

PLANS DESIGNED TO THE 2018 NORTH CAROLINA STATE RESIDENTIAL BUILDING CODE

MEAN ROOF HEIGHT: 18'-10"
HEIGHT TO RIDGE: 25'-6"

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
FLOOR R-VALUE	19	19	19
BASEMENT WALL R-VALUE	5/13	5/13	5/13
CLAB R-VALUE	0	0	0
CRAWL SPACE WALL R-VALUE	5/13	5/13	5/13
* 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 WITH INSULATION DEPTH WITH SLAB 24" OR TO BOTTOM OF FOUNDATION WALL			
DESIGNED FOR WIND SPEED OF 120 MPH, 3 SECOND GUST FOR 93 FASTEST WIND EXPOSURE "B"			
MEAN ROOF	UP TO 30'	30'-1" TO 35'	35'-1" TO 40'
COMPONENT & CLADDING DESIGN FOR THE FOLLOWING LOADS	35'-1" TO 40'	40'-1" TO 45'	45'
ZONE 1	14.2	14.9	15.8
ZONE 2	14.2	18.0	15.5
ZONE 3	14.2	18.0	14.9
ZONE 4	15.5	16.0	16.3
ZONE 5	15.5	20.0	16.3

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 ventilation 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 = 2,253 SQ.FT.

NET FREE CROSS VENTILATION NEEDED:

WITHOUT 50% TO 80% OF VENTING 3'-0" ABOVE EAVE = 15.02 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 = 7.51 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 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 43/8 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, weatherstripped 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.

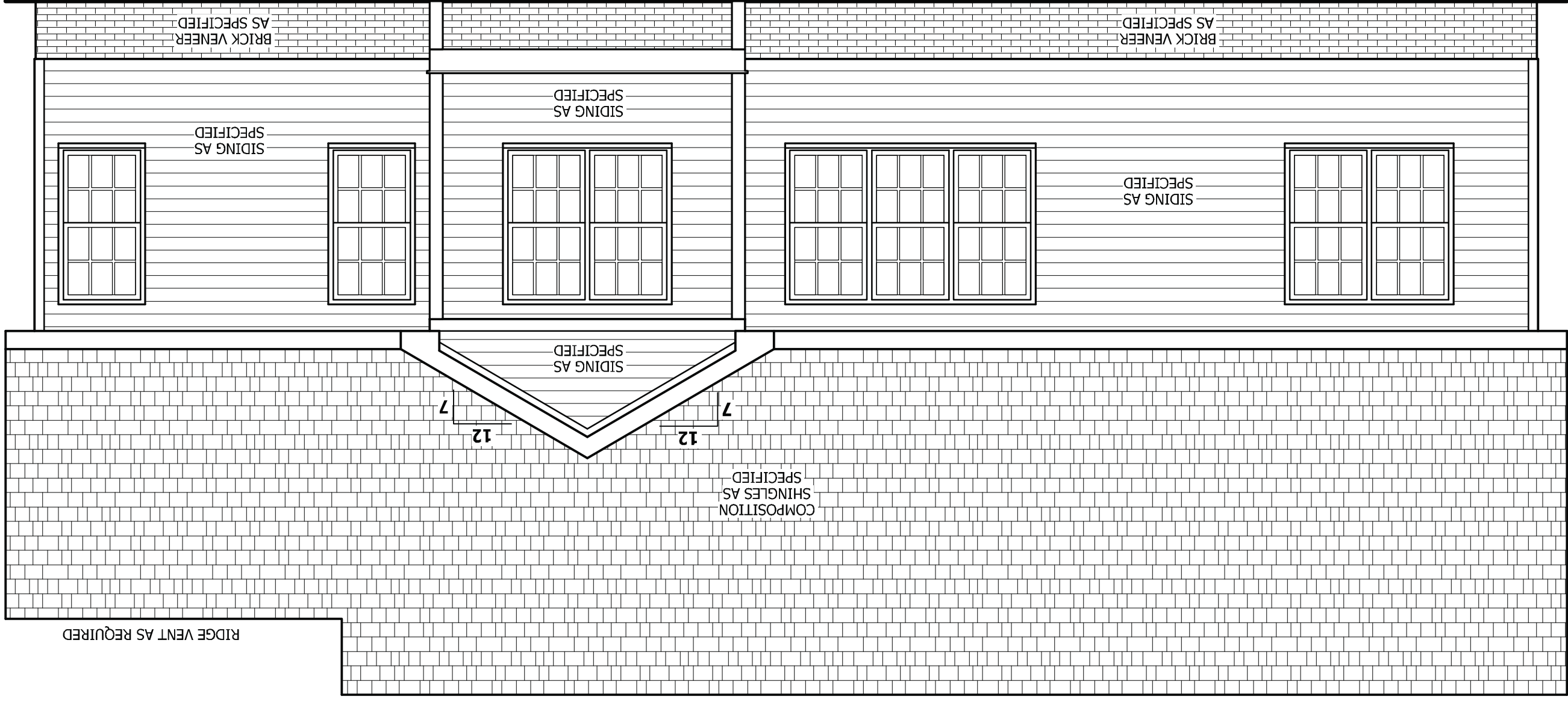
3. Capping and sealing soffit or dropped ceiling areas.

