

DRAWING SCHEDULE

SHEET 1
DRAWING SCHEDULE
BUILDING DATA

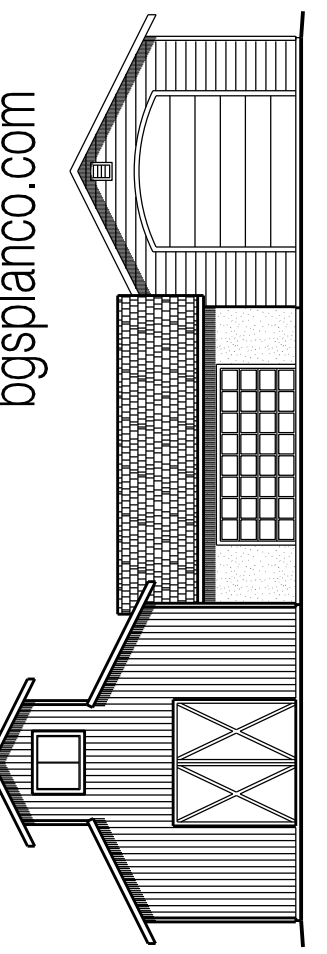
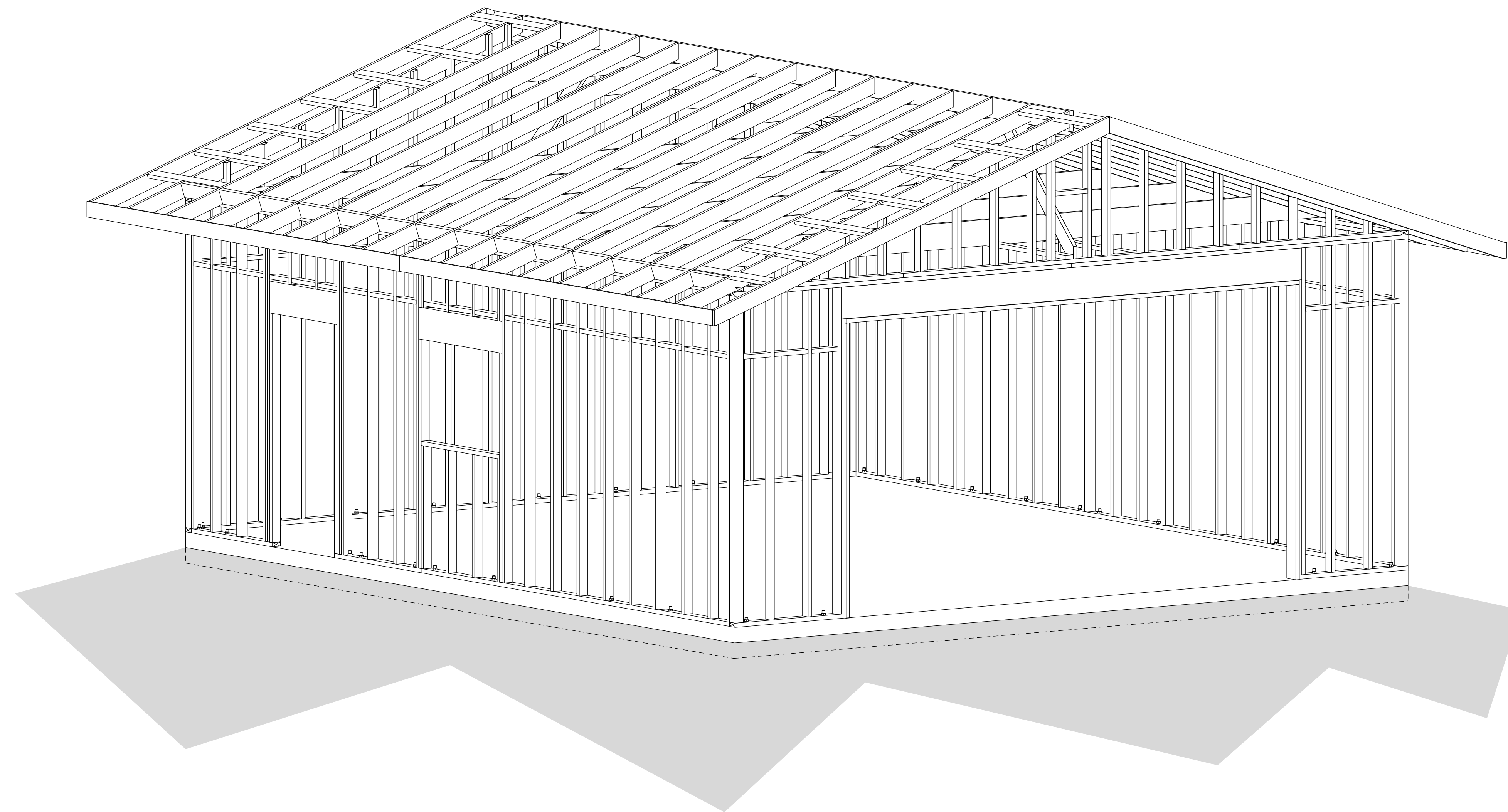
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ELECTRICAL

SHEET G1-3 CALIFORNIA ONLY
CALIFORNIA GREEN CODE



bgsplanco.com

24 X 30 GARAGE

BGS PLAN COMPANY
P.O. BOX 1181
ROSEVILLE, CA 95678
(916) 783-6822

DESIGN DATA

OWNER : _____
ADDRESS : _____
PARCEL NO. : _____

Scope of Work : Building Shell for Private Garage

Basis of Design: IBC, CBC & CRC,
2015 NDS and ASCE 7-16
Building Use: Parking & Storage
Occupancy Group: U
Construction Type: VB
Floor Area: 720 Sq Ft Total
Building Height: 14'-3" One Story
Soil Pressure: Designed for 1500 psf
Wind Load: 110 MPH, 3 Second Gust
Roof Load: 40 PSF Live + 19 PSF Dead

PLAN NUMBER

247

DESIGNED

LOREN/NORM

SHEET

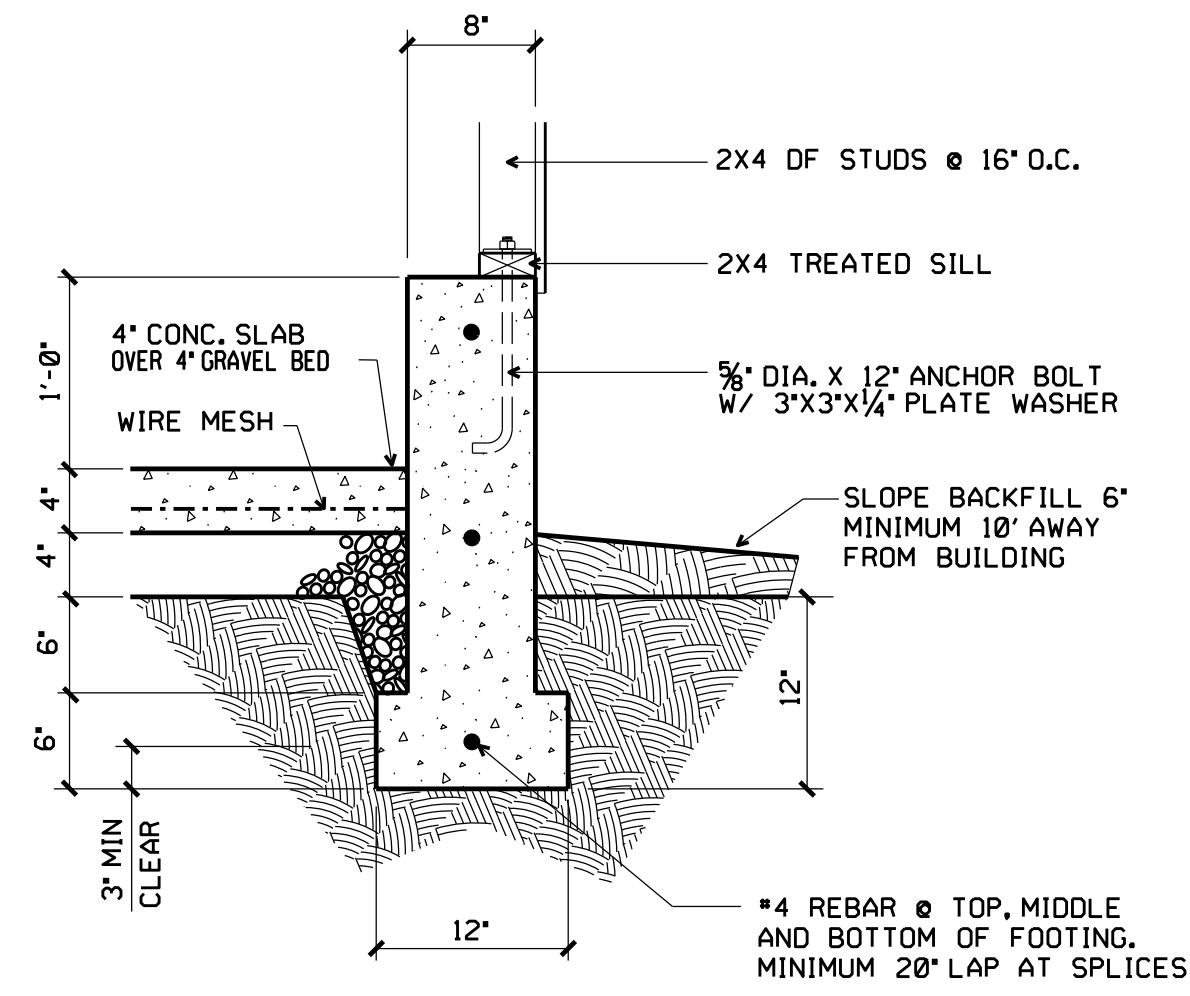
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OF 5

24X30 GARAGE GENERAL INSTRUCTIONS

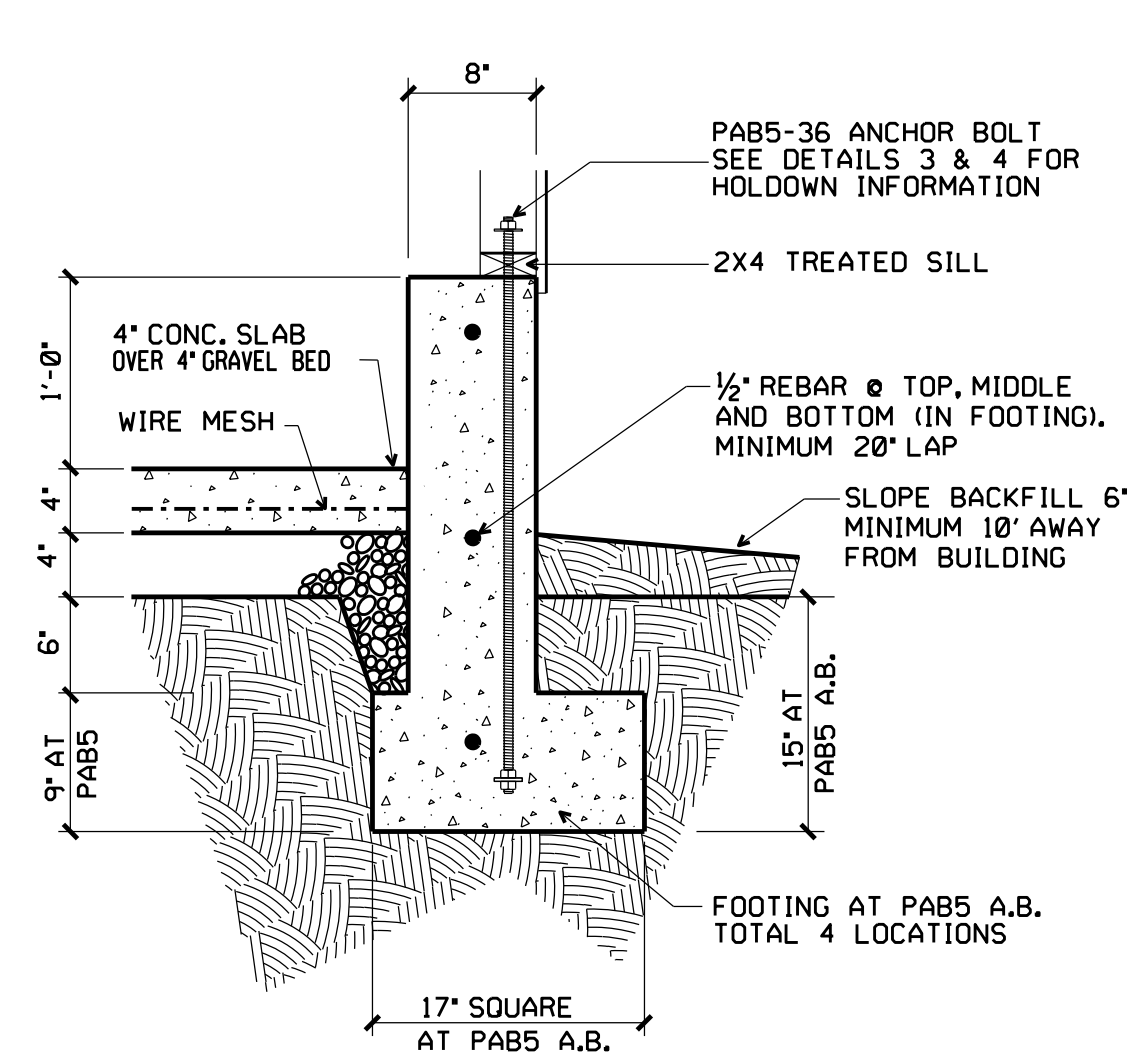
A. Study plans and ALL instructions carefully before proceeding with any work.
 B. Check local building code requirements and obtain a building permit.

