ARC. 617Db
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ASSIGNMENT #7

The design content of this exercise is meant to deal with Structure and Materials as physical considerations in design. The graphic content will introduce Model Making.

The task here is to understand how the forces of gravity and wind affect a structure and how the properties of various materials act to withstand those forces. We will be working with ground form, linear elements, and planes to carry forces of tension and compression (all of these terms to be explained in class). We will be building a structure which should express the nature of forces and characteristics of the materials as well as being efficient and economical in its consumption of materials.

1. Read:

   Wilson, Forrest, Structure: The Essence of Architecture--whole book (required text).

2. With the expertise gained from this reading and with the benefit of information gleaned from class discussions you are to design a small tower. The primary design and presentation media should be a model at a scale of 1 1/2"= 1'-0". The tower should reach to a height of 25 feet and should be able to be climbed by a healthy, athletic person. Construction is limited to the following materials:

   1. concrete blocks 8"x8"x16"
   2. rough-sawn cedar 2x4's in lengths from 2' to 20' @ 2' intervals.
   3. 1" plywood in sheets 4'x8' to be used with minimum waste.
   4. connectors--nails, mortar, nuts, bolts, screws, etc.

   In making the model you should use:

   1. wooden blocks 1"x1"x2" for concrete blocks
   2. balsa wood with 1/4"x1/2" section for 2x4's
   3. illustration board 1/16" thick for plywood
   4. glue for connectors