

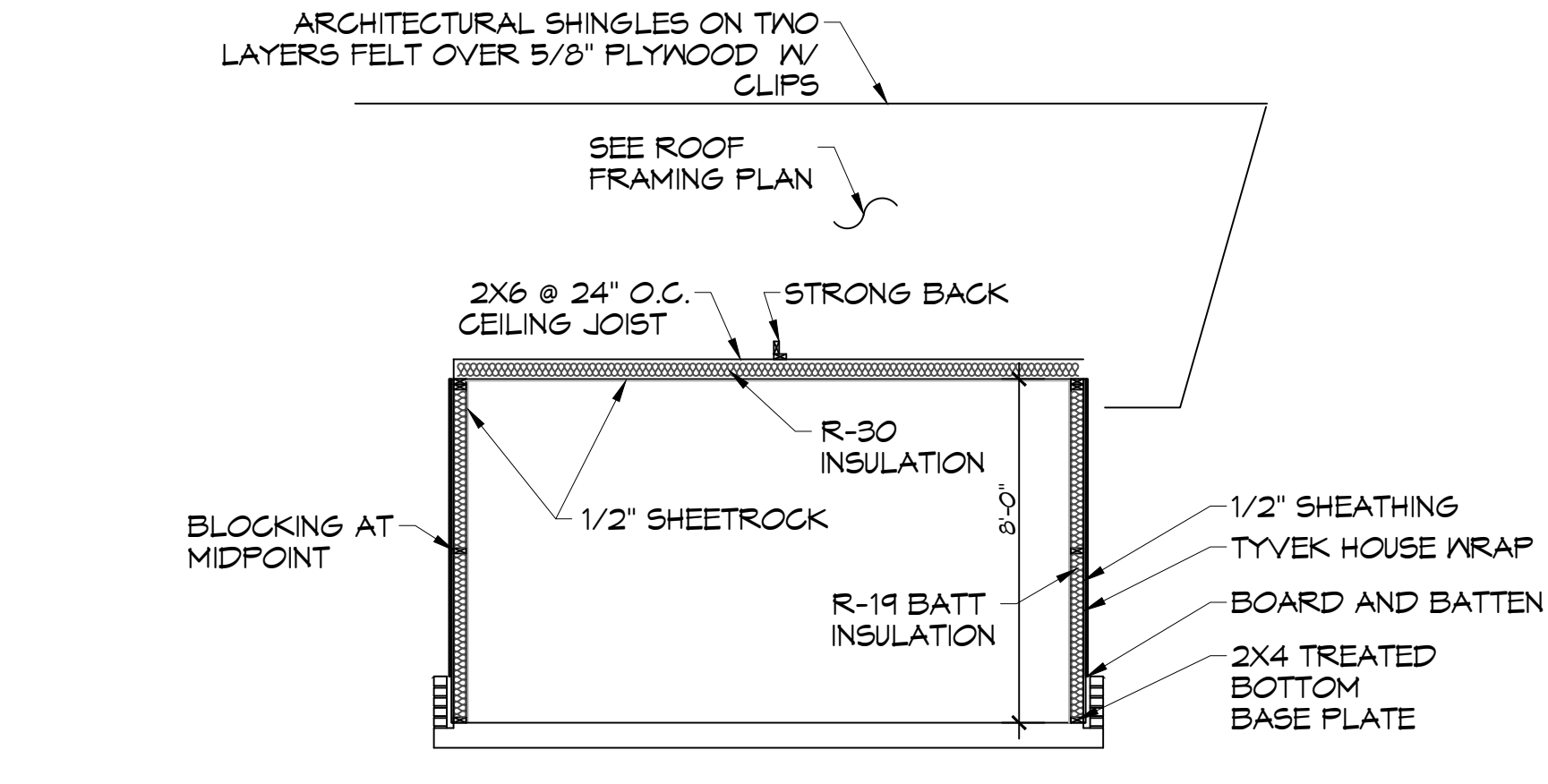
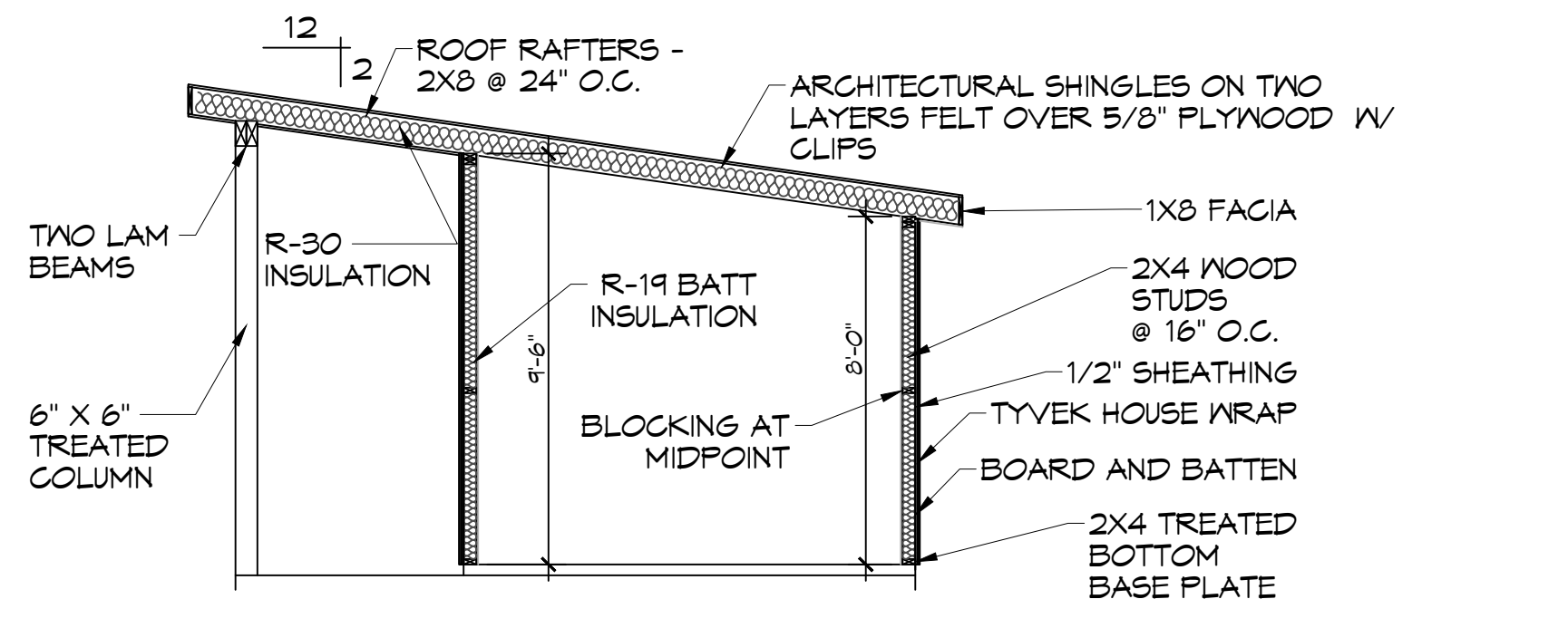
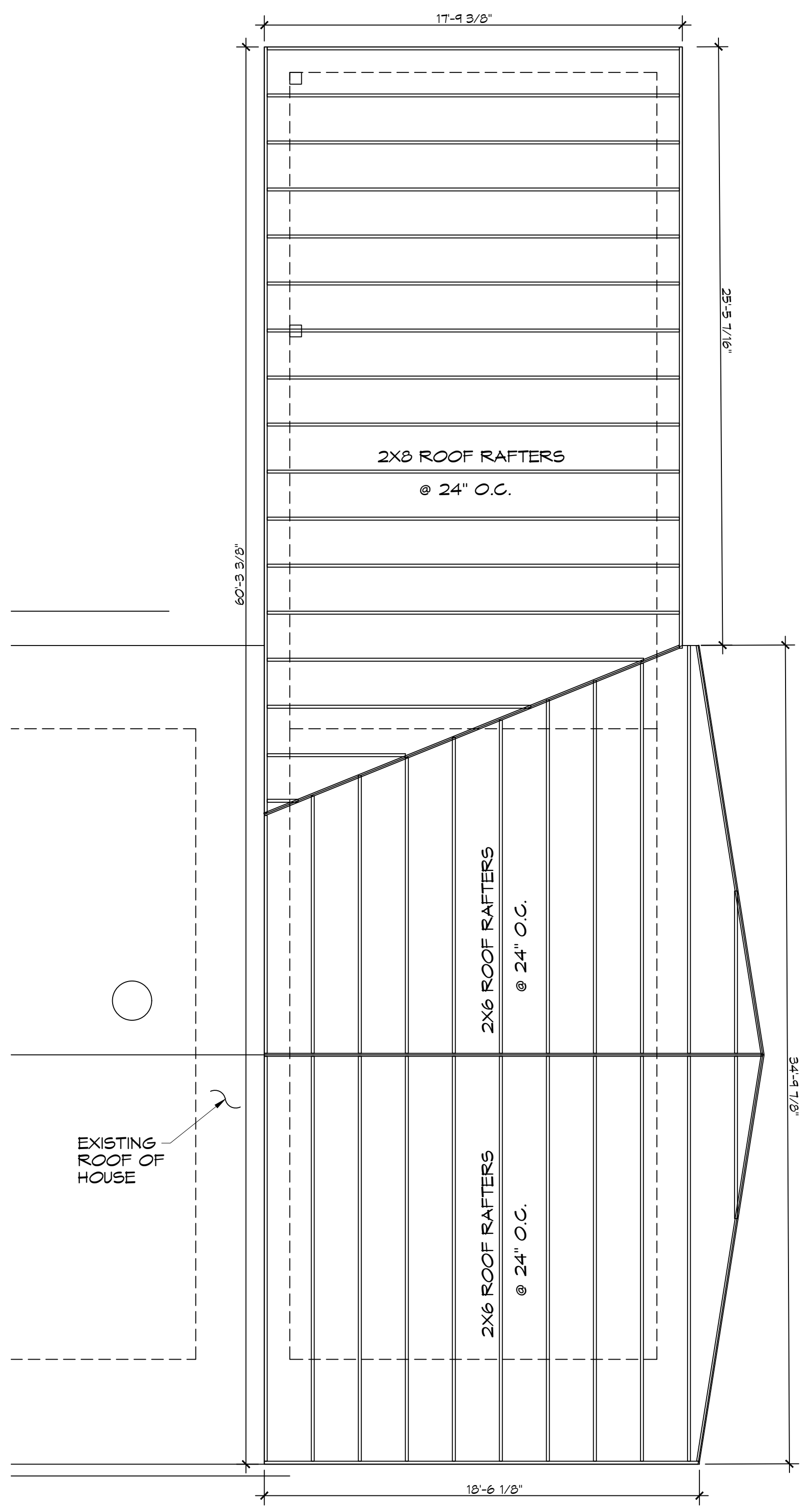
