

**PLANS DESIGNED TO THE
2018 NORTH CAROLINA STATE
RESIDENTIAL BUILDING CODE**

MEAN ROOF HEIGHT: 18'-5" HEIGHT TO RIDGE: 24'-9"

| CLIMATE ZONE | ZONE 3A | ZONE 4A | ZONE 5A |
|----------------------------|------------|------------|------------|
| FENESTRATION U-FACTOR | 0.35 | 0.35 | 0.35 |
| SKYLIGHT U-FACTOR | 0.55 | 0.55 | 0.55 |
| GLAZED FENESTRATION SHGC | 0.30 | 0.30 | 0.30 |
| CEILING R-VALUE | 38 or 30ci | 38 or 30ci | 38 or 30ci |
| WALL R-VALUE | 15 | 15 | 19 |
| FLOOR R-VALUE | 19 | 19 | 30 |
| * BASEMENT WALL R-VALUE | 5/13 | 10/15 | 10/15 |
| ** SLAB R-VALUE | 0 | 10 | 10 |
| * CRAWL SPACE WALL R-VALUE | 5/13 | 10/15 | 10/19 |

* 10/13" MEANS R-10 SHEATHING INSULATION OR R-13 CAVITY INSULATION
** INSULATION DEPTH WITH MONOLITHIC SLAB 24" OR FROM INSPECTION GAP TO BOTTOM OF FOOTING; INSULATION DEPTH WITH STEM WALL SLAB 24" OR TO BOTTOM OF FOUNDATION WALL

DESIGNED FOR WIND SPEED OF 120 MPH, 3 SECOND GUST (93 FASTEST MILE) EXPOSURE "B"

COMPONENT & CLADDING DESIGNED FOR THE FOLLOWING LOADS

| MEAN ROOF | UP TO 30' | 30'-1" TO 35' | 35'-1" TO 40' | 40'-1" TO 45' |
|-----------|-----------|---------------|---------------|---------------|
| ZONE 1 | 14.2 | -15.0 | 14.9 | -15.8 |
| ZONE 2 | 14.2 | -18.0 | 14.9 | -18.9 |
| ZONE 3 | 14.2 | -18.0 | 14.9 | -18.9 |
| ZONE 4 | 15.5 | -16.0 | 16.3 | -16.8 |
| ZONE 5 | 15.5 | -20.0 | 16.3 | -21.0 |

ROOF VENTILATION

SECTION R806
R806.1 Ventilation required. Enclosed attics and enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters shall have cross ventilation for each separate space by ventilating openings protected against the entrance of rain or snow. Ventilation openings shall have a least dimension of 1/16 inch (1.6 mm) minimum and 1/4 inch (6.4 mm) maximum. Ventilation openings having a least dimension larger than 1/4 inch (6.4 mm) shall be provided with corrosion-resistant wire cloth screening, hardware cloth, or similar material with openings having a least dimension of 1/16 inch (1.6 mm) minimum and 1/4 inch (6.4 mm) maximum. Openings in roof framing members shall conform to the requirements of Section R802.7.

R806.2 Minimum area. The total net free ventilating area shall not be less than 1/150 of the area of the space ventilated except that reduction of the total area to 1/300 is permitted provided that at least 50 percent and not more than 80 percent of the required ventilating area is provided by ventilators located in the upper portion of the space to be ventilated at least 3 feet (914 mm) above the eave or cornice vents with the balance of the required ventilation provided by eave or cornice vents. As an alternative, the net free cross-ventilation area may be reduced to 1/300 when a Class I or II vapor retarder is installed on the warm-in-winter side of the ceiling.

Exceptions:
1. Enclosed attic/rafter spaces requiring less than 1 square foot (0.0929 m2) of ventilation may be vented with continuous soffit ventilation only.
2. Enclosed attic/rafter spaces over unconditioned space may be vented with continuous soffit vent only.

SQUARE FOOTAGE OF ROOF TO BE VENTED = 2,134 SQ.FT.
NET FREE CROSS VENTILATION NEEDED:
WITHOUT 50% TO 80% OF VENTING 3'-0" ABOVE EAVE = 14.23 SQ.FT.
WITH 50% TO 80% OF VENTING 3'-0" ABOVE EAVE; OR WITH CLASS I OR II VAPOR RETARDER ON WARM-IN-WINTER SIDE OF CEILING = 7.11 SQ.FT.

GUARD RAIL NOTES

SECTION R312
R312.1 Where required. Guards shall be located along open-sided walking surfaces, including stairs, ramps and landings, that are located more than 30 inches (762 mm) measured vertically to the floor or grade below at any point within 36 inches (914 mm) horizontally to the edge of the open side. Insect screening shall not be considered as a guard.

R312.2 Height. Required guards at open-sided walking surfaces, including stairs, porches, balconies or landings, shall be not less than 36 inches (914 mm) high measured vertically above the adjacent walking surface, adjacent fixed seating or the line connecting the leading edges of the treads.

Exceptions:
1. Guards on the open sides of stairs shall have a height not less than 34 inches (864 mm) measured vertically from a line connecting the leading edges of the treads.

2. Where the top of the guard also serves as a handrail on the open sides of stairs, the top of the guard shall not be not less than 34 inches (864 mm) and not more than 38 inches (965 mm) measured vertically from a line connecting the leading edges of the treads.

R312.3 Opening limitations. Required guards shall not have openings from the walking surface to the required guard height which allow passage of a sphere 4 inches (102 mm) in diameter.

Exceptions:
1. The triangular openings at the open side of a stair, formed by the riser, tread and bottom rail of a guard, shall not allow passage of a sphere 6 inches (153 mm) in diameter.

2. Guards on the open sides of stairs shall not have openings which allow passage of a sphere 4 3/8 inches (111 mm) in diameter.

AIR LEAKAGE

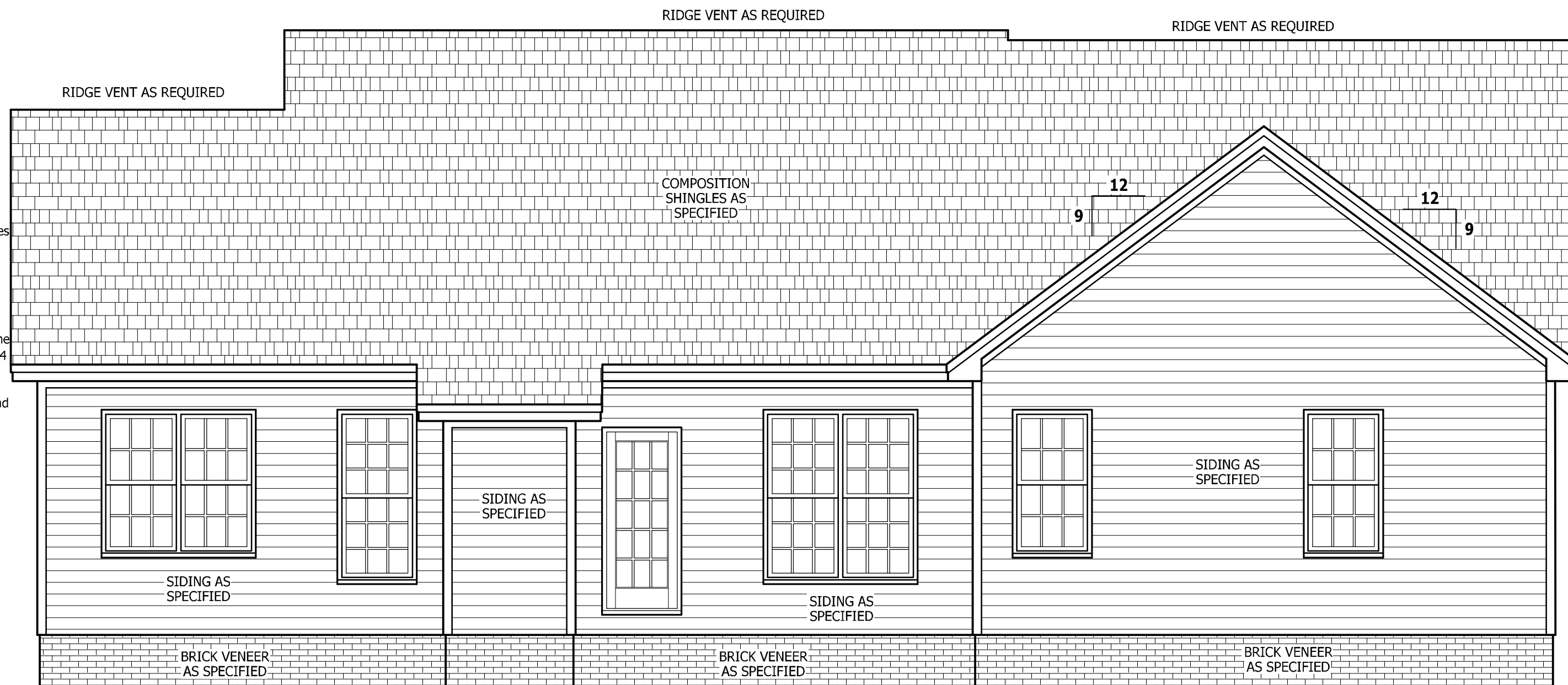
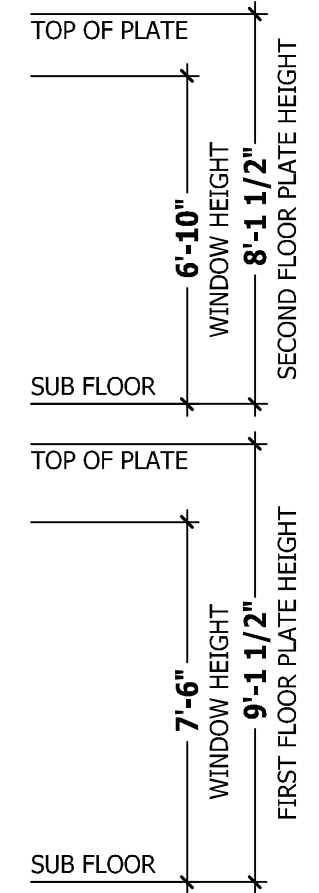
Section N1102.4
N1102.4.1 Building thermal envelope. The building thermal envelope shall be durably sealed with an air barrier system to limit infiltration. The sealing methods between dissimilar materials shall allow for differential expansion and contraction. For all homes, where present, the following shall be caulked, gasketed, weather stripped or otherwise sealed with an air barrier material or solid material consistent with Appendix E-2.4 of this code:

1. Blocking and sealing floor/ceiling systems and under knee walls open to unconditioned or exterior space.
2. Capping and sealing shafts or chases, including flue shafts.
3. Capping and sealing soffit or dropped ceiling areas.



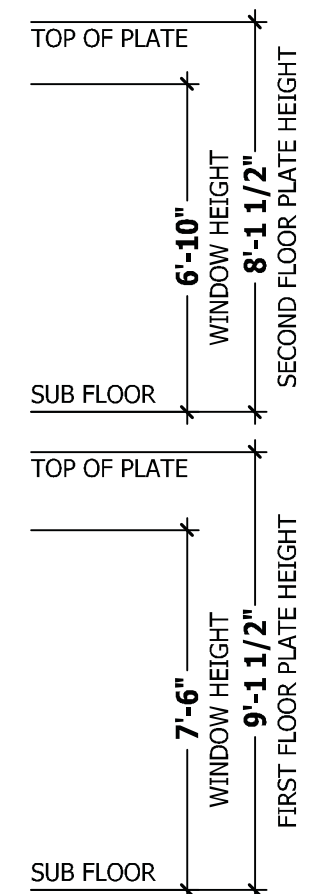
FRONT ELEVATION

SCALE 1/4" = 1'-0"



REAR ELEVATION

SCALE 1/4" = 1'-0"



PURCHASER MUST VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE CONSTRUCTION BEGINS. HAYNES HOME PLANS, INC. ASSUMES NO LIABILITY FOR CONTRACTORS PRACTICES AND PROCEDURES. CODES AND CONDITIONS MAY VARY WITH LOCATION. A LOCAL DESIGNER, ARCHITECT OR ENGINEER SHOULD BE CONSULTED BEFORE CONSTRUCTION. THESE DRAWINGS ARE INSTRUMENTS OF SERVICE AND AS SUCH SHALL REMAIN PROPERTY OF THE DESIGNER.

FRONT & REAR ELEVATIONS

Kraken

Southern Tide Homes, LLC
1327 Landmark Road
Woo Springs, NC 27592

HAYNES HOME PLANS, INC.
P.O. Box 702, White Forest, NC 27888 919-435-6180 Fax: 1-866-494-0906

| SQUARE FOOTAGE HEATED | |
|-----------------------|-------------|
| FIRST FLOOR | 1527 SQ.FT. |
| SECOND FLOOR | 315 SQ.FT. |
| TOTAL | 1842 SQ.FT. |
| UNHEATED | |
| GARAGE | 459 SQ.FT. |
| FRONT PORCH | 160 SQ.FT. |
| STORAGE | 276 SQ.FT. |
| TOTAL | 895 SQ.FT. |

© Copyright 2013 Haynes Home Plans, Inc.

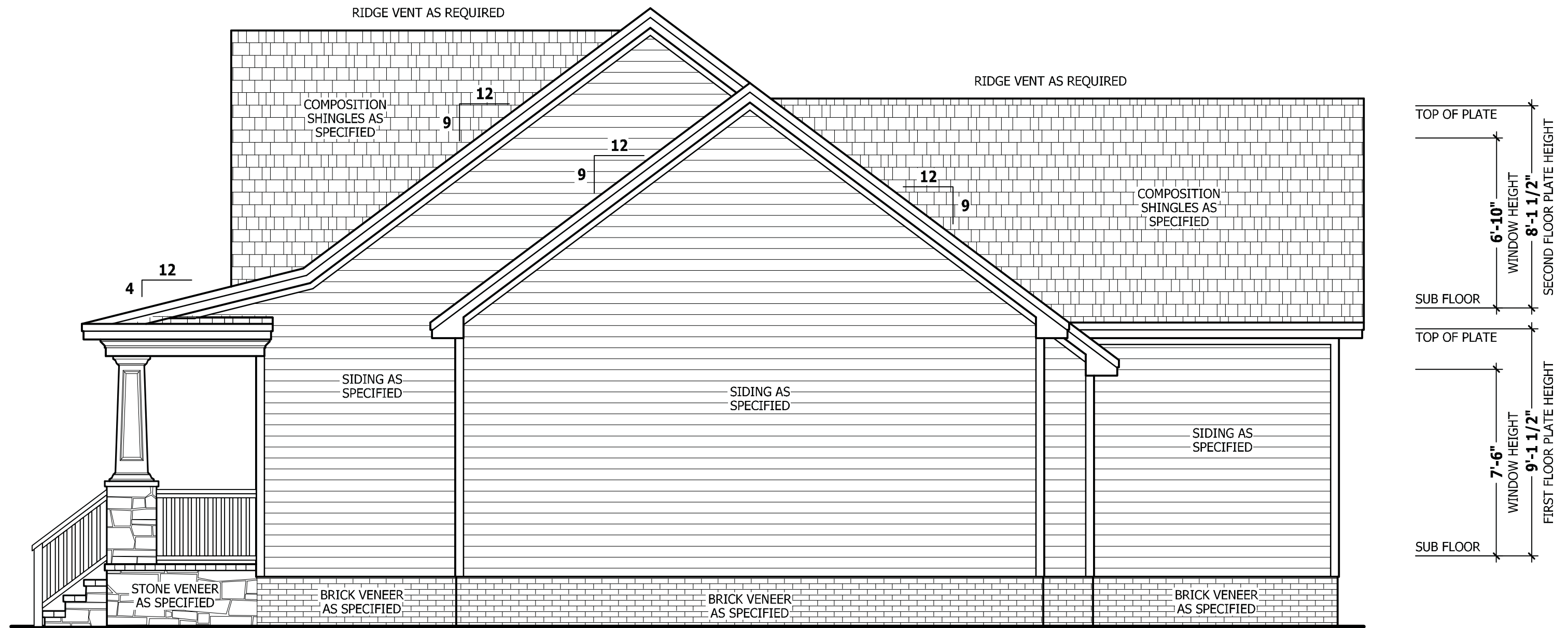
3/24/2020

191104B

PAGE 1 OF 5

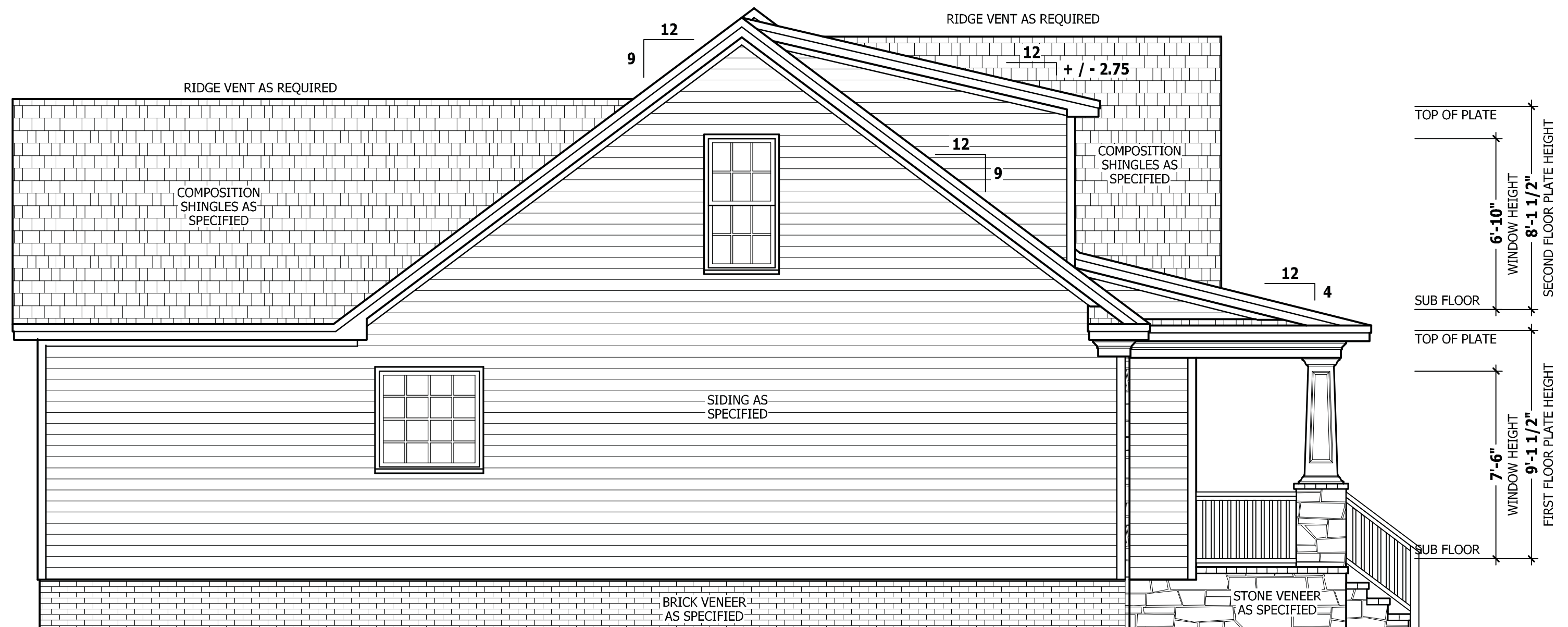
Z:\Builder\Southern Tide Homes\1911048 Kraken\1911048 Kraken L.H.aec

PURCHASER MUST VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE CONSTRUCTION BEGINS.
 HAYNES HOME PLANS, INC. ASSUMES NO LIABILITY FOR CONTRACTORS PRACTICES AND PROCEDURES.
 CODES AND CONDITIONS MAY VARY WITH LOCATION. A LOCAL DESIGNER, ARCHITECT OR ENGINEER SHOULD BE CONSULTED BEFORE CONSTRUCTION.
 THESE DRAWING ARE INSTRUMENTS OF SERVICE AND AS SUCH SHALL REMAIN PROPERTY OF THE DESIGNER.



RIGHT SIDE ELEVATION

SCALE 1/4" = 1'-0"



LEFT SIDE ELEVATION

SCALE 1/4" = 1'-0"

SIDE ELEVATIONS

Kraken

Southern Tide Homes, LLC
 1327 Landmark Road
 Wioow Springs, NC 27592

HAYNES
HOME PLANS, INC.
 P.O. Box 702, Wake Forest, NC 27888 919-435-6180 Fax: 919-435-4996

| SQUARE FOOTAGE HEATED | |
|-----------------------|-------------|
| FIRST FLOOR | 1527 SQ.FT. |
| SECOND FLOOR | 315 SQ.FT. |
| TOTAL | 1842 SQ.FT. |
| UNHEATED | |
| GARAGE | 459 SQ.FT. |
| FRONT PORCH | 160 SQ.FT. |
| STORAGE | 276 SQ.FT. |
| TOTAL | 895 SQ.FT. |

© Copyright 2013 Haynes Home Plans, Inc.

3/24/2020

191104B

PAGE 2 OF 5

EXTERIOR WINDOWS AND DOORS

SECTION R612
R612.1 General. This section prescribes performance and construction requirements for exterior windows and doors installed in walls. Windows and doors shall be installed and flashed in accordance with the fenestration manufacturer's written installation instructions. Window and door openings shall be flashed in accordance with Section R703.8. Written installation instructions shall be provided by the fenestration manufacturer for each window or door.
R612.2 Window sills. In *dwelling* units, where the opening of an operable window is located more than 72 inches (1829 mm) above the finished *grade* or surface below, the lowest part of the clear opening of the window shall be a minimum of 24 inches (610 mm) above the finished floor of the room in which the window is located. Operable sections of windows shall not permit openings that allow passage of a 4 inch (102 mm) diameter sphere where such openings are located within 24 inches (610 mm) of the finished floor.
Exceptions:
 1. Windows whose openings will not allow a 4-inch diameter (102 mm) sphere to pass through the opening when the opening is in its largest opened position.
 2. Openings that are provided with window fall prevention devices that comply with Section R612.3.
 3. Openings that are provided with fall prevention devices that comply with ASTM F 2090.
 4. Windows that are provided with opening limiting devices that comply with Section R612.4.
R612.3 Window fall prevention devices. Window fall prevention devices and window guards, where provided, shall comply with the requirements of ASTM F 2090.

