

Purchaser must verify all dimensions and conditions before beginning construction.

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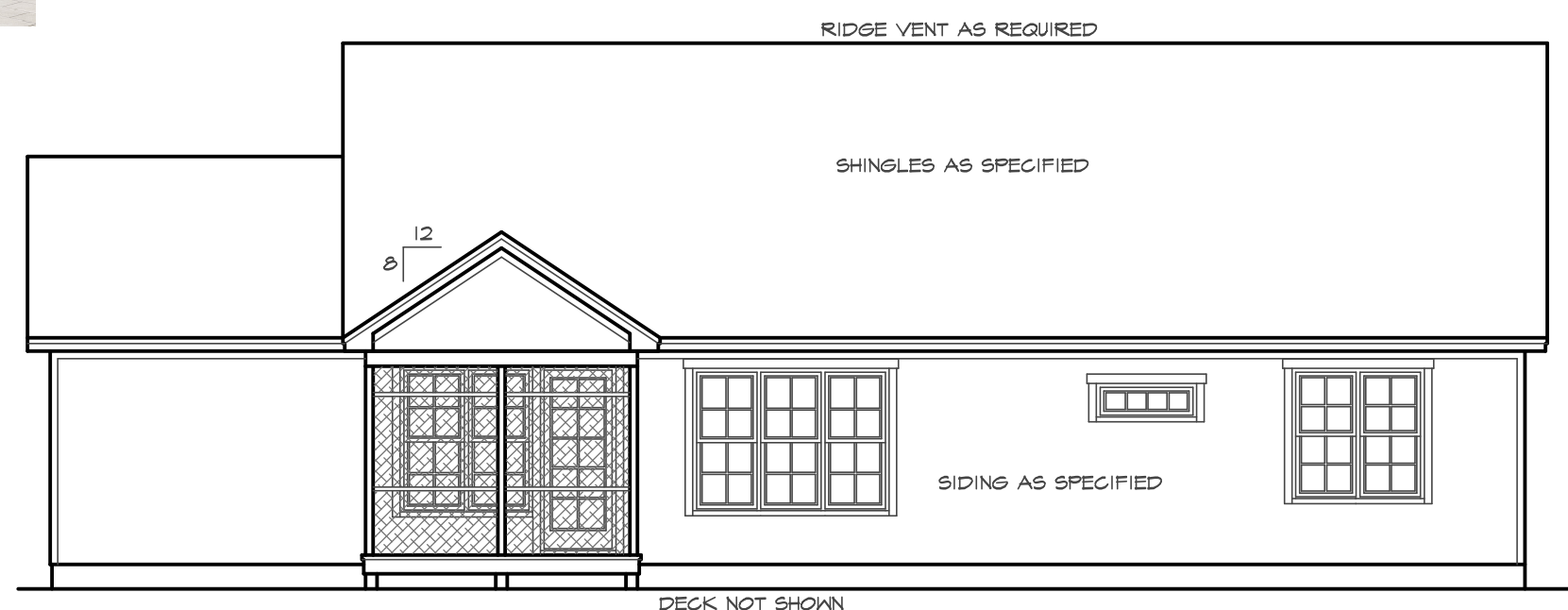
Plan For: **The "Howard"** GARAGE RIGHT  
 MidTown Designs Inc. 1008 Ridge Dr. Clayton NC 27520 Phone: 919-783-8626 www.midtowndesigns.com



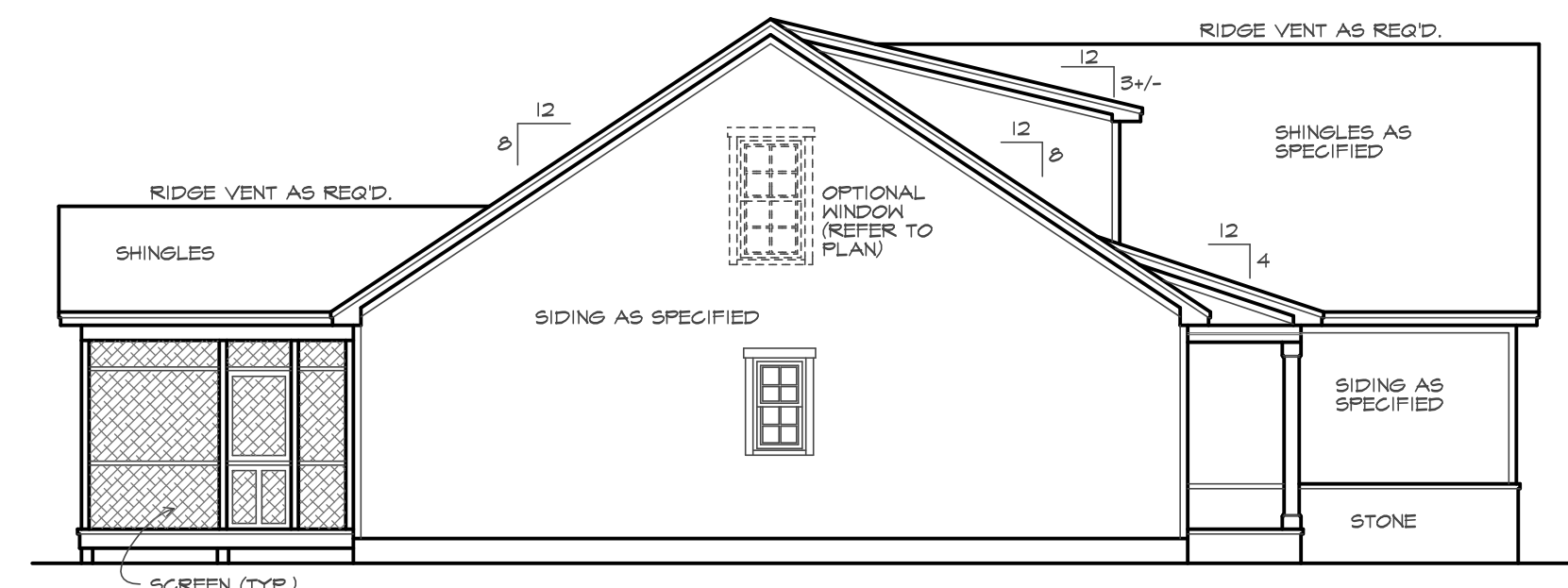
**FRONT ELEVATION**  
SCALE 1/4" = 1'0"



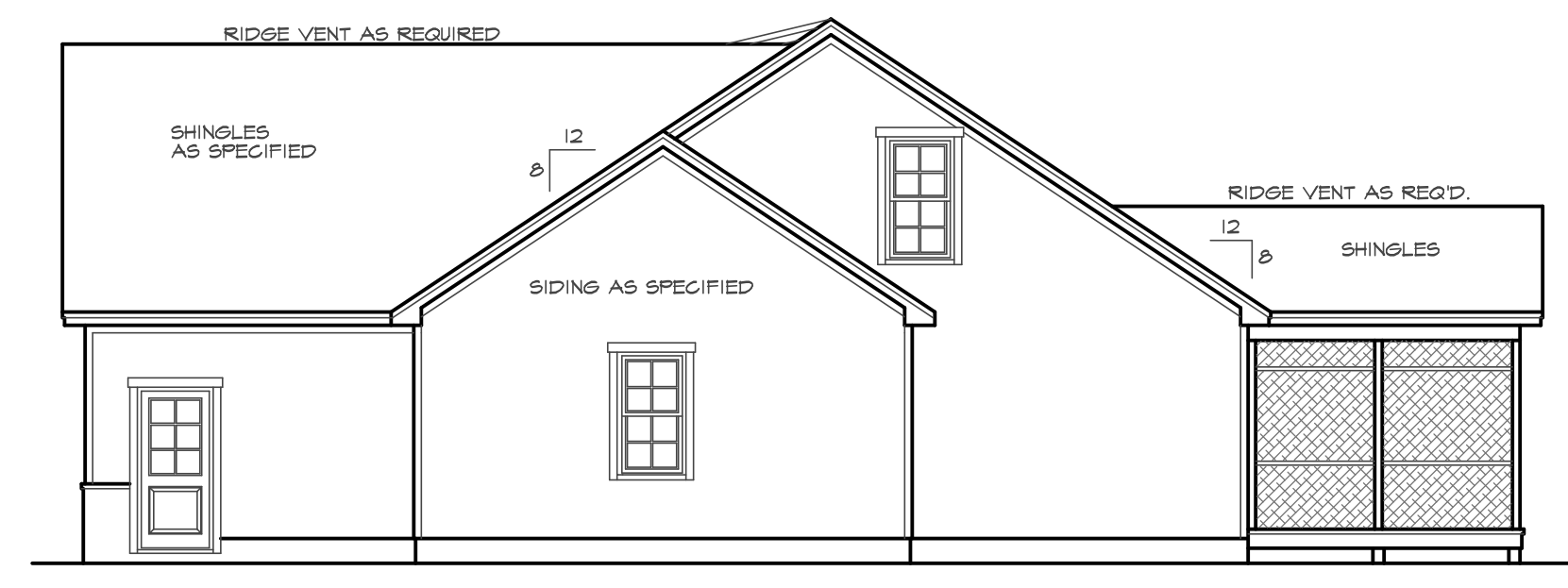
**ATTIC VENTILATION:**  
 THE NET FREE VENTILATING AREA SHALL BE NOT LESS THAN 1 TO 150 OF THE AREA OF THE SPACE VENTILATED EXCEPT THAT THE AREA MAY BE 1 TO 300, PROVIDED AT LEAST 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE SPACE TO BE VENTILATED AT LEAST 3 FEET ABOVE EAVE OR CORNICE VENTS WITH THE BALANCE OF THE REQUIRED VENTILATION TO BE PROVIDED BY EAVE OR CORNICE VENTS.  
 GROSS ATTIC AREA TO BE VENTILATED 2493 SQ.FT.  
 2493/300 = 8.31 SQ.FT. NET FREE AREA  
 50% OF VENTING MUST BE 3FT. ABOVE EAVE OR SOFFIT VENTS.



