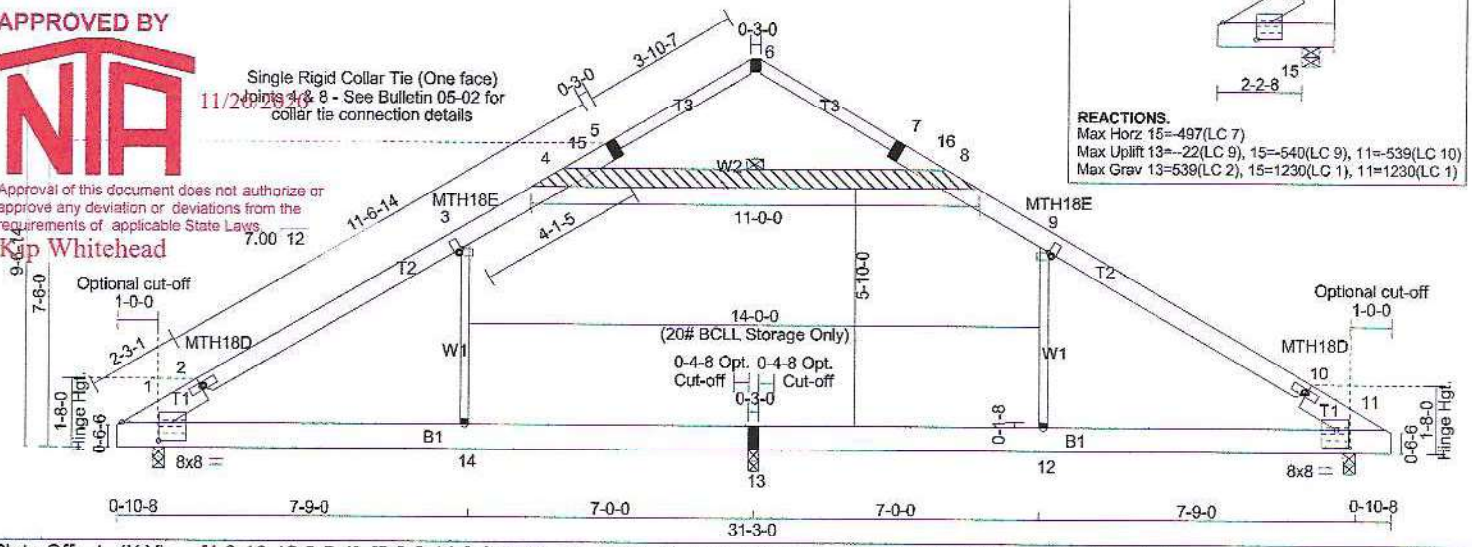
Universal Forest Products Inc., Grand Rapids, MI 49525, Weston Gorby 7.640 e Apr 22 2016 MiTek Industries, Inc. Thu Sep 22 09:02:35 2016 Page 1 of 2

CC278011 = IBC2009
CC278017 = IBC2015/2012

APPROVED BY
NTA
11/20/2018

Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
Kip Whitehead

Single Rigid Collar Tie (One face) Joints 4 & 8 - See Bulletin 05-02 for collar tie connection details



REACTIONS.
Max Horz 15=-497(LC 7)
Max Uplift 13=-22(LC 9), 15=-540(LC 9), 11=-539(LC 10)
Max Grav 13=539(LC 2), 15=1230(LC 1), 11=1230(LC 1)

Plate Offsets (X,Y)-- [1:0-10-12,0-5-4], [2:0-0-11,0-0-0], [3:0-0-11,0-1-2], [9:0-0-11,0-1-2], [10:0-0-11,0-0-0], [11:0-3-10,0-5-4]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	23.1	Plate Grip DOL	1.15	TC	0.48	Vert(LL)	0.48	1-14	>370	240	MT20	197/144
(Ground Snow=30.0)		Lumber DOL	1.15	BC	0.54	Vert(CT)	0.42	1-14	>425	180	MT18HS	197/144
TCDL	10.0	Rep Stress Incr	YES	WB	0.83	Horz(CT)	0.03	11	n/a	n/a		
BCLL	0.0 *	Code	IBC2015/TPI2014	(Matrix)		Attic	-0.26	12-13	655	360	Weight: 180 lb	FT = 0%
BCDL	10.0		IBC2012/TPI2007									

LUMBER-
TOP CHORD 2x8 SP No.1 or 2x8 SPF No.2 *Except*
T2: 2x6 SP No.1 or 2x6 SPF No.2
T3: 2x4 SP No.1 or 2x4 SPF No.2
BOT CHORD 2x8 SP No.1
WEBS 2x3 SPF Stud *Except*
W2: 2x6 SPF No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-1-8 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 4-8

