

CERTAINTED LANDMARK / TAMCO HERITAGE SHINGLES

FIRE RESISTANCE:

- UL 790 CLASS A FIRE RESISTANCE
- UL CERTIFIED TO MEET ASTM E108 TYPE 1

SIDING CHART	
CRANE TRIPLE 6 & DOUBLE 7 SOLID CORE SIDING	BOTTOM ROW OF SIDING SHIPPED
D4, D4.5 & D5 VINYL SIDING	BOTTOM 2 ROWS OF SIDING SHIPPED

VENTILATION CALCULATIONS		
RIDGE VENT:	0.139	NET FREE AIR PER SQ.FT.
58	LINEAL FOOT =	8.06 SQFT. NET FREE AIR
VENTILATED SOFFIT:	0.041	NET FREE AIR PER SQ.FT.
124	LINEAL FOOT =	5.08 SQFT. NET FREE AIR

EXTERIOR PORTFOLIO VINYL SIDING & SOFFIT

FLAME SPREAD-PVC: <25 (ASTM E84) PER SECTION R302.1.2 OF THE 2018 NORTH CAROLINA RESIDENTIAL CODE

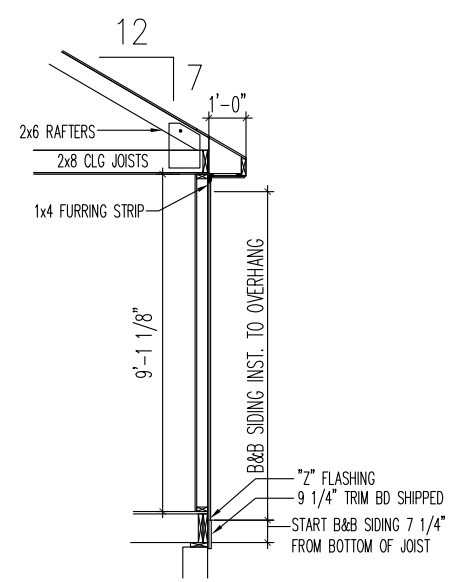
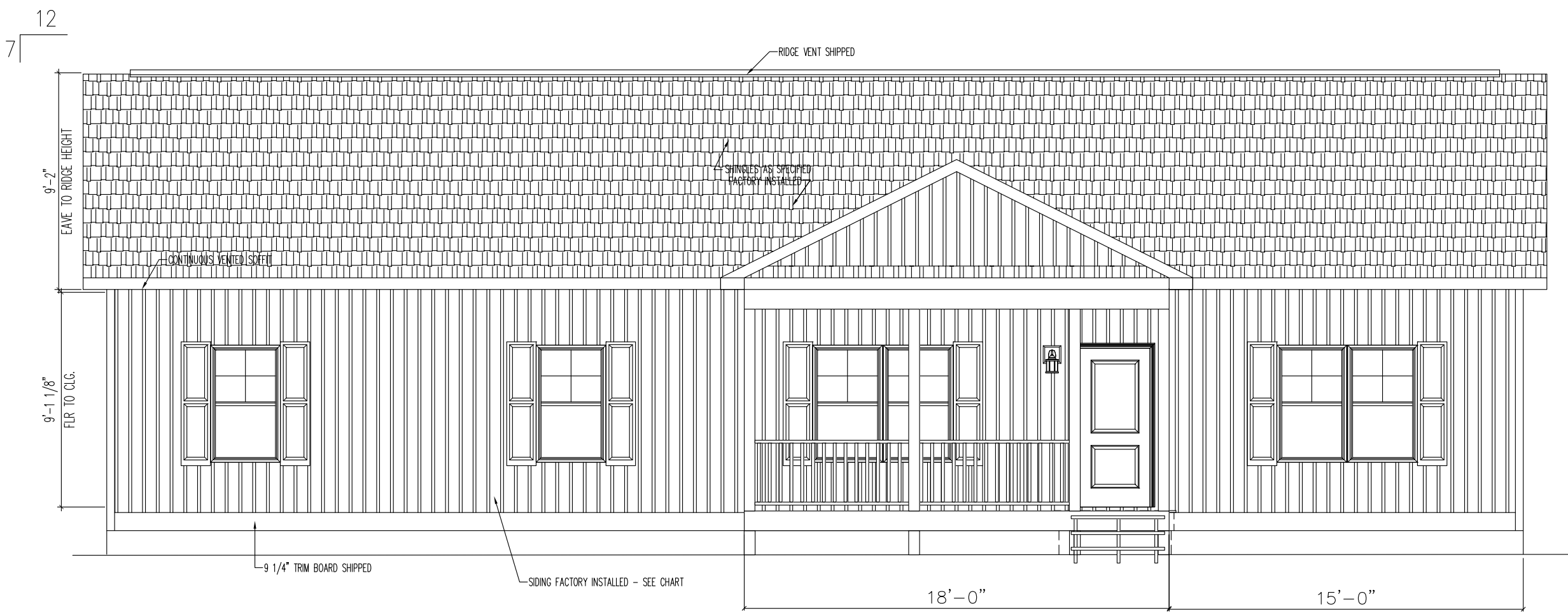
SMOKE DENSITY-PVC: <450 (ASTM E84)

NOTE:

SOFFIT MATERIALS FOR THIS UNIT ASSUMES THAT THE BUILDING FACE WILL BE 10 FT. OR GREATER FROM THE PROPERTY LINE WHEN INSTALLED ON SITE. WHERE THE BUILDING FACE IS LESS THAN 10 FT. FROM THE PROPERTY LINE, THE UNDERLAYMENT MATERIALS AND VENTILATION IN ACCORDANCE WITH SECTION R302.1.1 OF THE NORTH CAROLINA RESIDENTIAL CODE, MUST BE PROVIDED & INSTALLED AT THE SITE WITH INSPECTION AND APPROVAL BY THE LOCAL JURISDICTION.

"Z" FLASHING SHIPPED LOOSE FOR SITE INSTALLATION

**"Z" FLASHING - BAND BOARD**



OMIT SALEM TRIM

**FRONT ELEVATION**

SCALE: 3/16" = 1'-0"

1100 RIVES ROAD, MARTINSVILLE, VA 24112  
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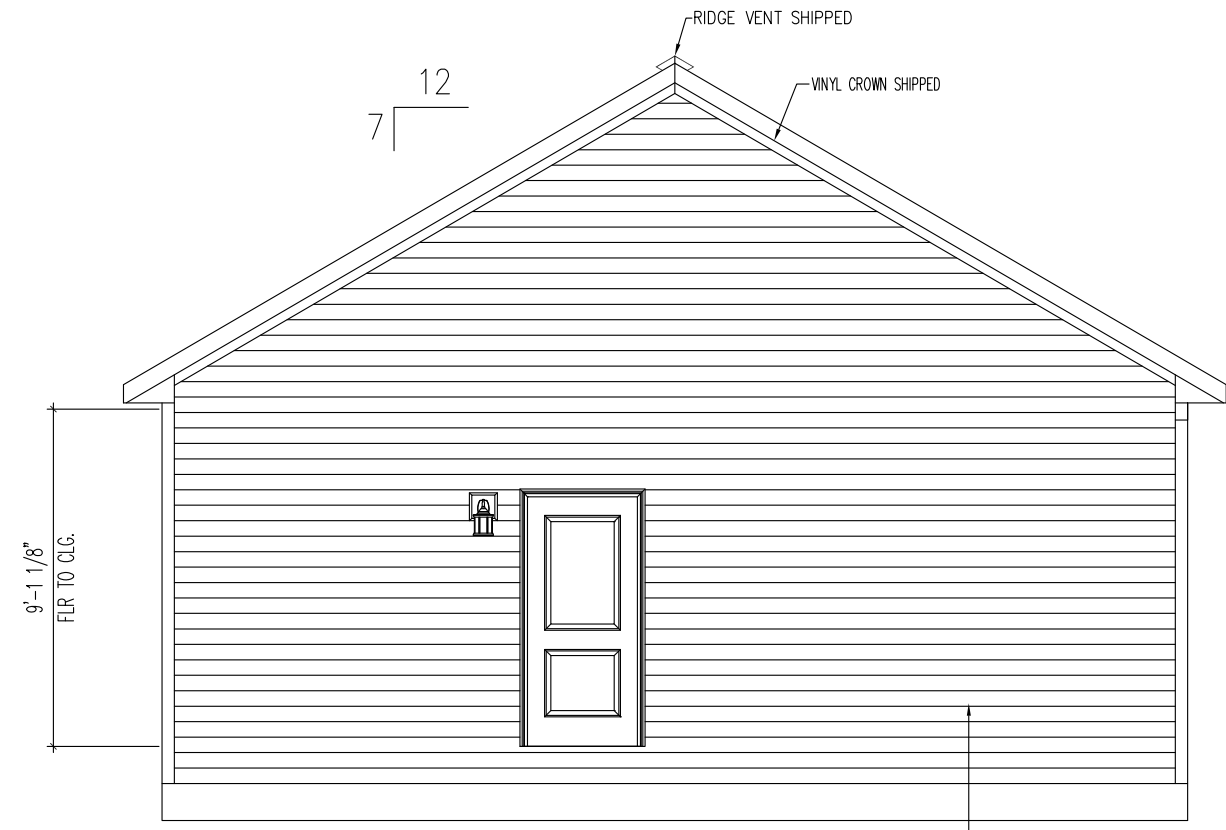
NOTE: ONLY ONE HOUSE MAY BE BUILT UTILIZING THE PLANS THAT ARE DESIGNATED FOR THIS CONTRACT JOB

PURCHASER: HOMES BY VANDERBILT  
JOB NO.: NS4-24  
CONTRACT NO.: 196879

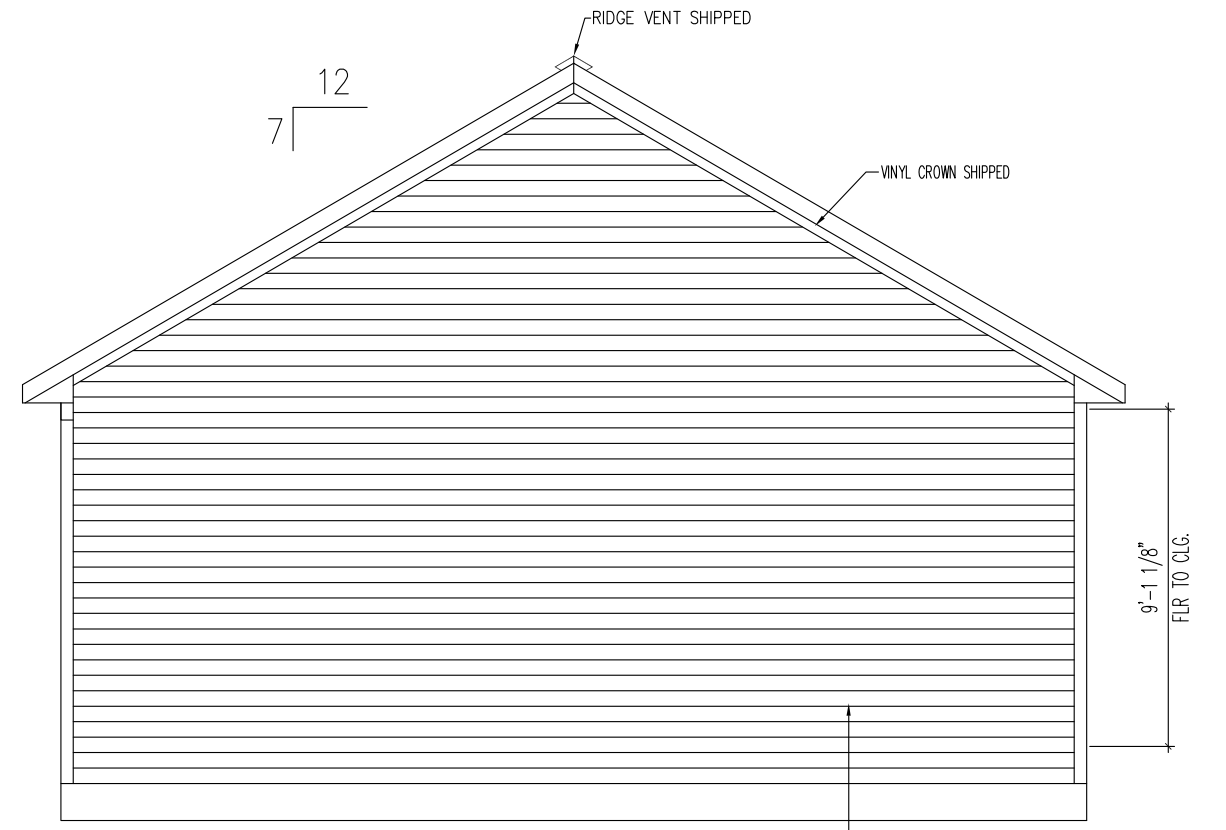
BLACKLINE DATE & BY: 6/25/24 CR  
PLAN REVISION DATE: 7/26/2024 BKK01  
PLOTTED: 7/26/2024 2:48 PM

PLAN NAME: HEARTLAND II  
COLLECTION/SERIES: HEARTLAND  
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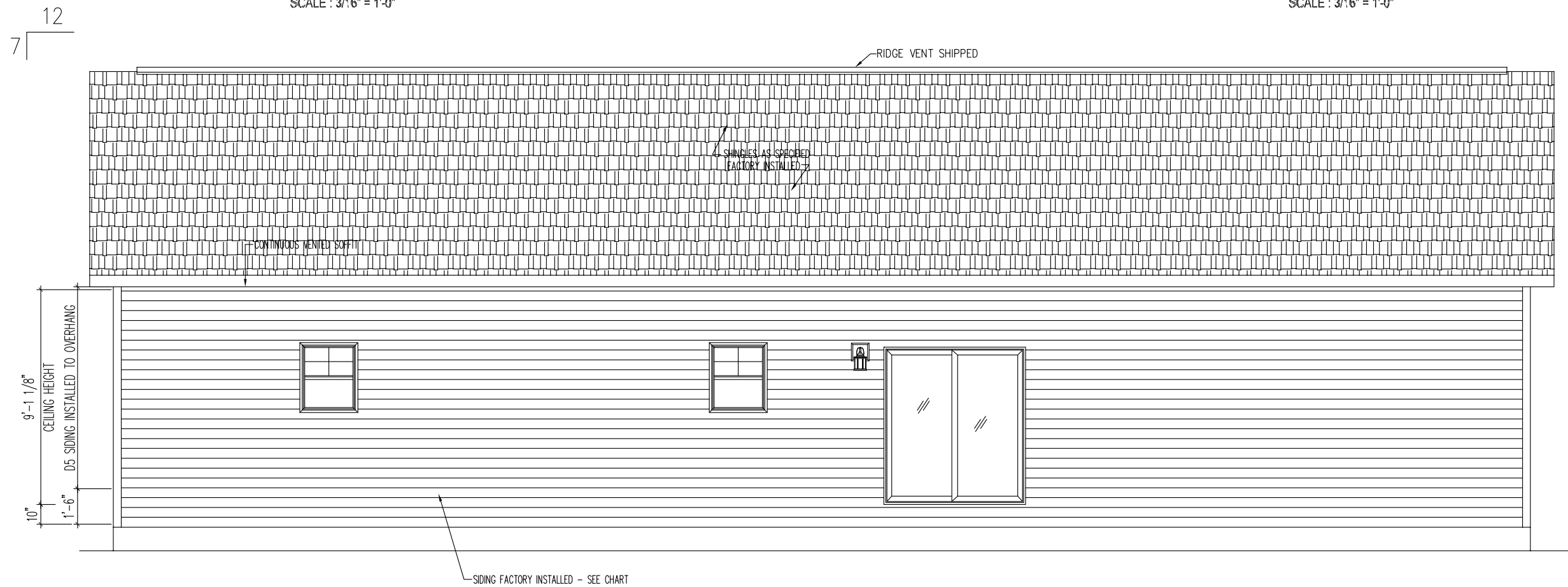
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**LEFT ELEVATION**  
SCALE : 3/16" = 1'-0"

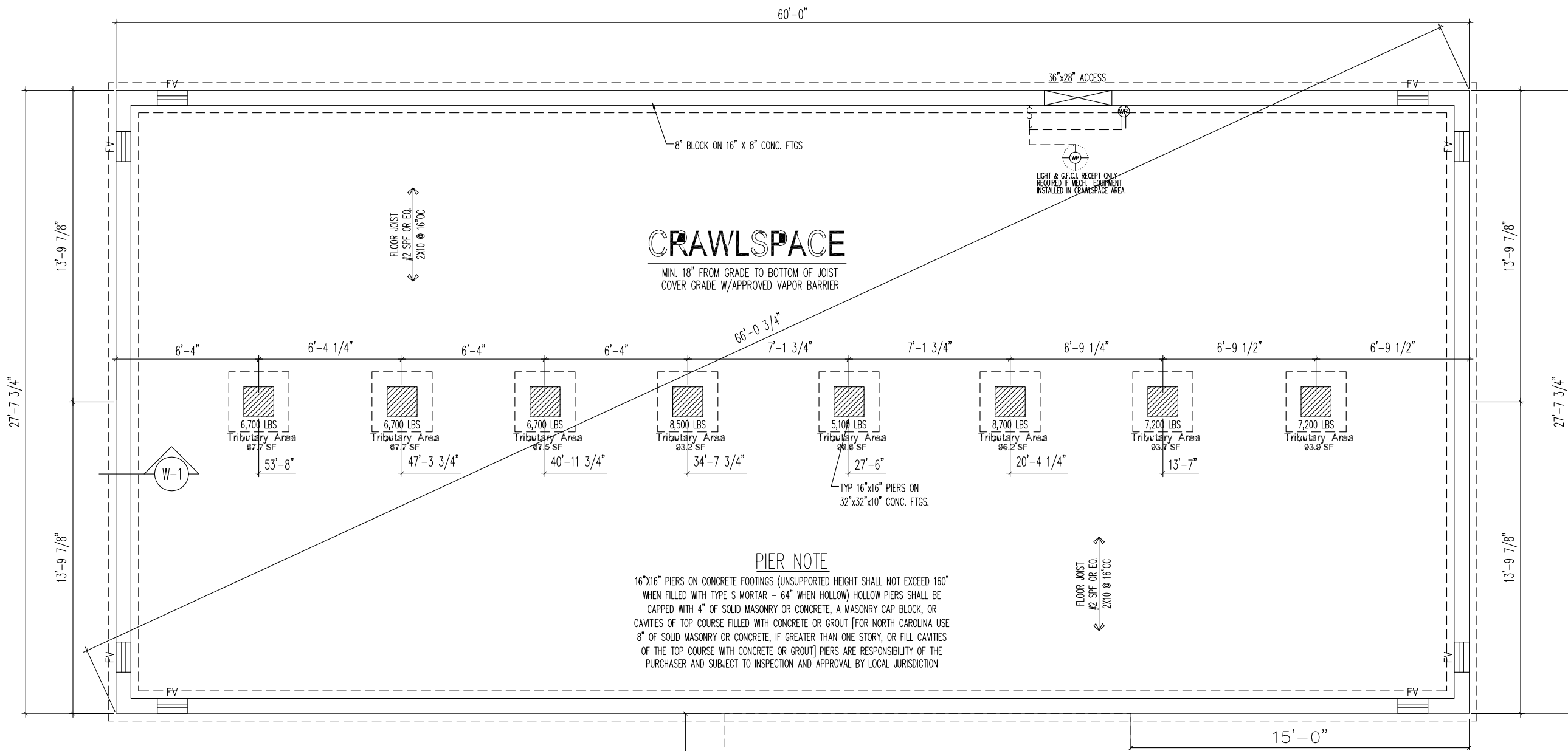


**RIGHT ELEVATION**  
SCALE : 3/16" = 1'-0"



**REAR ELEVATION**  
SCALE : 3/16" = 1'-0"

PLAN NAME: HEARTLAND II  
 COLLECTION/SERIES: HEARTLAND  
 PURCHASER: HOMES BY VANDERBILT  
 JOB NO.: NS4-24  
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### CRAWLSPACE

MIN. 18" FROM GRADE TO BOTTOM OF JOIST  
COVER GRADE W/APPROVED VAPOR BARRIER

#### PIER NOTE

16"x16" PIERS ON CONCRETE FOOTINGS (UNSUPPORTED HEIGHT SHALL NOT EXCEED 160" WHEN FILLED WITH TYPE S MORTAR - 64" WHEN HOLLOW) HOLLOW PIERS SHALL BE CAPPED WITH 4" OF SOLID MASONRY OR CONCRETE, A MASONRY CAP BLOCK, OR CAVITIES OF TOP COURSE FILLED WITH CONCRETE OR GROUT [FOR NORTH CAROLINA USE 8" OF SOLID MASONRY OR CONCRETE, IF GREATER THAN ONE STORY, OR FILL CAVITIES OF THE TOP COURSE WITH CONCRETE OR GROUT] PIERS ARE RESPONSIBILITY OF THE PURCHASER AND SUBJECT TO INSPECTION AND APPROVAL BY LOCAL JURISDICTION

#### TYPICAL CRAWLSPACE NOTES:

- IT SHALL BE THE RESPONSIBILITY OF THE PURCHASER TO HAVE THE FOUNDATION INSTALLED BY OTHERS PER ALL STATE AND LOCAL CODES (SUBJECT TO INSPECTION BY AUTHORITY HAVING JURISDICTION).
- THE FOUNDATION IS DESIGNED FOR A FAIRLY LEVEL SITE WITH A 2,000LB SOIL BEARING CAPACITY. IT SHALL BE THE RESPONSIBILITY OF THE PURCHASER TO HAVE THE FOUNDATION DESIGNED BY A PROFESSIONAL ENGINEER IF REQUIRED BY THE A.H.J.
- INSTALLATION OF ANY ELECTRICAL SHALL BE THE RESPONSIBILITY OF THE PURCHASER AND MUST CONFORM TO CURRENT NATIONAL ELECTRICAL CODE.
- PIERS DESIGNED WITH 2,000 PSI COMPRESSIVE STRENGTH VALUE
- REFER TO COVER SHEET FOR OTHER INFORMATION.
- HOSE BIBS SHALL BE RESPONSIBILITY OF THE PURCHASER, WHEN NOT FACTORY INSTALLED

#### PIER & FOOTING SIZE FOR SUPPORT OF GIRDERS - TABLE R403.1(2)

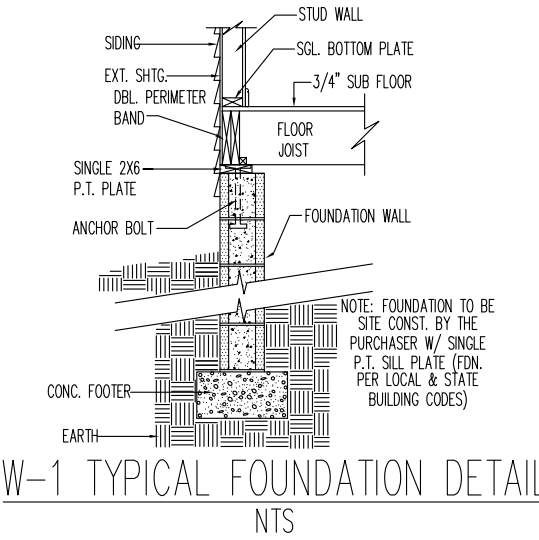
TRIBUTARY AREA	1 (ONE) STORY		2 (TWO) STORY	
	PIER	FOOTING	PIER	FOOTING
50	8" x 16"	1'-4" x 2'-0" x 8"	8" x 16"	1'-4" x 2'-6" x 8"
100	8" x 16"	1'-4" x 2'-0" x 8"	8" x 16"	2'-0" x 2'-0" x 10"
150	8" x 16"	2'-0" x 2'-0" x 8"	16" x 16"	2'-8" x 2'-8" x 10"
200	8" x 16"	2'-4" x 2'-4" x 10"	16" x 16"	3'-0" x 3'-0" x 10"
250	-	-	16" x 16"	3'-4" x 3'-4" x 1'-0"
300	-	-	16" x 16"	3'-8" x 3'-8" x 1'-2"

*EACH CORNER OF FOUNDATION TO HAVE ONE VENT WITHIN 3'-0"*	
CRAWLSPACE VENTILATION	
VENTILATION BASED ON 1 SQ.FT. VENTILATION FOR EVERY 1500 SQ.FT. OF AREA. CRAWLSPACE AREA TO BE COVERED W/ APPROVED VAPOR BARRIER. ** EACH FOUNDATION VENT HAS 50 INCHES OF NET FREE AIR PER VENT	
1543.7	SQUARE FOOTAGE OF AREA
1.0291	SQUARE FOOTAGE REQUIRED VENTILATION
8	NUMBER OF VENTS
3.44	SQUARE FOOTAGE OF VENTILATION PROVIDED

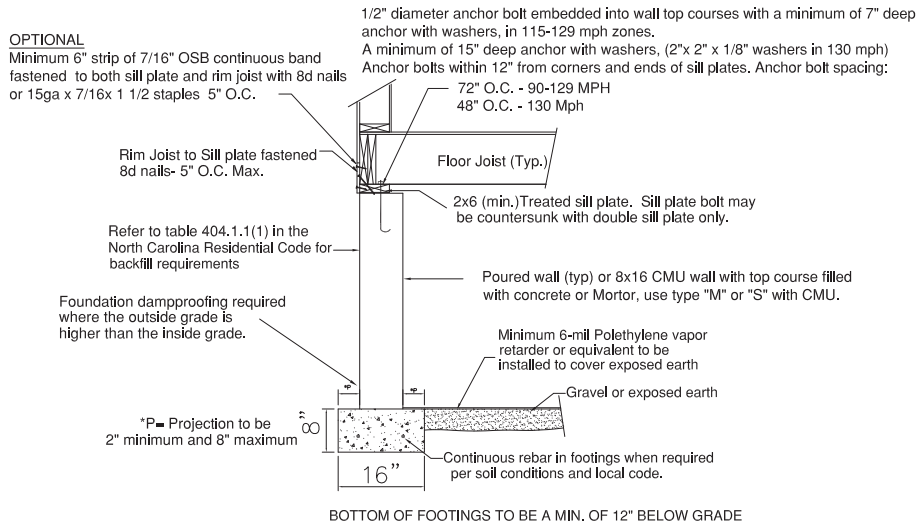
IF FACTORY INSTALLED EXTERIOR RECEPTACLES DO NOT MEET MINIMUM REQUIREMENTS OF THE CURRENT BUILDING CODE, BUILDER MUST SITE INSTALL A FRONT AND REAR RECEPTACLE PER CURRENT BUILDING CODE SUBJECT TO INSPECTION BY LOCAL JURISDICTION

## FOUNDATION PLAN

SCALE: 3/16" = 1'-0"

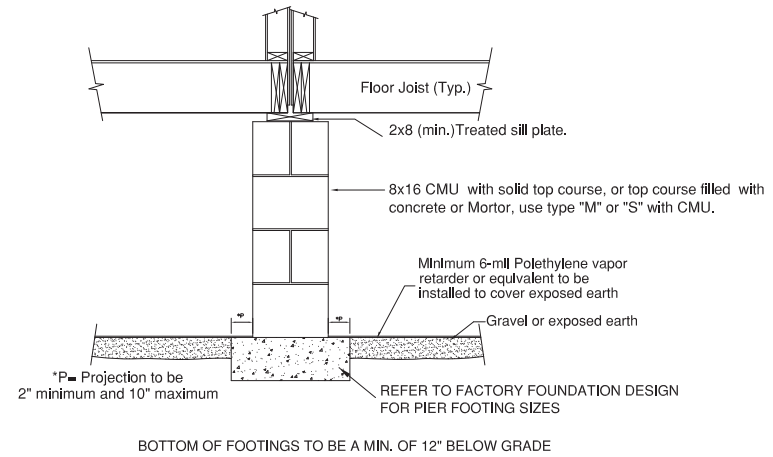


### N.C. Foundation Cross Section- 90 to 130 Mph 1-1/2, 2, OR 2-1/2 STORY



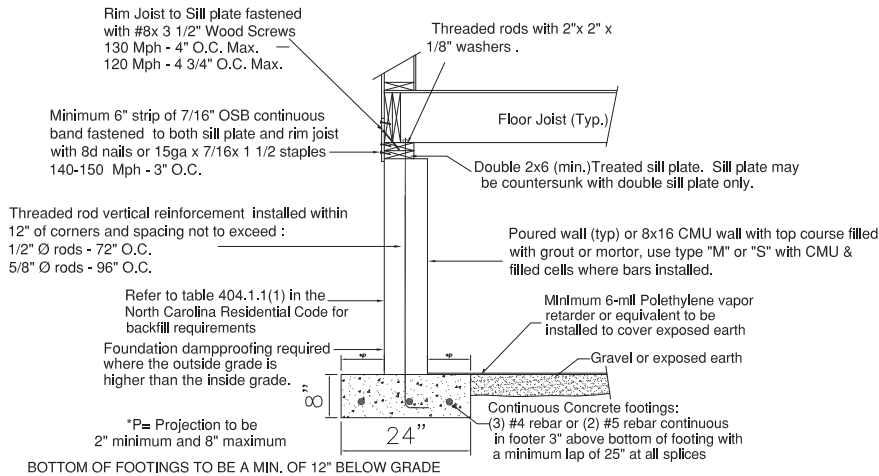
Applicable to Seismic Zone C with minimum soil bearing capacity of 1500 PSF. Concrete 2500-PSI min. Wind speed up to 130 Mph Exp. C. Refer to Chapter 4 in the North Carolina Residential Code for specific foundation application or CMU Construction. Refer to the wind bracing pages for additional tie down and braced wall requirements.

### N.C. Pier Cross Section- All Zones- UP TO 3 STORIES



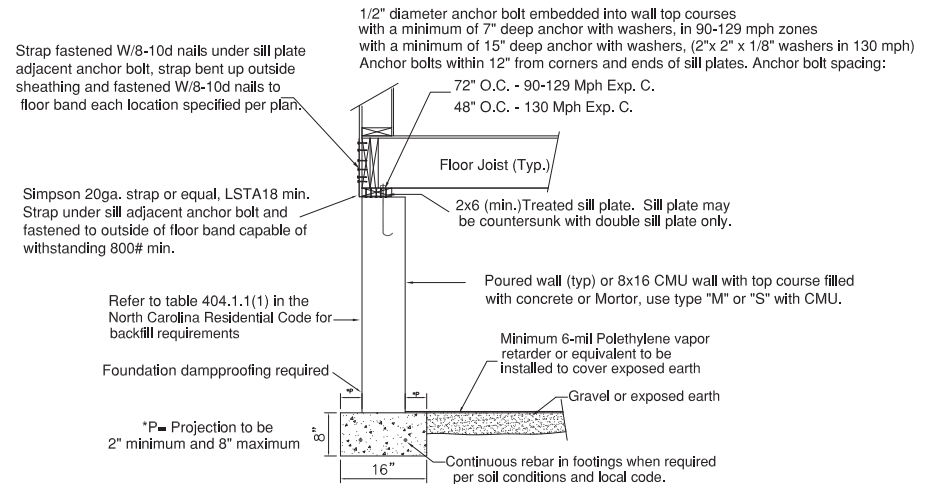
R404.1.5.4 Piers. The unsupported height of masonry piers shall not exceed 10 times their least dimension. When structural clay tile or hollow concrete masonry units are used for isolated piers to support beams and girders, the cellular spaces shall be filled solidly with concrete or Type M or S mortar, except that unfilled hollow piers may be used if their unsupported height is not more than four times their least dimension. When hollow masonry units are solidly filled with concrete or Type M or S mortar, the allowable compressive stress may be increased as provided in Table 606.9.

### N.C. High Wind Foundation Cross Section- 140 to 150 Mph 1-1/2, 2, OR 2-1/2 STORY



Applicable to Seismic Zone C, D0, D1 with minimum soil bearing capacity of 2500 PSF. Concrete-2500 PSI min. Wind speed up to 130 Mph maximum. Refer to wind bracing pages for additional tie down requirements at braced wall locations. Refer to Chapters 4 & 45 in the North Carolina Residential Code for specific foundation application or CMU Construction. REFER TO FIGURE R4504.2(B) FOUNDATION WALL WITH UPLIFT ANCHOR BOLTS FROM FOOTING TO SILL PLATE

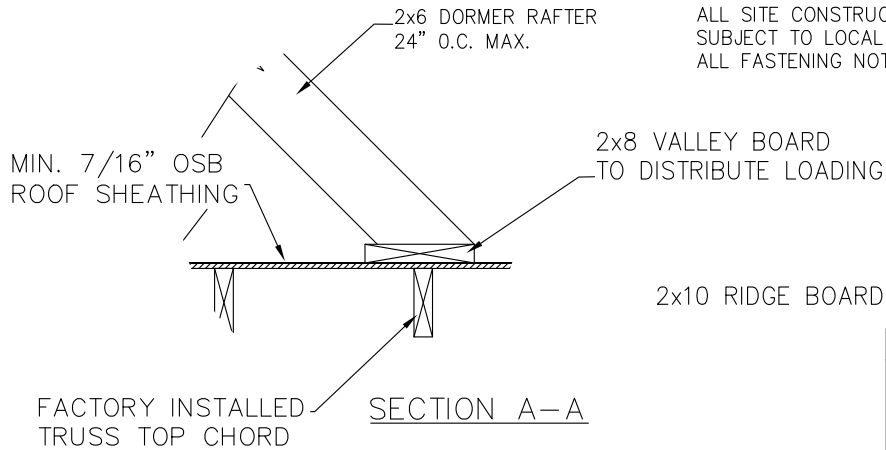
### N.C. 800# HOLD DOWN STRAP DEVICE



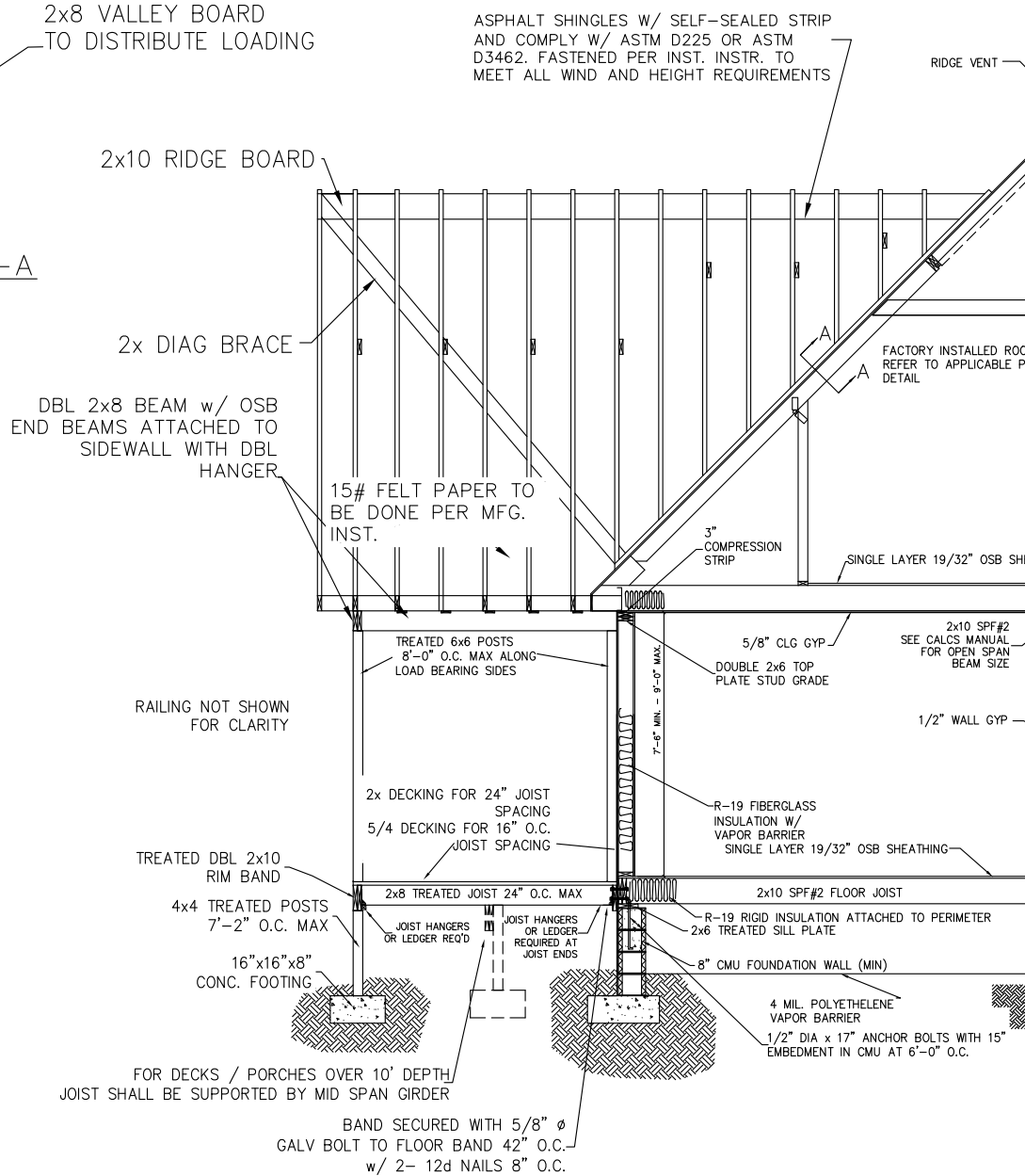
Applicable to Seismic Zone C with minimum soil bearing capacity of 2500 PSF. Concrete 2500-PSI min. Wind speed up to 110 Mph Exp. C. Refer to Chapter 4 in the North Carolina Residential Code for specific foundation application or CMU Construction. Refer to the wind bracing pages for additional tie down and braced wall requirements.

CUSTOMER	ALL HOMES	ALL	NC	20
CITY				
WIND SPEED	110	150		
CUST. NO.				
DATE	11/18/18	1/30/19		
REVISION		2018 CODE UPDATES		
BY				
NOTE				
TYP FOUNDATION DETAILS				
PIER DETAILS 2021 DWG				

**HOMES BY VANDERBUILT**  
 3300 JEFFERSON DAVIS HWY  
 SANFORD, NC 27332  
 PHONE: (919) 718-2780  
 FAX: (919) 718-2799



ALL SITE CONSTRUCTION TO MEET 2018 ED. OF THE N.C. RESIDENTIAL BUILDING CODE,  
SUBJECT TO LOCAL JURISDICTION INSPECTION AND APPROVAL.  
ALL FASTENING NOT SPECIFIED TO MEET THE N.C. RESIDENTIAL BUILDING CODE.



GROUND SNOW LOAD (psf) 30	
WIDTH MAX 28' (PERPENDICULAR TO RIDGE)	
HEADER SIZE	MAX. SPAN
2-2x8	5'-11"
2-2x10	7'-3"
3-2x8	7'-5"
3-2x10	9'-1"

COUNTY	VARIOUS
STATE	NC
CITY	
WIND SPEED	110
WIND LOAD	32.4
SNOW LOAD	30
CUSTOMER	
DRAWING NAME	
CUST. NO.	

DATE:	7/08/08	BY:	BRB	NOTE:	
REVISION:	CRTE				

**HOMES BY VANDERBUILT**

3300 JEFFERSON DAVIS HWY  
SANFORD, NC 27332  
PHONE: (919) 718-2760  
FAX: (919) 718-2799

DESIGN APPLICABLE FOR UNITS UP TO 130 MPH, EXP. C.

## DESIGN INFORMATION

USE GROUP	R-3
CONSTRUCTION	TYPE VB
FLOOR LOAD(S)	40/10 1st
ROOF LOAD	30/10
GROUND SNOW LOAD	20 (ATTIC LIVE LOAD: 20 LBS FOR STORAGE /30 LBS FOR CAPE)
WIND LOAD (FOR UNIT DESIGN)	115 mph Vult / 89 mph Vasd <sup>(1)(2)(3)(4)</sup>
SEISMIC DESIGN	C
EXPOSURE	C
CLIMATE ZONE	3a
MAXIMUM DESIGNED MEAN ROOF HEIGHT	18'-0"

- FOOTNOTES:**
- IF 115Vult/89Vasd MPH STRUCTURE MUST BE LOCATED AT AN ELEVATION OF LESS THAN 2,700 FEET IN MOUNTAIN REGIONS.
  - IF 120Vult/93Vasd MPH STRUCTURE MUST BE LOCATED AT AN ELEVATION OF 2,700 TO LESS THAN 3,000 FEET IN MOUNTAIN REGIONS.
  - IF 130Vult/101Vasd MPH STRUCTURE MUST BE LOCATED AT AN ELEVATION OF 3,000 TO LESS THAN 3,500 FEET IN MOUNTAIN REGIONS.
  - IF 140Vult/108Vasd MPH STRUCTURE MUST BE LOCATED AT AN ELEVATION OF 3,500 TO LESS THAN 4,500 FEET IN MOUNTAIN REGIONS.
  - 150Vult/116Vasd MPH STRUCTURE MUST BE LOCATED AT AN ELEVATION OF 4,500 FEET OR GREATER IN MOUNTAIN REGIONS.
- WIND BORNE DEBRIS AREA'S: HURRICANE SHUTTERS (IF REQUIRED) SHALL BE SUPPLIED AND SITE INSTALLED BY THE PURCHASER.

**NOTICE:**  
IT IS THE RESPONSIBILITY OF THE PURCHASER TO INSURE THAT THE ATTACHED PLANS CONFORM TO LOCAL ORDINANCES IN RESPECT TO BUILDING SIZE, HEIGHT, SETBACKS, OR AESTHETICS WHICH ARE ENFORCED BY THE LOCAL JURISDICTION

**NOTICE:**  
PLANS ARE EXTRACTED FROM APPROVED SYSTEMS DOCUMENTATION AND CAN NOT BE MODIFIED OUTSIDE THE PARAMETERS SET FORTH. ANY CHANGES TO PLANS MUST BE APPROVED BY NATIONWIDE HOMES ENGINEERING DEPARTMENT. ANY MINOR CHANGES OR MODIFICATIONS ARE SUBJECT TO THIRD PARTY INSPECTION.

PHYSICAL ADDRESS: LINE ROAD, CAMERON, NC

## CODE CONFORMANCE

### NORTH CAROLINA

- NC RESIDENTIAL CODE, 2018 EDITION
- NC ENERGY CODE, 2018 EDITION
- 2017 NC ELECTRICAL CODE

### ATTENTION LOCAL INSPECTION DEPARTMENT

IF THIS STRUCTURE IS IN A THERMAL ZONE THAT IS MORE STRINGENT THAN THAT LISTED ON THESE PLANS, 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 THE ACTUAL SITE CONDITIONS. ALTERATIONS MAY THEN BE REQUIRED TO BRING THE HOME INTO COMPLIANCE WITH THE MORE STRINGENT CONDITIONS.

### ATTENTION THIS NOTE APPLIED IF UPPER LEVEL IS COMPLETELY FINISHED

\* BEFORE A CERTIFICATE OF OCCUPANCY CAN BE ISSUED FOR CAPE MODEL DESIGNS, THE UPPER LEVEL MUST BE FINISHED  
\* AND ALL COMPLETION OF THE UPPER LEVEL IS SUBJECT TO SITE INSPECTION WITH APPROVAL BY THE LOCAL JURISDICTION.  
\* (EXCEPTION: UPPER LEVELS LABELED AS UNFINISHED AND/OR STORAGE ONLY)  
\*

- PLANS MAY BE MASTERED
- PLANS MAY BE REVERSED

SEE QC MANUAL PAGE 3.79  
FOR CRANE LIFTING POINTS

## CERTIFICATION INFORMATION

REFER TO "NOTE-1" ON FLOOR PLAN:  
CERTIFICATION INFORMATION LOCATED UNDER THE KITCHEN SINK:  
A) DATA PLATE  
B) 3rd PARTY INSPECTION LABEL  
C) STATE LABEL  
D) INSULATION CERTIFICATION (NC)

REFER TO "NOTE-2" ON FLOOR PLAN:  
CERTIFICATION INFORMATION LOCATED IN ADJACENT SECTIONS ON CLOSET WALL  
A) 3rd PARTY INSPECTION LABEL

## TYPICAL FOUNDATION NOTES

### FOOTING NOTES:

- FOOTINGS BASED ON 2,000psf SOIL BEARING CAPACITY. IF SOIL BEARING CAPACITY IS LOWER, FOOTINGS MUST BE REVISED AS DETERMINED BY REQUIREMENTS OF AUTHORITY HAVING JURISDICTION.
- BOTTOM OF ALL FOOTINGS TO BE BELOW FROST LINE AS DETERMINED BY LOCAL BUILDING CODES
- CONCRETE TO DEVELOP A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI

### TYPICAL TERRACE NOTES:

- EXTERIOR CONCRETE TO BE AIR ENTRAINED WITH A MIN. 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI (OR LOCAL REQUIREMENT)
- 4" CONC. OVER 6"x6" #3 WIRE MESH.
- OFFSET CAP TO CARRY SLAB.
- INSTALL METAL FLASHING BETWEEN CONC. & WOOD MEMBERS.
- TERRACES TO BE CONSTRUCTED AFTER HOUSE IS SET ON FOUNDATION.
- PURCHASER RESPONSIBLE FOR ACCESSIBILITY INTO LIVING UNIT PER STATE & LOCAL CODE.

### OPTIONAL BASEMENT NOTES:

- ALL BASEMENT DOORS & WINDOWS ARE SUPPLIED & INSTALLED BY PURCHASER.
- DOOR & WINDOW SIZE & LOCATION SUBJECT TO CHANGE ACCORDING TO SITE CONDITIONS.
- BACKFILL TO BE IN & TAMPED PRIOR TO ARRIVAL OF HOUSE.
- FOUNDATION DRAINAGE & DAMP-PROOFING TO CONFORM TO CURRENT BUILDING CODE.
- ALL ELECTRICAL, PLUMBING & MECHANICAL INSTALLATION WITHIN THE BASEMENT ARE THE RESPONSIBILITY OF THE PURCHASER & SUBJECT TO APPROVAL & INSPECTION BY THE LOCAL JURISDICTION.

### UNIT FASTENING REQUIREMENTS:

- 115 mph Vult / 89 mph Vasd AREAS & LESS:
- PURCHASER TO TOENAIL PERIMETER OF FLOOR RIM TO SILL PLATE w/ 16d NAILS (NON-CORROSIIVE TYPE) AT 16" O.C. FOR THE ENTIRE PERIMETER OF HOUSE.
  - MODULE TO MODULE GIRDER CONNECTION TO BE SIMPSON SDS25800 (SIMPSON 8" LAG SCREW) AT 32" O/C. LAG SCREWS TO BE SET MIN. OF 2" INTO GIRDER BY FLOOR CREW. DRIVERS TO SHIM AND COMPLETE PENETRATION OF LAG SCREWS ONCE UNITS ARE SET ON FOUNDATION.
  - SECOND LEVEL OF 2 STORY MODELS TO BE TOE-NAILED TO THE FIRST LEVEL CEILING PREMIER PLATE w/ 16d NAILS AT 16" O.C. FOR THE ENTIRE PERIMETER OF HOUSE.
  - PURCHASER TO REFER TO THE "BUILDER RESPONSIBILITY BULLETIN" FOR INSTRUCTION ON JOB SITE PREPARATION AND EQUIPMENT NEEDS FOR UNIT SETTING.

