

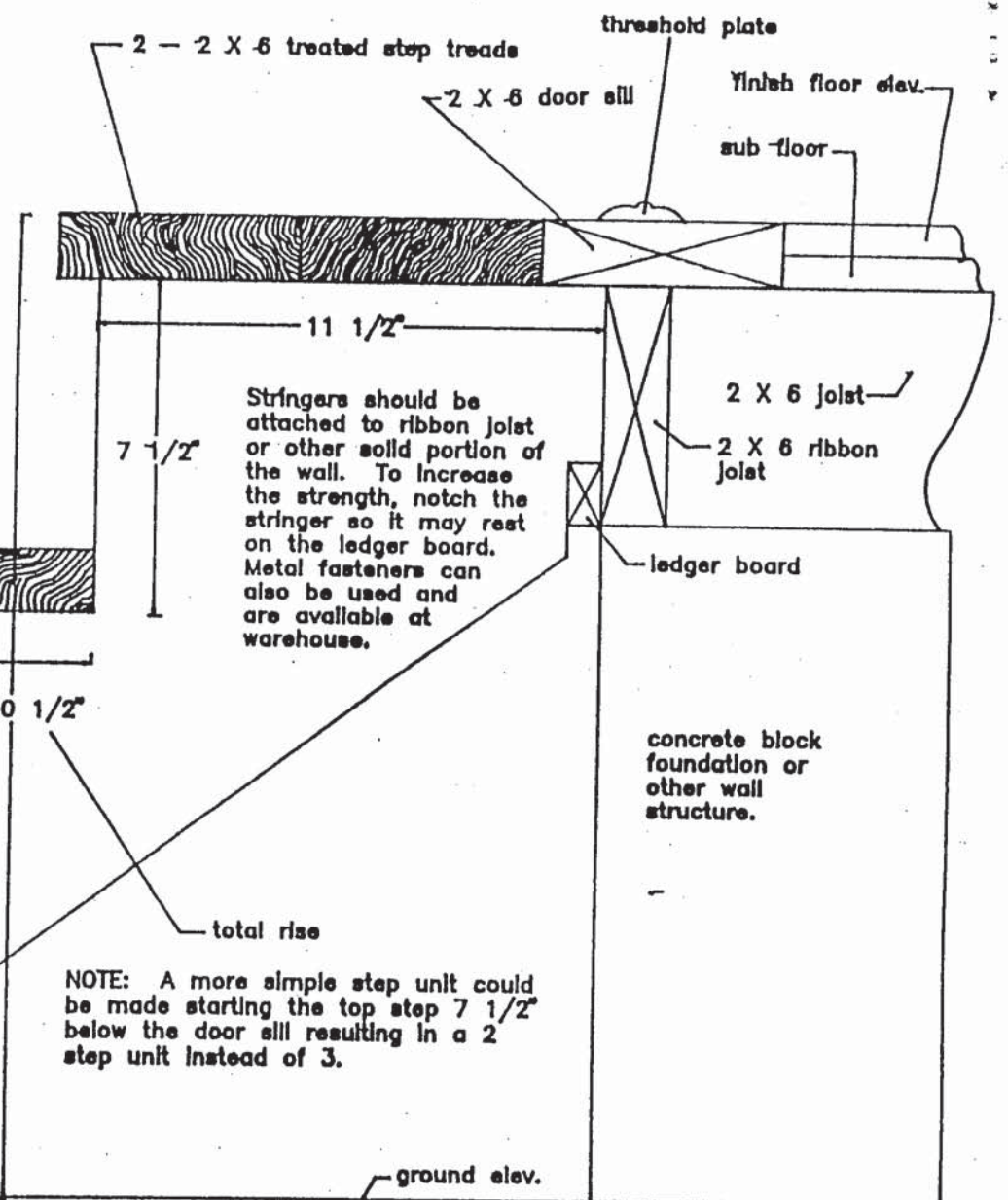
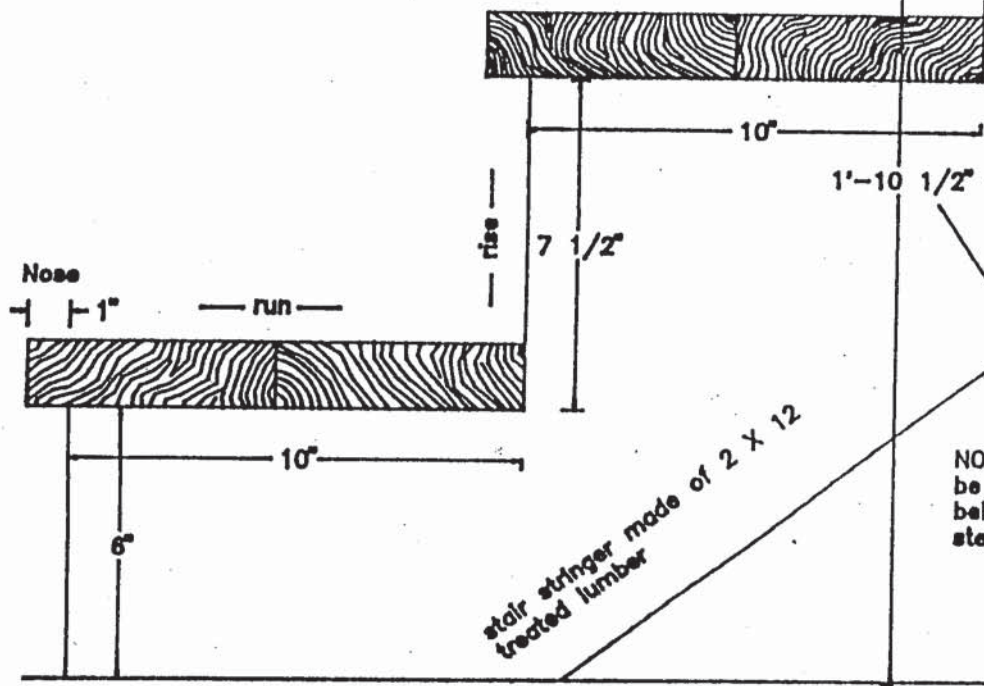


STAIRWAY LAYOUT

Determine total distance from ground elevation to upper floor level. This may be a door sill as shown in drawing or porch. There are rules. First one; unit rise (the vertical distance between steps) cannot exceed 8". Second one; one unit rise and one unit run should total between 17" and 18".

