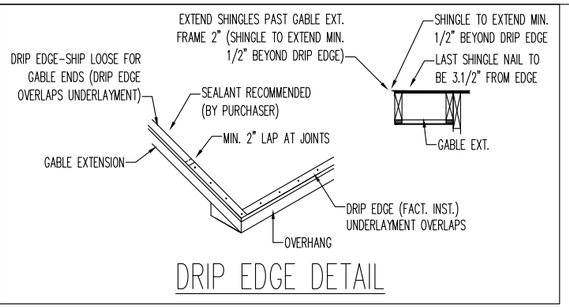
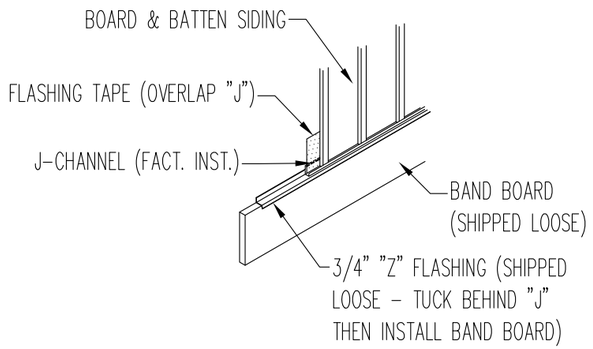



DRIP EDGE DETAIL




"Z" FLASHING SHIPPED LOOSE FOR SITE INSTALLATION

"Z" FLASHING - BAND BOARD

CERTAINTEED 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 |

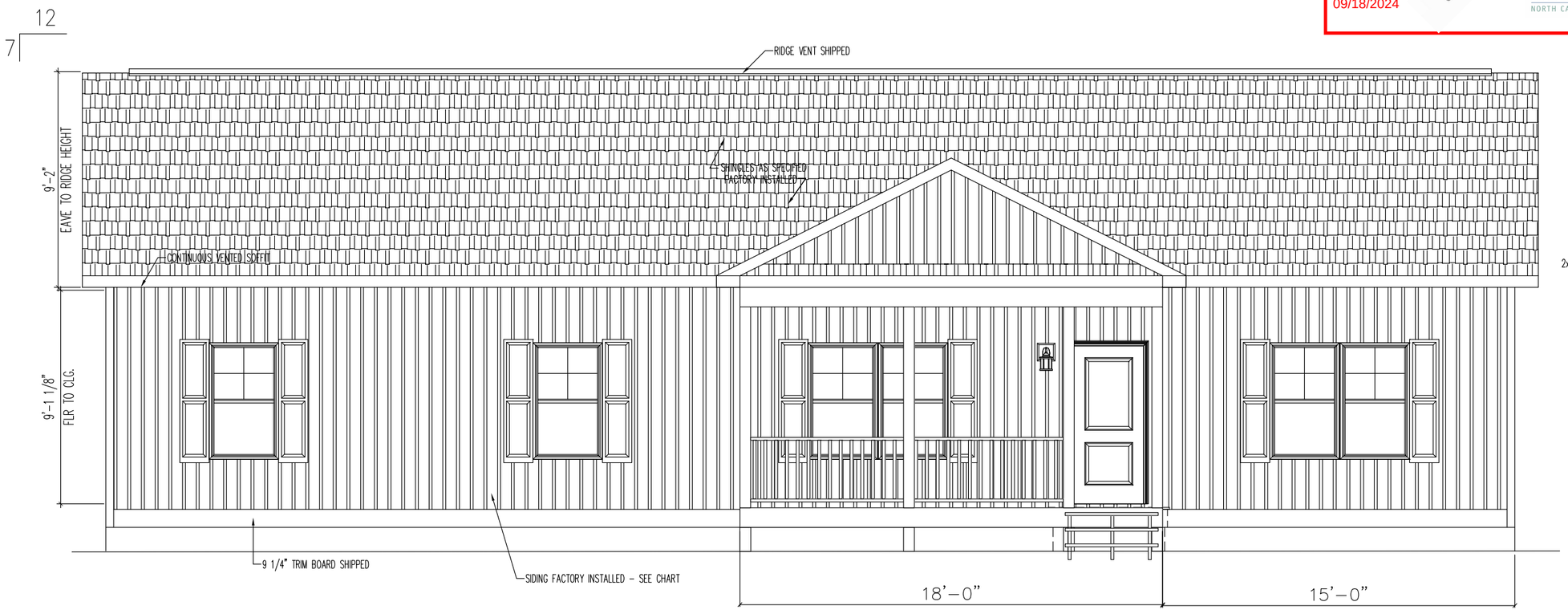
VENTILATION CALCULATIONS

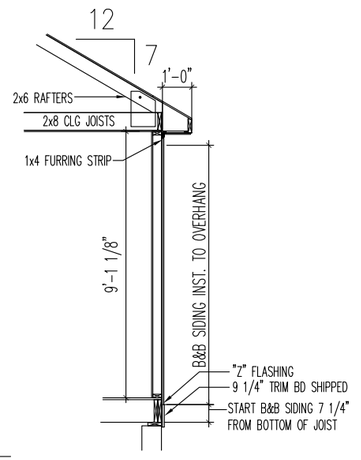
| | | | | |
|---|---|---|---|---|
| RIDGE VENT: | 0.139 | NET FREE AIR PER SQ.FT. | | |
| 58 | LINEAL FOOT = | 8.06 | SQFT. NET FREE AIR | |
| VENTILATED SOFFIT: | 0.041 | NET FREE AIR PER SQ.FT. | | |
| 124 | LINEAL FOOT = | 5.08 | SQFT. NET FREE AIR | |

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.

NOTICE TO CONTRACTOR
All construction must comply with current NC Building Codes and is subject to field inspection and verification.
APPROVED
Limited building only review
Permit holder responsible for full compliance with the code
09/18/2024
Harnett COUNTY NORTH CAROLINA



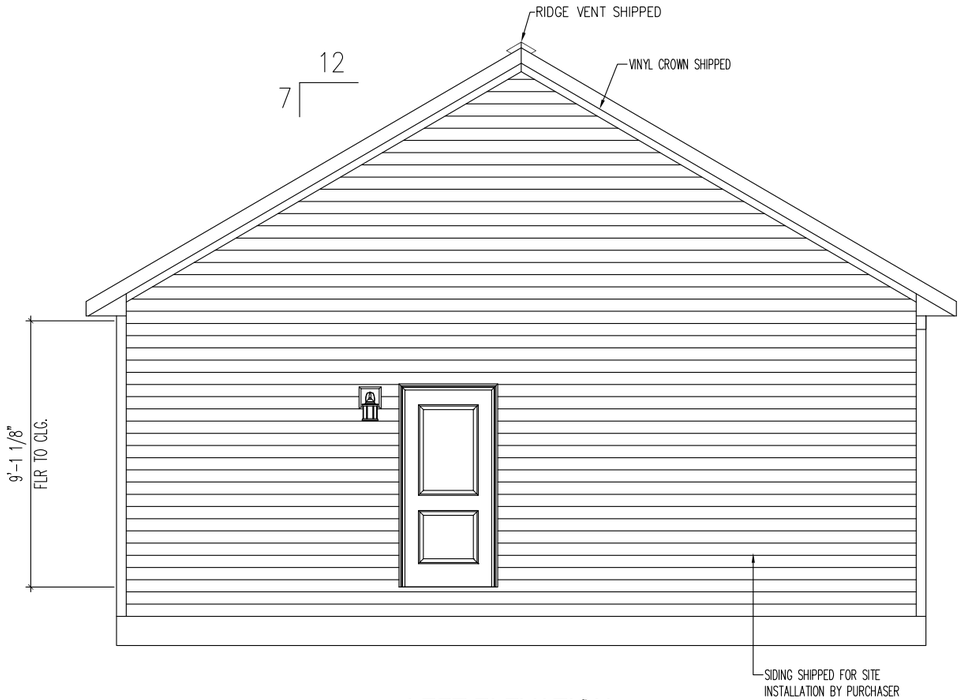

OMIT SALEM TRIM

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

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

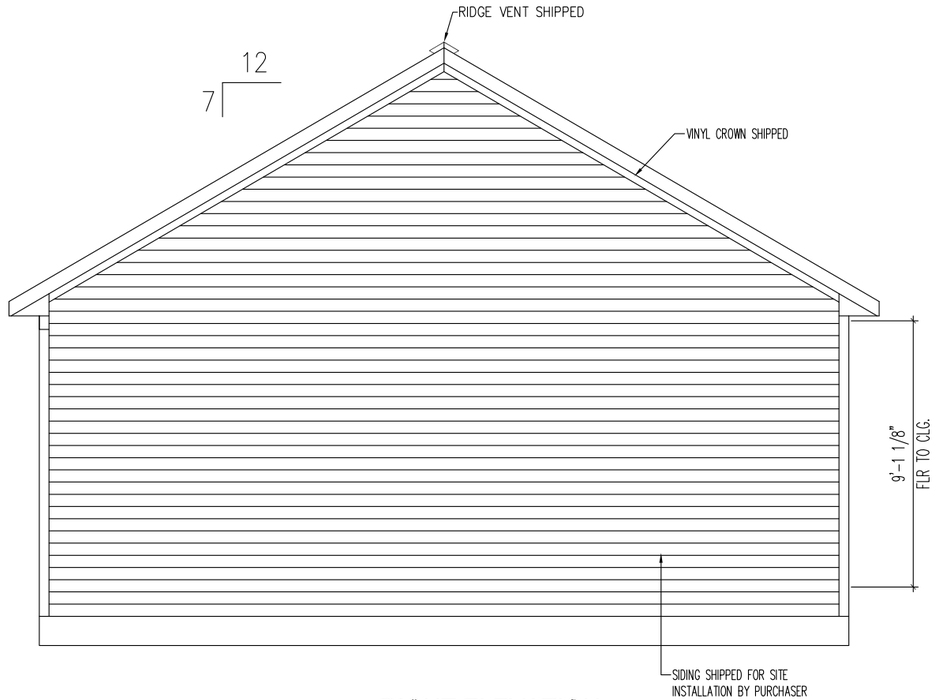
NOTE: ONLY ONE HOUSE MAY BE BUILT UTILIZING THE PLANS THAT ARE DESIGNATED FOR THIS CONTRACT JOB

PURCHASER: HOMES BY VANDERBUILT
CONTRACT NO.: 196879
PLAN NAME: HEARTLAND II
JOB NO.: MS4-24
PROCESS DATE & BY: 6/25/24 CR
BLACKLINE DATE & BY:
PLAN REVISION DATE: 7.26.2024 BXK01
PLOTTED: 7/26/2024 2:45 PM
COLLECTION/SERIES: HEARTLAND



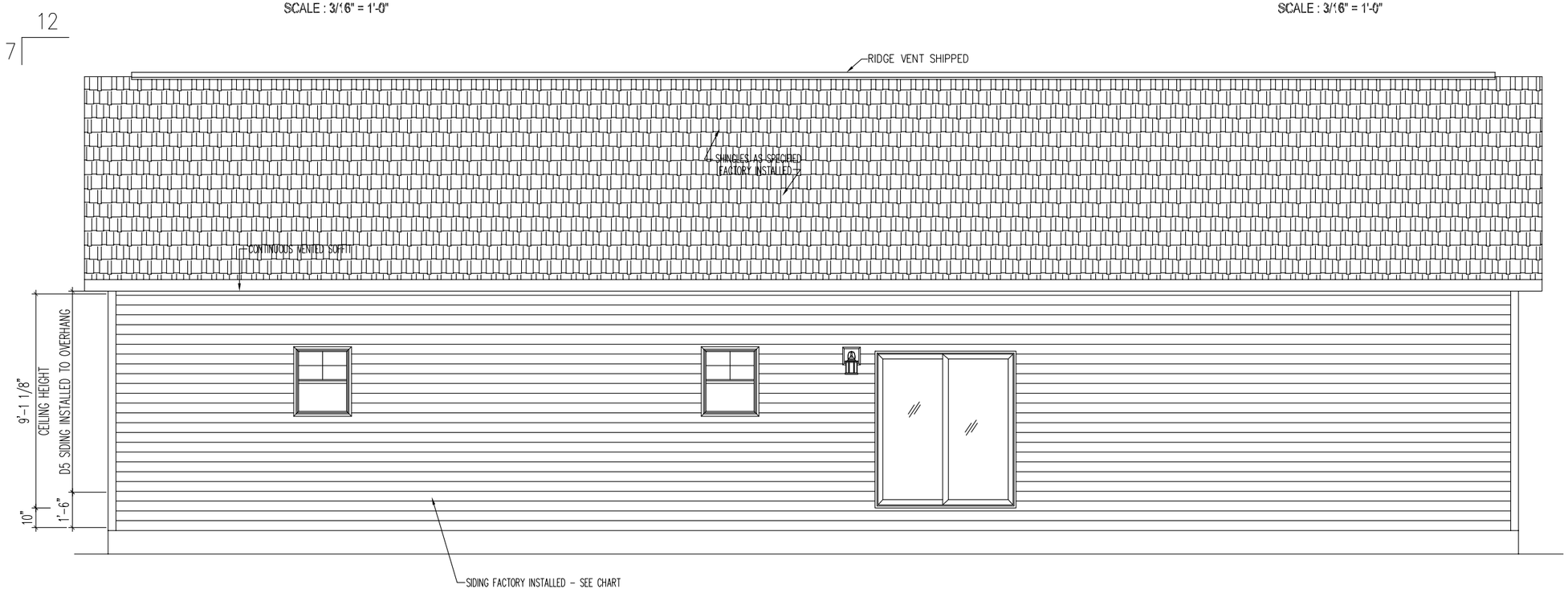

## LEFT ELEVATION

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




## RIGHT ELEVATION

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




## REAR ELEVATION

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

1100 RIVES ROAD, MARTINSVILLE, 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

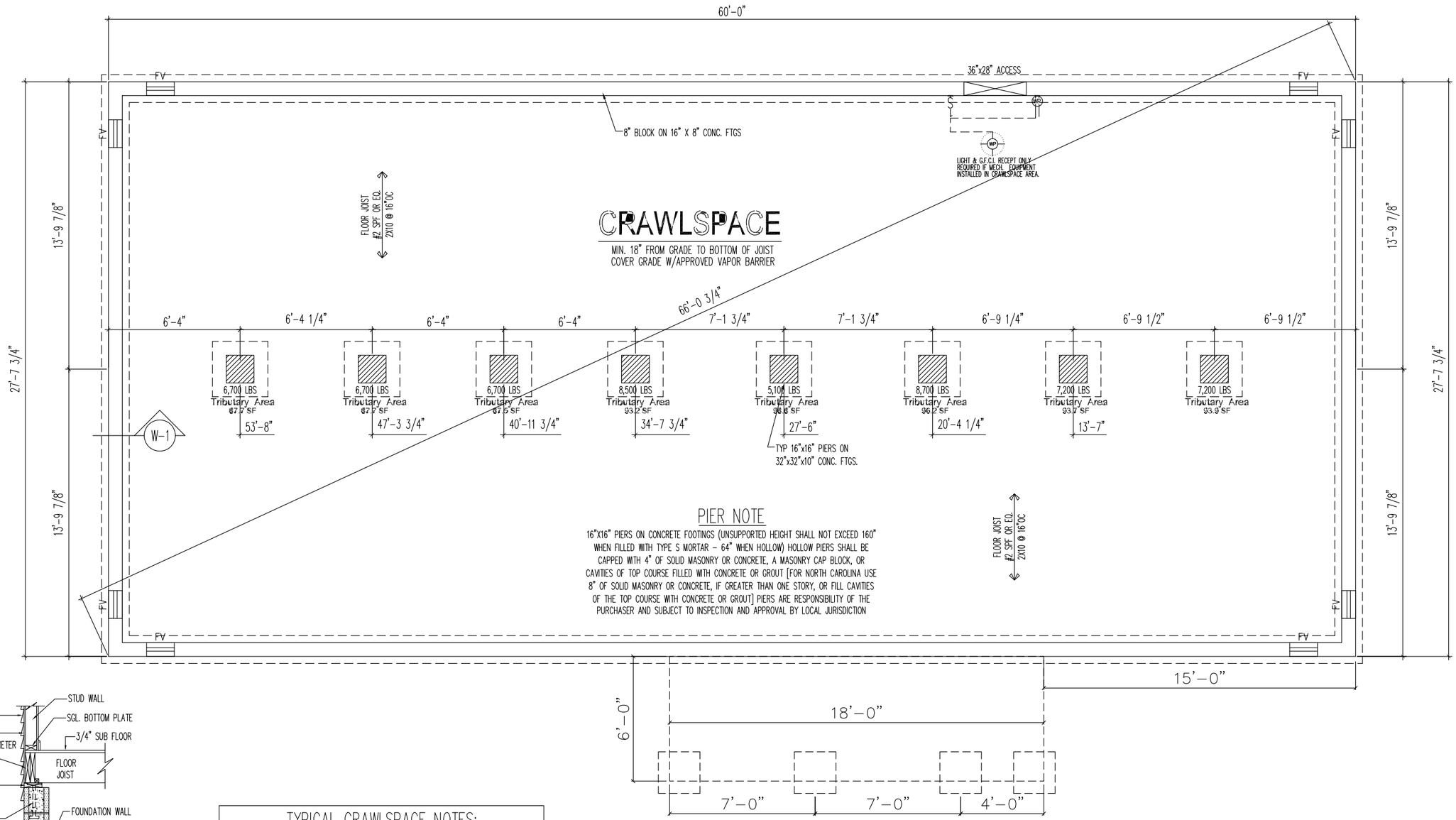
PURCHASER: HOMES BY VANDERBUILT
CONTRACT NO.: 196879
PROCESS DATE & BY: 6/25/24 CR

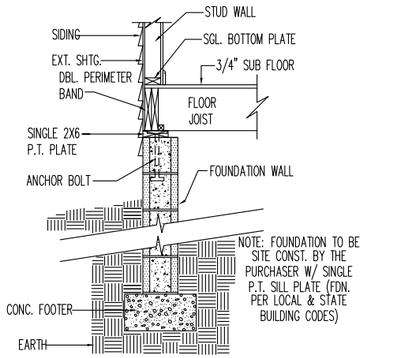
PLAN NAME: HEARTLAND II
JOB NO.: MS4-24
BLACKLINE DATE & BY:
PLAN REVISION DATE: 7.26.2024 BXK01
PLOTTED: 7/26/2024 2:49 PM

COLLECTION/SERIES: HEARTLAND



PAGE NO.




## W-1 TYPICAL FOUNDATION DETAIL

NTS

## TYPICAL CRAWLSPACE NOTES:

A. 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).
B. 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.
C. INSTALLATION OF ANY ELECTRICAL SHALL BE THE RESPONSIBILITY OF THE PURCHASER AND MUST CONFORM TO CURRENT NATIONAL ELECTRICAL CODE.
D. PIERS DESIGNED WITH 2,000 PSI COMPRESSIVE STRENGTH VALUE
E. REFER TO COVER SHEET FOR OTHER INFORMATION.
F. 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 MINUMUM 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"

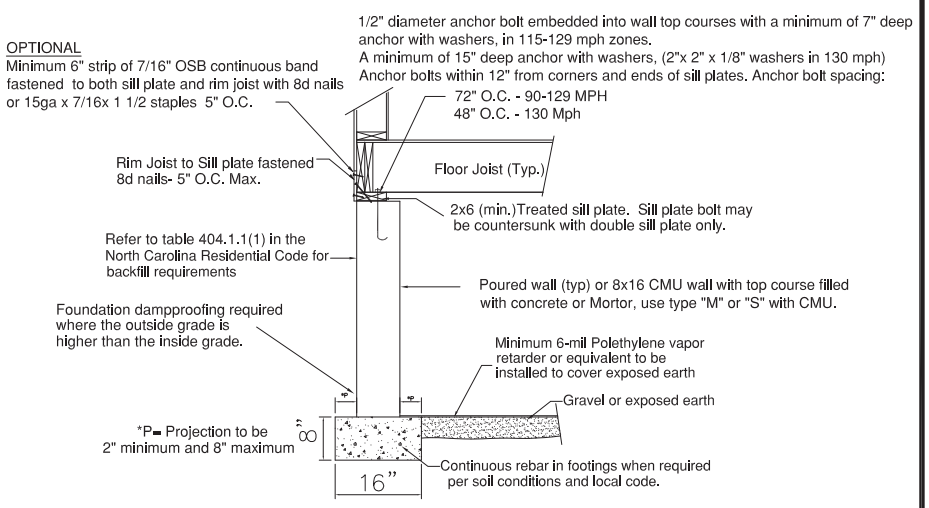

1100 RIVES ROAD, MARTINSVILLE, VA 24112
(276) 632-7100
WWW.NATIONWIDECUSTOMHOMES.COM


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

PURCHASER: HOMES BY VANDERBUILT
CONTRACT NO.: 196879
JOB NO.: MS4-24
BLACKLINE DATE & BY:
PROCESS DATE & BY: 6/25/24 CR
PLAN REVISION DATE: 7.26.2024 BXK01
PLOTTED: 7/26/2024 2:47 PM

PLAN NAME: HEARTLAND II
COLLECTION/SERIES: HEARTLAND

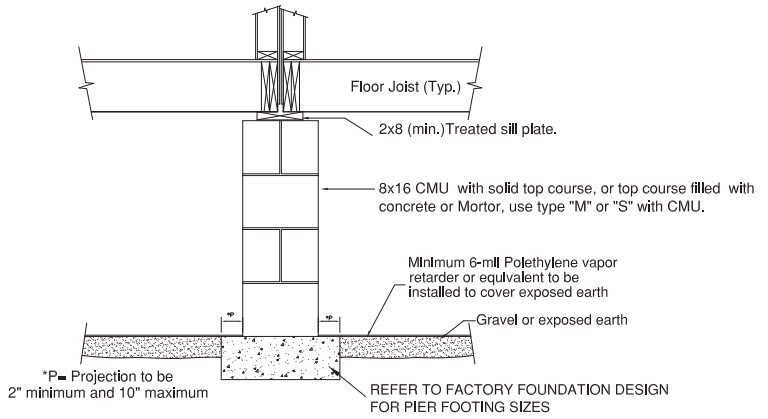
## N.C. Foundation Cross Section- 90 to 130 Mph 1-1/2, 2, OR 2-1/2 STORY




BOTTOM OF FOOTINGS TO BE A MIN. OF 12" BELOW GRADE

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.

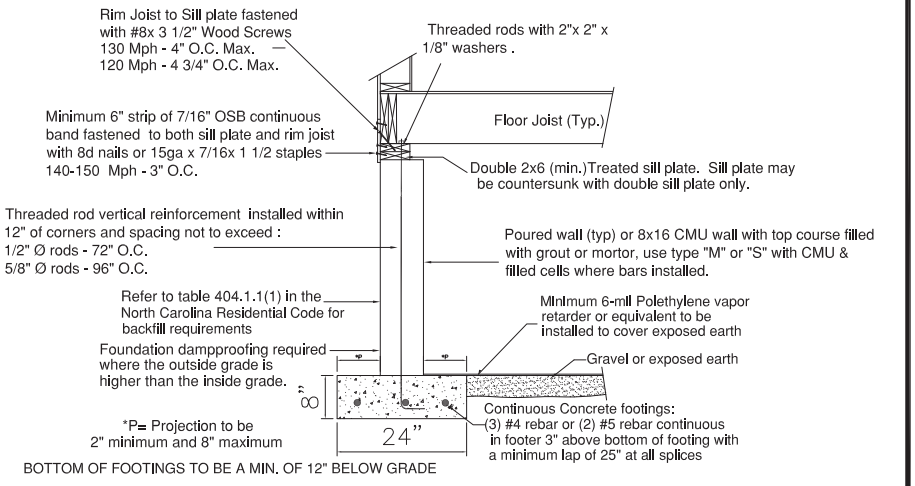
## N.C. Pier Cross Section- All Zones- UP TO 3 STORIES




BOTTOM OF FOOTINGS TO BE A MIN. OF 12" BELOW GRADE

R404.1.5.4Piers.
The unsupported height of masonry piers shal lnot 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

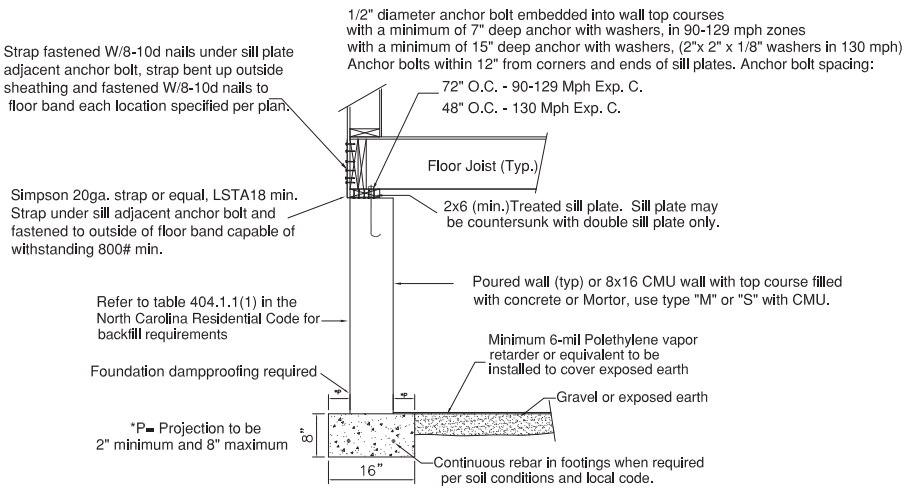



BOTTOM OF FOOTINGS TO BE A MIN. OF 12" BELOW GRADE

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.

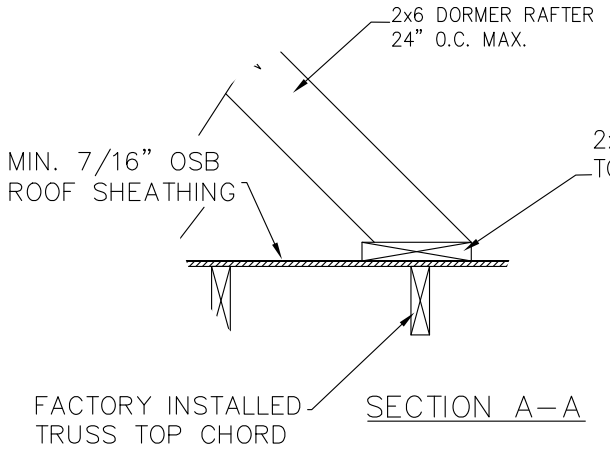
CUSTOMER | ALL HOMES | COUNTY: ALL
CITY | STATE: NC
WIND SPEED: 110 – 150 | WIND LOAD | SNOW LOAD: 20
CUST. NO. | DRAWING NAME

TYP FOUNDATION DETAILS

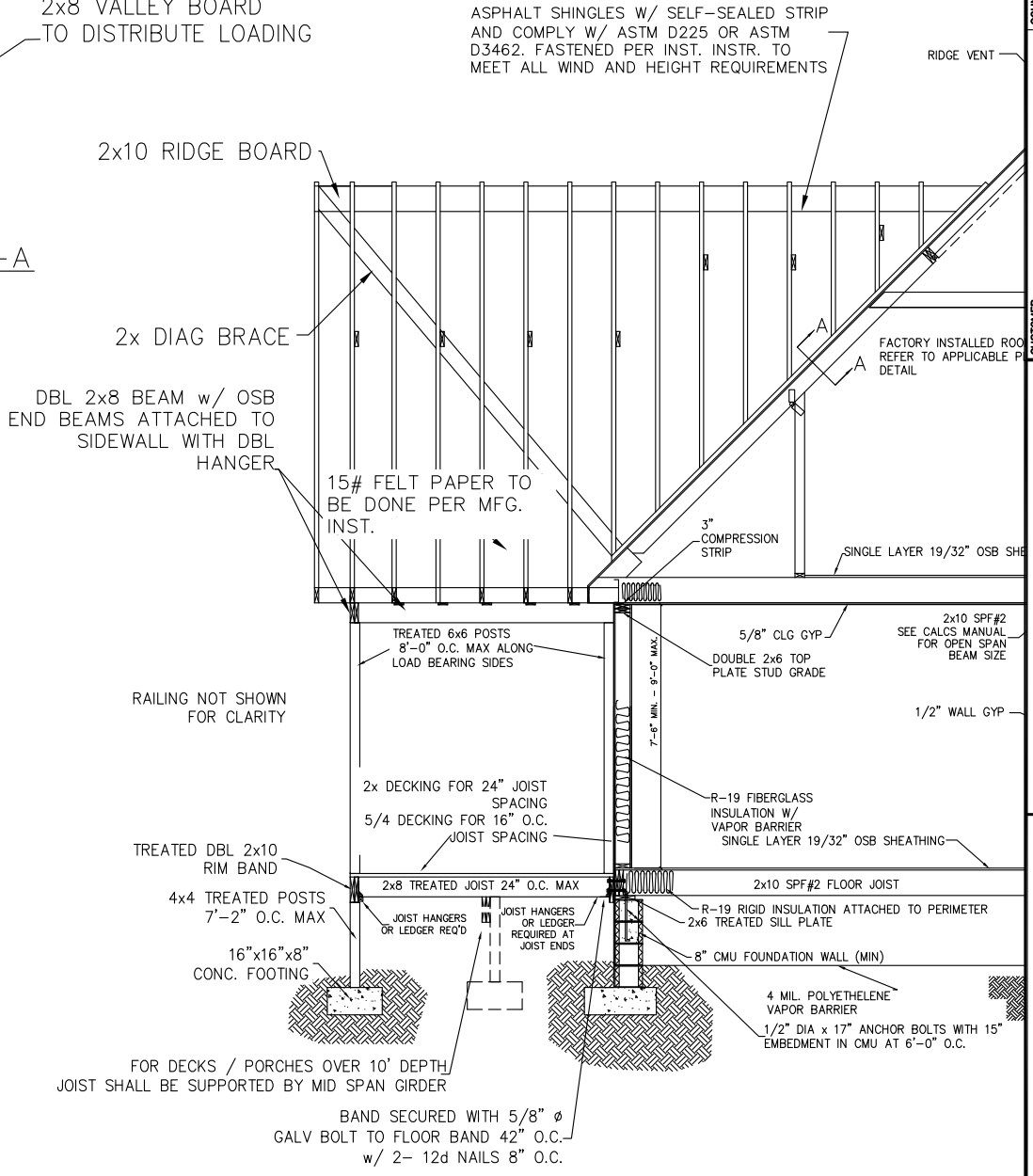
| DATE: | REVISION: | BY: | NOTE: |
|---|---|---|---|
| 11/18/18 | | | |
| 1/30/19 | 2018 CODE UPDATES | | |

T:\NC_WALL_PIER_DETAILS_2021.DWG

HOMES BY VANDERBUILT
3300 JEFFERSON DAVIS HWY
SANFORD, NC 27332
PHONE: (919) 718-2760
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 |
| 2-2×8 | 5'-11" |
| 2-2×10 | 7'-3" |
| 3-2×8 | 7'-5" |
| 3-2×10 | 9'-1" |

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

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

PORCH DETAIL

| DATE: | REVISION: | BY: | NOTE: |
|---|---|---|---|
| 7/08/08 | CRTED | BRB | |

T:\MISCELLANEOUS\DORMER PORCH 2014.DWG

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

# 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) | 120 mph Vult / 93 mph Vasd (1)(2)(3)(4) |
| SEISMIC DESIGN | C |
| EXPOSURE | C |
| CLIMATE ZONE | 4a |
| 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 (HARNETT CO)

# 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:

1. 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.
2. BOTTOM OF ALL FOOTINGS TO BE BELOW FROST LINE AS DETERMINED BY LOCAL BUILDING CODES
3. CONCRETE TO DEVELOP A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI

## TYPICAL TERRACE NOTES:

1. EXTERIOR CONCRETE TO BE AIR ENTRAINED WITH A MIN. 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI (OR LOCAL REQUIREMENT)
2. 4" CONC. OVER 6"X6" #8 WIRE MESH.
3. OFFSET CAP TO CARRY SLAB.
4. INSTALL METAL FLASHING BETWEEN CONC. & WOOD MEMBERS.
5. TERRACES TO BE CONSTRUCTED AFTER HOUSE IS SET ON FOUNDATION.
6. PURCHASER RESPONSIBLE FOR ACCESSIBILITY INTO LIVING UNIT PER STATE & LOCAL CODE.

