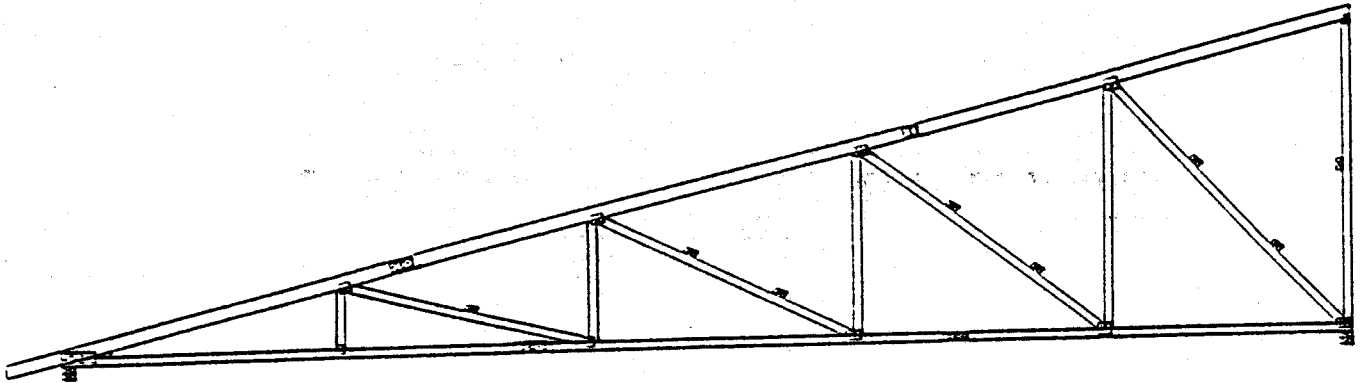
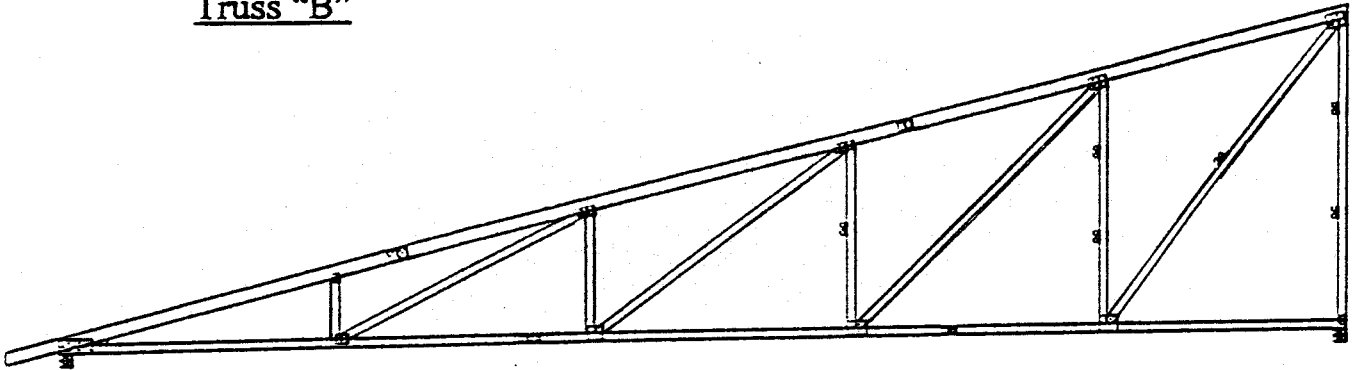


## EXAMPLE # 1

Truss "A"



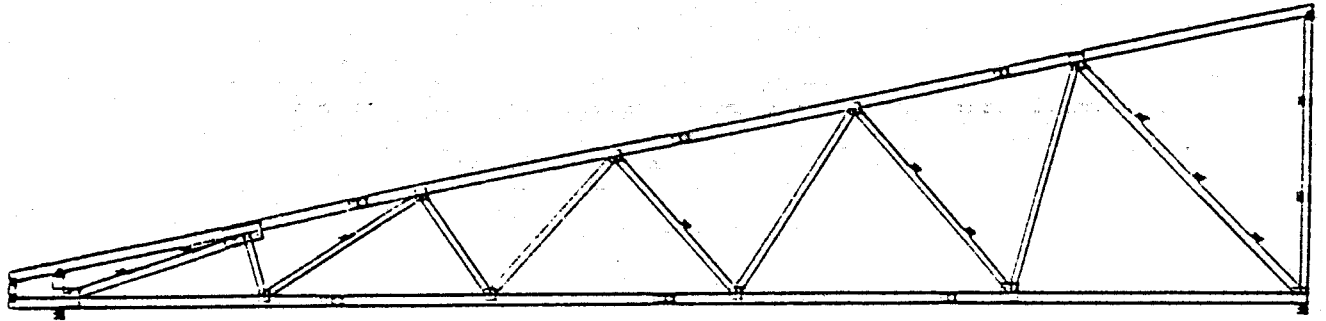
Truss "B"