- Clean surface area of site and make level. Surrounding area shall slope away from garage in all directions for drainage purposes. Plans call for 4" gravel base. Concrete may be placed on native undisturbed soil providing there is no fill material and the building department does not require a soils report.
- Construct batter boards as shown in Figure A, using duplex nails.
- Install nails on top edge of horizontal boards at outside edges of building.
- Attach nylon string to starting nail and tightly pull string to opposite batter board. Tie string off and loop to adjacent nail. Attach string securely. Repeat process to opposite batter boards until building perimeter is completed.
- Measure string line intersection to opposite string line intersection on diagonal. Now measure opposite diagonal. Both measurements should be 38'-5". If measurements are not equal adjustment of the position of string on diagonal is necessary. Install new nail to the right or left of existing nail and reposition string. Re-measure diagonals. **Important!** If measurements have gotten closer to each other you're going in the right direction. Often several adjustments are necessary before string becomes perfectly square.
- Using plumb bob at string, mark grade (with nails) at several points along perimeter of building.
- Place a 2x4 on grade on outside of nails.
- Using flour (or chalk) mark outside edge of footing using 2x4 as a guide.
- Remove string with intentions of replacing at a later stage.
- Excavate footings. Use backhoe tractor if necessary. Place excavated material on exterior of footings leaving sufficient room to walk around the perimeter.
- If gravel base is used, place material on grade at interior as shown on Footing Detail 2.
- Reattach strings to correct nails. Did you mark them? Measure diagonals.
- Using 2x6 for form boards, form perimeter of building as shown in Slab Form Detail 1. Let ends of form board run wild where possible. You will be reusing them. Forms need to be level. This is best accomplished by using a transit or a builder's level. After all forms have been leveled, brace as necessary to achieve strong and secure forming. Leveling should be done at initial bracing of forms.
- Install rebar. Lap joints a minimum of 20". Tie with wire.
- Install underground utilities if applicable. Must have permit. Must be installed per code.
- Install wire mesh or #3 rebar at 18" on each way. **NOTE: IF NOT REQUIRED BY BUILDING DEPARTMENT, AND IF CRACKING AND/OR MOISTURE PENETRATION ARE NOT AN ISSUE, THE REINFORCEMENT FOR THE CONCRETE SLAB IDENTIFIED ON PLANS IS AT THE DISCRETION OF THE OWNER.**
- Locate and place anchor bolts, sstb a.b., and holdown straps per layout on foundation plan, use simpson placement guides as specified on plans.
- Clean footing of debris and call for forming inspection from local building department.
- After inspection has passed you're ready for concrete. Placement and finish of concrete should be by a licensed concrete contractor unless owner/builder has experience working with "mud".
- Concrete should be kept moist for a minimum of 3 days.
- If using owner built trusses see attached sheet for plans and instructions



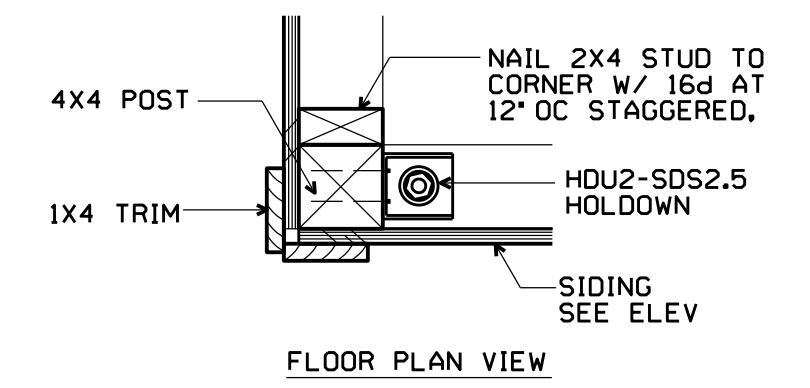
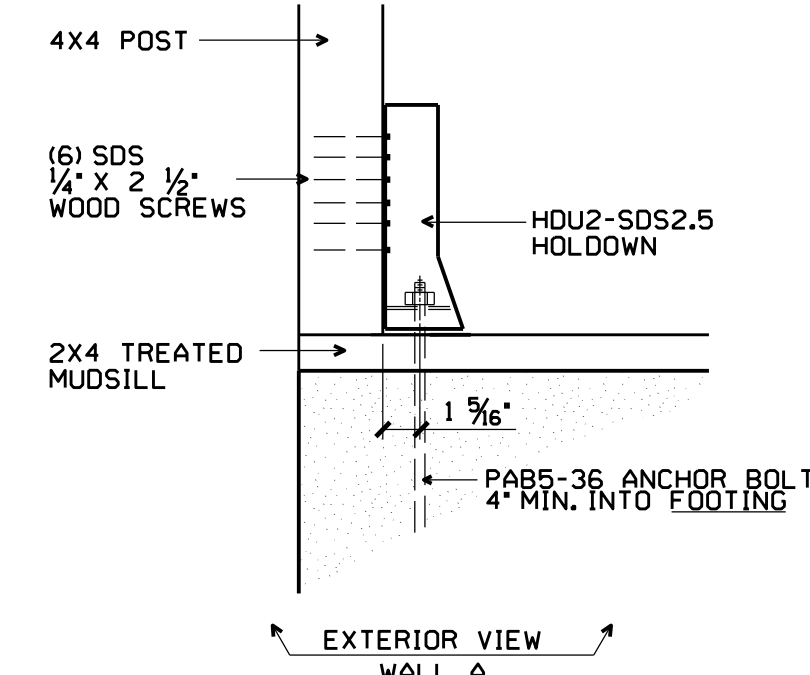
STEMWALL FOOTING

1:1'-0" 104 LINEAL FEET



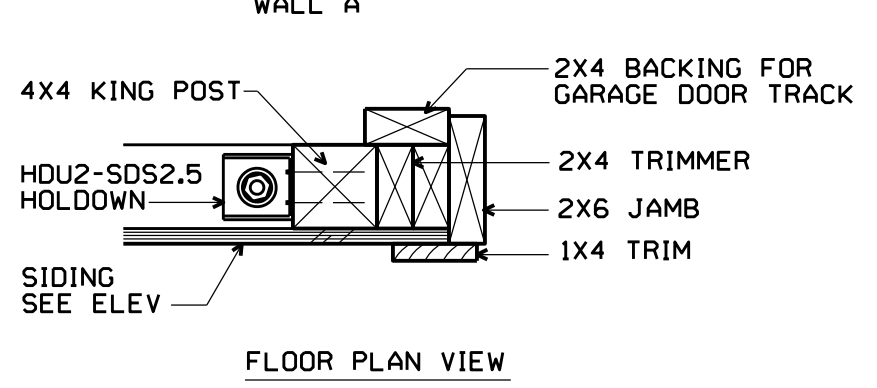
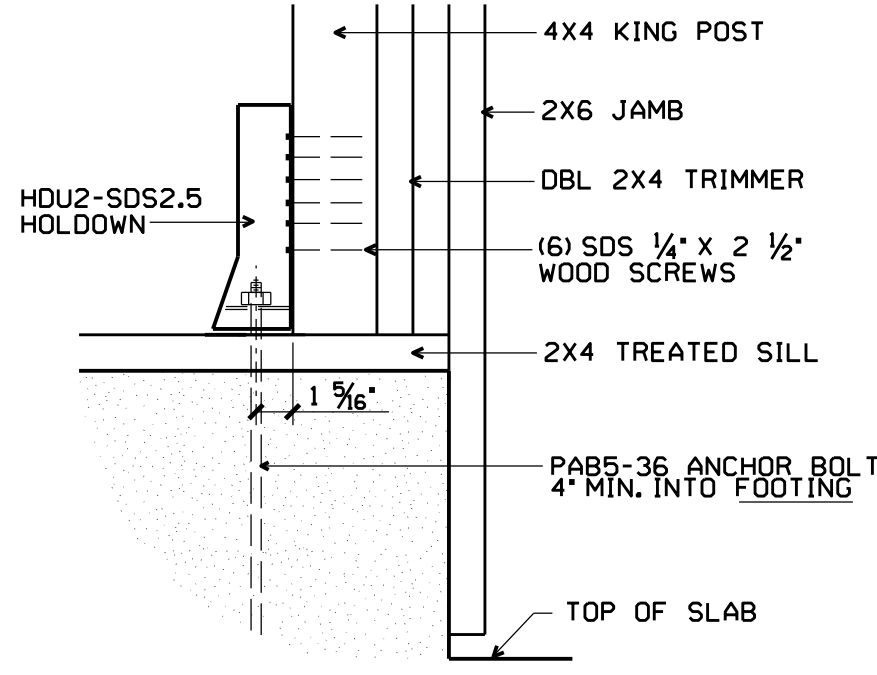
PAD FOOTING AT PAB5 A. B.

SCALE: 1:1'-0" TOTAL OF 4 LOCATIONS



HDU2 HOLDOWN at CORNER

SCALE: 1 1/2:1'-0" TOTAL OF 2



HDU2 HOLDOWN at DOOR

SCALE: 1 1/2:1'-0" TOTAL OF 2

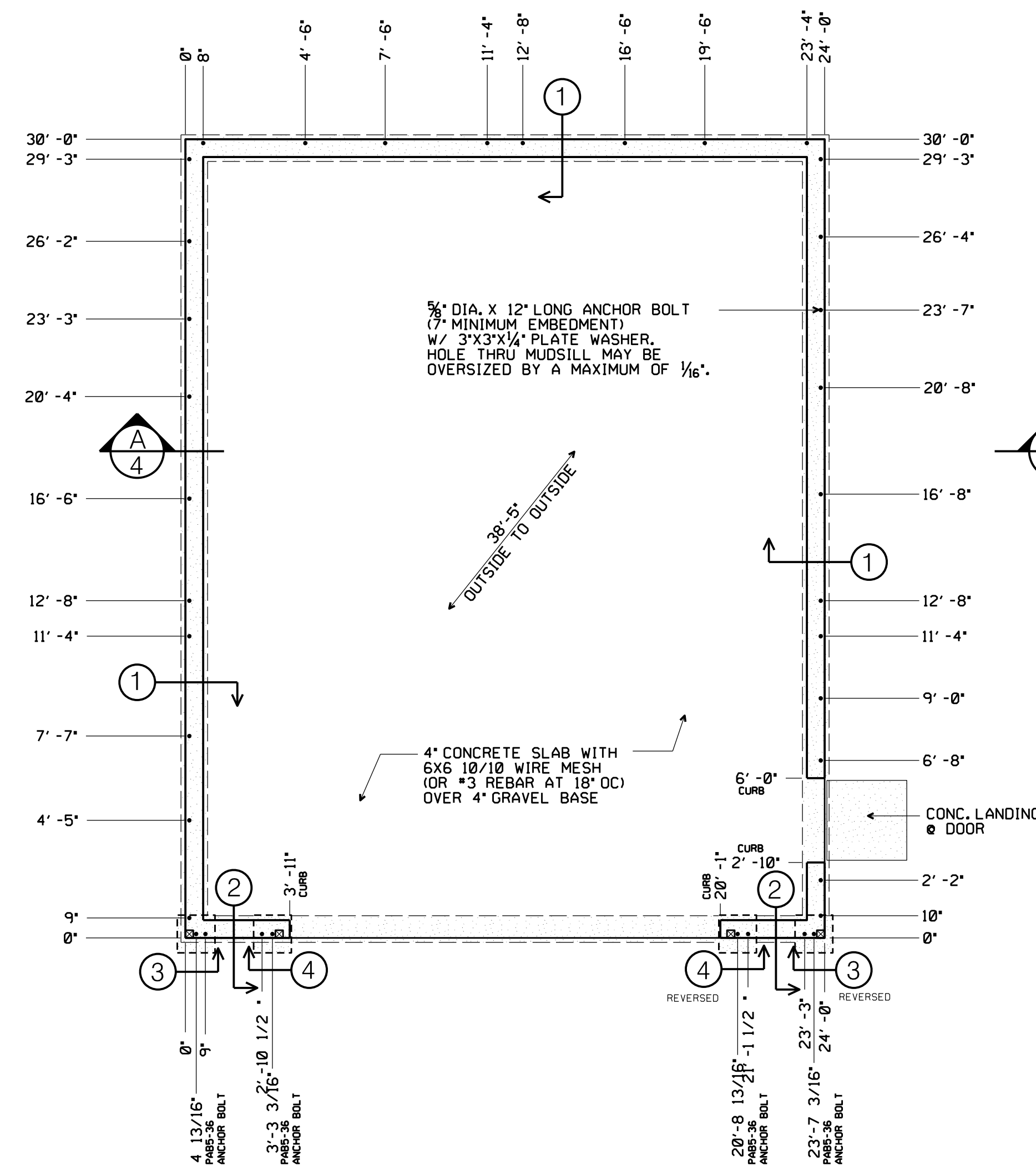
CONCRETE AND REINFORCING STEEL

- CONCRETE CONSTRUCTION SHALL CONFORM TO ACI-318-08.
- THE WEIGHT & MINIMUM 28 DAY STRENGTH OF CONCRETE SHALL BE: SLAB ON GRADE & FOOTINGS: 150 PCF, F'c = 2500 PSI
- CEMENT SHALL CONFORM TO ASTM C150 TYPE 1 OR 2. PROVIDE TYPE 5 CEMENT FOR SOILS CONTAINING SULFATE CONCENTRATIONS OF MORE THAN 0.2%.
- CONCRETE AGGREGATES: NATURAL SANDS AND ROCK AGGREGATES SHALL CONFORM TO ASTM C33.
- REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 40.

