

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

MEAN ROOF HEIGHT: 19'-9" HEIGHT TO RIDGE: 27'-5"

| 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 INSULATION 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         |

**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:**

- 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.
- 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:**

- 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.
- 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.

**ROOF VENTILATION**

**SECTION R806**

SQUARE FOOTAGE OF ROOF TO BE VENTED = 2,477 SQ.FT.

NET FREE CROSS VENTILATION NEEDED:

WITHOUT 50% TO 80% OF VENTING 3'-0" ABOVE EAVE = 16.51 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 = 8.26 SQ.FT.

NOTICE TO CONTRACTOR  
All construction must comply with current NC Building Codes and is subject to field inspection and verification.

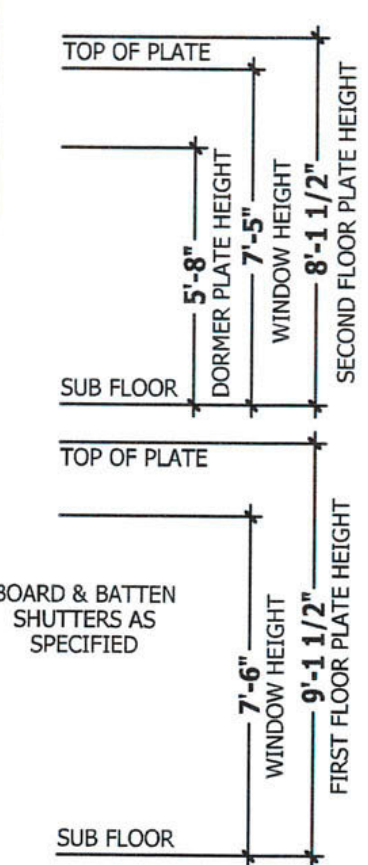
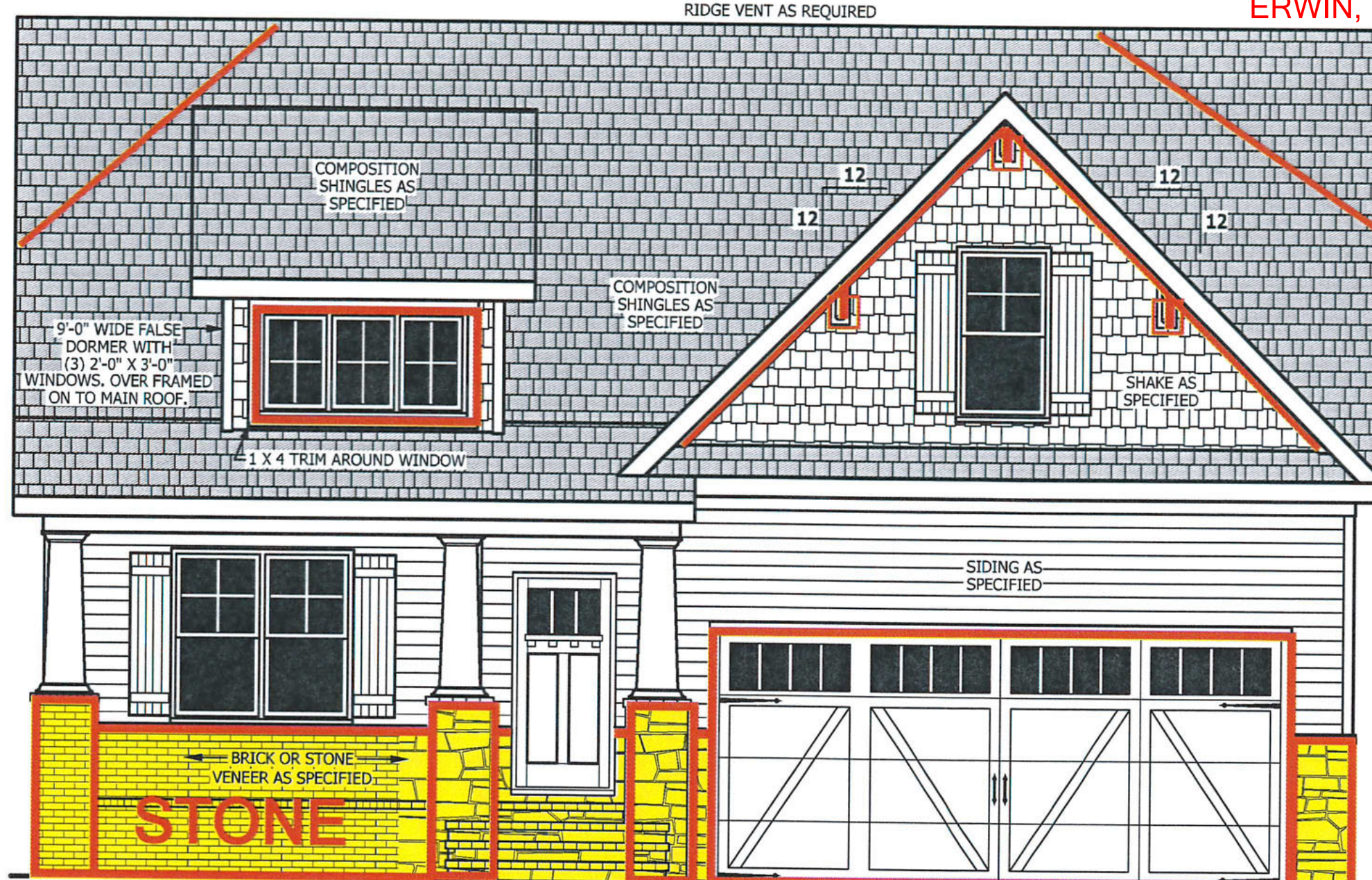
APPROVED  
Limited building only review  
Harnett County Building Department  
full compliance with the code

07/26/2021

**ALL WHITE/ BLACK GUTTERS**

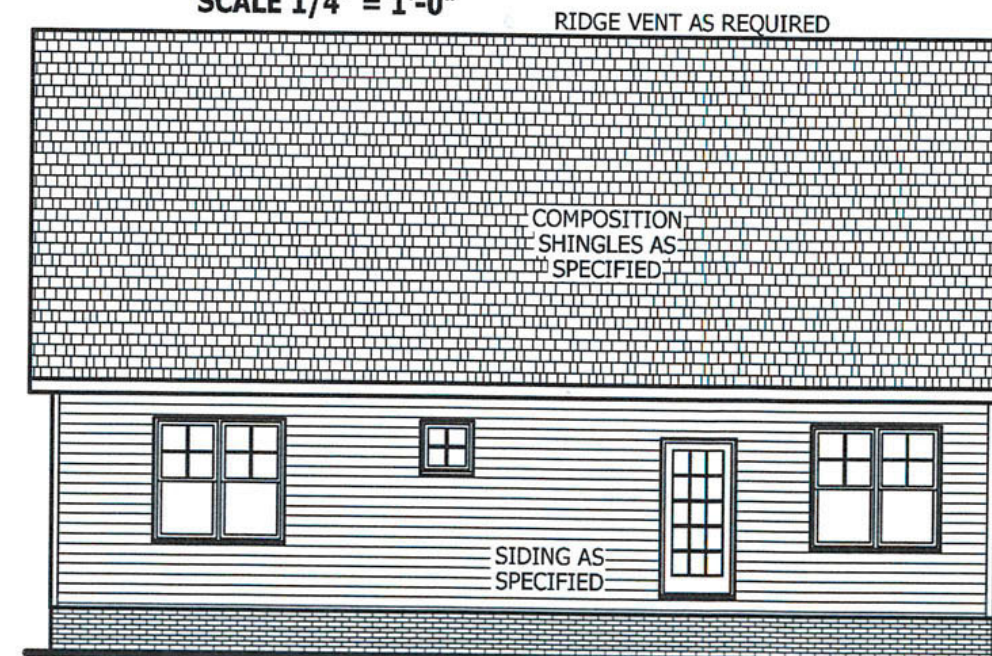
LOT 2W WILLIAMS FARM  
1937 JOSIE WILLIAMS RD  
ERWIN, NC

3 CAR GARAGE



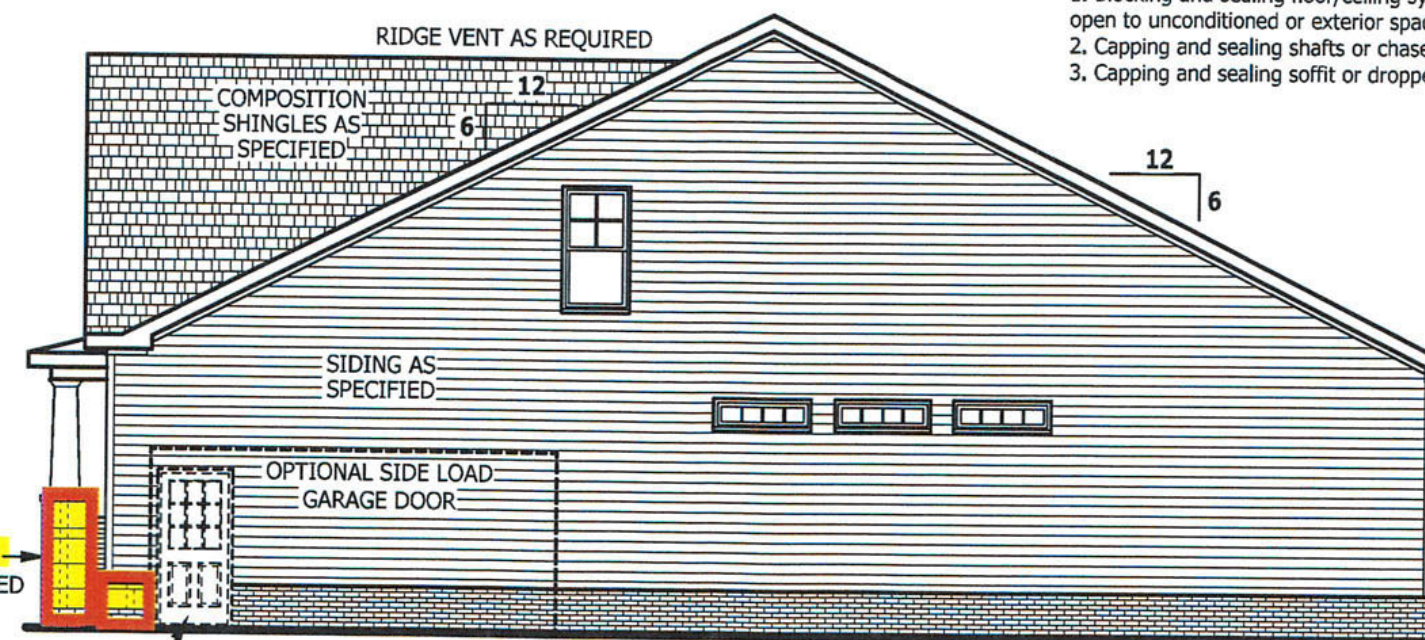
**FRONT ELEVATION**

SCALE 1/4" = 1'-0"



**REAR ELEVATION**

SCALE 1/8" = 1'-0"



**RIGHT SIDE ELEVATION**

SCALE 1/8" = 1'-0"

**SQUARE FOOTAGE**

|                          |             |
|--------------------------|-------------|
| <b>HEATED</b>            |             |
| FIRST FLOOR              | 1766 SQ.FT. |
| PLAYROOM                 | 400 SQ.FT.  |
| TOTAL                    | 2166 SQ.FT. |
| <b>HEATED OPTIONAL</b>   |             |
| CAROLINA ROOM            | 148 SQ.FT.  |
| RECREATION ROOM          | 304 SQ.FT.  |
| TOTAL                    | 452 SQ.FT.  |
| <b>UNHEATED</b>          |             |
| FRONT PORCH              | 188 SQ.FT.  |
| GARAGE                   | 488 SQ.FT.  |
| TOTAL                    | 676 SQ.FT.  |
| <b>UNHEATED OPTIONAL</b> |             |
| SCREENED PORCH           | 160 SQ.FT.  |
| DECK / PATIO             | 108 SQ.FT.  |
| THIRD GARAGE             | 292 SQ.FT.  |
| TOTAL                    | 560 SQ.FT.  |

**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:

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

**WINDOWS WITH SIDE LOAD**

SCALE 1/8" = 1'-0"



**LEFT SIDE ELEVATION**

SCALE 1/8" = 1'-0"

PURCHASER MUST VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE CONSTRUCTION BEGINS.  
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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.

**ELEVATION**  
**The Lauren H**

**HAYNES WEAVER HOMES**

910.630.2100 • 919.606.4696

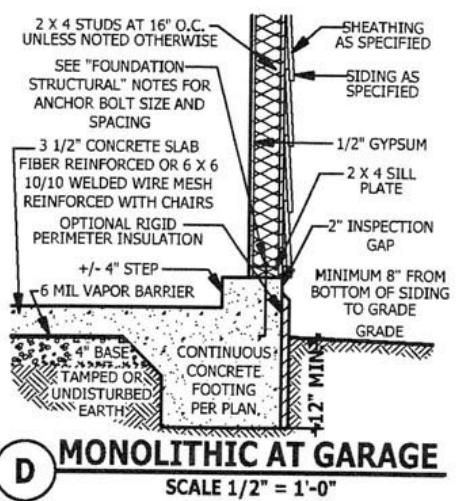
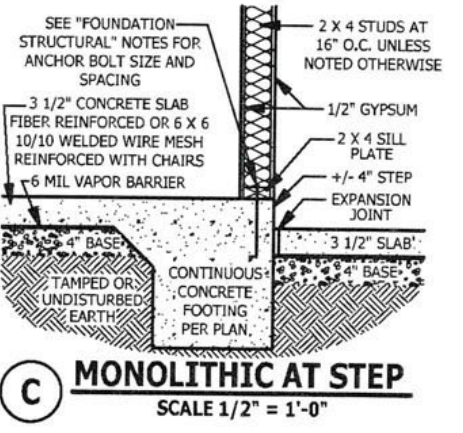
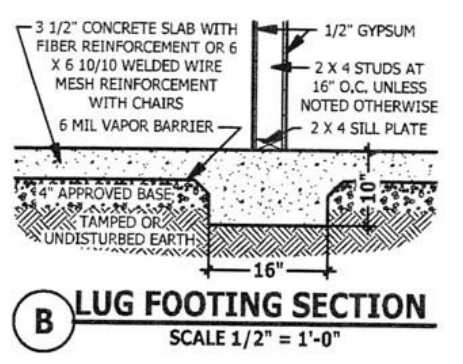
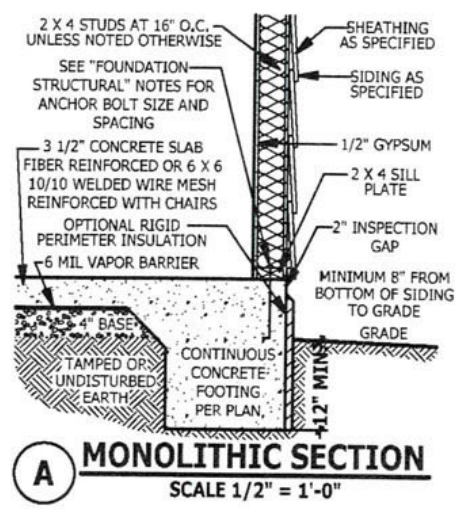
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P.O. BOX 702, WAKE FOREST, NC 27588 919-435-9180 Fax 1-866-491-0396

**SQUARE FOOTAGE**

|                          |             |
|--------------------------|-------------|
| <b>HEATED</b>            |             |
| FIRST FLOOR              | 1766 SQ.FT. |
| PLAYROOM                 | 400 SQ.FT.  |
| TOTAL                    | 2166 SQ.FT. |
| <b>HEATED OPTIONAL</b>   |             |
| CAROLINA ROOM            | 148 SQ.FT.  |
| RECREATION ROOM          | 304 SQ.FT.  |
| TOTAL                    | 452 SQ.FT.  |
| <b>UNHEATED</b>          |             |
| FRONT PORCH              | 188 SQ.FT.  |
| GARAGE                   | 488 SQ.FT.  |
| TOTAL                    | 676 SQ.FT.  |
| <b>UNHEATED OPTIONAL</b> |             |
| SCREENED PORCH           | 160 SQ.FT.  |
| DECK / PATIO             | 108 SQ.FT.  |
| THIRD GARAGE             | 292 SQ.FT.  |
| TOTAL                    | 560 SQ.FT.  |

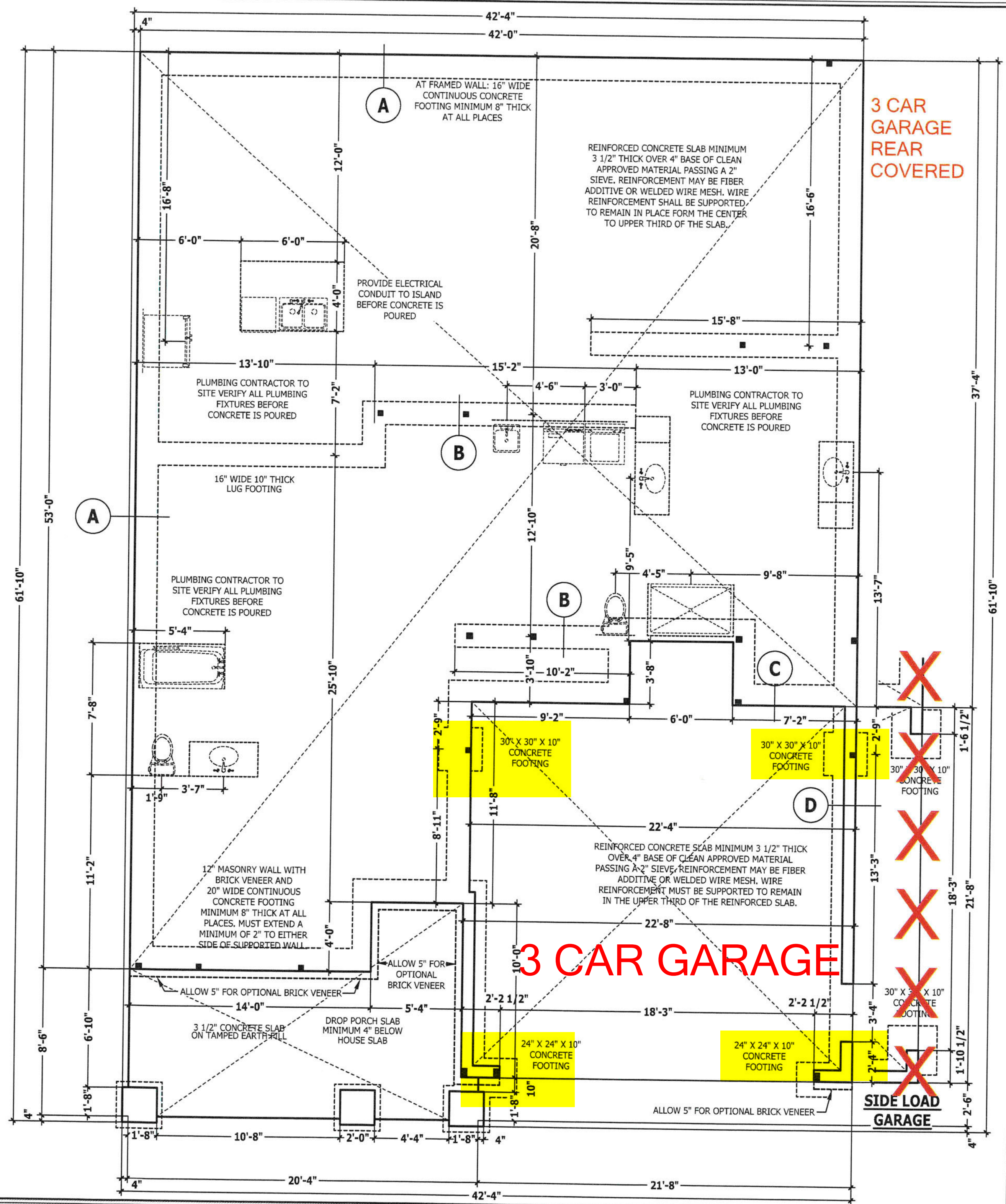
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2/24/2020  
200219B  
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**FOUNDATION STRUCTURAL**

115 to 130 mph wind zone (1 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 64" 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 7", maximum 6'-0" on center, within 12" of plate ends, and 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 in accordance with ACI standards. All samples for pumping shall be taken 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.

