

**Andrew Tu**  
**Hofheimer Grotto Eagle Project**  
**Photo Appendix**

August 2014 - November 2014



Before picture of the grotto entrance completely overgrown by grasses, weeds, and invasive bushes. A perimeter was established using cones.



Work at the grotto has begun. Scouts are helping to cut down larger bushes and remove the brush within the set perimeter.



The clearing process has most been completed. Scouts have begun to dig the necessary post holes for the Trailhead and bench.



Scouts unloading the wood to begin construction of the tables and benches.



Transporting materials into adjacent parking lot which offered better working conditions for the construction of the tables and benches. Wheel barrows were used to move the bulk of the lumber.



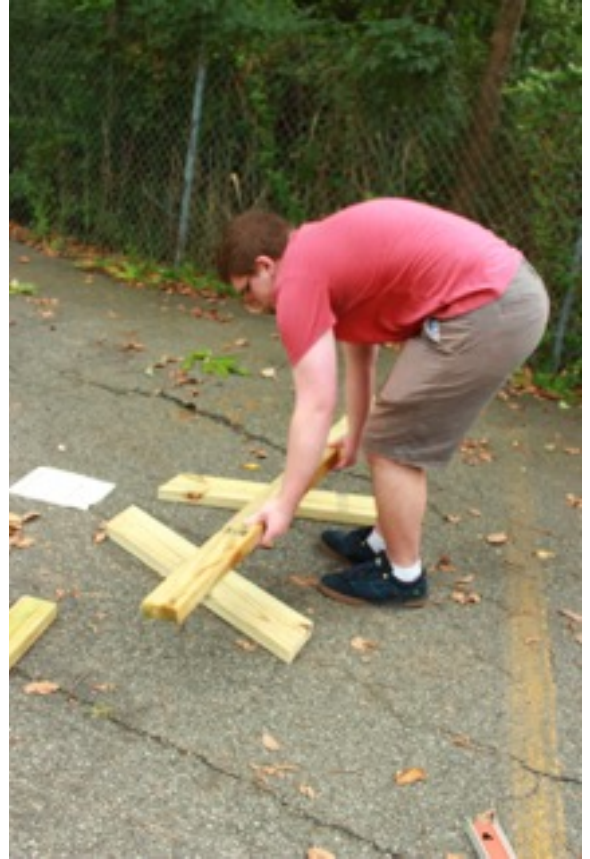




Volunteers were organized into three different groups that each constructed a table or a bench. Dividing into groups allowed the tasks to be completed more easily and efficiently. Instruction documents were given to the leader of each group.



The given instructions allowed people to construct the tables with ease. In some cases, additional clarification was needed to help the volunteers construct the benches. In this case, the purpose of the predrilled holes for the bench is being further clarified.



After the tables were constructed, they were stained to improve the aesthetics and help protect the wood. In addition, the bench was also stained.



The trailhead was constructed in pieces starting with the roof. First the frame was laid out and adjusted to position, then secured using screws and braces. After the base was constructed, the rafters and ridge beam were attached.



Volunteers taking a break after completing the base of the trailhead.





Roofing paper was stapled to the plywood roofing. This provided a membrane impermeable to water (protecting the plywood).

Nailing in the starter strip of shingles that went over the the roofing paper. Eventually the entire roof was covered in shingles.



Drip edge was cut using tin-snips. Volunteers are wearing safety gloves to protect them from the sharp edges.



While cutting the shingles, excess plywood was used as a guide to help with the cutting process.





The holes were pre-dug for the benches and the trailhead. Tubes were inserted in the holes in order to provide a form for the concrete.



The concrete was also pre-mixed so that it will readily accessible to fill in the tubes once the posts have been inserted.





The body of the trailhead was carried into position and then secured with carriage bolts.



The posts of the trailhead were then positioned over the pre-dug holes.





A winch was then used to pull the trailhead up into place. A sledgehammer was used to align the push the posts into the holes.

Once the trailhead was in place, 2x6's were used to support the trailhead while the concrete dried.

The trailhead was also stained.



Once staining was complete, the sign board was put in place and secured.







Body and trailhead were combined and pulled up and placed in the pre-dug post holes. Concrete was then used to completely secure the trailhead.



Approximately 2 inches of stone were laid down as a base. This will help with draining and prevent flooding later down the road.

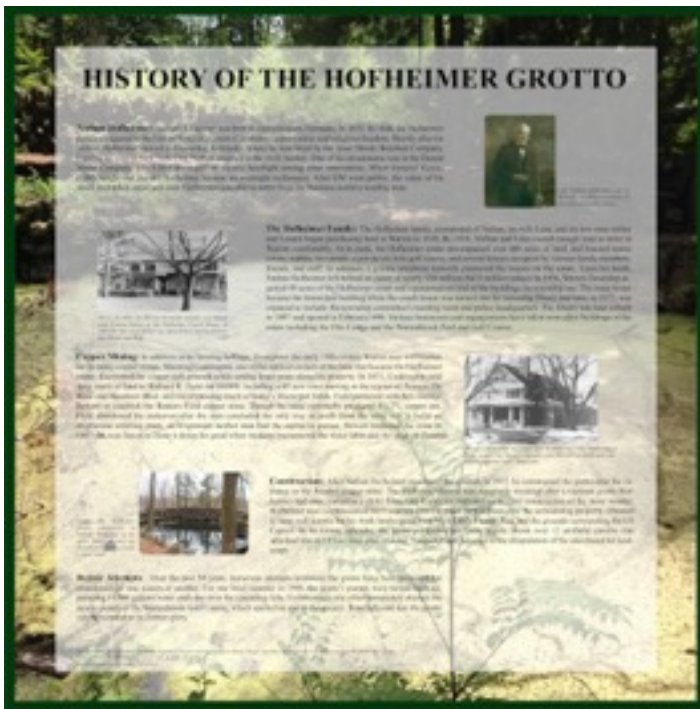
Wheel barrows were used to move the stone around from the pile.







Woodchips being spread across the worksite. Excess wood chips were spread over the worksite.



The designed historical sign for the Hofheimer Grotto that was installed in the trailhead. The sign takes up 2/3 of the board space leaving the remaining third as cork board.



Eagle Scout Candidate standing next to completed trailhead.





The before and after comparison of the worksite. Prior to the candidate's Eagle project, the area was overgrown and unkempt. Following the project's completion, the site has been cleaned out and is inviting. There is a new trailhead and a picnic area.

