The Dirty Monkey Structure

(Or, “How to build an experimental structure on a shoestring budget”
We have to do what?!

- Design a human scale physical model capable of demonstrating stabilizing systems
- Demonstrate 3-dimensional interplay of structural elements
- Support two team members
- The structure must contain three types of stabilizing systems
- CAN'T SPEND MORE THAN $50!!
The design-build process – A&M style

- Unique form for a unique group

Drill holes and just have bolts for easy removal

4' 4"

42 degree angle

Pallatte pieces 3"x1"x40"

2' 11"

48 degree angle

24" x 35" OSB

65 degree angle

24" x 40" (half the pallate)

Pust some OSB on top of the pallate
Shopping in strange places

- Hey, are you going to use that pallet??
- It counts as garbage if it is behind the store by the dumpster, right??
Working on a budget

- With a little duct tape, some wire, and a hammer, I can build anything!
Material acquisition

- Once we finished breaking down our supply materials, we started putting together the structure
- (Please ignore the large hammer)
Construction
More construction
It’s starting to take shape
Hmm, we appear to have made it too strong…

- Our original design proved to be too stable
- The reconfigured design better demonstrates stabilizing features

Stabilizing plate

Stabilizing bar

Shear panel

Load transmitting floor
Bad things happen when you take out stabilizers
Waiter, can we get the check?

- Wood - zero dollars
- Paint - zero dollars
- Labor - zero dollars
- Use of the wood shop - zero dollars
- Building one awesome structure - priceless!