

Mary Carr Greer Elementary School

Kiosk and Nature Trail Enhancements

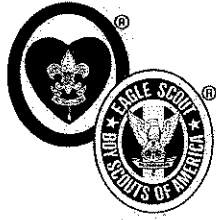
2011

Presented by

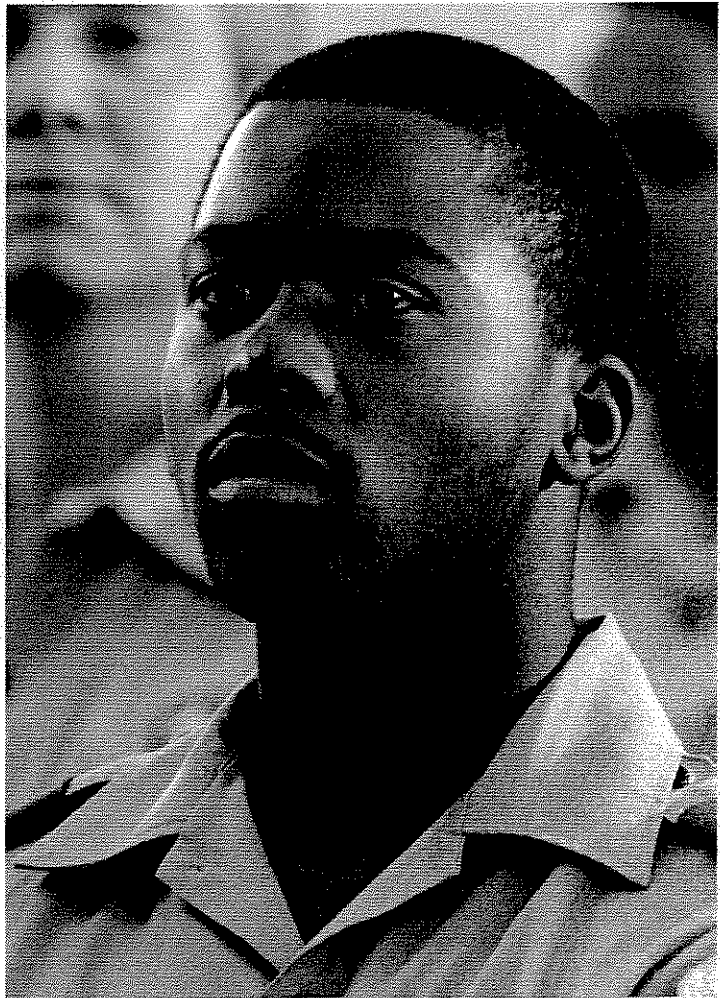
John Christopher Morales

Life Scout

Troop 77



Eagle Scout Leadership Service Project Workbook



BOY SCOUTS  OF AMERICA®



BOY SCOUTS OF AMERICA

National Office
1325 West Walnut Hill Lane
P.O. Box 152079, Irving, Texas 75015-2079
972-580-2000

Message from the Chief Scout Executive

Congratulations, Life Scout.

In attaining the rank of Life Scout, you have had the opportunity to learn and master many skills. You've hiked and camped in good and not-so-good weather. You've learned to take care of yourself and others in the out-of-doors, as well as in your home community.

Before you now is the opportunity to master yet another set of skills. These skills are encompassed in the requirements for the rank of Eagle Scout. One of these requirements is your demonstration of leadership skills. You do so by planning and carrying out an Eagle Scout leadership service project.

This Eagle Scout Leadership Service Project Workbook will help you meet this requirement. You will use this workbook to plan, receive the necessary approvals, carry out, and then report on the completion of your project.

After completing your project and all the other requirements for the rank of Eagle Scout, complete the following steps:

1. Review the Eagle Scout Rank Application. Note that you will need to list references of people who will speak on your behalf. You will also need to prepare a statement about yourself.
2. Fill out the Eagle Scout Rank Application. Ask your unit leader and/or unit advancement committee person to assist you.
3. Secure the signatures of your unit leader and unit committee chairman. Their signatures indicate approval and recommendation by your unit.
4. Submit your Eagle Scout Rank Application and the statement about yourself with your Leadership Service Project Workbook to your local council service center.

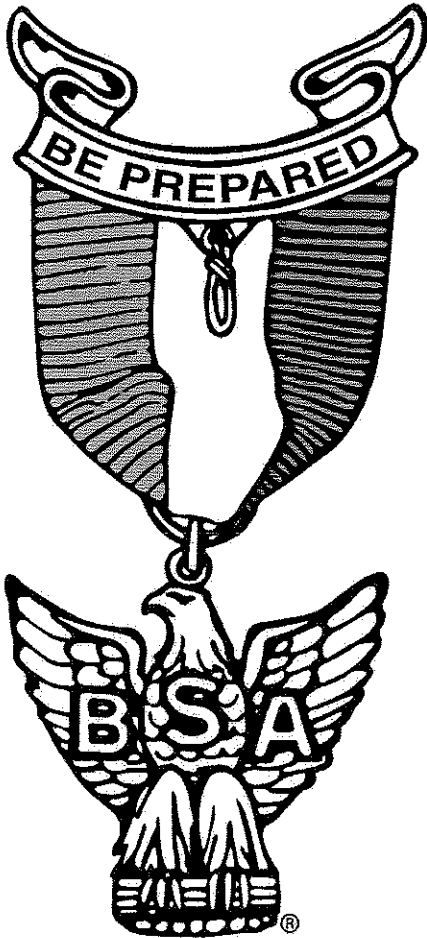
The contents of your application will be certified and the references you have listed will be contacted. After certification and reference verification, you will be contacted by the Eagle Scout board of review chairman, who will set your board of review date.

