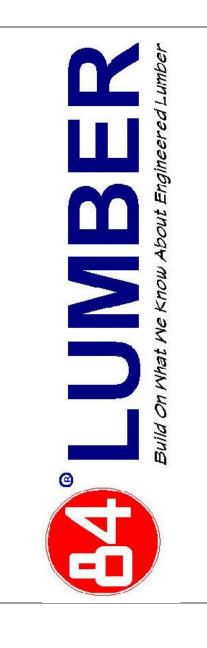


KB Homes
2338 Elev.C
12 Highland Grove

Boise Cascad



All I-Joist and Versa-Lam Beams Must be Installed per The Boise Cascade Installation Guide!

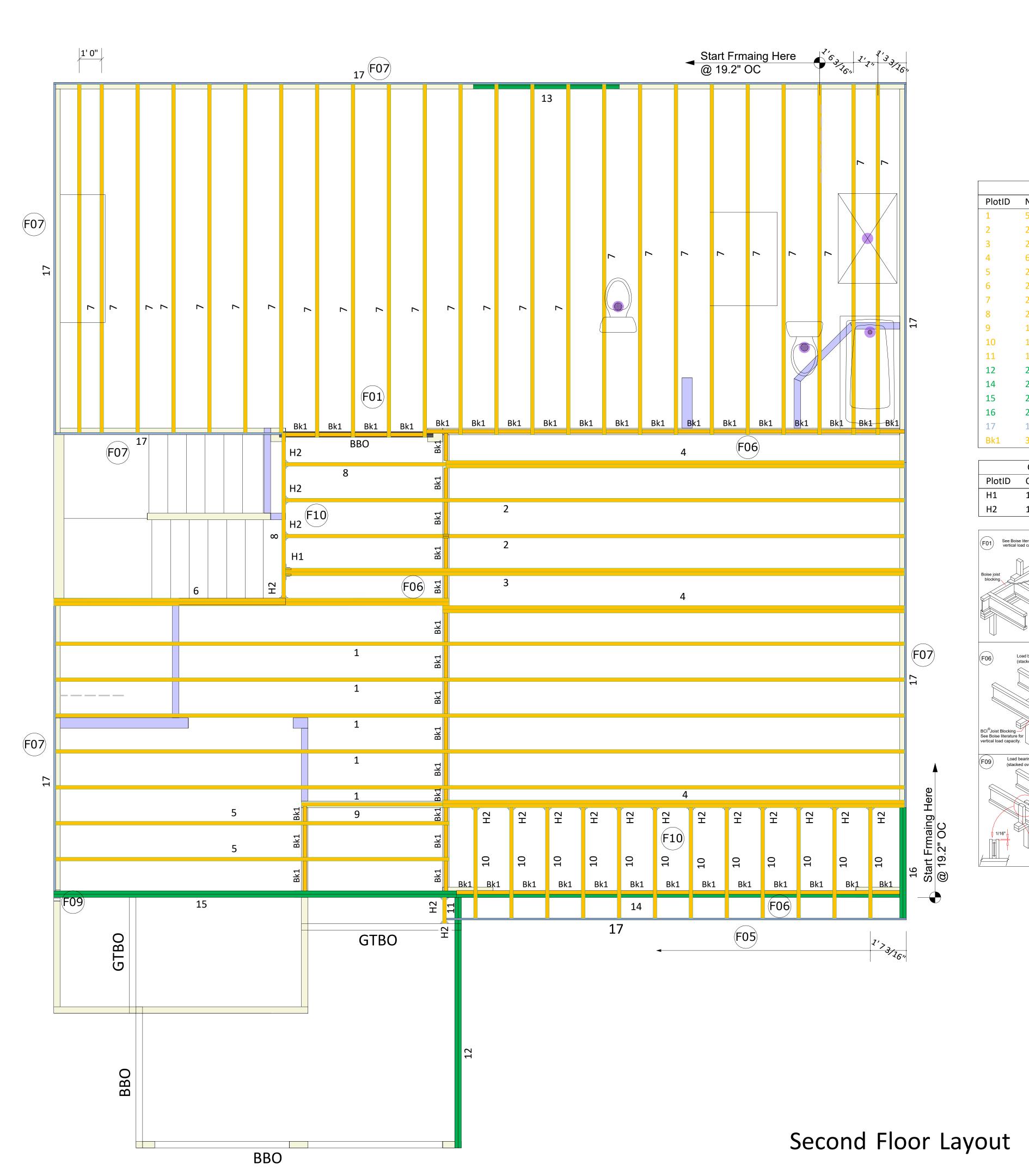
Squash Blocks Required
Under The Ends Of All LVL
And Point Loads For Load
Transfer - See Details

BC FRAMER II

Plan Date: 03/04/2020

Struc Date: 10/24/2019

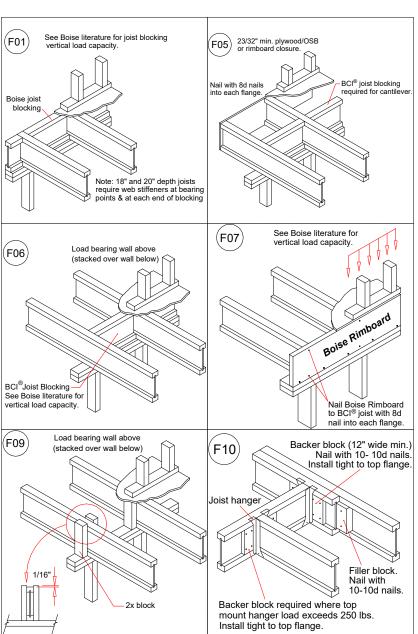
By: GAT
Sheet: 1/4



# **KB** Homes 2338 Elev.C 12 Highland Grove

		Products		
PlotID	Net Qty	Product	Length	Plies
1	5	14" BCI® 5000s-1.8	38' 0"	1
2	2	14" BCI® 5000s-1.8	28' 0"	1
3	2	14" BCI® 5000s-1.8	28' 0"	2
4	6	14" BCI® 5000s-1.8	21' 0"	2
5	2	14" BCI® 5000s-1.8	18' 0"	1
6	2	14" BCI® 5000s-1.8	18' 0"	2
7	24	14" BCI® 5000s-1.8	16' 0"	1
8	2	14" BCI® 5000s-1.8	8' 0"	1
9	1	14" BCI® 5000s-1.8	7' 0"	1
10	12	14" BCI® 5000s-1.8	5' 0"	1
11	1	14" BCI® 5000s-1.8	2' 0"	1
12	2	1-3/4" x 9-1/4" VERSA-LAM® LVL 2.1E 3100 SP	12' 0"	2
14	2	1-3/4" x 11-7/8" VERSA-LAM® LVL 2.1E 3100 SP	22' 0"	2
15	2	1-3/4" x 14" VERSA-LAM® LVL 2.1E 3100 SP	18' 0"	2
16	2	1-3/4" x 14" VERSA-LAM® LVL 2.1E 3100 SP	6' 0"	2
17	11	1" x 14" BC RIM BOARD OSB	12' 0"	1
Bk1	32	14" BCI® 5000s-1.8	2' 0"	1

	Conn	ector Summ	ary
PlotID	Qty	Manuf	Product
H1	1	Simpson	HU4.12/11
H2	18	Simpson	IUS 2.06/14

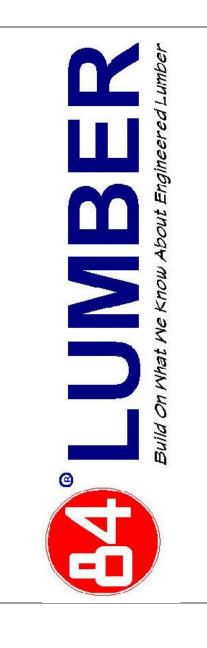


All I-Joist and Versa-Lam Beams Must be Installed per The Boise Cascade Installation Guide!

> Squash Blocks Required Under The Ends Of All LVL And Point Loads For Load Transfer - See Details

Revisions:	BY:





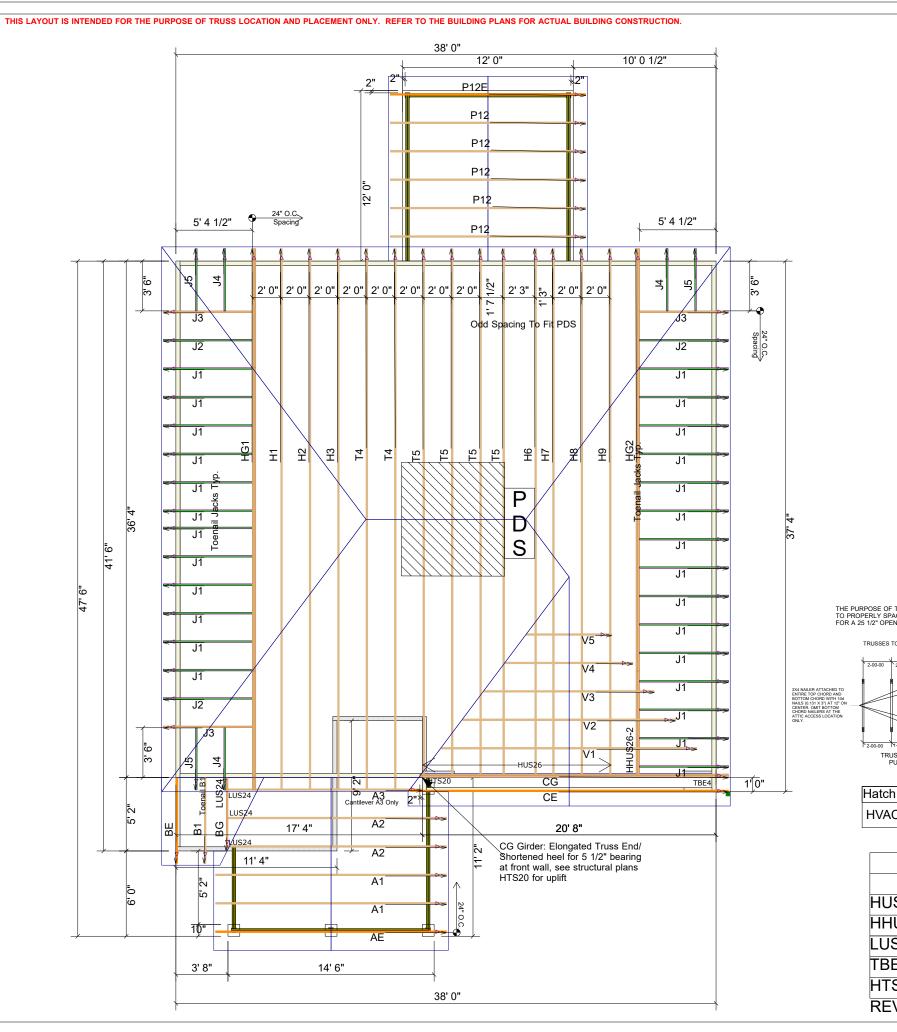
KB Homes 2338 Elev.C 12 Highland Grove 84 Lumber EWP