**REAR ELEVATION**  
SCALE 1/8" = 1'0"



**LEFT SIDE ELEVATION**  
SCALE 1/8" = 1'0"



**RIGHT SIDE ELEVATION**  
SCALE 1/8" = 1'0"

DATE	REV	DATE	REV

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SCALE:  

PROJECT #: 191007

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DATE	10/30/2019
SCALE	
PROJECT #	191007

**FOUNDATION STRUCTURAL NOTES:**

- 1 (3) 2 x 10 SFF #2 GIRDER DROPPED, TYPICAL UNO.
- 2 CONCRETE BLOCK PIER SIZE SHALL BE:  

SIZE	HOLLOW MASONRY	SOLID MASONRY
8 x 16	UP TO 32' HIGH	UP TO 3'-0" HIGH
12 x 16	UP TO 48' HIGH	UP TO 4'-0" HIGH
16 x 16	UP TO 64' HIGH	UP TO 12'-0" HIGH
24 x 24	UP TO 96' HIGH	

WITH 30" x 30" x 10" CONCRETE FOOTING, UNO.
- 3 WALL FOOTING AS FOLLOWS:  
 DEPTH: 8" - UP TO 2-1/2 STORY  
 10" - 3 STORY  
 WIDTH: SIDING (OR EQUAL)  
 - 16" - UP TO 2-1/2 STORY  
 - 18" - 3 STORY  
 BRICK VENEER  
 - 16" - 1 STORY  
 - 20" - 2 STORY  
 - 24" - 3 STORY  
 FOR FOUNDATION WALL HEIGHT AND BACKFILL REQUIREMENTS, REFER TO NORTH CAROLINA RESIDENTIAL CODE TABLE R404.11 (1) THRU (4) NOTE: ASSUMED SOIL BEARING CAPACITY = 2000 PSF. CONTRACTOR MUST VERIFY SITE CONDITIONS AND CONTACT SOILS ENGINEER IF MARGINAL OR UNSTABLE SOILS ARE ENCOUNTERED. ATTACH SILL PLATE WITH 1/2" dia. ANCHOR BOLTS AT 6'-0" CENTERS (1" EMBEDMENT) AND 12" FROM EACH PLATE END. (SECTION R 403.1.6)
- 4 \* DESIGNATES A SIGNIFICANT POINT LOAD TO HAVE SOLID BLOCKS TO PIER. SOLID BLOCK ALL BEAM BEARING POINTS NOTED TO HAVE THREE OR MORE STUDS TO END, TYPICAL.
- 5 ABBREVIATIONS:  
 'S,J' = SINGLE JOIST  
 'D,J' = DOUBLE JOIST  
 'T,J' = TRIPLE JOIST
- 6 (4) 2 x 10 SFF #2 GIRDER, TYPICAL UNO.

**FOUNDATION VENTING**

**SECTION R408 UNDER FLOOR SPACE**

R408.1 Ventilation. The under-floor space between the bottom of the floor joists and the earth under any building (except space occupied by a basement or cellar) shall be provided with ventilation openings through foundation walls or exterior walls. The minimum net area of ventilation openings shall not be less than 1 square foot for each 150 square feet (13.7 m squared) for each 100 m squared of under-floor space area. One such ventilating opening shall be within 3 feet (914 mm) of each corner of solid building.

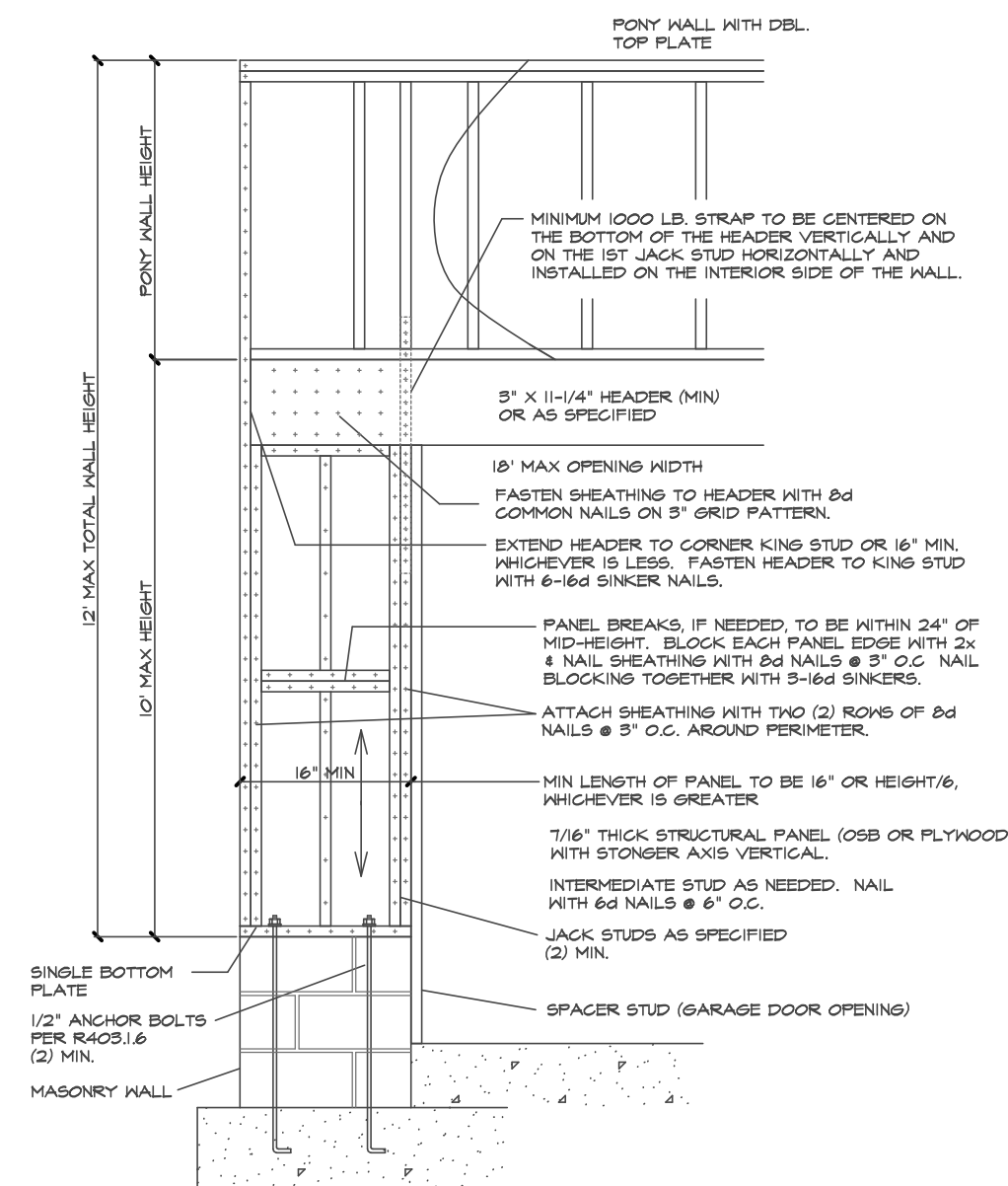
CRAWL AREA TO BE VENTED. 1650 SQ.FT. 1650/1500 = 1.105 NET FREE VENTING AREA REQUIRED

R408.2 Ground Vapor Retarder. A minimum 6 mil. polyethylene vapor retarder shall be installed to cover all earth in the crawl space with joints lapped not less than 12"