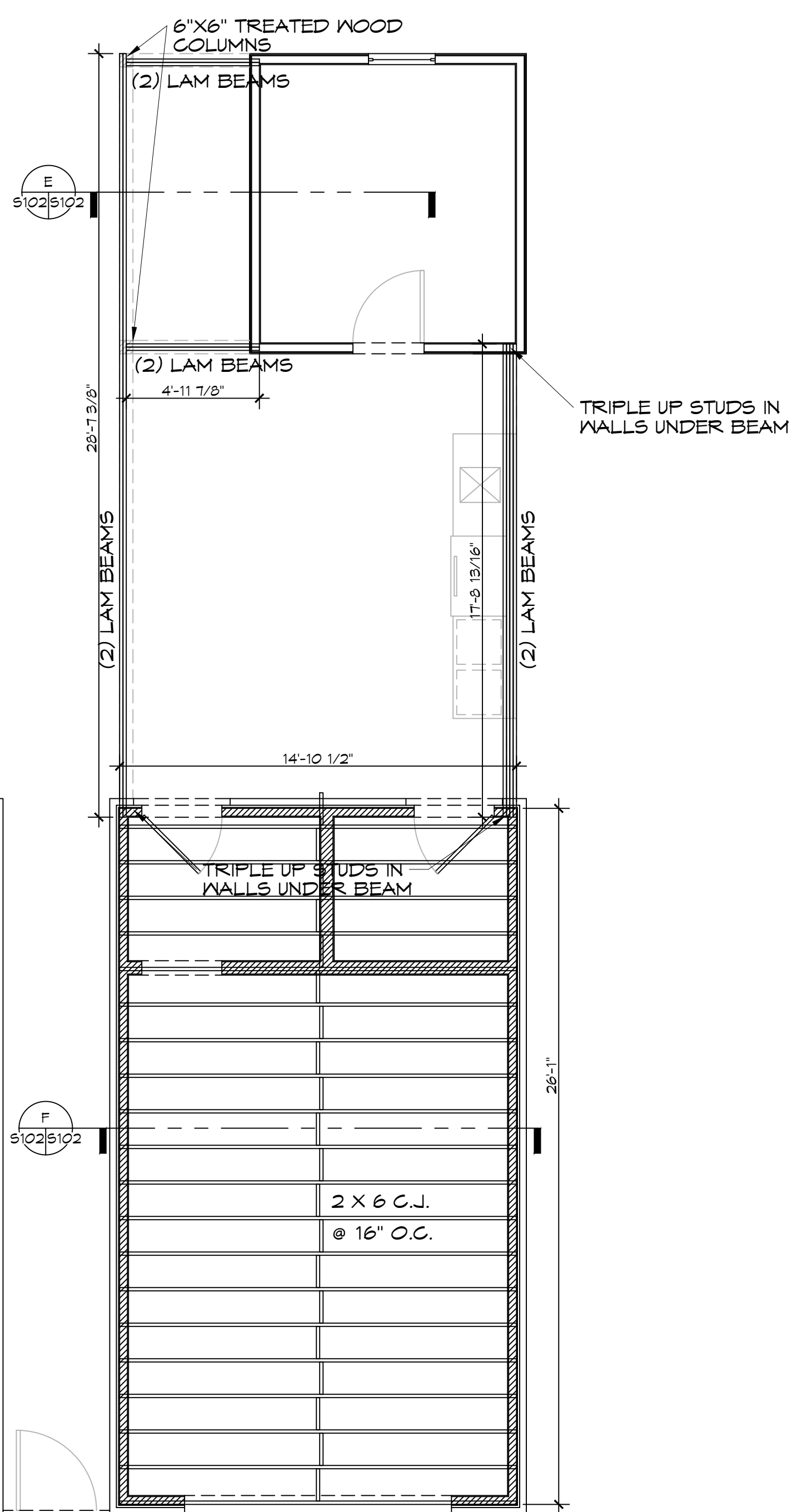
D.E. MARR, A.E. - Foundation & Structural Design, Inc. 1000 West Pine Street, Metairie, Louisiana 70001-5510 - Phone: 504.885.1100 - Fax: 504.885.1101 - www.dammoneengineering.com