## OPTIONAL BASEMENT NOTES:

1. ALL BASEMENT DOORS & WINDOWS ARE SUPPLIED & INSTALLED BY PURCHASER.
2. DOOR & WINDOW SIZE & LOCATION SUBJECT TO CHANGE ACCORDING TO SITE CONDITIONS.
3. BACKFILL TO BE IN & TAMPED PRIOR TO ARRIVAL OF HOUSE.
4. FOUNDATION DRAINAGE & DAMP-PROOFING TO CONFORM TO CURRENT BUILDING CODE.
5. 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:

### 120 mph Vult / 93 mph Vasd AREAS & LESS:

1. PURCHASER TO TOENAIL PERIMETER OF FLOOR RIM TO SILL PLATE w/ 16d NAILS (NON-CORROSIVE TYPE) AT 16" O.C. FOR THE ENTIRE PERIMETER OF HOUSE.
2. 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.
3. 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.
4. PURCHASER TO REFER TO THE "BUILDER RESPONSIBILITY BULLETIN" FOR INSTRUCTION ON JOB SITE PREPARATION AND EQUIPMENT NEEDS FOR UNIT SETTING.

APPROVED BY NTA 9/12/2025
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws. & LOCAL CODES

## GENERAL FOUNDATION NOTES:

1. PURCHASER TO USE MORTAR TYPE "S" OR "M" FOR FOUNDATION CONSTRUCTION AS REQUIRED BY STATE & LOCAL CODES
2. 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.
3. ALL FOUNDATION PLANS ARE SUGGESTIVE ONLY & MUST BE CONST. IN ACCORDANCE WITH STATE & LOCAL CODE REQUIREMENTS.
4. FOUNDATION DESIGNED FOR PROJECT SPECIFIC WIND ZONE. (3-SEC. GUST) (SEE FLOOR PLAN FOR EXACT WIND SPEED)

## BRICK CASED DIMENSION NOTES: (IMPORTANT)

1. 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 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.
- 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.

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



NATIONWIDE Homes™

# HOME PLANS AND GENERAL NOTES

1. THIS UNIT MUST BE CONNECTED TO A PUBLIC WATER SUPPLY & SEWER SYSTEM IF AVAILABLE
2. 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/COOLING 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.
- 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 NCRC
- 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 NCRC

## 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 ACCESSES, 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 |
| - MAXIMUM FLAME SPREAD RATING FOR INSULATION SHALL NOT EXCEED 25 |
| SMOKE DEVELOPMENT |
| - MAXIMUM SMOKE DEVELOPED INDEX FOR WALL AND CEILING FINISHES SHALL NOT EXCEED 450 |
| - MAXIMUM SMOKE DEVELOPED RATING FOR INSULATION SHALL NOT EXCEED 450 PER ASTM E 84 OR UL 723 |

| 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 (RICH SHIELD RADIANT BARRIER) | 24/16 |

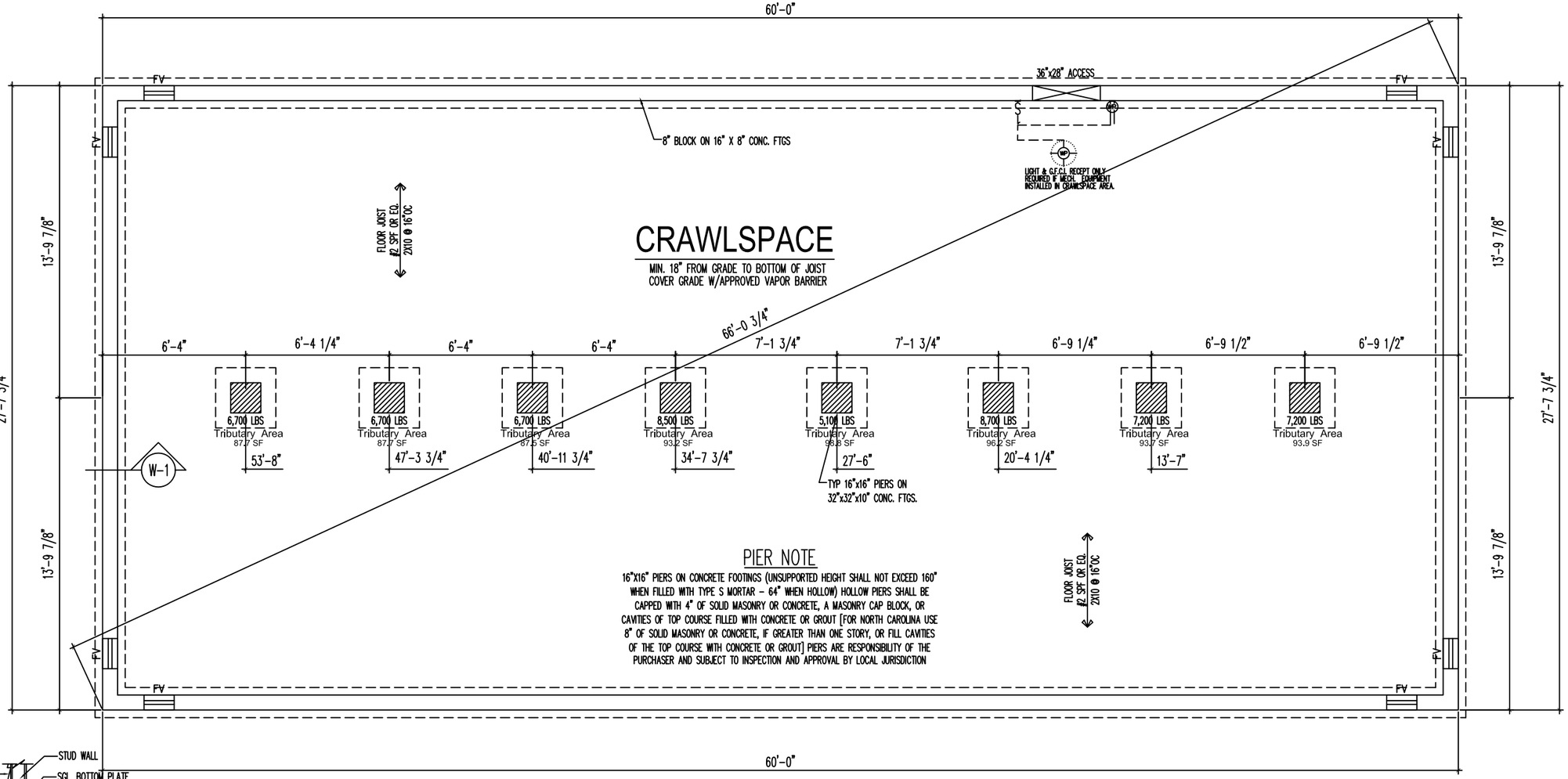
| VAPOR BARRIER | | |
|---|---|---|
| LOCATION | R-VALUE | PAPER |
| FLOOR | R-19 | KRAFT-FACED |
| | R-30 | KRAFT-FACED |
| WALL | R-13 | KRAFT-FACED |
| | R-15 | KRAFT-FACED |
| | R-19 | KRAFT-FACED |
| | R-21 | KRAFT-FACED |
| ROOF | R-30 | KRAFT-FACED |
| | R-38 | KRAFT-FACED |

# TYPICAL ELECTRICAL NOTES

1. 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).
2. 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.
3. ALL 125-VOLT, AND 250-VOLT 15-AMPERE & 20-AMPERE RECEPTACLES SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES
4. 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.

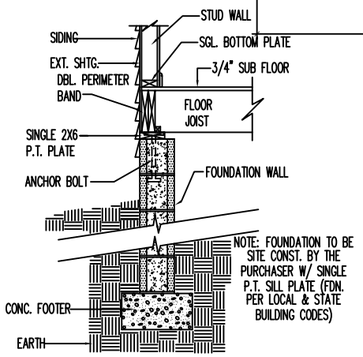
APPROVED BY
NTA
9/12/2024
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
David Barts




## 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

FLOOR JOIST @ 9PF OR EQ. 2X10 @ 16"OC




## W-1 TYPICAL FOUNDATION DETAIL

NTS

## TYPICAL CRAWLSPACE NOTES:

A. 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).
B. 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.
C. INSTALLATION OF ANY ELECTRICAL SHALL BE THE RESPONSIBILITY OF THE PURCHASER AND MUST CONFORM TO CURRENT NATIONAL ELECTRICAL CODE.
D. PIERS DESIGNED WITH 2,000 PSI COMPRESSIVE STRENGTH VALUE
E. REFER TO COVER SHEET FOR OTHER INFORMATION.
F. 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 MINUMUM 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

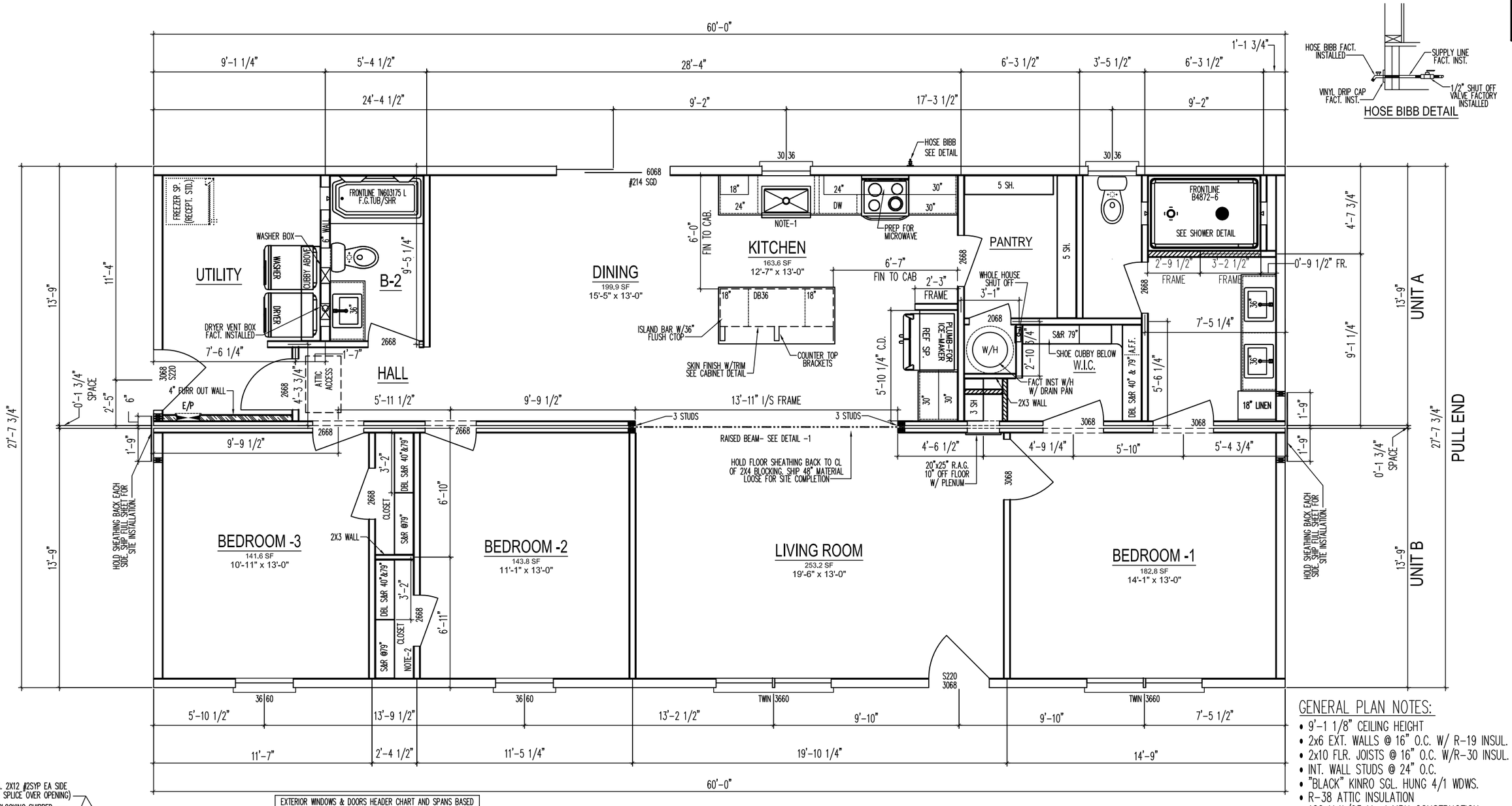
## FOUNDATION PLAN

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


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

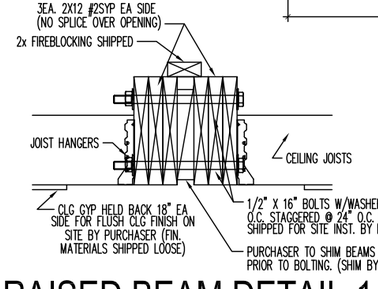

NOTE: ONLY ONE HOUSE MAY BE BUILT UTILIZING THE PLANS THAT ARE DESIGNATED FOR THIS CONTRACT JOB

PURCHASER: HOMES BY VANDERBUILT
CONTRACT NO.: 196879
PROCESS DATE & BY: 6/25/24 CR
PLOTTED: 7/26/2024 2:47 PM
JOB NO.: MS4-24
BLACKLINE DATE & BY:
PLAN REVISION DATE: 7.26.2024 BXK01
PLAN NAME: HEARTLAND II
COLLECTION/SERIES: HEARTLAND




## 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
- 120 Vult/93 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.

APPROVED BY
NTA
9/12/2024
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
David Barts

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

# FIRST LEVEL FLOOR PLAN

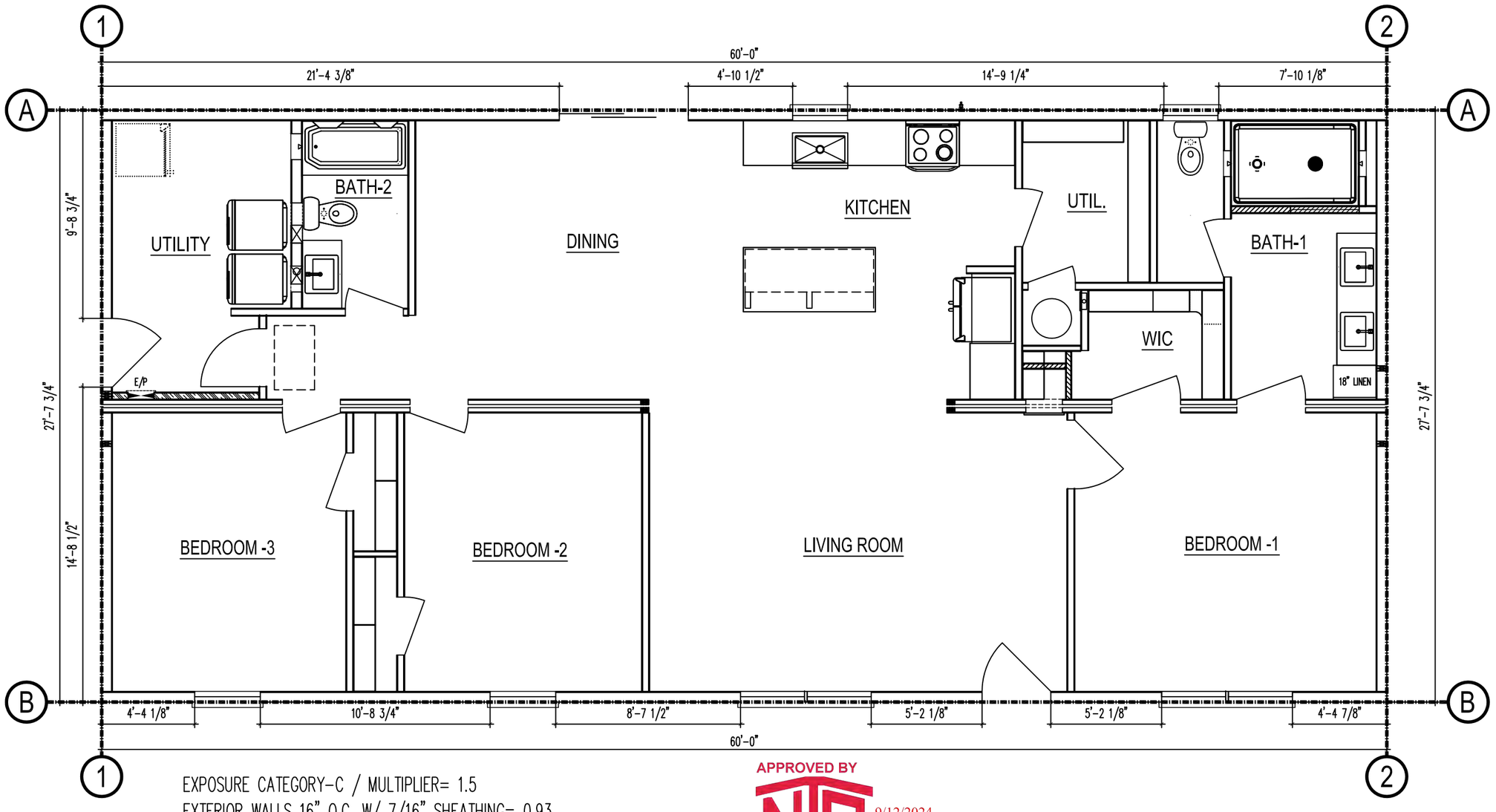
SCALE : 3/16" = 1'-0"

NATIONWIDE Homes
1100 RIVES ROAD, MARTINSVILLE, 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 VANDERBUILT
JOB NO.: MS4-24
BLACKLINE DATE & BY: 8.12.2024 JXA03
PLAN REVISION DATE:
PLAN NAME: HEARTLAND II
COLLECTION/SERIES: HEARTLAND
CONTRACT NO.: 196879
PROCESS DATE & BY: 6/25/24 CR
PLOTTED: 9/12/2024 12:21 PM

# 120 Vult / 93 Vasd MPH PRESCRIPTIVE BRACED WALL PANEL
# DETAIL SHEET (PER 2018 N.C.R.C) CIRCUMSCRIBED METHOD




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

APPROVED BY
NTA
9/12/2024
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
David Barts

| WALL | DISTANCE BETWEEN B.W.P.s | REQUIIRED LENGTH OF B.W.P.s | | LENGTH OF B.W.P.s | BLOCKING | SHEATHING FASTENING |
|---|---|---|---|---|---|---|
| A | 27'-7 3/4" | 5.5'/30x27.64x1.5x0.93x0.92= | 6'-6 1/16" | 48'-10 1/4" | NO | 1.3/4" 16ga. STAPLES 3" EDGE / 6" FIELD |
| B | 27'-7 3/4" | 5.5'/30x27.64x1.5x0.93x0.92= | 6'-6 1/16" | 38'-5 1/2" | NO | 1.3/4" 16ga. STAPLES 3" EDGE / 6" FIELD |
| 1 | 60'-0" | 11.0'/60x60x1.5x0.93x0.92= | 14'-1 7/16" | 24'-5 1/4" | YES | 1.3/4" 16ga. STAPLES 3" EDGE / 6" FIELD |
| 2 | 60'-0" | 11.0'/60x60x1.5x0.93x0.92= | 14'-1 7/16" | 27'-7 3/4" | YES | 1.3/4" 16ga. STAPLES 3" EDGE / 6" FIELD |

## 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 (130Vult & 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.

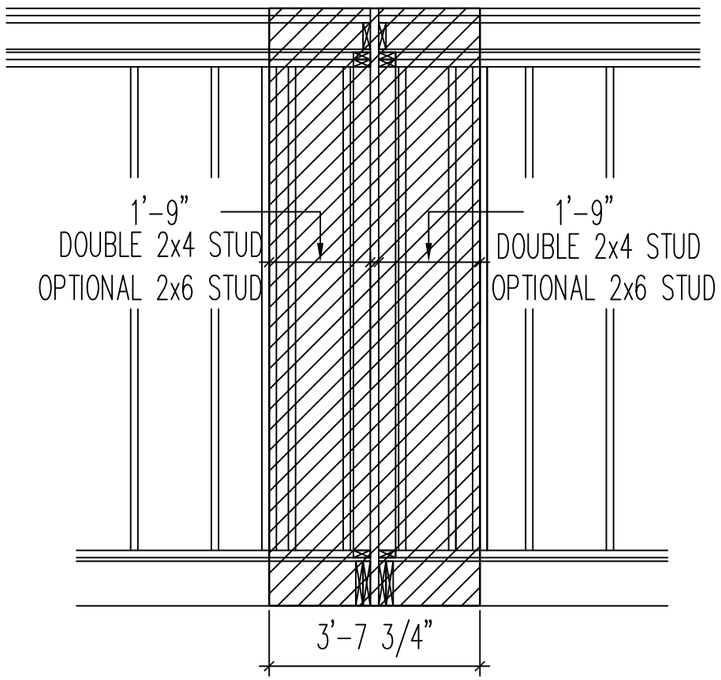

NATIONWIDE Homes
1100 RIVES ROAD, MARTINSVILLE, VA 24112
(276) 632-7100
WWW.NATIONWIDECUSTOMHOMES.COM


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

PURCHASER: HOMES BY VANDERBUILT
JOB NO.: MS4-24 | CONTRACT NO.: 196879
BLACKLINE DATE & BY: | PROCESS DATE & BY: 6/25/24 CR
PLAN REVISION DATE: 8.12.2024 JXA03 | PLOTTED: 9/12/2024 12:21 PM
PLAN NAME: HEARTLAND II
COLLECTION/SERIES: HEARTLAND

APPROVED BY
NTA
9/12/2024
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
David Barts

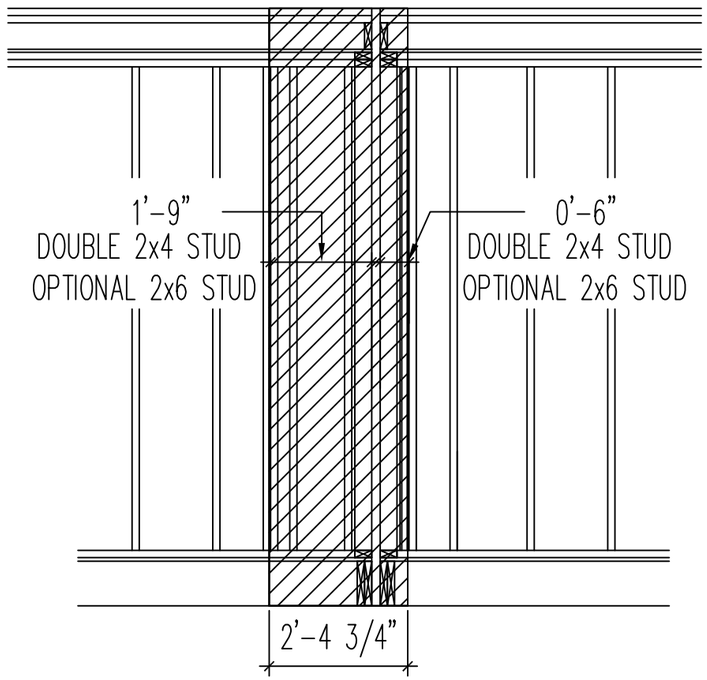
# EXT. SHEATHING DETAIL
## BATH 1 / BEDROOM 1




SITE INSTALLED 7/16"
SHEATHING ACROSS
MATING WALL

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




SITE INSTALLED 7/16"
SHEATHING ACROSS
MATING WALL

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


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

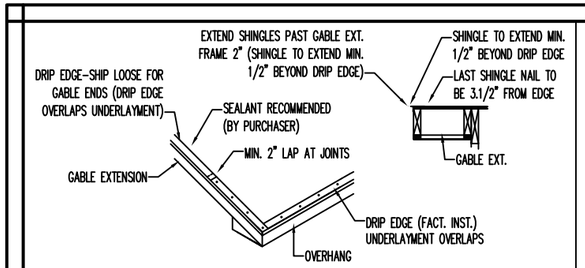

NOTE: ONLY ONE HOUSE MAY BE BUILT UTILIZING THE PLANS THAT ARE DESIGNATED FOR THIS CONTRACT JOB

PURCHASER: HOMES BY VANDERBUILT
JOB NO.: MS4-24
CONTRACT NO.: 196879
PROCESS DATE & BY: 6/25/24 CR
BLACKLINE DATE & BY:
PLAN REVISION DATE: 7.26.2024 BIX01
PLOTTED: 7/26/2024 2:48 PM
PLAN NAME: HEARTLAND II
COLLECTION/SERIES: HEARTLAND

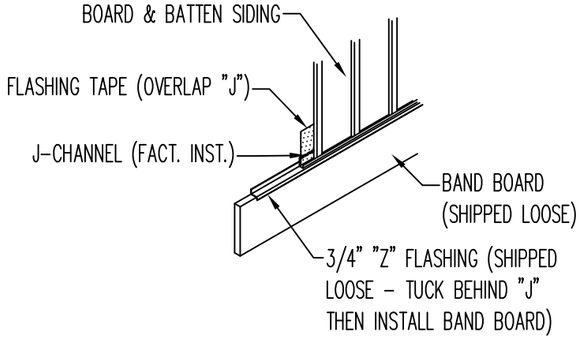




3/8" SCALE




DRIP EDGE DETAIL




"Z" FLASHING SHIPPED LOOSE FOR SITE INSTALLATION

"Z" FLASHING - BAND BOARD

CERTAINTEED LANDMARK / TAMCO HERITAGE SHINGLES
FIRE RESISTANCE:
•UL 790 CLASS A FIRE RESISTANCE
•UL CERTIFIED TO MEET ASTM E108 TYPE 1

