

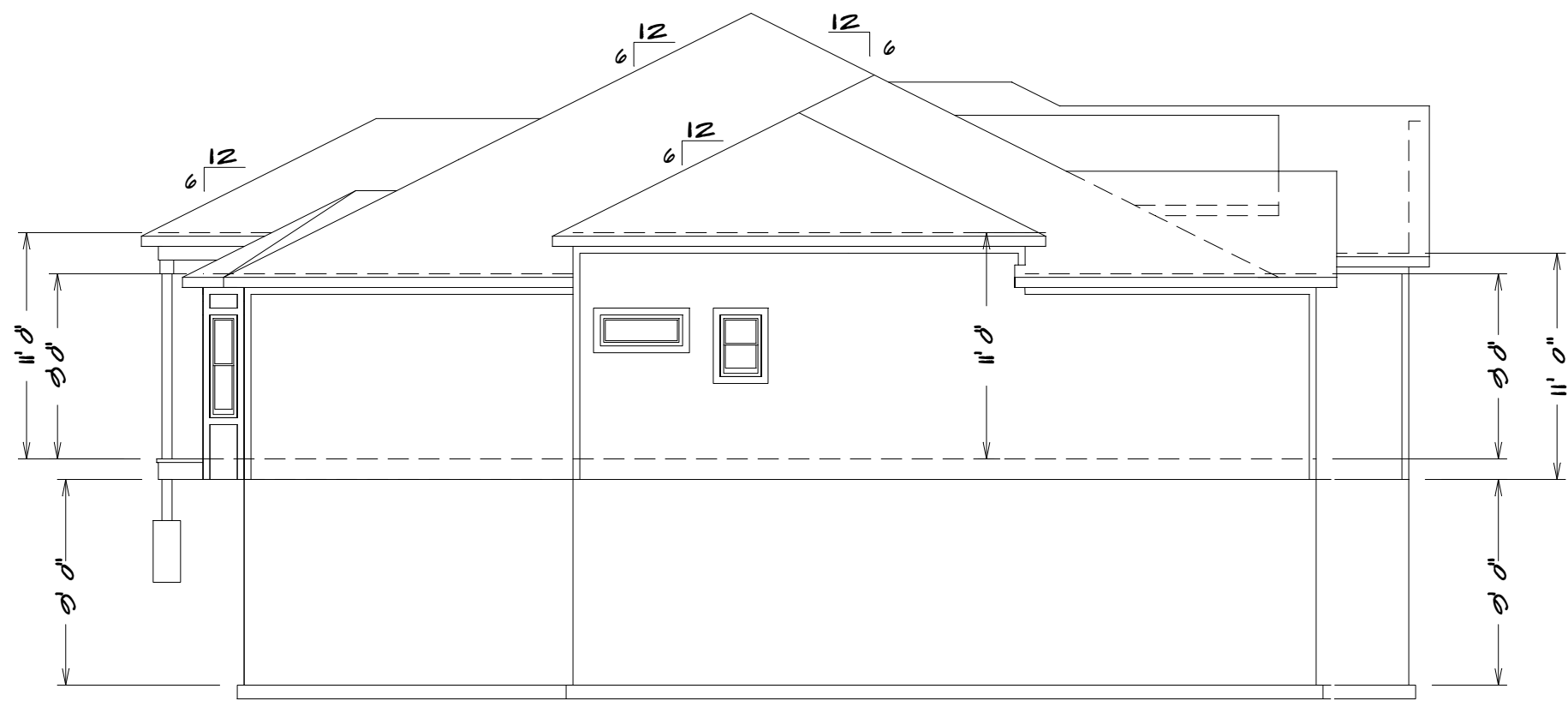


BUILDER/CONTRACTOR IS RESPONSIBLE TO CHECK ALL DIMENSIONS FOR ACCURACY BETWEEN FLOORS, FOUNDATION, AND ELEVATIONS. ALSO VERIFY ALL BEAM, HEADERS, PAD LOCATIONS, AND COLUMN SIZES.

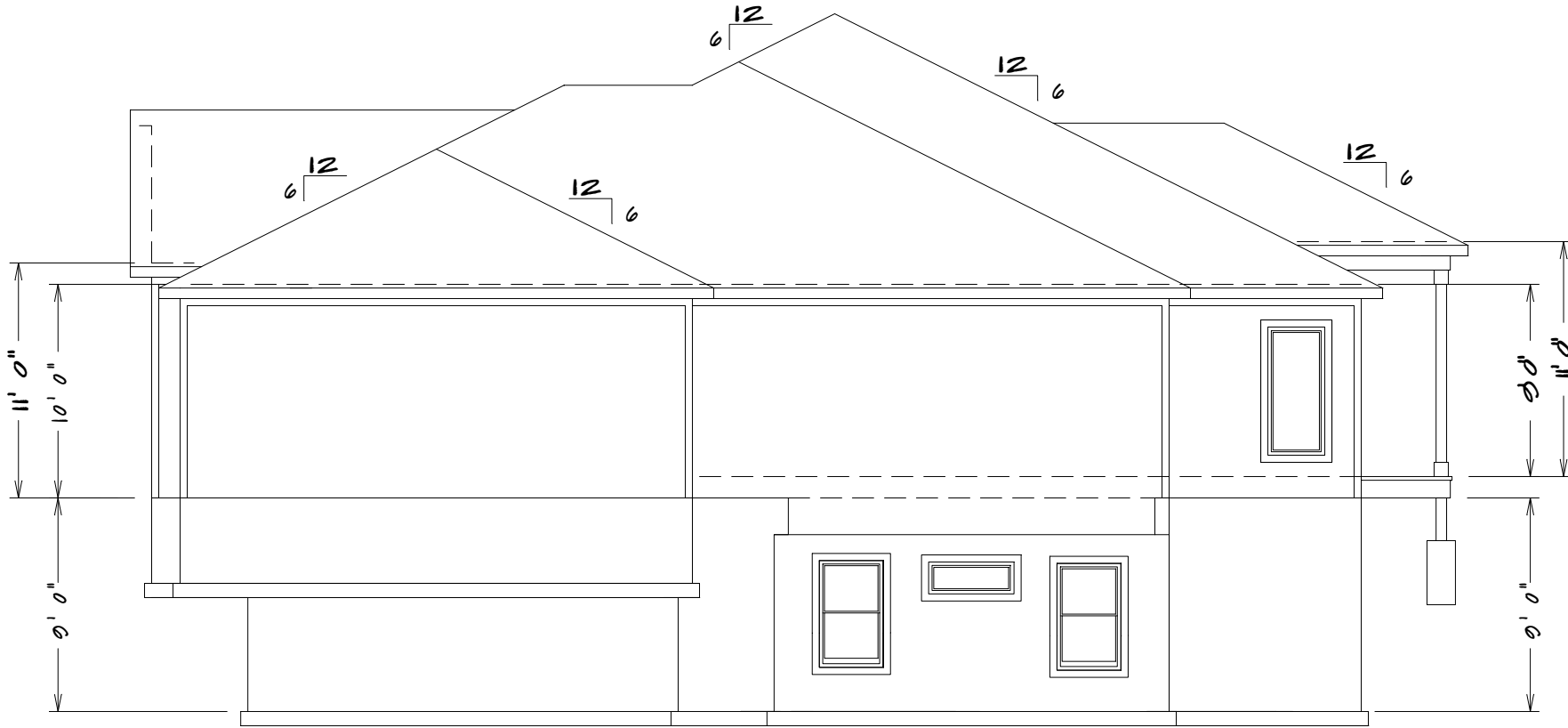
FRONT ELEVATION
1/4" = 1'0"

