

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

MEAN ROOF HEIGHT: 15'-2" HEIGHT TO RIDGE: 20'-1"

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

DESIGNED FOR WIND SPEED OF 130 MPH, 3 SECOND GUST (101 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	16.7	-18.0	17.5	-18.9
ZONE 2	16.7	-21.0	17.5	-22.1
ZONE 3	16.7	-21.0	17.5	-22.1
ZONE 4	18.2	-19.0	19.1	-20.0
ZONE 5	18.2	-24.0	19.1	-25.2

**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 = 2,294 SQ.FT.  
NET FREE CROSS VENTILATION NEEDED:  
WITHOUT 50% TO 80% OF VENTING 3'-0" ABOVE EAVE = 15.29 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 = 7.65 SQ.FT.

**GUARD RAIL NOTES**

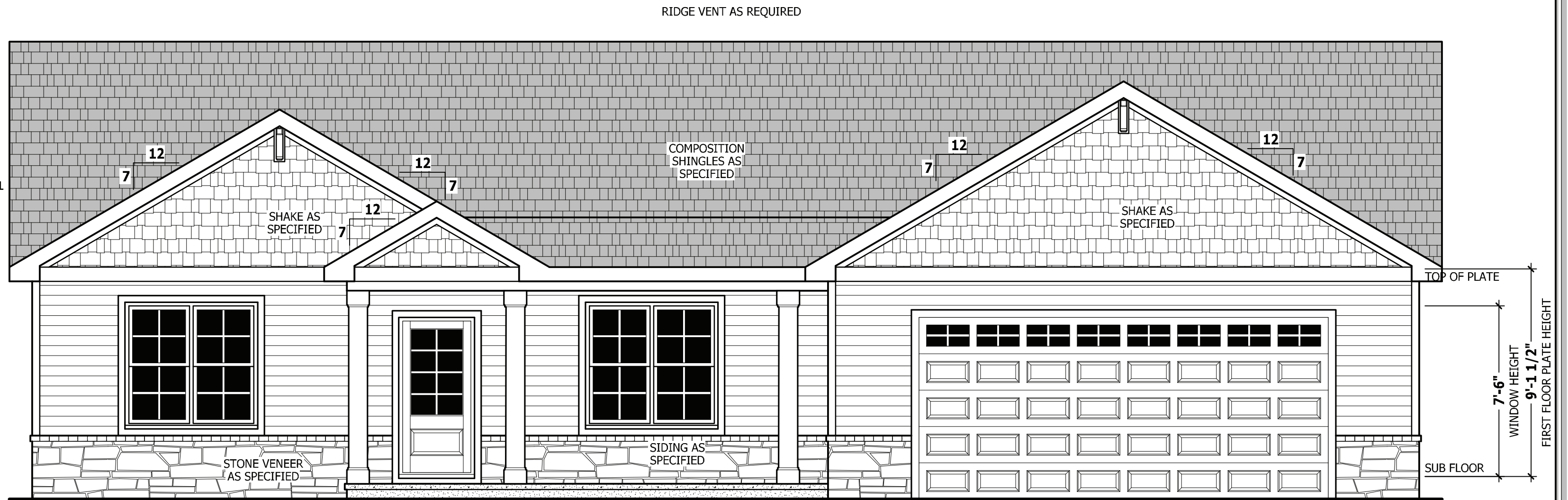
**SECTION R312**  
**R312.1** Where required. Guards shall be located along open-sided walking surfaces, including stairs, ramps and landings, that are located more than 30 inches (762 mm) measured vertically to the floor or grade below at any point within 36 inches (914 mm) horizontally to the edge 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.



**FRONT ELEVATION**

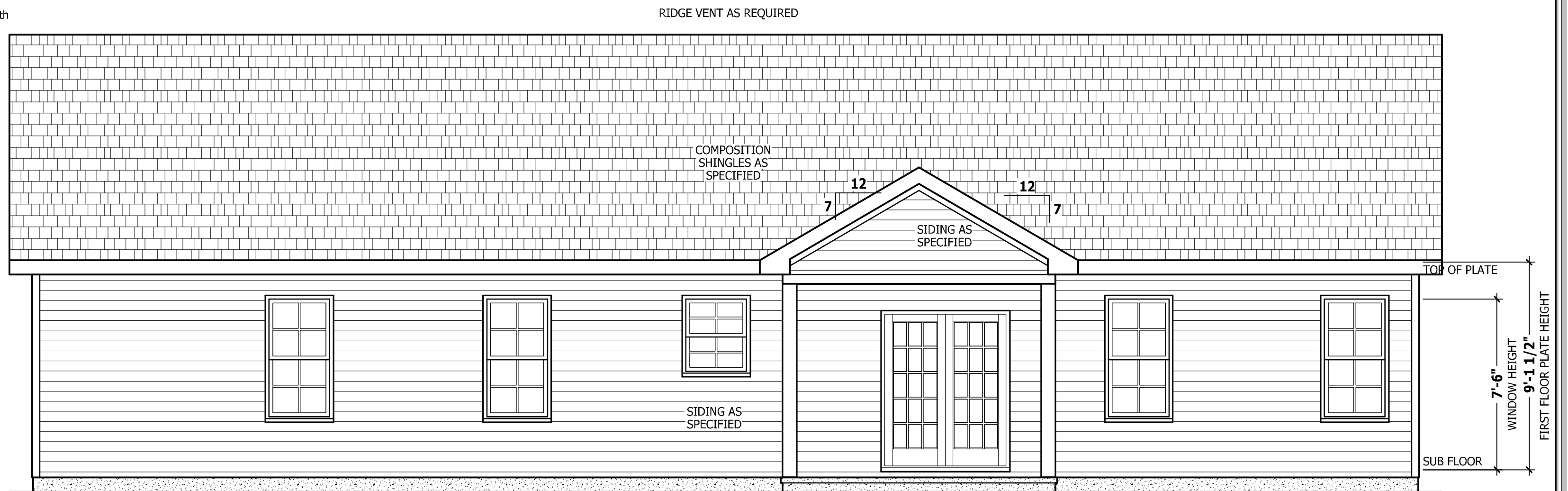
SCALE 1/4" = 1'-0"

**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.

**SQUARE FOOTAGE**

HEATED	
FIRST FLOOR	1952 SQ.FT.
TOTAL	1952 SQ.FT.
UNHEATED	
FRONT PORCH	116 SQ.FT.
GARAGE	528 SQ.FT.
REAR PORCH	144 SQ.FT.
TOTAL	788 SQ.FT.