In this example, our total rise is 1'-10 1/2" or 22 1/2". Therefore, our rise should be 7 1/2" to get 3 equal rises. One more rule; the difference in rise cannot exceed 3/8" from the lowest to highest step. Using the second rule, we should use a run of 10".

Notice that the run doesn't include the nose of the step. We are using 2 X 6" for the step. Finish width is 5 1/2" so there will be a 1" nose on each step.



Stringers should be attached to ribbon jolist or other solid portion of the wall. To increase the strength, notch the stringer so it may rest on the ledger board. Metal fasteners can also be used and are available at warehouse.

NOTE: A more simple step unit could be made starting the top step 7 1/2" below the door sill resulting in a 2 step unit instead of 3.

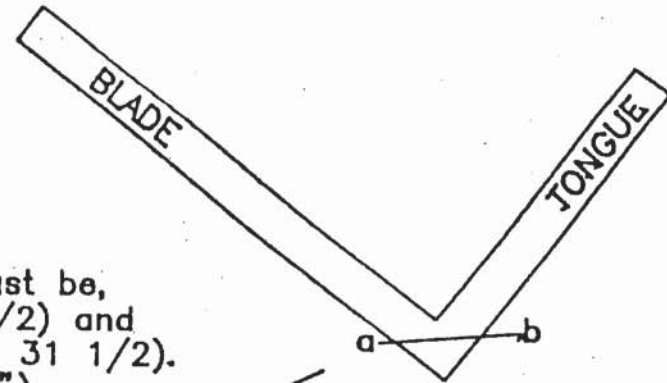
The procedure for laying out stringers follows on another drawing



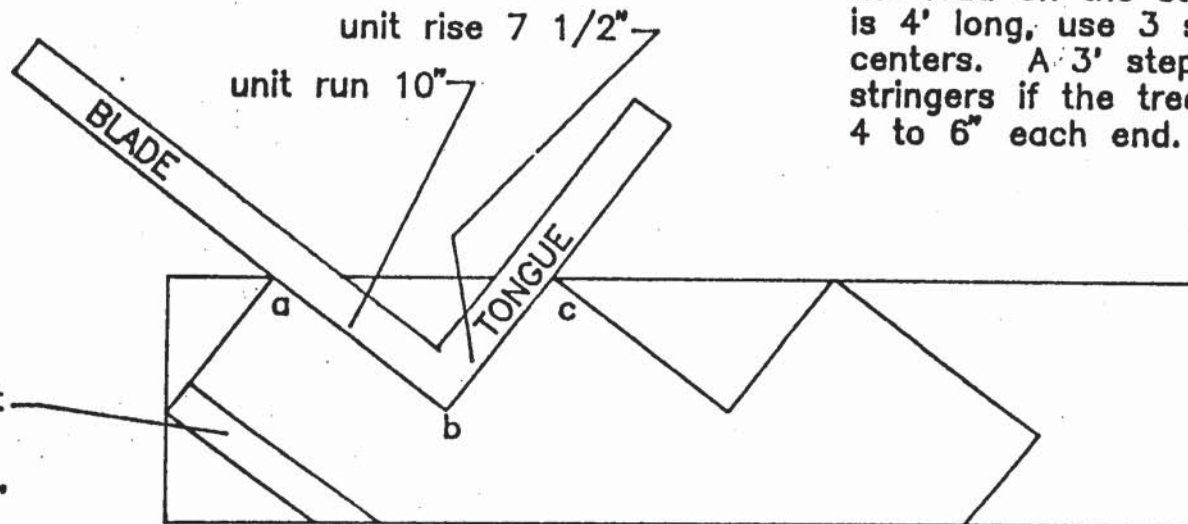
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STRINGER LAYOUT

To determine how long the 2 X 12 must be, add up all rises ($7 \frac{1}{2}'' \times 3 = 22 \frac{1}{2}''$) and add up all runs ($2 \times 10 + 11 \frac{1}{2} = 31 \frac{1}{2}''$). Measure from a ($2 \frac{1}{4}''$) to b ($3 \frac{1}{4}''$). Distance should be approximately $3 \frac{3}{4}'$. Converting inches to feet you need $3 \frac{3}{4}'$ length. Easily cut it from 4' length.



Stringers should be placed to carry the load on the steps. If the step is 4' long, use 3 stringers on 24" centers. A 3' step can use 2 stringers if the treads are over-hung 4 to 6" each end.



first rise is cut short by the thickness of the tread. In our example, it is $1 \frac{1}{2}''$ making this rise $6''$.

Place your framing square on the 2 X 12 as shown above. Read unit run on the blade ($10''$) and the unit rise on the tongue ($7 \frac{1}{2}''$). Simply repeat this procedure as you add steps. The top step can be measured by inverting the framing square and making the marks with the pencil. In this case adding the $1 \frac{1}{2}''$ to make up for the door sill overhang ($1 \frac{1}{2}''$).