

## FOUR COMPARTMENT BIN FOR FARM FEED MILL

160 cu. ft. per Compartment

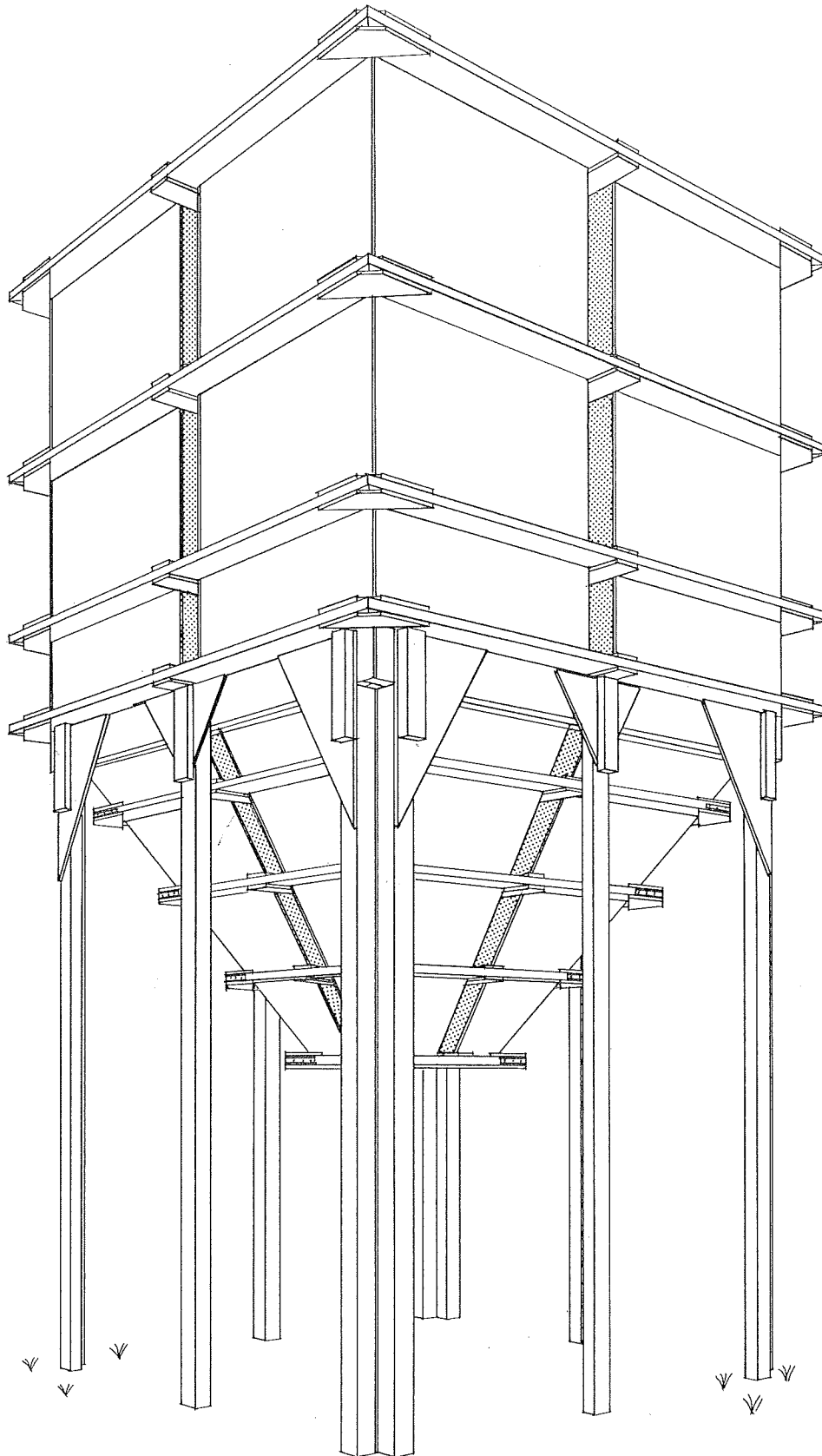
The four compartments of this bin will provide the storage needed for the basic ingredients used with a farm feed mill. Small mills operating for a period of time can grind and mix feed efficiently to meet particular needs and this storage serving as a holding bin will allow the mill to run unattended.

Exterior-type plywood and framing lumber combine to give this design sufficient strength to resist the weight and pressure of wheat or shelled corn. Construction is speeded by minimizing the work done above ground level so the framing is preassembled on the ground and then raised during erection. The plywood hopper is suspended from the perimeter carrying-beams with no support required under the center of the bin to give ample work space around the feed mill.

Each compartment has a volume of 160 cu. ft., or about 3 3/4 tons of shelled corn. Clearance requirements for mills will determine the leg length needed, but the bin should not be built more than 2 feet higher than the level shown on the plan unless the relatively slender legs are reinforced. The foundation for the bin must be designed to be able to carry about 3000# under each leg.