Eagle Scouts are recognized as a group of men who are outstanding in all that Scouting represents. I encourage you to become a member of this elite group.

Sincerely,

Robert J. Mazzuca
Chief Scout Executive

Eagle Scout Leadership Service Project Workbook



John Christopher Morales

Scout's name

133 Blackthorn Lane Charlottesville VA 22902

Address

434-906-9085

March 15, 1995

Telephone No.

mmorales@k12albemarle.org

Date of birth

E-mail (optional)

Troop 77

Unit No.

Monticello

District

Stonewall Jackson

Local council

Mr. John Gersbach

Unit leader's name

Church of the Incarnation Charlottesville VA 22901

Address

434-244-2495

Telephone No.

Ms. Karen Poehailos

Unit advancement committee person's name

Church of the Incarnation Charlottesville VA 22901

Address

434-293-5425

Telephone No.

Your Eagle Scout Leadership Service Project

How to Start

You have earned the Life Scout rank and are ready to begin your Eagle Scout leadership service project. This workbook will help you plan and record your progress and complete and submit a final report.

The Requirement

As stated in the *Boy Scout Handbook*: While a Life Scout, plan, develop, and give leadership to others in a service project helpful to your religious institution, school, or your community. (The project should benefit an organization other than the BSA.) The project plan must be approved by the organization benefiting from the effort, your unit leader (Scoutmaster, Varsity Scout Coach, Venturing crew Advisor), unit committee, and by the council or district advancement committee before you start. You must use the Eagle Scout Leadership Service Project Workbook, No. 18-927E, or this online equivalent, in meeting this requirement.

Originality

Does the leadership service project for Eagle have to be original, perhaps something you dream up that has never been done before? The answer: No, but it certainly could be. You may pick a project that has been done before, but you must accept responsibility for planning, directing, and following through to its successful completion.

Limitations

- Routine labor (a job or service normally rendered) should not be considered.
- Projects involving council property or other BSA activities are not acceptable.
- Projects may not be performed for businesses.
- Projects may not be of a commercial nature.
- Projects may not be a fund-raiser. Fund-raising is permitted only for securing materials needed to carry out the project.
- Donors to projects must be made aware of what entity is benefiting from the project, and that it clearly is not the Boy Scouts of America.
- Any funds raised for a project and not used for the purchase of project materials must be returned to the donors.

Size

How big a project is required? There are no specific requirements, as long as the project is helpful to a religious institution, school, or community. The amount of time spent by you in planning your project and the actual working time spent in carrying out the project should be as much as is necessary for you to demonstrate your leadership of others.

Examples

A look at some projects other Scouts have done for their Eagle Scout Award illustrates that your project can be to construct something or can be to render a service. Scouts have

- Made trays to fasten to wheelchairs for veterans with disabilities at a Veterans Administration hospital.
- Collected used books and distributed them to people in the community who wanted and needed, but could not afford, books.
- Built a sturdy footbridge across a brook to make a safe shortcut for children between their homes and school.
- Collected and repaired used toys and gave them to a home for children with disabilities.
- Organized and operated a bicycle safety campaign. This involved a written safety test, equipment safety check, and a skills contest in a bike rodeo.
- Surveyed the remains of an old Spanish mission and prepared an accurate map relating it to the present church.
- Built a “tot lot” in a big city neighborhood and set up a schedule for Boy Scouts to help run it.
- Set up a community study center for children who needed a place to do schoolwork.
- Trained fellow students as audiovisual aides for their school. Arranged for more than 200 hours of audiovisual work.
- Prepared plans for a footbridge on a trail in a national forest. Worked with rangers to learn the skills necessary to build the structure, gathered materials and tools, and then directed a Scout work group to do the construction.

Approvals

Before You Start

The project plan must be reviewed and approved by the beneficiary of the project, your unit leader, the unit committee, and the council or district advancement committee before the project is started.

The following questions must be answered before giving this approval:

- What is the project you are planning?
- Who will benefit from the project?
- How will they benefit?
- What representative of the project’s beneficiary will be contacted for guidance in planning the project?
- What are the project planning details?

Remember, the project must be approved before you begin, so make sure all signatures have been secured before you start the project. You must be a Life Scout before you begin an Eagle Scout leadership service project.

After Completion

Although your project was preapproved by the project's beneficiary, your unit leader, the unit committee, and the council or district advancement committee before it was begun, the Eagle Scout board of review must approve the manner in which it was carried out. The following must be answered:

- In what ways did you demonstrate leadership of others?
- Give examples of how you directed the project rather than doing the work yourself.
- In what way did the religious institution, school, or community group benefit from the project?
- Did the project follow the plan?
- If changes to the plan were made, explain why the changes were necessary.

Filling Out the Form

As you plan and carry out your leadership service project, use this workbook to record your plans and progress. Remember that others will be reading these pages. You should print, type, or write legibly using black or blue ink. Complete the form on a computer if you have access to an electronic version. You may add as many pages as needed to thoroughly complete the workbook.