DWELLING / GARAGE SEPARATION

REFER TO SECTIONS R302.5, R302.6, AND R302.7 WALLS. A minimum 1/2" gypsum board must be installed on all walls supporting floor/ceiling assemblies used for separation required by this section.
STAIRS. A minimum of 1/2" gypsum board must be installed on the underside and exposed sides of all stairways.
CEILING. A minimum of 1/2" gypsum must be installed on the garage ceiling if there are no habitable room above the garage. If there are habitable room above the garage a minimum of 5/8" type X gypsum board must be installed on the garage ceiling.
OPENING PENETRATIONS. Openings between the garage and residence shall be equipped with solid wood doors not less than 1 3/8 inches (35 mm) in thickness, solid or honeycomb core steel doors not less than 1 3/8 inches (35 mm) thick, or 20-minute fire-rated doors.
DUCT PENETRATIONS. Ducts in the garage and ducts penetrating the walls or ceilings separating the *dwelling* from the garage shall be constructed of a minimum No. 26 gage (0.48 mm) sheet steel or other *approved* material and shall have no openings into the garage.
OTHER PENETRATIONS. Penetrations through the separation required in Section R302.6 shall be protected as required by Section R302.11, Item 4.

WALLS & THICKNESSES

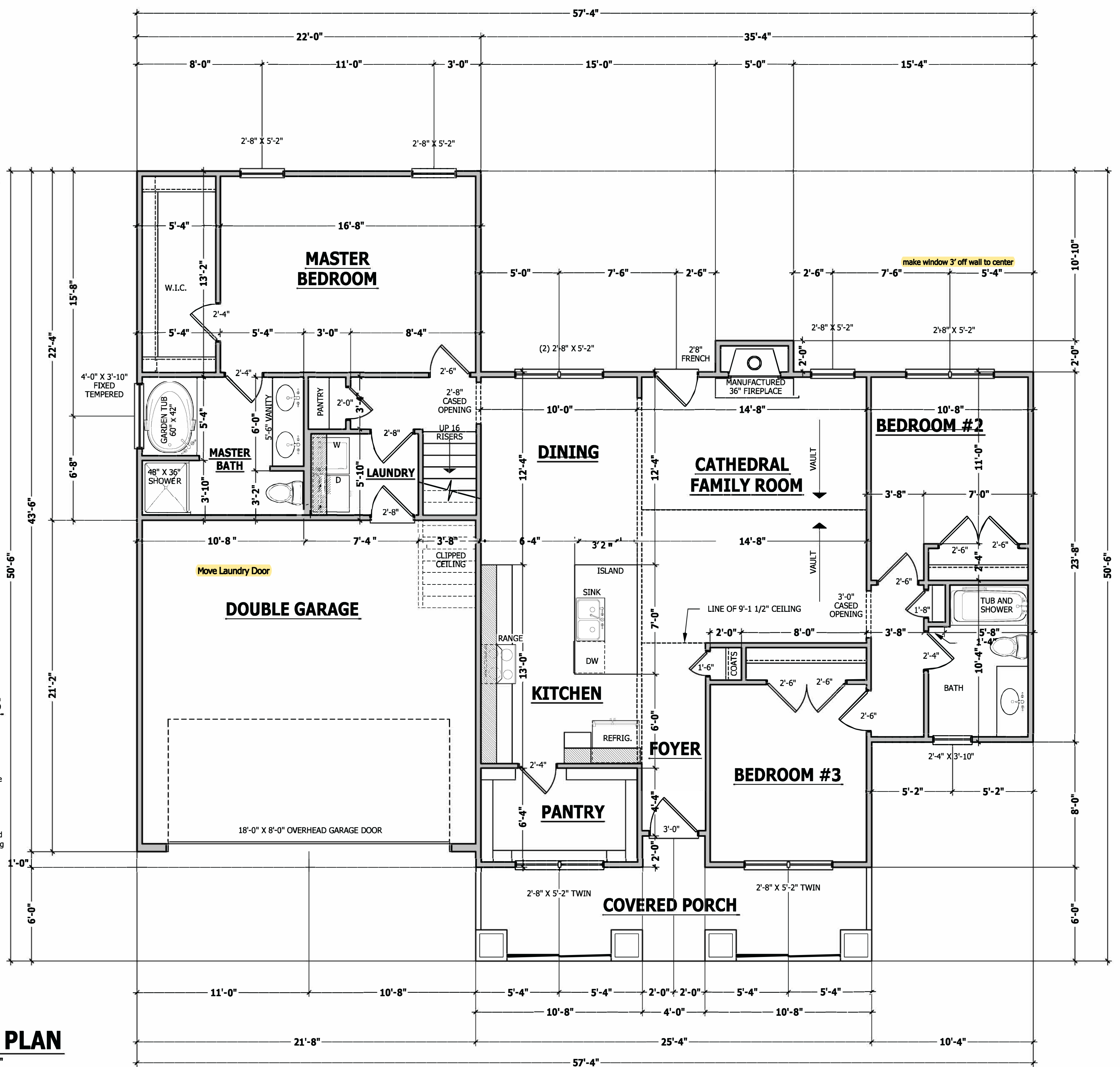
All walls are 3 1/2" thick 2 X 4 nominal studs SPF #2 @ 16" on center unless noted otherwise.
Exterior walls are dimensioned as 4" thick and include 1/2" sheathing. Subtract 1/2" for stud face on exterior side.
Garage walls adjacent to finished space are drawn and dimensioned as 4" and include 1/2" gypsum board on the inside of the garage. Subtract 1/2" for stud face on garage side.
Interior walls are dimensioned as 3 1/2" thick.
2 X 6 walls are drawn as 5 1/2" thick and are 2 X 6 nominal studs SPF #2 @ 16" on center unless noted otherwise on interior of house. 2 X 6 walls at exterior and garage are dimensioned as 6", and include 1/2" sheathing or 1/2" gypsum. Subtract 1/2" for stud face at exterior and garage.
Interior Gypsum is not included in dimensions.

SQUARE FOOTAGE

| HEATED | |
|--------------|-------------|
| FIRST FLOOR | 1527 SQ.FT. |
| SECOND FLOOR | 315 SQ.FT. |
| TOTAL | 1842 SQ.FT. |
| UNHEATED | |
| GARAGE | 459 SQ.FT. |
| FRONT PORCH | 160 SQ.FT. |
| STORAGE | 276 SQ.FT. |
| TOTAL | 895 SQ.FT. |

FIRST FLOOR PLAN

SCALE 1/4" = 1'-0"



PURCHASER MUST VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE CONSTRUCTION BEGINS.
 HAYNES HOME PLANS, INC. ASSUMES NO LIABILITY FOR CONTRACTORS PRACTICES AND PROCEDURES.
 CODES AND CONDITIONS MAY VARY WITH LOCATION. A LOCAL DESIGNER, ARCHITECT OR ENGINEER SHOULD BE CONSULTED BEFORE CONSTRUCTION.
 THESE DRAWINGS ARE INSTRUMENTS OF SERVICE AND AS SUCH SHALL REMAIN PROPERTY OF THE DESIGNER.

FIRST FLOOR PLAN
Kraken

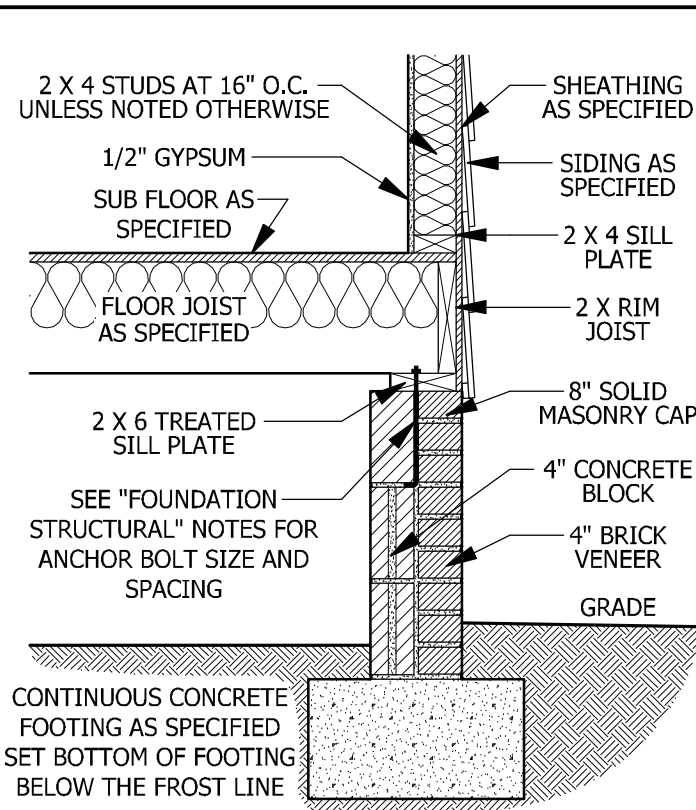
Southern Tide Homes, LLC
 1327 Landmark Road
 Wioos Springs, NC 27592

HAYNES
 HOME PLANS, INC.
 P.O. Box 702, Wake Forest, NC 27588 919-355-6180 Fax: 919-355-4096

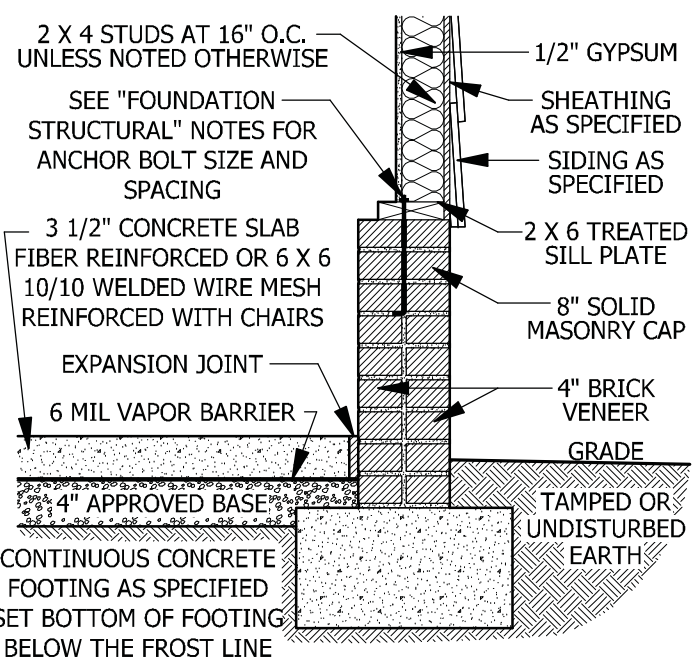
| SQUARE FOOTAGE | |
|----------------|-------------|
| HEATED | |
| FIRST FLOOR | 1527 SQ.FT. |
| SECOND FLOOR | 315 SQ.FT. |
| TOTAL | 1842 SQ.FT. |
| UNHEATED | |
| GARAGE | 459 SQ.FT. |
| FRONT PORCH | 160 SQ.FT. |
| STORAGE | 276 SQ.FT. |
| TOTAL | 895 SQ.FT. |

© Copyright 2013 Haynes Home Plans, Inc.
 3/24/2020
 191104B
 PAGE 3 OF 5

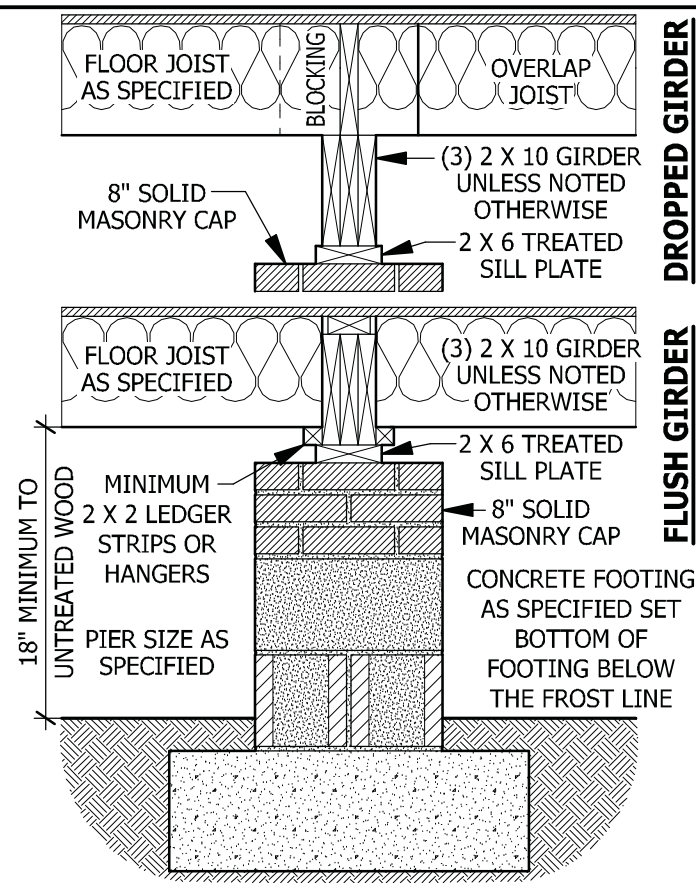
Z:\Builder\Southern Tide Homes\191104B Kraken\191104B Kraken.LH.aec



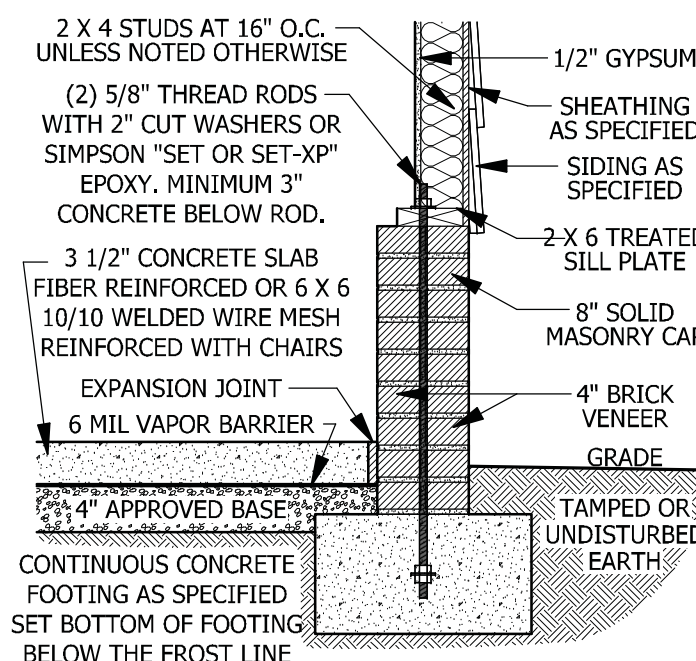
A CRAWL SPACE WALL
SCALE 3/4" = 1'-0"



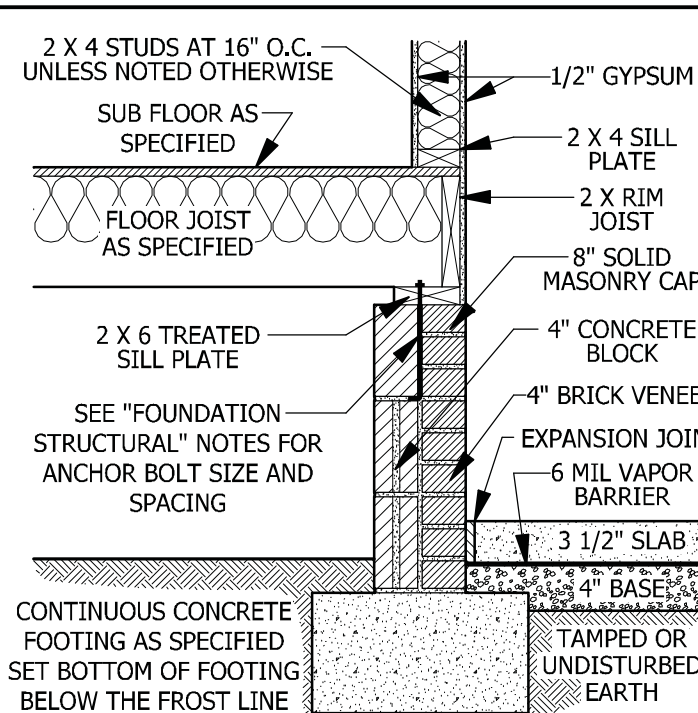
D GARAGE STEM WALL
SCALE 3/4" = 1'-0"



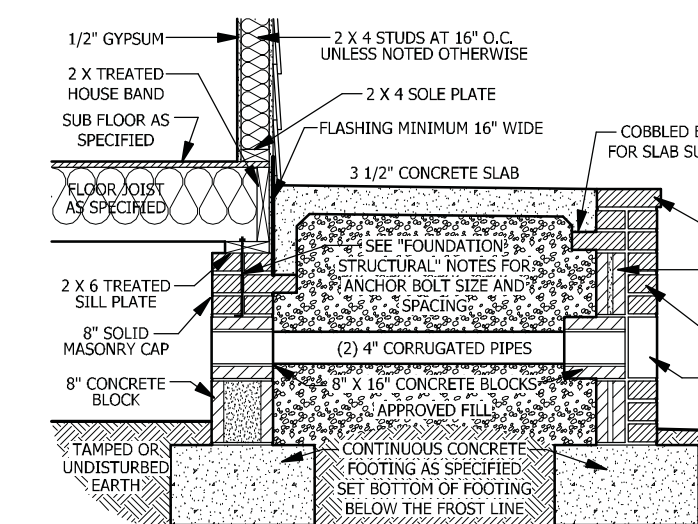
B DROPPED/ FLUSH PIER
SCALE 3/4" = 1'-0"



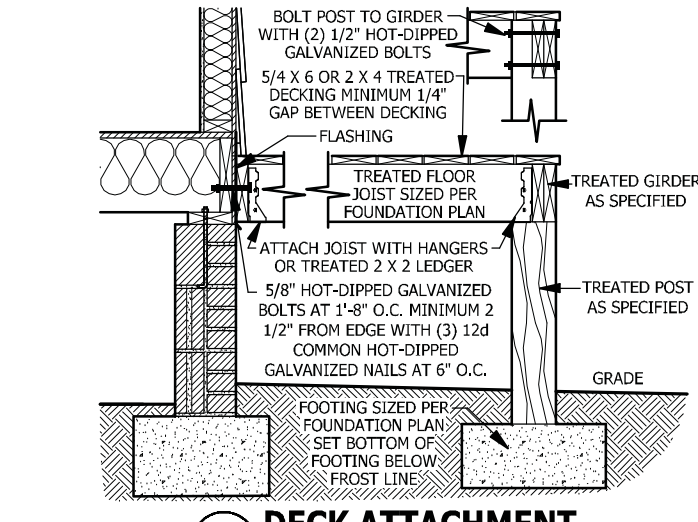
E <48\"/>



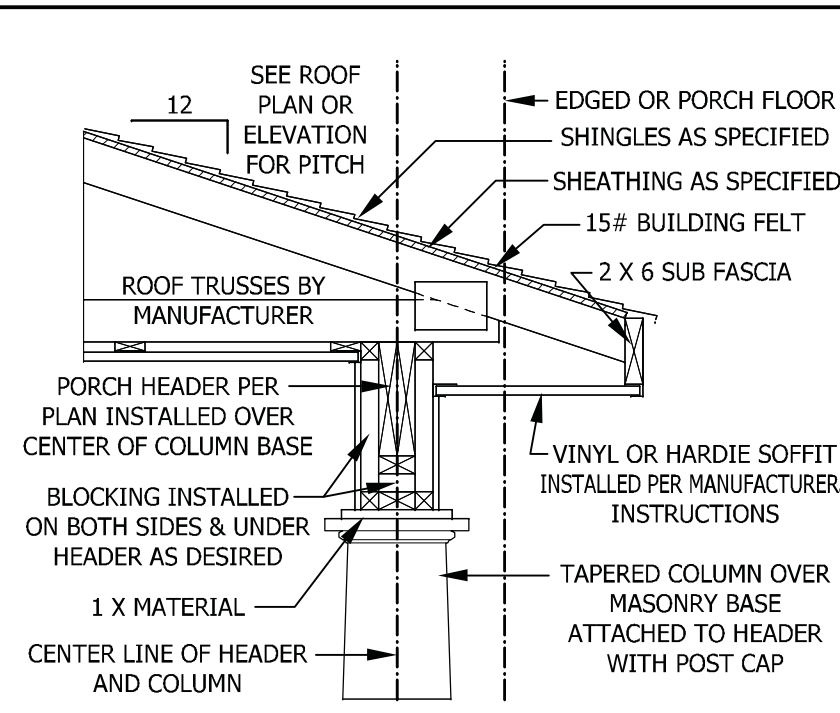
C CRAWL SPACE AT GARGE
SCALE 3/4" = 1'-0"



F FILLED PORCH SECTION WITH VENT
SCALE 1/2" = 1'-0"



G DECK ATTACHMENT
SCALE 1/2" = 1'-0"



PORCH HEADER WITH TAPERED COLUMN
SCALE 3/4" = 1'-0"

CARBON MONOXIDE ALARMS

SECTION R315
R315.1 Carbon monoxide alarms. In new construction, dwelling units shall be provided with an approved carbon monoxide alarm installed outside of each separate sleeping area in the immediate vicinity of the bedroom(s) as directed by the alarm manufacturer.
R315.2 Where required in existing dwellings, where interior alterations, repairs, fuel-fired appliance replacements, or additions requiring a permit occurs, or where one or more sleeping rooms are added or created, carbon monoxide alarms shall be provided in accordance with Section 315.1.
R315.3 Alarm requirements. The required carbon monoxide alarms shall be audible in all bedrooms over background noise levels with all intervening doors closed. Single station carbon monoxide alarms shall be listed as complying with UL 2034 and shall be installed in accordance with this code and the manufacturer's installation instructions.

