

48215_Materials&Assembly

Wood Framing Homework (25 pts)

Assigned Date: Due Date: 2007.02.08

Assignment

Each of you has obtained 18 sheets of APA rated floor sheathing and as much APA rated roof sheathing as you need. Design a rectangular wood framed structure with a floor supported on an 8" cmu foundation and a sloping roof that utilizes all of the sheathing with no waste. The structure must have at least one open and one closed side. Use the framing system of your choice - sawn lumber or engineered wood - striving to use the components at their optimum span capability.

Using the drawing conventions introduced in class, compose a single ANSI "D" (22" x 34") sheet based containing the following drawings with references:

1. A supported floor framing plan and a roof plan at 1/4"=1'-0" include all framing members, room labels, section marks, notes, dimensions and grid lines.
2. Building section at 1/4"=1'-0" cut through the secondary structure illustrating the framing around a door.
3. Corner details - plan and 2 sections at 1 1/2"=1'-0".

Please submit your drawings to the designated flat file in the entrance of the Robert L. Preger Intelligent Workplace™.

DO NOT, I repeat, **DO NOT** roll the drawings. They must be submitted absolutely flat.

Span Table

Joists (min width 1 1/2") Depth to Span Ratio

Sawn Lumber	1:16
Engineered Wood	1:24

Beams/ Headers (min width 3 1/2")

Sawn Lumber	1:12
Engineered Wood	1:16

Girders (min width 5 1/2")

Sawn Lumber	1:12
Engineered Wood	1:16

Configuration Table

<i>Last Digit SS #</i>	<i>Aspect Ratio</i>
0,1	1:1

2,3	5:7 (16 sf waste)
4,5	4:9
6,7	1:4
8,9	1:9

Grading Criteria:

Grids/ Dimensions/ Notes	5 pts
Primary/ Secondary Span	5 pts
Configuration	10 pts
Details	5 pts