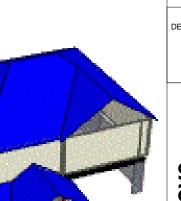
BC FRAMER II

Plan Date: 03/04/2020 Struc Date: 10/24/2019

By: GAT

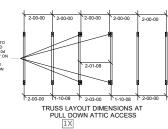
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TRUSSES TO BE DESIGNED AT 24" ON CENTER





Truss Connector List					
Product Qty					
HUS26	Simpson	HUS26	8		
HHUS26-2	Simpson	HHUS26-2	1		
LUS26	Simpson	LUS26	4		
TBE4	Simpson	TBE4	1 Set		
HTS20	Simpson	HTS20	1		
DEV 2/9/21 To lot 12 Crowl with 12 v 12 Sergenced CD					

REV 2/8/21- To lot 12, Crawl with 12 x 12 Screened CP



DEDICATED TO QUALITY AND EXCELLENCE 200 EMMETT ROAD DUNN, NORTH CAROLINA 28334 PHONE: 910-892-8400 FAX: 910-892-8384

278

KB HOME   State   St	ME	UMBER: ORDER: 25, PO # SHIP DATE: 202	
238.23 SCALE PRINT DATE: 1/6/21	KB HOME	P.O. NU REV:	
CUSTOMER:  MODEL:  Plan 238.  SCALE:  NOT TO SCALE  DRAWN BY:  MWWM 1/6/		NOT TO (	

TOP LIVE: 20 PSF

TOP DEAD: 10 PSF

BOTM DEAD: 10 PSF

WIND SPD: 120 MPH

# GENERAL NOTES:

DO NOT CUT OR MODIFY TRUSSES.

TRUSSES ARE SPACED 24" ON CENTER UNLESS NOTED OTHERWISE.

REFER TO THE INDIVIDUAL TRUSS DESIGN DRAWINGS FOR THE LOCATION OF LATERAL BRACING AND MULTI-PLY CONNECTION REQUIREMENTS.

PER ANSI TPI 1-2002 THE TRUSS ENGINEER IS RESPONSIBLE FOR TRUSS TO TRUSS CONNECTIONS AND TRUSS PLY TO PLY CONNECTIONS. THIS TRUSS PLACEMENT PLAN RECCOMENDS TRUSS TO BEARING CONNECTIONS AND TRUSS TO BEAM CONNECTIONS WHICH SHALL BE REVIEWED BY THE BUILDING DESIGNER. IT IS THE RESPONSIBILITY OF THE BUILDING DESIGNER TO RESOLVE ALL ROOF FORCES ADEQUATELY TO THE FOUNDATION.

# STRUCTURAL PLANS FOR:



# 238.2338 - RH GARAGE

REV DATE	ARCH PLAN VERSION	REVISION DESCRIPTION	DRFT
02/12/2021	2338-238-01350 RH D19 - 01.06.21	INITIAL SETUP OF LAYOUT	ABS
02/12/2021	2338-238-01350 RH D19 - 01.06.21	CREATED LOT-SPECIFIC STRUCTURAL LAYOUT FROM MASTER PLAN AND EWP LAYOUT	ABS

# **NOTES**

- 1. ENGINEER'S SEAL APPLIES TO STRUCTURAL COMPONENTS ONLY. ENGINEER'S SEAL DOES NOT CERTIFY DIMENSIONAL ACCURACY OR ARCHITECTURAL LAYOUT, INCLUDING ROOF GEOMETRY. JDSfaulkner, PLLC ASSUMES NO LIABILITY FOR CHANGES MADE TO THESE PLANS BY OTHERS, OR FOR CONSTRUCTION METHODS, OR FOR ANY DEVIATION FROM THE PLANS, ENGINEER TO BE NOTIFIED PRIOR TO CONSTRUCTION IF ANY DISCREPANCIES ARE NOTED ON THE
- 2. DIMENSIONS SHALL GOVERN OVER SCALE, AND CODE SHALL GOVERN OVER DIMENSIONS.
- 3. PLANS MUST HAVE SIGNED SEAL TO BE VALID AND ARE LIMITED TO THE FOLLOWING USES:
  - A. IF THESE PLANS ARE ISSUED AS A MASTER-PLAN SET, THE SET IS VALID FOR 18 MONTHS FROM THE DATE ON THE SEAL, UNLESS ANY CODE-REQUIRED UPDATES ARE PLACED IN EFFECT BY THE MUNICIPALITY.
  - IF THESE PLANS ARE NOT ISSUED AS A MASTER-PLAN SET, THE SET IS VALID FOR A CONDITIONAL, ONE-TIME USE FOR THE LOT OR ADDRESS SPECIFIED ON THE TITLE BLOCK.

# CODE

ALL CONSTRUCTION, WORKMANSHIP, AND MATERIAL QUALITY AND **SELECTION SHALL BE PER:** 

2018 NORTH CAROLINA **STATE BUILDING CODE:** RESIDENTIAL CODE

# **ENGINEER OF RECORD**

JDSfaulkner, PLLC **ENGINEERING, BUILDING DESIGN, & CONSTRUCTION CONSULTING SERVICES** 8600 'D' JERSEY COURT RALEIGH, NC 27617 FIRM LIC. NO: P-0961 PROJECT REFERENCE: 21900253

NORTH CAROLINA DIVISION 4518 S. MIAMI BLVD. SUITE 180
DURHAM, NC 27703
TEL: (919) 768-7988 ■ FAX: (919) 472-0582 ■ JDSfaulkner, PLLC HAS PERFORMED A STRUCTURAL REVIEW OF THESE PLANS. THE STRUCTURAL COMPONENTS COMPLY WITH THE 2018 NORTH CAROLINA RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS FOR NC PLAN REVIEW DEVIATION OF ANY STRUCTURA REQUIREMENTS OF THESE PLANS WITHOUT THE 8600 'D' JERSEY CT, RALEIGH, NC 27617;919.480.1075 INFO@JDSfaulkner.COM; WWW.JDSfaulkner.COM

238,2338

TITLE SHEET

NOTE: ALL CHAPTERS, SECTIONS, TABLES, AND FIGURES CITED WITHOUT A PUBLICATION TITLE ARE FROM THE APPLICABLE RESIDENTIAL CODE (SEE TITLE SHEET).

# **GENERAL**

- IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION. FURTHERMORE, CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, AND SAFETY ON SITE. NOTIFY JDSfaulkner, PLLC IMMEDIATELY IF DISCREPANCIES ON PLAN EXIST.
- BRACED-WALL DESIGN IS BASED ON <u>SECTION R602.10 WALL</u> BRACING. PRIMARY PRESCRIPTIVE METHOD TO BE CS-WSP. SEE WALL BRACING PLANS AND DETAILS FOR ADDITIONAL INFORMATION.
- ALL NON-PRESCRIPTIVE SOLUTIONS ARE BASED ON GUIDELINES ESTABLISHED IN THE AMERICAN SOCIETY OF CIVIL ENGINEERS PUBLICATION ASCE 7 AND THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION SPECIAL DESIGN PROVISIONS FOR WIND AND SEISMIC.
- 3. SEISMIC DESIGN SHALL BE PER SECTION R301.2.2 SEISMIC PROVISIONS, INCLUDING ASSOCIATED TABLES AND FIGURES, BASED ON LOCAL SEISMIC DESIGN CATEGORY.

# **DESIGN LOADS**

ASSUMED SOIL BEARING-CAPACITY	2,000 PSF
	LIVE LOAD
ULTIMATE DESIGN WIND SPEED	115 MPH, EXPOSURE B
GROUND SNOW	15 PSF
ROOF	20 PSF
RESIDENTIAL CODE TABLE R301.5	LIVE LOAD (PSF)
DWELLING UNITS	40
SLEEPING ROOMS	30
ATTICS WITH STORAGE	20
ATTICS WITHOUT STORAGE	10
STAIRS	40
DECKS	40
EXTERIOR BALCONIES	60
PASSENGER VEHICLE GARAGES	50
FIRE ESCAPES	40
GUARDS AND HANDRAILS	200 (pounds, concentrated)

COMPONENT AND CLADDING LOADS, INCLUDING THOSE FOR DOORS AND WINDOWS, SHALL BE DERIVED FROM TABLES R301.2(2) AND R301.2(3) FOR A BUILDING WITH A MEAN ROOF HEIGHT OF 35 FEET, LOCATED IN EXPOSURE B.

ABBR	EVIATIONS	KS LVL	KING STUD COLUMN LAMINATED VENEER
ABV	ABOVE		LUMBER
ΔFF	ABOVE FINISHED FLOOR ALTERNATE	MAX	MAXIMUM
ALT	AL TERNATE	MECH	MECHANICAL
BRG	BEARING	MFTR	MANUFACTURER
	BASEMENT	MIN	MINIMUM
	CANTILEVER	NTS	NOT TO SCALE
	CEILING JOIST	OA	OVERALL
	CEILING	OC	ON CENTER
	CONCRETE MASONRY UNIT	PT	PRESSURE TREATED
	CASED OPENING	R	RISER
	COLUMN	REF	REFRIGERATOR
	CONCRETE	RFG	ROOFING
	CONTINUOUS	RO	ROUGH OPENING
D	CLOTHES DRYER		ROOF SUPPORT
DBL	DOUBLE	SC	STUD COLUMN
DIAM		SF	SQUARE FOOT (FEET)
DJ	DOUBLE JOIST		SHELF / SHELVES
DN	DOWN		SHEATHING
DP	DEEP		SHOWER
DR	DEEP DOUBLE RAFTER DOUBLE STUD POCKET EACH		SIMILAR
DSP	DOUBLE STUD POCKET		SINGLE JOIST
EA	EACH	SP	
EE	EACH END		SPECIFIED
EQ	EQUAL	SQ	SQUARE
EX	EXTERIOR	T	TREAD
FAU	FORCED-AIR UNIT	TEMP	TEMPERED GLASS
FDN	FOUNDATION	TEMP THK	THICK(NESS)
FF	FINISHED FLOOR	TJ	TRIPLE JOIST
FLR	FLOOR(ING)	TJ TOC TR	TOP OF CURB / CONCRETE
FP	FIREPLACE	TR	TRIPLE RAFTER
FTG		TYP	TYPICAL
HB		UNO	UNLESS NOTED OTHERWISE
	HEADER	W	CLOTHES WASHER
HGR		WH	
JS	JACK STUD COLUMN		WELDED WIRE FABRIC
I		XJ	EXTRA JOIST

## **MATERIALS**

 INTERIOR / TRIMMED FRAMING LUMBER SHALL BE #2 SPRUCE PINE FIR (SPF) WITH THE FOLLOWING DESIGN PROPERTIES (#2 SOUTHERN YELLOW PINE MAY BE SUBSTITUTED):