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 43/8 inches (111 mm) in diameter.

REAR ELEVATION

SCALE 1/4" = 1'-0"



TOP OF PLATE
WINDOW HEIGHT
7'-6"
9'-1 1/2"
FIRST FLOOR PLATE HEIGHT
SUB FLOOR

SQUARE FOOTAGE

HEATED	1608 SQ.FT.
FIRST FLOOR	1608 SQ.FT.
UNHEATED	484 SQ.FT.
TOTAL	2092 SQ.FT.
REAR PORCH	51 SQ.FT.
GARAGE	110 SQ.FT.
FRONT PORCH	484 SQ.FT.
TOTAL	645 SQ.FT.

FRONT ELEVATION

SCALE 1/4" = 1'-0"



TOP OF PLATE
WINDOW HEIGHT
7'-6"
9'-1 1/2"
FIRST FLOOR PLATE HEIGHT
SUB FLOOR

SQUARE FOOTAGE

HEATED	1608 SQ.FT.
FIRST FLOOR	1608 SQ.FT.
UNHEATED	484 SQ.FT.
TOTAL	2092 SQ.FT.
REAR PORCH	51 SQ.FT.
GARAGE	110 SQ.FT.
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TOTAL	645 SQ.FT.

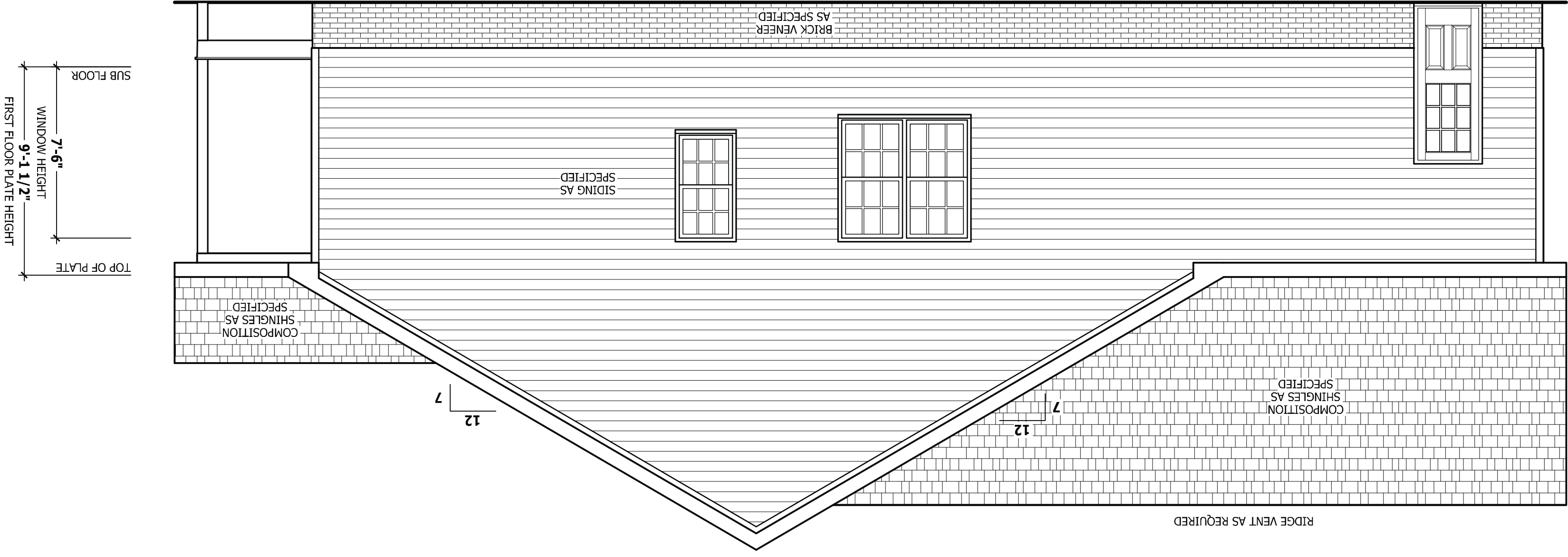
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FRONT & REAR ELEVATIONS
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PURCHASER MUST VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE CONSTRUCTION BEGINS. HAYNES HOME PLANS, INC. ASSUMES NO LIABILITY FOR CONTRACTORS PRACTICES AND PROCEDURES. CODES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

