

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

MEAN ROOF HEIGHT: 17'-2" HEIGHT TO RIDGE: 25'-6"

CLIMATE ZONE	ZONE 3A	ZONE 4A	ZONE 5A
PENETRATION U-FACTOR	0.35	0.35	0.35
SKYLIGHT U-FACTOR	0.55	0.55	0.55
GLAZED PENETRATION SPEC.	0.30	0.30	0.30
CEILING R-VALUE	38 or 30cd	38 or 30cd	38 or 30cd
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

\* 1/4"1/2" MEANS R-10 SHEATHING INSULATION OR R-13 CAVITY INSULATION  
\*\* INSULATION DEPTH WITH MONOLITHIC SLAB 2" OR FROM INSPECTION GAP TO BOTTOM OF FOOTING; INSULATION DEPTH WITH 5TH STORY SLAB 2" OR TO BOTTOM OF FOUNDATION WALL  
DESIGNED FOR WIND SPEED OF 120 MPH, 3 SECOND GUST (90 FASTEST MEAN 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	15.5	-16.4	15.9	-16.8
ZONE 2	14.2	-18.0	14.9	-18.9	15.5	-19.6	15.9	-20.2
ZONE 3	14.2	-18.0	14.9	-18.9	15.5	-19.6	15.9	-20.2
ZONE 4	15.5	-16.0	16.3	-16.8	16.9	-17.4	17.4	-17.9
ZONE 5	15.5	-20.0	16.3	-21.0	16.9	-21.8	17.4	-22.4

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	18.1	-19.6	18.7	-20.2
ZONE 2	16.7	-21.0	17.5	-22.1	18.2	-22.9	18.7	-23.5
ZONE 3	16.7	-21.0	17.5	-22.1	18.2	-22.9	18.7	-23.5
ZONE 4	18.2	-19.0	19.1	-20.0	19.8	-20.7	20.4	-21.3
ZONE 5	18.2	-24.0	19.1	-25.2	19.8	-26.2	20.4	-26.9

**ROOF VENTILATION**

SECTION R806

SQUARE FOOTAGE OF ROOF TO BE VENTED = 2,111 SQ.FT.  
NET FREE CROSS VENTILATION NEEDED:  
WITHOUT 50% TO 80% OF VENTING 3'-0" ABOVE EAWE = 14.07 SQ.FT.  
WITH 50% TO 80% OF VENTING 3'-0" ABOVE EAWE; OR WITH CLASS 1 OR II VAPOR RETARDER ON WARM-IN-WINTER SIDE OF CEILING = 7.04 SQ.FT.

**GUARD RAIL NOTES**

SECTION R312

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

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

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

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

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

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

2. Guards on the open sides of stairs shall not have openings which allow passage of a sphere 43/8 inches (111 mm) in diameter.

**AIR LEAKAGE**

Section N1102.4

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

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

NOTICE TO CONTRACTOR  
All construction shall comply with the applicable Building Code and is subject to field inspection and verification.

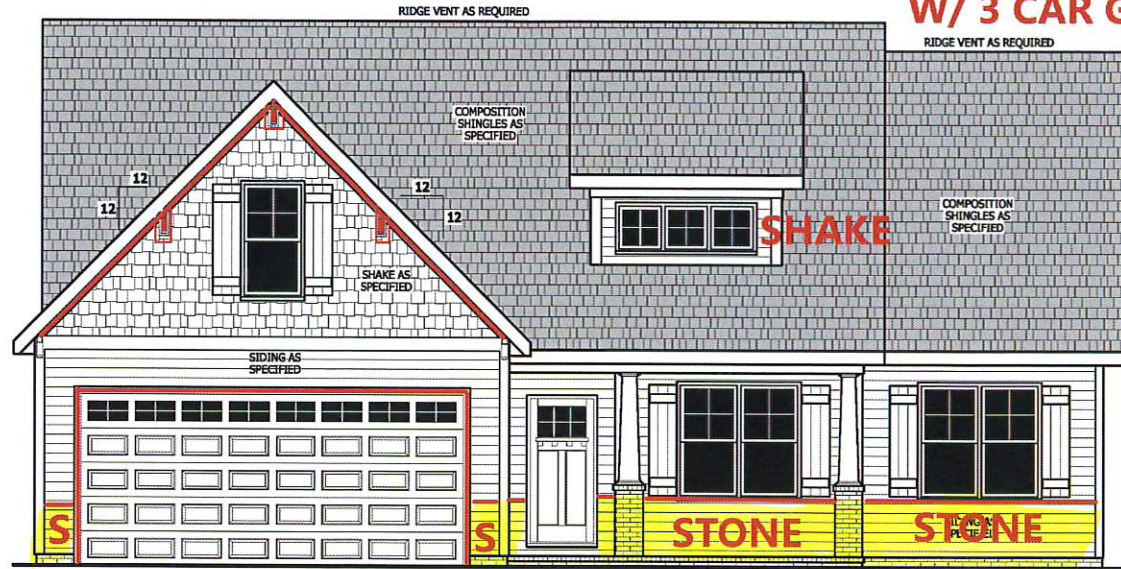
APPROVED

United Building, Inc.  
Permit holder responsible for  
compliance with the code.

04/20/2020

Harnett COUNTY  
NORTH CAROLINA

**MURRAY FARM 1-D  
W/ 3 CAR GARAGE**



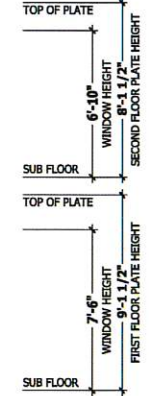
**FRONT ELEVATION**

SCALE 1/4" = 1'-0"



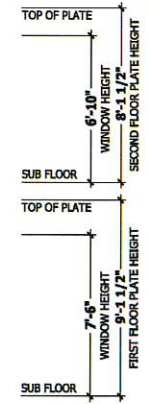
**REAR ELEVATION**

SCALE 1/4" = 1'-0"



**SQUARE FOOTAGE**

HEATED	1351 SQ.FT.
FIRST FLOOR	1351 SQ.FT.
PLATFOOM	221 SQ.FT.
TOTAL	1572 SQ.FT.
HEATED OPTIONAL	
HALF BATH	28 SQ.FT.
TOTAL	28 SQ.FT.
UNHEATED	
FRONT PORCH	134 SQ.FT.
GARAGE	447 SQ.FT.
REAR PORCH	113 SQ.FT.
TOTAL	694 SQ.FT.
UNHEATED OPTIONAL	
THIRD GARAGE	307 SQ.FT.
TOTAL	307 SQ.FT.



FRONT & REAR ELEVATIONS  
**SINCLAIR**

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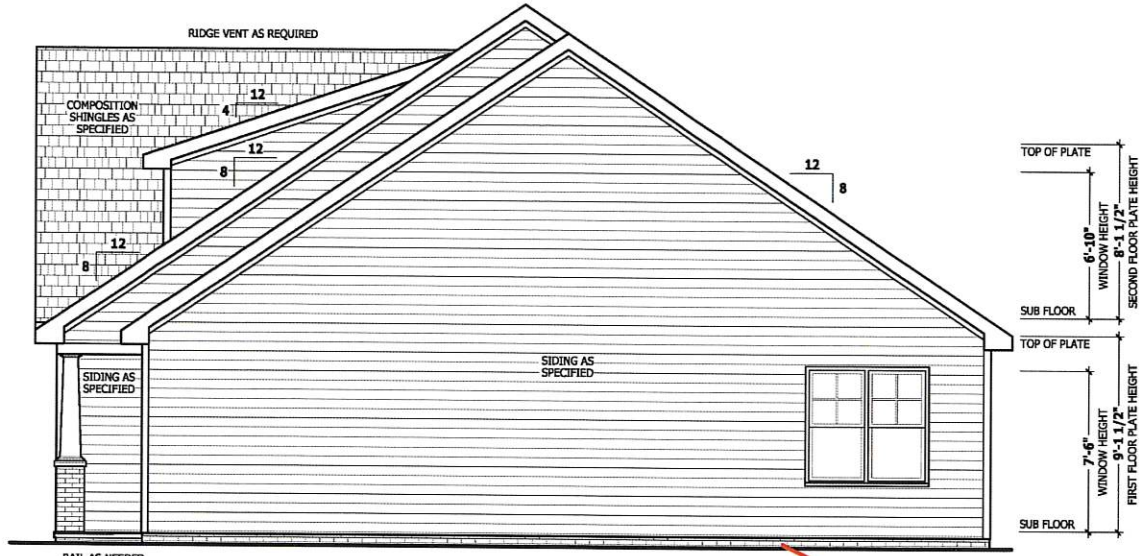
SQUARE FOOTAGE

HEATED	1351 SQ.FT.
FIRST FLOOR	1351 SQ.FT.
PLATFOOM	221 SQ.FT.
TOTAL	1572 SQ.FT.
HEATED OPTIONAL	
HALF BATH	28 SQ.FT.
TOTAL	28 SQ.FT.
UNHEATED	
FRONT PORCH	134 SQ.FT.
GARAGE	447 SQ.FT.
REAR PORCH	113 SQ.FT.
TOTAL	694 SQ.FT.
UNHEATED OPTIONAL	
THIRD GARAGE	307 SQ.FT.
TOTAL	307 SQ.FT.

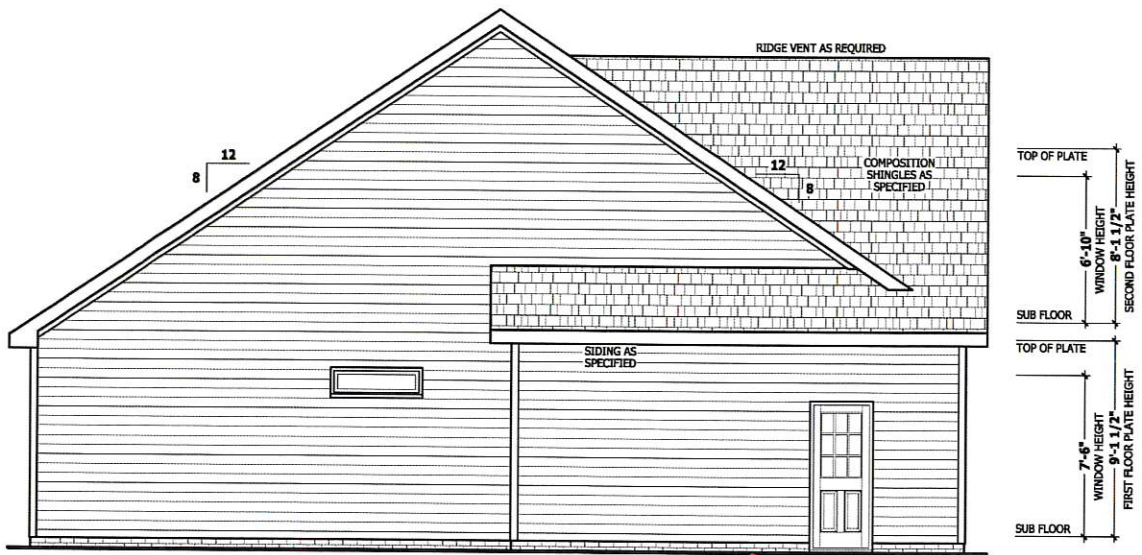
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**5/31/2019**  
**190320B**  
**PAGE 1 OF 8**