Fb = 875 PSI Fv = 70 PSI E = 1.4E6 PSI

 FRAMING LUMBER EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND, CONCRETE, OR MASONRY SHALL BE PRESSURE TREATED #2 SOUTHERN YELLOW PINE (SYP) WITH THE FOLLOWING DESIGN PROPERTIES:

Fb = 975 PSI Fv = 95 PSI E = 1.6E6 PSI

3. LVL STRUCTURAL MEMBERS TO BE LAMINATED VENEER LUMBER WITH THE FOLLOWING MINIMUM DESIGN PROPERTIES:

Fb = 2600 PSI Fv = 285 PSI E = 1.9E6 PSI

4. PSL STRUCTURAL MEMBERS TO BE PARALLEL STRAND LUMBER WITH THE FOLLOWING MINIMUM DESIGN PROPERTIES:

5. LSL STRUCTURAL MEMBERS TO BE LAMINATED STRAND LUMBER WITH THE FOLLOWING MINIMUM DESIGN PROPERTIES:

Fb = 2250 PSI Fv = 400 PSI E = 1.55E6 PSI

- STRUCTURAL STEEL WIDE-FLANGE BEAMS SHALL CONFORM TO ASTM A992. Fy = 50 KSI
- 7. REBAR SHALL BE DEFORMED STEEL CONFORMING TO ASTM A615,
- 8. POURED CONCRETE COMPRESSIVE STRENGTH TO BE A MINIMUM 3,000 PSI AT 28 DAYS. MATERIALS USED TO PRODUCE CONCRETE SHALL COMPLY WITH THE APPLICABLE STANDARDS LISTED IN AMERICAN CONCRETE INSTITUTE STANDARD ACI 318 OR ASTM C1457
- 9. CONCRETE SUBJECT TO MODERATE OR SEVERE WEATHERING PROBABILITY PER TABLE R301.2(1) SHALL BE AIR-ENTRAINED WHEN REQUIRED BY TABLE R402.2.
- 10. CONCRETE MASONRY UNITS (CMU) SHALL CONFORM TO AMERICAN CONCRETE INSTITUTE PUBLICATION 530: BUILDING CODE REQUIREMENTS AND SPECIFICATIONS FOR MASONRY STRUCTURES AND COMPANION COMMENTARIES AND THE MASONRY SOCIETY PUBLICATION TMS 402/602: BUILDING CODE REQUIREMENTS AND SPECIFICATIONS FOR MASONRY STRUCTURES
- 11. MORTAR SHALL COMPLY WITH ASTM INTERNATIONAL STANDARD C270.
- INDICATED MODEL NUMBERS FOR ALL METAL HANGERS, STRAPS, FRAMING CONNECTORS, AND HOLD-DOWNS ARE SIMPSON STRONG-TIE BRAND. EQUIVALENT USP BRAND PRODUCTS ARE ACCEPTABLE.
- 13. REFER TO I-JOIST EQUIVALENCE CHART ON I-JOIST DETAIL SHEET FOR SUBSTITUTION OF MANUFACTURER SERIES.

## FOUNDATION

- MINIMUM ALLOWABLE SOIL BEARING CAPACITY IS ASSUMED TO BE 2,000 PSF. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SOIL BEARING CAPACITY IF UNSATISFACTORY CONDITIONS EVICT.
- CONCRETE FOUNDATION WALLS TO BE SELECTED AND CONSTRUCTED PER SECTION R404 OR AMERICAN CONCRETE INSTITUTE STANDARD ACI 318.
- 3. MASONRY FOUNDATION WALLS TO BE SELECTED AND CONSTRUCTED PER SECTION R404 AND/OR AMERICAN CONCRETE INSTITUTE PUBLICATION 530: BUILDING CODE REQUIREMENTS AND SPECIFICATIONS FOR MASONRY STRUCTURES AND COMPANION COMMENTARIES AND/OR THE MASONRY SOCIETY PUBLICATION TMS 402/602: BUILDING CODE REQUIREMENTS AND SPECIFICATIONS FOR MASONRY STRUCTURES
- . CONCRETE WALL HORIZONTAL REINFORCEMENT TO BE PER TABLE R404.1.2(1) OR AS NOTED OR DETAILED. CONCRETE WALL VERTICAL REINFORCEMENT TO BE PER TABLES R404.1.2(3 AND 4) OR AS NOTED OR DETAILED. ALL CONCRETE WALLS SHALL COMPLY WITH APPLICABLE PROVISIONS OF CHAPTER 6.
  - A. TABLES ASSUME THAT WALLS HAVE PERMANENT LATERAL SUPPORT AT THE TOP AND BOTTOM.
  - B. FOUNDATION DRAINS ARE ASSUMED AT ALL WALLS PER SECTION R405.
- 5. PLAIN-MASONRY WALL DESIGN TO BE PER TABLE R404.1.1(1) OR AS NOTED OR DETAILED. MASONRY WALLS WITH VERTICAL REINFORCEMENT TO BE PER TABLES R404.1.1 (2 THROUGH 4) OR AS NOTED OR DETAILED. ALL MASONRY WALLS SHALL COMPLY WITH APPLICABLE PROVISIONS OF CHAPTER 6.
  - A. TABLES ASSUME THAT WALLS HAVE PERMANENT LATERAL SUPPORT AT THE TOP AND BOTTOM.
  - B. WALL REINFORCING SHALL BE PLACED ACCORDING TO FOOTNOTE (c) OF THE TABLES (REINFORCING IS NOT CENTERED IN WALL).
  - C. FOUNDATION DRAINS ARE ASSUMED AT ALL WALLS PER SECTION R405.
- 6. WOOD SILL PLATES TO BE ANCHORED TO THE FOUNDATION WITH 1/2" DIAMETER ANCHOR BOLTS WITH MINIMUM 7" EMBEDMENT, SPACED A MAXIMUM OF 6'-0" OC AND WITHIN 12" FROM THE ENDS OF EACH PLATE SECTION. INSTALL MINIMUM (2) ANCHOR BOLTS PER SECTION. SEE SECTION R403.1.6 FOR SPECIFIC CONDITIONS.
- 7. THE UNSUPPORTED HEIGHT OF SOLID MASONRY PIERS SHALL NOT EXCEED TEN TIMES THEIR LEAST DIMENSION. UNFILLED, HOLLOW PIERS MAY BE USED IF THE UNSUPPORTED HEIGHT IS NOT MORE THAN FOUR TIMES THEIR LEAST DIMENSION.
- 8. CENTERS OF PIERS TO BEAR IN THE MIDDLE THIRD OF THE FOOTINGS, AND GIRDERS SHALL CENTER IN THE MIDDLE THIRD OF THE PIERS.
- 9. ALL FOOTINGS TO HAVE MINIMUM 2" PROJECTION ON EACH SIDE OF FOUNDATION WALLS (SEE DETAILS).
- 10. ALL REBAR NOTED IN CONCRETE TO HAVE AT LEAST 2" COVER FROM EDGE OF CONCRETE TO EDGE OF REBAR.
- 11. FRAMING TO BE FLUSH WITH FOUNDATION WALLS.
- 12. WITH CLASS 1 SOILS, VAPOR BARRIER AND CRUSHED STONE MAY BE OMITTED.

## **FRAMING**

- ALL BEARING HEADERS TO BE (2) 2x6 SUPPORTED W/ MIN (1) JACK STUD AND (1) KING STUD EACH END, UNO.
- 2. ALL NON-BEARING HEADERS TO BE (2) 2x4, UNO.
- NON-BEARING INTERIOR WALLS NOT MORE THAN 10' NOMINAL HEIGHT AND NOT SHOWN AS BRACED WALLS MAY BE FRAMED WITH 2x4 STUDS @ 24" OC.
- SOLID BLOCKING TO BE PROVIDED AT ALL POINT LOADS THROUGH FLOOR LEVELS TO THE FOUNDATION OR TO OTHER STRUCTURAL COMPONENTS.
- 5. ALL BEAMS SPECIFIED ARE MINIMUM SIZES ONLY. LARGER MEMBERS MAY SUBSTITUTED AS NEEDED FOR EASE OF CONSTRUCTION.
- 6. ALL EXTERIOR WALLS TO BE FULLY SHEATHED WITH 7/16" OSB.
- . PORCH / PATIO COLUMNS TO BE 4x4 MINIMUM PRESSURE-TREATED LUMBER.
  - A. ATTACH PORCH COLUMNS TO SLAB / FDN WALL USING ABA, ABU, ABW, OR CPT SIMPSON POST BASES TO FIT COLUMN SIZES NOTED ON PLAN -OR- ANY OTHER COLUMN CONNECTION WITH 500# UPLIFT CAPACITY.
  - B. ATTACH PORCH COLUMNS TO PORCH BEAMS USING AC OR BC SIMPSON POST CAPS TO FIT COLUMN SIZES NOTED ON PLAN -OR- ANY OTHER COLUMN CONNECTION WITH 500# UPLIFT CAPACITY.
  - C. TRIM OUT COLUMN(S) AND BEAM(S) PER BUILDER AND DETAILS.
- 8. ALL ENGINEERED WOOD PRODUCTS (LVL, PSL, LSL, ETC.) SHALL BE INSTALLED WITH CONNECTIONS PER MANUFACTURER SPECIFICATIONS.
- 9. ENGINEERED WOOD FLOOR SYSTEMS AND ROOF TRUSS SYSTEMS:
  - A. SHOP DRAWINGS FOR THE SYSTEMS SHALL BE PROVIDED TO THE ENGINEER OF RECORD FOR REVIEW AND COORDINATION BEFORE CONSTRUCTION.
  - B. TRUSS PROFILES SHALL BE SEALED BY THE TRUSS MANUFACTURER.
  - C. INSTALLATION OF THE SYSTEMS SHALL BE PER MANUFACTURER'S INSTRUCTIONS.
  - D. TRUSS LAYOUT AND PLACEMENT BY MANUFACTURER TO COINCIDE WITH THE SUPPORT LOCATIONS SHOWN IN THESE DRAWINGS.
- 10. ALL BEAMS TO BE CONTINUOUSLY SUPPORTED LATERALLY AND SHALL BEAR FULL WIDTH ON THE SUPPORTING WALLS OR COLUMNS INDICATED, WITH A MINIMUM OF THREE STUDS, UNO.
- 11. ALL STEEL BEAMS TO BE SUPPORTED AT EACH END WITH A MIN BEARING LENGTH OF 3 1/2" AND FULL FLANGE WIDTH. BEAMS MUST BE ATTACHED AT EACH END WITH A MINIMUM OF FOUR 16d NAILS OR TWO 1/2" x 4" LAG SCREWS, UNO.
- 12. STEEL FLITCH BEAMS TO BE BOLTED TOGETHER USING (2) ROWS OF 1/2" DIAMETER BOLTS (ASTM 307) WITH WASHERS PLACED UNDER THE THREADED END OF THE BOLT. BOLTS TO BE SPACED AT 24" OC (MAX) AND STAGGERED TOP AND BOTTOM OF BEAM (2" EDGE DISTANCE), WITH TWO BOLTS TO BE LOCATED AT 6" FROM EACH END OF FLITCH BEAM.
- 3. WHEN A 4-PLY LVL BEAM IS USED, ATTACH WITH (1) 1/2" DIAMETER BOLT, 12" OC, STAGGERED TOP AND BOTTOM, 1 1/2" MIN FROM ENDS. ALTERNATE EQUIVALENT ATTACHMENT METHOD MAY BE USED, SUCH AS SDS, SDW, OR TRUSSLOK SCREWS (SEE MANUFACTURER SPECIFICATIONS).
- 14. FOR STUD COLUMNS OF 4-OR-MORE STUDS, INSTALL SIMPSON STRONG-TIE CS16 STRAPS ACROSS STUDS @ 30" OC, 6" MAX FROM PLATES, ON INSIDE FACE OF COLUMN (EXTERIOR WALL), ON BOTH FACES OF COLUMN (INTERIOR WALL).
- 15. FLOOR JOISTS ADJACENT AND PARALLEL TO THE EXTERIOR FOUNDATION WALL SHALL BE PROVIDED WITH FULL-DEPTH SOLID BLOCKING, NOT LESS THAN TWO (2) INCHES NOMINAL IN THICKNESS, PLACED PERPENDICULAR TO THE JOIST AT SPACING NOT MORE THAN FOUR (4) FEET. THE BLOCKING SHALL BE NAILED TO THE FLOOR SHEATHING, THE SILL PLATE, THE JOIST, AND THE EXTERIOR RIM JOIST / BOARD.
- 16. BRACED WALL PANELS SHALL BE FASTENED TO MEET THE UPLIFT-RESISTANCE REQUIREMENTS IN CHAPTERS 6 AND 8 OF THE APPLICABLE CODE (SEE TITLE SHEET). REQUIREMENTS OF THE STRUCTURAL DRAWINGS THAT EXCEED THE CODE MINIMUM SHALL BE MET.