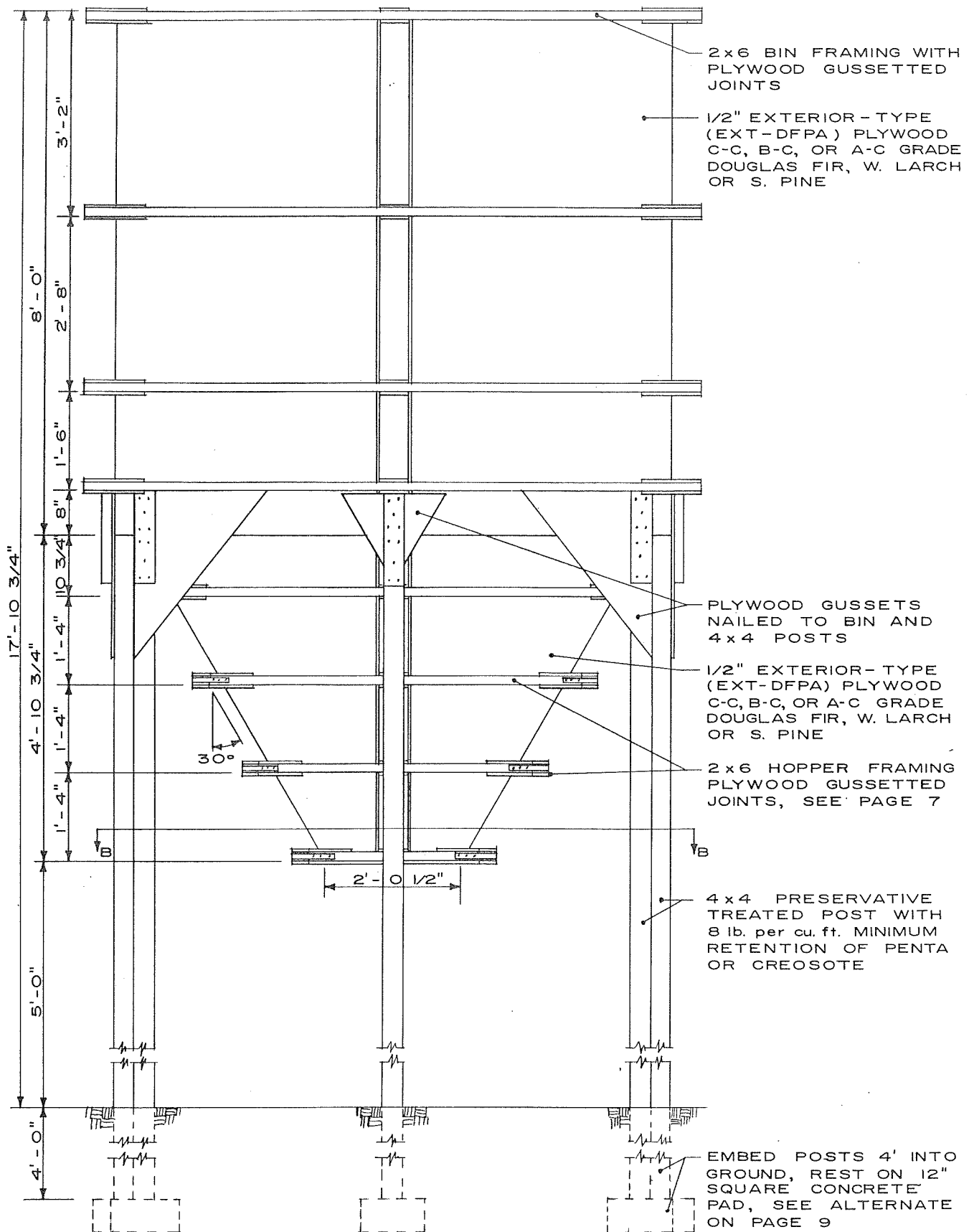
To assure safety, the nail sizes and numbers shown on the plan must be used. Adequate nailing of the plywood to framing and the gusset nailing are essential in this design to enable the entire bin to act as a unit in supporting the heavy loads. For bins built outside and exposed to weather, galvanized nails will minimize staining and corrosion.