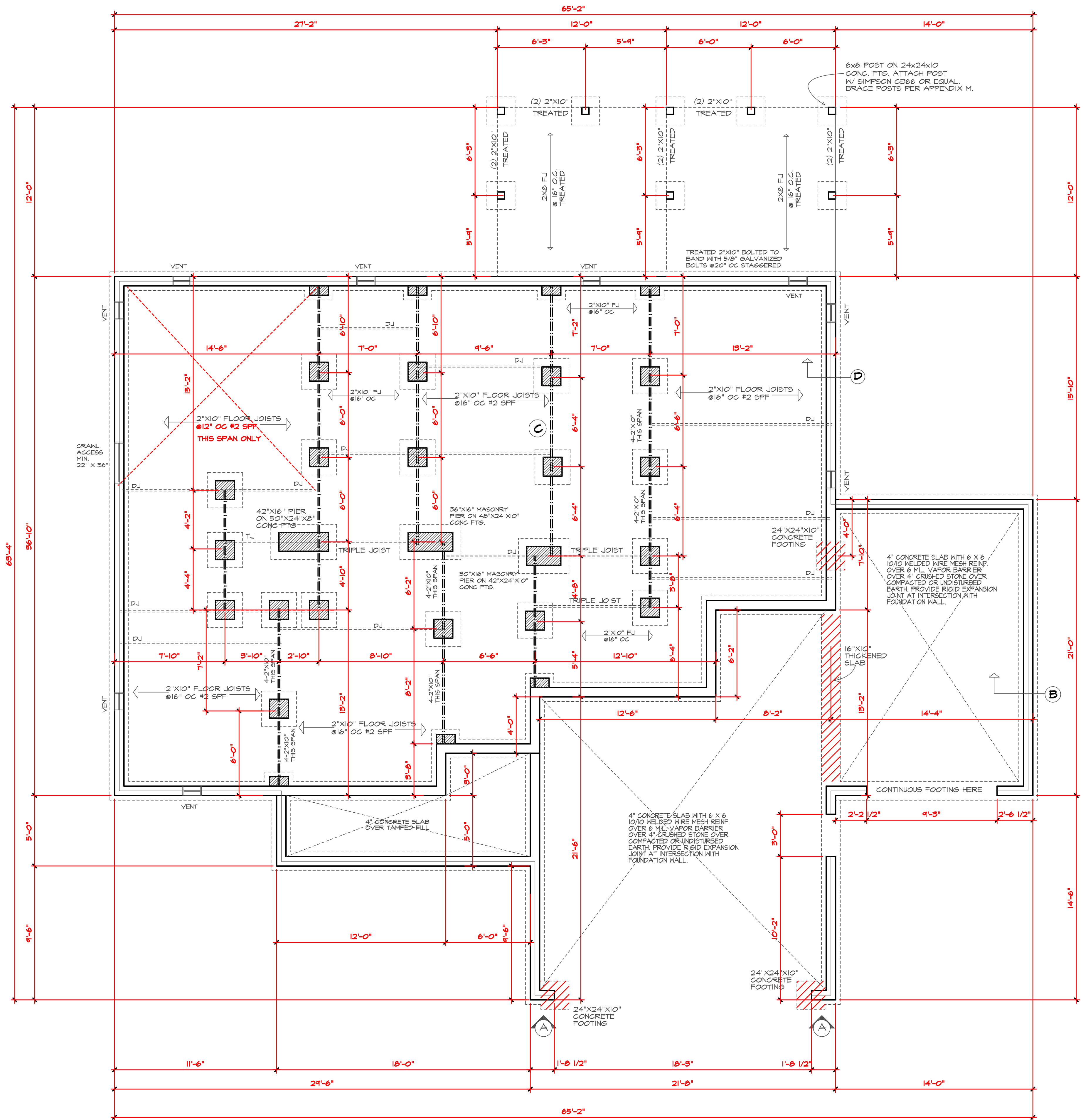
**OR**  
**SEALED CRAWL SPACE BY OTHERS**



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**A** CONTINUOUS PORTAL FRAME PANEL CONSTRUCTION OVER MASONRY OR CONCRETE FOUNDATION.



**FOUNDATION PLAN**

SCALE 1/4" = 1'-0"

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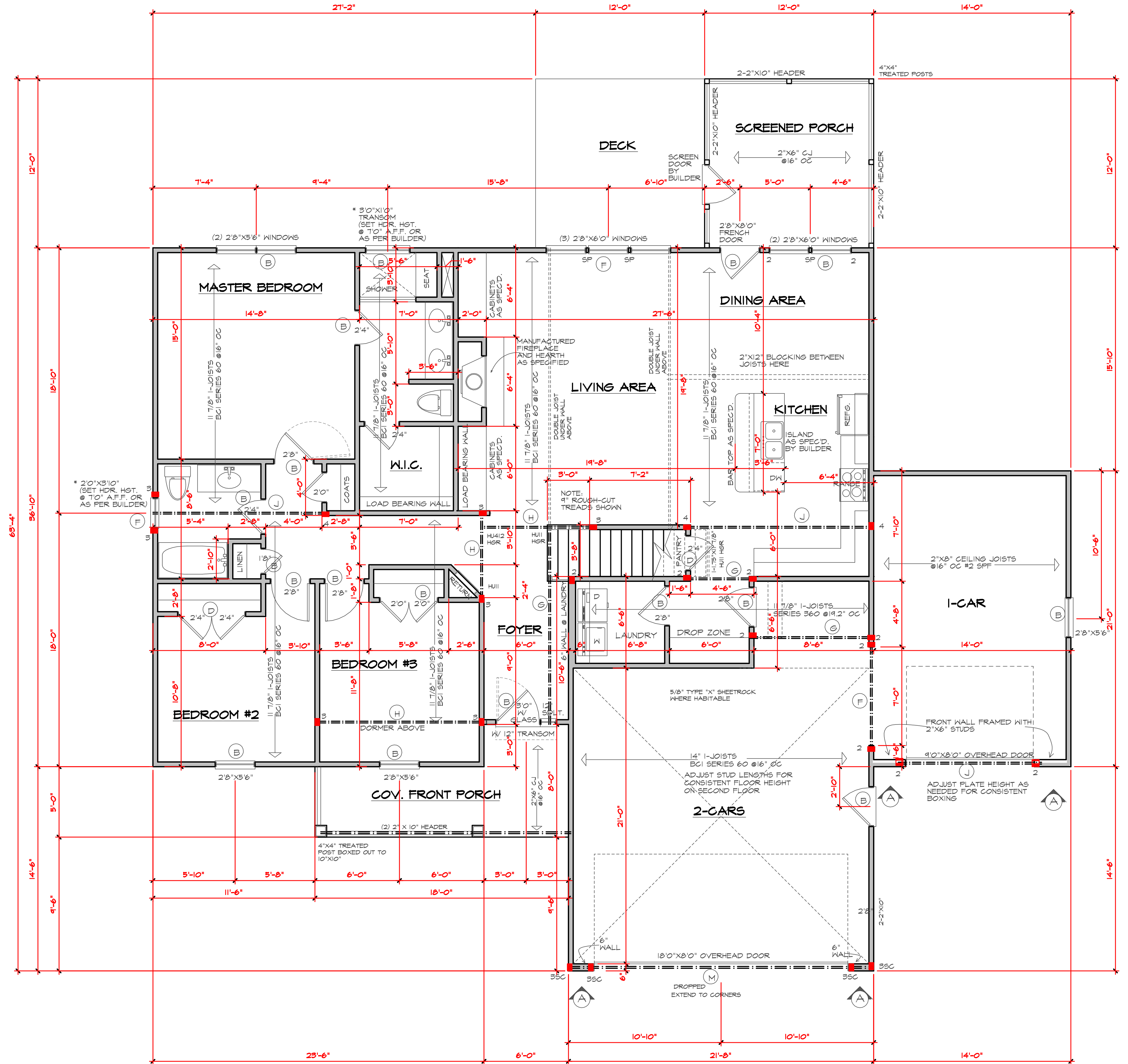
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- BEAM SCHEDULE**
- (A) 2-2"x10" FLUSH
  - (B) 2-2"x10" DROPPED
  - (C) 2-2"x8" FLUSH
  - (D) 2-2"x8" DROPPED
  - (E) 2-1.75"x9.25" LVL FLUSH
  - (F) 2-1.75"x9.25" DROPPED
  - (G) 1-1.75"x12 7/8" LVL FLUSH
  - (H) 2-1.75"x12 7/8" LVL FLUSH
  - (J) 3-1.75"x12 7/8" LVL DROPPED
  - (K) 3-1.75"x14" LVL DROPPED
  - (M) 2-1.75"x18" LVL DROPPED



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**FIRST FLOOR PLAN**  
SCALE 1/4" = 1'-0"

SQUARE FOOTAGE	
FIRST FLOOR	1,665 SQ.FT.
SECOND FLOOR	528 SQ.FT.
<b>TOTAL</b>	<b>1,991 SQ.FT.</b>
<b>GARAGES</b>	
FRONT PORCH	108 SQ.FT.
SCREENED PORCH	144 SQ.FT.
DECK	144 SQ.FT.