National Eagle Scout Association

The National Eagle Scout Association was created in 1972 with the express purpose of bringing together Eagle Scouts of all ages so that they may be of greater service to themselves, their local councils, and their communities, thereby conserving and developing the human resources potential represented by those who hold Scouting's highest rank.

When you receive your Eagle badge, you will be eligible for membership in this elite association. You should give it serious consideration. Applications are available from your local council service center.

Project Description

Project name: Mary Carr Greer Elementary School Nature Trail: Build Kiosk, Identify Trees, Create Map
Describe the project you plan to do.

Background Information

My Eagle Scout Leadership Project is to improve Greer Elementary School's Nature Trail by identifying and labeling trees, creating a map of the nature trail and building a kiosk at the entrance to the trail with a box to place maps in. The nature trail begins on the west side of Greer Elementary and exits on the north side. The kiosk will be located at the nature trail entrance. The map will include information on the 15 trees labeled on the trail and the length of the trail. Mr. Matt Landahl, Principal of Greer Elementary, and I met in March 2011 at which time we decided on building a kiosk which will contain a box to house maps of the trail and a sign welcoming people to the nature trail. The kiosk will be 5' wide and 7.5' tall and posts will be 2.5' underground. Supervision and advice for the building of this kiosk, tree identification and map creation has been received from Mr. Jeff Rohm of Albemarle County Building Services, Ellen Powell of the Virginia Department of Forestry, Mr. Dan Brown MHS construction and architecture teacher, and Mr. Matt Landahl and Mrs. Mary Alice Bond from Greer Elementary School.

What group will benefit from the project?

Mary Carr Greer Elementary School

434-973-8371

Name of religious institution, school, or community

Telephone No.

190 Lambs Lane

Charlottesville

VA 22901

Street address

City

State

Zip code

My project will be of benefit to the group because:

My project will benefit Mary Carr Greer Elementary School and the surrounding community in Northern Albemarle County by providing a kiosk with maps of the schools nature trail to be enjoyed by the students in kindergarten, first, second, third, fourth, and fifth grades and community members. Teachers will not have to worry about getting lost on the trail as I am going to blaze the trail. Students will be able to know what kinds of trees are on the nature trail because many will be labeled. Students and teachers will be able to use the nature trail to find similarities and differences between a variety of different trees native to our area, they will be able to use maps and/or i-pod recorded tour to see vocabulary they are learning in context (coniferous, evergreen, deciduous). Community members can also use the trail to learn more about trees native to Charlottesville. Teachers, students, administration and parents have shown a lot of interest in and enthusiasm for my Eagle Scout Project at Greer.

This concept was discussed with my unit leader on:

January 12, 2010

Date

The project concept was discussed with the following representative of the group that will benefit from the project.

Mr. Matt Landahl
Mrs. Mary Alice Bond

August 2010
September 2010

Representative's name
Principal Mary Carr Greer Elementary School
Physical Education Teacher

Date of meeting
434-973-8371
434-971-8037

Representative's title

Phone No.

Project Details

Plan your work by describing the present condition, the method, materials to be used, project helpers, and a time schedule for carrying out the project, the estimated cost of the project, and how the needed funds will be obtained. Describe any safety hazards you might face, and explain how you will ensure the safety of those carrying out the project.

If appropriate, include photographs of the area before you begin your project. Providing before-and-after photographs of your project area can give a clear example of your effort.

Section A: Present Condition

The entrance to Greer's Nature Trail is currently difficult to find unless you already know where it is. There is no sign to let you know that a trail begins there. Once you start walking on the trail you notice that it is unmarked/unblazed and that trees are not identified or labeled. On the survey I sent out to Greer's staff some teachers remarked that they were reluctant to take their classes out because they were afraid of getting lost.