STAIRWAY NOTES

R311.7
R311.7.2 Headroom. The minimum headroom in all parts of the stairway shall not be less than 6 feet 8 inches (2032 mm) measured vertically from the sloped line adjoining the tread nosing or from the floor surface of the landing or platform on that portion of the stairway.
R311.7.4 Stair treads and risers. Stair treads and risers shall meet the requirements of this section. For the purposes of this section all dimensions and dimensioned surfaces shall be exclusive of carpets, rugs or runners.
R311.7.4.1 Riser height. The maximum riser height shall be 8 1/4 inches (210 mm). The riser shall be measured vertically between leading edges of the adjacent treads.
R311.7.4.2 Tread depth. The minimum tread depth shall be 9 inches (229 mm). The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge. Winder treads shall have a minimum tread depth of 9 inches (229 mm) measured as above at a point 12 inches (305 mm) from the side where the treads are narrower. Winder treads shall have a minimum tread depth of 4 inches (102 mm) at any point.
R311.7.4.3 Profile. The radius of curvature at the nosing shall be no greater than 9/16 inch (14 mm). A nosing not less than 3/4 inch (19 mm) but not more than 1 1/4 inches (32 mm) shall be provided on stairways with solid risers.
R311.7.7 Handrails. Handrails shall be provided on at least one side of each continuous run of treads or flight with four or more risers.
R311.7.7.1 Height. Handrail height, measured vertically from the sloped plane adjoining the tread nosing, or finish surface of ramp slope, shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm).
Exceptions:
 1. The use of a volute, turnout or starting easing shall be allowed over the lowest tread.
 2. When handrail fittings or bendings are used to provide continuous transition between flights, the transition from handrail to guardrail, or used at the start of a flight, the handrail height at the fittings or bendings shall be permitted to exceed the maximum height.
R311.7.7.2 Continuity. Handrails for stairways shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. Handrail ends shall be returned or shall terminate in newel posts or safety terminals. Handrails adjacent to a wall shall have a space of not less than 1 1/2 inch (38 mm) between the wall and the handrails.
Exceptions:
 1. Handrails shall be permitted to be interrupted by a newel post.
 2. The use of a volute, turnout, starting easing or starting newel shall be allowed over the lowest tread.
 3. Two or more separate rails shall be considered continuous if the termination of the rails occurs within 6 inches (152 mm) of each other. If transitioning between a wall-mounted handrail and a guardrail/handrail, the wall-mounted rail must return into the wall.

DECK STAIR NOTES

SECTION AM110
AM110.1 Stairs shall be constructed per Figure AM110. Stringer spans shall be no greater than 7 foot span between supports. Spacing between stringers shall be based upon decking material used per AM107.1. Each Stringer shall have minimum 3 1/2 inches between step cut and back of stringer. If used, suspended headers shall be attached with 3/8 inch galvanized bolts with nuts and washers to securely support stringers at the top.

DECK BRACING

SECTION AM109
AM109.1 Deck bracing. Decks shall be braced to provide lateral stability. The following are acceptable means to provide lateral stability.
AM109.1.1. When the deck floor height is less than 4'-0" above finished grade per Figure AM109 and the deck is attached to the structure in accordance with Section AM104, lateral bracing is not required.
AM109.1.2. 4 x 4 wood knee braces may be provided on each column in both directions. The knee braces shall attach to each post at a point not less than 1/3 of the post length from the top of the post, and the braces shall be angled between 45 degrees and 60 degrees from the horizontal. Knee braces shall be bolted to the post and the girder/double band with one 5/8 inch hot dipped galvanized bolt with nut and washer at both ends of the brace per Figure AM109.1
AM109.1.3. For freestanding decks without knee braces or diagonal bracing, lateral stability may be provided by embedding the post in accordance with Figure AM109.2 and the following:

| POST SIZE | MAX. TRIBUTARY AREA | MAX. POST HEIGHT | EMBEDMENT DEPTH | CONCRETE DIAMETER |
|-----------|---------------------|------------------|-----------------|-------------------|
| 4 X 4 | 48 SF | 4'-0" | 2'-6" | 1'-0" |
| 6 X 6 | 120 SF | 6'-0" | 3'-6" | 1'-8" |

AM109.1.4. 2 x 6 diagonal vertical cross bracing may be provided in two perpendicular directions for freestanding decks or parallel to the structure at the exterior column line for attached decks. The 2 x 6's shall be attached to the posts with one 5/8 inch hot dipped galvanized bolt with nut and washer at each end of each bracing member per Figure AM109.3.
AM109.1.5. For embedment of piles in Coastal Regions, see Chapter 45.

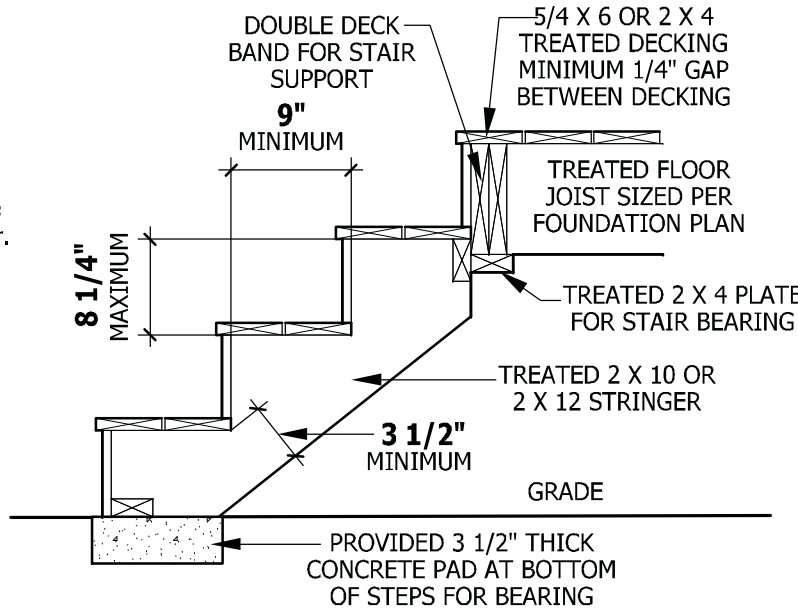
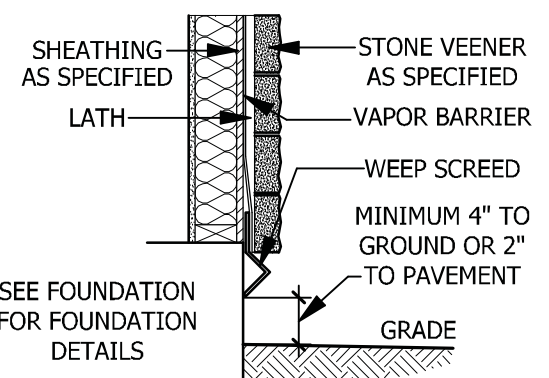


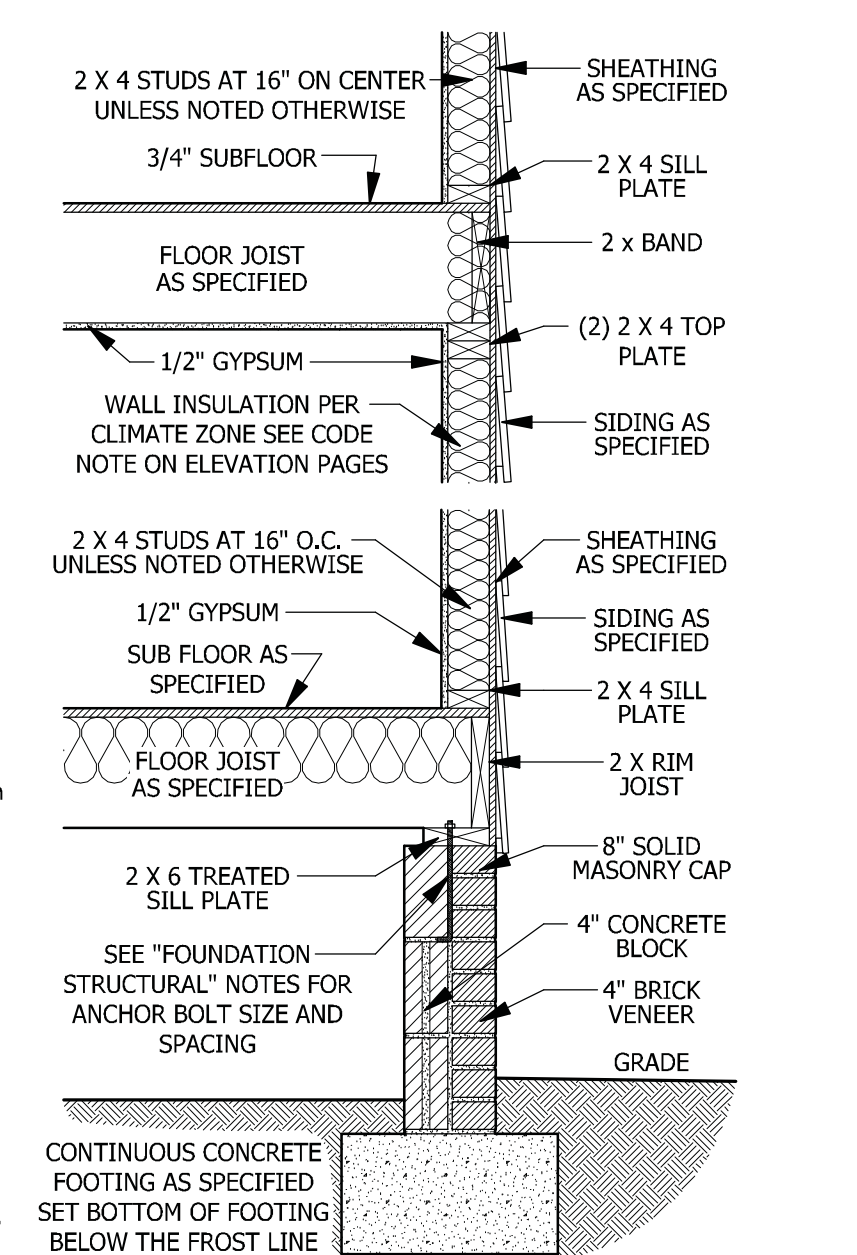
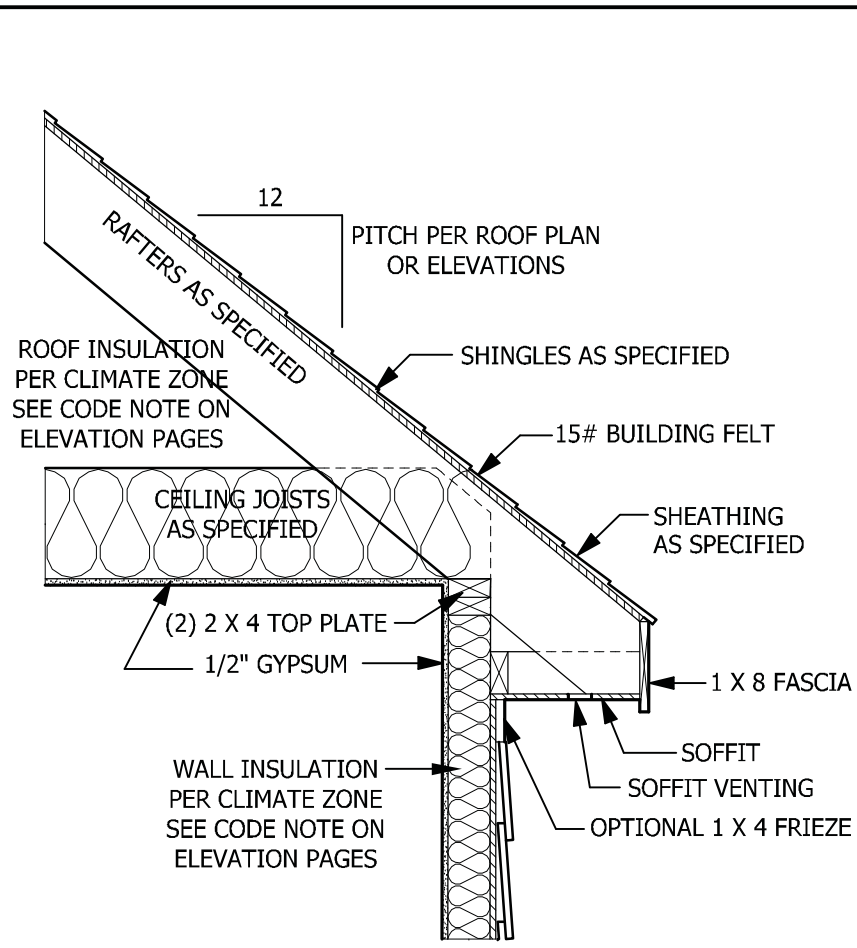
FIGURE AM110
TYPICAL DECK STAIR DETAIL
SCALE 3/4" = 1'-0"

WEEP SCREEDS

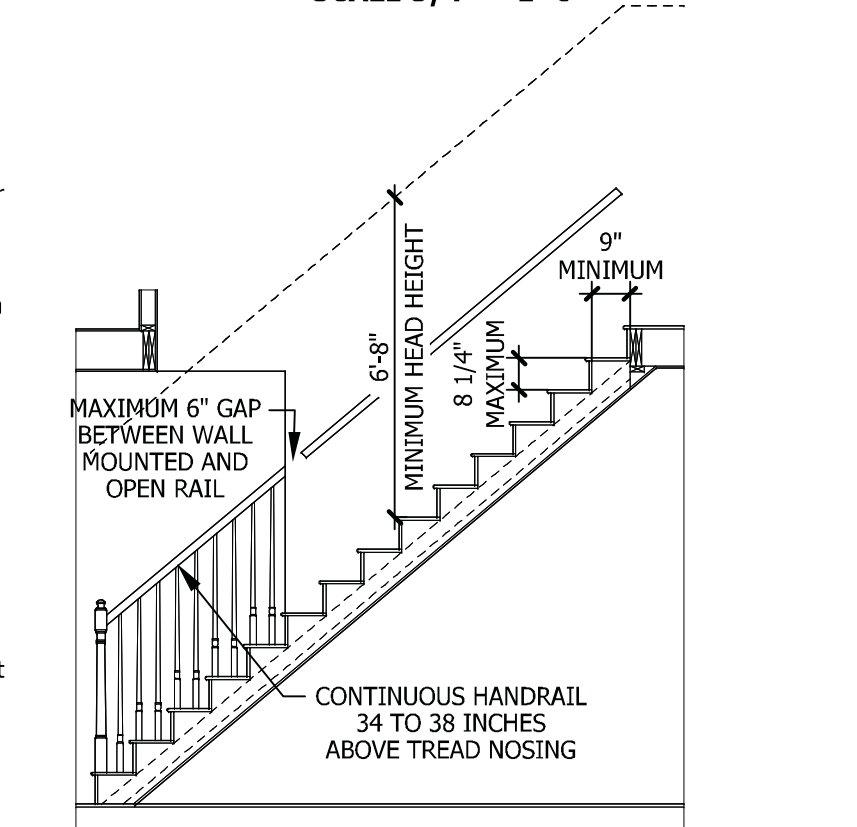
All weep screeds and stone veneer to be installed per manufacturers instructions and per the 2012 North Carolina Residential Building code.
R703.6.2.1 - A minimum 0.019-inch (0.5 mm) (No. 26 galvanized sheet gage), corrosion-resistant weep screed or plastic weep screed, with a minimum vertical attachment flange of 3 1/2 inches (89 mm) shall be provided at or below the foundation plate line on exterior stud walls in accordance with ASTM C 926. The weep screed shall be placed a minimum of 4 inches (102 mm) above the earth or 2 inches (51 mm) above paved areas and shall be of a type that will allow trapped water to drain to the exterior of the building. The weather-resistant barrier shall lap the attachment flange. The exterior lath shall cover and terminate on the attachment flange of the weep screed.



WEEP SCREED
SCALE 3/4" = 1'-0"



TYPICAL WALL DETAIL
SCALE 3/4" = 1'-0"



TYPICAL STAIR DETAIL
SCALE 1/4" = 1'-0"

PURCHASER MUST VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE CONSTRUCTION BEGINS. HAYNES HOME PLANS, INC. ASSUMES NO LIABILITY FOR CONTRACTORS PRACTICES AND PROCEDURES. CODES AND CONDITIONS MAY VARY WITH LOCATION. A LOCAL DESIGNER, ARCHITECT OR ENGINEER SHOULD BE CONSULTED BEFORE CONSTRUCTION. THESE DRAWING ARE INSTRUMENTS OF SERVICE AND AS SUCH SHALL REMAIN PROPERTY OF THE DESIGNER.

TYPICAL DETAILS
Kraken

Southern Tide Homes, LLC
1327 Landmark Road
Wooow Springs, NC 27592

HAYNES HOME PLANS, INC.
P.O. Box 102, White Forest, NC 27888 919-435-6180 Fax: 1-866-494-0906

SQUARE FOOTAGE HEATED

| | |
|--------------|-------------|
| FIRST FLOOR | 1527 SQ.FT. |
| SECOND FLOOR | 315 SQ.FT. |
| TOTAL | 1842 SQ.FT. |

UNHEATED

| | |
|-------------|------------|
| GARAGE | 459 SQ.FT. |
| FRONT PORCH | 160 SQ.FT. |
| STORAGE | 276 SQ.FT. |
| TOTAL | 895 SQ.FT. |

© Copyright 2013 Haynes Home Plans, Inc.
3/24/2020
191104B
PAGE 5 OF 5

**120 MPH ULTIMATE DESIGN WIND SPEED
NOTES FOR LESS THAN
30' MEAN ROOF HEIGHT:**

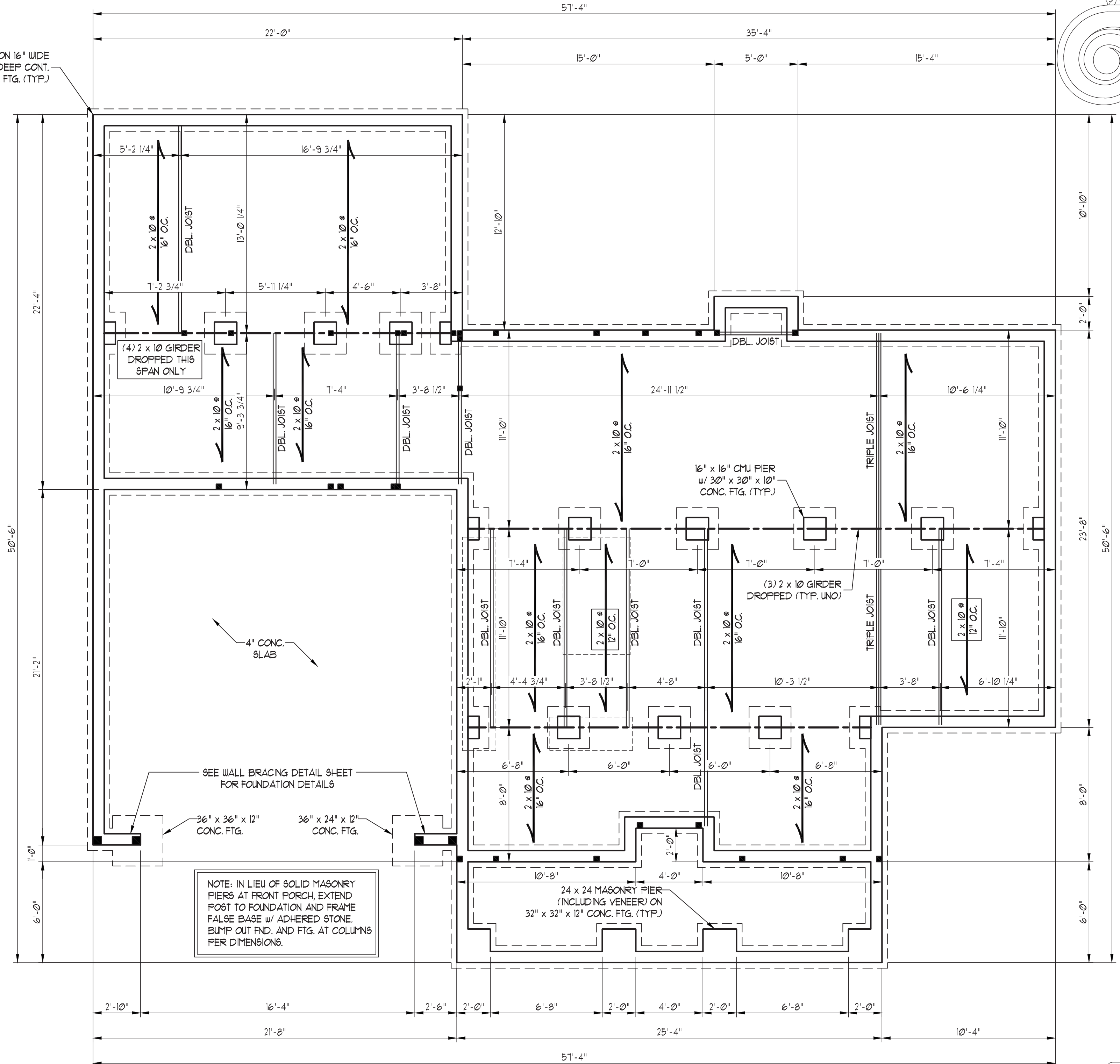
- ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS. ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL ACCURACY OR ARCHITECTURAL LAYOUT INCLUDING ROOF SYSTEM.
- STRUCTURAL DESIGN PER NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION.
- INSTALL 1/2" ANCHOR BOLTS 6'-0" O.C. AND WITHIN 1'-0" FROM END OF EACH CORNER. ANCHOR BOLTS MUST EXTEND A MINIMUM OF 1" INTO MASONRY OR CONCRETE. LOCATE BOLT WITHIN MIDDLE THIRD OF PLATE WIDTH. MEAN ROOF HEIGHT IS LESS THAN 30 FEET.
- EXTERIOR WALLS DESIGNED FOR 120 MPH WINDS.
- WALL CLADDING DESIGNED FOR +5.5 PSF AND -20 PSF (+/- INDICATE POSITIVE / NEGATIVE PRESSURE (TYP)).
- ROOF CLADDING DESIGNED FOR +42 PSF AND -18 PSF FOR ROOF PITCHES 1/12 TO 12/12 AND +10 PSF AND -36 PSF FOR ROOF PITCHED 2 25/12 TO 1/12.
- INSTALL 7/16" OSB SHEATHING ON ALL EXTERIOR WALLS OF ALL STORIES IN ACCORDANCE WITH SECTION R602.10.3 OF THE NRC, 2018 EDITION. SEE THE WALL BRACING NOTES AND DETAILS SHEET FOR MORE INFORMATION.
- ENERGY EFFICIENCY COMPLIANCE AND INSULATION VALUES OF THE BUILDING TO BE IN ACCORDANCE WITH CHAPTER 11 OF THE NRC, 2018 EDITION.
- REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.