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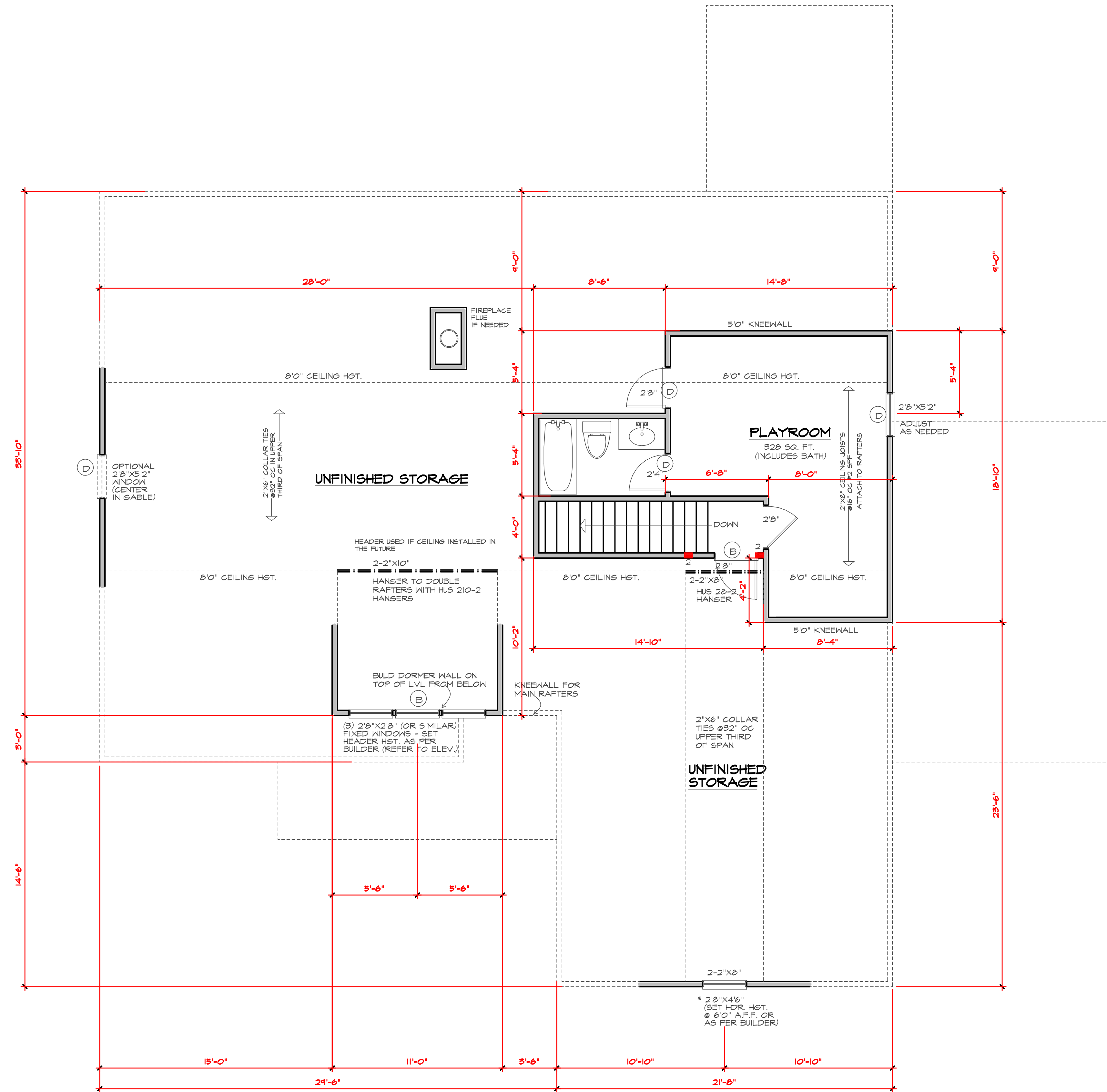
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DATE	10/30/2019
SCALE	
PROJECT #	191007

BEAM SCHEDULE

- (A) 2-2"x10" FLUSH
- (B) 2-2"x10" DROPPED
- (C) 2-2"x8" FLUSH
- (D) 2-2"x8" DROPPED
- (E) 2-1.75"x9.25" LVL FLUSH
- (F) 2-1.75"x9.25" DROPPED
- (G) 1-1.75"x14" LVL FLUSH
- (H) 2-1.75"x14" LVL FLUSH
- (J) 2-1.75"x14" LVL DROPPED
- (K) 3-1.75"x14" LVL DROPPED
- (L) 3-1.75"x18" LVL DROPPED



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**SECOND FLOOR PLAN**  
 SCALE 1/4" = 1'-0"

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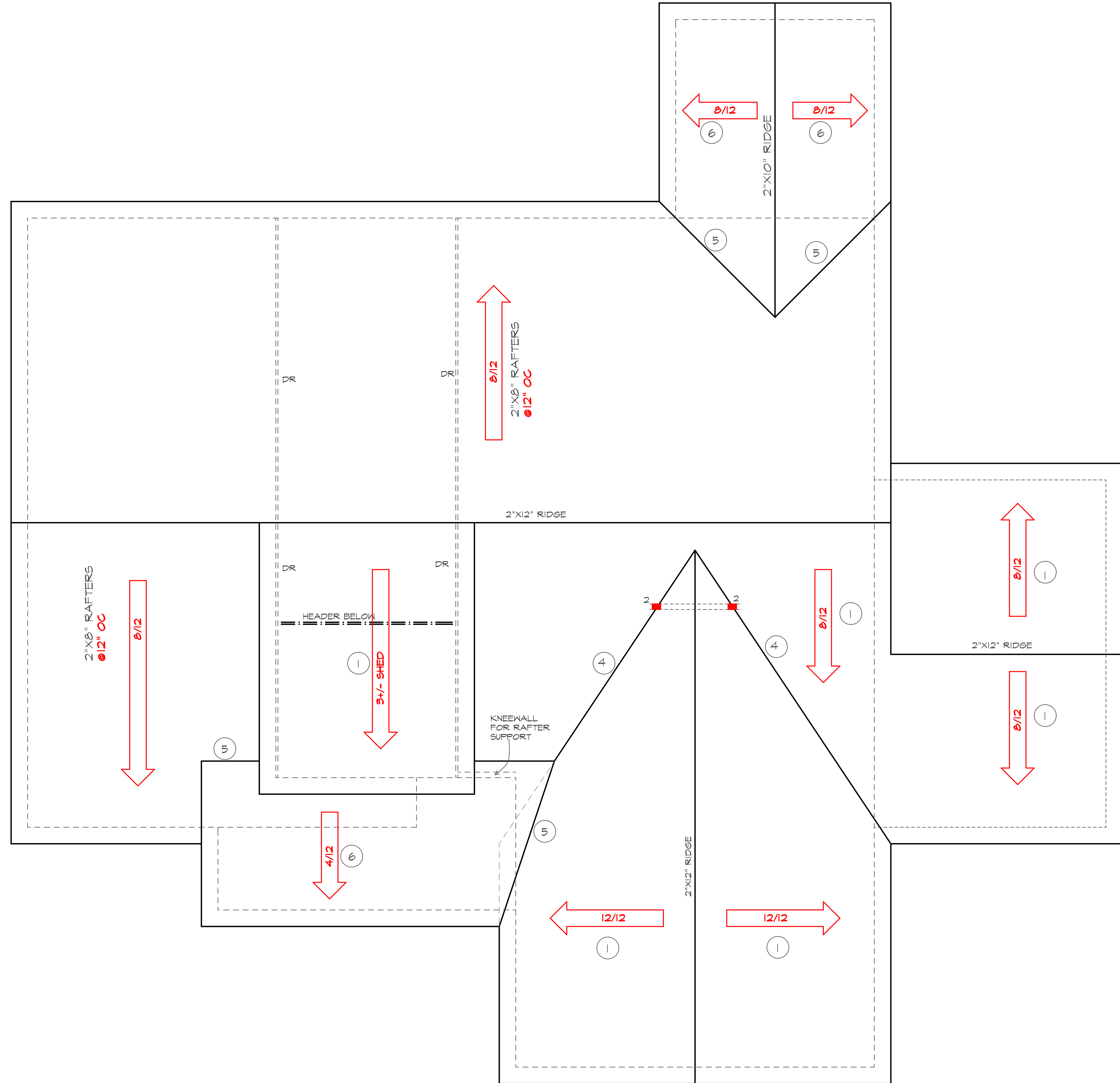
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**ROOF FRAMING NOTES:**