"Before" Photographs



Figure 1, Current entrance to the trail

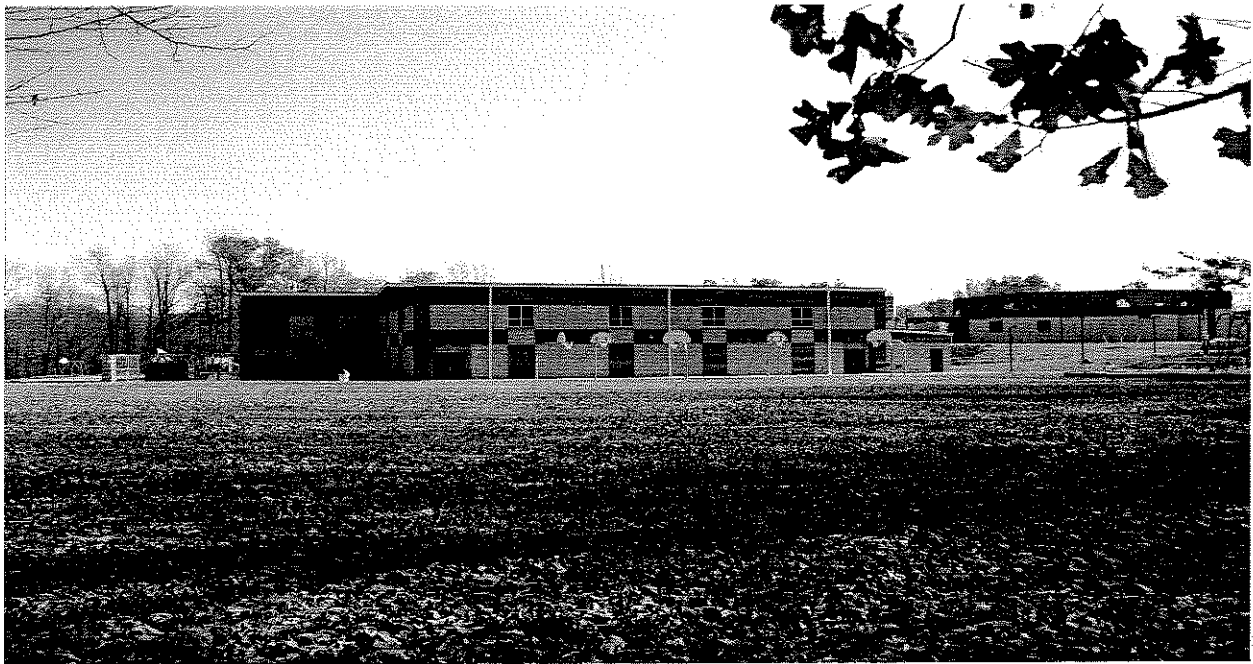


Figure 2, View of the school from the entrance to the nature trail.



Figure 3, Marking the trail

Section B: Building Method

My plan is to make a kiosk constructed from pressure treated 2x4s (for horizontal posts), ¾" treated plywood sheets (for roof and back panel), 4x4s (for vertical posts), nails, shingles, and deck screws. Construction will require a compound miter saw, post hole digger, and drills. I am hoping to spend 2 days building the kiosk, 2 days identifying and labeling trees, and 3 days measuring the trail, creating the map, and building the map box. I plan on assembling the kiosk on site. Greer Elementary's PTO will fund half of the Eagle Project and I will hold bake sales to raise the remaining money. I spoke with Mr. Jeff Rohm from Albemarle County Building Services. He said no building permit is needed for any part of my project.

A. Kiosk Construction/Assembly:

- 1) *Dig holes at kiosk site:* This team will dig holes for kiosk posts and place posts in holes affixed by concrete with gravel underneath. 4 adults and 6 scout volunteers will complete the work in one day. Tools required are shovels, post hole digger, gloves, safety glasses, pick axe, tape measure, concrete bags, gravel and a water level. Completed by volunteers in ½ day.
- 2) *Build body of kiosk:* Kiosk will be assembled by a crew of 2 adult and 4 scout volunteers, following the available plan in one day. Tools required are hand saw, 10' tape measure, gloves, safety glasses, face masks, cordless drill with star bit and 1/8in drill bit and countersink bit. Work will be completed in 1 day
- 3) *Make roof of kiosk:* The roof of the kiosk will be assembled by 2 adults and 4 scouts. Tools required are roofing nails, tape measure, gloves, safety glasses, brown shingles, miter saw, plywood, 2x4s, 4x4s, and hammers. Volunteers will complete the work in 1 day.
- 4) *Construct map box:* The map box will be assembled by 1 adult and 2 scouts. Tools required are a table saw, a tape measure, ½ in plywood, hinges, and ¾ in screws, and plexiglass. Volunteers will complete it in a half day.



Figure 4, Map Box

B. Tree Identification and Labeling

- 1) *Identify 15 trees along the trail that are healthy mix of deciduous, coniferous and evergreen(vocabulary teachers wanted emphasized).**
- 2) *Wrap surveyor's tape around the 15 trees.**
- 3) *Use resources to identify trees and write name of tree on laminated index card with permanent marker and affix to surveyor's tape.**
- 4) *Have Ellen Powell, from the Department of Forestry, come and check tree identifications to make sure they are accurate.**
- 5) *Dig holes and install 2x6s in front of the 15 trees.*
- 6) *Affix engraved plaque/label with 2 screws on to top of post cut at 45 degree angle.*

*All starred items should be done before work dates so that trees will be accurately labeled before starting work so that engraved plaque/labels can be ordered at least two weeks in advance. We will need them for day two.