SIDING CHART

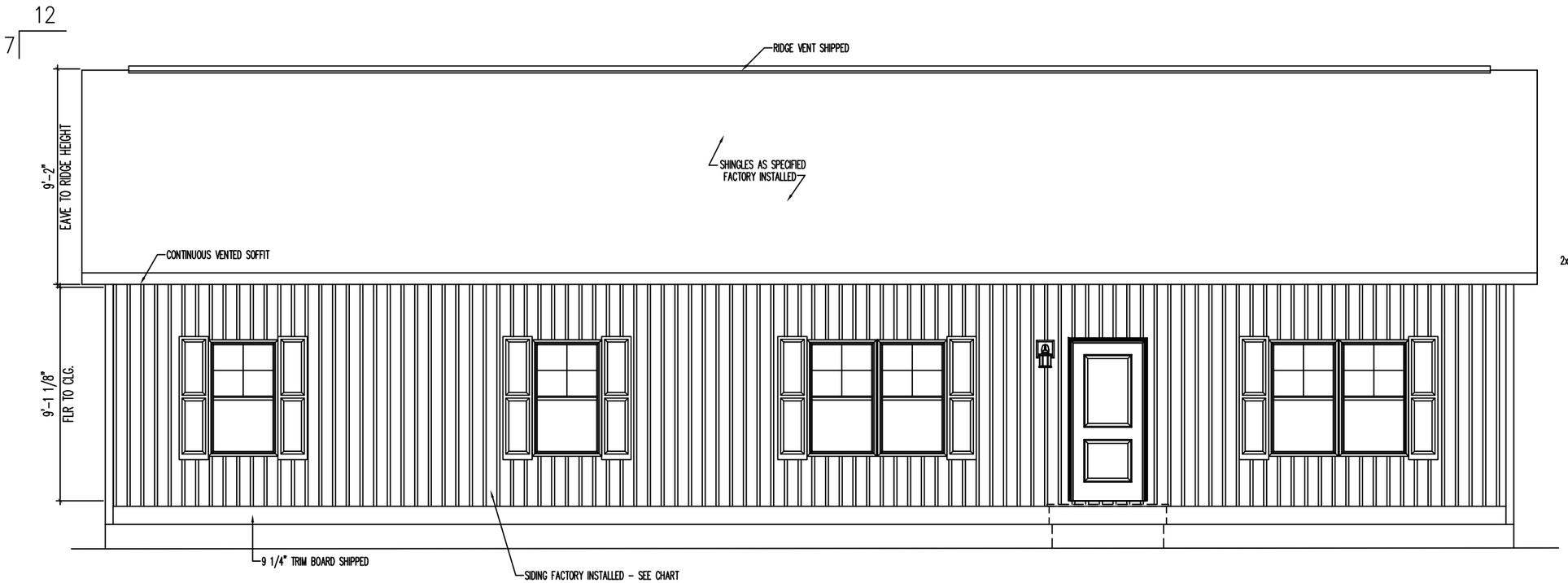
| | |
|---|---|
| CRANE TRIPLE 6 & DOUBLE 7 SOLID CORE SIDING | BOTTOM ROW OF SIDING SHIPPED |
| D4, D4.5 & D5 VINYL SIDING | BOTTOM 2 ROWS OF SIDING SHIPPED |

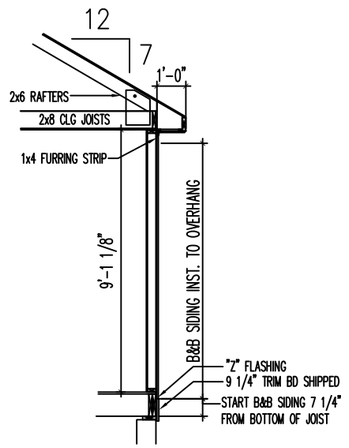
VENTILATION CALCULATIONS

| | | | |
|---|---|---|---|
| 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

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

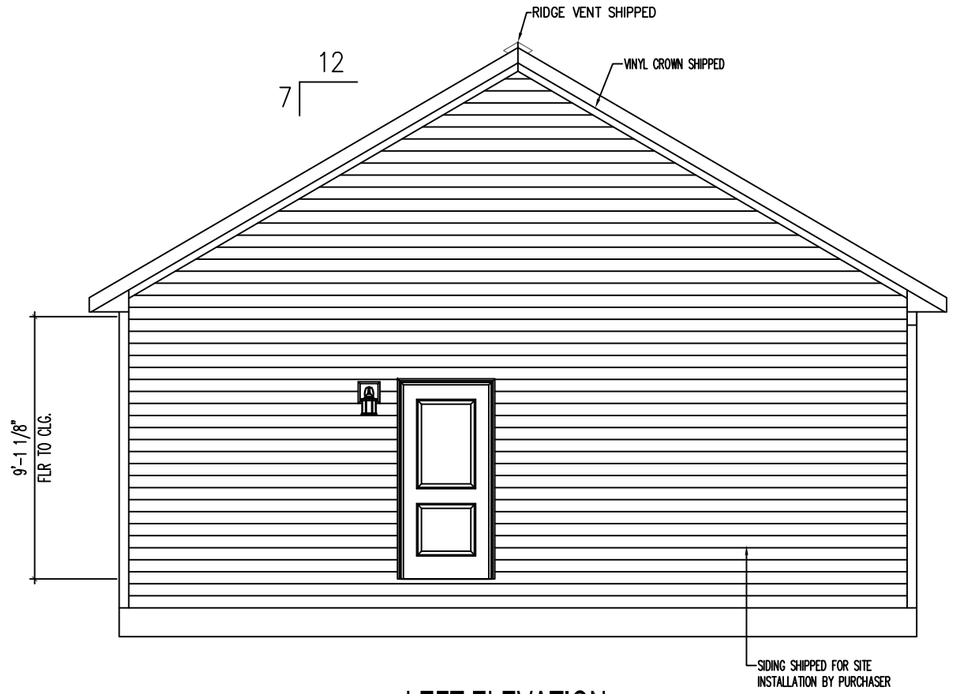
APPROVED BY
NTA
9/12/2024
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
David Barts

NATIONWIDE Homes
1100 RIVES ROAD, MARTINSVILLE, 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

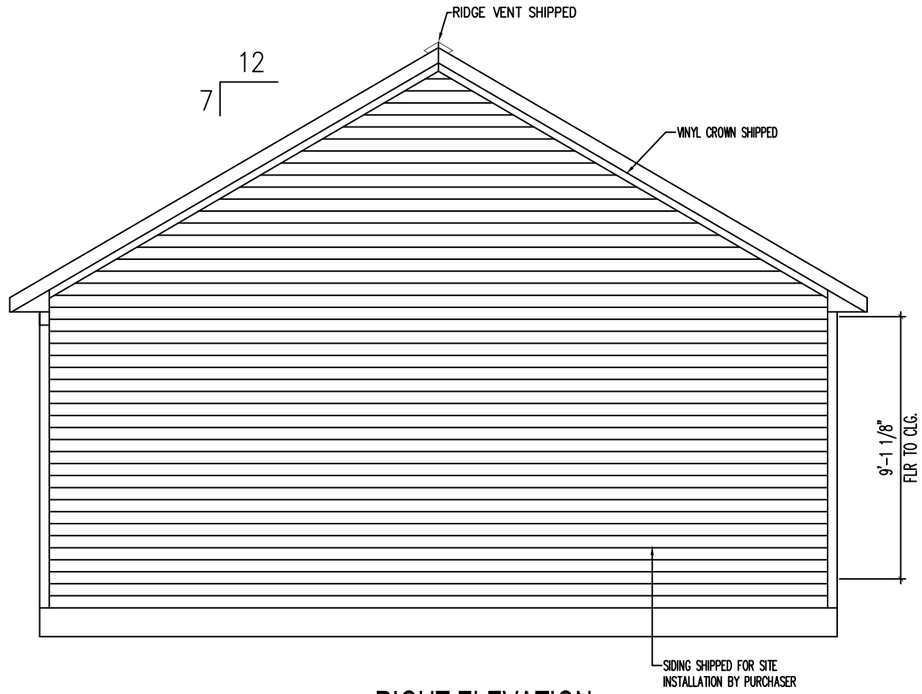
PURCHASER: HOMES BY VANDERBUILT
JOB NO.: MS4-24 | CONTRACT NO.: 196879
BLACKLINE DATE & BY: | PROCESS DATE & BY: 6/25/24 CR
PLAN REVISION DATE: 7.26.2024 BXK01 | PLOTTED: 7/26/2024 2:40 PM

PLAN NAME: HEARTLAND II
COLLECTION/SERIES: HEARTLAND



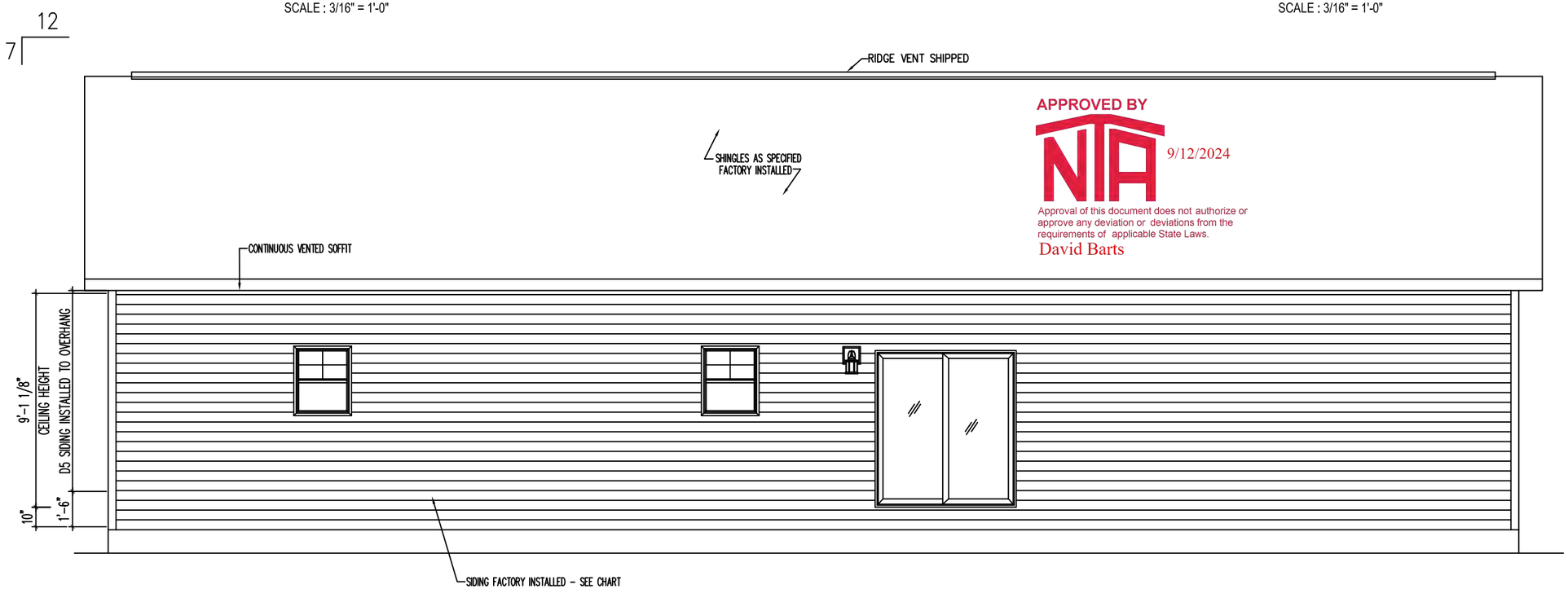

LEFT ELEVATION

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




RIGHT ELEVATION

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




REAR ELEVATION

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

APPROVED BY

NTA 9/12/2024

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

David Barts

NATIONWIDE Homes

1100 RIVES ROAD, MARTINSVILLE, 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 VANDERBUILT | CONTRACT NO.: 196879

JOB NO.: MSA-24 | BLACKLINE DATE & BY: | PROCESS DATE & BY: 6/25/24 CR

PLAN REVISION DATE: 7/26/2024 BXK01 | PLOTTED: 7/26/2024 2:49 PM

PLAN NAME: HEARTLAND II

COLLECTION/SERIES: HEARTLAND

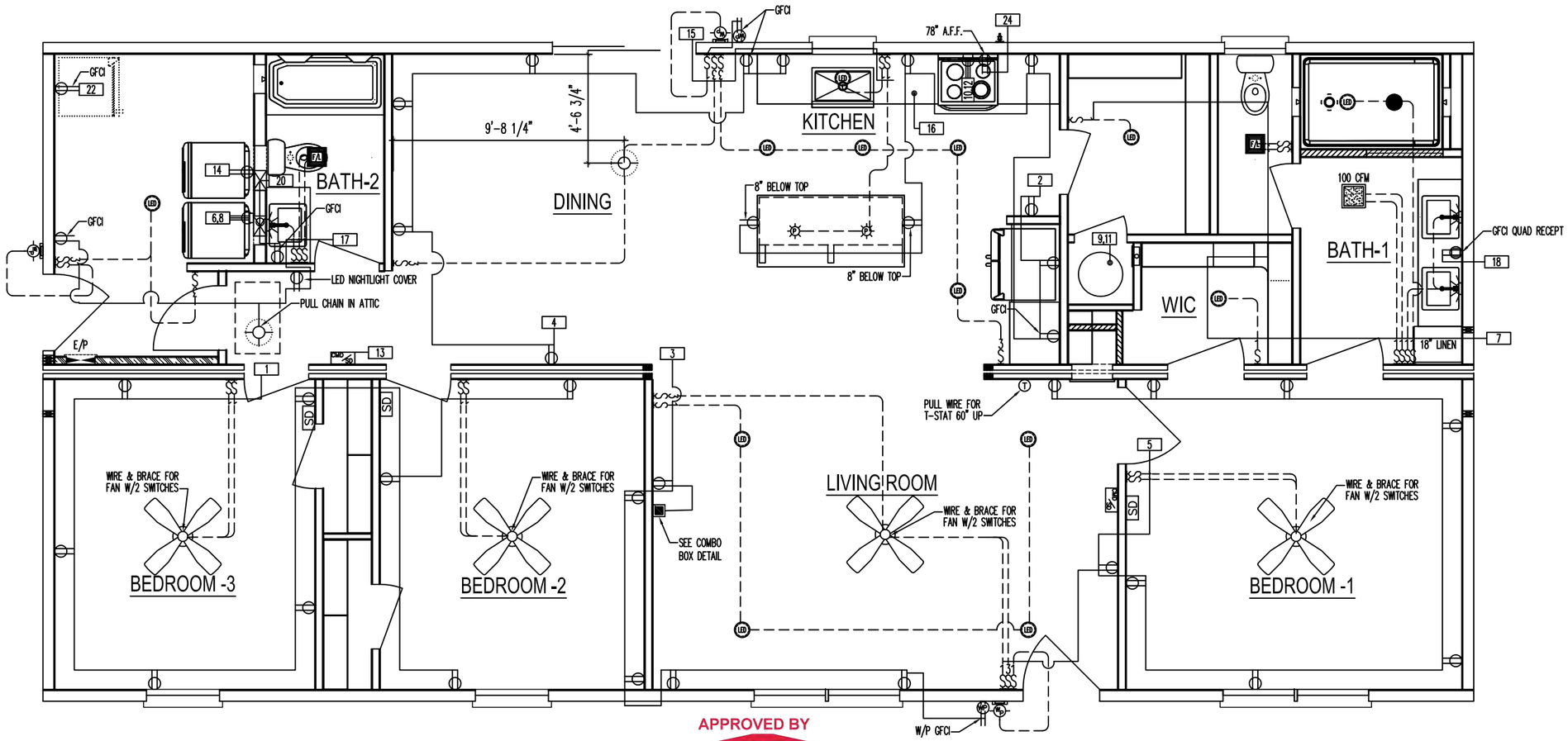
- Purchaser responsible for all service entry connections to dwelling unit main service panel.
- Purchaser responsible for performing complete circuit testing prior to service connection for all site wiring.
- Exterior weatherproof recepts and light fixtures shipped for site installation by purchaser.
- 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 | CMD | Carbon Monoxide Det. |
| | Weatherproof duplex | | Three-way switch | CMD SD | Carb.Mon./Sm.Det. Combo |
| | 240v Receptacle | | Four-way switch | | Wire & Brace (Fan optional) |
| | Quad Receptacle | TV | Television outlet | | Exterior Light |
| | Overhead light | | Telephone outlet | | Push button for chime |
| | LED Recessed / Weatherproof light | | Wall Light / Sconce | | Flood Light |
| | Fluorescent light | T | Thermostat | DC | Wireless Door Chime |
| FA | Light/Clg. Exh. fan (50 CFM Min) | | Heat/Fan/Light | | 4 x 10 Registers |
| FA | Clg. Exh. fan (50 CFM Min) | SD | Smoke Detector | | Toe-Kick Registers |





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) | | HOUR 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

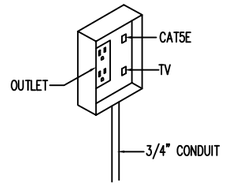
EXTERIOR RECEPTACLE OULET BOX HOODS THAT ARE A PART OF THE WEATHERPROOF ENCLOSURE TO BE LISTED AND IDENTIFIED AS "EXTRA DUTY" DURABILITY TO RETAIN A DEGREE OF PROTECTION FOR THE RECEPTACLES.

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.

APPROVED BY
NTA
9/12/2024
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
David Barts

MOUNT ELECTRICAL DEVICES UNDER WALL CABINETS IN KITCHEN




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

# FIRST LEVEL ELECTRICAL PLAN

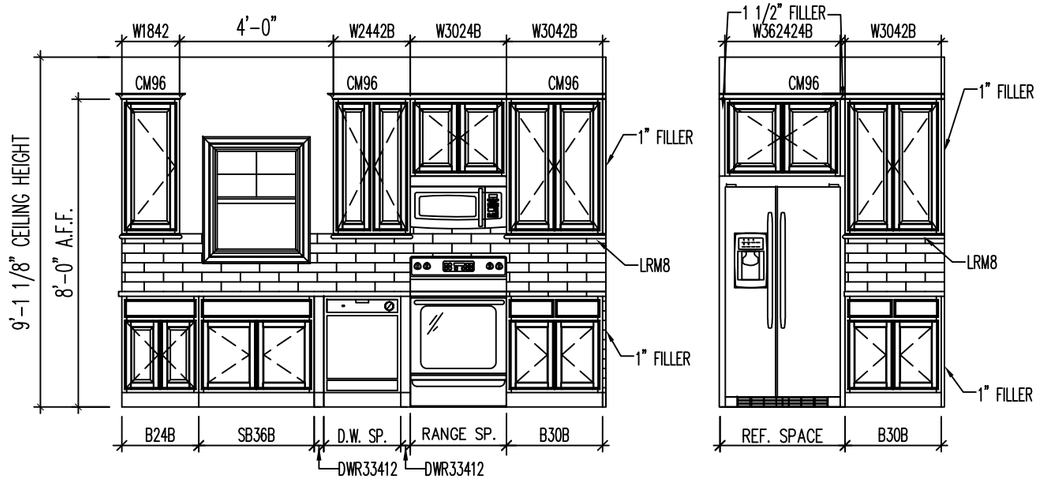
SCALE : 3/16" = 1'-0"


NATIONWIDE Homes
1100 RIVES ROAD, MARTINSVILLE, 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

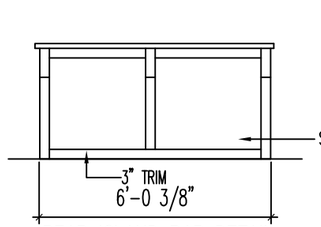
PURCHASER: HOMES BY VANDERBUILT
JOB NO.: MS4-24 | CONTRACT NO.: 196879
BLACKLINE DATE & BY: | PROCESS DATE & BY: 6/25/24 CR
PLAN REVISION DATE: 7.26.2024 BIK01 | PLOTTED: 7/26/2024 2:55 PM

PLAN NAME: HEARTLAND II
COLLECTION/SERIES: HEARTLAND

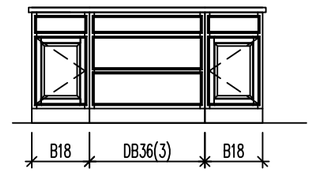



# KITCHEN CABINET LAYOUT

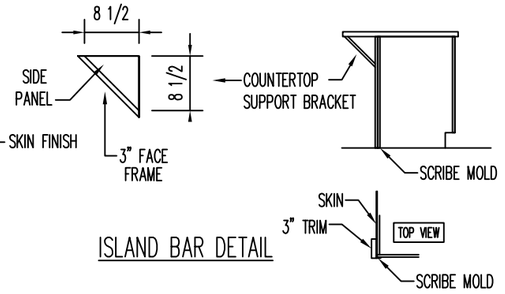
MATCHING TOE KICK COVERS




REAR ISLAND BAR DETAIL



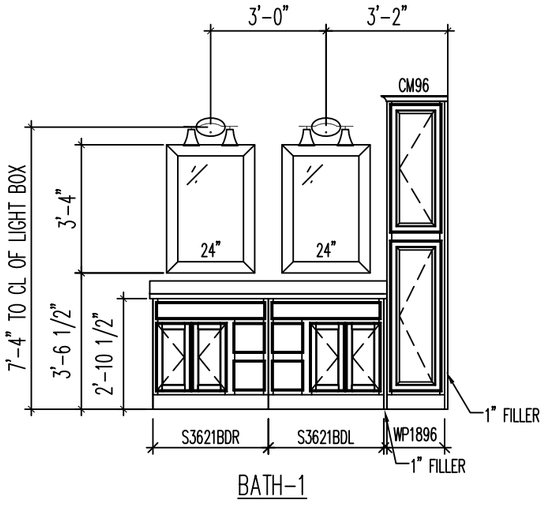

FRONT ISLAND BAR DETAIL



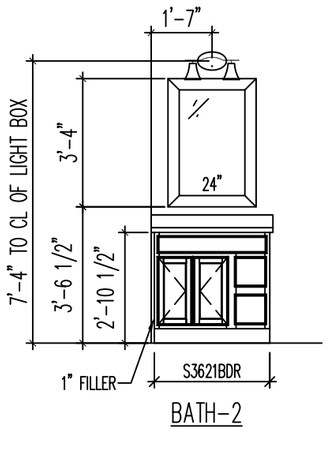

ISLAND BAR DETAIL

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




BATH-1




BATH-2

# BATHROOM CABINETS

MATCHING TOE KICK COVERS

APPROVED BY
NTA
9/12/2024

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

David Barts

NATIONWIDE Homes
1100 RIVES ROAD, MARTINSVILLE, 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 VANDERBUILT
JOB NO.: MS4-24 | CONTRACT NO.: 196879
BLACKLINE DATE & BY: | PROCESS DATE & BY: 6/25/24 CR
PLAN REVISION DATE: 7.26.2024 BKK01 | PLOTTED: 7/26/2024 2:59 PM

PLAN NAME: HEARTLAND II
COLLECTION/SERIES: HEARTLAND

| TRAP SIZE | FALL PER FOOT | DISTANCE TO VENT FROM TRAP |
|---|---|---|
| 1 1/4" | 1/4" | 3 Ft. 6 In. |
| 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. |

ALL FACTORY INSTALLED PLUMBING TO CONFORM TO:
CURRENT PLUMBING CODE (SEE COVER SHEET)

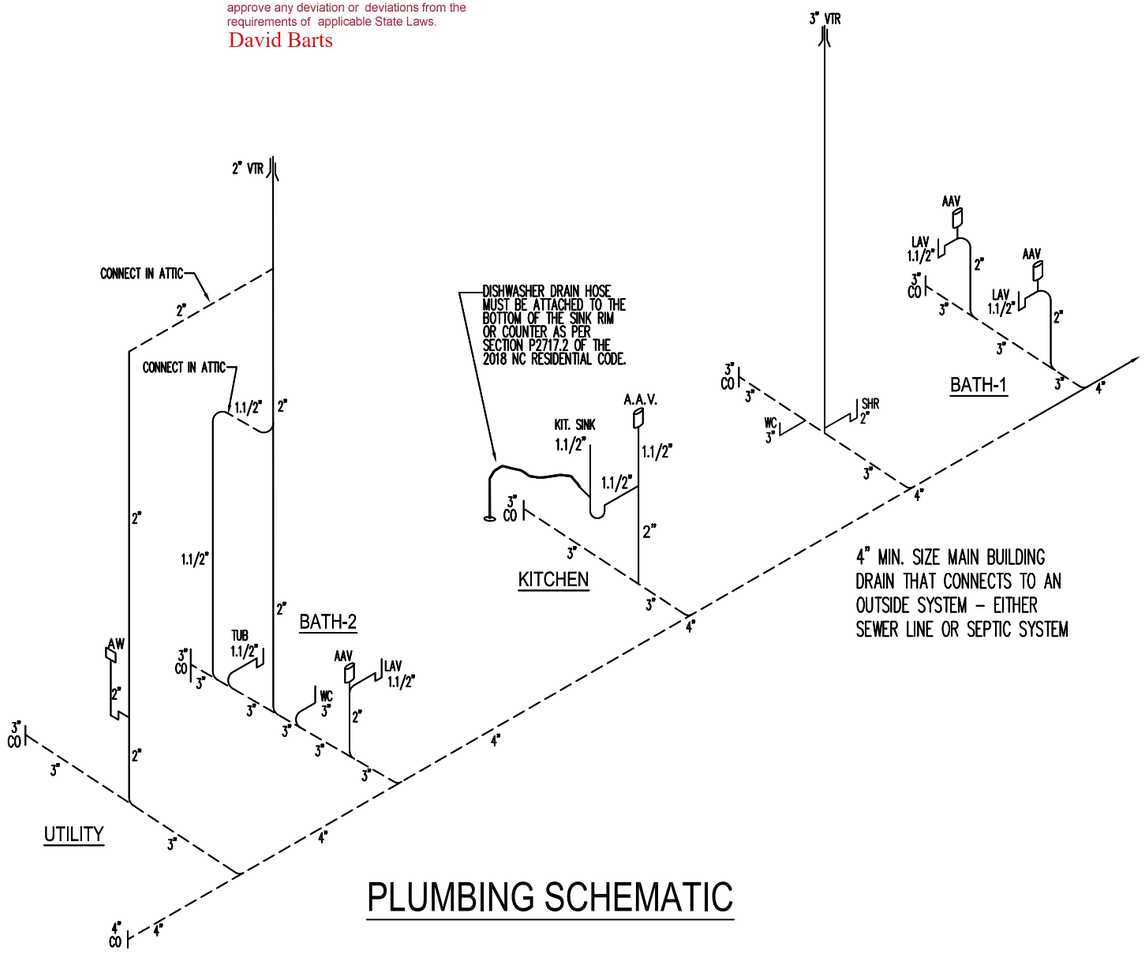
REFER TO PLUMBING NOTES ON COVER SHEET FOR ADDITIONAL INFORMATION

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.

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

* 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

APPROVED BY
NTA
9/12/2024
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
David Barts

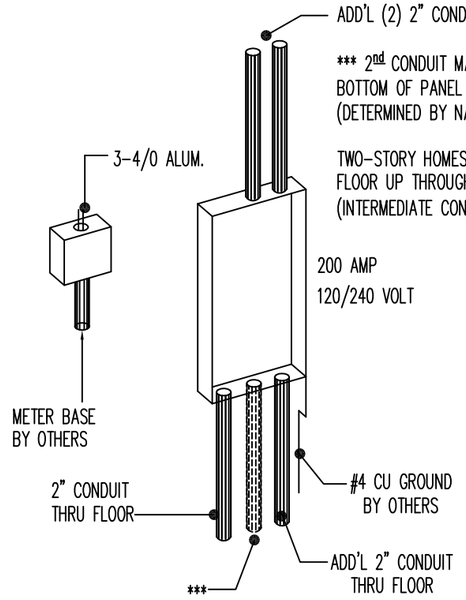



# PLUMBING SCHEMATIC

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




## 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

NATIONWIDE Homes

1100 RIVES ROAD, MARTINSVILLE, 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 VANDERBUILT
CONTRACT NO.: 196879
PROCESS DATE & BY: 6/25/24 CR
PLOTTED: 7/26/2024 2:59 PM
JOB NO.: MS4-24
BLACKLINE DATE & BY:
PLAN REVISION DATE: 7.26.2024 BXK01
PLAN NAME: HEARTLAND II
COLLECTION/SERIES: HEARTLAND



PAGE NO.

## 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 PUMBING 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 GAUAGE 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 HYDRALIC 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 MATELINE. PURCHASER TO MAKE CONNECTION FROM MODULE TO MODULE ON SITE
11. MAXIMUM LENGTH OF INDUVIDUAL DISTRIBUTION LINES SHALL NOT EXCEED 60 FT.

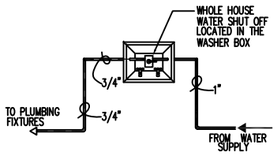
NOTE: APPROVED ENGINEERED MECHANICAL WATER HAMMER ARRESTERS FOR QUICK CLOSING VALVES FACTORY INSTALLED WHERE REQUIRED BY CODE

NOTE: PEX PLUMBING PIPE TO BE SUPPORTED AT 32" INTERVALS AND PROTECTED FROM FREEZING

NOTE:
APPROVED ENGINEERED MECHANICAL WATER HAMMER ARRESTORS, FOR ALL QUICK CLOSING VALVES, ARE FACTORY INSTALLED AT ICEMAKER, DISHWASHER, AND WASHING MACHINE AS REQUIRED BY CURRENT STATE PLUMBING CODES.