REACTIONS. (lb/size) 1=1213/0-5-8 (min. 0-1-14), 11=1213/0-5-8 (min. 0-1-14), 13=271/0-3-0 (min. 0-1-8)
Max Horz 1=-497(LC 7)
Max Uplift 1=-511(LC 9), 11=-511(LC 10), 13=-1(LC 9)
Max Grav 1=1213(LC 1), 11=1213(LC 1), 13=488(LC 13)

FORCES. (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=-1596/731, 2-3=-1419/733, 3-4=-1342/846, 4-15=-354/170, 5-15=-333/171, 5-6=-220/195, 6-7=-221/196, 7-16=-334/171, 8-16=-353/170, 8-9=-1342/846, 9-10=-1419/733, 10-11=-1596/732
BOT CHORD 1-14=-424/1237, 13-14=-423/1237, 12-13=-423/1237, 11-12=-424/1237
WEBS 9-12=-117/288, 3-14=-120/291, 4-8=-1048/802

REQUIRED FIELD JOINT CONNECTIONS - Maximum Compression (lb)/ Tension (lb)/ Shear (lb)/ Moment (lb-in)
4=1048/802/113/5398, 5=308/176/150/0, 6=191/198/146/0, 7=307/177/149/0, 8=1048/802/113/5362, 12=117/288/0/0, 13=423/1237/276/0, 14=120/291/0/0

NOTES-
1) Wind: ASCE 7-10; Vult=150mph (3-second gust) Vasd=119mph; TCDL=6.0psf; BCDL=6.0psf; h=30ft; Cat. II; Exp C; enclosed; MWFRS (envelope) gable end zone and C-C Exterior(2) zone; cantilever left and right exposed ;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.; Ct=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) All plates are MT20 plates unless otherwise indicated.
6) See HINGE PLATE DETAILS for plate placement.

E-signed by Kevin Freeman

4/19/2018

The professional engineering seal indicates that a licensed professional has reviewed the design under the standards referenced within this document, not necessarily the current state building code. The engineering seal is not an approval to use in a specific state. The final determination on whether a truss design is acceptable under the locally adopted building code rest with the building official or designated appointee.

Universal Forest Products, Inc. 2801 EAST BELTLINE RD, NE
PHONE (616)-364-6161 FAX (616)-365-0060 GRAND RAPIDS, MI 49525

Job	Truss	Truss Type	Qty	Ply	Crestline Homes 315 #261
84927	CC278017	HINGED ATTIC	1	1	Ref.#3157054

7) Provisions must be made to prevent lateral movement of hinged member(s) during transportation.
8) All additional member connections shall be provided by others for forces as indicated.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * 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.
11) Ceiling dead load (5.0 psf) on member(s). 3-4, 8-9, 4-8
12) Bottom chord live load (20.0 psf) and additional bottom chord dead load (0.0 psf) applied only to room. 13-14, 12-13
13) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 511 lb uplift at joint 1, 511 lb uplift at joint 11 and 1 lb uplift at joint 13.
14) Fixity of member 4 - 8 has been changed.
15) This truss is designed in accordance with the 2015 International Building Code section 2306.1 and referenced standard ANSI/TPI 1.
16) Attic space shown is not designed for occupancy.
17) This truss is designed in accordance with the 2012 IBC Sec 2306.1 and referenced standard ANSI/TPI 1
18) Take precaution to keep the chords in plane, any bending or twisting of the hinge plate must be repaired before the building is put into service.
19) The field-installed members are an integral part of the truss design. Retain a design professional to specify final field connections and temporary supports. All field-installed members must be properly fastened prior to applying any loading to the truss. This design anticipates the final set position.
20) Based on: CC278012
21) Revision: IBC2015 version

APPROVED BY
NTA
11/20/2020
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
Kip Whitehead

The professional engineering seal indicates that a licensed professional has reviewed the design under the standards referenced within this document, not necessarily the current state building code. The engineering seal is not an approval to use in a specific state. The final determination on whether a truss design is acceptable under the locally adopted building code rest with the building official or designated appointee.

Setup / Construction Guidelines

4.2.4.4. The shingles are woven through the valley, extending at least 12" beyond the centerline of the valley.

4.3. Pod Tie-In and Accent Dormer Construction

4.3.1. Materials and details are provided to build these items. Use the appropriate state Residential Building Code for all connection requirements.

4.4. Gable Ends / Drip Edge

4.4.1. Drip edge is not installed at the plant on the gable ends of the homes. This is due to the distance at the gable end from the eve to the hinge point of the truss. The drip edge, if installed would be a short piece, which oftentimes is bent during setup and esthetically is not pleasing to the homeowners. The drip edge must be installed and the shingles along the gable end fastened during setup.