160  
4  
640

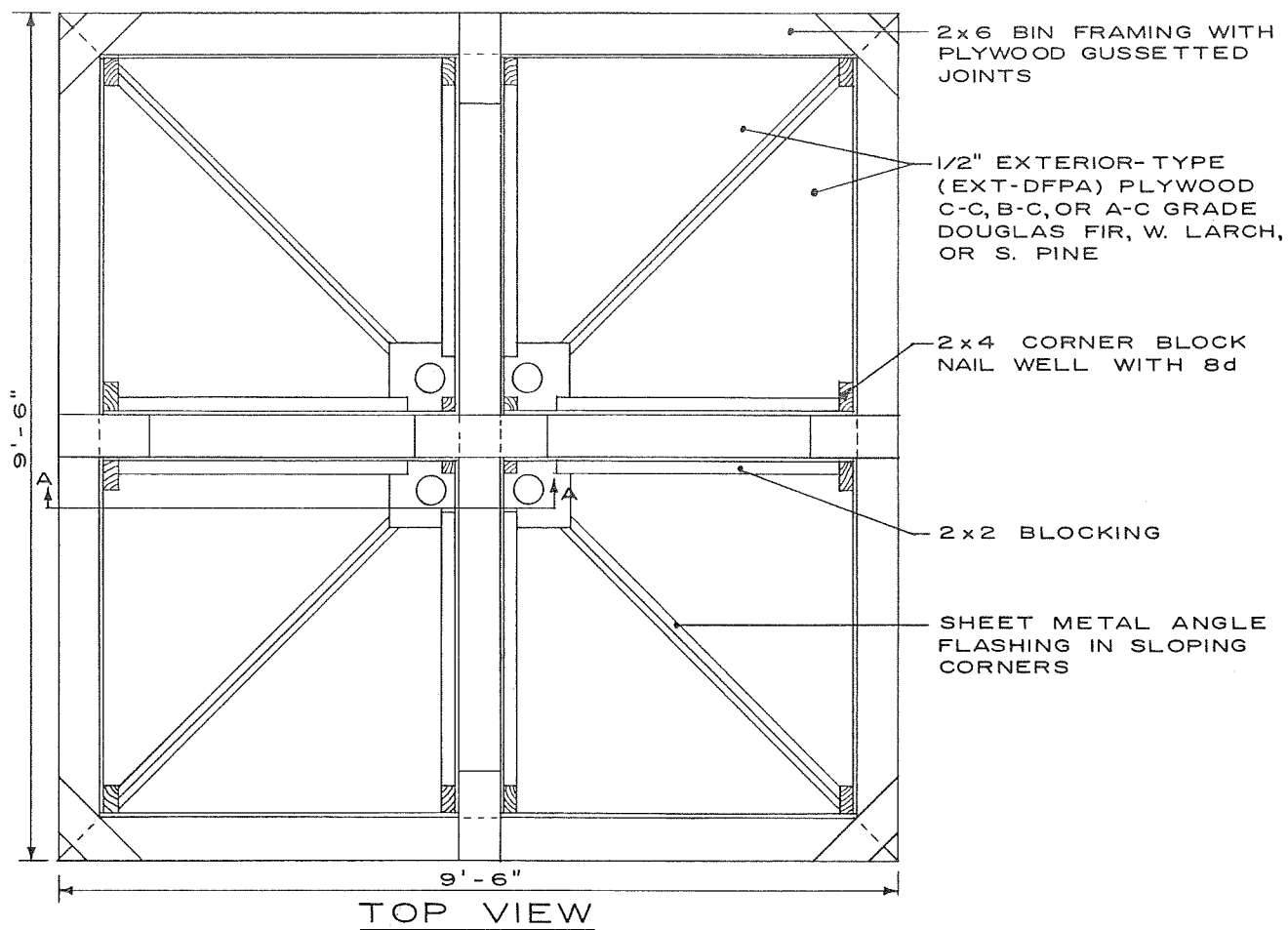


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SIDE VIEW

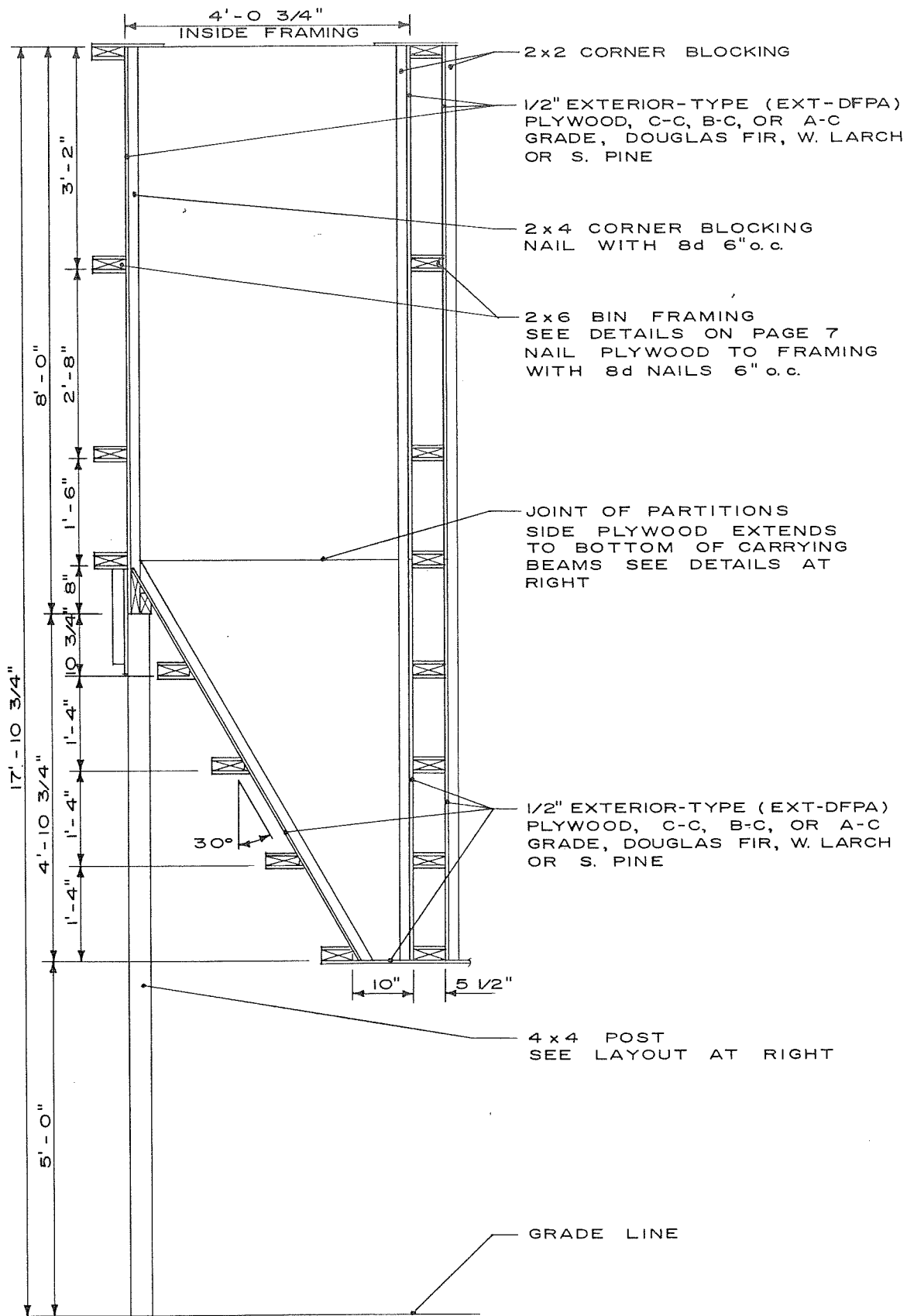


## NOTES

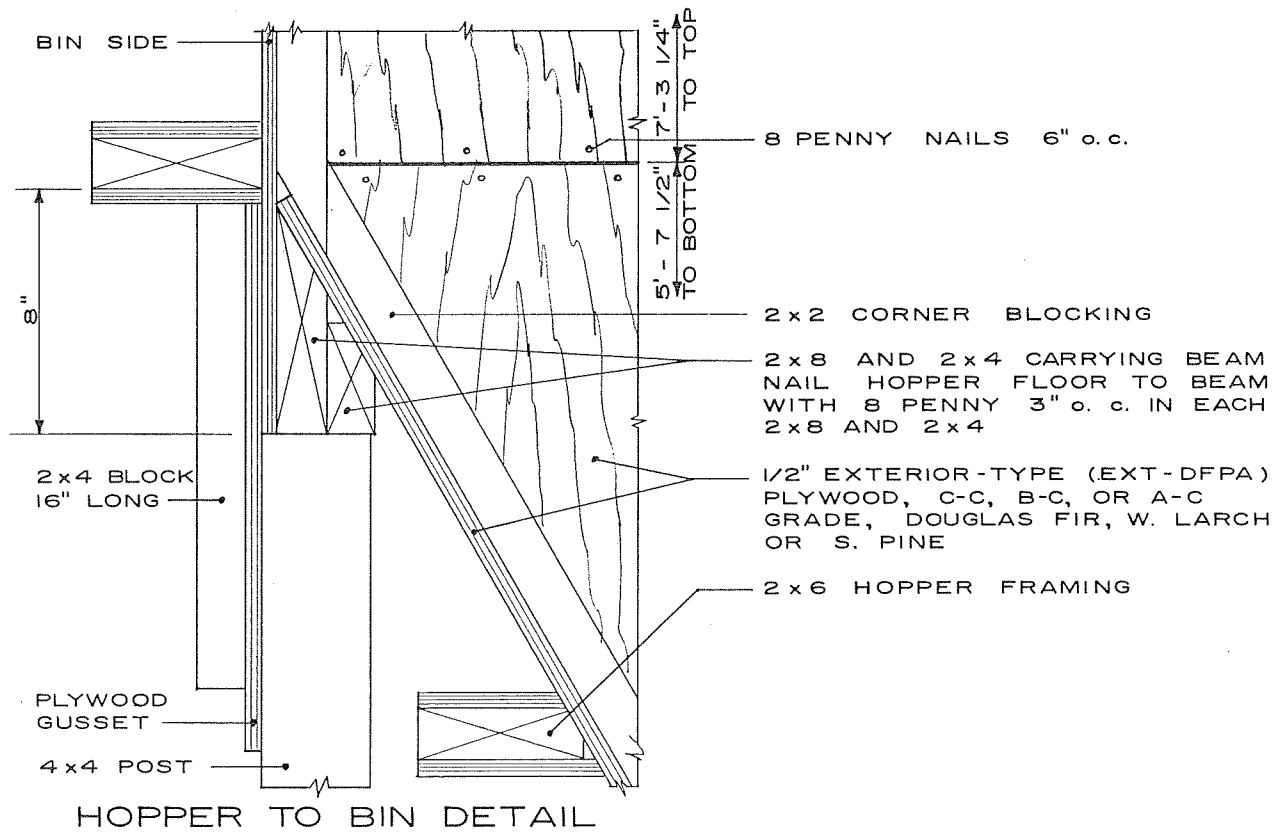
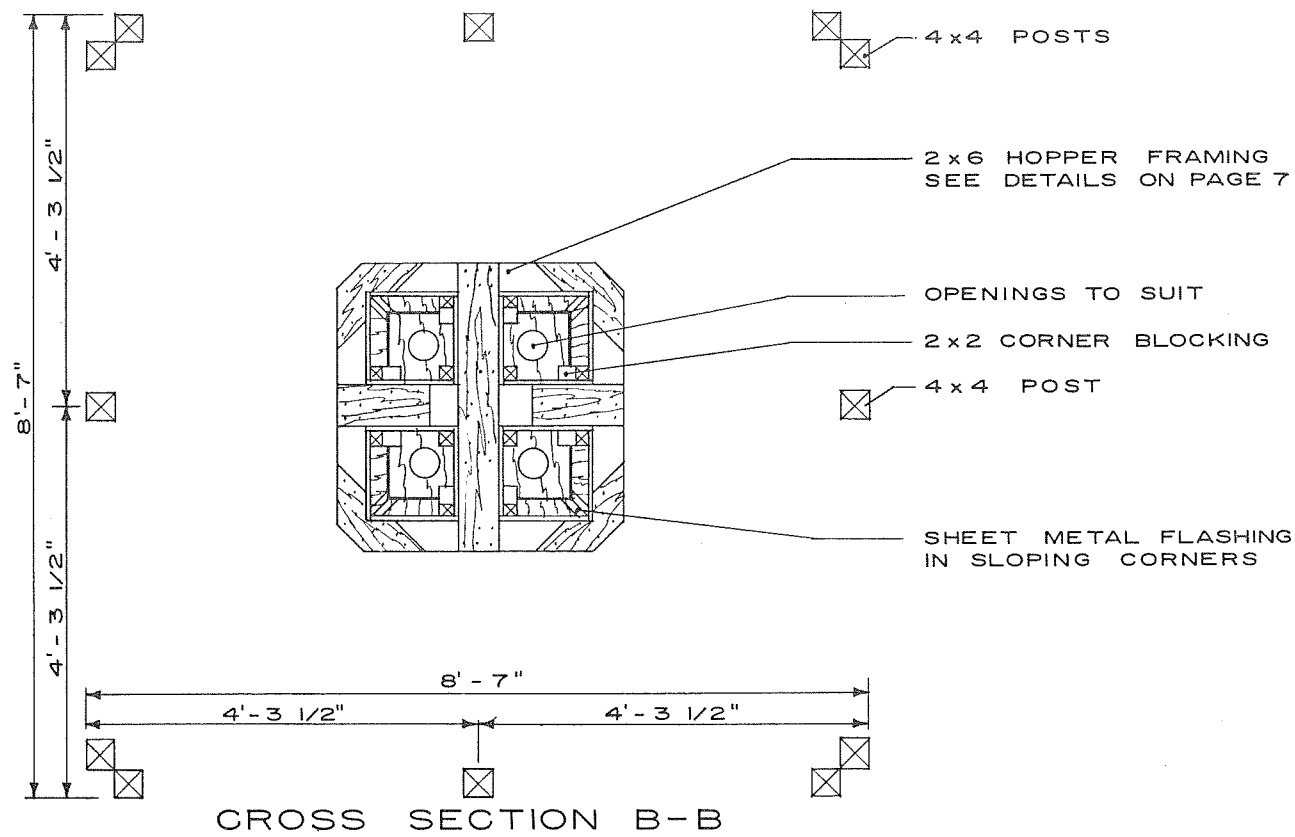
1. All plywood used is EXTERIOR-TYPE (EXT-DFPA) Douglas fir, W. larch or S. pine. Use A-C, B-C, or C-C grade. A-C grade preferred for sloping surfaces.
2. All lumber is construction grade Douglas fir or equivalent.
3. Leg members embedded in the ground are preservative treated with creosote or penta. Minimum retention 8 lb. per cu. ft.
4. Nailing is vital to the strength of the bin. Use the number and type of nails called for in the location shown.
5. This design is based on the use of American Plywood Association Grade-Trademarked plywood. Structural deficiencies may result with the substitution of materials. Because erection of the structure cannot be supervised, no liability can be assumed by the designer or the American Plywood Association.