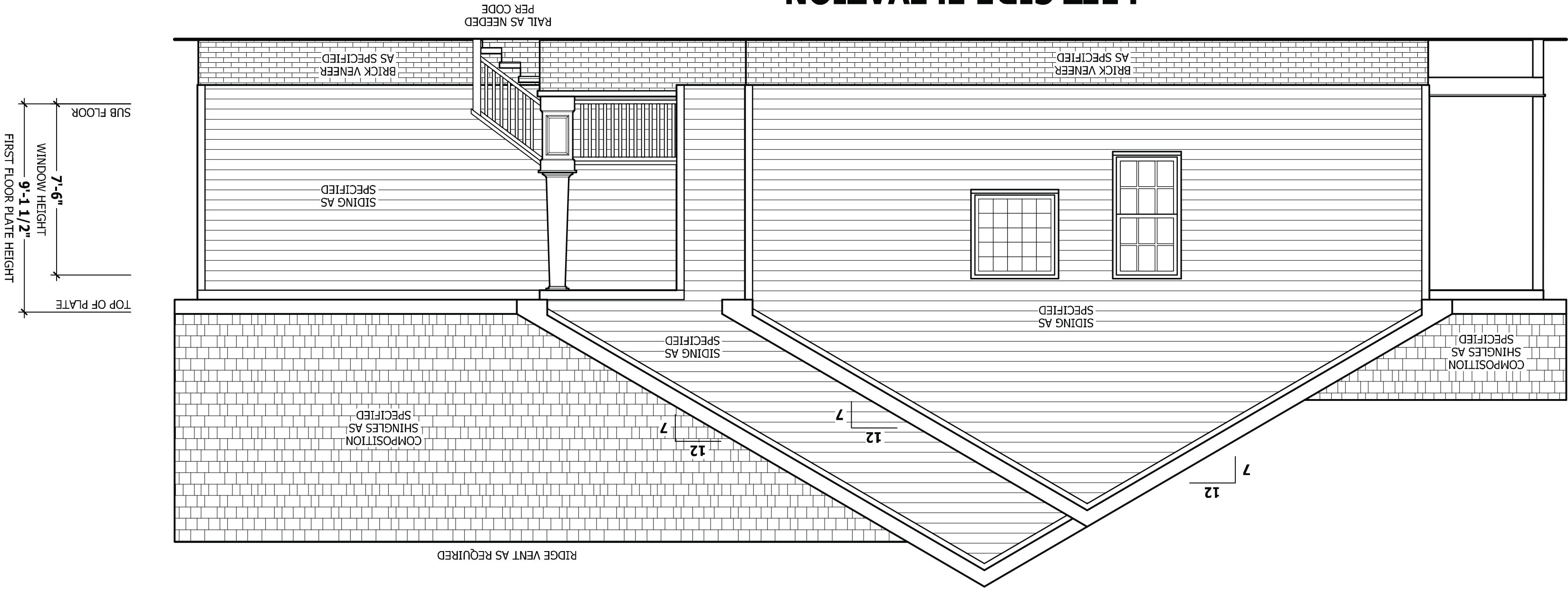
RIGHT SIDE ELEVATION

SCALE 1/4" = 1'-0"



LEFT SIDE ELEVATION

SCALE 1/4" = 1'-0"



SQUARE FOOTAGE

HEATED	1608 SQ. FT.
UNHEATED	110 SQ. FT.
TOTAL	1718 SQ. FT.
FIRST FLOOR	1608 SQ. FT.
REAR PORCH	488 SQ. FT.
GAUGE	51 SQ. FT.
REAR PORCH	51 SQ. FT.
TOTAL	645 SQ. FT.

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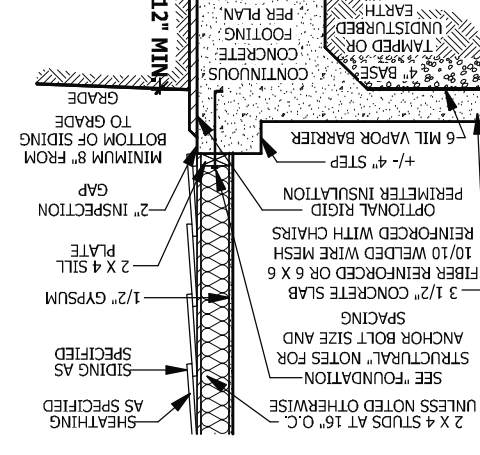
LEFT & RIGHT ELEVATIONS
Amherst

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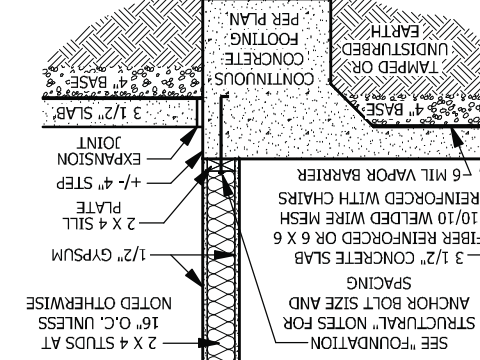
FOUNDATION STRUCTURAL

115 to 130 mph wind zone (1/2 to 2 1/2 story)
CONTINUOUS FOOTING: 16" wide and 8" thick minimum, 20" wide minimum at brick veneer. Must extend 2" to either side of supported wall.
GIRDERS: (3) 2 X 10 girder unless noted otherwise.
PIERS: 16" X 16" piers with 8" solid masonry cap on 30" X 30" X 10" concrete footing with maximum pier height of 6'-4" with hollow masonry and 160" with solid masonry.
POINT LOADS: ■ designates significant point load and should have solid blocking to pier, girder or foundation wall.
115 and 120 MPH ANCHORS BOLTS: 1/2" diameter anchor bolts embedded minimum two anchor bolts per plate.
130 MPH ANCHORS BOLTS: 1/2" diameter anchor bolts embedded minimum 15", maximum 4'-0" on center, within 12" of plate ends, and minimum two anchor bolts per plate.
CONCRETE: Concrete shall have a minimum 28 day strength of 3000 psi and a maximum 5" slump. Air entrained per table 402.2. All concrete shall be from the exit end of the pump.
SOILS: Allowable soil bearing pressure assumed to be 2000 PSF. The contractor must contact a geotechnical engineer and a structural engineer if unsatisfactory subsurface conditions are encountered. The surface area adjacent to the foundation wall shall be provided with adequate drainage and shall be graded so as to drain surface water away from foundation walls.