DESIGN CRITERIA

THE CONSTRUCTION FOR SAID RESIDENCE, WHERE WIND SPEED IS 140 MILES PER HOUR AND V₉₀ WIND SPEED IS 130 MPH, WIND EXPOSURE ZONE C, IS DESIGNED IN ACCORDANCE WITH AMERICAN FOREST AND PAPER ASSOCIATION (AF&PA) WOOD FRAME CONSTRUCTION MANUAL FOR ONE AND TWO FAMILY DWELLINGS (WFCM) 2001 EDITION AS WELL AS THE INTERNATIONAL RESIDENTIAL CODE (IRC) 2021 EDITION. STRUCTURE SHALL BE BUILT TO THE 2021 INTERNATIONAL ENERGY CONSERVATION CODE (IECC) AND STATE AMENDMENTS ADOPTED JULY 1, 2023.

- ROOF NOTES**
- ALL JOIST SPANS, HEADERS AND GIRDERS REVIEWED AS #2 SOUTHERN YELLOW PINE.
 - ANY CHANGES IN THE SPECIES OR GRADE SHALL CONFORM TO THE APPROPRIATE SPAN TABLES, FLOOR JOIST CHAPTER 5, RAFTERS & CEILING JOIST CHAPTER 8, UNLESS NOTED ON THE CONSTRUCTION PLANS.
 - ALL JOIST, BEAMS, HEADERS, HIPS, VALLEYS, AND PURLINS SHALL BE SUPPORTED AND BRACED TO LOAD BEARING WALLS AS REQUIRED BY THE INTERNATIONAL RESIDENTIAL BUILDING CODE.
 - ALL SHALL BE SIZED FOR SPAN AND FOR ALL LOADS THAT WILL BE APPLIED.
 - CEILING JOISTS SPANS ARE BASED ON INTERNATIONAL RESIDENTIAL CODE (I.R.C.) SOUTHERN YELLOW PINE #2 LUMBER SPANS.
 - HEADER SIZES SHOULD BE BASED ON I.R.C. - TABLE R502.5
 - DESIGN AND LAYOUT OF TRIM JOISTS TO BE PROVIDED BY TRIM JOIST MANUFACTURER.
 - ALL LUMBER TO BE #2 SOUTHERN PINE.
 - TRIPLE UP ALL STUDS AT END OF BEAMS.