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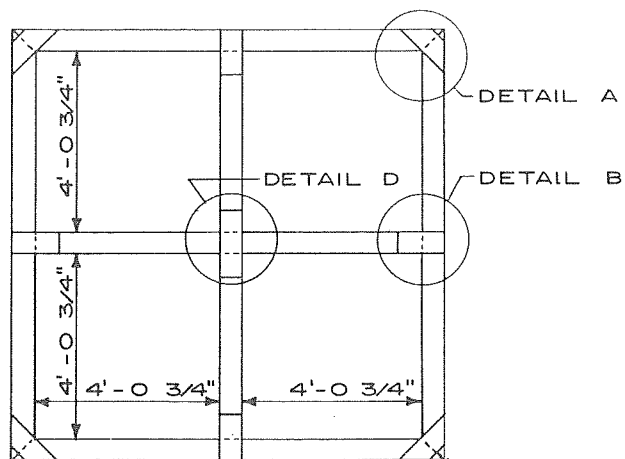


CROSS SECTION A-A

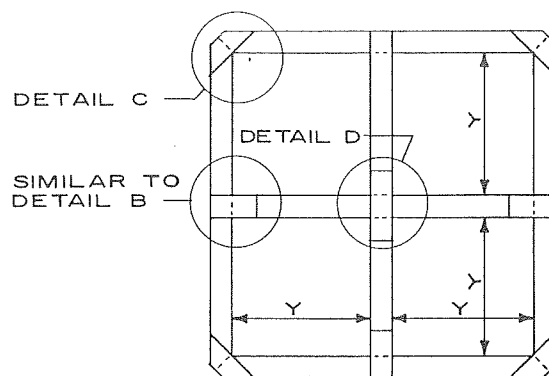


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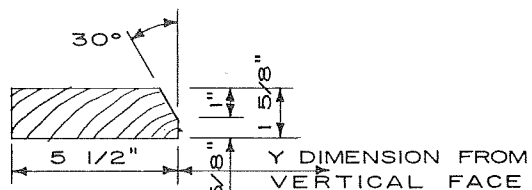