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



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**MONOLITHIC SLAB PLAN**  
**The Lauren H**

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 300 W. Walnut Tree • Fayetteville, NC 27508  
 P.O. BOX 702, WAKE FOREST, NC 27588 919-435-6180 FAX 1-866-491-0396

| SQUARE FOOTAGE    |             |
|-------------------|-------------|
| HEATED            |             |
| FIRST FLOOR       | 1766 SQ.FT. |
| PAVING            | 480 SQ.FT.  |
| TOTAL             | 2166 SQ.FT. |
| HEATED OPTIONAL   |             |
| CAROLINA ROOM     | 148 SQ.FT.  |
| RECREATION ROOM   | 304 SQ.FT.  |
| TOTAL             | 452 SQ.FT.  |
| UNHEATED          |             |
| FRONT PORCH       | 188 SQ.FT.  |
| GARAGE            | 488 SQ.FT.  |
| TOTAL             | 676 SQ.FT.  |
| UNHEATED OPTIONAL |             |
| SCREENED PORCH    | 160 SQ.FT.  |
| DECK / PATIO      | 188 SQ.FT.  |
| THIRD GARAGE      | 292 SQ.FT.  |
| TOTAL             | 560 SQ.FT.  |

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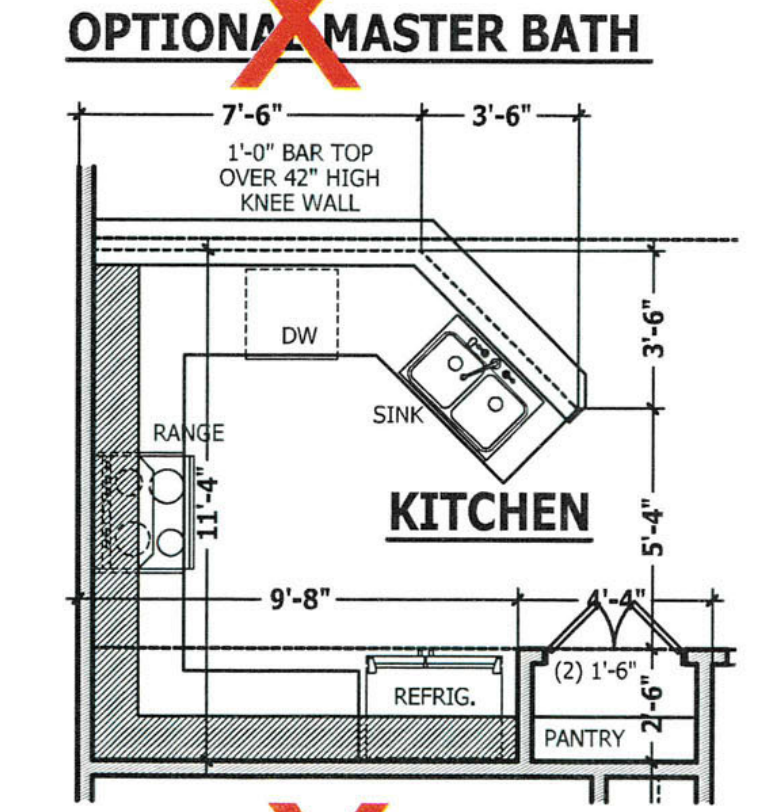
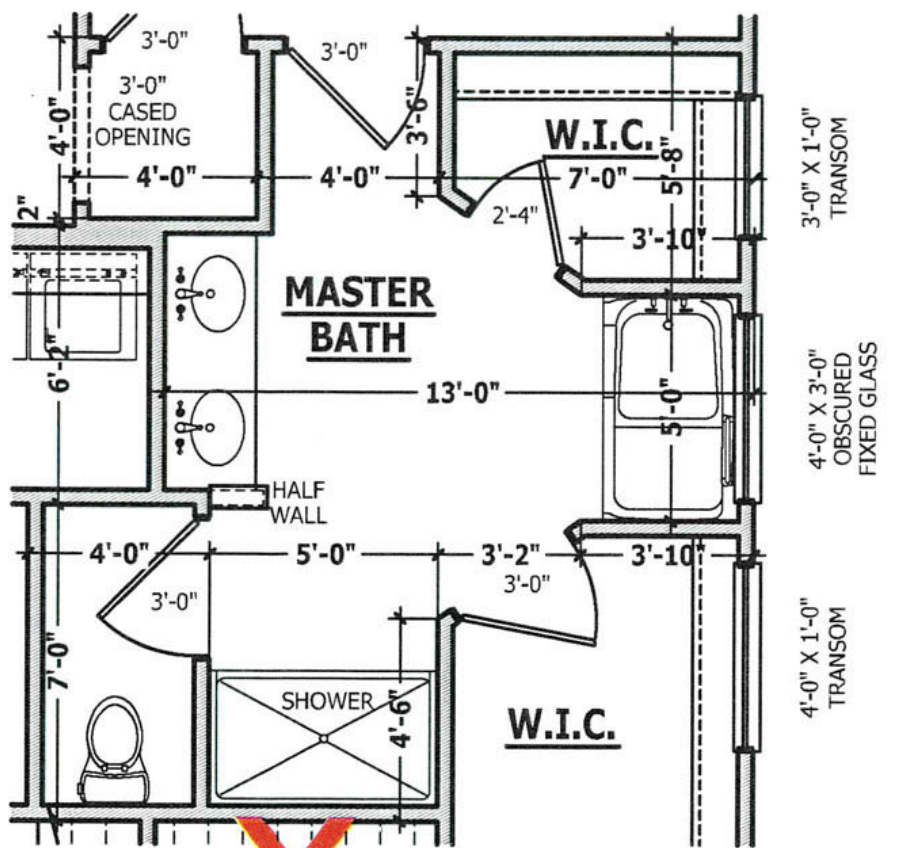
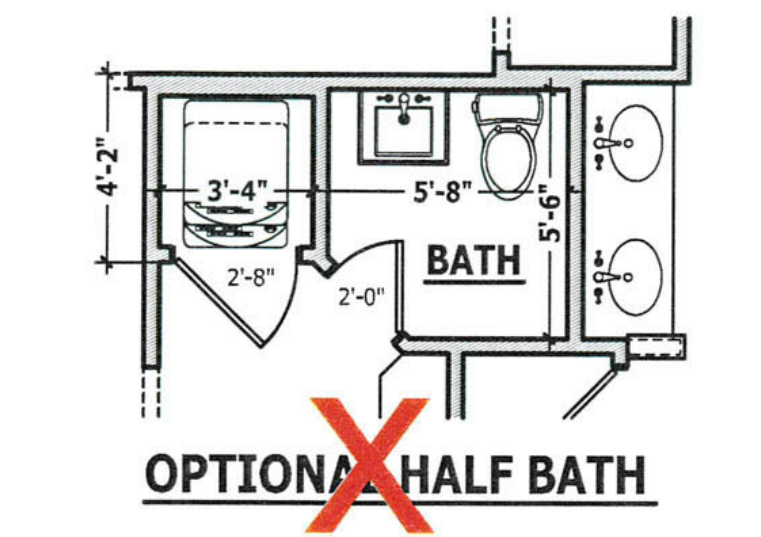
FIRST FLOOR PLAN  
The Lauren H

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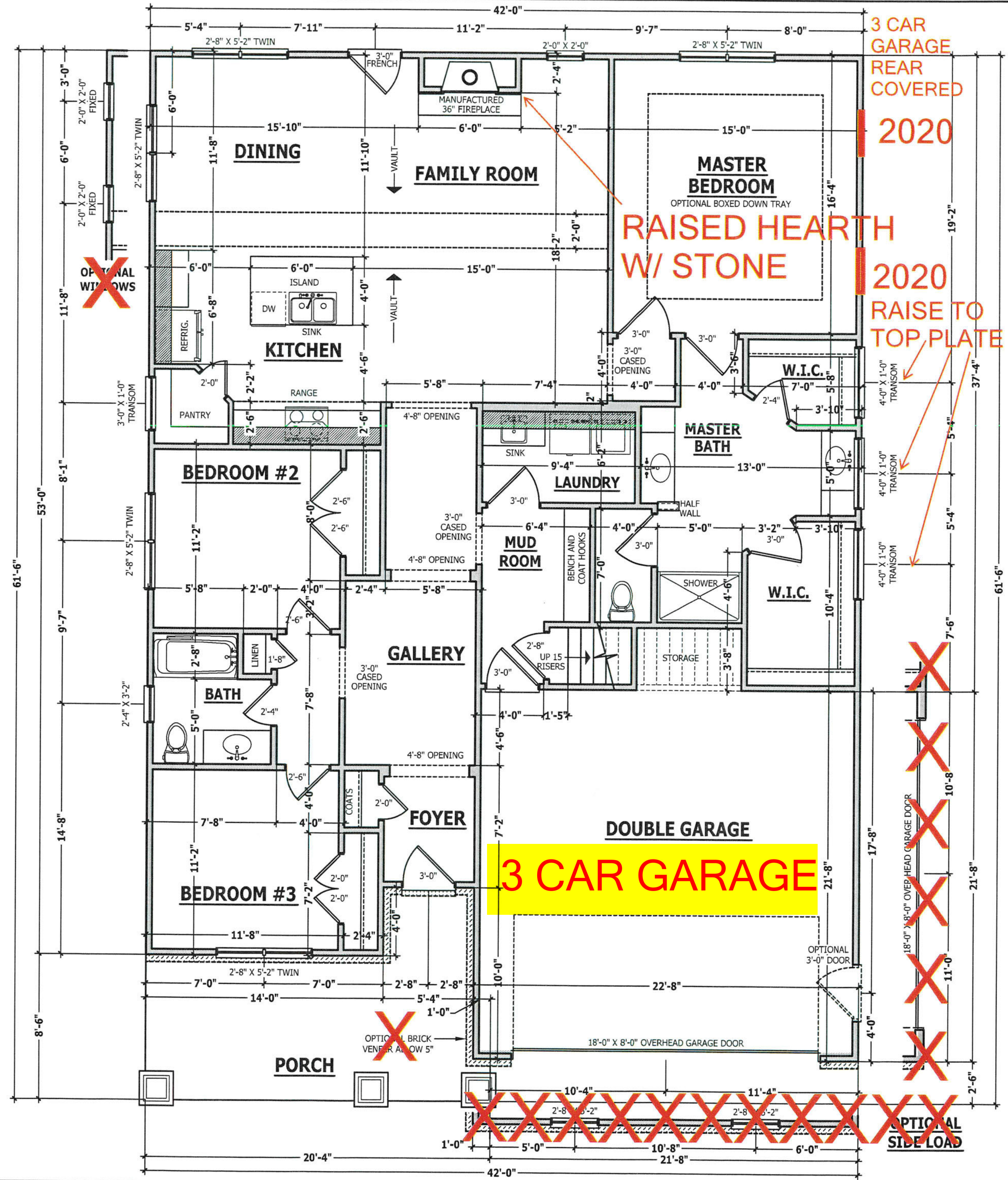
| SQUARE FOOTAGE           |             |
|--------------------------|-------------|
| <b>HEATED</b>            |             |
| FIRST FLOOR              | 1766 SQ.FT. |
| PLAYROOM                 | 400 SQ.FT.  |
| TOTAL                    | 2166 SQ.FT. |
| <b>HEATED OPTIONAL</b>   |             |
| CAROLINA ROOM            | 148 SQ.FT.  |
| RECREATION ROOM          | 304 SQ.FT.  |
| TOTAL                    | 452 SQ.FT.  |
| <b>UNHEATED</b>          |             |
| FRONT PORCH              | 188 SQ.FT.  |
| GARAGE                   | 488 SQ.FT.  |
| TOTAL                    | 676 SQ.FT.  |
| <b>UNHEATED OPTIONAL</b> |             |
| SCREENED PORCH           | 160 SQ.FT.  |
| DECK / PATIO             | 108 SQ.FT.  |
| THIRD GARAGE             | 292 SQ.FT.  |
| TOTAL                    | 560 SQ.FT.  |

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| SQUARE FOOTAGE           |             |
|--------------------------|-------------|
| <b>HEATED</b>            |             |
| FIRST FLOOR              | 1766 SQ.FT. |
| PLAYROOM                 | 400 SQ.FT.  |
| TOTAL                    | 2166 SQ.FT. |
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| CAROLINA ROOM            | 148 SQ.FT.  |
| RECREATION ROOM          | 304 SQ.FT.  |
| TOTAL                    | 452 SQ.FT.  |
| <b>UNHEATED</b>          |             |
| FRONT PORCH              | 188 SQ.FT.  |
| GARAGE                   | 488 SQ.FT.  |
| TOTAL                    | 676 SQ.FT.  |
| <b>UNHEATED OPTIONAL</b> |             |
| SCREENED PORCH           | 160 SQ.FT.  |
| DECK / PATIO             | 108 SQ.FT.  |
| THIRD GARAGE             | 292 SQ.FT.  |
| TOTAL                    | 560 SQ.FT.  |

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



OPTIONAL SIDE LOAD





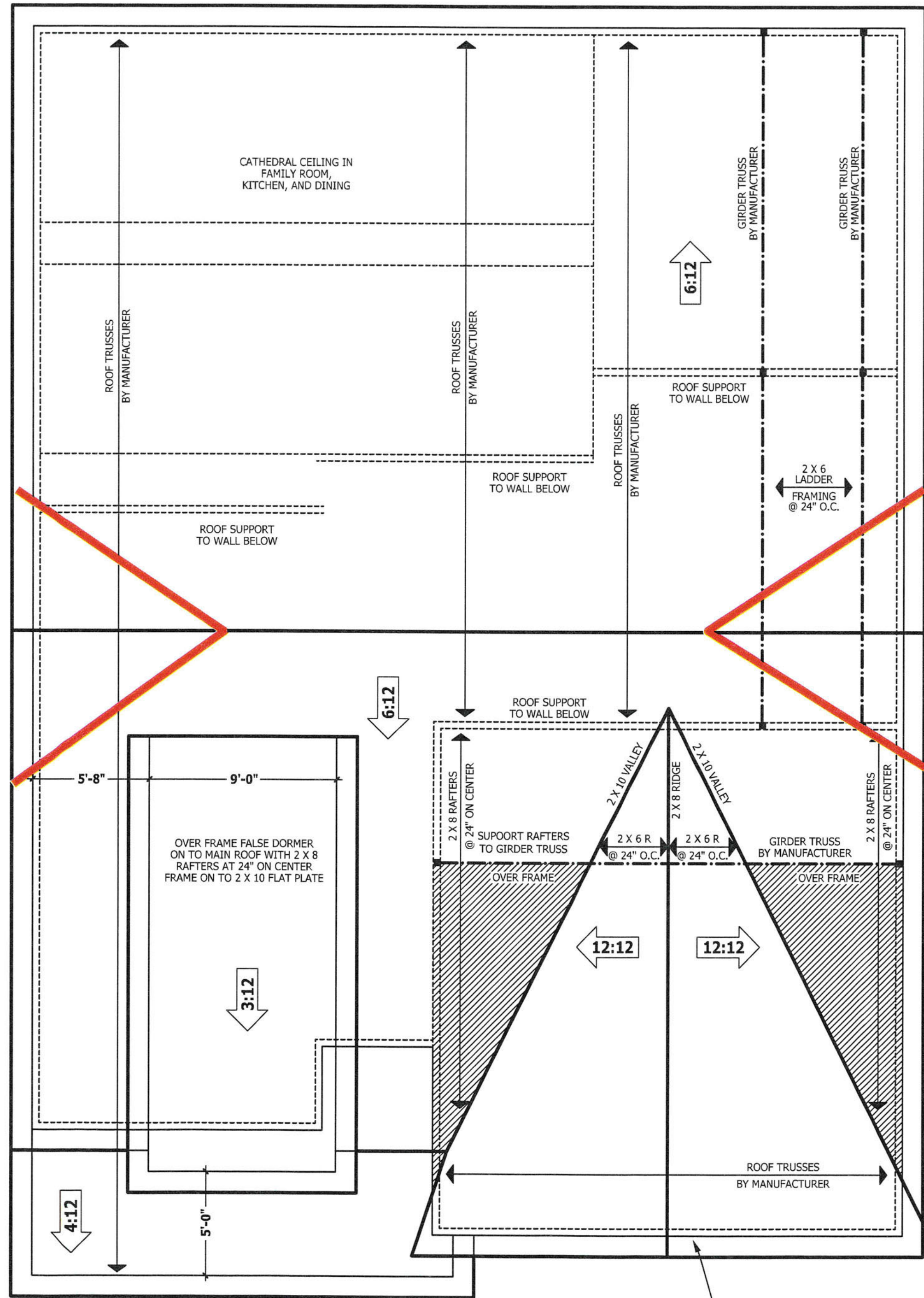
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**ROOF PLAN**  
**The Lauren H**

**HAYNES WEAVER**  
**HOME PLANS, INC.**  
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P.O. Box 702, Wake Forest, NC 27888 • 919-435-6100 Fax 1-866-491-0396

**ROOF TRUSS REQUIREMENTS**

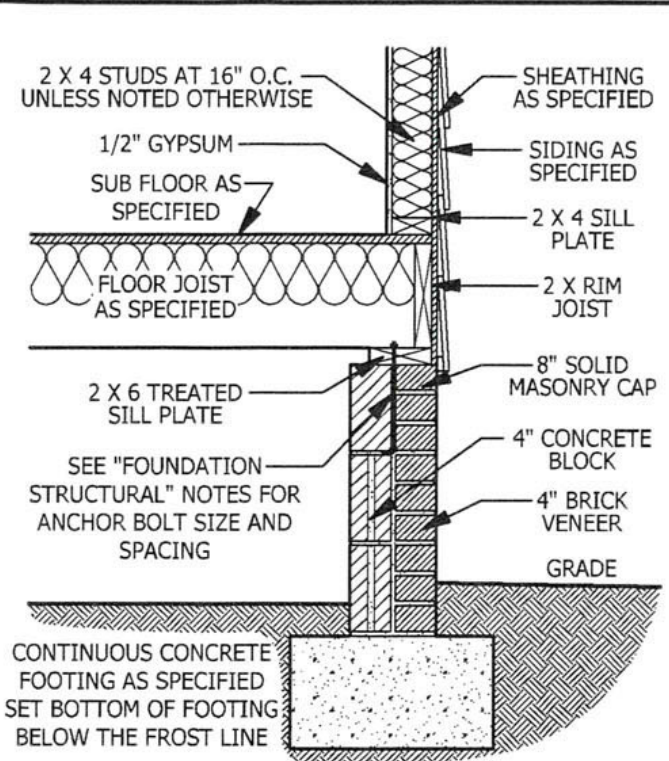
**TRUSS DESIGN.** Trusses to be designed and engineered in accordance with these drawings. Any variation with these drawings must be brought to Haynes Home Plan, Inc. attention before construction begins.  
**KNEE WALL AND CEILING HEIGHTS.** All finished knee wall heights and ceiling heights are shown 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.