To facilitate this, the shingles are not fastened approximately 18" from the gable ends of the roof. Therefore they can be lifted, the drip edge installed in full-length sections, and the shingles secured. [Fasten per the shingle manufacturer's instructions for high wind zones]

4.5. Sealing Roof Penetrations

4.5.1. Nail Holes / Damage

4.5.1.1. Replace the shingle(s). There is no other acceptable repair.

4.5.2. Vents / Chimneys

4.5.2.1. Proper Flashing

4.5.2.1.1. Refer to the flashing and shingle manufacturer's installation instructions for fastening and sealing

5. Windows

5.1. Installation

5.1.1. The procedure for field installing windows is as follows:

5.1.1.1. Ensure window is closed and locked

5.1.1.2. Apply ¼" [minimum] continuous bead of exterior caulking to the backsides of the mounting flange.

Setup / Construction Guidelines

5.1.1.3. Place the window in the opening, resting on the sill and while holding it flat against the opening, install fasteners in the top left and right corners.

5.1.1.4. Verify square installation by diagonal measurements

5.1.1.5. Install fasteners in the bottom left and right corners, then in the center of the top and bottom.

5.1.1.6. Complete the fastening by installing the remaining fasteners, spaced 6" or less.

5.1.1.7. Seal the window from the outside by use of window /door sealant tape, installing the sides first and the top of the window last.

6. Electrical

6.1. Homes are wired in compliance with the National Electrical Code. 12-gauge wire is used as a minimum for receptacle circuits and 14-gauge wire for lighting circuits. Appliances drawing a heavier load [dryers, stoves, etc.] are wired as detailed by the code.

6.2. Electrical circuits that cross over from one section of the home to the other, do so through a junction box that is located behind an access panel whose location is identified on the electrical print.

6.2.1. The wires on one section of the home terminate in a junction box. The wires on the other section are left in the bay directly opposite the junction box in the mating half.

6.2.2. The wires are identified with the number of the circuit that is shown on the electrical print. Each wire in the junction box has a mate in the opposite bay.

6.2.3. The wires are joined by the use of appropriately sized wire nuts that twist the wires together.

6.3. A complete electrical test is performed at MCB on every circuit in each house.

6.3.1. Operational

6.3.2. Polarity

6.3.3. Continuity

6.3.4. High Pot – High potential test to identify any penetrations of the electrical cable by a staple or nail

Setup / Construction Guidelines

6.3.5. Ground Fault

6.3.6. Arc Fault

7. Plumbing

7.1. With the exception of some 2nd floor fixtures all drain lines [DWV plumbing] are dropped straight through the floor of the house for interconnection by a licensed plumber after the house is set. The work that is done on site is identified in the plumbing diagram for the house by dashed lines.

7.1.1. These drop outs and the fixtures they're attached to are tested at the factory for leaks. However they may loosen due to movement during transportation, setting or while being plumbed after setup.

Therefore, it is important that after interconnection of the DWV is complete that it be tested as required by the International Residential Plumbing Code Section 312.2.

7.1.2. The most common problems encountered with these interconnections are:

7.1.2.1. A pipe, which was installed in the wall as a chase for 2nd floor electrical or refrigerant lines, is plumbed as a vent pipe. Result: Sewer smell in the 2nd floor.

7.1.2.2.A commode's wet vent is not plumbed. Result: Bubbling when flushed

7.2. Supply line plumbing consists of 1", ¾" and ½" lines. These are leakage tested at the factory to ensure proper operation.

7.2.1. Mating male and female connections are installed at the marriage walls when there are wet sections on more than one portion of the home.

7.2.2. Common problems encountered with the supply lines are:

7.2.2.1.Water not being hot enough for the homeowner in the shower/tub. This is typically due to a scald-proof faucet, which the homeowner must adjust to their liking.

7.2.2.2.Shut-off valves not being open either under a fixture or at the hot water tank.

Setup / Construction Guidelines

8. Mechanical

8.1. Given the requirements of the area where the home may be located and the preference of the builder or homeowner, either perimeter floor registers or overhead registers may be installed. In either case both supply and return air must be properly sized and ducted.

8.2. When applicable, CCB installs a typical number of supply registers with flex duct run-offs and return air locations. No other HVAC components are installed. This is subject to change based on the model series, the floor plan, and the customer order. All equipment is sized based on loads calculated in accordance with ACCA Manual D or SMACNA Installation Standards for Residential Heating and Air Conditioning Systems. Additional supply registers may be required as determined by the load and duct calculations. These calculations have not been performed by CCB and must be performed by a heating contractor licensed by the applicable State Board of Examiners of Plumbing, Heating, and Fire Sprinkler Contractors.

8.3. Dependent upon the layout, the size of the home, the state and local jurisdictions, and the roof truss selected, the manner in which either the return air or supply air is ducted may vary. It is important that the HVAC Licensed Installer follows the duct diagram provided with the home as close as possible to avoid any alterations in the register quantities and locations.

8.4. It is not uncommon after a down draft perimeter floor system is installed to have a homeowner state that they have no airflow from some of their registers. This normally is due to the flex from the register not being connected to the trunk line.