**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 DRAWING ARE INSTRUMENTS OF SERVICE AND AS SUCH SHALL REMAIN PROPERTY OF THE DESIGNER.

**FRONT & REAR ELEVATIONS**  
**Braxton**

**HAYNES HOME PLANS, INC.**  
P.O. BOX 702, WAKE FOREST, NC 27788 919-495-6180 FAX 919-866-4911-0396

**JW SEALEY & ASSOCIATES**  
**Construction**

SQUARE FOOTAGE	
HEATED	
FIRST FLOOR	1952 SQ.FT.
TOTAL	1952 SQ.FT.
UNHEATED	
FRONT PORCH	116 SQ.FT.
GARAGE	528 SQ.FT.
REAR PORCH	144 SQ.FT.
TOTAL	788 SQ.FT.

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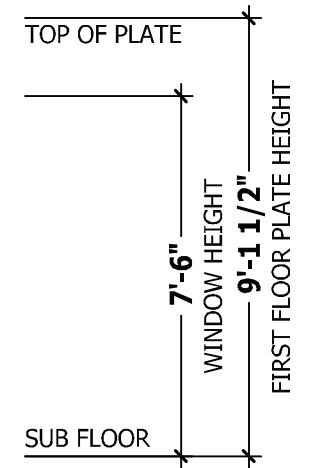
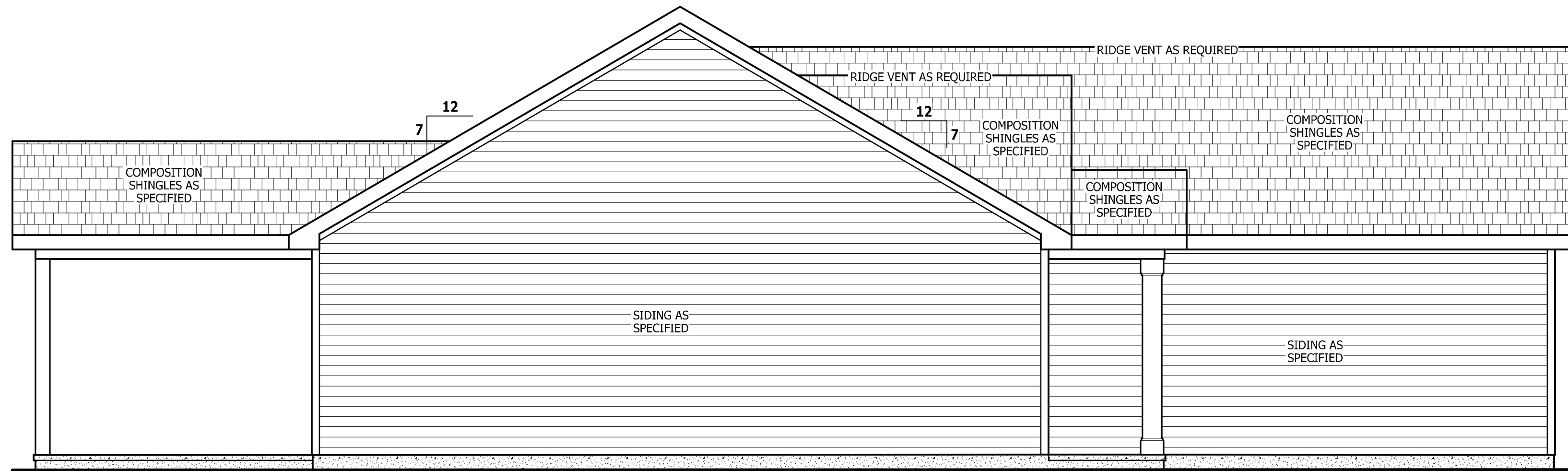
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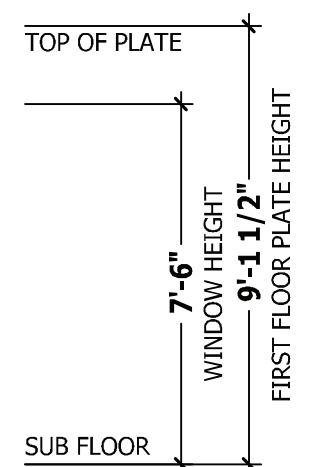
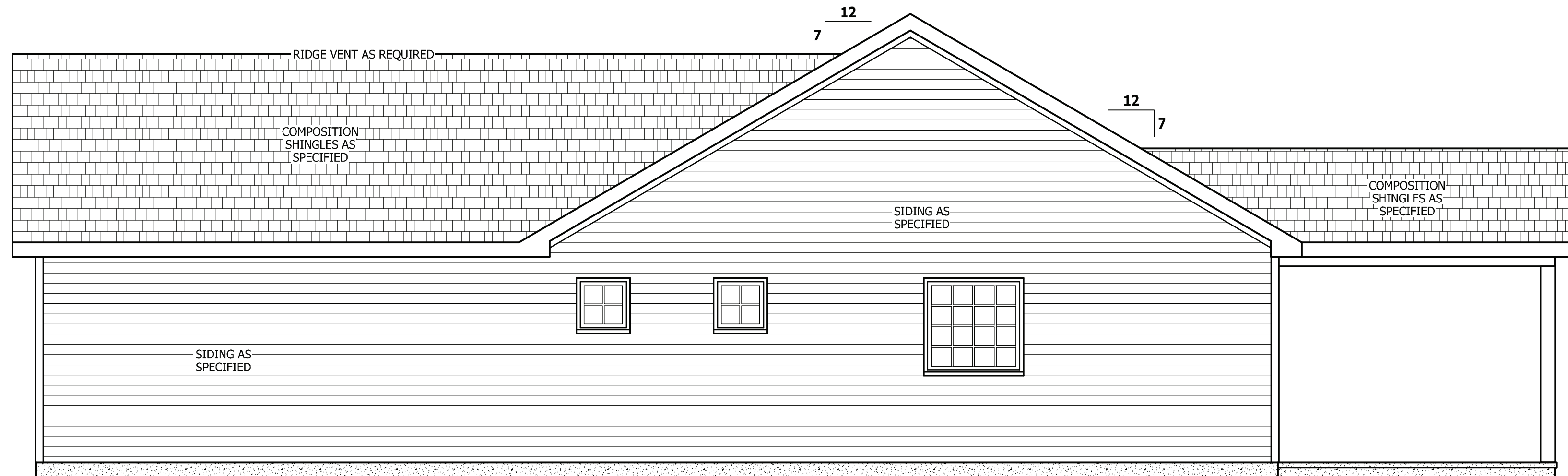
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**LEFT SIDE ELEVATION**