NOTE: PRE ENGINEERED LVL BEAM & GLUE LAM SHALL BE SIZED PER MANUFACTURER RECOMMENDATION



DAMMON ENGINEERING, INC.
LOUISIANA & MISSISSIPPI

www.dammoneengineering.com
info@dammoneengineering.com
PH: 985.649.8832

Chief Engineer: Brian Mistich, PE
554 Old Spanish Trail
Slidell, LA 70458

REVISIONS	DATE
# DESCRIPTION	



HOUSE FRAMING PLAN

JIM SMITH

6386 PRATT DRIVE
NEW ORLEANS, LA 70122

JOB No: DATE: 02-18-2025
DRAWN BY: CKD CHECKED BY: BAW

SHEET TITLE:
GARAGE CEILING JOIST AND ROOF RAFTER PLAN WITH SECTIONS

DRAWING NUMBER:
S102

SHEET No: 2 of 4

TABLE S601.7 - UPLIFT CONNECTIONS - 140 MPH WINDS EXP "B"
NFCM 2015 TABLE 3.2

CONNECTION	FRAMING SPACING (INCHES)	ROOF SPAN (FEET)	UPLIFT	LATERAL	SHEAR	NUMBER OF 8d COMMON NAILS OR 10d BOX NAILS IN EACH END OF 1-1/4" X 20" GAGE STRAP
ROOF ASSEMBLY TO WALL ASSEMBLY	16" OC	16	401	292	152R	4
WALL ASSEMBLY TO FOUNDATION	16" OC	16	224	219	436	4

TABLE S601.8 - SILL OR BOTTOM PLATE TO FOUNDATION CONNECTIONS RESISTING UPLIFT LOADS - 140 MPH WIND EXP "B"
NFCM 2015 TABLE 3.2C

BOTTOM PLATE TO FOUNDATION ANCHOR BOLT CONNECTION RESISTING	FOUNDATION SUPPORTING	MAXIMUM ANCHOR BOLT SPACING (INCHES)	
		8' END ZONES	INTERIOR ZONES
UPLIFT LOADS	1 - 3 STORIES	25 INCHES ON CENTER	30 INCHES ON CENTER

NOTE: A MINIMUM OF ONE ANCHOR BOLT SHALL BE PROVIDED WITHIN 6 TO 12 INCHES OF EACH END OF EACH PLATE

TABLE S601.9 - SILL OR BOTTOM PLATE TO FOUNDATION CONNECTIONS RESISTING SHEAR LOADS - 140 MPH WIND EXP "B"
NFCM 2015 TABLE 3.2B

BOTTOM PLATE TO FOUNDATION ANCHOR BOLT CONNECTION RESISTING	FOUNDATION SUPPORTING	MAXIMUM ANCHOR BOLT SPACING (INCHES)	
		5/8" Ø ANCHOR BOLTS	48 INCHES ON CENTER W/3X3X1/4" WASHER
UPLIFT LOADS	4 STORY		

TABLE S601.10 - FULL HEIGHT STUD REQUIREMENT FOR HEADERS OR WINDOW SILL PLATES IN EXTERIOR WALLS EXPOSURE "B"
NFCM 2015 TABLE 3.23C

HEADER SPAN (FEET)	WALL SPACING (INCHES)		
	12" O.C.	16" O.C.	24" O.C.
2	1	1	1
4	2	2	1
6	3	3	2
8	4	3	2

TABLE S601.10 - FULL HEIGHT STUD REQUIREMENT FOR HEADERS OR WINDOW SILL PLATES IN EXTERIOR WALLS EXPOSURE "B"
NFCM 2015 TABLE 3.23C

HEADER SPAN (FEET)	WALL SPACING (INCHES)		
	12" O.C.	16" O.C.	24" O.C.
2	1	1	1
4	2	2	1
6	3	3	2
8	4	3	2

TABLE S601.10 - FULL HEIGHT STUD REQUIREMENT FOR HEADERS OR WINDOW SILL PLATES IN EXTERIOR WALLS EXPOSURE "B"
NFCM 2015 TABLE 3.23C