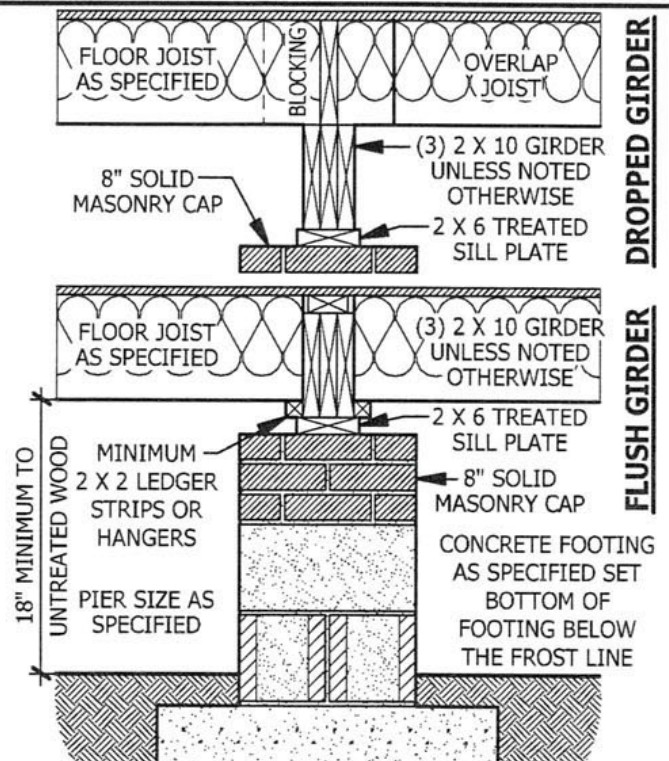
**ROOF PLAN**  
SCALE 1/4" = 1'-0"

| SQUARE FOOTAGE           |             |
|--------------------------|-------------|
| <b>HEATED</b>            |             |
| FIRST FLOOR              | 1766 SQ.FT. |
| 2ND FLOOR                | 430 SQ.FT.  |
| TOTAL                    | 2196 SQ.FT. |
| <b>HEATED OPTIONAL</b>   |             |
| CAROLINA ROOM            | 148 SQ.FT.  |
| RECREATION ROOM          | 304 SQ.FT.  |
| TOTAL                    | 452 SQ.FT.  |
| <b>UNHEATED</b>          |             |
| FRONT PORCH              | 188 SQ.FT.  |
| GARAGE                   | 488 SQ.FT.  |
| TOTAL                    | 676 SQ.FT.  |
| <b>UNHEATED OPTIONAL</b> |             |
| SCREENED PORCH           | 146 SQ.FT.  |
| DECK / PATIO             | 108 SQ.FT.  |
| THIRD GARAGE             | 292 SQ.FT.  |
| TOTAL                    | 546 SQ.FT.  |

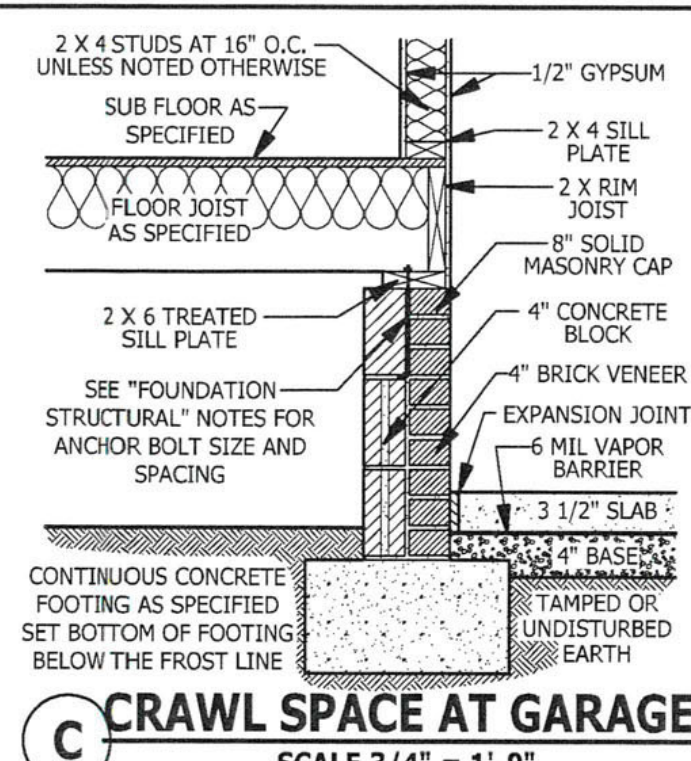
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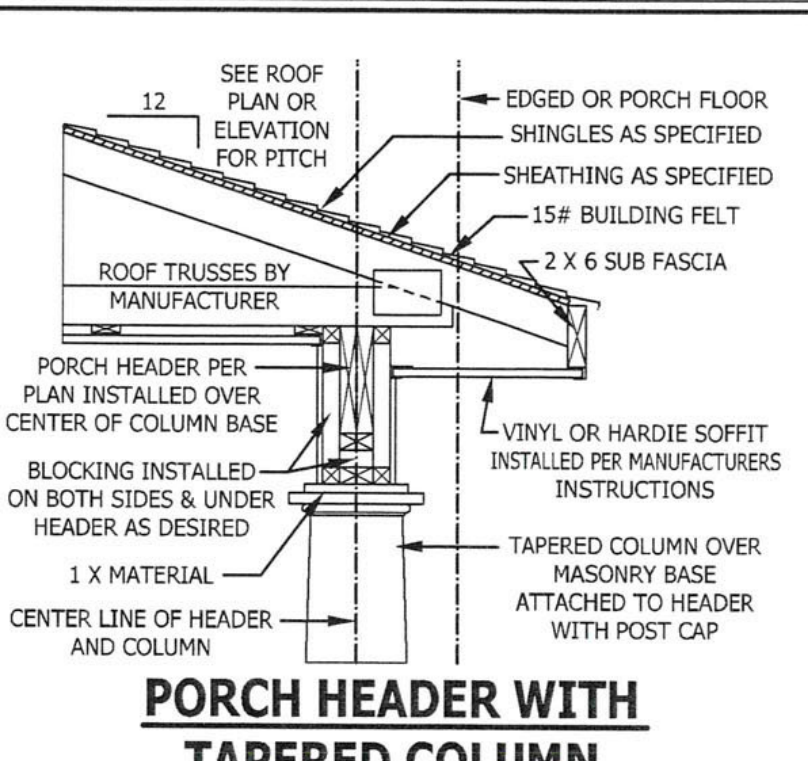
**A CRAWL SPACE WALL**  
SCALE 3/4" = 1'-0"



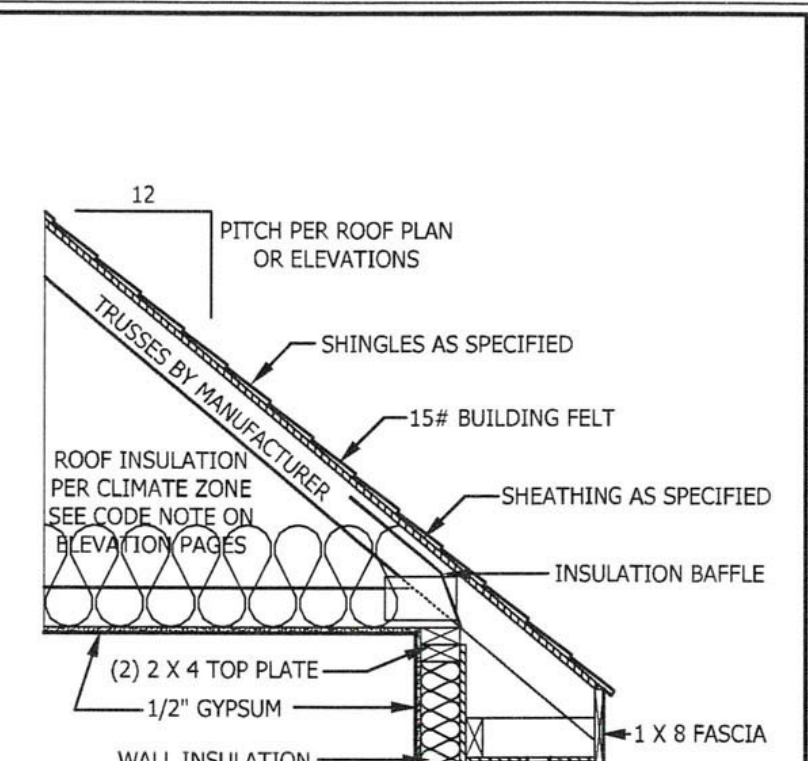
**B DROPPED/ FLUSH PIER**  
SCALE 3/4" = 1'-0"



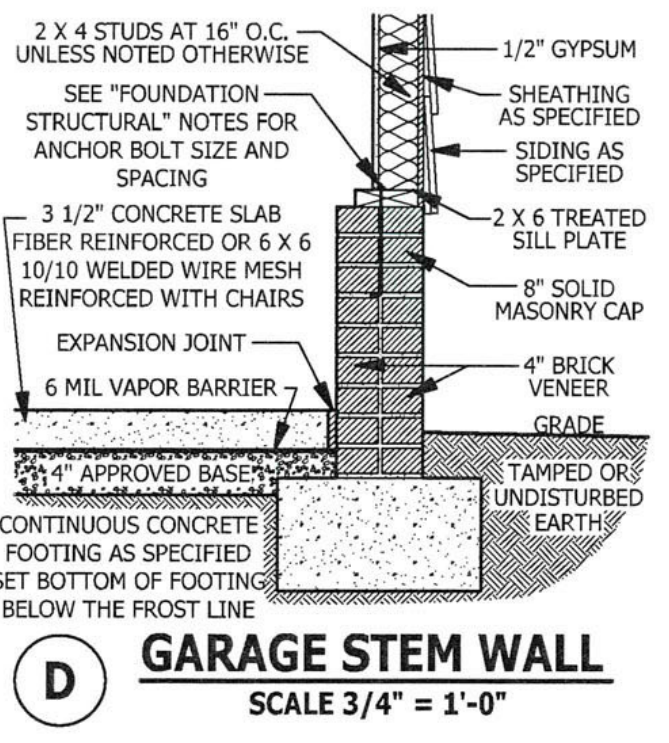
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SCALE 3/4" = 1'-0"



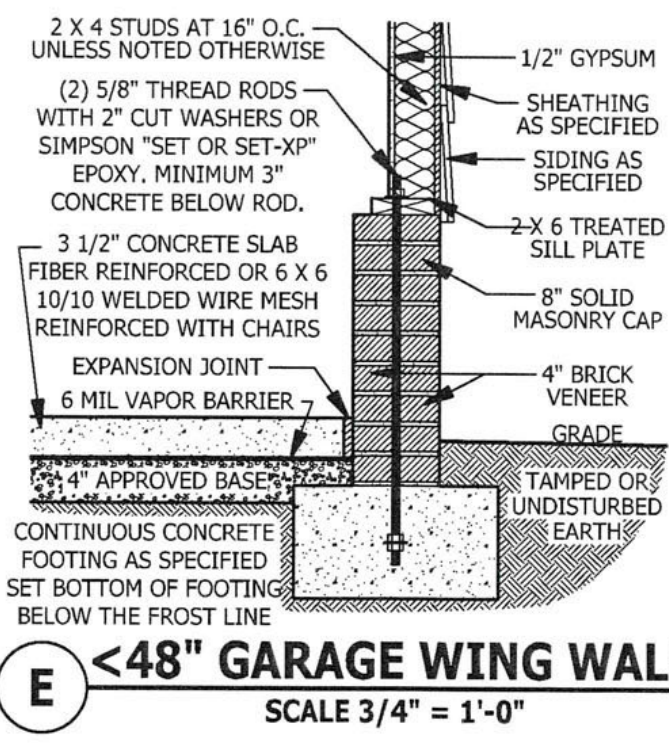
**D GARAGE STEM WALL**  
SCALE 3/4" = 1'-0"



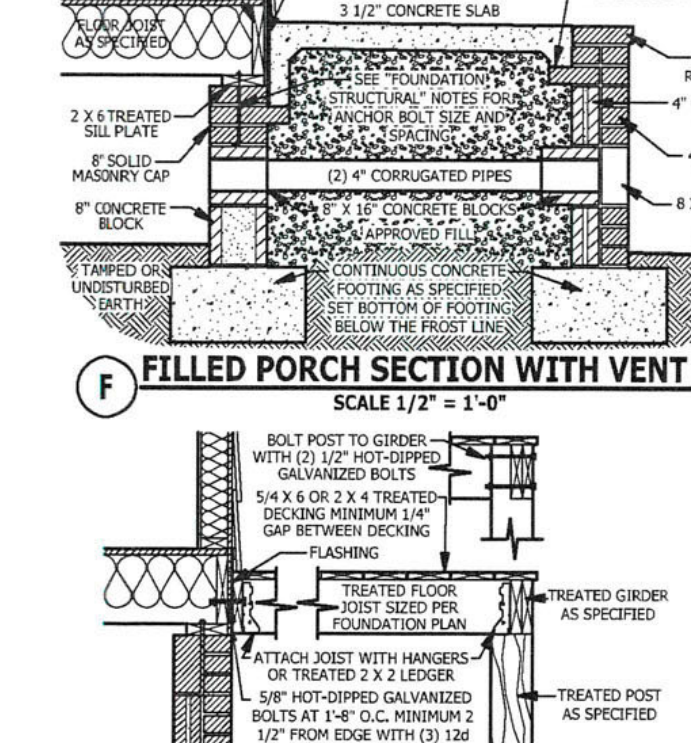
**E <48\"/> SCALE 3/4" = 1'-0"**



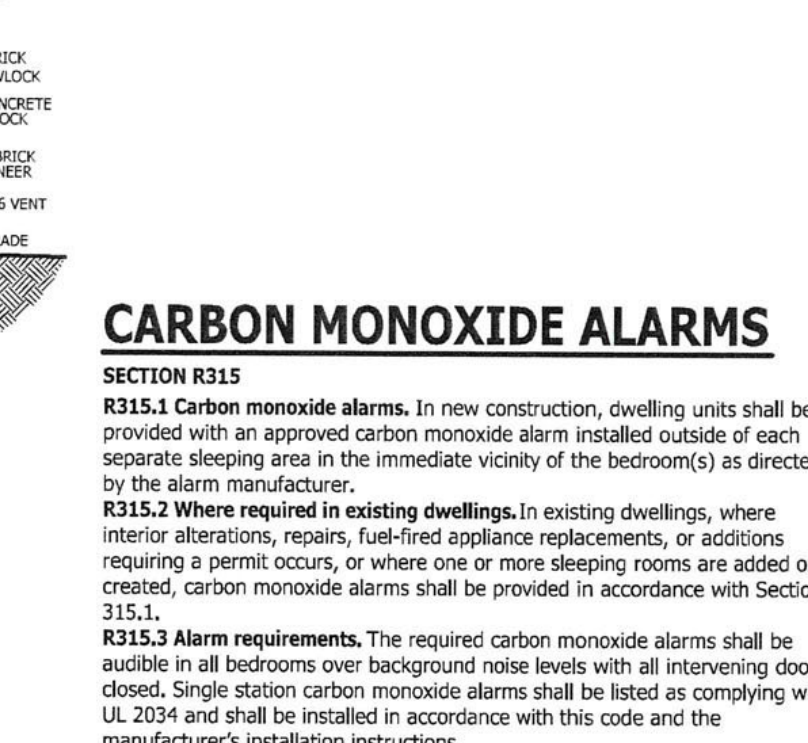
**F FILLED PORCH SECTION WITH VENT**  
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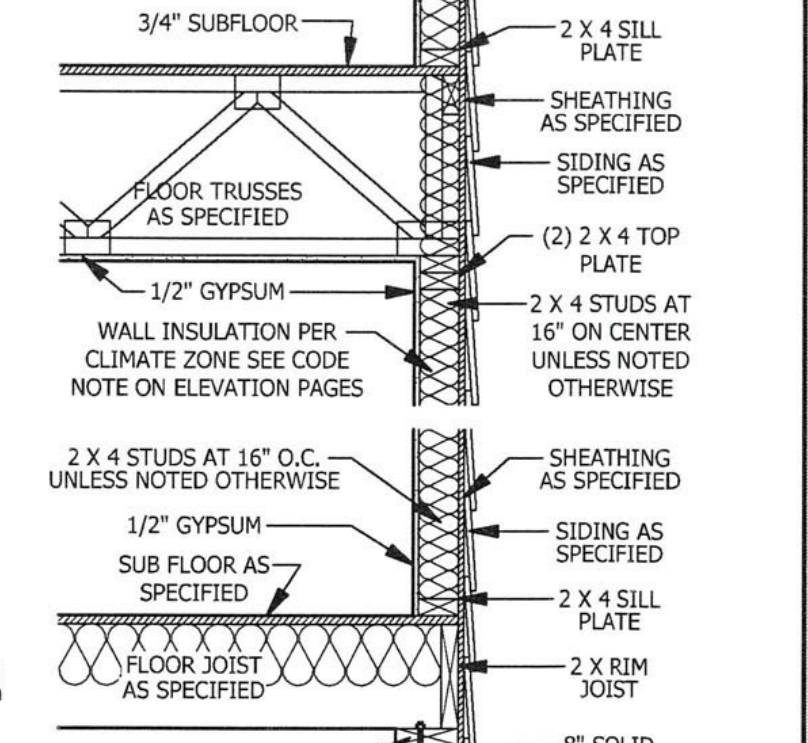
**G DECK ATTACHMENT**  
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**H CARBON MONOXIDE ALARMS**  
SCALE 3/4\"/>

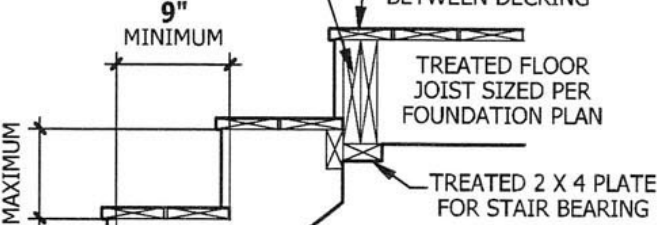


**I STAIRWAY NOTES**  
SCALE 3/4\"/>



**J TYPICAL WALL DETAIL**  
SCALE 3/4\"/>

**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.

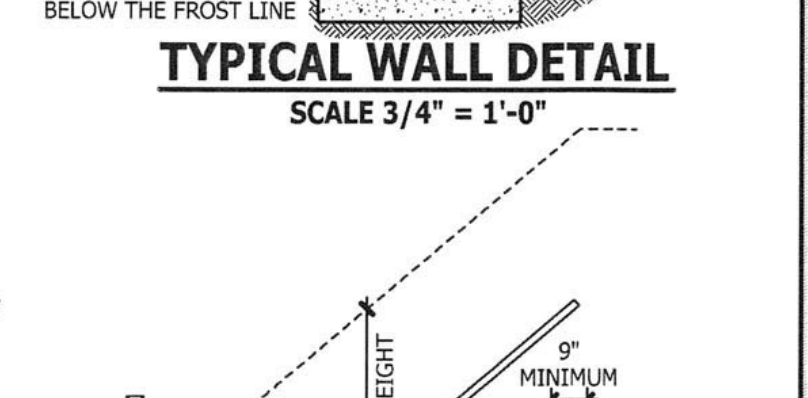


**K TYPICAL DECK STAIR DETAIL**  
SCALE 3/4\"/>

**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\"/>

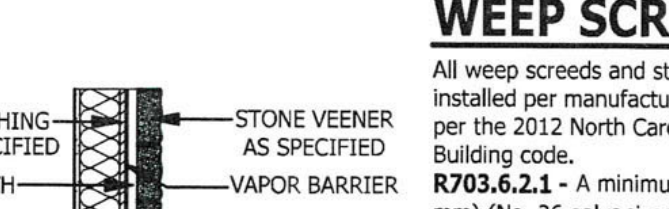
**SMOKE ALARMS**  
SECTION R314  
R314.1 Smoke detection and notification. All smoke alarms shall be listed in accordance with UL 217 and installed in accordance with the provisions of this code and the household fire warning equipment provisions of NFPA 72.  
R314.2 Smoke detection systems. Household 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) attics-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.

**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 11/2 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.



**L TYPICAL STAIR DETAIL**  
SCALE 1/4\"/>

**WEEP SCREED**  
SCALE 3/4\"/>



**WEEP SCREEDS**  
All weep screeds and stone veneer to be installed per manufactures 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 31/2 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.

**SQUARE FOOTAGE**  
HEATED  
FIRST FLOOR 1766 SQ.FT.  
PLAYROOM 400 SQ.FT.  
TOTAL 2166 SQ.FT.  
HEATED OPTIONAL  
CAROLINA ROOM 148 SQ.FT.  
RECREATION ROOM 304 SQ.FT.  
TOTAL 452 SQ.FT.  
UNHEATED  
FRONT PORCH 188 SQ.FT.  
GARAGE 488 SQ.FT.  
TOTAL 676 SQ.FT.  
UNHEATED OPTIONAL  
SCREENED PORCH 160 SQ.FT.  
DECK/PATIO 202 SQ.FT.  
THIRD GARAGE 560 SQ.FT.  
TOTAL

| 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"             |

AM109.1.2, 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:  
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.

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.

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AM109.1.5. For embedment of piles in Coastal Regions, see Chapter 45.