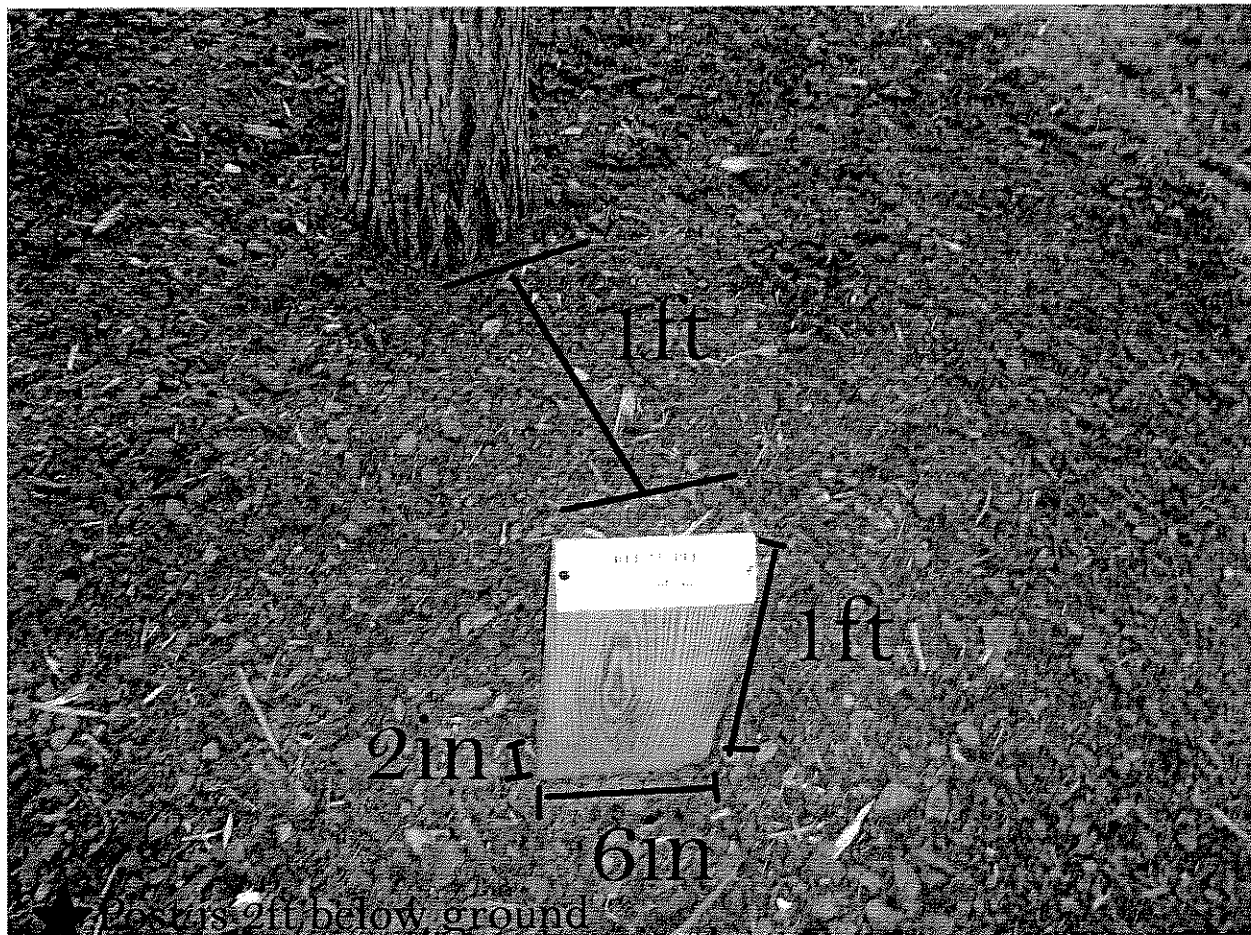


Figure 5, Tree identification marker specifications

C. Create Map of Nature Trail/Blaze Trail

- 1) Blaze trail with Gecko stencil and spray paint.
- 2) Borrow tool from Jeff Rohm to measure length of nature trail and measure/mark where each of the labeled 15 trees are along the trail.
- 3) Draw map of trail, mark each of the 15 trees on it, and tell the length of the entire nature trail .
- 4) Use Important Forest Trees of the Eastern United States by the Virginia Department of Forestry to research and provide information about each of the 15 trees on the map.
- 5) Meet with teachers at Greer to find a grade level willing to check amount of maps in box on kiosk, print, and stock maps on the trail over the next year.

Section C: Materials and Tools

Quantity of Unit	Unit Description	Cost of unit/Source
2	¾" Treated Plywood Sheet 4x8 for roof and back panel of kiosk	71.94
2	4"x4"x10' pressure treated posts for vertical posts/kiosk	23.94
12	2"x4"x8' pressure treated boards for horizontal posts/kiosk and trusses	39.48
2 bundles 1 bundle cap.	25 yr asphalt shingles, 60mph wind resistance, brown/kiosk	45.50
1 lb. box	3 ½" deck screws, star head/kiosk (T-20)	8.67
1 lb. box	1 ¼" deck screws, star head/kiosk (T-20)	8.67
1 lb. box	2" deck screws, star head/kiosk (T-20)	7.89
1 lb. box	4" deck screws, star head/kiosk (T-20)	7.89
1lb. box	1 7/8" galvanized roofing nails for shingles/kiosk	9.98
4	40 lb bags quickset concrete/kiosk	7.50
1	Black mortar tub to mix concrete in	6.00
1	Roll of tar paper to put under shingles/kiosk	16.80
8	2"x6"x8' pressure treated posts for tree identification	39.76
1	18"x24" Acrylic clear sheet for front of map box	7.98
1	½" treated plywood sheet, 4'x8' for map box	28.97
4	2"x2" stakes	Mom
1 bag	Gravel- 50 lb bag	3.62
15	Tree ID markers	135.00
1	Sign for kiosk	84.51
1	Gecko stencil	24.70
2	4 ft level	
3	Tape measures	Mom, Grandpa,
1	Sledgehammer	

1	Jigsaw	
2	½" cordless drill	
3	Claw hammers	
1	Hand saw	Mom
1	**10" compound miter saw**	
1	Assorted drill bit set	
1	Assorted screwdriver bit set	
1	Pick axe	
2	Post hole digger	
2	Spade shovel	Mom and grandpa
1	Metal straight edge	
1	Water level	
1	Protractor	John
1	Caution tape	Mom
1	Sawhorse	
2	Cell phones for emergencies	Mom and Grandma
1	First Aid Kit	
1	Cooler	Mary Alice Bond
1	Camera	Mom
2	Large Trash Bags	Mom
12	Work Gloves	Ask Boy Scout Volunteers to bring a pair with them
12	Ear Plugs	
5 days	Lunch for volunteers	\$200.00
	TOTAL	\$770.71



Figure 6, Front view of kiosk that we will build.



