

Cow Shed/Stall Construction for Good Cow Comfort

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- * Dairy cattle that are comfortable are healthier and produce more milk.
- * Cows must be able to rest in comfort (soft, dry, shaded), and rise and lie down easily.
- * Proper shed/stall construction allows good comfort and depends on the size of the cow.

Table #1 has guidelines for stall requirements for various sizes of cows and heifers. The total stall length includes 15 inches of space in front of a cow's stall that a cow can use to put her head when she lunges forward with her head in order to stand up. If this space is not available because of obstructions at that end of the shed, then the body resting length should be made 15 inches longer. Note that end boards at the end of a stall can be placed too low and therefore not allow a cow to fit her head into this lunging space. Table #1 has the proper height for these end boards for different size cows and heifers. Neck rail boards (on top of a cow's neck) can also get in the way of a cow standing up properly, or standing in the stall improperly (allowing manure to collect in the stall instead of the walkway).

Table #1: Required stall measurements for comfortable dairy cattle.

Weight (pounds)	Width (inches)	Body Resting Length (inches)	Total Stall Length (inches)	End Board Height (inches)	Neck Rail Height (inches)
400-600	32	60-70	75-85	32	30
600-800	39	70-80	85-95	32	35
800-1000	43	80-90	95-105	32	40
1000-1200	48	90-100	105-115	32	45
Stall in Figures 1-3	48 (120 cm)	84 (210 cm)		28 (70 cm)	38 (95 cm)

Adapted from Nigel Cook, U. of Wisconsin 2006

Figures 1 and 2 give dimensions for a cattle shed (Figure 3) for 3 mature cows and 2 heifers (there is a cubicle for lying down for each animal). The total length of the shed can be reduced by one or two cubicles if you have only 1 or 2 cows or only 1 heifer (or increased if you have more than 3 cows or 2 heifers)

Figure 1 shows the exact same size of stalls where the cows and heifers rest, for a mature cow of 1000-1200 pounds. A small cow will still be comfortable in a stall that is too large for her, but a large cow will not be comfortable in a stall that is too small for her. The heifer stalls are as large as the cow stalls to allow for dry cows to be housed with heifers or to allow the entire shed to be used for the milking herd as cow numbers increase. You could make the stalls for the heifers smaller according to the listed requirements in Table 1.