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■ FAX: (919) 472-0582 ■

SEAL PLANT OF THE SEAL PRIES E.

P-0961

JDSfaulkner, PLLC HAS PERFORMED A STRUCTURAL REVIEW OF THESE PLANS. THE STRUCTURAL COMPONENTS COMPLY WITH THE 2018 NORTH CAROLINA RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS FOR NC PLAN REVIEW. DEVIATION OF ANY STRUCTURAL REQUIREMENTS OF THESE PLANS WITHOUT THE APPROVAL OF THE EOR IS PROHIBITED.



DATE: 02/22/2021

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PLAN: 238.2338

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GENERAL NOTES

**GN1.0** 

FASTENER SCHEDULE			
CONNECTION	3" x 0.131" NAIL	3" x 0.120" NAIL	
JOIST TO SILL PLATE	(4) TOE NAILS	(4) TOE NAILS	
SOLE PLATE TO JOIST / BLOCKING	NAILS @ 8" OC (typical) (4) PER 16" SPACE (at braced panels)	NAILS @ 8" OC (typical) (4) PER 16" SPACE (at braced panels)	
STUD TO SOLE PLATE	(4) TOE NAILS	(4) TOE NAILS	
TOP OR SOLE PLATE TO STUD	(3) FACE NAILS	(4) FACE NAILS	
RIM JOIST OR BAND JOIST TO TOP PLATE OR SILL PLATE	TOE NAILS @ 6" OC	TOE NAILS @ 4" OC	
BLOCKING BETWEEN JOISTS TO TOP PLATE OR SILL PLATE	(4) TOE NAILS	(4) TOE NAILS	
DOUBLE STUD	NAILS @ 8" OC	NAILS @ 8" OC	
DOUBLE TOP PLATES	NAILS @ 12" OC	NAILS @ 12" OC	
DOUBLE TOP PLATES LAP (24" MIN LAP LENGTH)	(12) NAILS IN LAPPED AREA, EA SIDE OF JOINT	(12) NAILS IN LAPPED AREA, EA SIDE OF JOINT	
TOP PLATE LAP AT CORNERS AND INTERSECTING WALLS	(3) FACE NAILS	(3) FACE NAILS	
OPEN-WEB TRUSS BOTTOM CHORD TO TOP PLATES OR SILL PLATE (PARALLEL TO WALL)	NAILS @ 6" OC	NAILS @ 4" OC	
BOTTOM CHORD OF TRUSS TO TOP PLATES OR SILL PLATE (PERPENDICULAR TO WALL)	(3) TOE NAILS	(3) TOE NAILS	

SEE TABLE R602.3(1) FOR ADDITIONAL STRUCTURAL-MEMBER FASTENING REQUIREMENTS.

DETAILS AND NOTES ON DRAWINGS GOVERN.

BALLOON WALL FRAMING SCHEDULE (USE THESE STANDARDS UNLESS NOTED OTHERWISE ON THE FRAMING PLAN SHEETS)

FRAMING MEMBER SIZE	MAX HEIGHT (PLATE TO PLATE) 115 MPH ULTIMATE DESIGN WIND SPEED
2~4 @ 46" 00	10'-0"
2x4 @ 16" OC	
2x4 @ 12" OC	12'-0"
2x6 @ 16" OC	15'-0"
2x6 @ 12" OC	17'-9"
2x8 @ 16" OC	19'-0"
2x8 @ 12" OC	22'-0"
(2) 2x4 @ 16" OC	14'-6"
(2) 2x4 @ 12" OC	17'-0"
(2) 2×6 @ 46" OC	21'-6"
(2) 2x6 @ 16" OC	·
(2) 2x6 @ 12" OC	25'-0"
(2) 2x8 @ 16" OC	27'-0"
(2) 2x8 @ 12" OC	31'-0"

- a. ALL HEIGHTS ARE MEASURED SUBFLOOR TO TOP OF WALL PLATE.
- b. WHEN SPLIT-FRAMED WALLS ARE USED FOR HEIGHTS OVER 12', THE CONTRACTOR SHALL ADD 6' MINIMUM OF CS16 COIL STRAPPING (FULLY NAILED), CENTERED OVER THE WALL BREAK.
- c. FINGER-JOINTED MEMBERS MAY BE USED FOR CONTINUOUS HEIGHTS WHERE TRADITIONALLY MILLED LUMBER LENGTHS ARE
- d. FOR GREATER WIND SPEED, SEE ENGINEERED SOLUTION FOR CONDITION IN DRAWINGS.

# **ROOF SYSTEMS**

# TRUSSED ROOF - STRUCTURAL NOTES

 PROVIDE CONTINUOUS BLOCKING THROUGH STRUCTURE FOR ALL POINT LOADS.



DENOTES OVER-FRAMED AREA

- 3. MINIMUM 7/16" OSB ROOF SHEATHING
- 4. TRUSS LAYOUT AND PLACEMENT BY MANUFACTURER TO COINCIDE WITH THE SUPPORT LOCATIONS SHOWN. TRUSS PROFILES SHALL BE SEALED BY THE TRUSS MANUFACTURER. TRUSS PLANS TO BE COORDINATED WITH THE SEALED STRUCTURAL DRAWINGS. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
- 5. MANUFACTURER TO PROVIDE REQUIRED UPLIFT CONNECTION.
- 6. PROVIDE H2.5A (MINIMUM) OR EQUIVALENT AT EACH TRUSS-TO-TOP PLATE CONNECTION AT OVER-FRAMED AREAS, UNLESS NOTED OTHERWISE.
- 7. UPLIFT CONNECTION TO BE CARRIED THROUGH TO FLOOR SYSTEM

# STICK-FRAMED ROOF - STRUCTURAL NOTES

- PROVIDE 2x4 COLLAR TIES AT 48" OC AT UPPER THIRD OF RAFTERS, UNLESS NOTED OTHERWISE.
- 2. FUR RIDGES FOR FULL RAFTER CONTACT.
- 3. PROVIDE CONTINUOUS BLOCKING THROUGH STRUCTURE FOR ALL POINT LOADS.



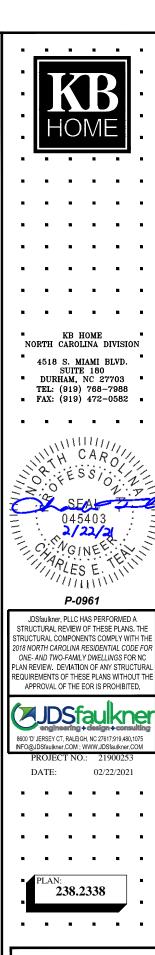
DENOTES OVER-FRAMED AREA

- 5. MINIMUM 7/16" OSB ROOF SHEATHING
- PROVIDE 2x4 RAFTER TIES AT 16" OC AT 45° BETWEEN RAFTERS AND CEILING JOISTS. USE (4) 16d NAILS AT EACH CONNECTION. RAFTER TIES MAY BE SPACED AT 48" OC AT LOCATIONS WHERE NO KNEE WALLS ARE INSTALLED.
- 7. PROVIDE H2.5A (MINIMUM) OR EQUIVALENT AT EACH RAFTER-TO-TOP PLATE CONNECTION AT OVER-FRAMED AREAS, UNLESS NOTED OTHERWISE.
- 8. UPLIFT CONNECTION TO BE CARRIED THROUGH TO FLOOR SYSTEM.