NOTE:
ACTUAL ELEVATIONS MAY VARY FROM ARCHITECTURAL DRAWINGS, DUE TO TERRAIN/BACKFILL PROCESS
FRONT ELEVATION IS ARCHITECTURAL DRAWING AND MAY VARY DUE TO MATERIALS AVAILABILITY

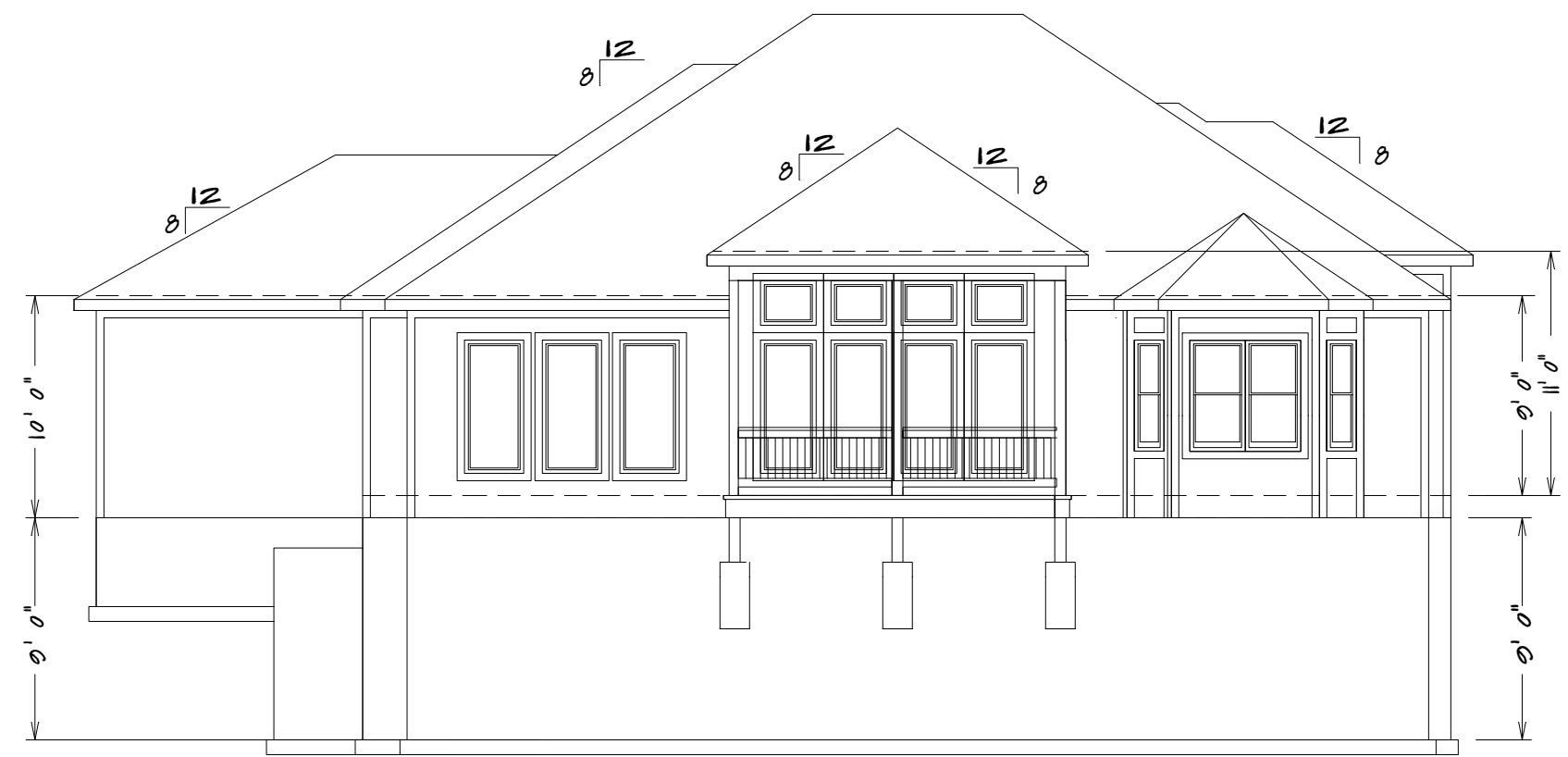
1616 SW 27TH STREET
LEES SUMMIT MO
LOT 45 WHISPERING WOODS



LEFT ELEVATION
1/8" = 1'0"



RIGHT ELEVATION
1/8" = 1'0"



REAR ELEVATION
1/8" = 1'0"

DD-7164



SQUARE FOOTAGE
LIVING AREA
FIRST FLOOR = 1860
BASEMENT = 1203
UNFINISHED AREA
STORAGE BASEMENT = 300
GARAGE = 822
STORAGE UNDER STOOP = 40

HOME BUYER:	PHONE:	DATE DRAWN:	PLAN NO.	SHEET NO.
BUILDER:	PHONE:	DATE REVISED:	DD-7164	I
SUB-DIVISION:	LOT NO.	DESIGNER:	FILE NAME:	APPROX. SQ.FT.
			7164 FRNT	