8.4.1. In the section of the home where the furnace or air handler would normally be located, the flex duct that connects to the boots of the registers is left in the belly of the house for transportation. This is due to the short length normally required to connect with the trunk line. The area where they are located is marked with a painted circle. A hole needs to be cut in the silver board in that location and the flex duct pulled out to make that connection. The other section of the house has a box of flex secured to the frame for transportation.

9. Uncovered Decks / Porches

9.1. Uncovered decks or porches must be built at least 6" below the threshold of the door. Failure to do this **voids the warranty** of the door manufacturer against deterioration and leakage of the door.

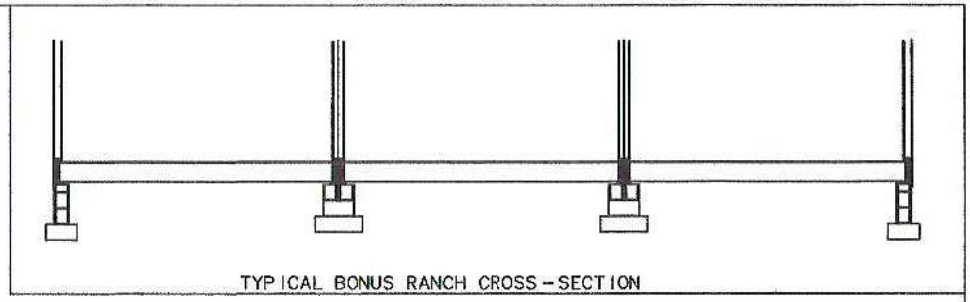
APPROVED BY
NTA
11/20/2020
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws
Kip Whitehead

Crestline Custom Builders
5880 Crestline Road
Louisburg, NC 28352
1-800-772-0195

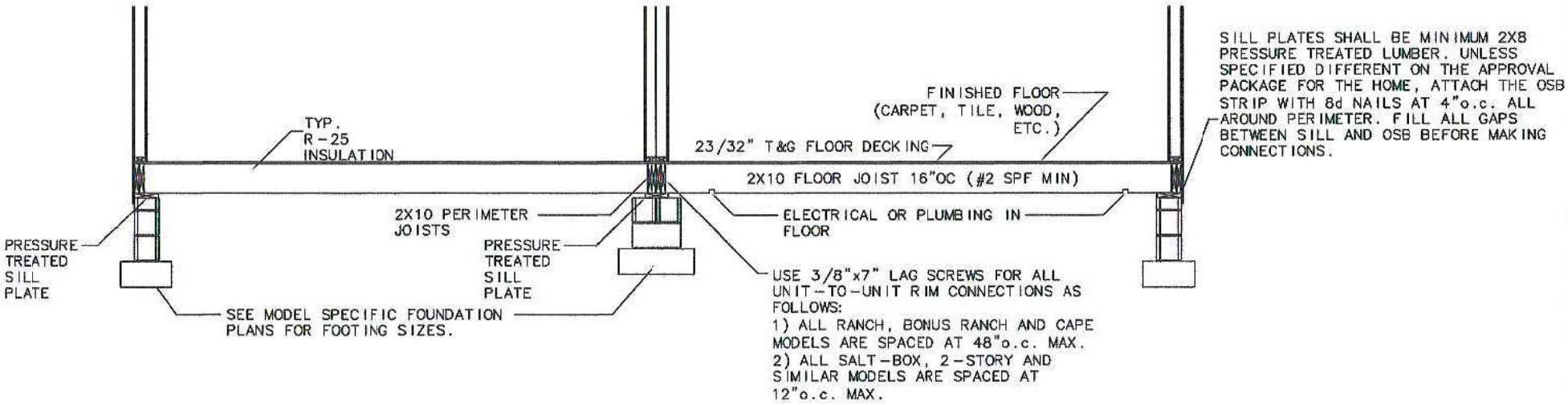
REV.	DRAWN	DATE

TYPICAL FLOOR

NOTE:
REFER TO THE MODEL SPECIFIC FOUNDATION PLAN AND/OR THE SHEAR WALL CALCULATIONS FOR OTHER RELATED DETAILS AND FOR ALL APPLICABLE, HIGH WIND AND SHEAR-DESIGN, TIE-DOWN REQUIREMENTS.