BRICK VENEER LINTEL SCHEDULE			
SPAN	STEEL ANGLE SIZE	END BEARING LENGTH	
UP TO 42"	L3-1/2"x3-1/2"x1/4"	8" (MIN. @ EACH END)	
UP TO 72"	L6"x4"x5/16"* (LLV)	8" (MIN. @ EACH END)	
OVER 72"	L6"x4"x5/16"* (LLV) ATTACH LINTEL w/ 1/2" THRU BOLT @ 12" OC, 3" FROM EACH END		

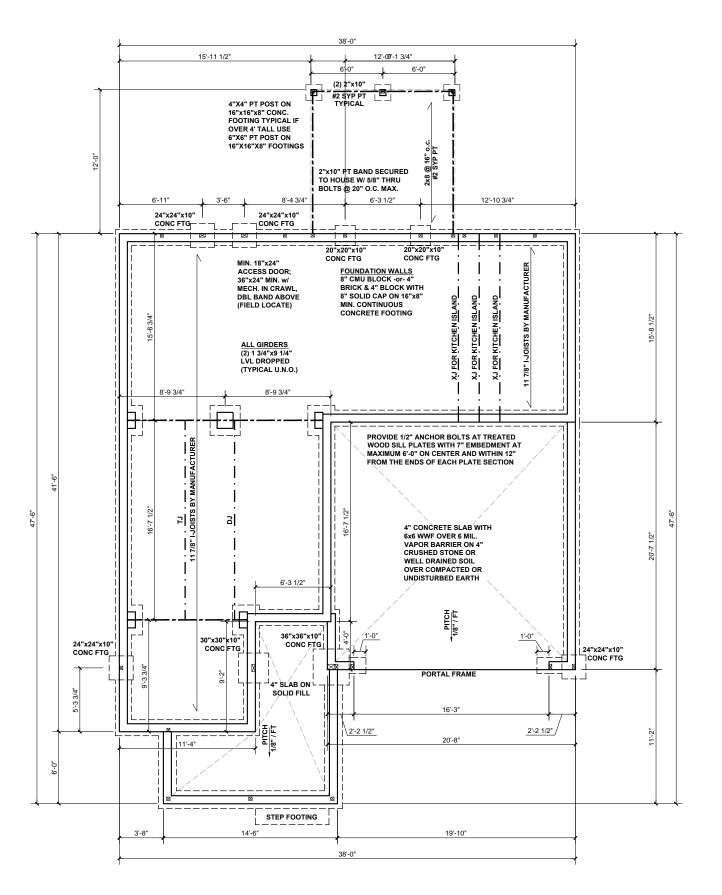
\* FOR QUEEN BRICK: LINTELS AT THIS CONDITION MAY BE 5"x3-1/2"x5/16"

NOTE: BRICK LINTELS AT SLOPED AREAS TO BE 4"x3-1/2"x1/4" STEEL ANGLE WITH 16D NAILS IN 3/16" HOLES IN 4" ANGLE LEG AT 12" OC TO TRIPLE RAFTER. WHEN THE SLOPE EXCEEDS 4:12 A MINIMUM OF 3"x3"x1/4" PLATES SHALL BE WELDED AT 24" OC ALONG THE STEEL ANGLE.



GENERAL NOTES

GN1.1



# **CRAWL SPACE FOUNDATION PLAN - 'C'**

SCALE: 1/8"=1'-0"

### BEAM & POINT LOAD LEGE

INTERIOR LOAD BEARING WALL

-- ROOF RAFTER / TRUSS SUPP

· - · - · DOUBLE RAFTER / DOUBLE JOIST

STRUCTURAL BEAM / GIRDER

WINDOW / DOOR HEADEI

 ☑ POINT LOAD TRANSFER
 ■ POINT LOAD FROM ABOVE BEARING ON BEAM / GIRDER

# FOUNDATION STRUCTURAL NOTES :

1. CONCRETE BLOCK PIER SIZE SHALL BE:

SIZE HOLLOW MASONRY SOLID MASONRY

8x16 UP TO 32" HIGH UP TO 5'-0" HIGH 12x16 UP TO 48" HIGH UP TO 9'-0" HIGH 16x16 UP TO 64" HIGH UP TO 12'-0" HIGH

WITH 30" x 30" x 10" CONCRETE FOOTING, UNO.

FLOOR FRAMING TO BE 11 7/8" DEEP TJI 210 SERIES OR EQUAL, 19.2" OC MAXIMUM SPACING

\*\*REFER TO I-JOIST EQUIVALENCE CHART ON I-JOIST DETAIL SHEET FOR SUBSTITUTION OF MANUFACTURER SERIES

I-JOIST SPACING NOT TO EXCEED 19.2" OC IN LOCATIONS WITH TILE FINISH FLOOR

8"x16" PIERS AT FOUNDATION WALL SUPPORTING DROPPED GIRDER TO HAVE A 30"x10"x8" FOOTING PROJECTION FROM THE MAIN WALL FOOTING.

> (1) #5 REBAR @ CENTER OF ALL PERIMETER FOOTINGS. (2" C.C. MIN)



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# P-0961

JDSfaulkner, PLLC HAS PERFORMED A STRUCTURAL REVIEW OF THESE PLANS. THE STRUCTURAL COMPONENTS COMPLY WITH THE 2018 NORTH CAROLINA RESIDENTIAL CODE FOR ONE- AND TWO-FAMILY DWELLINGS FOR NC PLAN REVIEW. DEVIATION OF ANY STRUCTURAL REQUIREMENTS OF THESE PLANS WITHOUT THE APPROVAL OF THE FOR IS PROMINITED



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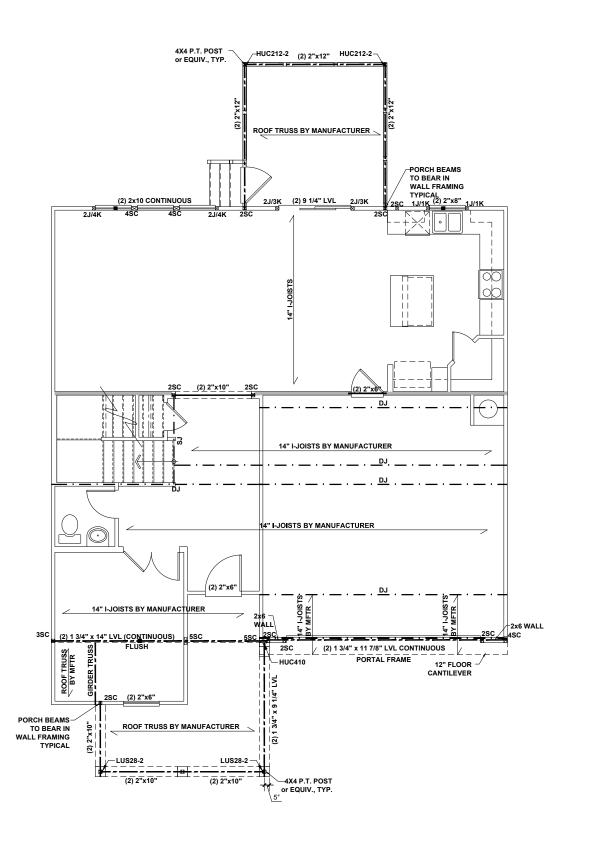
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CRAWL SPACE FOUNDATION PLAN

**S.30C** 



BEAM & POINT LOAD LEGE

INTERIOR LOAD BEARING WALL

---- ROOF RAFTER / TRUSS SUPPORT
----- DOUBLE RAFTER / DOUBLE JOIST

TOUBLE RAFTER / DOUBLE JO

window / door header

☑ POINT LOAD TRANSFER

■ POINT LOAD FROM ABOVE BEARING ON BEAM / GIRDER

STRUCTURAL FRAMING NOTES - (SEE GENERAL NOTES SHEET FOR ADDITIONAL REQUIREMENTS.)

ALL FRAMING TO BE #2 SPF MINIMUM.

2. ALL BEARING HEADERS TO BE (2) 2x6 SUPPORTED W/ MIN (1) JACK AND (1) KING EACH END, UNO.

3. EXTERIOR WALL OPENINGS OVER 3' TO HAVE MULTIPLE KING STUDS AS NOTED ON PLAN.

ALL NON-BEARING HEADERS TO BE (2) 2x4 (1) J (1) K, UNO.

PROVIDE CONTINUOUS BLOCKING THROUGH STRUCTURE FOR ALL POINT LOADS.

6. ALL HANGERS AND CONNECTORS SPECIFIED ARE TO BE SIMPSON STRONG-TIE OR EQUIVALENT.

7. ALL BEAMS SPECIFIED ARE MINIMUM SIZES ONLY. LARGER MEMBERS MAY SUBSTITUTED AS NEEDED FOR EASE OF CONSTRUCTION. MINIMUM BEAM SUPPORT IS (1) 2x4 STUD.

ALL EXTERIOR WALLS TO BE FULLY SHEATHED

FRONT PORCH COLUMNS TO BE MIN 4x4 PT
 ATTACHED AT TOP AND BOTTOM USING SIMPSON
 (OR EQUIV) COLUMN BASE OR SST A24
 BRACKETS. TRIM OUT PER BUILDER.

 PORCH COLUMNS TO BE MIN 4x4 PT ATTACHED AT BOTTOM USING SIMPSON (OR EQUIV) ABA44 AND AT TOP USING CS 16 STRAPPING (12" MIN) TO PORCH HEADER / BAND.

WHEN A 4-PLY LVL IS USED, ATTACH WITH (1) 1/2" Ø BOLT 12" OC STAGGERED, TOP AND BOTTOM, 1-1/2" MIN FROM ENDS. ALTERNATE ATTACHMENT EQUIVALENT METHOD MAY BE USED, SUCH AS SOW OR TRUSSLOK SCREWS (SEE MANUFACTURER'S SPECIFICATIONS).

. FOR STUD COLUMNS OF 4 OR MORE, INSTALL SST CS16 STRAPS @ 30" OC, 6" MAX FROM PLATES, ON INSIDE FACE OF COLUMN (EXTERIOR WALL), ON BOTH FACES OF COLUMN (INTERIOR WALL).

I-JOIST SPACING NOT TO EXCEED 19.2" OC IN LOCATIONS WITH TILE FINISH FLOOR

ALL FLUSH BEAMS TO BE DIRECTLY SUPPORTED BY
(2) 2X\_STUDS UNLESS OTHERWISE NOTED. STUD
COLUMNS TO BE SUPPORTED BY SOLID BLOCKING TO
FOUNDATION OR TO BEARING COMPONENT BELOW.

FLOOR FRAMING TO BE 14" DEEP TJI 210 SERIES OR EQUAL, 19.2" OC MAXIMUM SPACING, U.N.O.