BIN FRAMES

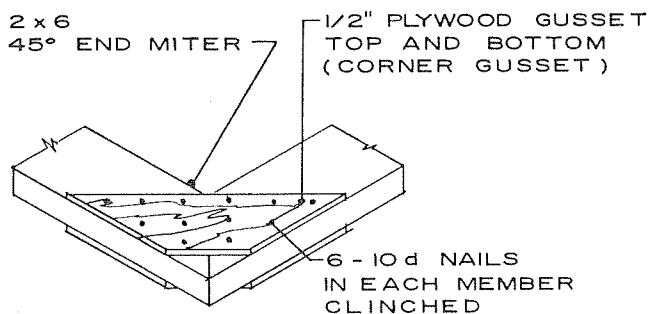


TOP HOPPER FRAME Y = 3'-1 3/4"  
 2nd HOPPER FRAME Y = 2'-4 1/2"  
 3rd HOPPER FRAME Y = 1'-7 1/4"  
 BOTTOM FRAME Y = 10"

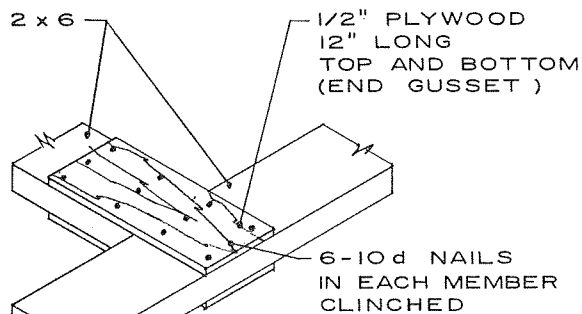
HOPPER FRAMES



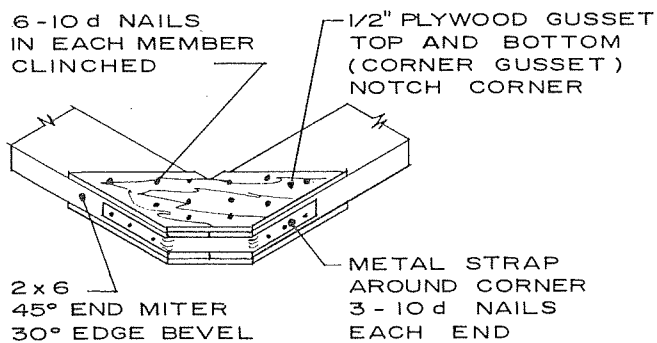
HOPPER FRAME BEVEL



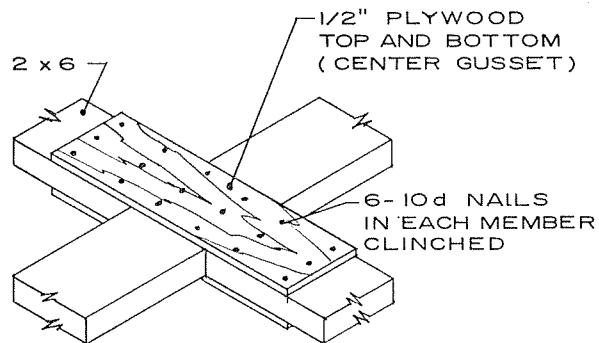
DETAIL A



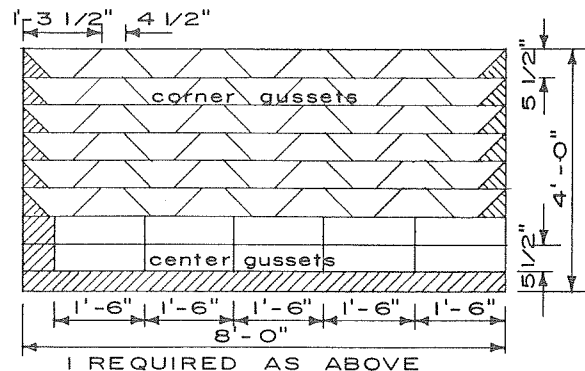
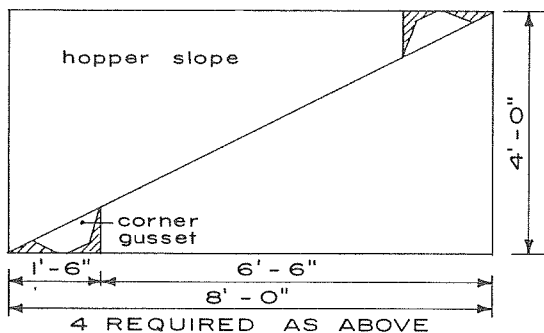
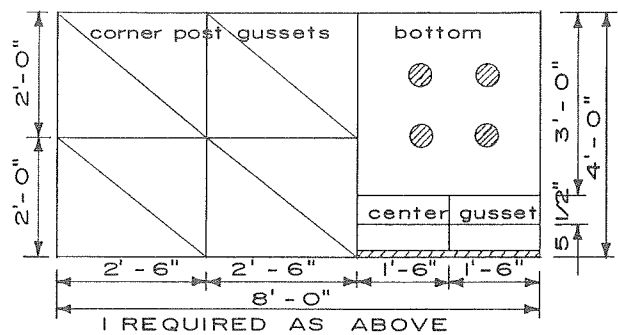
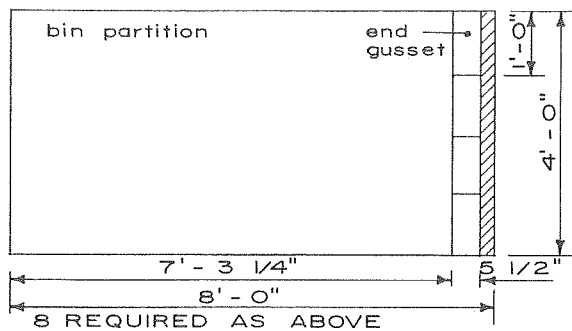
DETAIL B