ALL ANCHOR BOLTS TO BE IN PLACE PRIOR TO FORM/FOUNDATION INSPECTION.
 USE AM 5/8 ANCHORMATE AT 5/8" MUDSILL ANCHOR BOLTS (33 TOTAL)
 USE ABS 5/8 ANCHOR BOLT STABILIZER AT PAB5 ANCHOR BOLT (4 TOTAL)

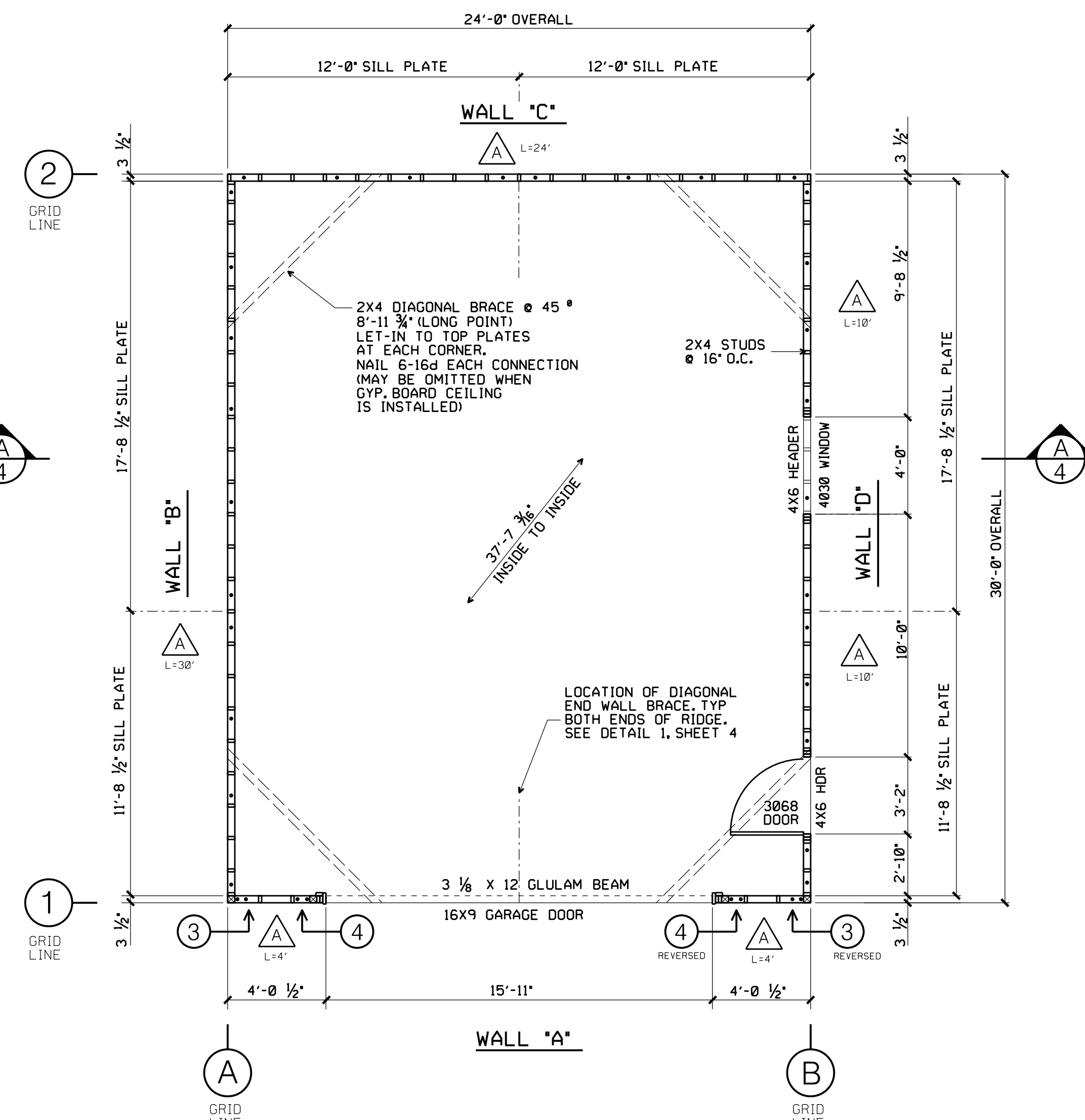
CONSTRUCTION REQUIREMENT NOTES

- ROOF DIAPHRAGM NAILING TO BE INSPECTED BEFORE COVERING. STRENGTH AXIS OF WOOD STRUCTURAL PANEL SHALL BE PERPENDICULAR TO SUPPORTS. FLOOR DIAPHRAGMS SHALL BE TONGUE AND GROOVE OR HAVE BLOCKED PANEL EDGES. WOOD STRUCTURAL PANEL SPANS SHALL CONFORM TO CBC TABLE 2304.7.
- ALL DIAPHRAGM AND SHEAR WALL NAILING SHALL UTILIZE COMMON NAILS WITH FULL HEADS UNLESS OTHERWISE APPROVED.
- MECHANICALLY DRIVEN NAILS USED IN WOOD STRUCTURAL PANELS SHALL MEET THE SAME DIMENSIONS AS THAT REQUIRED FOR HAND-DRIVEN NAILS, INCLUDING DIAMETER, MINIMUM LENGTH AND MINIMUM HEAD DIAMETER. CLIPPED HEAD OR BOX NAILS ARE NOT ACCEPTABLE. (CBC 2305.3.12, ORDINANCE 1167)
- ALL BOLT HOLES SHALL BE DRILLED 1/32" TO 1/16" OVERSIZED. BOLTS SHALL NOT BE FORCIBLY DRIVEN. (INDS 111.1.2.2)
- FOUNDATION SILLS SHALL BE NATURALLY DURABLE OR PRESERVATIVE-TREATED WOOD. (CBC 2304.11.2.4)
- FASTENERS IN PRESERVATIVE-TREATED WOOD SHALL BE HOT-DIPPED, GALVANIZED STEEL OR STAINLESS STEEL. (CBC 2304.9.5)
- THE QUALITY MARK SHALL BE ON THE STAMP OR LABEL AFFIXED TO PRESERVATIVE-TREATED WOOD AND SHALL INCLUDE THE FOLLOWING INFORMATION: IDENTIFICATION OF TREATING MANUFACTURER, TYPE OF PRESERVATIVE USED, MINIMUM PRESERVATIVE RETENTION (PCF), END USE FOR WHICH THE PRODUCT WAS TREATED, AWPA STANDARD TO WHICH THE PRODUCT WAS TREATED AND IDENTITY OF THE ACCREDITED INSPECTION AGENCY. (CBC 2303.1.8.1)
- MAXIMUM MOISTURE CONTENT OF WOOD SHALL BE 19% OR LESS BEFORE BEING COVERED WITH INSULATION, INTERIOR WALL FINISH AND FLOOR COVERING OF OTHER MATERIALS.



FOUNDATION PLAN

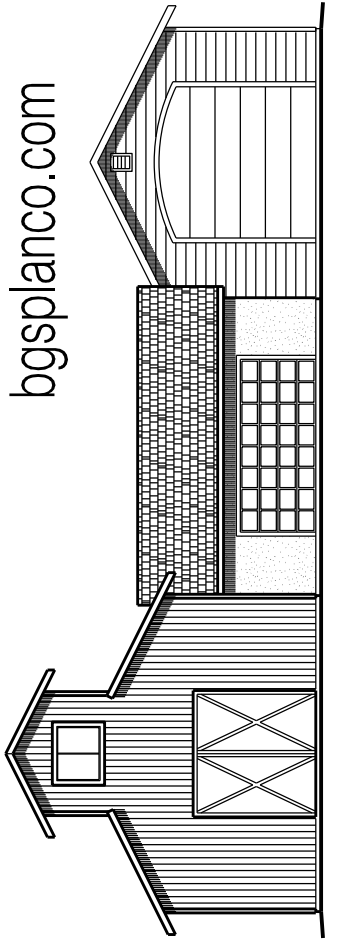
1/4:1'-0"



FLOOR PLAN

1/4:1'-0"

1/4" T&G 1/2" PLYWOOD SIDING WITH 8d COMMON NAILS AT 6" O.C. EDGE AND 12" O.C. FIELD.
 5/8" x 12" LONG ANCHOR BOLTS AT 48" O.C. MAX.



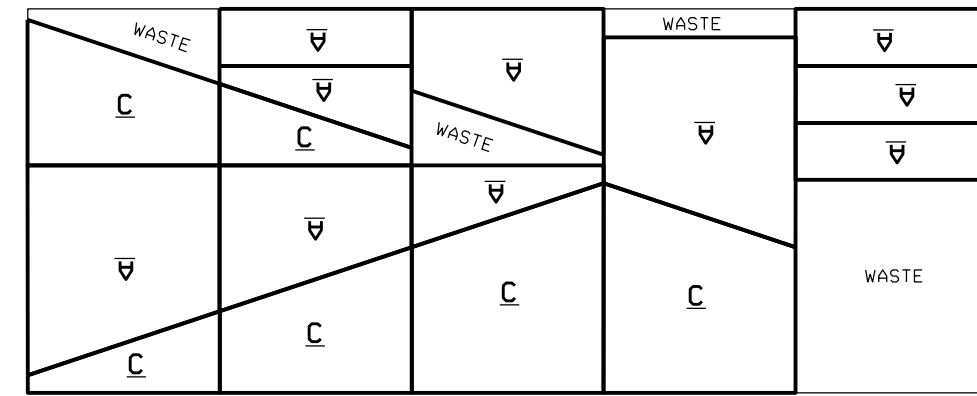
24 X 30 GARAGE
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PLAN NUMBER
 247
 DESIGNED
 LOREN/NORM
 SHEET

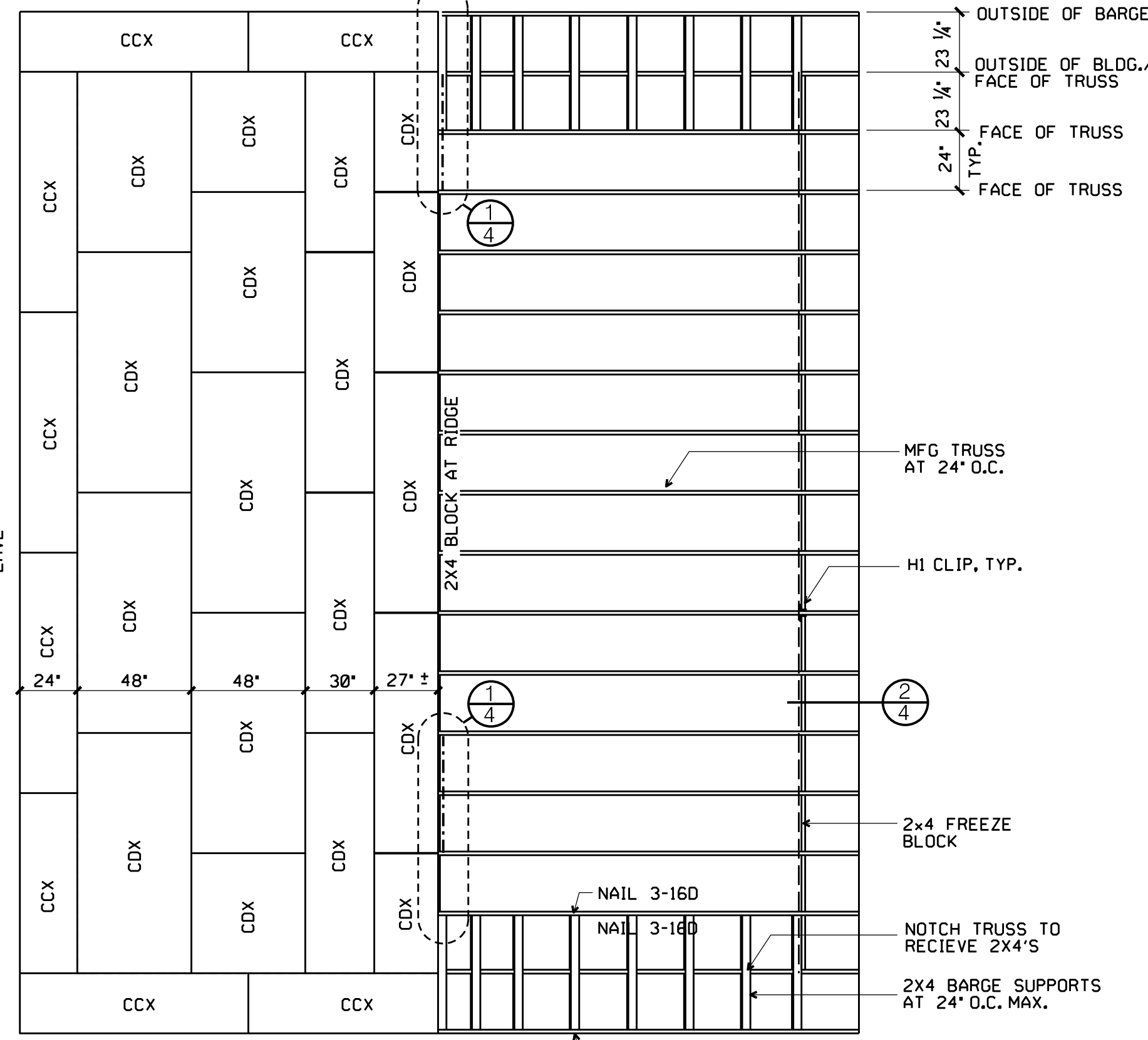
WALL FRAMING

1. Install nail on better boards 3 1/2" to interior of previously marked nail.
2. Restring using interior nails. Measure diagonals. Both measurements should be 37'-7 3/8". Adjust nails and string as necessary.
3. Plumb from string on each wall and mark slab. Snap chalk line on slab to identify interior side of wall. Remove string.
4. Place treated sills flat on slab to interior of anchor bolts. See Floor Plan, Sheet 2 for sill lengths. Using a square, mark each side of anchor and bolt on sill. Measure from chalk line for edge of bolt and transfer measurement to sill. This procedure will locate the bolt position on sill. Mark the side to remain up. Drill 1/8" holes.
5. Frame one wall at a time. See Floor Plan, Sheet 2 for spacing, lengths and dimensions.
6. Using slab as working surface place sill and bottom top plate on edge, face to face and tack together. Bottom top plate may be cut 1/8" short to allow for future adjustments. Place mark to indicate face of stud on both sill and plate. Put an "X" on side of mark that stud will go. Remove tacks and place approximately 9' apart.
7. Place studs, headers and/or cripples between sill and plate. Nail each connection with 2-16d nails thru plates into studs. Nail studs to end of header with a minimum of 8-16d nails. Nail temporary 2 x 4 scab on sill joint AT GARAGE DOOR.
8. Lift wall up (with help, of course) over anchor bolts and rest on slab. Install temporary 2x4 braces at 45 degrees from top of wall to 2x4 stake in ground. Braces will hold wall vertical.
9. Repeat procedure for other walls.
10. Do not nail corners together yet.
11. Place washers and nuts over anchor bolts and tighten.
12. Using a plumb bob or long level, plumb each wall front to back and side to side. Readjust brace at wall, not at stake, as necessary.
13. Place top top plates on walls and nail with 16d nails at 18" on center. Minimum LAP is 4'-0" with 24-16d nails per lap.
14. Nail corners together with 8-16d nails. Place a 2x4 diag. corner brace on top plate as indicated on Floor Plan, Sheet 2. Mark plate at both sides of brace. Cut block from top top plate only and attach brace into new slot w/ (6)16d nails at each connection.
15. Install windows with building paper flashing.
16. Place brace from top of wall to bottom of opposite wall. OVERLAPPING of braces will be required. Do not extend braces past exterior side of studs. Nail brace to studs first, then nail OVERLAP using 16d duplex nails.