\*\*REFER TO I-JOIST EQUIVALENCE CHART ON I-JOIST DETAIL SHEET FOR SUBSTITUTION OF MANUFACTURER SERIES



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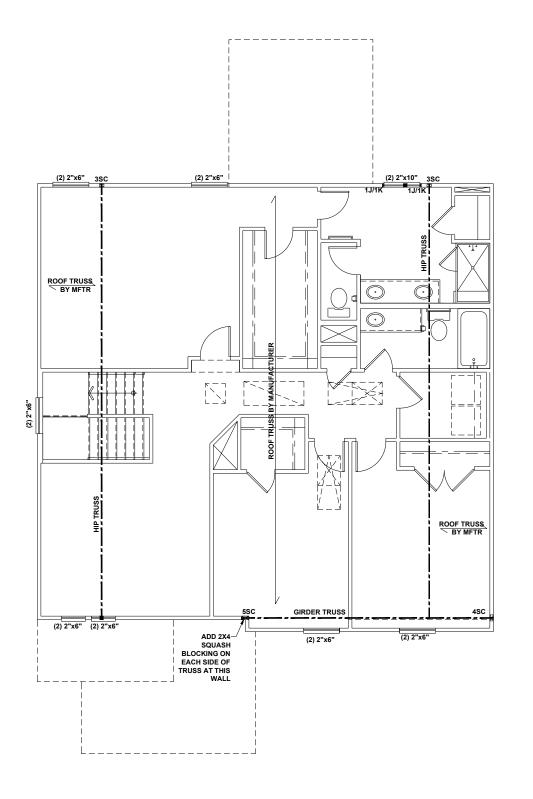
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FIRST FLOOR

CEILING FRAMING PLAN

**S1.0C** 

FIRST FLOOR CEILING FRAMING PLAN - 'C'



SCALE: 1/8"=1'-0"

### BEAM & POINT LOAD LEGE

INTERIOR LOAD BEARING WALL

---- ROOF RAFTER / TRUSS SUPPORT
---- DOUBLE RAFTER / DOUBLE JOIST

DOUBLE RAFTER / DOUBLE JOIS
STRUCTURAL BEAM / GIRDER

WINDOW / DOOR HEADER

■ POINT LOAD FROM ABOVE BEARING ON BEAM / GIRDER

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- ALL BEAMS SPECIFIED ARE MINIMUM SIZES ONLY. LARGER MEMBERS MAY SUBSTITUTED AS NEEDED FOR EASE OF CONSTRUCTION. MINIMUM BEAM SUPPORT IS (1) 2x4 STUD.
- ALL EXTERIOR WALLS TO BE FULLY SHEATHED
  WITH 7/16" OSB
- D. FRONT PORCH COLUMNS TO BE MIN 4x4 PT ATTACHED AT TOP AND BOTTOM USING SIMPSON (OR EQUIV) COLUMN BASE OR SST A24 BRACKETS. TRIM OUT PER BUILDER.
- PORCH COLUMNS TO BE MIN 4x4 PT ATTACHED AT BOTTOM USING SIMPSON (OR EQUIV) ABA44 AND AT TOP USING CS 16 STRAPPING (12" MIN) TO PORCH HEADER / BAND.
- I. WHEN A 4-PLY LVL IS USED, ATTACH WITH (1) 1/2" Ø BOLT 12" OC STAGGERED, TOP AND BOTTOM, 1-1/2" MIN FROM ENDS. ALTERNATE ATTACHMENT EQUIVALENT METHOD MAY BE USED, SUCH AS SDW OR TRUSSLOK SCREWS (SEE MANUFACTURER'S SPECIFICATIONS).
- 2. FOR STUD COLUMNS OF 4 OR MORE, INSTALL SST CS16 STRAPS @ 30" OC, 6" MAX FROM PLATES, ON INSIDE FACE OF COLUMN (EXTERIOR WALL), ON BOTH FACES OF COLUMN (INTERIOR WALL).

ALL FLUSH BEAMS TO BE DIRECTLY SUPPORTED BY (2) 2X\_STUDS UNLESS OTHERWISE NOTED. STUD COLUMNS TO BE SUPPORTED BY SOLID BLOCKING TO FOUNDATION OR TO BEARING COMPONENT BELOW.



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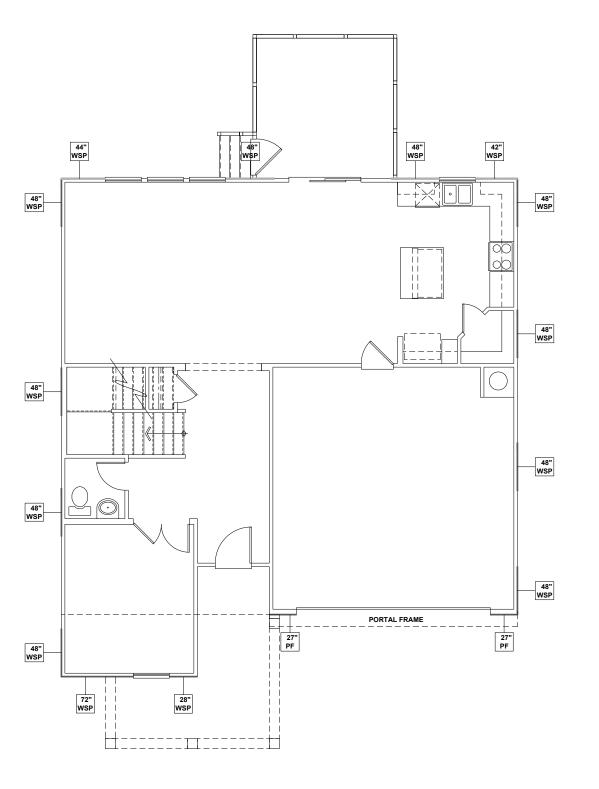
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SECOND FLOOR CEILING FRAMING PLAN

. . . . .

**S2.0C** 

**SECOND FLOOR CEILING FRAMING PLAN - 'C'** 



# WALL BRACING REQUIREMENTS

- MINIMUM PANEL WIDTH IS 24"
   FIGURES BASED ON THE CONTINUOUS SHEATHING METHOD USING THE RECTANGLE CIRCUMSCRIBED AROUND THE FLOOR PLAN OR PORTION OF THE FLOOR PLAN. IF NO RECTANGLE IS NOTED, THE STRUCTURE HAS BEEN FIGURED ALL WITHIN ONE RECTANGLE.
  - PANELS MAY SHIFT UP TO 36" EITHER DIRECTION
- FOR EASE OF CONSTRUCTION (NAILING & BLOCK REQUIREMENTS STILL APPLY).
- FOR ADDITIONAL WALL BRACING INFORMATION,
  REFER TO WALL BRACING DETAIL SHEET(S).
   SCHEMATIC BELOW INDICATES HOW SIDES OF RECTANGLE ARE TO BE INTERPRETED IN BRACING CHART WHEN APPLIED TO STRUCTURE:



CS16 STRAP FROM STUD, CROSS HEADER, TO WALL TOP PLATE, 36" LONG MINIMUM

SIMPSON MSTA15 HOLD DOWN CAPACITY OF 970 POUNDS PER ANCHOR WITH (12) 10d NAILS. STRAF TO BE LOCATED AT EDGE OF BRACED WALL PANEL. (CS16 STRAPPING MAY BE SUBSTITUTED W/ SIMILAR LENGTH AND NAILING PATTERN.) USE HTT4 FOR ATTACHMENT TO CONCRETE.

SCALED LENGTH OF WALL PANEL AT LOCATION —

LENGTH OF PANEL

# WALL BRACING: RECTANGLE 1

SIDE	REQUIRED LENGTH	PROVIDED LENGTH
FRONT	13.5 FT.	15.08 FT.
LEFT	11.0 FT.	16.0 FT.
REAR	13.5 FT.	15.16 FT.
RIGHT	11.0 FT.	16.0 FT.

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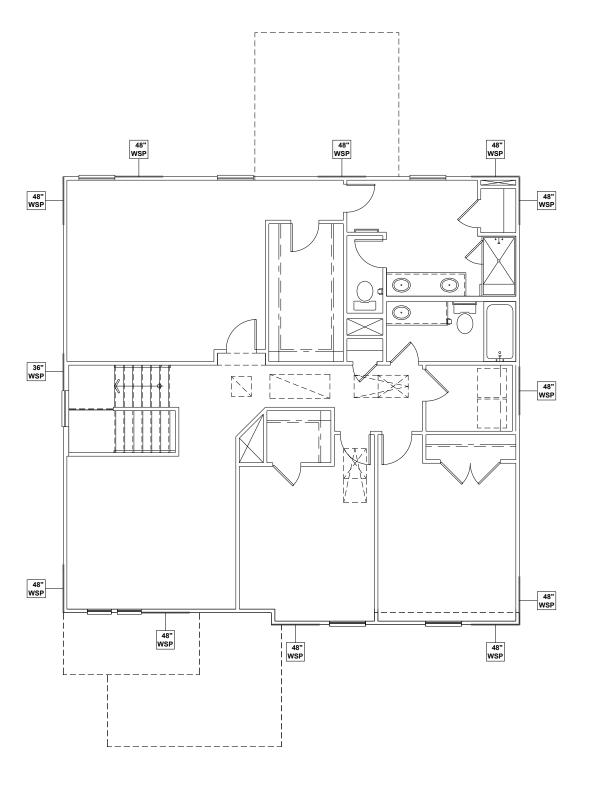


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FIRST FLOOR WALL BRACING PLAN

FIRST FLOOR WALL BRACING PLAN - 'C'



# WALL BRACING REQUIREMENTS

- MINIMUM PANEL WIDTH IS 24"
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SCALED LENGTH
OF WALL PANEL
AT LOCATION

24" NUME LENG OF PA

OF PANEL
PANEL TYPE

# WALL BRACING: RECTANGLE 1

SIDE	REQUIRED LENGTH	PROVIDED LENGTH
FRONT	6.5 FT.	12.0 FT.
LEFT	5.5 FT.	11.0 FT.
REAR	6.5 FT.	12.0 FT.
RIGHT	5.5 FT.	12.0 FT.

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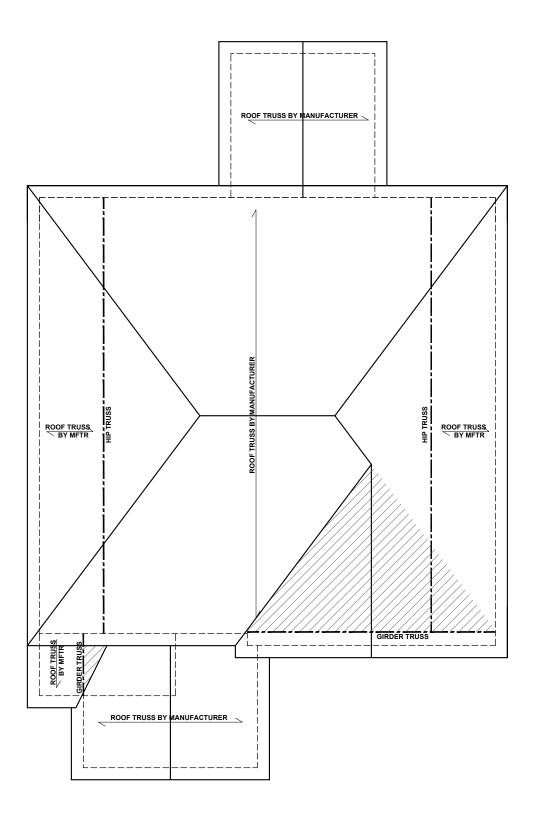
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SECOND FLOOR WALL BRACING PLAN

**S5.0C** 

SECOND FLOOR WALL BRACING PLAN - 'C'



BEAM & POINT LOAD LEGEND

INTERIOR LOAD BEARING WALL

- - ROOF RAFTER / TRUSS SUPPORT

----- DOUBLE RAFTER / DOUBLE JOIST

--- STRUCTURAL BEAM / GIRDER

WINDOW / DOOR HEADER

POINT LOAD TRANSFER

POINT LOAD FROM ABOVE BEARING ON BEAM / GIRDER

## TRUSSED ROOF - STRUCTURAL NOTES

PROVIDE CONTINUOUS BLOCKING THROUGH STRUCTURE FOR ALL POINT LOADS.