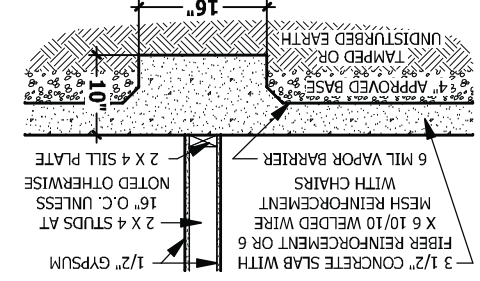
D MONOLITHIC AT GARAGE
 SCALE 1/2" = 1'-0"



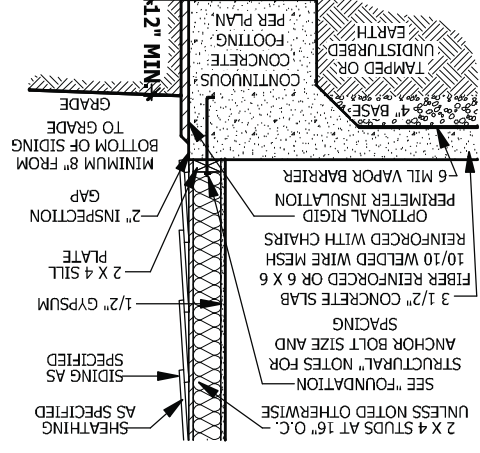
C MONOLITHIC AT STEP
 SCALE 1/2" = 1'-0"



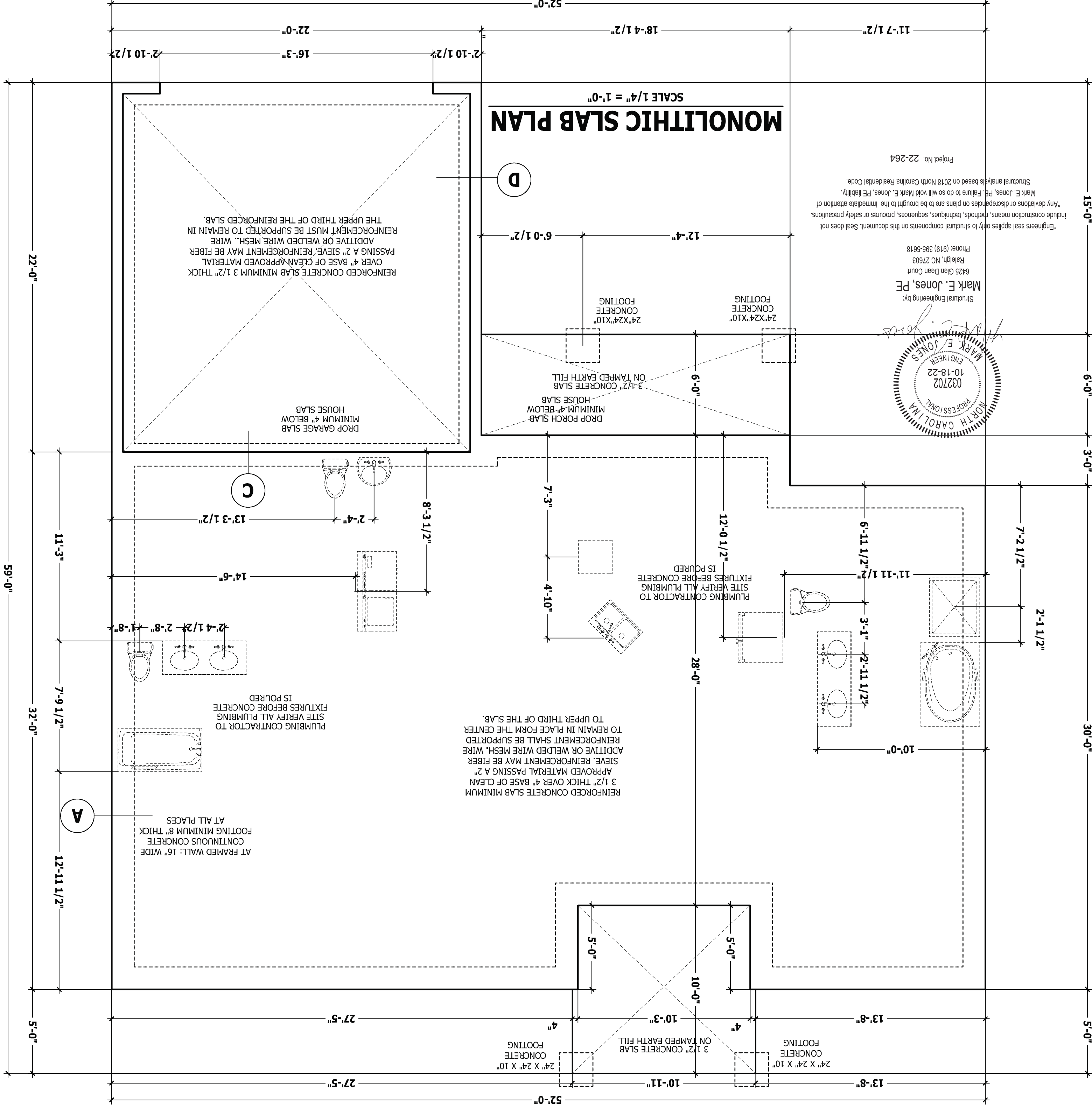
B LUG FOOTING SECTION
 SCALE 1/2" = 1'-0"