17. Remove exterior wall braces at interior brace just installed and relocate on interior building at next bracing location. Repeat procedure at each brace location.
18. Install plywood on exterior of building. Nail with 8d galvanized nails at 6" O.C. at edges and 12" O.C. at field unless noted otherwise, see Floor plan.
19. Mark top plate for truss layout, at 24" o.c. see truss layout on sheet 3
20. Place gable end truss on back wall. Using lapped 2 x 4 brace, secure truss at top to 2x4 stake at grade. Minimum 2 braces. Place interior truss on mark. Secure to each top plate with temporary 16d nail. Secure on each side of ridge by placing temporary 1 x 6 across top chords using a 2 1/2" block for spacing. (2 1/2" block for Gable Built Trusses). Do not nail block at this time. Repeat procedure until all trusses have been placed.
21. Brace gable end truss as done with first truss.
22. Pull string line at ridge between gable end trusses.
23. Now YOU're ready to permanently secure trusses to top plate. Remove temporary nails as necessary and adjust center line of truss to string line at ridge. Install block at ridge. Secure truss to top plate w/ 3-16d nails.
24. Install 2" Bar flashing, vent and plywood at gable ends. See paged layout for gable ends A and C. Use garage door cut-out.
25. Install 2 x 4 outriggers and barge rafter as shown on Framing Isometric, Sheet 4 & truss layout sheet 3.
26. Install fascia board with 2 - 16d galvanized nails per rafter tail.
27. Begin roof plywood at overhangs using CCX plywood as shown on Sheet 3. Nail roof SHEATHING to roof trusses with 8d nails at 6" on CENTER. Stagger plywood butt joints.
28. Install roofing over felt.
29. Remove interior braces.
30. Apply exterior trim, see Sheet 3.
31. Paint or stain as desired.
32. Clean-up
33. Party
33. SEND PHOTOS

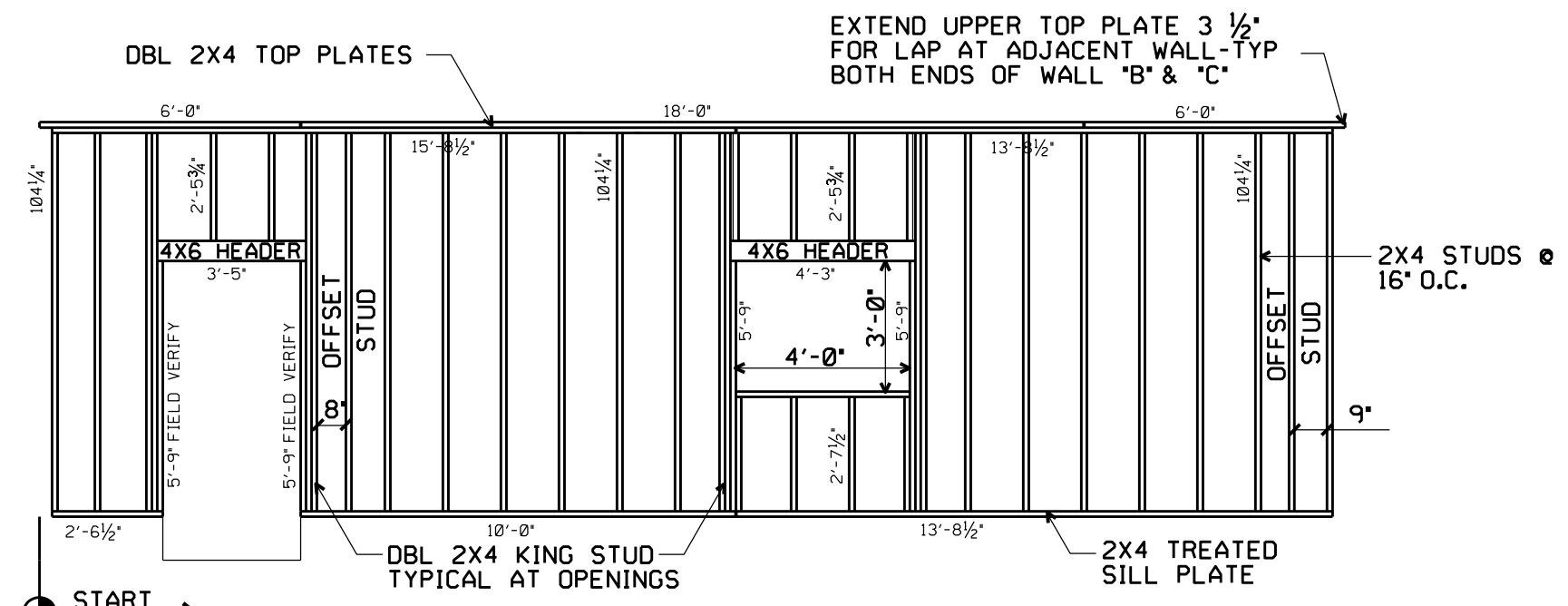


GABLE END SIDING LAYOUT 4x8 SHEETS
1/4"=1'-0"