STRUCTURAL NOTES:

- ALL FRAMING LUMBER TO BE #2 SPF (UNO). ALL TREATED LUMBER TO BE #2 SYP (UNO).
- PROVIDE DOUBLE JOIST UNDER ALL WALLS PARALLEL TO FLOOR JOISTS.
- SQUARES DENOTE POINT LOADS WHICH REQUIRE SOLID BLOCKING TO GIRDER OR FOUNDATION.
- SHADED PIERS TO BE FILLED SOLID.
- INSTALL LADDER WIRE @ 16" O.C. TO SECURE MULTIPLE WYTHE FOUNDATION WALLS TOGETHER.
- REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.



8" FND. ON 16" WIDE BY 8" DEEP CONT. CONC. FTG. (TYP.)



NOTE: IN LIEU OF SOLID MASONRY PIERS AT FRONT PORCH, EXTEND POST TO FOUNDATION AND FRAME FALSE BASE W/ ADHERED STONE. BUMP OUT FND. AND FTG. AT COLUMNS PER DIMENSIONS.

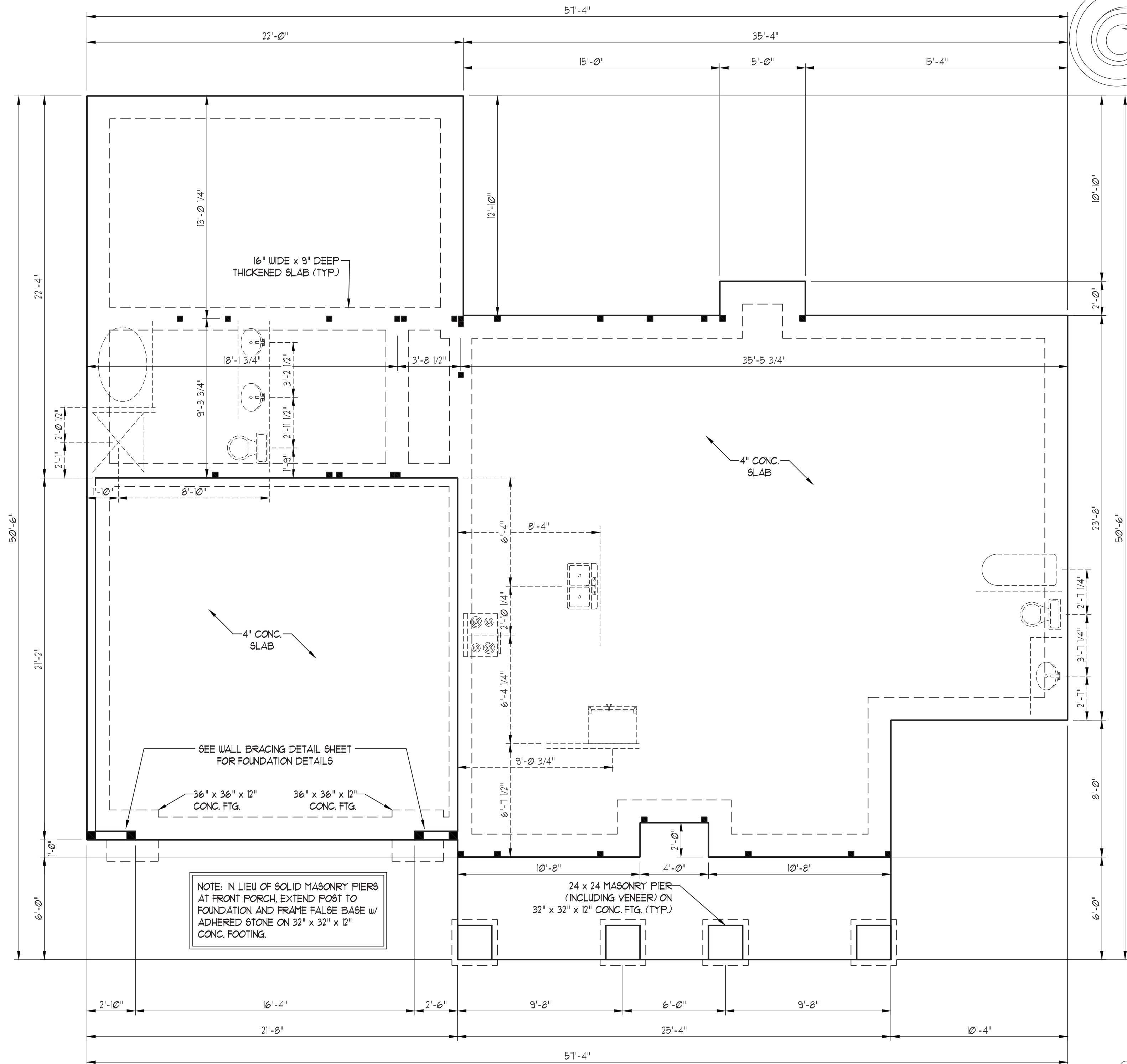
**J.S. THOMPSON
ENGINEERING, INC**
606 WADE AVE, SUITE 104, RALEIGH, NC 27605
PHONE: (919) 789-9919 FAX: (919) 789-9921
N.C. LICENSE NO.: C-1733

**KRAKEN
SOUTHERN TIDE HOMES**

| |
|-----------------------------|
| DATE: FEBRUARY 17, 2020 |
| SCALE: 1/4" = 1'-0" |
| DRAWN BY: HAYNES HOME PLANS |
| ENGINEERED BY: WFB |

**120 MPH ULTIMATE DESIGN WIND SPEED
NOTES FOR LESS THAN
30' MEAN ROOF HEIGHT:**

1. ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS. ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL ACCURACY OR ARCHITECTURAL LAYOUT INCLUDING ROOF SYSTEM.
2. STRUCTURAL DESIGN PER NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION.
3. INSTALL 1/2" ANCHOR BOLTS 6'-0" O.C. AND WITHIN 1'-0" FROM END OF EACH CORNER. ANCHOR BOLTS MUST EXTEND A MINIMUM OF 1" INTO MASONRY OR CONCRETE. LOCATE BOLT WITHIN MIDDLE THIRD OF PLATE WIDTH.
4. MEAN ROOF HEIGHT IS LESS THAN 30 FEET.
5. EXTERIOR WALLS DESIGNED FOR 120 MPH WINDS.
6. WALL CLADDING DESIGNED FOR +5.5 PSF AND -20 PSF (+/- INDICATE POSITIVE / NEGATIVE PRESSURE (TYP)).
7. ROOF CLADDING DESIGNED FOR +42 PSF AND -18 PSF FOR ROOF PITCHES 1/12 TO 12/12 AND +10 PSF AND -36 PSF FOR ROOF PITCHED 225/12 TO 1/12.
8. INSTALL 7/16" OSB SHEATHING ON ALL EXTERIOR WALLS OF ALL STORIES IN ACCORDANCE WITH SECTION R602.10.3 OF THE NRC, 2018 EDITION. SEE THE WALL BRACING NOTES AND DETAILS SHEET FOR MORE INFORMATION.
9. ENERGY EFFICIENCY COMPLIANCE AND INSULATION VALUES OF THE BUILDING TO BE IN ACCORDANCE WITH CHAPTER 11 OF THE NRC, 2018 EDITION.
10. REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.



**J.S. THOMPSON
ENGINEERING, INC**
606 WADE AVE, SUITE 104 RALEIGH, NC 27605
PHONE: (919) 789-9919 FAX: (919) 789-9921
N.C. LICENSE NO.: C-1733

**KRAKEN
SOUTHERN TIDE HOMES**

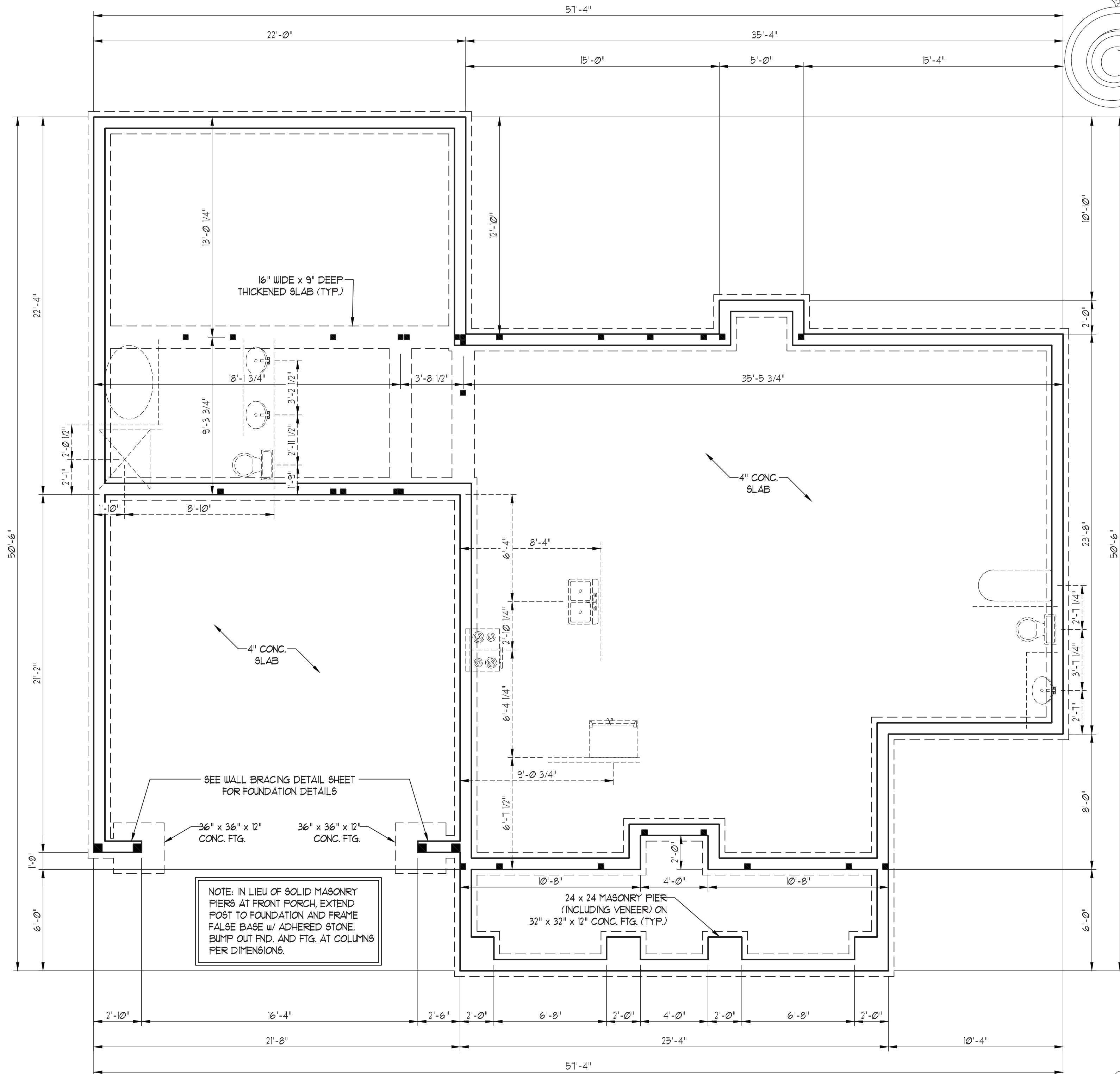
| |
|-----------------------------|
| DATE: FEBRUARY 17, 2020 |
| SCALE: 1/4" = 1'-0" |
| DRAWN BY: HAYNES HOME PLANS |
| ENGINEERED BY: WFB |

SHEET 2 OF 6
S-1b
MONO SLAB
FOUNDATION PLAN



**120 MPH ULTIMATE DESIGN WIND SPEED
NOTES FOR LESS THAN
30' MEAN ROOF HEIGHT:**

1. ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS. ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL ACCURACY OR ARCHITECTURAL LAYOUT INCLUDING ROOF SYSTEM.
2. STRUCTURAL DESIGN PER NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION.
3. INSTALL 1/2" ANCHOR BOLTS 6'-0" O.C. AND WITHIN 1'-0" FROM END OF EACH CORNER. ANCHOR BOLTS MUST EXTEND A MINIMUM OF 1" INTO MASONRY OR CONCRETE. LOCATE BOLT WITHIN MIDDLE THIRD OF PLATE WIDTH.
4. MEAN ROOF HEIGHT IS LESS THAN 30 FEET.
5. EXTERIOR WALLS DESIGNED FOR 120 MPH WINDS.
6. WALL CLADDING DESIGNED FOR +5.5 PSF AND -20 PSF (+/- INDICATE POSITIVE / NEGATIVE PRESSURE (TYP)).
7. ROOF CLADDING DESIGNED FOR +42 PSF AND -18 PSF FOR ROOF PITCHES 1/12 TO 12/12 AND +10 PSF AND -36 PSF FOR ROOF PITCHED 22.5/12 TO 1/12.
8. INSTALL 7/16" OSB SHEATHING ON ALL EXTERIOR WALLS OF ALL STORIES IN ACCORDANCE WITH SECTION R602.10.3 OF THE NCRC, 2018 EDITION. SEE THE WALL BRACING NOTES AND DETAILS SHEET FOR MORE INFORMATION.
9. ENERGY EFFICIENCY COMPLIANCE AND INSULATION VALUES OF THE BUILDING TO BE IN ACCORDANCE WITH CHAPTER 11 OF THE NCRC, 2018 EDITION.
10. REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.



**J.S. THOMPSON
ENGINEERING, INC**
 606 WADE AVE, SUITE 104 RALEIGH, NC 27605
 PHONE: (919) 789-9919 FAX: (919) 789-9921
 N.C. LICENSE NO.: C-1733

**KRAKEN
SOUTHERN TIDE HOMES**

| |
|-----------------------------|
| DATE: FEBRUARY 17, 2020 |
| SCALE: 1/4" = 1'-0" |
| DRAWN BY: HAYNES HOME PLANS |
| ENGINEERED BY: WFB |

SHEET 3 OF 6
S-1c
 STEM WALL
 FOUNDATION PLAN



BRACED WALL DESIGN NOTES:

- BRACED WALL DESIGN PER SECTION R602.10 OF THE NCRC 2018 EDITION.
- CS-WSP REFERS TO "CONTINUOUS SHEATHING - WOOD STRUCTURAL PANELS" CONTRACTOR IS TO INSTALL 7/16" OSB ON ALL EXTERIOR WALLS ATTACHED w/ 8d NAILS SPACED 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD.
- GB REFERS TO "GYPSUM BOARD" CONTRACTOR IS TO INSTALL 1/2" (MIN.) GYPSUM WALL BOARD WHERE NOTED ON THE PLANS. FASTEN GB WITH 1 1/4" SCREWS OR 1 5/8" NAILS SPACED 1" O.C. ALONG PANEL EDGES AND IN THE FIELD INCLUDING TOP AND BOTTOM PLATES.
- BRACED WALL DESIGN APPLIED IN WIND ZONES UP TO 130 MPH. FOR HIGH WIND ZONES, BRACE WALLS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH CHAPTER 45 OF THE NCRC 2018 EDITION.
- SEE NOTES AND DETAIL SHEETS FOR ADDITIONAL BRACED WALL INFORMATION.

NOTE:

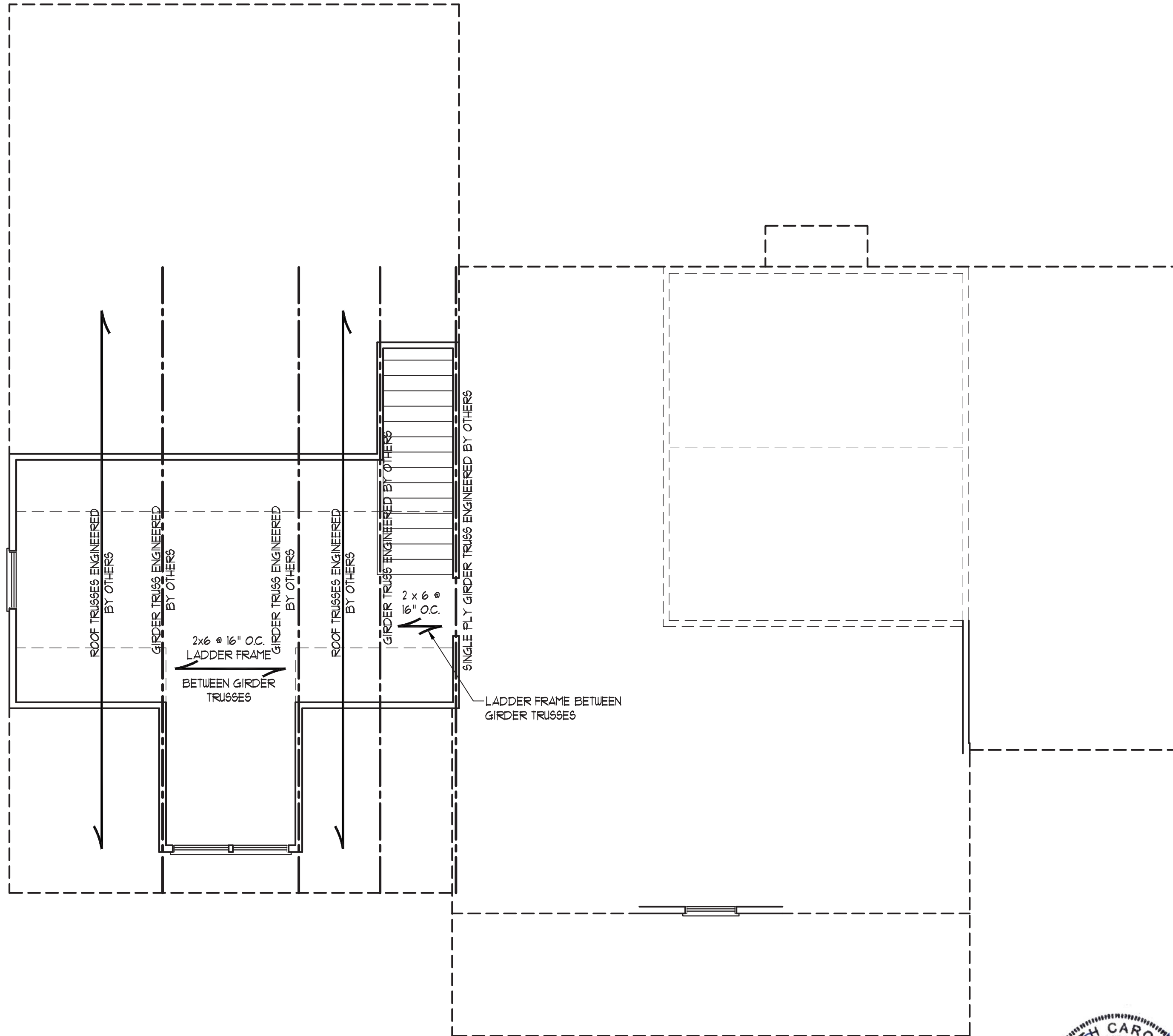
- PER SECTION R602.10.3.2 OF THE 2018 NCRC, THE AMOUNT OF BRACING ON THE SECOND FLOOR EXCEEDS THE AMOUNT REQUIRED FOR THE FIRST FLOOR AND NO BRACED WALL ANALYSIS IS REQUIRED.
- SHEATH ALL EXTERIOR WALLS WITH 7/16" OSB SHEATHING ATTACHED WITH 8d NAILS AT 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD.

STRUCTURAL NOTES:

- ALL FRAMING LUMBER TO BE #2 SFF (UNO).
- ALL LOAD BEARING HEADERS TO BE (2) 2 x 6 (UNO).
- WINDOW AND DOOR HEADERS TO BE SUPPORTED w/ (1) JACK STUD AND (1) KING STUD EA. END (UNO.). SEE TABLE R602.15 FOR ADDITIONAL KING STUD REQUIREMENTS.
- SQUARES DENOTE POINT LOADS WHICH REQUIRE SOLID BLOCKING TO GIRDER OR FOUNDATION. SQUARES TO BE (2) STUDS (UNO.).
- REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.