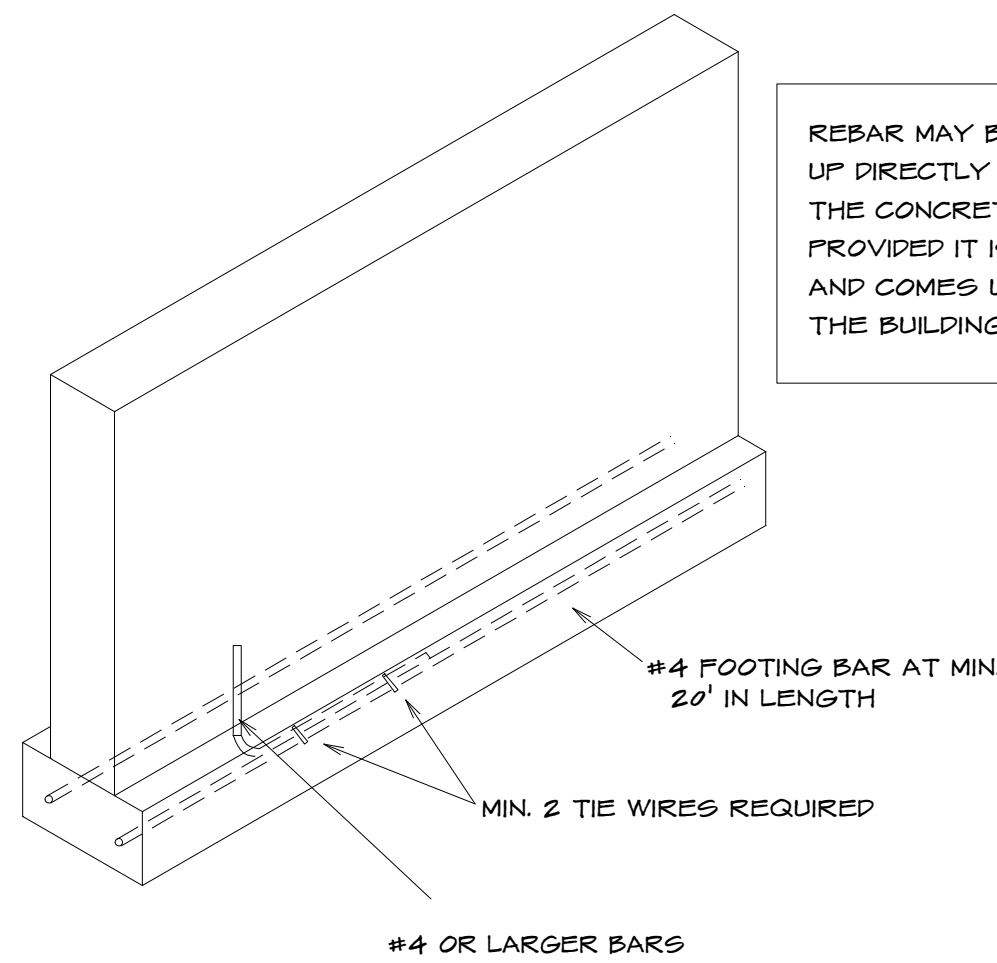
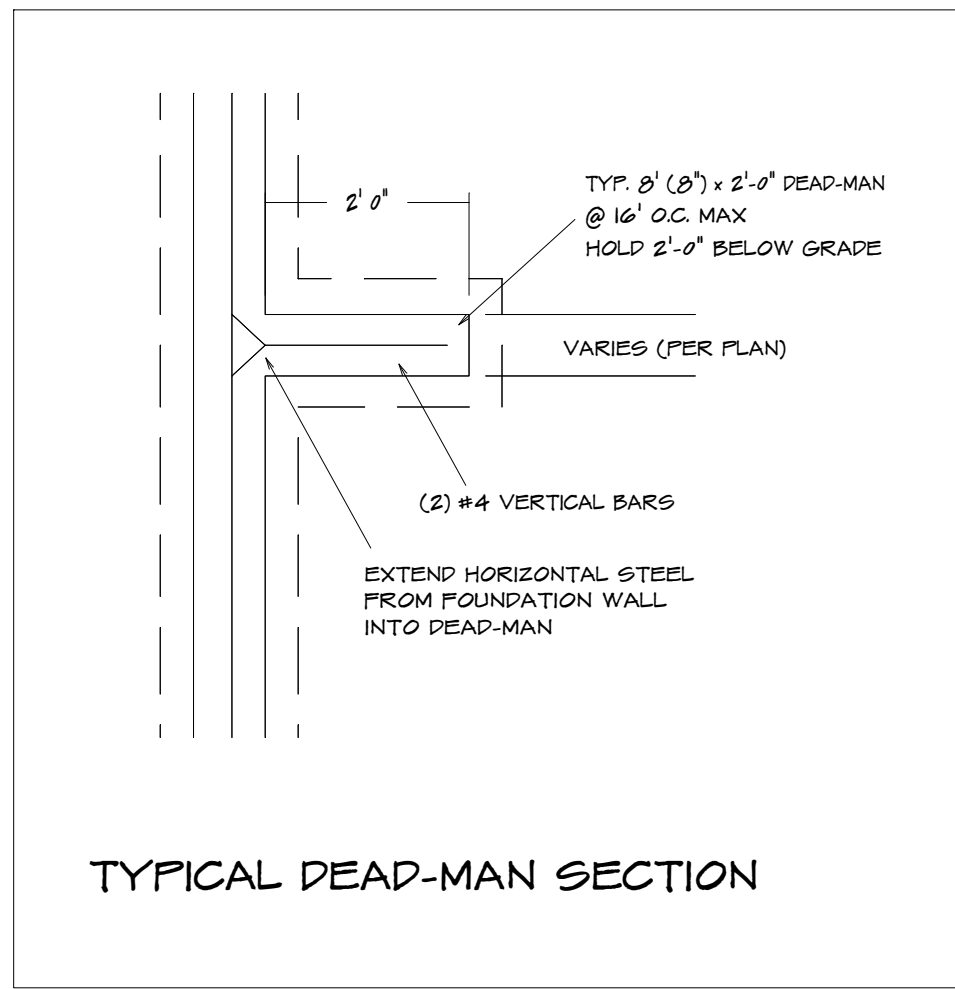
BUILDER/CONTRACTOR IS RESPONSIBLE TO CHECK ALL DIMENSIONS FOR ACCURACY BETWEEN FLOORS, FOUNDATION, AND ELEVATIONS. ALSO VERIFY ALL BEAM, HEADERS, PAD LOCATIONS, AND COLUMN SIZES. BUILDER/CONTRACTOR TO CHECK FOR CONFLICTS WITH EXISTING UTILITIES AND STRUCTURES. BUILDER/CONTRACTOR ACCEPTS ALL RESPONSIBILITY FOR LOT PLACEMENT, SET BACKS, AND FLOOD PLANS. BUILDER/CONTRACTOR AND HOME OWNER ACCEPTS RESPONSIBILITY FOR ANY AND ALL COPYRIGHT INFRINGEMENTS OR RESEMBLANCES TO OTHER COPYRIGHTED PLANS. BUILDER/CONTRACTOR ACCEPTS RESPONSIBILITY FOR ANY ON SITE CHANGES MADE TO STRUCTURE.

SEE ELEVATION FOR
WALL HEIGHTS

NOTE... ELECTRICAL SERVICE
TO BE 200 AMP.

NOTE... DOUBLE JOIST UNDER
ALL PARALLEL WALLS
ABOVE UNLESS NOTED

S.D.
= SMOKE DETECTOR



1 Section 250.52 of the National Electrical Code requires that the concrete encased reinforcing steel be included in the grounding electrode system. This means that you must have "an electrode encased by at least 50 mm (2 in.) of concrete, located horizontally near the bottom or vertically, and within that portion of a concrete foundation or footing that is in direct contact with the earth, consisting of at least 60 m (20 ft) of one or more bare or zinc galvanized or other electrically conductive coated steel reinforcing bars or rods of not less than 13 mm (1/2 in.) in diameter, or consisting of at least 60 m (20 ft) of bare copper conductor not smaller than 4 AWG.