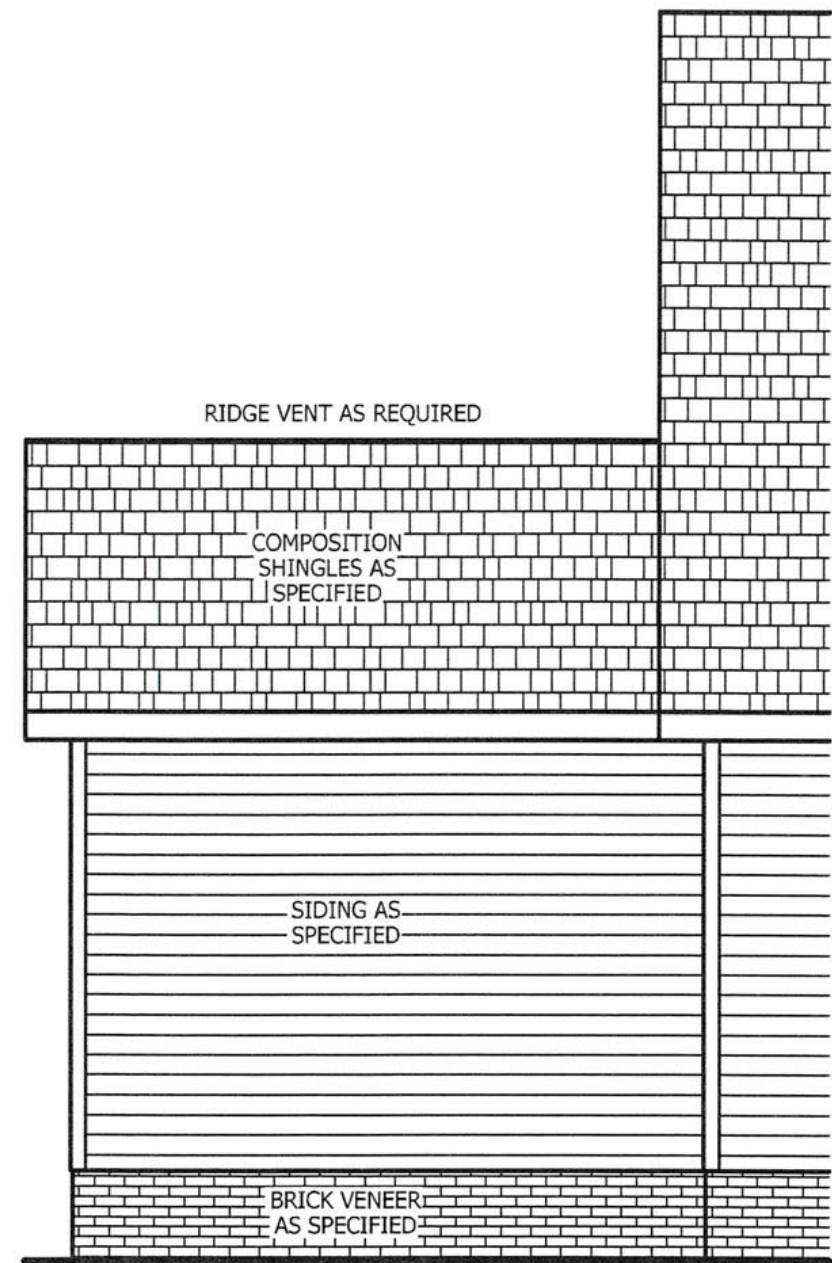
PURCHASER MUST VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE CONSTRUCTION BEGINS. HAYNES HOME PLANS, INC. ASSUMES NO LIABILITY FOR CONTRACTOR PRACTICES AND PROCEDURES. CODES AND CONDITIONS MAY VARY WITH LOCATION. A LOCAL DESIGNER, ARCHITECT OR ENGINEER SHOULD BE CONSULTED BEFORE CONSTRUCTION. THESE DRAWING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

TYPICAL DETAILS  
The Lauren H

WEAVER HOMES  
910.630.2100 • 919.606.4696

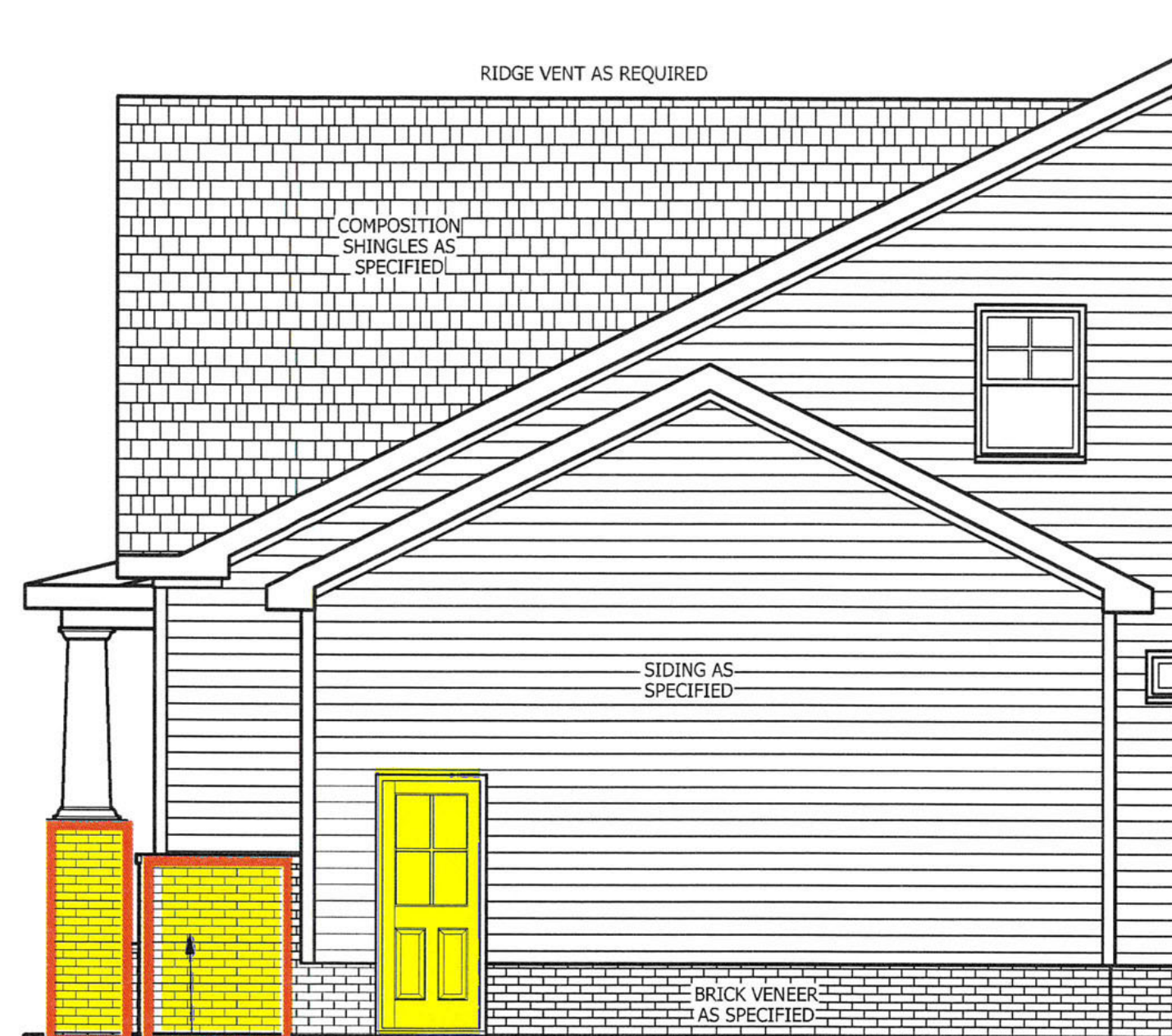
HAYNES HOME PLANS, INC.  
P.O. BOX 702, WAKE FOREST, NC 27158 919-435-6180 FAX 1-866-491-0936

| 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"             |



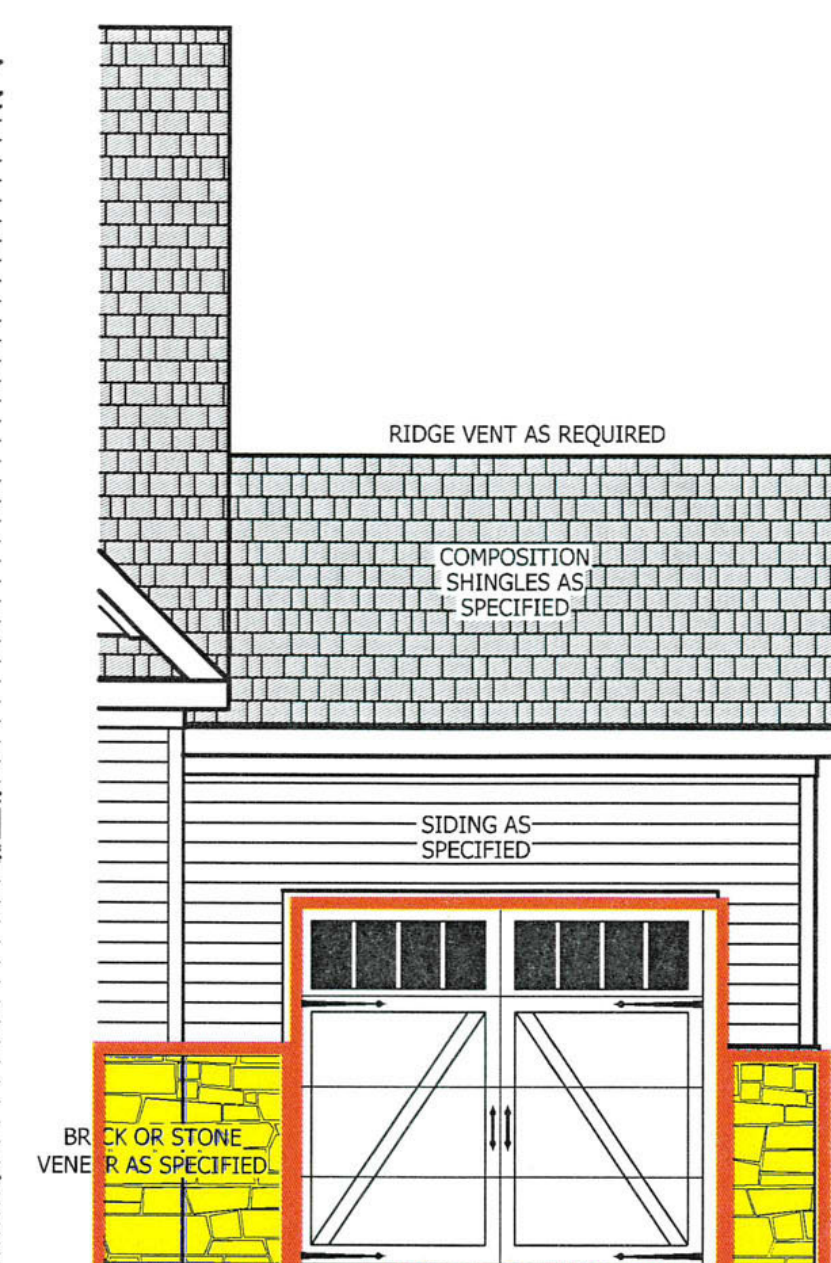
**REAR ELEVATION**

SCALE 1/4" = 1'-0"



**SIDE ELEVATION**

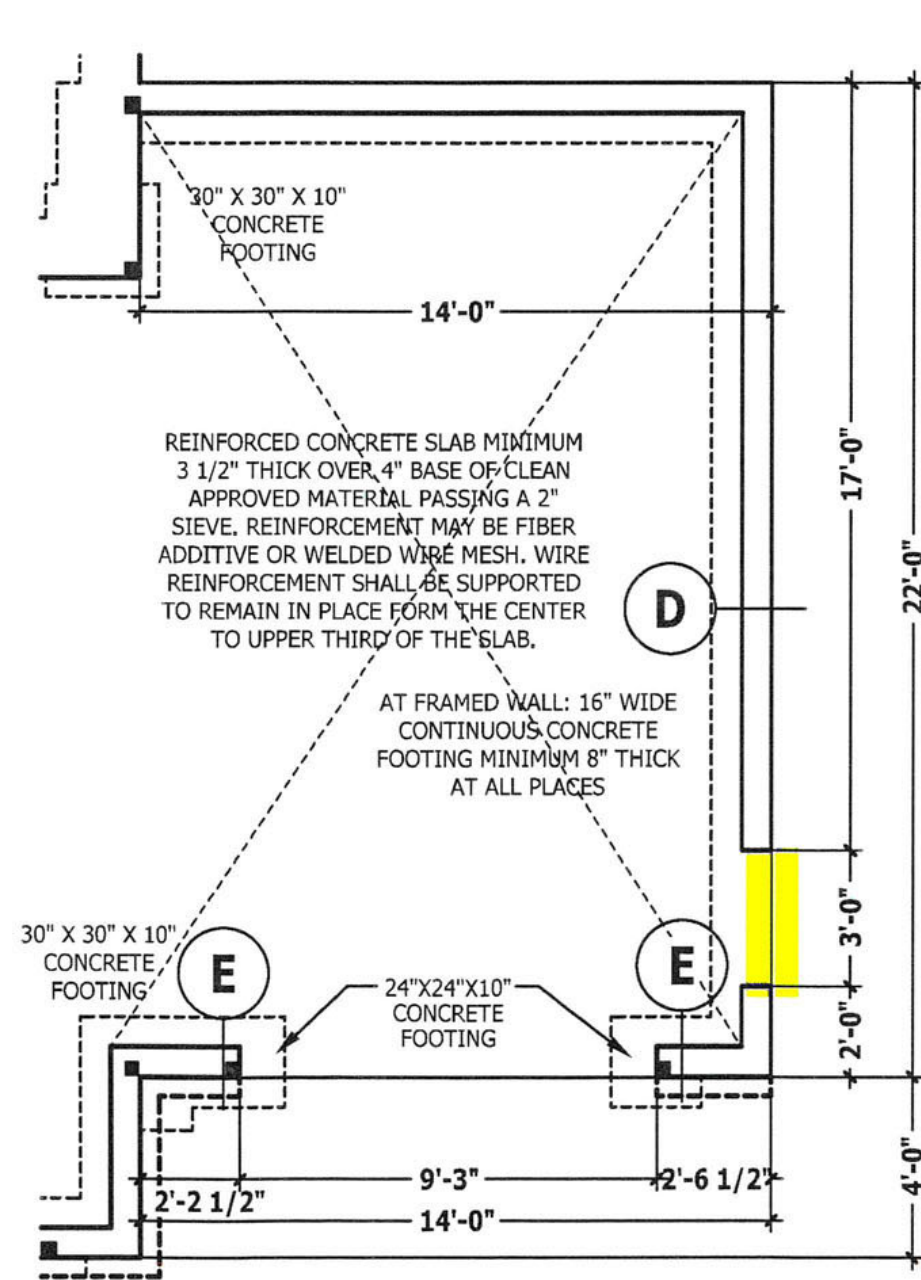
SCALE 1/4" = 1'-0"



**FRONT ELEVATION**

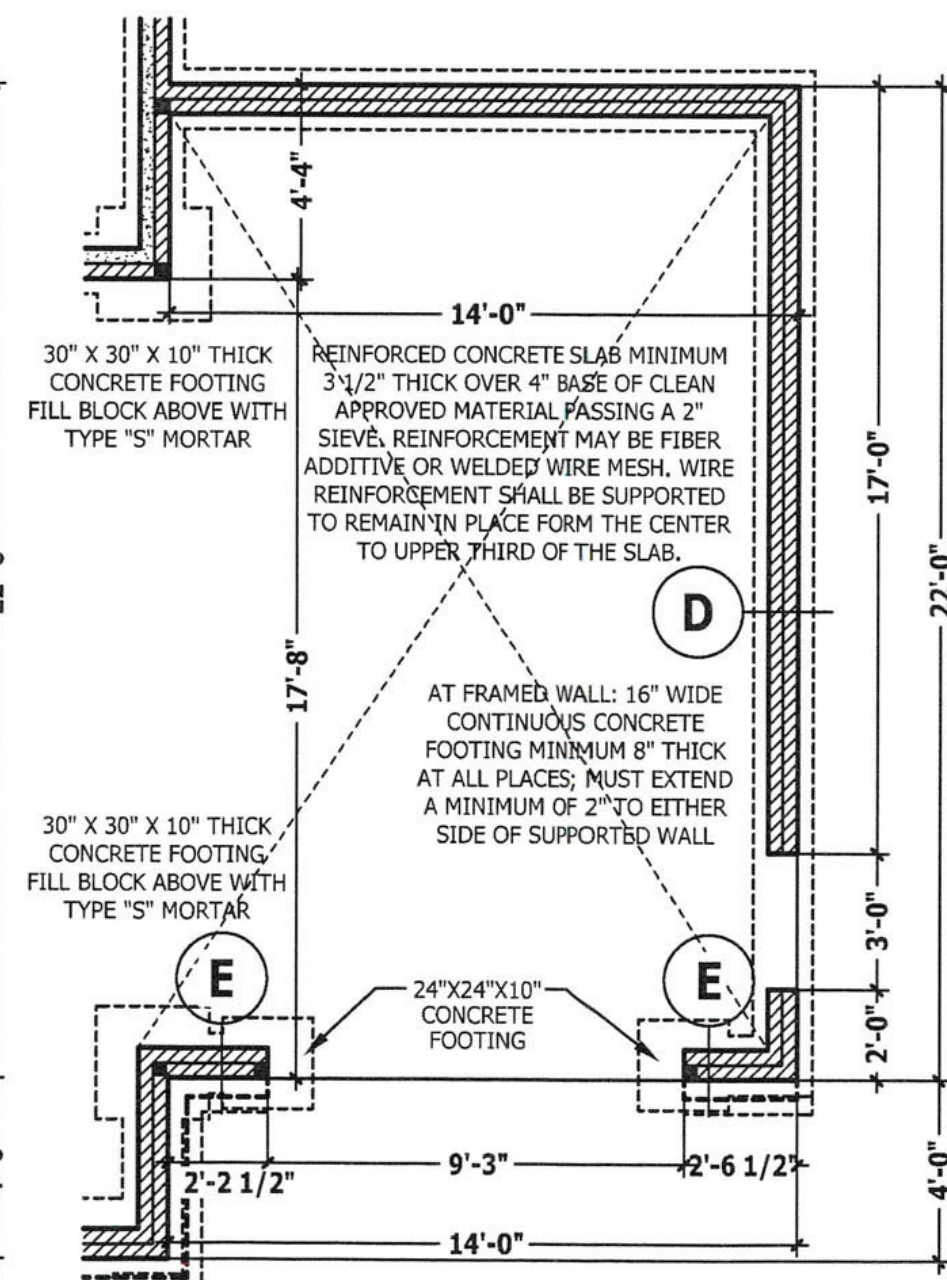
SCALE 1/4" = 1'-0"

SEE BASE PLAN FOR NOTES AND DETAILS



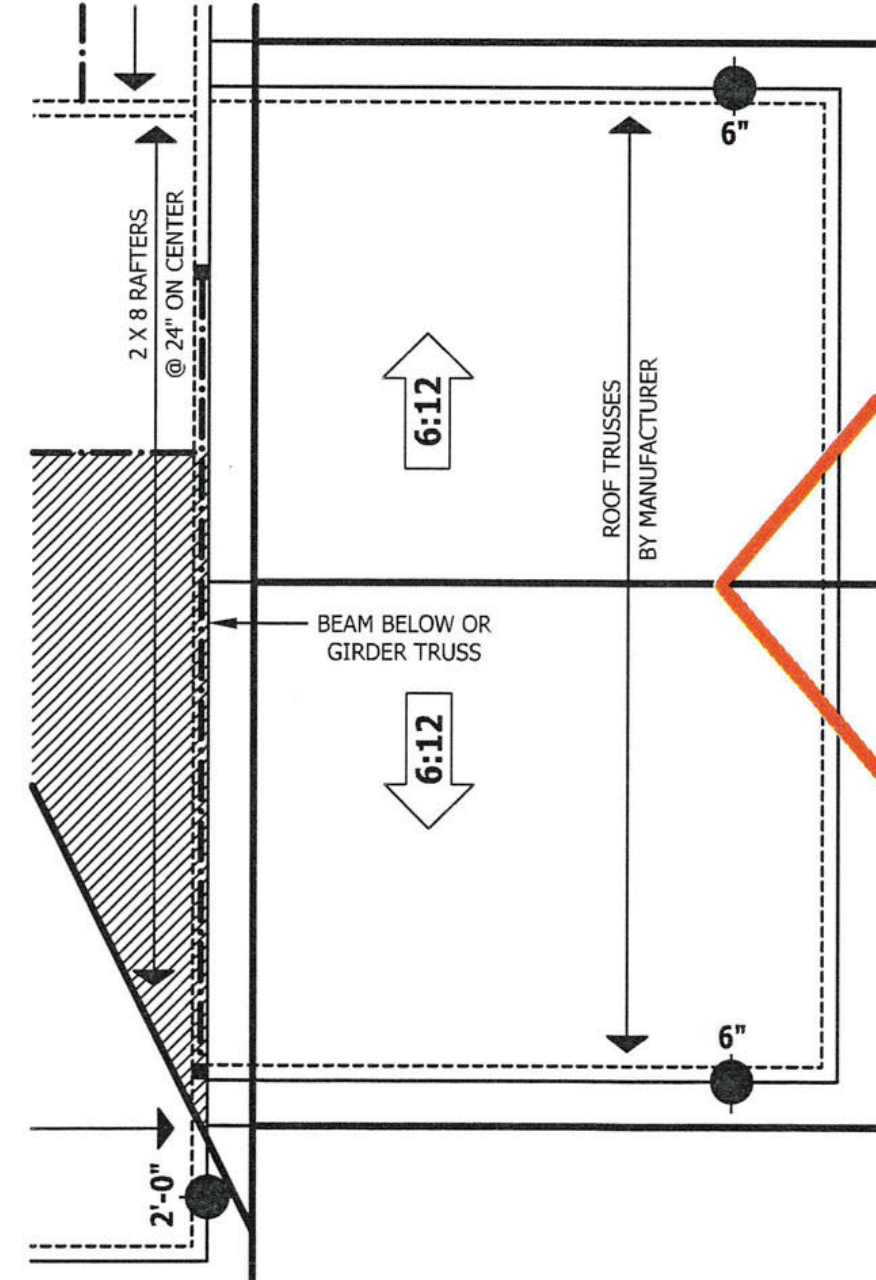
**MONOLITHIC SLAB PLAN**

SCALE 1/4" = 1'-0"