- ① ALL RAFTERS TO BE 2x8 @ 16" O.C. WITH 2 X 12 RIDGE, UNO.
  - ② (2)2x10 OR 1.75"x11 7/8" LVL HIP, HIPs MAY BE SPLICED WITH A MINIMUM 6'-0" OVERLAP AT CENTER.
  - ③ (2)2x10 OR 1.75"x9.25" VALLEY, DO NOT SPLICE VALLEYS
  - ④ 1.75"x11 7/8" LVL VALLEY
  - ⑤ FALSE FRAME VALLEY ON 2x10 FLAT PLATE
  - ⑥ 2"x6" RAFTERS @ 16" OC WITH 2"x10" RIDGE
  - ⑦ 2"x10" RAFTERS @ 16" OC WITH 2"x12" RIDGE
- "SR" = SINGLE RAFTER
  - "DR" = DOUBLE RAFTER
  - "TR" = TRIPLE RAFTER
  - "RS" = ROOF SUPPORT FOR RAFTER SUPPORT
  - "S" (3) STUD OR 4x4 POST FOR ROOF SUPPORT
  - FIR DOWN 2x8 RAFTERS OR USE 2x10 AT CATHEDRAL CEILINGS
  - ATTACH VAULTED RAFTERS WITH HURRICANE CLIPS; SIMPSON "H-5" OR EQUIVALENT
  - 2"x6" COLLAR TIES @ 32" OC IN UPPER THIRD OF SPAN TYPICAL



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

Plan For:

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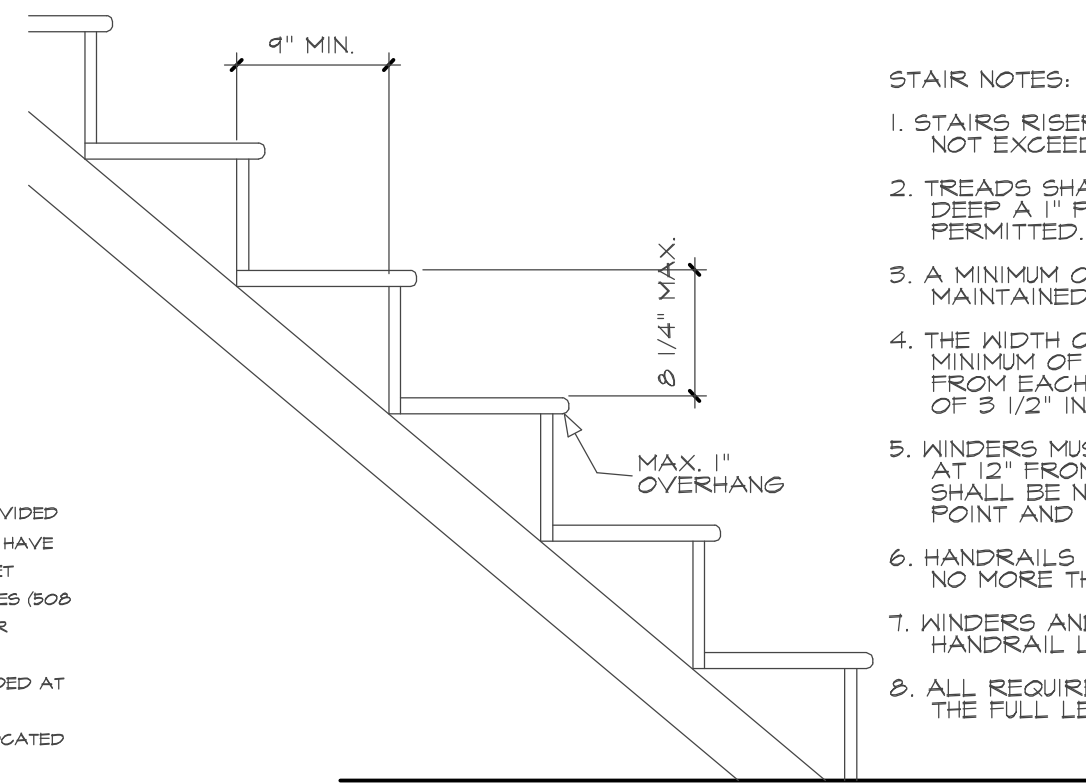
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**ATTIC ACCESS**

SECTION R601  
 R601.1 ATTIC ACCESS AN ATTIC ACCESS OPENING SHALL BE PROVIDED TO ATTIC AREAS THAT EXCEED 400 SQUARE FEET (37.6 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 M505.1.5 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, BARNERS, BAY WINDOWS, ETC. ARE NOT REQUIRED TO HAVE ACCESS.  
 2. FALL DOWN STAIR TREADS, STRINGERS, HANDRAILS, AND HARDWARE MAY PROTRUDE INTO THE NET CLEAR OPENING.



**STAIR NOTES:**

1. STAIR RISERS MUST BE UNIFORM AND NOT EXCEED 8 1/4".
2. TREADS SHALL NOT BE LESS THAN 10" DEEP & 1" PROJECTION OVER RISER IS PERMITTED.
3. A MINIMUM OF 6'8" HEADROOM MUST BE MAINTAINED AT ALL PLACES ON STAIR.
4. THE WIDTH OF THE STAIR SHALL BE A MINIMUM OF 36" HANDRAIL MAY PROJEKT FROM EACH SIDE OF STAIR A DISTANCE OF 3 1/2" INTO THE REQUIRED WIDTH.
5. HANDERS MUST BE A MINIMUM OF 9" IN WIDTH AT 12" FROM THE NARROWEST SIDE. TREAD SHALL BE NO NARROWER THAN 4" AT ANY POINT AND AVERAGE NO LESS THAN 9 INCHES.
6. HANDRAILS SHALL BE NO LESS THAN 3 1/2" AND NO MORE THAN 3 3/4" ABOVE TREAD NOSING.
7. HANDERS AND SPIRAL STAIRS SHALL HAVE THE HANDRAIL LOCATED ON THE OUTSIDE RADIUS.
8. ALL REQUIRED HANDRAILS SHALL BE CONTINUOUS THE FULL LENGTH OF THE STAIRS.