2. Reinforcing bars shall be permitted to be bonded together by the usual steel tie wires or other effective means. Where multiple concrete-encased electrodes are present at a building or structure, it shall be permissible to bond only one into the grounding electrode system.* Proper lap splices are required

UNDER GROUNDING SECTION

STEEL COLUMNS TO BE
3" DIAMETER SCHEDULE 40 PIPE MANUFACTURED
IN ACCORDANCE WITH ASTM A53 GRADE B OR
APPROVED EQUIVALENT UNLESS NOTED

Note...Bridging. Joists exceeding a nominal 2 inches by
12 inches shall be supported laterally by solid blocking,
diagonal bridging (wood or metal), or a continuous
1-inch-by-3-inch strip nailed across the bottom of joists
perpendicular to joists at intervals not exceeding 8 feet.
(R502.7.1)

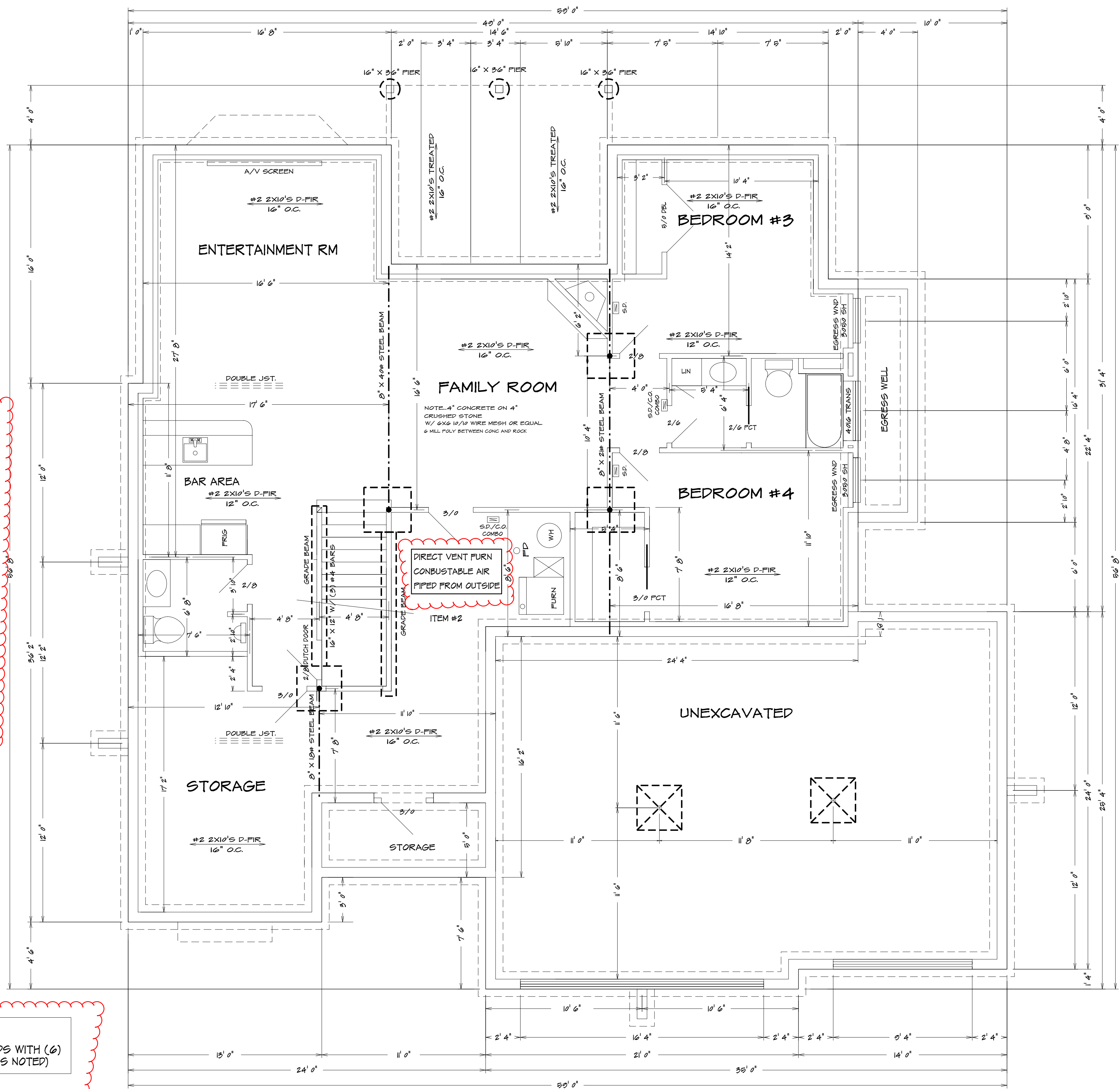
TYPICAL FOUNDATION WALL

(2) #4 REBAR CONTINUOUS
4" CONCRETE
4" ROCK

GRADE PAD

1/2" = 1'0"

NOTE...
42" X 42" X 12" CONCRETE PADS WITH (6)
#4 REBARS EACH WAY (UNLESS NOTED)



BASEMENT PLAN

1/4" = 1'0"

1616 SW 27TH STREET
LEES SUMMIT, MO
LOT 45 WHISPERING WOODS

DD-7164

HOME BUYER:	PHONE:	DATE DRAWN:	PLAN NO.	SHEET NO.
BUILDER:	PHONE:	DATE REVISED:	DD-7164	2
SUB-DIVISION:	LOT NO.	DESIGNER:	FILE NAME:	APPROX. SQ.FT.
			7164 BSWT	

BUILDER/CONTRACTOR IS RESPONSIBLE TO CHECK ALL DIMENSIONS FOR ACCURACY
BETWEEN FLOORS, FOUNDATION AND ELEVATIONS. ALSO VERIFY ALL BEAM HEADERS,
CONNECTIONS, AND COLUMN SIZES. BUILDER/CONTRACTOR TO CHECK FOR
CONFLICTS WITH EXISTING UTILITIES, SETBACKS, AND FLOOD PLANS.
ACCEPTS ALL RESPONSIBILITY FOR LOT PLACEMENT, SETBACKS, AND FLOOD PLANS.
BUILDER/CONTRACTOR AND HOME OWNER ACCEPTS RESPONSIBILITY FOR ANY AND ALL
COPYRIGHT INFRINGEMENTS OR RESEMBLANCES TO OTHER COPYRIGHTED PLANS.
BUILDER/CONTRACTOR ACCEPTS RESPONSIBILITY FOR ANY ON SITE CHANGES MADE
TO STRUCTURE.



SEE ELEVATION FOR
WALL HEIGHTS

NOTE.. ELECTRICAL SERVICE
TO BE 200 AMP.