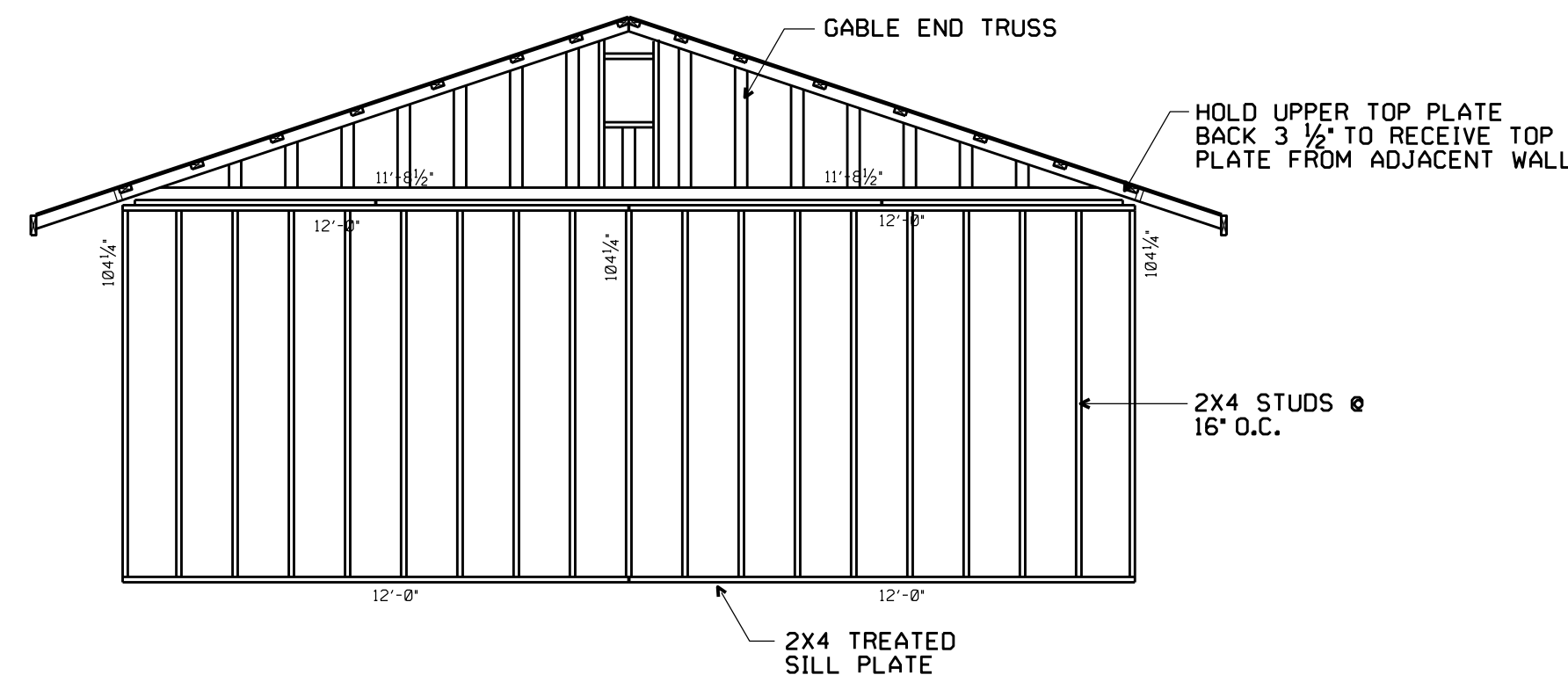


SHEATHING LAYOUT / TRUSS LAYOUT

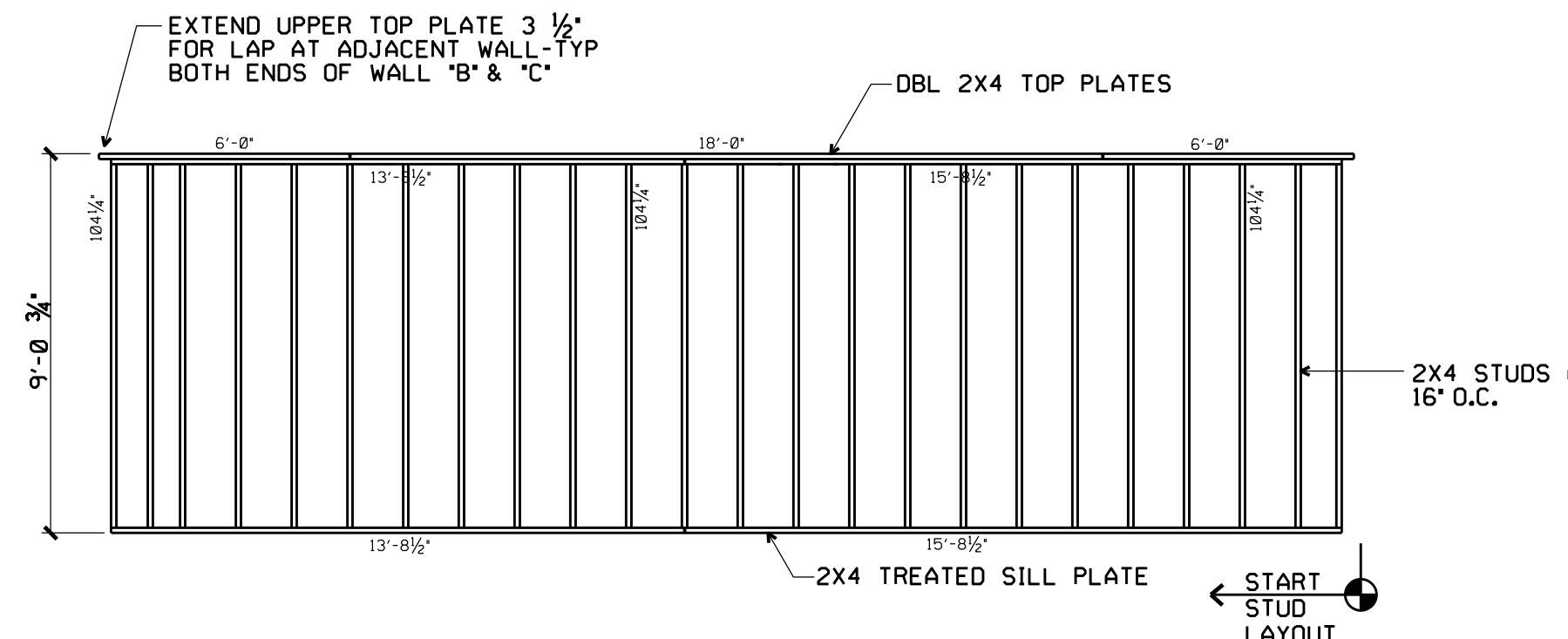
1/4"=1'-0" PANEL ID 24 / 0



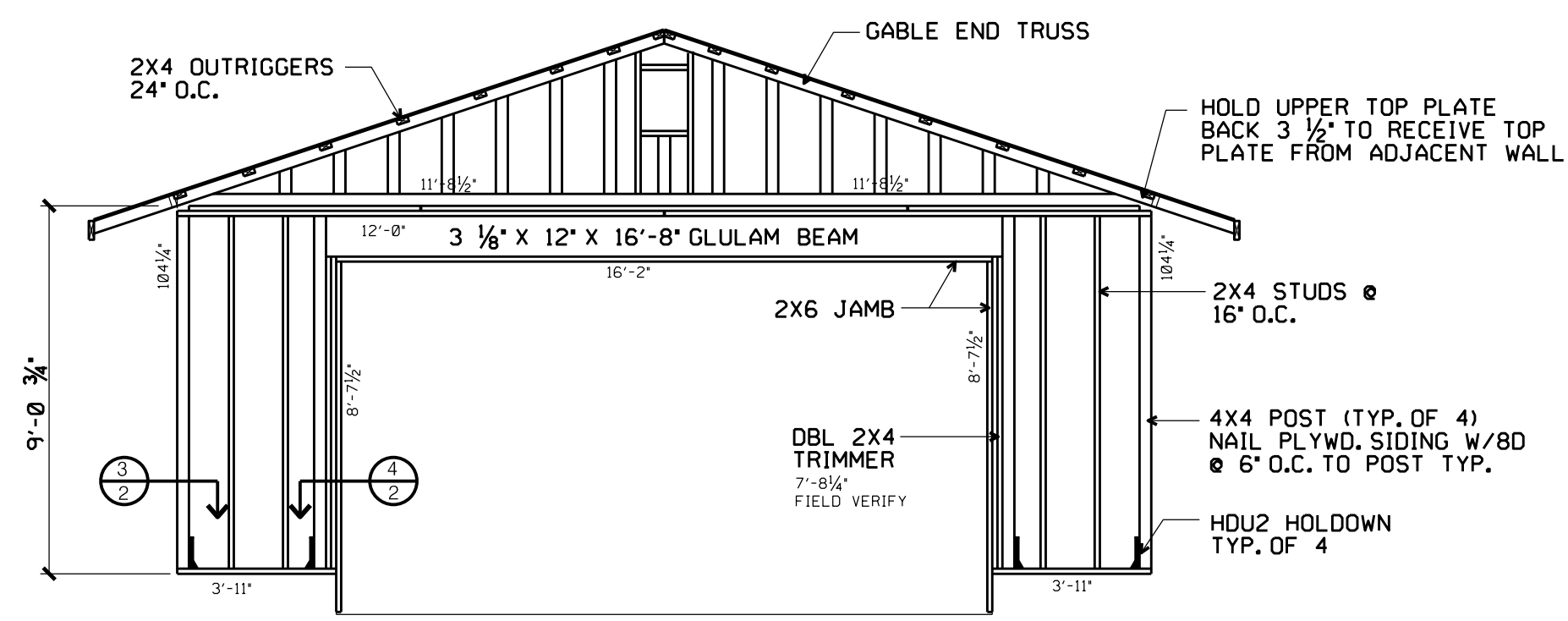
FRAMING ELEVATION WALL D
1/4"=1'-0"



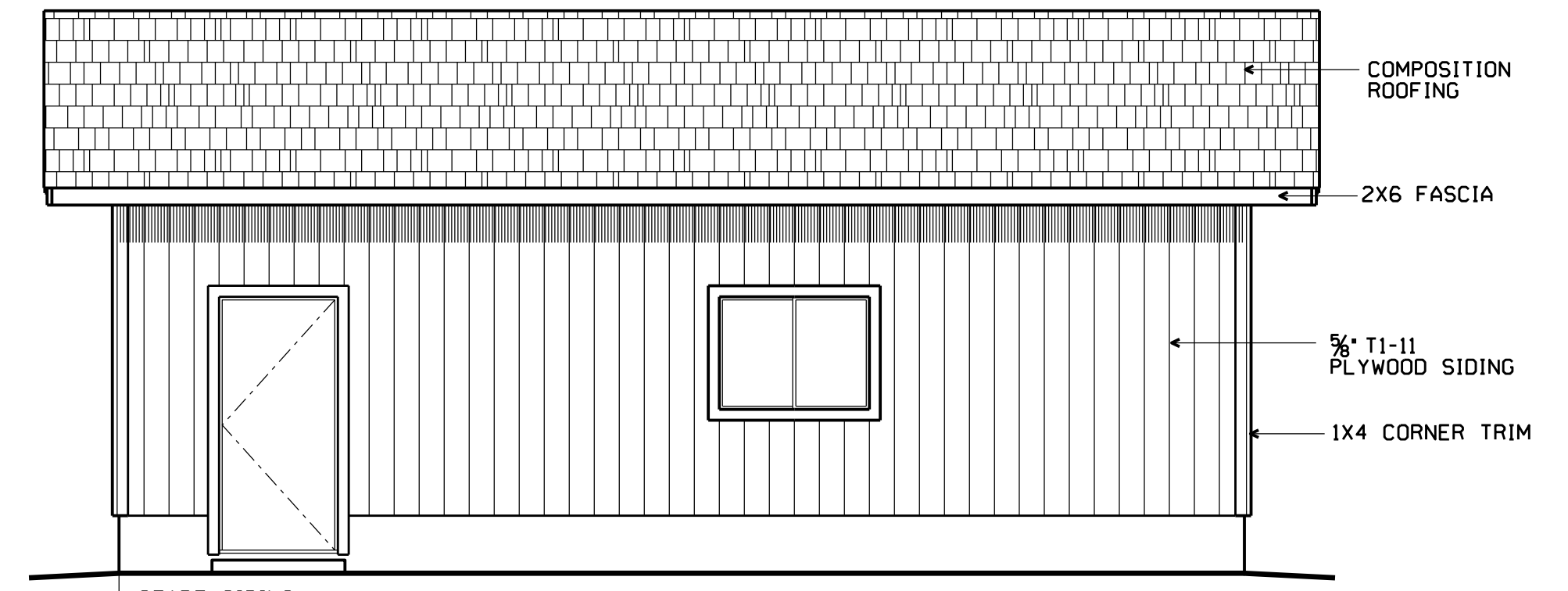
FRAMING ELEVATION WALL C
1/4"=1'-0"



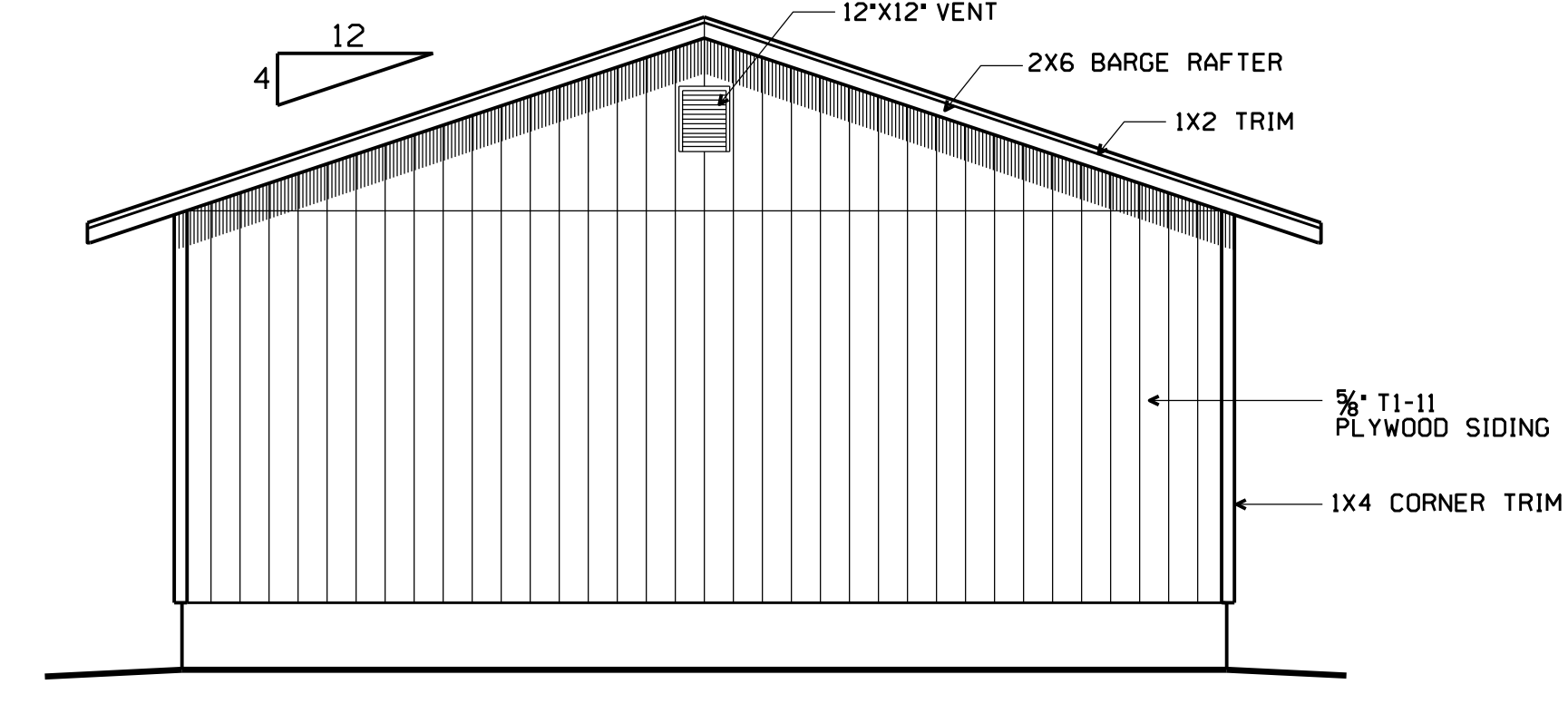
FRAMING WALL B
1/4"=1'-0"



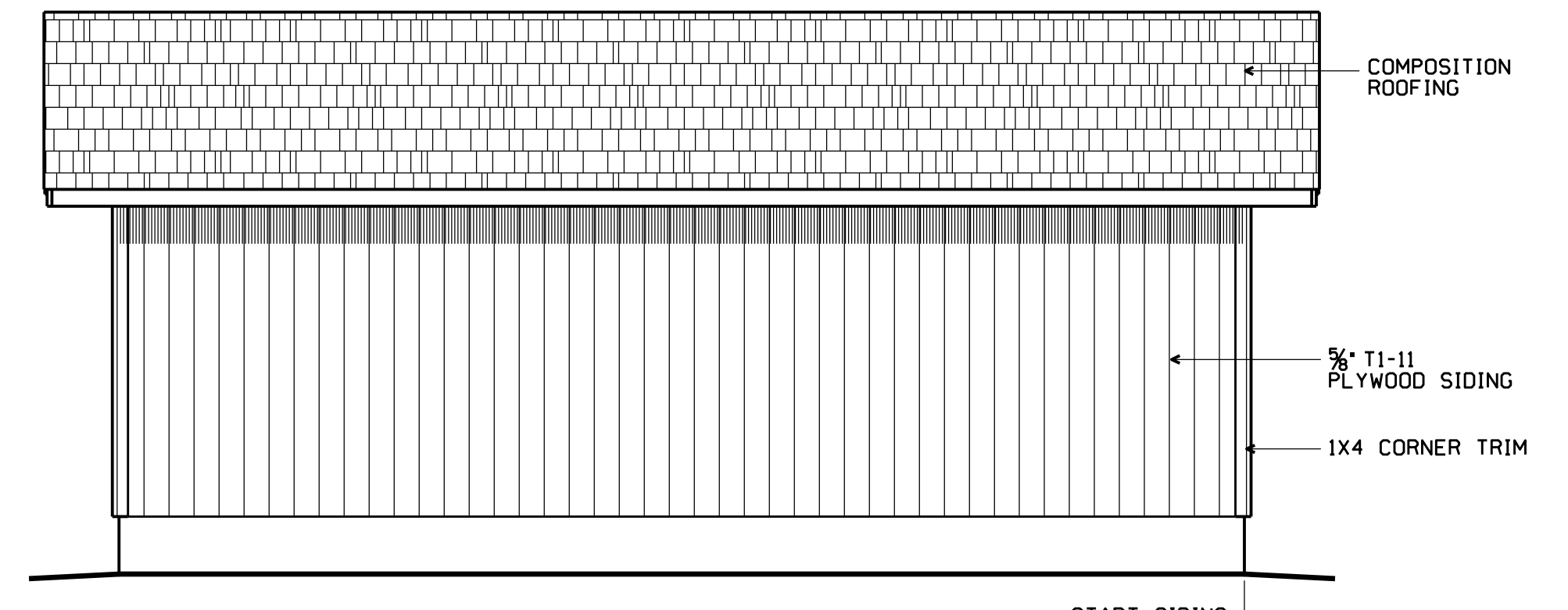
FRAMING ELEVATION WALL A
1/4"=1'-0"