DETAIL C

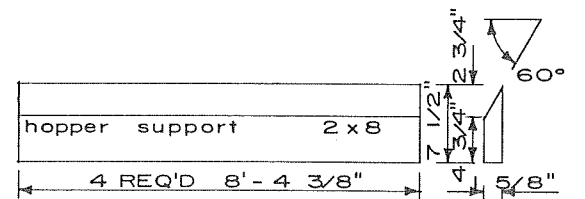
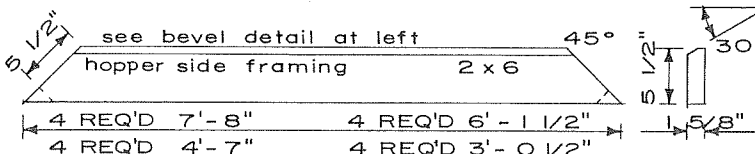
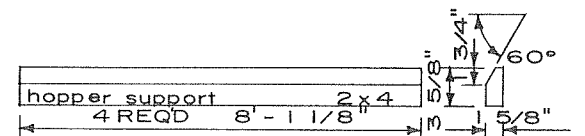
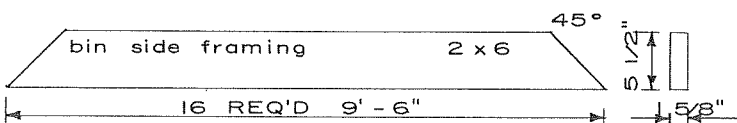
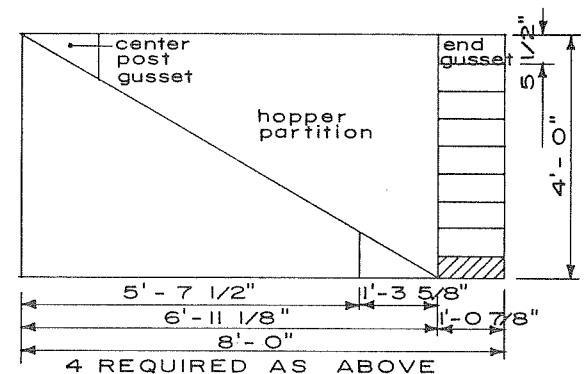
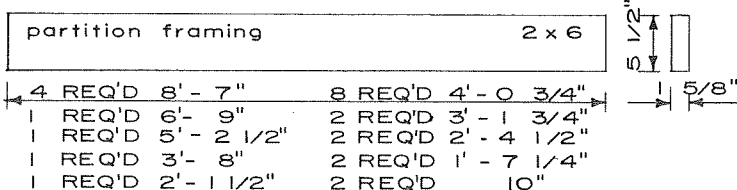