SCALE 1/4" = 1'-0"

RAIL AS NEEDED PER CODE



**RIGHT SIDE ELEVATION**

SCALE 1/4" = 1'-0"

**LEFT & RIGHT ELEVATIONS**

**Braxton**

**JW SEALEY & associates Construction**

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 P.O. BOX 702, WAKE FOREST, NC 27588 919-485-6180 FAX 1-866-491-0396

SQUARE FOOTAGE	
<b>HEATED</b>	
FIRST FLOOR	1952 SQ. FT.
TOTAL	1952 SQ. FT.
<b>UNHEATED</b>	
FRONT PORCH	116 SQ. FT.
GARAGE	528 SQ. FT.
REAR PORCH	144 SQ. FT.
TOTAL	788 SQ. FT.

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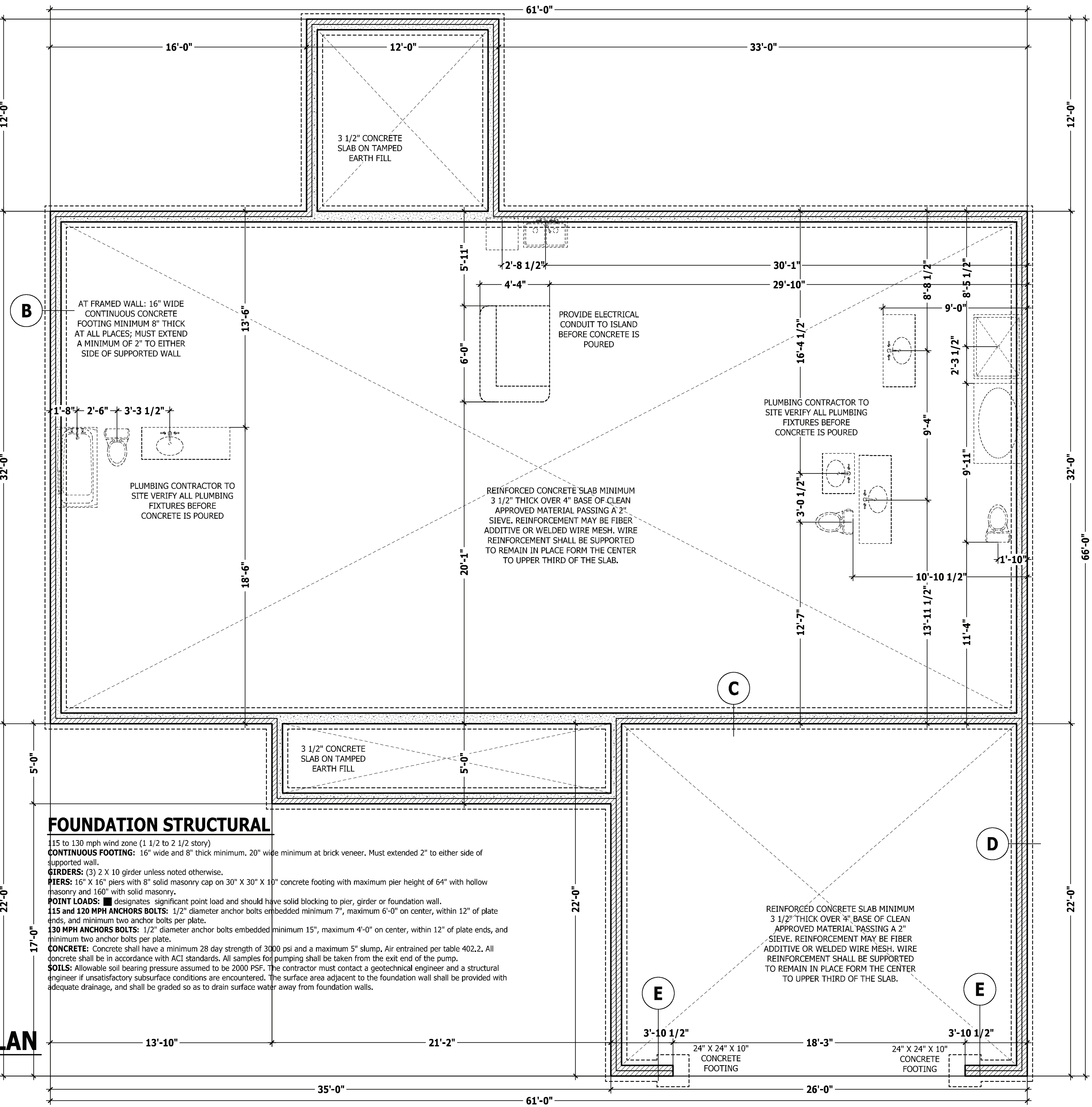
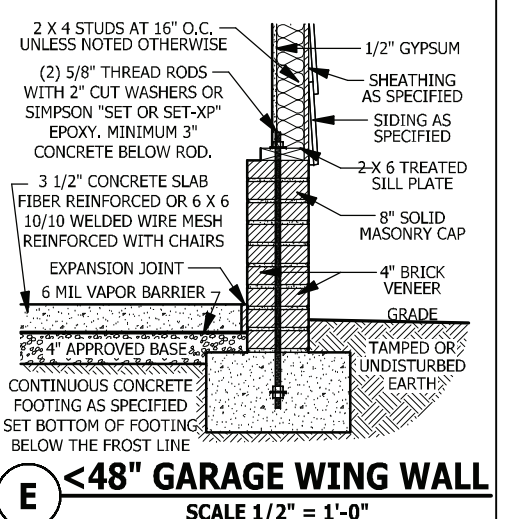
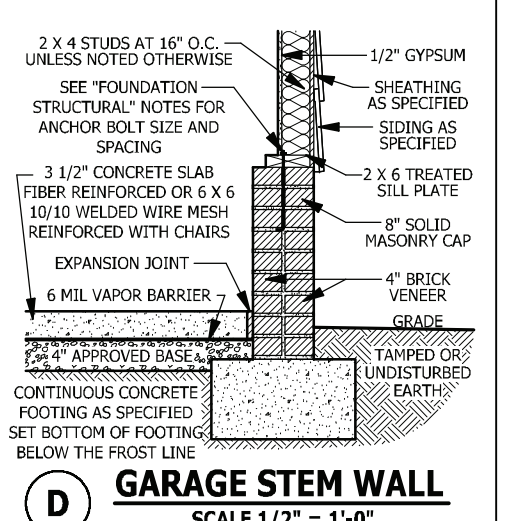
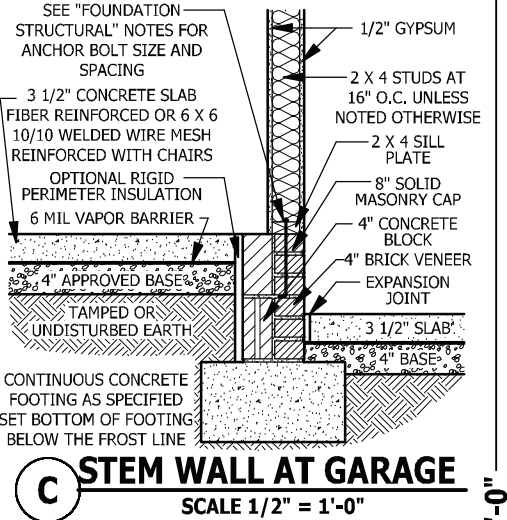
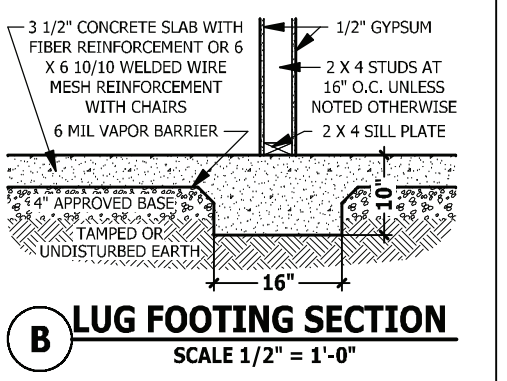
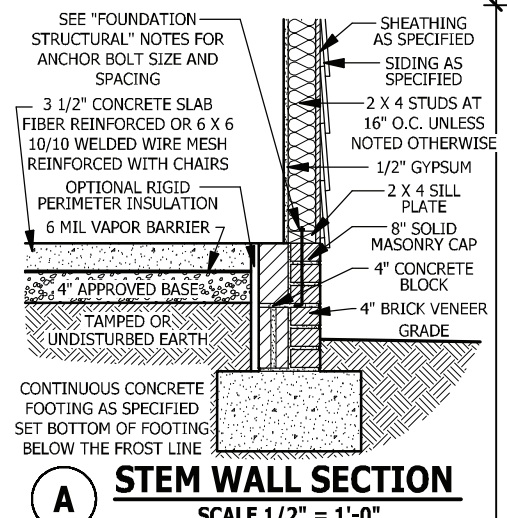
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**FOUNDATION PLAN**  
**Braxton**