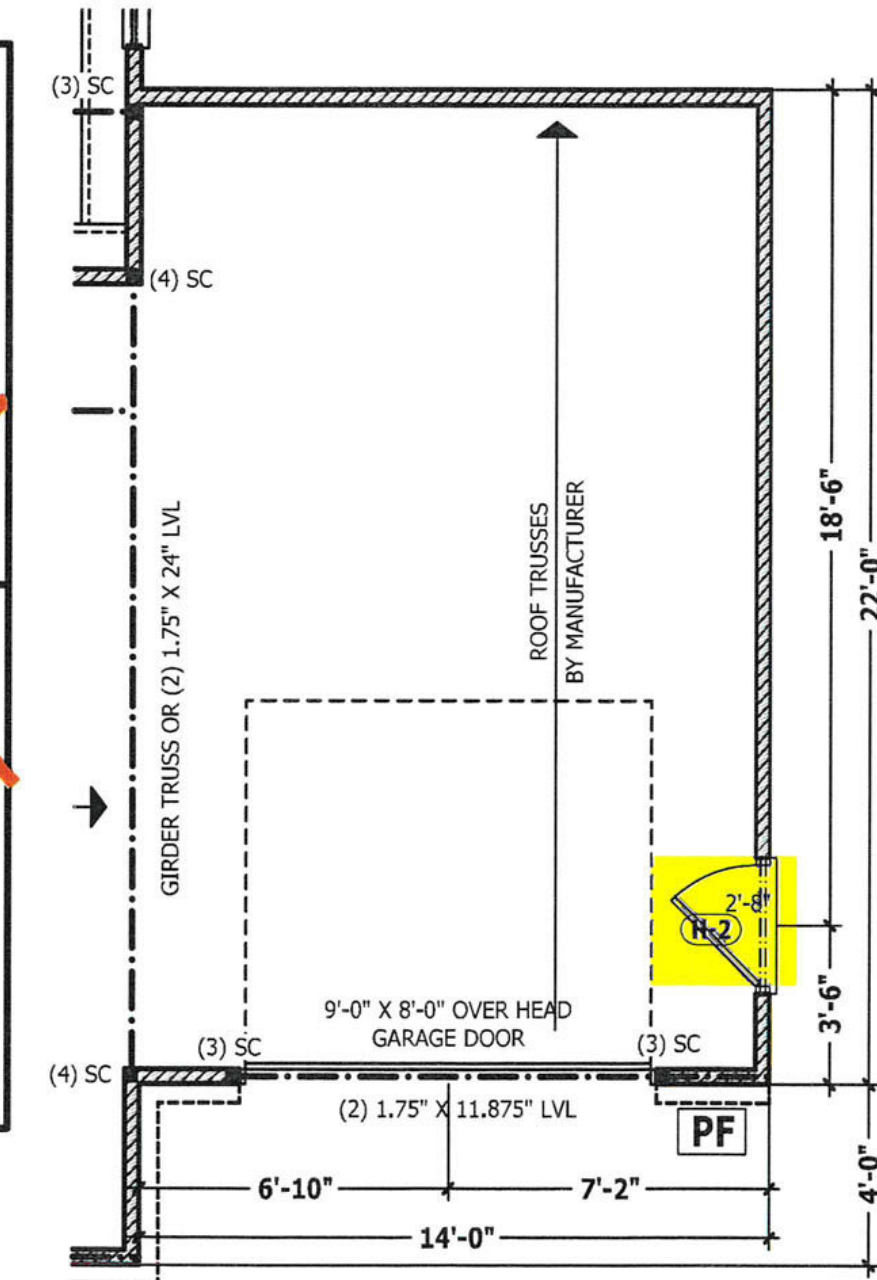
**CRAWL SPACE / STEM WALL**

SCALE 1/4" = 1'-0"



**ROOF PLAN**

SCALE 1/4" = 1'-0"



**FIRST FLOOR PLAN**

SCALE 1/4" = 1'-0"

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**THIRD GARAGE ADDENDUM**  
**The Lauren H**

**HAYNES WEAVER HOMES**  
910.630.2100 • 919.606.4696  
300 Wagonwheel Boulevard, Raleigh, NC

**HAYNES HOME PLANS, INC.**  
P.O. Box 702, Wake Forest, NC 27588 • 919.435.6160 • FAX 1-866-491-1036

| SQUARE FOOTAGE                                |             |
|---|-------------|
| HEATED FIRST FLOOR                            | 1766 SQ.FT. |
| PLAYROOM                                      | 492 SQ.FT.  |
| TOTAL   | 2166 SQ.FT. |
| HEATED OPTIONAL CAROLINA ROOM RECREATION ROOM | 148 SQ.FT.  |
| TOTAL   | 304 SQ.FT.  |
| UNHEATED FRONT PORCH                          | 188 SQ.FT.  |
| GARAGE  | 482 SQ.FT.  |
| TOTAL   | 670 SQ.FT.  |
| UNHEATED OPTIONAL SCREENED PORCH              | 160 SQ.FT.  |
| DECK / PATIO                                  | 292 SQ.FT.  |
| THIRD GARAGE                                  | 560 SQ.FT.  |
| TOTAL   | 980 SQ.FT.  |

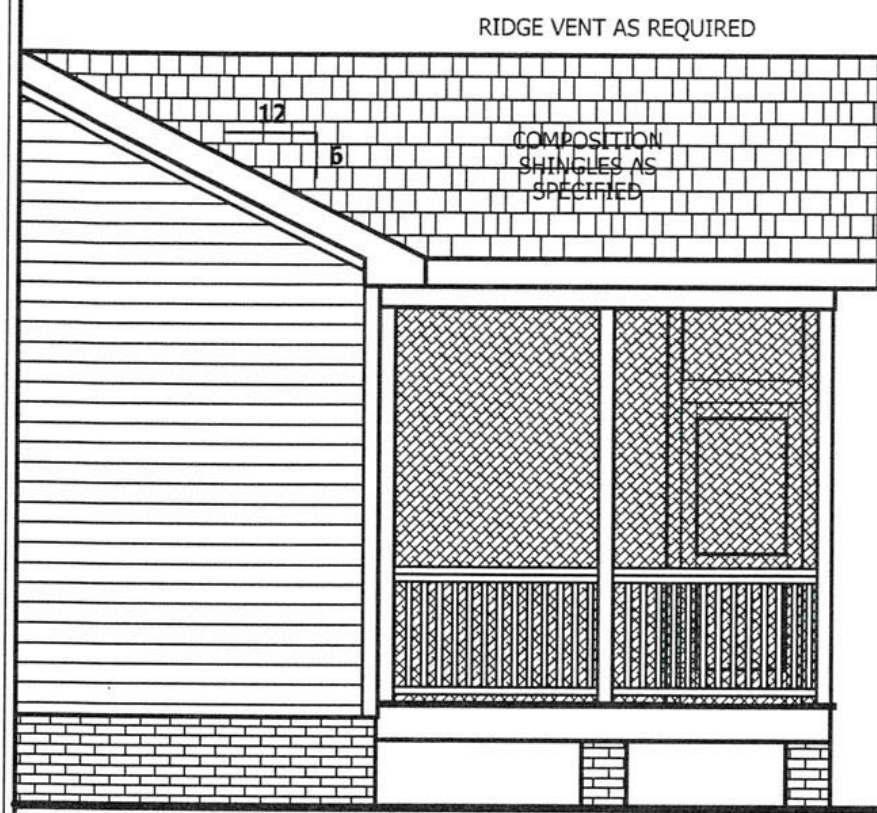
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2/24/2020  
200219B  
ADDENDUM



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.

**PORCH ADDENDUM**

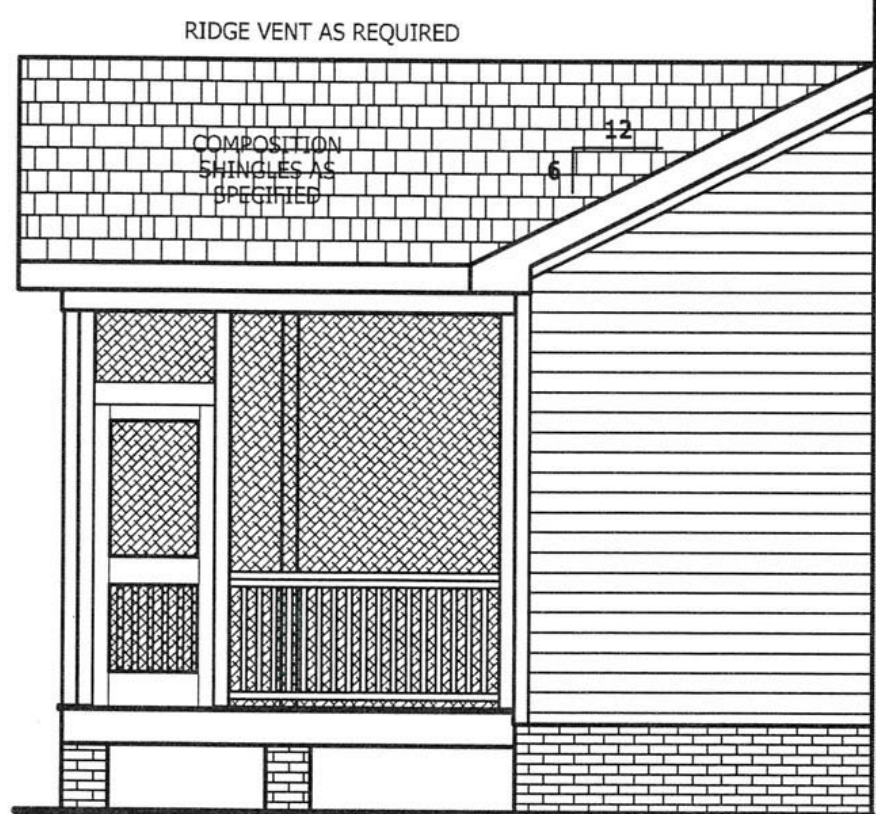
**The Lauren H**



**RIGHT SIDE ELEVATION**  
SCALE 1/4" = 1'-0"



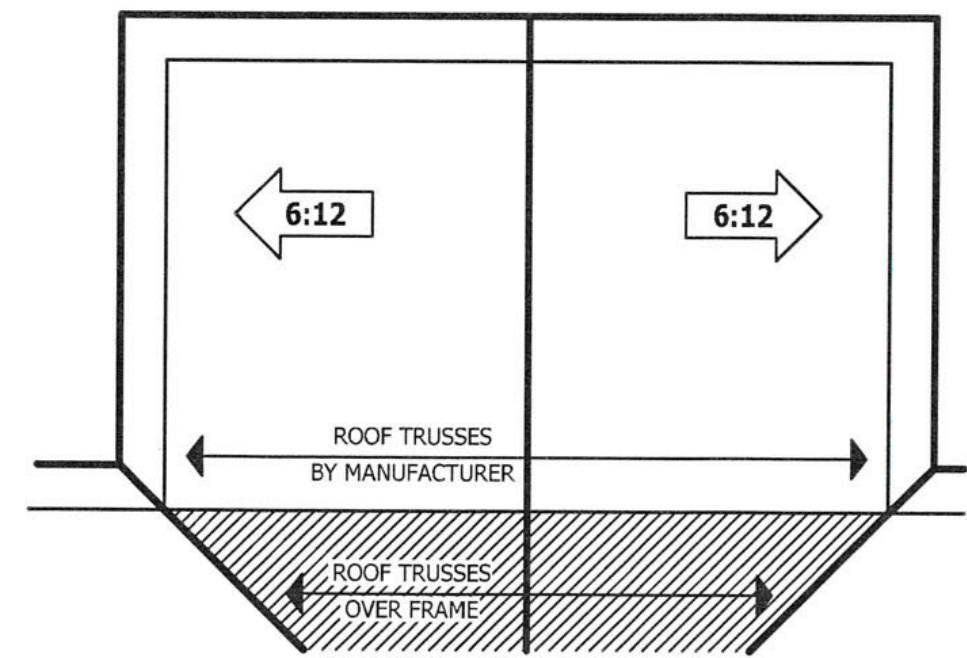
**REAR ELEVATION**  
SCALE 1/4" = 1'-0"



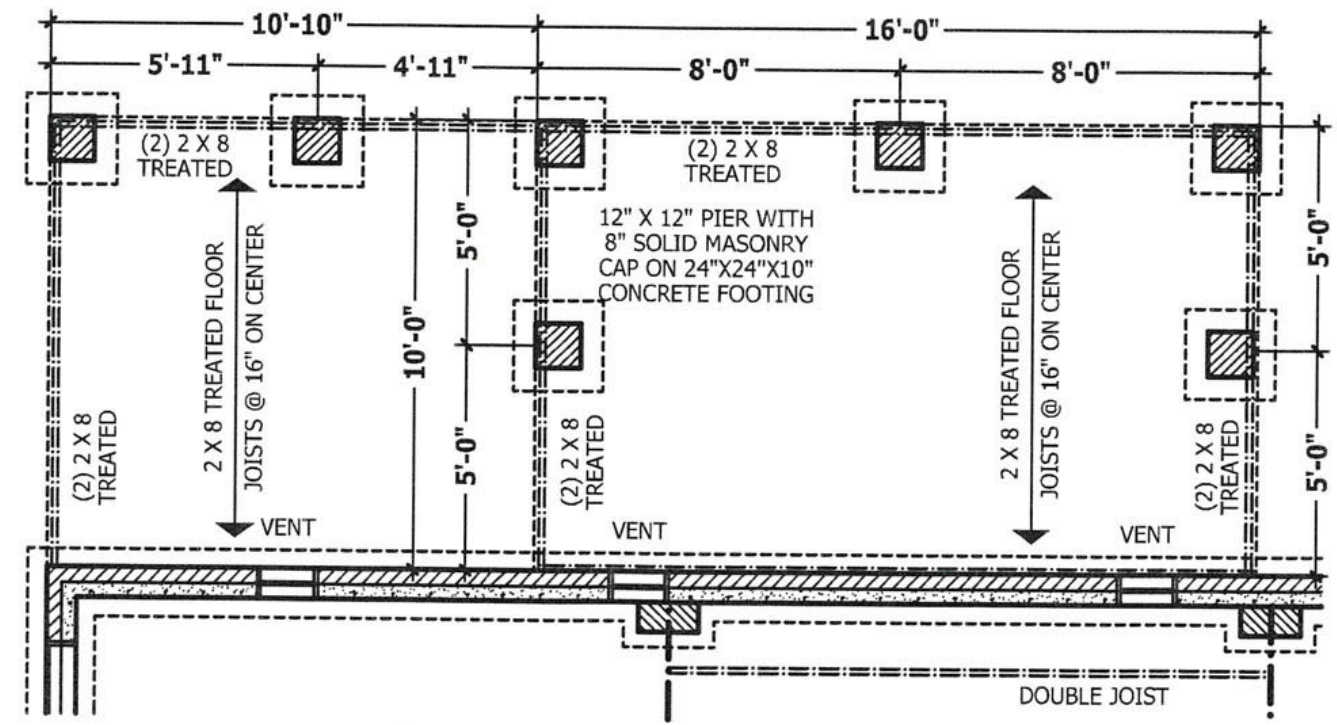
**LEFT SIDE ELEVATION**  
SCALE 1/4" = 1'-0"

SEE BASE PLAN FOR NOTES AND DETAILS

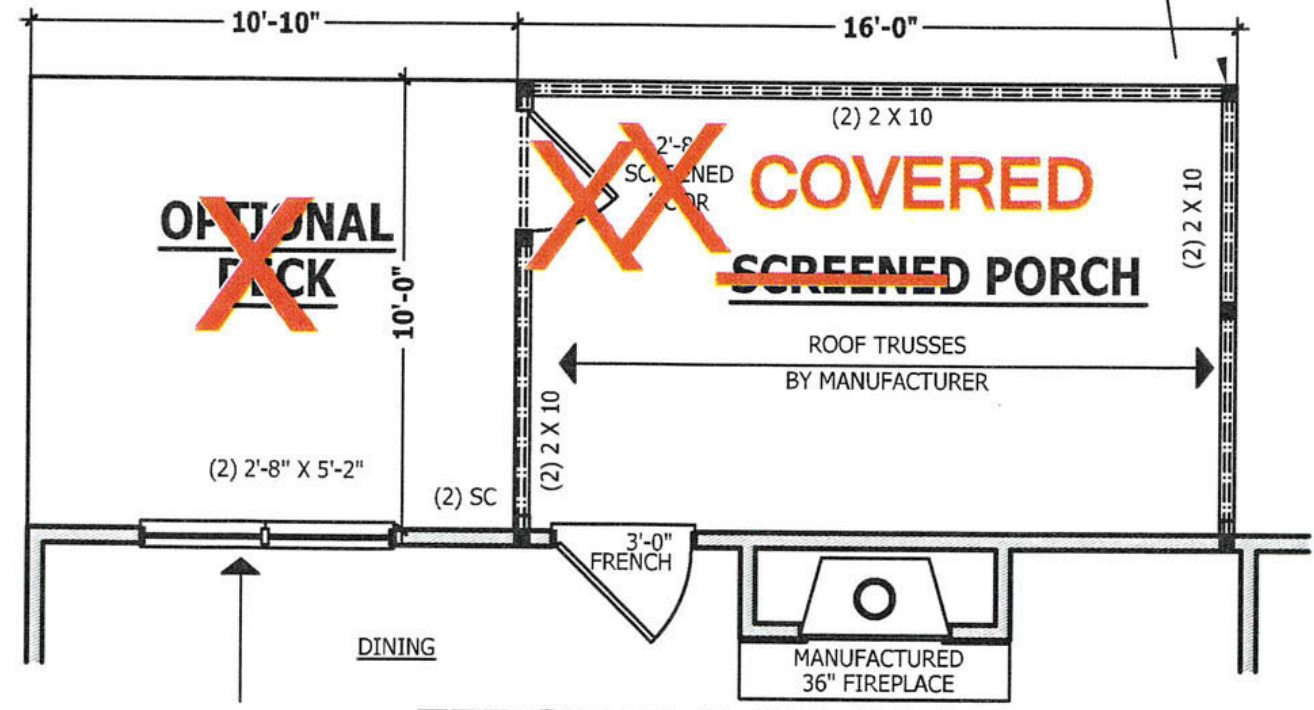
4 X 4 TREATED POST OR EQUIVALENT TYPICAL. ATTACH RAFTERS TO HEADER WITH HURRICANE CONNECTORS (SIMPSON H2.5 OR EQUIVALENT). ATTACH HEADER TO POST AND POST TO BASE WITH POST CAP, METAL STRAPS, AND/OR POST BASE.



