Senior Design I

Spring 2011

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Group Summary

Group B

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Reviewed by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Dr. John Walton (Mentor)

 During the course of this year our group (Group B) will be working on the Aspendale Mountain Retreat Center in Cloudcroft, New Mexico. This project entails designing six new eco-friendly cabins.

On our first visit to the camp we met up with Mr. J.E. Hammond the Camp Administrator and learned that the camp currently does have electricity as well as a water supply. Furthermore we learned that a big concern is the harsh winters, sub-freezing weather and the amount of snowfall they produce. This amount of snowfall has created a problem in the past. Their dining facility collapsed under the weight of the snow that gathered on the roof. We will be taking this into consideration during the design process. Mr. Hammond informed us that the organization that owns this camp is trying to make the camp open to families and small groups. They currently have a number of ample larger cabins that are suitable for various sized groups. His vision is to create six new cabins to be able to diversify his audience from large groups and include single families as well. Lily proposed that we design one of those cabins to be handicap accessible. This would include all the accommodations including counter level height and doorway widths. Mr. Hammonds requested that along with convenient parking we take into consideration proposed locations for handicap ramps for future special needs patrons.

Our group is looking into the available water supply as well as what resources we can tap into. As mentioned before, we know that they have stored potable water available. The septic system takes care of the sewage disposal. We are looking into harvesting rainwater for any non- potable uses. Another idea that our group had was to consolidate all the snow collected from clearing the roads into a particular area so that when the snow begins to melt it was melt a slower rate and can possible be harvested as ground water. The cabins will have to be very well insulated to keep heating and cooling costs down. Heating the cabins currently comes from propane. For the new cabins we plan to design them to use less propane. Additionally, we are looking into implementing a passive solar design and a wood burning stove or fireplace. Lastly, we are looking at the use ceiling fans and exhaust fans in the ceiling for the summer to minimize or reduce the need for air conditioners. This will be dependent on the final design selected. Orientation of the cabins is something else we are considering. We are looking at building them oriented to the south and making longer than they are wide.

The design that Mr. Hammond has in mind is a cabin with two bedrooms and possibly a loft area for the kids to sleep. He provided us a magazine with the floor plans he had been looking at called *The Grant*. He is very much set on maintaining the appearance and feel of a traditional log cabin. As it stands right now, there are no monies available for this project. Part of the purpose of designing this set of cabins is to create a scaled down physical model to assist Mr. Hammond in presenting his idea. We did learn that many of the current lodgers are willing to donate materials, time as well as their skills to construct the cabins. There are several large cut trees that can be cut into wood for the structure if the need arises. The budget to build the actual cabins will come primarily from donations.

This first visit was primarily to meet with the client and get a better perspective of what the client is looking at and what the goals are. On our next visit we will be taking precise measurements of the area but are presently using Google Earth. We estimated the area to be approximately 1 acre. During this week we will be dividing the tasks, researching the various designs, styles and floor plans currently available and coordinating with Mr. Ebby to set a time for a detailed survey of the proposed area.

We have slightly modified our milestones and included a little more detail. Our current milestones are as follows:

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| February | 18 -19 Initial visit to site met with Mr. Hammond had questions answered, web page running | June | Make Revisions |
| Beginning March | Task Divisions and edit of web page keeping up with project | End of June Beginning of July | Continue adding to web page while fixing revisions |
| March | Initial Project Plan before Spring Break | July | Decide on final design & edit web page |
| End of March | Another trip to site before April | August | Auto Cad and Model |
| April | 3 options with cost & will be posted on web page | September | Prepare for presentation |
| End of April Beginning of May | Get presentation together for Client | October | Dry Runs with final edits & to web page |
| May | Clean up and edit Presentation | November | Dry Run |
| End of May Beginning of June | Present to Client | December | Final Presentation |