### AREAS W/ WIND ZONE GREATER THAN 115 mph Vult / 89 mph Vasd (3-SEC. GUST):

- PURCHASER RESPONSIBLE TO SUPPLY & INSTALL ALL FOUNDATION TO UNIT, PILING TO UNIT & UNIT TO UNIT WITH TIE DOWN STRAPS.
- COMPLETION OF ROOF COMPONENT TIE DOWN PER "HIGH WIND CONST." DETAILS IS THE RESPONSIBILITY OF THE PURCHASER.
- PURCHASER RESPONSIBLE FOR ALL PILING TYPE FOUNDATION CONST. DESIGN & ENGINEERING & SUBJECT TO APPROVAL & INSPECTION BY LOCAL JURISDICTION.

### GENERAL FOUNDATION NOTES:

- PURCHASER TO USE MORTAR TYPE "S" OR "M" FOR FOUNDATION CONSTRUCTION AS REQUIRED BY STATE & LOCAL CODES.
- GROUND SURFACE WITHIN CRAWLSPACE AREAS TO BE COVERED WITH APPROVED VAPOR BARRIER TO ALLOW 1/1500 VENT REDUCTION AS CALCULATED. VENTS MUST BE LOCATED WITHIN 3'-0" OF EACH CORNER.
- ALL FOUNDATION PLANS ARE SUGGESTIVE ONLY & MUST BE CONST. IN ACCORDANCE WITH STATE & LOCAL CODE REQUIREMENTS.
- FOUNDATION DESIGNED FOR PROJECT SPECIFIC WIND ZONE. (3-SEC. GUST) (SEE FLOOR PLAN FOR EXACT WIND SPEED)

### BRICK CASED DIMENSION NOTES: (IMPORTANT)

- AN ALLOWANCE OF 5" MUST BE INCORPORATED TO EACH SIDE OF THE FOUNDATION DIMENSIONS IF BRICK CASED EXTERIOR IS SELECTED. NOTE THAT LIVING UNIT SIZES ARE NOT ADJUSTED. VERIFY DIMENSIONS W/ NATIONWIDE ENGINEERING DEPARTMENT OF CLARIFICATION OF DIMENSIONS ARE NEEDED PRIOR TO CONSTRUCTION.

## TYPICAL PLUMBING NOTES

- ALL SUPPLY, DRAIN, WASTE & VENT LINES TO BE SUPPORTED AT 4'-0" O.C.
- PURCHASER TO SUPPLY & INSTALL ALL DWV & SUPPLY LINE MATERIALS FOR SITE COMPLETION OF PLUMBING CONNECTIONS UNDER FLOOR & BETWEEN TWO STORY STACK-ON SECTIONS. CONNECTIONS TO BE MADE AT WALL ACCESS ON TWO STORIES AS NOTED ON THE FLOOR PLAN WITH ALL CONNECTIONS SUBJECT TO INSPECTION BY LOCAL JURISDICTION.
- ALL VENTS SHALL TERMINATE MINIMUM 12" ABOVE THE ROOF.
- ALL FITTINGS, DRAIN WASTE, & VENT PIPES SHALL BE PVC/DWV PIPE w/ SOLVENT WELDED JOINTS PER THE MANUFACTURER INSTALLATION INSTRUCTIONS.
- ALL PLUMBING (ON 1ST LEVEL) WILL BE FACTORY INSTALLED TO BOTTOM OF FLOOR JOISTS. PURCHASER RESPONSIBLE FOR PLUMBING COMPLETION TO CONFORM TO CURRENT PLUMBING CODE.
- ALL CLEAN OUTS BY PURCHASER PER CURRENT PLUMBING CODE.
- ALL PVC/DWV TO CONFORM TO CURRENT PLUMBING CODE.
- ANTI-SCALD FAUCETS INSTALLED ON ALL SHOWER FAUCETS.
- PURCHASER RESPONSIBLE FOR FIRE-STOPPING ALL FLOOR CUTOUTS AT TUB TRAPS.
- HEATED WATER TO BATHTUBS/WHIRLPOOL TUBS LIMITED TO 120 DEGREES F. BY WATER TEMPERATURE LIMITING DEVICE CONFORMING TO CURRENT BUILDING CODE.
- SHOWER AND TUB/SHOWER COMBINATION VALVES SHALL BE EQUIPPED WITH CONTROL VALVES OF THE PRESSURE-BALANCE, THERMOSTATIC-MIXING OR COMBINATION PRESSURE-BALANCE/THERMOSTATIC-MIXING VALVE TYPES WITH A HIGH LIMIT STOP IN ACCORDANCE WITH ASSE 1016/ASME A112.1016/CSA B125.16. THE HIGH LIMIT STOP SHALL BE SET TO LIMIT THE WATER TEMPERATURE TO NOT GREATER THAN 120F.
- TEMPERATURE-ACTUATED MIXING VALVES, WHICH ARE INSTALLED TO REDUCE WATER TEMPERATURES TO DEFINED LIMITS, SHALL COMPLY WITH ASSE 1017. SUCH VALVES SHALL BE INSTALLED AT THE HOT WATER SOURCE.
- TEMPERATURE-ACTUATED, FLOW-REDUCTION DEVICES, WHERE INSTALLED FOR INDIVIDUAL FIXTURE FITTINGS, SHALL CONFORM TO ASSE 1062. SUCH VALVES SHALL NOT BE USED AS A SUBSTITUTE FOR THE BALANCED PRESSURE, THERMOSTATIC OR COMBINATION SHOWER VALVES REQUIRED FOR SHOWERS IN SECTION P2708.4.
- NOTES FOR WATER HAMMER ARRESTORS - "WATER HAMMER ARRESTORS CONFORMING TO ASSE 1010 AND INSTALLED PER MANUFACTURERS INSTRUCTIONS" AND "NOT REQUIRED FOR PLASTIC WATER DISTRIBUTION PIPE"
- A MEANS FOR CONTROLLING INCREASED PRESSURE CAUSED BY THERMAL EXPANSION SHALL BE INSTALLED WHERE REQUIRED IN ACCORDANCE WITH THE FOLLOWING:
- FOR WATER SERVICE SYSTEM SIZES UP TO AND INCLUDING 2 INCHES (51 MM), A DEVICE FOR CONTROLLING PRESSURE SHALL BE INSTALLED WHERE, BECAUSE OF THERMAL EXPANSION, THE PRESSURE ON THE DOWNSTREAM SIDE OF A PRESSURE-REDUCING VALVE EXCEEDS THE PRESSURE-REDUCING VALVE SETTING.
- WHERE A BACKFLOW PREVENTION DEVICE, CHECK VALVE OR OTHER DEVICE IS INSTALLED ON A WATER SUPPLY SYSTEM USING STORAGE WATER HEATING EQUIPMENT SUCH THAT THERMAL EXPANSION CAUSES AN INCREASE IN PRESSURE, A DEVICE FOR CONTROLLING PRESSURE SHALL BE INSTALLED.

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## HOME PLANS AND GENERAL NOTES

- THIS UNIT MUST BE CONNECTED TO A PUBLIC WATER SUPPLY & SEWER SYSTEM IF AVAILABLE
- ONLY ONE HOUSE MAY BE BUILT UTILIZING THE PLANS DESIGNED FOR THIS CONTRACT JOB.

### ATTENTION LOCAL INSPECTION DEPARTMENT

SET-UP INSTRUCTIONS FOR THIS MODULAR UNIT ARE INCLUDED WITHIN THESE PLANS.

THE FOLLOWING ITEMS HAVE NOT BEEN COMPLETED BY NATIONWIDE HOMES, HAVE NOT BEEN INSPECTED BY NTA Inc. CODE COMPLIANCE MUST BE DETERMINED AT THE LOCAL LEVEL;

- FOUNDATION (INCLUDING FOOTING, WALLS, PIERS, COLUMNS, DRAINAGE)
- INSTALLATION AND CONNECTION OF WELL AND PUMP OR CONNECTION TO PUBLIC WATER SYSTEM
- INSTALLATION AND CONNECTION OF SEPTIC SYSTEM OR CONNECTION TO PUBLIC SEWER SYSTEM
- INSTALLATION AND CONNECTION OF ELECTRICAL METER AND METER BASE WITH CONNECTION OF ELECTRICAL POWER FROM PUBLIC UTILITIES.
- CONSTRUCTION OF STOOPS, PORCHES, STEPS, WALKS, DRIVEWAYS AND ALL SITE BUILT ATTACHMENTS.
- COMPLETE FINAL GRADE AND LANDSCAPING, INCLUDING PLANTING & SEEDING.
- CARPET SHIPPED PRE-WRAPPED, LABELED BY ROOM FOR BUILDING INSTALLATION.
- HEATING/COOING SYSTEM SUPPLIED AND SITE INSTALLED BY PURCHASER.
- BASED ON STYLE OF HOUSE, ON-SITE CONNECTIONS AND/OR COMPLETING AS PRESCRIBED BY THE BUILDER OPERATIONS MANUAL.
- IF WATER HEATER IS SHIPPED OR OMITTED, PURCHASER IS RESPONSIBLE FOR INSTALLATION TO FACTORY INSTALLED SUPPLY LINES & SITE CONNECTION TO ELECTRICAL SUPPLY.
- IF AN OPTIONAL GAS FIREPLACE IS FACTORY INSTALLED IN MODULAR UNITS, CONNECTION OF A GAS SUPPLY LINE TO THE INSTALLED FIREPLACE
- DRYER VENTED TO OUTSIDE AIR BY PURCHASER PER SECTION M1502 OF N.C.R.C.
- IF BASEMENT FOUNDATION, BASEMENT STAIRS SUPPLIED & SITE CONST. BY PURCHASER.
- 10-kVA ASSUMED FOR THE HVAC SYSTEM FOR SERVICE PANEL SIZING.
- IT SHALL BE THE RESPONSIBILITY OF THE PURCHASER TO INSURE ANY SITE COMPLETION OF AN UNFINISHED AREA TO MEET LIGHT/VENTILATION, EGRESS, PLUMING AND ELECTRICAL REQUIREMENTS AND SUBJECT TO INSPECTION BY LOCAL AND/OR STATE JURISDICTION.
- ANY UNUSED CONDUITS OR PIPING ARE TO BE SEALED AT EACH END ON SITE BY OTHERS AND IS THE RESPONSIBILITY OF THE PURCHASER, AND IS SUBJECT TO INSPECTION AND APPROVAL BY THE LOCAL JURISDICTION.
- WATER HEATER DRAIN PAN DRAIN SHALL EXTEND TO THE EXTERIOR OF THE BUILDING AND TERMINATE NOT LESS THAN 6" AND NOT MORE THAN 24" ABOVE ADJACENT GROUND SURFACE PER SECTION P2801.6.2 OF THE 2018 NCR
- COMMUNICATIONS OUTLET SUPPLIED & INSTALLED BY PURCHASER AS REQUIRED BY CURRENT NEC, CHAPTER 8
- ANY FACT. INST. SYSTEMS THAT ARE COMPLETED ON-SITE SHALL BE TESTED AS A WHOLE IN ACCORDANCE WITH 2018 NCR

### RODENT PROOFING

- OPENINGS AND/OR PENETRATIONS AROUND ALL DRAIN PIPES, WATER SUPPLY LINES, AND ELECTRICAL WIRES AND CONDUITS, SHALL BE SEALED IN FACTORY WITH AN APPROVED METAL COLLAR OR OTHER APPROVED MATERIALS THAT ADHERE TO THE ADJOINING STRUCTURE.
- AT ALL TUB AND SHOWER P-TRAP CUTOUTS OR ACCESSSES, IT SHALL BE THE RESPONSIBILITY OF THE PURCHASER TO INSURE THAT THE OPENING/ACCESS IS SEALED ON SITE BY A FABRICATED WOOD PANEL, SECURED TO BLOCKING, AND SEALED TO INSURE NO RODENT PENETRATION CAN OCCUR INTO THE HOME.

#### REQUIREMENT FOR INTERIOR FINISHES

FLAME SPREAD	
- MAXIMUM FLAME SPREAD RATING FOR WALL AND CEILING FINISHES SHALL NOT EXCEED 200	40/20
- MAXIMUM FLAME SPREAD RATING FOR INSULATION SHALL NOT EXCEED 25	48/24
SMOKE DEVELOPMENT	
- MAXIMUM SMOKE DEVELOPED INDEX FOR WALL AND CEILING FINISHES SHALL NOT EXCEED 450	24/16
- MAXIMUM SMOKE DEVELOPED RATING FOR INSULATION SHALL NOT EXCEED 450 PER ASTM E 84 OR UL 723	40/20
	24/16

#### FLOOR, WALL, & ROOF SHEATHING

LOCATION	TYPE	SPAN RATING
FLOOR	- 19/32" T&G OSB	40/20
	- 23/32" T&G OSB	48/24
WALL	- 7/16" SE OSB	24/16
	- 19/32" SE OSB	40/20
	- 7/16" ZIP PANEL	24/16
ROOF	- 7/16" SE OSB	24/16
	- 7/16" SE OSB (EACH SHEED MINIMUM BARRIER)	24/16

#### VAPOR BARRIER

LOCATION	R-VALUE	PAPER
FLOOR	R-19	WARRANT-FACED
	R-30	WARRANT-FACED
WALL	R-13	WARRANT-FACED
	R-15	WARRANT-FACED
	R-21	WARRANT-FACED
ROOF	R-30	WARRANT-FACED
	R-38	WARRANT-FACED

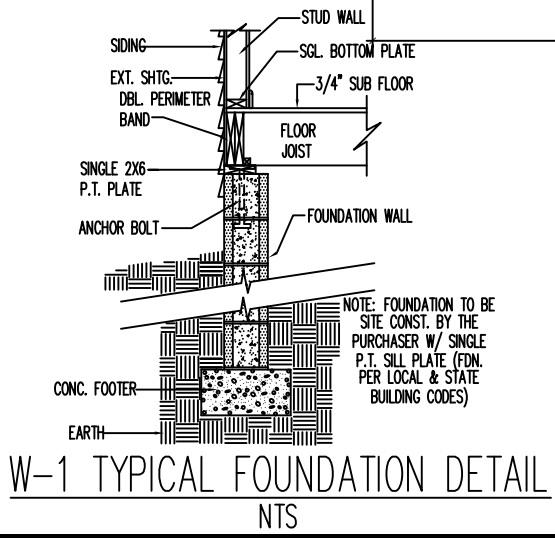
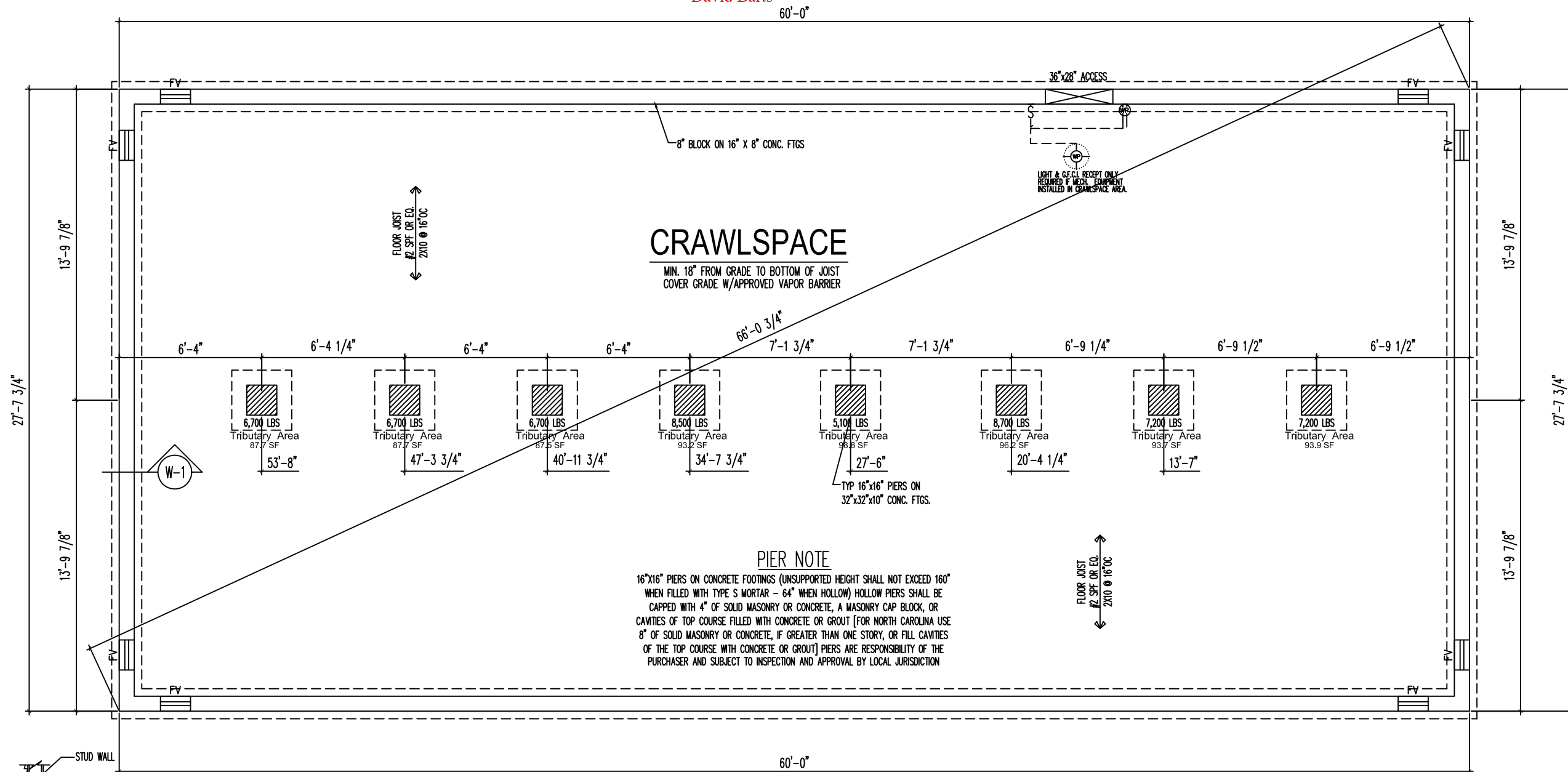
## TYPICAL ELECTRICAL NOTES

- ALL BRANCH CIRCUITS SUPPLYING 15 & 20 AMPERE OUTLETS IN KITCHENS, FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, LAUNDRY AREAS, OR ANY SIMILAR ROOMS OR AREAS, SHALL BE PROTECTED BY AN ARC-FAULT CIRCUIT INTERRUPTER PER SECTION 210.12 OF THE 2017 NEC (NATIONAL ELECTRICAL CODE).
- BASEMENT PLANS: SMOKE DETECTOR WIRE COILED UNDER FLOOR FOR SITE INSTALLATION OF SMOKE DETECTOR BY THE PURCHASER IN THE BASEMENT AREA. SMOKE DETECTORS WIRED FOR SIMULTANEOUS OPERATION.
- ALL 125-VOLT, AND 250-VOLT 15-AMPERE & 20-AMPERE RECEPTACLES SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES
- COMMUNICATIONS OUTLET SUPPLIED & INSTALLED BY PURCHASER AS REQUIRED BY CURRENT NEC, CHAPTER 8

### NOTE:

SOFFIT MATERIALS FOR THIS UNIT ASSUMES THAT THE BUILDING FACE WILL BE 10 FT. OR GREATER FROM THE FIRE SEPARATION DISTANCE WHEN INSTALLED ON SITE. WHERE THE BUILDING FACE IS LESS THAN 10 FT. FROM THE FIRE SEPARATION DISTANCE, THE UNDERLAYMENT MATERIALS AND VENTILATION IN ACCORDANCE WITH SECTION R302.1.1 OF THE NC RESIDENTIAL CODE, MUST BE PROVIDED & INSTALLED AT THE SITE WITH INSPECTION AND APPROVAL BY THE LOCAL JURISDICTION.

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- TYPICAL CRAWLSPACE NOTES:**
- IT SHALL BE THE RESPONSIBILITY OF THE PURCHASER TO HAVE THE FOUNDATION INSTALLED BY OTHERS PER ALL STATE AND LOCAL CODES (SUBJECT TO INSPECTION BY AUTHORITY HAVING JURISDICTION).
  - THE FOUNDATION IS DESIGNED FOR A FAIRLY LEVEL SITE WITH A 2,000LB SOIL BEARING CAPACITY. IT SHALL BE THE RESPONSIBILITY OF THE PURCHASER TO HAVE THE FOUNDATION DESIGNED BY A PROFESSIONAL ENGINEER IF REQUIRED BY THE A.H.J.
  - INSTALLATION OF ANY ELECTRICAL SHALL BE THE RESPONSIBILITY OF THE PURCHASER AND MUST CONFORM TO CURRENT NATIONAL ELECTRICAL CODE.
  - PIERS DESIGNED WITH 2,000 PSI COMPRESSIVE STRENGTH VALUE
  - REFER TO COVER SHEET FOR OTHER INFORMATION.
  - HOSE BIBS SHALL BE RESPONSIBILITY OF THE PURCHASER, WHEN NOT FACTORY INSTALLED

PIER & FOOTING SIZE FOR SUPPORT OF GIRDERS - TABLE R403.1(2)

TRIBUTARY AREA	1 (ONE) STORY		2 (TWO) STORY	
	PIER	FOOTING	PIER	FOOTING
50	8" x 16"	1'-4" x 2'-0" x 8"	8" x 16"	1'-4" x 2'-6" x 8"
100	8" x 16"	1'-4" x 2'-0" x 8"	8" x 16"	2'-0" x 2'-0" x 10"
150	8" x 16"	2'-0" x 2'-0" x 8"	16" x 16"	2'-8" x 2'-8" x 10"
200	8" x 16"	2'-4" x 2'-4" x 10"	16" x 16"	3'-0" x 3'-0" x 10"
250	-	-	16" x 16"	3'-4" x 3'-4" x 1'-0"
300	-	-	16" x 16"	3'-8" x 3'-8" x 1'-2"

\*EACH CORNER OF FOUNDATION TO HAVE ONE VENT WITHIN 3'-0"\*

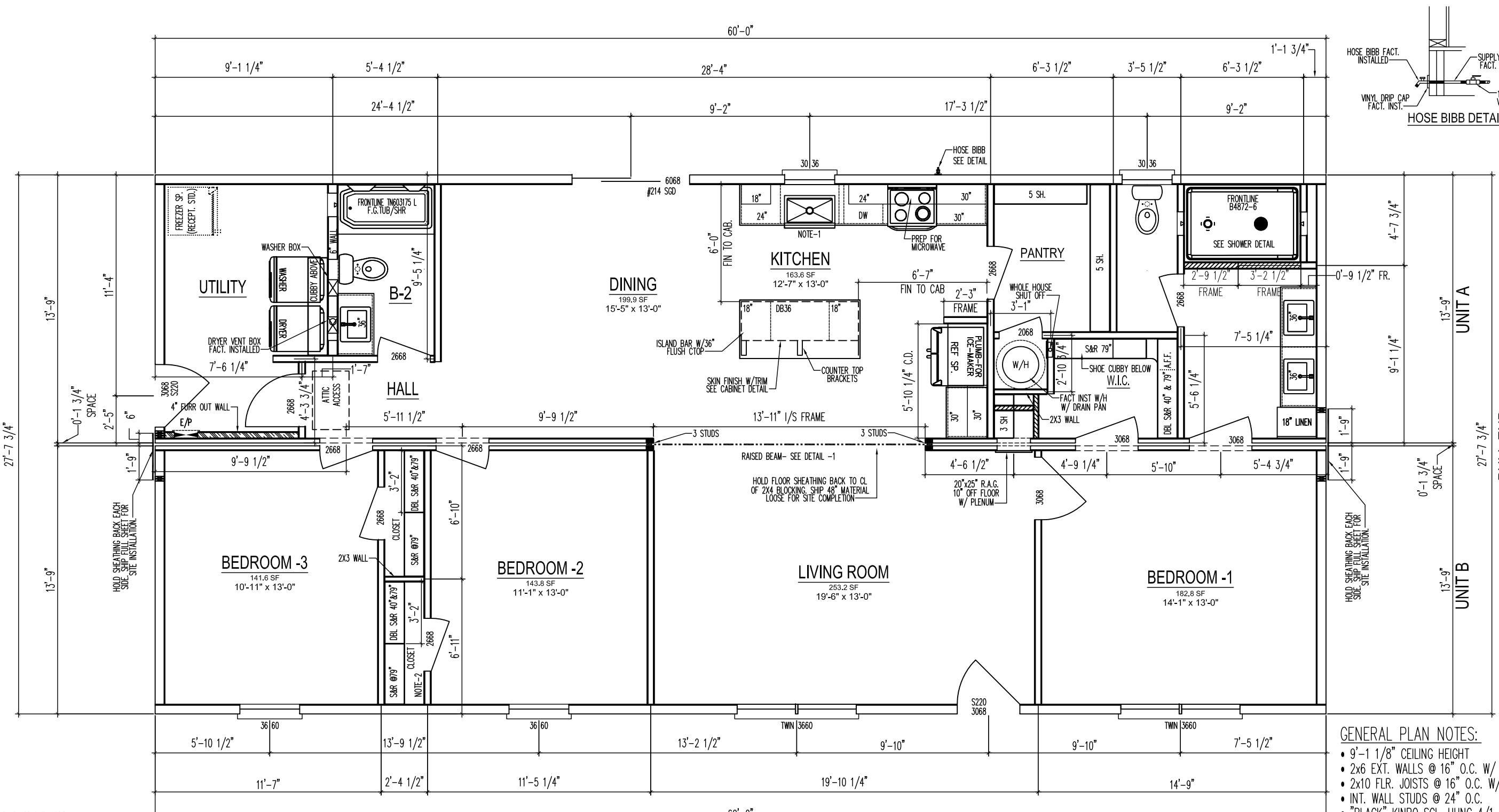
**CRAWLSPACE VENTILATION**

VENTILATION BASED ON 1 SQ.FT. VENTILATION FOR EVERY 1500 SQ.FT. OF AREA. CRAWLSPACE AREA TO BE COVERED W/ APPROVED VAPOR BARRIER. \*\* EACH FOUNDATION VENT HAS 50 INCHES OF NET FREE AIR PER VENT

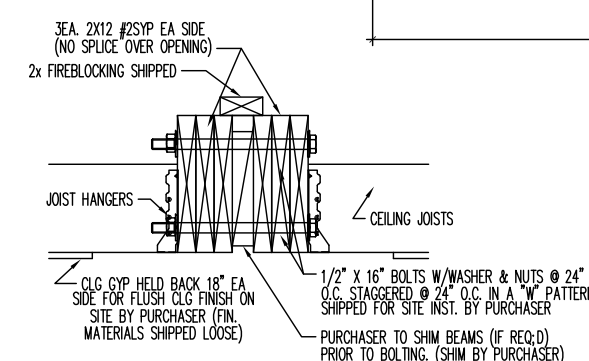
1543.7	SQUARE FOOTAGE OF AREA
1.0291	SQUARE FOOTAGE REQUIRED VENTILATION
8	NUMBER OF VENTS
3.44	SQUARE FOOTAGE OF VENTILATION PROVIDED

IF FACTORY INSTALLED EXTERIOR RECEPTACLES DO NOT MEET MINIMUM REQUIREMENTS OF THE CURRENT BUILDING CODE, BUILDER MUST SITE INSTALL A FRONT AND REAR RECEPTACLE PER CURRENT BUILDING CODE SUBJECT TO INSPECTION BY LOCAL JURISDICTION

**FOUNDATION PLAN**  
 SCALE : 3/16" = 1'-0"



- GENERAL PLAN NOTES:**
- 9'-1 1/8" CEILING HEIGHT
  - 2x6 EXT. WALLS @ 16" O.C. W/ R-19 INSUL.
  - 2x10 FLR. JOISTS @ 16" O.C. W/R-30 INSUL.
  - INT. WALL STUDS @ 24" O.C.
  - "BLACK" KINRO SGL. HUNG 4/1 WDWS.
  - R-38 ATTIC INSULATION
  - 115 Vult/89 Vasd MPH CONSTRUCTION



**RAISED BEAM DETAIL-1**

EXTERIOR WINDOWS & DOORS HEADER CHART AND SPANS BASED ON SECTION-36 OF THE CALCULATIONS MANUAL FOR BACKUP

MATING WALL OPENING HEADER CHART		
CONDITION	HEADER SIZE	SPAN
1 STORY	(1) 2x10 #2 SYP	10'-3"
1 STORY	(2) 2x10 #2 SYP	14'-6"
1 STORY	(2) 2x12 #2 SYP	16'-0"
2 STORY	(1) 2x10 #2 SYP	4'-11"
2 STORY	(2) 2x10 #2 SYP	6'-11"
2 STORY	(2) 2x12 #2 SYP	8'-0"
2 1/2 STORY or 3 STORY	(2) 2x10 #2 SYP	6'-1"
2 1/2 STORY or 3 STORY	(2) 2x12 #2 SYP	7'-0"

SEE SECTION-36 OF THE CALCULATION MANUAL FOR BACKUP

NC DESIGN PRESSURES FOR DOORS & WINDOWS PER TABLE R4502 (a) OF 2018 N.C.R.C. POSITIVE AND NEGATIVE IN psf

VELOCITY (mph)	MEAN ROOF HEIGHT (ft)		
	15	25	35
130Vult/101Vasd	25	29	32
140Vult/108Vasd	31	35	39
150Vult/116Vasd	37	43	47

NOTE: IF WINDOW OR DOOR IS MORE THAN 4'-0" FROM A CORNER, THE PRESSURE FROM THE TABLE SHALL BE PERMITTED TO BE MULTIPLIED BY 0.87 (THIS ADJUSTMENT DOES NOT APPLY TO GARAGE DOORS)

**CERTIFICATION INFORMATION**

NOTE-1

A) DATA PLATE  
B) 3rd PARTY INSPECTION LABEL  
C) STATE LABEL  
D) INSULATION (NC ONLY)

NOTE-2

B) 3rd PARTY INSPECTION LABEL

NOTE: WHERE THE TOP OF THE SILL OF AN OPERABLE WINDOW OPENING IS LOCATED LESS THAN 24 INCHES ABOVE THE FINISHED FLOOR AND GREATER THAN 72 INCHES ABOVE THE FINISHED GRADE OR OTHER SURFACE BELOW ON THE EXTERIOR OF THE BUILDING, OPERABLE WINDOWS WILL BE PROVIDED W/ FALL PREVENTION DEVICES THAT COMPLY W/ASTM F2090 - SUPPLIED & SITE INSTALLED BY THE PURCHASER PER SECTION 312.2 OF 2018 NORTH CAROLINA RESIDENTIAL CODE.

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**NIA** 8/2/2024  
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**SQUARE FOOTAGE**

TOTAL AVAILABLE SQUARE FOOTAGE	1600
--------------------------------	------

**FIRST LEVEL FLOOR PLAN**  
SCALE: 3/16" = 1'-0"



# 115 Vult / 89 Vasd MPH PRESCRIPTIVE BRACED WALL PANEL DETAIL SHEET (PER 2018 N.C.R.C) CIRCUMSCRIBED METHOD



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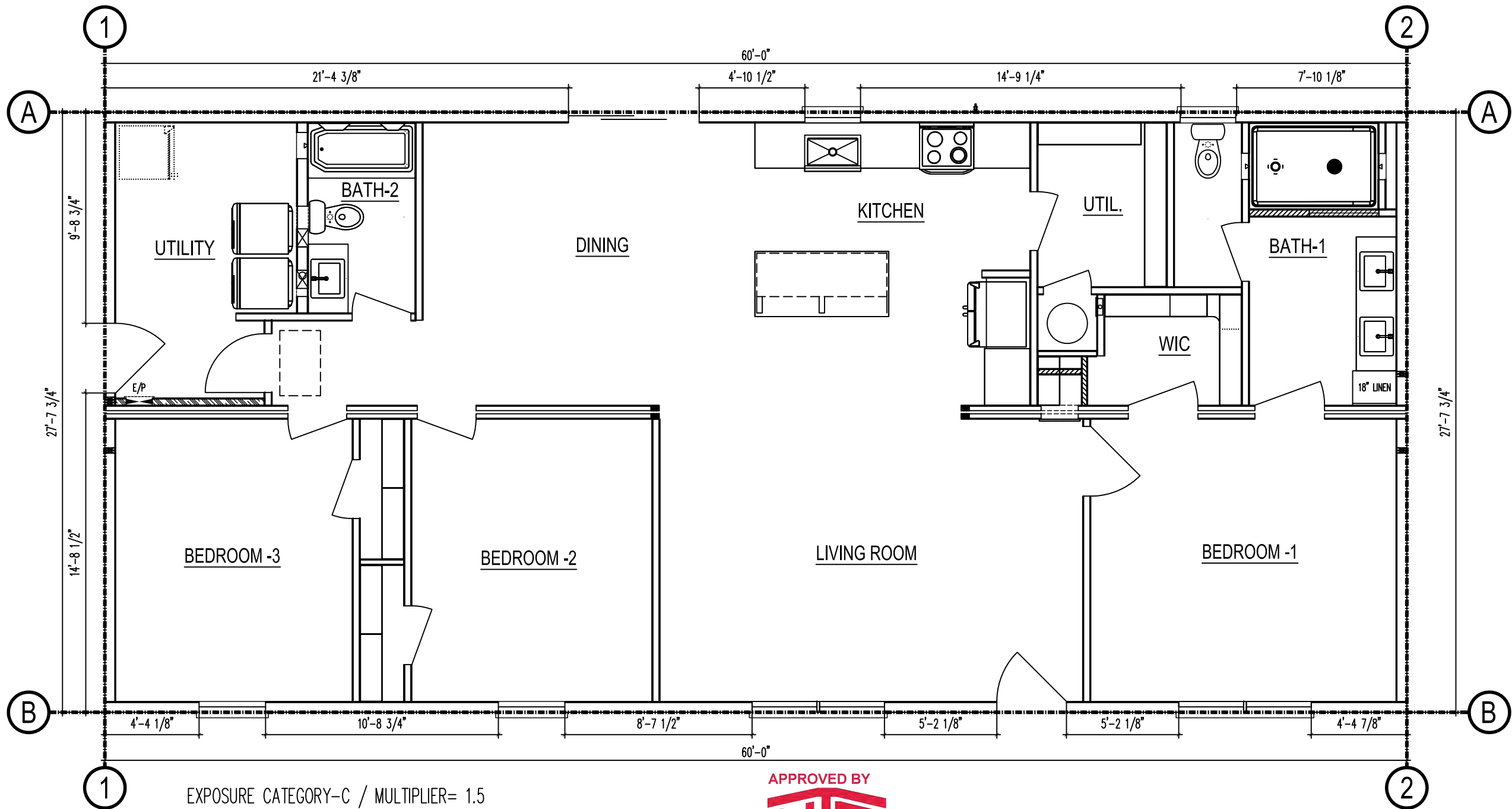
NOTE: ONLY ONE HOUSE  
MAY BE BUILT UTILIZING  
THE PLANS THAT ARE  
DESIGNATED FOR THIS  
CONTRACT JOB

PURCHASER: HOMES BY VANDERBILT  
JOB NO.: MS4-24 CONTRACT NO.: 196879  
BLACKLINE DATE & BY: 6/25/24 CR  
PLAN REVISION DATE: 7/29/2024 BAK01

PLAN NAME: HEARTLAND II  
COLLECTION/SERIES: HEARTLAND  
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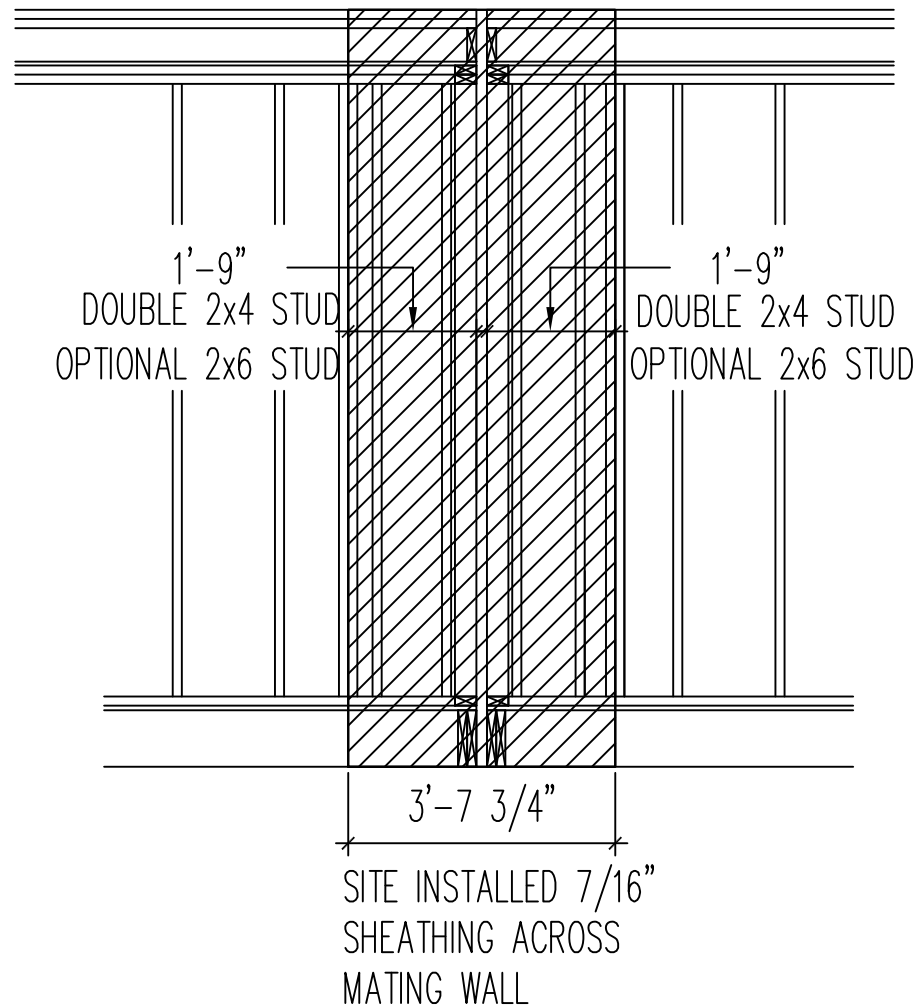
EXPOSURE CATEGORY-C / MULTIPLIER= 1.5  
EXTERIOR WALLS 16" O.C. W/ 7/16" SHEATHING= 0.93  
9'-7" EAVE TO RIDGE HEIGHT / MULTIPLIER= 1.0  
CEILING HEIGHT = 9'-1 1/8" / MULTIPLIER = 0.92  
BRACED WALL METHOD = CS-WSP

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**TYPICAL BRACED WALL NOTES:**  
\* Braced walls shown are per the prescriptive braced wall requirements found in the International North Carolina Residential Code, 2018 Edition.  
\* Braced Walls (130V<sub>ult</sub> & Greater): All exterior walls are to be covered with 7/16" OSB sheathing and classified as braced walls. OSB sheathing is to be fastened to studs with 8d nails 6" on-center at the edge and 12" on center at the field. If less than 50% but more than 25% of the wall is sheathed, then fasten the OSB sheathing with 8d nails 3" on-center at the edge and 6" on center at the field. If less then 25% of the wall is sheathed, then specific braced wall calculations must be designed per an approved engineering practice in lieu of using the prescriptive method.

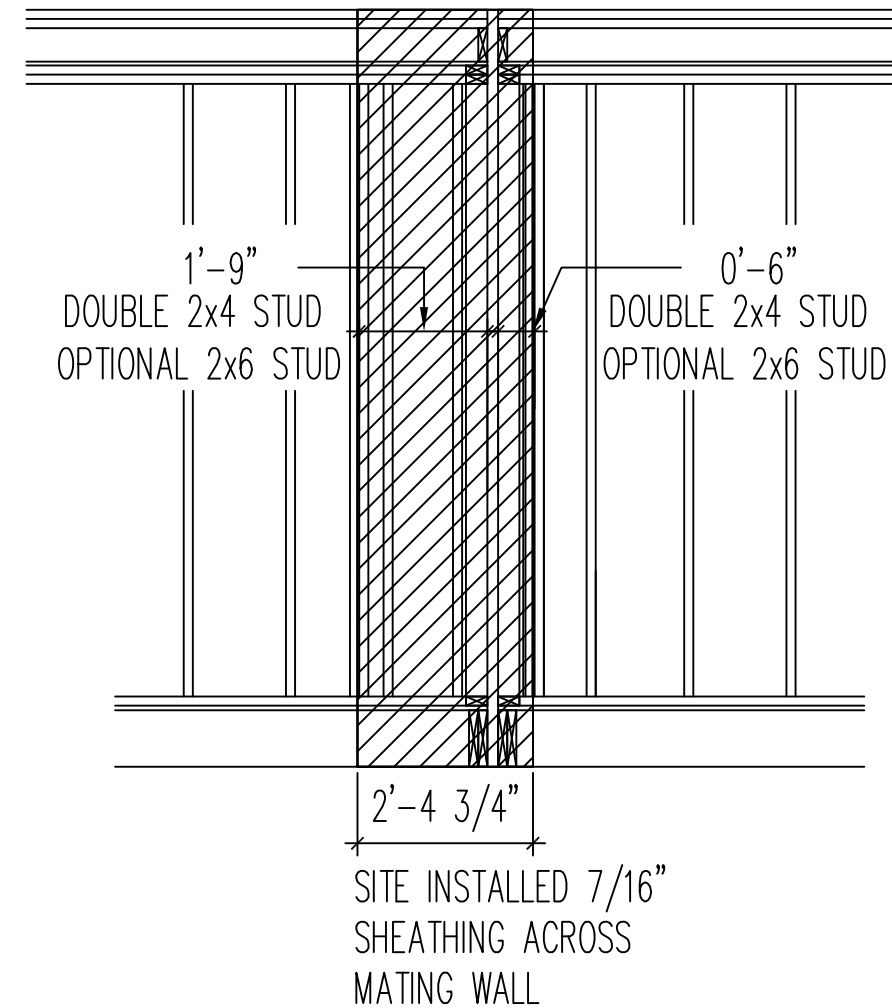
WALL	DISTANCE BETWEEN B.W.P.s	REQUIRED LENGTH OF B.W.P.s	LENGTH OF B.W.P.s	BLOCKING	SHEATHING FASTENING
A	27'-7 3/4"	4.8'/30x27.64x1.5x0.93x0.92=	5'-8 1/8"	48'-10 1/4"	NO 1.3/4" 16ga. STAPLES 3" EDGE / 6" FIELD
B	27'-7 3/4"	4.8'/30x27.64x1.5x0.93x0.92=	5'-8 1/8"	38'-5 1/2"	NO 1.3/4" 16ga. STAPLES 3" EDGE / 6" FIELD
1	60'-0"	9.6'/60x60x1.5x0.93x0.92=	12'-3 7/8"	24'-5 1/4"	YES 1.3/4" 16ga. STAPLES 3" EDGE / 6" FIELD
2	60'-0"	9.6'/60x60x1.5x0.93x0.92=	12'-3 7/8"	27'-7 3/4"	NO 1.3/4" 16ga. STAPLES 3" EDGE / 6" FIELD

## EXT. SHEATHING DETAIL BATH 1 / BEDROOM 1



FASTEN EDGES WITH 1.3/4" 16GA. STAPLES 3" EDGE  
 FASTEN FIELD WITH 1.3/4" 16GA. STAPLES 6" FIELD

## EXT. SHEATHING DETAIL BEDROOM 3 / UTILITY



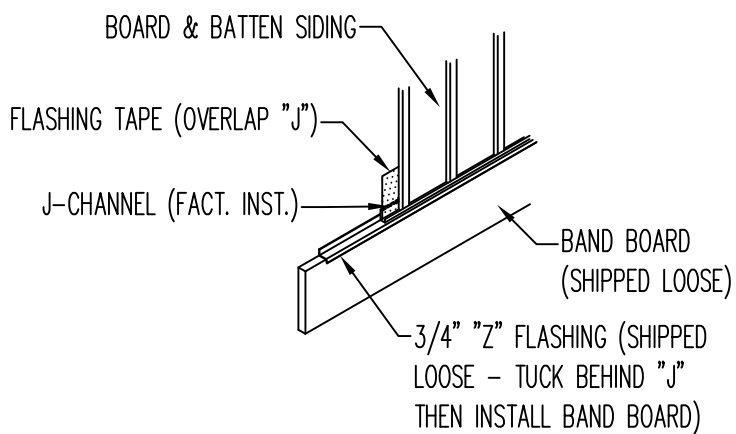
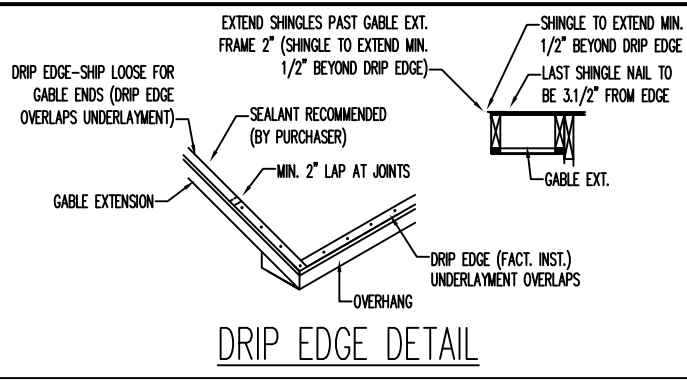
FASTEN EDGES WITH 1.3/4" 16GA. STAPLES 3" EDGE  
 FASTEN FIELD WITH 1.3/4" 16GA. STAPLES 6" FIELD

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 (276) 632-7100  
 WWW.NATIONWIDECUSTOMHOMES.COM

NOTE: ONLY ONE HOUSE MAY BE BUILT UTILIZING THE PLANS THAT ARE DESIGNATED FOR THIS CONTRACT JOB

PURCHASER: HOMES BY VANDERBILT  
 JOB NO.: MS4-24  
 CONTRACT NO.: 196879  
 BLACKLINE DATE & BY: 6/25/24 CR  
 PLAN REVISION DATE: 7.26.2024  
 PLOTTED: 7/26/2024 2:48 PM  
 EXH01

PLAN NAME: HEARTLAND II  
 COLLECTION/SERIES: HEARTLAND  
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"Z" FLASHING SHIPPED LOOSE FOR SITE INSTALLATION  
"Z" FLASHING - BAND BOARD

CERTAINTED LANDMARK / TAMCO HERITAGE SHINGLES

FIRE RESISTANCE:  
•UL 790 CLASS A FIRE RESISTANCE  
•UL CERTIFIED TO MEET ASTM E108 TYPE 1

SIDING CHART	
CRANE TRIPLE 6 & DOUBLE 7 SOLID CORE SIDING	BOTTOM ROW OF SIDING SHIPPED
D4, D4.5 & D5 VINYL SIDING	BOTTOM 2 ROWS OF SIDING SHIPPED

VENTILATION CALCULATIONS		
RIDGE VENT:	0.139	NET FREE AIR PER SQ.FT.
58 LINEAL FOOT =	8.06	SQFT. NET FREE AIR
VENTILATED SOFFIT:	0.041	NET FREE AIR PER SQ.FT.
124 LINEAL FOOT =	5.08	SQFT. NET FREE AIR

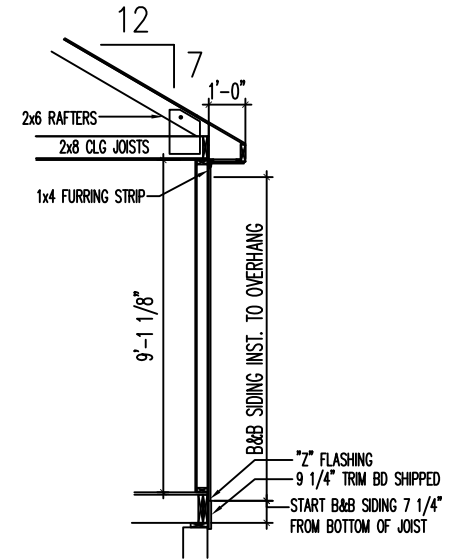
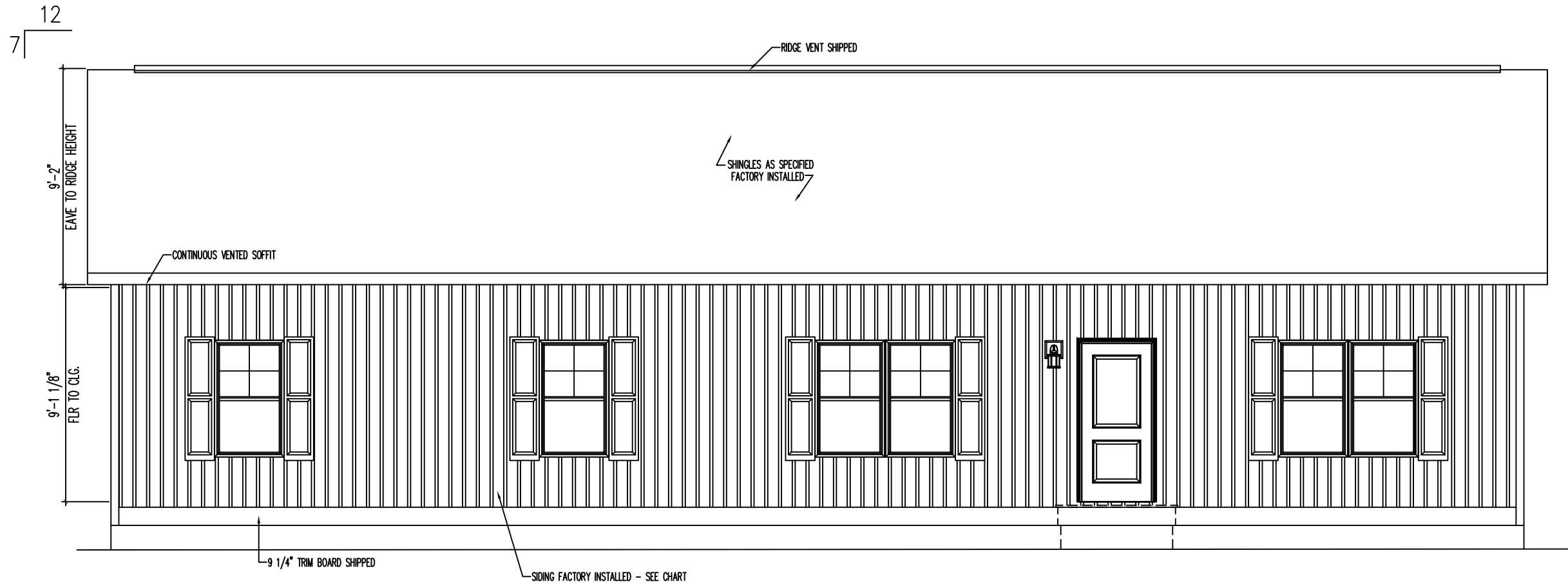
EXTERIOR PORTFOLIO VINYL SIDING & SOFFIT

FLAME SPREAD-PVC: <25 (ASTM E84) PER SECTION

R302.1.2 OF THE 2018 NORTH CAROLINA RESIDENTIAL CODE

SMOKE DENSITY-PVC: <450 (ASTM E84)

NOTE:  
SOFFIT MATERIALS FOR THIS UNIT ASSUMES THAT THE BUILDING FACE WILL BE 10 FT. OR GREATER FROM THE PROPERTY LINE WHEN INSTALLED ON SITE. WHERE THE BUILDING FACE IS LESS THAN 10 FT. FROM THE PROPERTY LINE, THE UNDERLAYMENT MATERIALS AND VENTILATION IN ACCORDANCE WITH SECTION R302.1.1 OF THE NORTH CAROLINA RESIDENTIAL CODE, MUST BE PROVIDED & INSTALLED AT THE SITE WITH INSPECTION AND APPROVAL BY THE LOCAL JURISDICTION.