PURCHASER MUST VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE CONSTRUCTION BEGINS.  
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**RIGHT SIDE ELEVATION** PARGE  
 SCALE 1/4" = 1'-0"



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

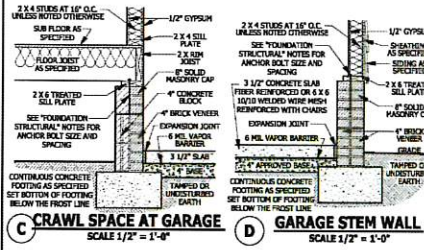
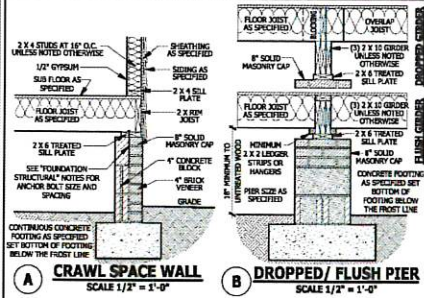
**LEFT & RIGHT ELEVATIONS**  
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 P.O. BOX 102, WAKE FOREST, NC 27388, 919-455-4100 FAX 919-455-4109

SQUARE FOOTAGE	
HEATED	
FIRST FLOOR	1581.50 SQ. FT.
REAR PORCH	23.25 SQ. FT.
TOTAL	1604.75 SQ. FT.
UNHEATED	
FRONT PORCH	28.50 SQ. FT.
REAR PORCH	28.50 SQ. FT.
TOTAL	57.00 SQ. FT.
UNHEATED OPTIONAL	
FRONT PORCH	134.50 SQ. FT.
REAR PORCH	44.50 SQ. FT.
TOTAL	179.00 SQ. FT.
FINISHED GARAGE	302.50 SQ. FT.
TOTAL	302.50 SQ. FT.



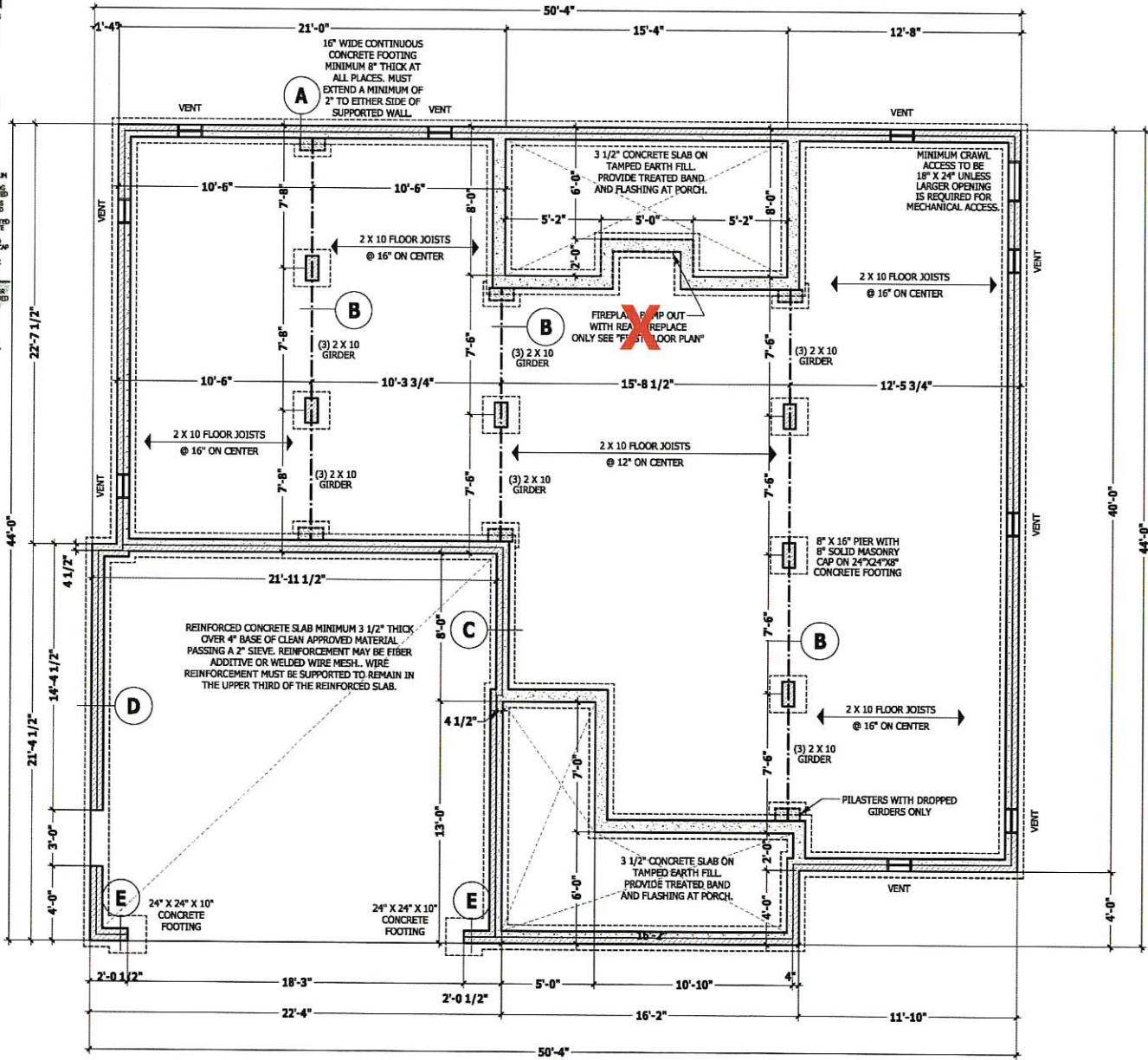


**FOUNDATION STRUCTURAL**

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:** [Symbol] 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.

**WALL VENTED CRAWL SPACES**

**UNDER-FLOOR SPACE (SECTION R408)**  
 SQUARE FOOTAGE OF FOUNDATION TO BE VENTED = 1,296 SQ.FT.  
 WITHOUT CROSS VENTILATION AREA OF VENTING NEEDED = 8.64 SQ.FT.  
 WITH CROSS VENTILATION AREA OF VENTING NEEDED = 0.864 SQ.FT.  
 NOTE: NUMBER OF VENTS NEED WILL VARY DEPENDING ON VENTS USED AND CROSS VENTILATION.



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

PURCHASER MUST VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE CONSTRUCTION BEGINS.  
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 THESE DRAWINGS ARE INSTRUMENTS OF SERVICE AND AS SUCH SHALL REMAIN PROPERTY OF THE DESIGNER.

**FOUNDATION PLAN**  
**SINCLAIR**

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**SQUARE FOOTAGE**

HEATED FIRST FLOOR	1351 SQ.FT.
PORCH	222 SQ.FT.
TOTAL	1573 SQ.FT.
HEATED OPTIONAL	
WALL PORCH	28 SQ.FT.
TOTAL	1601 SQ.FT.
UNHEATED	
PIERCE PORCH	134 SQ.FT.
GAZEBO	448 SQ.FT.
REAR PORCH	113 SQ.FT.
TOTAL	705 SQ.FT.
UNHEATED OPTIONAL	
THIRD GARAGE	302 SQ.FT.
TOTAL	1007 SQ.FT.







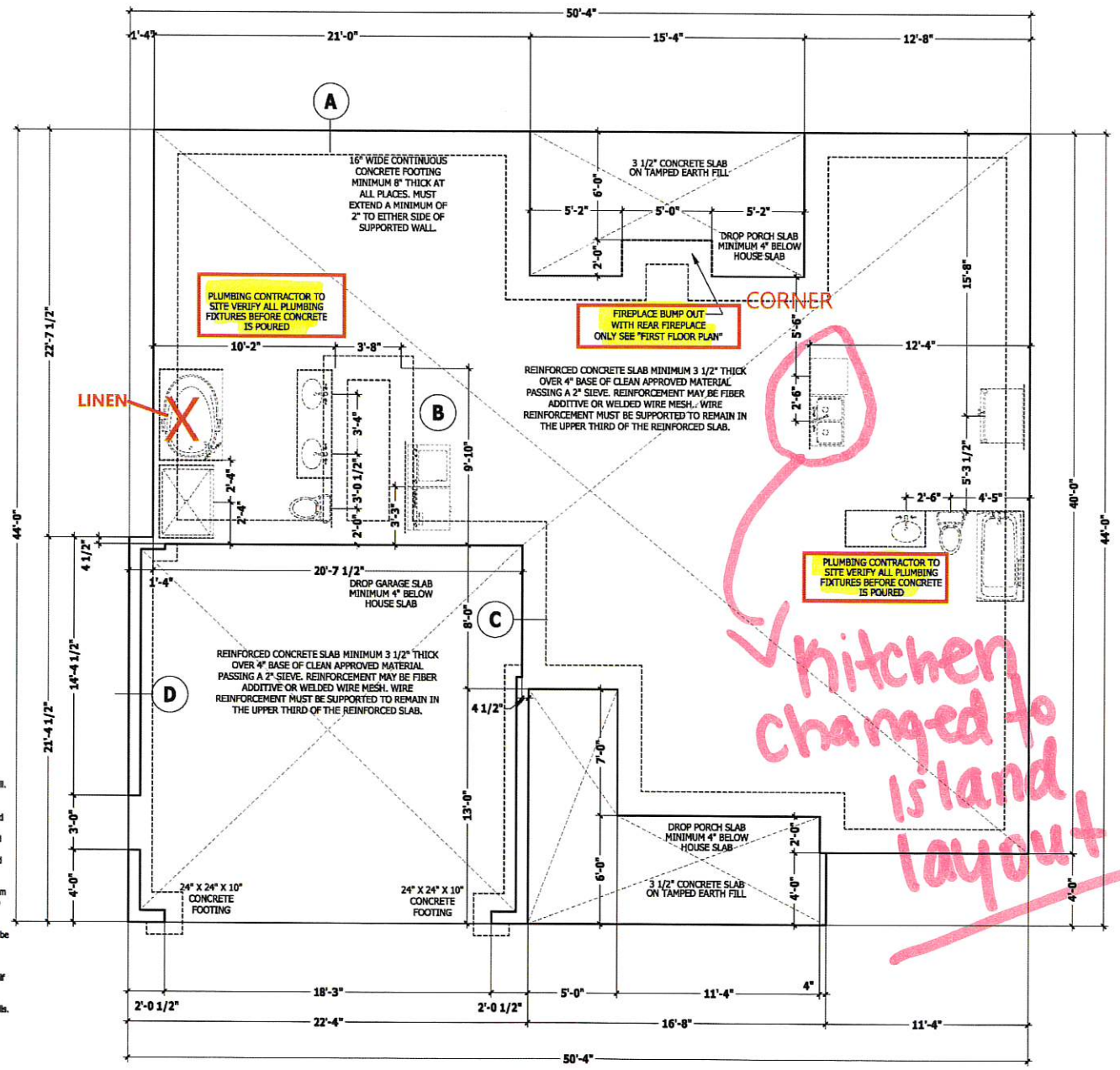
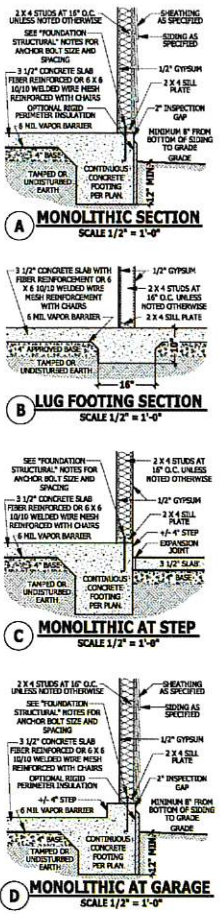
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**MONOLITHIC SLAB PLAN**  
**SINCLAIR**

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1000 Peachtree Lakes • Atlanta, GA 30328

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SQUARE FOOTAGE	
HEATED	
FIRST FLOOR	1381.90 SQ. FT.
REAR PORCH	467.50 SQ. FT.
TOTAL	1849.40 SQ. FT.
UNHEATED	
REAR PORCH	134.50 SQ. FT.
GARAGE	447.50 SQ. FT.
TOTAL	582.00 SQ. FT.
UNHEATED OPTIONAL	
REAR PORCH	134.50 SQ. FT.
TOTAL	582.00 SQ. FT.
REAR PORCH	134.50 SQ. FT.
TOTAL	582.00 SQ. FT.