TYPICAL BONUS RANCH CROSS-SECTION



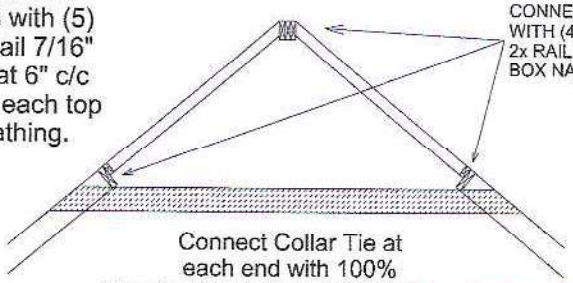
NOTES:
1) FLOOR JOISTS SHALL BE A MINIMUM OF 18" ABOVE THE GROUND.
2) WOOD GIRDERS SHALL BE A MINIMUM OF 12" ABOVE THE GROUND.
3) WOOD SIDING SHALL BE A MINIMUM OF 6" ABOVE THE GROUND.
4) ACCESS PANELS ARE PROVIDED IN FLOORS AND/OR CEILINGS FOR PLUMBING & ELECTRICAL CONNECTIONS BETWEEN FLOORS.
5) 2x12's AND 9 1/4" WEB JOISTS ARE OPTIONAL.
6) REFER TO THE CROSS-SECTION IN THE APPROVAL PACKAGE FOR ADDITIONAL INFORMATION.

NOTE!
REFER TO THE INSTALLATION INSTRUCTIONS FOR UTILITY CONNECTIONS BETWEEN SECTIONS:
1) PLUMBING-PGS. IN-13.1 - 13.2
2) MECHANICAL-PGS. IN-13.2 - 13.3
3) ELECTRICAL-PG. IN-13.1. ALSO, WHERE APPLICABLE, SEE THE NOTES ON THE ELECTRICAL PRINT TO DETERMINE THE WIRE CONNECTIONS FROM THE 2ND FLOOR SUB-PANEL TO THE 1ST FLOOR MAIN PANEL BOX.

Job	Truss	Truss Type	Qty	Ply	CRESTLINE/MANIS CUSTOM BUILDERS
PER201558 IN-15C	CAPE CONNECTION DETAILS	HINGED ATTIC	1	1	Standard Cape Connection Details

CONNECTION DETAILS FOR 7/12 #231 and #261 STANDARD (2 BOX) CAPE TRUSSES. Universal truss CC124361 and CC278025 150 MPH Vult

Strap across top chord field joints with 1.5" x 18" x 26 gauge straps attached with (6) .120" x 1.5" roofing nails each end or Simpson LSTA12 straps with (5) .131" x 1.5" nails each end or nail 7/16" sheathing with .131" x 3" nails at 6" c/c into edge rails and 4 nails down each top chord before butt joint in sheathing.



CONNECT 2x RAILS TO EACH END OF CHORDS WITH (4)-.131" x 3" BOX NAILS AND CONNECT EACH 2x RAIL TO THE OTHER WITH (2)-ROWs OF .131" x 3" BOX NAIL AT 8" c/c.

Connect Collar Tie at each end with 100% Structural Adhesive CONTACT and (8) .131" x 3" nails. See Universal Bulletin 05-02

APPROVED BY NTA 11/2/2020

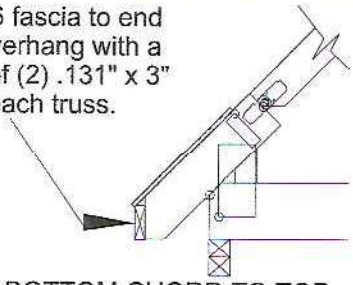
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.

Kip Whitehead

COMMONWEALTH OF VIRGINIA PHILLIP E. ROBBINS Lic. No. 025988 PROFESSIONAL ENGINEER

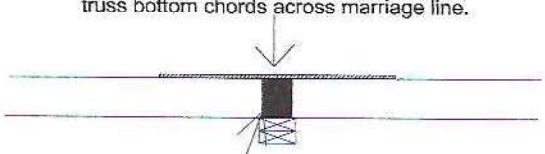
SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No 15600 PHILLIP EDWARD ROBBINS

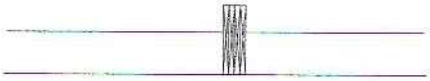
Attach 2x6 fascia to end of truss overhang with a minimum of (2) .131" x 3" nails each truss.



ATTACH BOTTOM CHORD TO TOP PLATE WITH (2) SIMPSON SDWC15600 OR SDS25600 TOE-SCREWS OR (1) SIMPSON MTS12.

Marriage Line cape truss floor tension connection use (1) Simpson MSTA36 strap centered on truss bottom chords across marriage line.





Face nail inner ply of adjacent header into end grain of truss bottom chord with (6) .131" x 3" at marriage line each box. For 2-ply marriage beam face nail ply-to-ply with (3) rows of .131" x 3" nails at 12" c/c. For 3-ply and 4-ply marriage beams laminate beams together with (2) rows of Simpson SDS 1/4" x 4.5" (3-ply) or 1/4" x 6" (4-ply) screws at 12" c/c.

Connect beam to studs at 48" c/c with (1) 1.5" x 18" x 26 ga. strap and (6) 1" x 1.5" x 16 gauge staples each end.