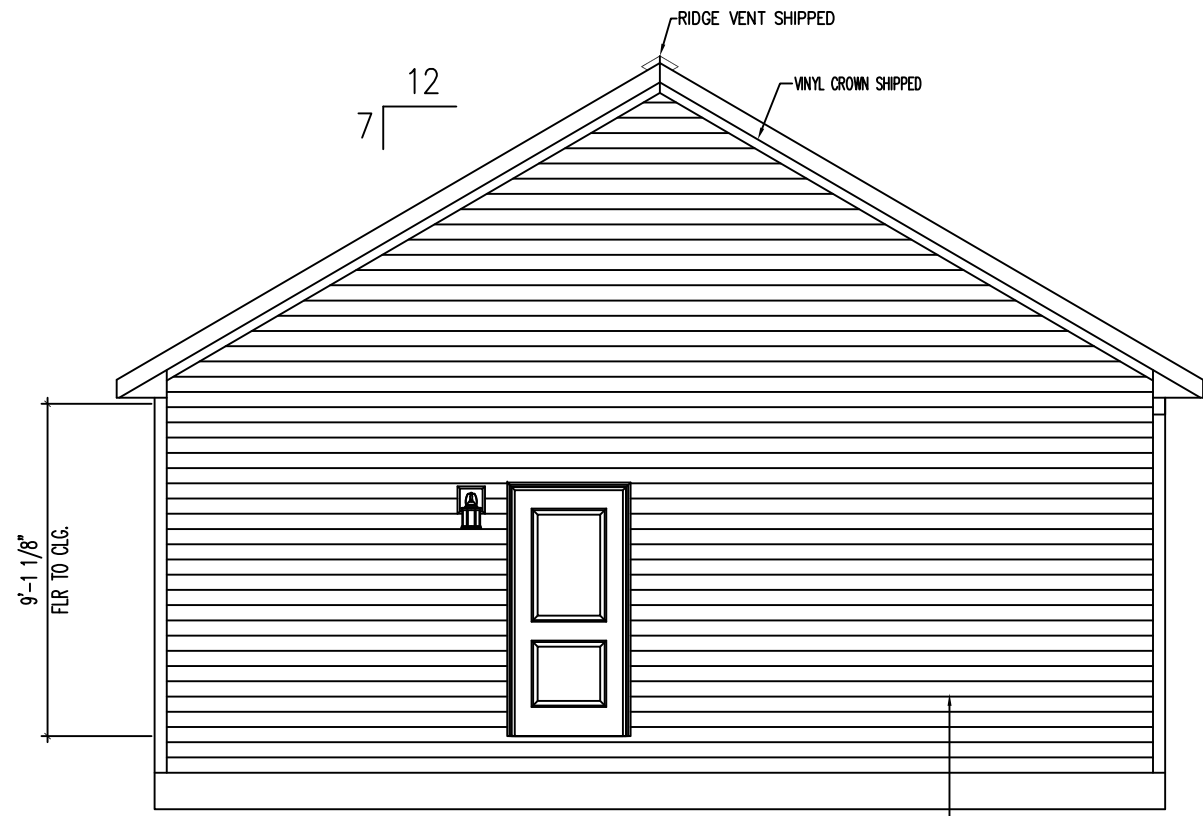
OMIT SALEM TRIM

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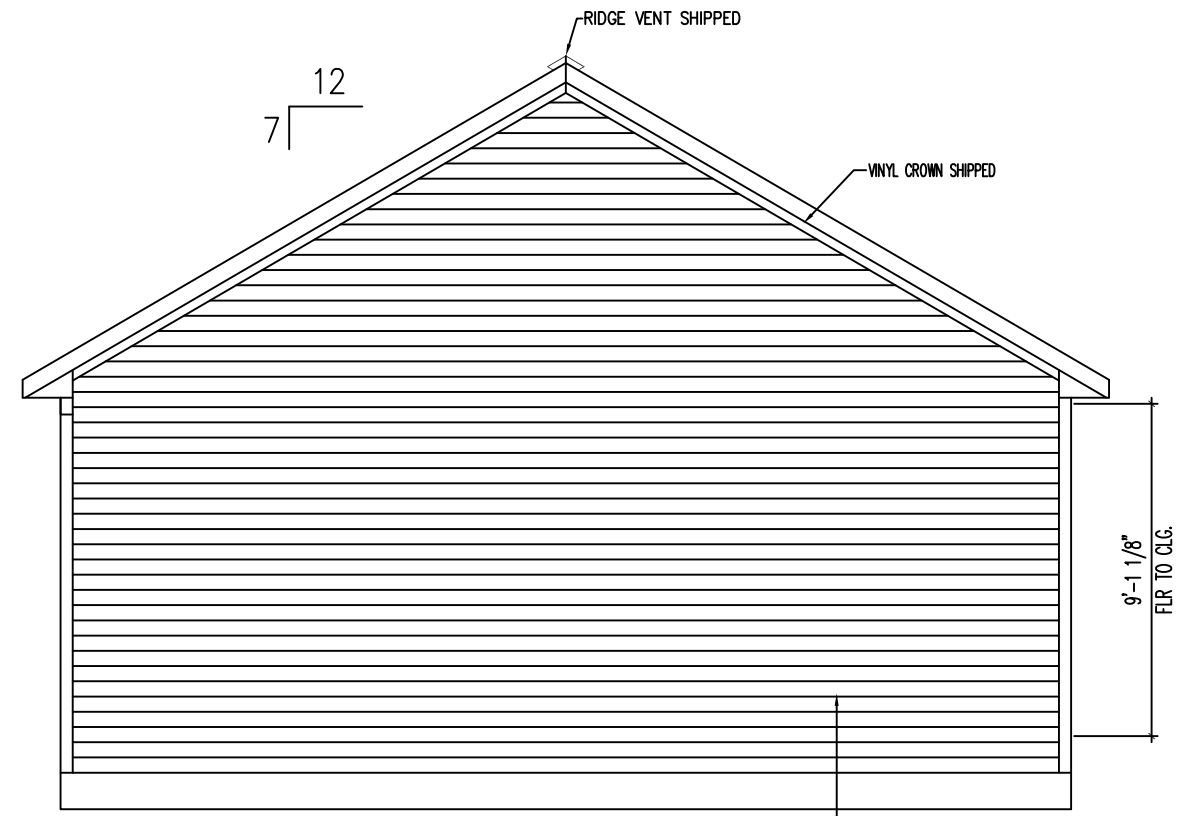
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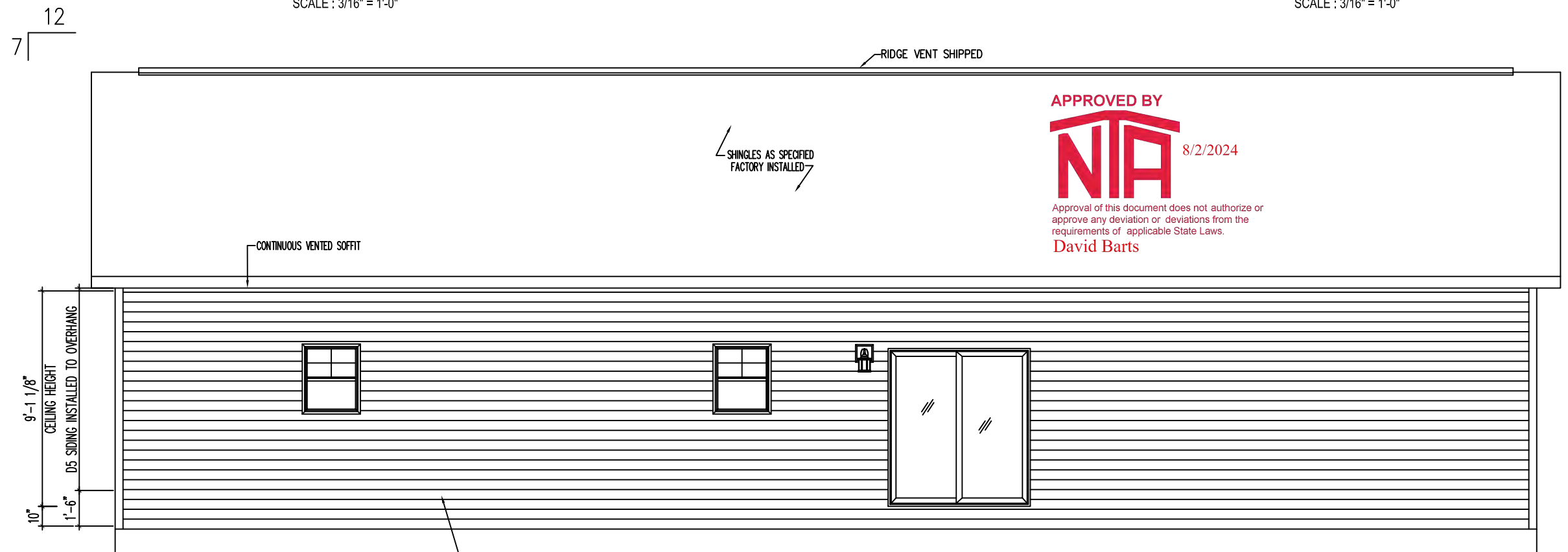
**LEFT ELEVATION**

SCALE : 3/16" = 1'-0"



**RIGHT ELEVATION**

SCALE : 3/16" = 1'-0"



**REAR ELEVATION**

SCALE : 3/16" = 1'-0"

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- Purchaser responsible for all service entry connections to dwelling unit main service panel.
- Purchaser responsible for performing complete circuit testing prior to service connection for all site wiring.
- Exterior weatherproof recepts and light fixtures shipped for site installation by purchaser.
- All gas pipe lines for gas appliances by purchaser.
- All heating / cooling systems supplied and installed by purchaser per state and local codes. When washer/dryer are located in basement, all installation/connections shall be by Purchaser to meet current Bldg./Elec. codes.
- All wiring to be per National Electric Code (Current Edition).
- Unless other wise specified, mount recept. 14" from subfloor to bottom of boxes, switches 48.1/2", Thermostat 60"
- AC/DC smoke detectors wired for simultaneous operation.

- G.F.C.I. recepts wired with feed thru for ground fault protection to all (Load side) branch circuit recept.
- Range hoods are ventless unless otherwise specified.
- All exhaust fans in baths and at dryer shall be vented to the outside air by the purchaser unless otherwise specified.
- Lock-Out clip on water heater & dishwasher.
- Switches & Recept. in bathrooms and dressing rooms over lavinettes to be 46" up.
- Switches and recepts. over counter to be 46" up unless otherwise specified.
- All electrical boxes on exterior walls to be sealed with foam to eliminate air infiltration.
- Batt insulation glued to attic access cover.
- Insulation shipped for site installation by Purchaser. to be installed in gaps at mating wall seams, and at floor & ceiling areas.

- Ceiling angles to be caulked behind crown mould (if crown mould is purchased).
- All exterior wall horizontal sheathing joints to be sealed.
- Interior walls around the perimeter of basement openings to be insulated with R-15.
- Wiring for phone and TV outlets are the responsibility of the purchaser. Nationwide to provide the outlet jack and 2X4 box with 3/4" conduit below subfloor, if requested.
- Communications outlet supplied and installed by purchaser as required by current NEC, Chapter 8.
- Tamper Resistant Receptacles

FOR NORTH CAROLINA ONLY: REFER TO NATIONWIDE HOMES  
2018 NC Q.A. MANUAL, CHAPTER-12, FOR ELECTRICAL FIXTURES

Duplex Receptacle	Single pole switch	Carbon Monoxide Det.
Weatherproof duplex	Three-way switch	Carb.Mon./Sm.Det. Combo
240v Receptacle	Four-way switch	Wire & Brace (Fan optional)
Quad Receptacle	Television outlet	Exterior Light
Overhead light	Telephone outlet	Push button for chime
LED Recessed / Weatherproof light	Wall Light / Sconce	Flood Light
Fluorescent light	Thermostat	Wireless Door Chime
Light/Clg. Exh. fan (50 CFM Min)	Heat/Fan/Light	4 x 10 Registers
Clg. Exh. fan (50 CFM Min)	Smoke Detector	Toe-Kick Registers



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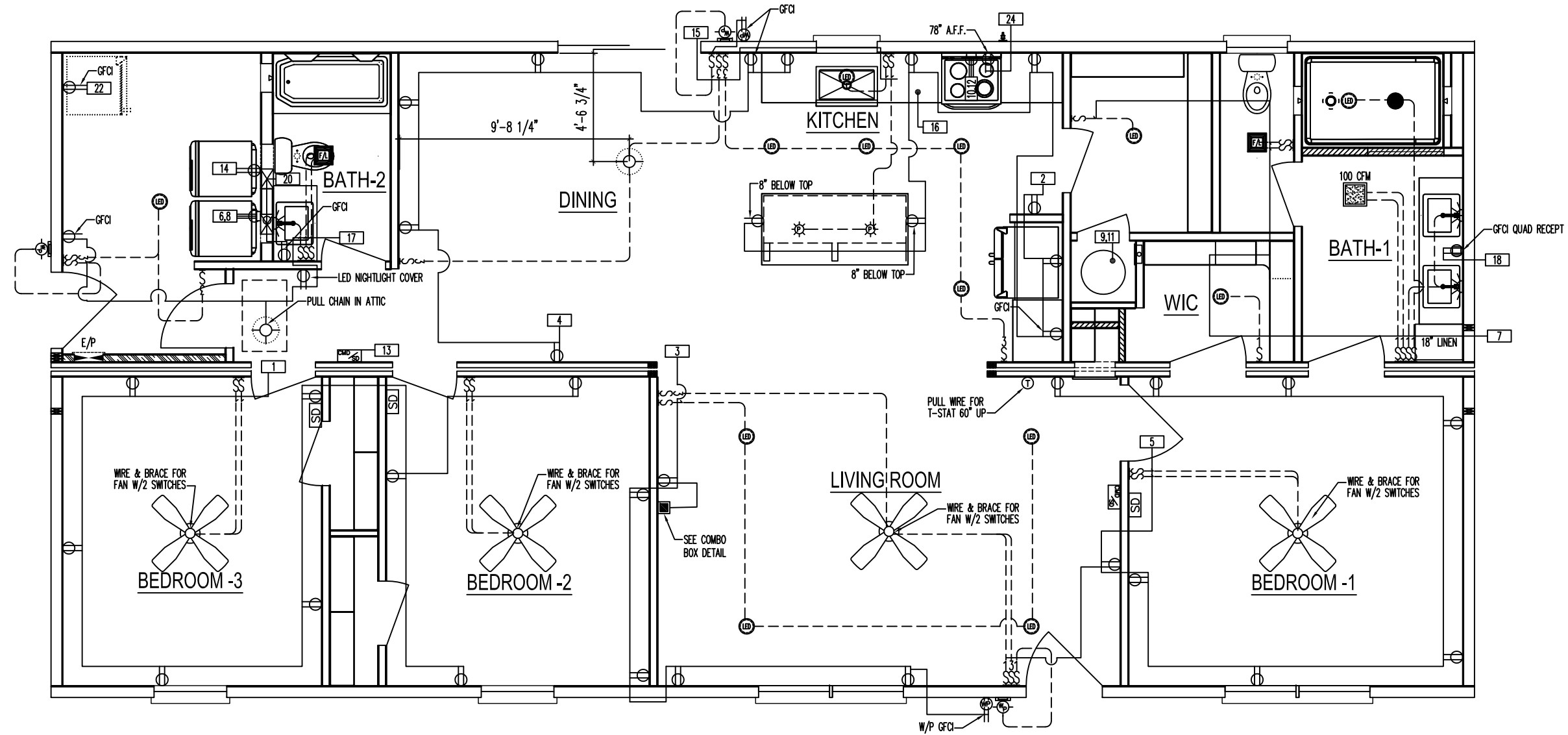
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PURCHASER: HOMES BY VANDERBILT  
JOB NO.: MS4-24  
CONTRACT NO.: 196879

BLACKLINE DATE & BY: 6/25/24 CR  
PLAN REVISION DATE: 7/26/2024 BJK01

PROCESS DATE & BY: 6/25/24 CR  
PLOTTED: 7/26/2024 2:56 PM

PLAN NAME: HEARTLAND II  
COLLECTION/SERIES: HEARTLAND  
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AirCycle WHOLE HOUSE EXHAUST FAN SWITCH

WHOLE HOUSE VENTILATION REQUIRED PER SECTION M1507 OF NC RESIDENTIAL CODE 2018 TO BE PROVIDED BY WAY OF A 100 CFM EXHAUST FAN LOCATED IN BATHROOM-1

MECHANICAL VENTILATION PER TABLE M1507.3.3(1)			
CODE REQUIRED VENTILATION IN CFM FAN CFM (BASED ON # OF BEDROOMS)	HOURLY FRACTION	VENTILATION SETTINGS IN MINUTES/HOUR	
60	100	0.6000	36.00

HVAC SYSTEM DESIGNED, ENGINEERED, AND SITE INSTALLED BY HVAC CONTRACTOR. ALL DUCTWORK, AIR HANDLER, A-COIL, FLOOR OR CEILING REGISTERS SUPPLIED & SITE INSTALLED BY THE HVAC CONTRACTOR ON SITE SUBJECT TO INSPECTION AND APPROVAL BY LOCAL JURISDICTION

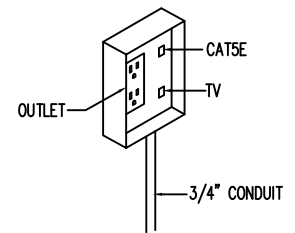
EXTERIOR RECEPTACLE OUTLET BOX HOODS THAT ARE A PART OF THE WEATHERPROOF ENCLOSURE TO BE LISTED AND IDENTIFIED AS "EXTRA DUTY" DURABILITY TO RETAIN A DEGREE OF PROTECTION FOR THE RECEPTACLES.

IF FACTORY INSTALLED EXTERIOR RECEPTACLES DO NOT MEET MINIMUM REQUIREMENTS OF THE CURRENT BUILDING CODE, BUILDER MUST SITE INSTALL AN EXTERIOR RECEPTACLE IN FOUNDATION AT FRONT AND AT REAR PER CURRENT BUILDING CODE SUBJECT TO INSPECTION AND APPROVAL BY LOCAL JURISDICTION

NOTE: ALL BRANCH CIRCUITS THAT ARE SUPPLYING 15 & 20 AMP OUTLETS IN ALL BEDROOMS, KITCHENS, DINING ROOM, BREAKFAST ROOM, PARLORS, LIBRARIES, DENS FAMILY ROOM, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, LAUNDRY AREAS OR SIMILAR AREAS, TO BE PROTECTED BY ARC-FAULT CIRCUIT INTERRUPTER PER SECTION 210.12, 2017 NEC ELECTRICAL CODE.

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David Barts

MOUNT ELECTRICAL DEVICES UNDER WALL CABINETS IN KITCHEN



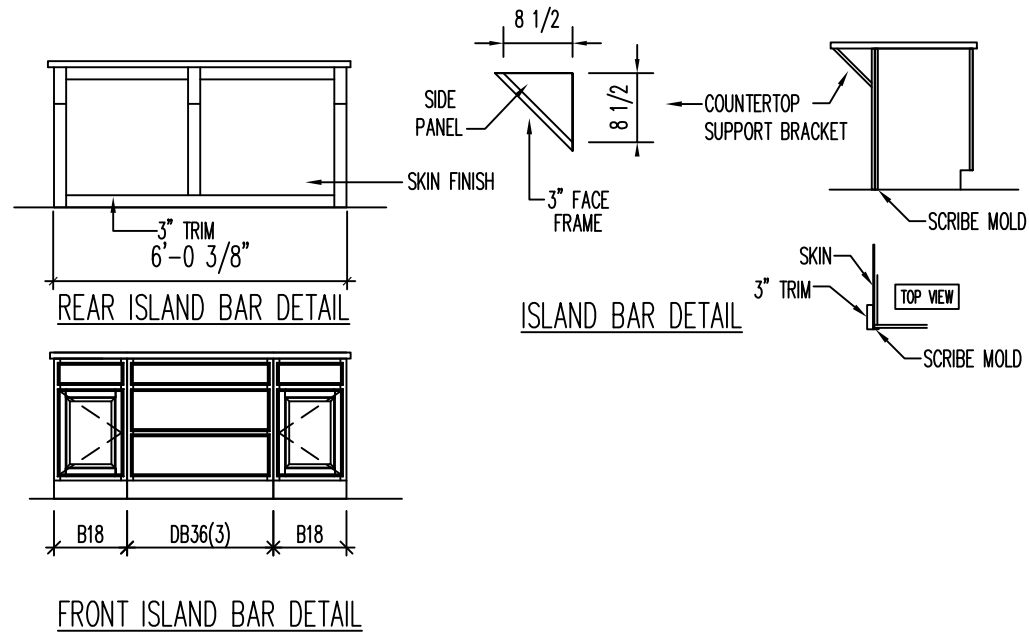
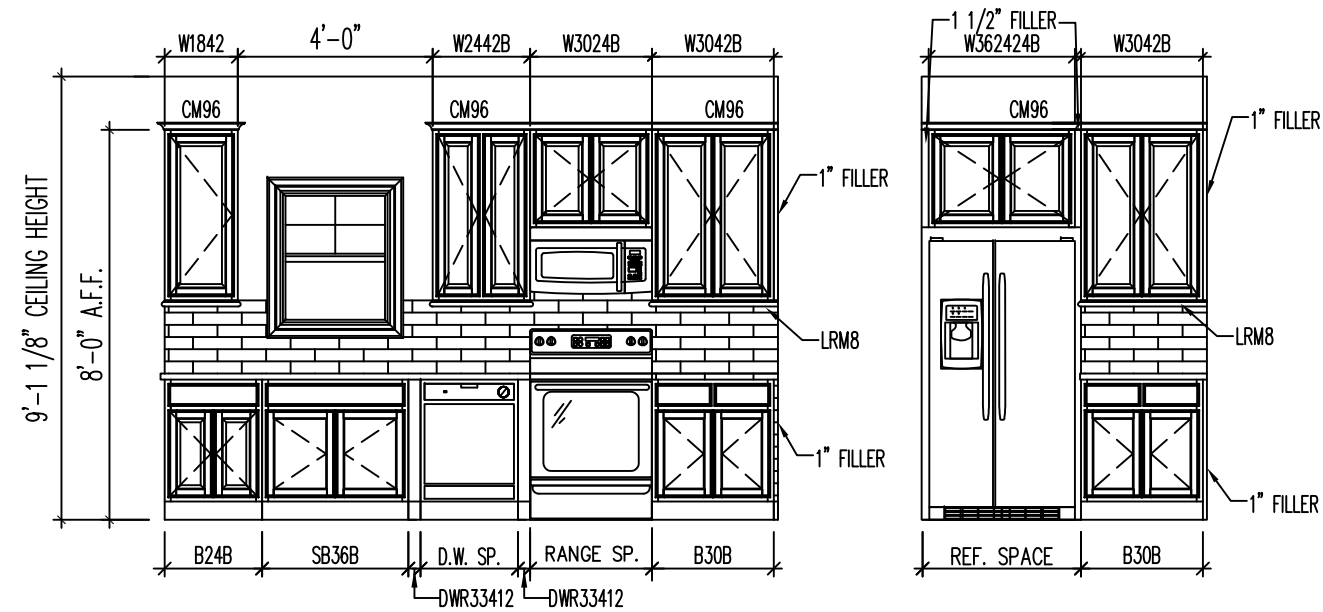
RECESSED RECEPT/TV/PH. JACK DET. COMBO BOX DETAIL

FIRST LEVEL ELECTRICAL PLAN

SCALE: 3/16" = 1'-0"

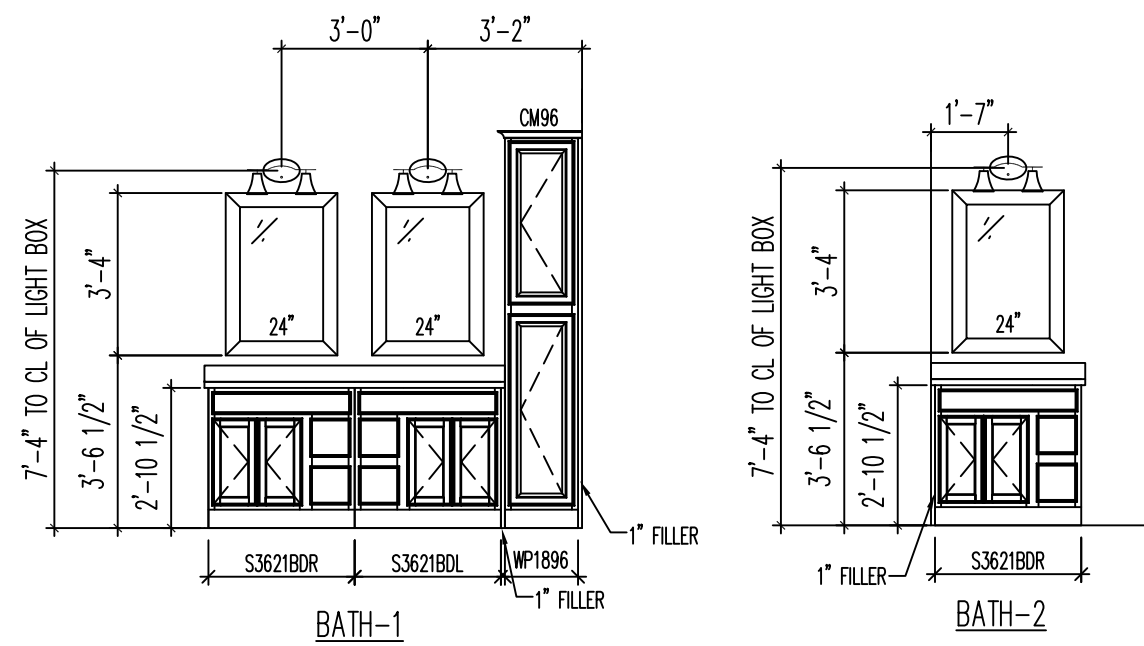
1. CABINET CONFIGURATION MAY VARY TO CABINET STYLE SELECTED
2. MIN. 30" CLARENCE BETWEEN RANGE AND COMBUSTIBLE SURFACE ABOVE
3. MIN. 1" CLARENCE FROM RANGE EXHAUST VENT TO COMBUSTIBLE MATERIAL
4. VENTLESS RANGE HOOD UNLESS OTHERWISE NOTED.

FOR NORTH CAROLINA ONLY: REFER TO NATIONWIDE HOMES 2018 NC Q.A. MANUAL, CHAPTER-10, FOR ALL APPLIANCES



## KITCHEN CABINET LAYOUT

MATCHING TOE KICK COVERS



## BATHROOM CABINETS

MATCHING TOE KICK COVERS

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# PANEL SCHEDULE

\* LOCKOUT BREAKER INSTALLED ON WATER HEATER & DISHWASHER

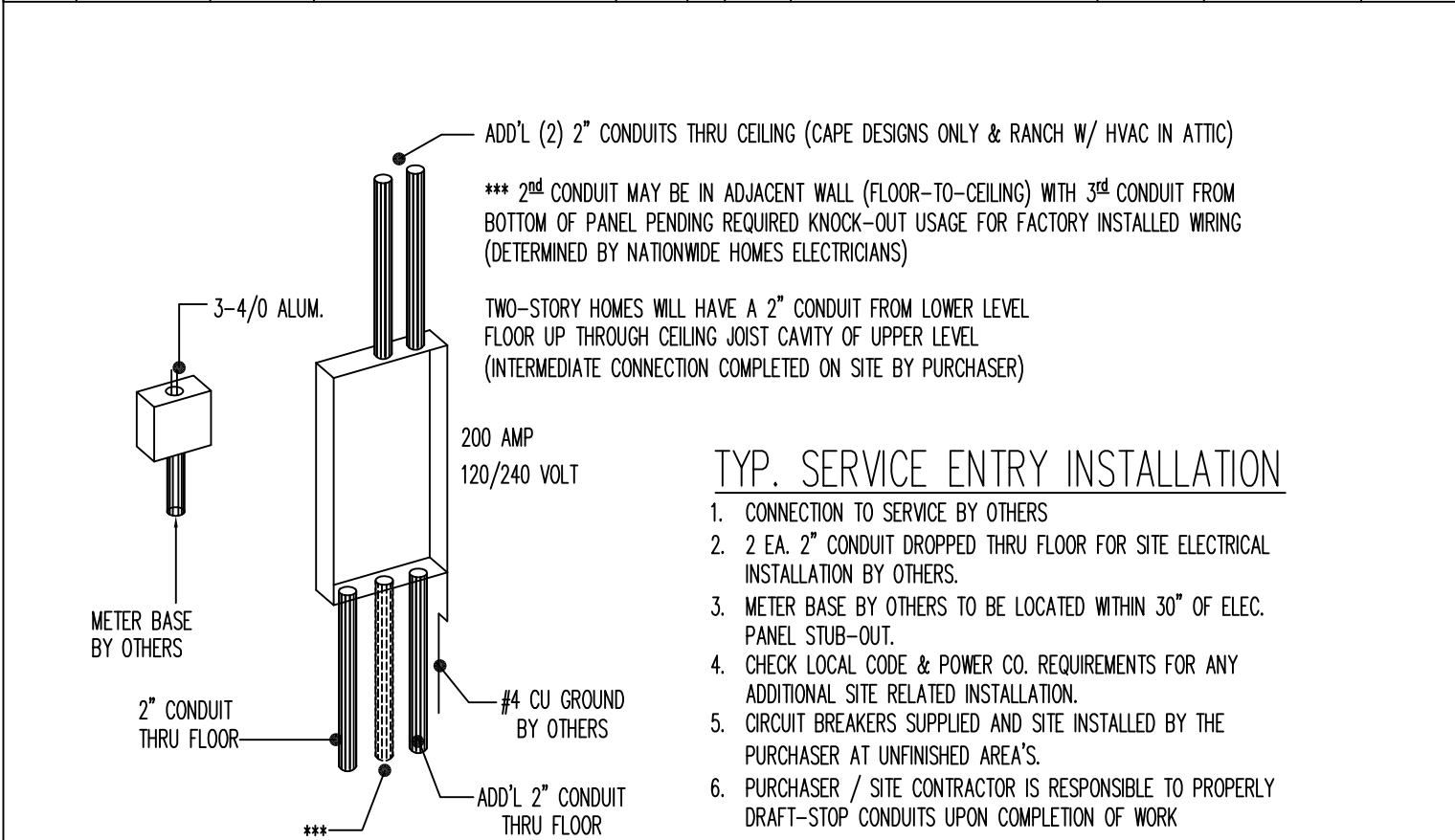
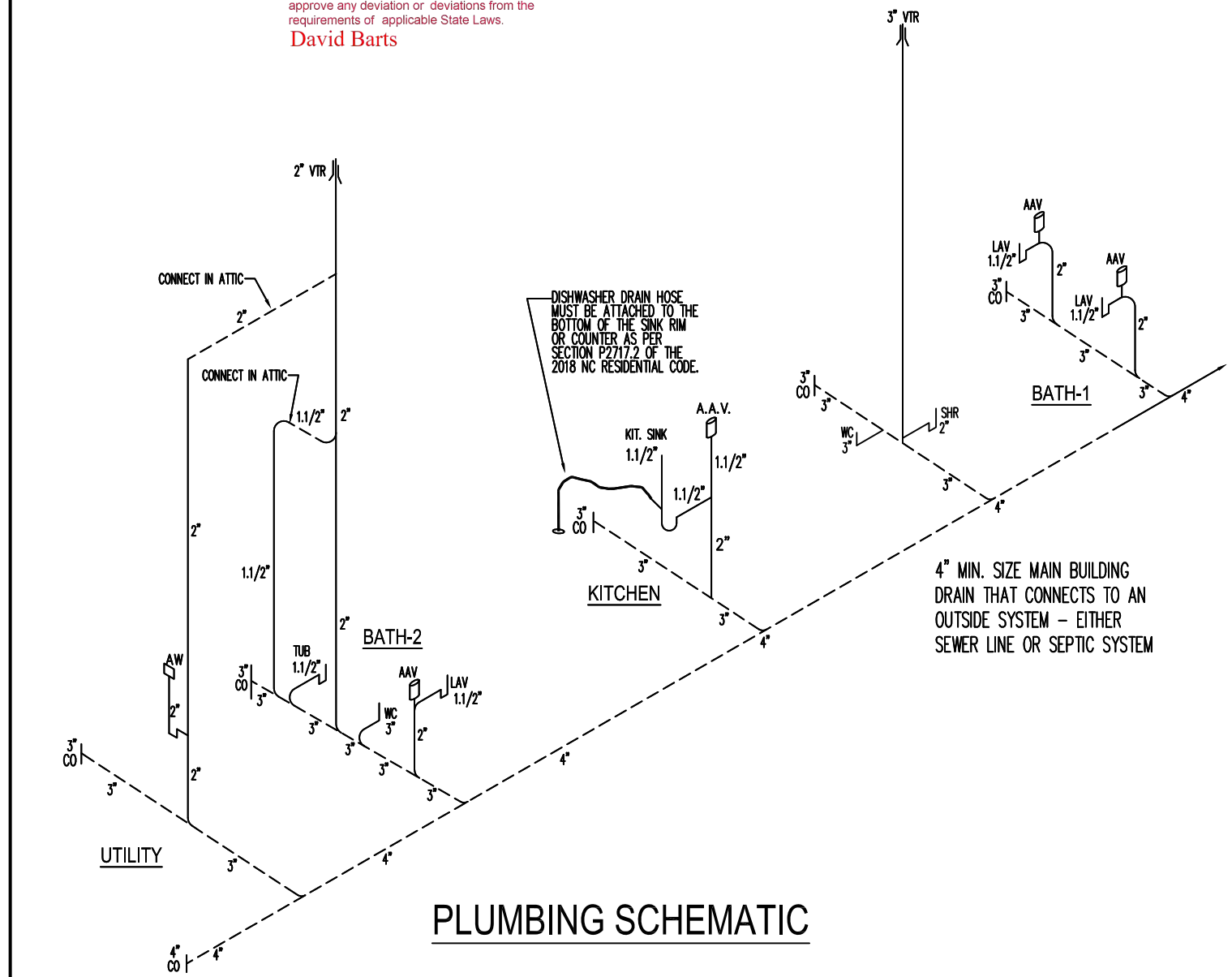
AMP	WIRE SIZE	200 AMP PANEL				WIRE SIZE	AMP
20	12/2	AFCI	GENERAL WIRING	1	2	SMALL APPLIANCE	20
20	12/2	AFCI	GENERAL WIRING	3	4	SMALL APPLIANCE	20
20	12/2	AFCI	GENERAL WIRING	5	6	DRYER	30
20	12/2	AFCI	GENERAL WIRING	7	8	DRYER	30
25	10/2	240	* WATER HEATER	9	10	RANGE	40
25	10/2		WATER HEATER	11	12	RANGE	40
15	14/3	AFCI	SMOKE DETECTOR/CMD	13	14	WASHER	20
20	12/2	AFCI	GENERAL WIRING	15	16	* DISHWASHER	20
20	12/2	AFCI	GENERAL WIRING	17	18	BATH-1 RECEPT	20
				19	20	BATH-2 RECEPT	20
				21	22	FREEZER OUTLET	20
				23	24	MICROWAVE	20
				25	26		
				27	28		
				29	30		
				31	32		
				33	34		
				35	36		
				37	38		
				39	40		

TRAP SIZE	FALL PER FOOT	DISTANCE TO VENT FROM TRAP	ALL FACTORY INSTALLED PLUMBING TO CONFORM TO: CURRENT PLUMBING CODE (SEE COVER SHEET)
1 1/4"	1/4"	3 Ft. 6 In.	REFER TO PLUMBING NOTES ON COVER SHEET FOR ADDITIONAL INFORMATION
1 1/2"	1/4"	5 Ft. 0 In.	
2"	1/4"	6 Ft. 0 In.	
3"	1/4"	10 Ft. 0 In.	
4"	1/8"	12 Ft. 0 In.	

NOTE: APPROVED ENGINEERED MECHANICAL WATER HAMMER ARRESTERS FOR QUICK CLOSING VALVES FACT. INST. AT ICEMAKER, DISHWASHER & WASHING MACHINE AS REQUIRED BY CURRENT STATE PLUMBING CODES.

- \* PEX PLUMBING FOR SUPPLY LINES
- \* GLUE P-TRAPS AT ALL TUBS AND SHOWERS
- \* PEX SUPPLY LINES SHALL HAVE A MAXIMUM SUPPORT SPACING OF 32 INCHES.
- \* PROTECTION FROM FREEZING SHALL COMPLY WITH SECTION P2603.5 OF THE 2018 NCRC

FOR NORTH CAROLINA ONLY: REFER TO NATIONWIDE HOMES 2018 NC Q.A. MANUAL, CHAPTER-11, FOR ALL PLUMBING FIXTURES



## TYP. SERVICE ENTRY INSTALLATION

1. CONNECTION TO SERVICE BY OTHERS
2. 2 EA. 2" CONDUIT DROPPED THRU FLOOR FOR SITE ELECTRICAL INSTALLATION BY OTHERS.
3. METER BASE BY OTHERS TO BE LOCATED WITHIN 30" OF ELEC. PANEL STUB-OUT.
4. CHECK LOCAL CODE & POWER CO. REQUIREMENTS FOR ANY ADDITIONAL SITE RELATED INSTALLATION.
5. CIRCUIT BREAKERS SUPPLIED AND SITE INSTALLED BY THE PURCHASER AT UNFINISHED AREA'S.
6. PURCHASER / SITE CONTRACTOR IS RESPONSIBLE TO PROPERLY DRAFT-STOP CONDUITS UPON COMPLETION OF WORK

1100 RIES ROAD, WARTONVILLE, VA 24112  
(276) 632-7100  
WWW.NATIONWIDECUSTOMHOMES.COM

NOTE: ONLY ONE HOUSE MAY BE BUILT UTILIZING THE PLANS THAT ARE DESIGNATED FOR THIS CONTRACT JOB

PURCHASER: HOMES BY VANDERBILT  
JOB NO.: MS4-24  
CONTRACT NO.: 196879  
BLACKLINE DATE & BY: 6/25/24 CR  
PLAN REVISION DATE: 7/26/2024 BJK01  
PLOTTED: 7/26/2024 2:59 PM

PLAN NAME: HEARTLAND II  
COLLECTION/SERIES: HEARTLAND  
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**TYPICAL PLUMBING NOTES**

1. WATER DISTRIBUTION SYSTEM PIPE SHALL BE PEX PIPE (STD) SUPPORTED AT 32" INTERVALS.
2. FITTINGS & CONNECTIONS SHALL BE PEX WITH COMPRESSION RINGS INSTALLED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. FIXTURES VALVES SHALL HAVE COMPRESSION CONNECTION FITTINGS INSTALLED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
3. COPPER SUPPLY LINES TO BE INSTALLED A MINIMUM 18" FROM WATER HEATER OUTLET BEFORE CONNECTION TO "PEX" PIPING.
4. BUILDER TO INSTALL BACKFLOW PREVENTERS ON EXTERIOR AND/OR OTHER FAUCETS WHERE REQ'D BY PUMING CODE.
5. BUILDING TO SUPPLY & INSTALL COPPER T & P RELIEF LINE AND EXTEND TO BUILDING EXTERIOR.
6. OVER AREA SUBJECT TO WATER DAMAGE, BUILDER SHALL INSTALL A 24 GAUGE GALVANIZED METAL DRAIN PAN w/ MIN. 1" DRAIN EXTENDED TO BLDG. BELOW WATER HEATERS.
7. AS DICTATED BY THE SERVICE AVAILABLE, THE BUILDER SHALL INSTALL WATER HAMMER ARRESTORS ( AIR CHAMBERS, PRESSURE REDUCING VALVES, ETC.) ON THE WATER DISTRIBUTION SYSTEM TO REGULATE THE VELOCITY OF THE FLOW & LESSEN THE HYDRAULIC SHOCK OF QUICK-CLOSING VALVES & FAUCETS.
8. WATER HEATER EQUIPPED W/DIP TUBE TO PREVENT SIPHONING OF WATER FROM TANK BACK INTO WATER SUPPLY LINES.
9. ALL WATER HEATER TANKS SHALL BE EQUIPPED WITH DRAIN COCKS AT BASE OF TANK FOR EMPTYING.
10. ALL SUPPLY LINES RAN IN LOOP FASHION PER MODULE TO CONNECTION POINT AT WATELINE. PURCHASER TO MAKE CONNECTION FROM MODULE TO MODULE ON SITE.
11. MAXIMUM LENGTH OF INDIVIDUAL DISTRIBUTION LINES SHALL NOT EXCEED 60 FT.