**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.  
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**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.  
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**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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FIRST FLOOR PLAN  
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**SQUARE FOOTAGE**

HEATED	1351 SQ.FT.
FIRST FLOOR	1351 SQ.FT.
PLAYROOM	221 SQ.FT.
TOTAL	1572 SQ.FT.
HEATED OPTIONAL	
HALF BATH	28 SQ.FT.
TOTAL	28 SQ.FT.
UNHEATED	28 SQ.FT.
FRONT PORCH	134 SQ.FT.
GARAGE	447 SQ.FT.
REAR PORCH	113 SQ.FT.
TOTAL	694 SQ.FT.
UNHEATED OPTIONAL	
THIRD GARAGE	307 SQ.FT.
TOTAL	307 SQ.FT.

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**5/31/2019**  
**1903208**  
**PAGE 4 OF 8**

**DWELLING / GARAGE SEPARATION**

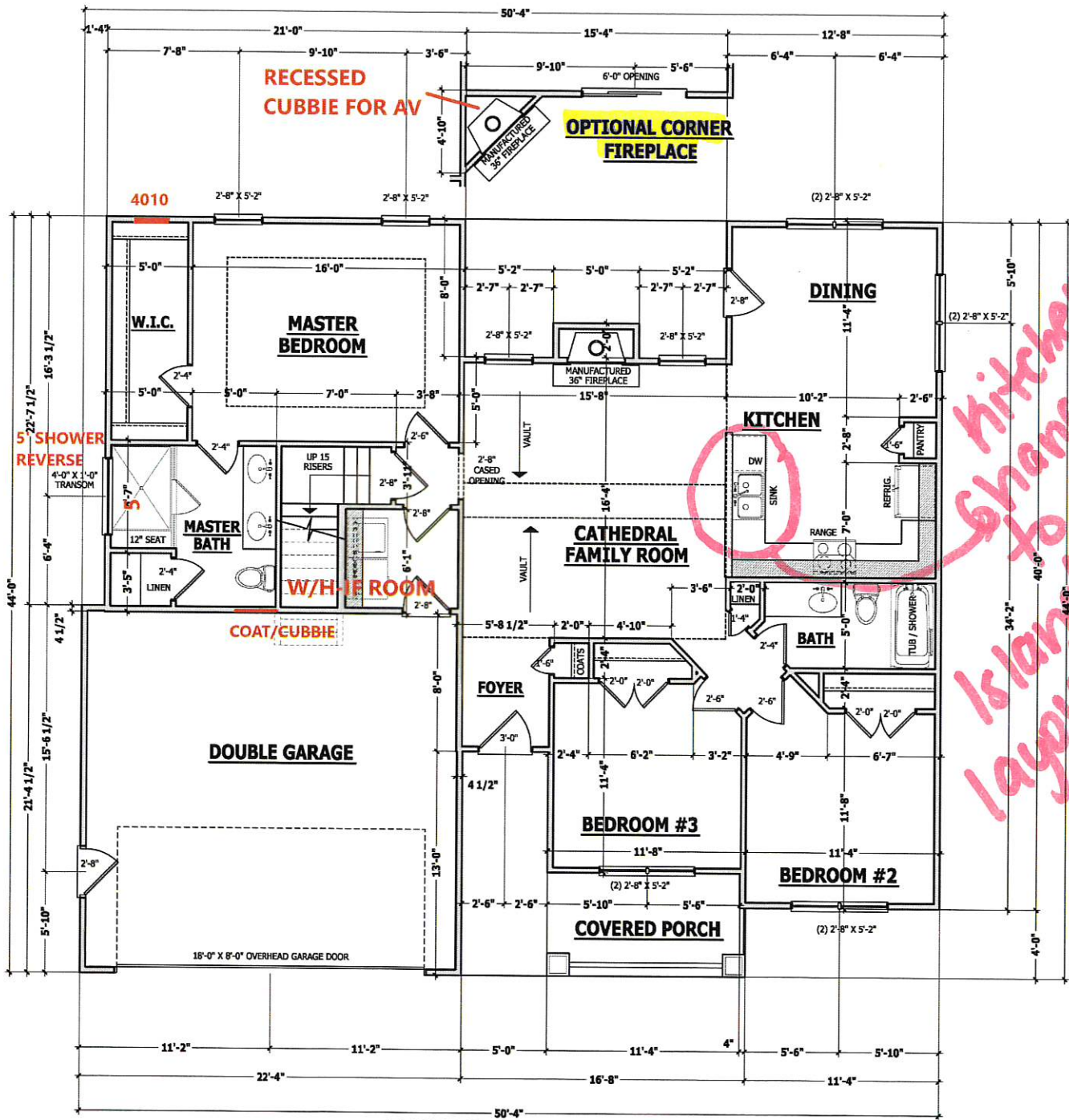
REFER TO SECTIONS R302.5, R302.6, AND R302.7  
**WALLS.** A minimum 1/2" gypsum board must be installed on all walls supporting floor/ceiling assemblies used for separation required by this section.  
**STAIRS.** A minimum of 1/2" gypsum board must be installed on the underside and exposed sides of all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

**WALL THICKNESSES**

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

**SQUARE FOOTAGE**

HEATED	1351 SQ.FT.
FIRST FLOOR	1351 SQ.FT.
PLAYROOM	221 SQ.FT.
TOTAL	1572 SQ.FT.
HEATED OPTIONAL	
HALF BATH	28 SQ.FT.
TOTAL	28 SQ.FT.
UNHEATED	
FRONT PORCH	134 SQ.FT.
GARAGE	447 SQ.FT.
REAR PORCH	113 SQ.FT.
TOTAL	694 SQ.FT.
UNHEATED OPTIONAL	
THIRD GARAGE	307 SQ.FT.
TOTAL	307 SQ.FT.



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







## STRUCTURAL NOTES

All construction shall conform to the latest requirements of the 2018 North Carolina Residential Building Code, plus all local codes and regulations. This document in no way shall be construed to supersede the code.

**JOBSITE PRACTICES AND SAFETY:** Haynes Home Plans, Inc. assumes no liability for contractors practices and procedures or safety program. Haynes Home Plans, Inc. takes no responsibility for the contractor's failure to carry out the construction work in accordance with the contract documents. All members shall be framed, anchored, and braced in accordance with good construction practice and the building code.

DESIGN LOADS	LIVE LOAD (PSF)	DEAD LOAD (PSF)	DEFLECTION (L)
Attics without storage	10	10	L/240
Attics with limited storage	20	10	L/360
Attics with fixed stairs	40	10	L/360
Balconies and decks	40	10	L/360
Fine escapes	40	10	L/360
Guardrails and handrails	200	-	-
Guardrail in-fill components	50	-	-
Passenger vehicle garages	50	10	L/360
Rooms other than sleeping	40	10	L/360
Sleeping rooms	30	10	L/360
Stairs	40	-	L/360
Snow	20	-	-

**FRAMING LUMBER:** All non treated framing lumber shall be SPF #2 (Fb = 875 PSI) or SYP #2 (Fb = 750 PSI) and all treated lumber shall be SYP #2 (Fb = 750 PSI) unless noted otherwise.

### ENGINEERED WOOD BEAMS:

Laminated veneer lumber (LVL) = Fb=2600 PSI, Pv=285 PSI, E=1.9x10<sup>6</sup> PSI  
Parallel strand lumber (PSL) = Fb=2900 PSI, Pv=290 PSI, E=2.0x10<sup>6</sup> PSI  
Laminated strand lumber (LSL) = Fb=2250 PSI, Pv=400 PSI, E=1.55x10<sup>6</sup> PSI  
Install all connectors per manufacturer's instructions.

**TRUSS AND I-JOIST MEMBERS:** All roof truss and I-joist layouts shall be prepared in accordance with this document. Trusses and I-joists shall be installed according to the manufacturer's specifications. Any change in truss or I-joist layout shall be coordinated with Haynes Home Plans, Inc.

**LINTELS:** Brick lintels shall be 3 1/2" x 3 1/2" x 1/4" steel angle for up to 6'-0" span, 6" x 4" x 5/16" steel angle with 6" leg vertical for spans up to 9'-0" unless noted otherwise. 3 1/2" x 3 1/2" x 1/4" steel angle with 1/2" bolts at 2'-0" on center for spans up to 18'-0" unless noted otherwise.

**FLOOR SHEATHING:** OSB or CDX floor sheathing minimum 1/2" thick for 16" on center joist spacing, minimum 5/8" thick for 19.2" on center joist spacing, and minimum 3/4" thick for 24" on center joist spacing.

**ROOF SHEATHING:** OSB or CDX roof sheathing minimum 3/8" thick for 16" on center rafters and 7/16" for 24" on center rafters.

**CONCRETE AND SOILS:** See foundation notes.

## 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 Plans, Inc. attention before construction begins.

**KNEE WALL AND CEILING HEIGHTS:** All finished knee wall heights and ceiling heights are shown turned down 10" from roof decking for insulation. If for any reason the truss manufacturer fails to meet or exceed designated feet heights, finished knee wall heights, 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.

## EXTERIOR HEADERS

- (2) 2 X 6 WITH 1 JACK STUD EACH END UNLESS NOTED OTHERWISE

- KING STUDS EACH END PER TABLE BELOW

HEADER SPAN	< 3'	3'-4'	4'-8'	8'-12'	12'-16'
KING STUD(S)	1	2	3	5	6

## INTERIOR HEADERS

- LOAD BEARING HEADERS (2) 2 X 6 WITH 1 JACK STUD AND 1 KING STUD EACH END UNLESS NOTED OTHERWISE

- NON LOAD BEARING HEADERS TO BE LADDER FRAMED

## ATTIC ACCESS

### SECTION R807

**R807.1 Attic access.** An attic access opening shall be provided to attic areas that exceed 400 square feet (37.16 m<sup>2</sup>) and have a vertical height of 60 inches (1524 mm) or greater. The net clear opening shall not be less than 20 inches by 30 inches (508 mm by 762 mm) and shall be located in a hallway or other readily accessible location. A 30-inch (762 mm) minimum unobstructed headroom in the attic space shall be provided at some point above the access opening. See Section M1305.1.3 for access requirements where mechanical equipment is located in attics.