Raised marriage beam connection
Attach 1-ply or 2-ply LVL to truss bottom chord with (5) Simpson SDWC15600 screws.
Fasten LVL to LVL in field with (2) rows of SDWC15600 screws at 12" c/c face to face. Maximum 1.5" gap. Gaps shall be fully shimmed at fastener locations
OR
use (1) Simpson MSTA36 strap centered on truss bottom chords across marriage line.

KNEE WALL

OPTION 1

30.0 DEG.

(1) SIMPSON SDS 1/4" X 6" OR SDWC15600 TOE-SCREWS

2"

1-1/2" MAX.

BOTTOM CHORD

KNEE WALL

OPTION 2

SIMPSON MTS12 (7) .148" x 1.5" NAILS EACH END.

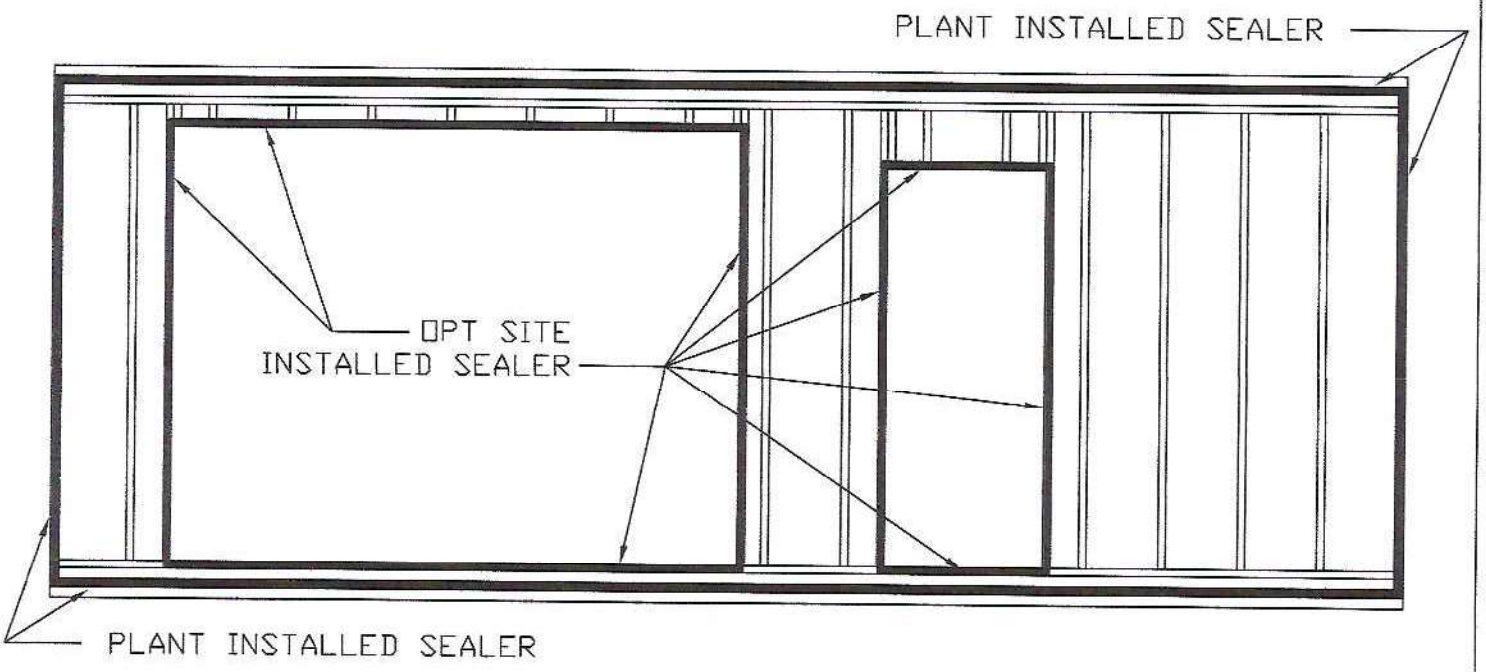
BOTTOM CHORD

NORTH CAROLINA PROFESSIONAL SEAL 20809 ENGINEER PHILLIP EDWARD ROBBINS

07/17/2020

ON-SITE APPLICATION OF MATING WALL INSULATION SEALER

CRESTLINE CUSTOM BUILDERS INSTALLS AN INSULATION SEALER THAT IS USED TO CREATE A BARRIER FROM OUTSIDE AIR INFILTRATION. THIS WILL REDUCE THE LOSS OF CONDITIONED AIR FROM INSIDE THE HOUSE AND GIVE THE CUSTOMER A MORE ENERGY EFFICIENT HOME.
THE SEALER IS ATTACHED TO THE MATING WALL EXTERIOR EDGES AS DEPICTED BY THE BOLD OUTLINE IN THE DETAIL SHOWN BELOW. BEFORE THE MULTIPLE SECTIONS OF THE HOME ARE JOINED TOGETHER, INSURE THE SEALER IS INTACT AROUND THE ENTIRE PERIMETER OF THE HOME. AFTER THE SECTIONS ARE TOGETHER, CHECK FOR ANY VOIDS THAT MAY HAVE OCCURRED AND PROMPTLY FILL THEM WITH SEALER, INSULATION, OR AN APPROVED CAULKING MATERIAL. THE SAME MAY BE DONE AT ALL MATING WALL PENETRATIONS, DOORWAYS, AND OPENINGS AT THE DISCRETION OF THE BUILDER OR HOMEOWNER, BUT IS NOT REQUIRED. MATERIALS ARE PROVIDED BY OTHERS.