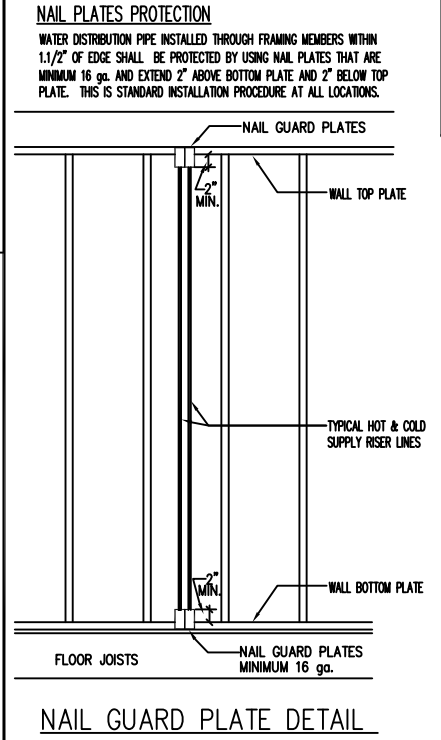
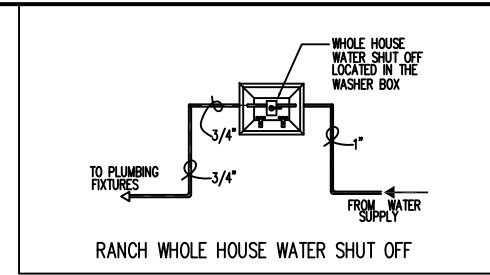
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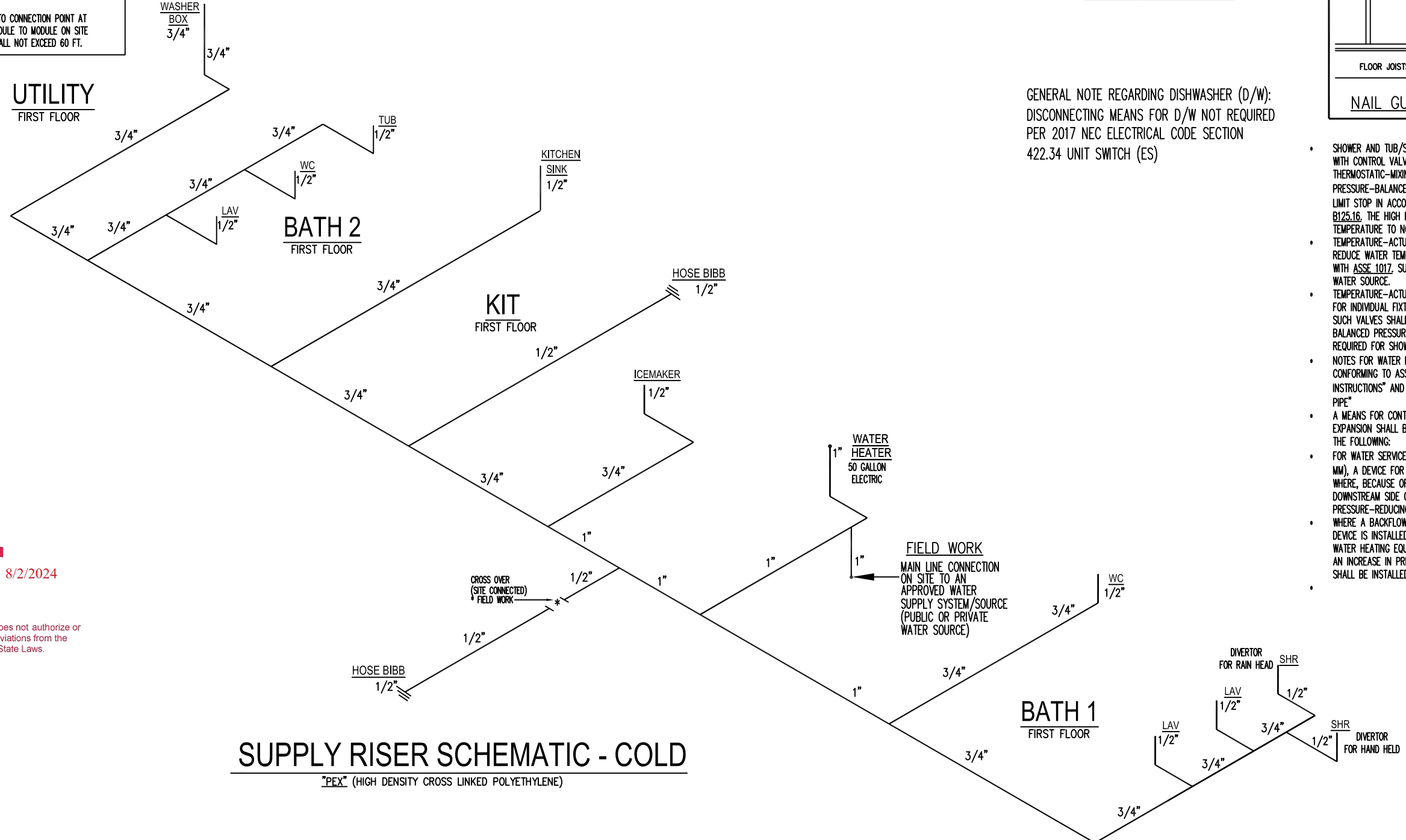
**WATER HEATER DRAIN PAN NOTE**

WATER HEATER DRAIN PAN DRAIN SHALL EXTEND TO THE EXTERIOR OF THE BUILDING AND TERMINATE NOT LESS THAN 6" AND NOT MORE THAN 24" ABOVE ADJACENT GROUND SURFACE PER SECTION P2801.6.2 OF THE 2018 NCPC



GENERAL NOTE REGARDING DISHWASHER (D/W): DISCONNECTING MEANS FOR D/W NOT REQUIRED PER 2017 NEC ELECTRICAL CODE SECTION 422.34 UNIT SWITCH (ES)

- SHOWER AND TUB/SHOWER COMBINATION VALVES SHALL BE EQUIPPED WITH CONTROL VALVES OF THE PRESSURE-BALANCE, THERMOSTATIC-MIXING OR COMBINATION PRESSURE-BALANCE/THERMOSTATIC-MIXING VALVE TYPES WITH A HIGH LIMIT STOP IN ACCORDANCE WITH ASSE 1016/ASME A112.1016/CSA B125.16. THE HIGH LIMIT STOP SHALL BE SET TO LIMIT THE WATER TEMPERATURE TO NOT GREATER THAN 120°F.
- TEMPERATURE-ACTUATED MIXING VALVES, WHICH ARE INSTALLED TO REDUCE WATER TEMPERATURES TO DEFINED LIMITS, SHALL COMPLY WITH ASSE 1017. SUCH VALVES SHALL BE INSTALLED AT THE HOT WATER SOURCE.
- TEMPERATURE-ACTUATED, FLOW-REDUCTION DEVICES, WHERE INSTALLED FOR INDIVIDUAL FIXTURE FITTINGS, SHALL CONFORM TO ASSE 1062. SUCH VALVES SHALL NOT BE USED AS A SUBSTITUTE FOR THE BALANCED PRESSURE, THERMOSTATIC OR COMBINATION SHOWER VALVES REQUIRED FOR SHOWERS IN SECTION P2708.4.
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**SUPPLY RISER SCHEMATIC - COLD**

\*PEX\* (HIGH DENSITY CROSS LINKED POLYETHYLENE)

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8/2/2024  
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PLAN NAME: HEARTLAND II  
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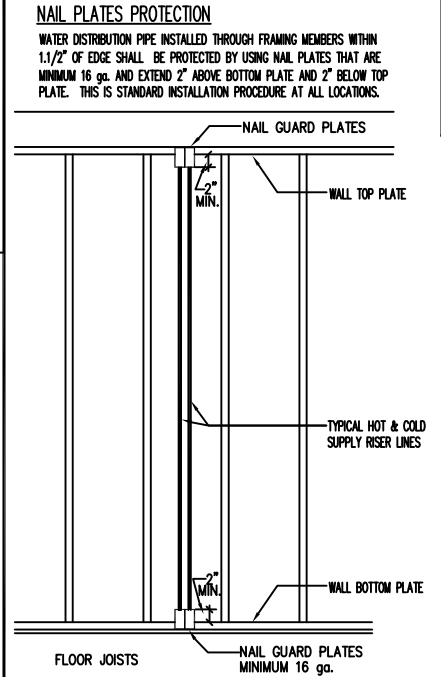
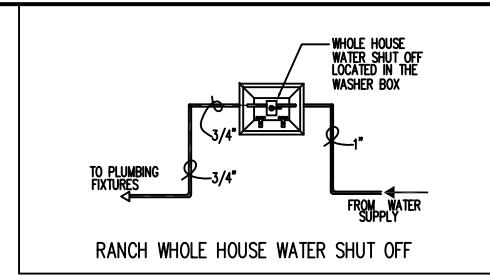
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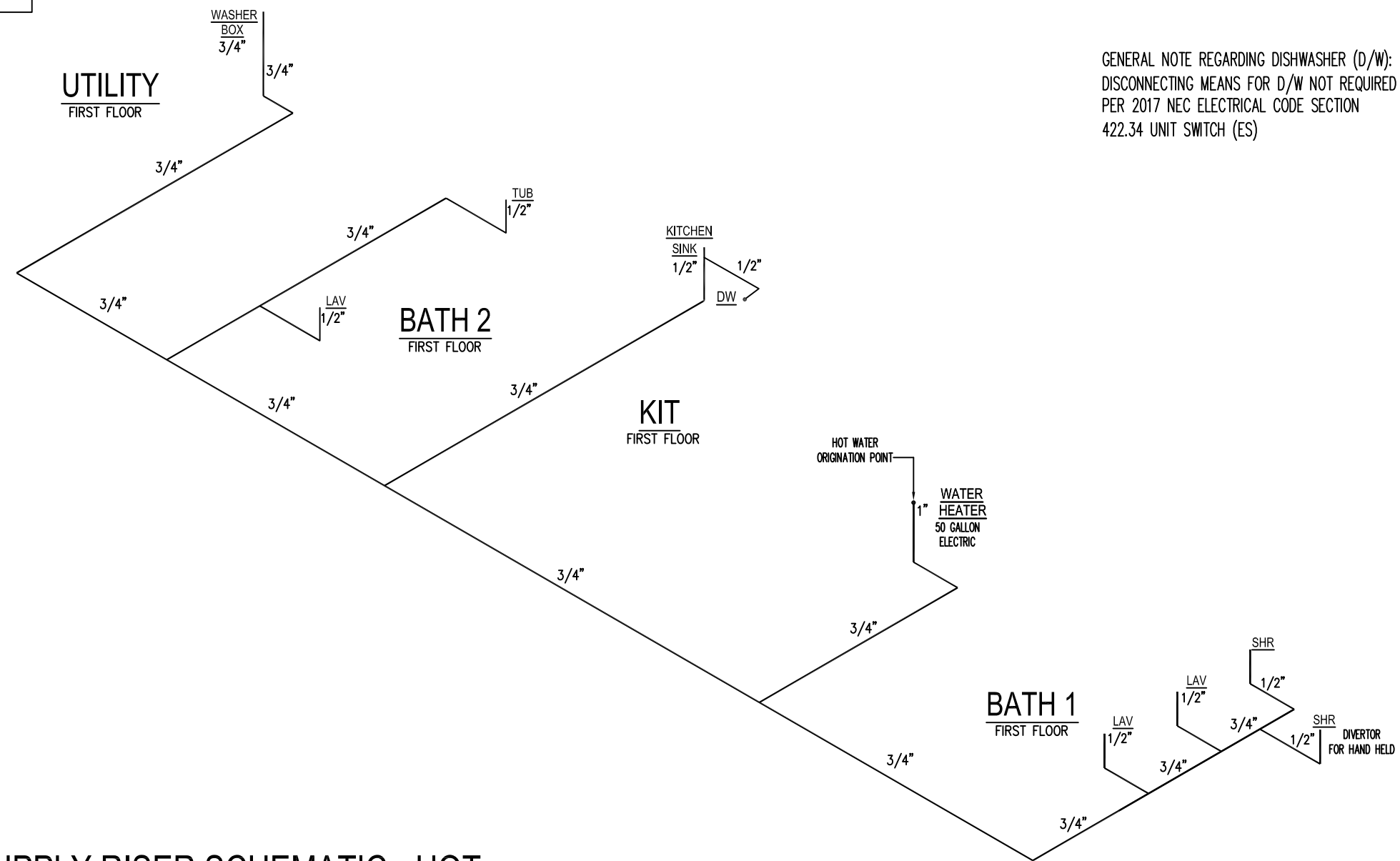
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NAIL GUARD PLATE DETAIL

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SUPPLY RISER SCHEMATIC - HOT  
"PEX" (HIGH DENSITY CROSS LINKED POLYETHYLENE)

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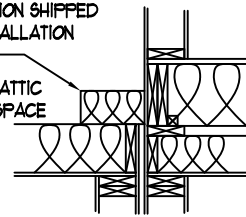
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WHERE A SINGLE STORY MODULE JOINS A MULTI-STORY FOLLOW THESE GUIDELINES:

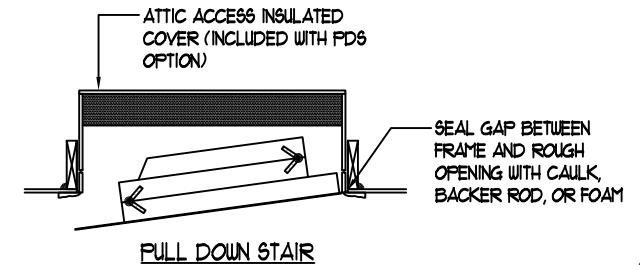
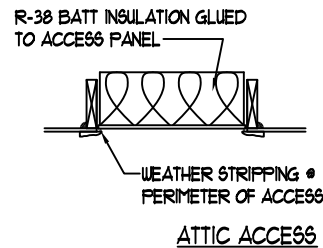
BATT INSULATION SHIPPED FOR SITE INSTALLATION AFTER SET

ATTIC SPACE



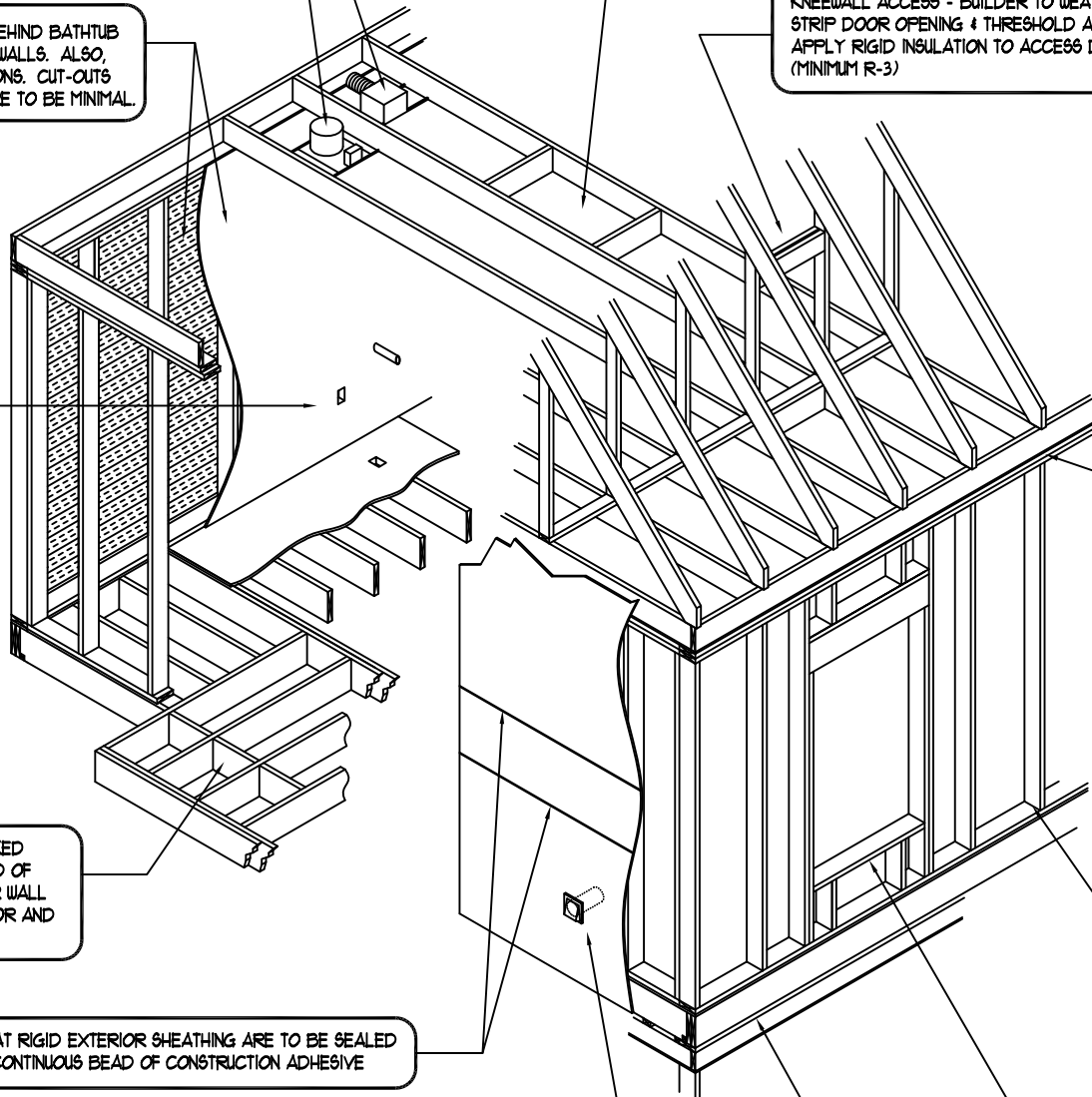
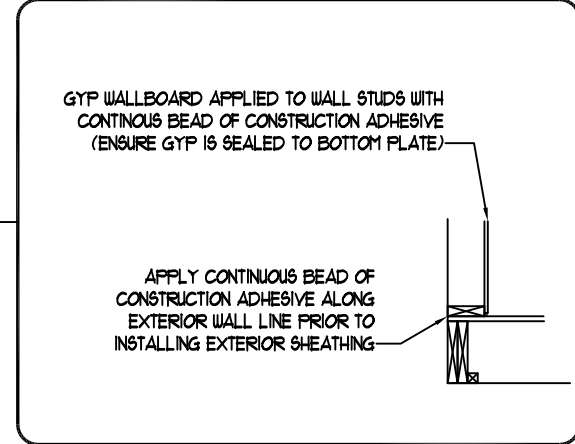
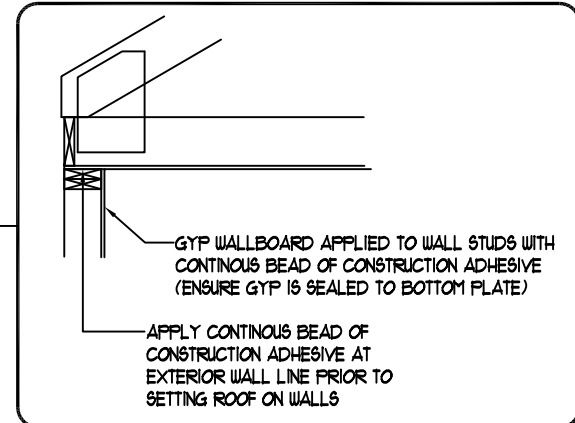
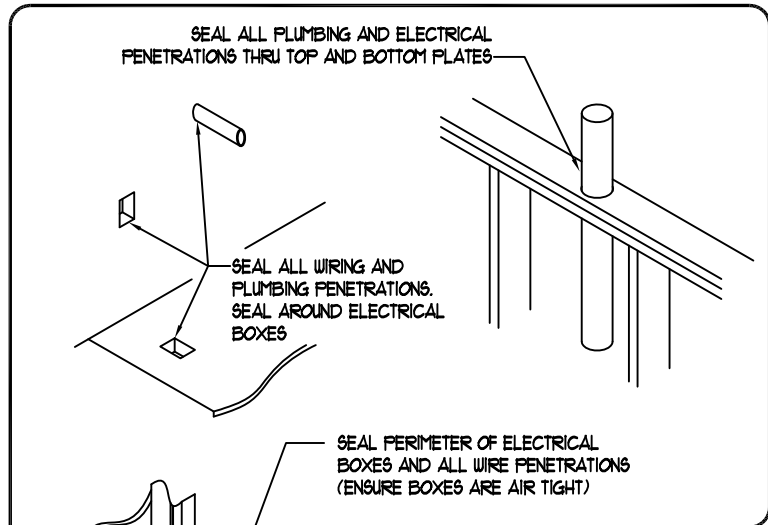
FOAM SEAL LIGHTS, BATH FANS, SPEAKERS, ETC. TO CEILING DRYWALL. USE AIR TIGHT IC-RATED RECESSED CANS AND COVER W/ INSULATION

INSULATE AND INSTALL GYPSUM WALL BOARD BEHIND BATHTUB AND SHOWERS ON EXTERIOR WALLS AND ATTIC WALLS. ALSO, SEAL BATHTUB AND SHOWER DRAIN PENETRATIONS. CUT-OUTS FOR TUB AND SHOWER DRAIN PENETRATIONS ARE TO BE MINIMAL.



KNEEWALL ACCESS - BUILDER TO WEATHER STRIP DOOR OPENING & THRESHOLD AND APPLY RIGID INSULATION TO ACCESS DOOR (MINIMUM R-3)

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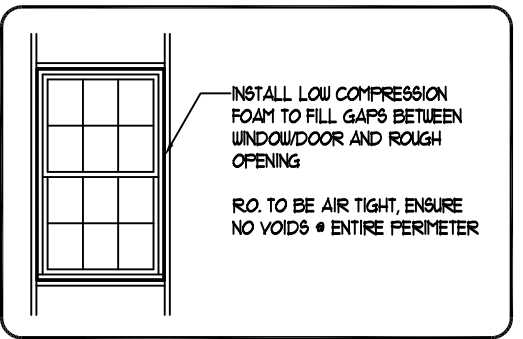
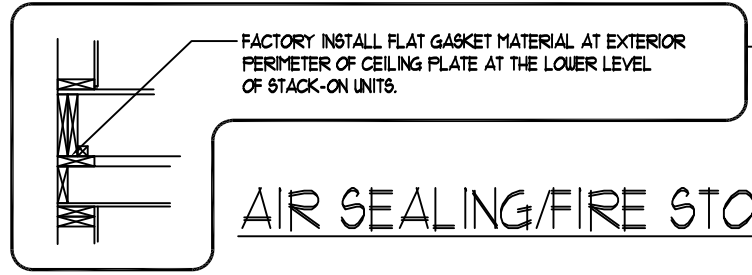
CANTILEVER AREAS ARE TO BE BLOCKED AND SEALED. APPLY CONTINUOUS BEAD OF CONSTRUCTION ADHESIVE AT EXTERIOR WALL LINE PRIOR TO SETTING WALLS ON FLOOR AND ROOF ON WALLS

SEAMS AT RIGID EXTERIOR SHEATHING ARE TO BE SEALED WITH A CONTINUOUS BEAD OF CONSTRUCTION ADHESIVE

EXTERIOR WALL EXHAUST/VENT TERMINATIONS ARE TO BE SEALED

IT IS THE RESPONSIBILITY OF THE PURCHASER TO INSTALL LOOSE FILL INSULATION (MIN. 2" THICK) OR SPRAY FOAM AT MATING WALL GAPS.

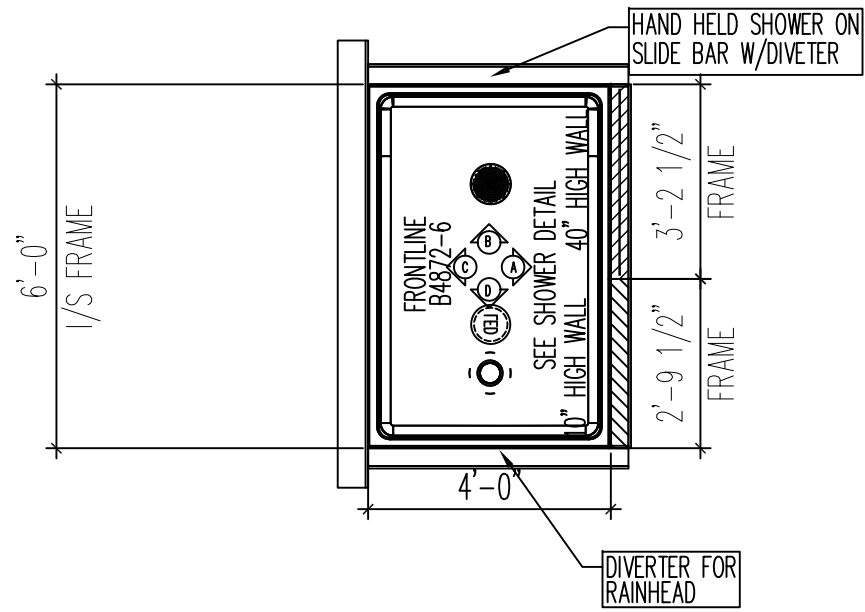
SEAL ALL CRANE CABLE NOTCHES WITH FOAM



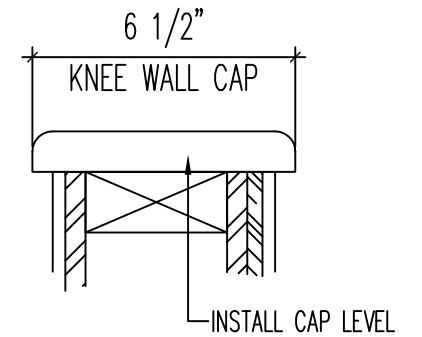
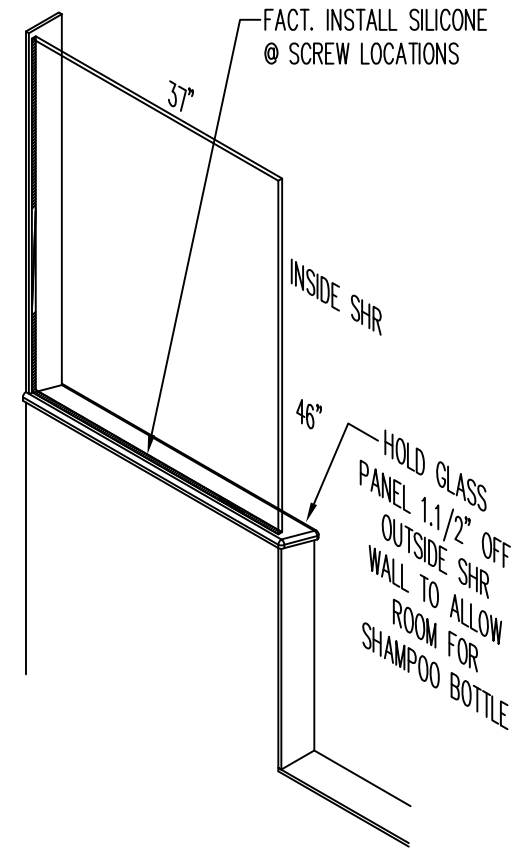
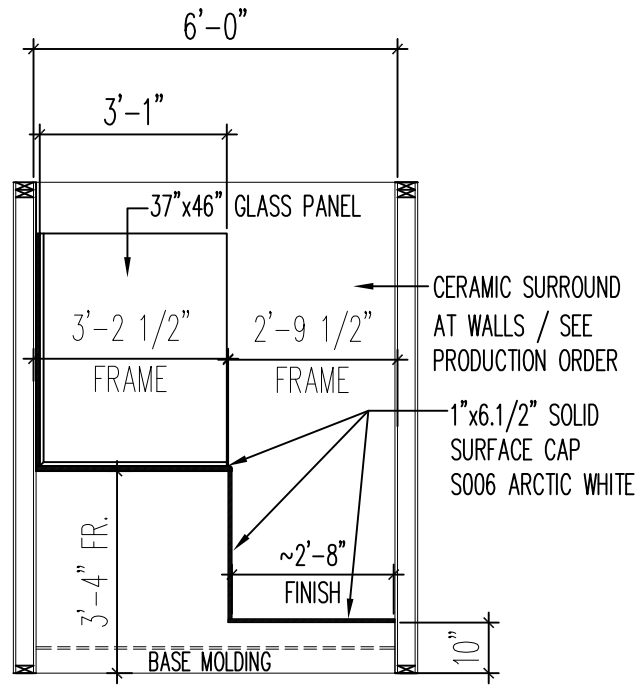
# AIR SEALING/FIRE STOP DETAIL SHEET

N.T.S.

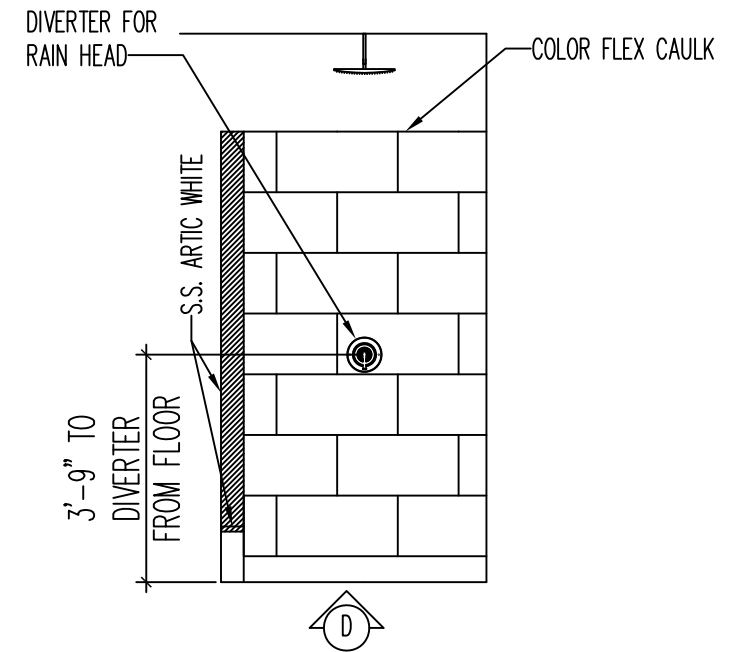
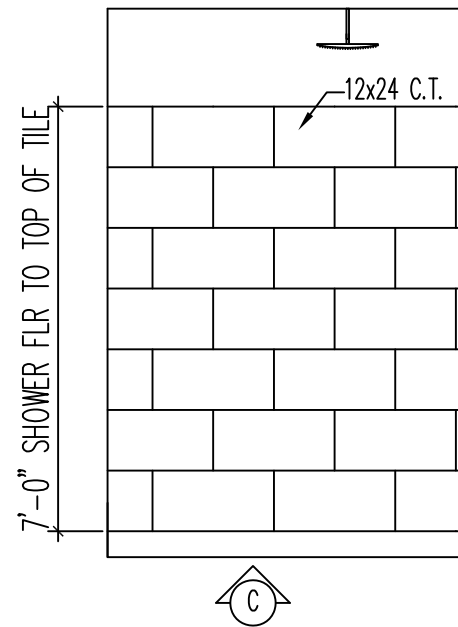
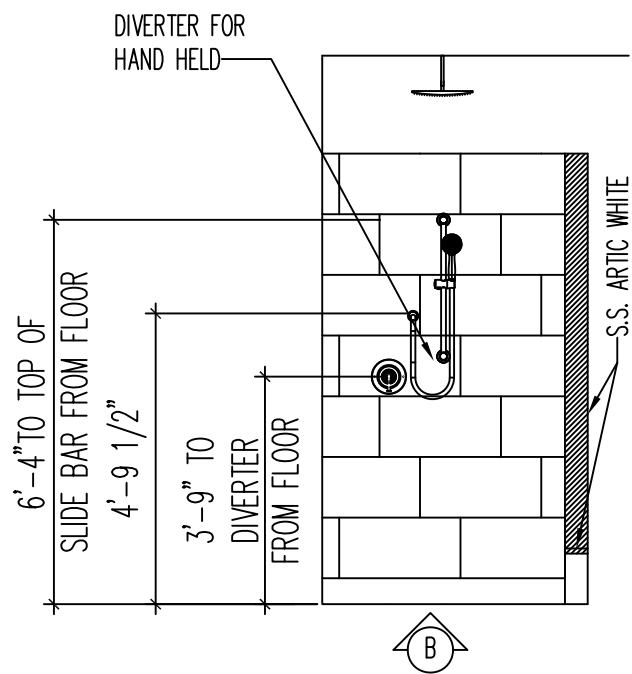
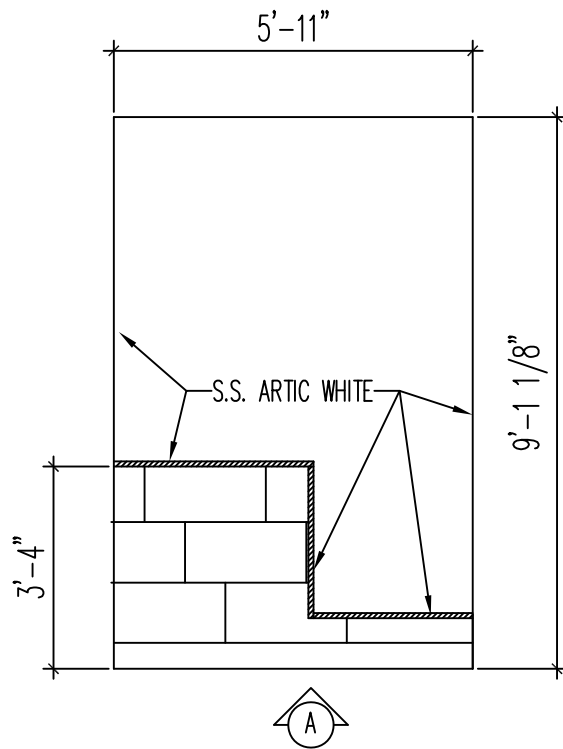
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PLAN NAME:	COLLECTION SERIES:	DESIGN DATE:	REV. DATE:	REV. DATE:	REV. DATE:	REV. DATE:	REV. DATE:
1000 RIVES ROAD, MARTINSVILLE, VA 24112	(716) 632-1000	FAX (716) 632-1001	WWW.NATIONWIDECUSTOMHOMES.COM	NATIONWIDE <i>Custom Homes</i> CUSTOM MADE EASY © COPYRIGHT 2018 NATIONWIDE HOMES ALL RIGHTS RESERVED			
NOTE: ONLY ONE HOUSE MAY BE BUILT UTILIZING THE PLANS THAT ARE DESIGNATED FOR THIS CONTRACT JOB		PAGE NO. 13 of 52					



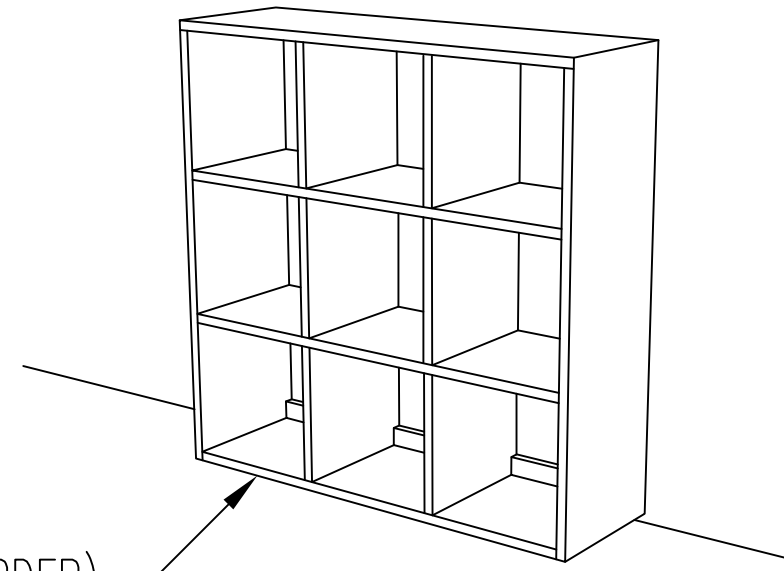
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**NIA** 8/2/2024  
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## 48"X72" FRONTLINE FIBERGLASS SHOWER BASE (NO SEAT) BATH-1 SHOWER DETAIL

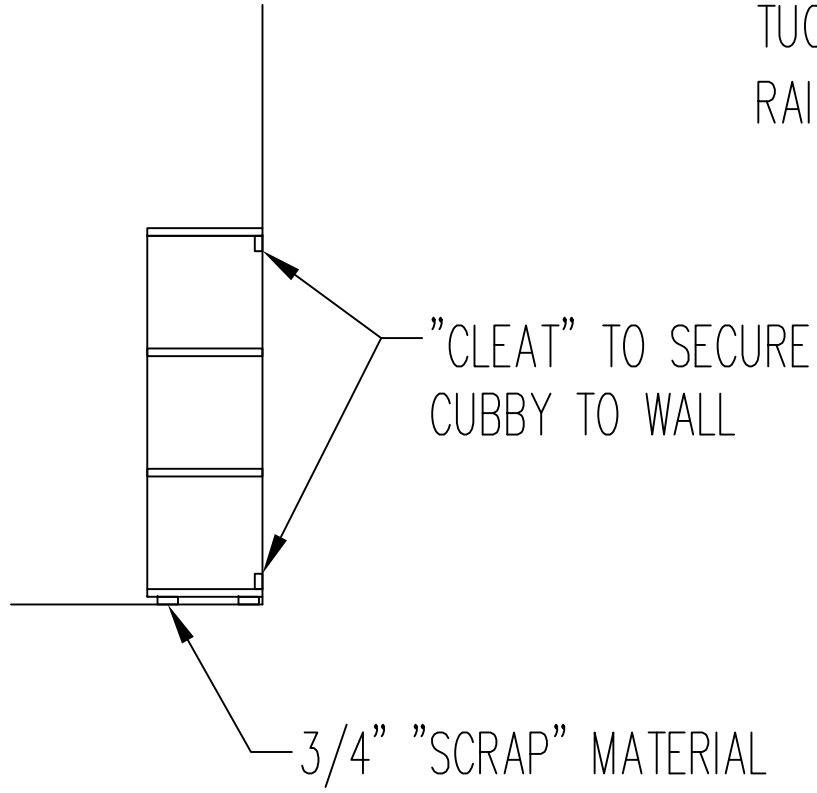
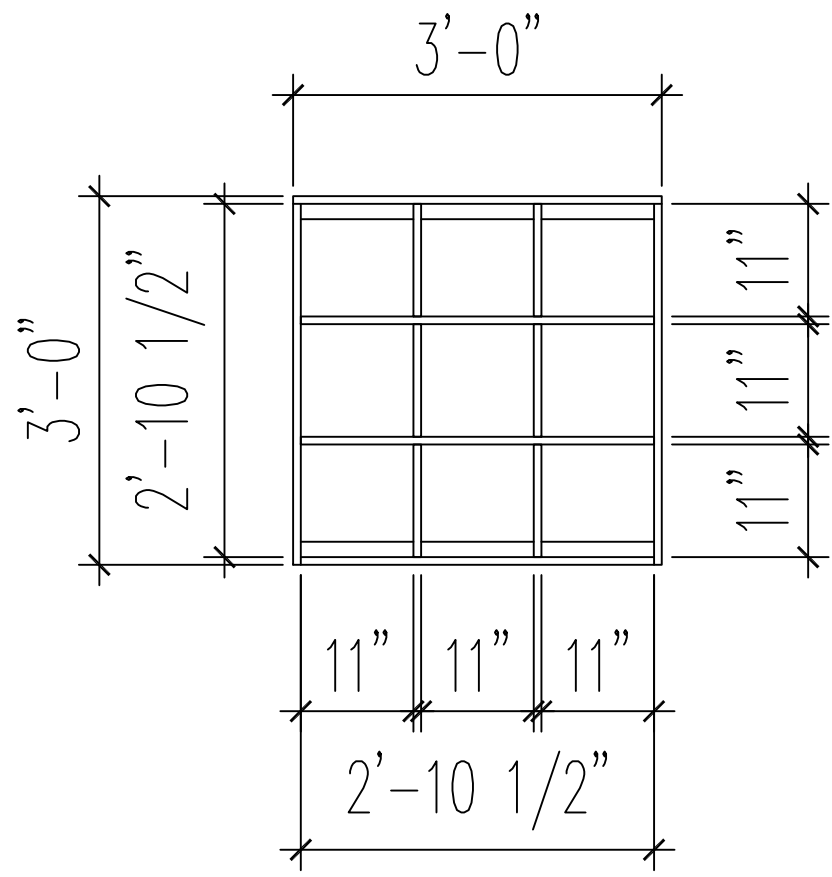


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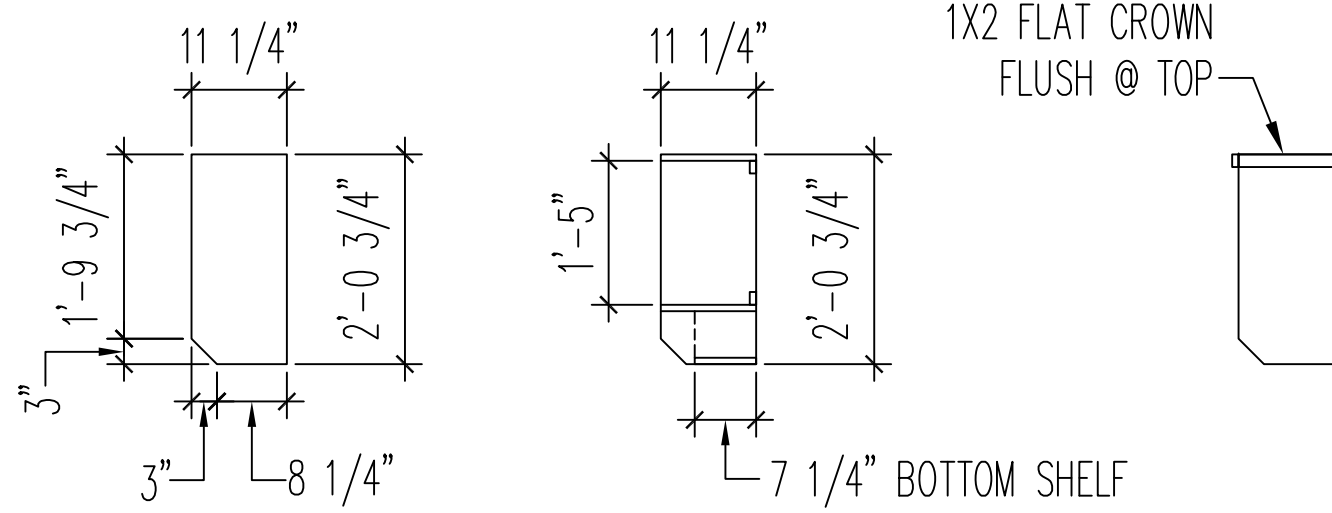
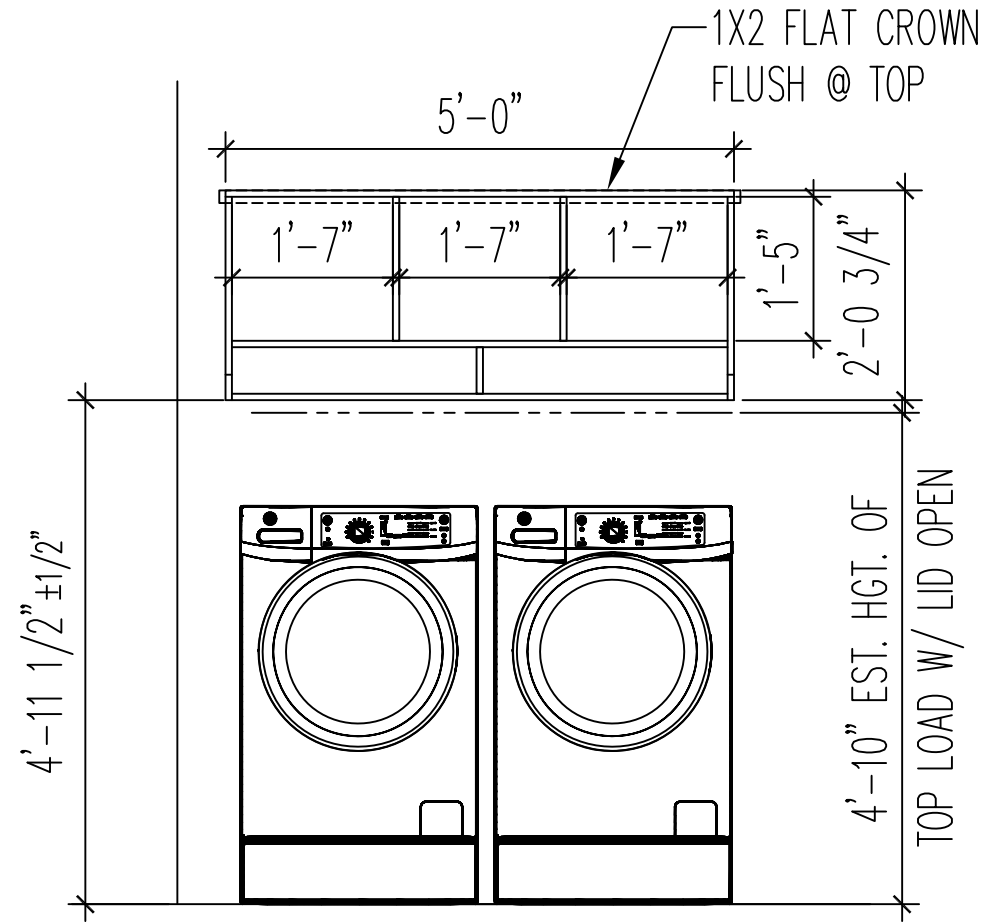
SHOE MOLD WITH LAMINATE FLOORING  
 (SHIPPED/INSTALLED SEE PRODUCTION ORDER)

CUBBY RAISED 3/4" ALLOWING FLOORING TO  
 TUCK UNDER. PLACE "SCRAP" MATERIAL USED TO  
 RAISE CUBBY MINIMUM 1" FROM ENDS OF CUBBY