Section D: Safety Considerations

General

Meetings with officials from Albemarle County Building Services have been set up to check for county utility lines. As requested by Albemarle County Public Schools, Miss Utility cannot be contacted until this meeting (see attached email for details). Miss Utility will be contacted prior to any construction.

Adults that use the power tools will be reminded to wear safety goggles and to keep their hands and feet a safe distance from the blade of any tool they use.

A first aid kit will be prepared and readily available on site for any injuries that take place. There will be a rest area near the site that is in the shade. Here people can rest and drink water which will prevent dehydration of volunteers. Scouts and adult leaders will be encouraged to wear sunscreen and hats to prevent heat illnesses and sunburn. Sunscreen will be available on site as well.

We will have access to phones and bathrooms in Mary Carr Greer Elementary School. We will also have cell phones to contact family members or emergency help in the event of any serious injuries or accidents.

Volunteers will be reminded to wear appropriate footwear (closed toe shoes instead of sandals or flipflops). Volunteers will also be asked to bring work gloves and some will be available on site.

Kiosk and Map Box

1. *Digging*: Care must be taken with use of post hole digger and shovels. People must look where they are digging. Volunteers will be asked to bring work gloves and 2 pair will be available.
2. *Measuring, Cutting, and Drilling*: The majority of safety issues with this phase of the project deal with the power tools that are used to cut and drill holes in wood. As a precaution, anytime a power tool is used, it will be used by an adult who has experience, as well as a caution that all adults should be wearing safety gear such as safety goggles.
3. *Assembly*. The concerns about this part involve any wood or boards falling or any unwanted banging or nicking taking place. For this, a senior Scout or adult should be present at all times as well as giving a review of safety precautions before the assembly.

Tree Identification and Signage

- a) *Digging*. Care must be taken with use of shovels. People must look where they are digging. Work gloves are suggested and 2 pair will be available.

Blazing the Trail

- a) *Spraypainting*. Volunteers who will be spraypainting will wear safety goggles, a face mask and latex gloves. Will be done by one adult and two boyscouts.

Section E: Fundraising

Estimates from Better Living, 84 Lumber, Lowe's, Classic Signs and Hightech Signs have projected the cost of this project to be between \$750- \$900. The necessary funds for this project will come from the Greer Elementary School PTO, a car wash and a bake sale.

Car Wash

I will ask my fellow scouts, family and friends to work this car wash to help raise money for my Eagle Project. Email and Facebook will be used to get volunteers to help with the car wash and to invite friends and family to get their cars washed. It will cost about \$25 to use water at the ALC copy store. With this event I hope to earn about \$500-\$550 total.

Bake Sale

Leadership will be demonstrated by asking scouts from troop 17 to assist with selling baked goods. I will also ask my family, friends, and Greer staff/PTO to assist in the sale by volunteering to sell or donate baked goods. Fliers will be made to pass out to scouts to remind them to bake. Emails will be made to volunteers to remind them to bake items for the sale. With this event I hope to earn between \$200-\$250 total.

Budget for Greer Nature Trail Leadership Project			
Income			
	Projected income	Actual income	Balance
Donation from PTO	\$100		
Car Wash	\$500		
Bake Sale	\$200		
Total	\$800		

Expenses		
	Projected Spending	Actual Spending
Building Materials	\$570.71	
Lunch for workers	\$200.00	
Total	770.71	

Section F: Work Schedule

Time (Day 1) Description

9:00 All volunteers meet at Mary Carr Greer Elementary School.

9:15 Plans are reviewed with all volunteers and safety talk about digging, mixing concrete, working with pressure treated lumber, and using spray paint. Safety glasses and work gloves are to be worn at all times. Take attendance for record of service hours.

9:30 Group is split into 2 teams. Team 1 reviews how to dig holes, place two posts in with gravel

and concrete, how to build supports and gets tools necessary to do the job.

9:45 Working commences. All team 1 workers begin to dig 2 holes, 2.5 feet deep, located 5 feet apart (one inside edge of vertical post to the other post's inside edge).

10:30 Team 1 holes have been dug completely. Workers begin mixing concrete and putting gravel in holes.

10:45 Team 1 workers put gravel in one hole and then the first post in hole, make sure its level and fill the hole with concrete. I order pizza.

11:00 Team 1 workers set up A frame to keep first post in place
I order pizza.

11:15 Pizza arrives. All workers wash hands due to handling pressure treated wood so they can eat lunch. Lunch break.

12:00 Lunch break ends. Team 1 workers review plans for digging holes, placing posts in with gravel and concrete, and how to build supports. Team 2 workers review how to blaze the trail according to plans.

12:15 Working commences

1:45- 2:15 All workers begin clean up and stack wood and tools in school shed.

2:15 Workers set up caution tape around the board, notifying people not to go near the kiosk.

2:30 All workers go home. Anything uncompleted will be completed the next day. Workers will meet at 190 Lamb's Lane at 9:00.

