Tarek Idea (tja5190)

After considering the assignment guidelines (mainly the most inexpensive and easiest solution to design a Gutter system), this is what I suggest:

First proposal, since the roof is made of tin and since there is extra tin on the sides of the roof (according to Dr. Mehta, the length of the extra tin between the wall to the end of the roof ranges between few inches to few feet), we can bend the extra tin to form a “V” shape. The picture on the right demonstrates the idea of the concept.

The advantages of this design are:

• It doesn’t need any extra material; it just uses the extra-unused roof extension to shape the Gutter.

• No need use any attaching methods (like hooks)

• The longevity of the gutter and the roof would be alike since they are from the same tin piece of tin.

• It could be preform using simple, basic tools.

• The house owner could do it by himself.

• The cost is minimized using this proposal.

Second proposal, in case the house doesn’t have the extra tin on the side (or for any other reason), we can shape a tin sheet into a “V” shape structure (see the picture on the right) then we could nail the gutter into the roof. Because we nailed the gutter onto the roof, the shape of the gutter would look like the picture of the first proposal (see the above house picture).
Crystal Idea (zqy5058)

Ideal: rainwater should be collected from the rooftop because it can collect cleaner water than that on the round, channels should attach the buildings using tin sheets, channels should have around 8 inches for size. It is easy to launch them because the shape of roof is a V shape so the channels should put onto the each edge of the roof using circular stripe to the roofs and be vertical to the ground. During the process, we need a channel to filter the water at the beginning, then we need another channel to discharge the useless water. After collecting clean water in the tank, water will go through everywhere in the building by the pressure control pump.
Jay Idea (jxj5152)

- Circular shaped gutters
- 4 sections of pipe that end up flowing into the same tank
- Can be attached to the roofs by hooks holding it, like some metal strap attached to the bottom of the gutter
- Can have the pipe going down the size the building attached by metal rectangular metal strap
- Metal has to be very thin and downward slope in middle
• It also can be attached under the structure of the roof and using nails to hammer it down to stay attached to the roof
• Has circular shape pipe coming back into the house
• Solar power pumped to pump the water back into the house
• Can have a little metal covering (fencing) on top of the gutter to prevent things from getting into the gutter system
• Size should be about 6 inches from end to end