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**JW SEALEY & ASSOCIATES Construction**  
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SQUARE FOOTAGE	
HEATED	
FIRST FLOOR	1952 SQ. FT.
TOTAL	1952 SQ. FT.
UNHEATED	
FRONT PORCH	116 SQ. FT.
GARAGE	528 SQ. FT.
REAR PORCH	144 SQ. FT.
TOTAL	788 SQ. FT.



**STEM WALL SLAB PLAN**  
SCALE 1/4" = 1'-0"

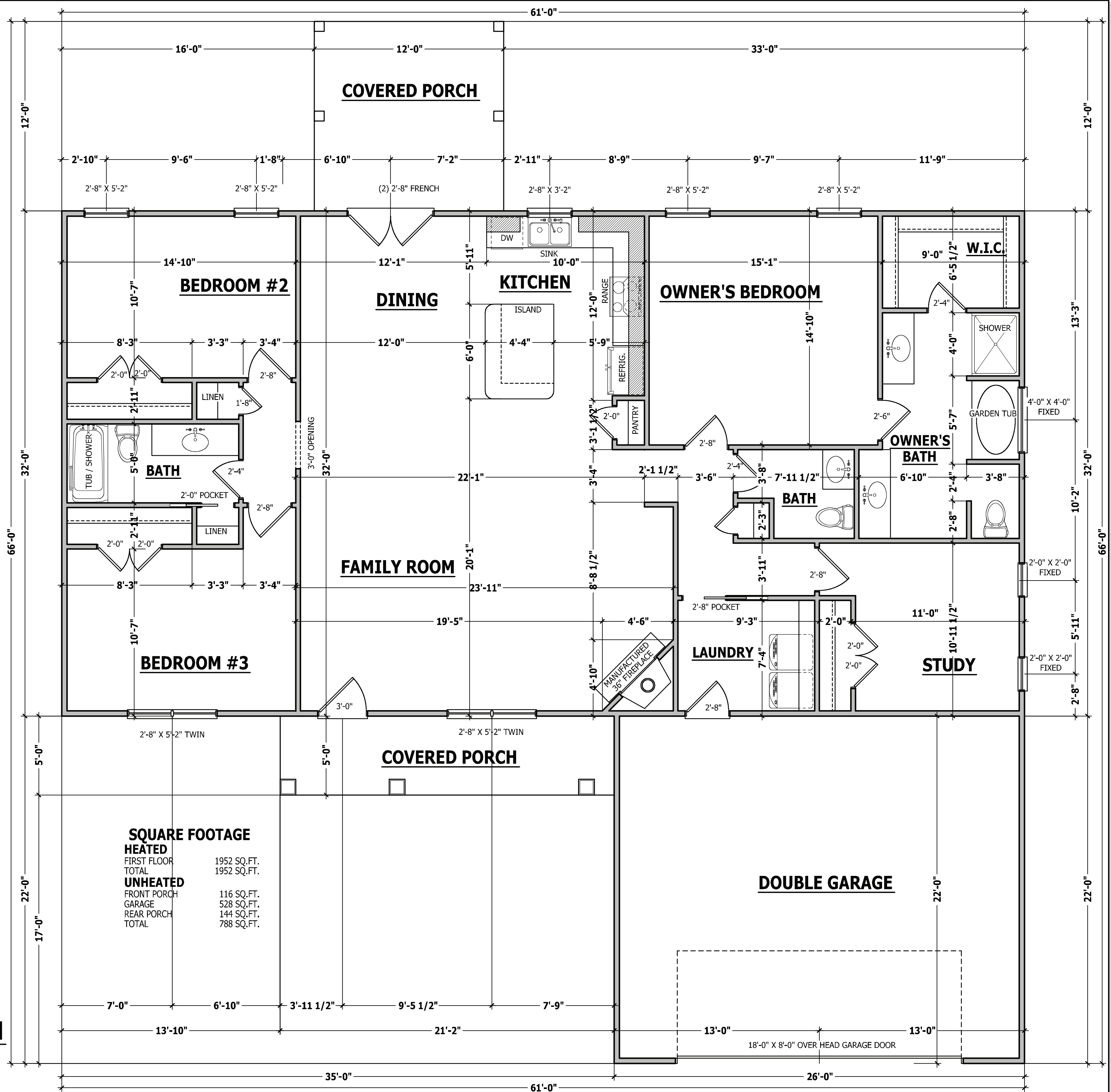
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**FIRST FLOOR PLAN**  
**Braxton**