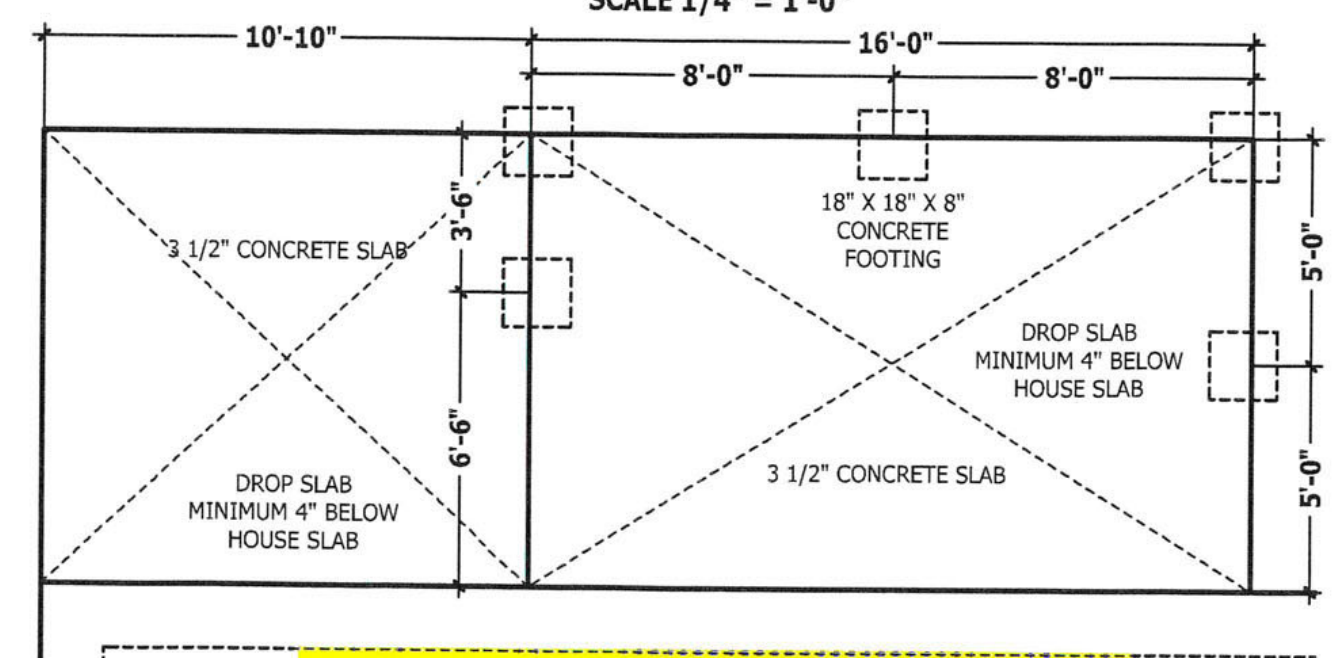
**ROOF PLAN**  
SCALE 1/8" = 1'-0"



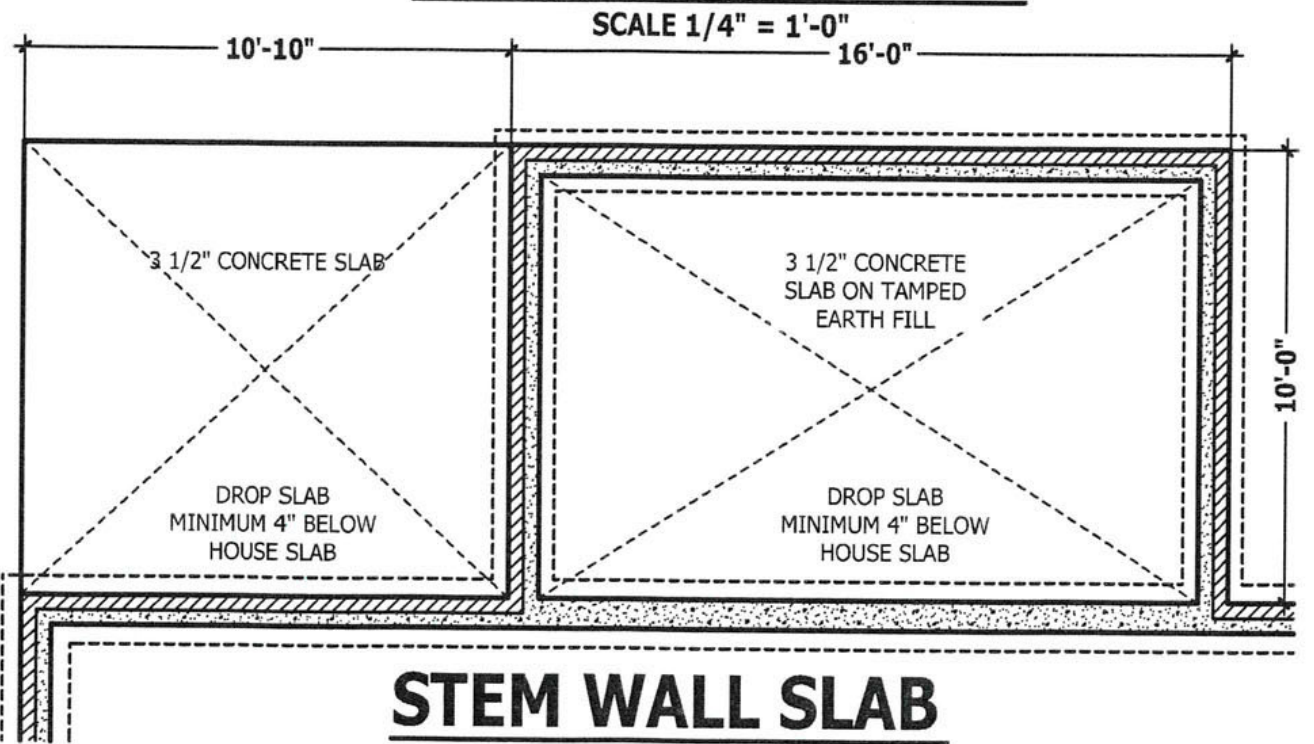
**CRAWL SPACE PLAN**  
SCALE 1/4" = 1'-0"



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



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



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

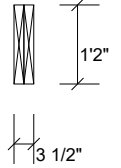
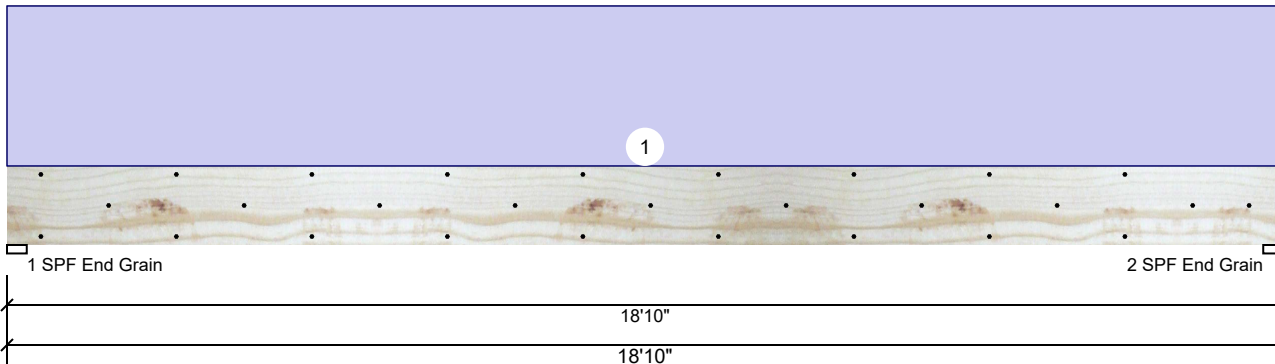
**HAYNES WEAVER HOMES**  
HOME PLANS, INC.  
910.630.2100 • 919.606.4696  
P.O. Box 702, WARE FOREST, NC 27688 919.435.6180 FAX 1-866-491-0395

| SQUARE FOOTAGE     |             |
|--------------------|-------------|
| HEATED FIRST FLOOR | 1766 SQ.FT. |
| PLAYROOM           | 400 SQ.FT.  |
| TOTAL              | 2166 SQ.FT. |
| HEATED OPTIONAL    |             |
| CAROLINA ROOM      | 148 SQ.FT.  |
| RECREATION ROOM    | 394 SQ.FT.  |
| TOTAL              | 542 SQ.FT.  |
| UNHEATED           |             |
| FRONT PORCH        | 188 SQ.FT.  |
| GARAGE             | 488 SQ.FT.  |
| TOTAL              | 676 SQ.FT.  |
| UNHEATED OPTIONAL  |             |
| SCREENED PORCH     | 160 SQ.FT.  |
| DECK / PATIO       | 108 SQ.FT.  |
| THIRD GARAGE       | 293 SQ.FT.  |
| TOTAL              | 560 SQ.FT.  |

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200219B  
ADDENDUM

**GDH Kerto-S LVL 1.750" X 14.000" 2-Ply - PASSED**

Level: Level



**Member Information**

|                     |               |                |             |
|---------------------|---------------|----------------|-------------|
| Type:               | Girder        | Application:   | Floor       |
| Plies:              | 2             | Design Method: | ASD         |
| Moisture Condition: | Dry           | Building Code: | IBC 2012    |
| Deflection LL:      | 360           | Load Sharing:  | No          |
| Deflection TL:      | 240           | Deck:          | Not Checked |
| Importance:         | Normal        |                |             |
| Temperature:        | Temp <= 100°F |                |             |

**Reactions UNPATTERNED lb (Uplift)**

| Brg | Live | Dead | Snow | Wind | Const |
|-----|------|------|------|------|-------|
| 1   | 0    | 2457 | 0    | 0    | 0     |
| 2   | 0    | 2457 | 0    | 0    | 0     |

**Bearings**

| Bearing           | Length | Cap. React | D/L lb   | Total | Ld. Case | Ld. Comb. |
|-------------------|--------|------------|----------|-------|----------|-----------|
| 1 - SPF End Grain | 3.500" | 23%        | 2457 / 0 | 2457  | Uniform  | D         |
| 2 - SPF End Grain | 3.500" | 23%        | 2457 / 0 | 2457  | Uniform  | D         |

**Analysis Results**

| Analysis     | Actual        | Location  | Allowed       | Capacity     | Comb. | Case    |
|--------------|---------------|-----------|---------------|--------------|-------|---------|
| Moment       | 11011 ft-lb   | 9'5"      | 24299 ft-lb   | 0.453 (45%)  | D     | Uniform |
| Unbraced     | 11011 ft-lb   | 9'5"      | 11013 ft-lb   | 1.000 (100%) | D     | Uniform |
| Shear        | 2093 lb       | 1'4 3/4"  | 9408 lb       | 0.222 (22%)  | D     | Uniform |
| LL Defl inch | 0.000 (L/999) | 0         | 999.000 (L/0) | 0.000 (0%)   |       |         |
| TL Defl inch | 0.444 (L/497) | 9'5 1/16" | 0.919 (L/240) | 0.480 (48%)  | D     | Uniform |

**Design Notes**

- 1 Fasten all plies using 3 rows of SDW22338 at 24" o.c. Maximum end distance not to exceed 12".
- 2 Refer to last page of calculations for fasteners required for specified loads.
- 3 Simpson fasteners applied from a single side of the member use tip values where published.
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top loads must be supported equally by all plies.
- 6 Top must be laterally braced at a maximum of 9'7 1/2" o.c.
- 7 Bottom braced at bearings.
- 8 Lateral slenderness ratio based on single ply width.

| ID | Load Type   | Location | Trib Width | Side | Dead 0.9 | Live 1 | Snow 1.15 | Wind 1.6 | Const. 1.25 | Comments |
|----|-------------|----------|------------|------|----------|--------|-----------|----------|-------------|----------|
| 1  | Uniform     |          |            | Top  | 250 PLF  | 0 PLF  | 0 PLF     | 0 PLF    | 0 PLF       |          |
|    | Self Weight |          |            |      | 11 PLF   |        |           |          |             |          |

**Notes**

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

chemicals

**Handling & Installation**

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 2/26/2023

**Manufacturer Info**

Metsä Wood  
 301 Merritt 7 Building, 2nd Floor  
 Norwalk, CT 06851  
 (800) 622-5850  
 www.metsawood.com/us  
 ICC-ES: ESR-3633

Comtech, Inc.  
 1001 S. Reilly Road, Suite #639  
 Fayetteville, NC  
 USA  
 28314  
 910-864-TRUS



**GDH Kerto-S LVL 1.750" X 14.000" 2-Ply - PASSED**

Level: Level



**Multi-Ply Analysis**

Fasten all plies using 3 rows of SDW22338 at 24" o.c.. Maximum end distance not to exceed 12"

|                          |           |
|--------------------------|-----------|
| Capacity                 | 0.0 %     |
| Load                     | 0.0 PLF   |
| Yield Limit per Foot     | 382.5 PLF |
| Yield Limit per Fastener | 255.0 lb. |
| Yield Mode               | Lookup    |
| Edge Distance            | 1 1/2"    |
| Min. End Distance        | 6"        |
| Load Combination         |           |
| Duration Factor          | 1.00      |

**Notes**

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive

chemicals

**Handling & Installation**

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 2/26/2023

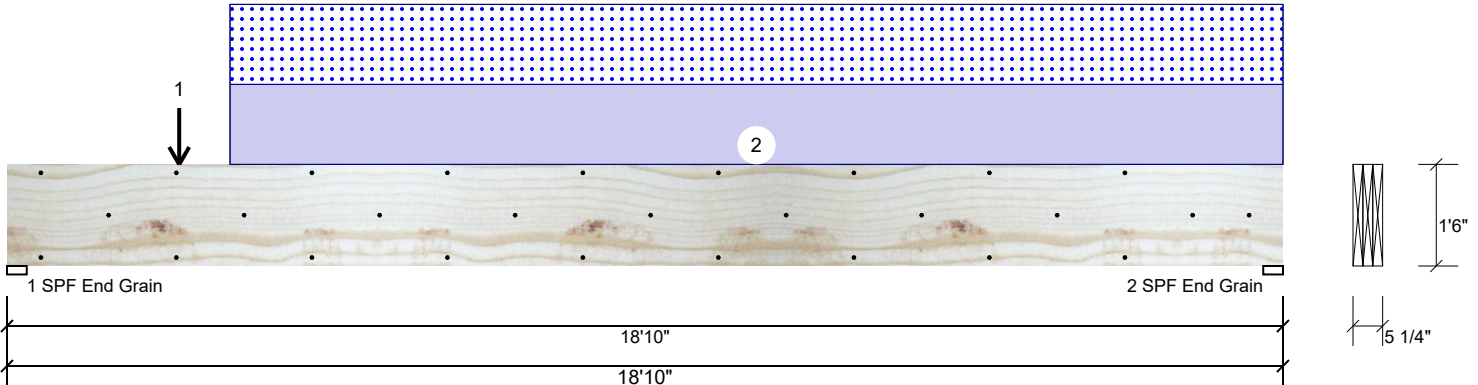
**Manufacturer Info**

Metsä Wood  
 301 Merritt 7 Building, 2nd Floor  
 Norwalk, CT 06851  
 (800) 622-5850  
[www.metsawood.com/us](http://www.metsawood.com/us)  
 ICC-ES: ESR-3633

Comtech, Inc.  
 1001 S. Reilly Road, Suite #639  
 Fayetteville, NC  
 USA  
 28314  
 910-864-TRUS



**GDH (Side Load) Kerto-S LVL 1.750" X 18.000" 3-Ply - PASSED** Level: Level



**Member Information**

|                     |               |                |             |
|---------------------|---------------|----------------|-------------|
| Type:               | Girder        | Application:   | Floor       |
| Plies:              | 3             | Design Method: | ASD         |
| Moisture Condition: | Dry           | Building Code: | IBC 2012    |
| Deflection LL:      | 360           | Load Sharing:  | Yes         |
| Deflection TL:      | 240           | Deck:          | Not Checked |
| Importance:         | Normal        |                |             |
| Temperature:        | Temp <= 100°F |                |             |

**Reactions UNPATTERNED lb (Uplift)**

| Brg | Live | Dead | Snow | Wind | Const |
|-----|------|------|------|------|-------|
| 1   | 0    | 3889 | 3691 | 0    | 0     |
| 2   | 0    | 3812 | 3614 | 0    | 0     |

**Bearings**

| Bearing           | Length | Cap. React | D/L lb      | Total | Ld. Case | Ld. Comb. |
|-------------------|--------|------------|-------------|-------|----------|-----------|
| 1 - SPF End Grain | 3.500" | 47%        | 3889 / 3691 | 7580  | L        | D+S       |
| 2 - SPF End Grain | 3.500" | 46%        | 3812 / 3614 | 7426  | L        | D+S       |

**Analysis Results**

| Analysis     | Actual        | Location | Allowed       | Capacity     | Comb. | Case |
|--------------|---------------|----------|---------------|--------------|-------|------|
| Moment       | 34254 ft-lb   | 9'2 1/8" | 77108 ft-lb   | 0.444 (44%)  | D+S   | L    |
| Unbraced     | 34254 ft-lb   | 9'2 1/8" | 34270 ft-lb   | 1.000 (100%) | D+S   | L    |
| Shear        | 7544 lb       | 1'8 5/8" | 23184 lb      | 0.325 (33%)  | D+S   | L    |
| LL Defl inch | 0.221 (L/998) | 9'4"     | 0.613 (L/360) | 0.360 (36%)  | S     | L    |
| TL Defl inch | 0.454 (L/486) | 9'4"     | 0.920 (L/240) | 0.490 (49%)  | D+S   | L    |

**Design Notes**

- 1 Fasten all plies using 3 rows of SDW22500 at 24" o.c. Maximum end distance not to exceed 12".
- 2 Refer to last page of calculations for fasteners required for specified loads.
- 3 Simpson fasteners applied from a single side of the member use tip values where published.
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top loads must be supported equally by all plies.
- 6 Top must be laterally braced at a maximum of 5'9 3/8" o.c.
- 7 Bottom braced at bearings.
- 8 Lateral slenderness ratio based on single ply width.

| ID | Load Type     | Location         | Trib Width | Side | Dead 0.9 | Live 1 | Snow 1.15 | Wind 1.6 | Const. 1.25 | Comments |
|----|---------------|------------------|------------|------|----------|--------|-----------|----------|-------------|----------|
| 1  | Point         | 2-6-8            |            | Top  | 1493 lb  | 0 lb   | 1493 lb   | 0 lb     | 0 lb        | B3       |
| 2  | Part. Uniform | 3-3-8 to 18-10-0 |            | Top  | 374 PLF  | 0 PLF  | 374 PLF   | 0 PLF    | 0 PLF       | B2       |
|    | Self Weight   |                  |            |      | 21 PLF   |        |           |          |             |          |

**Notes**

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

**Handling & Installation**

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 2/26/2023

**Manufacturer Info**

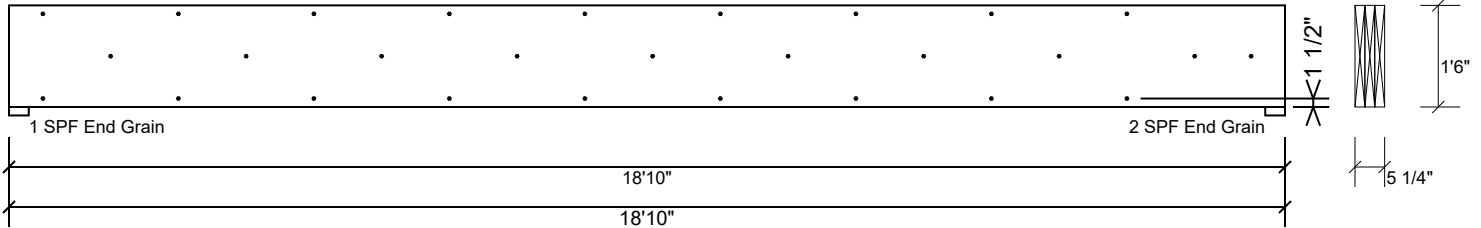
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 910-864-TRUS



**GDH (Side Load) Kerto-S LVL 1.750" X 18.000" 3-Ply - PASSED**

Level: Level



**Multi-Ply Analysis**

Fasten all plies using 3 rows of SDW22500 at 24" o.c.. Maximum end distance not to exceed 12"

|                          |           |
|--------------------------|-----------|
| Capacity                 | 0.0 %     |
| Load                     | 0.0 PLF   |
| Yield Limit per Foot     | 382.5 PLF |
| Yield Limit per Fastener | 255.0 lb. |
| Yield Mode               | Lookup    |
| Edge Distance            | 1 1/2"    |
| Min. End Distance        | 6"        |
| Load Combination         |           |
| Duration Factor          | 1.00      |