A MONOLITHIC SECTION
 SCALE 1/2" = 1'-0"



MONOLITHIC SLAB PLAN
 SCALE 1/4" = 1'-0"



Structural Engineering by:
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 Phone: (919) 395-5618
 Project No. 22-264

North Carolina Professional Engineer
 032702
 10-18-22
 Mark E. Jones
 ENGINEER

Any deviations or discrepancies on plans are to be brought to the immediate attention of the contractor. Methods, techniques, sequences, or safety precautions include construction means, methods, techniques, sequences, or safety precautions. Seal does not apply to structural components on this document. Seal does not apply to construction means, methods, techniques, sequences, or safety precautions.

Structural analysis based on 2018 North Carolina Residential Code.
 Mark E. Jones, PE. Failure to do so will void Mark E. Jones, PE liability.

REINFORCED CONCRETE SLAB MINIMUM 3 1/2" THICK OVER 4" BASE OF CLEAN APPROVED MATERIAL PASSING A 2" SIEVE. REINFORCEMENT MAY BE FIBER ADDITIVE OR WELDED WIRE MESH. WIRE REINFORCEMENT MUST BE SUPPORTED TO REMAIN IN THE UPPER THIRD OF THE REINFORCED SLAB.

REINFORCED CONCRETE SLAB MINIMUM 3 1/2" THICK OVER 4" BASE OF CLEAN APPROVED MATERIAL PASSING A 2" SIEVE. REINFORCEMENT MAY BE FIBER ADDITIVE OR WELDED WIRE MESH. WIRE REINFORCEMENT SHALL BE SUPPORTED TO REMAIN IN PLACE FORM THE CENTER TO UPPER THIRD OF THE SLAB.

PLUMBING CONTRACTOR TO SITE VERIFY ALL PLUMBING FIXTURES BEFORE CONCRETE IS POURED

AT ALL PLACES CONTINUOUS CONCRETE FOOTING MINIMUM 8" THICK

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FOUNDATION PLAN
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SQUARE FOOTAGE
 HEATED 1608 SQ.FT.
 UNHEATED 110 SQ.FT.
 GARAGE 484 SQ.FT.
 FRONT PORCH 51 SQ.FT.
 REAR PORCH 645 SQ.FT.
 TOTAL 2298 SQ.FT.

BUYER'S PROPERTY OF THE DESIGNER. AS SUCH REMAINS THE PROPERTY OF THE DESIGNER. THESE DRAWINGS ARE THE PROPERTY OF THE DESIGNER. ENGINEER SHALL REMAIN RESPONSIBLE FOR ALL ERRORS AND OMISSIONS. CONTRACTOR SHALL 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.