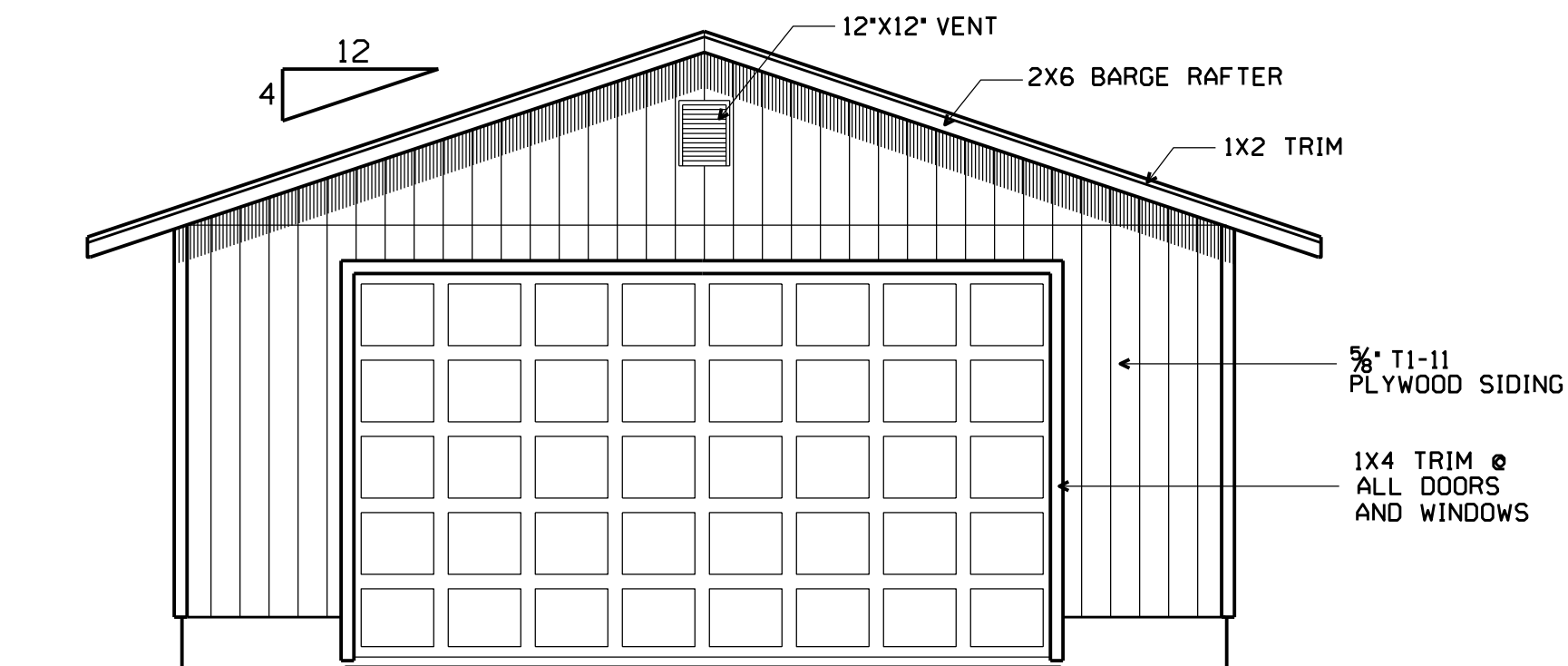
RIGHT ELEVATION WALL D
1/4"=1'-0"



REAR ELEVATION WALL C
1/4"=1'-0"



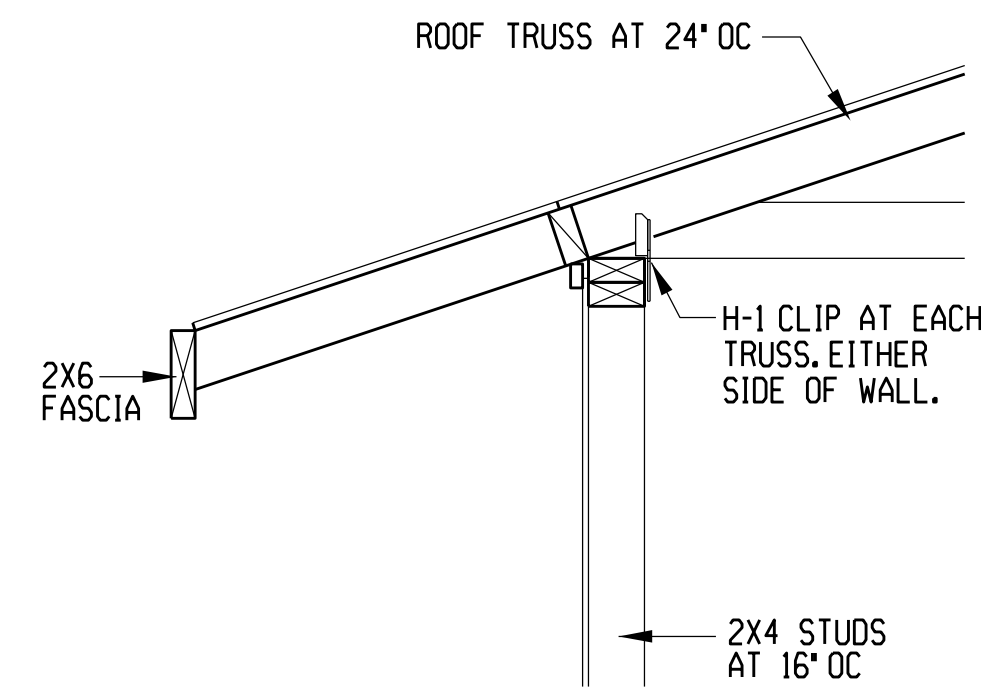
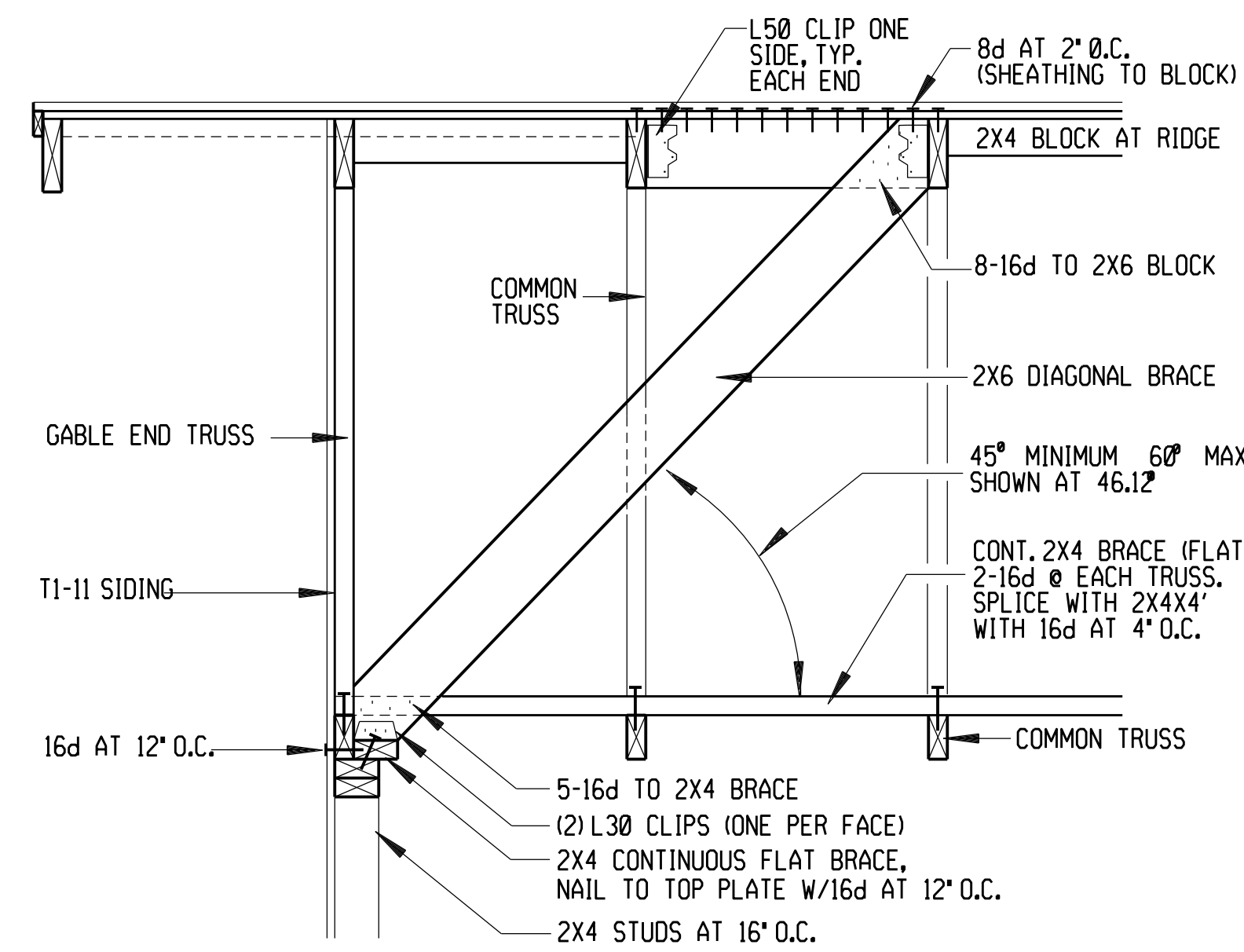
LEFT ELEVATION WALL B
1/4"=1'-0"



FRONT ELEVATION WALL A
1/4"=1'-0"

NAIL 5/8" T1-11 PLYWOOD SIDING WITH 8D @ 6" O.C. @ EDGE & 12" O.C. @ FIELD

IT IS THE OWNER/BUILDERS RESPONSIBILITY TO VERIFY MATERIAL LIST PRIOR TO ORDERING. NOTIFY ANY DISCREPANCIES TO THE DESIGNER.

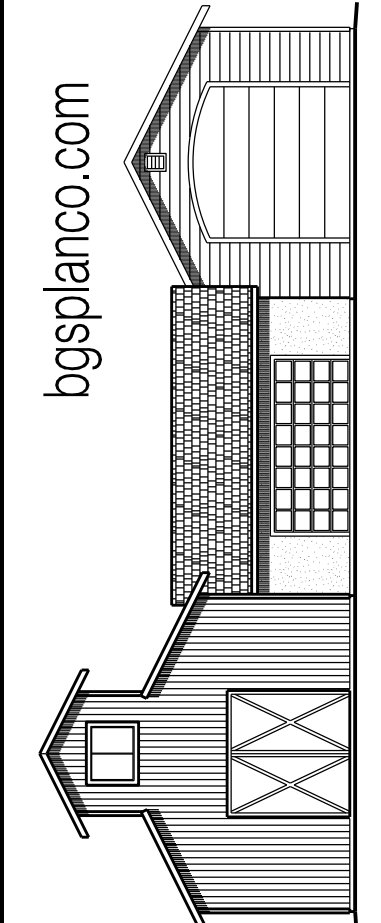
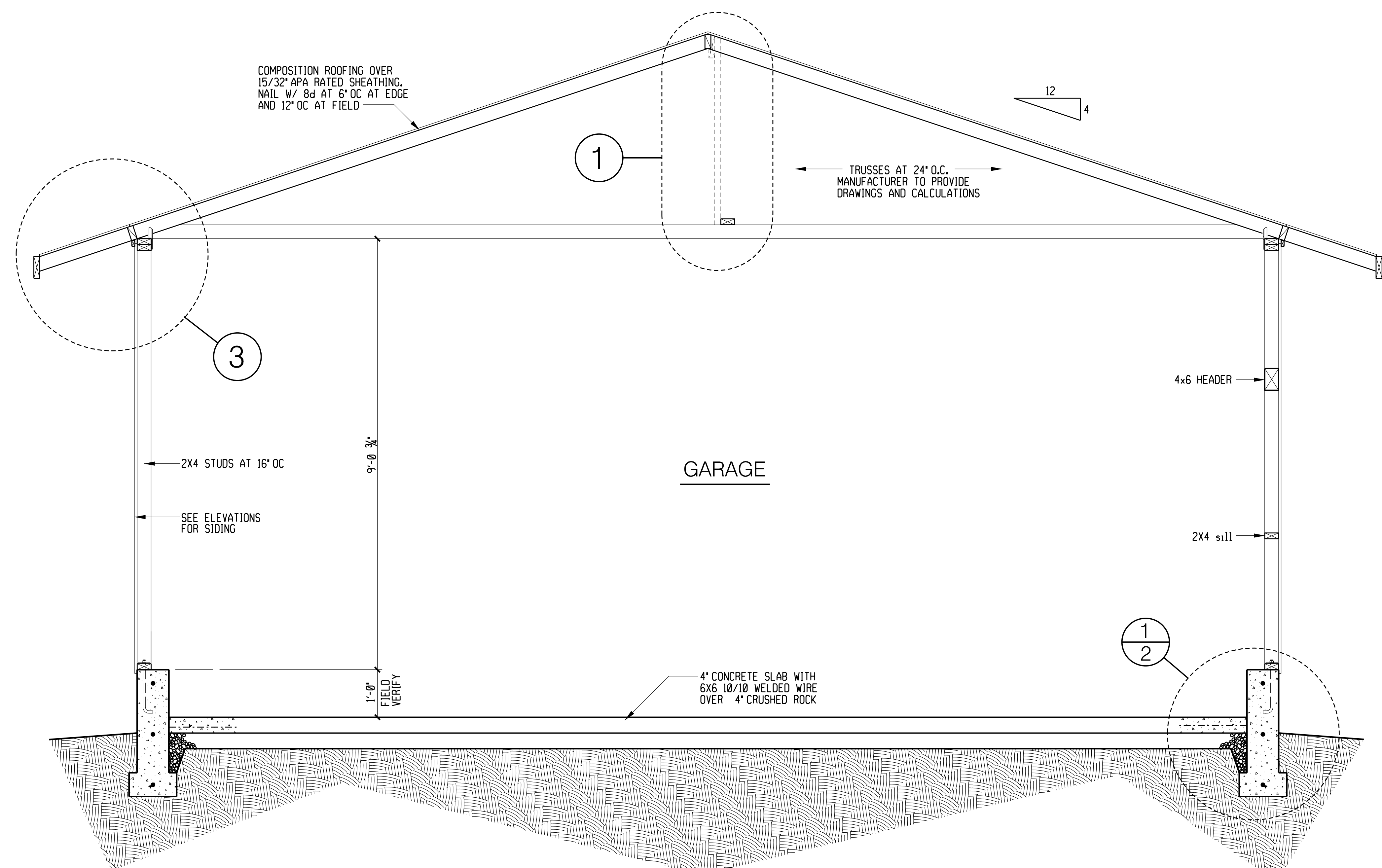