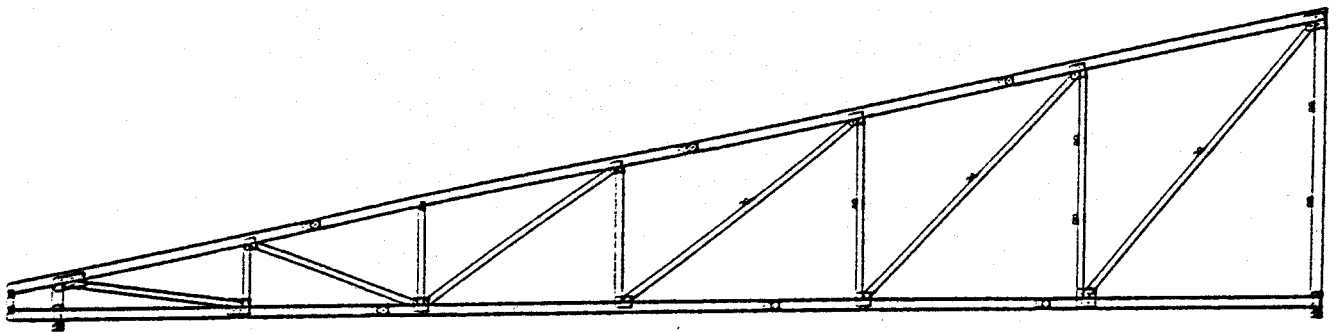
- Truss "B" requires the least amount of critical bracing.
- With bracing installed, the most heavily stressed web in truss "B" is only 58 % of the allowable compared to 98 % for truss "A" in spite of the necessity for the long diagonal web in truss "A" to be a higher grade than the other webs.
- Truss "B" costs only 3.4 % more than truss "A". This additional cost is offset by the cost of additional bracing and labor for installation.

## EXAMPLE # 2

Truss "A"



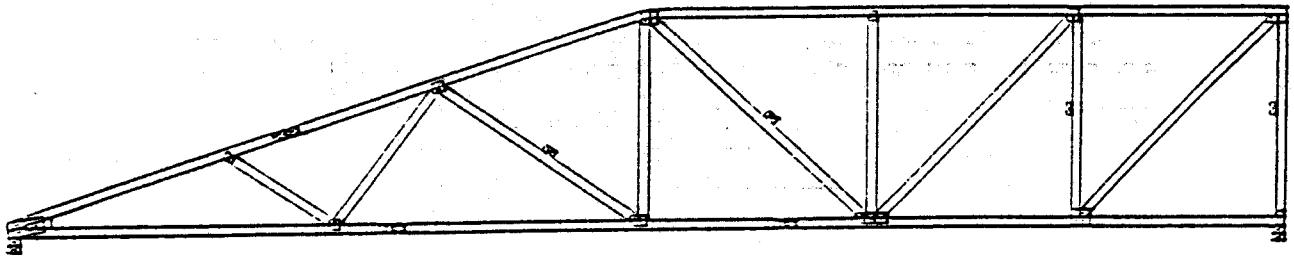
Truss "B"