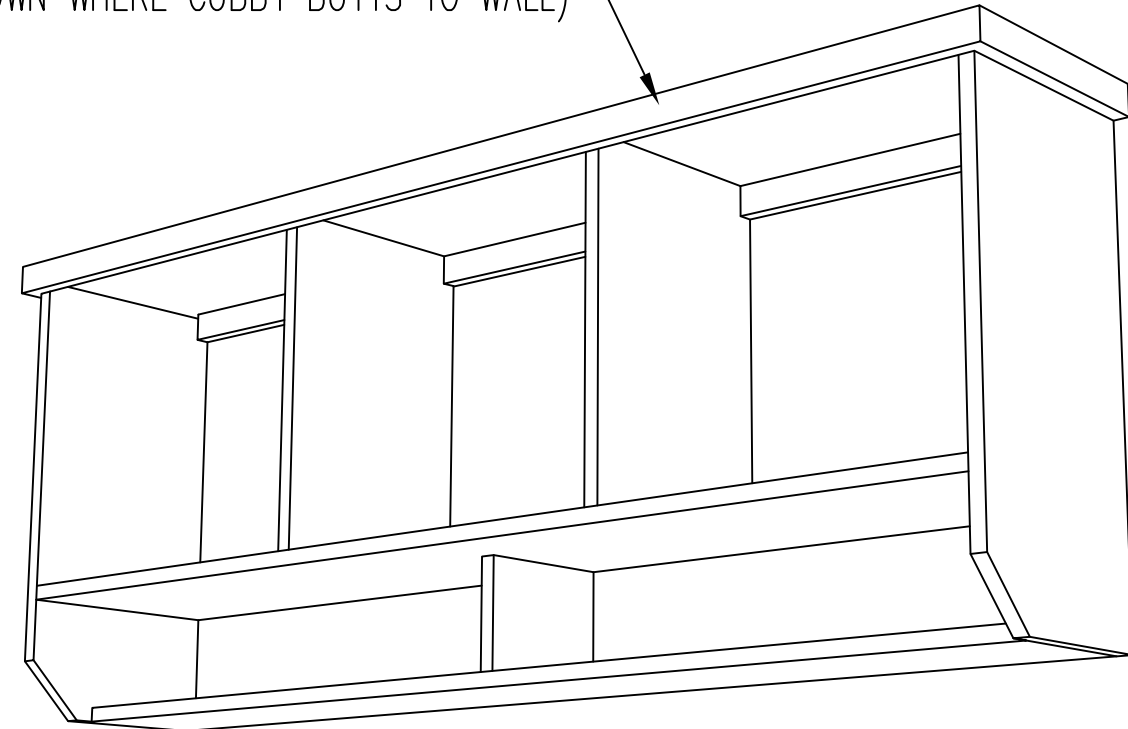


# SHOE CUBBY DETAIL

PRE-BUILT IN PLANT 2



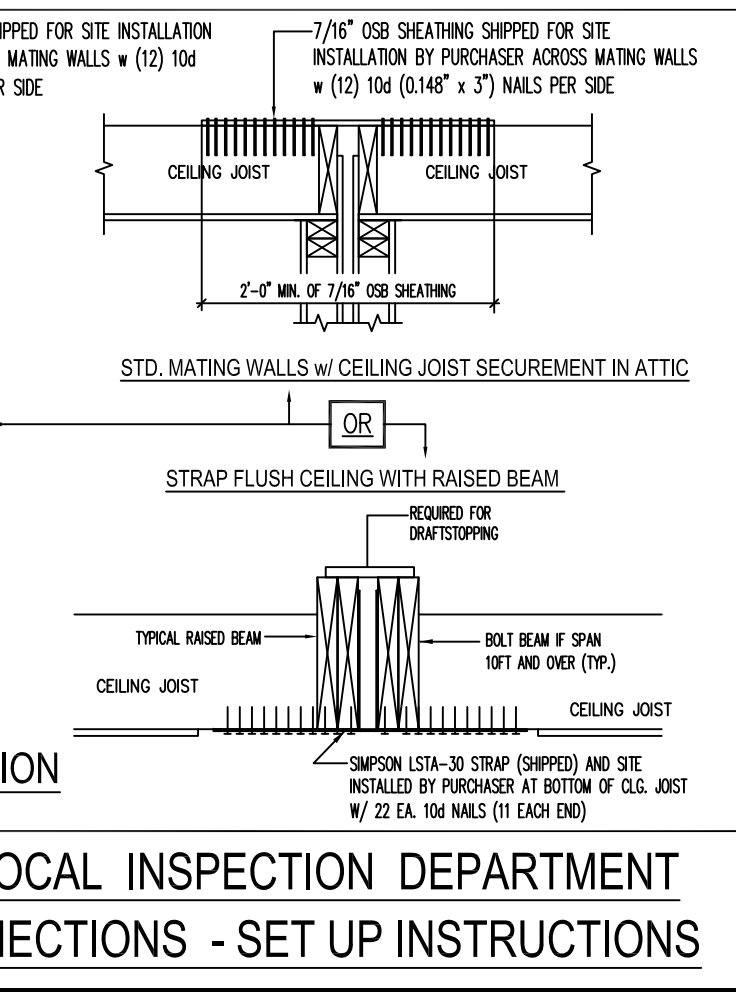
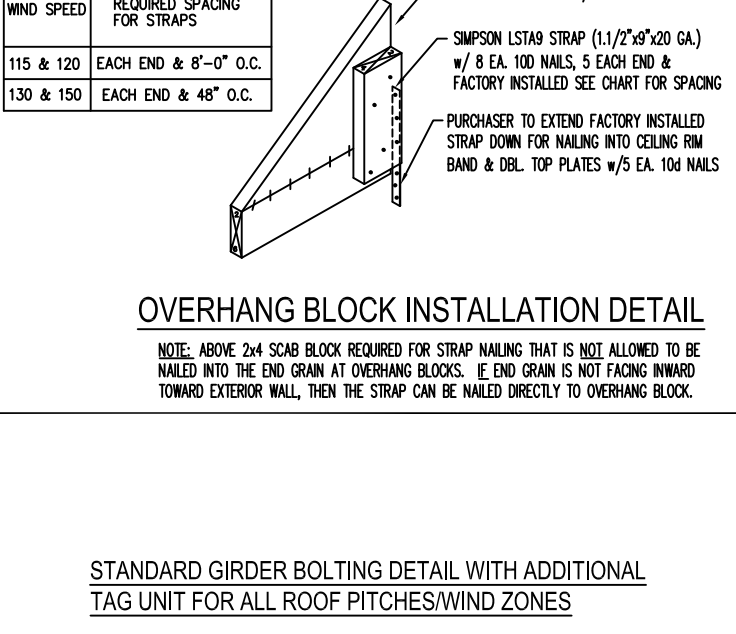
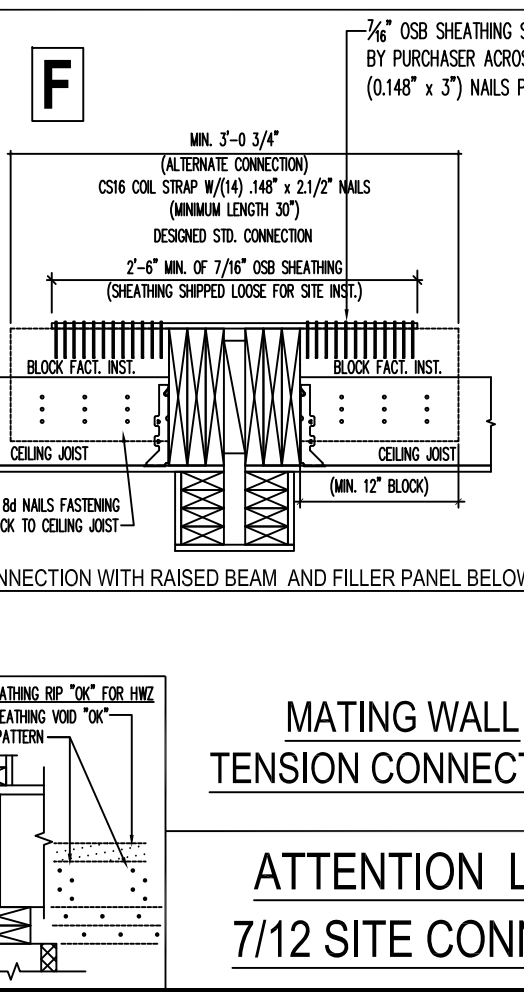
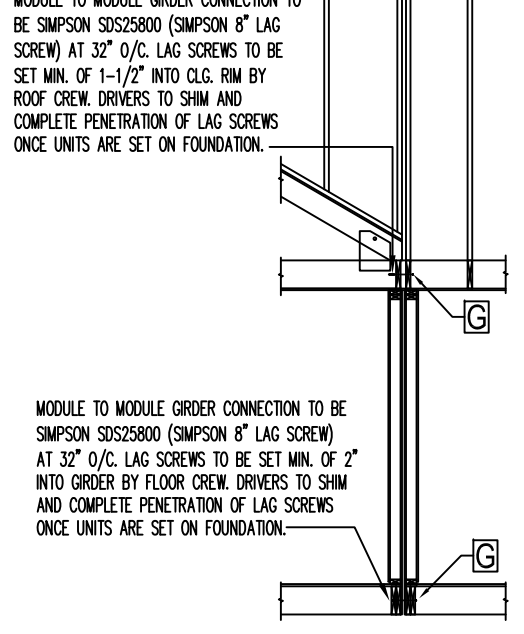
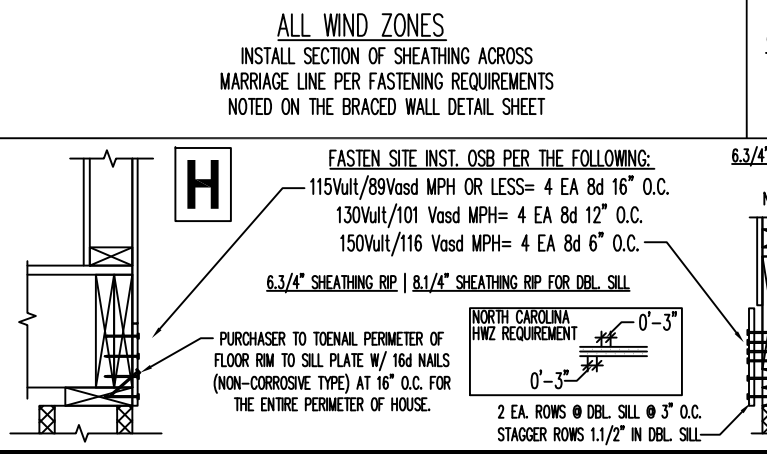
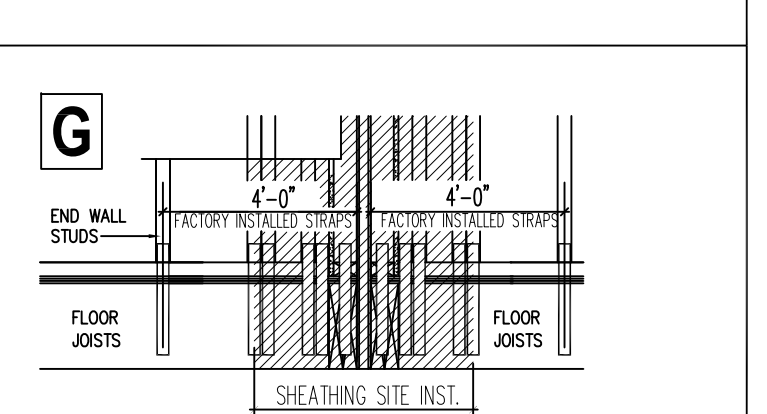
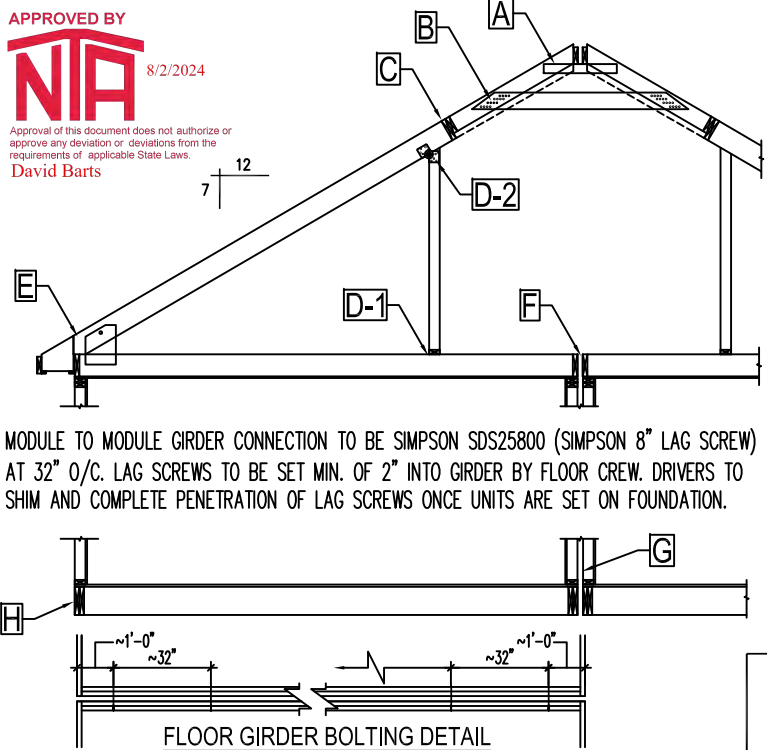
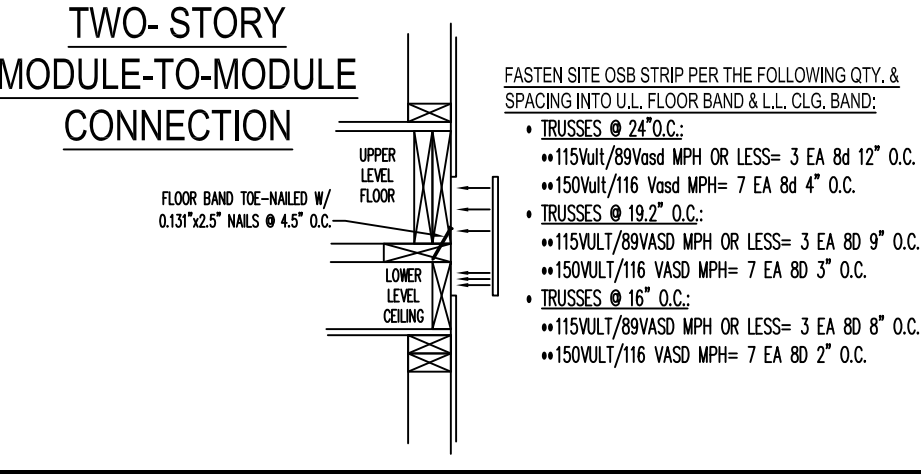
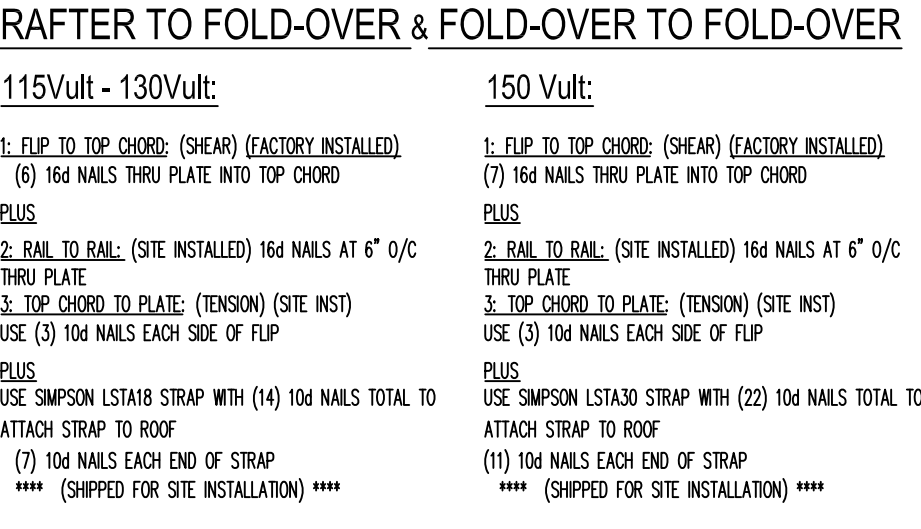
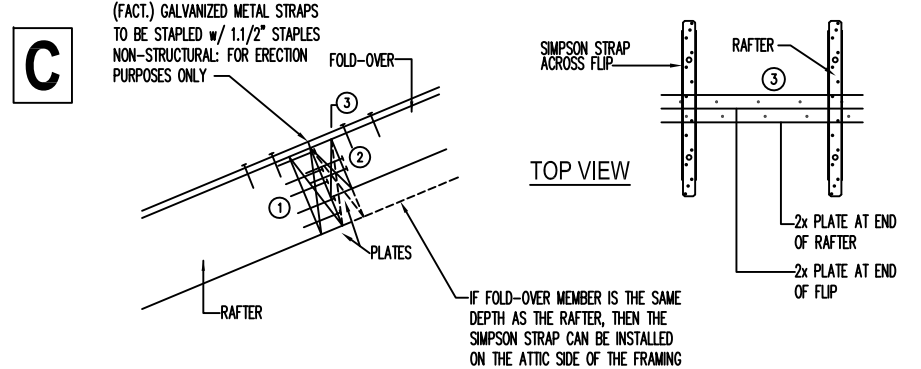
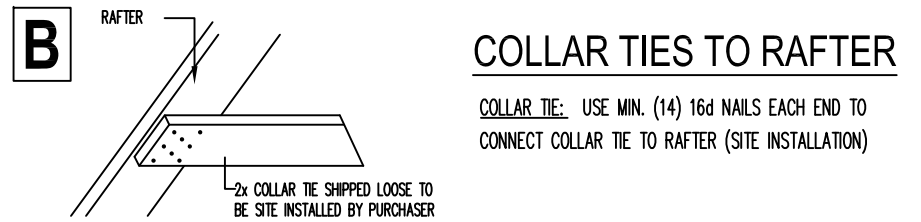
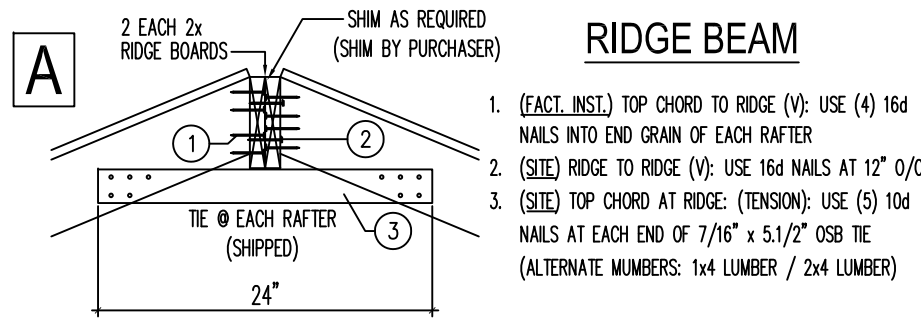
SEE FLOOR PLAN FOR CROWN LOCATION  
 (NO CROWN WHERE CUBBY BUTTS TO WALL)



# WASHER/DRYER CUBBY DETAIL

PRE-BUILT IN PLANT 2

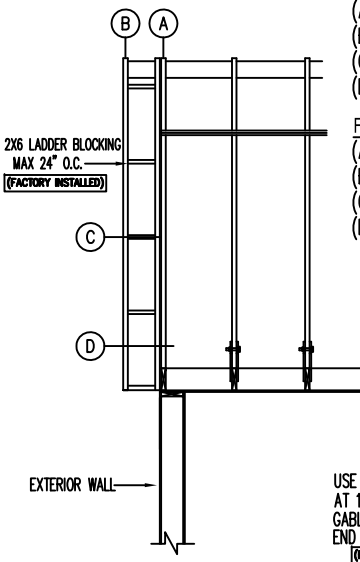
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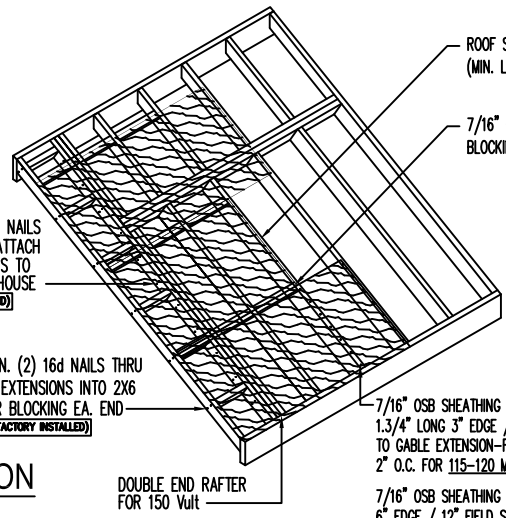
FASTENING SCHEDULE: (115-120 Vult) \*\*\* FACTORY INSTALLED \*\*\*  
(A) ROOF SHEATHING TO GABLE END RAFTER: 16ga. STAPLES 1.3/4" LONG 3" EDGE / 6" FIELD  
(B) ROOF SHEATHING TO O/S GABLE EXTENSION: 16ga. STAPLES 1.3/4" LONG AT 3" O.C.  
(C) 2X6 O/S GABLE EXTENSION TO 2X6 LADDER BLOCK: MIN. (2) 16d NAILS EACH END  
(D) 2X6 I/S GABLE EXTENSION TO GABLE END RAFTER: MIN. (2) 16d NAILS AT 12" O.C.

FASTENING SCHEDULE: (130 Vult AND GREATER) \*\*\* FACTORY INSTALLED \*\*\*  
(A) ROOF SHEATHING TO GABLE END RAFTER: 8d NAILS AT 4" O.C.  
(B) ROOF SHEATHING TO O/S GABLE EXTENSION: 8d NAILS AT 6" O.C.  
(C) 2X6 O/S GABLE EXTENSION TO 2X6 LADDER BLOCK: MIN. (2) 16d NAILS EACH END  
(D) 2X6 I/S GABLE EXTENSION TO GABLE END RAFTER: MIN. (2) 16d NAILS AT 12" O.C.

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GABLE EXTENSION CONNECTION  
ALL WIND ZONES



USE MIN. (2) 16d NAILS AT 12" O.C. TO ATTACH GABLE EXTENSIONS TO END RAFTER OF HOUSE (FACTORY INSTALLED)

USE MIN. (2) 16d NAILS THRU GABLE EXTENSIONS INTO 2X6 LADDER BLOCKING EA. END (FACTORY INSTALLED)

ROOF SHEATHING JOINTS NOT LESS THAN 24" FROM GABLE END WALL (MIN. LENGTH OF PANEL: 48" | 60" W/ GABLE END EXTENSION)

7/16" OSB PANEL EDGES FASTENED TO BLOCKING W/ 8d NAILS @ 6" O.C. (TYPICAL)

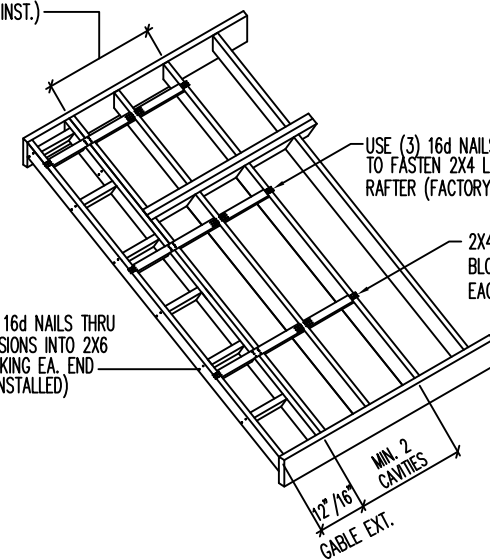
7/16" OSB SHEATHING FASTEN TO RAFTERS WITH 16ga. STAPLES 1.3/4" LONG 3" EDGE / 6" FIELD SPACING EXCEPT FOR END RAFTER TO GABLE EXTENSION-FASTEN WITH 16ga. STAPLES 1.3/4" LONG AT 2" O.C. FOR 115-120 MPH \*\*\* FACTORY INSTALLED \*\*\*

7/16" OSB SHEATHING FASTEN TO RAFTERS WITH 8d NAILS 6" EDGE / 12" FIELD SPACING EXCEPT FOR END RAFTER TO GABLE EXTENSION-FASTEN WITH 8d NAILS AT 4" O.C. FOR 130-150Vult \*\*\* FACTORY INSTALLED \*\*\*

**FACTORY CONNECTIONS**

2x4 BLOCKING MIN. 2 BAYS/CAVITIES (FACTORY INST.)

USE MIN. (2) 16d NAILS THRU GABLE EXTENSIONS INTO 2X6 LADDER BLOCKING EA. END (FACTORY INSTALLED)



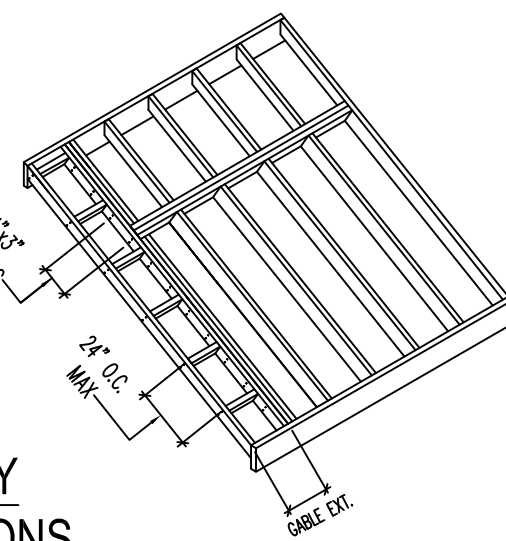
USE (3) 16d NAILS ENDNAILED TO FASTEN 2X4 LAY-IN INTO RAFTER (FACTORY INSTALLED)

2X4 SPRUCE (OR BETTER) BLOCKING CENTERED BENEATH EACH SHEATHING JOINT

MIN. 2 CAVITIES  
12" / 16" GABLE EXT.

(2) 0.13" x 3" NAILS @ 12" O.C.

24" O.C. MAX



**FACTORY CONNECTIONS**

**12" OR 16" GABLE EXTENSION CONNECTION DETAIL**  
\*\* 140 Vult AND GREATER \*\*

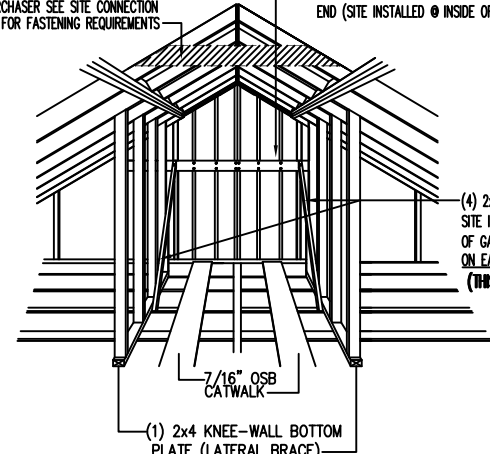
NON-CORROSIVE FASTENERS & STRAPS TO BE USED AS REQUIRED BY LOCAL BUILDING JURISDICTION. PURCHASER RESPONSIBLE FOR STRAPS NOT NOTED AS INSTALLED BY NATIONWIDE HOMES

**ATTENTION LOCAL INSPECTION DEPARTMENT**  
\*\*\* (ALTERNATIVE CONNECTION ONLY) \*\*\*

THIS CONNECTION WOULD BE IN LIEU OF THE GABLE EXTENSION CONNECTIONS ABOVE

2x6 COLLAR TIE (SHOWN DASHED) IS SHIPPED FOR SITE INSTALLATION AT EACH RAFTER BY THE PURCHASER SEE SITE CONNECTION DETAILS FOR FASTENING REQUIREMENTS

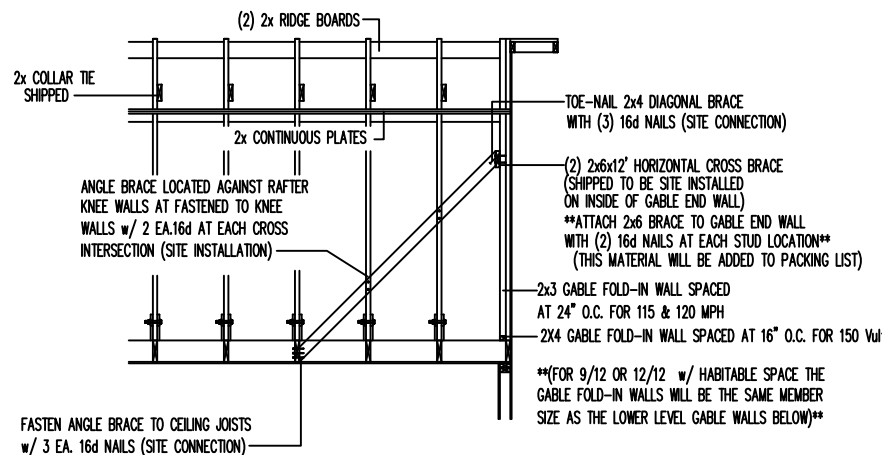
2x6x12' HORIZONTAL CROSS BRACE SHIPPED FOR EA. GABLE END (SITE INSTALLED @ INSIDE OF GABLE FOLD-IN WALL)



(4) 2x4x10' ANGLE BRACES SHIPPED FOR SITE INSTALLATION (REFER TO CROSS SECTION OF GABLE BRACING) BUILDER TO CUT ANGLE ON EACH END OF BRACE ON SITE (THIS MATERIAL WILL BE ADDED TO PACKING LIST)

**INTERIOR GABLE FOLD-IN BRACING**  
FOR 4/12, 5/12, 6/12, 7/12", 8/12 ROOF PITCHES AND 9/12 DECORATIVE ROOF PITCH

\*\*\* 140 Vult AND GREATER \*\*\*



FASTEN ANGLE BRACE TO CEILING JOISTS W/ 3 EA. 16d NAILS (SITE CONNECTION)

TOE-NAIL 2x4 DIAGONAL BRACE WITH (3) 16d NAILS (SITE CONNECTION)

(2) 2x6x12' HORIZONTAL CROSS BRACE (SHIPPED TO BE SITE INSTALLED ON INSIDE OF GABLE END WALL) \*\*ATTACH 2x6 BRACE TO GABLE END WALL WITH (2) 16d NAILS AT EACH STUD LOCATION\*\* (THIS MATERIAL WILL BE ADDED TO PACKING LIST)

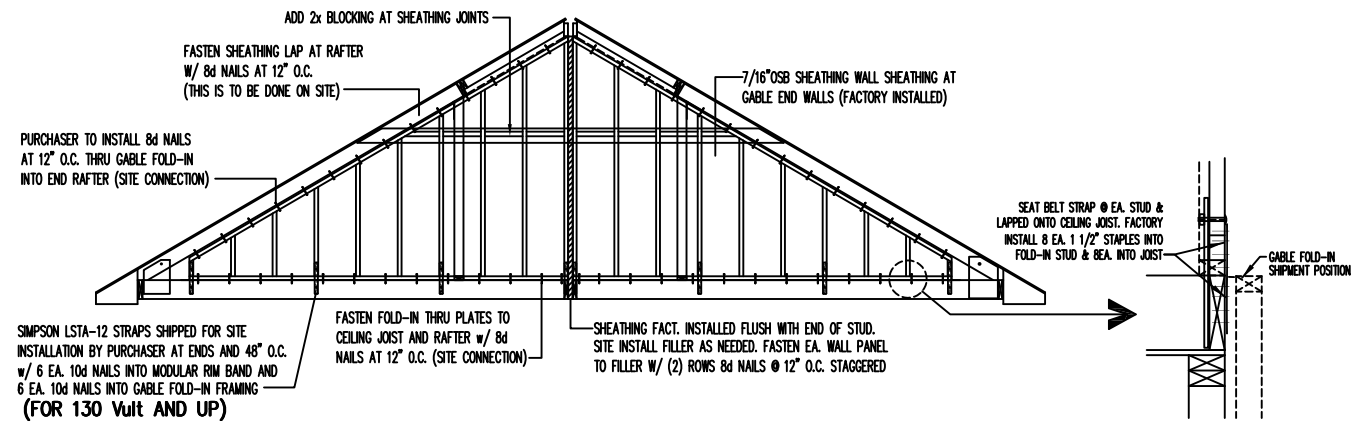
2x3 GABLE FOLD-IN WALL SPACED AT 24" O.C. FOR 115 & 120 MPH  
2X4 GABLE FOLD-IN WALL SPACED AT 16" O.C. FOR 150 Vult

\*\*FOR 9/12 OR 12/12 w/ HABITABLE SPACE THE GABLE FOLD-IN WALLS WILL BE THE SAME MEMBER SIZE AS THE LOWER LEVEL GABLE WALLS BELOW\*\*

**CROSS SECTION OF GABLE BRACING**

FOR 4/12, 5/12, 6/12, 7/12", 8/12 ROOF PITCHES AND 9/12 DECORATIVE ROOF PITCH

ALL CONSTRUCTION AND FASTENING OF GABLE FOLD-IN BRACING IS PRESCRIPTIVE PER THE 2018 NORTH CAROLINA RESIDENTIAL CODE - CHAPTER 45.



PURCHASER TO INSTALL 8d NAILS AT 12" O.C. THRU GABLE FOLD-IN INTO END RAFTER (SITE CONNECTION)

SIMPSON LSTA-12 STRAPS SHIPPED FOR SITE INSTALLATION BY PURCHASER AT ENDS AND 48" O.C. W/ 6 EA. 10d NAILS INTO MODULAR RIM BAND AND 6 EA. 10d NAILS INTO GABLE FOLD-IN FRAMING (FOR 130 Vult AND UP)

UP TO 120 Vult WIND ZONES:

PURCHASER TO FASTEN GABLE FOLD-IN PANEL AS FOLLOWS:

1. FASTEN SHEATHING LAP @ RAFTER WITH 8d NAILS SPACED AT 6" EDGE / 12" FIELD (IF APPLICABLE)
2. FASTEN GABLE FOLD-IN THRU PLATES TO CLG. JOIST AND RAFTER W/ 8d NAILS @ 12" O.C.
3. SHEATHING INSTALLED TO END STUD. BUILDER TO SITE INST. 2x FILLERS AS NEEDED.
4. FASTENING FOR 7/16" OSB SHEATHING: 8d NAILS SPACED AT 6" EDGE / 12" FIELD
5. GABLE FOLD-IN WALL SPACING PER CONSTRUCTION DETAIL \*\*FOR 12/12 ROOFS W/ LIVING SPACE GABLE FOLD-IN WALL WILL BE THE SAME AS THE LOWER LEVEL GABLE WALL\*\*

130 Vult, AND GREATER, WIND ZONES:

PURCHASER TO FASTEN GABLE FOLD-IN PANEL AS FOLLOWS:

- \*\* (BLOCKING INSTALLED AT SHEATHING JOINTS) \*\*
1. FASTEN SHEATHING LAP @ RAFTER W/ 8d NAILS @ 12" O.C. (IF APPLICABLE)
  2. FASTEN GABLE FOLD-IN THRU PLATES TO CLG. JOIST AND RAFTER W/ 16d NAILS @ 12" O.C.
  3. SHEATHING INSTALLED TO END STUD. BUILDER TO SITE INST. 2x FILLERS AS NEEDED.
  4. FASTENING FOR 7/16" OSB SHEATHING: 8d NAILS SPACED AT 3" O.C. EDGE / 6" O.C. FIELD
  5. GABLE FOLD-IN WALL SPACING: 2x4 AT 16" O.C.  
5.1. (FOR 12/12 ROOFS W/ LIVING SPACE GABLE FOLD-IN WALL WILL BE THE SAME AS THE LOWER LEVEL GABLE WALL)

**GABLE END WALL CONNECTION DETAIL**  
115 - 150 Vult HOUSES

**ATTENTION LOCAL INSPECTION DEPARTMENT**  
**7/12 SITE CONNECTIONS - SET UP INSTRUCTIONS**

# WINDOW HEADER UPLIFT CONNECTIONS

## FASTENING OPTIONS (EACH SIDE OF OPENING LINE):

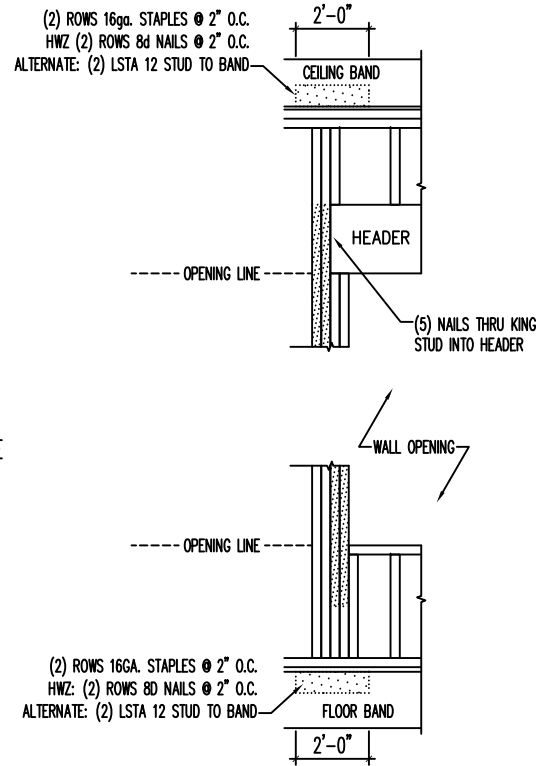
### STANDARD WIND:

- UP TO 36.5" OPENING
  - (4) 16ga.
  - ALTERNATE CONNECTION: (1) LSTA12
- UP TO 75.5" OPENING
  - (8) 16ga.
  - ALTERNATE CONNECTION: (1) LSTA12

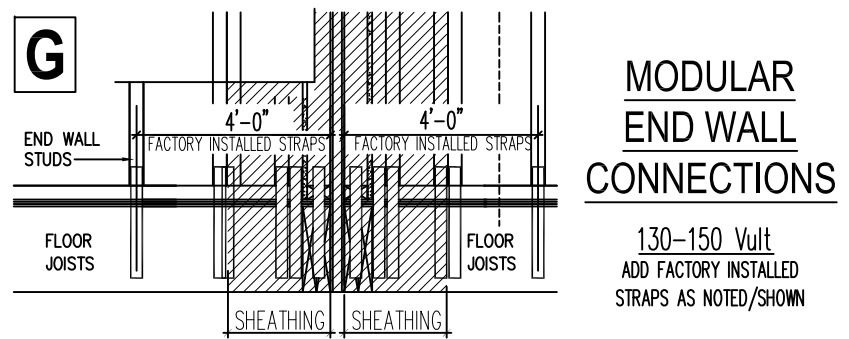
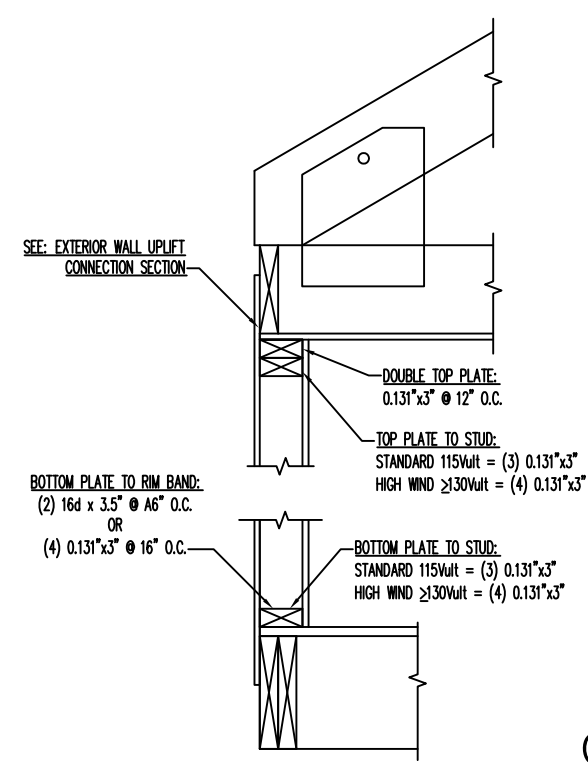
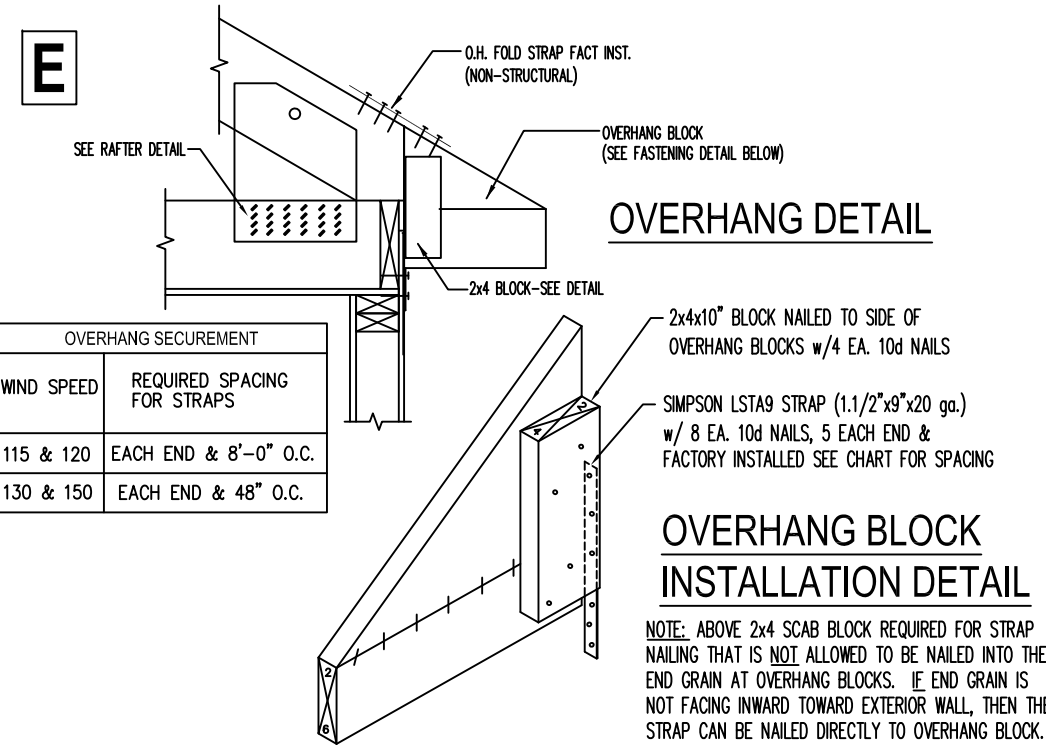
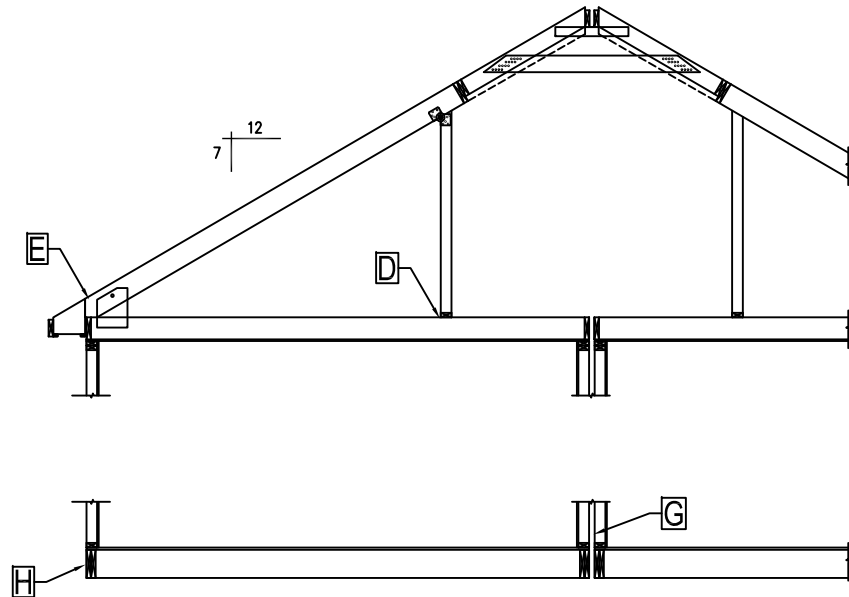
### HIGH WIND ZONE:

- UP TO 36.5" OPENING
  - (9) 8d NAILS EACH SIDE OF OPENING LINE
  - ALTERNATE CONNECTION: (2) LSTA12
- UP TO 75.5" OPENING
  - (19) 8d NAILS EACH SIDE OF OPENING LINE
  - ALTERNATE CONNECTION: (3) LSTA12

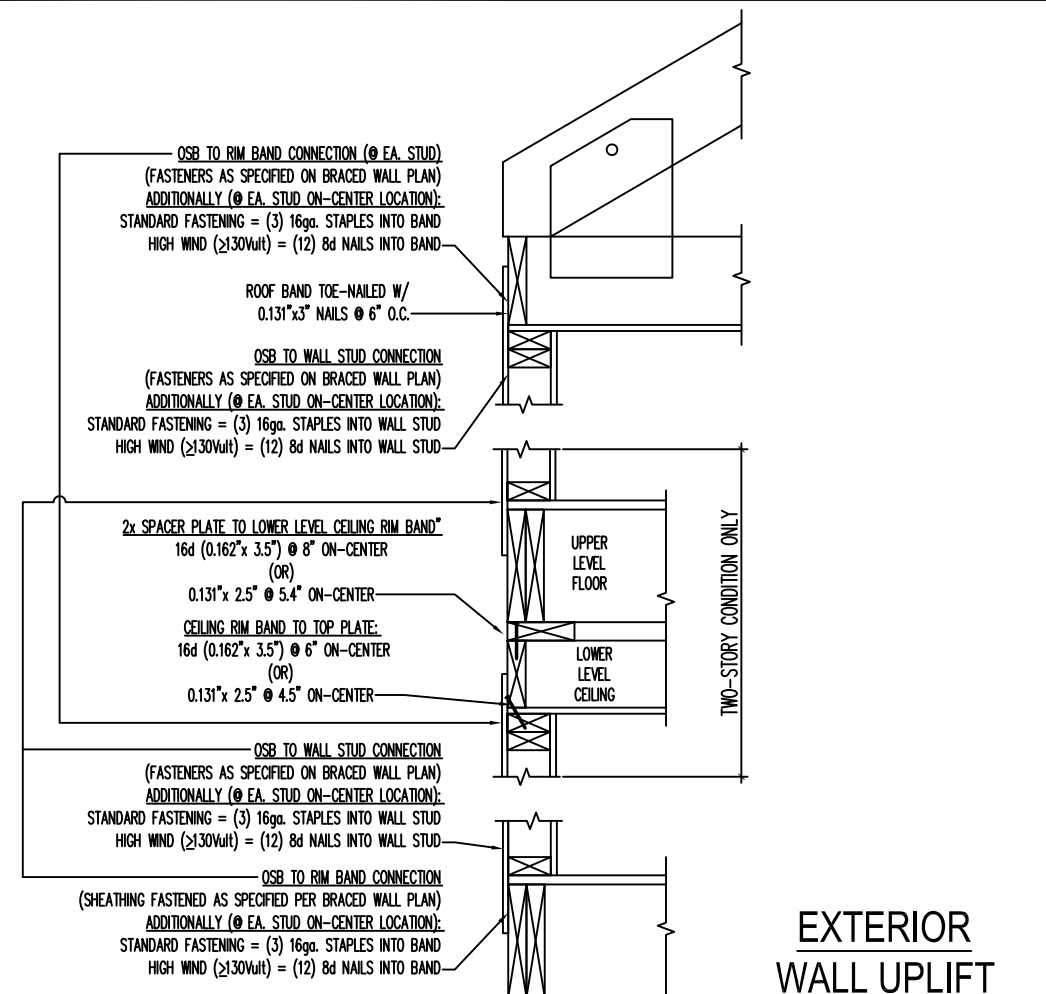
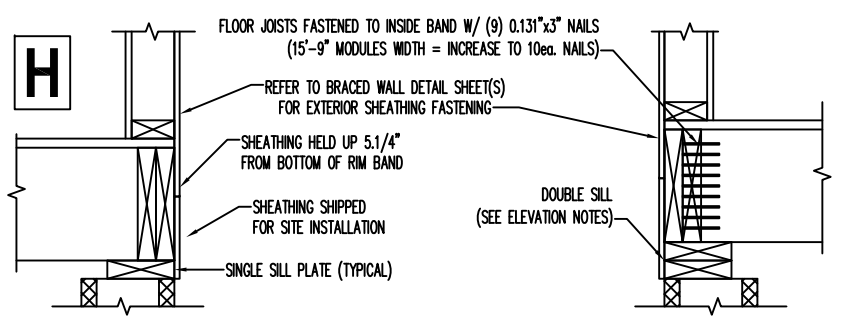
= CONNECTION ZONES



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ALL WIND ZONES  
 SHEATHING HELD BACK (PER PLAN) FROM OUTSIDE FRAME TO C OF DOUBLE STUD FOR SITE INSTALLED SINGLE PIECE BY THE PURCHASER IN ALL WIND ZONES (OSB SHIPPED LOOSE FOR SITE INST.)