TABLE R602.15
MINIMUM NUMBER OF FULL HEIGHT STUDS
AT EACH END OF HEADERS IN EXTERIOR WALLS

| HEADER SPAN (FEET) | MAXIMUM STUD SPACING (INCHES) (PER TABLE R602.3(5)) | |
|--------------------|--------------------------------------------------------|----|
| | 16 | 24 |
| UP TO 3' | 1 | 1 |
| 4' | 2 | 1 |
| 8' | 3 | 2 |
| 12' | 5 | 3 |
| 16' | 6 | 4 |



3/18/2020

J.S. THOMPSON ENGINEERING, INC
 606 WADE AVE., SUITE 104 RALEIGH, NC 27605
 PHONE: (919) 789-9919 FAX: (919) 789-9921
 N.C. LICENSE NO.: C-1733

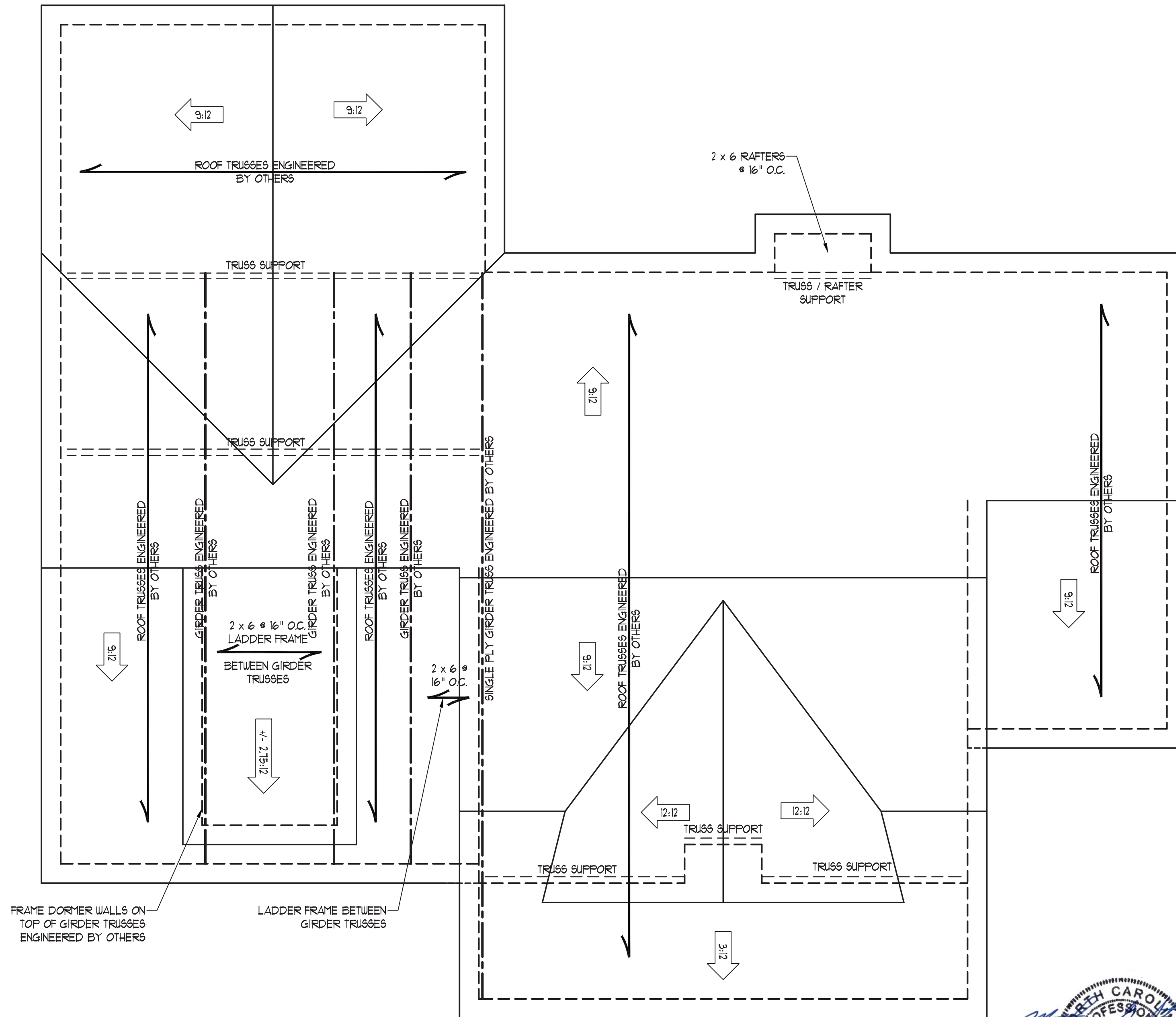
KRAKEN
SOUTHERN TIDE HOMES

DATE: FEBRUARY 17, 2020
 SCALE: 1/4" = 1'-0"
 DRAWN BY: HAYNES HOME PLANS
 ENGINEERED BY: WFB

SHEET 5 OF 6
S-3
 ATTIC FLOOR
 FRAMING PLAN

STRUCTURAL NOTES:

1. ALL FRAMING LUMBER TO BE #2 SFF (UNO).
2. CIRCLES DENOTE (3) 2 x 4 POSTS FOR ROOF SUPPORT.
3. FRAME DORMER WALLS ON TOP OF DOUBLE OR TRIPLE RAFTERS.
4. HIP SPLICES ARE TO BE SPACED A MIN. OF 8'-0". FASTEN MEMBERS WITH THREE ROWS OF 12d NAILS @ 16" O.C. (TYP.)
5. STICK FRAME OVER-FRAMED ROOF SECTIONS W/ 2 x 8 RIDGES, 2 x 6 RAFTERS @ 16" O.C. AND FLAT 2 x 10 VALLEYS OR USE VALLEY TRUSSES.
6. FASTEN FLAT VALLEYS TO RAFTERS OR TRUSSES WITH SIMPSON H2.5A HURRICANE TIES @ 32" O.C. MAX. PASS HURRICANE TIES THROUGH NOTCH IN ROOF SHEATHING. EACH RAFTER IS TO BE FASTENED TO THE FLAT VALLEY WITH A MIN. OF (6) 12d TOE NAILS.
7. REFER TO SECTION R802.11 OF THE 2018 NRC FOR REQUIRED UPLIFT RESISTANCE AT RAFTERS AND TRUSSES.
8. REFER TO NOTES AND DETAIL SHEETS FOR ADDITIONAL STRUCTURAL INFORMATION.



J.S. THOMPSON ENGINEERING, INC.
 606 WADE AVE, SUITE 104 RALEIGH, NC 27605
 PHONE: (919) 789-9919 FAX: (919) 789-9921
 N.C. LICENSE NO.: C-1733

