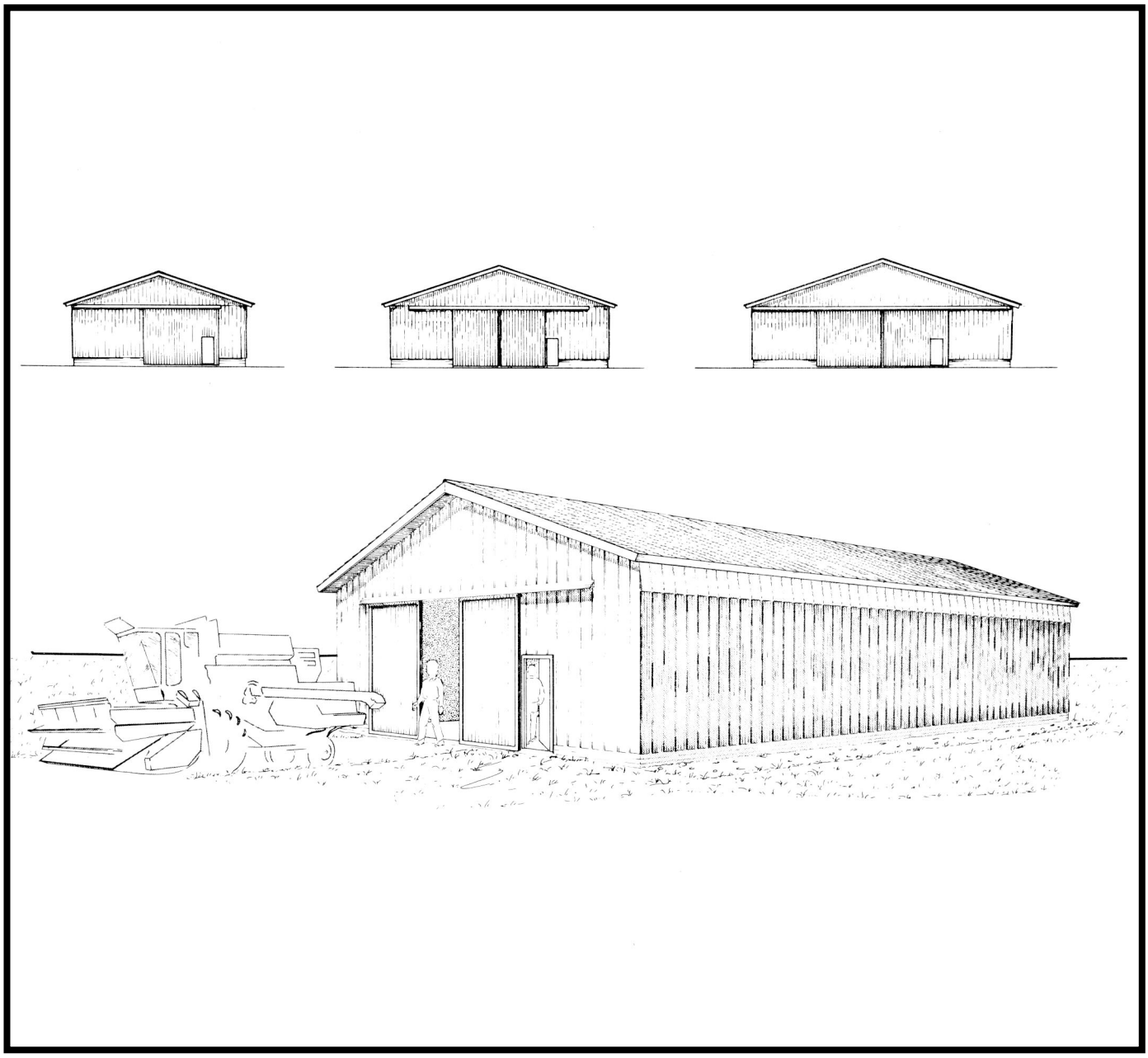
MACHINERY STORAGE – (END OPENING DOORS)
POLE FRAME



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MACHINERY STORAGE
(END OPENING DOORS)

CPS
PLAN 8311 REVISED 83:03

This plan gives construction details for a farm implement storage building 40, 50, or 60 ft wide. The roof is supported with clear-span nailed lumber trusses, making it convenient to arrange machines in storage. Prefabricated commercial wood trusses can be substituted for the site-built nailed trusses.

The plan shows an uninsulated storage area which can be built to any length in multiples of 8 ft. The clear height from floor to truss may be 14 or 16 ft, depending on your requirements. Check the height of your tallest machines, such as tractors and combines with weather-cabs.

MACHINERY STORAGE AREA A clear-span storage width of 40 ft or wider works best with access doors approximately centered in both end walls. The machines that are more difficult to move should be parked first along both walls, leaving an access passage through the center. If this center space is reserved for self-propelled machines such as trucks, tractors and combines, the passage area will not be wasted and it can be easily cleared for access to the other machines parked along the walls.

End doors are easier to frame than sidewall doors because the end roof truss can support the door track without the extra-heavy head beam required in load-bearing sidewalls. Side doors are therefore more expensive and are not recommended with the center passage arrangement. For those rare farmsteads where a side door is unavoidable, the plan includes details for a steel or nailed-plywood head beam for side doorways up to 16 ft wide. Use the steel beam if the side doorways must be almost full ceiling height.

End doorways 16, 20, or 28 ft wide are shown. Doorways over 16 ft wide should have two sliding doors, otherwise the doors become too massive to roll and stop easily by one man. Access man-doors may be framed into the wall beside the sliding door, or into the sliding door itself. With pole construction, it is probably easier to frame man-doors into a corner of the larger sliding door.

POLE FRAME CONSTRUCTION Wood poles, factory pressure-treated with CCA, make a strong and rapid construction system for machinery storage walls. This plan gives required sizes of rectangular poles for walls 14 and 16 ft in height. Round poles of equivalent cross section could be used, but most builders prefer to spend a little more for the rectangular-sawn poles, to save construction time.

This plan uses a truss roof frame with double trusses (site-nailed, or prefabricated). These are notched into the top of the wall poles, at 8 ft spacing. This eliminates the need for the heavy plate beam to support trusses arriving between poles, but it requires 2 x 4 in. roof purlins placed **on edge** to support the roofing. The plan gives details for doubling the purlins over each double truss where the purlin bending stresses are most severe. If you plan to add a ceiling to the underside of the trusses, it is probably better to space single trusses at 4 ft or less, and to add a plate beam in the sidewalls to support the intermediate trusses.

FLOATING FLOOR SLAB Frost may heave the soil under the floor of an unheated structure like this machinery storage. The concrete floor slab (if used), is isolated from the wall planking, so that floor heaving does not affect the wall and roof structure. It is important to leave a small space between the bottom of the treated wood splash planking and the soil beneath, to allow for frost heave. If a gravel floor is used instead of a floating floor slab, add a floating plank resting on edge between the poles, to keep out wind and drifting snow at the ground line.