**STAIR DETAIL**

NO SCALE

**STRUCTURAL NOTES**

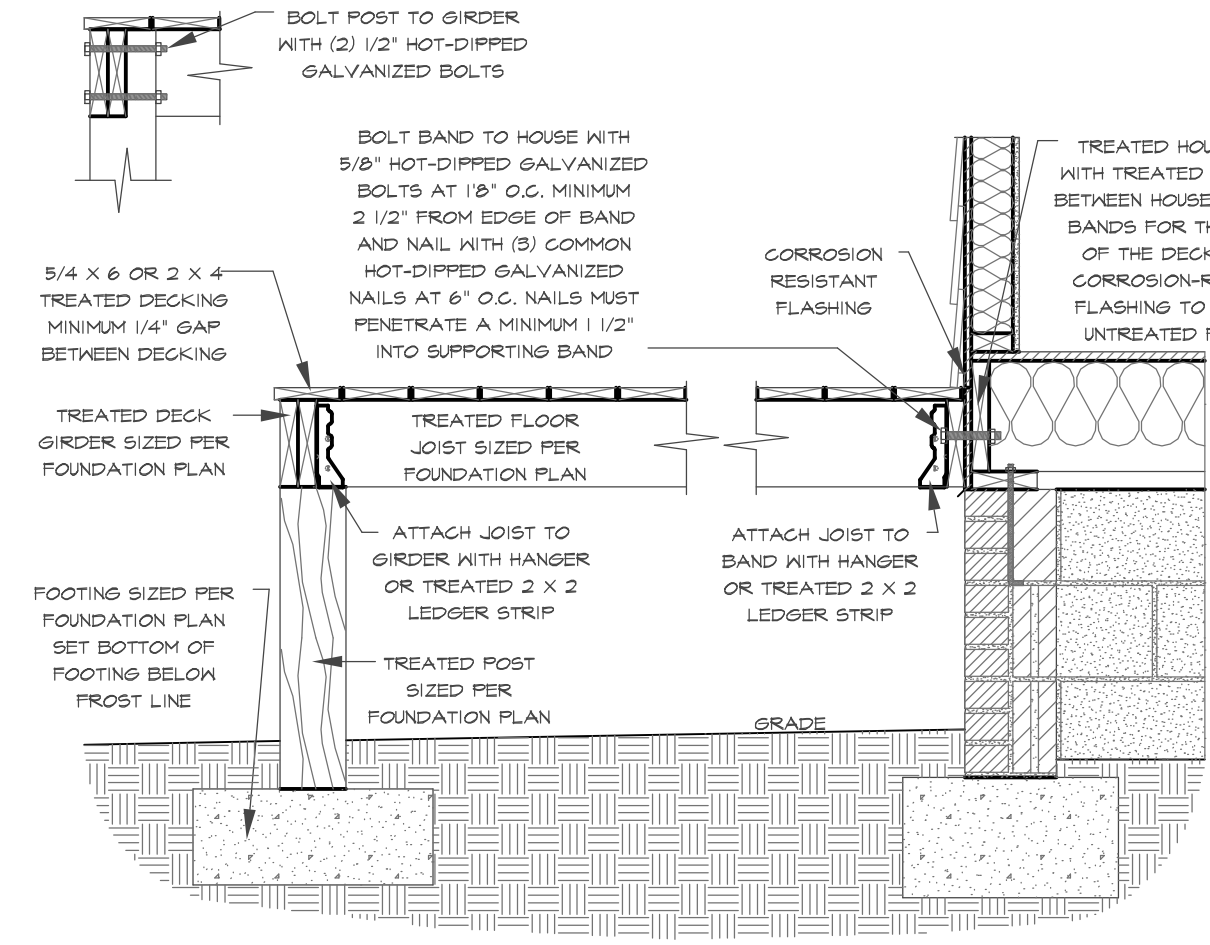
- 1) ALL CONSTRUCTION SHALL CONFORM TO THE LATEST REQUIREMENTS OF THE NORTH CAROLINA STATE RESIDENTIAL CODE - 2018 EDITION (2015 IRC), PLUS ALL LOCAL CODES AND REGULATIONS.  
 ALL MEMBERS SHALL BE FRAMED, ANCHORED, TIED AND BRACED IN ACCORDANCE WITH GOOD CONSTRUCTION PRACTICE AND THE BUILDING CODE.
- 2) DESIGN LOADS SEE TABLE R301.3
- WIND SPEED, (REFER TO TABLE R301.2.4) VERIFY ZONE BEFORE CONSTRUCTION.
- 3) WALL BRACING: WALLS SHALL BE BRACED ALONG BRACED WALL LINES ACCORDING TO SECTION R602.10. THE AMOUNT, LOCATION AND CONSTRUCTION OF BRACING SHALL COMPLY WITH R602.10. NOTE THAT THE BRACING SHOWN ON THE PLANS IS BASED ON THE PRESCRIPTIVE BRACING REQUIREMENTS OF THE CODE AND SHALL BE VERIFIED AND/OR APPROVED BY THE CODE OFFICIAL.
- 4) CONCRETE SHALL HAVE A MINIMUM 28 DAY STRENGTH OF 3000 PSI AND A MAXIMUM SLUMP OF 3 INCHES UNLESS NOTED OTHERWISE (NO). AIR ENTRAINMENT PER TABLE 402.2. ALL CONCRETE SHALL BE PROPORTIONED, MIXED, HANDLED, SAMPLED, TESTED AND PLACED IN ACCORDANCE WITH ACI STANDARDS. ALL SAMPLES FOR PUMPING SHALL BE TAKEN FROM THE EXIT END OF THE PUMP.
- 5) ALLOWABLE SOIL BEARING PRESSURE ASSUMED TO BE 2000 PSF. THE CONTRACTOR MUST CONTACT A GEOTECHNICAL ENGINEER AND THE 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.
- 6) ALL FRAMING LUMBER SHALL BE SPF #27B @ 975 PSI UNLESS NOTED OTHERWISE (NO). ALL TREATED LUMBER SHALL BE SYP #2 (FB#75 PSI). PLATE MATERIAL MAY BE SPF #3 OR SYP #3 (FC#PERF) @ 425 PSI - MIN.
- 7) ALL WOODEN BEAMS AND HEADERS SHALL HAVE THE FOLLOWING END SUPPORTS: (1) 2X4 STUD COLUMN FOR 6'-0" MAX BEAM SPAN (NO), (2) 2X4 STUDS FOR BEAM SPAN GREATER THAN 6'-0" (NO).
- 8) L.V.L. SHALL BE LAMINATED VENEER LUMBER. FB#2600 PSI, FV#285 PSI, E#1400000 PSI, P.S.L. SHALL BE PARALLEL STRAND LUMBER. FB#2400 PSI, FV#290 PSI, E#2000000 PSI. L.S.L. SHALL BE LAMINATED STRAND LUMBER. FB#2250 PSI, FV#400 PSI, E#1550000 PSI. INSTALL ALL CONNECTIONS PER MANUFACTURER'S INSTRUCTIONS.
- 9) ALL ROOF TRUSSES AND I-JOIST LAYOUTS SHALL BE PREPARED IN ACCORDANCE WITH THE SEALED STRUCTURAL DRAWINGS. TRUSSES AND I-JOISTS SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS.
- 10) ALL STRUCTURAL STEEL SHALL BE ASTM A-36. STEEL BEAMS SHALL BE SUPPORTED AT EACH END WITH A MINIMUM BEARING LENGTH OF 3 1/2" INCHES AND FULL FLANGE WITH PROVIDE SOLID BEARING FROM BEAM SUPPORT TO FOUNDATION. BEAMS SHALL BE ATTACHED TO EACH SUPPORT WITH TWO LAG SCREWS (1/2" DIAMETER & 4" LONG). LATERAL SUPPORT IS CONSIDERED ADEQUATE PROVIDED THE JOIST ARE TOE NAILED TO THE SOLE PLATE, AND SOLE PLATE IS NAILED OR BOLTED TO THE BEAM FLANGE @ 48" O.C. ALL STEEL TUBING SHALL BE ASTM A500.
- 11) REBAR SHALL BE DEFORMED STEEL, ASTM#65, GRADE 60.
- 12) FLITCH BEAMS SHALL BE BOLTED TOGETHER USING (2) ROWS OF 1/2" DIAMETER BOLTS (ASTM A307) WITH WASHERS PLACED UNDER THE THREADED END OF BOLT. BOLTS SHALL BE SPACED AT 24" O.C. (MAX) AND STAGGERED AT THE TOP AND BOTTOM OF BEAM (2" EDGE DISTANCE), WITH 2 BOLTS LOCATED AT 6" FROM EACH END.
- 13) BRICK LINTELS SHALL BE 3 1/2"X3 1/2"X1/4" STEEL ANGLE FOR UP TO 6'-0" SPAN AND 6"X4"X5/16" STEEL ANGLE WITH 6" LEG VERTICAL FOR SPANS UP TO 4'-0" (NO).
- 14) THE POSITIVE AND NEGATIVE DESIGN PRESSURE FOR DOORS AND WINDOWS SEE R301.2(6)

**DECK BRACING**

SECTION AM04  
 AM04.1 DECK BRACING. DECKS SHALL BE BRACED TO PROVIDE LATERAL STABILITY. THE FOLLOWING ARE ACCEPTABLE MEANS TO PROVIDE LATERAL STABILITY.  
 AM04.1.1. WHEN THE DECK FLOOR HEIGHT IS LESS THAN 4'-0" ABOVE FINISHED GRADE PER FIGURE AM04 AND THE DECK IS ATTACHED TO THE STRUCTURE IN ACCORDANCE WITH SECTION AM04, LATERAL BRACING IS NOT REQUIRED.  
 AM04.1.2. 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 AM04.1.  
 AM04.1.3. FOR FREE-STANDING DECKS WITHOUT KNEE BRACES OR DIAGONAL BRACING, LATERAL STABILITY MAY BE PROVIDED BY EMBEDDING THE POST IN ACCORDANCE WITH FIGURE AM04.2 AND THE FOLLOWING:  

POST SIZE	MAX. TRIANGULAR 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"

 AM04.1.4. 2 X 6 DIAGONAL VERTICAL CROSS BRACING MAY BE PROVIDED IN TWO PERPENDICULAR DIRECTIONS FOR FREE-STANDING DECKS OR PARALLEL TO THE STRUCTURE AT THE EXTERIOR COLUMN LINE FOR ATTACHED DECKS. THE 2 X 6 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 AM04.3.  
 AM04.1.5. FOR EMBEDMENT OF PILES IN COASTAL REGIONS, SEE CHAPTER 45.