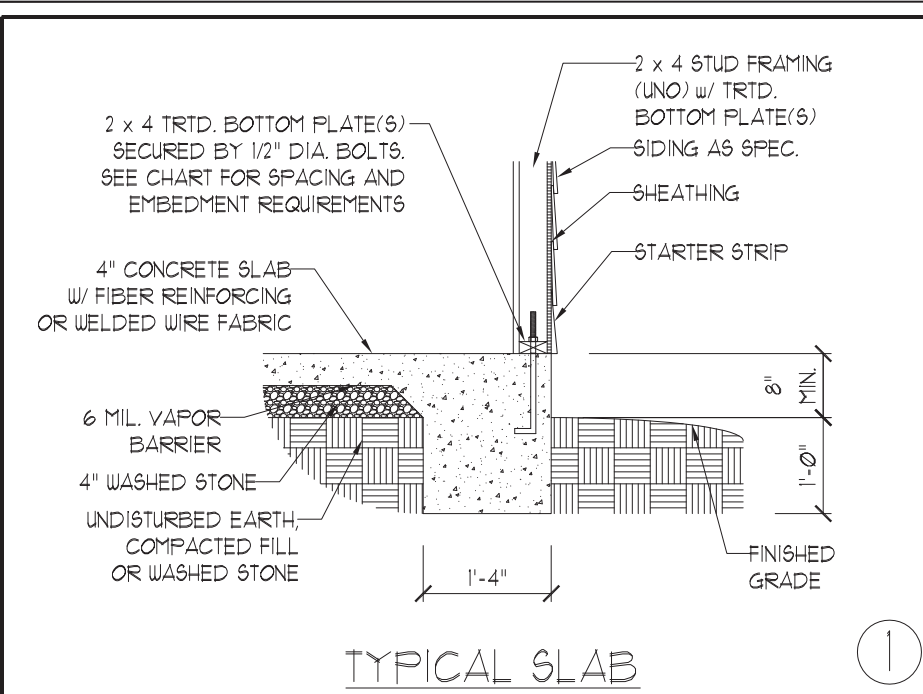
KRAKEN
 SOUTHERN TIDE HOMES

DATE: FEBRUARY 17, 2020
 SCALE: 1/4" = 1'-0"
 DRAWN BY: HAYNES HOME PLANS
 ENGINEERED BY: WFB

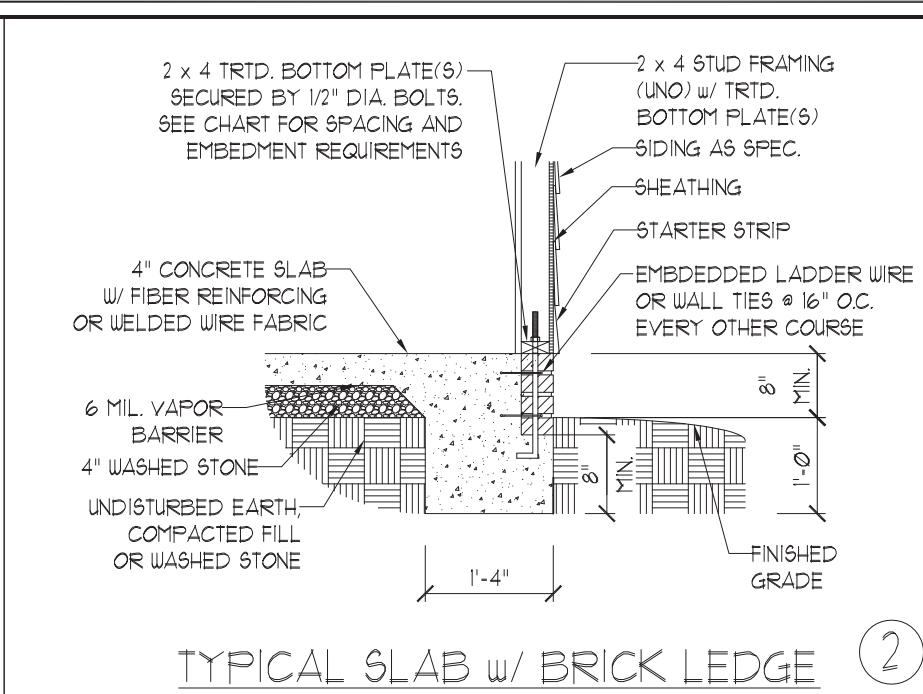


3/18/2020

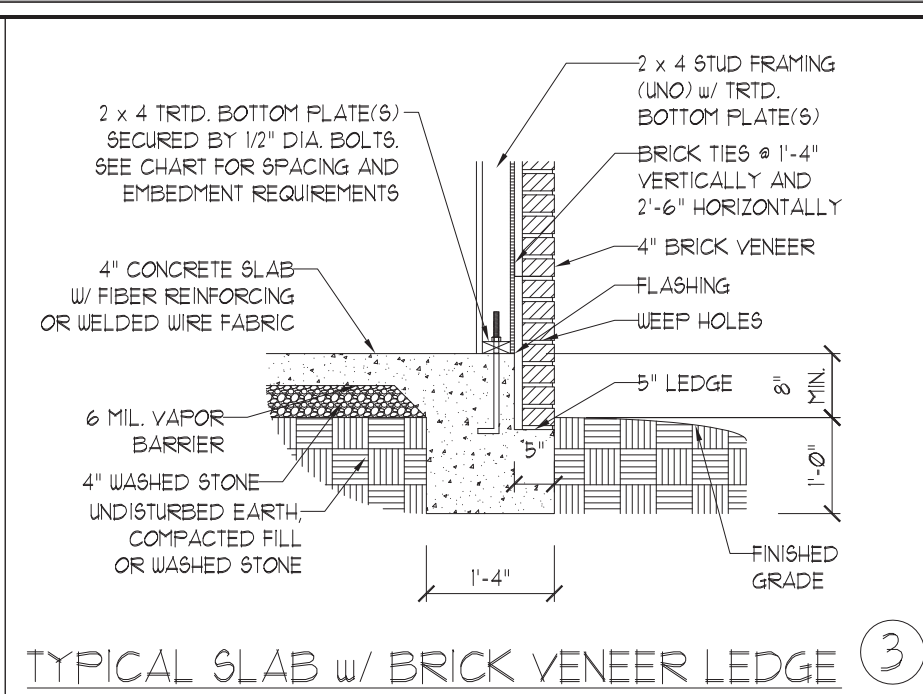
SHEET: 6 OF: 6
S4
 ROOF FRAMING PLAN



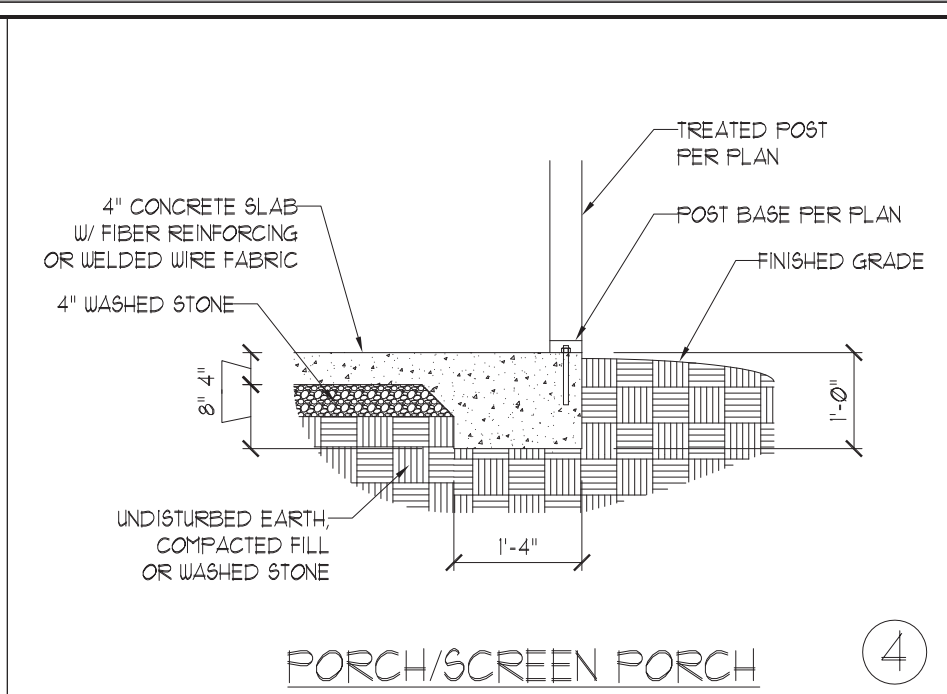
TYPICAL SLAB ①



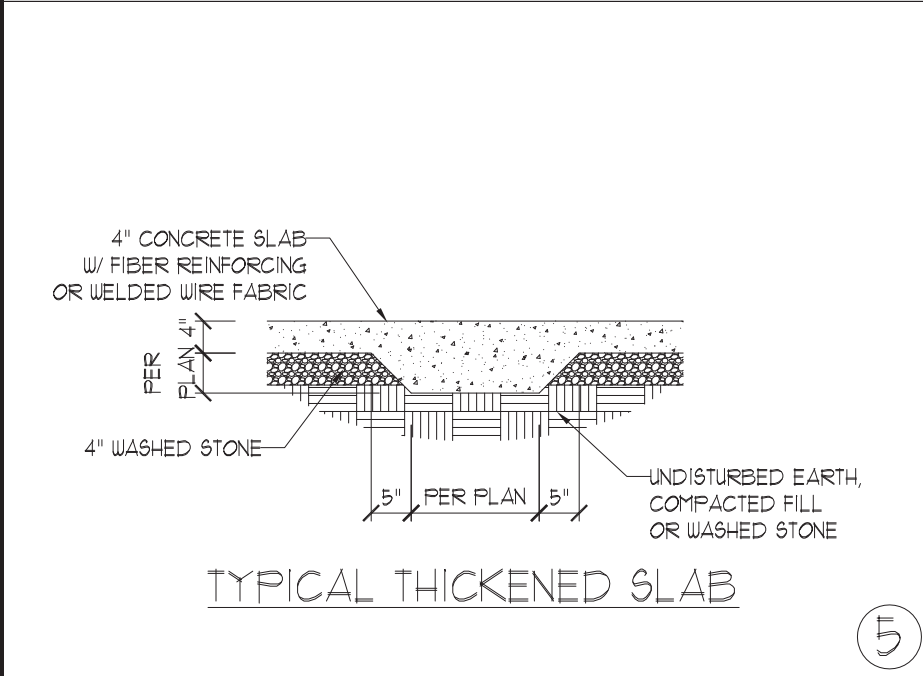
TYPICAL SLAB w/ BRICK LEDGE ②



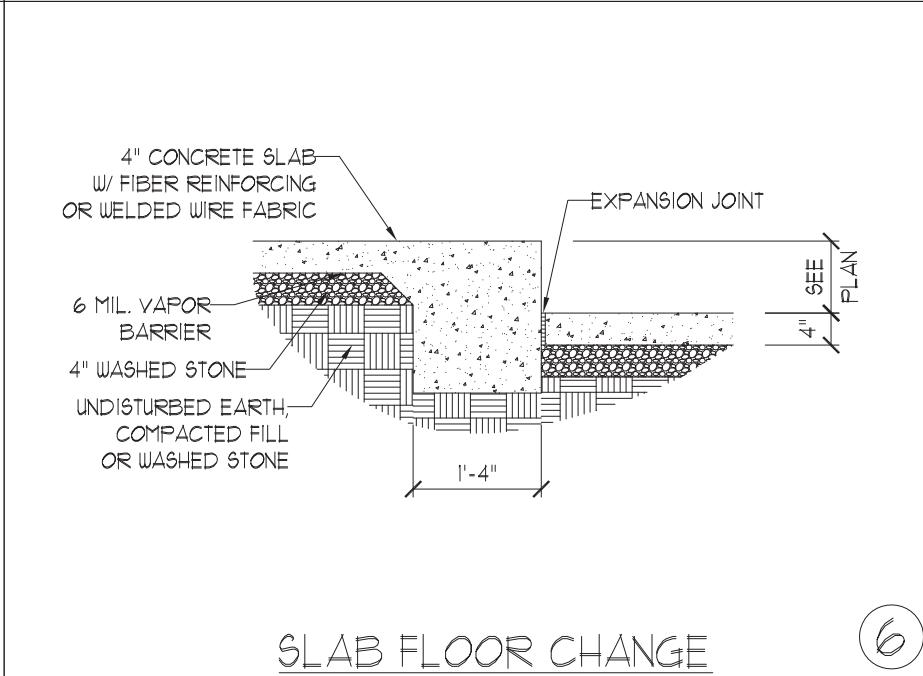
TYPICAL SLAB w/ BRICK VENEER LEDGE ③



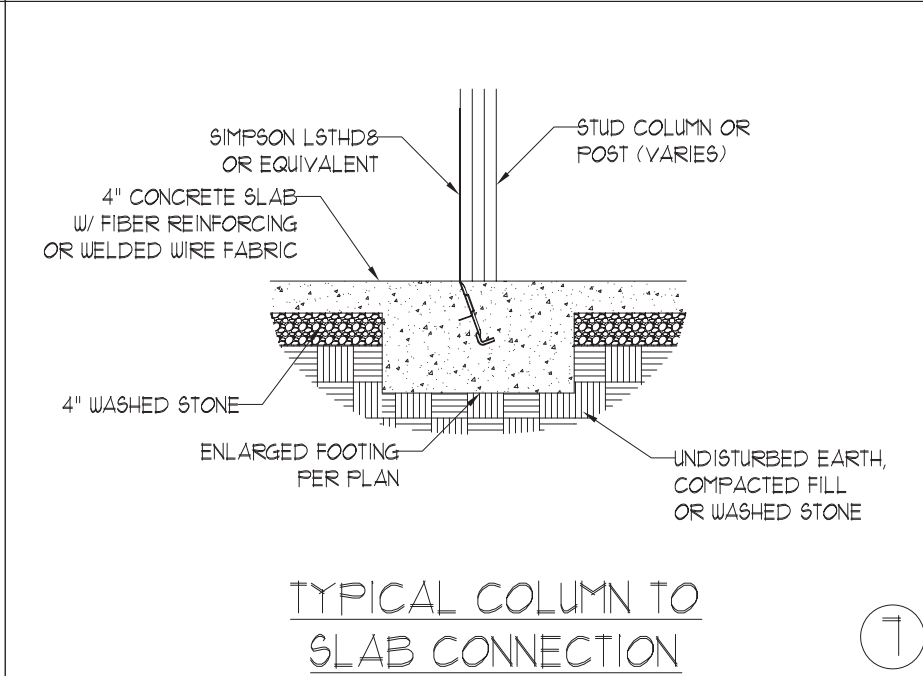
PORCH/SCREEN PORCH ④



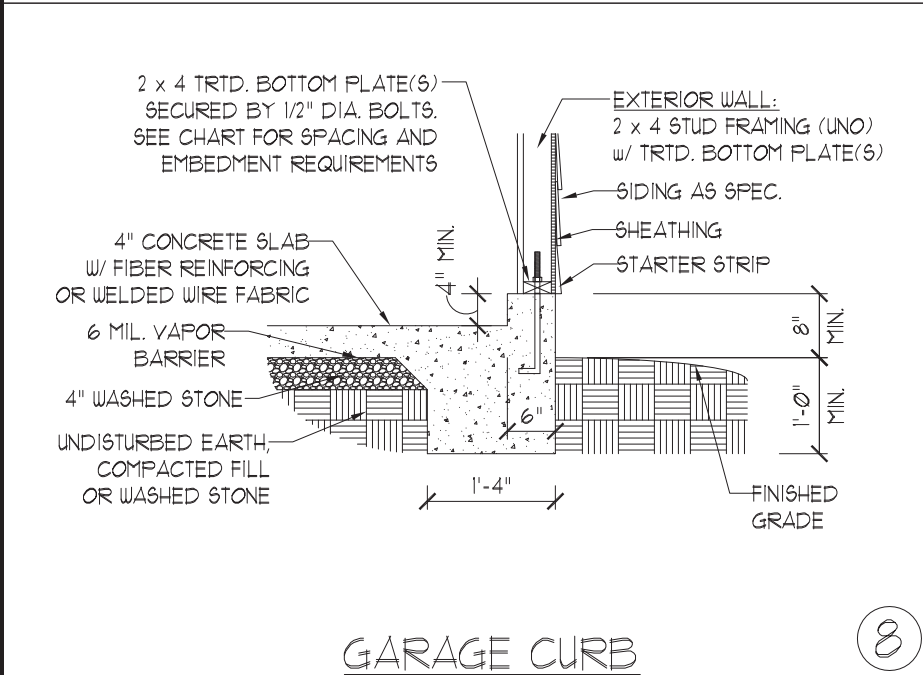
TYPICAL THICKENED SLAB ⑤



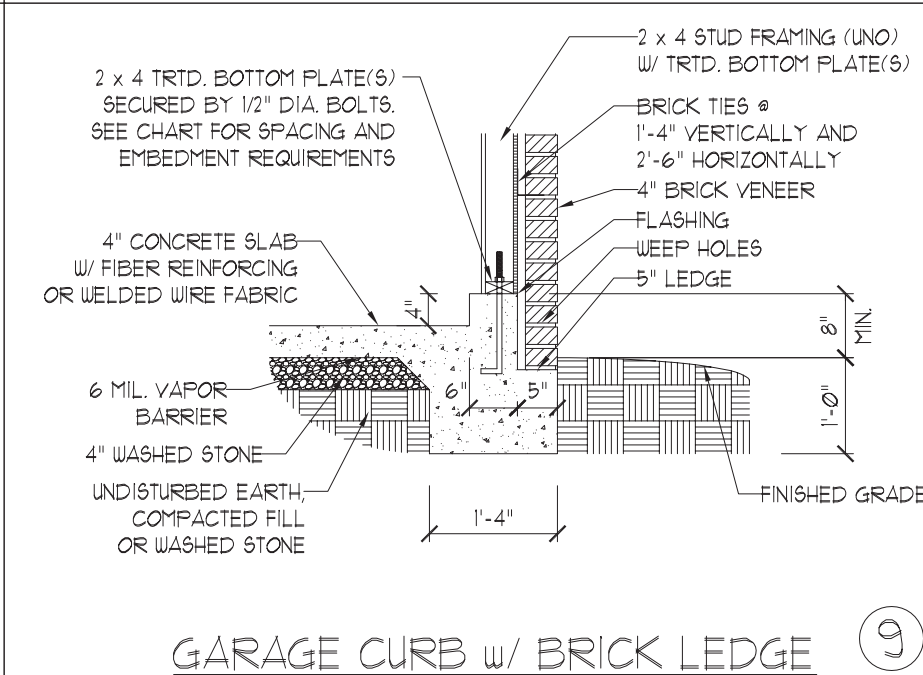
SLAB FLOOR CHANGE ⑥



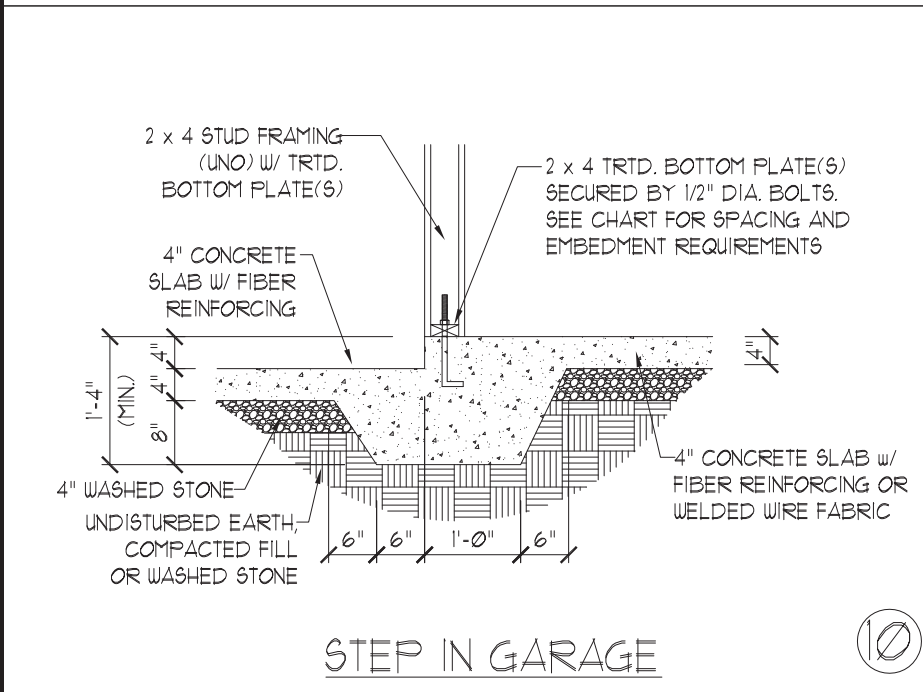
TYPICAL COLUMN TO SLAB CONNECTION ⑦



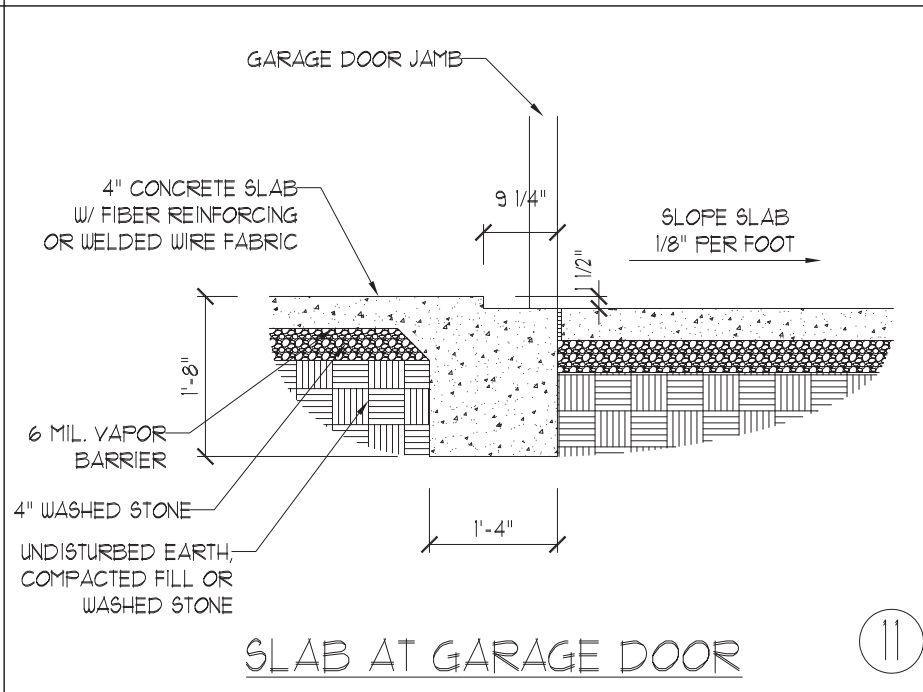
GARAGE CURB ⑧



GARAGE CURB w/ BRICK LEDGE ⑨



STEP IN GARAGE ⑩



SLAB AT GARAGE DOOR ⑪

| ANCHOR SPACING AND EMBEDMENT | | | NOTE: THREADED ROD WITH EPOXY, SIMPSON TITEN HD, OR APPROVED ANCHORS SPACED AS REQUIRED TO PROVIDE EQUIVALENT ANCHORAGE TO 1/2" DIAMETER ANCHOR BOLTS MAY BE USED IN LIEU OF 1/2" ANCHOR BOLTS. |
|------------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| WIND ZONE | 120 MPH | 130 MPH | |
| SPACING | 6'-0" O.C. INSTALL MIN. (2) ANCHORS PER PLATE SECTION AND (1) ANCHOR WITHIN 12" OF CORNERS | 4'-0" O.C. INSTALL MIN. (2) ANCHORS PER PLATE SECTION AND (1) ANCHOR WITHIN 12" OF CORNERS | |
| EMBEDMENT | 7" | 15" INTO MASONRY 7" INTO CONCRETE | |

J.S. THOMPSON ENGINEERING, INC.
 606 WADE AVE., SUITE 104 RALEIGH, NC 27605
 PHONE: (919) 789-9919 FAX: (919) 789-9921
 N.C. LICENSE NO.: C-1733

MONOLITHIC SLAB FOUNDATION DETAILS



| |
|------------------------|
| DATE: NOVEMBER 1, 2018 |
| SCALE: NTS |
| DRAWN BY: JST |
| ENGINEERED BY: JST |

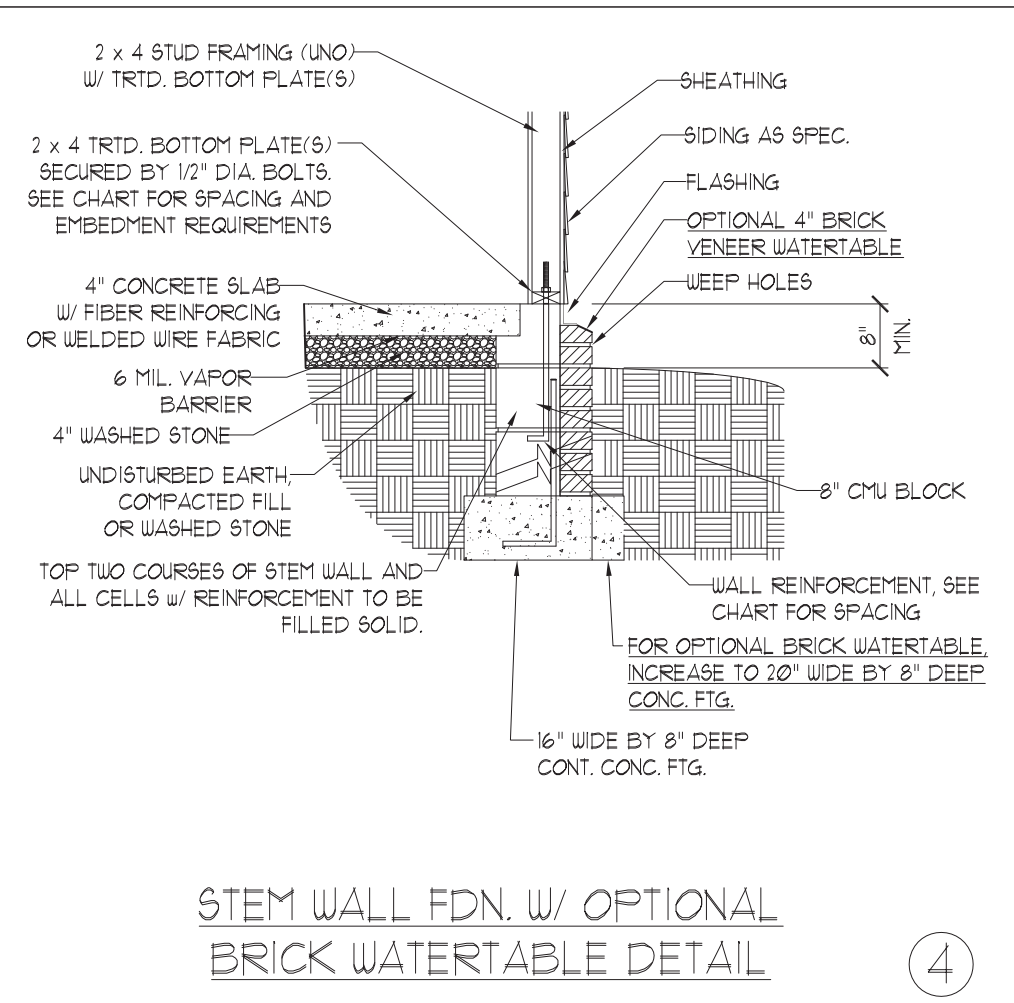
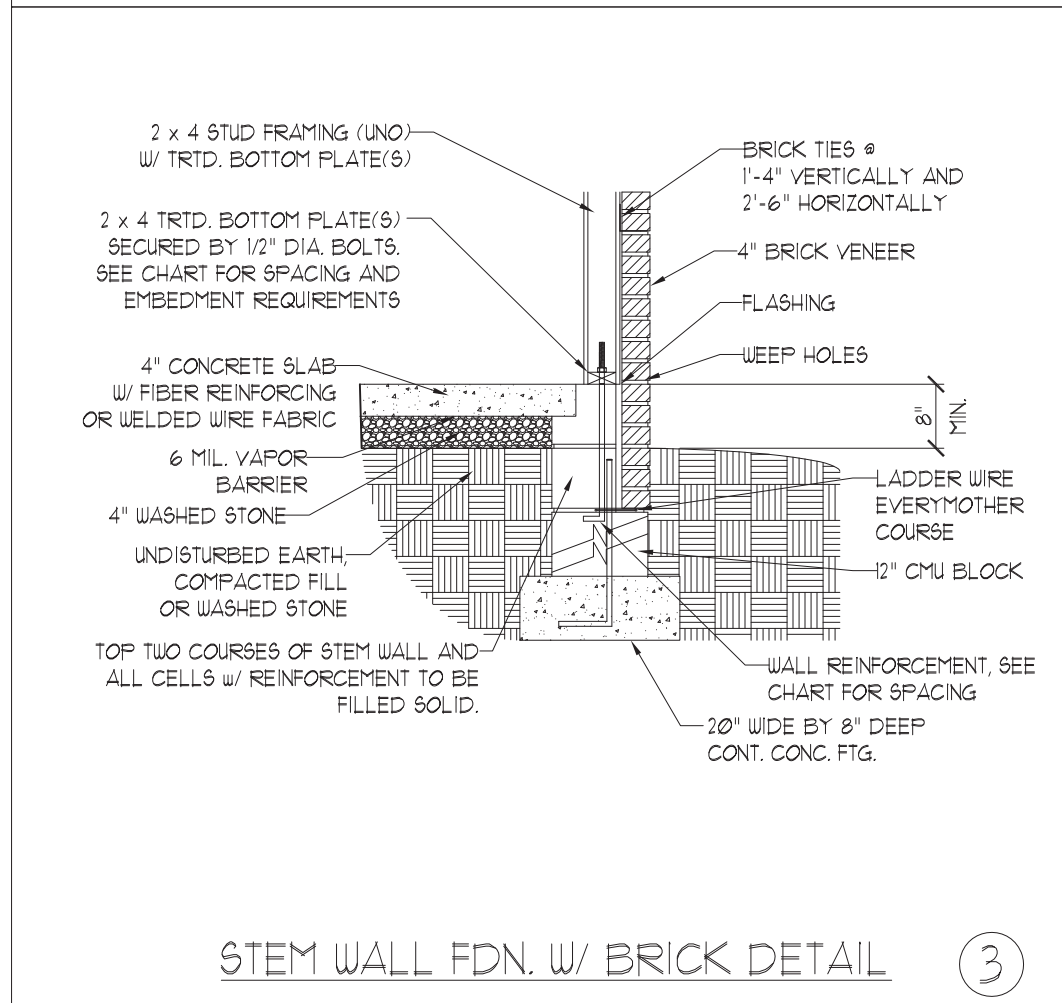
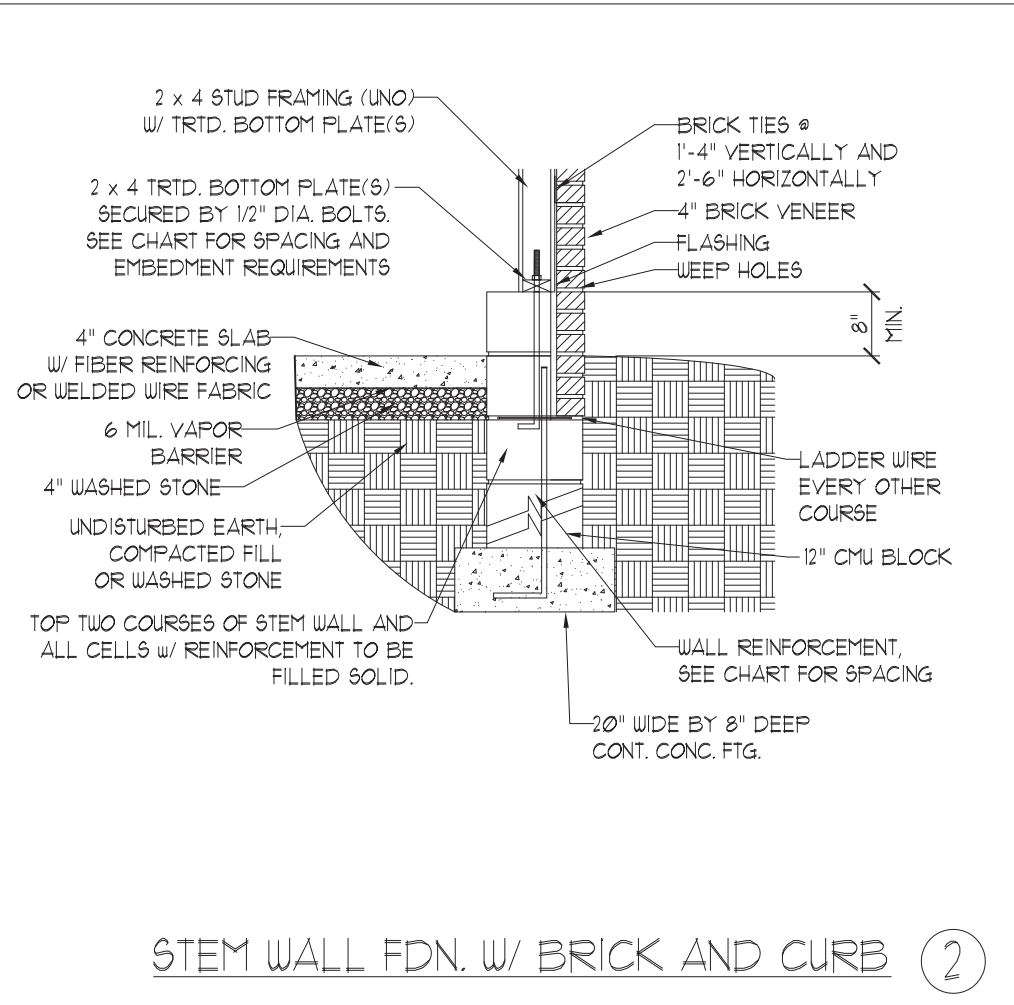
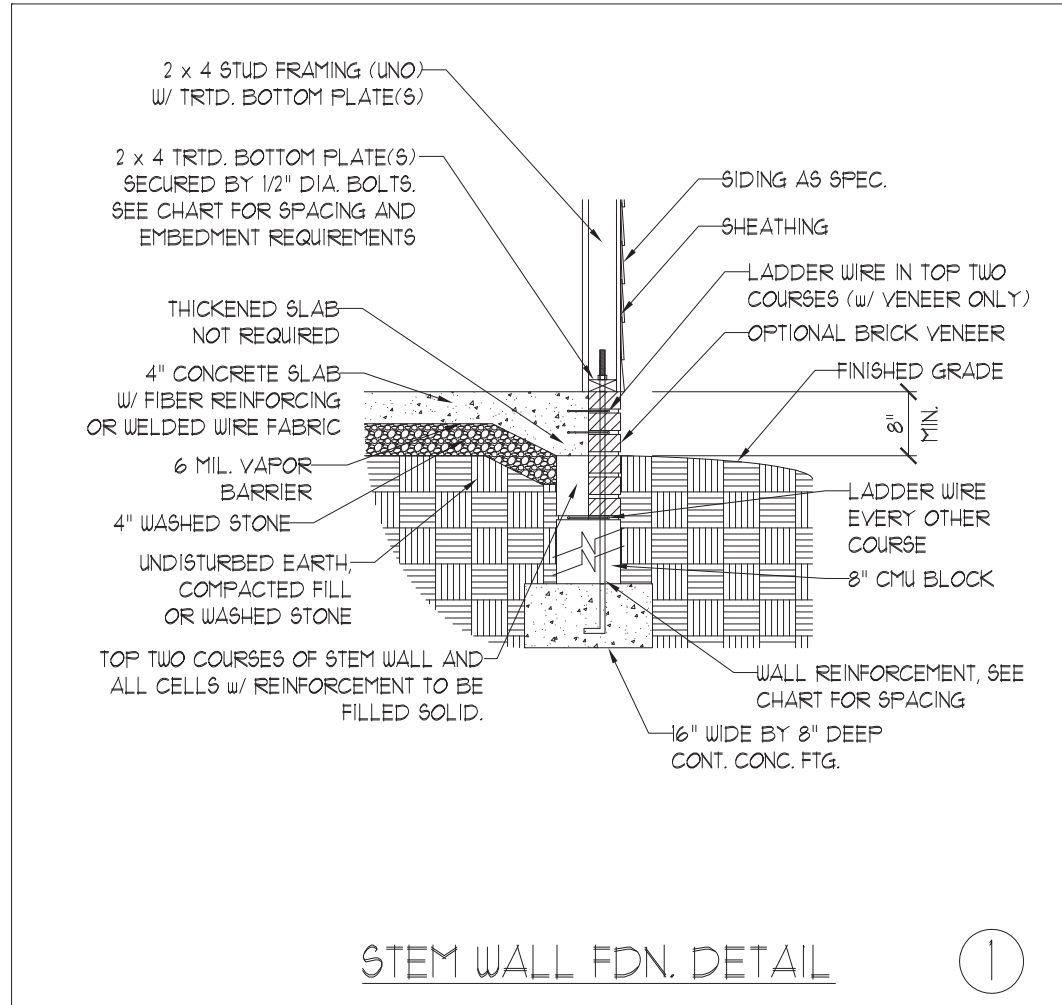
This sealed page is to be used in conjunction with a full plan set engineered by J.S. Thompson Engineering, Inc. only. Use of this individual sealed page within architectural pages or shop drawings by others is a punishable offense under N.C. Statute § 89C-23

FOUNDATION DETAILS



**J.S. THOMPSON
ENGINEERING, INC**
606 WADE AVE., SUITE 104 RALEIGH, NC 27605
PHONE: (919) 789-9919 FAX: (919) 789-9921
N.C. LICENSE NO.: C-1733

STEM WALL FOUNDATION DETAILS



| MASONRY STEMWALL SPECIFICATIONS | | | | |
|---------------------------------|--------------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| WALL HEIGHT (FEET) | MASONRY WALL TYPE | | | |
| | 8" CMU | 4" BRICK AND 4" CMU | 4" BRICK AND 8" CMU | 12" CMU |
| 2 AND BELOW | UNGROUTED | GROUT SOLID | UNGROUTED | UNGROUTED |
| 3 | UNGROUTED | GROUT SOLID | UNGROUTED | UNGROUTED |
| 4 | GROUT SOLID | GROUT SOLID w/ #4 REBAR @ 48" O.C. | GROUT SOLID | GROUT SOLID w/ #4 REBAR @ 64" O.C. |
| 5 | GROUT SOLID w/ #4 REBAR @ 36" O.C. | NOT APPLICABLE | GROUT SOLID w/ #4 REBAR @ 36" O.C. | GROUT SOLID w/ #4 REBAR @ 64" O.C. |
| 6 | GROUT SOLID w/ #4 REBAR @ 24" O.C. | NOT APPLICABLE | GROUT SOLID w/ #4 REBAR @ 24" O.C. | GROUT SOLID w/ #4 REBAR @ 64" O.C. |
| 7 AND GREATER | ENGINEERED DESIGN BASED ON SITE CONDITIONS | | | |

- STRUCTURAL NOTES:**
- 1) WALL HEIGHT MEASURED FROM TOP OF FOOTING TO TOP OF THE WALL.
 - 2) TIE MULTIPLE WYTHES TOGETHER WITH LADDER WIRE AT 16" O.C. VERTICALLY.
 - 3) CHART APPLICABLE FOR HOUSE FOUNDATION ONLY. CONSULT ENGINEER FOR DESIGN OF GARAGE FOUNDATION NOT COMMON TO HOUSE.
 - 4) BACKFILL OF CLEAN #51 / #61 WASHED STONE IS ALLOWABLE.
 - 5) BACKFILL OF WELL DRAINED OR SAND - GRAVEL MIXTURE SOILS (45 PSF/FT BELOW GRADE) CLASSIFIED AS GROUP 1 ACCORDING TO UNIFIED SOILS CLASSIFICATION SYSTEM IN ACCORDANCE WITH TABLE R405.1 OF THE 2018 NORTH CAROLINA RESIDENTIAL CODE ARE ALLOWABLE.
 - 6) PREP SLAB PER R506.2.1 AND R506.2.2 BASE AND EXCEPTION OF 2018 NORTH CAROLINA RESIDENTIAL CODE.
 - 7) MINIMUM 24" LAP SPLICE LENGTH.
 - 8) LOCATE REBAR IN CENTER OF FOUNDATION WALL.
 - 9) WHERE REQUIRED, FILL BLOCK SOLID WITH TYPE "S" MORTAR OR 3000 PSI GROUT. USE OF "LOW LIFT GROUTING" METHOD REQUIRED WHEN FILLING WALLS WITH GROUT AT HEIGHTS OF 5' AND GREATER.