Day 2 Description

9:00 All volunteers meet at Mary Carr Greer Elementary School.

9:15 Review with Team 3 workers what the plan for building the body of the kiosk is.

9:30 Measure from the ground 3 ft up each of the vertical posts and mark the spot with a pencil. Hold the 2inx4inx5ft with 2" side facing down, hold bottom of horizontal post at the mark. Use level to make sure that the post is perfectly horizontal. Use 4 3 ½ in deck screws to attach bottom horizontal post to vertical posts.

9: 45 Measure 9in up from the top of the bottom post and mark spot with pencil on each vertical post. Hold the 2inx4inx5ft with 2" side facing down, hold bottom of horizontal post at the mark. Use level to make sure that the post is perfectly horizontal. Use 4 3 ½ in deck screws to attach middle horizontal post to vertical posts.

10:00 Take 2inx4inx6ft horizontal post measure in with the tape measure 6in and mark spot vertically with pencil. Measure 9in up from top of middle horizontal post and mark spot with pencil on each vertical post. Hold 2in x 4in x 6ft with 2" side facing down, bottom at pencil marks and with 6in hanging over on each side. Use level to make sure that the post is perfectly horizontal. Use 4 3 ½ in deck screws to attach top horizontal post to vertical posts.

10:30 Take 2ft 6in x 4ft 4in piece of ¾" plywood and hold it level to bottom of bottom horizontal pose. Use a level to make sure its perfectly vertical. Screw 2 ½ in deck screws spaced 2 inches apart vertically and 1ft horizontally along each of the horizontal posts across the back with first drilling pilot holes and holes then countersinking them. This will hold plywood on the top horizontal and bottom horizontal posts on the back need to run along the edges of the ¾ in pressure treated plywood.

11:15 Pizza arrives. All workers wash hands due to handling pressure treated wood so they can eat lunch. Lunch break.

12:00 Lunch break ends. Team 3 workers review plans for next step of plan: placing edges on top and bottom of plywood.

12:15 Lay 2in x 4in x 4ft4in with 4in side fully facing the ground on top of plywood up against top horizontal post. Lay 2in x 4in x 4ft4in with 4in side fully facing the ground on bottom of plywood up against bottom horizontal post. Screw 4 deck screws spaced 1 ft apart horizontally starting from the back of the horizontal post, through the plywood into 2in x 4in edge.

1:30 Workers set up caution tape around the board, notifying people not to go near the kiosk. All workers go home.

Day 3 Description

9:00 All workers show up to worksite.

9:15 I review with the workers the plans for the constructing and installing the kiosk roof. I also discuss safety.

9:30 Workers begin to cut wood for trusses.

10:30 Workers form and nail wood together to form trusses on ground and screw trim to front and back of truss.

11:30 Call to order Pizza.

12:00 Pizza arrives. All workers wash hands due to handling pressure treated wood so they can eat lunch. Lunch break.

12:45 Cut and drill plywood for roof.

1:30 Nail shingles on roof.

2:30 Screw roof onto top of kiosk

do in Kiosk completed. Workers will clean up the worksite and pictures will be taken.

Install small sign on kiosk reading:

John Christopher Morales

Boy Scout Troop 17 of Charlottesville, Va

Eagle Project

June 2011

Day 4 Description

9:00 All workers show up to worksite.

9:15 I review with volunteers the plans for digging holes and placing tree identification markers.

9:30 Each of the 5 scouts goes to one tree that has yellow tape around it. Chooses location 1-1.5 feet away from tree (using measuring tape), moving towards nature trail path to dig hole. Shows location to adult volunteer. Once scout gets the go ahead, they can dig holes 2 feet deep, 1-1.5 feet away from each tree that will be identified (15). Adults and scouts work together to dig 15 holes.

11:00 Order lunch.

11:30 Food arrives. Wash hands and start eating!

12:15 Go over afternoon plan.

12:30 Cut 2"x6"x8's into 2"x6"x3' pieces with 45 degree angle at top (need 15 pieces).

1:30 Place 2"x6"x3's into holes. Pack dirt in around wood.

2:30 Use construction adhesive and 2 screws to glue tree identification markers (engraved plaques) onto top of 2'x6s.

3:15 Clean up area.

Day 5 Description

9:00 All workers show up to worksite.

9:15 I review with volunteers the plans for measuring, cutting, and building the map box.

9:30 Cut 5 pieces from your $\frac{1}{2}$ " plywood:

- a) back $16'' \times 5 \frac{1}{2}''$ (1)
- b) bottom $5 \frac{1}{2}'' \times 4 \frac{1}{2}''$ (1)
- c) sides $5 \frac{1}{2}''$ on bottom, front panel $9 \frac{3}{4}''$ tall, back panel $10 \frac{3}{4}''$ tall (2)
- d) top that flaps open and shut $7'' \times 7 \frac{1}{4}''$

10:30 Cut Plexiglas board to be $10 \frac{1}{2}''$ long $\times 5 \frac{1}{2}''$ wide

11:00 Drill starter holes for the nails. Glue pieces together with glue gun before nailing.

11:30 Order lunch

12:00 Wash hands, eat lunch.

12:45 Nail pieces together to form box.

1:00 Affix map box to kiosk.

1:15 Start at beginning of trail. Begin to measure length of trail. Write down the distance from the beginning to each of the trees that will be labeled on the trail so that they can be marked on the map of the nature trail.