## FACTORY INSTALLED COMPONENTS/FASTENERS

### 7/12 CONNECTIONS

1100 RIVES ROAD, MARTINSVILLE, VA 24112  
 (276) 632-7100  
 WWW.NATIONWIDECUSTOMHOMES.COM

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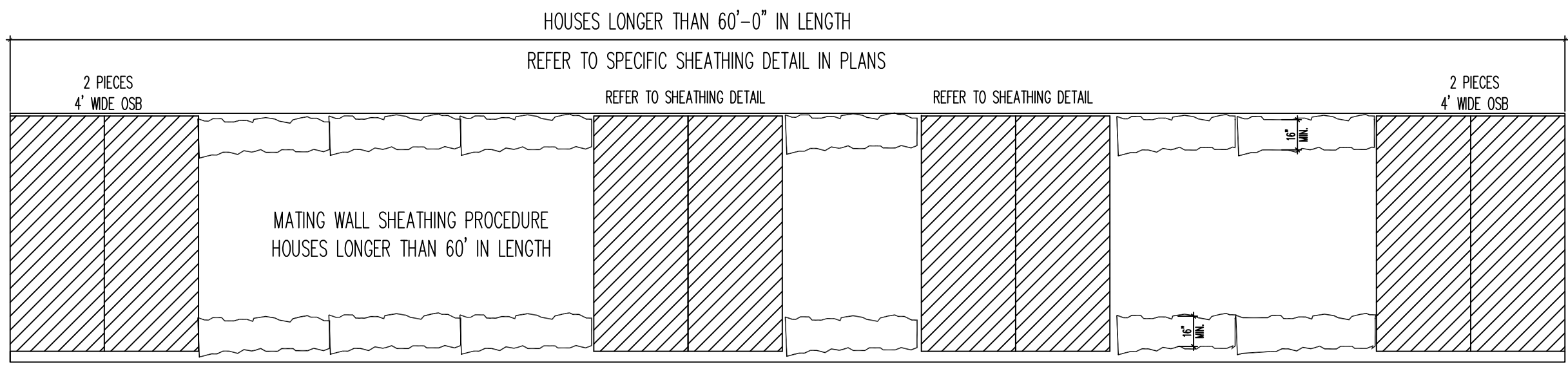
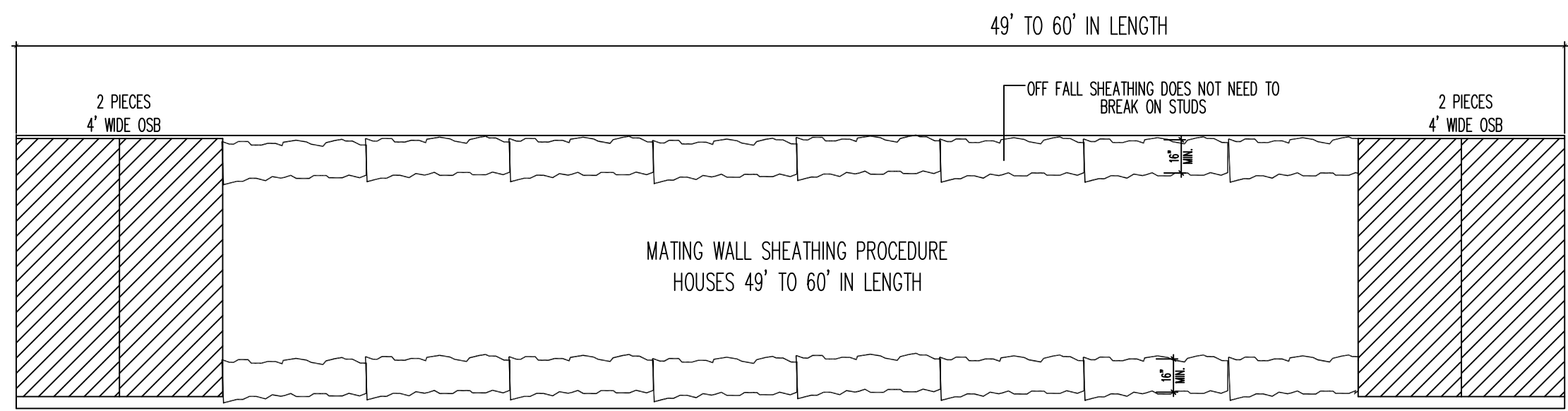
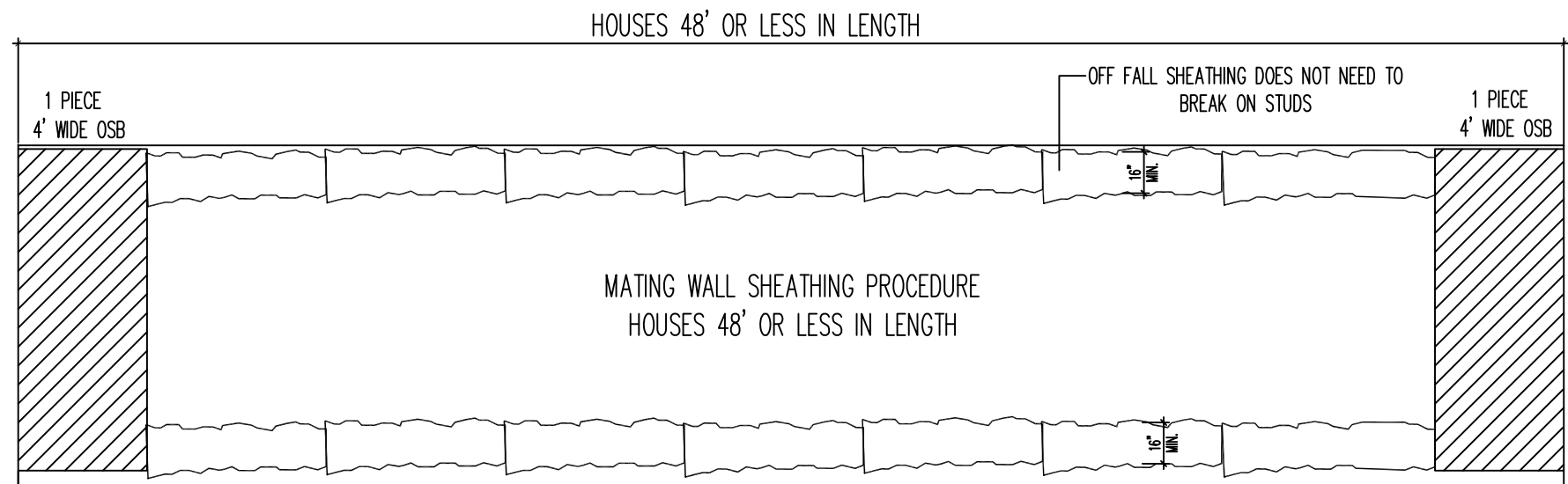
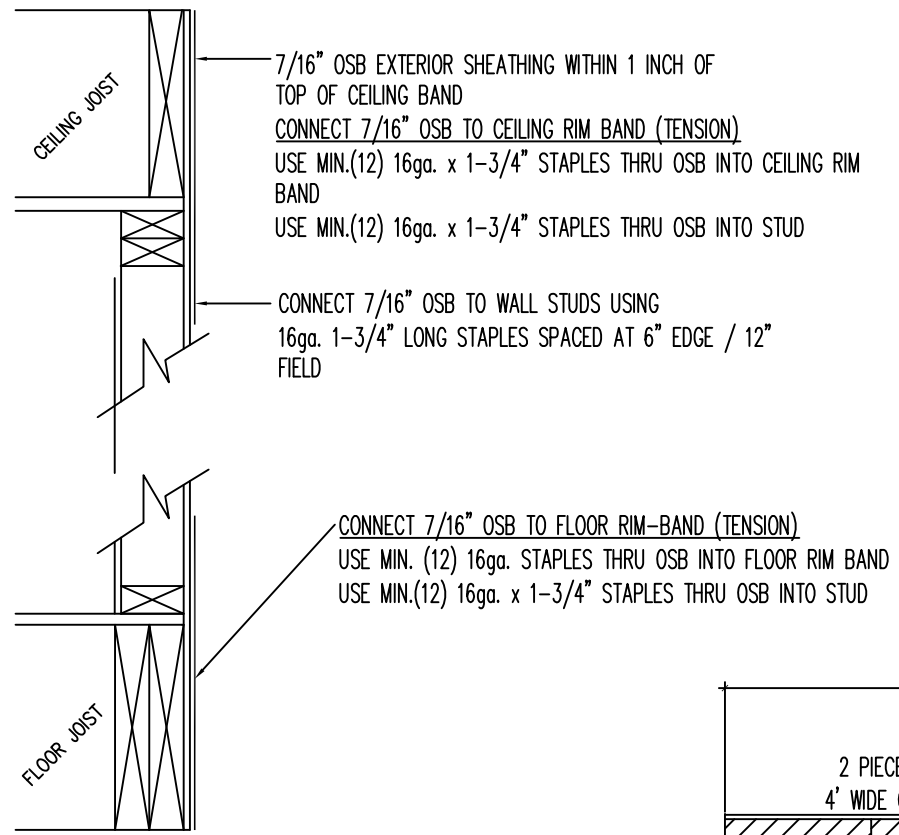
PURCHASER: 7/28 SITE CONNECTIONS  
 JOB NO.:  
 BLACKLINE DATE & BY:  
 PLAN REVISION DATE: 7.26.2024 BAK01

PROCESS DATE & BY:  
 PLOTTED: 7/26/2024 11:34 AM

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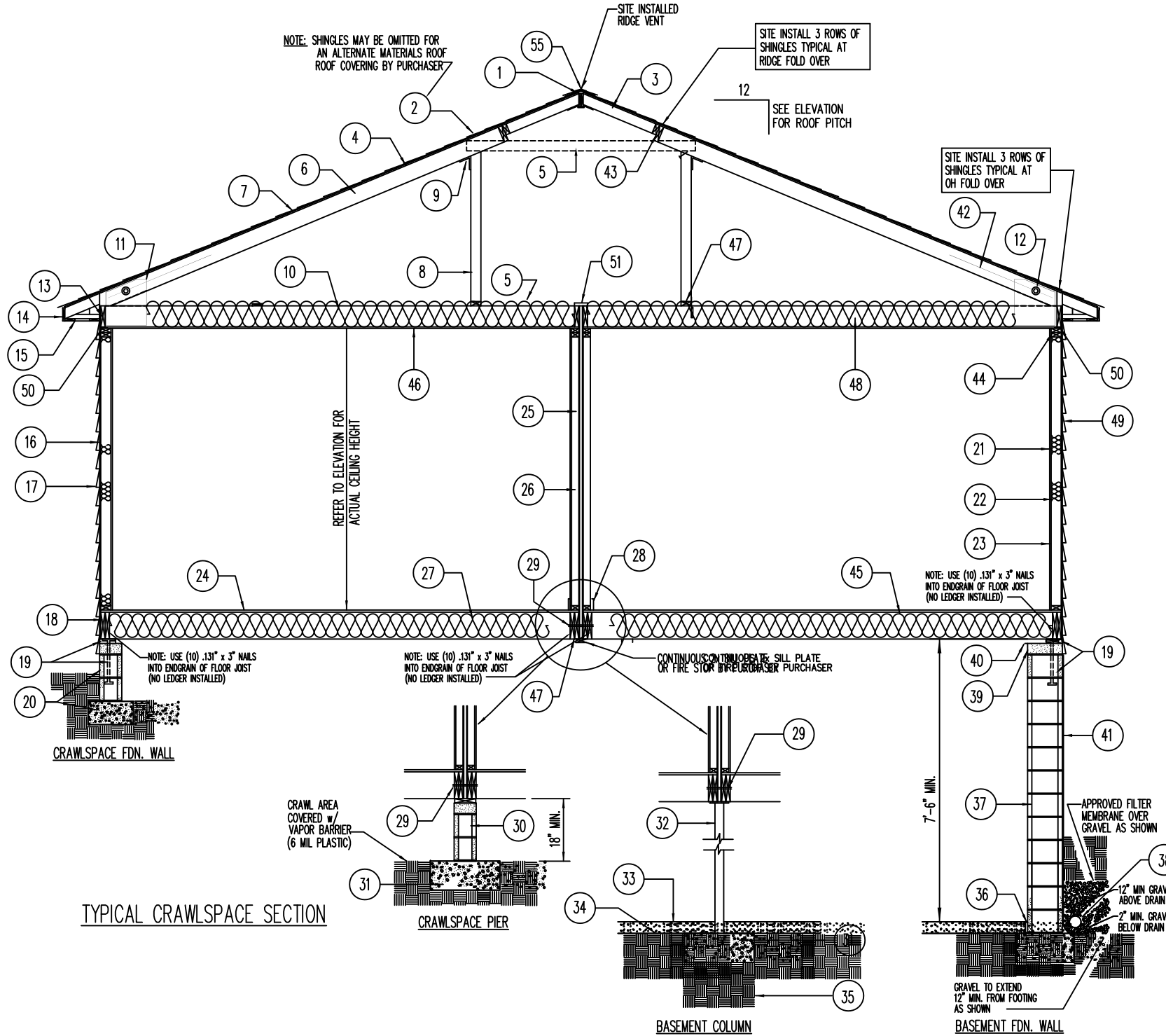


MATING WALL TO CEILING/ FLOOR JOIST SHEATHING APPLICATION/CONNECTION DETAIL

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NO.	DESCRIPTION
ALL WIND SPEEDS SHOWN BELOW IN MPH ARE 3-SECOND GUST	
1	DBL. 2x6 RIDGE BOARDS (#2 SPF OR EQUAL)
2	SHINGLES (SITE INSTALLED AT O.H. & U.I. FOLD-OVER)
3	2x FOLD-OVER RAFTERS (#2 SPF or EQ.) (115vult/150vult) REFER TO ROOF FRAMING FOR SPACING
4	SYNTHETIC UNDERLAYMENT
5	2x COLLAR TIE (SITE-INSTALLED) #2 SYP or EQUAL (REFER TO ROOF FRAMING FOR SPACING)
6	2x RAFTERS #2 SYP or EQ. (115vult / 150vult) (REFER TO ROOF FRAMING FOR SPACING)
7	ROOF SHEATHING (115vult / 150vult) 7/16" OSB SHEATHING
8	2x4 KNEEWALL (#2 SPF or EQ.) (115vult / 150vult) (REFER TO ROOF FRAMING FOR SPACING)
9	KNEEWALL HINGE
10	2x10 CEILING JOISTS (#2 SYP or EQUAL) (REFER TO ROOF FRAMING FOR SPACING)
11	OSB GUSSETS AT EACH SIDE
12	BOLT ASSEMBLY
13	CONTINUOUS PERIMETER BAND (#2 SYP or EQUAL)
14	FASCIA BOARD
15	VINYL CONTINUOUS VENTED SOFFIT
16	7/16" OSB STRUCTURAL SHEATHING (115vult / 150vult)
17	VINYL EXTERIOR SIDING
18	DOUBLE PERIMETER BAND 2x10 (#2 SYP or EQUAL)
19	MIN. 2x6 PRESSURE TREATED SILL PLATE W/ANCHOR BOLTS
20	FOUNDATION WALL AND CONCRETE FOOTER
21	1/2" GYPSUM WALL BOARD
22	R-15 WALL INSULATION (R-19 or R-21 W/ R-20 OPTION)
23	EXT. WALL STUDS: 2x4 AT 16" O/C (2x6 OPTION) #2 SPF or EQUAL
24	3/4" OSB T&G FLOOR SHEATHING
25	MATING WALL STUDS: 2x3 AT 16" O/C (#2 SPF or EQUAL) 115vult / 150vult
26	MATING WALL SHEATHING: 7/16" OSB STRUCTURAL SHEATHING
27	R-19 FLR INSULATION SITE INSTALLED BY PURCHASER (OPT. R-30 FACT. INSTALLED)
28	BASEMOULD
29	SIMPSON SDS25800 (SIMPSON 8" LAG SCREW) AT 32" O.C
30	CONCRETE PIERS
31	CONCRETE FOOTER
32	STRUCTURAL SUPPORT COLUMN
33	CONCRETE SLAB FLOOR
34	GRAVEL AND VAPOR BARRIER
35	EARTH
36	EXPANSION JOINT
37	FOUNDATION WALL
38	DRAIN TILE WITH GRAVEL SURROUND
39	SOLID CAPE (IF REQUIRED)
40	TERMITE SHIELD
41	DAMP PROOFING
42	INSULATION BAFFLE- SITE INSTALLED BY PURCHASER
43	CONTINUOUS DOUBLE 2x AT FOLD-OVER (#2 SPF or EQUAL)
44	DOUBLE 2x4 TOP PLATE (SPF STUD GRADE or EQUAL)
45	2x10 FLOOR JOISTS AT 16" O.C (#2 SYP or EQUAL)
46	1/2" CEILING GYPSUM
47	DOUBLE 2x10 GIRDER EACH SIDE (#2 SYP or EQUAL)
48	R-38 CLG. INSULATION FACTORY INSTALLED
49	WEATHER RESISTIVE BARRIER
50	7/16" OSB COMPRESSION STRIP (ENTIRE LENGTH OF LOAD BEARING WALL)
51	2x FIRESTOP INSTALLED BY PURCHASER (#2 SYP or EQUAL)

- ### GENERAL NOTES:
- ALL CONSTRUCTION BELOW BOTTOM OF FLOOR JOIST RESPONSIBILITY OF SITE CONTRACTOR. ALL INFORMATION SHOWN BELOW BOTTOM OF FLOOR JOIST IS SUGGESTIVE ONLY. REFER TO STATE AND LOCAL CODES FOR ACTUAL CONSTRUCTION METHOD REQUIRED.
  - REFER TO FOUNDATION WALL SECTION ON FOUNDATION PLAN FOR UNITS BEING CONSTRUCTED IN AREAS GREATER THAN 115 mph Vult WIND ZONE.
  - REFER TO FOUNDATION PLAN FOR LOCATION OF PIERS/COLUMNS.
  - CONSTRUCTION OF BASEMENT STAIRS BY PURCHASER.
  - MIN. 18" FROM GRADE FOR WOOD JOISTS AND 12" MIN. FOR WOOD GIRDERS.
  - MIN. 6" FROM GRADE TO EXTERIOR SIDING.
  - PURCHASER TO REFER TO BUILDER RESPONSIBILITY BULLETIN INSTRUCTIONS FOR ERECTION COMPLETION REQUIREMENTS.
  - FOUNDATION SECTION IS SUGGESTIVE ONLY. ALL FOUNDATION CONSTRUCTION IS THE RESPONSIBILITY OF THE BUILDER. CONSTRUCTION SHALL CONFORM TO CURRENT STATE BUILDING CODES, SUBJECT TO INSPECTION BY LOCAL JURISDICTION.
  - PURCHASER RESPONSIBLE FOR SECURING MODULAR UNITS TO FOUNDATION AND MODULAR TO MODULAR UNITS. FOR HIGH WIND AREAS: CONNECTION MATERIAL AND ENGINEERING IS THE RESPONSIBILITY OF THE PURCHASER.
  - ALL PILING FOUNDATIONS SHALL BE ENGINEERED BY PURCHASER.
  - SEE FOUNDATION PLAN AND "SUPERIOR WALL" DETAILS WHEN A "SUPERIOR WALL" FOUNDATION SYSTEM IS USED.
  - ALL MATERIALS LISTED ABOVE REPRESENTS NATIONWIDE HOMES STANDARD CONSTRUCTION. ALTERNATE MATERIALS FOR CONSTRUCTION MAY BE REQUESTED BY THE CUSTOMER AS SUBSTITUTION FOR STANDARD MATERIALS. THESE ITEMS WILL BE NOTED ON THE PRODUCTION ORDER AND/OR PLANS, AND NOT ON THIS CROSS SECTION.
  - FOR WIND ZONES 150 mph Vult AND ABOVE: HORIZONTAL MID SPAN BLOCKING AT EXTERIOR WALLS AT SHEATHING JOINTS (IF HORIZONTAL INSTALLATION)
  - REFER TO COVER SHEET FOR WIND ZONE SPEED.



TYPICAL CRAWLSPACE SECTION

TYPICAL BASEMENT SECTION

RANCH CROSS SECTION

APPROVED BY

8/2/2024

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**David Barts**

FOR ROOF TRUSS REFERENCE - 7/12 (27-8") SEE ATTACHED PE SEALED CALCULATIONS

FOR FLOOR JOISTS FASTENING REFERENCE SEE NATIONWIDE HOMES CALCULATIONS MANUAL, SECTION #48, PAGES #3-8

RAISED BEAM SIZED PER - 7/12 RAFTER COMP. LOAD SUMMARY SECTION 36/page.8 (PAGE 1995 OF MANUAL) BASED ON L/360 (DROPPED BEAM 1)

EXTERIOR HEADER SIZED PER - 7/12 RAFTER COMP. LOAD SUMMARY  
 \*\*SECTION 36/page.37 (PAGE 2024 OF MANUAL) BASED ON L/360 (FOR THE FOLLOWING WINDOWS AND EXTERIOR DOORS: 3660 WINDOW, TWIN 3660 WINDOW, 3036 WINDOW, 3068 FRONT DOOR, 3068 SIDE DOOR IN UTILITY AND REAR 3068 DOOR IN DINING ROOM

**KINRO (SERIES 9750) LOW-E**

SHGC=0.29		U FACTOR = 0.34						
ACTUAL SIZE		ROUGH OPENING		8% LIGHT (SQ.FT.)		4% VENT. (SQ.FT.)		
PLAN CODE	WIDTH	HEIGHT	WIDTH	HEIGHT	GL. AREA	FLR. AREA	OPEN AREA	FLR. AREA
3036	29 1/2	35 1/2	30 3/4	37	5.55	69.38	2.64	66.00
3036 Tw	60 1/2	35 1/2	61 3/4	37	6.55	81.87	3.64	91.00
3660 "	35 1/2	59 1/2	36 3/4	61	12.21	152.63	5.99	149.75
3660 Tw	72 1/2	59 1/2	73 1/4	61	24.42	305.25	11.98	299.50
3660 Tr	108 3/4	59 1/2	109 1/2	61	25.42	317.75	12.98	324.50
***4646	45 1/2	45 1/2	46 3/4	47	13.03	162.88	-	-

\* MIN EGRESS WINDOW @ GRADE LEVEL \*\*\*U FACTOR = 0.32 & SHGC = 0.35  
\*\* EGRESS WINDOW

**EXTERIOR DOORS (SIZES)**

PLAN CODE	SIZE		ROUGH OPENING		DESCRIPTION
	WIDTH	HEIGHT	WIDTH	HEIGHT	
3068	3'-0"	6'-8"	38 1/2"	82 1/2"	PRE-HUNG EXTERIOR
3068	3'-0"	6'-8"	52"	82 1/2"	PRE-HUNG W/ SINGLE SIDELITE
3068	3'-0"	6'-8"	65"	82 1/2"	PRE-HUNG W/ DOUBLE SIDELITE
6068	6'-0"	6'-8"	75 1/2"	82 1/2"	CENTER HINGED PATIO DOOR
6068	6'-0"	6'-8"	72 1/4"	80"	SLIDING GLASS DOOR - VINYL
3068	3'-0"	6'-8"	38 1/2"	96 1/2"	PRE-HUNG W/ TRANSOM
3068	3'-0"	6'-8"	52"	96 1/2"	PRE-HUNG SGL. SIDELITE W/ TRANS.
3068	3'-0"	6'-8"	65"	96 1/2"	PRE-HUNG DBL. SIDELITE W/ TRANS.
6068	6'-0"	6'-8"	75 1/2"	82 1/2"	PRE-HUNG CENTER HINGED PATIO
6068	6'-0"	6'-8"	75 1/2"	82 1/2"	DOUBLE DOORS (BOTH PANELS OPERABLE)
6068	6'-0"	6'-8"	75 1/2"	96 1/2"	PRE-HUNG CENTER HINGED PATIO W/TRANS.

OUTSWING UNITS: REDUCE R.O. HEIGHT 3/4"

**KINRO TRANSOMS (LOW-E & ARGON) (SQUARE & ELLIPTICAL)**

SHGC=0.35		U FACTOR = 0.28		DP35 STD / DP 50 HWZ		
ACTUAL SIZE		ROUGH OPENING		8% LIGHT (SQ.FT.)		
PLAN CODE	WIDTH	HEIGHT	SINGLE		GL. AREA	FLR. AREA
			W.	H.		
2812	27 1/2	12	28 1/4	12 3/4	5.07	63.39
2828	28 1/2	28 1/2	29 1/4	29 1/4	12.50	156.21
3612	35 1/2	12	36 1/4	12 3/4	6.60	82.44
4812	47 1/2	12	48 1/4	12 3/4	8.88	111.01
6012	59 1/2	12	60 1/4	12 3/4	11.17	139.58
7212	71 1/2	12	72 1/4	12 3/4	13.45	168.15
3036 w/ELIP	29 1/2	48 1/2	30 1/4	49	22.04	275.46

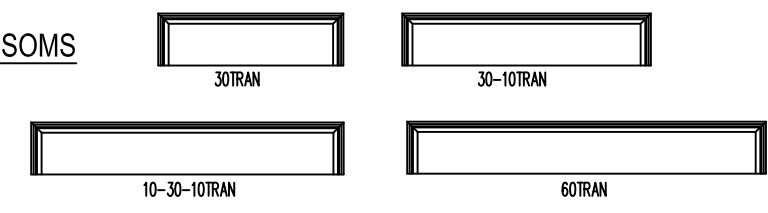
**THERMA TRU EXTERIOR DOORS (LIGHT/VENT & THERMAL VALUES)**

DOOR NUMBER	GLASS AREA	FLOOR AREA	U-VALUE	SHGC	VENT	FLOOR AREA	DESCRIPTION
S206	5.06	63.25	0.22	0.09	19.810	495.25	1/2 LITE (NO MUNTINS)
S80	6.68	83.50	0.23	0.11	19.810	495.25	2/3 LITE (NO MUNTINS)
S118	9.15	114.38	0.29	0.16	19.810	495.25	FULL-LITE (NO MUNTINS)
S4814	2.33	29.13	0.23	0.09	19.810	495.25	CRAFTSMAN (4-LITE MUTINS)
S262	5.06	63.25	0.22	0.08	19.810	495.25	1/2 LITE 2 PANEL (4-LITE MUNTINS)
S2106	6.68	83.50	0.23	0.10	19.810	495.25	2/3 LITE 2 PANEL (4-LITE MUNTINS)
S1209	9.15	114.38	0.29	0.14	19.810	495.25	FULL-LITE (4-LITE MUNTINS)
214	40.00	500.00	0.31	0.20	19.810	495.25	SLIDING GLASS DOOR
215	40.00	500.00	0.31	0.18	19.810	495.25	SLIDING GLASS DOOR (INT. MUNTINS)

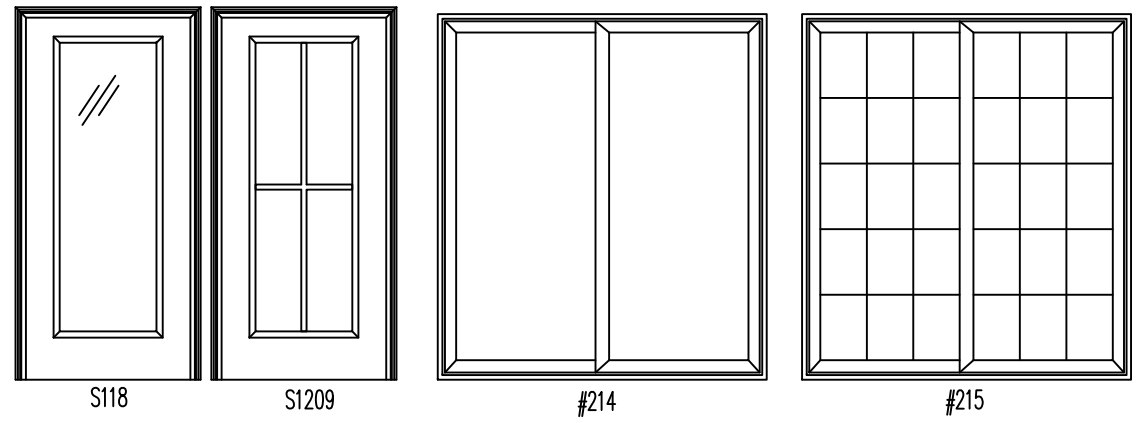
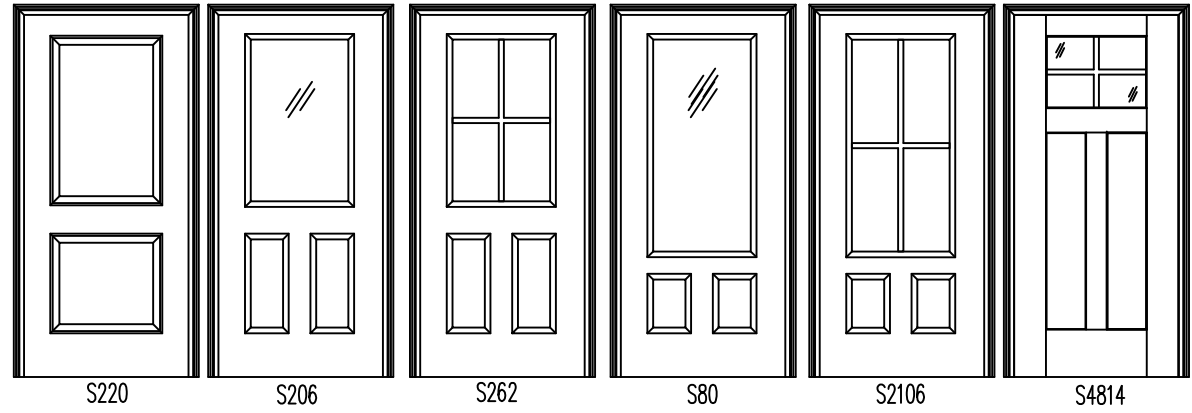
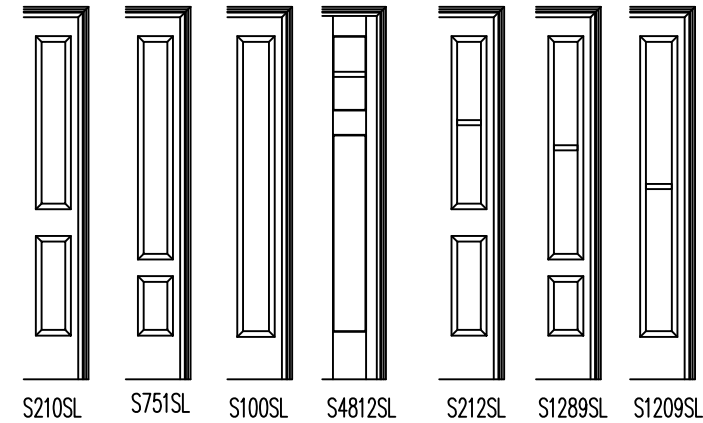
**SIDELITES**

DOOR NUMBER	GLASS AREA	FLOOR AREA	U-VALUE	SHGC	VENT	FLOOR AREA	DESCRIPTION
S210SL	2.21	27.63	0.18	0.05	-	-	HALF-LITE (NO MUNTINS)
S751SL	2.21	27.60	0.18	0.05	-	-	2/3 LITE (NO MUNTINS)
S100SL	2.59	32.38	0.19	0.05	-	-	FULL-LITE (NO MUNTINS)
S4812SL	.74	9.25	0.22	0.06	-	-	CRAFTSMAN (2-LITE MUNTINS)
S212SL	2.21	27.63	0.18	0.04	-	-	HALF-LITE (2-LITE MUNTINS)
S1089SL	2.45	30.63	0.19	0.04	-	-	2/3 LITE (2-LITE MUNTINS)
S1209SL	2.59	32.38	0.18	0.04	-	-	FULL-LITE (2-LITE MUNTINS)

**TRANSOMS**



**SIDELITES**



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**EXTERIOR DOORS**

\* GLASS PATTERNS SHOWN ARE REPRESENTATIVE & MAY VARY BY DESIGN BETWEEN DOOR MANUFACTURERS AND/OR DESIGN PREFERENCES

**INTERIOR DOORS**

PLAN CODE	SIZE		ROUGH OPENING		DESCRIPTION
	WIDTH	HEIGHT	WIDTH	HEIGHT	
1668	1'-6"	6'-8"	20 1/2"	82 1/2"	PRE-HUNG INTERIOR
2068	2'-0"	6'-8"	26 1/2"	82 1/2"	PRE-HUNG INTERIOR
2468	2'-4"	6'-8"	30 1/2"	82 1/2"	PRE-HUNG INTERIOR
2668	2'-6"	6'-8"	32 1/2"	82 1/2"	PRE-HUNG INTERIOR
2868	2'-8"	6'-8"	34 1/2"	82 1/2"	PRE-HUNG INTERIOR
3068	3'-0"	6'-8"	38 1/2"	82 1/2"	PRE-HUNG INTERIOR
2068	2'-0"	6'-8"	26 1/2"	94 1/2"	PRE-HUNG INTERIOR W/ TRANSOM
2468	2'-4"	6'-8"	30 1/2"	94 1/2"	PRE-HUNG INTERIOR W/ TRANSOM
2668	2'-6"	6'-8"	32 1/2"	94 1/2"	PRE-HUNG INTERIOR W/ TRANSOM
2868	2'-8"	6'-8"	34 1/2"	94 1/2"	PRE-HUNG INTERIOR W/ TRANSOM
3068	3'-0"	6'-8"	38 1/2"	94 1/2"	PRE-HUNG INTERIOR W/ TRANSOM
4068	4'-0"	6'-8"	50 1/2"	94 1/2"	PRE-HUNG INTERIOR W/ TRANSOM
5068	5'-0"	6'-8"	62 1/2"	94 1/2"	PRE-HUNG INTERIOR W/ TRANSOM
6068	6'-0"	6'-8"	74 1/2"	94 1/2"	PRE-HUNG INTERIOR W/ TRANSOM
2068	2'-0"	6'-8"	26 1/2"	82 1/2"	PRE-HUNG INTERIOR BIFOLD
2668	2'-6"	6'-8"	32 1/2"	82 1/2"	PRE-HUNG INTERIOR BIFOLD
3068	3'-0"	6'-8"	38 1/2"	82 1/2"	PRE-HUNG INTERIOR BIFOLD
4068	4'-0"	6'-8"	50 1/2"	82 1/2"	PRE-HUNG INTERIOR BIFOLD
5068	5'-0"	6'-8"	62 1/2"	82 1/2"	PRE-HUNG INTERIOR BIFOLD
1680	1'-6"	8'-0"	20 1/2"	98 1/2"	PRE-HUNG INTERIOR
2080	2'-0"	8'-0"	26 1/2"	98 1/2"	PRE-HUNG INTERIOR
2480	2'-4"	8'-0"	30 1/2"	98 1/2"	PRE-HUNG INTERIOR
2680	2'-6"	8'-0"	32 1/2"	98 1/2"	PRE-HUNG INTERIOR
2880	2'-8"	8'-0"	34 1/2"	98 1/2"	PRE-HUNG INTERIOR
3080	3'-0"	8'-0"	38 1/2"	98 1/2"	PRE-HUNG INTERIOR

# Nationwide Custom Homes Inc.

1100 RIVES ROAD  
MARTINSVILLE, VA. 24112  
(276) 632-7100

Model Name and Contract No.: Heartland II #196879

**Electrical Load Calculations:**

General Lighting Load:	<b>1,600</b> Sq. Ft. @ 3 volts-amperes/ft2	=	4,800	watts
Small Appliance Load: (3 circuits)		=	4,500	watts
Laundry:		=	1,500	watts

**Net Load:**  = **10,800** watts

Range :		=	8,640	watts
Microwave :		=	1,000	watts
Freezer :		=	1,800	watts
Dryer Load:		=	5,600	watts
Dishwasher :		=	1,032	watts
Water Heater: (4500 / 240 * 125%)		=	5,625	watts

**Net Load:**  = **34,497** watts

10000 watts @ 100%		=	10,000	watts
<b>34,497</b>	<b>24,497 @ 40%</b>	=	<b>9,799</b>	watts

**Net Load:**  = **19,799** watts

Heat Pump - 1st floor (2-1/2 ton) :		=	8,820	watts
		=		

**Total Load:**  = **28,619** watts

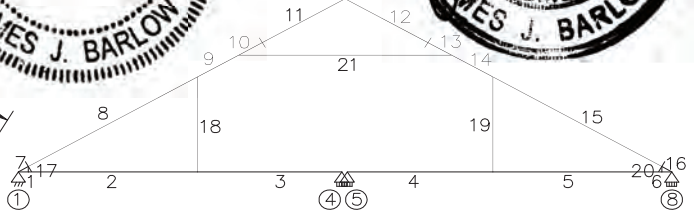
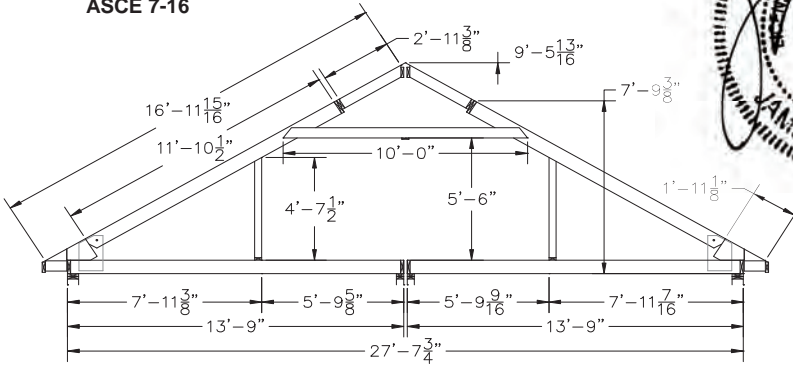
**Calculated Load for Service:**  = **28,619** = **119** Amperes

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 **8/2/2024**  
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**General Notes:**

1. Any site installed circuits (i.e. basement, heating/cooling, etc.) not to exceed service panel rating of 200 AMP. If additional loads exceed the main panel rating, the purchaser is responsible for site intallation of additional panel and/or adequate service entry. All installation to meet **2017 NEC**, subject to inspection by local jurisdiction.

FH712278  
 20/30 psf GSL 90/115 mph Vasd WIND  
 EXPOSURE "C"  
 ASCE 7-16



TRUSS NO.:	FH71228
JOB NO.:	240209
PITCH:	7/12
SPAN:	27'-8"

GROUND SNOW LOAD (psf):	20	30
TRUSS SPACING (in O.C.):	24	19.2
BALANCED SNOW LOAD (psf):	15.4	23.1
UNBALANCED SNOW LOAD (psf):	31	42.8
OPPOSITE SIDE UNB. SNOW LOAD (psf):	4.6	6.9
UNBALANCED SNOW LOAD LENGTH (ft):	4.3	5
MINIMUM ROOF LIVE LOAD (psf):	16	

TC DL (psf):	10
BC DL (psf):	10
BC LL (psf):	10
	20
	20

WHERE h < 42"  
 WHERE h ≥ 42"  
 BETWEEN KNEEWALLS

WIND SPEED (mph) (Vult):	115	150
WIND SPEED (mph) (Vasd):	90	116
TRUSS SPACING (in O.C.):	24	24
OVERHANG EXPOSED TRUSS SPACING (in O.C.):	24	24



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**MEMBER INFORMATION:**

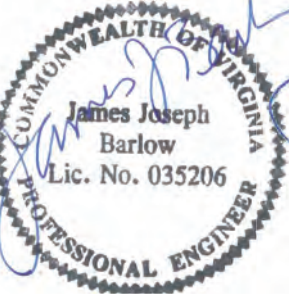
	MEMBER	SIZE & SPECIES	MAXIMUM CSI	MAXIMUM DEFLECTION (in)	L / I
BOTTOM CHORD	1 - 3	2X8 SP #2	0.919	0.488	338
	4 - 6	2X8 SP #2	0.919		
TOP CHORD	7 & 16	2X12 SP #2	0.195	0.76	253
	8 - 10	2X6 SP #2	0.993		
	11 - 12	2X4 SP #2	0.411		
	13 - 15	2X6 SP #2	0.992		
WEDGES	17 & 20	(2) 7/16" OSB	-	-	-
KNEE WALLS	18 & 19	2X4 SP #2	0.19	-	-
COLLAR TIE	21	2X6 SP #2	0.314	0.018	5867

GRAVITY REACTIONS (lbs):	20 psf GSL	30 psf GSL
<b>N1</b> DEAD LOAD	621	497
TOTAL LOAD	1153	1059
MIN. BEARING LENGTH (in)	2	1.83
<b>N4</b> DEAD LOAD	111	89
TOTAL LOAD	297	275
MIN. BEARING LENGTH (in)	1.5 (MIN)	1.5 (MIN)
<b>N5</b> DEAD LOAD	111	89
TOTAL LOAD	297	275
MIN. BEARING LENGTH (in)	1.5 (MIN)	1.5 (MIN)
<b>N8</b> DEAD LOAD	621	497
TOTAL LOAD	1153	1059
MIN. BEARING LENGTH (in)	2	1.83

**NOTES:**

- TRUSS SPACING SHALL BE THE MORE RESTRICTIVE OF THE REQUIRED SNOW OR WIND.
- LOAD DERIVATIONS AND COMBINATIONS ARE PER ASCE 7-16.
- UNBALANCED SNOW HAS BEEN CONSIDERED IN THIS DESIGN DUE TO PITCH.
- SNOW LOADS USE EXP. FACTOR = 1, THERMAL FACTOR = 1.1, IMP. FACTOR = 1.
- THIS TRUSS HAS BEEN DESIGNED WITH THE MINIMUM ROOF LIVE LOAD AND THE CALCULATED SNOW LOADING APPLIED AS SEPARATE LOAD CASES AND COMBINATIONS.
- LIVE LOADS HAVE BEEN REDUCED PER IRC TABLES R301.5 & R301.6.
- WIND PRESSURES ARE FOR EXPOSURE CATEGORY C, RISK CATEGORY II, 33 ft MEAN ROOF HEIGHT, ENCLOSED BUILDING, MWFRS ENVELOPE PROCEDURE.
- THIS TRUSS HAS BEEN DESIGNED USING ALLOWABLE STRESS DESIGN AND THE WIND LOADS HAVE BEEN CALCULATED USING THE Vasd WIND SPEED.
- THE TRUSS DEAD LOAD HAS BEEN REDUCED FOR WIND LOADING.
- BOTTOM CHORD OH EXPOSED TO WIND IS ANALYZED LOADING EACH SIDE INDEPENDENTLY AND FULL EXPOSURE AS SEPARATE LOAD COMBINATIONS.**
- THIS TRUSS HAS BEEN DESIGNED TO BE INSTALLED AND LOADED VERTICALLY.
- CONSTRUCTION AND LIFTING LOADS HAVE NOT BEEN CONSIDERED IN THIS DESIGN.
- TRUSS BRACING IS ASSUMED SHEATHING ON BOTTOM AND TOP CHORDS.
- ADDITIONAL PERMANENT BRACING IS THE RESPONSIBILITY OF THE BUILDING DESIGNER.
- MEMBER 21 IS TO BE LATERALLY BRACED AT MID-SPAN.

WIND REACTIONS (lbs):		90 mph	90 mph OH	116 mph	116 mph OH
		ASD	ASD	ASD	ASD
<b>N1</b>	MWFRS VERT.	48	-132	-163	-464
	MWFRS LAT.	187	187	296	296
	C & C	-304	-585	-747	-1228
<b>N4</b>	MWFRS VERT.	-27	-116	-84	-231
	MWFRS LAT.	0	0	0	0
	C & C	3	-135	-41	-277
<b>N5</b>	MWFRS VERT.	-26	-115	-82	-229
	MWFRS LAT.	0	0	0	0
	C & C	4	-133	-38	-274
<b>N8</b>	MWFRS VERT.	48	-133	-164	-465
	MWFRS LAT.	0	0	0	0
	C & C	-299	-580	-740	-1221



05/22/24

BARLOW ENGINEERING, P.C.  
 1916 QUAIL RIDGE RD.  
 RALEIGH, NC 27609

FH712278  
 20/30 psf GSL 90/115 mph Vasd WIND  
 EXPOSURE "C"  
 ASCE 7-16

NATIONWIDE CUSTOM HOMES



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**David Barts**

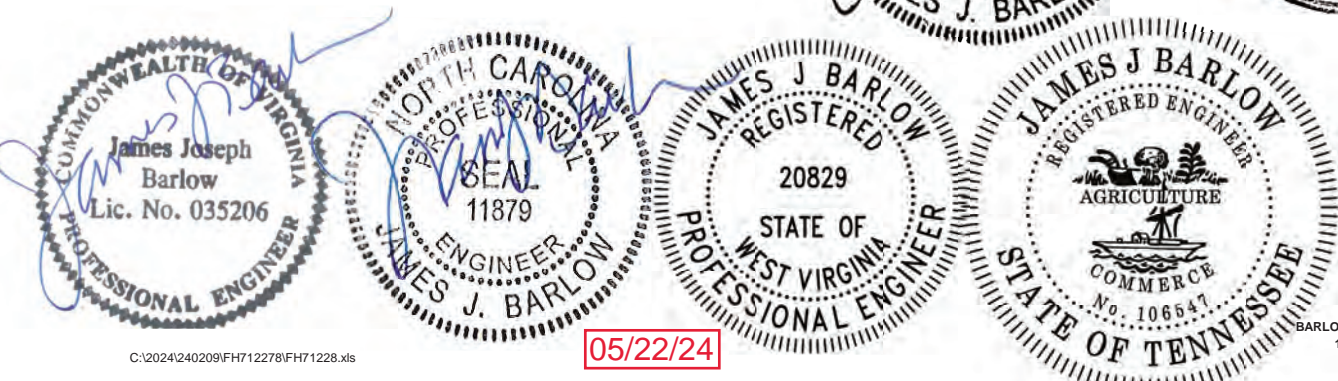
TRUSS NO.:	FH71228
JOB NO.:	240209
PITCH:	7/12
SPAN:	27'-8"

GROUND SNOW LOAD (psf):	20 / 30
WIND SPEED (mph) (Vasd):	90

- NOTES:**
- SUITABLE CONNECTIONS MAY BE SUBSTITUTED.
  - GRAVITY FORCES HAVE BEEN ADJUSTED FOR LOAD DURATION. A CD OF 1.0 SHALL BE USED FOR GRAVITY LOAD CASES.
  - WIND FORCES HAVE NOT BEEN ADJUSTED FOR LOAD DURATION. A CD OF 1.6 SHALL BE USED FOR WIND LOAD CASES.

**UPLIFT CONNECTIONS (MWFRS LOADS):  
 STANDARD WIND**

N1			
UPLIFT (lbs)	LC	CD	
0	WIND	1.6	NO CONN REQ'D OR OR OR OR
ALTERNATE: NO CONN REQ'D			
ALTERNATE: NO CONN REQ'D			
OR OR OR OR			
LATERAL (lbs)	LC	CD	
187	WIND	1.6	(2) 16d (0.162" x 3.5") COMMON NAILS THROUGH BAND INTO TOP PLATE (TOENAILED)
N4			
UPLIFT (lbs)	LC	CD	
27	WIND	1.6	OK FOR 1 1/2" x 26 ga STRAP w/ (2) 8d (0.131" x 2.5") COMMON NAIL OR w/ (2) 16 ga x 2.5" x 7/16" STAPLE EACH END OR OK FOR 1 1/2" x 20 ga STRAP w/ (2) 8d (0.131" x 2.5") COMMON NAIL OR w/ (2) 16 ga x 2.5" x 7/16" STAPLE EACH END OR OK FOR SIMPSON CS20 STRAP w/ (2) 0.131" x 2.5" NAILS EACH END OR OK FOR SIMPSON LSTA9 STRAP w/ (8) 0.148" x 2.5" NAILS EACH END OR OK FOR SIMPSON H3 TIE w/ (8) 0.131" x 1.5" NAILS EACH END
ALTERNATE: (2) 16d (0.162" x 3.5") COMMON NAILS THROUGH BAND INTO BC (ENDGRAIN) PLUS (2) 8d (0.131" x 3") COMMON NAILS THROUGH SHEATHING INTO BAND AND STUD (FACE)			
ALTERNATE: (4) 16d (0.162" x 3.5") COMMON NAILS THROUGH BAND INTO BC (ENDGRAIN) PLUS (9) 8d (0.131" x 3") COMMON NAILS THROUGH SHEATHING INTO BAND AND STUD (FACE) PLUS NO ADDITIONAL CONNECTION REQ'D OR NO ADDITIONAL CONNECTION REQ'D OR NO ADDITIONAL CONNECTION REQ'D OR NO ADDITIONAL CONNECTION REQ'D OR NO ADDITIONAL CONNECTION REQ'D			
LATERAL (lbs)	LC	CD	
0	WIND	1.6	NO CONN REQ'D



05/22/24

BARLOW ENGINEERING, P.C.  
 1916 QUAIL RIDGE RD.  
 RALEIGH, NC 27609

FH712278  
 20/30 psf GSL 90/115 mph Vasd WIND  
 EXPOSURE "C"  
 ASCE 7-16

NATIONWIDE CUSTOM HOMES



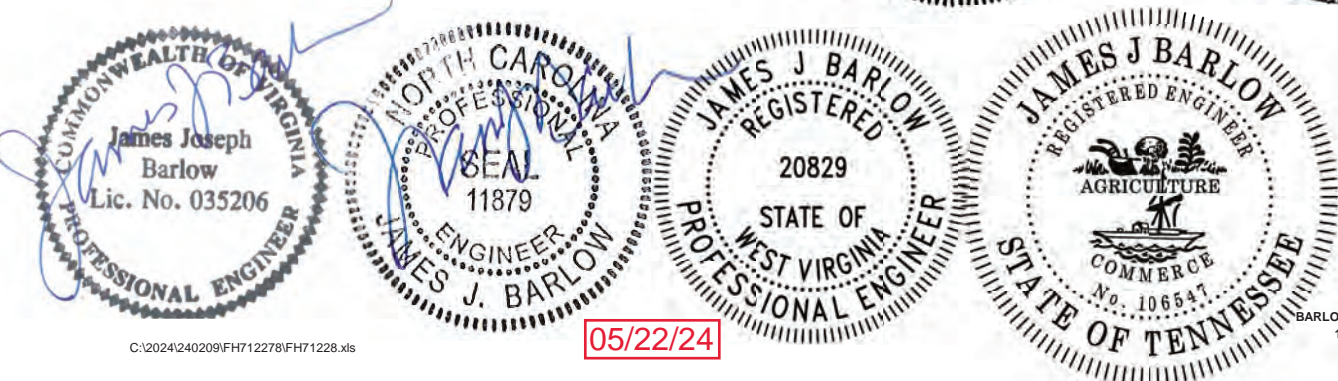
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 David Barts

TRUSS NO.:	FH71228
JOB NO.:	240209
PITCH:	7/12
SPAN:	27'-8"

GROUND SNOW LOAD (psf):	20 / 30
WIND SPEED (mph) (Vasd):	90

- NOTES:**
- SUITABLE CONNECTIONS MAY BE SUBSTITUTED.
  - GRAVITY FORCES HAVE BEEN ADJUSTED FOR LOAD DURATION. A CD OF 1.0 SHALL BE USED FOR GRAVITY LOAD CASES.
  - WIND FORCES HAVE NOT BEEN ADJUSTED FOR LOAD DURATION. A CD OF 1.6 SHALL BE USED FOR WIND LOAD CASES.