SEAL
33736
ENGINEER
MATTHEW G. STROTHER
NORTH CAROLINA PROFESSIONAL SEAL
3/18/2020

| ANCHOR SPACING AND EMBEDMENT | | | NOTE: THREADED ROD WITH EPOXY, SIMPSON TITEN HD, OR APPROVED ANCHORS SPACED AS REQUIRED TO PROVIDE EQUIVALENT ANCHORAGE TO 1/2" DIAMETER ANCHOR BOLTS MAY BE USED IN LIEU OF 1/2" ANCHOR BOLTS. |
|------------------------------|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| WIND ZONE | 120 MPH | 130 MPH | |
| SPACING | 6'-0" O.C. INSTALL MIN. (2) ANCHORS PER PLATE SECTION AND (1) ANCHOR WITHIN 12" OF CORNERS | 4'-0" O.C. INSTALL MIN. (2) ANCHORS PER PLATE SECTION AND (1) ANCHOR WITHIN 12" OF CORNERS | |
| EMBEDMENT | 1" | 15" INTO MASONRY 1" INTO CONCRETE | |

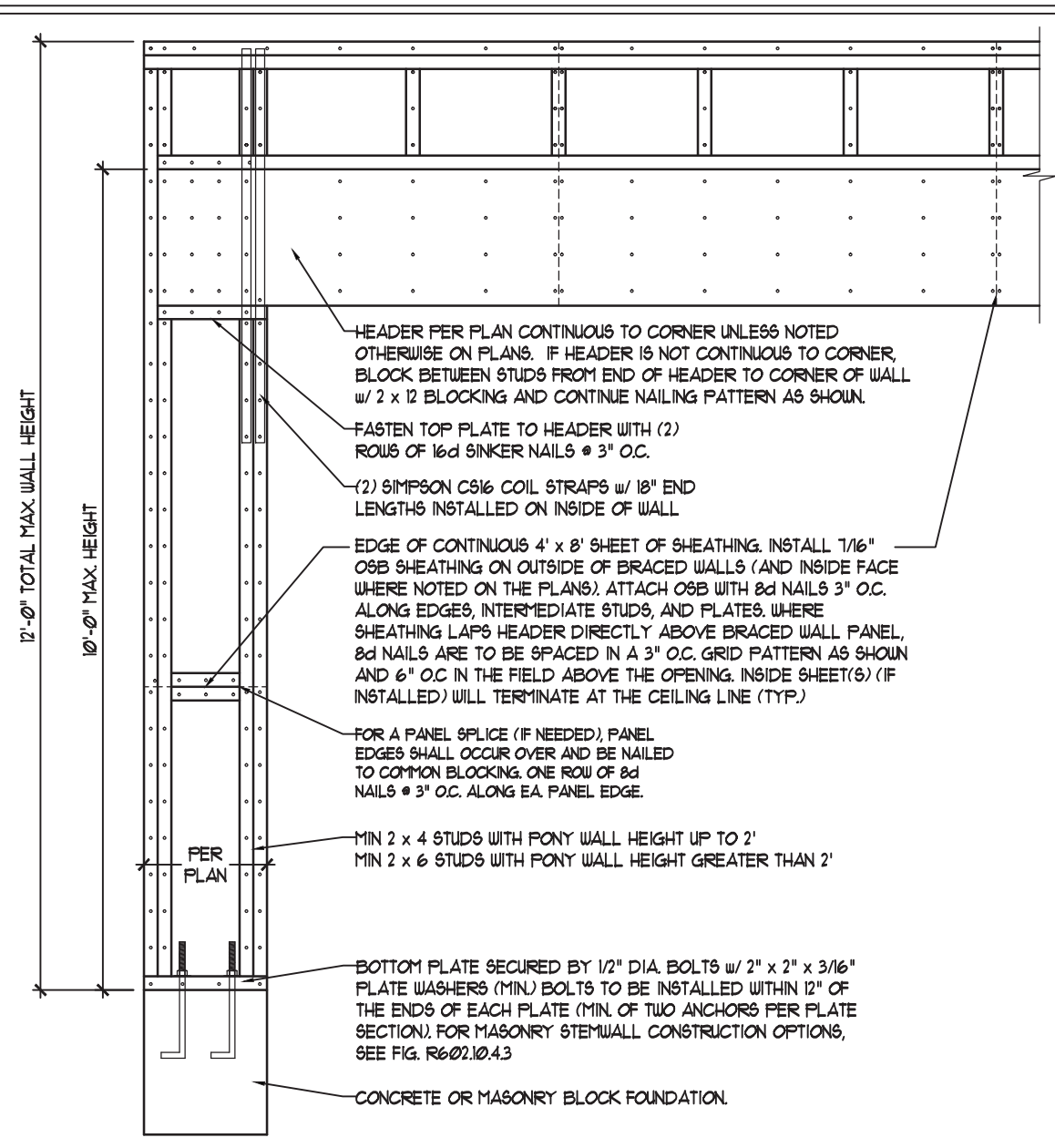
This sealed page is to be used in conjunction with a full plan set engineered by J.S. Thompson Engineering, Inc. only. Use of this individual sealed page within architectural pages or shop drawings by others is a punishable offense under N.C. Statute § 89C-23

DATE: NOVEMBER 1, 2018
SCALE: NTS
DRAWN BY: JST
ENGINEERED BY: JST

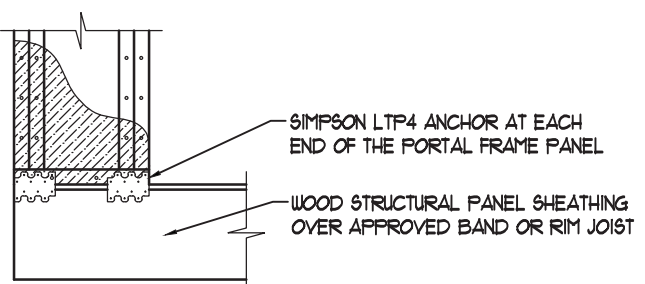
FOUNDATION DETAILS

GENERAL WALL BRACING NOTES:

1. WALL BRACING DESIGNED IN ACCORDANCE WITH CHAPTER 6 OF THE 2018 NC RESIDENTIAL BUILDING CODE (NCRBC). TABLES AND FIGURES REFERENCED ARE FROM THE 2018 NCRBC.
2. SEE THIS SHEET FOR GENERAL DETAILS. REFER TO THE 2018 NCRBC FOR ADDITIONAL INFORMATION AS NEEDED.
3. BRACED EXTERIOR WALLS SUPPORTING ROOF TRUSSES AND RAFTERS, INCLUDING STORIES BELOW THE TOP FLOOR, HAVE BEEN DESIGNED PER R602.3.5 (3) WALL SHEATHING AND FASTENERS HAVE BEEN DESIGNED TO RESIST COMBINED UPLIFT AND SHEAR FORCES IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICE.
4. SEE STRUCTURAL SHEETS FOR BRACED WALL LOCATIONS, DIMENSIONS, HOLD DOWN TYPE AND LOCATIONS, BRACED WALL LINE KEY WITH WALL DESIGN SUMMARY OF REQUIRED/PROVIDED TOTALS FOR EACH WALL LINE AND ANY SPECIAL NOTES OR REQUIREMENTS.
5. ALL EXTERIOR WALLS ARE TO BE SHEATHED WITH CS-WSP IN ACCORDANCE WITH SECTION R602.10.3 UNLESS NOTED OTHERWISE.
6. ALL EXTERIOR AND INTERIOR WALLS TO HAVE 1/2" GYPSUM INSTALLED. WHEN NOT USING METHOD "GB", GYPSUM TO BE FASTENED PER TABLE R102.3.5, METHOD GB TO BE FASTENED PER TABLE R602.101
7. CS-WSP REFERS TO THE "CONTINUOUS SHEATHING - WOOD STRUCTURAL PANELS" WALL BRACING METHOD. 1/16" O8B SHEATHING IS TO BE INSTALLED ON ALL EXTERIOR WALLS ATTACHED w/ 6d COMMON NAILS OR 8d (2 1/2" LONG x 0.13" DIAMETER) NAILS SPACED 6" O.C. ALONG PANEL EDGES AND 12" O.C. IN THE FIELD (UNO).
8. GB REFERS TO THE "GYPSUM BOARD" WALL BRACING METHOD. 1/2" (MIN.) GYPSUM WALL BOARD IS TO BE INSTALLED ON BOTH SIDES OF THE BRACED WALL FASTENED WITH 1 1/4" SCREWS OR 1 5/8" NAILS SPACED 7" O.C. ALONG PANEL EDGES INCLUDING TOP AND BOTTOM PLATES AND INTERMEDIATE SUPPORTS (UNO). VERIFY ALL FASTENER OPTIONS FOR 1/2" AND 5/8" GYPSUM PRIOR TO CONSTRUCTION. FOR INTERIOR FASTENER OPTIONS SEE TABLE R102.3.5. FOR EXTERIOR FASTENER OPTIONS SEE TABLE R602.3(1). EXTERIOR GB TO BE INSTALLED VERTICALLY.
9. REQUIRED BRACED WALL LENGTH FOR EACH SIDE OF THE CIRCUMSCRIBED RECTANGLE ARE INTERPOLATED PER TABLE R602.10.3, METHOD CS-WSP CONTRIBUTES ITS ACTUAL LENGTH, METHOD GB CONTRIBUTES 5 ITS ACTUAL LENGTH, AND METHOD FF CONTRIBUTES 15 TIMES ITS ACTUAL LENGTH.



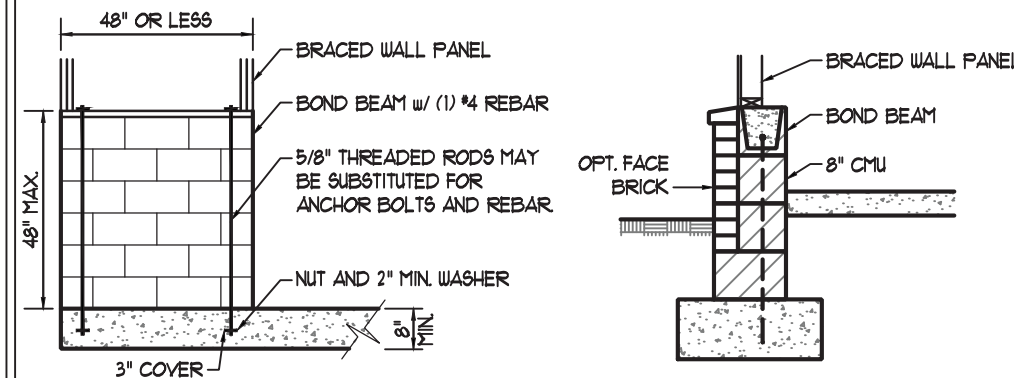
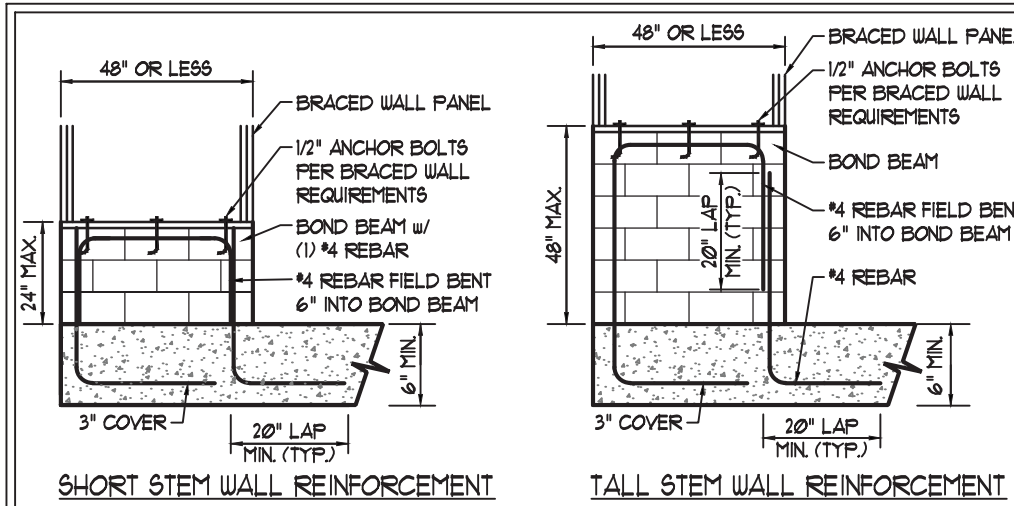
OVER CONCRETE OR MASONRY BLOCK FOUNDATION



OVER RAISED WOOD FLOOR - FRAMING ANCHOR OPTION

* APPLICABLE w/ GREATER THAN 12" KNEE WALL HEIGHTS
* IN CRAWL SPACE AND ABOVE FRAMED BASEMENT WALLS *

METHOD PF-PORTAL FRAME DETAIL ①



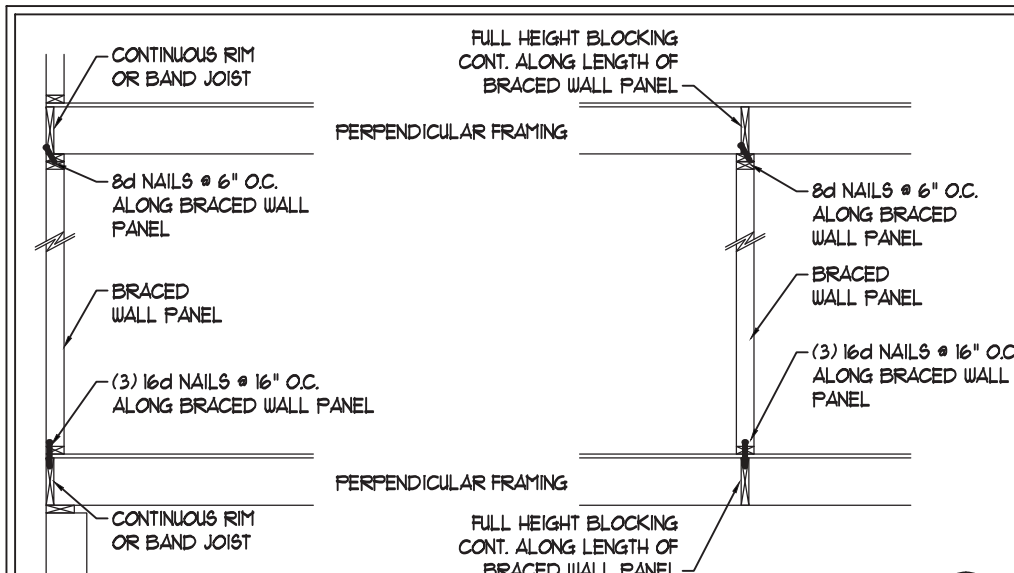
RODS MAY BE INSTALLED USING AN ADHESIVE ANCHORING SYSTEM WITH A MINIMUM TENSILE CAPACITY OF 3150 LBS AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECS.

OPTIONAL STEM WALL REINFORCEMENT

NOTE: GROUT BOND BEAMS AND ALL CELLS WHICH CONTAIN REBAR, THREADED RODS AND ANCHOR BOLTS

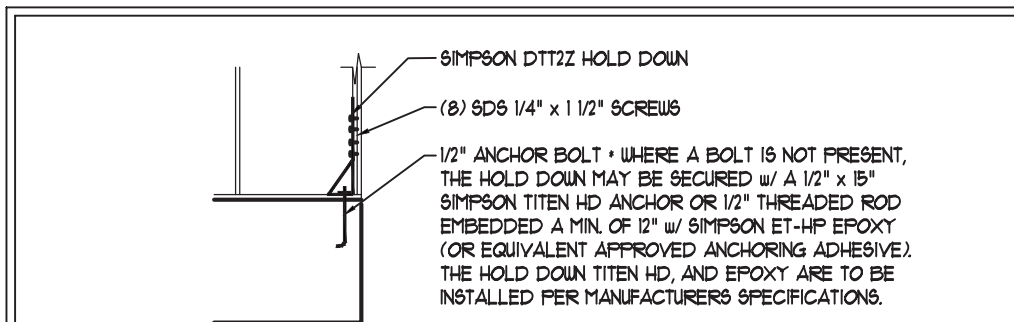
MASONRY STEM WALLS SUPPORTING BRACED WALL PANELS ②

PER FIGURE R602.10.4.3



BRACED WALL PANEL CONNECTION WHEN PERPENDICULAR TO FLOOR/CEILING FRAMING ③

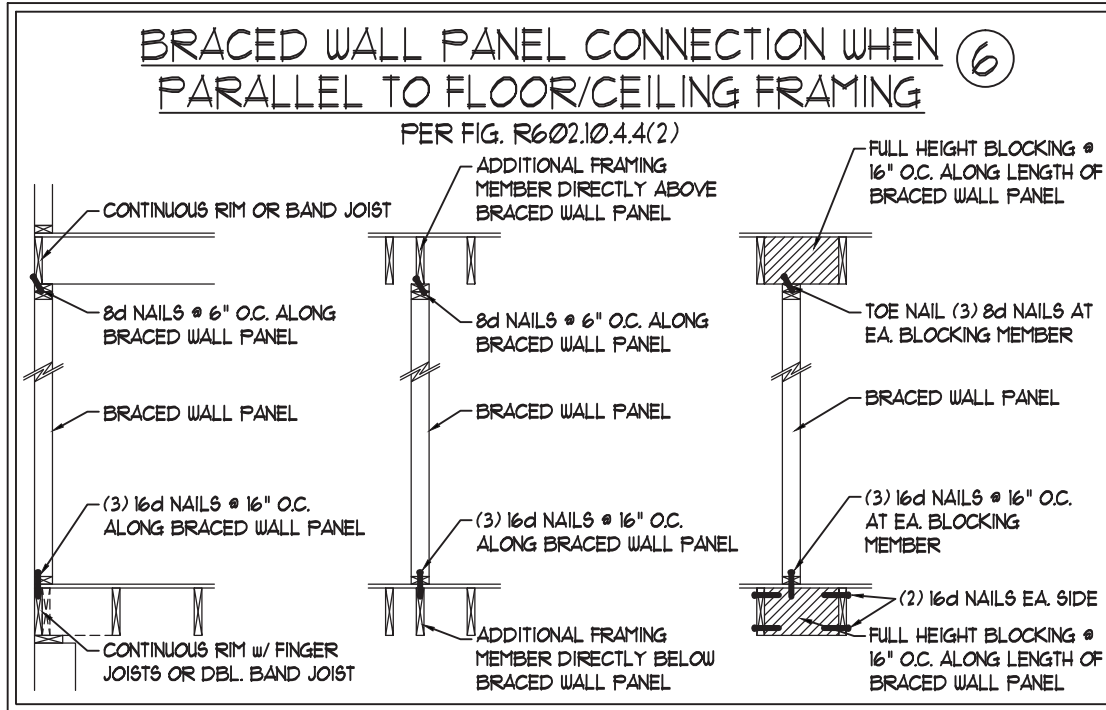
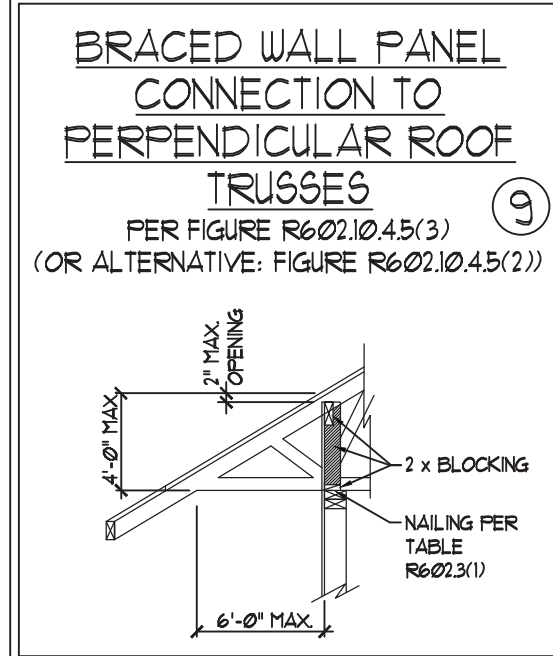
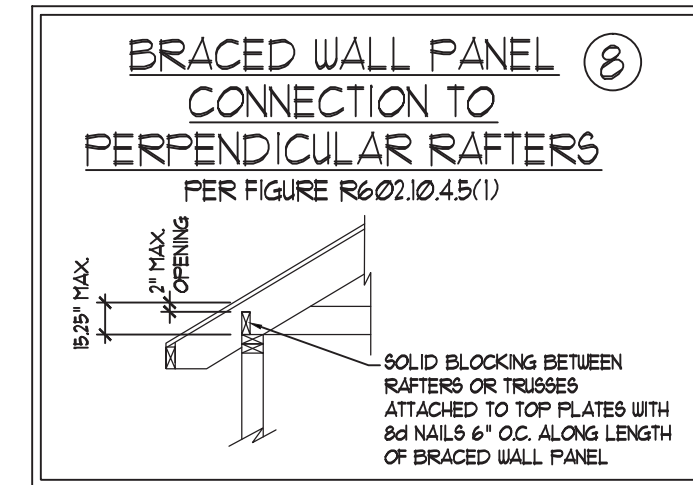
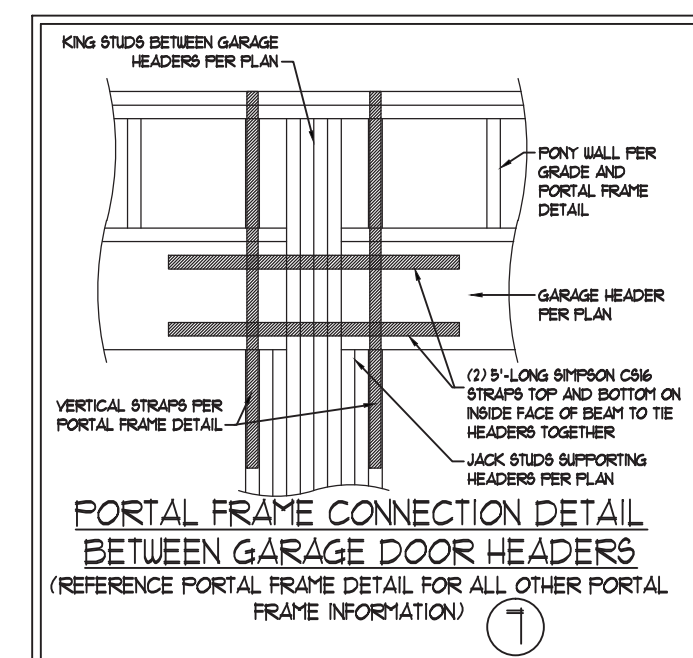
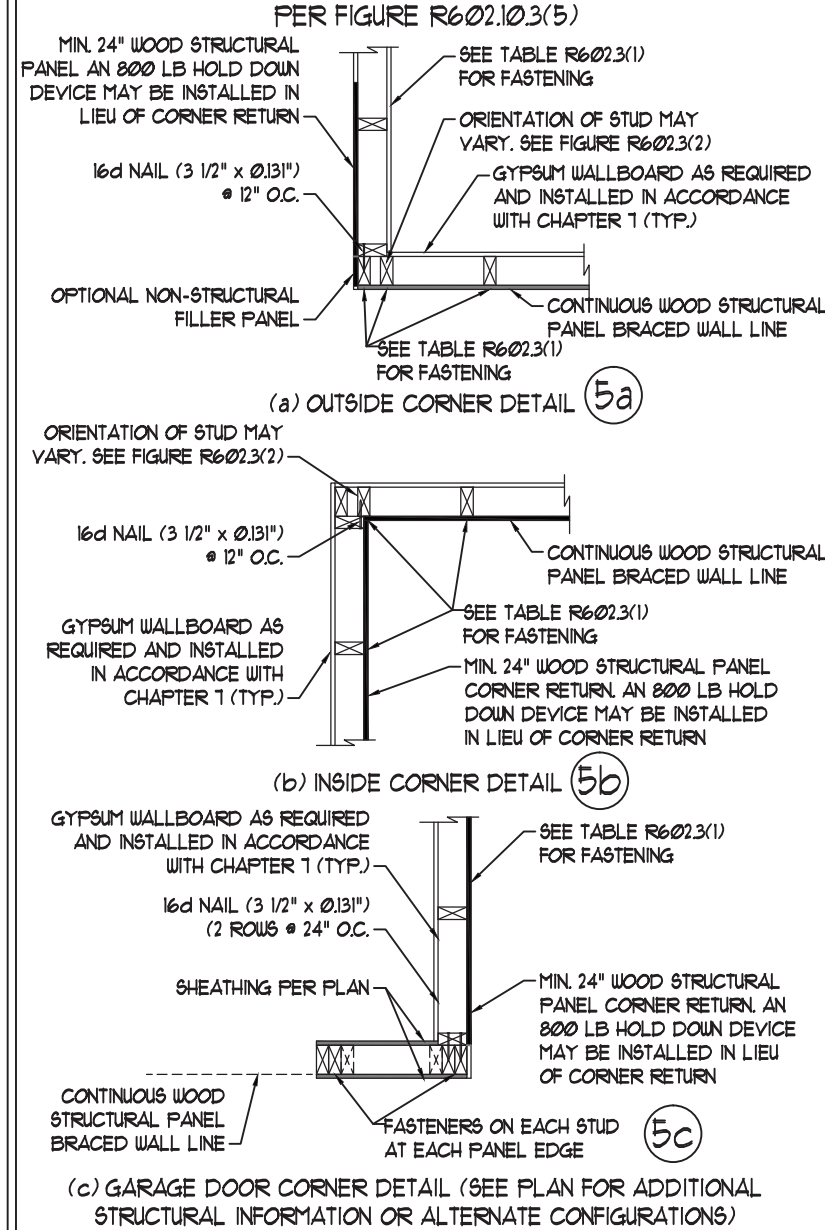
PER FIGURE R602.10.4.4(1)