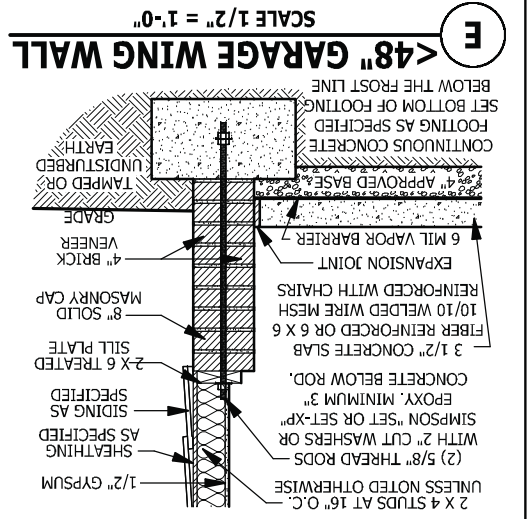
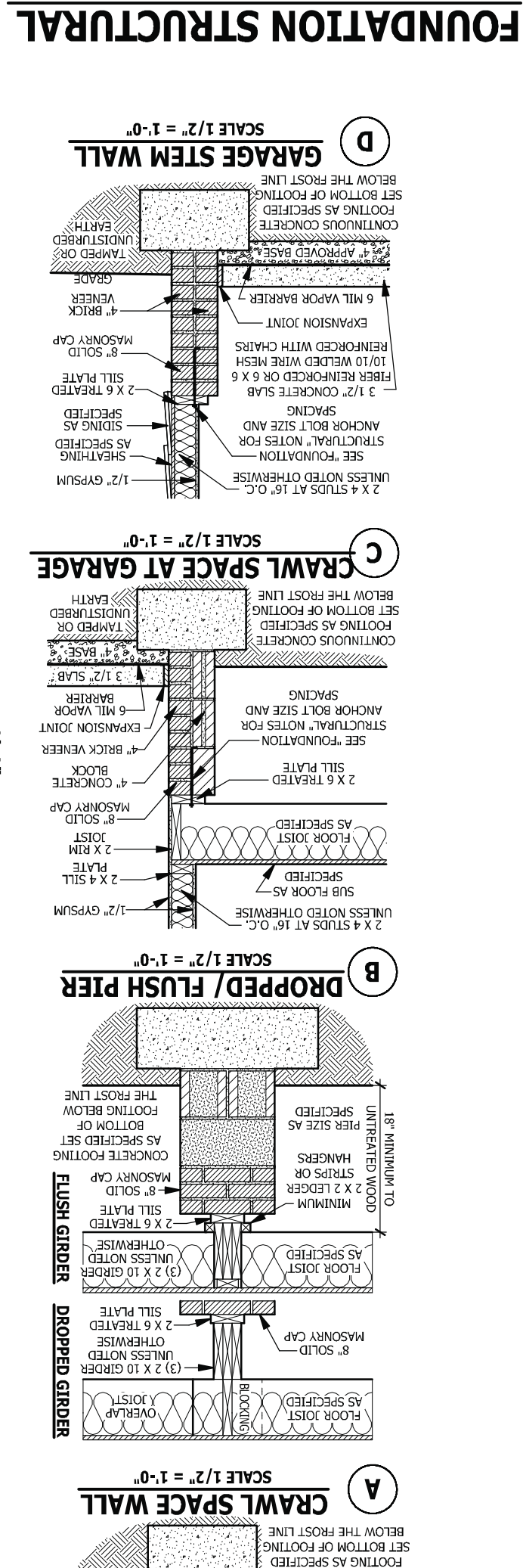
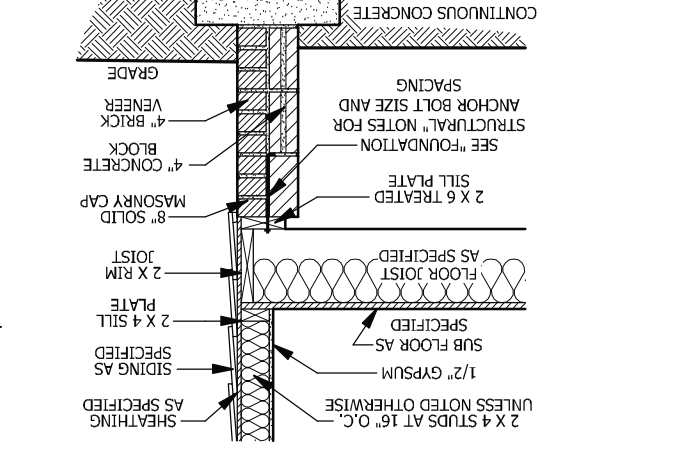
and shall be graded so as to drain surface water away from foundation walls. adjacent to the foundation wall shall be provided with adequate drainage. unsatisfactory subsurface conditions are encountered. The surface area contractor must contact a geotechnical engineer and a structural engineer if

SOILS: Allowable soil bearing pressure assumed to be 2000 PSF. The contractor must contact a geotechnical engineer and a structural engineer if in accordance with ACI standards. All samples for pumping shall be taken from the exit end of the pump.
CONCRETE: Concrete shall have a minimum 28 day strength of 3000 psi and a maximum 5" slump. Air entrained per table 402.2. All concrete shall be placed in accordance with ACI standards. All samples for pumping shall be taken from the exit end of the pump.

POINT LOADS: designates significant point load and should have solid blocking to pier, girder or foundation wall.
115 and 120 MPH ANCHORS BOLTS: 1/2" diameter anchor bolts embedded minimum two anchor bolts per plate.
130 MPH ANCHORS BOLTS: 1/2" diameter anchor bolts embedded minimum two anchor bolts per plate.

PIERS: 8" x 16" with 4" solid masonry pier height of 64" with hollow masonry and solid masonry. 16" x 16" piers with 4" solid masonry cap on 30" x 30" x 10" footing with maximum pier height of 32" with hollow masonry and 80" with solid masonry. 16" x 16" piers with 4" solid masonry cap on 24" x 24" x 10" concrete footing with maximum pier height of 64" with hollow masonry and 80" with solid masonry. 16" x 16" piers with 4" solid masonry cap on 30" x 30" x 10" footing with maximum pier height of 32" with hollow masonry and 80" with solid masonry. 16" x 16" piers with 4" solid masonry cap on 24" x 24" x 10" concrete footing with maximum pier height of 64" with hollow masonry and 80" with solid masonry. 16" x 16" piers with 4" solid masonry cap on 30" x 30" x 10" footing with maximum pier height of 32" with hollow masonry and 80" with solid masonry.

CONTINUOUS FOOTING: 16" wide and 8" thick minimum. 20" wide minimum at brick veneer. Must extend 2' to either side of supported wall.
115 to 130 mph wind zone (1 story)



CRAWL SPACE PLAN
SCALE 1/4" = 1'-0"
UNDER-FLOOR SPACE (SECTION R408)
WALL VENTED CRAWL SPACES

SQUARE FOOTAGE OF FOUNDATION TO BE VENTED = 1,490 SQ.FT.
WITHOUT CROSS VENTILATION AREA OF VENTING NEEDED = 9.93 SQ.FT.
WITH CROSS VENTILATION AREA OF VENTING NEEDED = 4.97 SQ.FT.
NOTE: NUMBER OF VENTS NEED WILL VARY DEPENDING ON VENTS USED AND CROSS VENTILATION.