**HAYNES HOME PLANS, INC.**  
**JW SEALEY & ASSOCIATES**  
**Construction**  
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SQUARE FOOTAGE	
HEATED	
FIRST FLOOR	1952 SQ. FT.
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**ATTIC ACCESS**

**SECTION R807**  
**R807.1 Attic access.** An attic access opening shall be provided to attic areas that exceed 400 square feet (37.16 m<sup>2</sup>) and have a vertical height of 60 inches (1524 mm) or greater. The net clear opening shall not be less than 20 inches by 30 inches (508 mm by 762 mm) and shall be located in a hallway or other readily accessible location. A 30-inch (762 mm) minimum unobstructed headroom in the attic space shall be provided at some point above the access opening. See Section M1305.1.3 for access requirements where mechanical equipment is located in attics.  
**Exceptions:**  
1. Concealed areas not located over the main structure including porches, areas behind knee walls, dormers, bay windows, etc. are not required to have access.  
2. Pull down stair treads, stringers, handrails, and hardware may protrude into the net clear opening.

**WALL THICKNESSES**

**Exterior walls and walls adjacent to a garage area** are drawn as 4" or as noted 2 X 6 are drawn as 6" to include 1/2" sheathing or gypsum. Subtract 1/2" for stud face.  
**Interior walls** are drawn as 3 1/2" or as noted 2 X 6 are drawn as 5 1/2", and do not include gypsum.

**DWELLING / GARAGE SEPARATION**

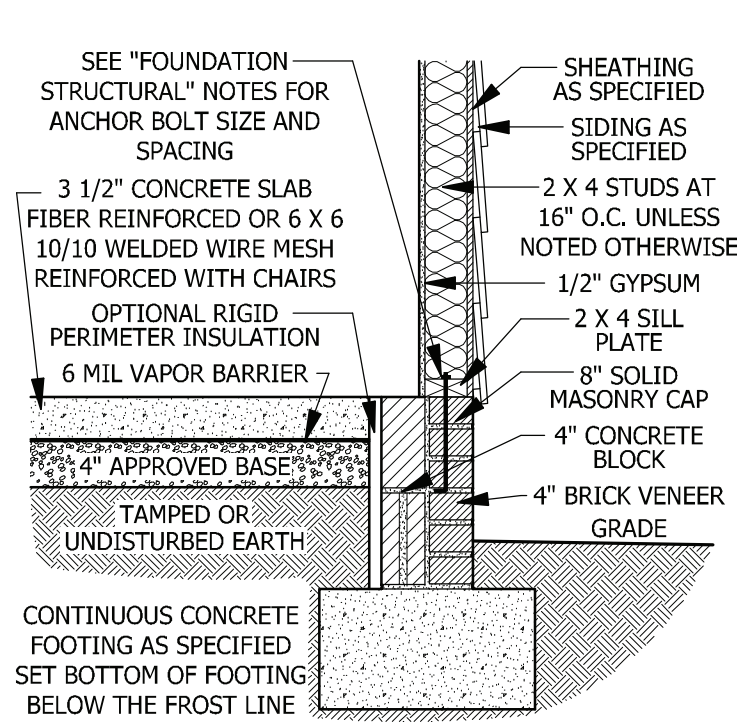
**REFER TO SECTIONS R302.5, R302.6, AND R302.7**  
**WALLS.** A minimum 1/2" gypsum board must be installed on all walls supporting floor/ceiling assemblies used for separation required by this section.  
**STAIRS.** A minimum of 1/2" gypsum board must be installed on the underside and exposed sides of all stairways.  
**CEILINGS.** 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.

**FIRST FLOOR PLAN**

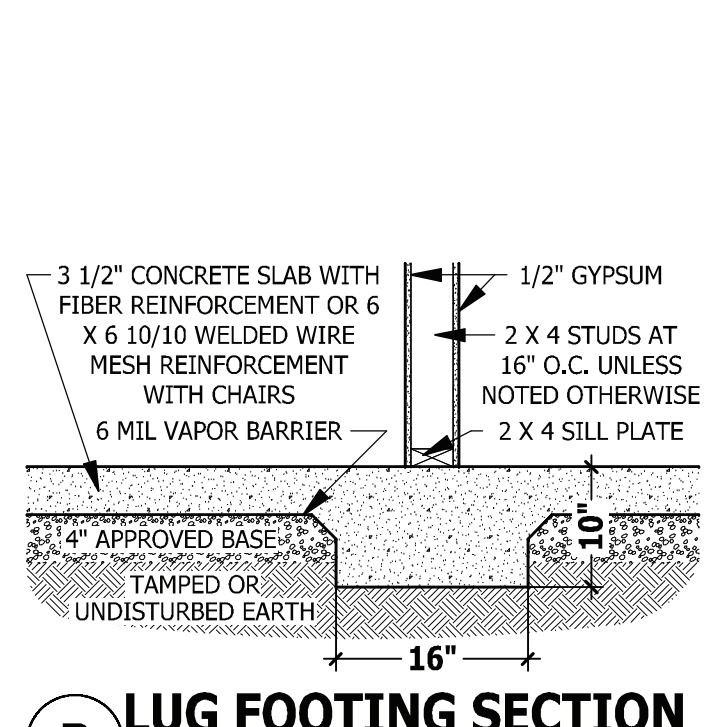
SCALE 1/4" = 1'-0"