**Notes**

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive

chemicals

**Handling & Installation**

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 2/26/2023

**Manufacturer Info**

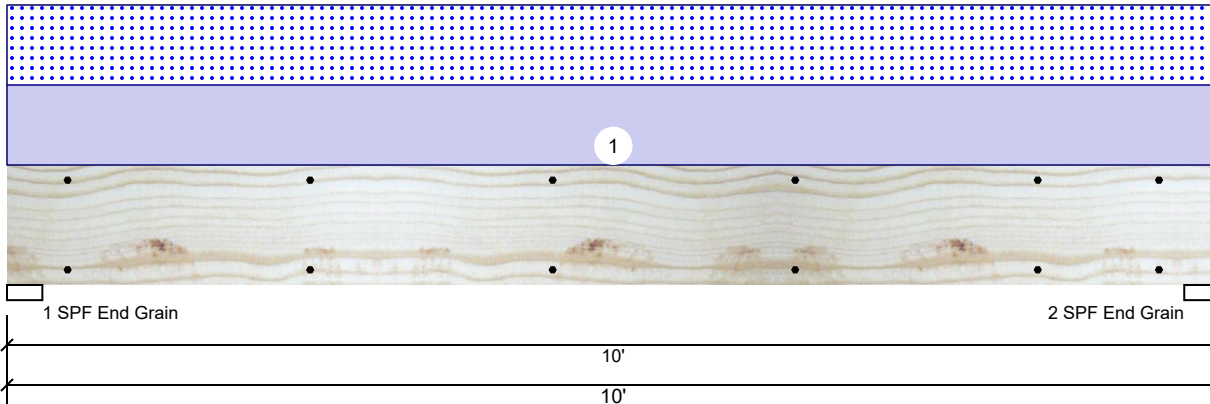
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**GDH-1 Kerto-S LVL 1.750" X 11.875" 2-Ply - PASSED**

Level: Level



**Member Information**

|                     |               |                |             |
|---------------------|---------------|----------------|-------------|
| Type:               | Girder        | Application:   | Floor       |
| Plies:              | 2             | Design Method: | ASD         |
| Moisture Condition: | Dry           | Building Code: | IBC 2012    |
| Deflection LL:      | 360           | Load Sharing:  | No          |
| Deflection TL:      | 240           | Deck:          | Not Checked |
| Importance:         | Normal        |                |             |
| Temperature:        | Temp <= 100°F |                |             |

**Reactions UNPATTERNED lb (Uplift)**

| Brg | Live | Dead | Snow | Wind | Const |
|-----|------|------|------|------|-------|
| 1   | 0    | 1196 | 1150 | 0    | 0     |
| 2   | 0    | 1196 | 1150 | 0    | 0     |

**Bearings**

| Bearing           | Length | Cap. React | D/L lb      | Total | Ld. Case | Ld. Comb. |
|-------------------|--------|------------|-------------|-------|----------|-----------|
| 1 - SPF End Grain | 3.500" | 22%        | 1196 / 1150 | 2346  | L        | D+S       |
| 2 - SPF End Grain | 3.500" | 22%        | 1196 / 1150 | 2346  | L        | D+S       |

**Analysis Results**

| Analysis     | Actual         | Location | Allowed       | Capacity    | Comb. | Case |
|--------------|----------------|----------|---------------|-------------|-------|------|
| Moment       | 5340 ft-lb     | 5'       | 22897 ft-lb   | 0.233 (23%) | D+S   | L    |
| Unbraced     | 5340 ft-lb     | 5'       | 9721 ft-lb    | 0.549 (55%) | D+S   | L    |
| Shear        | 1774 lb        | 8'9 3/8" | 10197 lb      | 0.174 (17%) | D+S   | L    |
| LL Defl inch | 0.051 (L/2238) | 5'       | 0.318 (L/360) | 0.160 (16%) | S     | L    |
| TL Defl inch | 0.104 (L/1097) | 5'       | 0.477 (L/240) | 0.220 (22%) | D+S   | L    |

**Design Notes**

- 1 Fasten all plies using 2 rows of SDW22338 at 24" o.c. Maximum end distance not to exceed 12".
- 2 Refer to last page of calculations for fasteners required for specified loads.
- 3 Simpson fasteners applied from a single side of the member use tip values where published.
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top loads must be supported equally by all plies.
- 6 Top braced at bearings.
- 7 Bottom braced at bearings.
- 8 Lateral slenderness ratio based on single ply width.

| ID | Load Type   | Location | Trib Width | Side | Dead 0.9 | Live 1 | Snow 1.15 | Wind 1.6 | Const. 1.25 | Comments |
|----|-------------|----------|------------|------|----------|--------|-----------|----------|-------------|----------|
| 1  | Uniform     |          |            | Top  | 230 PLF  | 0 PLF  | 230 PLF   | 0 PLF    | 0 PLF       | G1       |
|    | Self Weight |          |            |      | 9 PLF    |        |           |          |             |          |

**Notes**

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive

chemicals

**Handling & Installation**

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 2/26/2023

**Manufacturer Info**

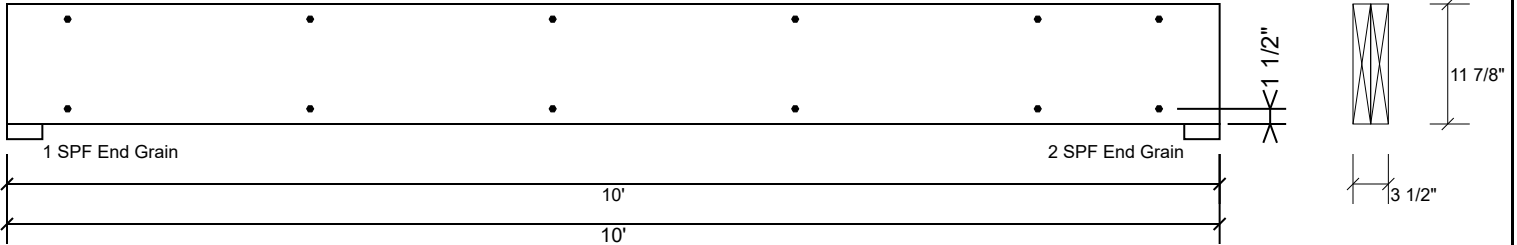
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**GDH-1 Kerto-S LVL 1.750" X 11.875" 2-Ply - PASSED**

Level: Level



**Multi-Ply Analysis**

Fasten all plies using 2 rows of SDW22338 at 24" o.c.. Maximum end distance not to exceed 12"

|                          |           |
|--------------------------|-----------|
| Capacity                 | 0.0 %     |
| Load                     | 0.0 PLF   |
| Yield Limit per Foot     | 255.0 PLF |
| Yield Limit per Fastener | 255.0 lb. |
| Yield Mode               | Lookup    |
| Edge Distance            | 1 1/2"    |
| Min. End Distance        | 6"        |
| Load Combination         |           |
| Duration Factor          | 1.00      |

**Notes**

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive

chemicals

**Handling & Installation**

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 2/26/2023

**Manufacturer Info**

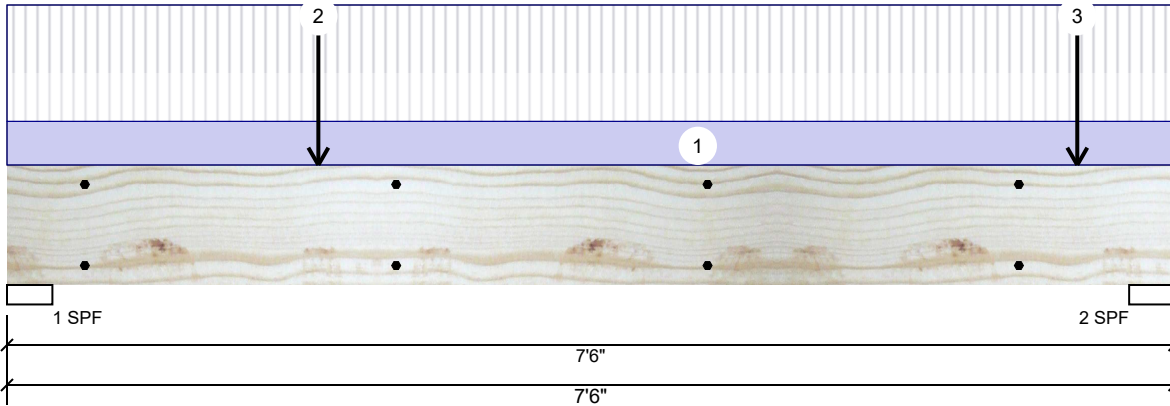
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**BM1 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED**

Level: Level



**Member Information**

|                     |               |
|---------------------|---------------|
| Type:               | Girder        |
| Plies:              | 2             |
| Moisture Condition: | Dry           |
| Deflection LL:      | 360           |
| Deflection TL:      | 240           |
| Importance:         | Normal        |
| Temperature:        | Temp <= 100°F |

|                |             |
|----------------|-------------|
| Application:   | Floor       |
| Design Method: | ASD         |
| Building Code: | IBC 2012    |
| Load Sharing:  | No          |
| Deck:          | Not Checked |

**Reactions UNPATTERNED lb (Uplift)**

| Brg | Live | Dead | Snow | Wind | Const |
|-----|------|------|------|------|-------|
| 1   | 150  | 959  | 876  | 0    | 0     |
| 2   | 150  | 1384 | 1300 | 0    | 0     |

**Bearings**

| Bearing | Length | Cap. React | D/L lb      | Total | Ld. Case | Ld. Comb. |
|---------|--------|------------|-------------|-------|----------|-----------|
| 1 - SPF | 3.500" | 35%        | 959 / 876   | 1834  | L        | D+S       |
| 2 - SPF | 3.500" | 52%        | 1384 / 1300 | 2684  | L        | D+S       |

**Analysis Results**

| Analysis     | Actual         | Location  | Allowed       | Capacity    | Comb. | Case |
|--------------|----------------|-----------|---------------|-------------|-------|------|
| Moment       | 3204 ft-lb     | 2'        | 14423 ft-lb   | 0.222 (22%) | D+S   | L    |
| Unbraced     | 3204 ft-lb     | 2'        | 9592 ft-lb    | 0.334 (33%) | D+S   | L    |
| Shear        | 1812 lb        | 1'        | 7943 lb       | 0.228 (23%) | D+S   | L    |
| LL Defl inch | 0.030 (L/2815) | 3'4 1/16" | 0.235 (L/360) | 0.130 (13%) | S     | L    |
| TL Defl inch | 0.063 (L/1338) | 3'4 7/16" | 0.352 (L/240) | 0.180 (18%) | D+S   | L    |

**Design Notes**

- Fasten all plies using 2 rows of SDW22338 at 24" o.c. Maximum end distance not to exceed 12".
- Refer to last page of calculations for fasteners required for specified loads.
- Simpson fasteners applied from a single side of the member use tip values where published.
- Girders are designed to be supported on the bottom edge only.
- Top loads must be supported equally by all plies.
- Top braced at bearings.
- Bottom braced at bearings.
- Lateral slenderness ratio based on single ply width.

| ID | Load Type   | Location | Trib Width | Side | Dead 0.9 | Live 1 | Snow 1.15 | Wind 1.6 | Const. 1.25 | Comments |
|----|-------------|----------|------------|------|----------|--------|-----------|----------|-------------|----------|
| 1  | Uniform     |          |            | Top  | 15 PLF   | 40 PLF | 0 PLF     | 0 PLF    | 0 PLF       | Floor    |
| 2  | Point       | 2-0-0    |            | Top  | 1088 lb  | 0 lb   | 1088 lb   | 0 lb     | 0 lb        | A6       |
| 3  | Point       | 6-10-8   |            | Top  | 1088 lb  | 0 lb   | 1088 lb   | 0 lb     | 0 lb        | A6       |
|    | Self Weight |          |            |      | 7 PLF    |        |           |          |             |          |

**Notes**  
 Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**  
 1. Dry service conditions, unless noted otherwise  
 2. LVL not to be treated with fire retardant or corrosive chemicals

**Handling & Installation**  
 1. LVL beams must not be cut or drilled  
 2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals  
 3. Damaged Beams must not be used  
 4. Design assumes top edge is laterally restrained  
 5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 2/26/2023

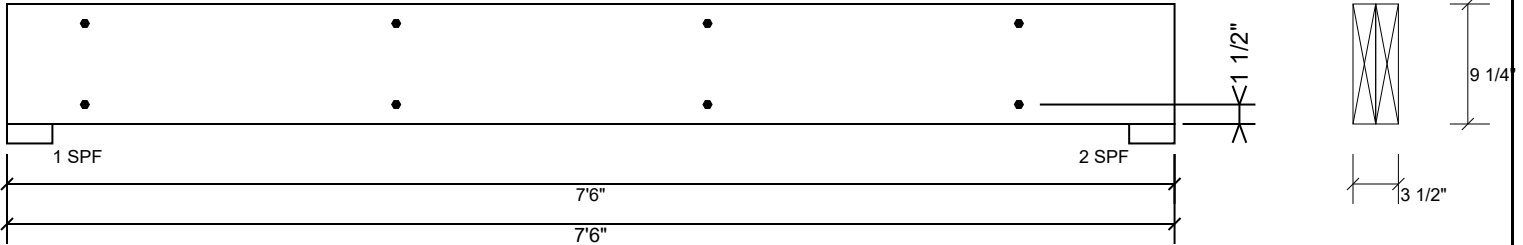
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 301 Merritt 7 Building, 2nd Floor  
 Norwalk, CT 06851  
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 ICC-ES: ESR-3633

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 910-864-TRUS



**BM1 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED**

Level: Level



**Multi-Ply Analysis**

Fasten all plies using 2 rows of SDW22338 at 24" o.c.. Maximum end distance not to exceed 12"

|                          |           |
|--------------------------|-----------|
| Capacity                 | 0.0 %     |
| Load                     | 0.0 PLF   |
| Yield Limit per Foot     | 255.0 PLF |
| Yield Limit per Fastener | 255.0 lb. |
| Yield Mode               | Lookup    |
| Edge Distance            | 1 1/2"    |
| Min. End Distance        | 6"        |
| Load Combination         |           |
| Duration Factor          | 1.00      |

**Notes**

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive

**Handling & Installation**

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 2/26/2023

**Manufacturer Info**

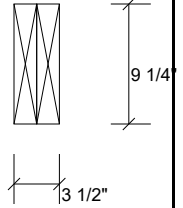
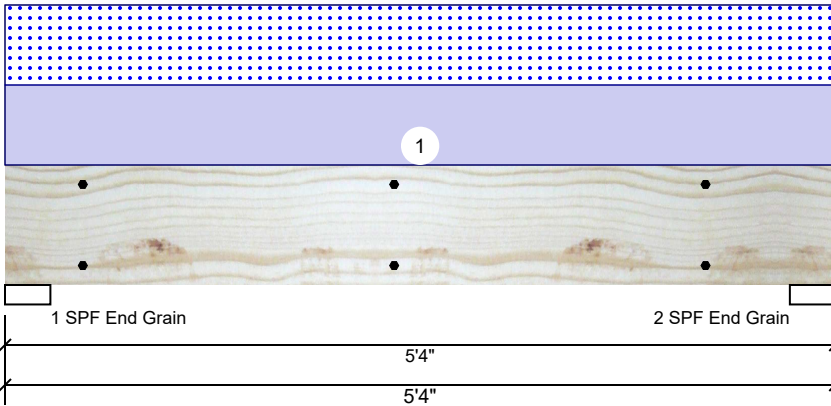
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**BM2 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED**

Level: Level



**Member Information**

|                     |               |
|---------------------|---------------|
| Type:               | Girder        |
| Plies:              | 2             |
| Moisture Condition: | Dry           |
| Deflection LL:      | 360           |
| Deflection TL:      | 240           |
| Importance:         | Normal        |
| Temperature:        | Temp <= 100°F |

|                |             |
|----------------|-------------|
| Application:   | Floor       |
| Design Method: | ASD         |
| Building Code: | IBC 2012    |
| Load Sharing:  | No          |
| Deck:          | Not Checked |

**Reactions UNPATTERNED lb (Uplift)**

| Brg | Live | Dead | Snow | Wind | Const |
|-----|------|------|------|------|-------|
| 1   | 0    | 1686 | 1667 | 0    | 0     |
| 2   | 0    | 1686 | 1667 | 0    | 0     |

**Bearings**

| Bearing           | Length | Cap. React | D/L lb      | Total | Ld. Case | Ld. Comb. |
|-------------------|--------|------------|-------------|-------|----------|-----------|
| 1 - SPF End Grain | 3.500" | 31%        | 1686 / 1667 | 3353  | L        | D+S       |
| 2 - SPF End Grain | 3.500" | 31%        | 1686 / 1667 | 3353  | L        | D+S       |

**Analysis Results**

| Analysis     | Actual         | Location | Allowed       | Capacity    | Comb. | Case |
|--------------|----------------|----------|---------------|-------------|-------|------|
| Moment       | 3735 ft-lb     | 2'8"     | 14423 ft-lb   | 0.259 (26%) | D+S   | L    |
| Unbraced     | 3735 ft-lb     | 2'8"     | 11811 ft-lb   | 0.316 (32%) | D+S   | L    |
| Shear        | 2095 lb        | 1'       | 7943 lb       | 0.264 (26%) | D+S   | L    |
| LL Defl inch | 0.024 (L/2457) | 2'8"     | 0.162 (L/360) | 0.150 (15%) | S     | L    |
| TL Defl inch | 0.048 (L/1221) | 2'8"     | 0.244 (L/240) | 0.200 (20%) | D+S   | L    |

**Design Notes**

- 1 Fasten all plies using 2 rows of SDW22338 at 24" o.c. Maximum end distance not to exceed 12".
- 2 Refer to last page of calculations for fasteners required for specified loads.
- 3 Simpson fasteners applied from a single side of the member use tip values where published.
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top loads must be supported equally by all plies.
- 6 Top braced at bearings.
- 7 Bottom braced at bearings.
- 8 Lateral slenderness ratio based on single ply width.

| ID | Load Type   | Location | Trib Width | Side | Dead 0.9 | Live 1 | Snow 1.15 | Wind 1.6 | Const. 1.25 | Comments |
|----|-------------|----------|------------|------|----------|--------|-----------|----------|-------------|----------|
| 1  | Uniform     |          |            | Top  | 625 PLF  | 0 PLF  | 625 PLF   | 0 PLF    | 0 PLF       | A2       |
|    | Self Weight |          |            |      | 7 PLF    |        |           |          |             |          |

**Notes**

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive chemicals

**Handling & Installation**

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 2/26/2023

**Manufacturer Info**

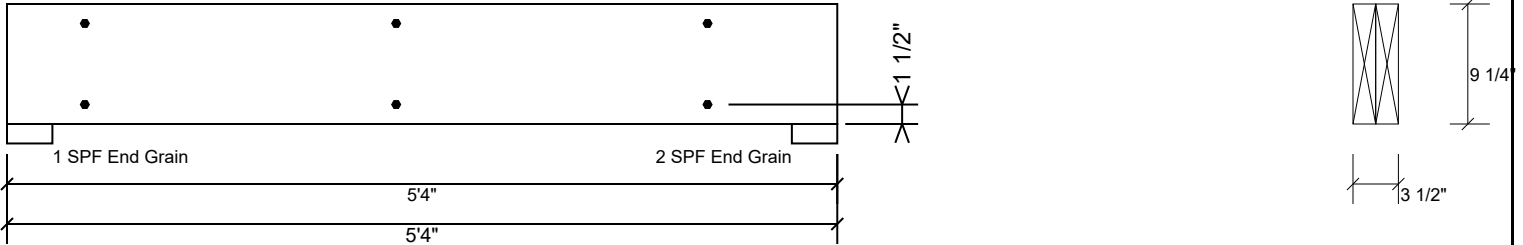
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 910-864-TRUS



**BM2 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED**

Level: Level



**Multi-Ply Analysis**

Fasten all plies using 2 rows of SDW22338 at 24" o.c.. Maximum end distance not to exceed 12"

|                          |           |
|--------------------------|-----------|
| Capacity                 | 0.0 %     |
| Load                     | 0.0 PLF   |
| Yield Limit per Foot     | 255.0 PLF |
| Yield Limit per Fastener | 255.0 lb. |
| Yield Mode               | Lookup    |
| Edge Distance            | 1 1/2"    |
| Min. End Distance        | 6"        |
| Load Combination         |           |
| Duration Factor          | 1.00      |

**Notes**

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive

chemicals

**Handling & Installation**

1. LVL beams must not be cut or drilled
2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals
3. Damaged Beams must not be used
4. Design assumes top edge is laterally restrained
5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