APPROVED BY
NTA
11/20/2020
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
Kip Whitehead

MODULAR	TYPICAL
DWG. TITLE: MATING WALL INSULATION SEALER	
MODEL SIZE: N/A	REV'D.: 2/23/18
SCALE: NONE	SHT.: 1 OF: 1

MANIS & CRESTLINE CUSTOM BUILDERS
5880 CRESTLINE RD.
LAURINBURG, NC 28352
1-800-772-0195

CRESTLINE CUSTOM BUILDERS

5880 Crestline Road Laurinburg, NC 28352
Phone: (800) 772-0195 Fax: (910) 610-1497

DATE: 10/29/08

Crestline's standard home is designed and built to a 150 MPH ultimate wind speed criteria, which is defined by the International Residential Code [IRC]. With additional modifications, they also comply with the 150 MPH ultimate wind speed criteria. The states' adoption of the IRC as the accepted building code has affected parts of the design and some of the components and fastening schedules for a Crestline home. The following pages, which consist of detailed setup instructions, identify the significant changes that must be adhered to. There are fourteen (14) specific items throughout the following pages and are addressed as follows:

1. Staples are no longer allowed as a means of fastening shingles. Standard fastening criteria requires the use of galvanized or stainless steel, aluminum or copper nails. Given that our minimum design is to a 150 MPH wind zone, six (6) fasteners must be used per shingle.

2. N.C. Only: This note is to alert you to the fact that any home, which is located in a 150 MPH wind zone in North Carolina, must comply with the requirements of the Coastal and Flood Plain Standards, Chapter 45 of the N.C. IRC, regardless of where it is located. This directly affects shingle fastening, item #3.

3. In a 150 MPH wind zone, shingles must be fastened with a "hot dipped galvanized" nail. There is a 1 1/4" hot dipped galvanized nail sold under the name of "Mave" which can be shot through a Senco nail gun. This is the nail we presently are using at Crestline for this application.

4. Pages IN-18 and IN-20 show the fastening at the ridge and fold-back for 7/12, 9/12, and 12/12 pitch roofs in 150 MPH wind spe 150 MPH wind speed zones.

5. Page IN-18 explains the fastening of the collar ties with the exception of those on either side of a dormer. [Refer to item #14].

6. Page IN-18 requires that the bottom chord of the trusses at the marriage line, on 7/12, 9/12, and 12/12 pitch roofs, be decked and secured with both nails and GLUE.

7. Page IN-18 also shows multiple options on how to secure the knee walls on 7/12, 9/12, and 12/12 pitch roofs to the bottom chord of the truss. However, one (1) of the three (3) must be used for each and every knee wall.

8. Page IN-19 shows how a single 4x8x7/16" piece of sheathing must be secured with

nails to either the top or bottom of the collar ties at each gable end.

9. Page IN-19 identifies 1/8" as the amount of allowable gap between the end-wall and top chord of the truss before shimming is required.

10. Page IN-19 details the securement of the end-wall to the top chord of the truss.

11. Page IN-19 defines the shimming [1/8" maximum gap] and fastening in the area where the end-wall is secured to the fold-back.

12. Page IN-19 also contains the following collar tie details:

- A collar tie must be secured to each stud on the end wall and the top chord of the truss.

- Two inches of blocking must be secured to the end truss in order that the collar tie can be fastened.

13. Page IN-20 explains how to secure the dormers to the roof truss framing on the house with the lag screws provided; which were taped to one of the dormer rafters. Each individual dormer has it's own quantity of screws necessary for attaching that specific dormer.

GABLE END FRAMING

7/ 12, 9/12 AND 12/12 ROOF PITCH

Roof Truss

WINDOWS MAY NOT BE AVAILABLE FOR ALL PITCH TYPES.

ATTACH 4' DEEP X WIDTH OF OPENING X $\frac{7}{16}$" 24 / 16 APA RATED SHEATHING TO TOP OR BOTTOM EDGE OF COLLAR TIES, CENTERED WITH (1) ROW OF .099 X 2 $\frac{1}{4}$" NAILS AT 6" C/C.