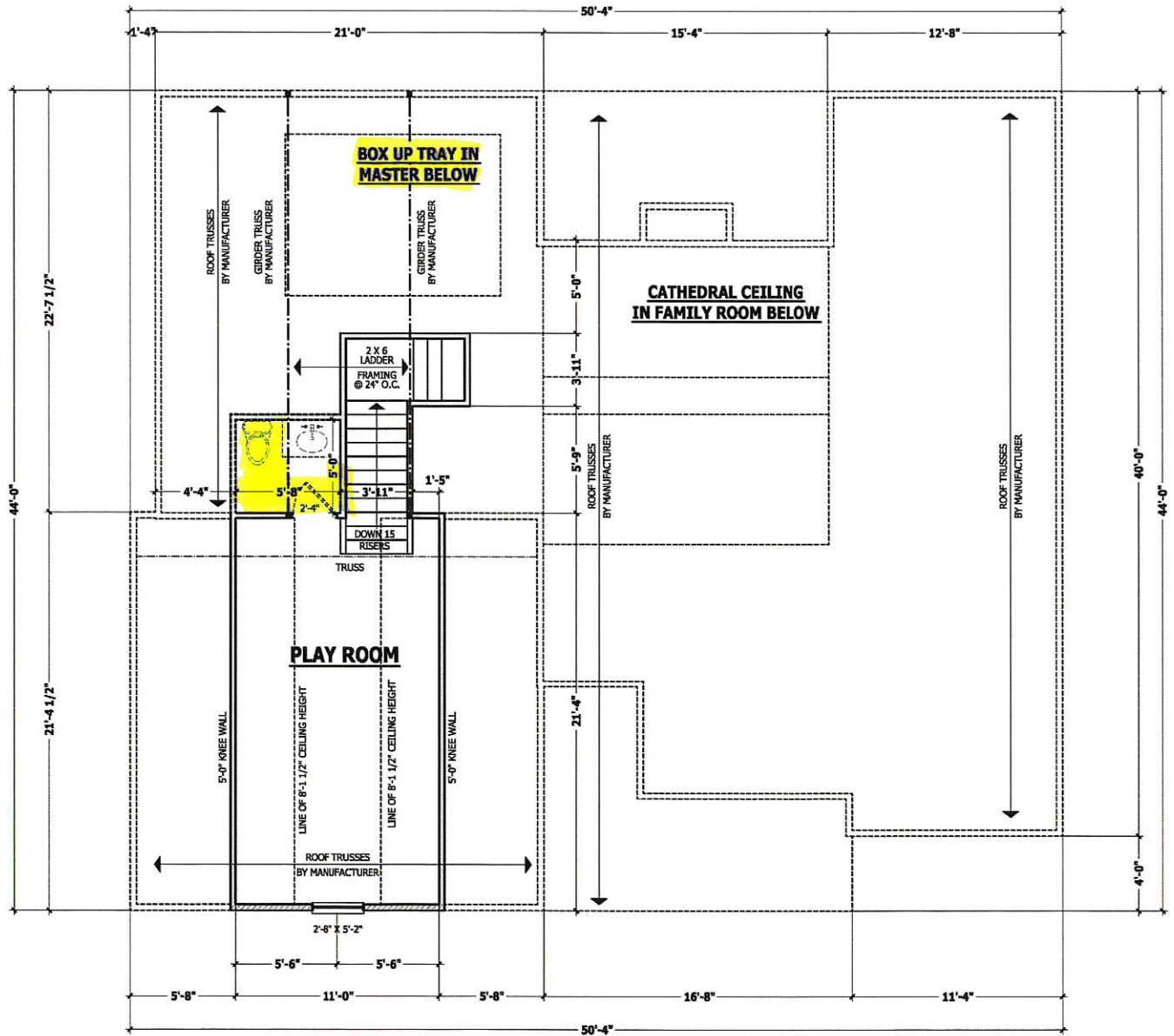
### Exceptions:

1. Concealed areas not located over the main structure including porches, areas behind knee walls, dormers, bay windows, etc. are not required to have access.
2. Pull down stair treads, stringers, handrails, and hardware may protrude into the net clear opening.

## WALL THICKNESSES

Exterior walls and walls adjacent to a garage area are drawn as 4" or as noted 2 X 6 are drawn as 6" to include 1/2" sheathing or gypsum. Subtract 1/2" for stud face.

Interior walls are drawn as 3 1/2" or as noted 2 X 6 are drawn as 5 1/2", and do not include gypsum.



## SECOND FLOOR PLAN

SCALE 1/4" = 1'-0"

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

SECOND FLOOR PLAN  
SINCLAIR

HAYNES WEAVER HOMES  
HOME PLANS, INC.  
910.630.2100 • 919.606.4696  
1702 BOWLING GREEN FOREST, WILMINGTON, NC 28408

SQUARE FOOTAGE	
FIRST FLOOR	1301 SQ.FT.
SECOND FLOOR	1272 SQ.FT.
TOTAL	2573 SQ.FT.
HEATED OPTIONAL	
HALF BATH	28 SQ.FT.
UNHEATED	28 SQ.FT.
FRONT PORCH	124 SQ.FT.
SCREENED	440 SQ.FT.
REAR PORCH	113 SQ.FT.
TOTAL	585 SQ.FT.
UNHEATED OPTIONAL	
TRUSS GARAGE	207 SQ.FT.
TOTAL	792 SQ.FT.

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5/31/2019  
190320B  
PAGE 6 OF 8



### 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 Plans, Inc. attention before construction begins.

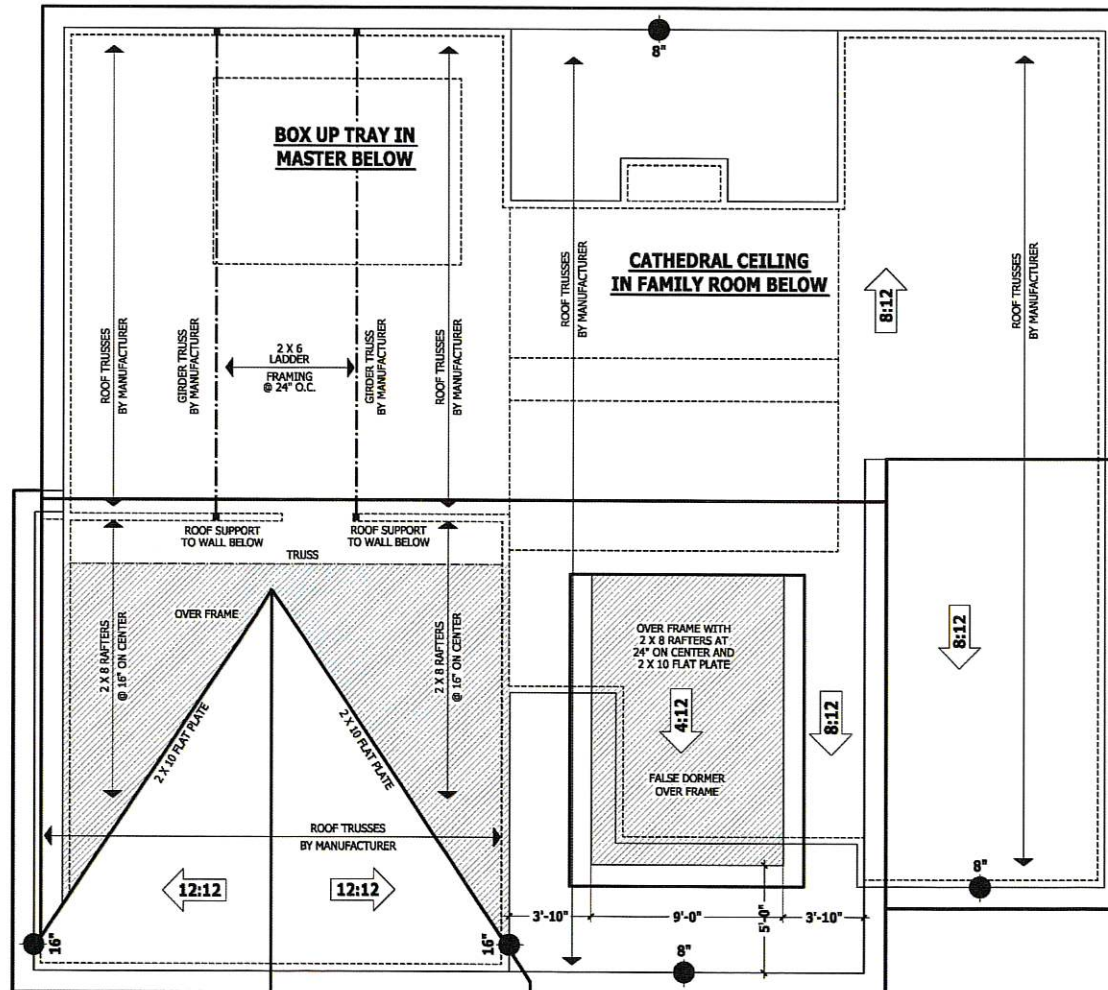
**KNEE WALL AND CEILING HEIGHTS.** All finished knee wall heights and ceiling heights are shown furred down 10" from roof decking for insulation. If for any reason the truss manufacturer fails to meet or exceed designated heel heights, finished knee wall heights, or finished ceiling heights shown on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

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

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

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

- HEEL HEIGHT ABOVE FIRST FLOOR PLATE
- HEEL HEIGHT ABOVE SECOND FLOOR PLATE



### ROOF PLAN

SCALE 1/4" = 1'-0"

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

ROOF PLAN  
**SINCLAIR**

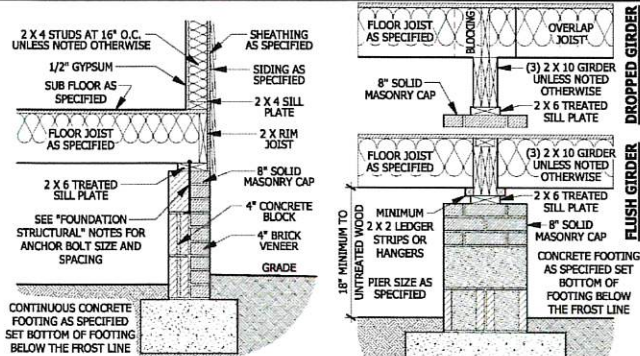
**HAYNES WEAVER HOMES**  
HOME PLANS, INC.  
910-630-2100 • 919-606-4696

**HAYNES HOME PLANS, INC.**  
P.O. BOX 102, LIME ROCK, NC 27888 919-636-1180 FAX 919-636-4143

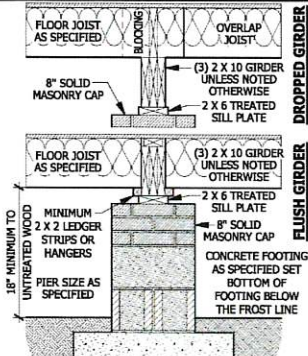
SQUARE FOOTAGE	
HEATED FIRST FLOOR	1351 SQ. FT.
PLANITEX	225 SQ. FT.
TOTAL HEATED	1577 SQ. FT.
UNHEATED	28 SQ. FT.
TOTAL	1605 SQ. FT.
PORCH PERCH	134 SQ. FT.
GARAGE	313 SQ. FT.
REAR PORCH	210 SQ. FT.
UNHEATED OPTIONAL	307 SQ. FT.
TOTAL GARAGE	307 SQ. FT.
TOTAL	1912 SQ. FT.