HEADER SPAN (FEET)	WALL SPACING (INCHES)		
	12" O.C.	16" O.C.	24" O.C.
2	1	1	1
4	2	2	1
6	3	3	2
8	4	3	2

TABLE S601.10 - FULL HEIGHT STUD REQUIREMENT FOR HEADERS OR WINDOW SILL PLATES IN EXTERIOR WALLS EXPOSURE "B"
NFCM 2015 TABLE 3.23C

HEADER SPAN (FEET)	WALL SPACING (INCHES)		
	12" O.C.	16" O.C.	24" O.C.
2	1	1	1
4	2	2	1
6	3	3	2
8	4	3	2

TABLE S601.10 - FULL HEIGHT STUD REQUIREMENT FOR HEADERS OR WINDOW SILL PLATES IN EXTERIOR WALLS EXPOSURE "B"
NFCM 2015 TABLE 3.23C

HEADER SPAN (FEET)	WALL SPACING (INCHES)		
	12" O.C.	16" O.C.	24" O.C.
2	1	1	1
4	2	2	1
6	3	3	2
8	4	3	2

TABLE S601.10 - FULL HEIGHT STUD REQUIREMENT FOR HEADERS OR WINDOW SILL PLATES IN EXTERIOR WALLS EXPOSURE "B"
NFCM 2015 TABLE 3.23C

HEADER SPAN (FEET)	WALL SPACING (INCHES)		
	12" O.C.	16" O.C.	24" O.C.
2	1	1	1
4	2	2	1
6	3	3	2
8	4	3	2

TABLE S601.10 - FULL HEIGHT STUD REQUIREMENT FOR HEADERS OR WINDOW SILL PLATES IN EXTERIOR WALLS EXPOSURE "B"
NFCM 2015 TABLE 3.23C

HEADER SPAN (FEET)	WALL SPACING (INCHES)		
	12" O.C.	16" O.C.	24" O.C.
2	1	1	1
4	2	2	1
6	3	3	2
8	4	3	2

TABLE S601.10 - FULL HEIGHT STUD REQUIREMENT FOR HEADERS OR WINDOW SILL PLATES IN EXTERIOR WALLS EXPOSURE "B"
NFCM 2015 TABLE 3.23C

HEADER SPAN (FEET)	WALL SPACING (INCHES)		
	12" O.C.	16" O.C.	24" O.C.
2	1	1	1
4	2	2	1
6	3	3	2
8	4	3	2

TABLE S601.10 - FULL HEIGHT STUD REQUIREMENT FOR HEADERS OR WINDOW SILL PLATES IN EXTERIOR WALLS EXPOSURE "B"
NFCM 2015 TABLE 3.23C

HEADER SPAN (FEET)	WALL SPACING (INCHES)		
	12" O.C.	16" O.C.	24" O.C.
2	1	1	1
4	2	2	1
6	3	3	2
8	4	3	2

TABLE S601.10 - FULL HEIGHT STUD REQUIREMENT FOR HEADERS OR WINDOW SILL PLATES IN EXTERIOR WALLS EXPOSURE "B"
NFCM 2015 TABLE 3.23C

HEADER SPAN (FEET)	WALL SPACING (INCHES)		
	12" O.C.	16" O.C.	24" O.C.
2	1	1	1
4	2	2	1
6	3	3	2
8	4	3	2

TABLE S601.10 - FULL HEIGHT STUD REQUIREMENT FOR HEADERS OR WINDOW SILL PLATES IN EXTERIOR WALLS EXPOSURE "B"
NFCM 2015 TABLE 3.23C

HEADER SPAN (FEET)	WALL SPACING (INCHES)		
	12" O.C.	16" O.C.	24" O.C.
2	1	1	1
4	2	2	1
6	3	3	2
8	4	3	2

TABLE S601.10 - FULL HEIGHT STUD REQUIREMENT FOR HEADERS OR WINDOW SILL PLATES IN EXTERIOR WALLS EXPOSURE "B"
NFCM 2015 TABLE 3.23C

HEADER SPAN (FEET)	WALL SPACING (INCHES)		
	12" O.C.	16" O.C.	24" O.C.
2	1	1	1
4	2	2	1
6	3	3	2
8	4	3	2

TABLE S601.10 - FULL HEIGHT STUD REQUIREMENT FOR HEADERS OR WINDOW SILL PLATES IN EXTERIOR WALLS EXPOSURE "B"
NFCM 2015 TABLE 3.23C