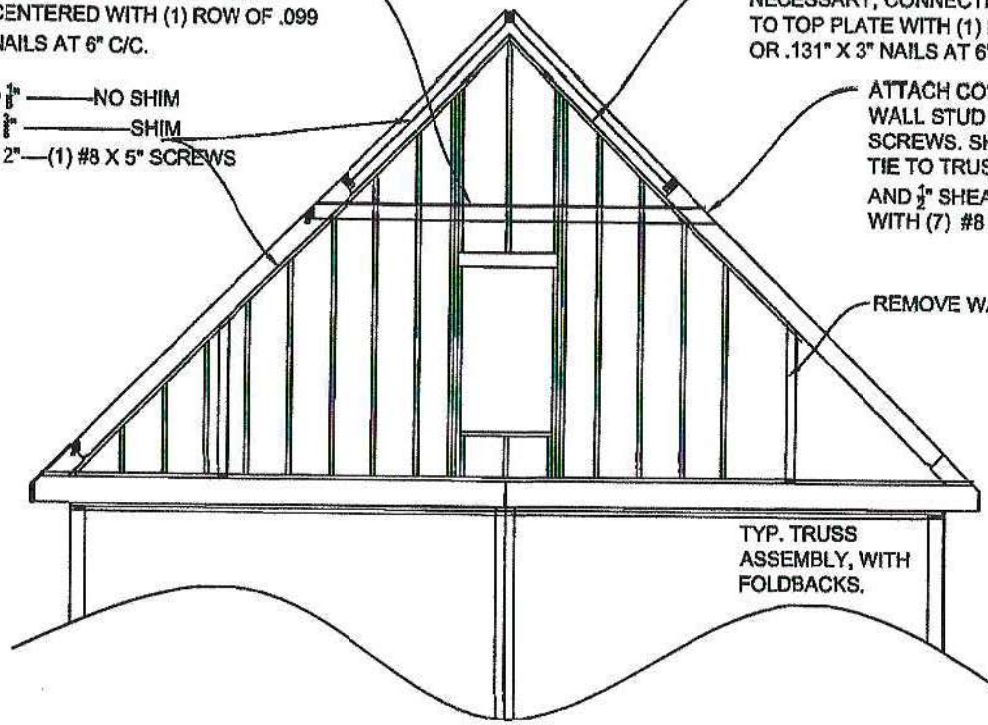
0" TO $\frac{1}{8}$" ——NO SHIM
$\frac{1}{8}$" TO $\frac{1}{2}$" ——SHIM
$\frac{1}{2}$" TO 2"—(1) #8 X 5" SCREWS

SHIM WITH 2 X 4 AND $\frac{1}{2}$" SHEATHING AS NECESSARY, CONNECTED TO TRUSS AND TO TOP PLATE WITH (1) ROW OF 16d NAILS OR .131" X 3" NAILS AT 6" C/C

ATTACH COLLAR TIE TO EACH END WALL STUD WITH (2) # 8 X 3" SCREWS. SHIM ENDS OF COLLAR TIE TO TRUSS WITH 2 X 4 BLOCKS AND $\frac{1}{2}$" SHEATHING AND ATTACH WITH (7) #8 X 5" SCREWS EACH END.

CONNECT EACH STUD TO PLATES WITH (3) .131" X 3" NAILS EACH END

REMOVE WALL POSTS



TYP. TRUSS ASSEMBLY, WITH FOLDBACKS.

SECURE WALLS TO TRUSS USING (1) ROW 16d NAILS OR .131" X 3" @ 6" C/C TOP AND BOTTOM.

TOP AND BOTTOM WALL PLATE SPLICES MAY BE ALIGNED FOR GABLE END FRAMING. PLATES MAY BE DOUBLE OR SINGLE.

GABLE WALL ASSEMBLY AND SECUREMENT APPLIES TO 7 / 12, 9 / 12, AND 12 / 12 TRUSS DESIGN.

APPROVED BY
NTA
11/20/2020
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
Kip Whitehead

ALL FRAMING DIMENSION VALUES ARE DEPENDENT ON THE APPLICATION.

150 Vult WIND SPEED

GEORGIA REGISTERED No 27656 PROFESSIONAL ENGINEER PHILLIP E. ROBBINS

COMMONWEALTH OF VIRGINIA PHILLIP E. ROBBINS Lic. No. 025988 PROFESSIONAL ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 20889 ENGINEER PHILLIP EDWARD ROBBINS

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 16598 PHILLIP EDWARD ROBBINS

GABLE END FRAMING
30 PSF GROUND SNOW LOAD AND 130 MPH ,
EXPOSURE C, HEIGHT = 30'
DATE : 11 / 03 / 08

MANIS AND
CUSTOMER: CRESTLINE CUSTOM BUILDERS
JOB # : CRC 08135
DISCRIPTION: GABLE END FRAMING
PREPARED BY : PIR

P.E. ROBBINS,P.E.
105 WEST MAIN ST.
VICTORIA, ILLINOIS
61485