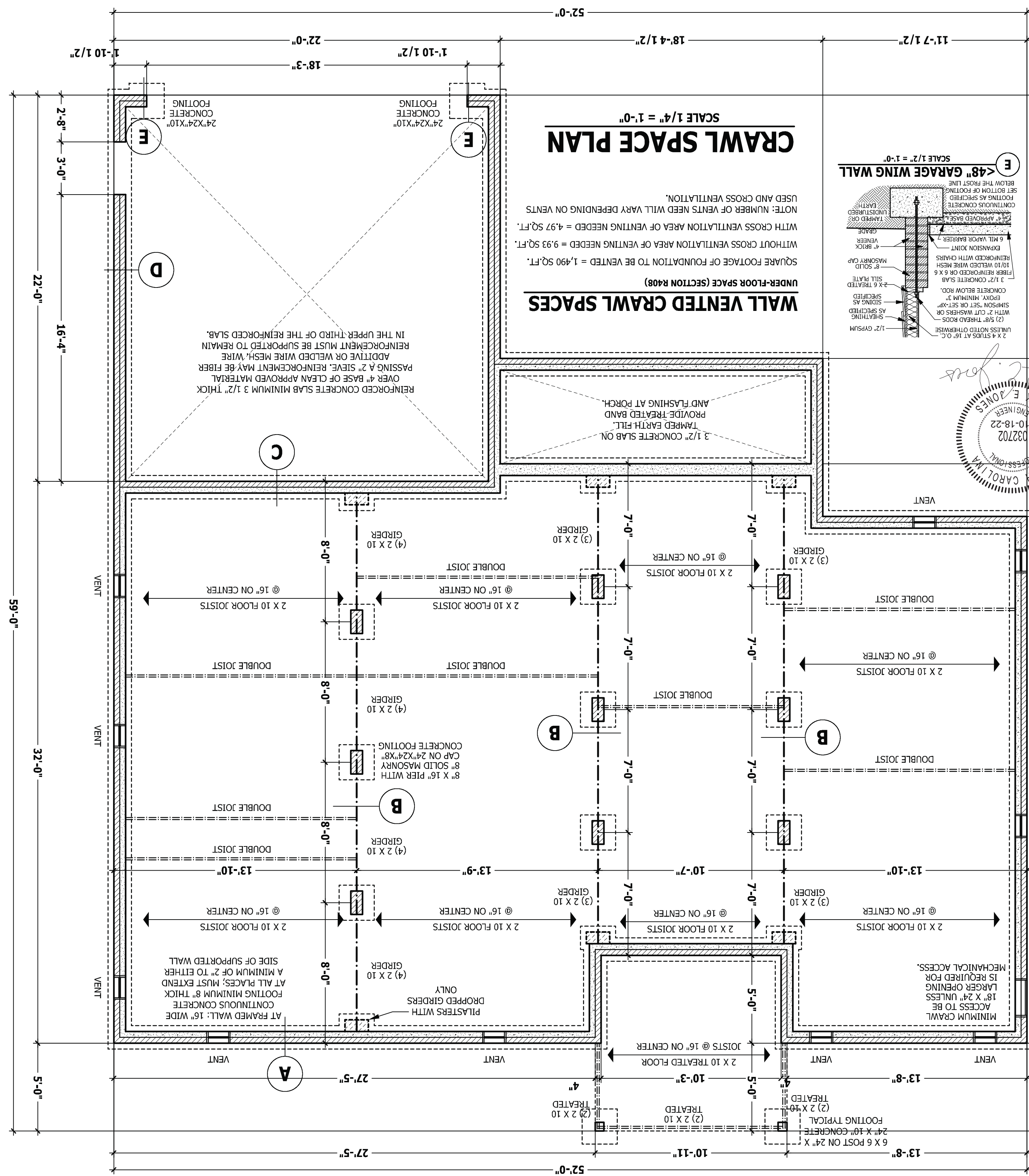


Table with 2 columns: Description and Area. Includes HEATED SQUARE FOOTAGE, UNHEATED SQUARE FOOTAGE, and TOTAL SQUARE FOOTAGE.

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FOUNDATION PLAN
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TRUSS DESIGN. Trusses to be designed and engineered in accordance with these drawings. Any variation with these drawings must be brought to Haynes Home Plan, Inc. attention before construction begins.

KNEE WALL AND CEILING HEIGHTS. All finished knee wall heights and ceiling heights are shown furred down 10" from roof decking for insulation. If for any reason the truss manufacturer fails to meet or exceed designated heel heights, finished knee wall heights, or finished ceiling heights shown on these drawings the finished square footage may vary. Any discrepancy must be brought to Haynes Home Plans, Inc. attention, so a suitable solution can be reached before construction begins. Any variation due to these conditions not being met is the responsibility of the truss manufacturer.