HOLD DOWN DETAIL FOR MASONRY FOUNDATION OR MONOLITHIC SLAB ④

* APPLICABLE ONLY WHERE SPECIFIED ON PLAN *

TYPICAL EXTERIOR CORNER FRAMING FOR CONTINUOUS SHEATHING ⑤



This sealed page is to be used in conjunction with a full plan set engineered by J.S. Thompson Engineering, Inc. only. Use of this individual sealed page within architectural pages or shop drawings by others is a punishable offense under N.C. Statute § 89C-23



3/18/2020

J.S. THOMPSON ENGINEERING, INC.
 606 WADE AVE., SUITE 104 RALEIGH, NC 27605
 PHONE: (919) 789-9919 FAX: (919) 789-9921
 N.C. LICENSE NO.: C-1733

WALL BRACING NOTES AND DETAILS

| |
|------------------------|
| DATE: OCTOBER 30, 2018 |
| SCALE: 1/4" = 1'-0" |
| DRAWN BY: JST |
| ENGINEERED BY: JST |

BRACED WALL NOTES AND DETAILS AND PF DETAIL

GENERAL NOTES

- ENGINEER'S SEAL APPLIES ONLY TO STRUCTURAL COMPONENTS INCLUDING ROOF RAFTERS, HIPS, VALLEYS, RIDGES, FLOORS, WALLS, BEAMS, HEADERS, COLUMNS, CANTILEVERS, OFFSET LOAD BEARING WALLS, PIERS, GIRDER SYSTEM AND FOOTING. ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL ACCURACY OF ARCHITECTURAL LAYOUT INCLUDING ROOF. ENGINEER'S SEAL DOES NOT APPLY TO I-JOIST OR FLOOR/ROOF TRUSS LAYOUT DESIGN AND ACCURACY.
- ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE NORTH CAROLINA RESIDENTIAL CODE (NCRC), 2018 EDITION, PLUS ALL LOCAL CODES AND REGULATIONS. THE STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR, AND WILL NOT HAVE CONTROL OF, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE CONSTRUCTION WORK. NOR WILL THE ENGINEER BE RESPONSIBLE FOR THE CONTRACTORS FAILURE TO CARRY OUT THE CONSTRUCTION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- STRUCTURAL DESIGN BASED ON THE PROVISIONS OF THE NCRC, 2018 EDITION (R301.4 - R301.7)

| DESIGN CRITERIA: | LIVE LOAD (PSF) | DEAD LOAD (PSF) | DEFLECTION (IN) |
|--------------------------------|---------------------------------------------------|-----------------|-----------------------------------|
| ATTIC WITH LIMITED STORAGE | 20 | 10 | L/240 (L/360 w/ BRITTLE FINISHES) |
| ATTIC WITHOUT STORAGE | 10 | 10 | L/360 |
| DECKS | 40 | 10 | L/360 |
| EXTERIOR BALCONIES | 40 | 10 | L/360 |
| FIRE ESCAPES | 40 | 10 | L/360 |
| HANDRAILS/GUARDRAILS | 200 LB OR 50 (PLF) | 10 | L/360 |
| PASSENGER VEHICLE GARAGE | 50 | 10 | L/360 |
| ROOMS OTHER THAN SLEEPING ROOM | 40 | 10 | L/360 |
| SLEEPING ROOMS | 30 | 10 | L/360 |
| STAIRS | 40 | 10 | L/360 |
| WIND LOAD | (BASED ON TABLE R301.2(4) WIND ZONE AND EXPOSURE) | | |
| GROUND SNOW LOAD: Pg | 20 (PSF) | | |

- I-JOIST SYSTEMS DESIGNED WITH 12 PSF DEAD LOAD AND DEFLECTION (IN) OF L/480
- FLOOR TRUSS SYSTEMS DESIGNED WITH 15 PSF DEAD LOAD

- FOR 115 AND 120 MPH WIND ZONES, FOUNDATION ANCHORAGE IS TO COMPLY WITH SECTION R403.16 OF THE NCRC, 2018 EDITION. FOR 130 MPH, 140 MPH, AND 150 MPH WIND ZONES, FOUNDATION ANCHORAGE IS TO COMPLY WITH SECTION 4504 OF THE NCRC, 2018 EDITION.
- ENERGY EFFICIENCY COMPLIANCE AND INSULATION VALUES OF THE BUILDING TO BE IN ACCORDANCE WITH CHAPTER II OF THE NCRC, 2018 EDITION.

FOOTING AND FOUNDATION NOTES

- FOUNDATION DESIGN BASED ON A MINIMUM ALLOWABLE BEARING CAPACITY OF 2000 PSF. CONTACT GEOTECHNICAL ENGINEER IF BEARING CAPACITY IS NOT ACHIEVED.
- FOR ALL CONCRETE SLABS AND FOOTINGS, THE AREA WITHIN THE PERIMETER OF THE BUILDING ENVELOPE SHALL HAVE ALL VEGETATION, TOP SOIL AND FOREIGN MATERIAL REMOVED. FILL MATERIAL SHALL BE FREE OF VEGETATION AND FOREIGN MATERIAL. THE FILL SHALL BE COMPACTED TO ASSURE UNIFORM SUPPORT OF THE SLAB, AND EXCEPT WHERE APPROVED, THE FILL DEPTHS SHALL NOT EXCEED 24" FOR CLEAN SAND OR GRAVEL. A 4" THICK BASED COURSE CONSISTING OF CLEAN GRADED SAND OR GRAVEL SHALL BE PLACED. A BASE COURSE IS NOT REQUIRED WHERE A CONCRETE SLAB IS INSTALLED ON WELL-DRAINED OR SAND-GRAVEL MIXTURE SOILS CLASSIFIED AS GROUP I, ACCORDING TO THE UNITED SOIL CLASSIFICATION SYSTEM IN ACCORDANCE WITH TABLE R405.1 OF THE NCRC, 2018 EDITION.
- PROPERLY DEWATER EXCAVATION PRIOR TO POURING CONCRETE WHEN BOTTOM OF CONCRETE SLAB IS AT OR BELOW WATER TABLE. IF APPLICABLE, 3/4" - 1" DEEP CONTROL JOINTS ARE TO BE SAWED WITHIN 4 TO 12 HOURS OF CONCRETE FINISHING AND WALL LOCATIONS HAVE BEEN MARKED. ADJUST WHERE NECESSARY.
- CONCRETE SHALL CONFORM TO SECTION R402.2 OF THE NCRC, 2018 EDITION. CONCRETE REINFORCING STEEL TO BE ASTM A615 GRADE 60. WELDED WIRE FABRIC TO BE ASTM A185. MAINTAIN A MINIMUM CONCRETE COVER AROUND REINFORCING STEEL OF 3" IN FOOTINGS AND 1 1/2" IN SLABS. FOR POURED CONCRETE WALLS, CONCRETE COVER FOR REINFORCING STEEL MEASURED FROM THE INSIDE FACE OF THE WALL SHALL NOT BE LESS THAN 3/4". CONCRETE COVER FOR REINFORCING STEEL MEASURED FROM THE OUTSIDE FACE OF THE WALL SHALL NOT BE LESS THAN 1 1/2" FOR #5 BARS OR SMALLER, AND NOT LESS THAN 2" FOR #6 BARS OR LARGER.
- MASONRY UNITS TO CONFORM TO ACE 530/ASCE 5/TMS 402. MORTAR SHALL CONFORM TO ASTM C210.
- THE UNSUPPORTED HEIGHT OF MASONRY PIERS SHALL NOT EXCEED FOUR TIMES THEIR LEAST DIMENSION FOR UNFILLED HOLLOW CONCRETE MASONRY UNITS AND TEN TIMES THEIR LEAST DIMENSION FOR SOLID OR SOLID FILLED PIERS. PIERS MAY BE FILLED SOLID WITH CONCRETE OR TYPE M OR S MORTAR PIERS AND WALLS SHALL BE CAPPED WITH 8" OF SOLID MASONRY.
- THE CENTER OF EACH OF THE PIERS SHALL BEAR IN THE MIDDLE THIRD OF ITS RESPECTIVE FOOTING. EACH GIRDER SHALL BEAR IN THE MIDDLE THIRD OF THE PIERS.
- ALL CONCRETE AND MASONRY FOUNDATION WALLS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF SECTION R404 OF THE NCRC, 2018 EDITION OR IN ACCORDANCE WITH ACI 318, ACI 332, NCMA TR68-A OR ACE 530/ASCE 5/TMS 402. MASONRY FOUNDATION WALLS ARE TO BE REINFORCED PER TABLE R404.1.1(1), R404.1.1(2), R404.1.1(3), OR R404.1.1(4) OF THE NCRC, 2018 EDITION. CONCRETE FOUNDATION WALLS ARE TO BE REINFORCED PER TABLE R404.1.1(5) OF THE NCRC, 2018 EDITION. STEP CONCRETE FOUNDATION WALLS TO 2 x 6 FRAMED WALLS AT 16" O.C. WHERE GRADE PERMITS (UNO).



This sealed page is to be used in conjunction with a full plan set engineered by J.S. Thompson Engineering, Inc. only. Use of this individual sealed page within architectural pages or shop drawings by others is a punishable offense under N.C. Statute § 89C-23

FRAMING NOTES

- ALL FRAMING LUMBER SHALL BE #2 SFF MINIMUM (Fb = 875 PSI, Fv = 375 PSI, E = 1600000 PSI) UNLESS NOTED OTHERWISE (UNO). ALL TREATED LUMBER SHALL BE #2 SYP MINIMUM (Fb = 975 PSI, Fv = 175 PSI, E = 1600000 PSI) UNLESS NOTED OTHERWISE (UNO).
- LAMINATED VENEER LUMBER (LVL) SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: Fb = 2600 PSI, Fv = 285 PSI, E = 1900000 PSI. LAMINATED STRAND LUMBER (LSL) SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: Fb = 2325 PSI, Fv = 310 PSI, E = 1550000 PSI. PARALLEL STRAND LUMBER (PSL) UP TO 1" DEPTH SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: Fc = 2500 PSI, E = 1800000 PSI. PARALLEL STRAND LUMBER (PSL) MORE THAN 1" DEPTH SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: Fc = 2900 PSI, E = 2000000 PSI. INSTALL ALL CONNECTIONS PER MANUFACTURER'S SPECIFICATIONS.
- STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING ASTM SPECIFICATIONS

| | |
|--------------------------------|--------------------------------|
| A. W AND WT SHAPES: | ASTM A992 |
| B. CHANNELS AND ANGLES: | ASTM A36 |
| C. PLATES AND BARS: | ASTM A36 |
| D. HOLLOW STRUCTURAL SECTIONS: | ASTM A500 GRADE B |
| E. STEEL PIPE: | ASTM A53, GRADE B, TYPE E OR S |
- STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3 1/2" AND FULL FLANGE WIDTH (UNO). PROVIDE SOLID BEARING FROM BEAM SUPPORT TO FOUNDATION. BEAMS SHALL BE ATTACHED AT THE BOTTOM FLANGE TO EACH SUPPORT AS FOLLOWS (UNO):

| | |
|----------------------------|--------------------------------------------------|
| A. WOOD FRAMING | (2) 1/2" DIA. x 4" LONG LAG SCREWS |
| B. CONCRETE | (2) 1/2" DIA. x 4" WEDGE ANCHORS |
| C. MASONRY (FULLY GROUTED) | (2) 1/2" DIA. x 4" LONG SIMPSON TITEN HD ANCHORS |

LATERAL SUPPORT IS CONSIDERED ADEQUATE PROVIDING THE JOISTS ARE TOE NAILED TO THE 2x NAILER ON TOP OF THE STEEL BEAM, AND THE 2x NAILER IS SECURED TO THE TOP OF THE STEEL BEAM w/ (2) ROWS OF SELF TAPPING SCREWS @ 16" O.C. OR (2) ROWS OF 1/2" DIAMETER BOLTS @ 16" O.C. IF 1/2" BOLTS ARE USED TO FASTEN THE NAILER, THE STEEL BEAM SHALL BE FABRICATED w/ (2) ROWS OF 9/16" DIAMETER HOLES @ 16" O.C.
- SQUARES DENOTE POINT LOADS WHICH REQUIRE SOLID BLOCKING TO GIRDER OR FOUNDATION. SHADED SQUARES DENOTE POINT LOADS FROM ABOVE WHICH REQUIRE SOLID BLOCKING TO SUPPORTING MEMBER BELOW.
- ALL LOAD BEARING HEADERS TO CONFORM TO TABLE R602.1(1) AND R602.1(2) OF THE NCRC, 2018 EDITION OR BE (2) 2 x 6 WITH (1) JACK AND (1) KING STUD EACH END (UNO), WHICHEVER IS GREATER ALL HEADERS TO BE SECURED TO EACH JACK STUD WITH (4) 8d NAILS. ALL BEAMS TO BE SUPPORTED WITH (2) STUDS AT EACH BEARING POINT (UNO). INSTALL KING STUDS PER SECTION R602.15 OF THE NORTH CAROLINA RESIDENTIAL CODE, 2018 EDITION.
- ALL BEAMS, HEADERS, OR GIRDER TRUSSES PARALLEL TO WALL ARE TO BEAR FULLY ON (1) JACK OR (2) STUDS MINIMUM OR THE NUMBER OF JACKS OR STUDS NOTED. ALL BEAMS OR GIRDER TRUSSES PERPENDICULAR TO WALL AND SUPPORTED BY (3) STUDS OR LESS ARE TO HAVE 1 1/2" MINIMUM BEARING (UNO). ALL BEAMS OR GIRDER TRUSSES PERPENDICULAR TO WALL AND SUPPORTED BY MORE THAN (3) STUDS OR OTHER NOTED COLUMN ARE TO BEAR FULLY ON SUPPORT COLUMN FOR ENTIRE WALL DEPTH (UNO). BEAM ENDS THAT BUTT INTO ONE ANOTHER ARE TO EACH BEAR EQUAL LENGTHS (UNO).
- FLITCH BEAMS SHALL BE BOLTED TOGETHER USING 1/2" DIAMETER BOLTS (ASTM A307) WITH WASHERS PLACED AT THREADED END OF BOLT. BOLTS SHALL BE SPACED AT 24" CENTERS (MAXIMUM), AND STAGGERED AT TOP AND BOTTOM OF BEAM (2" EDGE DISTANCE), WITH (2) BOLTS LOCATED AT 6" FROM EACH END (UNO).
- ALL I-JOIST OR TRUSS LAYOUTS ARE TO BE IN COMPLIANCE WITH THE OVERALL DESIGN SPECIFIED ON THE PLANS. ALL DEVIATIONS ARE TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER OF RECORD PRIOR TO INSTALLATION.
- BRACED WALL PANELS SHALL BE CONSTRUCTED ACCORDING TO THE NORTH CAROLINA RESIDENTIAL CODE 2018 EDITION WALL BRACING CRITERIA. THE AMOUNT, LENGTH, AND LOCATION OF BRACING SHALL COMPLY WITH ALL APPLICABLE TABLES IN SECTION R602.10.
- PROVIDE DOUBLE JOIST UNDER ALL WALLS PARALLEL TO FLOOR JOISTS. PROVIDE SUPPORT UNDER ALL WALLS PARALLEL TO FLOOR TRUSSES OR I-JOISTS PER MANUFACTURER'S SPECIFICATIONS. INSTALL BLOCKING BETWEEN JOISTS OR TRUSSES FOR POINT LOAD SUPPORT FOR ALL POINT LOADS ALONG OFFSET LOAD LINES.
- FOR ALL HEADERS SUPPORTING BRICK VENEER THAT ARE LESS THAN 8'-0" IN LENGTH, REST A 6" x 4" x 5/16" STEEL ANGLE WITH 6" MINIMUM EMBEDMENT AT SIDES FOR BRICK SUPPORT (UNO). FOR ALL HEADERS 8'-0" AND GREATER IN LENGTH, BOLT A 6" x 4" x 5/16" STEEL ANGLE TO HEADER WITH 1/2" LAG SCREWS AT 12" O.C. STAGGERED FOR BRICK SUPPORT. FOR ALL BRICK SUPPORT AT ROOF LINES, BOLT A 6" x 4" x 5/16" STEEL ANGLE TO (2) 2 x 10 BLOCKING INSTALLED w/ (4) 12d NAILS EA. PLY BETWEEN WALL STUDS WITH (2) ROWS OF 1/2" LAG SCREWS AT 12" O.C. STAGGERED AND IN ACCORDANCE WITH SECTION R703.2.1 OF THE NCRC, 2018 EDITION.
- FOR STICK FRAMED ROOFS: CIRCLES DENOTE (3) 2 x 4 POSTS FOR ROOF MEMBER SUPPORT. HIP SPLICES ARE TO BE SPACED A MINIMUM OF 8'-0". FASTEN MEMBERS WITH THREE ROWS OF 12d NAILS AT 16" O.C. FRAME DORMER WALLS ON TOP OF DOUBLE OR TRIPLE RAFTERS AS SHOWN (UNO).
- FOR TRUSSED ROOFS: FRAME DORMER WALLS ON TOP OF 2 x 4 LADDER FRAMING AT 24" O.C. BETWEEN ADJACENT ROOF TRUSSES. STICK FRAME OVER-FRAMED ROOF SECTIONS WITH 2 x 8 RIDGES, 2 x 6 RAFTERS AT 16" O.C. AND FLAT 2 x 10 VALLEYS (UNO).
- ALL 4 x 4 AND 6 x 6 POSTS TO BE INSTALLED WITH 100 LB CAPACITY UPLIFT CONNECTORS TOP AND BOTTOM (UNO). POSTS MAY BE SECURED USING ONE SIMPSON H6 OR L7512 UPLIFT CONNECTOR FASTENED TO THE BAND AT THE BOTTOM AND THE BEAM AT THE TOP OF EACH POST. ONE 16" SECTION OF SIMPSON CS16 COIL STRAPPING WITH (8) 8d HDG NAILS AT EACH END MAY BE USED IN LIEU OF EACH TWIST STRAP IF DESIRED. FOR MASONRY OR CONCRETE FOUNDATION USE SIMPSON POST BASE.

J.S. THOMPSON ENGINEERING, INC.
 606 WADE AVE, SUITE 104, RALEIGH, NC 27605
 PHONE: (919) 789-9919 FAX: (919) 789-9921
 N.C. LICENSE NO.: C-1173

STANDARD STRUCTURAL NOTES

| |
|------------------------|
| DATE: OCTOBER 29, 2018 |
| SCALE: 1/4" = 1'-0" |
| DRAWN BY: JES |
| ENGINEERED BY: JST |

SHEET:
 STRUCTURAL NOTES