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**5/31/2019**  
**1903208**  
**PAGE 7 OF 8**

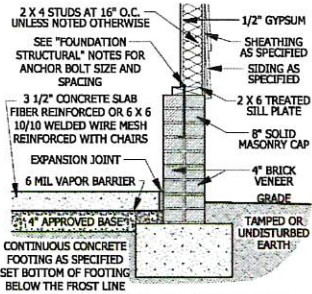




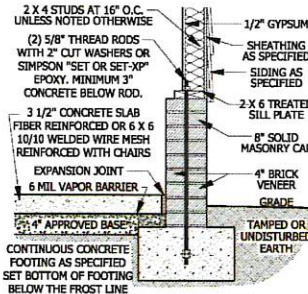
**A CRAWL SPACE WALL**  
SCALE 3/4" = 1'-0"



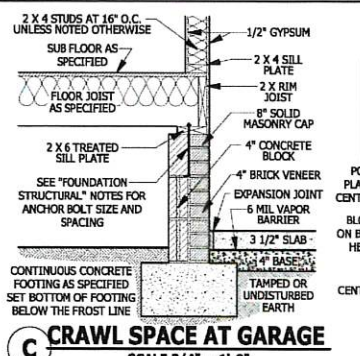
**B DROPPED/ FLUSH PIER**  
SCALE 3/4" = 1'-0"



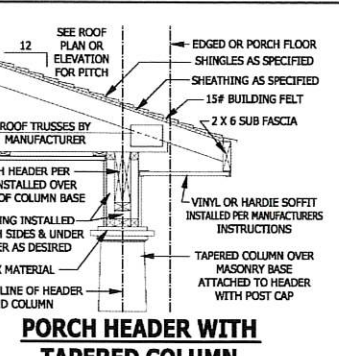
**D GARAGE STEM WALL**  
SCALE 3/4" = 1'-0"



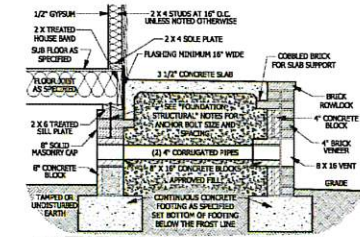
**E <48\"/>**



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



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



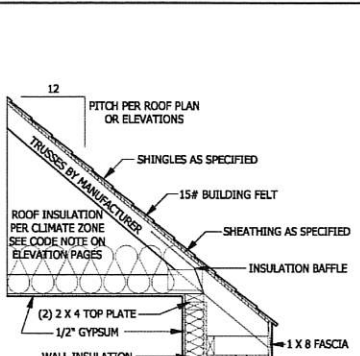
**F FILLED PORCH SECTION WITH VENT**  
SCALE 1/2" = 1'-0"

**CARBON MONOXIDE ALARMS**

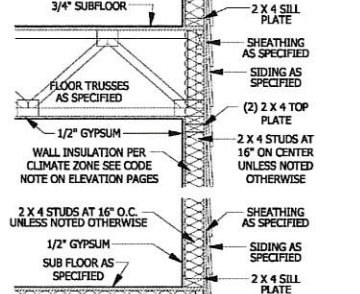
**SECTION R315**  
**R315.1 Carbon monoxide alarms.** In new construction, dwelling units shall be provided with an approved carbon monoxide alarm installed outside of each separate sleeping area in the immediate vicinity of the bedroom(s) as directed by the alarm manufacturer.  
**R315.2** Where required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

**STAIRWAY NOTES**

**R311.7**  
**R311.7.2 Handrails.** The minimum handrail in all parts of the stairway shall not be less than 5 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 dimensional 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 treads' 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 treads.  
**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 casing shall be allowed over the lowest tread.  
 2. When handrail fittings or bindings are used to provide continuous transition between the treads, the transition from handrail to guardrail, or used at the start of a flight, the handrail height at the fittings or bindings 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 self-terminate in newel posts or safety terminals. Handrails adjacent to a wall shall have a space of not less than 1 1/2 inch (38 mm) between the wall and the handrails.  
**Exceptions:**  
 1. Handrails shall be permitted to be interrupted by a newel post.  
 2. The use of a volute, turnout, starting casing 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.



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



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

**DECK STAIR NOTES**

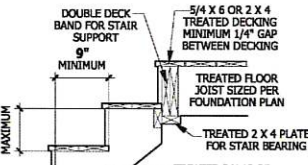
**SECTION AM110**  
**AM110.1** Stairs shall be constructed per Figure AM110. Stringer spans shall be no greater than 7 foot span between supports. Spacing between stringers shall be based upon decking material used per AM107.1. Each Stringer shall have minimum 3 1/2 inches between step out and back of stringer. If used, suspended handrails shall be attached with 5/8 inch galvanized bolts with nuts and washers to securely support stringers at the top.

**DECK BRACING**

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

POST SIZE	EMBEDMENT DEPTH	MINIMUM HEIGHT	MINIMUM DENSITY	MINIMUM CONCRETE DIAMETER
4 X 4	48 SF	4'-0"	2'-6"	1'-0"
6 X 6	120 SF	6'-0"	3'-6"	1'-8"

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



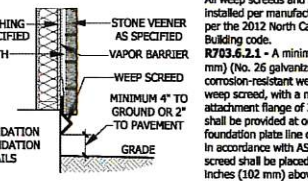
**FIGURE AM110 TYPICAL DECK STAIR DETAIL**  
SCALE 3/4" = 1'-0"

**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 this code include smoke alarms, or a combination of smoke detector and audible notification device, or a combination of smoke detector and audible notification device. 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.  
**Exceptions:** 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 attic (finished) but not including crawl spaces, unhabitable (unfinished) attics and unhabitable (unfinished) attic stories. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.  
 When more than one smoke alarm is required to be installed within an individual dwelling unit the alarm devices shall be interconnected in such a manner that the activation of one alarm will activate all of the alarms in the individual unit.  
**R314.4 Power source.** Smoke alarms shall receive their primary power from the building wiring when such wiring is served from a commercial source, and when primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection. Smoke alarms shall be interconnected.

**WEEP SCREDS**

All weep screeds and stone veneer to be installed per manufacturers instructions and per the 2012 North Carolina Residential Building code.  
**R703.6.2.1 - A** minimum 0.019-inch (0.5 mm) (No. 26 galvanized steel gage), corrosion-resistant weep screed or plastic weep screed, with a minimum vertical attachment flange of 3/12 inches (89 mm) shall be provided at or below the foundation plate line on exterior stud walls in accordance with ASTM C 926. The weep screed shall be placed a minimum of 4 inches (102 mm) above the earth or 2 inches (51 mm) above paved areas and shall be of a type that will allow trapped water to drain to the exterior of the building. The weather-resistant barrier shall lap the attachment flange. The exterior lath shall cover and terminate on the attachment flange of the weep screed.



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

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

**TYPICAL DETAILS**  
**SINCLAIR**

**HAYNES WEAVER HOMES HOME PLANS, INC.**  
 910.630.2100 • 919.606.4696  
 1700 W. 702nd • WAREHOUSING, NC 27586 • 919.455.9138

**HOME PLANS, INC.**  
 1700 W. 702nd • WAREHOUSING, NC 27586 • 919.455.9138

**SQUARE FOOTAGE**

HEATED	UNHEATED
FIRST FLOOR	1381 SQ FT
SECOND FLOOR	402 SQ FT
TOTAL	1783 SQ FT
HEATED OPTIONAL	
1/2 BATH	78 SQ FT
1/2 BATH	78 SQ FT
UNHEATED OPTIONAL	
PORCH/PORCH	124 SQ FT
SCREENED	402 SQ FT
REAR PORCH	133 SQ FT
SCREENED	89 SQ FT
TOTAL	307 SQ FT







Weaver Homes  
 Sinclair Left 2020 Plan  
 Kitchen 36" WALLS

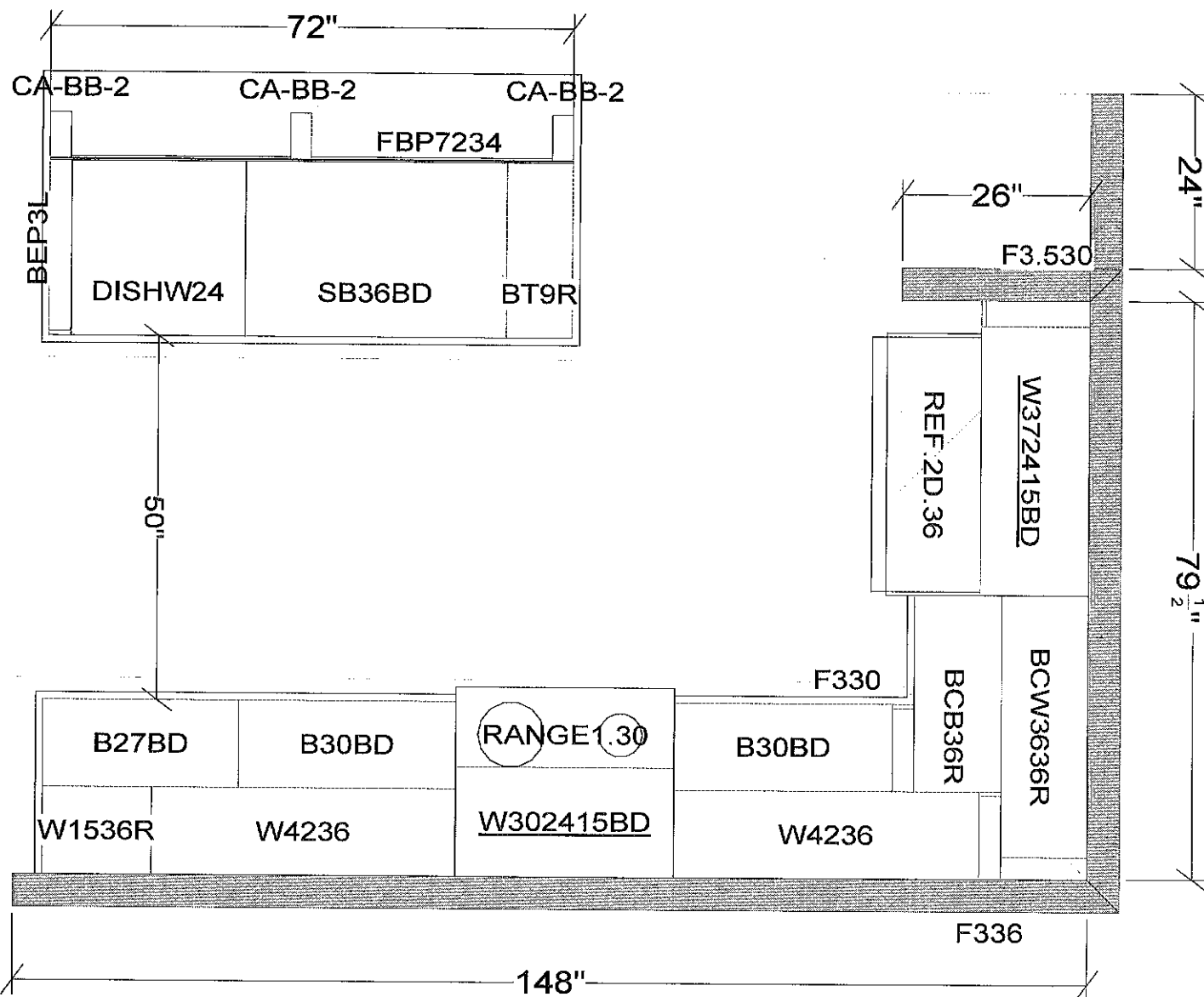
OXFORD Standard Overlay  
 Maple / ??  
 Plywood Dovetail Drawers