N5			
UPLIFT (lbs)	LC	CD	
26	WIND	1.6	OK FOR 1 1/2" x 26 ga STRAP w/ (2) 8d (0.131" x 2.5") COMMON NAIL OR w/ (2) 16 ga x 2.5" x 7/16" STAPLE EACH END OR OK FOR 1 1/2" x 20 ga STRAP w/ (2) 8d (0.131" x 2.5") COMMON NAIL OR w/ (2) 16 ga x 2.5" x 7/16" STAPLE EACH END OR OK FOR SIMPSON CS20 STRAP w/ (2) 0.131" x 2.5" NAILS EACH END OR OK FOR SIMPSON LSTA9 STRAP w/ (8) 0.148" x 2.5" NAILS EACH END OR OK FOR SIMPSON H3 TIE w/ (8) 0.131" x 1.5" NAILS EACH END
ALTERNATE: (2) 16d (0.162" x 3.5") COMMON NAILS THROUGH BAND INTO BC (ENDGRAIN) PLUS (2) 8d (0.131" x 3") COMMON NAILS THROUGH SHEATHING INTO BAND AND STUD (FACE)			
ALTERNATE: (4) 16d (0.162" x 3.5") COMMON NAILS THROUGH BAND INTO BC (ENDGRAIN) PLUS (9) 8d (0.131" x 3") COMMON NAILS THROUGH SHEATHING INTO BAND AND STUD (FACE) PLUS NO ADDITIONAL CONNECTION REQ'D OR NO ADDITIONAL CONNECTION REQ'D OR NO ADDITIONAL CONNECTION REQ'D OR NO ADDITIONAL CONNECTION REQ'D OR NO ADDITIONAL CONNECTION REQ'D			
LATERAL (lbs)	LC	CD	
0	WIND	1.6	NO CONN REQ'D
N8			
UPLIFT (lbs)	LC	CD	
0	WIND	1.6	NO CONN REQ'D OR OR OR OR
ALTERNATE: NO CONN REQ'D			
ALTERNATE: NO CONN REQ'D			
LATERAL (lbs)	LC	CD	
0	WIND	1.6	NO CONN REQ'D OR OR OR OR



05/22/24

BARLOW ENGINEERING, P.C.  
 1916 QUAIL RIDGE RD.  
 RALEIGH, NC 27609

FH712278  
 20/30 psf GSL 90/115 mph Vasd WIND  
 EXPOSURE "C"  
 ASCE 7-16

NATIONWIDE CUSTOM HOMES



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 David Barts

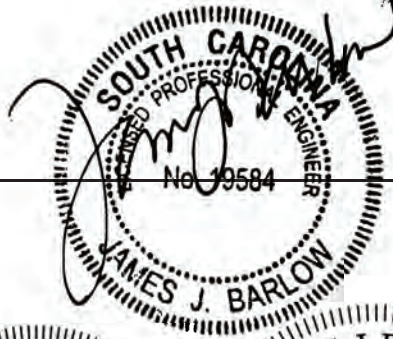
TRUSS NO.:	FH71228
JOB NO.:	240209
PITCH:	7/12
SPAN:	27'-8"

GROUND SNOW LOAD (psf):	20 / 30
WIND SPEED (mph) (Vasd):	90

- NOTES:**
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  - GRAVITY FORCES HAVE BEEN ADJUSTED FOR LOAD DURATION. A CD OF 1.0 SHALL BE USED FOR GRAVITY LOAD CASES.
  - WIND FORCES HAVE NOT BEEN ADJUSTED FOR LOAD DURATION. A CD OF 1.6 SHALL BE USED FOR WIND LOAD CASES.

**UPLIFT CONNECTIONS (MWFRS LOADS):  
 OVERHANG WIND**

N1			
UPLIFT (lbs)	LC	CD	
132	WIND	1.6	OK FOR 1 1/2" x 26 ga STRAP w/ (2) 8d (0.131" x 2.5") COMMON NAIL OR w/ (2) 16 ga x 2.5" x 7/16" STAPLE EACH END OR OK FOR 1 1/2" x 20 ga STRAP w/ (2) 8d (0.131" x 2.5") COMMON NAIL OR w/ (2) 16 ga x 2.5" x 7/16" STAPLE EACH END OR OK FOR SIMPSON CS20 STRAP w/ (2) 0.131" x 2.5" NAILS EACH END OR OK FOR SIMPSON LSTA9 STRAP w/ (8) 0.148" x 2.5" NAILS EACH END OR OK FOR SIMPSON H3 TIE w/ (8) 0.131" x 1.5" NAILS EACH END
ALTERNATE: (2) 16d (0.162" x 3.5") COMMON NAILS THROUGH BAND INTO BC (ENDGRAIN) PLUS (2) 8d (0.131" x 3") COMMON NAILS THROUGH SHEATHING INTO BAND AND STUD (FACE)			
ALTERNATE: (4) 16d (0.162" x 3.5") COMMON NAILS THROUGH BAND INTO BC (ENDGRAIN) PLUS (9) 8d (0.131" x 3") COMMON NAILS THROUGH SHEATHING INTO BAND AND STUD (FACE) PLUS NO ADDITIONAL CONNECTION REQ'D OR NO ADDITIONAL CONNECTION REQ'D OR NO ADDITIONAL CONNECTION REQ'D OR NO ADDITIONAL CONNECTION REQ'D OR NO ADDITIONAL CONNECTION REQ'D			
LATERAL (lbs)	LC	CD	
187	WIND	1.6	(2) 16d (0.162" x 3.5") COMMON NAILS THROUGH BAND INTO TOP PLATE (TOENAILED)
N4			
UPLIFT (lbs)	LC	CD	
116	WIND	1.6	OK FOR 1 1/2" x 26 ga STRAP w/ (2) 8d (0.131" x 2.5") COMMON NAIL OR w/ (2) 16 ga x 2.5" x 7/16" STAPLE EACH END OR OK FOR 1 1/2" x 20 ga STRAP w/ (2) 8d (0.131" x 2.5") COMMON NAIL OR w/ (2) 16 ga x 2.5" x 7/16" STAPLE EACH END OR OK FOR SIMPSON CS20 STRAP w/ (2) 0.131" x 2.5" NAILS EACH END OR OK FOR SIMPSON LSTA9 STRAP w/ (8) 0.148" x 2.5" NAILS EACH END OR OK FOR SIMPSON H3 TIE w/ (8) 0.131" x 1.5" NAILS EACH END
ALTERNATE: (2) 16d (0.162" x 3.5") COMMON NAILS THROUGH BAND INTO BC (ENDGRAIN) PLUS (2) 8d (0.131" x 3") COMMON NAILS THROUGH SHEATHING INTO BAND AND STUD (FACE)			
ALTERNATE: (4) 16d (0.162" x 3.5") COMMON NAILS THROUGH BAND INTO BC (ENDGRAIN) PLUS (9) 8d (0.131" x 3") COMMON NAILS THROUGH SHEATHING INTO BAND AND STUD (FACE) PLUS NO ADDITIONAL CONNECTION REQ'D OR NO ADDITIONAL CONNECTION REQ'D OR NO ADDITIONAL CONNECTION REQ'D OR NO ADDITIONAL CONNECTION REQ'D OR NO ADDITIONAL CONNECTION REQ'D			
LATERAL (lbs)	LC	CD	
0	WIND	1.6	NO CONN REQ'D



05/22/24

BARLOW ENGINEERING, P.C.  
 1916 QUAIL RIDGE RD.  
 RALEIGH, NC 27609



FH712278  
 20/30 psf GSL 90/115 mph Vasd WIND  
 EXPOSURE "C"  
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NATIONWIDE CUSTOM HOMES



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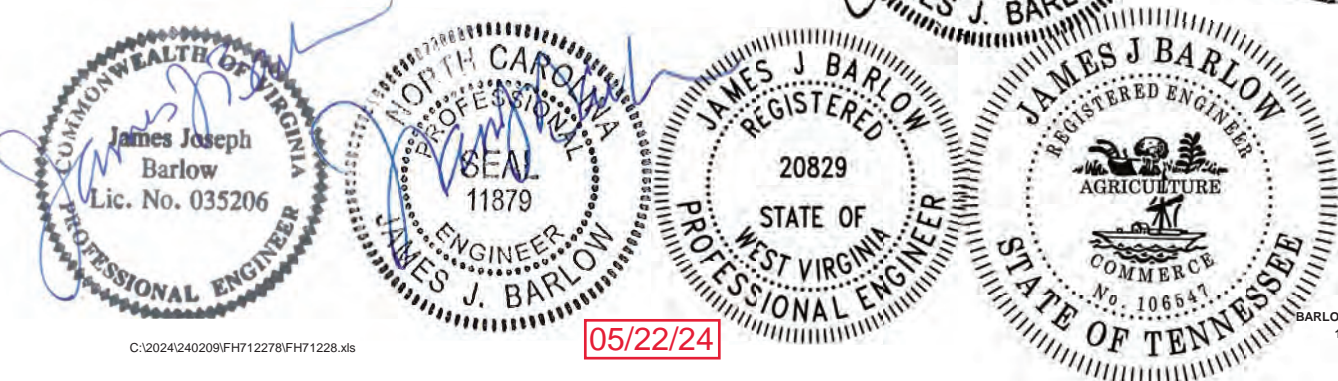
David Barts

TRUSS NO.:	FH71228
JOB NO.:	240209
PITCH:	7/12
SPAN:	27'-8"

GROUND SNOW LOAD (psf):	20 / 30
WIND SPEED (mph) (Vasd):	90

- NOTES:**
- SUITABLE CONNECTIONS MAY BE SUBSTITUTED.
  - GRAVITY FORCES HAVE BEEN ADJUSTED FOR LOAD DURATION. A CD OF 1.0 SHALL BE USED FOR GRAVITY LOAD CASES.
  - WIND FORCES HAVE NOT BEEN ADJUSTED FOR LOAD DURATION. A CD OF 1.6 SHALL BE USED FOR WIND LOAD CASES.

N5			
UPLIFT (lbs)	LC	CD	
115	WIND	1.6	OK FOR 1 1/2" x 26 ga STRAP w/ (2) 8d (0.131" x 2.5") COMMON NAIL OR w/ (2) 16 ga x 2.5" x 7/16" STAPLE EACH END OR OK FOR 1 1/2" x 20 ga STRAP w/ (2) 8d (0.131" x 2.5") COMMON NAIL OR w/ (2) 16 ga x 2.5" x 7/16" STAPLE EACH END OR OK FOR SIMPSON CS20 STRAP w/ (2) 0.131" x 2.5" NAILS EACH END OR OK FOR SIMPSON LSTA9 STRAP w/ (8) 0.148" x 2.5" NAILS EACH END OR OK FOR SIMPSON H3 TIE w/ (8) 0.131" x 1.5" NAILS EACH END <hr/> ALTERNATE: (2) 16d (0.162" x 3.5") COMMON NAILS THROUGH BAND INTO BC (ENDGRAIN) PLUS (2) 8d (0.131" x 3") COMMON NAILS THROUGH SHEATHING INTO BAND AND STUD (FACE) <hr/> ALTERNATE: (4) 16d (0.162" x 3.5") COMMON NAILS THROUGH BAND INTO BC (ENDGRAIN) PLUS (9) 8d (0.131" x 3") COMMON NAILS THROUGH SHEATHING INTO BAND AND STUD (FACE) PLUS NO ADDITIONAL CONNECTION REQ'D OR NO ADDITIONAL CONNECTION REQ'D OR NO ADDITIONAL CONNECTION REQ'D OR NO ADDITIONAL CONNECTION REQ'D OR NO ADDITIONAL CONNECTION REQ'D
LATERAL (lbs)	LC	CD	
0	WIND	1.6	NO CONN REQ'D
N8			
UPLIFT (lbs)	LC	CD	
133	WIND	1.6	OK FOR 1 1/2" x 26 ga STRAP w/ (2) 8d (0.131" x 2.5") COMMON NAIL OR w/ (2) 16 ga x 2.5" x 7/16" STAPLE EACH END OR OK FOR 1 1/2" x 20 ga STRAP w/ (2) 8d (0.131" x 2.5") COMMON NAIL OR w/ (2) 16 ga x 2.5" x 7/16" STAPLE EACH END OR OK FOR SIMPSON CS20 STRAP w/ (2) 0.131" x 2.5" NAILS EACH END OR OK FOR SIMPSON LSTA9 STRAP w/ (8) 0.148" x 2.5" NAILS EACH END OR OK FOR SIMPSON H3 TIE w/ (8) 0.131" x 1.5" NAILS EACH END <hr/> ALTERNATE: (2) 16d (0.162" x 3.5") COMMON NAILS THROUGH BAND INTO BC (ENDGRAIN) PLUS (2) 8d (0.131" x 3") COMMON NAILS THROUGH SHEATHING INTO BAND AND STUD (FACE) <hr/> ALTERNATE: (4) 16d (0.162" x 3.5") COMMON NAILS THROUGH BAND INTO BC (ENDGRAIN) PLUS (9) 8d (0.131" x 3") COMMON NAILS THROUGH SHEATHING INTO BAND AND STUD (FACE) PLUS NO ADDITIONAL CONNECTION REQ'D OR NO ADDITIONAL CONNECTION REQ'D OR NO ADDITIONAL CONNECTION REQ'D OR NO ADDITIONAL CONNECTION REQ'D OR NO ADDITIONAL CONNECTION REQ'D
LATERAL (lbs)	LC	CD	
0	WIND	1.6	NO CONN REQ'D



05/22/24

BARLOW ENGINEERING, P.C.  
 1916 QUAIL RIDGE RD.  
 RALEIGH, NC 27609

FH712278  
 20/30 psf GSL 90/115 mph Vasd WIND  
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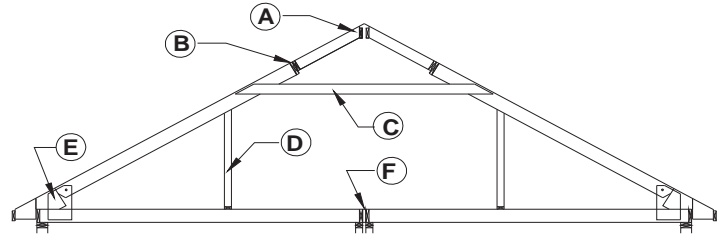


TRUSS NO.:	FH71228
JOB NO.:	240209
PITCH:	7/12
SPAN:	27'-8"

GROUND SNOW LOAD (psf):	20 / 30
WIND SPEED (mph) (Vasd):	90

NOTES: 1. SUITABLE CONNECTIONS MAY BE SUBSTITUTED.  
 2. GRAVITY FORCES HAVE BEEN ADJUSTED FOR LOAD DURATION. A CD OF 1.0 SHALL BE USED FOR GRAVITY LOAD CASES.  
 2. WIND FORCES HAVE NOT BEEN ADJUSTED FOR LOAD DURATION. A CD OF 1.6 SHALL BE USED FOR WIND LOAD CASES.

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**NIA** 8/2/2024  
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 David Barts



TRUSS CONNECTIONS FOR 20 / 30 psf GSL & 90 mph WIND (Vasd) (STANDARD & OH) :

CONDITION "A" - RIDGE:

TENSION (lbs)

FORCE	LC	CD	
0	GRAVITY	1	OK FOR 1 1/2" x 26 ga STRAP w/ (2) 8d (0.131" x 2.5") COMMON NAIL OR w/ (2) 16 ga x 2.5" x 7/16" STAPLE EACH END
173	WIND	1.6	OR OK FOR 1 1/2" x 20 ga STRAP w/ (2) 8d (0.131" x 2.5") COMMON NAIL OR w/ (2) 16 ga x 2.5" x 7/16" STAPLE EACH END OR OK FOR SIMPSON CS20 STRAP w/ (2) 0.131" x 2.5" NAILS EACH END OR OK FOR SIMPSON LSTA9 STRAP w/ (8) 0.148" x 2.5" NAILS EACH END

ALTERNATE: USE (2) 10d (0.148" x 3") COMMON NAILS (FACE) THROUGH EACH END OF A MINIMUM 7/16" x 2" DEEP OSB TIE  
 ALTERNATE: USE (3) 8d (0.131" x 3") COMMON NAILS (FACE) THROUGH EACH END OF A MINIMUM 7/16" x 2" DEEP OSB TIE

SHEAR (lbs)

FORCE	LC	CD	
127	GRAVITY	1	(2) 16d (0.162" x 3.5") COMMON NAILS THROUGH RIDGE BEAM INTO RAFTER (ENDGRAIN)
101	WIND	1.6	ALTERNATE: (4) 8d (0.131" x 3") COMMON NAILS THROUGH RIDGE BEAM INTO RAFTER (ENDGRAIN) ALTERNATE: (4) 16d (0.162" x 3.5") COMMON NAILS THROUGH RIDGE BEAM INTO RAFTER (ENDGRAIN) PLUS NO ADDITIONAL CONN REQ'D ALTERNATE: (4) 8d (0.131" x 3") COMMON NAILS THROUGH RIDGE BEAM INTO RAFTER (ENDGRAIN) PLUS NO ADDITIONAL CONN REQ'D PLUS USE 10d (0.148" x 3") COMMON NAILS AT 15 in O.C. THROUGH RIDGE BEAM PLYS ALTERNATE: OR USE 8d (0.131" x 3") COMMON NAILS AT 9 in O.C. THROUGH RIDGE BEAM PLYS

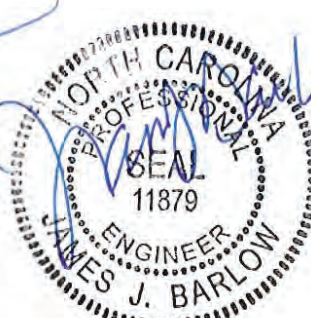
CONDITION "B" - TOP CHORD FLIP:

TENSION

FORCE	LC	CD	
0	GRAVITY	1	(2) 8d (0.131" x 3") COMMON NAILS THROUGH SHEATHING INTO RAFTER EACH SIDE OF FLIP BREAK (FACE)
147	WIND	1.6	ALTERNATE: (3) 16 ga x 2.5" x 7/16" STAPLES THROUGH SHEATHING INTO RAFTER EACH SIDE OF FLIP BREAK (FACE) ALTERNATE: OK FOR 1 1/2" x 26 ga STRAP w/ (2) 8d (0.131" x 2.5") COMMON NAIL OR w/ (2) 16 ga x 2.5" x 7/16" STAPLE EACH END OR OK FOR 1 1/2" x 20 ga STRAP w/ (2) 8d (0.131" x 2.5") COMMON NAIL OR w/ (2) 16 ga x 2.5" x 7/16" STAPLE EACH END OR OK FOR SIMPSON CS20 STRAP w/ (2) 0.131" x 2.5" NAILS EACH END OR OK FOR SIMPSON LSTA9 STRAP w/ (8) 0.148" x 2.5" NAILS EACH END

SHEAR

FORCE	LC	CD	
127	GRAVITY	1	(2) 16d (0.162" x 3.5") COMMON NAILS THROUGH EACH RAFTER INTO FLIP PLATE (ENDGRAIN)
91	WIND	1.6	ALTERNATE: (2) 16d (0.162" x 3.5") COMMON NAILS THROUGH EACH RAFTER INTO FLIP PLATE (ENDGRAIN) PLUS NO ADDITIONAL CONN REQ'D ALTERNATE: (2) 8d (0.131" x 3") COMMON NAILS THROUGH EACH RAFTER INTO FLIP PLATE (ENDGRAIN) PLUS OK FOR SIMPSON L30 ANGLE w/ (4) 0.148" x 1.5" NAILS PLUS USE 10d (0.148" x 3") COMMON NAILS AT 15 in O.C. THROUGH FLIP PLATE PLYS ALTERNATE: OR USE 8d (0.131" x 3") COMMON NAILS AT 9 in O.C. THROUGH FLIP PLATE PLYS



05/22/24

BARLOW ENGINEERING, P.C.  
 1916 QUAIL RIDGE RD.  
 RALEIGH, NC 27609

FH712278  
 20/30 psf GSL 90/115 mph Vasd WIND  
 EXPOSURE "C"  
 ASCE 7-16

NATIONWIDE CUSTOM HOMES



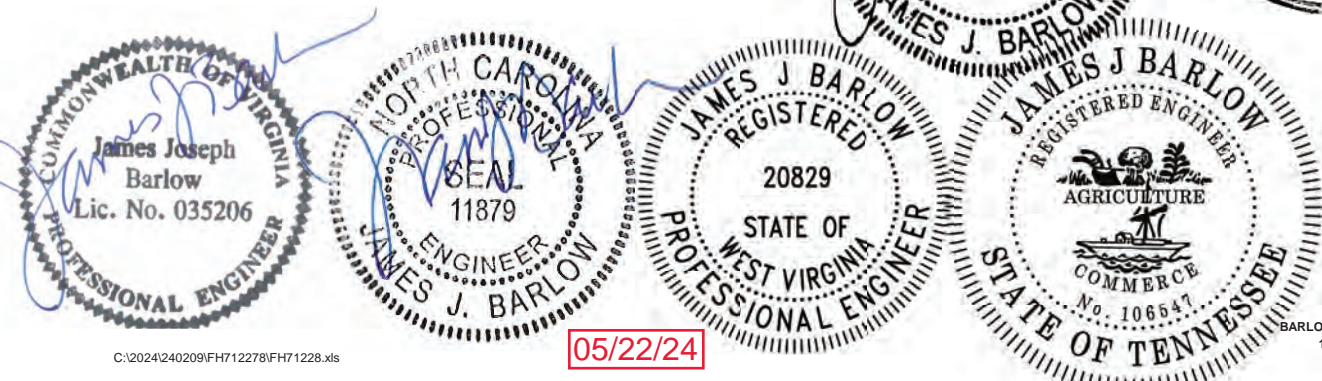
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**David Barts**

TRUSS NO.:	FH71228
JOB NO.:	240209
PITCH:	7/12
SPAN:	27'-8"

GROUND SNOW LOAD (psf):	20 / 30
WIND SPEED (mph) (Vasd):	90

- NOTES:**
- SUITABLE CONNECTIONS MAY BE SUBSTITUTED.
  - GRAVITY FORCES HAVE BEEN ADJUSTED FOR LOAD DURATION. A CD OF 1.0 SHALL BE USED FOR GRAVITY LOAD CASES.
  - WIND FORCES HAVE NOT BEEN ADJUSTED FOR LOAD DURATION. A CD OF 1.6 SHALL BE USED FOR WIND LOAD CASES.

<b>CONDITION "C" - COLLAR TIE:</b>			
<b>TENSION</b>			
FORCE	LC	CD	
0	GRAVITY	1	(9) 16d (0.162" x 3.5") COMMON NAILS THROUGH TIE INTO RAFTER EACH END (FACE)
654	WIND	1.6	ALTERNATE: (4) 16d (0.162" x 3.5") COMMON NAILS THROUGH TIE INTO RAFTER EACH END (FACE) PLUS (5) 16d (0.162" x 3.5") COMMON NAILS THROUGH TIE INTO BEARING BLOCK (FACE)
<b>COMPRESSION</b>			
FORCE	LC	CD	ALTERNATE: (16) 8d (0.131" x 3") COMMON NAILS THROUGH TIE INTO RAFTER EACH END (FACE)
1002	GRAVITY	1	ALTERNATE: (7) 8d (0.131" x 3") COMMON NAILS THROUGH TIE INTO RAFTER EACH END (FACE) PLUS
765	WIND	1.6	(10) 8d (0.131" x 3") COMMON NAILS THROUGH TIE INTO BEARING BLOCK (FACE)
<b>CONDITION "D" - KNEE WALLS:</b>			
<b>TENSION</b>			
FORCE	LC	CD	
315	GRAVITY	1	OK FOR 1 1/2" x 26 ga STRAP w/ (4) 8d (0.131" x 2.5") COMMON NAIL OR w/ (3) 16 ga x 2.5" x 7/16" STAPLE EACH END
237	WIND	1.6	OR OK FOR 1 1/2" x 20 ga STRAP w/ (2) 8d (0.131" x 2.5") COMMON NAIL OR w/ (3) 16 ga x 2.5" x 7/16" STAPLE EACH END OR OK FOR SIMPSON CS20 STRAP w/ (4) 0.131" x 2.5" NAILS EACH END OR OK FOR SIMPSON LSTA9 STRAP w/ (8) 0.148" x 2.5" NAILS EACH END OR OK FOR SIMPSON H2.5A TIE w/ (10) 0.131" x 1.5" NAILS EACH END
ALTERNATE: TOE SCREW CONNECTION NOT ADEQUATE THROUGH KNEEWALL AND PLATE INTO CHORD (WITHDRAWAL (TOED))			
<b>COMPRESSION</b>			
FORCE	LC	CD	
147	GRAVITY	1	(2) 16d (0.162" x 3.5") COMMON NAILS THROUGH CHORD BLOCK INTO RAFTER EACH SIDE (WHEN USED) (FACE)
184	WIND	1.6	
ALTERNATE: NO GOOD FOR SIMPSON MMHC w/ (10) 10 d x 1 1/2" NAILS AT TOP OF KNEEWALL			
ADDITIONAL TENSION REQUIRED			
FORCE	LC	CD	*** STRAPS INSTALLED SO AS TO AVOID INTEREFERNC ***
109	GRAVITY	1	OK WITH AN ADDITIONAL 1 1/2" x 26 ga STRAP w/ (2) 8d (0.131" x 2.5") COMMON NAIL OR w/ (2) 16 ga x 2.5" x 7/16" STAPLE EACH END OK WITH AN ADDITIONAL 1 1/2" x 20 ga STRAP w/ (2) 8d (0.131" x 2.5") COMMON NAIL OR w/ (2) 16 ga x 2.5" x 7/16" STAPLE EACH END OK WITH AN ADDITIONAL SIMPSON CS20 STRAP w/ (2) 0.131" x 2.5" NAILS EACH END OK WITH AN ADDITIONAL SIMPSON LSTA9 STRAP w/ (8) 0.148" x 2.5" NAILS EACH END OK WITH AN ADDITIONAL SIMPSON H3 TIE w/ (8) 0.131" x 1.5" NAILS EACH END
ALTERNATE: OKAY FOR (2) SIMPSON MMHC w/ (10) 10 d x 1 1/2" NAILS EACH AT TOP OF KNEEWALL			



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 David Barts

NATIONWIDE CUSTOM HOMES



TRUSS NO.:	FH71228
JOB NO.:	240209
PITCH:	7/12
SPAN:	27'-8"

GROUND SNOW LOAD (psf):	20 / 30
WIND SPEED (mph) (Vasd):	90

- NOTES:**
- SUITABLE CONNECTIONS MAY BE SUBSTITUTED.
  - GRAVITY FORCES HAVE BEEN ADJUSTED FOR LOAD DURATION. A CD OF 1.0 SHALL BE USED FOR GRAVITY LOAD CASES.
  - WIND FORCES HAVE NOT BEEN ADJUSTED FOR LOAD DURATION. A CD OF 1.6 SHALL BE USED FOR WIND LOAD CASES.

CONDITION "E" - HEEL:			
<b>TOP CHORD</b>			
FORCE	LC	CD	
797	GRAVITY	1	VERTICAL 1.5 in MINIMUM BEARING LENGTH FOR TOP CHORD TO BOTTOM CHORD
1367			LATERAL OKAY FOR 3/8" GR. 5 BOLT (DOUBLE SHEAR; 3/8" SIDE PLATES) PLUS AN ADDITIONAL
250	WIND	1.6	VERTICAL (9) 8d (0.131" x 3") COMMON NAILS THROUGH OSB GUSSET INTO RAFTER EACH SIDE (FACE) OR
429			LATERAL (13) 16 ga x 2.5" x 7/16" STAPLES THROUGH OSB GUSSET INTO RAFTER EACH SIDE (FACE)
ALTERNATE: OK FOR 3/4" GR. 5 BOLT (DOUBLE SHEAR; DBL. 3/8" SIDE PLATES)			
<b>BOTTOM CHORD</b>			
FORCE	LC	CD	
797	GRAVITY	1	VERTICAL (12) 8d (0.131" x 3") COMMON NAILS THROUGH OSB GUSSET INTO RAFTER EACH SIDE (FACE)
1367			LATERAL OR (18) 16 ga x 2.5" x 7/16" STAPLES THROUGH OSB GUSSET INTO RAFTER EACH SIDE (FACE)
250	WIND	1.6	VERTICAL
429			LATERAL
<b>CONDITION "F" - BOTTOM CHORD AT MATING LINE:</b>			
<b>TENSION</b>			
FORCE	LC	CD	
1158	GRAVITY	1	NO GOOD FOR 1 1/2" x 26 ga STRAP
685	WIND	1.6	OR NO GOOD FOR 1 1/2" x 20 ga STRAP
OR OK FOR SIMPSON CS14 STRAP w/ (11) 0.131" x 2.5" NAILS EACH END			
OR OK FOR SIMPSON LSTA24 STRAP w/ (18) 0.148" x 2.5" NAILS EACH END			
OR USE (17) 10d (0.148" x 3") COMMON NAILS THROUGH FLOOR SHEATHING INTO BOTTOM CHORD EACH SIDE OF MATING LINE			
<b>SHEAR</b>			
FORCE	LC	CD	
257	GRAVITY	1	(4) 16d (0.162" x 3.5") COMMON NAILS THROUGH RIDGE BEAM INTO RAFTER (ENDGRAIN)
176	WIND	1.6	ALTERNATE: (4) 16d (0.162" x 3.5") COMMON NAILS THROUGH BEAM INTO BOTTOM CHORD (ENDGRAIN) PLUS NO ADDITIONAL CONN REQ'D
ALTERNATE: (4) 8d (0.131" x 3") COMMON NAILS THROUGH BEAM INTO BOTTOM CHORD (ENDGRAIN) PLUS OK FOR SIMPSON L30 ANGLE w/ (4) 0.148" x 1.5" NAILS			
PLUS USE 10d (0.148" x 3") COMMON NAILS AT 7 in O.C. THROUGH MULTIPLE PLYS			
ALTERNATE: OR USE 8d (0.131" x 3") COMMON NAILS AT 4 in O.C. THROUGH MULTIPLE PLYS			



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TRUSS NO.:	FH71228
JOB NO.:	240209
PITCH:	7/12
SPAN:	27'-8"

**COMPONENT UNIFORM LOAD SUMMARY**

HEADER REACTIONS ARE TO BE DETERMINED BY THE BUILDING DESIGNER

EXTERIOR WALL DEAD LOAD =	12 psf x 10 ft =	120 plf			
MATING WALL DEAD LOAD =	8 psf x 10 ft =	80 plf			
FLOOR DEAD LOAD =	10 psf x 13.75 ft / 2 =	69 plf	10 psf x 13.75 ft / 2 =	69 plf	
FLOOR LIVE LOAD =	40 psf x 13.75 ft / 2 =	275 plf	40 psf x 13.75 ft / 2 =	275 plf	
CEILING DEAD LOAD =	5 psf x 13.75 ft / 2 =	34 plf	5 psf x 13.75 ft / 2 =	34 plf	

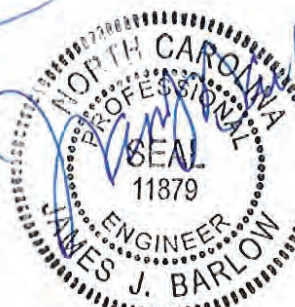
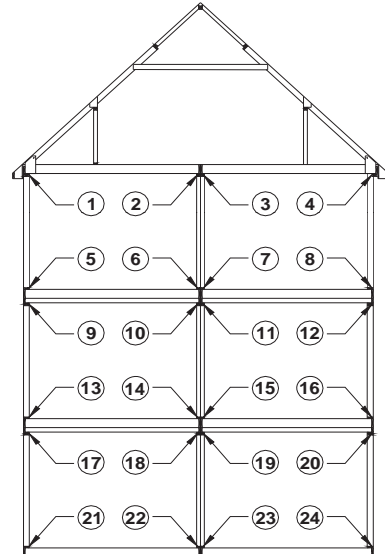
\* CROSS SECTION IS FOR REFERENCE ONLY AND MAY NOT REFLECT ACTUAL TRUSS

**20 psf GROUND SNOW (MATING WALL LOADS ARE PER SIDE OF LINE)**

LOCATION	1	2	3	4	5	6	7	8
DEAD LOAD	311	56	56	311	500	205	205	500
LIVE LOAD	266	93	93	266	541	368	368	541
TOTAL LOAD	577	149	149	577	1041	573	573	1041
LOCATION	9	10	11	12	13	14	15	16
DEAD LOAD	534	239	239	534	723	388	388	723
LIVE LOAD	541	368	368	541	816	643	643	816
TOTAL LOAD	1075	607	607	1075	1539	1031	1031	1539
LOCATION	17	18	19	20	21	22	23	24
DEAD LOAD	757	422	422	757	946	571	571	946
LIVE LOAD	816	643	643	816	1091	918	918	1091
TOTAL LOAD	1573	1065	1065	1573	2037	1489	1489	2037

**30 psf GROUND SNOW**

LOCATION	1	2	3	4	5	6	7	8
DEAD LOAD	311	56	56	311	500	205	205	500
LIVE LOAD	351	116	116	351	626	391	391	626
TOTAL LOAD	662	172	172	662	1126	596	596	1126
LOCATION	9	10	11	12	13	14	15	16
DEAD LOAD	534	239	239	534	723	388	388	723
LIVE LOAD	626	391	391	626	901	666	666	901
TOTAL LOAD	1160	630	630	1160	1624	1054	1054	1624
LOCATION	17	18	19	20	21	22	23	24
DEAD LOAD	757	422	422	757	946	571	571	946
LIVE LOAD	901	666	666	901	1176	941	941	1176
TOTAL LOAD	1658	1088	1088	1658	2122	1512	1512	2122



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USE MWFRS REACTIONS TO DESIGN CONNECTIONS  
 AND C&C REACTIONS TO DESIGN MEMBERS

90 mph STANDARD WIND

LOCATION	1	2	3	4	5	6	7	8
0.6 DL	187	34	34	187	300	123	123	300
MWFRS UPLIFT	24	-14	-13	24	-	-	-	-
C&C UPLIFT	-152	2	2	-150	-39	-	-	-37
LOCATION	9	10	11	12	13	14	15	16
0.6 DL	320	143	143	320	434	233	233	434
MWFRS UPLIFT	-	-	-	-	-	-	-	-
C&C UPLIFT	-19	-	-	-17	-	-	-	-
LOCATION	17	18	19	20	21	22	23	24
0.6 DL	454	253	253	454	568	343	343	568
MWFRS UPLIFT	-	-	-	-	-	-	-	-
C&C UPLIFT	-	-	-	-	-	-	-	-

USE MWFRS REACTIONS TO DESIGN CONNECTIONS  
 AND C&C REACTIONS TO DESIGN MEMBERS

116 mph STANDARD WIND

LOCATION	1	2	3	4	5	6	7	8
0.6 DL	187	34	34	187	300	123	123	300
MWFRS UPLIFT	-82	-42	-41	-82	-	-	-	-
C&C UPLIFT	-374	-21	-19	-370	-261	-	-	-257
LOCATION	9	10	11	12	13	14	15	16
0.6 DL	320	143	143	320	434	233	233	434
MWFRS UPLIFT	-	-	-	-	-	-	-	-
C&C UPLIFT	-241	-	-	-237	-127	-	-	-123
LOCATION	17	18	19	20	21	22	23	24
0.6 DL	454	253	253	454	568	343	343	568
MWFRS UPLIFT	-	-	-	-	-	-	-	-
C&C UPLIFT	-107	-	-	-103	-	-	-	-

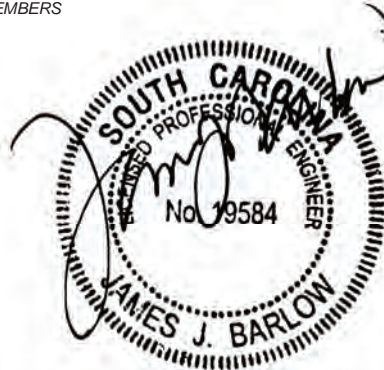
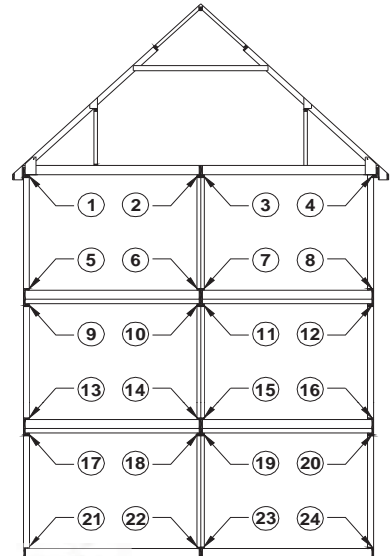
USE MWFRS REACTIONS TO DESIGN CONNECTIONS  
 AND C&C REACTIONS TO DESIGN MEMBERS

90 mph OVERHANG WIND

LOCATION	1	2	3	4
MWFRS UPLIFT	-66	-58	-58	-67
C&C UPLIFT	-293	-68	-67	-290

116 mph OVERHANG WIND

LOCATION	1	2	3	4
MWFRS UPLIFT	-232	-116	-115	-233
C&C UPLIFT	-614	-116	-137	-611



05/22/24

FH712278  
 20/30 psf GSL 90/115 mph Vasd WIND  
 EXPOSURE "C"  
 ASCE 7-16

NATIONWIDE CUSTOM HOMES

90 mph OVERHANG WIND

PORCH CONNECTIONS (MWFRS REACTIONS FOR CONNECTIONS)

1/2" BOLT	Z =	1723 lbs
SIMPSON LS70	F1 =	915 lbs
SIMPSON LSTA12	T =	795 lbs w/ (10) 10 d NAILS
10 d NAIL	Z =	79.5 lbs

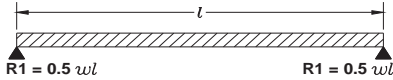
SUPPORT :	<b>N1</b>	UP =	66 plf
SUPPORT :	<b>N4</b>	UP =	58 plf
SUPPORT :	<b>N5</b>	UP =	58 plf
SUPPORT :	<b>N8</b>	UP =	67 plf

PORCH BEAM TO CEILING RIM CONNECTION:

- N1** USE (1) SIMPSON LSTA12 AT A MAXIMUM OF 72 in O.C.
- N4** USE (1) SIMPSON LSTA12 AT A MAXIMUM OF 72 in O.C.
- N5** USE (1) SIMPSON LSTA12 AT A MAXIMUM OF 72 in O.C.
- N8** USE (1) SIMPSON LSTA12 AT A MAXIMUM OF 72 in O.C.

PORCH COLUMN CONNECTIONS:

(1) SPAN



SUPPORT : <b>N1</b>			
<i>l</i>		R1	R1 EACH END
SPAN (ft)	wl (lbs)	0.5 wl (lbs)	1/2" BOLT QTY
4	264	132	1
6	396	198	1
8	528	264	1
10	660	330	1
SUPPORT : <b>N4</b>			
<i>l</i>		R1	R1 EACH END
SPAN (ft)	wl (lbs)	0.5 wl (lbs)	1/2" BOLT QTY
4	232	116	1
6	348	174	1
8	464	232	1
10	580	290	1
SUPPORT : <b>N5</b>			
<i>l</i>		R1	R1 EACH END
SPAN (ft)	wl (lbs)	0.5 wl (lbs)	1/2" BOLT QTY
4	232	116	1
6	348	174	1
8	464	232	1
10	580	290	1
SUPPORT : <b>N8</b>			
<i>l</i>		R1	R1 EACH END
SPAN (ft)	wl (lbs)	0.5 wl (lbs)	1/2" BOLT QTY
4	268	134	1
6	402	201	1
8	536	268	1
10	670	335	1

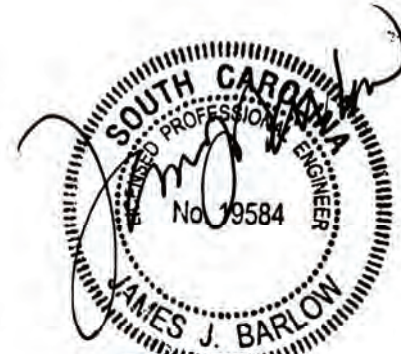
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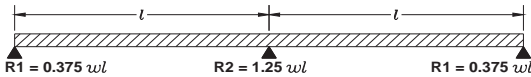


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90 mph OVERHANG WIND  
 (2) EQUAL SPANS



SUPPORT: N1								
$l$		R1	R1 EACH END	R2	(2)	BOLT	R2 EACH END	
SPAN (ft)	$wl$ (lbs)	$0.375 wl$ (lbs)	1/2" BOLT QTY	$1.25 wl$ (lbs)	SIMPSON LS70 (lbs)	LOAD (lbs)	1/2" BOLT QTY	
4	264	99	1	330	1830	-1500	N/A	
6	396	149	1	495	1830	-1335	N/A	
8	528	198	1	660	1830	-1170	N/A	
10	660	248	1	825	1830	-1005	N/A	
SUPPORT: N4								
$l$		R1	R1 EACH END	R2	(2)	BOLT	R2 EACH END	
SPAN (ft)	$wl$ (lbs)	$0.375 wl$ (lbs)	1/2" BOLT QTY	$1.25 wl$ (lbs)	SIMPSON LS70 (lbs)	LOAD (lbs)	1/2" BOLT QTY	
4	232	87	1	290	1830	-1540	N/A	
6	348	131	1	435	1830	-1395	N/A	
8	464	174	1	580	1830	-1250	N/A	
10	580	218	1	725	1830	-1105	N/A	
SUPPORT: N5								
$l$		R1	R1 EACH END	R2	(2)	BOLT	R2 EACH END	
SPAN (ft)	$wl$ (lbs)	$0.375 wl$ (lbs)	1/2" BOLT QTY	$1.25 wl$ (lbs)	SIMPSON LS70 (lbs)	LOAD (lbs)	1/2" BOLT QTY	
4	232	87	1	290	1830	-1540	N/A	
6	348	131	1	435	1830	-1395	N/A	
8	464	174	1	580	1830	-1250	N/A	
10	580	218	1	725	1830	-1105	N/A	
SUPPORT: N8								
$l$		R1	R1 EACH END	R2	(2)	BOLT	R2 EACH END	
SPAN (ft)	$wl$ (lbs)	$0.375 wl$ (lbs)	1/2" BOLT QTY	$1.25 wl$ (lbs)	SIMPSON LS70 (lbs)	LOAD (lbs)	1/2" BOLT QTY	
4	268	101	1	335	1830	-1495	N/A	
6	402	151	1	503	1830	-1327	N/A	
8	536	201	1	670	1830	-1160	N/A	
10	670	251	1	838	1830	-992	N/A	



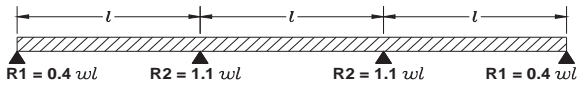
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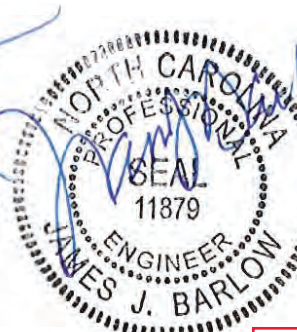
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90 mph OVERHANG WIND

(3) EQUAL SPANS



SUPPORT : N1							
$l$		R1	R1 EACH END	R2	(2)	BOLT	R2 EACH END
SPAN (ft)	$wl$ (lbs)	$0.4 wl$ (lbs)	1/2" BOLT QTY	$1.1 wl$ (lbs)	SIMPSON LS70 (lbs)	LOAD (lbs)	1/2" BOLT QTY
4	264	106	1	290	1830	-1540	N/A
6	396	158	1	436	1830	-1394	N/A
8	528	211	1	581	1830	-1249	N/A
10	660	264	1	726	1830	-1104	N/A
SUPPORT : N4							
$l$		R1	R1 EACH END	R2	(2)	BOLT	R2 EACH END
SPAN (ft)	$wl$ (lbs)	$0.4 wl$ (lbs)	1/2" BOLT QTY	$1.1 wl$ (lbs)	SIMPSON LS70 (lbs)	LOAD (lbs)	1/2" BOLT QTY
4	232	93	1	255	1830	-1575	N/A
6	348	139	1	383	1830	-1447	N/A
8	464	186	1	510	1830	-1320	N/A
10	580	232	1	638	1830	-1192	N/A
SUPPORT : N5							
$l$		R1	R1 EACH END	R2	(2)	BOLT	R2 EACH END
SPAN (ft)	$wl$ (lbs)	$0.4 wl$ (lbs)	1/2" BOLT QTY	$1.1 wl$ (lbs)	SIMPSON LS70 (lbs)	LOAD (lbs)	1/2" BOLT QTY
4	232	93	1	255	1830	-1575	N/A
6	348	139	1	383	1830	-1447	N/A
8	464	186	1	510	1830	-1320	N/A
10	580	232	1	638	1830	-1192	N/A
SUPPORT : N8							
$l$		R1	R1 EACH END	R2	(2)	BOLT	R2 EACH END
SPAN (ft)	$wl$ (lbs)	$0.4 wl$ (lbs)	1/2" BOLT QTY	$1.1 wl$ (lbs)	SIMPSON LS70 (lbs)	LOAD (lbs)	1/2" BOLT QTY
4	268	107	1	295	1830	-1535	N/A
6	402	161	1	442	1830	-1388	N/A
8	536	214	1	590	1830	-1240	N/A
10	670	268	1	737	1830	-1093	N/A



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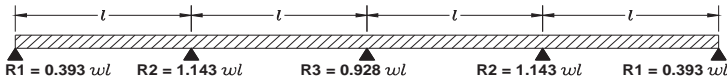
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90 mph OVERHANG WIND

(4) EQUAL SPANS



SUPPORT : N1												
$l$		R1	R1 EACH END	R2	(2)	BOLT	R2 EACH END	R3	(2)	BOLT	R3 EACH END	
SPAN (ft)	$wl$ (lbs)	0.393 $wl$ (lbs)	1/2" BOLT QTY	1.143 $wl$ (lbs)	SIMPSON LS70 (lbs)	LOAD (lbs)	1/2" BOLT QTY	0.928 $wl$ (lbs)	SIMPSON LS70 (lbs)	LOAD (lbs)	1/2" BOLT QTY	
4	264	104	1	302	1830	-1528	N/A	245	1830	-1585	N/A	
6	396	156	1	453	1830	-1377	N/A	367	1830	-1463	N/A	
8	528	208	1	604	1830	-1226	N/A	490	1830	-1340	N/A	
10	660	259	1	754	1830	-1076	N/A	612	1830	-1218	N/A	
SUPPORT : N4												
$l$		R1	R1 EACH END	R2	(2)	BOLT	R2 EACH END	R3	(2)	BOLT	R3 EACH END	
SPAN (ft)	$wl$ (lbs)	0.393 $wl$ (lbs)	1/2" BOLT QTY	1.143 $wl$ (lbs)	SIMPSON LS70 (lbs)	LOAD (lbs)	1/2" BOLT QTY	0.928 $wl$ (lbs)	SIMPSON LS70 (lbs)	LOAD (lbs)	1/2" BOLT QTY	
4	232	91	1	265	1830	-1565	N/A	215	1830	-1615	N/A	
6	348	137	1	398	1830	-1432	N/A	323	1830	-1507	N/A	
8	464	182	1	530	1830	-1300	N/A	431	1830	-1399	N/A	
10	580	228	1	663	1830	-1167	N/A	538	1830	-1292	N/A	
SUPPORT : N5												
$l$		R1	R1 EACH END	R2	(2)	BOLT	R2 EACH END	R3	(2)	BOLT	R3 EACH END	
SPAN (ft)	$wl$ (lbs)	0.393 $wl$ (lbs)	1/2" BOLT QTY	1.143 $wl$ (lbs)	SIMPSON LS70 (lbs)	LOAD (lbs)	1/2" BOLT QTY	0.928 $wl$ (lbs)	SIMPSON LS70 (lbs)	LOAD (lbs)	1/2" BOLT QTY	
4	232	91	1	265	1830	-1565	N/A	215	1830	-1615	N/A	
6	348	137	1	398	1830	-1432	N/A	323	1830	-1507	N/A	
8	464	182	1	530	1830	-1300	N/A	431	1830	-1399	N/A	
10	580	228	1	663	1830	-1167	N/A	538	1830	-1292	N/A	
SUPPORT : N8												
$l$		R1	R1 EACH END	R2	(2)	BOLT	R2 EACH END	R3	(2)	BOLT	R3 EACH END	
SPAN (ft)	$wl$ (lbs)	0.393 $wl$ (lbs)	1/2" BOLT QTY	1.143 $wl$ (lbs)	SIMPSON LS70 (lbs)	LOAD (lbs)	1/2" BOLT QTY	0.928 $wl$ (lbs)	SIMPSON LS70 (lbs)	LOAD (lbs)	1/2" BOLT QTY	
4	268	105	1	306	1830	-1524	N/A	249	1830	-1581	N/A	
6	402	158	1	459	1830	-1371	N/A	373	1830	-1457	N/A	
8	536	211	1	613	1830	-1217	N/A	497	1830	-1333	N/A	
10	670	263	1	766	1830	-1064	N/A	622	1830	-1208	N/A	



05/22/24

# SmartExhaust™

## Bath Fan/Light Switch with Ventilation Control & Delay Timer

The SmartExhaust™ Bath Fan/Light Switch is a simple and efficient solution for achieving adequate bathroom ventilation and meeting exhaust ventilation requirements. The SmartExhaust™ is designed to replace the bathroom fan and light switches with one smart controller and features programmable settings for running the exhaust fan as much or as little as you want, automatically.