DENOTES OVER-FRAMED AREA

MINIMUM 7/16" OSB ROOF SHEATHING

- 4. TRUSS LAYOUT AND PLACEMENT BY MANUFACTURER TO COINCIDE WITH THE SUPPORT LOCATIONS SHOWN. TRUSS PROFILES SHALL BE SEALED BY THE TRUSS
  MANUFACTURER. TRUSS PLANS TO BE
  COORDINATED WITH THE SEALED STRUCTURAL DRAWINGS. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S
- MANUFACTURER TO PROVIDE REQUIRED UPLIFT
- PROVIDE H2.5A (MINIMUM) OR EQUIVALENT AT EACH TRUSS-TO-TOP PLATE CONNECTION AT OVER-FRAMED AREAS, UNLESS NOTED
- UPLIFT CONNECTION TO BE CARRIED THROUGH TO FLOOR SYSTEM.

# TRUSS UPLIFT CONNECTORS: EXPOSURE B, 115 MPH, ANY PITCH, 24" O.C. MAX ROOF TRUSS SPACING

TRUSSES SHALL BE ATTACHED TO SUPPORT WALL FOR UPLIFT RESISTANCE. CONTINUOUS OSB WALL SHEATHING BELOW PROVIDES CONTINUOUS UPLIFT RESISTANCE TO FOUNDATION. ALL TRUSSES SUPPORTED BY INTERMEDIATE SUPPORT WALLS, KNEEWALLS, OR BEAMS SHALL BE ATTACHED TO SUPPORTING MEMBER PER SCHEDULE:

ROOF SPAN IS MEASURED HORIZONTALLY BETWEEN FURTHEST SUPPORT POINTS.

ROOF PLAN UP TO 28'

CONNECTOR NAILING PER TABLE 602.3(1)

**OVER 28'** 

(1) SIMPSON H2.5A HURRICANE CLIP TO DBL TOP PLATE OR

OR (1) SIMPSON H3 CLIP TO SINGLE 2x4 PLATE

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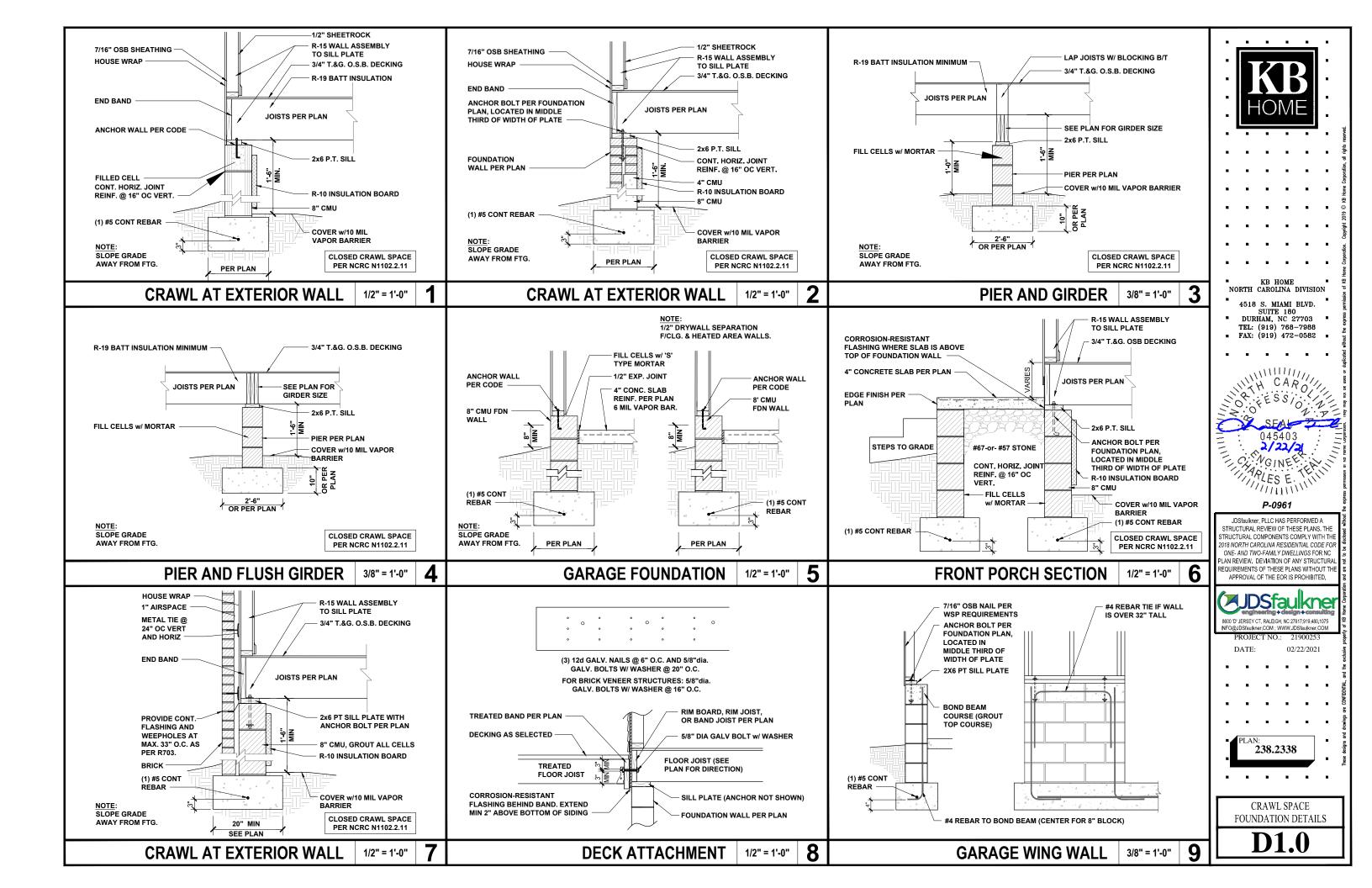
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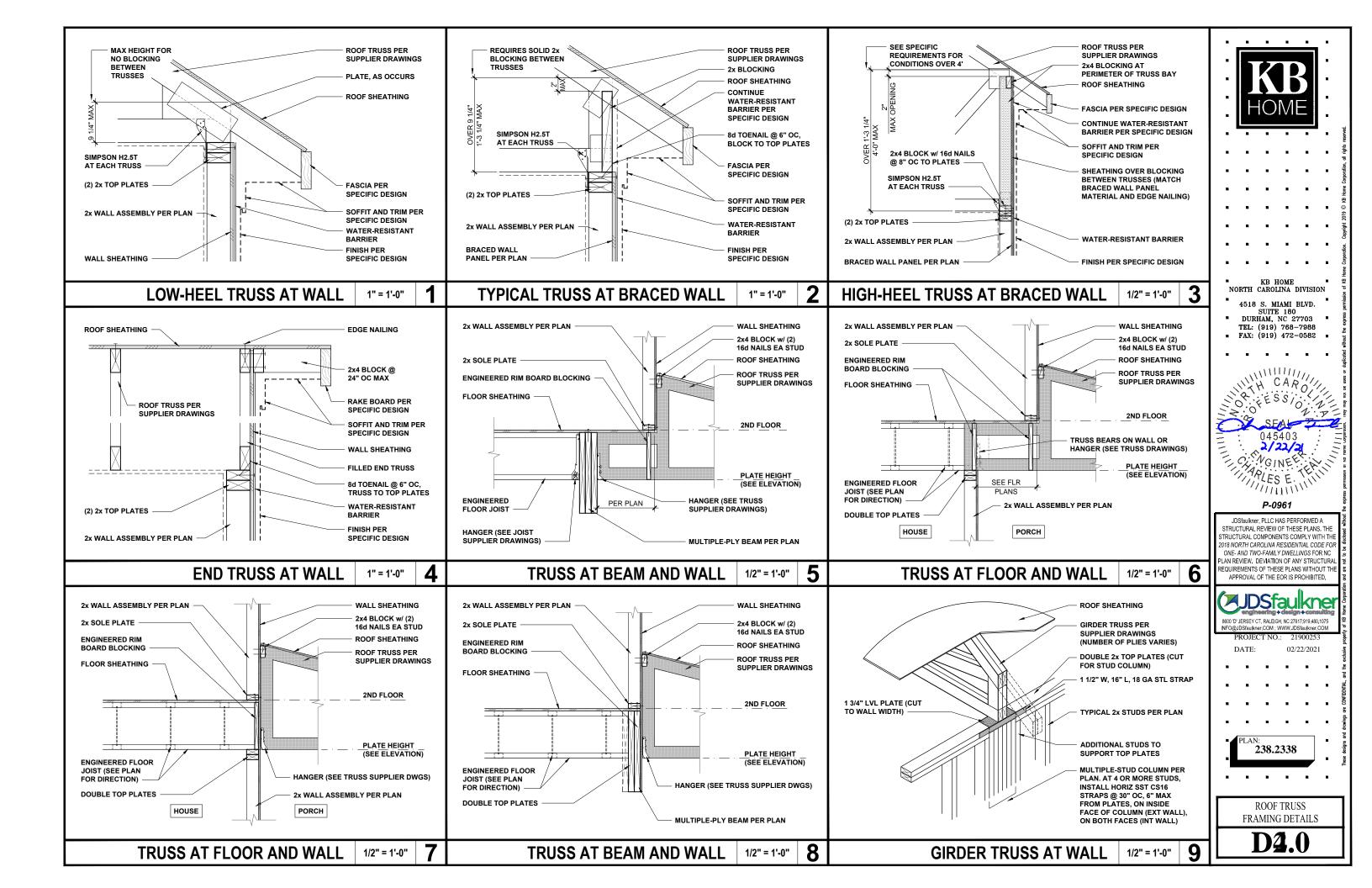