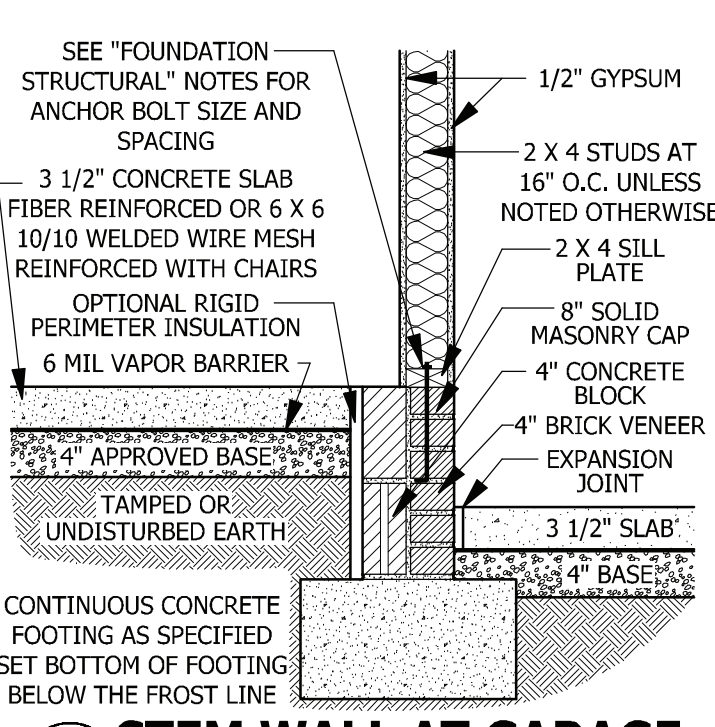




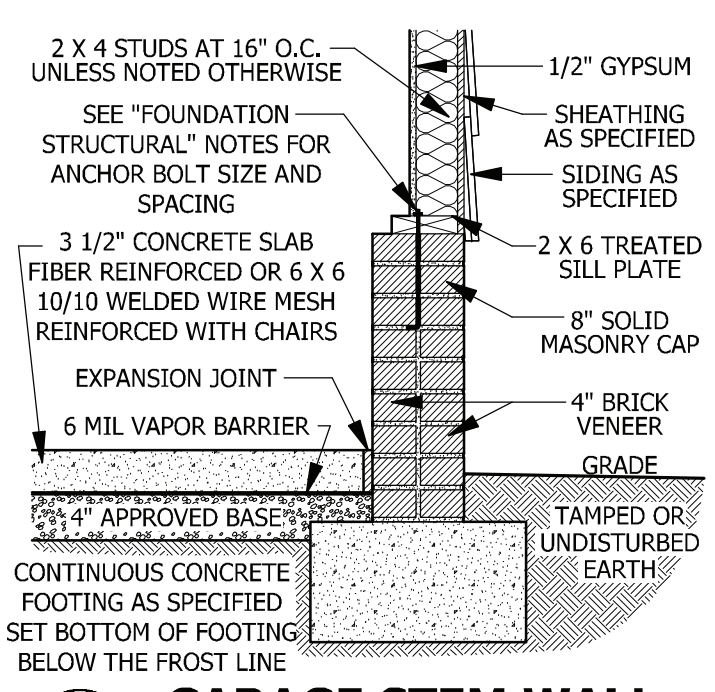
**A** **STEM WALL SECTION**  
SCALE 3/4" = 1'-0"



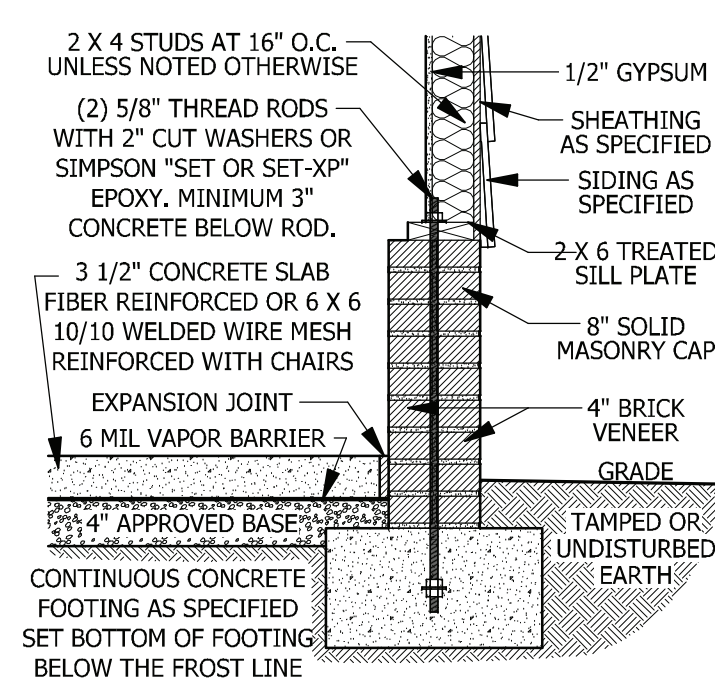
**B** **LUG FOOTING SECTION**  
SCALE 3/4" = 1'-0"