NOTE.. DOUBLE JOIST UNDER
ALL PARALLEL WALLS
ABOVE UNLESS NOTED

S.D.
= SMOKE DETECTOR

GENERAL HEADER SPECIFICATIONS:

REQUIRED AREAS NEEDING HEADERS:	HEADER DESCRIPTIONS:
WINDOWS/DOORS UP TO 38" R.O.	(2) #2 D-FIR 2X10'S
WINDOWS/DOORS 38" UP TO 72" R.O.	(2) #2 D-FIR 2X10'S W/1/2" GLUE PLY
WINDOWS/DOORS 72" UP TO 96" R.O.	(2) 9 1/2" L.V.L.
80" GARAGE DOORS W/CEILING & ROOF LOAD	(2) 9 1/2" L.V.L.
90" GARAGE DOORS W/CEILING & ROOF LOAD	(2) 9 1/2" L.V.L.
80" GARAGE DOORS W/SECOND FLOOR	(2) 9 1/2" L.V.L.
90" GARAGE DOORS W/SECOND FLOOR	(2) 11 7/8" L.V.L.
160" GARAGE DOOR W/NO SECOND FLOOR	(2) 11 7/8" L.V.L.
160" GARAGE DOORS W/SECOND FLOOR	(2) 14" L.V.L.

USE HEADERS FOR OPENINGS ABOVE UNLESS SPECIFIED OTHERWISE.

R312.21 Window sills.

In dwelling units, where the opening of an operable window is located more than 72 inches (1829 mm) above the finished grade or surface below, the lowest part of the clear opening of the window shall be a minimum of 24 inches (610 mm) above the finished floor of the room in which the window is located. Operable sections of windows shall not permit openings that allow passage of a 4-inch-diameter (102 mm) sphere where such openings are located within 24 inches (610 mm) of the finished floor.

Exceptions:

- Windows whose openings will not allow a 4-inch-diameter (102 mm) sphere to pass through the opening when the opening is in its largest opened position.
- Openings that are provided with window fall prevention devices that comply with ASTM F 2090.
- Windows that are provided with window opening control devices that comply with Section R312.2.2.

R312.2.2 Window opening control devices.

Window opening control devices shall comply with ASTM F 2090. The window opening control device, after operation to release the control device allowing the window to fully open, shall not reduce the minimum net clear opening area of the window unit to less than the area required by Section R310.11.

Bathrooms, water closet compartments and other similar rooms shall be provided with aggregate glazing area in windows of not less than 3 square feet, one-half of which must be operable.

Exception:

The glazed areas shall not be required where artificial light and a local exhaust system are provided. The minimum local exhaust rates shall be determined in accordance with Section M1507. Exhaust air from the space shall be exhausted directly to the outdoors.

BRACED WALL TABLE				
BWL	SPC	REQ'D LENGTH	PROVIDED LENGTH	TYPE
A	10	2	16	CS-WSP
B	25	8	20	GBWSP
C	19	3.5	12	WSP
D	19	3.5	8	WSP
1	16	3	10.33	CS-WSP
2	27	9.5	20	GBWSP
3	19	2.75	14	CS-WSP/PPH

WSP: WOOD STRUCTURAL PANEL, 7/16" STRUCTURAL SHEATHING, 8d @ 6" O.C. PERIMETER, 12" O.C. INTERIOR

GB: 1/2" GYPSUM BOARD, SCREWS @ 7" O.C. THROUGHOUT

PPH: PORTAL FRAME WITH HOLD-DOWNS, PER DETAIL

CS-PF: CONTINUOUS SHEATHING PORTAL FRAME PER DETAIL

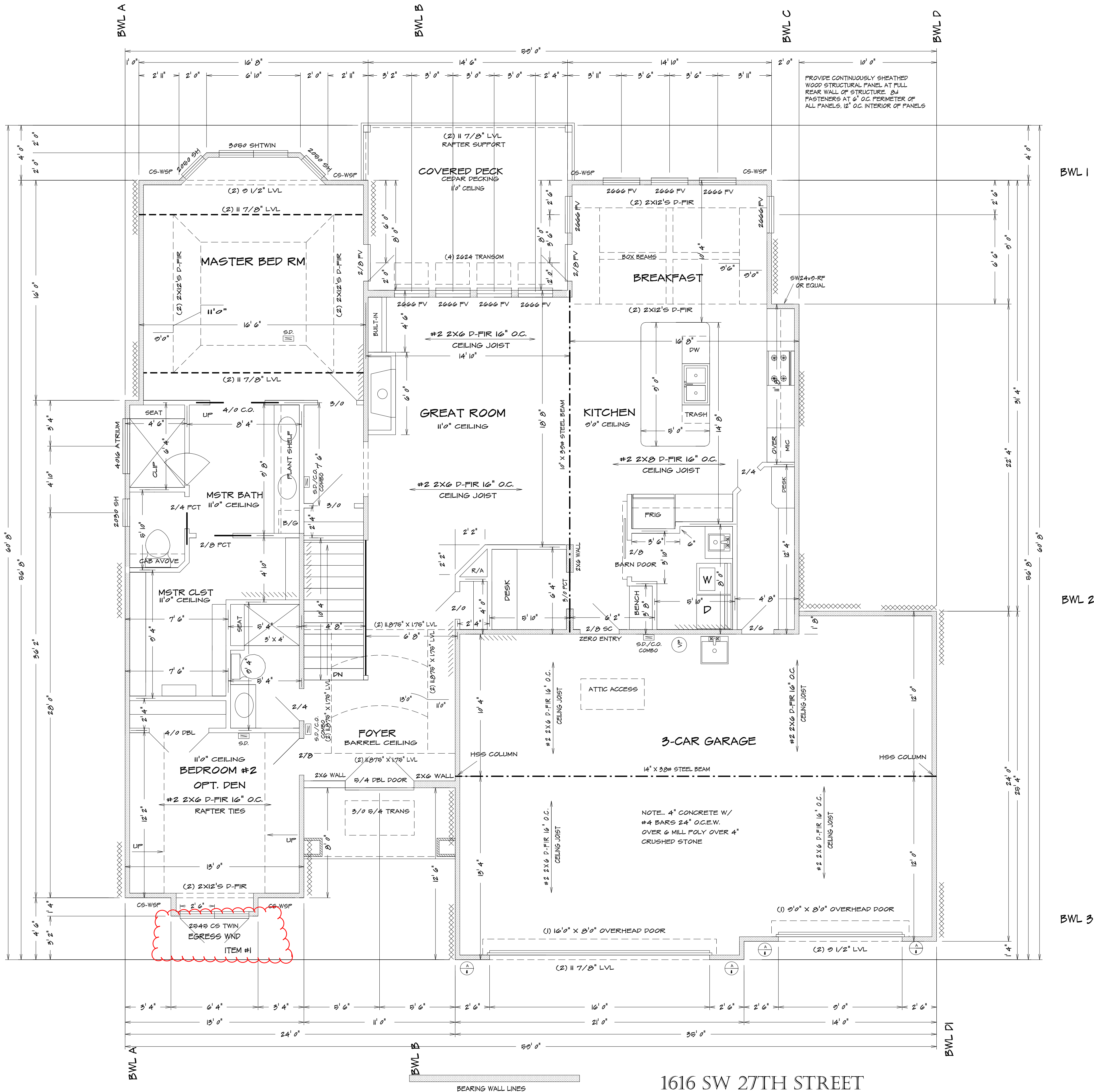
LIB: LET IN BRACING, METAL SURFACE STRAP OPTION, SIMPSON STRONG TIE WB126 OR EQ. INSTALL PER MFG. INSTALL AT 454 FOR CONTRIBUTING LENGTHS ABOVE (99, 91 > CONTRB. LENGTH = 9)