NAILING SCHEDULE	
2X PLATE TO STUD END NAILING	: 2-16d
3X PLATE TO STUD END NAILING	: 2-20d
DOUBLE STUDS FACE NAILING	: 16d @ 12" O.C.
STUD TO CORNER NAILING	: 16d @ 12" O.C.
KING STUD/ POST TO END OF HEADER	: 8-16d
DOUBLE TOP PLATE FACE NAILING	: 16d @ 16" O.C.
TOP PLATE LAPS	: 48" MIN W/24-16d IN LAP
TRUSS TO FREEZE BLOCK	: 2-16d
TRUSS TO TOP PLATE	: HI CLIP/ H2.5 CLIP
TRUSS BOTTOM CHORD TO 2X4 BRACE	: 2-16d
ROOF PLY	: 8d @ 6" O.C. EDGE, 12" O.C. FIELD
HI CLIP TO TRUSS	: 6-8dX1½
TO PLATES	: 4-8d
H2.5 CLIP TO TRUSS	: 5-8d
TO PLATES	: 5-8d
L30 CLIP TO BRACE	: 4-10dX1½
TO PLATES	: 4-10d
L50 CLIP TO BRACE	: 6-10dX1½
TO BLOCK	: 6-10dX1½
A35 CLIP TO BLOCK	: 6-8dX1½
TO PLATE	: 6-8d

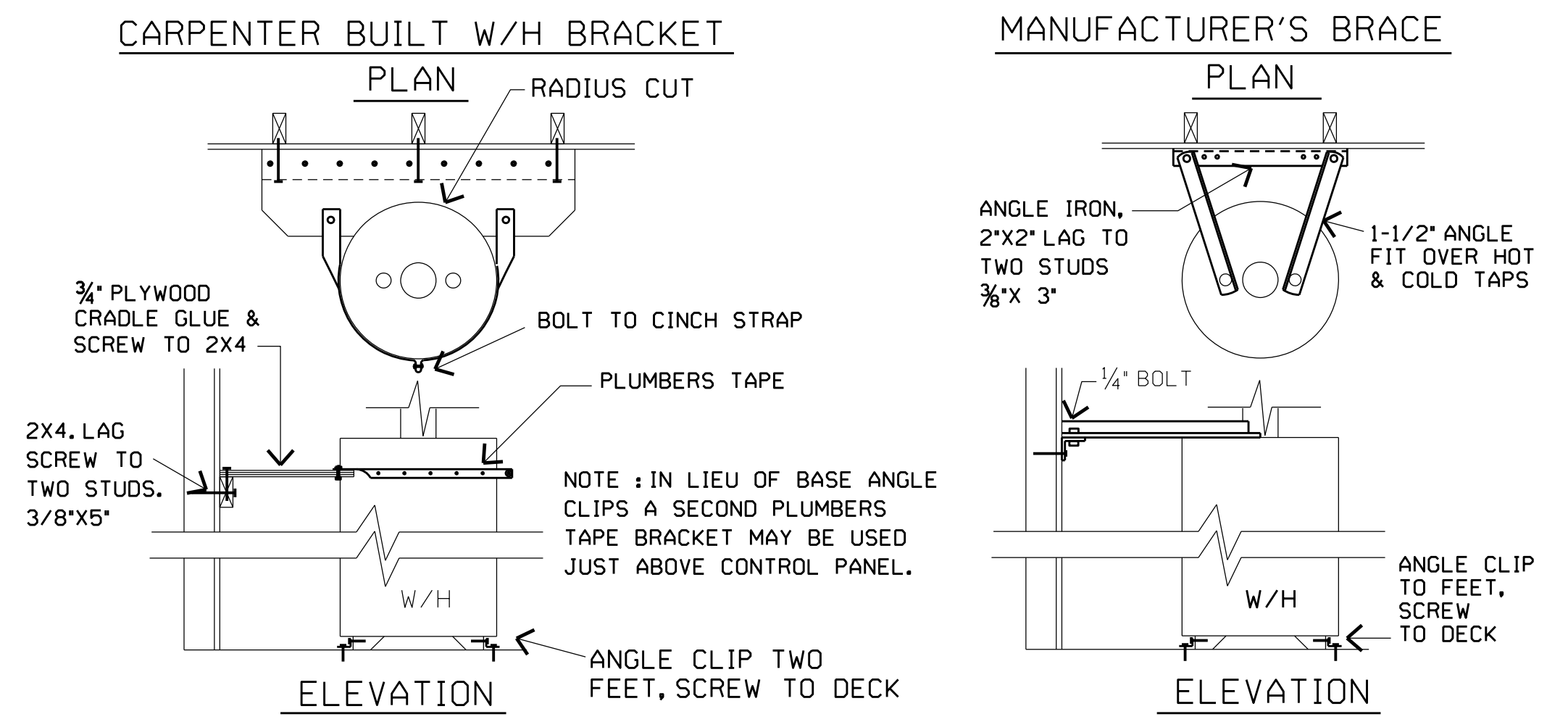
FOR ADDITIONAL NAILING INFORMATION, REFER TO SIMPSON CATALOG.

MATERIAL & CUT LIST PLAN 247						
24 x 30 DELUXE GARAGE						
NO.	PCS.	DIM.	LENGTH	DESCRIPTION	NOTES	
WALLS						
1	1	2 x 4	8'	D.F. Pressure Treated Sill Plate		
2	2	2 x 4	20'	D.F. Pressure Treated Sill Plate		
3	4	2 x 4	16'	D.F. Pressure Treated Sill Plate		
4	12	2 x 4	92 ¼"	D.F. Cripples, Blocks & Trimmers		
5	72	2 x 4	104 ¼"	STD./BTR D.F. Studs & Gar Dr Track		
6	1	4 x 6	8'	#2 D.F. Header	1 @ 4'-3" 1 @ 3'-5"	
7	1	3½ x 12	18'	24F-V4 Glulam Beam	1 @ 18'-0"	
8	4	4 x 4	10'	STD/BTR D.F. Post & Blocks	4 @ 184 ¼"	
9	10	2 x 4	12'	STD/BTR D.F. Top Plates		
10	2	2 x 4	14'	STD/BTR D.F. Top Plates		
11	2	2 x 4	16'	STD/BTR D.F. Top Plates		
12	2	2 x 4	18'	STD/BTR D.F. Top Plates		
13	4	2 x 4	10'	D.F. Diagonal Corner Bracing	4 @ 8'-11½"	
14	6	¾"	4' x 8'	T1-11 Plywood Siding	GABLE ENDS AND WINDOW	
15	22	¾"	4' x 9'	T1-11 Plywood Siding		
TRIM						
20	12	1 x 4	10'	R/S Garage Door & Corner Trim	Cut To Fit	
21	5	1 x 4	8'	R/S Window & Door Trim	Cut To Fit	
22	4	2 x 6	16'	R/S Barge Rafter	Cut To Fit	
23	18	1 x 2	10'	R/S Barge Trim, Eave Trim	Cut To Fit	
24	4	2 x 6	18'	R/S Fascia Board	Cut To Fit	
25	2	2 x 6	10'	R/S Jamb @ Sides		
26	1	2 x 6	18'	R/S Jamb @ Head		
MANUFACTURED TRUSSES						
30	2		24'	Gable End Truss		
31	14		24'	Common Truss		
32	4	2 x 4	92 ¼"	Ridge Block		
33	7	2 x 4	92 ¼"	Freeze Block	VERIFY	
34	16	2 x 4	92 ¼"	D.F. Barge Support		
35	7	2 x 4	12'	Truss Bracing (Flat)	Detail 1	
36	2	2 x 6	10'	End Wall Diagonal Bracing	Detail 1	
ROOF MATERIAL						
40	32	1½ x 2'	4' x 8'	CDX Plywood/OSB	Panel I.D. 24/8	
41	8	1½ x 2'	4' x 8'	CCX Sheathing at Overhang	Panel I.D. 24/8	
42	3	ROLLS		Roofing Felt		
43	11	SQUARES		Composition Roofing Shingles	VERIFY WITH OWNER 100% ACTUAL SQ. FT.	
DOORS & WINDOWS						
50	1	3068		Pre-Hung Door	VERIFY WITH OWNER	
51	1	EA.		Lockset	VERIFY WITH OWNER	
52	1	4030		Window	VERIFY WITH OWNER	
53	1	16x9		Garage Door	VERIFY WITH OWNER	
HARDWARE						
60	1 Box	50 lbs.		16d VC Sinker Nails		
61	1 Box	50 lbs.		8d Galvanized Nails		
62	1 Box	50 lbs.		8d Common Nails		
63		25 lbs.		Roofing Nails		
64	1	10 lbs.		16d Galvanized Nails	Fascia & Trim	
65	2	12"x12"		Gable End Vent		
66	13	1½"x1½"	10'	Galvanized Drip Edge		
67	2	1½"x1½"	4' / 6'	Angle Iron For Garage Door Track		
68	2	Rolls	36'	Building Paper		
69	33	¾"	12'	Foundation Bolt & Nut		
70	33	¾"		3"x3"x¼" Plate Washer		
71	33			AM¾ Anchormate		
72	28			HI Clip	TRUSS TO TOP PLATE	
73	4			HOU2-SDS2.5 Holdown		
74	4			PAB5-36 Anchor Bolt W/ Nut	AT HOU2 HOLDOWN	
75	4			ABS¾ Anchor Bolt Stabilizer		
76	4			L30 Clip		
77	4			L50 Clip		
78	13	½"	20'	#4 Rebar		
79	4			LPT4 Clip	For Rebar Laps	
80	24			Rebar Supports		
81	3	5'	50'	6"x6" Wire Mesh	OR #3 REBAR AT 18" OC EACH WAY	

MATERIAL LIST DOES NOT INCLUDE MATERIAL FOR FORMING AND TEMPORARY BRACING. VERIFY WITH CONTRACTOR.