- (4) SDCM8
- (3) BTS
- (4) PS3/4
- (1) F342
- (5) SM (Leave on Wall Cabinets)
- (2) TUK

- (2) 2x4
- (1) 1x6 Deadwood

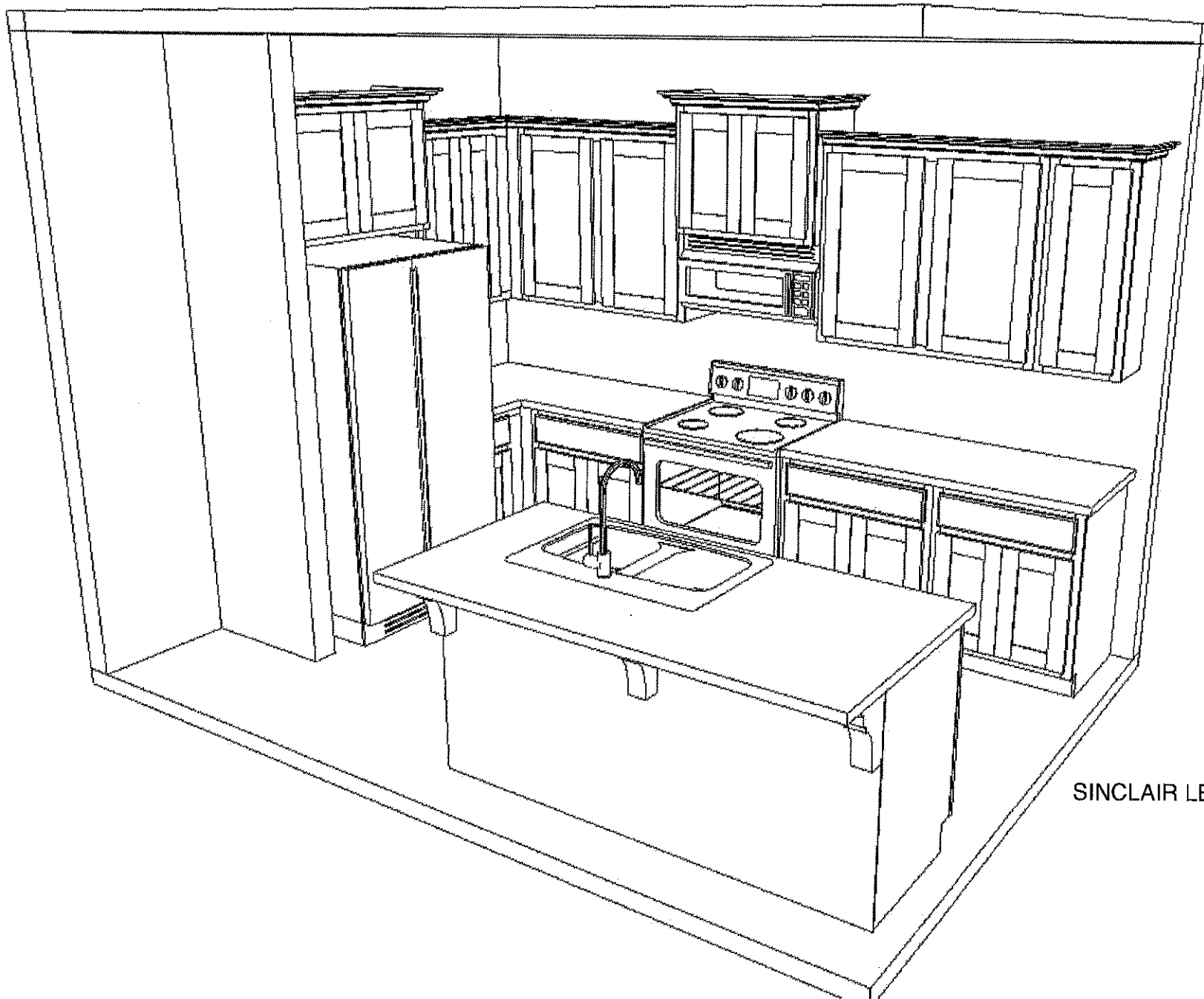
Hardware:  
 (21) - Doors -  
 (6) - Drawers -

Space Corbels Evenly  
 Do NOT Raise Base Cabinets  
 Use 1 TUK and Leave 2nd  
 in Ref. Cabinet



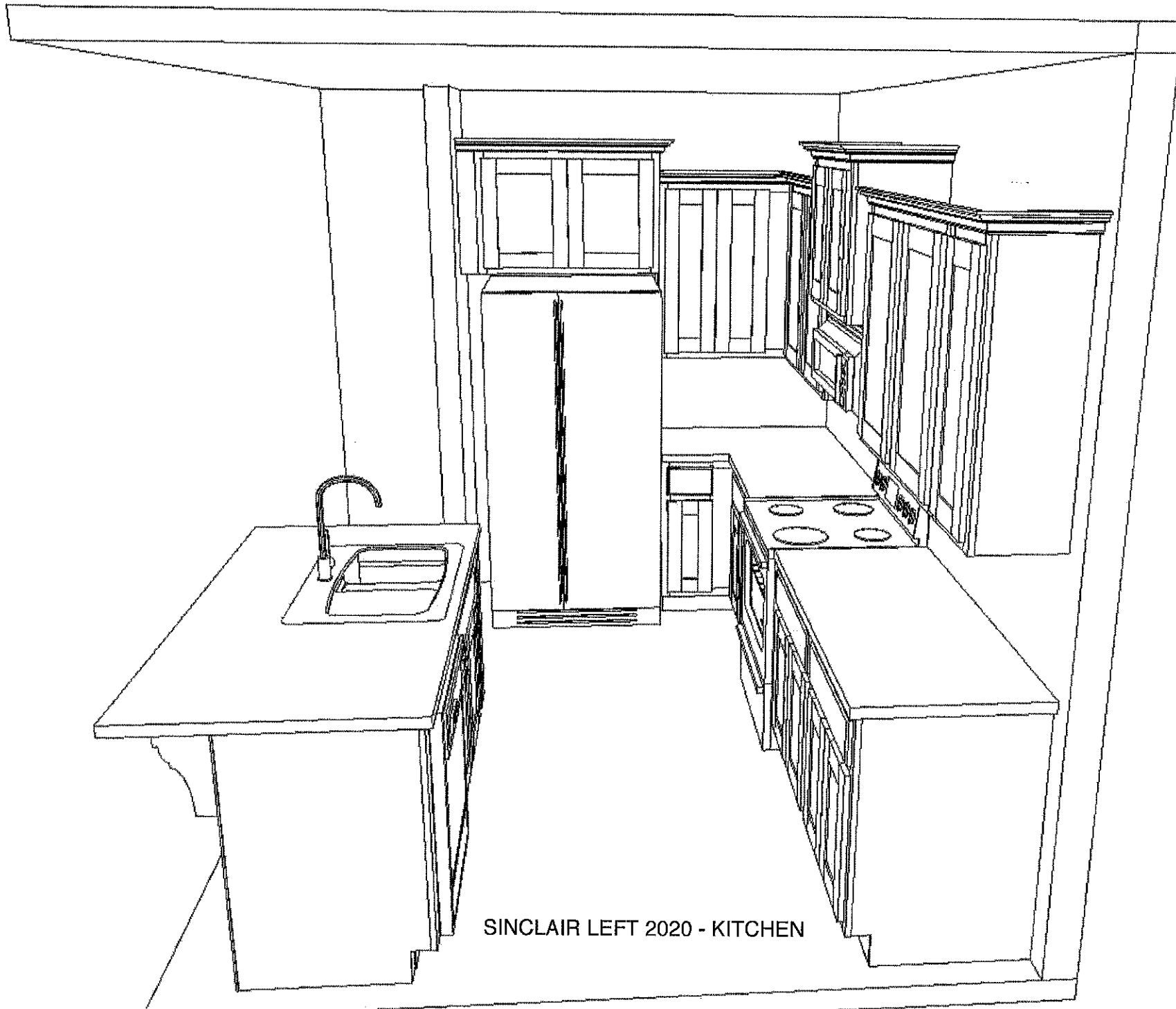
<p>All dimensions size designations given are subject to verification on job site and adjustment to fit job conditions.</p>	<p>2020</p>	<p>This is an original design and must not be released or copied unless applicable fee has been paid or job order placed.</p>	<p>Designed: 2/24/2020          Printed: 2/24/2020</p>
<p>Sinclair Kitchen</p>		<p>All</p>	<p>Drawing #: 1 No Scale.</p>