CS-WSP: CONTINUOUSLY SHEATHED WOOD STRUCTURAL PANEL W/ 8d FASTENERS AT 6" O.C. PERIMETER OF ALL PANELS WHERE SPECIFIED, 12" O.C. INTERIOR, 7/16" MIN. WSP SHEATHING

BWL 1

BWL 2

BWL 3



FIRST FLOOR PLAN
1/4" = 1'0"

1616 SW 27TH STREET
LEES SUMMIT, MO
LOT 45 WHISPERING WOODS

DD-7164

HOME BUYER:	PHONE:	DATE DRAWN:	PLAN NO.	SHEET NO.
BUILDER:	PHONE:	DATE REVISED:	DD-7164	3
SUB-DIVISION:	LOT NO.	DESIGNER:	FILE NAME:	APPROX. SQ.FT.
			7164 FLR1	

BUILDER/CONTRACTOR IS RESPONSIBLE TO CHECK ALL DIMENSIONS FOR ACCURACY BETWEEN FLOORS, FOUNDATION AND ELEVATIONS. ALSO VERIFY ALL BEAM, HEADER, COLUMN, AND COLUMN SIZES. BUILDER/CONTRACTOR TO CHECK FOR CONFLICTS WITH EXISTING UTILITIES, SET BACKS, AND FLOOD PLANS. BUILDER/CONTRACTOR AND HOME OWNER ACCEPTS RESPONSIBILITY FOR ANY AND ALL COPYRIGHT INFRINGEMENTS OR RESEMBLANCES TO OTHER COPYRIGHTED PLANS. BUILDER/CONTRACTOR ACCEPTS RESPONSIBILITY FOR ANY ON SITE CHANGES MADE TO STRUCTURE.



Foundation Wall Reinforcement Schedule - Table 2

Vertical reinforcement spacing 60 psf soil							
Concrete strength/Grade	8 inch thick wall			10 inch thick wall			
Reinforcement #4 bar	8'	9'	10'	8'	9'	10'	
3,000 psi / Grade 40	16	12	NP	24	16	12	
3,500 psi / Grade 40	16	12	NP	24	24	12	
3,000 psi / Grade 60	24	16	NP	24	20	16	
3,500 psi / Grade 60	24	16	NP	24	24	16	
Horizontal reinforcement – Minimum Grade 40 steel #4 bar							
One bar 12" from top of wall; maximum spacing 24" o.c.	4-#4	5-#4	6-#4	4-#4	5-#4	6-#4	

- Footnotes:
- 1) Wall height is measured from the top of the wall to the top of the floor slab.
 - 2) Vertical reinforcement for concrete walls that are not full height and for reinforcement spaced 24 inch on center may be placed in the middle of the wall. Other walls shall have vertical reinforcement place as follows:
 - a) 8-inch wall - Minimum 5 inches from the outside face.
 - b) 10-inch wall - Minimum 6.75 inches from the outside face.
 - c) Extend bars to within 8 inches of the top of the wall.
 - 3) Reinforcement clearances:
 - a) Concrete exposed to earth – minimum 1-1/2 inches.
 - b) Not exposed to weather (interior side of walls) – minimum 3/4 inch.
 - c) Concrete exposed to weather (top clearance in garage and driveway slabs)- 1-1/2 inches.
 - 4) Horizontal reinforcement:
 - a) One bar shall be placed within 12 inches of the top of the wall.
 - b) Other bars shall be equally spaced with spacing not to exceed 24 inches on center.
 - c) Horizontal bars should be as close to the tension face as possible (interior) and behind the vertical reinforcement (i.e.2" towards the inside).
 - d) Supplemental reinforcement at corners - Place 1 #4 bar 48 inches long at 45 degree angle at corners of openings per Figure 4a. Place reinforcement within 6" of the edge of inside corners
 - 5) Reinforcement shall be lapped a minimum 24 inches at ends, splices, and around corners.
 - 6) At masonry ledges the minimum wall thickness shall be 3-1/2 inches. Ledges shall not exceed a depth of more than 24 inches below the top of the wall. For wall thicknesses less than 4 inches provide #4 bars at maximum 24 inches on center to within 8 inches of the top of the wall.
 - 7) Straight walls more than 5 feet tall and more than 16 feet long shall be provided with exterior braced return walls. Wall length shall be measured using inside the shortest dimension between intersecting walls (See 7/S2).

TABLE R902.3(1) FASTENER SCHEDULE FOR STRUCTURAL MEMBERS

ITEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENERS ^{a,c,e}	SPACING OF FASTENERS
Roof			
1	Blocking between joists or rafters to top plate, toe nail	3-8d (2 1/2" x 0.113")	—
2	Ceiling joists to plate, toe nail	3-8d (2 1/2" x 0.113")	—
3	Ceiling joists not attached to parallel rafter, laps over partitions, face nail	3-10d	—
4	Collar tie to rafter, face nail or 1 1/4" x 20 gage ridge strap	3-10d (3" x 0.128")	—
5	Rafter or roof truss to plate, toe nail	3-16d box nails (3 1/2" x 0.135") or 3-10d common nails (3" x 0.148")	2 toe nails on one side and 1 toe nail on opposite side of each rafter or truss
6	Roof rafters to ridge, valley or hip rafters: toe nail face nail	4-16d (3 1/2" x 0.135") 3-16d (3 1/2" x 0.135")	—
Wall			
7	Built-up studs-face nail	10d (3" x 0.128")	24" o.c.
8	Abutting studs at intersecting wall corners, face nail	16d (3 1/2" x 0.135")	12" o.c.
9	Built-up header, two pieces with 1/2" spacer	16d (3 1/2" x 0.135")	16" o.c. along each edge
10	Continued header, two pieces	16d (3 1/2" x 0.135")	16" o.c. along each edge
11	Continuous header to stud, toe nail	4-8d (2 1/2" x 0.113")	—
12	Double studs, face nail	10d (3" x 0.128")	24" o.c.
13	Double top plates, face nail	10d (3" x 0.128")	24" o.c.
14	Double top plates, minimum 24-inch offset of end joints, face nail in lapped area	8-16d (3 1/2" x 0.135")	—
15	Sole plate to joist or blocking, face nail	16d (3 1/2" x 0.135")	16" o.c.
16	Sole plate to joist or blocking at braced panel	3-16d (3 1/2" x 0.135")	16" o.c.
17	Stud to sole plate, toe nail	3-8d (2 1/2" x 0.113") or 2-16d (3 1/2" x 0.135")	—
18	Top or sole plate to stud, end nail	2-16d (3 1/2" x 0.135")	—
19	Top plates, laps at corners and intersections, face nail	2-10d (3" x 0.128")	—
20	1" brace to each stud and plate, face nail	2-8d (2 1/2" x 0.113") 2 staples 1 3/4"	—
21	1" x 6" sheathing to each bearing, face nail	2-8d (2 1/2" x 0.113") 2 staples 1 3/4"	—
22	1" x 8" sheathing to each bearing, face nail	2-8d (2 1/2" x 0.113") 3 staples 1 3/4"	—
23	Wider than 1" x 8" sheathing to each bearing, face nail	3-8d (2 1/2" x 0.113") 4 staples 1 3/4"	—
Floor			
24	Joist to sill or girder, toe nail	3-8d (2 1/2" x 0.113")	—
25	Rim joist to top plate, toe nail (roof applications also)	8d (2 1/2" x 0.113")	6" o.c.
26	Rim joist or blocking to sill plate, toe nail	8d (2 1/2" x 0.113")	6" o.c.
27	1" x 6" subfloor or less to each joist, face nail	2-8d (2 1/2" x 0.113") 2 staples 1 3/4"	—
28	2" subfloor to joist or girder, blind and face nail	2-16d (3 1/2" x 0.135")	—
29	2" planks (plank & beam - floor & roof)	2-16d (3 1/2" x 0.135")	at each bearing
30	Built-up girders and beams, 2-inch lumber layers	10d (3" x 0.128")	Nail each layer as follows: 32" o.c. at top and bottom and staggered. Two nails at ends and at each splice.
31	Ledger strip supporting joists or rafters	3-16d (3 1/2" x 0.135")	At each joist or rafter