## 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 ADJANCENT GROUND SURFACE PER SECTION P2801.6.2 OF THE 2018 NCPC

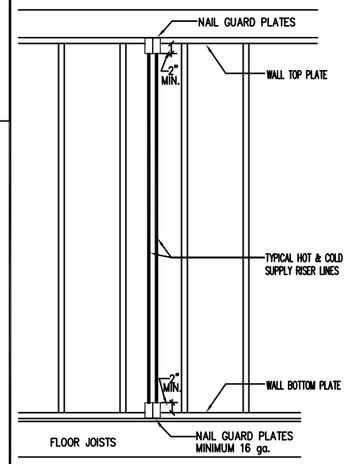



RANCH WHOLE HOUSE WATER SHUT OFF

WASHER BOX

### NAIL PLATES PROTECTION

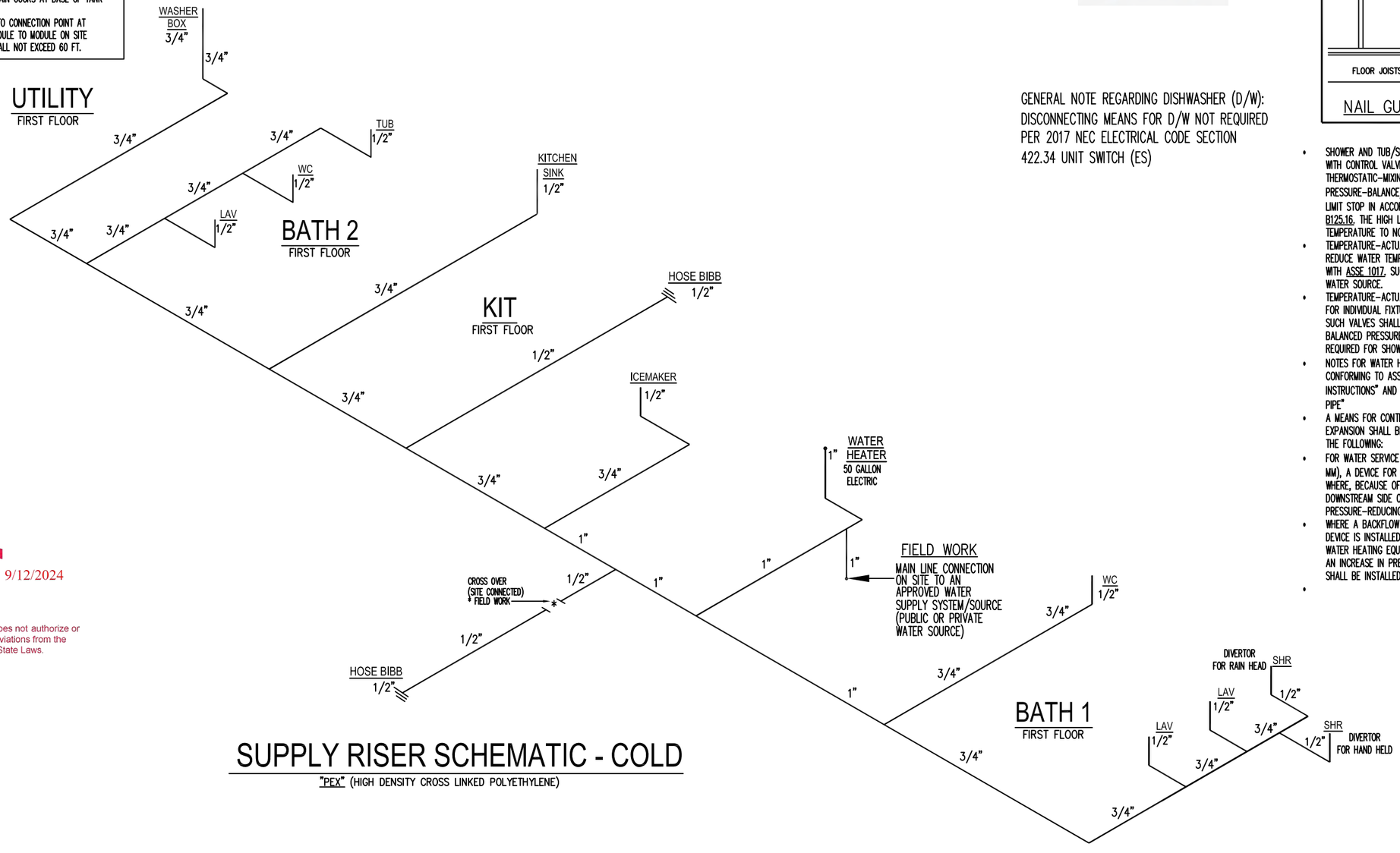
WATER DISTRIBUTION PIPE INSTALLED THROUGH FRAMING MEMBERS WITHIN 1.1/2" OF EDGE SHALL BE PROTECTED BY USING NAIL PLATES THAT ARE MINIMUM 16 ga. AND EXTEND 2" ABOVE BOTTOM PLATE AND 2" BELOW TOP PLATE. THIS IS STANDARD INSTALLATION PROCEDURE AT ALL LOCATIONS.




NAIL GUARD PLATE DETAIL

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.
- 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.




## SUPPLY RISER SCHEMATIC - COLD

"PEX" (HIGH DENSITY CROSS LINKED POLYETHYLENE)

APPROVED BY NTA 9/12/2024

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

David Barts


NATIONWIDE Homes
1100 RIVES ROAD, MARTINSVILLE, 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 VANDERBUILT
JOB NO.: WS4-24
BLACKLINE DATE & BY:
PLAN REVISION DATE: 7.29.2024 BXK01
CONTRACT NO.: 196879
PROCESS DATE & BY: 6/25/24 CR
PLOTTED: 8/1/2024 10:53 AM
PLAN NAME: HEARTLAND II
COLLECTION/SERIES: HEARTLAND

## 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 PUMBING 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 GAUAGE 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 HYDRALIC 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 MATELINE. PURCHASER TO MAKE CONNECTION FROM MODULE TO MODULE ON SITE
11. MAXIMUM LENGTH OF INDUVIDUAL DISTRIBUTION LINES SHALL NOT EXCEED 60 FT.

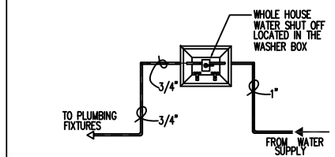
NOTE: APPROVED ENGINEERED MECHANICAL WATER HAMMER ARRESTERS FOR QUICK CLOSING VALVES FACTORY INSTALLED WHERE REQUIRED BY CODE

NOTE: PEX PLUMBING PIPE TO BE SUPPORTED AT 32" INTERVALS AND PROTECTED FROM FREEZING

NOTE:
APPROVED ENGINEERED MECHANICAL WATER HAMMER ARRESTORS, FOR ALL QUICK CLOSING VALVES, ARE FACTORY INSTALLED AT ICEMAKER, DISHWASHER, AND WASHING MACHINE AS REQUIRED BY CURRENT STATE PLUMBING CODES.

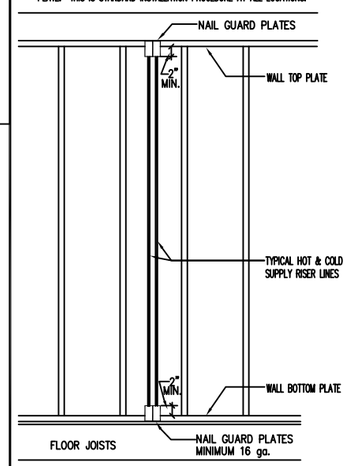
## WATER HEATER DRAIN PAN NOTE

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 ADJANCENT GROUND SURFACE PER SECTION P2801.6.2 OF THE 2018 NCPC



RANCH WHOLE HOUSE WATER SHUT OFF

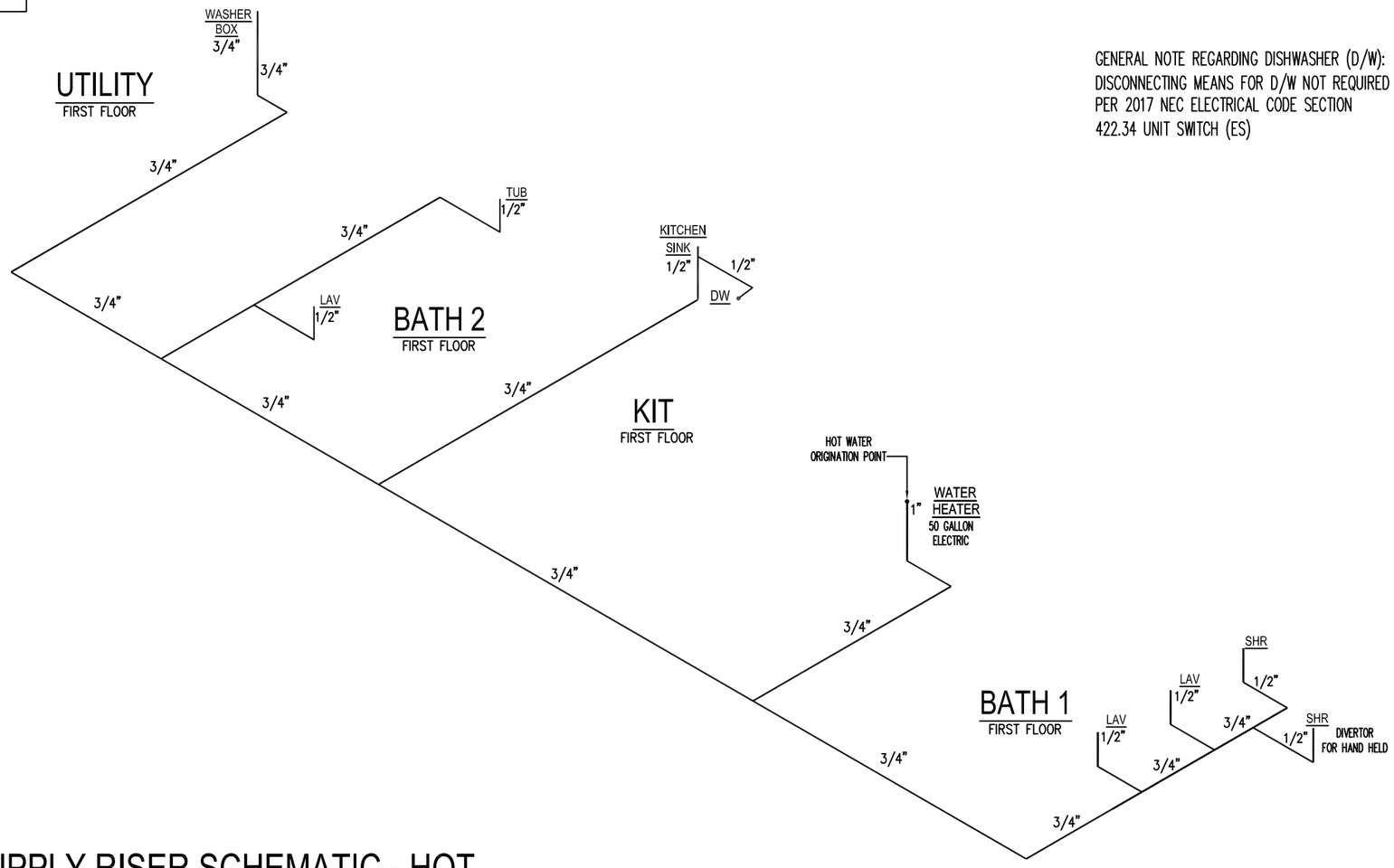

WASHER BOX



NAIL GUARD PLATE DETAIL

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.
- 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.
-



## SUPPLY RISER SCHEMATIC - HOT

"PEX" (HIGH DENSITY CROSS LINKED POLYETHYLENE)

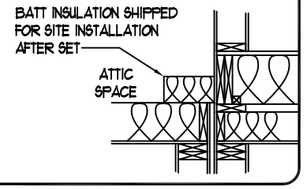
APPROVED BY
NTA
9/12/2024
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
David Barts

NATIONWIDE Homes
1100 RIVES ROAD, MARTINSVILLE, 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

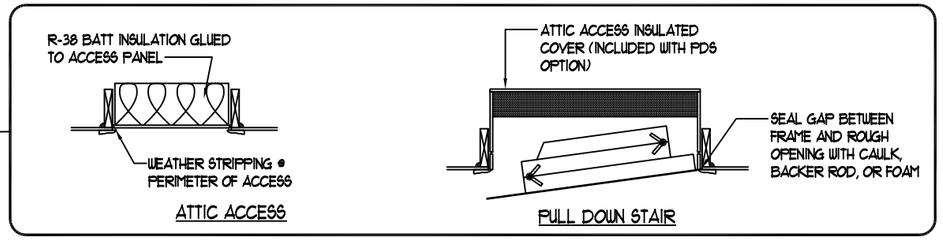
PURCHASER: HOMES BY VANDERBUILT | CONTRACT NO.: 196879 | PROCESS DATE & BY: 6/25/24 CR
JOB NO.: MS4-24 | BLACKLINE DATE & BY: | PLOTTED: 7/26/2024 3:01 PM
PLAN NAME: HEARTLAND II | PLAN REVISION DATE: 7.26.2024 BXK01
COLLECTION/SERIES: HEARTLAND

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



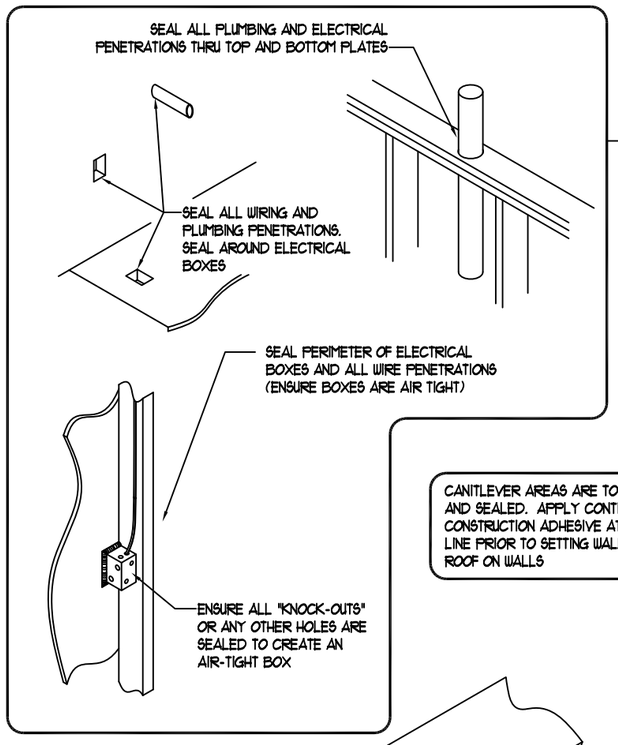

FOAM SEAL LIGHTS, BATH FANS, SPEAKERS, ETC. TO CEILING DRYWALL. USE AIR TIGHT IC-RATED RECESSED CANS AND COVER W/ INSULATION

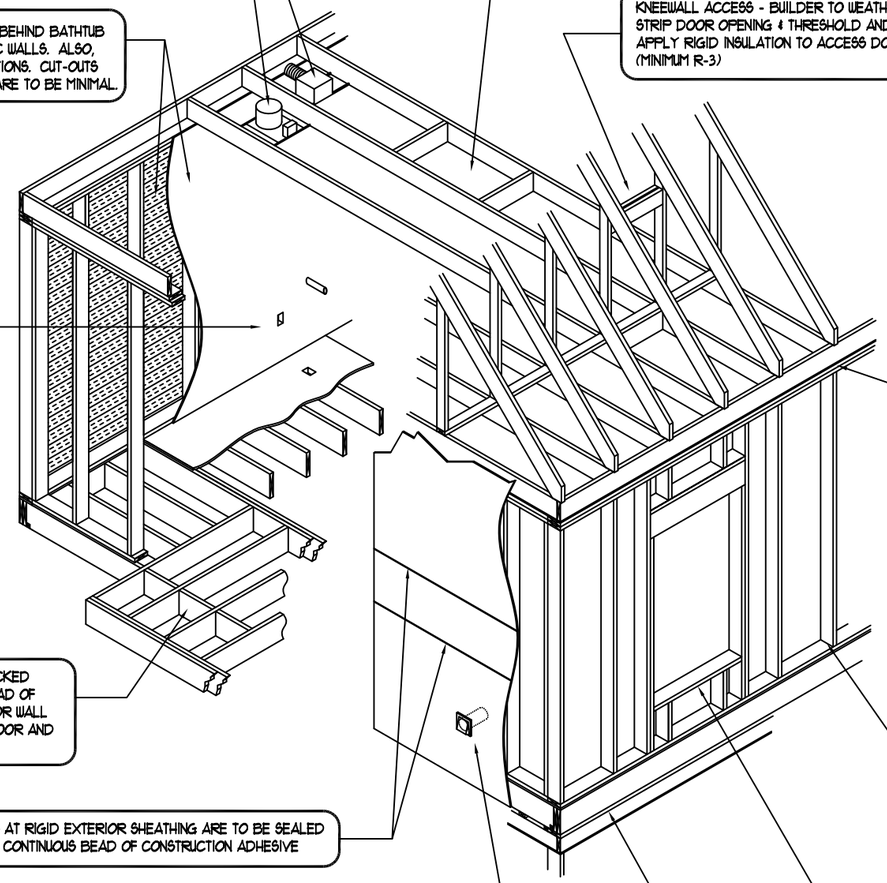
INSULATE AND INSTALL GYPSUM WALL BOARD BEHIND BATHTUB AND SHOWERS ON EXTERIOR WALLS AND ATTIC WALLS. ALSO, SEAL BATHTUB AND SHOWER DRAIN PENETRATIONS. CUT-OUTS FOR TUB AND SHOWER DRAIN PENETRATIONS ARE TO BE MINIMAL.




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

APPROVED BY
NTA
9/12/2024
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
David Barts

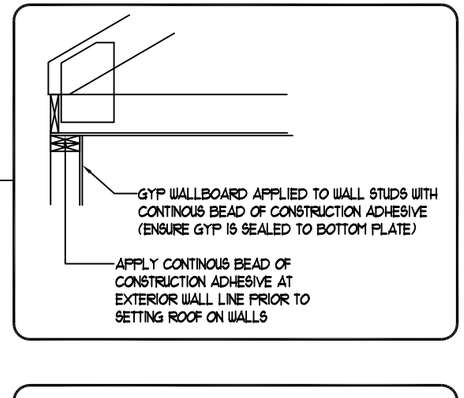


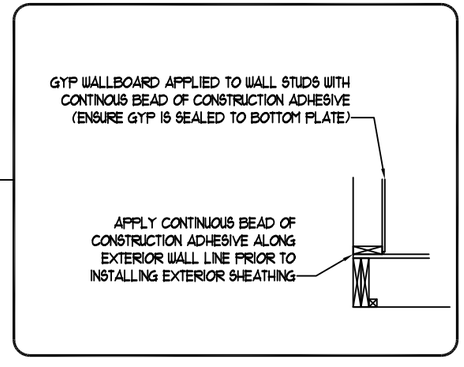



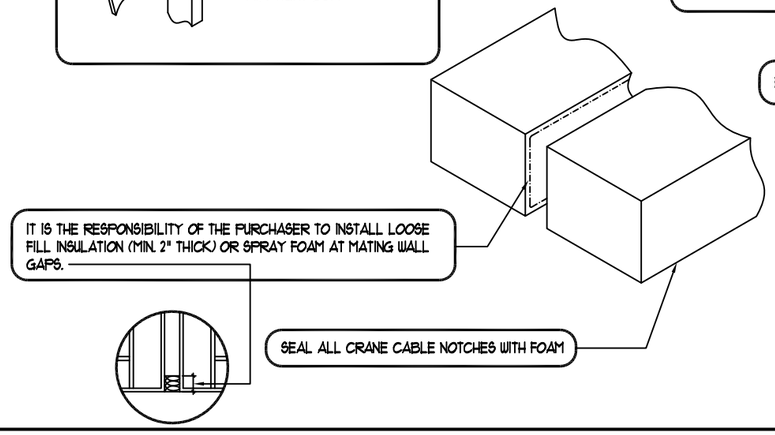
CANTILEVER AREAS ARE TO BE BLOCKED AND SEALED. APPLY CONTINOUS BEAD OF CONSTRUCTION ADHESIVE AT EXTERIOR WALL LINE PRIOR TO SETTING WALLS ON FLOOR AND ROOF ON WALLS

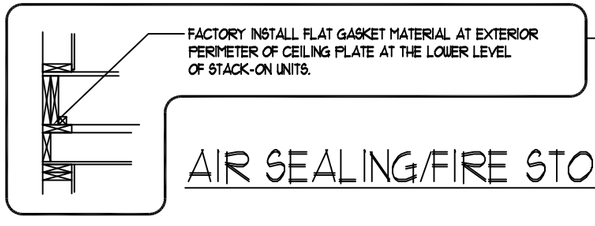
SEAMS AT RIGID EXTERIOR SHEATHING ARE TO BE SEALED WITH A CONTINUOUS BEAD OF CONSTRUCTION ADHESIVE

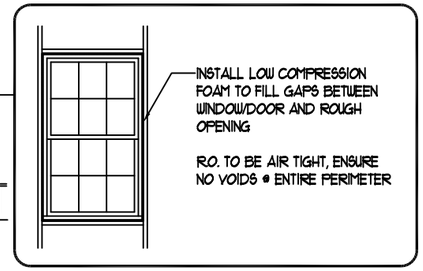
EXTERIOR WALL EXHAUST/VENT TERMINATIONS ARE TO BE SEALED




# AIR SEALING/FIRE STOP DETAIL SHEET

N.T.S.

PURCHASER:
JOB NO: CONTRACT NO.:
PLAN NAME:
COLLECTION/SERIES:
DESIGN DATE: DWG. BY: CHK. BY: PROCESS DATE: DWG. BY: CHK. BY:
REV. DATE: REV. BY: PLAN REVISION DATE: 2/12/2019 JXM14 PLOTTED: 6/4/2019 10:28 AM
REV. DATE: REV. BY: PRODUCTION DATE: DWG. BY:


NATIONWIDE Homes CUSTOM MADE EASY
1600 RIVES ROAD, MARTINSVILLE, VA 24112
(716) 632-1100
FAX (716) 632-1181
WWW.NATIONWIDECUSTOMHOMES.COM

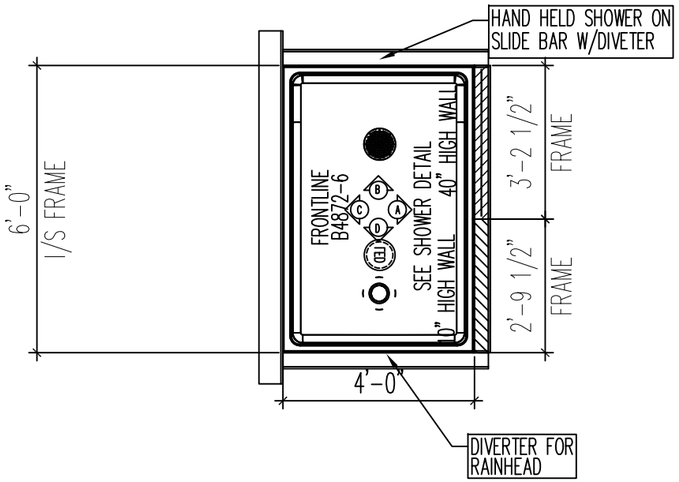


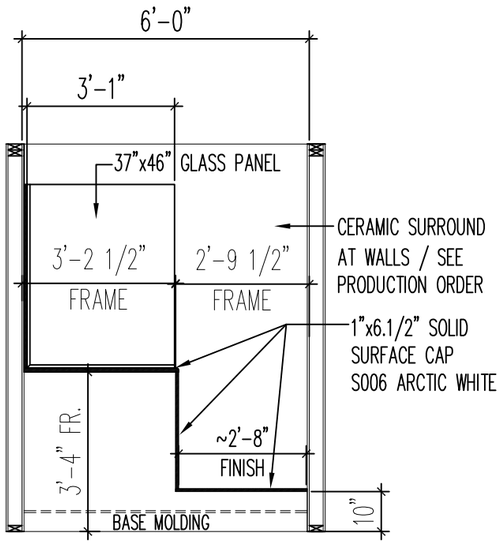

NOTE: ONLY ONE HOUSE MAY BE BUILT UTILIZING THE PLANS THAT ARE DESIGNATED FOR THIS CONTRACT JOB

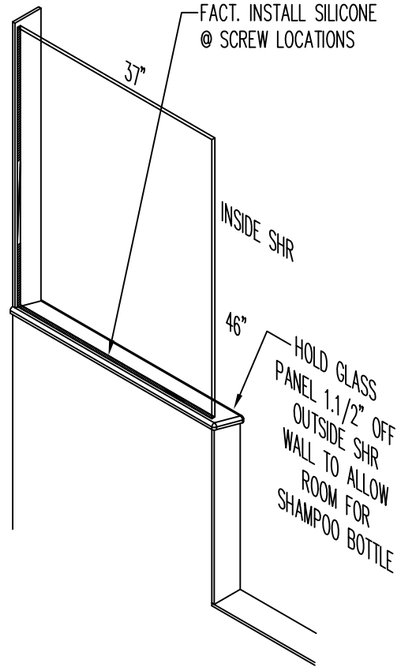
PAGE NO.

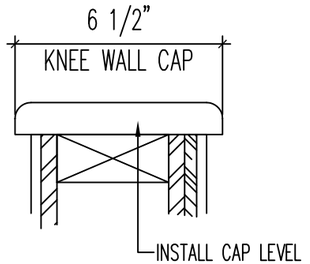


H:\Shared Files - Engineering\DETAILS\Insulation Details\Air Sealing Details.dwg, 6/24/2019 10:28:38 AM, jxm14



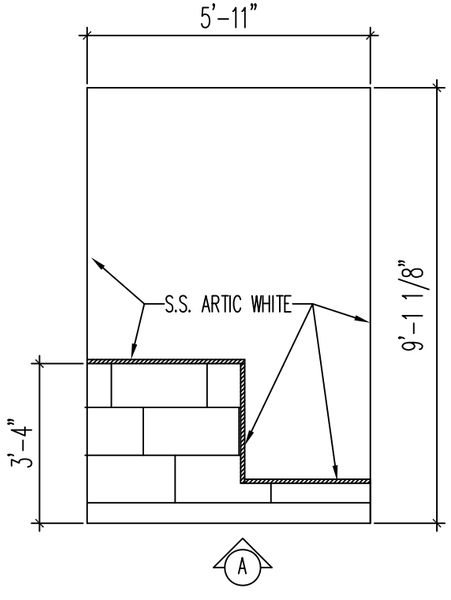



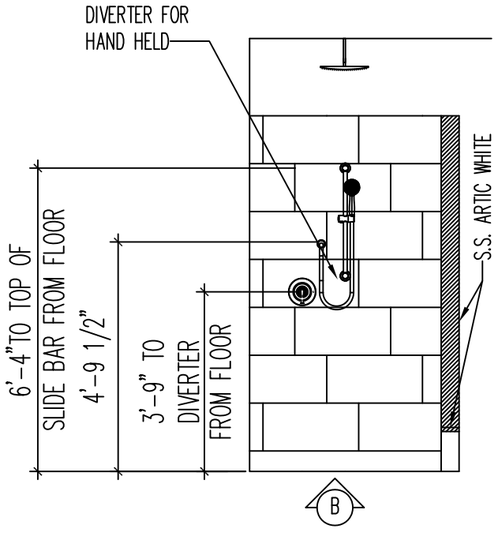



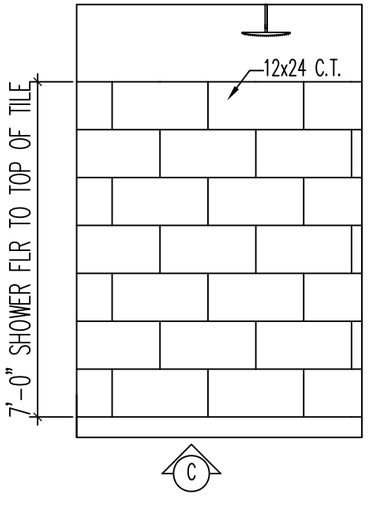

APPROVED BY
NTA
9/12/2024
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
David Barts

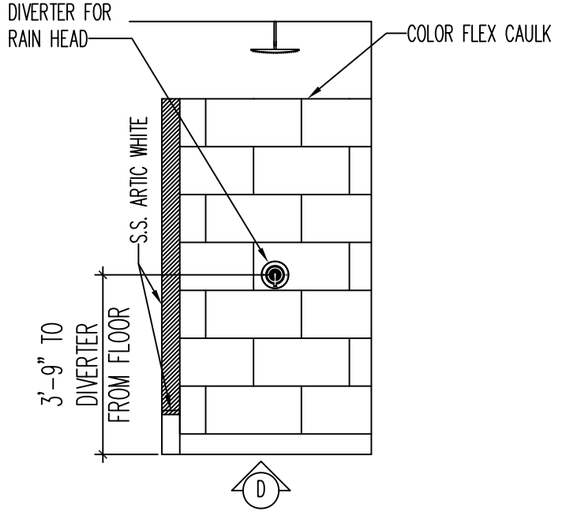
# 48"X72" FRONTLINE FIBERGLASS SHOWER BASE (NO SEAT)