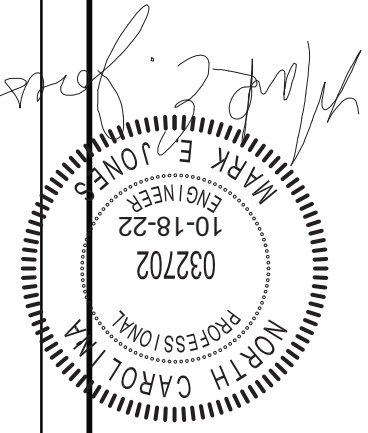
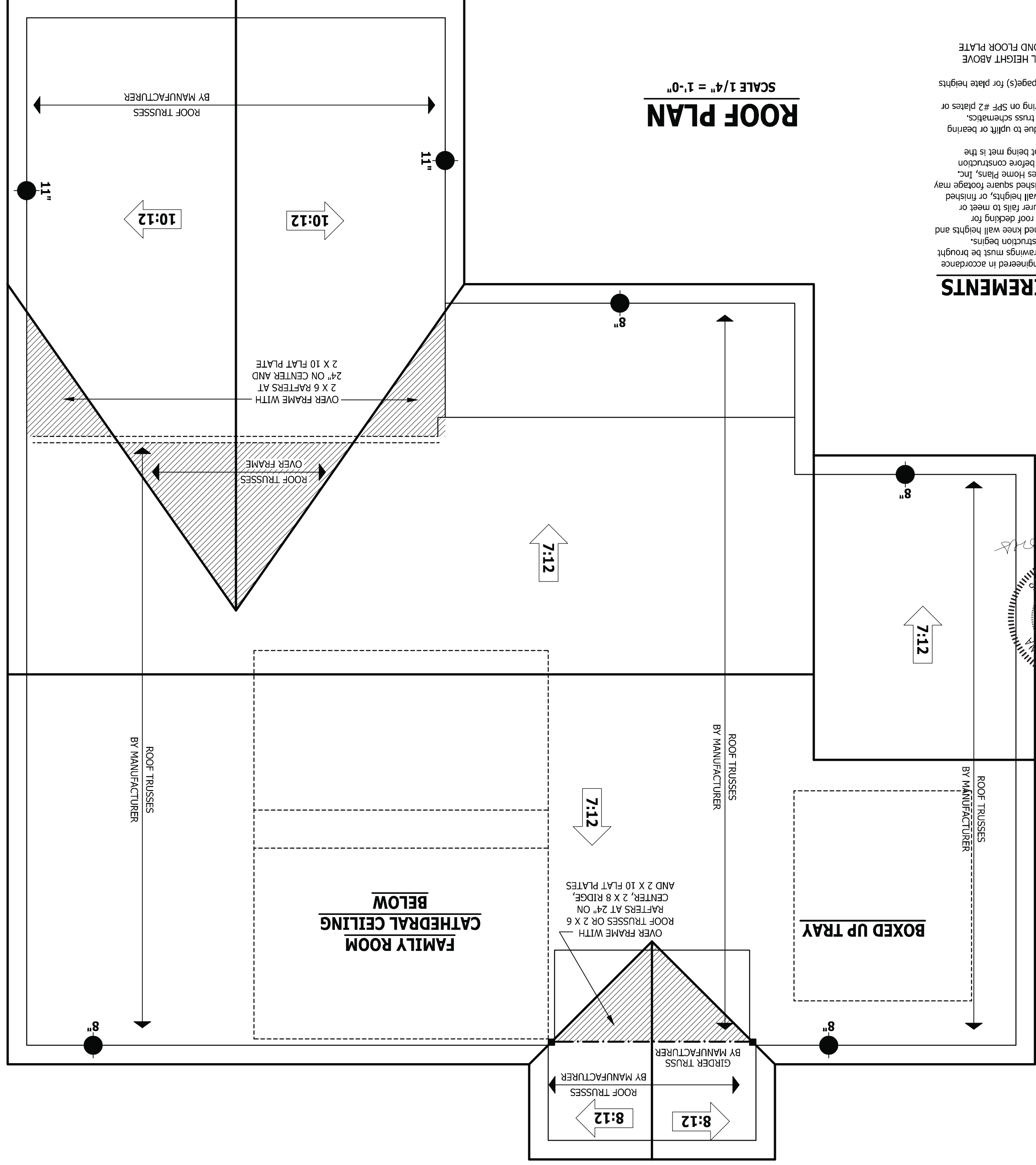
ANCHORAGE: All required anchors for trusses due to uplift or bearing shall meet the requirements as specified on the truss schematics.

BEARING. All trusses shall be designed for bearing on SPF #2 plates or ledgers unless noted otherwise.

Plate Heights & Floor Systems. See elevation page(s) for plate heights and floor system thicknesses.

● HEEL HEIGHT ABOVE
● FIRST FLOOR PLATE
● SECOND FLOOR PLATE

ROOF PLAN
SCALE 1/4" = 1'-0"



SQUARE FOOTAGE

HEATED	1608 SQ.FT.
FIRST FLOOR	1608 SQ.FT.
UNHEATED	110 SQ.FT.
ROOF PORCH	484 SQ.FT.
GARAGE	51 SQ.FT.
REAR PORCH	645 SQ.FT.
TOTAL	3806 SQ.FT.

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ROOF PLAN
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