DETAIL D



1/2" EXTERIOR-TYPE (EXT-DFPA) PLYWOOD  
A-C, B-C, OR C-C GRADE DOUGLAS FIR,  
W. LARCH, OR S. PINE

## PLYWOOD CUTTING DIAGRAMS

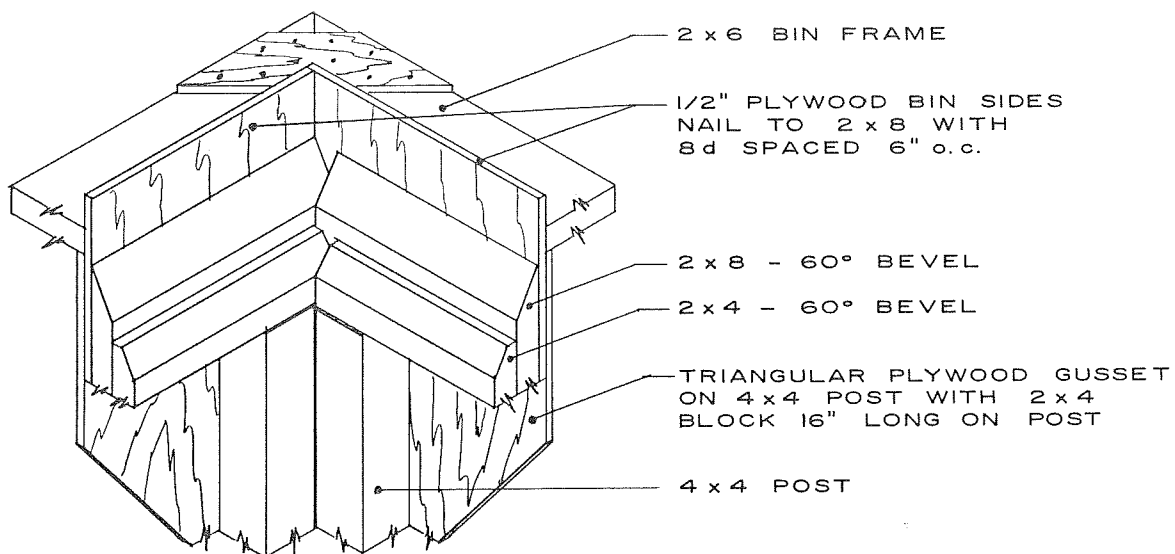


CONSTRUCTION GRADE DOUGLAS FIR

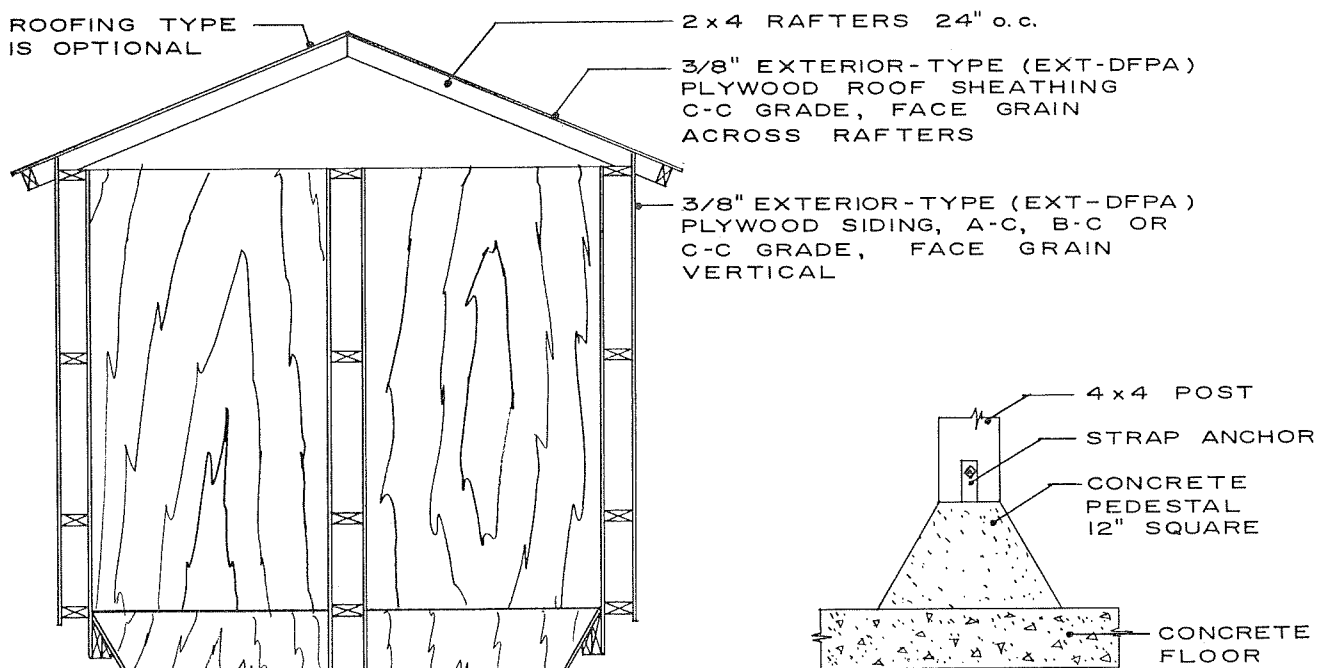
## CUTTING DIAGRAMS FOR FRAMING

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CORNER DETAIL



OPTIONAL  
ROOF AND SIDING

ALTERNATE  
LEG MOUNTING

MATERIAL LIST: FOUR COMPARTMENT BIN FOR FARM FEED MILL

Item and Use	Pieces	Size	Length	FBM
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PLYWOOD: EXTERIOR-TYPE (EXT-DFPA)

Bin Lining (A-C, B-C or C-C EXT-DFPA)	16	1/2"	4' x 8'	512
Hopper (A-C, B-C or C-C EXT-DFPA)	8	1/2"	4' x 8'	256
Gussets (A-C, B-C or C-C EXT-DFPA)	2	1/2"	4' x 8'	64

LUMBER: CONSTRUCTION GRADE DOUGLAS FIR

Bin and Hopper Framing	30	2 x 6	10'	300
	6	2 x 6	12'	72
Hopper Support Beams	4	2 x 8	10'	53
	4	2 x 4	10'	26
Corner Blocking	12	2 x 4	8'	64
	8	2 x 2	14'	38
Blocks	2	2 x 4	8'	11

POSTS: (PRESERVATIVE TREATED -- CREOSOTE OR PENTA  
8 PCF MINIMUM RETENTION)

Legs	12	4 x 4	14'	224
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HARDWARE:

Nails common	6 lb.	16d	
	20 lb.	10d	
	15 lb.	8d	
Sheet Metal Corners	4	1 1/2"	7'

SUGGESTED CONSTRUCTION SEQUENCE

1. Preassemble all framing. Inside measurements shown on page 7 should be used. Member length may vary slightly with actual width of 2 x 6 members. (5 1/2" width assumed.)
2. Set and tamp 4 x 4 posts, accurately spaced and plumbed as dimensioned. Trim tops of posts so all are level.
3. Nail plywood gussets and 2 x 4 blocks to outside of all posts. Blocks extend 7 1/2" above center posts and 8" above corner posts.
4. Preassemble bin framing. Place lowest frame on top of 2 x 4 blocks. Temporarily block and brace upper frames in place.
5. Install plywood on partition and sides of bin. Place hopper supports on top of posts and nail bin lining to the 2 x 8. Nail post gussets to hopper support beams.
6. Using temporary 1 x 4 hangers draw-nailed to bin partition, suspend hopper framing in proper location. Apply plywood to hopper partitions.
7. Fit plywood to sloping sides of hopper. Nail carefully to 2 x 8 and 2 x 4 support beam. Install hopper bottoms as required to fit feed mill.
8. Nail corner blocking and sheet metal flashing in corners. Check all nailing to assure adequate number and size as detailed.

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