## BATH-1 SHOWER DETAIL



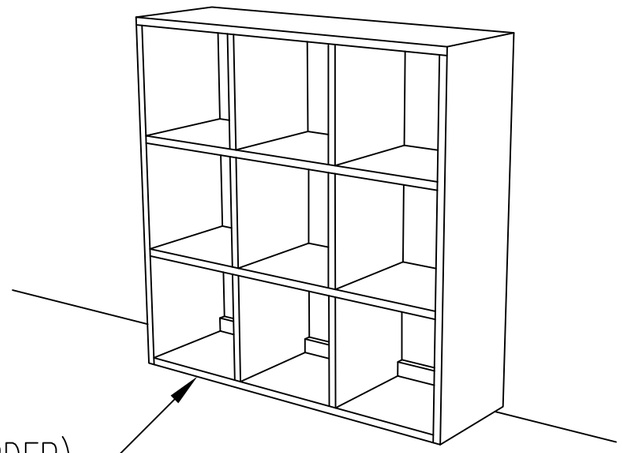

NATIONWIDE Homes

1100 RIVES ROAD, MARTINSVILLE, 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

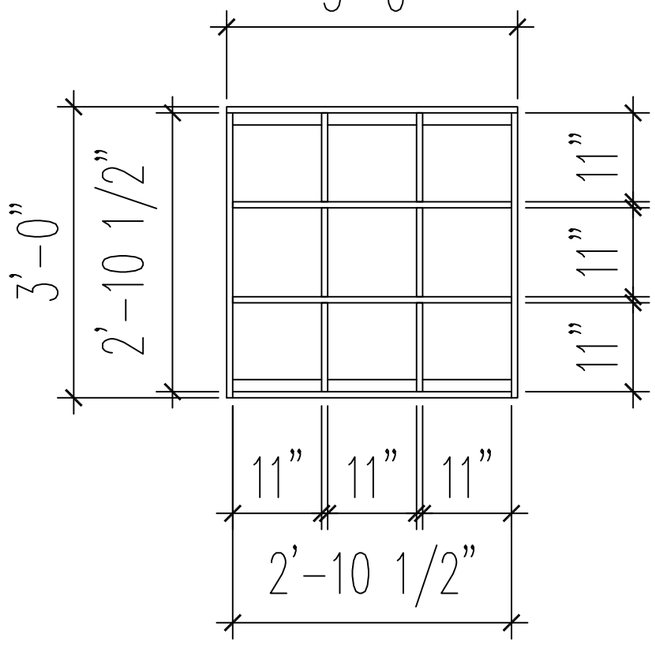
PURCHASER: HOMES BY VANDERBUILT
JOB NO.: MS4-24
CONTRACT NO.: 196879
PROCESS DATE & BY: 6/25/24 CR
BLACKLINE DATE & BY:
PLAN REVISION DATE: 7.26.2024 BXK01
PLOTTED: 7/26/2024 3:01 PM

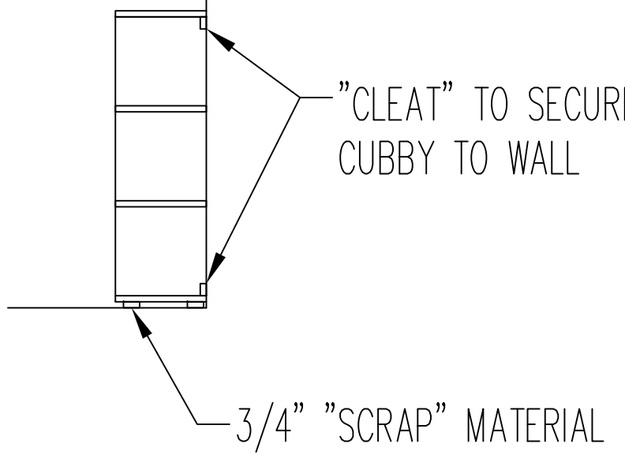
PLAN NAME: HEARTLAND II
COLLECTION/SERIES: HEARTLAND



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



"CLEAT" TO SECURE CUBBY TO WALL

3/4" "SCRAP" MATERIAL

APPROVED BY
NTA
9/12/2024
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
David Barts

# SHOE CUBBY DETAIL

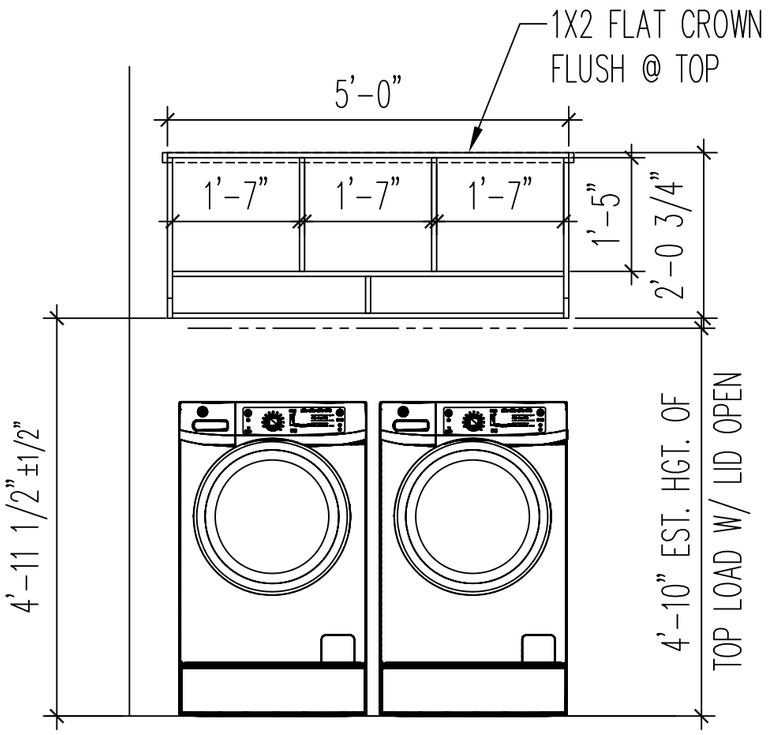
PRE-BUILT IN PLANT 2

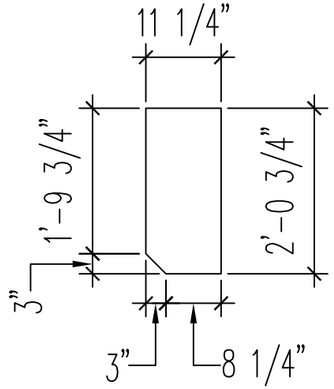

Palm Harbor Homes
1100 RIVES ROAD, MARTINSVILLE, VA 24112
(276) 632-7100
WWW.NATIONWIDECUSTOMHOMES.COM

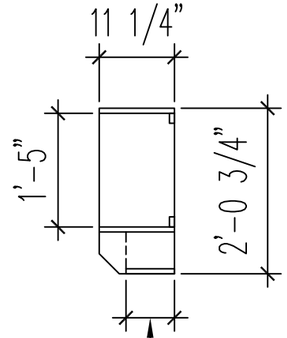

NOTE: ONLY ONE HOUSE MAY BE BUILT UTILIZING THE PLANS THAT ARE DESIGNATED FOR THIS CONTRACT JOB

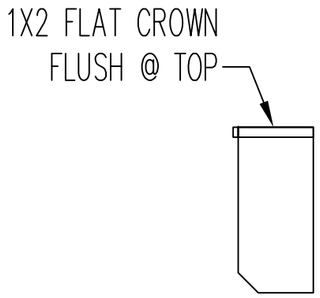
PURCHASER: CAROLINA CUSTOM (BRADFORD)
JOB NO.: 22-24
CONTRACT NO.: 196814
BLACKLINE DATE & BY:
PROCESS DATE & BY: 4-25-24 AH
PLAN REVISION DATE: 7.16.2024 BXK01
PLOTTED: 7/16/2024 8:16 AM

PLAN NAME: HEARTLAND III
COLLECTION/SERIES: HEARTLAND SERIES

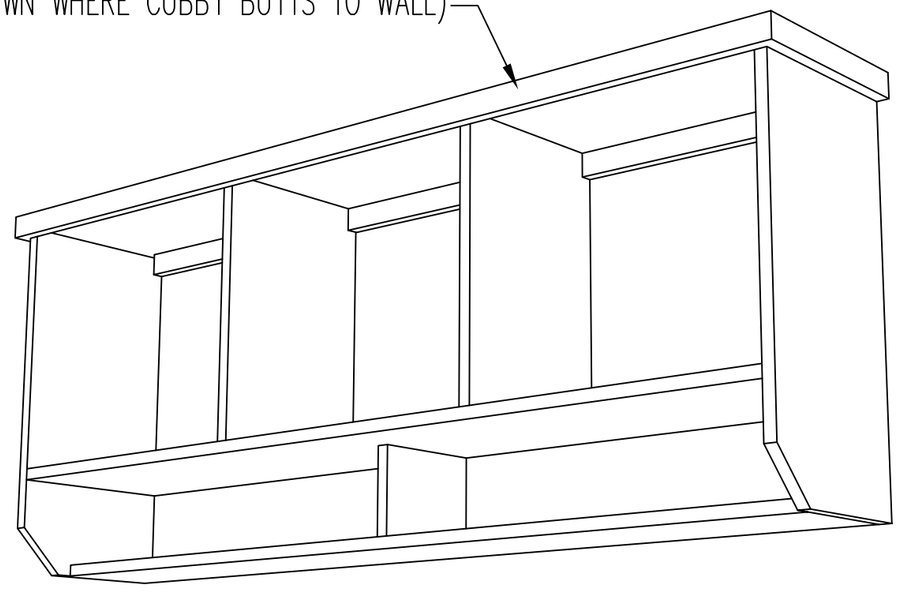



SEE FLOOR PLAN FOR CROWN LOCATION
(NO CROWN WHERE CUBBY BUTTS TO WALL)



APPROVED BY
NTA
9/12/2024

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

# WASHER/DRYER CUBBY DETAIL

PRE-BUILT IN PLANT 2

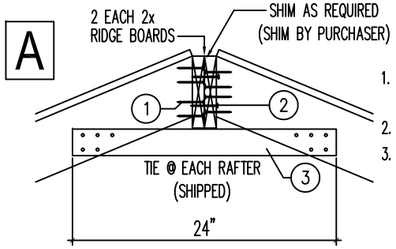
Palm Harbor Homes
1100 RIVES ROAD, MARTINSVILLE, VA 24112
(276) 632-7100
WWW.NATIONWIDECUSTOMHOMES.COM

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

PURCHASER: CAROLINA CUSTOM (BRADFORD)
JOB NO.: 22-24 | CONTRACT NO.: 196814
BLACKLINE DATE & BY: | PROCESS DATE & BY: 4-25-24 AH
PLAN REVISION DATE: 7.16.2024 BKK01 | PLOTTED: 7/16/2024 8:16 AM

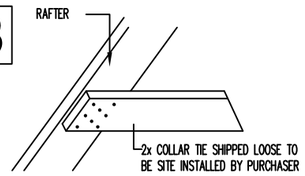
PLAN NAME: HEARTLAND III
COLLECTION/SERIES: HEARTLAND SERIES

## A — RIDGE BEAM



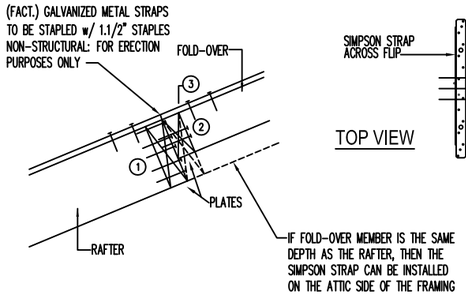

1. (FACT. INST.) TOP CHORD TO RIDGE (V): USE (4) 16d NAILS INTO END GRAIN OF EACH RAFTER
2. (SITE) RIDGE TO RIDGE (V): USE 16d NAILS AT 12" O/C
3. (SITE) TOP CHORD AT RIDGE: (TENSION): USE (5) 10d NAILS AT EACH END OF 7/16" x 5.1/2" OSB TIE (ALTERNATE MUMBERS: 1x4 LUMBER / 2x4 LUMBER)

## B — COLLAR TIES TO RAFTER




COLLAR TIE: USE MIN. (14) 16d NAILS EACH END TO CONNECT COLLAR TIE TO RAFTER (SITE INSTALLATION)

## C — RAFTER TO FOLD-OVER & FOLD-OVER TO FOLD-OVER




### 115Vult - 130Vult:

1: FLIP TO TOP CHORD: (SHEAR) (FACTORY INSTALLED)
(6) 16d NAILS THRU PLATE INTO TOP CHORD

PLUS

2: RAIL TO RAIL: (SITE INSTALLED) 16d NAILS AT 6" O/C THRU PLATE

3: TOP CHORD TO PLATE: (TENSION) (SITE INST)
USE (3) 10d NAILS EACH SIDE OF FLIP

PLUS

USE SIMPSON LSTA18 STRAP WITH (14) 10d NAILS TOTAL TO ATTACH STRAP TO ROOF
(7) 10d NAILS EACH END OF STRAP
**** (SHIPPED FOR SITE INSTALLATION) ****

### 150 Vult:

1: FLIP TO TOP CHORD: (SHEAR) (FACTORY INSTALLED)
(7) 16d NAILS THRU PLATE INTO TOP CHORD

PLUS

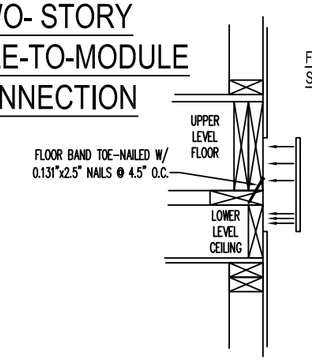
2: RAIL TO RAIL: (SITE INSTALLED) 16d NAILS AT 6" O/C THRU PLATE

3: TOP CHORD TO PLATE: (TENSION) (SITE INST)
USE (3) 10d NAILS EACH SIDE OF FLIP

PLUS

USE SIMPSON LSTA30 STRAP WITH (22) 10d NAILS TOTAL TO ATTACH STRAP TO ROOF
(11) 10d NAILS EACH END OF STRAP
**** (SHIPPED FOR SITE INSTALLATION) ****

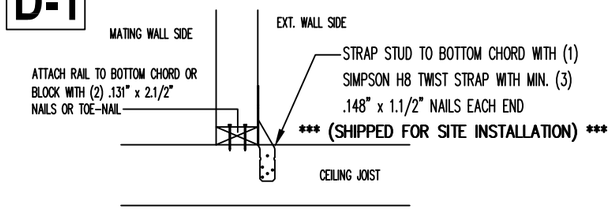
## TWO- STORY MODULE-TO-MODULE CONNECTION




FASTEN SITE OSB STRIP PER THE FOLLOWING QTY. & SPACING INTO U.L. FLOOR BAND & L.L. CLG. BAND:

- TRUSSES @ 24"O.C.:
  - 115Vult/89Vasd MPH OR LESS= 3 EA 8d 12" O.C.
  - 150Vult/116 Vasd MPH= 7 EA 8d 4" O.C.
- TRUSSES @ 19.2" O.C.:
  - 115VULT/89VASD MPH OR LESS= 3 EA 8D 9" O.C.
  - 150VULT/116 VASD MPH= 7 EA 8D 3" O.C.
- TRUSSES @ 16" O.C.:
  - 115VULT/89VASD MPH OR LESS= 3 EA 8D 8" O.C.
  - 150VULT/116 VASD MPH= 7 EA 8D 2" O.C.

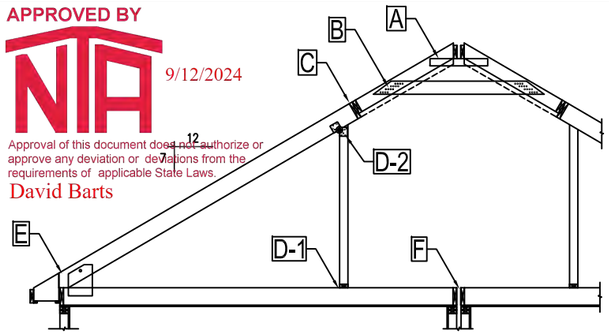
## D-1 — KNEEWALL TO CLG. JOIST



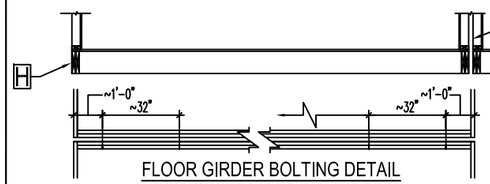

APPROVED BY NTA 9/12/2024

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

David Barts

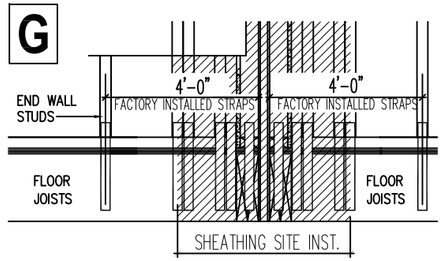



MODULE TO MODULE GIRDER CONNECTION TO BE SIMPSON SDS25800 (SIMPSON 8" LAG SCREW) AT 32" O/C. LAG SCREWS TO BE SET MIN. OF 2" INTO GIRDER BY FLOOR CREW. DRIVERS TO SHIM AND COMPLETE PENETRATION OF LAG SCREWS ONCE UNITS ARE SET ON FOUNDATION.




FLOOR GIRDER BOLTING DETAIL

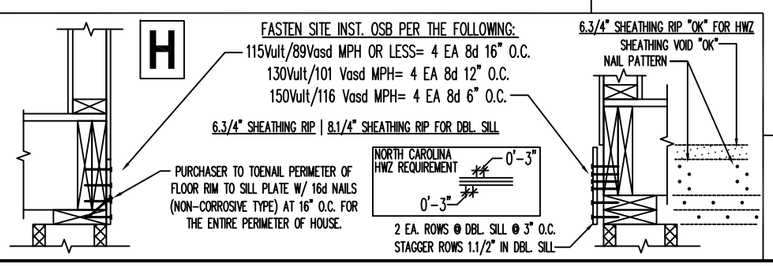
## G



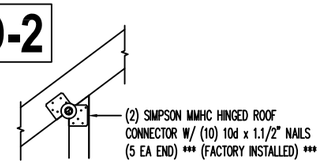

ALL WIND ZONES

INSTALL SECTION OF SHEATHING ACROSS MARRIAGE LINE PER FASTENING REQUIREMENTS NOTED ON THE BRACED WALL DETAIL SHEET

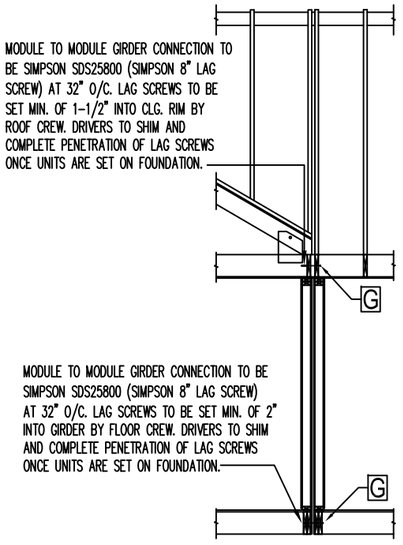
## H




## D-2

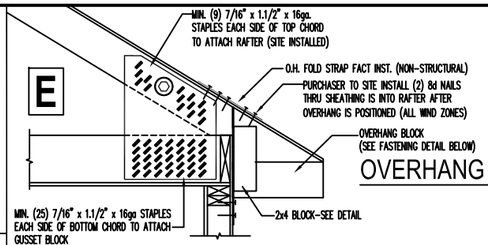



KNEE WALL-RAFTER CONNECTION

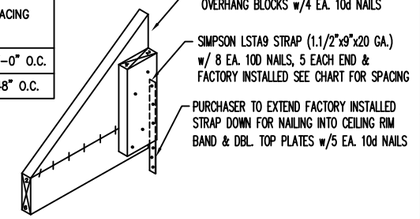



STANDARD GIRDER BOLTING DETAIL WITH ADDITIONAL TAG UNIT FOR ALL ROOF PITCHES/WIND ZONES

## E — OVERHANG DETAIL



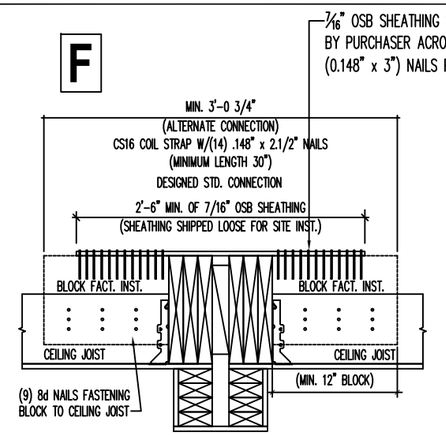

| OVERHANG SECUREMENT | |
|---|---|
| WIND SPEED | REQUIRED SPACING FOR STRAPS |
| 115 & 120 | EACH END & 8'-0" O.C. |
| 130 & 150 | EACH END & 48" O.C. |



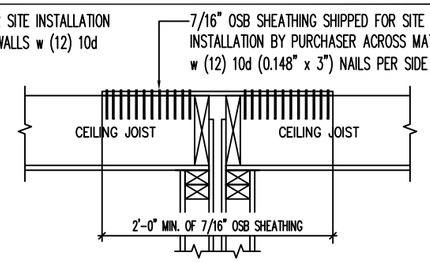

## OVERHANG BLOCK INSTALLATION DETAIL

NOTE: ABOVE 2x4 SCAB BLOCK REQUIRED FOR STRAP NAILING THAT IS NOT ALLOWED TO BE NAILED INTO THE END GRAIN AT OVERHANG BLOCKS. IF END GRAIN IS NOT FACING INWARD TOWARD EXTERIOR WALL, THEN THE STRAP CAN BE NAILED DIRECTLY TO OVERHANG BLOCK.

## F



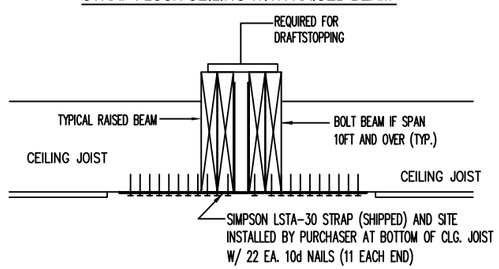

CONNECTION WITH RAISED BEAM AND FILLER PANEL BELOW




STD. MATING WALLS w/ CEILING JOIST SECUREMENT IN ATTIC

OR

STRAP FLUSH CEILING WITH RAISED BEAM




## MATING WALL TENSION CONNECTION

## ATTENTION LOCAL INSPECTION DEPARTMENT

## 7/12 SITE CONNECTIONS - SET UP INSTRUCTIONS

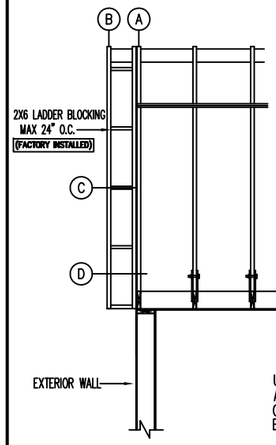

NATIONWIDE Homes
1100 RIVES ROAD, MARTINSVILLE, VA 24112
(276) 632-7100
WWW.NATIONWIDECUSTOMHOMES.COM


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

PURCHASER:
JOB NO:
CONTRACT NO:
PROCESS DATE & BY:
BLACKLINE DATE & BY:
PLOTTED: 7/26/2024 11:34 AM
PLAN REVISION DATE: 7/26/2024 BXK01
PLAN NAME: 7/28 SITE CONNECTIONS
COLLECTION/SERIES:



PAGE NO.
17 of 52



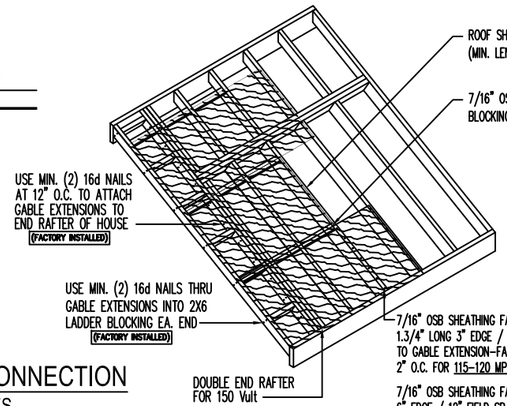

FASTENING SCHEDULE: (115-120 Vult) *** FACTORY INSTALLED ***
(A) ROOF SHEATHING TO GABLE END RAFTER: 16ga. STAPLES 1.3/4" LONG 3" EDGE / 6" FIELD
(B) ROOF SHEATHING TO O/S GABLE EXTENSION: 16ga. STAPLES 1.3/4" LONG AT 3" O.C.
(C) 2X6 O/S GABLE EXTENSION TO 2X6 LADDER BLOCK: MIN. (2) 16d NAILS EACH END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

APPROVED BY NTA 9/12/2024

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

David Barts



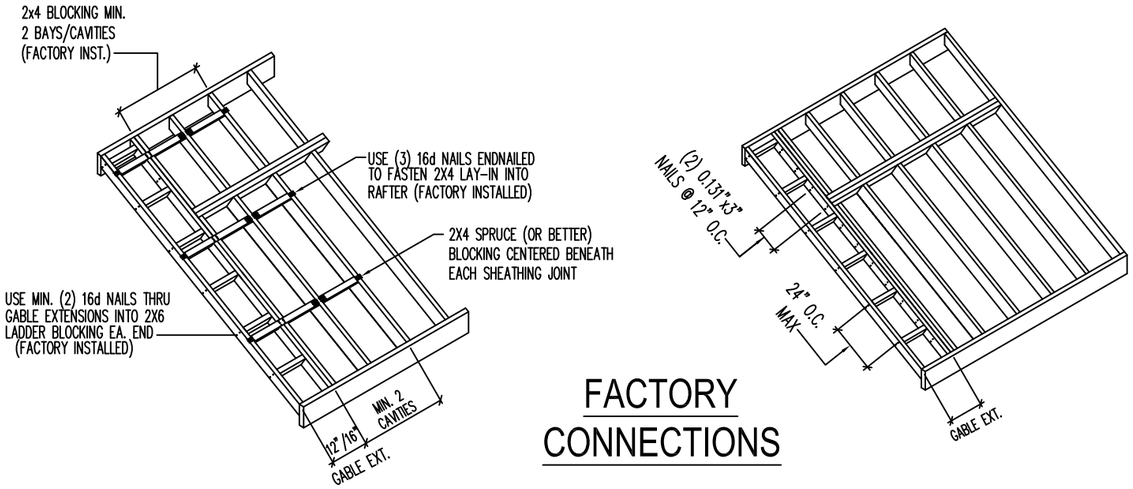

7/16" OSB SHEATHING FASTEN TO RAFTERS WITH 16ga. STAPLES 1.3/4" LONG 3" EDGE / 6" FIELD SPACING EXCEPT FOR END RAFTER TO GABLE EXTENSION-FASTEN WITH 16ga. STAPLES 1.3/4" LONG AT 2" O.C. FOR 115-120 MPH *** FACTORY INSTALLED ***

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 ***

## GABLE EXTENSION CONNECTION

ALL WIND ZONES

## FACTORY CONNECTIONS

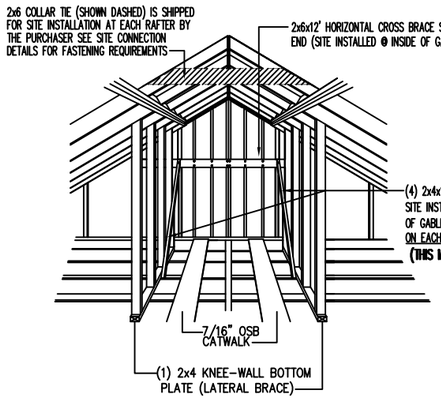



## FACTORY CONNECTIONS

## 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) ***

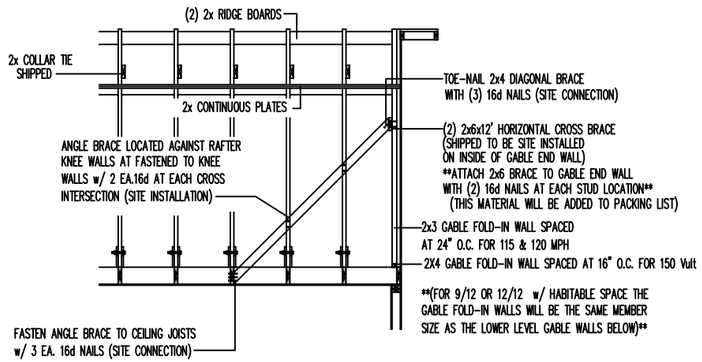
THIS CONNECTION WOULD BE IN LIEU OF THE GABLE EXTENSION CONNECTIONS ABOVE

## INTERIOR GABLE FOLD-IN BRACING

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

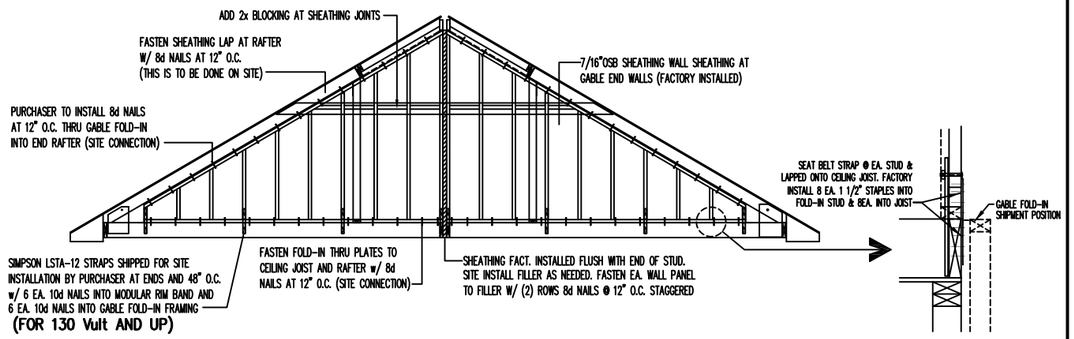
*** 140 Vult AND GREATER ***

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




## CROSS SECTION OF GABLE BRACING

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




(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

NATIONWIDE Homes
1100 RIVES ROAD, MARTINSVILLE, 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:
JOB NO:
CONTRACT NO:
PROCESS DATE & BY:
BLACKLINE DATE & BY:
PLOTTED: 7/26/2024 11:34 AM
PLAN REVISION DATE: 7.26.2024 BIX01
PLAN NAME: 7/28 SITE CONNECTIONS
COLLECTION/SERIES:

