

## **Report for 2005 on Babula Children's Garden**

### **Construction Projects in general**

In January 2005, we approached the University of Alaska Fairbanks Engineering Program and asked if their students would design more projects as part of their senior design program. They accepted our ideas for the grotto and trails construction. Grant Matheke and Jan Hanscom met with the students during the semester to refine the conceptual plans. The grotto project requires approval from UAF Facilities Services Design and Construction (D&C) to ensure they meet campus construction standards, and plans must be sealed to ensure they meet State of Alaska construction standards. The grotto is not in our work plan for several years. The trails project will be useful because they researched surfaces for us and came up with a chemical we can add to existing trails that will make them hard and more handicap accessible.

After several meetings with the University and engineers, we were approved to offer a garden construction class. Grant Matheke is the instructor of record. Students who work for us in the summer sign up for independent credit and complete the class. As a result we hired two summer employees just to do construction.

Dr. Hulsey arranged for a student engineer (Curtis Nordin) to formalize the plans for the treehouse. He worked on them all spring semester, some over the summer, and finally has given his work to Dr. Hulsey. The plans are 90% complete as of Nov. 1. Dr. Hulsey plans to send them to Jenny Campbell at D&C in December for approval. That means we could do construction on the treehouse in summer 2006.

### **The Great Hedge Maze**

Pat laid out the first section of the hedge maze in early July. Conor Sherman (troop 2) did the project for his eagle scout. It took \_\_\_\_ hours of staff time and over 170 hours of volunteer time to lay it out, put in the posts, put up the fencing and then plant the tree seedlings. That one section cost about \$2,000 dollars (for fencing mostly) so to complete the maze we will use about \$8,000 more.

### **Electricity**

The main connection to the power line was finally completed in early September. Remaining to do is taking power drops off the main lines to our stream and other areas that need power. This cost \_\_\_\_\_ for University electricians. Remaining cost are \_\_\_\_\_.

### **Round-a-bout**

This was an eagle scout project involving Ryan McDaniel, troop 2. They built a mound with a pathway around it and a retaining wall on the north side. This project is complete except for reglueing several cap tops on the retaining wall and cutting some small pieces to fit. This will require renting a mason cutter. This area will act as the focal point inside the children's garden for parents and teachers to meet. We used 30 hours of staff time and 137 hours of volunteer time on this project. Cost was ~ \$600 for the retaining wall, \$250 for the top soil to make the mound and one load of D1 at \$240. To finish – mason cutter rental- \$50.00.

### **Pioneer Garden**

Our student construction workers (Bobby and Laura) hauled rock from Murphy Dome and completed the rock wall around the log cabin. This garden is completed as far as construction goes. We will finish transplanting trees and shrubs in the area in 2006. The pioneer garden will be planted in the spring 2006 with heirloom plants. Cost to complete the project was the garden mix- \$250 and 160 hours staff time..

### **Entrance Gateway**

The entry way has been worked on as an eagle scout project by Dean Gustafson. The stairs going from the gateway to up the hill and the paths connecting to the round-a-bout are all in. The framing for the planting boxes around the base columns was completed but not installed because the ground was too frozen to level out a base pad. Remaining is the completion of the planting boxes around the entrance posts and finishing the D1 graveling of the entrance. This involved 17 hours staff time and 21 hours volunteer time. I continue to be in contact with Chad Dietz about replacing/fixing the sun in the top of the entrance. It blew out in the windstorm we had early in the summer. Cost this summer- One load D1- \$240, wood for planter boxes - \$1600, Stairs \$275, rock facing \$7,500.

### **Interactive Stream**

Bobby and Laura started by working on the bridges for the stream. They sanded and filled the holes on 8 beams to prepare them for the ASRE science camp students who arrived in July. Eight High Schoolers along with 3 DOT employees and Dr. Hulsey surveyed the interactive streambed, then they installed the bridge abutments and put the bridge together. Bobby worked with them the two weeks they were here. During this time parts of the streambed were being dug by hand to get the correct slope to maintain water flow and Grant dug all the lines for the plumbing.

In August, Dr. Babula and two teens put the lining down in the stream. Grant then put in the pond liner and finished the plumbing. The sump area was filled with sewer rock by volunteers at the beginning of September. This project used 220 staff hours and 384 volunteer hours and cost ~ \$6,600.

We have been struggling with sources of rock large enough and plentiful enough to line the pond. Recently we have found Evens Enterprises in Healy. They may be able to bring us larger rock in the spring. Grant is building the millrace that will shoot water fast enough to the water wheel to generate electricity. The water wheel will need to be constructed this winter. . To complete this project we need some electric lines, rock, the water wheel, a flume, and a weir. This may cost\_\_\_\_\_ more.

### **Pathways**

Several pathways, equaling close to 200 feet, connecting the maze and the pioneer cabin with the round-a-bout were completed late in the season by John Rees as part of his eagle project. This involved 20 hours staff time and 24 volunteer time.

## Summary

We completed a significant amount of work in 2005, much of it not on our plans for the year. We did not get the expected approval for construction so we shifted gears and did many projects that did not require approval. I expect us to continue with these landscaping projects whenever the opportunity is presented. They work well for eagle scout projects and volunteer labor. Being flexible has allowed us to get a lot done on small things while major projects require more direct work from GBG staff.

In 2006, our goals are:

1. Complete the design plans and begin construction of the treehouse (staff, construction class, contractor)
2. Continue fencing in the maze and planting the Caragana seedlings (eagle scout projects)
3. Plant the garden around the Pioneer cabin (4-H club)
4. Establish trails from the pond area to the children's garden and to the interactive stream (eagle scout projects)
5. Complete the last big bridge over the interactive stream (ASRE science camp or eagle scout project)
6. Continue training the willows on the willow tunnel (volunteers)
7. Complete the rock work and planters in the gateway (staff and volunteers)
8. Finish rock work on stream (staff and volunteers)
9. Put in retaining wall above the access road and level out area in front of the interactive stream (eagle scout project)

### 2004 Workers and Volunteers (\*) on the Babula Children's Garden

Boy Scout Troop 2\*- two Eagle Scout projects

Boy Scout Troop 1\* - Two Eagle Scout projects

Girl scout troop 119\*

ASRE science camp participants\*

DOT- 3\*

Dr. Hulsey\*

Jacob Van Veldhuizen\*

Matt Van Veldhuizen\*

Dr. Babula and two teens\*

Deb Neumayr\*

Joanne Klumb\*

Susan Dearborn\*

Curtis Thorgaard\*

Susie Zimmerman\*

Laura Thompson

Bobby Burgess

Grant Matheke

Jan Hanscom

Pat Holloway

Justin Hogrefe

Gretchen Garcia

Gretchen Garroutte