Figure 1: Top View of Cattle Shed

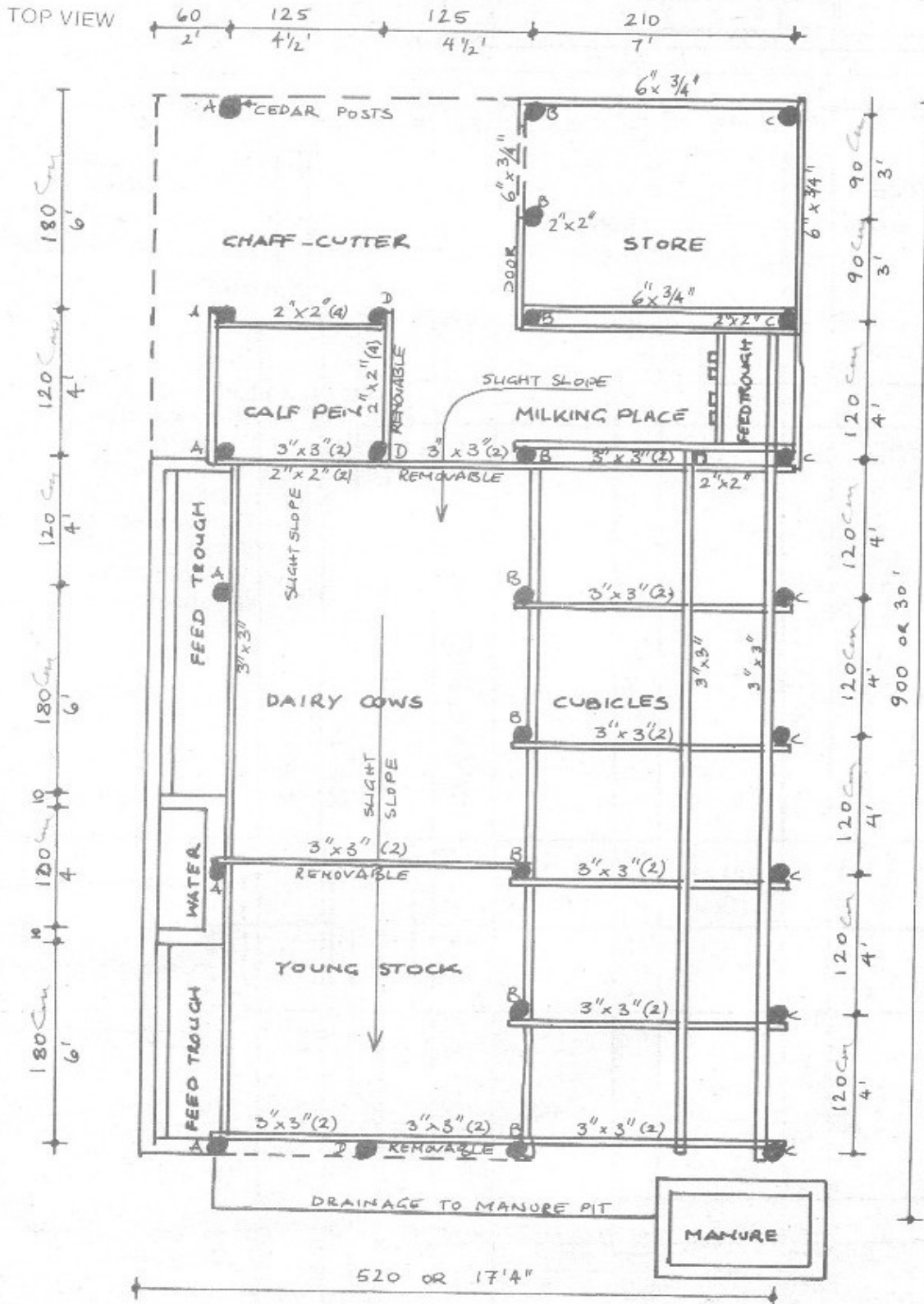


Figure 2: Side View of Cattle Shed

FRONT ELEVATION

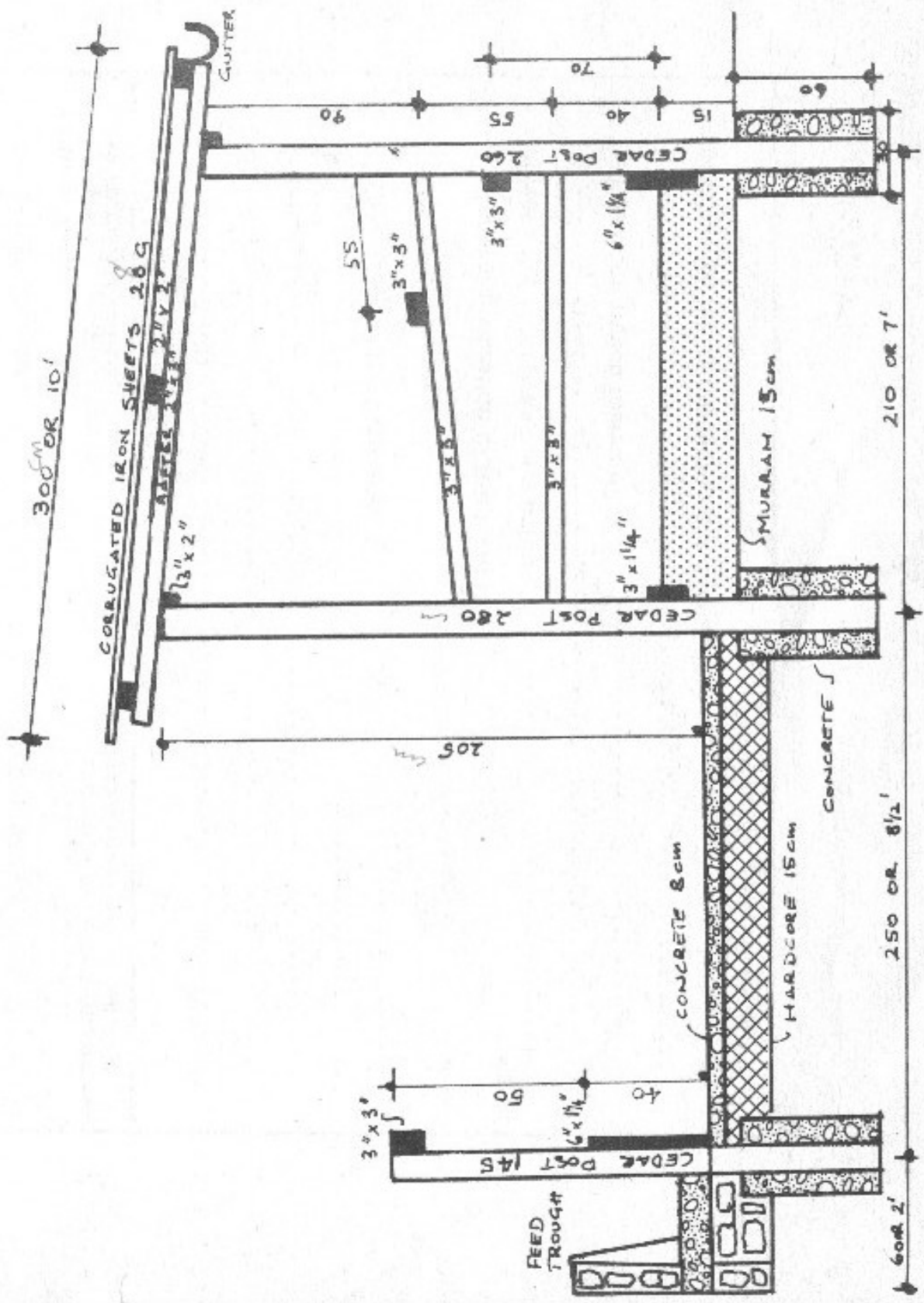
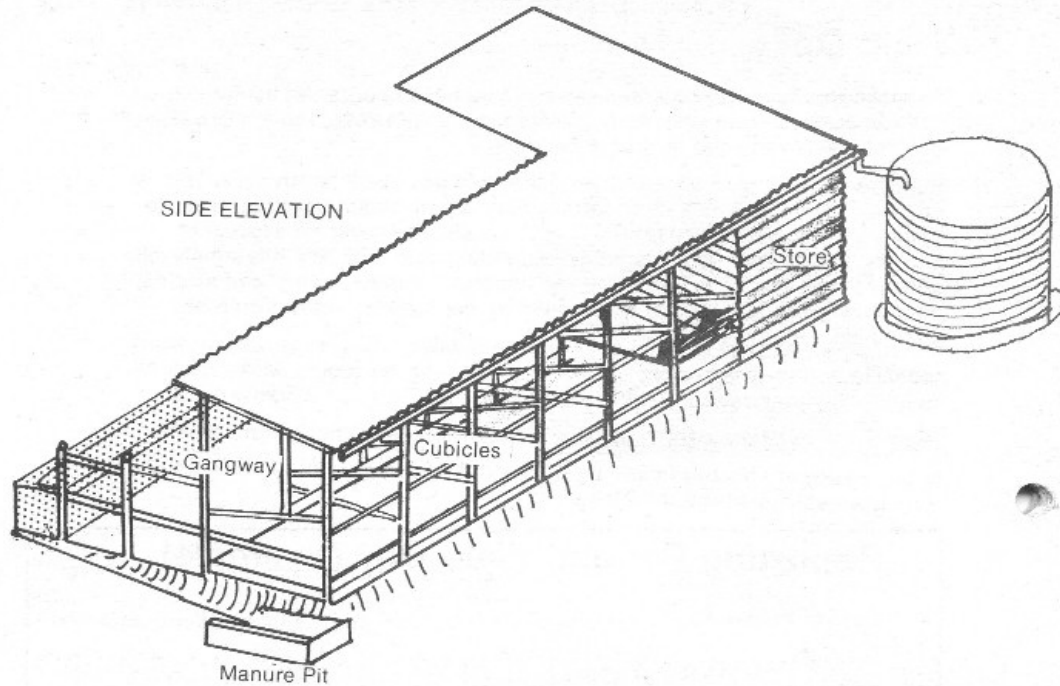


Figure 3: Overview of Cattle Shed

CONSTRUCTION PLAN ZERO GRAZING UNIT
(for 3 cows plus followers)

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SOURCE: KENYA MINISTRY OF LIVESTOCK DEVELOPMENT

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January 2008

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