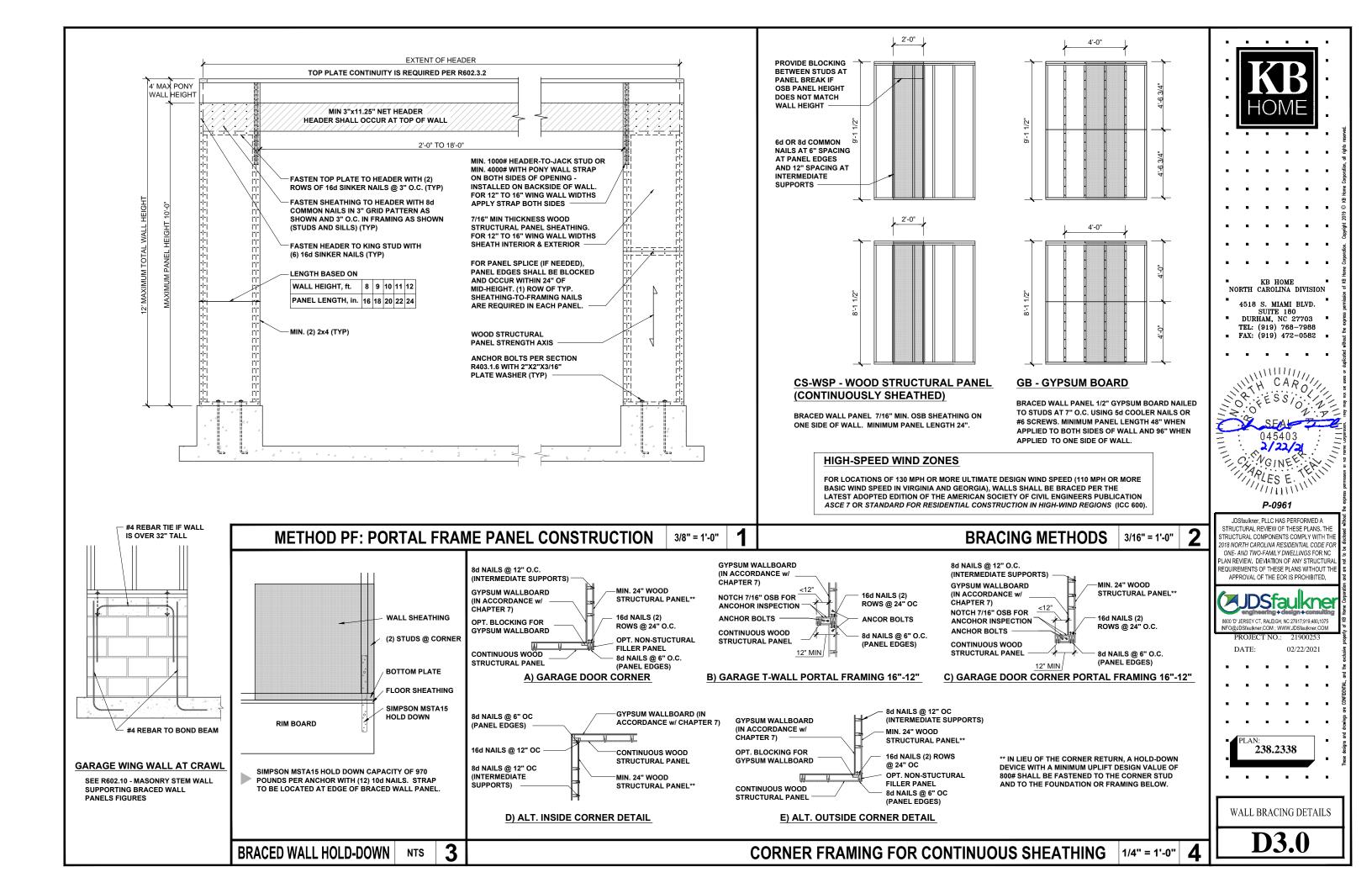
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ROOF FRAMING PLAN

**ROOF FRAMING PLAN - 'C'** 







### **JOIST DETAILS** When sheathing thickness exceeds 7/8", Load bearing or shear wall above IRC 502-7 requires lateral (must stack over wall below) **BEAM and COLUMN DETAILS** restraint (blocking) at all Plate nail - 16d (0.135" x intermediate supports i Floor panel nail - 8d (0.131" x $2\frac{1}{2}$ ") at 6" on-center\* D0, D1, and D2 to 11/4" rim board or blocking Web Stiffeners required squash blocks BEAM TO BEAM CONNECTION B1 B1W $1\frac{1}{4}$ " LSL or $1\frac{1}{8}$ " rim board.\* Toe nail - 10d (0.131" x 3") required each side (L1) at B1W and B2W For rim board thicker than 1 3/4" - Attach Joist to rim board with one 10d (0.128"x3") nail. (A3) Blocking panels may be A2 A2W Must have 13/4" minimum joist bearing B2 B2W Top nail from joist into rim board. required with shear w (L3) at ends. Attach rim joist per A3 detail Connect corner with four 10d (0.128"x3") nails. Toe nail from side of parallel closure into rim board above or below - see detail B1 A3W INTERMEDIATE BEARING Load bearing or shear wall BEARING AT CONCRETE WALL NO LOAD BEARING WALL ABOVE above (must stack over wall Load from abov Web stiffeners required (L4) BEARING AT COLUMN Protect untreated required on each Blocking panels may be of support Use 2x4 minimum squash blocks B3 B3W B4 B4W CS Use 2x4 minimum squas... to transfer load around joist of hanger do not laterally suppor above or below (See detail B1) **FASTENING of FLOOR PANELS** \* SEE I-JOIST EQUIVALENCE CHART FILLER and BACKER BLOCK SIZES \* SEE I-JOIST EQUIVALENCE CHART Guidelines for Closest On-Center Spacing per Row 110 FO \* 230 or 360 FO \* Rim Board 210 FQ \* 560 FO \* I-JOIST 110, 210, 3 I-Joists PSI LVL Nail Size 360 and 9½" or LSL or wide Depth 14" and 230 FQ. 560 FQ 8d (0.131" x 2½") 2x8 + ½" 2x12 + ½ 4" 3" Filler Block 2x6 + 3/8" 2x8 + 3/8 2x6 2x8 (Detail H2) sheathing sheathir sheathing sheathing sheathing 2x6 2x8 2x12 10d (0.148"x 3"), 12d (0.148"x 31/4") 4" 4" 4" 2x6 2x10 2x6+3/8" 2x10+3/8 2x6 + ½" 2x10 + ½" 16d (0.162"x 3½") 6" 6" 6"(2) 6"(2) 8" 6" Cantilever Fille 4'-0" 6'-0" sheathing sheathing sheathing sheathing (Detail E4) applicable (1) One row of fasteners permitted (two at abutting panel edges) for diaphragms. Stagger nails when long long 4'-0" long 6'-0" long 4'-0" long 6'-0" long using 4" on-center spacing and maintain 3/8" joist and panel edge distance. For other applications, Backer Block ( 3/4" or 7/8" multiple rows of fasteners are permitted if the rows are offset at least ½" and staggered. %" or 3/4" 1" Net 2x6 2x8 2x12 (Detail F1 or H2 (2) Can be reduced to 4" on-center if nail penetration into the narrow edge is no more than 1 3/8" (to avoid splitting). (1) If necessary, increase filler and backer block height for face mount hangers and maintain $\frac{1}{8}$ " gap at top of joist; see detail W. Filler and backer block lengths should accomodate required nailing • Recommended nailing is 12" on-center in field and 6" on-center along panel edge. Fastening requirements on engineered drawings supersede without splitting (12" minimum for backer blocks and 24" minimum for filler blocks). recommendations listed above. Joists must be laterally supported at cantilever and end bearings by blocking panels, hangers, or direct attachment to a rim board or rim joist. • Recommended use of a non-polyurethane subfloor adhesive on all contact points between panels and floor framing. Safety bracing (1x4 minimum) at 8' on-center (6' on-center for $\,$ 110 or equivalent Joists) and extended to a braced end wall. Fasten at each joist with two 8d (0.113" x 2 $\frac{V_2}{2}$ ") nails minimum (see WARNING). • Nailing rows must be offset at least 1/2" and staggered. • 14 ga. staples may be substituted for 8d (0.113" x 21/2") nails if minimum DO NOT bevel cut joist penetration of 1" into the joist or rim beyond inside face of wal board is achieved. Maximum spacing of nails is 18" on-center for joists. DO NOT overhang seat cut: on beams beyond the inside face of support member. Rim jois $1\frac{1}{4}$ " rim board. $\widehat{A2}$ Ĺ5 $\bigcirc \bigcup$ Use B1 or B2 at End of joists at see note 3 under DO NOT use sawn lumber for rim board or blocking, as it may shrink after

installation. Use only

Protect untreated

wood from direct

11/4" knockouts a

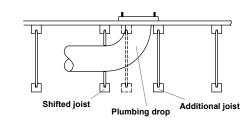
# **INSTALLATION TIPS**

Subfloor adhesive will improve floor performance, but may not be required.

Squash blocks and blocking panels carry stacked vertical loads (details B1 and B2). Packing out the web of a joist (with web stiffeners) is not a substitute for squash blocks or blocking panels.

When joists are doubled at non-load bearing parallel partitions, space joists apart the width of the wall for plumbing or HVAC.

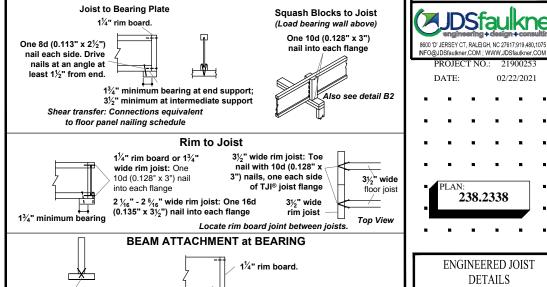
Additional joist at plumbing drop (see detail).



# \* I-JOIST EQUIVALENCY CHART

EQUIVALENT IN SPAN AND SPACING				
Depth	Mftr & Series	Mftr & Series	Mftr & Series	
	TJI - 110	BCI 4500		
9 1 "	TJI - 210	BCI 5000		
"	TJI - 230	BCI 6000	EverEdge 20	
		BCI 6500		
	TJI - 110	BCI 4500		
	TJI - 210	BCI 5000		
11 7"	TJI - 230	BCI 6000	EverEdge 20	
8		BCI 6500		
l i	TJI - 360	BCI 60'S	EverEdge 30	
	TJI - 560	BCI 90'S	EverEdge 50/60	
14"	TJI - 110	BCI 4500		
	TJI - 210	BCI 5000		
	TJI - 230	BCI 6000	EverEdge 20	
		BCI 6500		
	TJI - 360	BCI 60'S	EverEdge 30	
	TJI - 560	BCI 90'S	EverEdge 50/60	
16"	TJI - 110	BCI 4500		
	TJI - 210	BCI 5000		
	TJI - 230	BCI 6000	EverEdge 20	
		BCI 6500		
Ī	TJI - 360	BCI 60'S	EverEdge 30	
Ī	TJI - 560	BCI 90'S	EverEdge 50/60	

# **JOIST NAILING REQUIREMENTS at BEARING**



Drive nails at an

splitting of plate

angle to minimize

See framing plan (if applicable) or iLevel® Framer's Pocket

Guide for minimum end and

intermediate bearing lengths

One 10d (0.128" x 3")

nail each side of member at bearing, 11/2"

minimum from end

ENGINEERED JOIST DETAILS

238,2338

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KB HOME

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JDSfaulkner, PLLC HAS PERFORMED A

STRUCTURAL REVIEW OF THESE PLANS. THE

STRUCTURAL COMPONENTS COMPLY WITH THE

2018 NORTH CAROLINA RESIDENTIAL CODE FOR

ONE- AND TWO-FAMILY DWELLINGS FOR NC PLAN REVIEW DEVIATION OF ANY STRUCTURAL

REQUIREMENTS OF THESE PLANS WITHOUT THE

APPROVAL OF THE EOR IS PROHIBITED.

02/22/2021