On Tuesday the 17th I received a quote for the cost of the crane foundation from Randy at L&M concrete. He gave me a project total of $1000, this includes the all the reinforcing rods, anchoring J-bolts, forming, and pouring of the foundation. Not included is cost for excavation, which we are planning to do ourselves. I told him I would get back to him and had to see other quotes for the project until I could make a final decision. I told him that our budget was tight and he responded by saying we can work with you on the price if need be. I am leaning towards this company at this point as I have only found two companies, which will do the job, since I was directed to this company by another company who held them in high regard. They said that they are reliable and do excellent work.

On Tuesday I also discussed with Caitlin the mounting bracket for the vertical rail. We had initially thought of using the trolley’s hanger that we have to use as a base for the bracket, which we would weld some metal plates to which would attach to the vertical rail. However, on Wednesday Caitlin found a scrap piece of metal which closely resembled the hanger, which had a hole of the diameter of the trolley bolt. This piece was a thick piece of steel so it will definitely have the structural stability necessary for the application. This led us to use this piece for the mounting bracket for the vertical rail. Caitlin milled grooves into this stock so that the rail would have a good fit with the bracket. On a side note I am still awaiting a revised quote from the crane company which I have contacted and requested the revised quote from.
Figure 1. Piece found for mounting bracket with milled grooves

On Friday the 20th Caitlin and I worked on finishing the bracket and assembling it. We first drilled 5/16th inch holes on the vertical rail and the mounting bracket which aligned properly. We used the drill press in the senior design lab to do this. It was challenging to drill the holes in the vertical rail since it is so long so we supported one end of the rail using wood ensuring that it was level while drilling the holes. We got the holes drilled out and then tried to find nuts and bolts in the lab that would work for the bracket. We were unsuccessful in our attempts so we went to the hardware store and purchased 5/16th inch by 2 inch hex head bolts with locking nuts and washers. We brought the hardware back to the lab and assembled the bracket. We decided that we needed a sort of padding in between the rail and the bracket so a strip of
neoprene rubber was cut to fit in between them with holes for the bolts. Once this was assembled we put the bracket onto the trolley bolt to do a crude test fitting. We realized that about 1 inch needed to be taken off of the top of the rail to allow the trolleys' washers to fit flush in the assembly, so I went to the machine shop and cut off the excess from the vertical rail. While there I also trimmed the L-bars of the computer mount upon our client's request, so this project is done completely. I then returned to the lab with the trimmed vertical rail and reassembled the mounting bracket. This time the washers on the trolley bolt fit in. The bracket is ready for testing.

Figure 2. Completed bracket assembled onto trolley bolt
On Monday the 23rd I met with Carl from AYN contractors about the foundation for the project in the afternoon. I gave him the specs for the foundation and discussed the project and our situation. He will be mailing a quote for the project to me on Tuesday the 24th which will have cost for the foundation as well as excavation (if we want it done). He said their slow so the work can definitely be done when we need it. Once I receive this quote I can decide on a contractor for the foundation.
In the coming week I will try to order the jib crane, figure out supporting the rigging (springs, bungees, climbing rope), and decide on a concrete company and figure out dates for work with them and the client.