SINCLAIR LEFT 2020 - KITCHEN

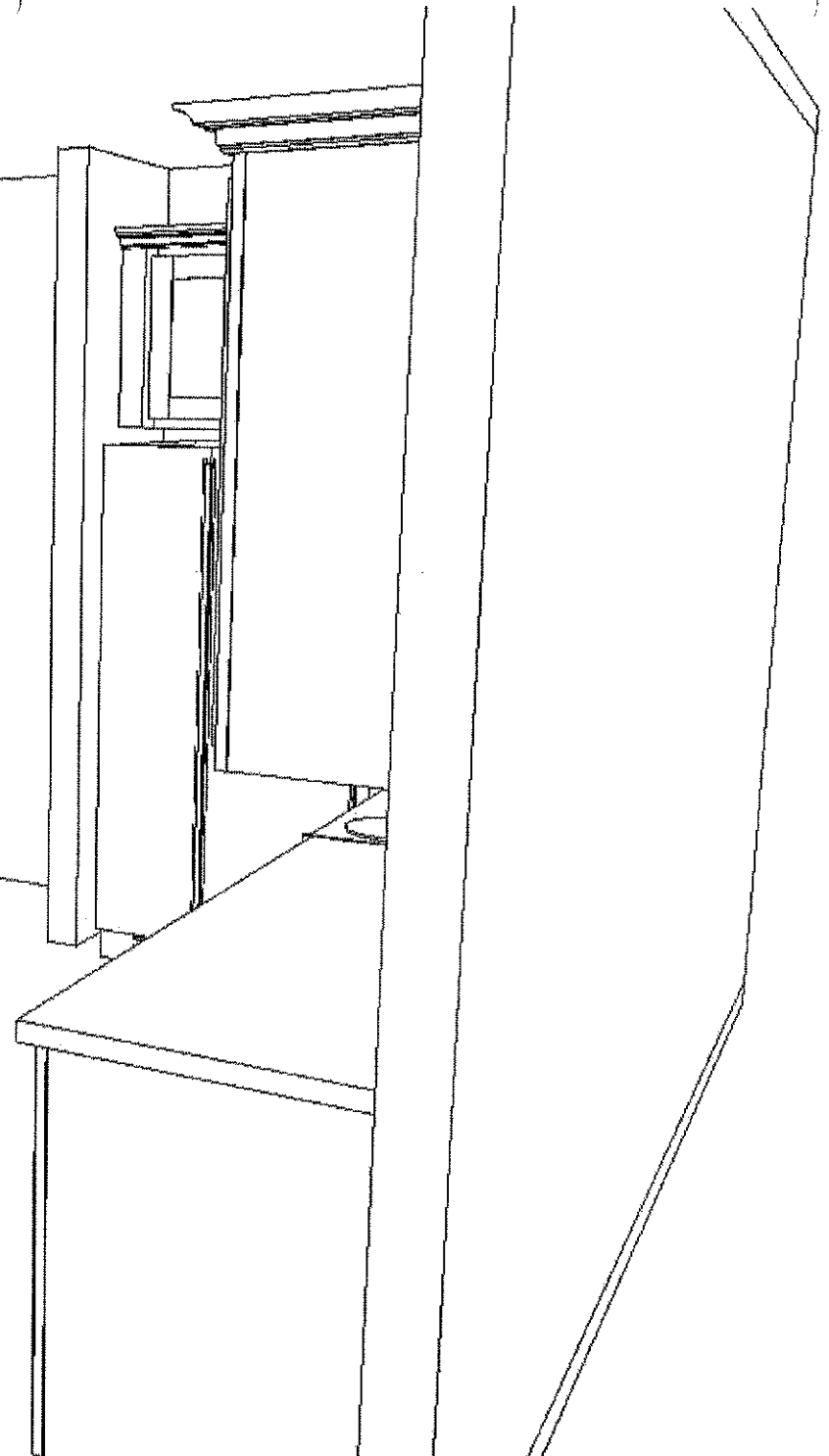
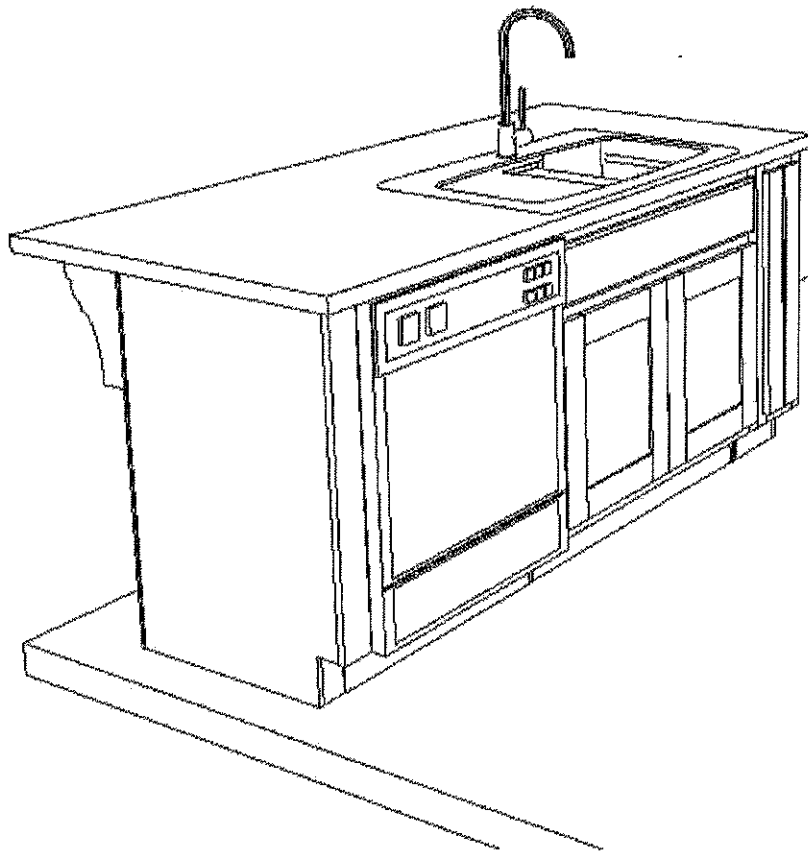




SINCLAIR LEFT 2020 - KITCHEN



SINCLAIR LEFT 2020 - KITCHEN





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#.

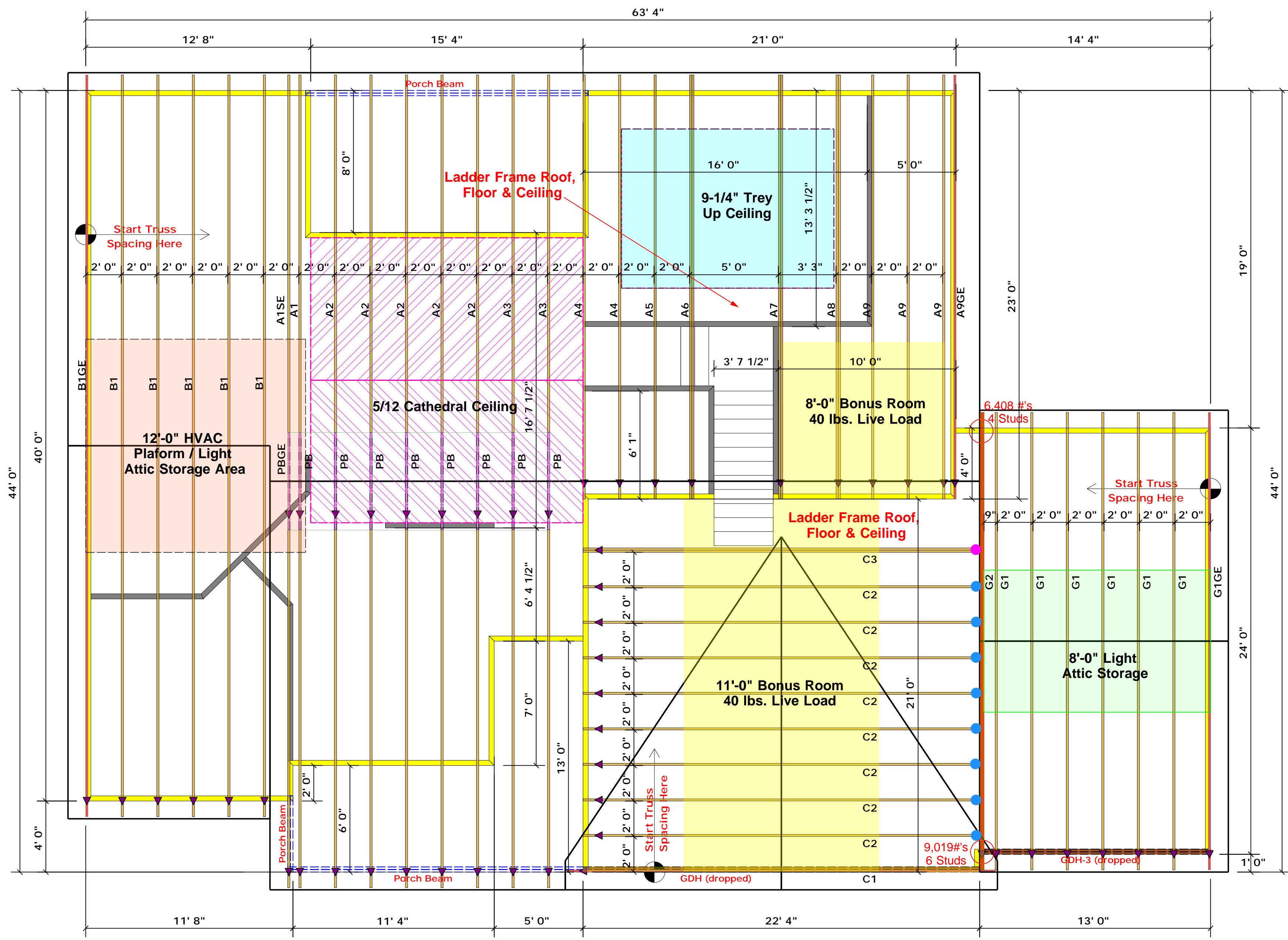
Signature \_\_\_\_\_  
**Lenny Norris**

**LOAD CHART FOR JACK STUDS**

(BASED ON TABLES ROOF/11 & 12)

NUMBER OF JACK STUDS REQUIRED @ EA END OF HEADERS/STROPS

END REACTION (IP-TON)	REQ'D STUDS FOR JOIST/FLOOR	END REACTION (IP-TON)	REQ'D STUDS FOR JOIST/BEAM	END REACTION (IP-TON)	REQ'D STUDS FOR JOIST/BEAM
1700	1	2550	1	3400	1
3400	2	5100	2	6800	2
5100	3	7650	3	10200	3
6800	4	10200	4	13600	4
8500	5	12750	5	17000	5
10200	6	15300	6		
11900	7				
13600	8				
15300	9				



**Truss Placement Plan**  
**SCALE: 1/4" = 1'0"**

- = THD26-2 (Qty. 1)
- = HUS26 (Qty. 8)

▲ = Denotes Left End of Truss  
(Reference Engineered Truss Drawing)

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

○ -- Denotes Reaction Greater than 3,000 lbs. Reaction / # of Studs

Products				
PlotID	Length	Product	Plies	Net Qty
GDH-3 (dropped)	13' 0"	1-3/4"x 11-7/8" LVL Kerto-S	2	2
GDH (dropped)	23' 0"	1-3/4"x 14" LVL Kerto-S	2	2

BUILDER	Weaver Development Co. Inc.	COUNTY	Harnett
JOB NAME	Lot 1-D Murray Farm	ADDRESS	Lot 1-D Murray Farm
PLAN	Sinclair w/ 3rd Car (190320B)	MODEL	Model
SEAL DATE	Seal Date	DATE REV.	/ /
QUOTE #	Quote #	DRAWN BY	Lenny Norris
JOB #	J0220-0595	SALESMAN	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 BCSI-B1 and BCSI-B3 provided with the truss delivery package or online @ sbcindustry.com.





**ROOF & FLOOR TRUSSES & BEAMS**

Reilly Road Industrial Park  
Fayetteville, N.C. 28309  
Phone: (910) 864-8787  
Fax: (910) 864-4444

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#.