HEADER SPAN (FEET)	WALL SPACING (INCHES)		
	12" O.C.	16" O.C.	24" O.C.
2	1	1	1
4	2	2	1
6	3	3	2
8	4	3	2

TABLE S601.10 - FULL HEIGHT STUD REQUIREMENT FOR HEADERS OR WINDOW SILL PLATES IN EXTERIOR WALLS EXPOSURE "B"
NFCM 2015 TABLE 3.23C

HEADER SPAN (FEET)	WALL SPACING (INCHES)		
	12" O.C.	16" O.C.	24" O.C.
2	1	1	1
4	2	2	1
6	3	3	2
8	4	3	2

TABLE S601.10 - FULL HEIGHT STUD REQUIREMENT FOR HEADERS OR WINDOW SILL PLATES IN EXTERIOR WALLS EXPOSURE "B"
NFCM 2015 TABLE 3.23C

HEADER SPAN (FEET)	WALL SPACING (INCHES)		
	12" O.C.	16" O.C.	24" O.C.
2	1	1	1
4	2	2	1
6	3	3	2
8	4	3	2

TABLE S601.10 - FULL HEIGHT STUD REQUIREMENT FOR HEADERS OR WINDOW SILL PLATES IN EXTERIOR WALLS EXPOSURE "B"
NFCM 2015 TABLE 3.23C

HEADER SPAN (FEET)	WALL SPACING (INCHES)		
	12" O.C.	16" O.C.	24" O.C.
2	1	1	1
4	2	2	1
6	3	3	2
8	4	3	2

TABLE S601.10 - FULL HEIGHT STUD REQUIREMENT FOR HEADERS OR WINDOW SILL PLATES IN EXTERIOR WALLS EXPOSURE "B"
NFCM 2015 TABLE 3.23C

HEADER SPAN (FEET)	WALL SPACING (INCHES)		
	12" O.C.	16" O.C.	24" O.C.
2	1	1	1
4	2	2	1
6	3	3	2
8	4	3	2

TABLE S601.10 - FULL HEIGHT STUD REQUIREMENT FOR HEADERS OR WINDOW SILL PLATES IN EXTERIOR WALLS EXPOSURE "B"
NFCM 2015 TABLE 3.23C

HEADER SPAN (FEET)	WALL SPACING (INCHES)		
	12" O.C.	16" O.C.	24" O.C.
2	1	1	1
4	2	2	1
6	3	3	2
8	4	3	2

TABLE S601.10 - FULL HEIGHT STUD REQUIREMENT FOR HEADERS OR WINDOW SILL PLATES IN EXTERIOR WALLS EXPOSURE "B"
NFCM 2015 TABLE 3.23C

HEADER SPAN (FEET)	WALL SPACING (INCHES)		
	12" O.C.	16" O.C.	24" O.C.
2	1	1	1
4	2	2	1
6	3	3	2
8	4	3	2

TABLE S601.10 - FULL HEIGHT STUD REQUIREMENT FOR HEADERS OR WINDOW SILL PLATES IN EXTERIOR WALLS EXPOSURE "B"
NFCM 2015 TABLE 3.23C

HEADER SPAN (FEET)	WALL SPACING (INCHES)		
	12" O.C.	16" O.C.	24" O.C.
2	1	1	1
4	2	2	1
6	3	3	2
8	4	3	2

TABLE S601.10 - FULL HEIGHT STUD REQUIREMENT FOR HEADERS OR WINDOW SILL PLATES IN EXTERIOR WALLS EXPOSURE "B"
NFCM 2015 TABLE 3.23C

HEADER SPAN (FEET)	WALL SPACING (INCHES)		
	12" O.C.	16" O.C.	24" O.C.
2	1	1	1
4	2	2	1
6	3	3	2
8	4	3	2

TABLE S601.10 - FULL HEIGHT STUD REQUIREMENT FOR HEADERS OR WINDOW SILL PLATES IN EXTERIOR WALLS EXPOSURE "B"
NFCM 2015 TABLE 3.23C