Toggle (Part # SE1-W)

Rocker (Part # SED-S)

### Features & Benefits

- Earn LEED and ENERGY STAR points for enhanced exhaust ventilation\*
- Makes standard bath fans ASHRAE 62.2 compliant\*
- Smart microprocessor provides precise, user-controlled ventilation
- Works with most incandescent, CFL, and LED lights\*\*
- Optional light and fan timeout after 60 mins (Rocker style only)
- Available in toggle and rocker models in a variety of colors

\*When used with ASHRAE 62.2 compliant fans

\*\*Rocker style not compatible with all LED bulbs. Dimmable LED bulb recommended

### Product Details

The SmartExhaust™ is a bath fan and light switch\* that also serves as a ventilation controller and fan delay timer. This product provides whole house exhaust ventilation. (\*Wiring the SmartExhaust™ to operate a light is optional)

With other fan and light switches, the time that someone is occupying the bathroom does not always provide sufficient run time for the fan to eliminate bathroom humidity or contaminants. Using the SmartExhaust™ **Ventilation** and **Delay** settings, the fan can be set to run on a timer so that adequate ventilation can be met even after someone exits the bathroom.

Using the **Ventilation** setting, the user is able to set the number of minutes per hour that the bathroom exhaust fan should run to achieve desired/required ventilation. Using the **Delay** setting, the user is able to set the number of minutes the fan should run after the SmartExhaust™ switch has been turned off. When the switch is turned off, the fan continues to run for the set delay time.

By combining the fan switch™ with the light switch, the SmartExhaust™ also becomes an occupancy sensor.

### Specifications

Light: 450 Watts @ 120 VAC (Blue Wire)

Fan: 150 Watts @ 120 VAC (Red Wire)

Operation: 120 VAC 60hz ± 10% (Red Wire)

2.5" Minimum wall box recommended

Cover plate not included, use any standard switch plate

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[www.AirCycler.com](http://www.AirCycler.com) | [info@aircycler.com](mailto:info@aircycler.com)

# Configuring Ventilation Time

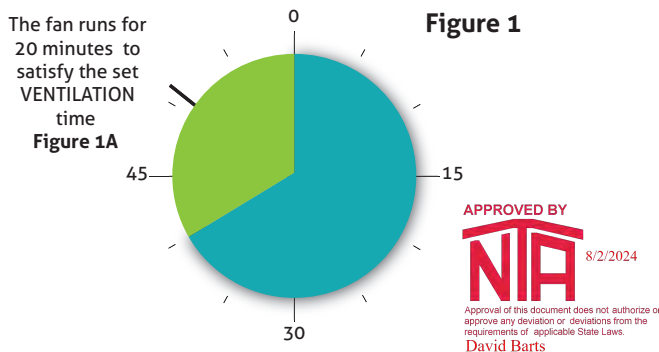
To properly set the VENTILATION time on your SmartExhaust™ you will need to know the code required CFM (Cubic Feet Per Minute) for your home and the Fan CFM. Follow this simple equation to calculate the VENTILATION min/hr.

Code Required Ventilation in CFM	=	Hour Fraction
Fan CFM	=	Hour Fraction
Hour Fraction	×	60 Minutes
		=
		Ventilation Settings in minutes

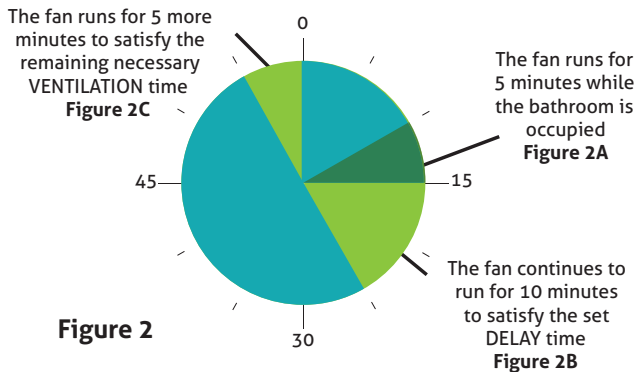
CFM = Cubic Feet Per Minute

## Example

### A Normal Hour of Operation with No Occupancy



### A Normal Hour of Operation with 5 Minutes of Occupancy and 10 Minute Fan Delay (Total Ventilation Set to 20 Min.)



The user wants to VENTILATE the bathroom for 20 minutes every hour with a 10 minute fan DELAY

### Figure 1

- The VENTILATION dial is set to 20 min/hr.
- The SmartExhaust™'s microprocessor performs the following equation to determine when to run the fan to meet the VENTILATION setting, based on 1 hour (60 mins).  
**60 MINS - VENTILATION SETTING = START VENT TIME**  
**60 MINS - 20 MINS = 40 MINS**
- The SmartExhaust™ will turn on 40 minutes into the hour and run for 20 minutes. (Figure 1A)

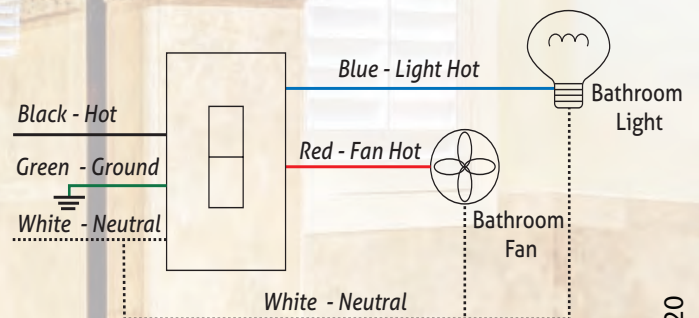
### Figure 2

- The DELAY dial is set to 10 min/hour
- Someone uses the bathroom for 5 minutes and manually turns the SmartExhaust™ on. The microprocessor logs this 5 minutes of use. (Figure 2A)
- The occupant exits the bathroom, turning the switch off, and the SmartExhaust™ continues to run the fan for the 10 minutes of DELAY run time. (Figure 2B)  
**5 MINS OF MANUAL USE + 10 MINS OF DELAY TIME = 15 MINUTES OF VENTILATION**
- 15 minutes will be subtracted from the total required 20 minutes of VENTILATION time. 55 minutes into the hour, the fan will turn on and run for the 5 additional minutes needed to complete the required ventilation. (Figure 2C)

Part No:	Description:
SE1-W	SmartExhaust™ Toggle - White
SE1-A	SmartExhaust™ Toggle - Almond
SED-S	SmartExhaust™ Rocker (Includes White Rocker)
SEDR-A	Almond Rocker Replacement
SEDR-BL	Black Rocker Replacement
SEDR-BR	Brown Rocker Replacement
SEDR-I	Ivory Rocker Replacement

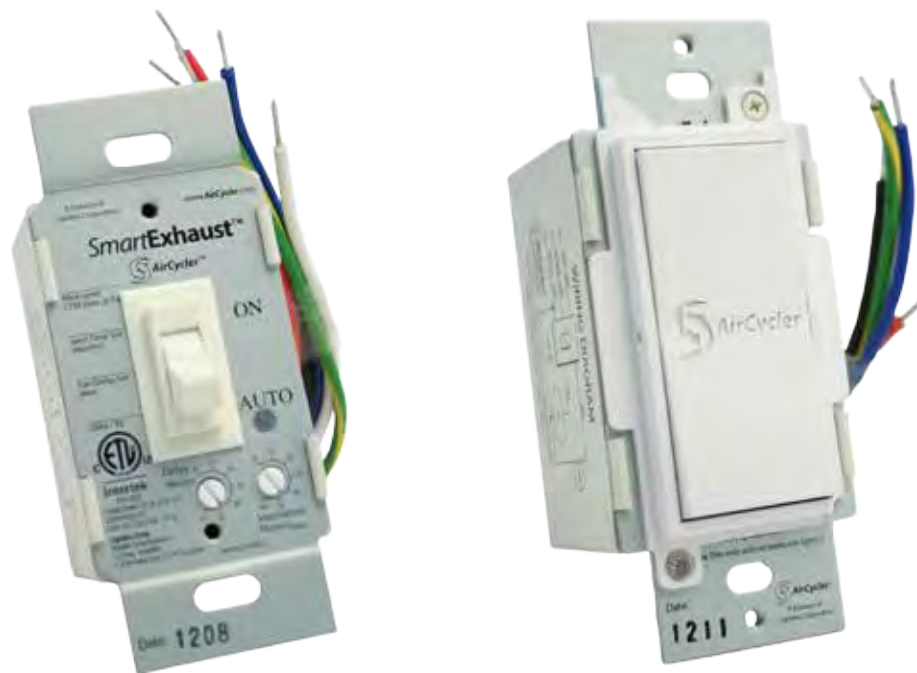
This product may be covered by one or more of the following patents and patents pending: 8,185,244

## Wiring Diagram





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# *SmartExhaust*<sup>TM</sup>

## Installation & User's Guide

VENTILATION MADE BREEZY!<sup>TM</sup>  
a breeze to install • a breeze to use

## INTRODUCTION

The SmartExhaust™ is designed to replace bathroom fan and light switches and provide both functions with one easy operation. By using a microprocessor to monitor and control operation, the SmartExhaust™ delivers a precise amount of ventilation.

## BENEFITS

- Earn LEED and ENERGY STAR points for enhanced exhaust ventilation\*
- Make standard bath fans ASHRAE 62.2 compliant\*
- Replaces both fan and light switches for one easy operation
- Microprocessor technology provides precise ventilation times
- Programmable DELAY and VENTILATION settings
- Excess manual and/or delay operation is subtracted from the next hour's programmed ventilation time
- Works with most incandescent, CFL, fluorescent and LED lights
- Optional light and fan time out after 60 minutes (Rocker version only)

\*When used with ASHRAE 62.2 compliant fans



## SAFETY CONSIDERATIONS

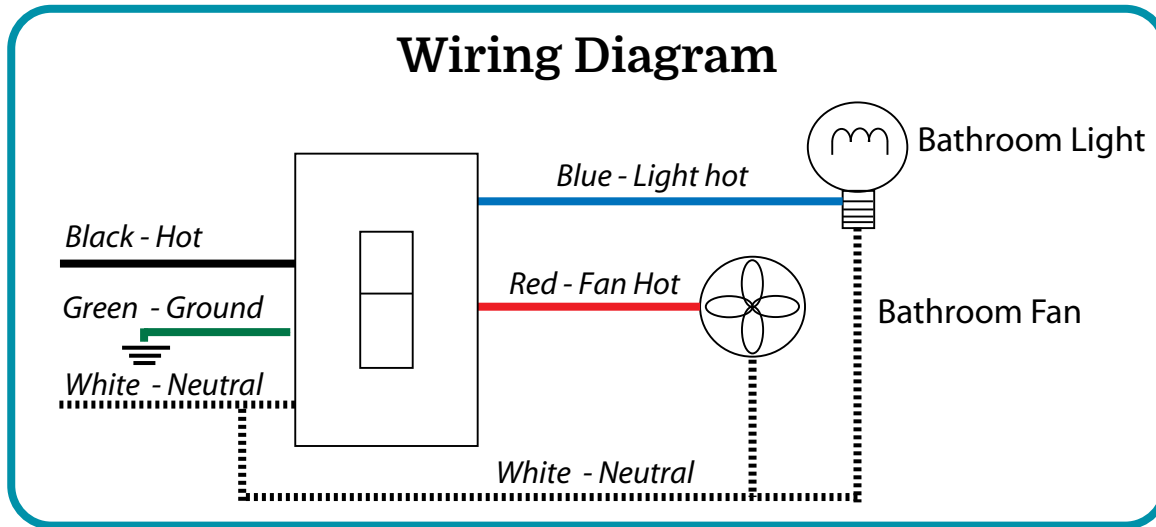
Read and follow manufacturer's instructions carefully. Follow all local electrical codes during installation. All wiring must conform to local and national electrical codes. Improper wiring or installation may result in personal injury or product and property damage.

## INSTALLATION

1. Do not connect this device to aluminum wire.
2. Use with copper or copper clad wire only.
3. TURN POWER OFF at circuit breaker or fuse panel.
4. Remove cover plate and existing switch from wall box if there is one already installed.
5. Connect the wires in the wall box using the supplied wire nuts.  
Wires must have  $\frac{3}{4}$  inch of bare copper exposed. Twist wires together tightly with supplied wire nuts. Make sure no bare copper is exposed. Secure connections with electrical tape. If a light is not connected, be sure to attach a wire nut to unused blue wire and secure with electrical tape.
6. Mount SmartExhaust™ switch in to wall box with supplied mounting screws.
7. Set desired DELAY time by turning dial to desired minutes.
8. Set desired VENTILATION time by turning dial to desired minutes per hour.
9. Record settings on face plate with an indelable marker and snap rocker assembly onto face plate.
10. Turn on power at circuit breaker or fuse box.

**Note:** To fully comply with ASHRAE 62.2 - Attach clear ASHRAE sticker to face of switch plate.

## WIRING DIAGRAM



## OPERATING INSTRUCTIONS

- Move switch up to turn on the fan and light
- Move switch down to turn off the light. The fan will continue to run for a pre-set DELAY time (unless manually canceled)
- To cancel DELAY time for the toggle version, turn the switch off and back on again within three seconds. Within another three seconds, turn the switch off and the fan will shut off canceling the DELAY for that use. For the Rocker version, simply turn the switch off again after use.
- DELAY will not activate until the light/fan has been on for at least 10 seconds
- The fan will automatically come on once per hour for the pre-set VENTILATION time.

## OPERATION

The SmartExhaust™ has a microprocessor in it that reads the two settings dials. If for example the VENTILATION dial is set to 20 minutes/hour, the micro-processor subtracts 20 minutes from 60 minutes and determines it needs to come on 40 minutes into the hour and run for the remaining 20 minutes of that hour.

Now if the DELAY dial is set to 10 minutes and someone uses the bathroom for 5 minutes, the microprocessor will keep track of the 5 minutes of use. Then when the person leaves after 4 minutes and turns the light switch off, the microprocessor will keep the fan on for 10 more minutes of the DELAY setting. This will add up to 14 minutes of total fan run time for that hour. The microprocessor will now subtract the 14 minutes of manual and delay time from the required 20 minutes of VENTILATION time and come up with 6 minutes needed to run at the end of the hour. Now 54 minutes into the hour the fan will come on and run for 6 more minutes. Resulting in 20 minutes of total run time that hour.

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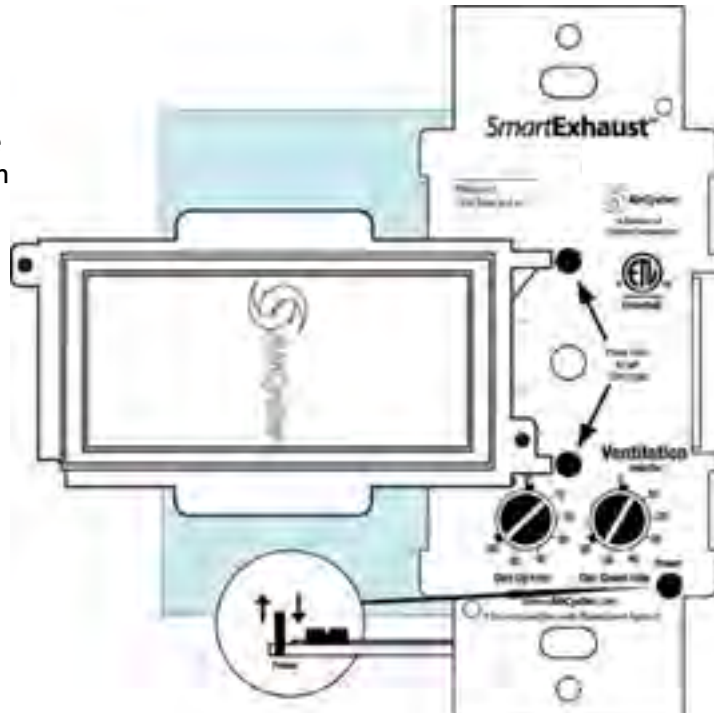
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## Additional SmartExhaust™ Rocker Model Features

### Adjustable Dim up/Dim down rates:

The dimmer function of this switch is designed for use only with permanently installed incandescent lighting fixtures. Do not use dim rates on fluorescent lighting, transformer supplied lighting/appliances, motorized appliances or receptacles. The incandescent lighting controlled by this dimmer switch must not exceed a total of 400 watts.

The time required to reach full brightness when turned on or full off when turned off, can be set from 0-6 seconds. Use the DELAY dial to set the dim up rate and VENTILATION dial to set the dim down rate. For example if you want it to take 5 seconds to reach full brightness and 3 seconds to reach full off, set DELAY to 5 and VENTILATION to 3. Then pull the small power button on the lower right corner of the switch to the off position. Now using the setting tool molded into the rocker, hold down both push buttons in the center of the switch and at the same time push in the power cut off button while continuing to hold in the push buttons. In 5 seconds the light will dim up to full brightness and then back off using the settings you just set. Last, return the DELAY and VENTILATION dials to the required DELAY and VENTILATION time.



### Night light function: (incandescent lights only)

If you have set a dim up rate, anytime you press the on button again after the initial push, the light will stop at that brightness level. This is great for late at night visits to the bathroom when you don't want or need full brightness of the light(s). A quick double tap will turn on the light at a low brightness and stop it there.

### Double tap delay cancel:

If after leaving the bathroom you don't want the fan to run for its set DELAY time, simply tap the bottom of the rocker again and the delay time will be canceled.

\*Double tap - Fan may remain on if doing vent time.

**Note:** When changing light bulbs, pull power switch up to disable power to light sockets.

### Auto off:

This default setting will automatically turn the fan and light off if the light has been left on for more than 60 minutes.

To disable this feature: Pull the power button out, then using the setting tool on the rocker frame, press the BOTTOM button while pushing the power button back down. The blue LED should come on. Hold the BOTTOM button for 5 seconds. The bathroom light will flash once to indicate this feature is now disabled.

To re-enable this feature: Pull the power button out. Using the setting tool, hold down the TOP button while pushing the power button back down. Hold the UP button for 5 seconds until the light flashes twice, indicating AUTO OFF is enabled.



## TROUBLESHOOTING & FREQUENTLY ASKED QUESTIONS

### What if you're only in the bathroom for a few seconds?

You have to have the switch on for 10 full seconds before the microprocessor will start counting time and enable the DELAY function. If you turn the switch back off with in 10 seconds, the fan shuts off and no time is counted.

### What if you don't want the DELAY time to run after you use the bathroom?

To cancel DELAY time for the toggle version, turn the switch off and back on again within three seconds. Within another three seconds, turn the switch off and the fan will shut off canceling the DELAY for that use. For the rocker version, simply turn the switch off again after use.

### What if manual and DELAY time exceeds VENTILATION time?

The microprocessor will calculate the excess ventilation time and subtract it from the total VENTILATION time for the next hour.

### *If you're SmartExhaust™ is not operating correctly check:*

#### Does the device have power?

Turn the VENTILATION dial to 60 minutes. The fan will come on within 20 seconds if the device is powered. If you have the rocker version, tap the top of the rocker to turn on both the light and the fan. If you have the toggle version, you must hear the fan turn on to verify the microprocessor is running.

#### Is the device wired correctly?

The SmartExhaust™ will not operate correctly if it is not wired correctly.

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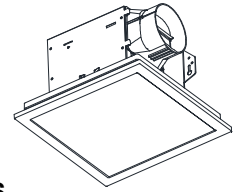
**Technical Support:**

**info@aircycler.com**

# INSTALLATION AND OPERATING INSTRUCTIONS

## VENTILATION FAN / DIMMABLE LED LIGHT

### READ AND SAVE THESE INSTRUCTIONS



#### General Safety Information

1. Make sure that the electric service supply voltage is AC 120V, 60Hz.
2. Follow all local electrical and safety codes, as well as the National Electrical Code (NEC) and the Occupational Safety and Healthy Act (OSHAAct).
3. Always disconnect the power source before working on or near the ventilating fan, motor or junction box.
4. Protect the power cord from sharp edges, oil, grease, hot surfaces, chemicals or other objects.
5. Do not kink the power cord.
6. Do not install the unit where ducts are configured as shown in Fig. A.
7. Provide suction parts with proper ventilation.
8. This unit is UL listed for use over a bathtub or shower when installed in a GFCI protected branch circuit.

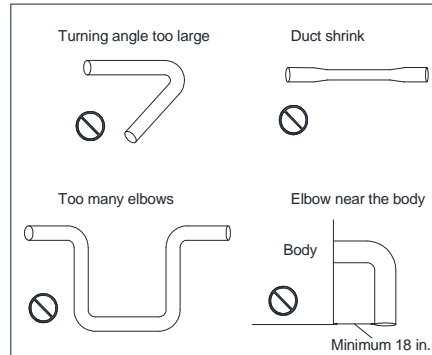


Fig. A

#### CAUTION

1. For General Ventilating Use Only. Do Not Use To Exhaust Hazardous Or Explosive Materials And Vapors.
2. Not for use in cooking area. (Fig. B)
3. This product must properly connect to the grounding conductor of the supply circuit.
4. To reduce the risk of injury to persons, install the fan at least 8.2 feet (2.5m) above the floor.

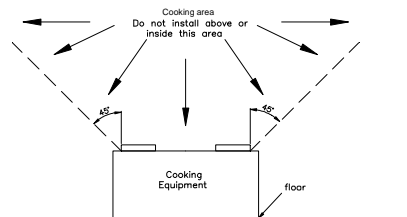


Fig. B

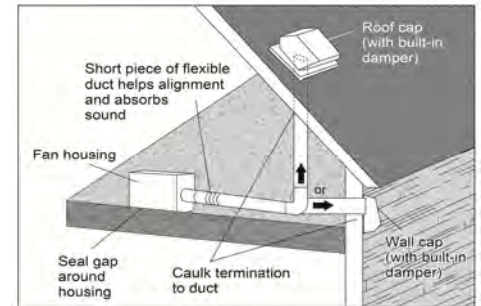
#### WARNING

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:

1. Use this unit only in the manner intended by the manufacturer. If you have any questions, contact the manufacturer.
2. Before servicing or cleaning the unit, switch power off at service panel and lock the service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.
3. Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction.
4. Sufficient air is needed for proper combustion and exhausting of gases through the flue (chimney) of fuel burning equipment to prevent back drafting. Follow the heating equipment manufacturer's guideline and safety standards such as those published by the National Fire Protection Association (NFPA), and the American Society for Heating, Refrigeration and Air Conditioning Engineers (ASHRAE), and the local code authorities.
5. When cutting or drilling into ceiling, do not damage electrical wiring and other hidden utilities.
6. Ducted fans must always be vented to the outdoors.
7. If this unit is to be installed over a tub or shower, it must be marked as appropriate for the application and be connected to a GFCI (Ground Fault Circuit Interrupter) – protected branch circuit.
8. Do not use this unit with any other solid-state control device. Solid-state controls devices may cause harmonic distortion, which can cause a motor humming noise.
9. **NEVER** place a switch where it can be reached from a tub or shower.
10. Not to be installed in a ceiling thermally insulated to a value greater than R40. (This is required for installation in Canada only).

#### INSTALLATIONS

Proper insulation around the fan to minimize building heat loss and gain. 4" circular duct is recommended for installation. The ducting from this fan to the outside of building has a strong effect on the air flow, noise and energy use of the fan. Use the shortest, straightest duct routing possible for best performance, and avoid installing the fan with smaller ducts than recommended. Insulation around the ducts can reduce energy loss and inhibit mold growth. Fans installed with existing ducts may not achieve their rated air flow.



#### Install with wood frame

Model No.	ITG100LED
Install Dim. (Inch)	7-1/2 x 7-1/4

1. Remove motor plate from housing by removing three screws. (Fig. C-1)
2. Remove wiring cover from housing by pulling straight out. Choose a hole and use a slotted screwdriver to remove it. (Fig. D)
3. Follow all local electrical and safety codes. **NEVER** place a switch where it can be reached from a tub or shower. Connect wires as shown in wiring diagrams. (Fig. E)
4. Using wire nuts (not provided) connect house power cable to ventilating fan wires. 14 AWG (2.1 mm<sup>2</sup>) is the smallest conductor that shall be used for branch-circuit wiring. (Fig. F)
5. Insert the duct into the duct connector and tape all ductworks connection to make them secure and airtight. Install the duct with a gradient 1°-2° to the outside. (Fig. G)
6. **New installation prior to finishing the ceiling:** Insert the fan between joists. Make sure the fan body is level and perpendicular with the joist. (Fig. H)
7. **Replacement installation:** After making electrical and ductwork connections (see steps 2-5), nail housing in place. Drive nails through the housing where indicated by arrows. (Fig. I)
8. **New installation in an existing ceiling:** Bend tabs outward 90° (Use a screw driver if desired) and position housing so that tabs rest against bottom edge of joists (or front of stud). Nail housing to joist or stud using four nails to ensure a solid, quiet installation. Ceiling installations: Tabs on opposite side of housing can be bent outward to rest on top of 1/2" ceiling material and provide extra stability. (Fig. J)
9. Insert the motor plug connector and locking the fan body back by using three screws. (Fig. C-2)
10. Insert the LED lighting plug connector into the housing. Squeeze grille springs together and insert the mounting springs into the slots of the housing and mount the grille to the fan body.

#### SUPPLIED ACCESSORIES

Part name	Appearance	Quantity
Grille		1
Fan & Housing		1
4" Duct		1
Screw (M4x12)		3

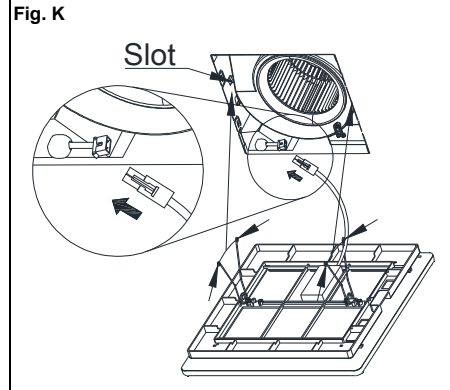
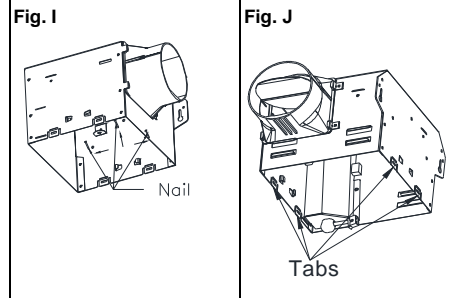
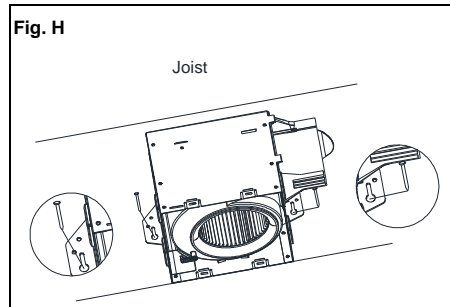
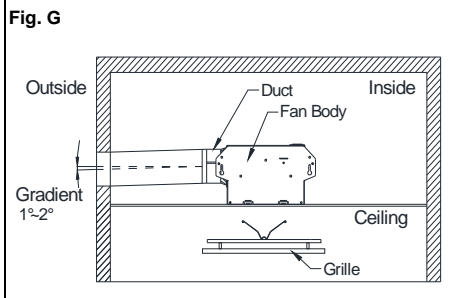
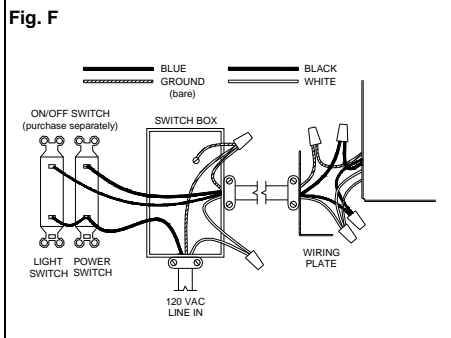
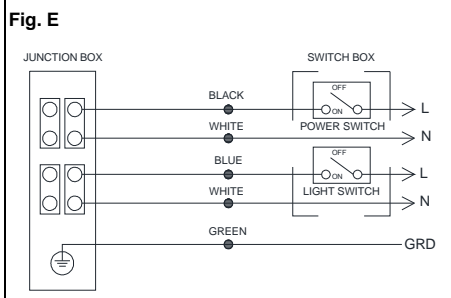
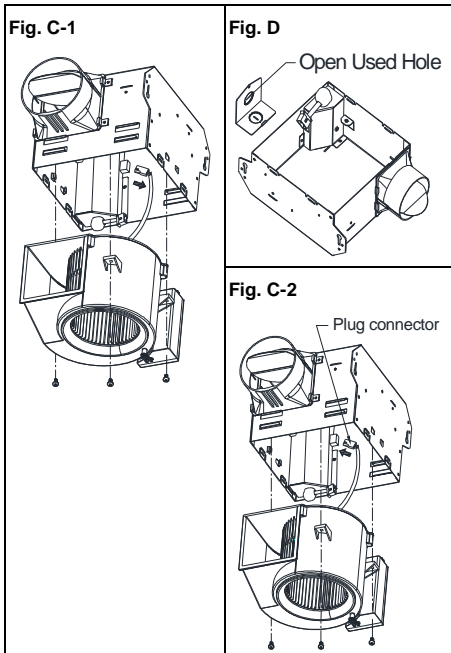
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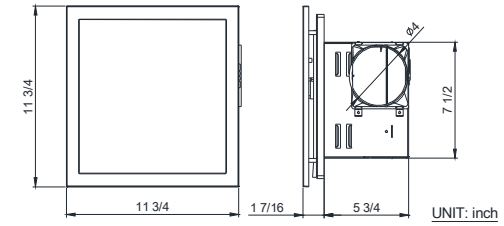
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Push grille up against ceiling. When the power on, check for abnormal vibration or sound. (Fig. K)



**DIMENSIONS**



**WARRANTY**

**DELTA ELECTRONICS THREE YEAR LIMITED WARRANTY**

Delta Electronics Inc. ("Delta Electronics") warrants to the original consumer purchaser in the USA that the Breez ventilation fan products will be free from defects in material or workmanship. This warranty is limited to three (3) years from the original date of purchase.

**Limitations and Exclusions**

- During the warranty period, a replacement for any defective product will be supplied free of charge for installation by the consumer. The warranty provided herein does not cover charges for labor or other costs incurred in the troubleshooting, repair, removal, and installation service.
- All returns of defective parts or products must include the product model number, and must be made through an authorized Delta Electronics distributor. Authorized returns must be shipped prepaid. Repaired or replacement products will be shipped by Delta Electronics F.O.B. shipping point.
- Delta Electronics shall not be liable for any indirect, incidental, consequential, punitive, or special damages arising out of or in connection with products use or performance, regardless of the form of action whether in contract, tort (including negligence), strict product liability or otherwise.
- This warranty does not extend to fluorescent lamp starters and tubes.
- The warranty does not cover if user does not comply with manufacture's installation manual.
- To qualify for warranty service, you must notify Delta Electronics at the address or telephone number below.
- Delta Electronics shall have no liability to the original owner-user with respect to any defect caused by abuse, misuse, neglect, improper transportation or storage, improper testing, improper installation, improper operation, improper use, improper maintenance, improper repair, improper alteration, improper modification, tampering or accident of products or parts thereof, or unusual deterioration or degradation of products or parts thereof due to a physical environment beyond the requirements of products' specifications.

Address: 46101 Fremont Boulevard, Fremont, CA 94538  
 US Toll Free Number: 1-888-979-9889

**OPERATION**

Turn the power switch ON/OFF to operate the fan/LED light.

**MAINTENANCE:**

Disconnect the power source before working on the unit. Routine maintenance must be done every year.

**CAUTION:**

- Never use gasoline, benzene, thinner or any other such chemicals for cleaning the ventilating fan.
- Do not allow water to enter the motor.
- Do not soak resin parts in water over 140 °F (60°C).

**CLEANING:**

- Pull down the spring to remove the grille.
- Wash and clean the grille. (Use non-abrasive kitchen detergent and wipe dry with a new cloth.)
- Remove dust and dirt from the ventilating fan using a vacuum cleaner.
- Using a cloth dampened with kitchen detergent, remove any dirt from the ventilating fan. Wipe dry with a new cloth.
- Replace the grille.

**SPECIFICATIONS**

Model No.	Volt/Hz	Air Flow @0.1"SP (CFM)	Power @0.1"SP (W)	Max Current (Amps)	Weight (lb.)	LED Light Spec
ITG100ELED	120/60	100	17.0	0.47	8.2	13Watts 1000Lumens 3000K

Note: Design and specifications are subject to change without notice.

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# FOUNDATION VENTS

Air Vent offers a complete line of foundation vents, from powered foundation vents to heavy-duty and replacement automatics. For all of your foundation ventilation needs call Customer Service: 1-800-247-8368.

## Automatic Foundation Vents



**HEAVY-DUTY  
MODEL: ST**

- Heavy-duty construction
- Premium bi-metal coil
- Honeycomb grill
- 5-year limited warranty
- NFA 50"
- Colors: black, brown, gray



**REPLACEMENT AUTOMATIC  
MODEL: RA**

- Easy to install, includes hardware
- 3-year limited warranty
- NFA 50"
- Colors: black, brown, gray

## Powered Foundation Vents



**HIGH POWER  
MODEL: STP**

- For problem and hard to vent foundations
- Suctions air out of foundation
- .8 amp motor, 3000 rpm
- Colors: black, brown, gray

**QUIET MODEL  
MODEL: STQ**

- .5 amp motor, 1550 rpm
- Colors: black, brown, gray

## Accessories



**THERMOSTAT; HUMIDISTATS  
HUMIDISTAT MODELS: HUB & HUC**

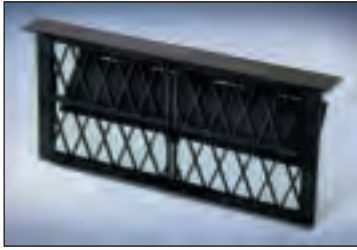
- Thermostat turns fan on when temperature exceeds setting
- HUB humidistat shuts the fan off in damp weather
- HUC humidistat turns on when humidity is above setting



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## Manual Foundation Vents – Plastic



ACCORDION DAMPER  
MODEL: 101

- Folding, accordian style damper
- NFA 68"
- Colors: black, brown, gray



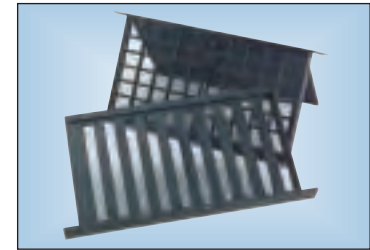
HEAVY-DUTY SLIDER  
MODEL: 303

- Heavy-duty solid plastic construction
- Aluminum screen
- NFA 42"
- Colors: black, brown, gray



SLIDER - MODEL: PLSL  
DAMPER - MODEL: PLDP

- Our best selling slider & damper
- Slider NFA 45"
- Damper NFA 64"
- Colors: black, brown, gray (Damper PLDP: black, gray)



JUMBO VENTS  
SLIDER - MODEL: JMSLBL  
DAMPER - MODEL: JBDBL

- Slider or Damper
- For 9 1/4" x 16" opening
- NFA: slider 60"; damper 78"
- Courses out with oversized bricks
- Color: black

MULTI-PURPOSE VENT  
MODEL: MP  
(Not Shown)

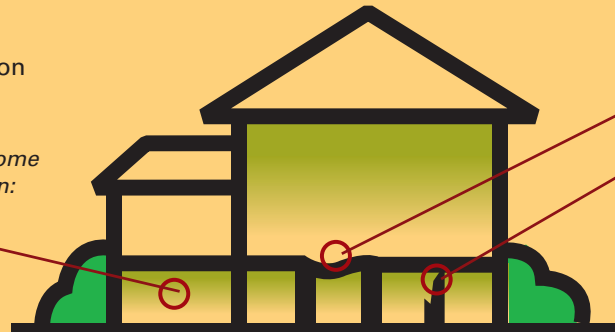
- 7" x 12" vent for 6" x 11" opening
- NFA 23"
- Colors: black, brown, gray

### Foundation ventilation helps protect against conditions that can lead to:

- Wood decay
- Mold and mildew
- Termite and insect infiltration

Significant damage can occur to a home without proper foundation ventilation:

Dark, damp environments attract wood attacking termites and other insects



Floors can warp

Wood can decay causing structural damage

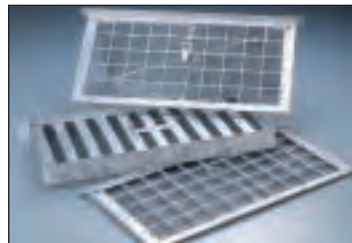
## Manual Replacement



MANUAL REPLACEMENT  
MODEL: RM

- Same housing as automatic
- Manual lever instead of automatic coil
- NFA 50"
- Colors: black, brown, gray

## Manual Foundation Vents – Metal



ALUMINUM FIXED VENTS  
LINTEL - MODEL: FC3L  
NO LINTEL - MODEL: FC3

- No damper or slider
- 16" x 8"
- Color: mill



STAMPED ALUMINUM  
MODEL: FA109

- Aluminum screen
- Adjustable sliding damper
- Also available for wood
- NFA 36"

ALUMINUM SLIDER  
MODEL: ALSL

- With lintel
- Color: mill
- NFA 45"

ALUMINUM DAMPERS  
NO LINTEL - MODEL: FC  
LINTEL - MODEL: ALDP

- Color: mill
- NFA 63"



3000 West Commerce  
Dallas, TX 75212  
1-800-AIRVENT  
www.airvent.com

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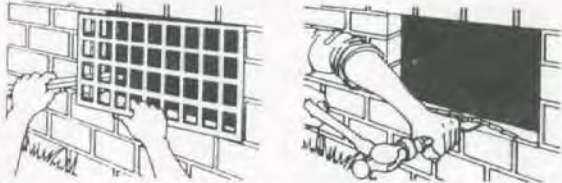


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RAV065-6/04

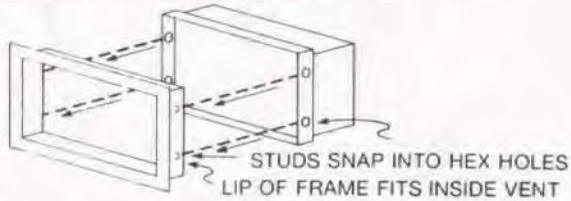
# AUTOMATIC VENT INSTALLATION INSTRUCTIONS

SERIES-5 2-PIECE VENT  
WITH REMOVABLE FRAME

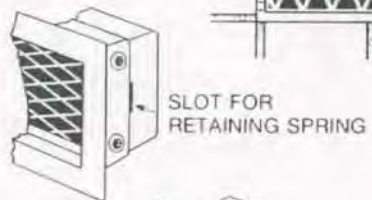
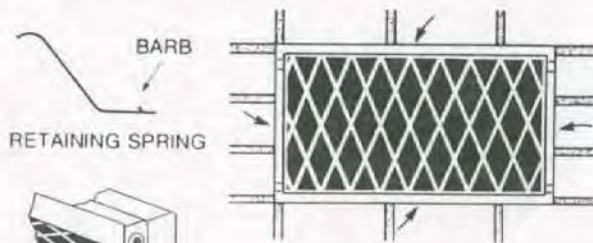
1. Remove the old vent with hammer and chisel, crow bar, etc., and clean protruding and loose mortar from opening with chisel. Vent MUST slide in easily. If it doesn't, use chisel to enlarge opening.



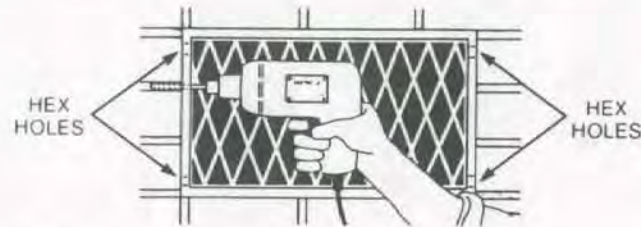
2. Remove frame from vent by pulling up or by inserting blade between frame and vent on outside and twisting. Be careful not to damage screen.



3. Attach a retaining spring to 2 opposite sides of the vent—either left and right or top and bottom depending on which produces the tighter fit in the foundation wall. Slide the barbed ends of the springs into the slots to attach.

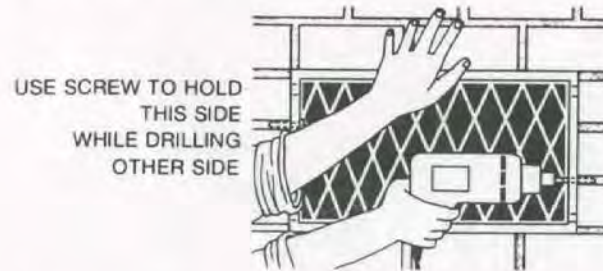


4. Insert vent into foundation opening either from the outside of the crawl space or from the inside. Be sure it fits easily. DO NOT USE FORCE. Hold TIGHTLY against the wall after adjusting for alignment. Using a 1/4" masonry carbide tipped bit, drill through the vent into a mortar joint on each side. It is best to drill high on one side and low on the other for increased stability. Be sure to line up with a mortar joint and angle the drill slightly inward toward the crawl space.

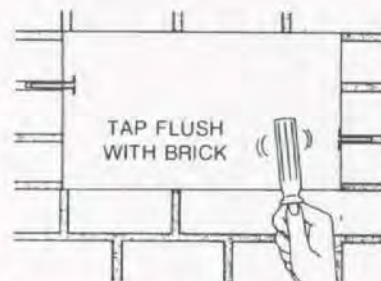


### NOTE:

The most important part of the installation is to hold the vent TIGHTLY against the wall while the two holes are drilled. The vent must not be moved between drilling the first and second holes. Some installers insert a screw in the first hole to hold the vent steady while drilling the second.

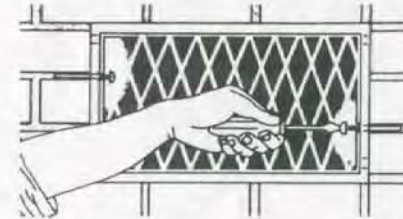


Be sure to drill the hole in the mortar joint deep enough the first time. Redrilling may make the hole too big for the anchor.

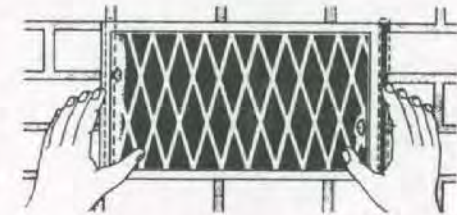


5. Remove the vent from the wall temporarily. Blow loose material out of the holes and insert the screw anchors. Tap the anchors all the way flush with the brick using a screw driver handle.

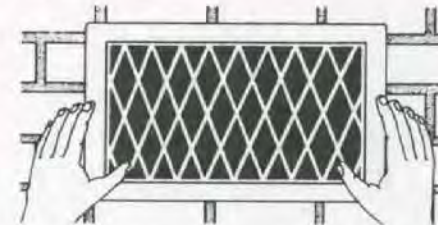
6. Mount vent using screws supplied. Turn screw until head is just flush with frame. Do not use excess pressure. To start the screw in the anchor it is helpful to bend the vent slightly away from the wall to see the tip of the screw enter the anchor. While turning the screw, if the vent begins to come away from the wall it means the screw is not in the anchor.



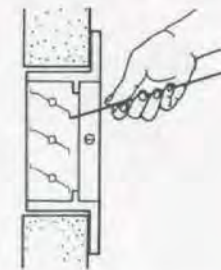
7. Before fully tightening the screws, adjust the vent left to right to insure that it is centered in the foundation opening.



8. Replace the frame.



9. Using a wire which will pass through the screen, test for freedom of movement of the louvers to be sure there is no binding.



APPROVED BY

**NIA**

8/2/2024

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

David Barts

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