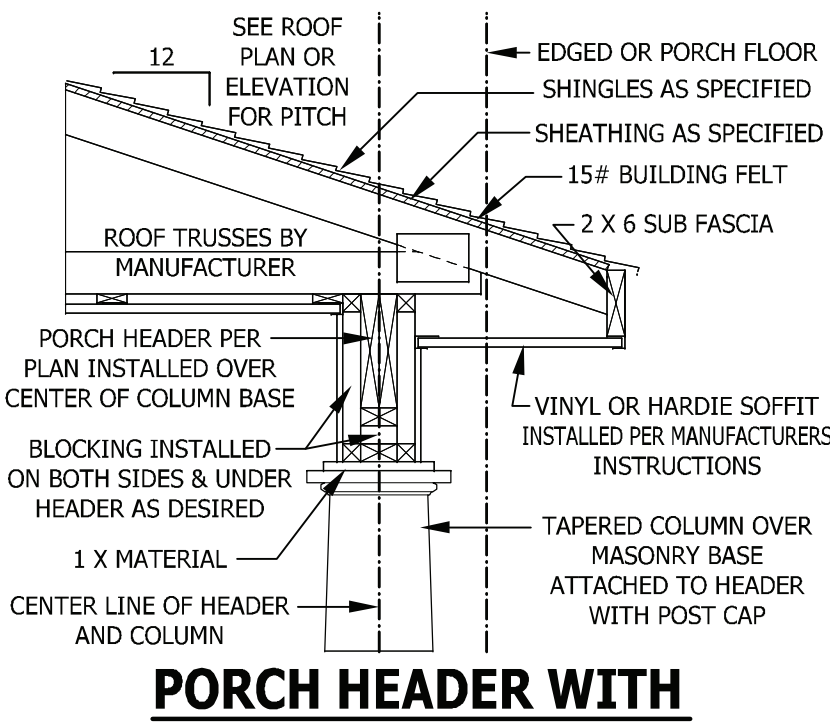
**C** **STEM WALL AT GARAGE**  
SCALE 3/4" = 1'-0"



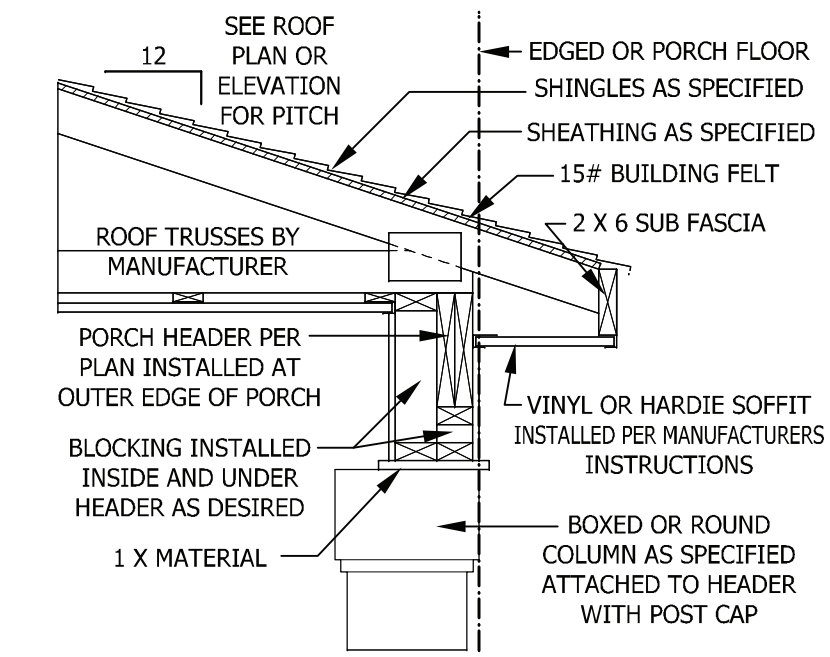
**D** **GARAGE STEM WALL**  
SCALE 3/4" = 1'-0"



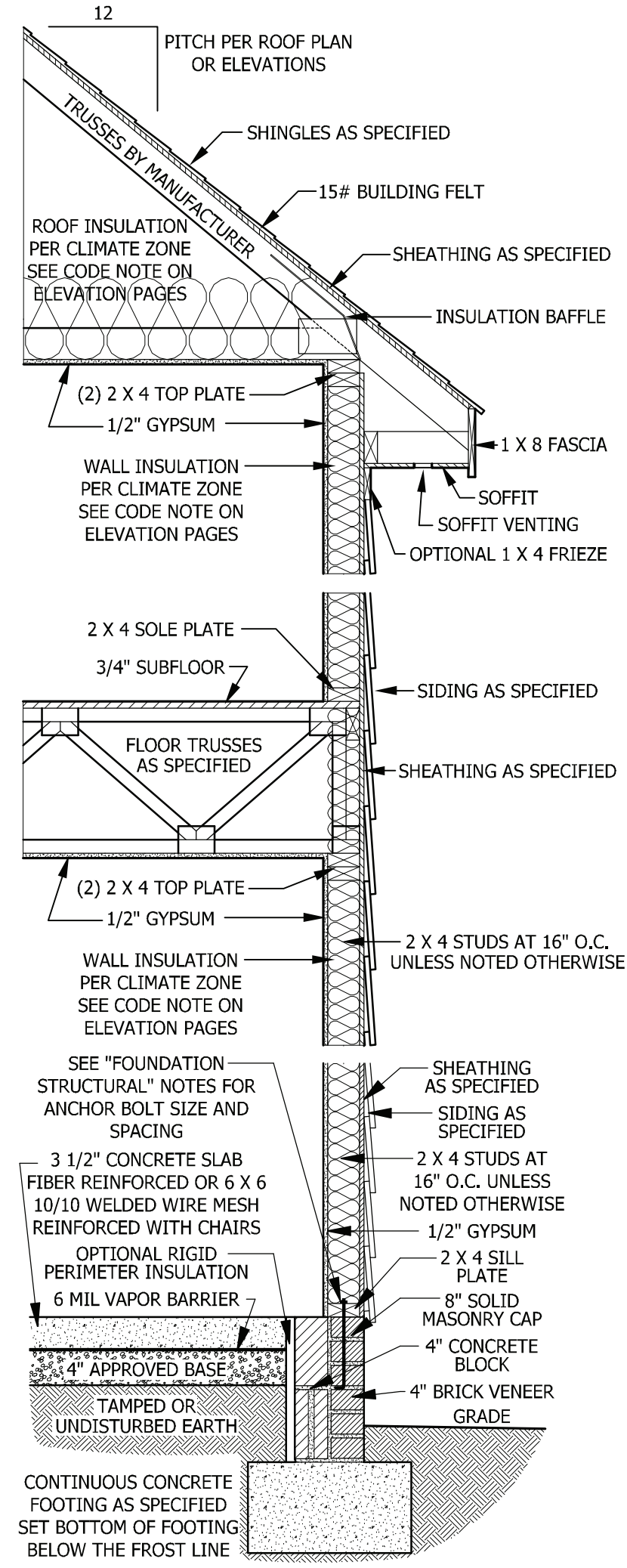
**E** **<48" GARAGE WING WALL**  
SCALE 3/4" = 1'-0"