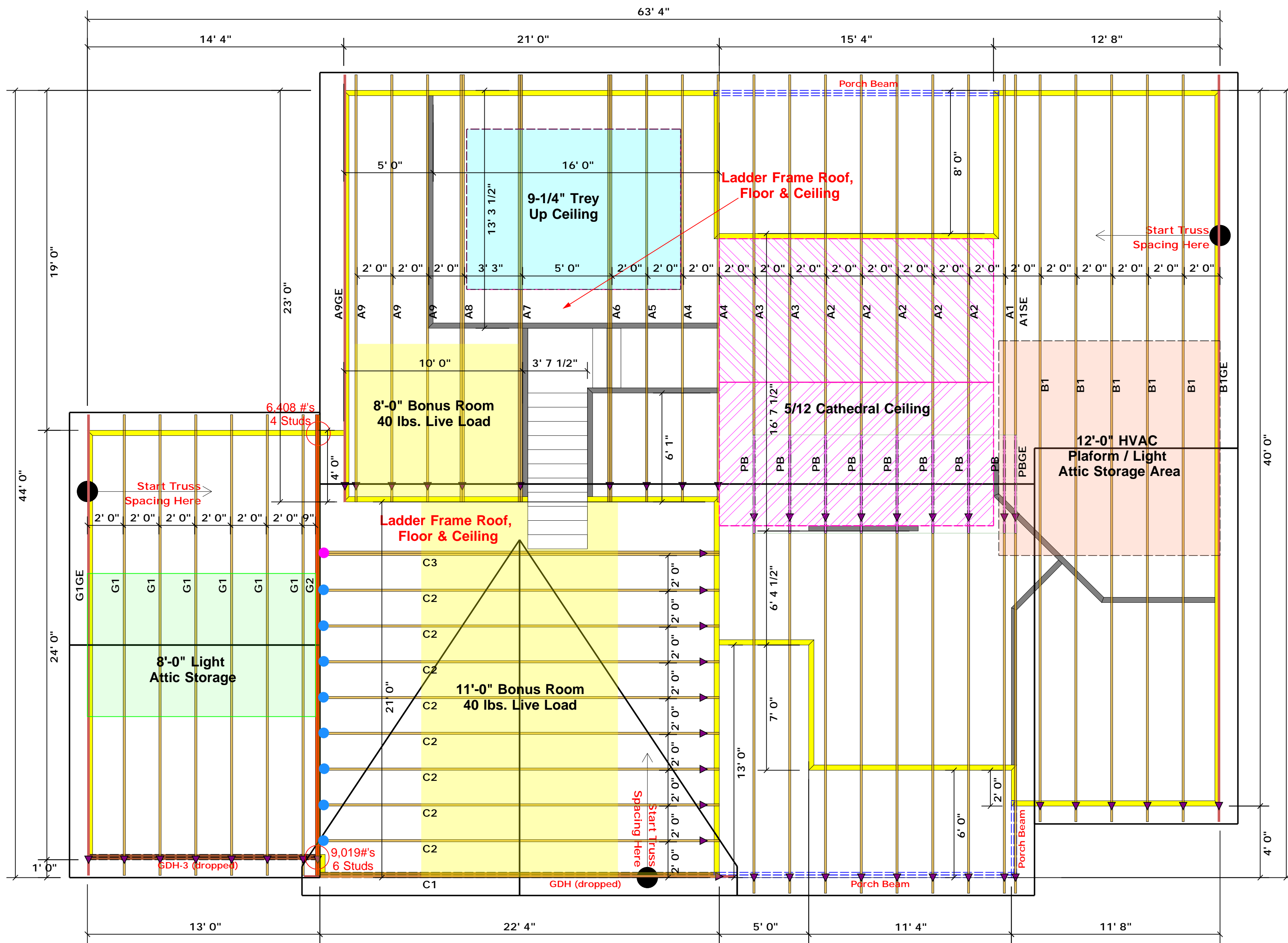
Signature \_\_\_\_\_  
**Lenny Norris**

**LOAD CHART FOR JACK STUDS**

(BASED ON TABLES ROUMLIC & DUB)

NUMBER OF JACK STUDS REQUIRED @ EA END OF HEADERS/GIRDERS

END REACTION (IP-TON)	REQ'D STUDS FOR 10' BY 10' BEAM	END REACTION (IP-TON)	REQ'D STUDS FOR 10' BY 10' BEAM
1700	1	2550	1
3400	2	5100	2
5100	3	7650	3
6800	4	10200	4
8500	5	12750	5
10200	6	15300	6
11900	7		
13600	8		
15300	9		



**Truss Placement Plan**  
**SCALE: 1/4" = 1'0"**

- = THD26-2 (Qty. 1)
- = HUS26 (Qty. 8)

▲ = Denotes Left End of Truss  
(Reference Engineered Truss Drawing)

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

○ -- Denotes Reaction Greater than 3,000 lbs. Reaction / # of Studs

Products				
PlotID	Length	Product	Plies	Net Qty
GDH-3 (dropped)	13' 0"	1-3/4"x 11-7/8" LVL Kerto-S	2	2
GDH (dropped)	23' 0"	1-3/4"x 14" LVL Kerto-S	2	2

BUILDER	Weaver Development Co. Inc.	COUNTY	Harnett
JOB NAME	Lot 1-D Murray Farm	ADDRESS	Lot 1-D Murray Farm
PLAN	Sinclair w/ 3rd Car (190320B)	MODEL	Model
SEAL DATE	Seal Date	DATE REV.	/ /
QUOTE #	Quote #	DRAWN BY	Lenny Norris
JOB #	J0220-0595	SALESMAN	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 BCSI-B1 and BCSI-B3 provided with the truss delivery package or online @ sbcindustry.com.

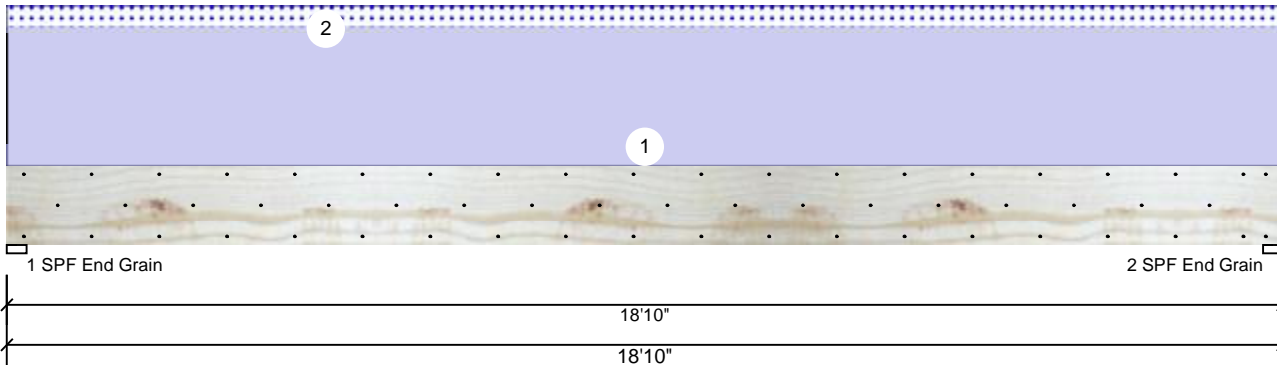


Client: Weaver Development  
 Project: Sinclair (190320B)  
 Address: Sinclair (190320B)

Date: 4/15/2020  
 Input by: Christine Shivy  
 Job Name: GDH  
 Project #:

**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:	480	Load Sharing:	No
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal		
Temperature:	Temp <= 100°F		

**Reactions UNPATTERNED Ib (Uplift)**

Brg	Live	Dead	Snow	Wind	Const
1	0	2598	377	0	0
2	0	2598	377	0	0

**Bearings**

Bearing	Length	Cap. React	D/L Ib	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	28%	2598 / 377	2975	L	D+S
2 - SPF End Grain	3.500"	28%	2598 / 377	2975	L	D+S

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	11644 ft-lb	9'5"	24299 ft-lb	0.479 (48%)	D	Uniform
Unbraced	13332 ft-lb	9'5"	13339 ft-lb	0.999 (100%)	D+S	L
Shear	2213 lb	1'4 3/4"	9408 lb	0.235 (24%)	D	Uniform
LL Defl inch	0.068 (L/3239)	9'5 1/16"	0.459 (L/480)	0.150 (15%)	S	L
TL Defl inch	0.538 (L/410)	9'5 1/16"	0.612 (L/360)	0.880 (88%)	D+S	L

**Design Notes**

- 1 Fasten all plies using 3 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 2 Refer to last page of calculations for fasteners required for specified loads.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Top loads must be supported equally by all plies.
- 5 Top must be laterally braced at a maximum of 7'8 5/8" o.c.
- 6 Bottom braced at bearings.
- 7 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	225 PLF	0 PLF	0 PLF	0 PLF	0 PLF	Exterior Siding / Plywood
2	Uniform			Top	40 PLF	0 PLF	40 PLF	0 PLF	0 PLF	20" Roof Load
	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

**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





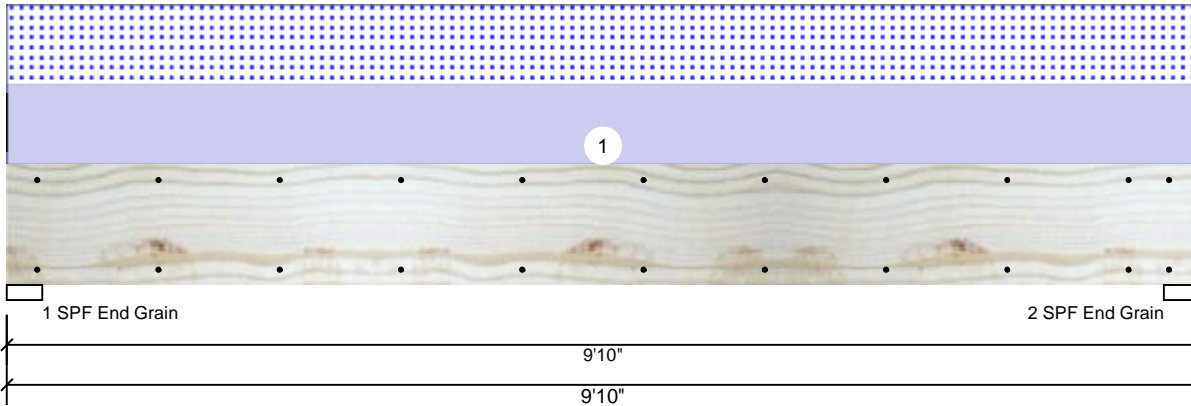


Client: Weaver Development  
 Project: Sinclair (190320B)  
 Address: Sinclair (190320B)

Date: 4/15/2020  
 Input by: Christine Shivy  
 Job Name: GDH-3  
 Project #:

**GDH-3 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:	480	Load Sharing:	No
Deflection TL:	360	Deck:	Not Checked
Importance:	Normal		
Temperature:	Temp <= 100°F		

**Reactions UNPATTERNED Ib (Uplift)**

Brg	Live	Dead	Snow	Wind	Const
1	0	1422	1377	0	0
2	0	1422	1377	0	0

**Bearings**

Bearing	Length	Cap. React	D/L Ib	Total	Ld. Case	Ld. Comb.
1 - SPF End Grain	3.500"	26%	1422 / 1377	2799	L	D+S
2 - SPF End Grain	3.500"	26%	1422 / 1377	2799	L	D+S

**Analysis Results**

Analysis	Actual	Location	Allowed	Capacity	Comb.	Case
Moment	6254 ft-lb	4'11"	22897 ft-lb	0.273 (27%)	D+S	L
Unbraced	6254 ft-lb	4'11"	9857 ft-lb	0.634 (63%)	D+S	L
Shear	2105 lb	1'2 5/8"	10197 lb	0.206 (21%)	D+S	L
LL Defl inch	0.058 (L/1928)	4'11"	0.234 (L/480)	0.250 (25%)	S	L
TL Defl inch	0.119 (L/948)	4'11"	0.312 (L/360)	0.380 (38%)	D+S	L

**Design Notes**

- 1 Fasten all plies using 2 rows of 10d Box nails (.128x3") at 12" o.c. Maximum end distance not to exceed 6".
- 2 Refer to last page of calculations for fasteners required for specified loads.
- 3 Girders are designed to be supported on the bottom edge only.
- 4 Top loads must be supported equally by all plies.
- 5 Top braced at bearings.
- 6 Bottom braced at bearings.
- 7 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	280 PLF	0 PLF	280 PLF	0 PLF	0 PLF	G1
	Self Weight				9 PLF					

**Notes**

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**Lumber**

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chemicals

**Handling & Installation**

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