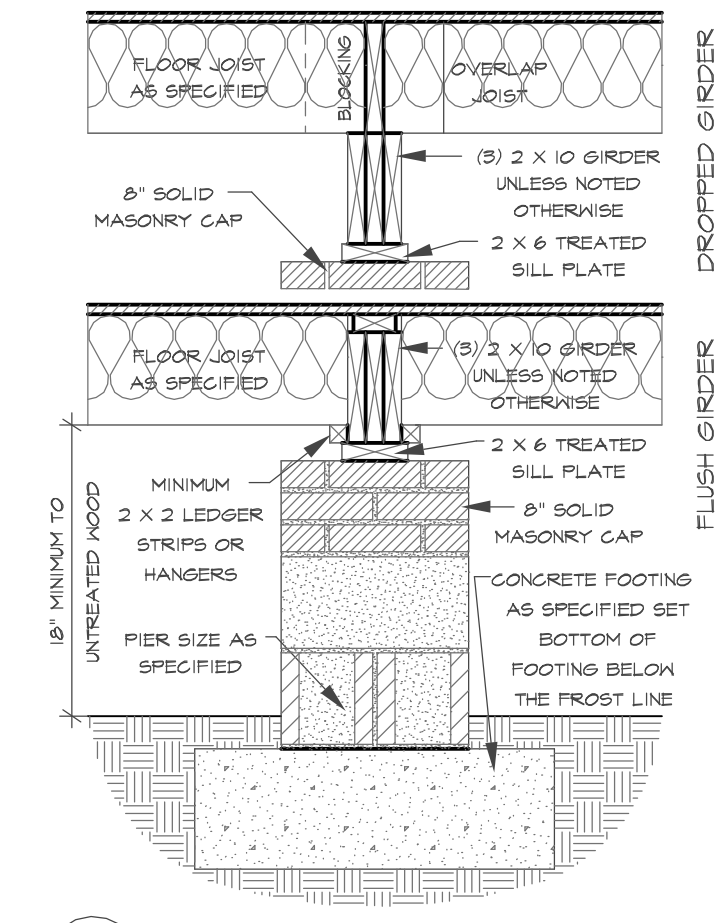


**DECK ATTACHMENT DETAIL TO FRAMED WALL**

SCALE 3/4" = 1'-0"

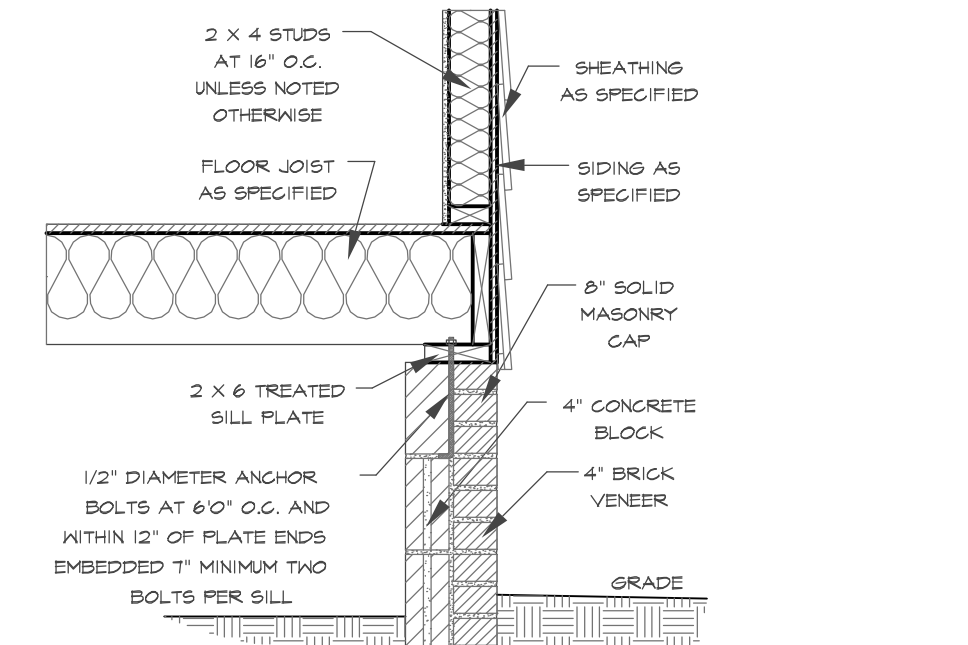
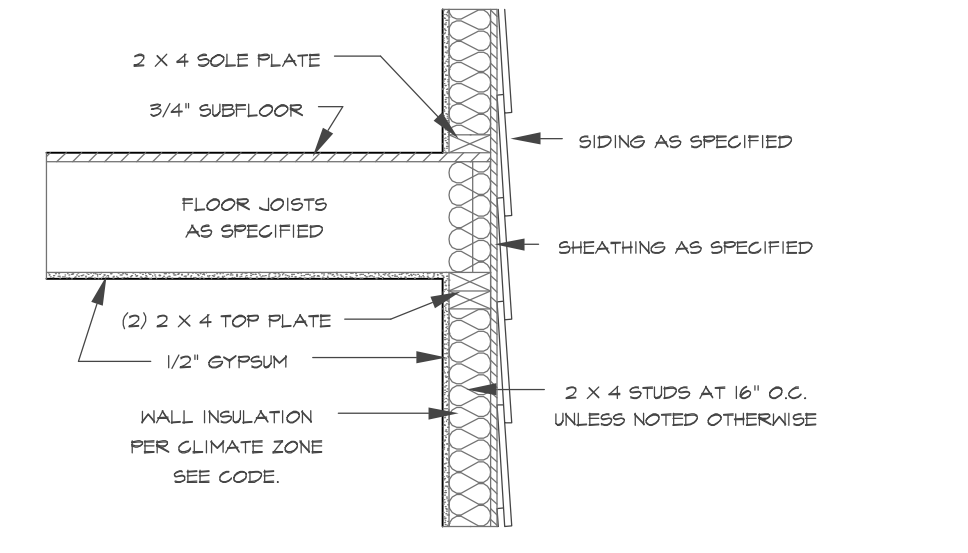
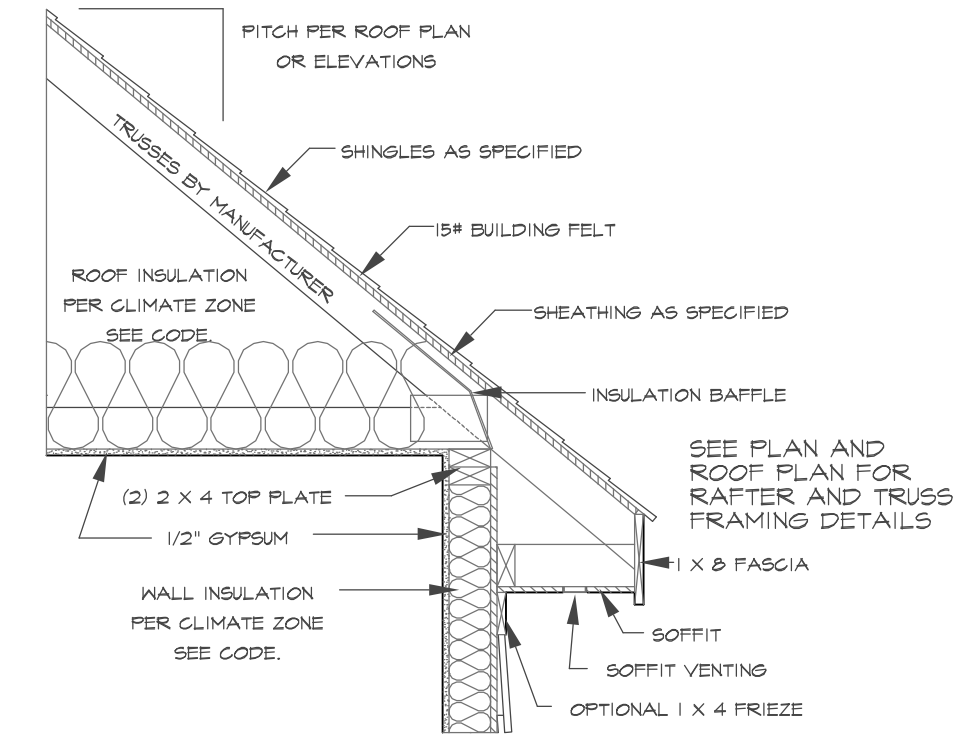
**DWELLING / GARAGE SEPARATION**

REFER TO SECTIONS R502.3, R502.6, AND R502.7  
 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 ROOMS ABOVE THE GARAGE. IF THERE ARE HABITABLE ROOMS 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 CEILING SEPARATING THE DWELLING FROM THE GARAGE SHALL BE CONSTRUCTED OF A MINIMUM NO. 26 GAUGE (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 R502.4 SHALL BE PROTECTED AS REQUIRED BY SECTION R502.11, ITEM 4.