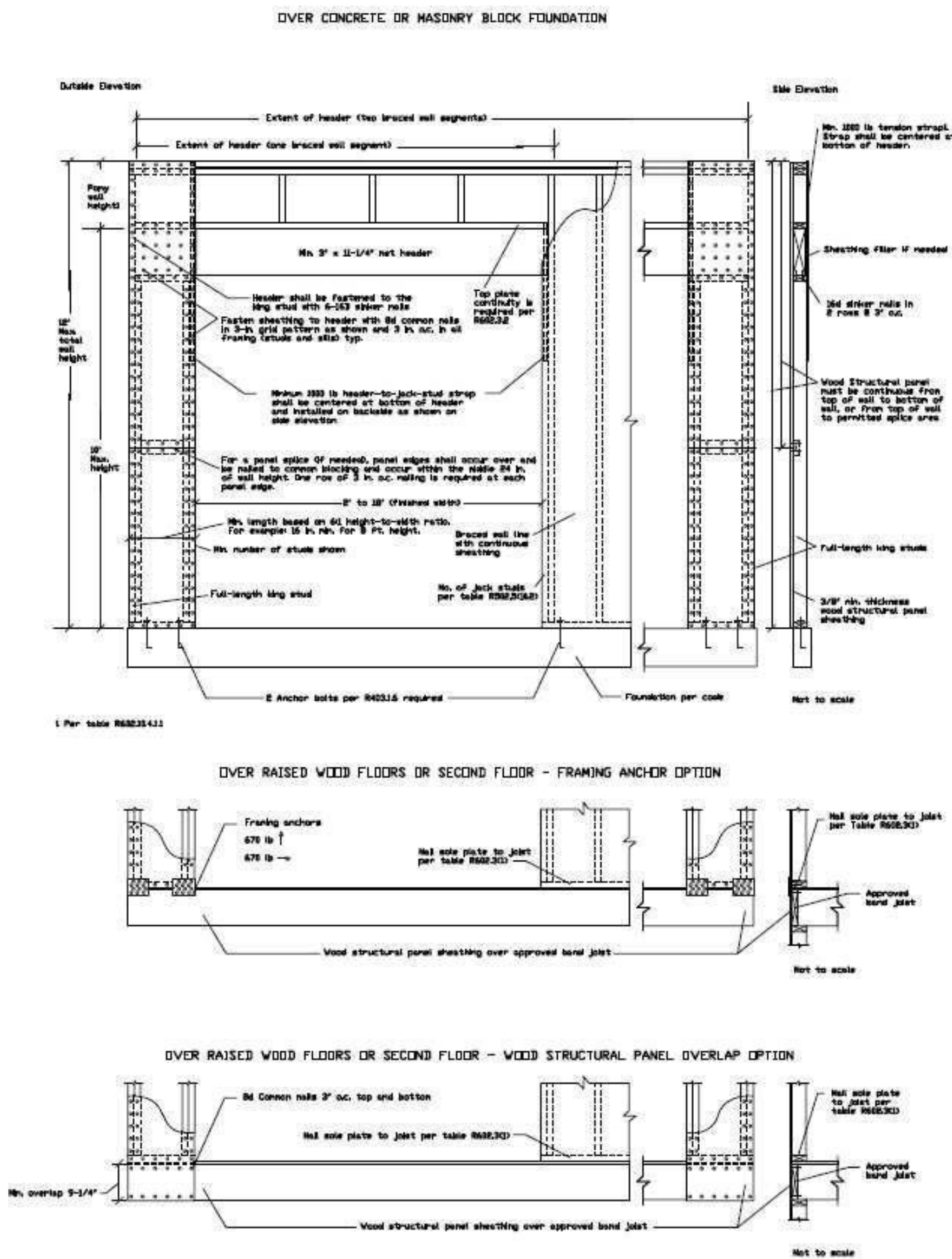
TABLE R902.3(1)—continued FASTENER SCHEDULE FOR STRUCTURAL MEMBERS

ITEM	DESCRIPTION OF BUILDING MATERIALS	DESCRIPTION OF FASTENER ^{a,c,e}	SPACING OF FASTENERS	
			Edges (inches) ^f	Intermediate supports ^{a,c,e} (inches)
Wood structural panels, subfloor, roof and interior wall sheathing to framing and particleboard wall sheathing to framing				
32	3/8" - 1/2"	6d common (2" × 0.113") nail (subfloor wall) 8d common (2 1/2" × 0.131") nail (roof) ^f	6	12"
33	1 9/32" - 1"	8d common nail (2 1/2" × 0.131")	6	12"
34	1 1/8" - 1 1/4"	10d common (3" × 0.148") nail or 8d (2 1/2" × 0.131") deformed nail	6	12
Other wall sheathing ^h				
35	1/2" structural cellulose fiberboard sheathing	1 1/2" galvanized roofing nail, 7/16" crown or 1" crown staple 16 ga., 1 1/4" long	3	6
36	25/32" structural cellulose fiberboard sheathing	1 3/4" galvanized roofing nail, 7/16" crown or 1" crown staple 16 ga., 1 1/2" long	3	6
37	1/2" gypsum sheathing ^d	1 1/2" galvanized roofing nail; staple galvanized, 1 1/2" long; 1 1/4 screws, Type W or S	7	7
38	5/8" gypsum sheathing ^d	1 3/4" galvanized roofing nail; staple galvanized, 1 5/8" long; 1 5/8" screws, Type W or S	7	7
Wood structural panels, combination subfloor underlayment to framing				
39	3/4" and less	6d deformed (2" × 0.120") nail or 8d common (2 1/2" × 0.131") nail	6	12
40	7/8" - 1"	8d common (2 1/2" × 0.131") nail or 8d deformed (2 1/2" × 0.120") nail	6	12
41	1 1/8" - 1 1/4"	10d common (3" × 0.148") nail or 8d deformed (2 1/2" × 0.120") nail	6	12