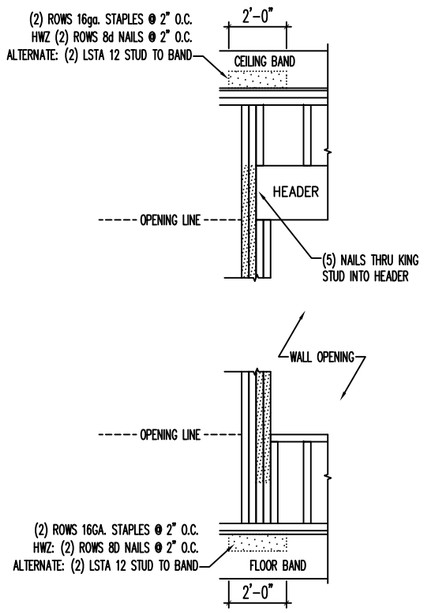
# WINDOW HEADER UPLIFT CONNECTIONS

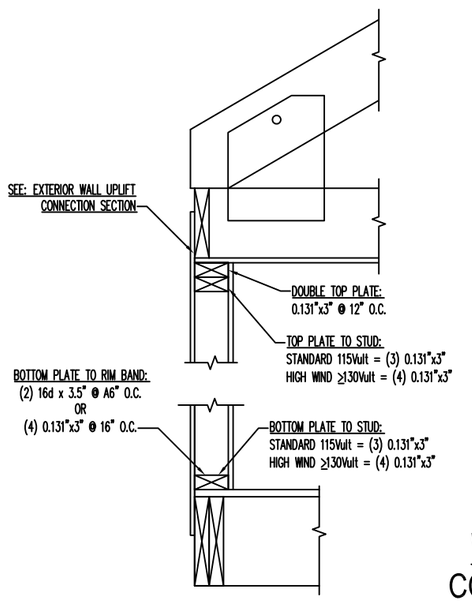
## FASTENING OPTIONS (EACH SIDE OF OPENING LINE):

- 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



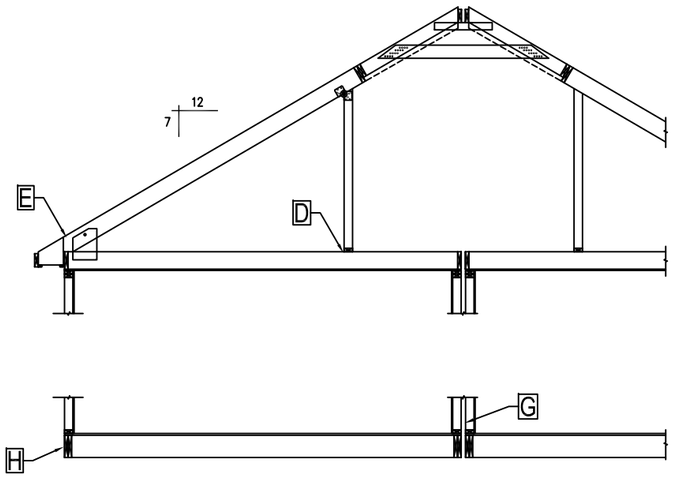




## EXTERIOR WALL STUD CONNECTIONS

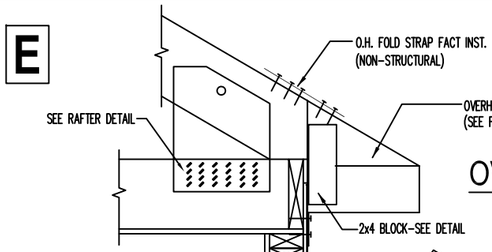
APPROVED BY NTA 9/12/2024

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

David Barts

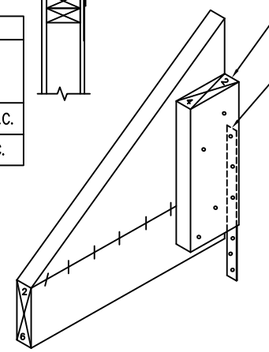



## E




## OVERHANG DETAIL

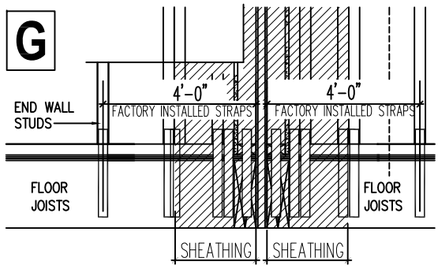
| OVERHANG SECUREMENT | |
|---|---|
| WIND SPEED | REQUIRED SPACING FOR STRAPS |
| 115 & 120 | EACH END & 8'-0" O.C. |
| 130 & 150 | EACH END & 48" O.C. |




## OVERHANG BLOCK INSTALLATION DETAIL

NOTE: ABOVE 2x4 SCAB BLOCK REQUIRED FOR STRAP NAILING THAT IS NOT ALLOWED TO BE NAILED INTO THE END GRAIN AT OVERHANG BLOCKS. IF END GRAIN IS NOT FACING INWARD TOWARD EXTERIOR WALL, THEN THE STRAP CAN BE NAILED DIRECTLY TO OVERHANG BLOCK.

## G




## MODULAR END WALL CONNECTIONS

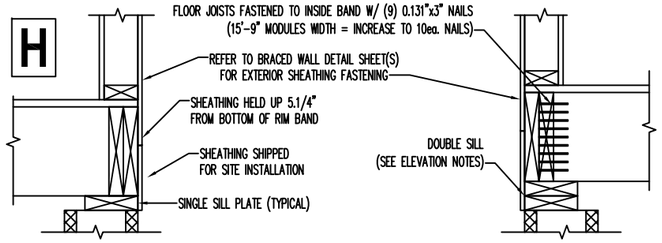
130-150 Vult

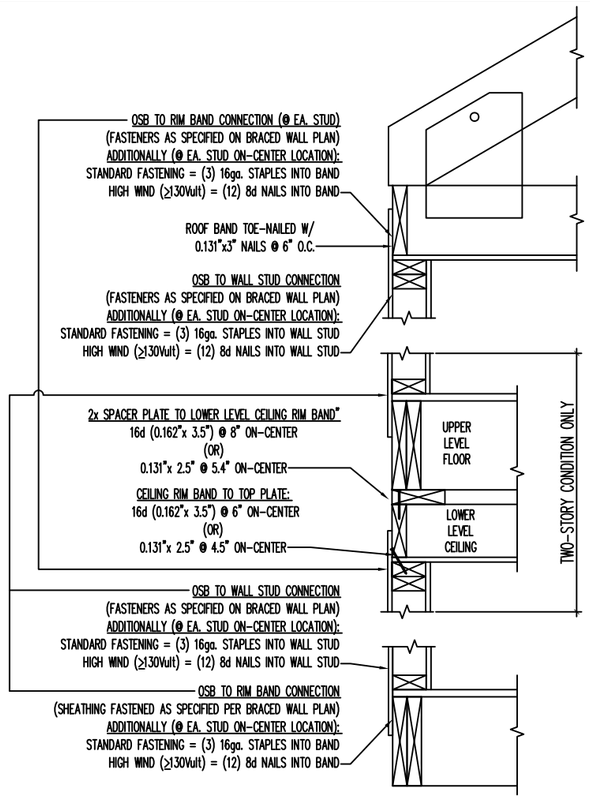
ADD FACTORY INSTALLED STRAPS AS NOTED/SHOWN

ALL WIND ZONES

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

## H



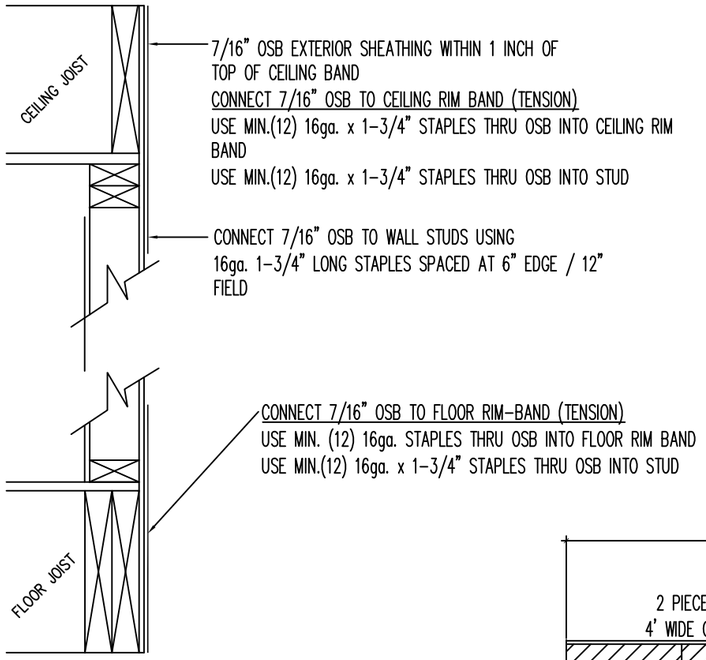

## EXTERIOR WALL UPLIFT

# FACTORY INSTALLED COMPONENTS/FASTENERS 7/12 CONNECTIONS

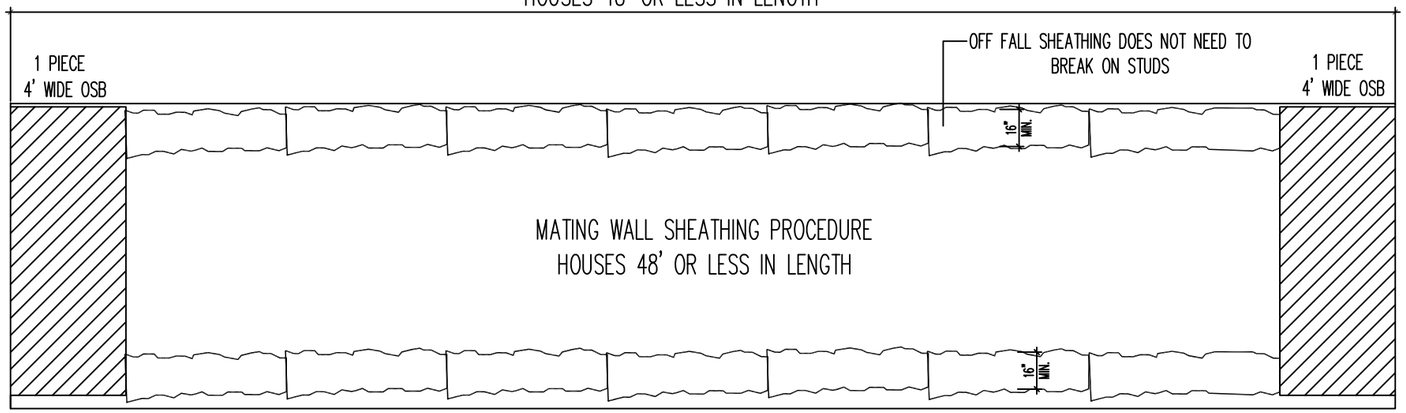

NATIONWIDE Homes
1100 RIVES ROAD, MARTINSVILLE, VA 24112
(276) 632-7100
WWW.NATIONWIDECUSTOMHOMES.COM


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

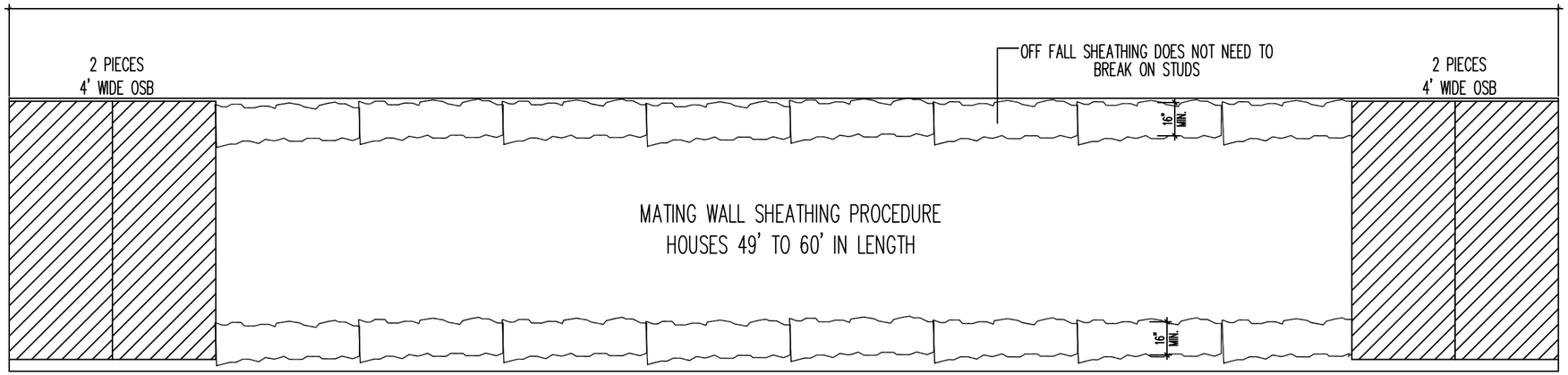
PURCHASER:
JOB NO.:
CONTRACT NO.:
PROCESS DATE & BY:
BLACKLINE DATE & BY:
PLAN REVISION DATE: 7.26.2024 BXK01
PLOTTED: 7/8/2024 11:34 AM
PLAN NAME: 7/28 SITE CONNECTIONS
COLLECTION/SERIES:



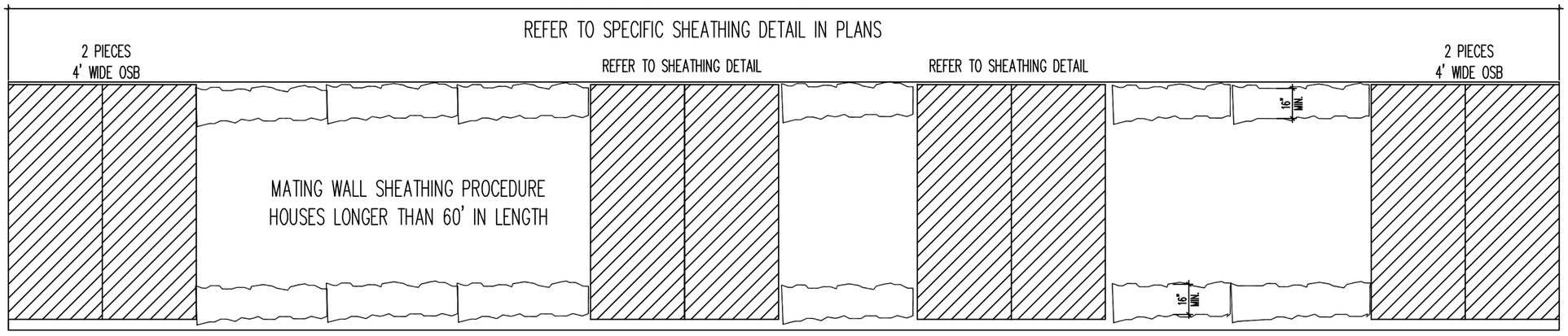

HOUSES 48' OR LESS IN LENGTH




49' TO 60' IN LENGTH




HOUSES LONGER THAN 60'-0" IN LENGTH



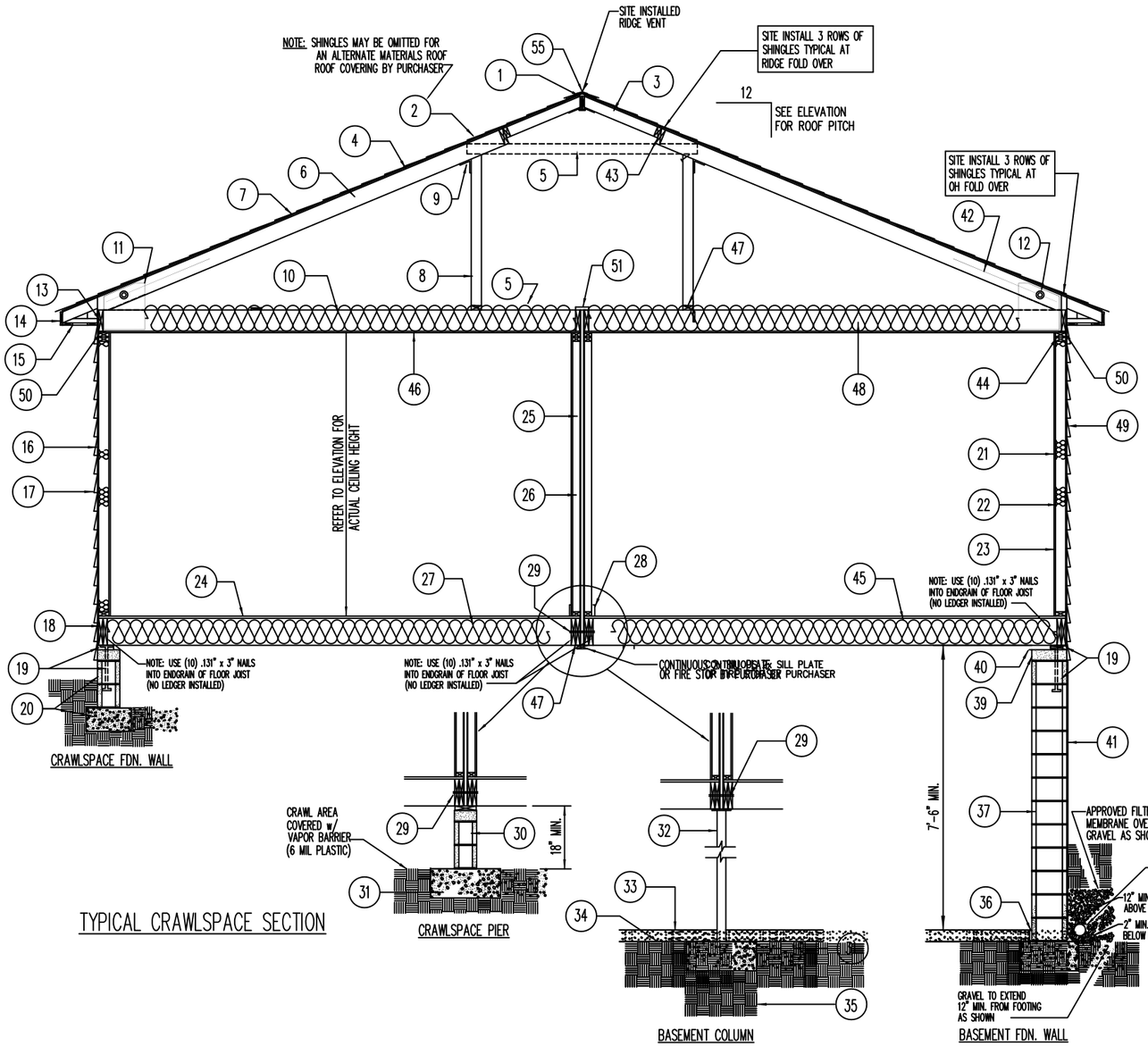

APPROVED BY
NTA
9/12/2024
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
David Barts

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

NATIONWIDE Homes
1100 RIVES ROAD, MARTINSVILLE, 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:
JOB NO.:
CONTRACT NO.:
PLAN NAME:
COLLECTION/SERIES:
BLACKLINE DATE & BY:
PROCESS DATE & BY:
PLAN REVISION DATE: 4.15.2024 BXK01
PLOTTED: 4/15/2024 11:47 AM




TYPICAL CRAWLSPACE SECTION

TYPICAL BASEMENT SECTION

# RANCH CROSS SECTION

## GENERAL NOTES:

1. 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.
2. REFER TO FOUNDATION WALL SECTION ON FOUNDATION PLAN FOR UNITS BEING CONSTRUCTED IN AREAS GREATER THAN 115 mph Vult WIND ZONE.
3. REFER TO FOUNDATION PLAN FOR LOCATION OF PIERS/COLUMNS.
4. CONSTRUCTION OF BASEMENT STAIRS BY PURCHASER.
5. MIN. 18" FROM GRADE FOR WOOD JOISTS AND 12" MIN. FOR WOOD GIRDERS.
6. MIN. 6" FROM GRADE TO EXTERIOR SIDING.
7. PURCHASER TO REFER TO BUILDER RESPONSIBILITY BULLETIN INSTRUCTIONS FOR ERECTION COMPLETION REQUIREMENTS.
8. 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.
9. 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
10. ALL PILING FOUNDATIONS SHALL BE ENGINEERED BY PURCHASER.
11. SEE FOUNDATION PLAN AND "SUPERIOR WALL" DETAILS WHEN A "SUPERIOR WALL" FOUNDATION SYSTEM IS USED.
12. 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.
13. FOR WIND ZONES 150 mph Vult AND ABOVE: HORIZONTAL MID SPAN BLOCKING AT EXTERIOR WALLS AT SHEATHING JOINTS (IF HORIZONTAL INSTALLATION)
14. REFER TO COVER SHEET FOR WIND ZONE SPEED.

| 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.L FOLD-OVER) |
| 3 | 2x FOLD-OVER RAFTERS (#2 SPF or EQ.) (115Vult/150Vult) REFER TO ROOF FRAMING FOR SPACING |
| 4 | SYNETHIC 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 | CONTINOUS PERIMETER BAND (#2 SYP or EQUAL) |
| 14 | FASCIA BOARD |
| 15 | VINYL CONTINIOUS 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/ 2x6 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 | CONTITUNOUS 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 SFP or EQUAL) |

APPROVED BY NTA 9/12/2024

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

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

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

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

PURCHASER:
JOB NO:
CONTRACT NO.:
BLACKLINE DATE & BY:
PROCESS DATE & BY:
PLAN REVISION DATE: 7.26.2024 BIX01
PLOTTED: 7/26/2024 3:02 PM
PLAN NAME:
COLLECTION/SERIES:

## 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

## 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.) | |
| | | | SINGLE | | SINGLE | |
| PLAN CODE | WIDTH | HEIGHT | W. | H. | GL. AREA | FLR. AREA |
| 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 |

## INTERIOR DOORS

| | | | ROUGH OPENING | | |
|---|---|---|---|---|---|
| PLAN CODE | SIZE | | WIDTH | HEIGHT | DESCRIPTION |
| 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 |

## EXTERIOR DOORS (SIZES)

| | | | ROUGH OPENING | | DESCRIPTION |
|---|---|---|---|---|---|
| PLAN CODE | SIZE | | 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. |

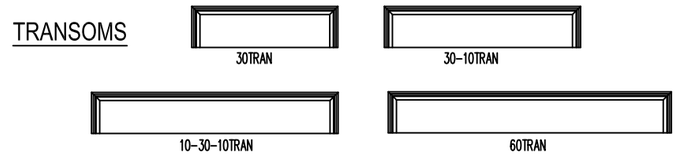
OUTSWING UNITS: REDUCE R.O. HEIGHT 3/4"

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

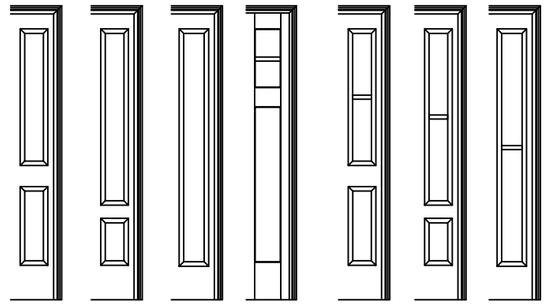
| | | | | | | | DESCRIPTION |
|---|---|---|---|---|---|---|---|
| DOOR NUMBER | GLASS AREA | FLOOR AREA | U-VALUE | SHGC | VENT | FLOOR AREA | |
| S220 | - | - | 0.20 | 0.01 | 19.810 | 495.25 | 2 PANEL |
| S206 | 5.06 | 63.25 | 0.22 | 0.09 | 19.810 | 495.25 | 1/2 LITE (NO MUNTINS) |
| S80 | 6.68 | 83.50 | 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 | | | | | | | |
| 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) |

APPROVED BY
NTA
9/12/2024
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
David Barts

## TRANSOMS

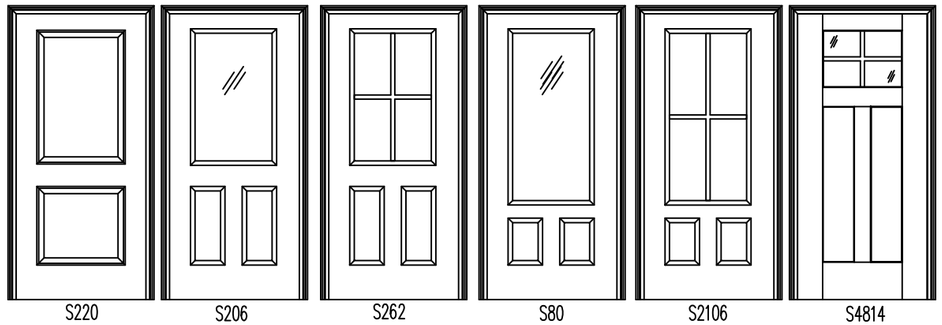


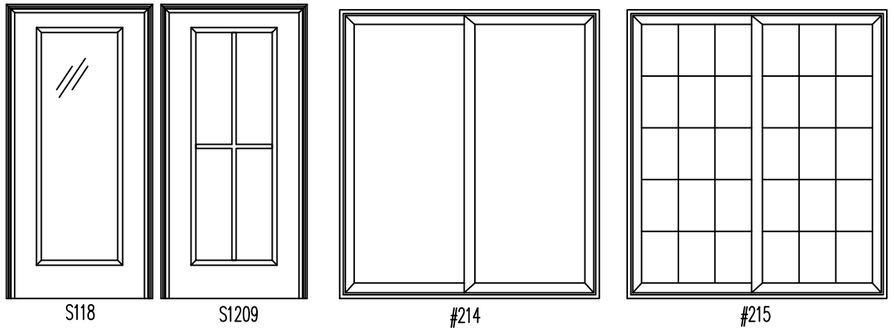

## SIDELITES




## EXTERIOR DOORS

* GLASS PATTERN'S SHOWN ARE REPRESENTATIVE & MAY VARY IN DESIGN BETWEEN DOOR MANUFACTURERS' AND/OR DESIGN PRESSURES




NATIONWIDE Homes

1100 RIVES ROAD, MARTINSVILLE, 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:
JOB NO:
CONTRACT NO:
PROCESS DATE:
DWG. BY:
PLAN REVISION DATE: 7.26.2024 BXK01
PLOTTED: 7/26/2024 3:02 PM

PLAN NAME:
COLLECTION/SERIES:



PAGE NO.
22 of 52

# 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: | | **1,600** | Sq. Ft. @ 3 volts-ampheres/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 |
| | **34,497** | **24,497** | @ 40% | = | **9,799** | 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 |

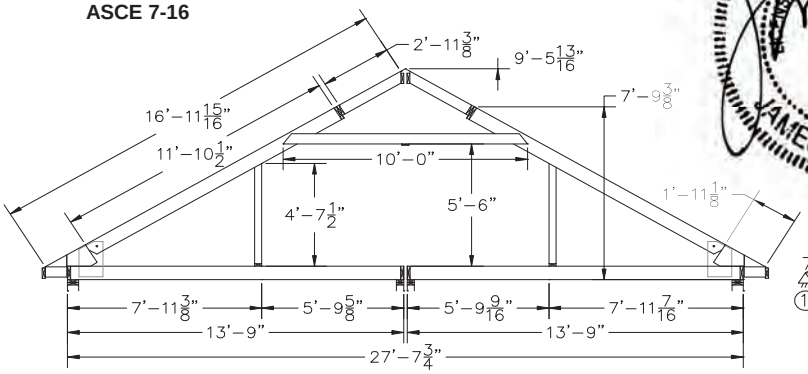
APPROVED BY
NTA
9/12/2024
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
David Barts

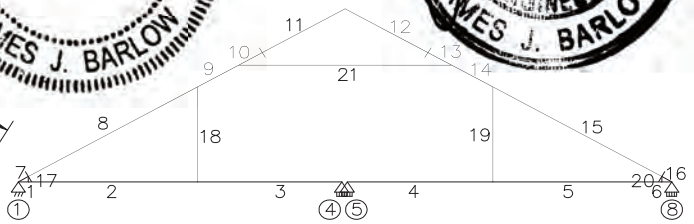
**General Notes**:

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 addtional panel and/or adequate service entry. All installation to meet **2017 NEC**, subject to inspection by local jurisdiction.