HEADER SPAN (FEET)	WALL SPACING (INCHES)		
	12" O.C.	16" O.C.	24" O.C.
2	1	1	1
4	2	2	1
6	3	3	2
8	4	3	2

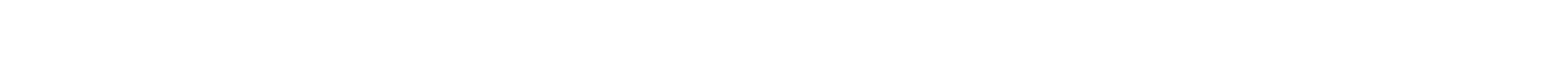
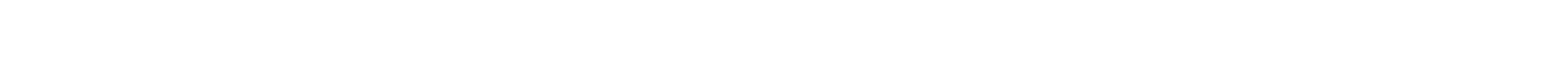


NAIL SPACING
X = 4" OC
Y = 4" OC
Z = 12" OC

X = PLATE EDGE NAIL SPACING
Y = LONG EDGE NAIL SPACING
Z = FIELD NAIL SPACING

INTERIOR SHEATHING
1/2" PLYWOOD EACH FACE STAGGERED 48" OC. W/8d NAILS @ 4" OC. FASTENING @ PANEL EDGES 8d NAILS @ 12" OC. FASTENING @ INTERMEDIATE MEMBERS.

EXTERIOR SHEATHING
5/8" PLYWOOD EACH FACE STAGGERED 48" OC. W/8d NAILS @ 4" OC. FASTENING @ PANEL EDGES 8d NAILS @ 12" OC. FASTENING @ INTERMEDIATE MEMBERS.



NOTE: SPACE NAILS AT EACH NAIL HOLE

SIMPSON STRONG-TIE GS16 COILED STRAPS AT 32" OC

TYPICAL CONNECTION DETAILS
SCALE: NTS

TABLE S601.5 - JACK STUD REQ - INT LOADBEARING WALLS

HEADER SUPPORTING	HEADER SPAN (FT)	ROOF SPAN (FEET)											
		12 FEET				24 FEET				36 FEET			
		3"	4.5"	5"	6.5"	3"	4.5"	5"	6.5"	3"	4.5"	5"	6"
ONE FLOOR ONLY (CENTER BEARING)	2	1	1	1	1	1	1	1	1	1	1	1	1
	4	1	1	1	1	1	1	1	1	1	1	1	1
	6	1	1	1	1	1	1	1	1	2	1	1	1
	8	1	1	1	1	2	1	1	1	2	2	2	1
	10	1	1	1	1	2	2	1	1	3	2	2	2
	12	1	1	1	1	2	2	2	1	3	2	2	2
	14	2	1	1	1	3	2	2	2	4	3	3	2
TWO FLOORS (CENTER BEARING)	2	1	1	1	1	1	1	1	1	2	1	1	1
	4	1	1	1	1	2	1	1	3	2	2	2	
	6	2	1	1	1	3	2	2	4	3	2	2	
	8	2	2	1	1	3	2	2	5	3	3	3	
	10	2	2	2	1	4	3	3	6	4	4	3	
	12	3	2	2	2	5	3	3	7	5	4	4	
	14	3	2	2	2	6	4	4	8	5	5	4	
16	4	3	2	2	6	4	4	9	6	6	5		

TABLE S601.6 - JACK STUD REQ - EXTERIOR LOADBEARING WALLS
NFCM 2021 TABLE 3.22F

HEADER WIDTH - 3" (2-2X), 4.5" (3-2X), 5", 6.5" (4-2X) EACH 1/2" PLYWOOD SPACER BETWEEN	ROOF LIVE LOAD 20 PSF				ROOF LIVE LOAD 30 PSF			
	3"	4.5"	5"	6.5"	3"	4.5"	5"	6.5"
	NUMBER OF JACK STUDS REQUIRED							
ROOF AND CEILING	2	1	1	1	1	1	1	1
	4	1	1	1	1	1	1	1
	6	2	1	1	1	2	1	1
	8	2	2	2	1	2	2	1
	10	3	2	2	2	3	2	2
	12	3	2	2	2	3	2	2
	14	4	3	2	2	4	3	2
ROOF, CEILING, AND ONE CENTER BEARING FLOOR	2	1	1	1	1	1	1	1
	4	2	1	1	1	2	1	1
	6	2	2	2	1	3	2	2
	8	3	2	2	2	3	2	2
	10	4	3	2	2	4	3	