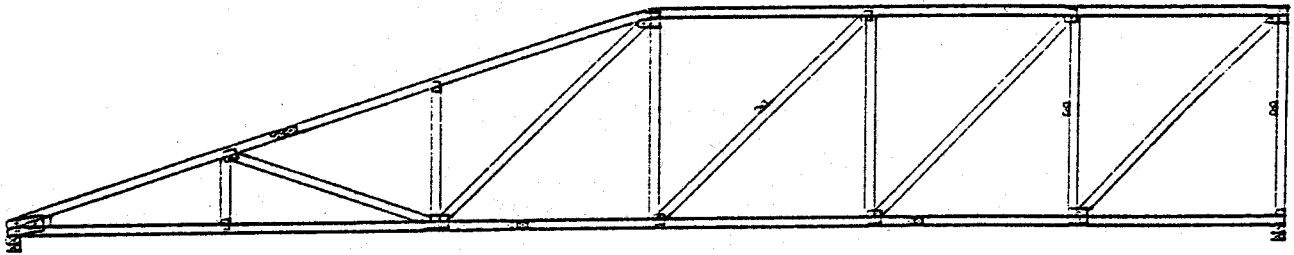
- Truss "B" requires the least amount of critical bracing.
- The diagonal web at the low end of truss "A" must resist a factored compressive force of 9824 lbs. at design load and would require a diagonal tie back brace for every two trusses using 3 1/2" common nails.
- The diagonal web at the upper end of truss "A" requires three lateral braces. Providing adequate restraint for three lateral braces may be possible but is not very practical.

### EXAMPLE # 3

Truss "A"



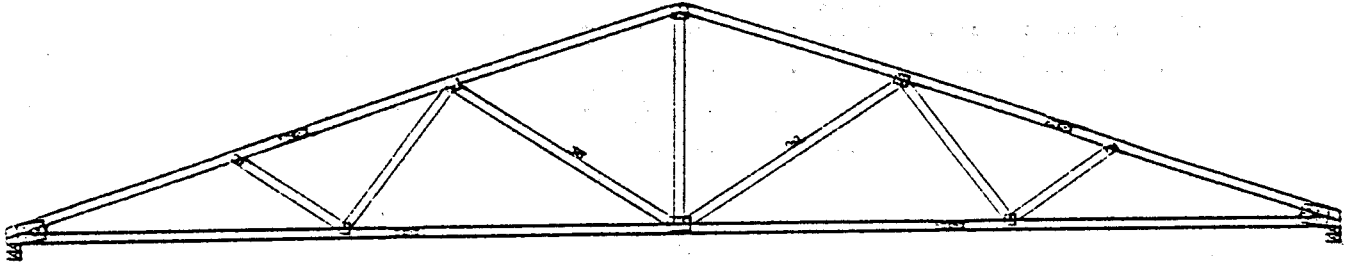
Truss "B"



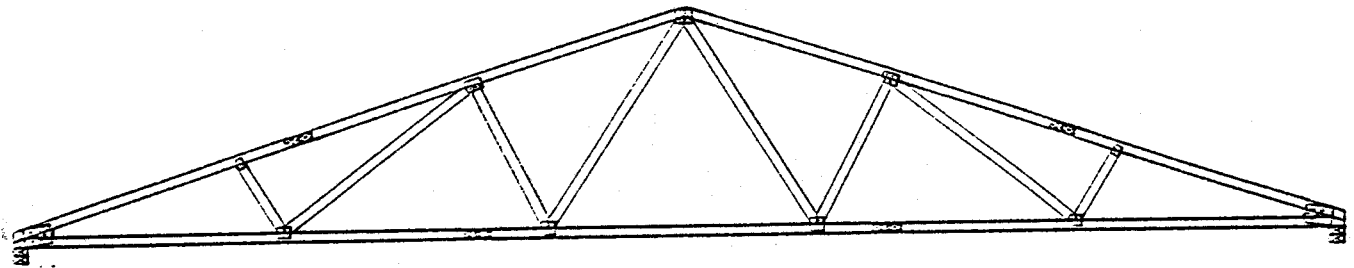
- Trusses of this shape are frequently used for cottage style roofs where the horizontal top chord recedes from one truss to the next. Installing and stabilizing lateral braces becomes difficult in this case because of the change in shape from truss to truss. Although truss "B" requires only one less lateral brace than truss "A" the change in web arrangement may be worthwhile to reduce the necessity for T-braces.

EXAMPLE #4

Truss "A"



Truss "B"



- Truss "A" requires two lines of lateral bracing and two 10 ft. long diagonal braces every 20 ft. Truss "B" can support full design load with no bracing.

Should building designers wish to minimize the amount of critical web bracing in the roof trusses for a project, they might consider adding a note to the structural drawings. Such a note could read as follows:

**“In preparation of truss designs, web orientations are to be employed that minimize the requirement for web bracing.”**