Engineering Department

**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 SIDE (psf): | 4.6 | 6.9 |
| UNBALANCED SNOW LOAD LENGTH (ft): | 4.3 | 5 |
| MINIMUM ROOF LIVE LOAD (psf): | 16 | |

| | | |
|---|---|---|
| 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 |

| | | |
|---|---|---|
| TC DL (psf): | 10 | |
| BC DL (psf): | 10 | |
| BC LL (psf): | 10 | WHERE h < 42" |
| | 20 | WHERE h ≧ 42" |
| | 20 | BETWEEN KNEEWALLS |

APPROVED BY
NTA
9/12/2024
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
David Barta

**MEMBER INFORMATION:**

| | MEMBER | SIZE & SPECIES | MAXIMUM CSI | MAXIMUM DEFLECTION (in) | l / |
|---|---|---|---|---|---|
| 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 |
|---|---|---|---|
| **N1** | DEAD LOAD | 621 | 497 |
| | TOTAL LOAD | 1153 | 1059 |
| | MIN. BEARING LENGTH (in) | 2 | 1.83 |
| **N4** | DEAD LOAD | 111 | 89 |
| | TOTAL LOAD | 297 | 275 |
| | MIN. BEARING LENGTH (in) | 1.5 (MIN) | 1.5 (MIN) |
| **N5** | DEAD LOAD | 111 | 89 |
| | TOTAL LOAD | 297 | 275 |
| | MIN. BEARING LENGTH (in) | 1.5 (MIN) | 1.5 (MIN) |
| **N8** | DEAD LOAD | 621 | 497 |
| | TOTAL LOAD | 1153 | 1059 |
| | MIN. BEARING LENGTH (in) | 2 | 1.83 |

**NOTES:**

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

**WIND REACTIONS (lbs):**

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

COMMONWEALTH OF VIRGINIA James Joseph Barlow Lic. No. 035206 PROFESSIONAL ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 11879 ENGINEER JAMES J. BARLOW
JAMES J BARLOW REGISTERED 20829 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER
JAMES J BARLOW REGISTERED ENGINEER AGRICULTURE COMMERCE No. 106547 STATE OF TENNESSEE

05/22/24


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


C:\2024\240209\FH712278\FH71228.xls

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

NATIONWIDE CUSTOM HOMES

APPROVED BY
NTA
9/12/2024
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
David Barts

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

| | |
|---|---|
| **GROUND SNOW LOAD (psf):** | **20 / 30** |
| **WIND SPEED (mph) (Vasd):** | **116** |

**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.

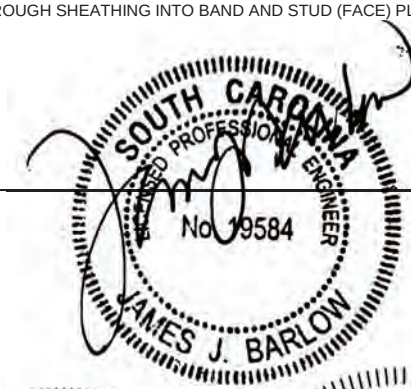
**UPLIFT CONNECTIONS (MWFRS LOADS):**
**STANDARD WIND**

**N1**

| UPLIFT (lbs) | LC | CD | |
|---|---|---|---|
| 163 | 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 | |
| 296 | WIND | 1.6 | (2) 16d (0.162" x 3.5") COMMON NAILS THROUGH BAND INTO TOP PLATE (TOENAILED) |

**N4**

| UPLIFT (lbs) | LC | CD | |
|---|---|---|---|
| 84 | 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

APPROVED BY
NTA
9/12/2024
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
David Barts

| | | | |
|---|---|---|---|
| **TRUSS NO.:** | **FH71228** | **GROUND SNOW LOAD (psf):** | **20 / 30** |
| **JOB NO.:** | **240209** | **WIND SPEED (mph) (Vasd):** | **116** |
| **PITCH:** | **7/12** | | |
| **SPAN:** | **27'-8"** | | |

**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.

**N5**

| UPLIFT (lbs) | LC | CD | |
|---|---|---|---|
| 82 | 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 | |
|---|---|---|---|
| 164 | 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 |

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 19584 JAMES J. BARLOW

GEORGIA REGISTERED No. 23823 PROFESSIONAL ENGINEER JAMES J. BARLOW

COMMONWEALTH OF VIRGINIA James Joseph Barlow Lic. No. 035206 PROFESSIONAL ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 11879 ENGINEER JAMES J. BARLOW

JAMES J BARLOW REGISTERED 20829 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER

JAMES J BARLOW REGISTERED ENGINEER AGRICULTURE COMMERCE No. 106647 STATE OF TENNESSEE

C:\2024\240209\FH712278\FH71228.xls

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

APPROVED BY
NTA
9/12/2024
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
David Barts

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

| | |
|---|---|
| **GROUND SNOW LOAD (psf):** | **20 / 30** |
| **WIND SPEED (mph) (Vasd):** | **116** |

**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.

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

**N1**

| UPLIFT (lbs) | LC | CD | |
|---|---|---|---|
| 464 | WIND | 1.6 | 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 |
| | | | 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: | (4) 16d (0.162" x 3.5") COMMON NAILS THROUGH BAND INTO BC (ENDGRAIN) PLUS |
| | | | (5) 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 | |
| 296 | WIND | 1.6 | (2) 16d (0.162" x 3.5") COMMON NAILS THROUGH BAND INTO TOP PLATE (TOENAILED) |

**N4**

| UPLIFT (lbs) | LC | CD | |
|---|---|---|---|
| 231 | 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 |

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 19584 JAMES J. BARLOW
GEORGIA REGISTERED No. 23823 PROFESSIONAL ENGINEER JAMES J. BARLOW
COMMONWEALTH OF VIRGINIA James Joseph Barlow Lic. No. 035206 PROFESSIONAL ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL 11879 ENGINEER JAMES J. BARLOW
JAMES J BARLOW REGISTERED 20829 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER
JAMES J BARLOW REGISTERED ENGINEER AGRICULTURE COMMERCE No. 106647 STATE OF TENNESSEE


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

APPROVED BY
NTA
9/12/2024
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
David Barts

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

| | |
|---|---|
| **GROUND SNOW LOAD (psf):** | **20 / 30** |
| **WIND SPEED (mph) (Vasd):** | **116** |

**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.

**N5**

| UPLIFT (lbs) | LC | CD | |
|---|---|---|---|
| 229 | 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 | |
|---|---|---|---|
| 465 | WIND | 1.6 | 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 |
| | | | 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: | (4) 16d (0.162" x 3.5") COMMON NAILS THROUGH BAND INTO BC (ENDGRAIN) PLUS |
| | | | (5) 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 |

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 19584 JAMES J. BARLOW

GEORGIA REGISTERED No. 23823 PROFESSIONAL ENGINEER JAMES J. BARLOW

COMMONWEALTH OF VIRGINIA James Joseph Barlow Lic. No. 035206 PROFESSIONAL ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 11879 ENGINEER JAMES J. BARLOW

JAMES J BARLOW REGISTERED 20829 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER

JAMES J BARLOW REGISTERED ENGINEER AGRICULTURE COMMERCE No. 106647 STATE OF TENNESSEE

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 DESIGN CRITERIA

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

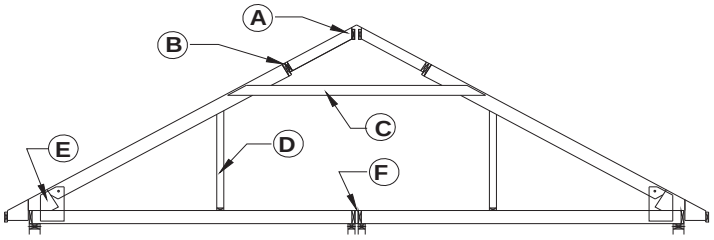
| | |
|---|---|
| GROUND SNOW LOAD (psf): | 20 / 30 |
| WIND SPEED (mph) (Vasd): | 116 |

**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.

APPROVED BY NTA 9/12/2024

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

David Barts




**TRUSS CONNECTIONS FOR 20 / 30 psf GSL & 116 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 |
| 307 | 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 (3) 10d (0.148" x 3") COMMON NAILS (FACE) THROUGH EACH END OF A MINIMUM 7/16" x 2" DEEP OSB TIE |
| | | | ALTERNATE: USE (5) 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) |
| 179 | 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 | (3) 8d (0.131" x 3") COMMON NAILS THROUGH SHEATHING INTO RAFTER EACH SIDE OF FLIP BREAK (FACE) |
| 280 | WIND | 1.6 | ALTERNATE: (5) 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) |
| 165 | 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 RIDGE BEAM INTO RAFTER (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**

APPROVED BY
NTA
9/12/2024
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
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):** | **116** |

**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.

**CONDITION "C" - COLLAR TIE:**

**TENSION**

| FORCE | LC | CD | |
|---|---|---|---|
| 0 | GRAVITY | 1 | (9) 16d (0.162" x 3.5") COMMON NAILS THROUGH TIE INTO RAFTER EACH END (FACE) |
| 1315 | WIND | 1.6 | ALTERNATE: (7) 16d (0.162" x 3.5") COMMON NAILS THROUGH TIE INTO RAFTER EACH END (FACE) PLUS |
| | | | (9) 16d (0.162" x 3.5") COMMON NAILS THROUGH TIE INTO BEARING BLOCK (FACE) |

**COMPRESSION**

| FORCE | LC | CD | |
|---|---|---|---|
| | | | ALTERNATE: (16) 8d (0.131" x 3") COMMON NAILS THROUGH TIE INTO RAFTER EACH END (FACE) |
| 1002 | GRAVITY | 1 | ALTERNATE: (14) 8d (0.131" x 3") COMMON NAILS THROUGH TIE INTO RAFTER EACH END (FACE) PLUS |
| 1014 | WIND | 1.6 | (3) 8d (0.131" x 3") COMMON NAILS THROUGH TIE INTO BEARING BLOCK (FACE) |

**CONDITION "D" - KNEE WALLS:**

**TENSION**

| 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 |
| 336 | 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)) |

**COMPRESSION**

| 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) |
| 346 | WIND | 1.6 | |

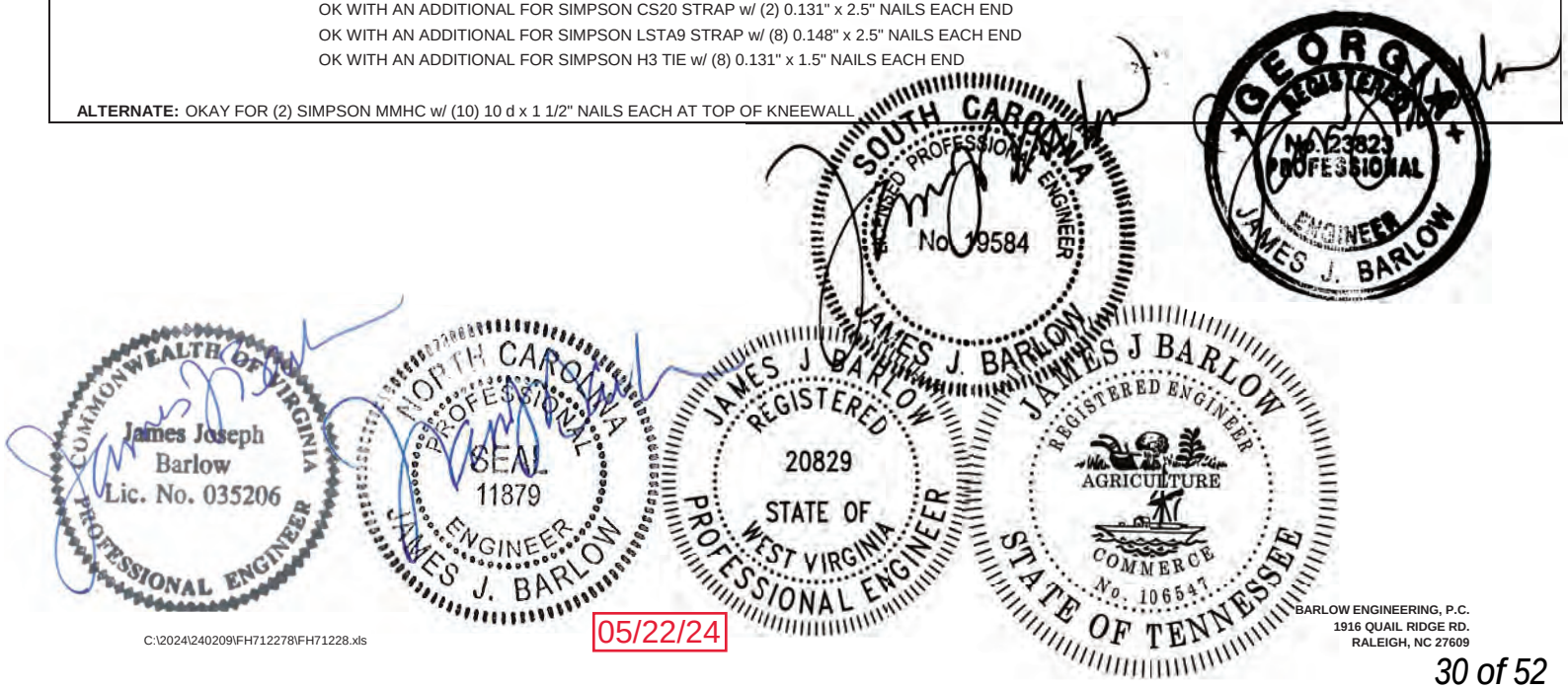
**ALTERNATE:** NO GOOD FOR SIMPSON MMHC w/ (10) 10 d x 1 1/2" NAILS AT TOP OF KNEEWALL

ADDITIONAL TENSION REQUIRED

| FORCE | LC | CD | |
|---|---|---|---|
| 109 | GRAVITY | 1 | *** STRAPS INSTALLED SO AS TO AVOID INTEREFERNCE *** |

OK WITH AN ADDITIONAL 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
OK WITH AN ADDITIONAL 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
OK WITH AN ADDITIONAL FOR SIMPSON CS20 STRAP w/ (2) 0.131" x 2.5" NAILS EACH END
OK WITH AN ADDITIONAL FOR SIMPSON LSTA9 STRAP w/ (8) 0.148" x 2.5" NAILS EACH END
OK WITH AN ADDITIONAL FOR 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




C:\2024\240209\FH712278\FH71228.xls

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**

APPROVED BY
NTA
9/12/2024
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
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):** | **116** |

**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.

**CONDITION "E" - HEEL:**

**TOP CHORD**

| 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 |
| 507 | WIND | 1.6 | VERTICAL | (9) 8d (0.131" x 3") COMMON NAILS THROUGH OSB GUSSET INTO RAFTER EACH SIDE (FACE) OR |
| 869 | | | 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) |

**BOTTOM CHORD**

| 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) |
| 507 | WIND | 1.6 | VERTICAL | |
| 869 | | | LATERAL | |

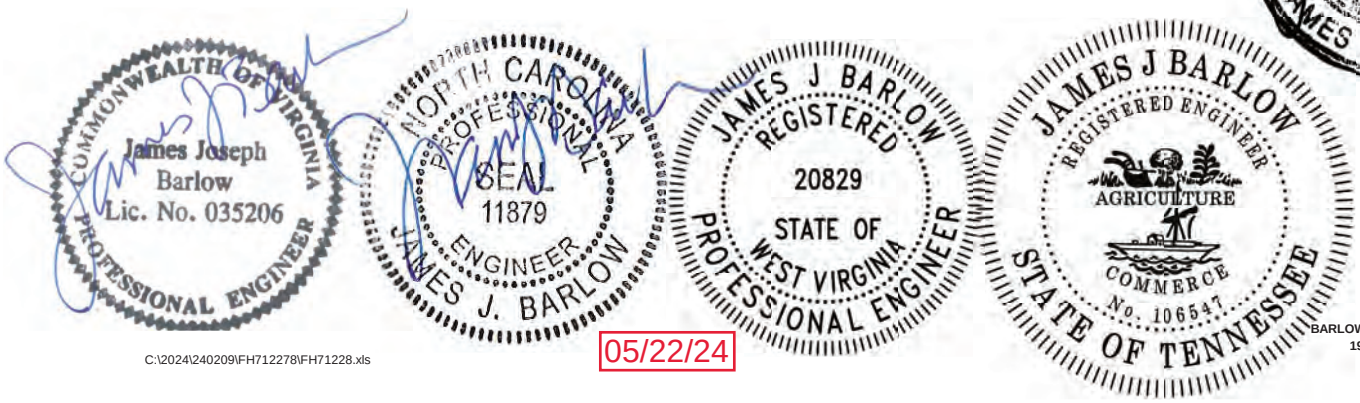
**CONDITION "F" - BOTTOM CHORD AT MATING LINE:**

**TENSION**

| FORCE | LC | CD | |
|---|---|---|---|
| 1158 | GRAVITY | 1 | NO GOOD FOR 1 1/2" x 26 ga STRAP |
| 864 | 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 |

**SHEAR**

| FORCE | LC | CD | | |
|---|---|---|---|---|
| 257 | GRAVITY | 1 | | (4) 16d (0.162" x 3.5") COMMON NAILS THROUGH RIDGE BEAM INTO RAFTER (ENDGRAIN) |
| 277 | 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 |


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

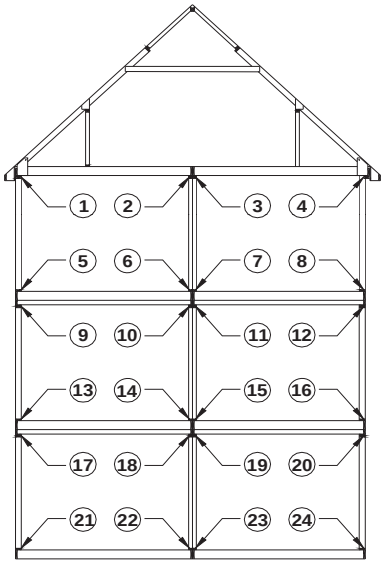
APPROVED BY
NTA
9/12/2024
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
David Barts

| | |
|---|---|
| **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 |

C:\2024\240209\FH712278\FH71228.xls

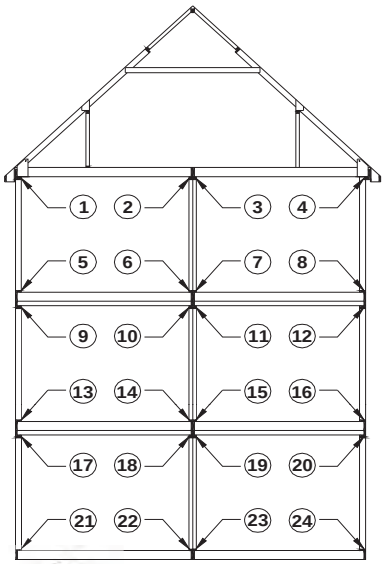
05/22/24

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

APPROVED BY
NTA
9/12/2024
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
David Barts

*USE MWFRS REACTIONS TO DESIGN CONNECTIONS*
**90 mph STANDARD WIND** *AND C&C REACTIONS TO DESIGN MEMBERS*

| 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*
**116 mph STANDARD WIND** *AND C&C REACTIONS TO DESIGN MEMBERS*

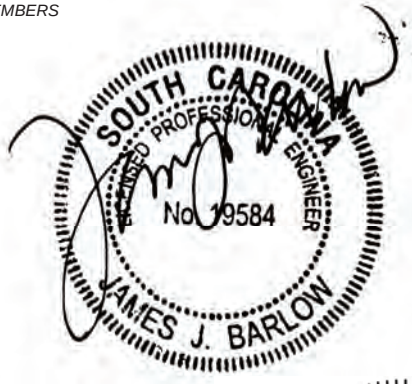
| LOCATION | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| 0.6 DL | 187 | 34 | 34 | 187 | 300 | 123 | 123 | 300 |
| MWFRS UPLIFT | -82 | -42 | -41 | -82 | - | - | - | - |
| C&C UPLIFT | -374 | -21 | -19 | -370 | -261 | - | - | -257 |
| LOCATION | 9 | 10 | 11 | 12 | 13 | 14 | 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*
**90 mph OVERHANG WIND** *AND C&C REACTIONS TO DESIGN MEMBERS*

| 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

**116 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 |

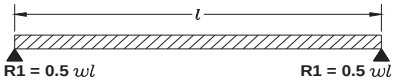
| | | | | |
|---|---|---|---|---|
| SUPPORT : | **N1** | UP = | 232 | plf |
| SUPPORT : | **N4** | UP = | 116 | plf |
| SUPPORT : | **N5** | UP = | 115 | plf |
| SUPPORT : | **N8** | UP = | 233 | plf |

APPROVED BY
NTA
9/12/2024
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
David Barts

**PORCH BEAM TO CEILING RIM CONNECTION:**

| | |
|---|---|
| **N1** | **USE (1) SIMPSON LSTA12 AT A MAXIMUM OF 41 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 40 in O.C.** |

**PORCH COLUMN CONNECTIONS:**
**(1) SPAN**



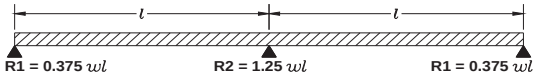

| SUPPORT : **N1** | | | |
|---|---|---|---|
| $l$ SPAN (ft) | $wl$ (lbs) | **R1** 0.5 $wl$ (lbs) | **R1 EACH END** 1/2" BOLT QTY |
| 4 | 928 | 464 | 1 |
| 6 | 1392 | 696 | 1 |
| 8 | 1856 | 928 | 1 |
| 10 | 2320 | 1160 | 1 |
| SUPPORT : **N4** | | | |
| $l$ SPAN (ft) | $wl$ (lbs) | **R1** 0.5 $wl$ (lbs) | **R1 EACH END** 1/2" BOLT QTY |
| 4 | 464 | 232 | 1 |
| 6 | 696 | 348 | 1 |
| 8 | 928 | 464 | 1 |
| 10 | 1160 | 580 | 1 |
| SUPPORT : **N5** | | | |
| $l$ SPAN (ft) | $wl$ (lbs) | **R1** 0.5 $wl$ (lbs) | **R1 EACH END** 1/2" BOLT QTY |
| 4 | 460 | 230 | 1 |
| 6 | 690 | 345 | 1 |
| 8 | 920 | 460 | 1 |
| 10 | 1150 | 575 | 1 |
| SUPPORT : **N8** | | | |
| $l$ SPAN (ft) | $wl$ (lbs) | **R1** 0.5 $wl$ (lbs) | **R1 EACH END** 1/2" BOLT QTY |
| 4 | 932 | 466 | 1 |
| 6 | 1398 | 699 | 1 |
| 8 | 1864 | 932 | 1 |
| 10 | 2330 | 1165 | 1 |

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

NATIONWIDE CUSTOM HOMES

APPROVED BY
NTA
9/12/2024
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
David Barts

**116 mph OVERHANG WIND**
**(2) EQUAL SPANS**




| SUPPORT : | N1 | | | | | | |
|---|---|---|---|---|---|---|---|
| $l$ SPAN (ft) | $wl$ (lbs) | R1 0.375 $wl$ (lbs) | R1 EACH END 1/2" BOLT QTY | R2 1.25 $wl$ (lbs) | (2) SIMPSON LS70 (lbs) | BOLT LOAD (lbs) | R2 EACH END 1/2" BOLT QTY |
| 4 | 928 | 348 | 1 | 1160 | 1830 | -670 | N/A |
| 6 | 1392 | 522 | 1 | 1740 | 1830 | -90 | N/A |
| 8 | 1856 | 696 | 1 | 2320 | 1830 | 490 | 1 |
| 10 | 2320 | 870 | 1 | 2900 | 1830 | 1070 | 1 |
| SUPPORT : | N4 | | | | | | |
| $l$ SPAN (ft) | $wl$ (lbs) | R1 0.375 $wl$ (lbs) | R1 EACH END 1/2" BOLT QTY | R2 1.25 $wl$ (lbs) | (2) SIMPSON LS70 (lbs) | BOLT LOAD (lbs) | R2 EACH END 1/2" BOLT QTY |
| 4 | 464 | 174 | 1 | 580 | 1830 | -1250 | N/A |
| 6 | 696 | 261 | 1 | 870 | 1830 | -960 | N/A |
| 8 | 928 | 348 | 1 | 1160 | 1830 | -670 | N/A |
| 10 | 1160 | 435 | 1 | 1450 | 1830 | -380 | N/A |
| SUPPORT : | N5 | | | | | | |
| $l$ SPAN (ft) | $wl$ (lbs) | R1 0.375 $wl$ (lbs) | R1 EACH END 1/2" BOLT QTY | R2 1.25 $wl$ (lbs) | (2) SIMPSON LS70 (lbs) | BOLT LOAD (lbs) | R2 EACH END 1/2" BOLT QTY |
| 4 | 460 | 173 | 1 | 575 | 1830 | -1255 | N/A |
| 6 | 690 | 259 | 1 | 863 | 1830 | -967 | N/A |
| 8 | 920 | 345 | 1 | 1150 | 1830 | -680 | N/A |
| 10 | 1150 | 431 | 1 | 1438 | 1830 | -392 | N/A |
| SUPPORT : | N8 | | | | | | |
| $l$ SPAN (ft) | $wl$ (lbs) | R1 0.375 $wl$ (lbs) | R1 EACH END 1/2" BOLT QTY | R2 1.25 $wl$ (lbs) | (2) SIMPSON LS70 (lbs) | BOLT LOAD (lbs) | R2 EACH END 1/2" BOLT QTY |
| 4 | 932 | 350 | 1 | 1165 | 1830 | -665 | N/A |
| 6 | 1398 | 524 | 1 | 1748 | 1830 | -82 | N/A |
| 8 | 1864 | 699 | 1 | 2330 | 1830 | 500 | 1 |
| 10 | 2330 | 874 | 1 | 2913 | 1830 | 1083 | 1 |

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 19584 JAMES J. BARLOW

GEORGIA REGISTERED No. 23823 PROFESSIONAL ENGINEER JAMES J. BARLOW

COMMONWEALTH OF VIRGINIA James Joseph Barlow Lic. No. 035206 PROFESSIONAL ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 11879 ENGINEER JAMES J. BARLOW

JAMES J BARLOW REGISTERED 20829 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER

JAMES J BARLOW REGISTERED ENGINEER AGRICULTURE COMMERCE No. 106547 STATE OF TENNESSEE

05/22/24



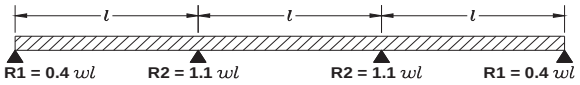
BARLOW ENGINEERING, P.C.
1916 QUAIL RIDGE RD.
RALEIGH, NC 27609

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

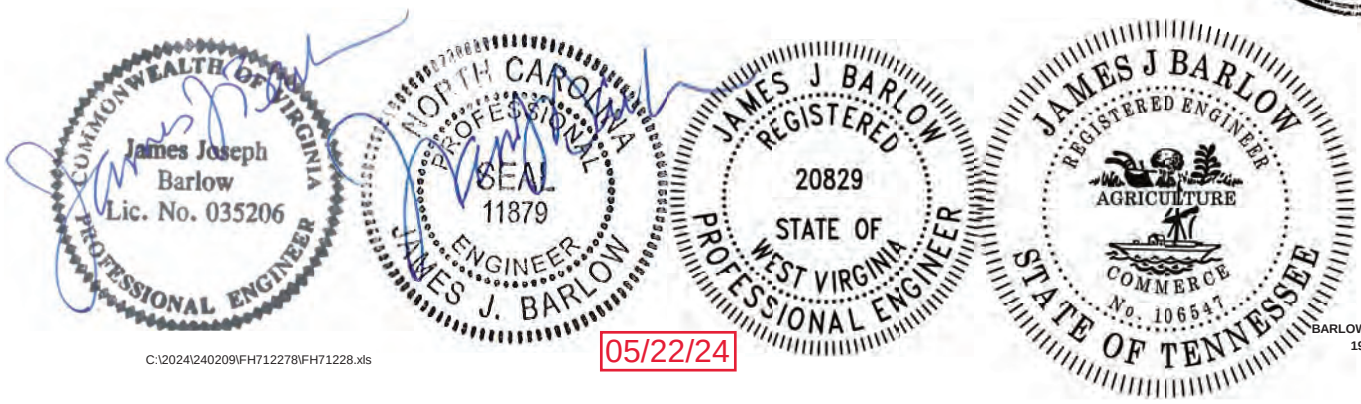
NATIONWIDE CUSTOM HOMES

APPROVED BY
NTA
9/12/2024
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
David Barts