This design is valid until 2/26/2023

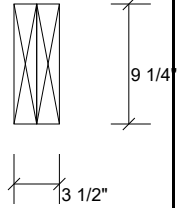
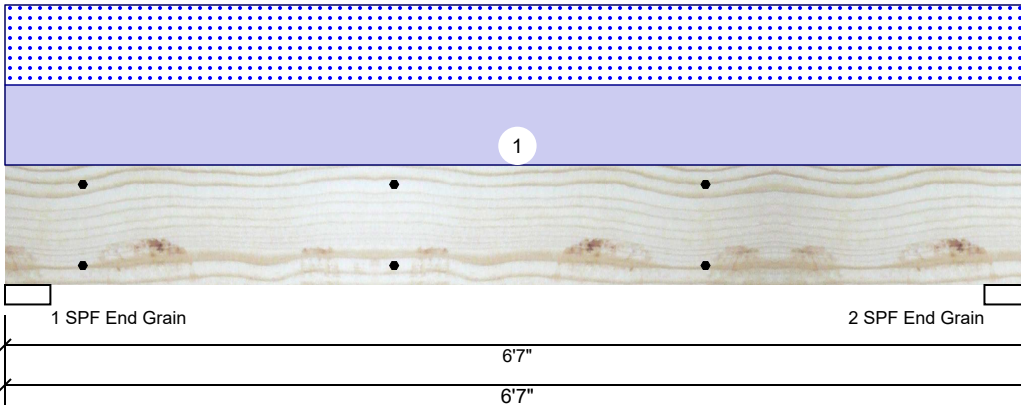
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**BM3 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED** Level: Level



**Member Information**

|                     |               |
|---------------------|---------------|
| Type:               | Girder        |
| Plies:              | 2             |
| Moisture Condition: | Dry           |
| Deflection LL:      | 360           |
| Deflection TL:      | 240           |
| Importance:         | Normal        |
| Temperature:        | Temp <= 100°F |

|                |             |
|----------------|-------------|
| Application:   | Floor       |
| Design Method: | ASD         |
| Building Code: | IBC 2012    |
| Load Sharing:  | No          |
| Deck:          | Not Checked |

**Reactions UNPATTERNED lb (Uplift)**

| Brg | Live | Dead | Snow | Wind | Const |
|-----|------|------|------|------|-------|
| 1   | 0    | 2400 | 2377 | 0    | 0     |
| 2   | 0    | 2400 | 2377 | 0    | 0     |

**Bearings**

| Bearing           | Length | Cap. React | D/L lb      | Total | Ld. Case | Ld. Comb. |
|-------------------|--------|------------|-------------|-------|----------|-----------|
| 1 - SPF End Grain | 3.500" | 45%        | 2400 / 2377 | 4777  | L        | D+S       |
| 2 - SPF End Grain | 3.500" | 45%        | 2400 / 2377 | 4777  | L        | D+S       |

**Analysis Results**

| Analysis     | Actual         | Location | Allowed       | Capacity    | Comb. | Case |
|--------------|----------------|----------|---------------|-------------|-------|------|
| Moment       | 6805 ft-lb     | 3'3 1/2" | 14423 ft-lb   | 0.472 (47%) | D+S   | L    |
| Unbraced     | 6805 ft-lb     | 3'3 1/2" | 10451 ft-lb   | 0.651 (65%) | D+S   | L    |
| Shear        | 3326 lb        | 1'       | 7943 lb       | 0.419 (42%) | D+S   | L    |
| LL Defl inch | 0.062 (L/1194) | 3'3 1/2" | 0.204 (L/360) | 0.300 (30%) | S     | L    |
| TL Defl inch | 0.124 (L/594)  | 3'3 1/2" | 0.306 (L/240) | 0.400 (40%) | D+S   | L    |

**Design Notes**

- 1 Fasten all plies using 2 rows of SDW22338 at 24" o.c. Maximum end distance not to exceed 12".
- 2 Refer to last page of calculations for fasteners required for specified loads.
- 3 Simpson fasteners applied from a single side of the member use tip values where published.
- 4 Girders are designed to be supported on the bottom edge only.
- 5 Top loads must be supported equally by all plies.
- 6 Top braced at bearings.
- 7 Bottom braced at bearings.
- 8 Lateral slenderness ratio based on single ply width.

| ID | Load Type   | Location | Trib Width | Side | Dead 0.9 | Live 1 | Snow 1.15 | Wind 1.6 | Const. 1.25 | Comments |
|----|-------------|----------|------------|------|----------|--------|-----------|----------|-------------|----------|
| 1  | Uniform     |          |            | Top  | 722 PLF  | 0 PLF  | 722 PLF   | 0 PLF    | 0 PLF       | A2       |
|    | Self Weight |          |            |      | 7 PLF    |        |           |          |             |          |

**Notes**  
 Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**  
 1. Dry service conditions, unless noted otherwise  
 2. LVL not to be treated with fire retardant or corrosive chemicals

**Handling & Installation**  
 1. LVL beams must not be cut or drilled  
 2. Refer to manufacturer's product information regarding installation requirements, multi-ply fastening details, beam strength values, and code approvals  
 3. Damaged Beams must not be used  
 4. Design assumes top edge is laterally restrained  
 5. Provide lateral support at bearing points to avoid lateral displacement and rotation

6. For flat roofs provide proper drainage to prevent ponding

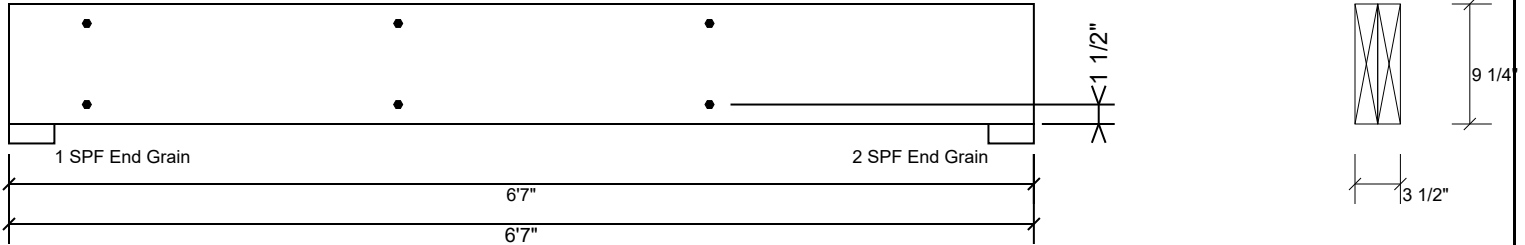
This design is valid until 2/26/2023

**Manufacturer Info**  
 Metsä Wood  
 301 Merritt 7 Building, 2nd Floor  
 Norwalk, CT 06851  
 (800) 622-5850  
 www.metsawood.com/us  
 ICC-ES: ESR-3633

Comtech, Inc.  
 1001 S. Reilly Road, Suite #639  
 Fayetteville, NC  
 USA  
 28314  
 910-864-TRUS

**BM3 Kerto-S LVL 1.750" X 9.250" 2-Ply - PASSED**

Level: Level



**Multi-Ply Analysis**

Fasten all plies using 2 rows of SDW22338 at 24" o.c.. Maximum end distance not to exceed 12"

|                          |           |
|--------------------------|-----------|
| Capacity                 | 0.0 %     |
| Load                     | 0.0 PLF   |
| Yield Limit per Foot     | 255.0 PLF |
| Yield Limit per Fastener | 255.0 lb. |
| Yield Mode               | Lookup    |
| Edge Distance            | 1 1/2"    |
| Min. End Distance        | 6"        |
| Load Combination         |           |
| Duration Factor          | 1.00      |

**Notes**

Calculated Structured Designs is responsible only of the structural adequacy of this component based on the design criteria and loadings shown. It is the responsibility of the customer and/or the contractor to ensure the component suitability of the intended application, and to verify the dimensions and loads.

**Lumber**

1. Dry service conditions, unless noted otherwise
2. LVL not to be treated with fire retardant or corrosive

chemicals

**Handling & Installation**

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6. For flat roofs provide proper drainage to prevent ponding

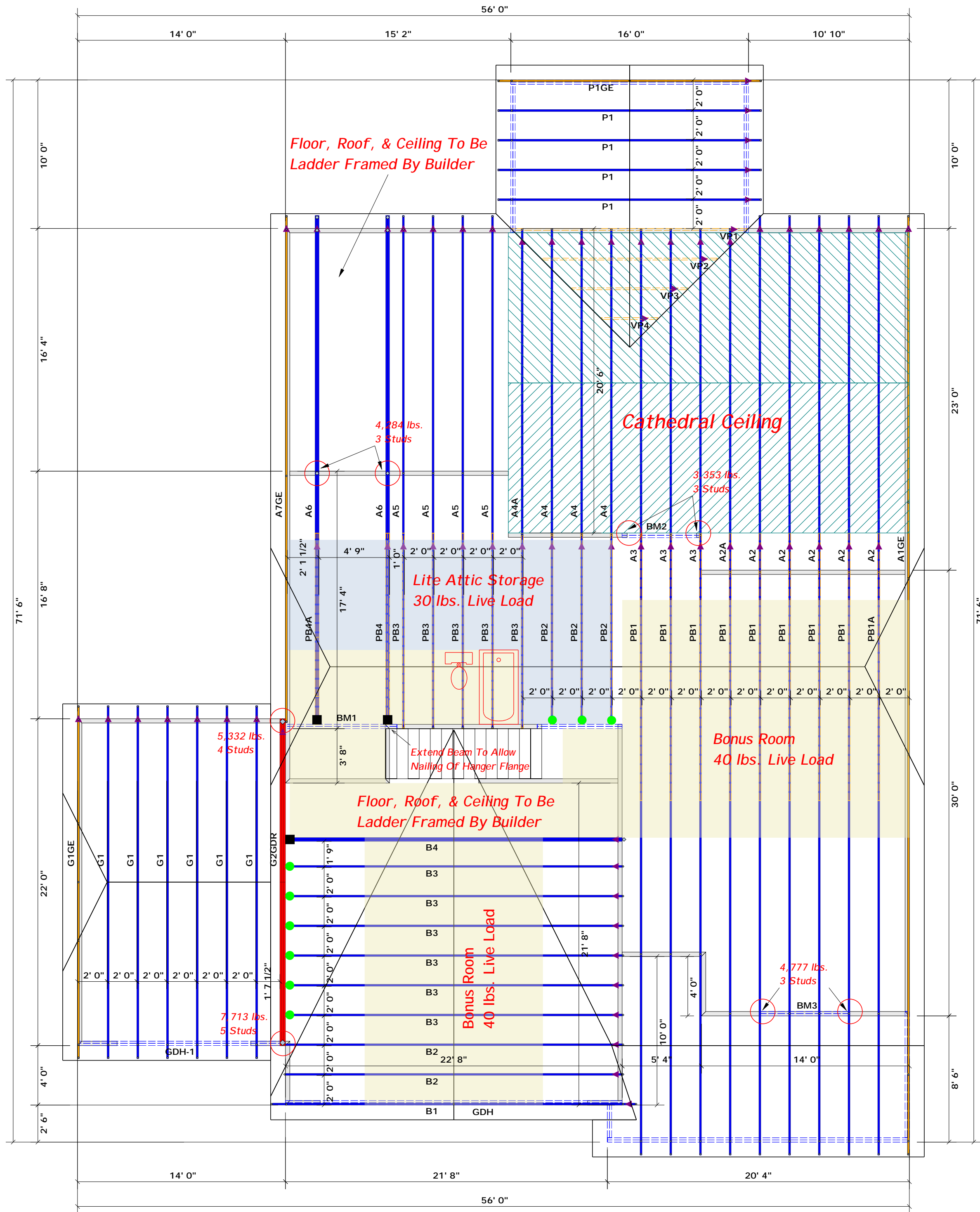
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 301 Merritt 7 Building, 2nd Floor  
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 (800) 622-5850  
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All Truss Reactions are Less than 3,000 lbs. Unless Noted Otherwise.

○ -- Denotes Reaction Greater than 3,000 lbs.

▲ = Denotes Left End of Truss (Reference Engineered Truss Drawing)  
Do Not Erect Trusses Backwards

Truss Placement Plan  
SCALE: 3/16" = 1'

**HANGER LEGEND**

|   |                                  |
|---|----------------------------------|
| ■ | = USP THD28-2 / Double 2x Hanger |
| ● | = USP HUS26 / Single 2x Hanger   |

**Beam Legend**

| PlotID | Length | Product                     | Plies | Net Qty |
|--------|--------|-----------------------------|-------|---------|
| BM1    | 8' 0"  | 1-3/4"x 9-1/4" LVL Kerto-S  | 2     | 2       |
| BM3    | 7' 0"  | 1-3/4"x 9-1/4" LVL Kerto-S  | 2     | 2       |
| BM2    | 6' 0"  | 1-3/4"x 9-1/4" LVL Kerto-S  | 2     | 2       |
| GDH-1  | 14' 0" | 1-3/4"x 11-7/8" LVL Kerto-S | 2     | 2       |
| GDH    | 23' 0" | 1-3/4"x 14" LVL Kerto-S     | 2     | 2       |

**LOAD CHART FOR JACK STUDS**

| MEMBER | SPACING | LOAD  | MEMBER | SPACING | LOAD  |
|--------|---------|-------|--------|---------|-------|
| 1700   | 1       | 2550  | 3400   | 2       | 5100  |
| 3400   | 2       | 5100  | 5100   | 3       | 7650  |
| 5100   | 3       | 7650  | 6800   | 4       | 10200 |
| 6800   | 4       | 10200 | 8500   | 5       | 12750 |
| 8500   | 5       | 12750 | 10200  | 6       | 15300 |
| 10200  | 6       | 15300 | 11900  | 7       |       |
| 11900  | 7       |       | 13600  | 8       |       |
| 13600  | 8       |       | 15300  | 9       |       |

|           |                                     |
|-----------|-------------------------------------|
| BUILDER   | Weaver Development Co. Inc.         |
| JOB NAME  | Lot 2W Williams Farm                |
| PLAN      | The Lauren H / Elev. B / CP / 3 Car |
| SEAL DATE | 2/24/20                             |
| QUOTE #   | Quote #                             |
| JOB #     | J0521-2783                          |

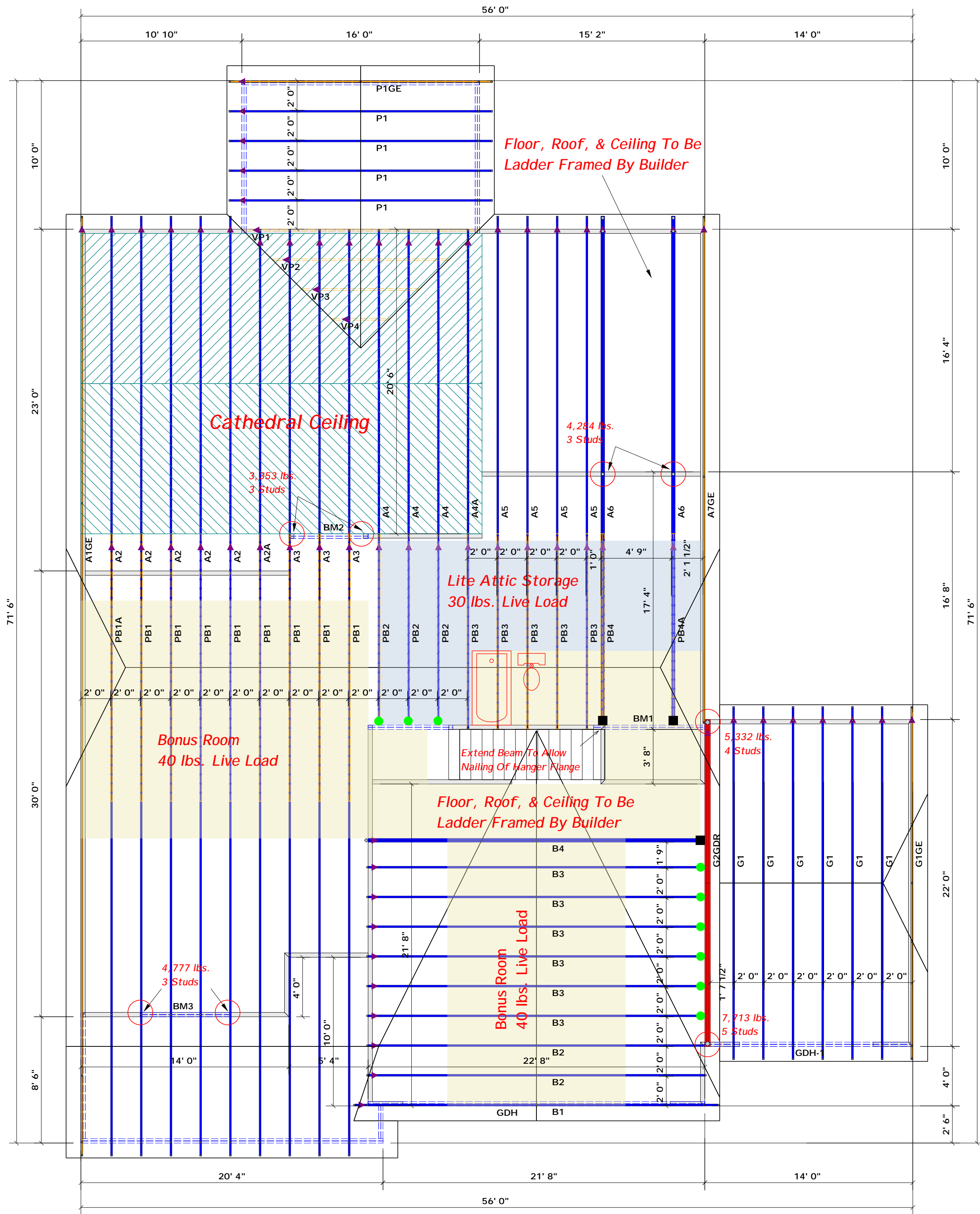
|            |                       |
|------------|-----------------------|
| CITY / CO. | Harnett Co. / Harnett |
| ADDRESS    | Lot 2W Williams Farm  |
| MODEL      | Roof                  |
| DATE REV.  | 05/07/21              |
| DRAWN BY   | Curtis Quick          |
| SALES REP. | Lenny Norris          |

THIS IS A TRUSS PLACEMENT DIAGRAM ONLY. These trusses are designed as individual building components to be incorporated into the building design at the specification of the building designer. See individual design sheets for each truss design identified on the placement drawing. The building designer is responsible for temporary and permanent bracing of the roof and floor system and for the overall structure. The design of the truss support structure including headers, beams, walls, and columns is the responsibility of the building designer. For general guidance regarding bracing, consult BCSH-B1 and BCSH-B3 provided with the truss delivery package or online @ sbcindustry.com

Bearing reactions less than or equal to 3000# are deemed to comply with the prescriptive Code requirements. The contractor shall refer to the attached Tables (derived from the prescriptive Code requirements) to determine the minimum foundation size and number of wood studs required to support reactions greater than 3000# but not greater than 15000#. A registered design professional shall be retained to design the support system for any reaction that exceeds those specified in the attached Tables. A registered design professional shall be retained to design the support system for all reactions that exceed 15000#.

Signature: Curtis Quick  
Curtis Quick

**ROOF & FLOOR TRUSSES & BEAMS**  
Reilly Road Industrial Park  
Fayetteville, N.C. 28309  
Phone: (910) 864-8787  
Fax: (910) 864-4444



All Truss Reactions are Less than 3,000 lbs. Unless Noted Otherwise.

○ -- Denotes Reaction Greater than 3,000 lbs.

▲ = Denotes Left End of Truss (Reference Engineered Truss Drawing)  
Do Not Erect Trusses Backwards

Truss Placement Plan  
SCALE: 3/16" = 1'

**HANGER LEGEND**

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- = USP HUS26 / Single 2x Hanger

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| 8500   | 5       | 12750 | 10200  | 6       | 15300 |
| 10200  | 6       | 15300 |        |         |       |
| 11900  | 7       |       |        |         |       |
| 13600  | 8       |       |        |         |       |
| 15300  | 9       |       |        |         |       |

|                  |                                     |                   |                       |
|------------------|-------------------------------------|-------------------|-----------------------|
| <b>BUILDER</b>   | Weaver Development Co. Inc.         | <b>CITY / CO.</b> | Harnett Co. / Harnett |
| <b>JOB NAME</b>  | Lot 2W Williams Farm                | <b>ADDRESS</b>    | Lot 2W Williams Farm  |
| <b>PLAN</b>      | The Lauren H / Elev. B / CP / 3 Car | <b>MODEL</b>      | Roof                  |
| <b>SEAL DATE</b> | 2/24/20                             | <b>DATE REV.</b>  | 05/07/21              |
| <b>QUOTE #</b>   | Quote #                             | <b>DRAWN BY</b>   | Curtis Quick          |
| <b>JOB #</b>     | J0521-2783                          | <b>SALES REP.</b> | Lenny Norris          |

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