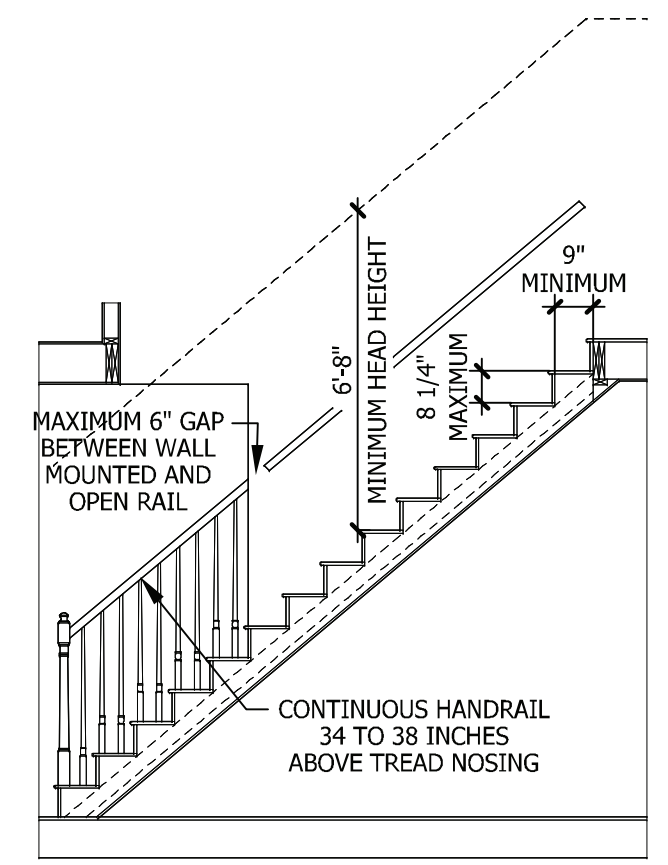
**PORCH HEADER WITH TAPERED COLUMN**  
SCALE 3/4" = 1'-0"



**PORCH HEADER WITH BOXED OR ROUND COLUMN**  
SCALE 3/4" = 1'-0"



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



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

**CARBON MONOXIDE ALARMS**

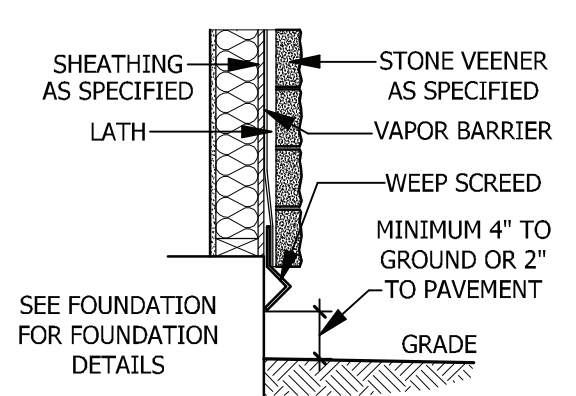
**SECTION R315**  
**R315.1 Carbon monoxide alarms.** In new construction, dwelling units shall be provided with an approved carbon monoxide alarm installed outside of each separate sleeping area in the immediate vicinity of the bedroom(s) as directed by the alarm manufacturer.  
**R315.2 Where required in existing dwellings.** 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.

**SMOKE ALARMS**

**SECTION R314**  
**R314.1 Smoke detection and notification.** All smoke alarms shall be listed in accordance with UL 217 and installed in accordance with the provisions of this code and the household fire warning equipment provisions of NFPA 72.  
**R314.2 Smoke detection systems.** Household fire alarm systems installed in accordance with NFPA 72 that include smoke alarms, or a combination of smoke detector and audible notification device installed as required by this section for smoke alarms, shall be permitted. The household fire alarm system shall provide the same level of smoke detection and alarm as required by this section for smoke alarms. Where a household fire warning system is installed using a combination of smoke detector and audible notification device(s), it shall become a permanent fixture of the occupancy and owned by the homeowner. The system shall be monitored by an approved supervising station and be maintained in accordance with NFPA 72.  
**Exception:** Where smoke alarms are provided meeting the requirements of Section R314.4.  
**R314.3 Location.** Smoke alarms shall be installed in the following locations:  
1. In each sleeping room.  
2. Outside each separate sleeping area in the immediate vicinity of the bedrooms.  
3. On each additional story of the dwelling, including basements and habitable attics (finished) but not including crawl spaces, uninhabitable (unfinished) attics and uninhabitable (unfinished) attic-stories. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.  
When more than one smoke alarm is required to be installed within an individual dwelling unit the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual unit.  
**R314.4 Power source.** Smoke alarms shall receive their primary power from the building wiring when such wiring is served from a commercial source, and when primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection. Smoke alarms shall be interconnected.

**WEEP SCREEDS**

All weep screeds and stone veneer to be installed per manufacturer's 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"

**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.

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.

**TYPICAL DETAILS**  
**Braxton**

**JW SEALEY & associates**  
**Construction**

**HAYNES HOME PLANS, INC.**  
P.O. BOX 702, WAKE FOREST, NC 27788 919-495-6180 FAX 919-495-4911-4396

SQUARE FOOTAGE	
HEATED FIRST FLOOR	1952 SQ. FT.
TOTAL	1952 SQ. FT.
UNHEATED FRONT PORCH	116 SQ. FT.
GARAGE	528 SQ. FT.
REAR PORCH	144 SQ. FT.
TOTAL	788 SQ. FT.

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