**116 mph OVERHANG WIND**
**(3) EQUAL SPANS**




| SUPPORT : N1 | | | | | | | |
|---|---|---|---|---|---|---|---|
| $l$ SPAN (ft) | $wl$ (lbs) | R1 0.4 $wl$ (lbs) | R1 EACH END 1/2" BOLT QTY | R2 1.1 $wl$ (lbs) | (2) SIMPSON LS70 (lbs) | BOLT LOAD (lbs) | R2 EACH END 1/2" BOLT QTY |
| 4 | 928 | 371 | 1 | 1021 | 1830 | -809 | N/A |
| 6 | 1392 | 557 | 1 | 1531 | 1830 | -299 | N/A |
| 8 | 1856 | 742 | 1 | 2042 | 1830 | 212 | 1 |
| 10 | 2320 | 928 | 1 | 2552 | 1830 | 722 | 1 |
| SUPPORT : N4 | | | | | | | |
| $l$ SPAN (ft) | $wl$ (lbs) | R1 0.4 $wl$ (lbs) | R1 EACH END 1/2" BOLT QTY | R2 1.1 $wl$ (lbs) | (2) SIMPSON LS70 (lbs) | BOLT LOAD (lbs) | R2 EACH END 1/2" BOLT QTY |
| 4 | 464 | 186 | 1 | 510 | 1830 | -1320 | N/A |
| 6 | 696 | 278 | 1 | 766 | 1830 | -1064 | N/A |
| 8 | 928 | 371 | 1 | 1021 | 1830 | -809 | N/A |
| 10 | 1160 | 464 | 1 | 1276 | 1830 | -554 | N/A |
| SUPPORT : N5 | | | | | | | |
| $l$ SPAN (ft) | $wl$ (lbs) | R1 0.4 $wl$ (lbs) | R1 EACH END 1/2" BOLT QTY | R2 1.1 $wl$ (lbs) | (2) SIMPSON LS70 (lbs) | BOLT LOAD (lbs) | R2 EACH END 1/2" BOLT QTY |
| 4 | 460 | 184 | 1 | 506 | 1830 | -1324 | N/A |
| 6 | 690 | 276 | 1 | 759 | 1830 | -1071 | N/A |
| 8 | 920 | 368 | 1 | 1012 | 1830 | -818 | N/A |
| 10 | 1150 | 460 | 1 | 1265 | 1830 | -565 | N/A |
| SUPPORT : N8 | | | | | | | |
| $l$ SPAN (ft) | $wl$ (lbs) | R1 0.4 $wl$ (lbs) | R1 EACH END 1/2" BOLT QTY | R2 1.1 $wl$ (lbs) | (2) SIMPSON LS70 (lbs) | BOLT LOAD (lbs) | R2 EACH END 1/2" BOLT QTY |
| 4 | 932 | 373 | 1 | 1025 | 1830 | -805 | N/A |
| 6 | 1398 | 559 | 1 | 1538 | 1830 | -292 | N/A |
| 8 | 1864 | 746 | 1 | 2050 | 1830 | 220 | 1 |
| 10 | 2330 | 932 | 1 | 2563 | 1830 | 733 | 1 |


C:\2024\240209\FH712278\FH71228.xls

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**

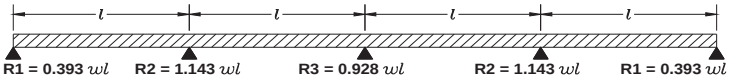
NATIONWIDE CUSTOM HOMES

APPROVED BY
NTA
9/12/2024
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
David Barts

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 19584 JAMES J. BARLOW

GEORGIA REGISTERED No. 023823 PROFESSIONAL ENGINEER JAMES J. BARLOW

**116 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 | 928 | 365 | 1 | 1061 | 1830 | -769 | N/A | 861 | 1830 | -969 | N/A |
| 6 | 1392 | 547 | 1 | 1591 | 1830 | -239 | N/A | 1292 | 1830 | -538 | N/A |
| 8 | 1856 | 729 | 1 | 2121 | 1830 | 291 | 1 | 1722 | 1830 | -108 | N/A |
| 10 | 2320 | 912 | 1 | 2652 | 1830 | 822 | 1 | 2153 | 1830 | 323 | 1 |
| 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 | 464 | 182 | 1 | 530 | 1830 | -1300 | N/A | 431 | 1830 | -1399 | N/A |
| 6 | 696 | 274 | 1 | 796 | 1830 | -1034 | N/A | 646 | 1830 | -1184 | N/A |
| 8 | 928 | 365 | 1 | 1061 | 1830 | -769 | N/A | 861 | 1830 | -969 | N/A |
| 10 | 1160 | 456 | 1 | 1326 | 1830 | -504 | N/A | 1076 | 1830 | -754 | 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 | 460 | 181 | 1 | 526 | 1830 | -1304 | N/A | 427 | 1830 | -1403 | N/A |
| 6 | 690 | 271 | 1 | 789 | 1830 | -1041 | N/A | 640 | 1830 | -1190 | N/A |
| 8 | 920 | 362 | 1 | 1052 | 1830 | -778 | N/A | 854 | 1830 | -976 | N/A |
| 10 | 1150 | 452 | 1 | 1314 | 1830 | -516 | N/A | 1067 | 1830 | -763 | 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 | 932 | 366 | 1 | 1065 | 1830 | -765 | N/A | 865 | 1830 | -965 | N/A |
| 6 | 1398 | 549 | 1 | 1598 | 1830 | -232 | N/A | 1297 | 1830 | -533 | N/A |
| 8 | 1864 | 733 | 1 | 2131 | 1830 | 301 | 1 | 1730 | 1830 | -100 | N/A |
| 10 | 2330 | 916 | 1 | 2663 | 1830 | 833 | 1 | 2162 | 1830 | 332 | 1 |

COMMONWEALTH OF VIRGINIA James Joseph Barlow Lic. No. 035206 PROFESSIONAL ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 11879 ENGINEER JAMES J. BARLOW

JAMES J BARLOW REGISTERED 20829 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER

JAMES J BARLOW REGISTERED ENGINEER AGRICULTURE COMMERCE No. 106547 STATE OF TENNESSEE

05/22/24



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

# *Smart*Exhaust™

## 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

APPROVED BY NTA 9/12/2024
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
David Barts

AirCycler®

**www.AirCycler.com | 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.

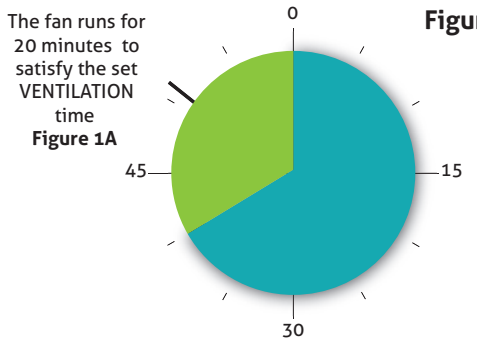
| | | | | |
|---|---|---|---|---|
| Code Required Ventilation in CFM / Fan CFM | = | Hour Fraction | | |
| Hour Fraction | × | 60 Minutes | = | Ventilation Settings in minutes |

CFM = Cubic Feet Per Minute

## Example

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

**A Normal Hour of Operation with No Occupancy**




The fan runs for 20 minutes to satisfy the set VENTILATION time
**Figure 1A**

**Figure 1**



**Figure 1**

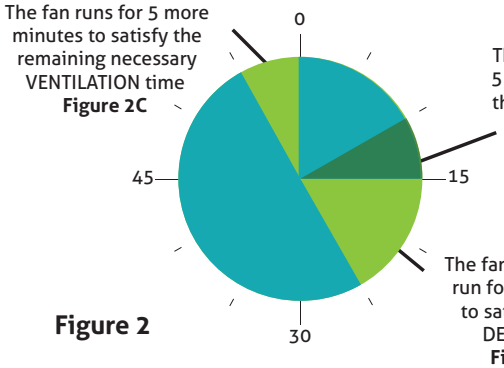
- The VENTILATION dial is set to 20 min/hr.
- The SmartExhaust™'s microprocessor performs the following equation to determine when to run the fan to meet the VENTILATION setting, based on 1 hour (60 mins).

  **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)

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




The fan runs for 5 more minutes to satisfy the remaining necessary VENTILATION time
**Figure 2C**

The fan runs for 5 minutes while the bathroom is occupied
**Figure 2A**

The fan continues to run for 10 minutes to satisfy the set DELAY time
**Figure 2B**

**Figure 2**

**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)

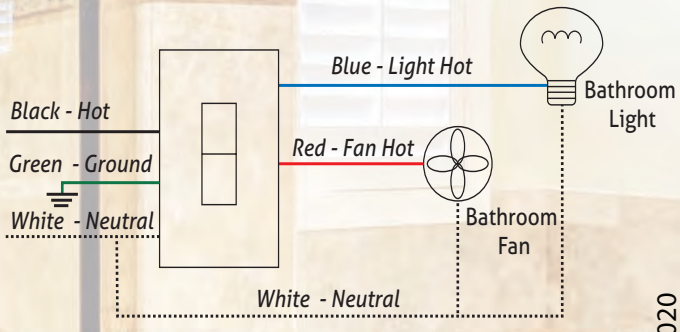
  **5 MINS OF MANUAL USE + 10 MINS OF DELAY TIME = 15 MINUTES OF VENTILATION**

- 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 |

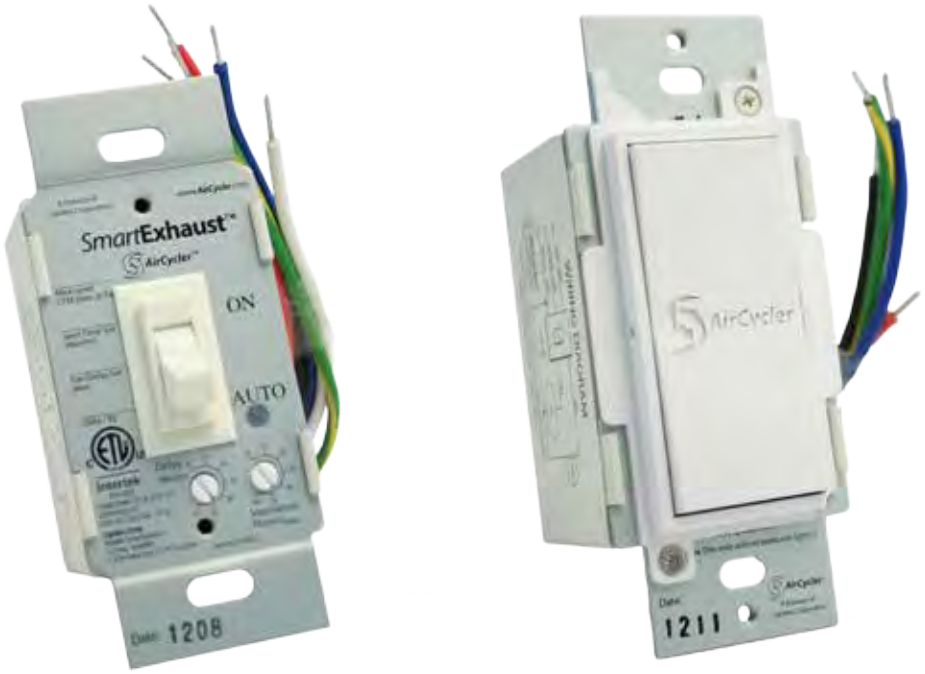
*This product may be covered by one or more of the following patents and patents pending: 8,185,244*

## Wiring Diagram



AirCycler®
Ventilation Products

APPROVED BY
NTA
9/12/2024
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
David Barts




# SmartExhaust™
## Installation & User's Guide

VENTILATION MADE BREEZY!™
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.

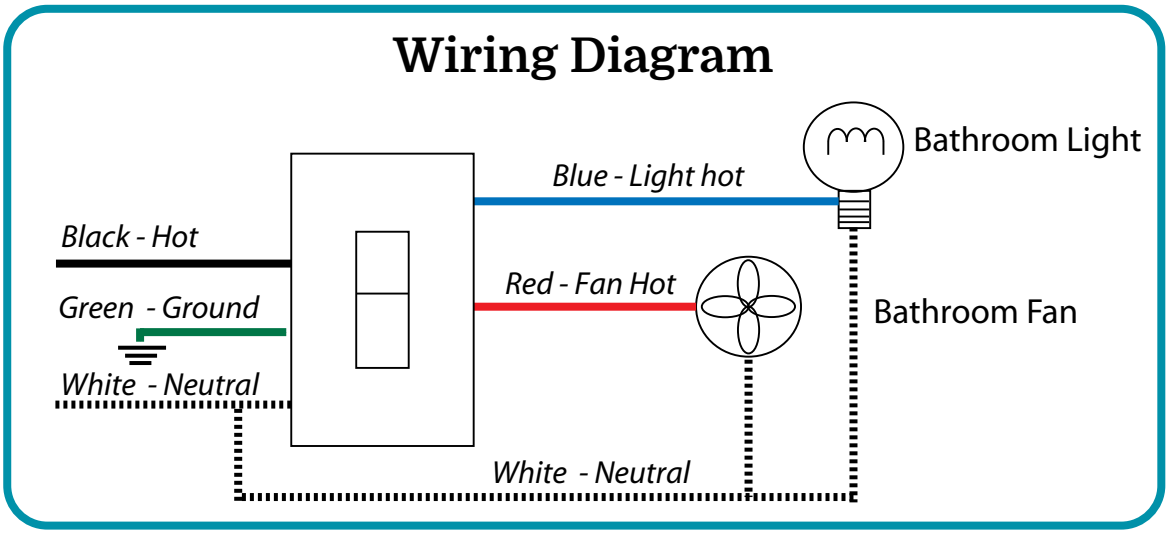
## INSTALLATION

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 ¾ 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.

APPROVED BY
NTA
9/12/2024
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
David Barts

## 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.

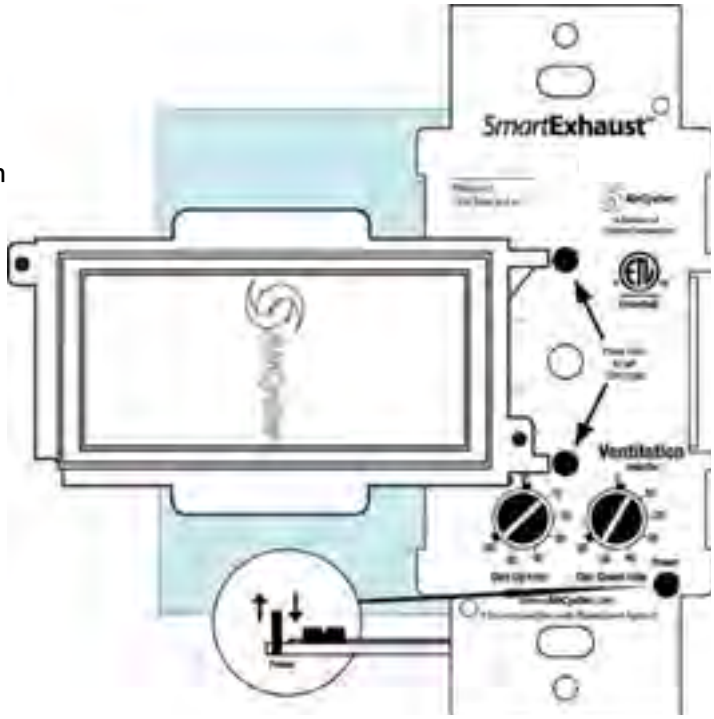
APPROVED BY
NTA
9/12/2024
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
David Barts

## 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 VENTLATION 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 microprosessor is running.

### Is the device wired correctly?

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

APPROVED BY
NTA
9/12/2024
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
David Barts

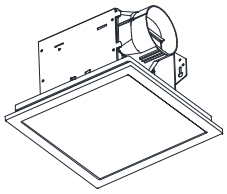
**Technical Support:**

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 (OSHAct).
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.

### 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).

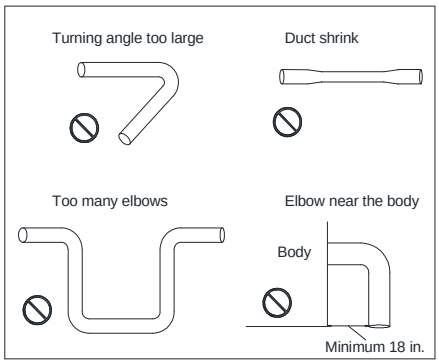



**Fig. A**

### 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.

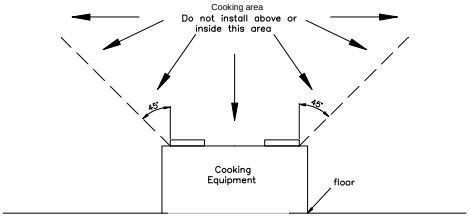
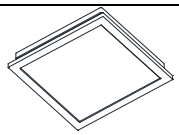
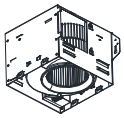



**Fig. B**

### SUPPLIED ACCESSORIES

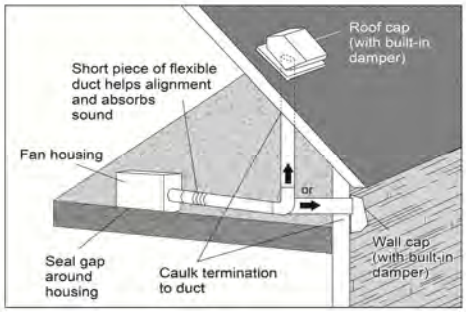
| Part name | Appearance | Quantity |
|---|---|---|
| Grille |  | 1 |
| Fan & Housing |  | 1 |
| 4" Duct |  | 1 |
| Screw (M4x12) |  | 3 |

APPROVED BY
NTA
9/12/2024

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

### 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. | ITG100ELED |
|---|---|
| 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 $mm^2$) 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.

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

**Fig. C-1**

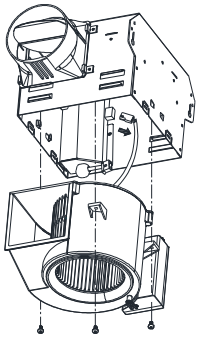


**Fig. D**

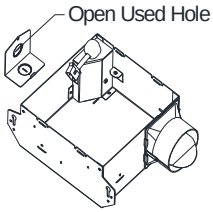



**Fig. C-2**

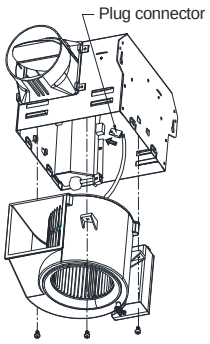



**Fig. E**

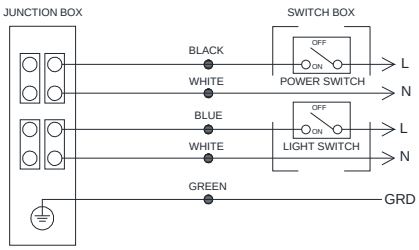



**Fig. F**

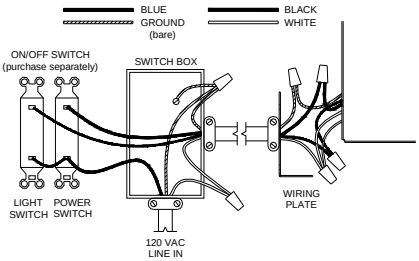



**Fig. G**

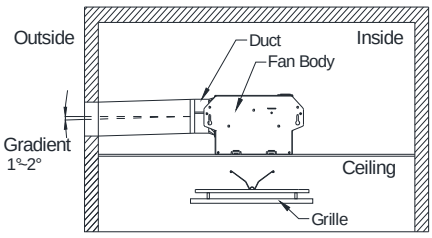



**Fig. H**

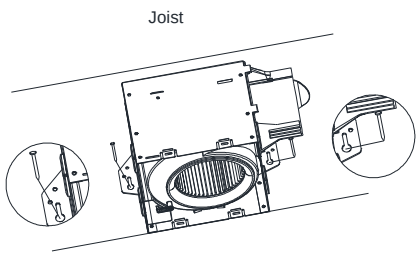



**Fig. I**

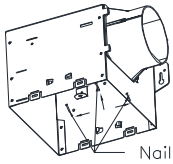



**Fig. J**

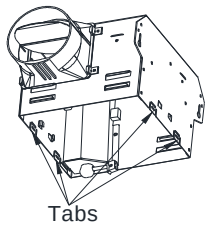
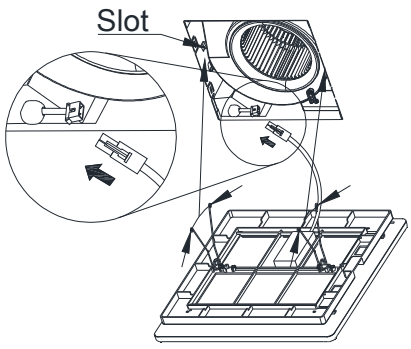



**Fig. K**




## 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:**

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

**CLEANING:**

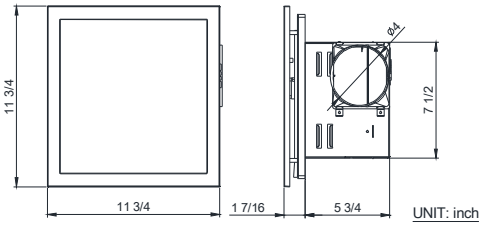
1. Pull down the spring to remove the grille.
2. Wash and clean the grille. (Use non-abrasive kitchen detergent and wipe dry with a new cloth.)
3. Remove dust and dirt from the ventilating fan using a vacuum cleaner.
4. Using a cloth dampened with kitchen detergent, remove any dirt from the ventilating fan. Wipe dry with a new cloth.
5. 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.

## 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**

1. 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.
2. 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.
3. 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.
4. This warranty does not extend to fluorescent lamp starters and tubes.
5. The warranty does not cover if user does not comply with manufacture's installation manual.
6. To qualify for warranty service, you must notify Delta Electronics at the address or telephone number below.
7. 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**

APPROVED BY NTA 9/12/2024

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

David Barts

AIR VENT INC.

# 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

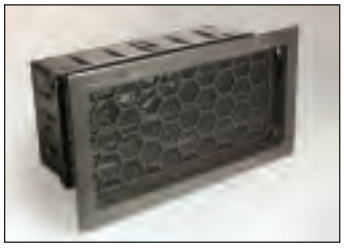
**HEAVY-DUTY**
**MODEL: ST**

- 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

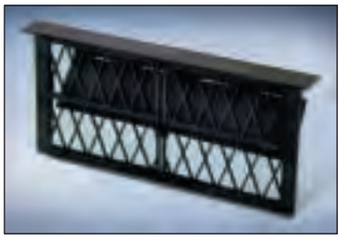
**THERMOSTAT; HUMIDISTATS**
**HUMIDISTAT MODELS: HUB & HUC**

- 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

APPROVED BY
NTA
9/12/2024

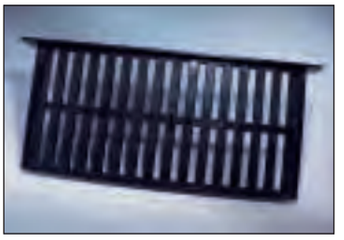
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
David Barts

## Manual Foundation Vents – Plastic



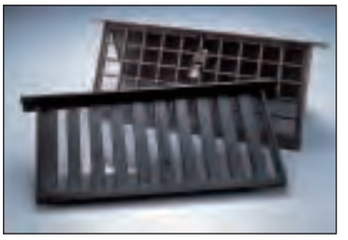
ACCORDION DAMPER
MODEL: 101

- Folding, accordion style damper
- NFA 68″
- Colors: black, brown, gray



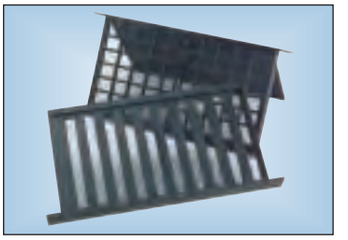
HEAVY-DUTY SLIDER
MODEL: 303

- 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: JBDPBL

- 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)*

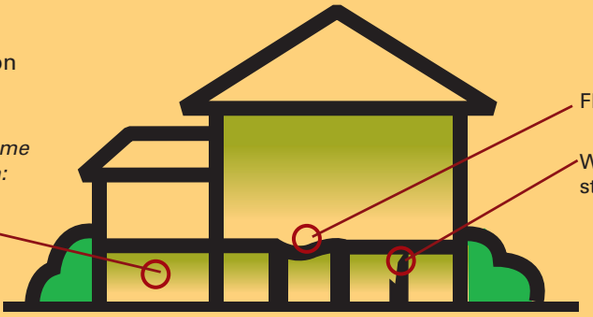
- 7″ x 12″ vent for 6″ x 11″opening
- NFA 23″
- Colors: black, brown, gray

### Foundation ventilation helps protect against conditions that ca n 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

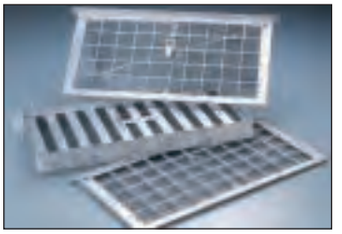



## Manual Replacement

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″

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

APPROVED BY NTA 9/12/2024

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

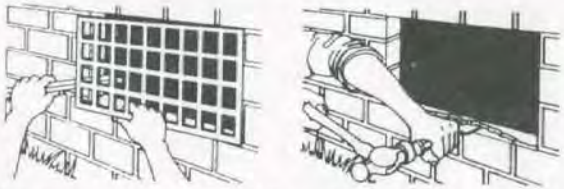
David Barts

A GIBRALTAR Company

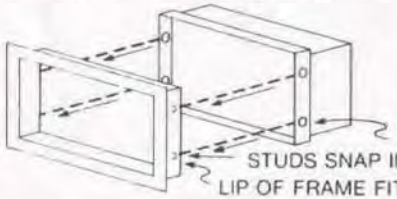
# AUTOMATIC VENT
## INSTALLATION INSTRUCTIONS

SERIES-5 2-PIECE VENT
WITH REMOVABLE FRAME

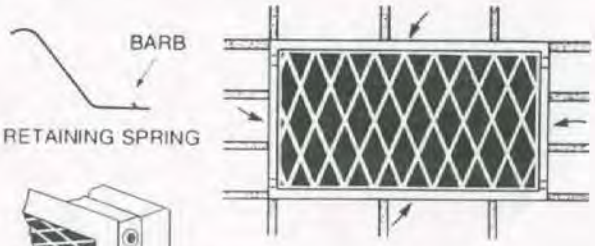
1. Remove the old vent with hammer and chisel, crow bar, etc., and clean protruding and loose mortar from opening with chisel. Vent MUST slide in easily. If it doesn't, use chisel to enlarge opening.



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.

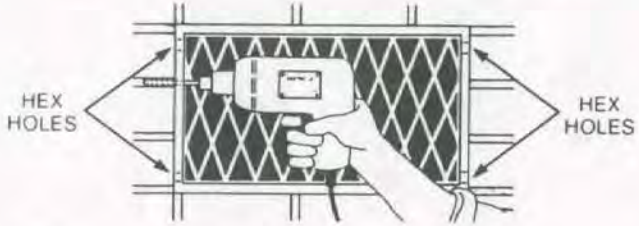



3. Attach a retaining spring to 2 opposite sides of the vent—either left and right or top and bottom depending on which produces the tighter fit in the foundation wall. Slide the barbed ends of the springs into the slots to attach.



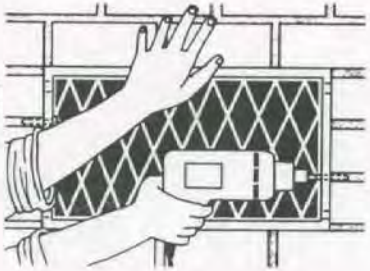



4. Insert vent into foundation opening either from the outside of the crawl space or from the inside. Be sure it fits easily. DO NOT USE FORCE. Hold TIGHTLY against the wall after adjusting for alignment. Using a ¼" masonry carbide tipped bit, drill through the vent into a mortar joint on each side. 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.

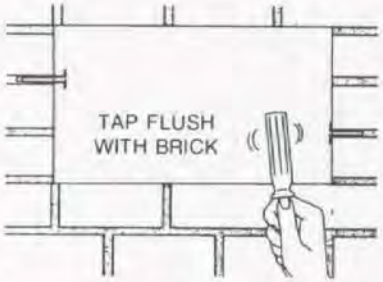



NOTE:

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.

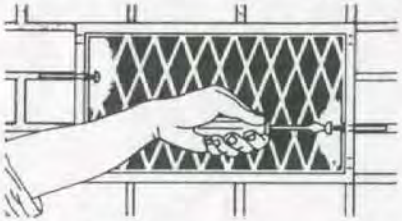



Be sure to drill the hole in the mortar joint deep enough the first time. Redrilling may make the hole too big for the anchor.

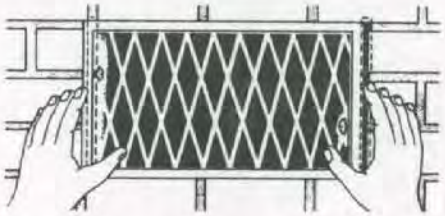



5. Remove the vent from the wall temporarily. Blow loose material out of the holes and insert the screw anchors. Tap the anchors all the way flush with the brick using a screw driver handle.

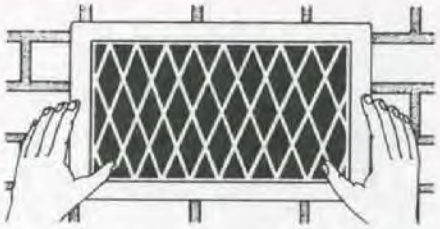
6. Mount vent using screws supplied. Turn screw until head is just flush with frame. Do not use excess pressure. To start the screw in the anchor it is helpful to bend the vent slightly away from the wall to see the tip of the screw enter the anchor. While turning the screw, if the vent begins to come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



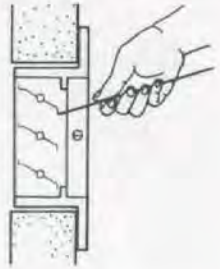
7. Before fully tightening the screws, adjust the vent left to right to insure that it is centered in the foundation opening.



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
NTA
9/12/2024
Approval of this document does not authorize or approve any deviation or deviations from the requirements of applicable State Laws.
David Barts

TEMP-VENT®
P.O. BOX 2030
SHELBY, N.C. 28150