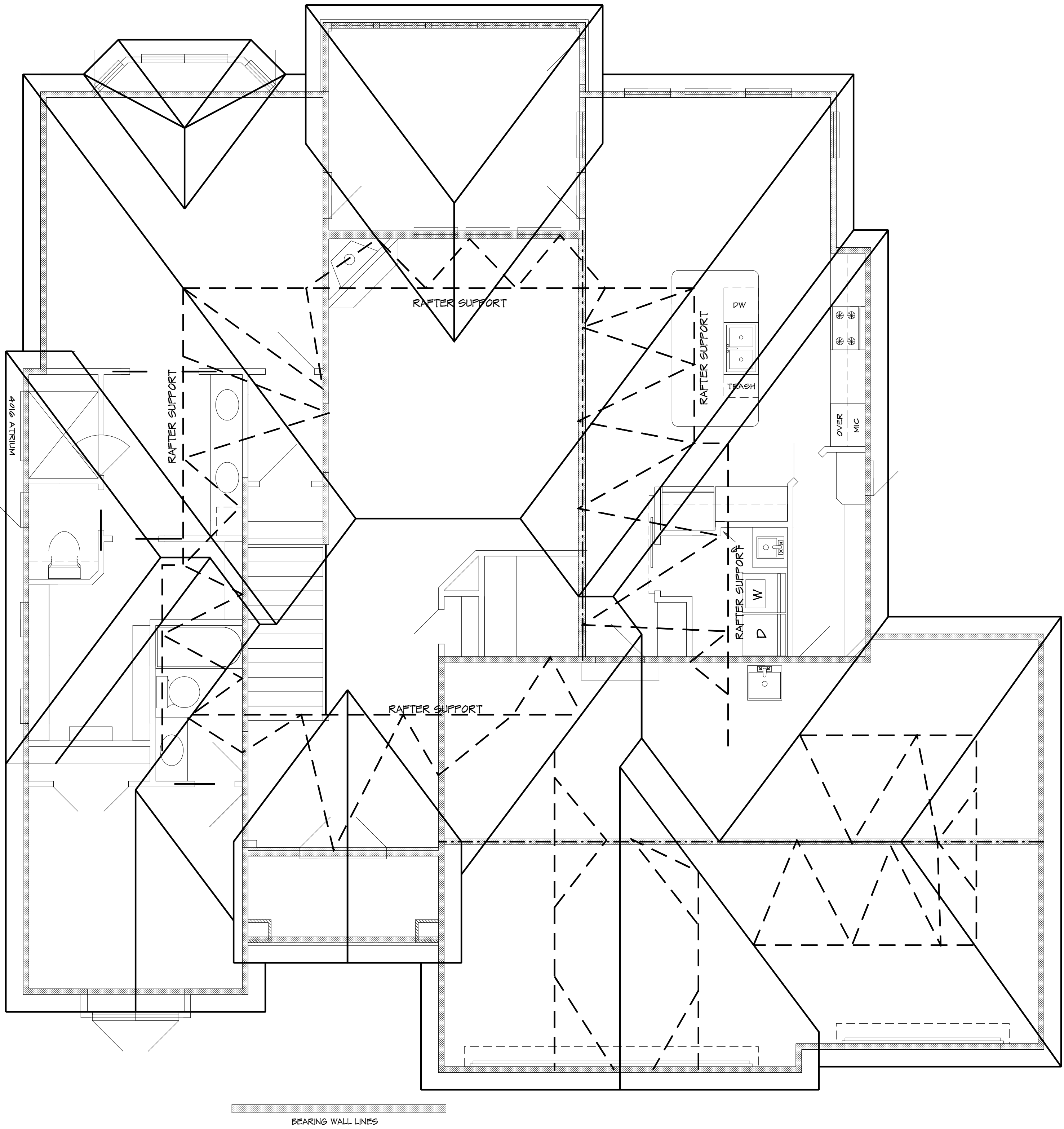
For SI: 1 inch = 25.4 mm. 1 foot = 304.8 mm. 1 mile per hour = 0.447 m/s; 1 Ksi = 6.895 MPa.

REQUIRED FOOTING:			
BUILDING HEIGHT	MINIMUM FOOTING	HORIZONTAL REBAR	LOCATION OF REBAR
1 OR 2 STY.	8" T x 16" W	2-#4	5" FROM BTM.
3 STORY	8" T x 24" W	2-#4	5" FROM BTM.
ACC. STR.	8" T x 12" W	2-#4	5" FROM BTM.

ITEM #3,4,5



CF-PF WALL BRACING SECTION



ROOF ELEVATION

1/4" = 1'0"

ROOF DESIGNED WITH:
LIVE LOAD = 20 PSF
DEAD LOAD = 10 PSF

NOTE.. HIP RIDGE FOR THE MAIN ROOF AS:
2X8 FOR UNBRACED LENGTH UP TO 9'0"
2X10 FOR UNBRACED LENGTH UP TO 10'0"
2X12 FOR UNBRACED LENGTH UP TO 12'0"

ALL RAFTERS TO BE #2 2X6 D-FIR 16" O.C.
UNLESS OTHER WISE NOTED
PURLING RAFTERS TO BEARING WALL LINES
CONNECT RAFTERS TO CEILING JOIST W (4) 16d GALV. NAILS
CONNECT RAFTERS TO RIDGE, VALLEY, AND HIP RIDGE
WITH (4) 16d GALV. NAILS
VERT. RIDGE AND RAFTER SUPPORTS TO BE EQUAL TO OR GREATER
THAN THE DEPTH OF RAFTERS

HOME BUYER:	PHONE:	DATE DRAWN:	PLAN NO.	SHEET NO.
	BUILDER:	DATE REVISED:	DC-7164	5
SUB-DIVISION:	LOT NO.	DESIGNER:	FILE NAME:	APPROX. SQ.FT.
			7164 SEC2	

BUILDER/CONTRACTOR IS RESPONSIBLE TO CHECK ALL DIMENSIONS FOR ACCURACY BETWEEN FLOORS, FOUNDATION AND ELEVATIONS. ALSO VERIFY ALL BEAM HEADERS, PIER LOCATIONS, AND COLUMN SIZES. BUILDER/CONTRACTOR MUST CHECK FOR CONFLICTS WITH EXISTING UTILITIES AND STRUCTURES. BUILDER/CONTRACTOR ACCEPTS ALL RESPONSIBILITY FOR LOT PLACEMENT, SETBACKS, AND FLOOD PLANS. BUILDER/CONTRACTOR AND HOME OWNER ACCEPTS TO OTHER COPYRIGHTED PLANS. COPYRIGHT INFRINGEMENTS OR RESUBMITTALS TO OTHER COPYRIGHTED PLANS. BUILDER/CONTRACTOR ACCEPTS RESPONSIBILITY FOR ANY AND ALL SITE CHANGES MADE TO STRUCTURE.