**DROPPED / FLUSH PIER**

SCALE 3/4" = 1'-0"



**TYPICAL WALL SECTION**

SCALE 3/4" = 1'-0"

**THIS PLAN DESIGNED UNDER NORTH CAROLINA RESIDENTIAL CODE 2018 EDITION (2015 IRC)**

HOUSE DESIGNED FOR 115 or 120 MPH EXPOSURE B

ANCHOR BOLTS SHALL BE MINIMUM 1/2" DIAMETER & SHALL EXTEND A MINIMUM OF 7" INTO MASONRY OR CONCRETE. ANCHOR BOLTS TO BE NO MORE THAN 6" ON CENTER AND WITHIN 12" OF ALL CORNERS. THERE SHALL BE A MINIMUM OF TWO (2) ANCHOR BOLTS PER PLATE SECTION.  
 MINIMUM VALUES FOR ENERGY COMPLIANCE ZONE 4A, 4 B. VERIFY ZONE BEFORE CONSTRUCTION

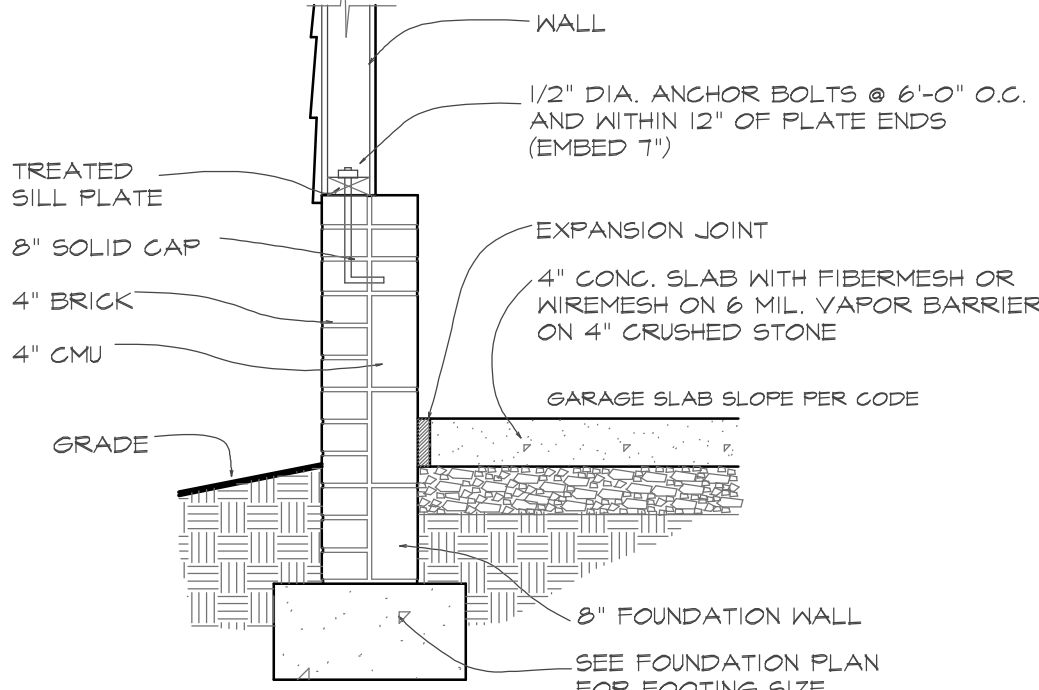
**TABLE R902.1.2 INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT\***

CLIMATE ZONE	FENESTRATION U-FACTOR*	SKYLIGHT U-FACTOR	GLAZED FENESTRATION SHGC*	CEILING U-FACTOR	WOOD FRAME WALL U-FACTOR	MASS WALL U-FACTOR	FLOOR U-FACTOR	BASEMENT WALL U-FACTOR	SLAB SPACE WALL U-FACTOR	CRAWL SPACE WALL U-FACTOR
3	0.35	0.55	0.30	0.030	15 or 13-2.5" 3/13 or 5/10a3	19	5/19	0	5/13	
4	0.35	0.55	0.30	0.030	15 or 13-2.5" 3/13 or 5/10a3	19	10/15	10	10/15	
5	0.35	0.55	NR	0.030	15 or 13+5" 3/13 or 5/10a3	19	10/15	10	10/15	

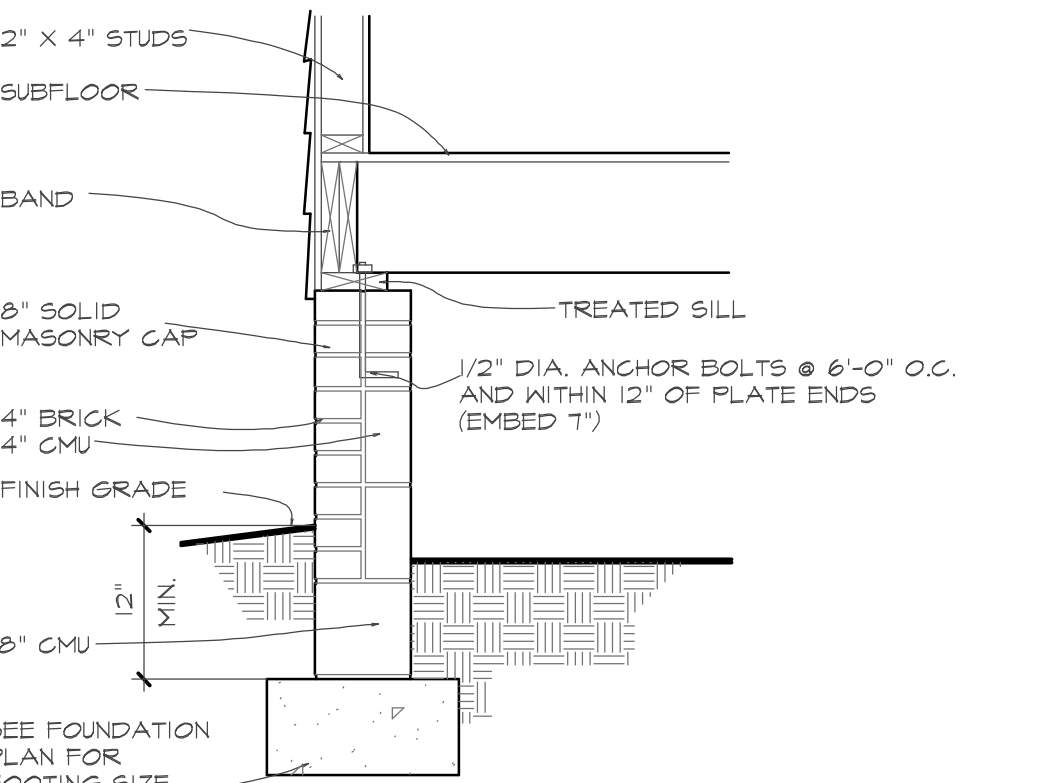
**TABLE R902.1.4 EQUIVALENT U-FACTORS\***

CLIMATE ZONE	FENESTRATION U-FACTOR*	SKYLIGHT U-FACTOR	CEILING U-FACTOR	FRAME WALL U-FACTOR	MASS WALL U-FACTOR	FLOOR U-FACTOR	BASEMENT WALL U-FACTOR	CRAWL SPACE WALL U-FACTOR
3	0.35	0.55	0.030	0.072	0.141	0.047	0.091	0.136
4	0.35	0.55	0.030	0.072	0.141	0.047	0.059	0.065
5	0.35	0.55	0.030	0.061	0.082	0.033	0.059	0.065

\* Nonfenestration U-factors shall be obtained from measurement, calculation or an approved source.  
 b. When more than half the insulation is on the interior, the mass wall U-factors shall be a maximum of 0.07 in Climate Zone 3, 0.07 in Climate Zone 4 and 0.054 in Climate Zone 5.  
 c. Basement wall U-factor of 0.360 in warm-humid locations as defined by Figure R301.1 and Table R301.1.  
 d. A maximum of two glazed fenestration product assemblies having a U-factor no greater than 0.55 and a SHGC no greater than 0.70 shall be permitted to be substituted for minimum code compliant fenestration product assemblies without penalty. When applying this note, and using the RES-check "UA Trade-off" compliance method to allow continued use of the software, the applicable fenestration products shall be modeled as meeting the U-factor of 0.35 and the SHGC of 0.30, as applicable, but the fenestration products actual U-factor and actual SHGC shall be noted in the comments section of the software for documentation of application of this note to the applicable products. Compliance for these substitute products shall be verified compared to the allowed substituted maximum U-value requirement and maximum SHGC requirement, as applicable.



**SECTION AT GARAGE SLAB**



**SECTION AT CRAWL**

Purchaser must verify all dimensions and conditions before beginning construction.  
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