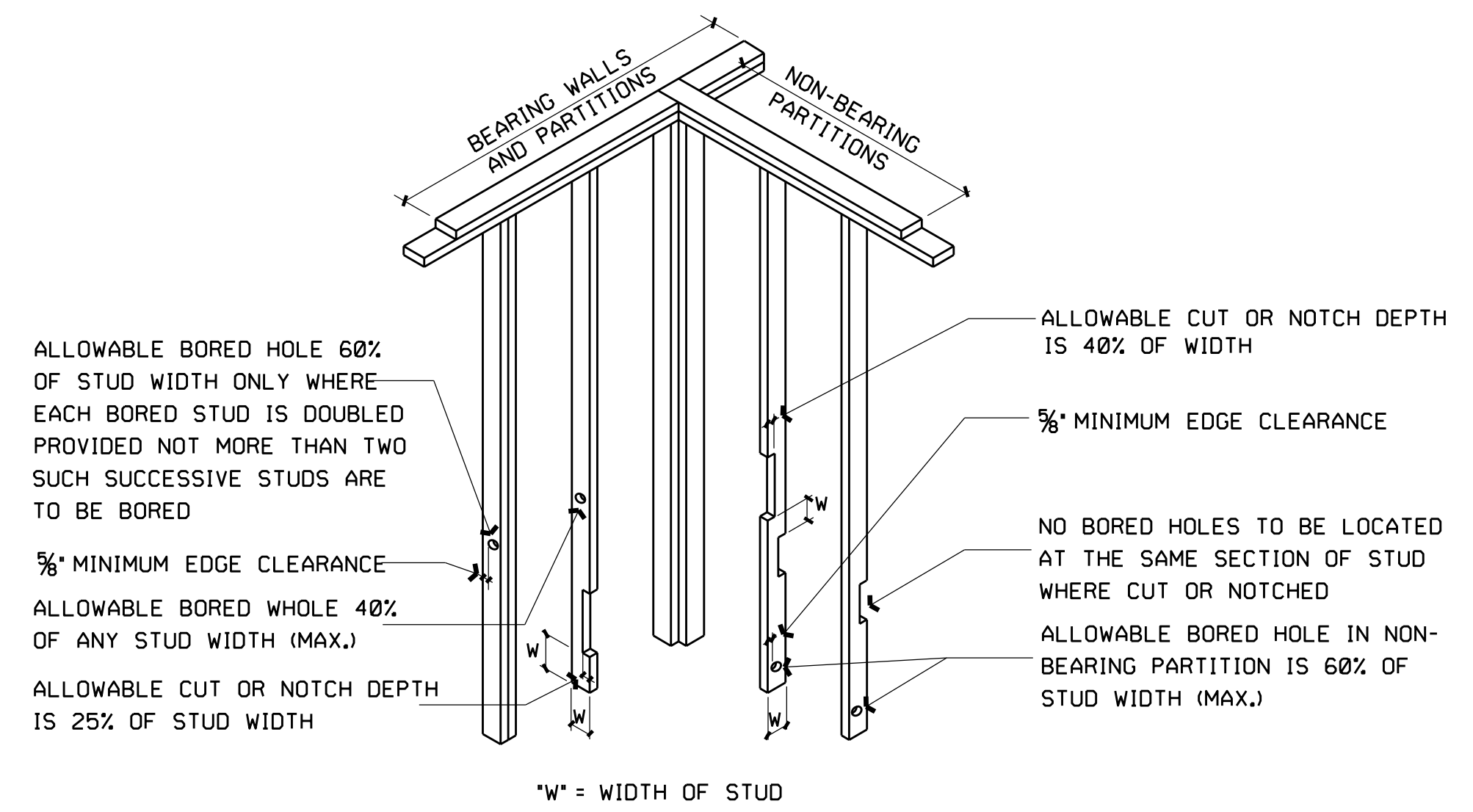


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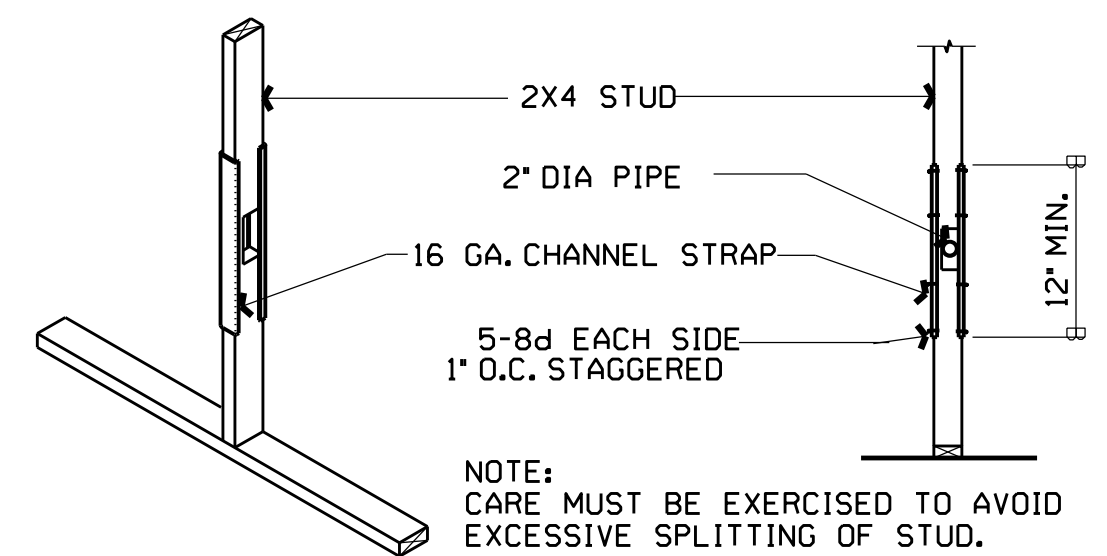
WATER HEATER SEISMIC ANCHORAGE

N.T.S.



SIZE	NOMINAL	ACTUAL	NOTCHING		BORING	
			25%	40%	40%	60%
2x4	4"	3 1/2"	7/8"	1 1/8"	1 1/8"	2 1/8"
2x6	6"	5 1/2"	1 1/8"	2 3/16"	2 3/16"	3 3/16"

SINGLE FAMILY RESIDENTIAL CONSTRUCTION



NOTCHING FOR PIPE AT WOOD STUDS

PLUMBING LEGEND

- WATER CLOSET
- SHOWER
- TUB
- SINK
- WATER HEATER (SPECIFY SIZE)
- WASHER & DRYER (VENT TO OUTSIDE)
- HOSE BIB
- COLD WATER- (SPECIFY SIZE)
- HOT WATER- (SPECIFY SIZE)
- WASTE (SPECIFY SIZE)
- VENT (SPECIFY SIZE)
- GAS (SPECIFY SIZE)

ALL PIPE MUST BE WRAPPED OVER 600 FT ELEVATION.

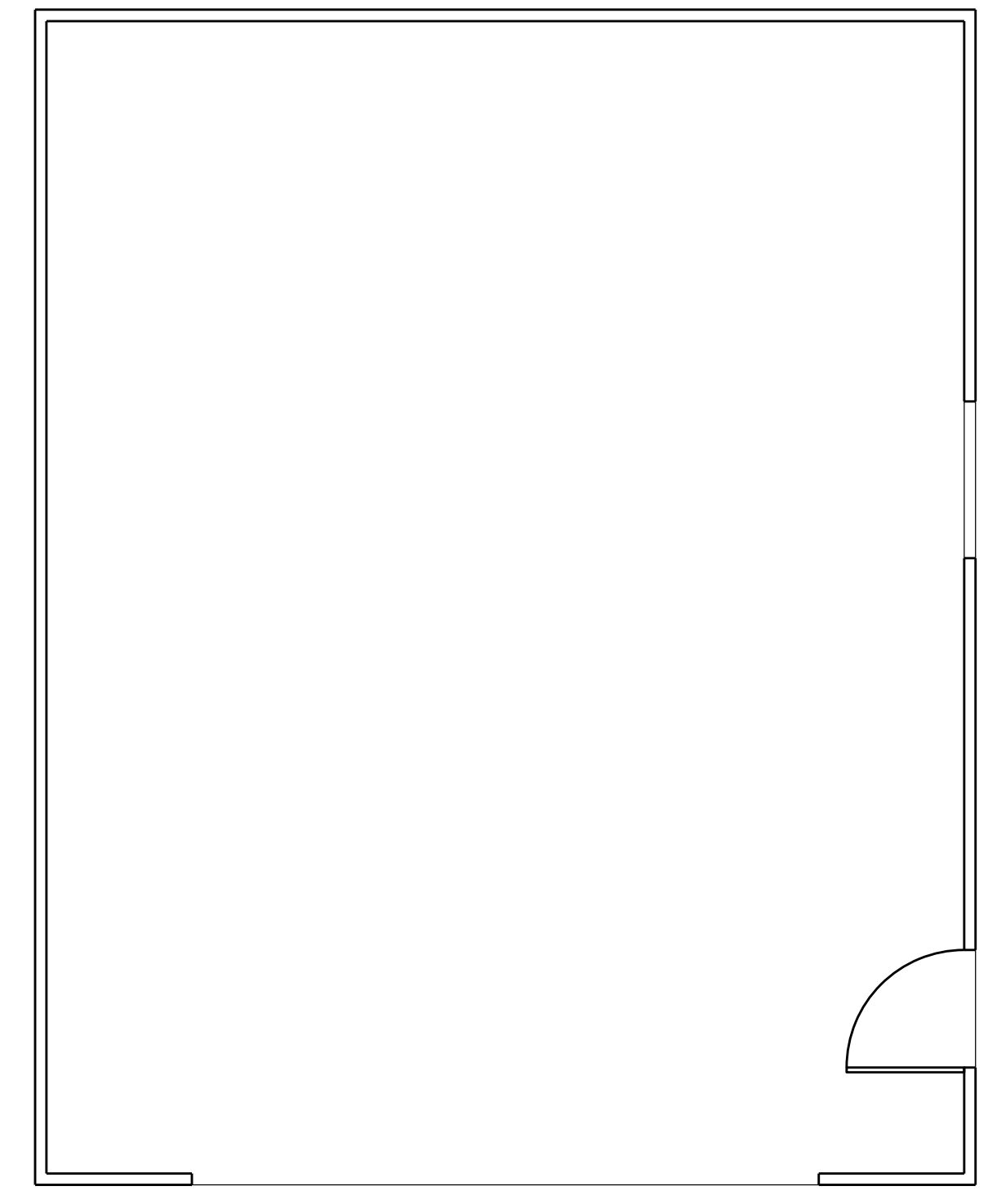
ALL "IN-SLAB" COPPER SHOULD BE SHIELDED @ LEAST 3" BEFORE PENETRATING SLAB. CONSULT BLDG. DEPT.

ELECTRICAL LEGEND

- 110 OUTLET
- 220 OUTLET
- 110 HALF HOT OUTLET
- WALL LIGHT
- CEILING LIGHT
- RECESSED CANISTER LIGHT
- FAN & LIGHT COMBO
- EXHAUST FAN
- FLUORESCENT LIGHT
- (2) TUBED FLUORESCENT LIGHT
- SMOKE DETECTOR
- MAIN SERVICE SPECIFY AMPS
- DOOR BELL
- DOOR BELL CHIMES
- T.V. OUTLET
- PHONE JACK
- SWITCH
- 3 WAY SWITCH
- 4 WAY SWITCH
- GROUND FAULT INTERRUPTER
- GARAGE DOOR OPENER
- WATER PROOF
- 36" ABOVE FLOOR
- 42" ABOVE FLOOR

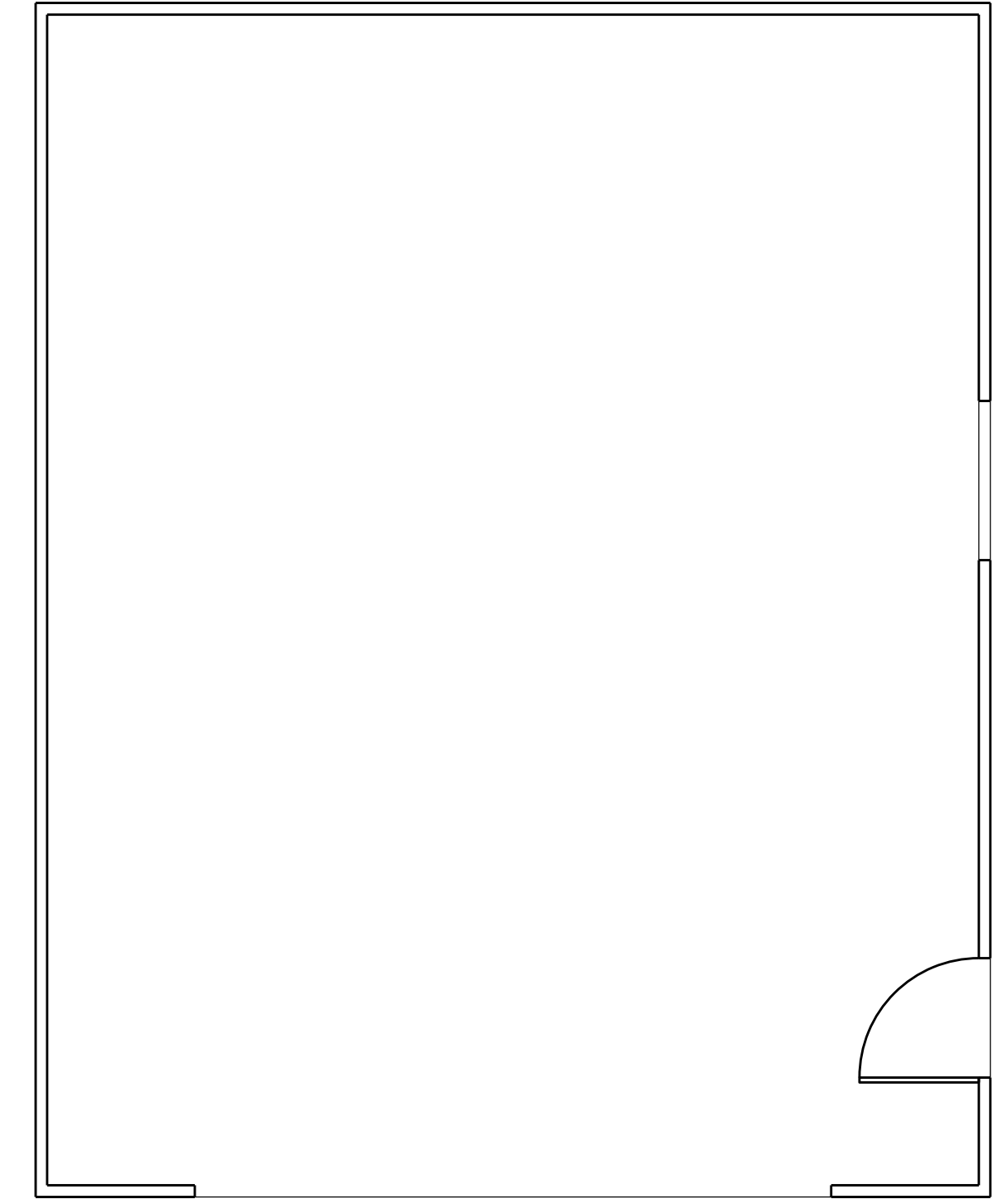
ALL ELECTRICAL BELOW 8'-0" IS TO BE IN METAL CONDUIT (EMT) OR COVERED WITH 1/2" GYPSUM WALLBOARD. CONSULT BUILDING DEPARTMENT.

THE ELECTRICAL PANEL MAY NOT BE LOCATED WITHIN A SHEAR WALL. IF THE ELECTRICAL PANEL IS TO BE POSITIONED WITHIN A SHEAR WALL, ENGINEERING CALCULATIONS AND DETAILS MUST BE PROVIDED.



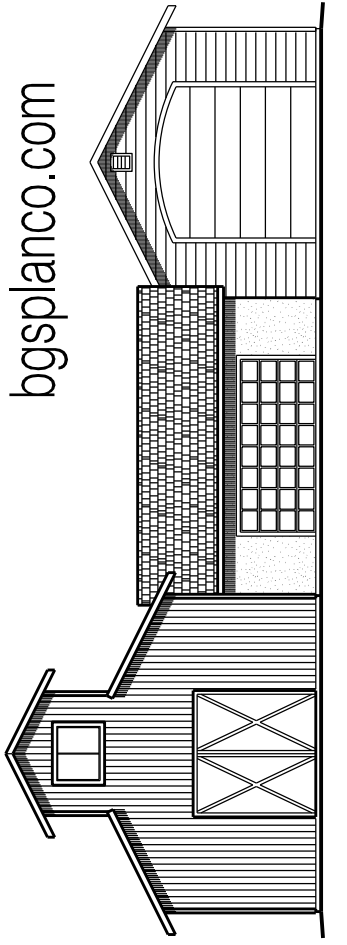
PLUMBING FLOOR PLAN

1/4"=1'-0"



ELECTRICAL FLOOR PLAN

1/4"=1'-0"



24 X 30 GARAGE
 BGS PLAN COMPANY
 P.O. BOX 1181
 ROSEVILLE, CA 95678
 (916) 783-6822

DATE
PLAN NUMBER 247
DESIGNED LOREN/NORM
SHEET