On pad, write distances to each of the trees with names on them. List

- a. Tree 1: Maple, 80 feet into trail
- b. Tree 2: Red Oak, 110 feet into trail

3:00 Make sure you write complete length of trail on pad.

3:15 Clean up.

Day 6 Description

Work from home to design map.

Be sure to include: name of nature trail, distance of entire trail from beginning to end, mark where 15 identified trees are, and use *Important Forest Trees of the Eastern United States* by the Virginia Department of Forestry to research and provide information about each of the 15 trees on the map.

Day 7 Description

Get approval on map from Mr. Landahl and a subgroup of teachers. Make any changes. Print 100 copies to stock map box. Meet with teachers at Greer to find a grade level willing to check amount of maps in box on kiosk, print, and stock maps on the trail over the next year. Send map to designated teacher(s) for restocking as needed.

Section G: Daily Systematic Instructions

DAY ONE

Team 1

Dig holes at kiosk site and place both posts in with supports

Number of workers

3 adults

5 scouts

Tools needed

Shovels
Post hole digger
Gloves
Safety glasses
Pick axe
Tape measure
Concrete bags
Bucket
Level

Directions:

1. Dig 2 holes 2.5 feet deep and 1 foot across spaced 5'6" feet apart on outside with pick axe, shovels and post hole digger.
2. Fill one hole with 4 inches of gravel
3. Place 1 4x4x10 post in the hole
4. Build an A frame from scraps and 3 1/2" deck screws to make sure post does not move. Make sure post is perfectly level using level and plumb. Check it at top and bottom.
5. Mix concrete powder and water in the mortar tub, after making sure post is perfectly vertical using level and plumb, pour concrete in hole.
6. Repeat steps 2-6 for the second post
7. Look at figures 16, 17, and 18 for help (Figures will be made available to the workers)

Team 2

Blaze trail with gecko stencil

Number of workers

1 adult
2 scouts

Tools needed

Spraypaint
Gloves
Safety goggles
Face masks
Gecko stencil
Duct tape
Scissors
Garbage bag

1. Start at beginning of nature trail. For each tree with surveyors tape around it (with no index card with tree name on it) place stencil on tree. Tape it on flat against the tree. Spray paint.
2. Remove stencil from tree.
3. Cut surveyor's tape off of tree and place in garbage bag.

DAY TWO

Team 3

Build body of kiosk

Number of volunteers needed:

2 adults

4 scouts

Tools needed:

Hand saw

10' tape measure

gloves

safety glasses

Cordless drill with star bit and 1/8in drill bit and countersink bit

pencil

Directions:**Pt. 1- Horizontal posts behind plywood on kiosk**

1. Measure from the ground 3 ft up each of the posts and mark the spot with a pencil.
2. Have two volunteers hold the 2inx4inx5ft6" with bottom of horizontal post at the mark.
3. Another volunteer will use the level to make sure that the post is perfectly horizontal.
4. Use 4 3 1/2 in deck screws to attach horizontal post to vertical posts.
5. Measure 9in up from the top of the bottom post and mark spot with pencil on each vertical post.
6. Repeat steps 2-4
7. Take 2inx4inx6ft horizontal post (top post is longer to support end trusses) measure in with the tape measure 6in and mark spot vertically with pencil.
8. Measure 9in up from top of middle horizontal post and mark with spot pencil on each vertical post.
9. Have two volunteers hold 2in x 4in x 6ft with bottom at pencil marks and with 6in hanging over on each side.
10. Repeat steps 3 and 4

Pt. 2- Affixing plywood to horizontal posts

1. Check distance between inside edges of posts.
2. Make any adjustments needed to size on plywood.
3. Take 2ft 6in x 4ft 11in piece of 3/4 in plywood and hold it level to bottom of bottom horizontal post.
4. Have an older scout volunteer use a level to make sure its perfectly vertical.
5. Screw 2 1/2 in deck screws spaced 2 inches apart vertically and 1ft horizontally along each of the horizontal posts across the back with first drilling pilot holes and holes then countersinking them. This will hold plywood on the top horizontal and bottom horizontal posts on the back. Horizontal posts need to run along the edges of the 3/4 " pressure treated plywood.

Pt. 3- Top and bottom ledges framing plywood front face of kiosk

1. Lay 2in x 4in x 4ft11" with 4in side fully facing the ground on top of plywood up against top horizontal post.
2. Screw 4 deck screws spaced 1ft apart horizontally starting from the back of the horizontal

- post, through the plywood into 2in x 4in edge.
3. Lay 2in x 4in x 4ft4in with 4in side fully facing the ground on bottom of plywood up against bottom horizontal post.
 4. Repeat step 2.

DAY THREE

Team 4

Construct and install roof

Number of volunteers needed:

2 adults

4 scouts

Tools needed:

Nails

Tape measure

Gloves

Safety glasses

Face mask

Brown Shingles

Hammers

Miter saw

3/4"x2x8 plywood (precut from Lowe's)

2x4s

4x4x12s

Protractor

Screws

Screwdriver bits

Directions:

1. Build the roof of the project according to figures 6, 7, 10, 13, 14, 15, 19,20 (Figures will be made available to the workers)
2. Trusses will be constructed on the ground.
3. Cut 10 22.5 in posts out of 2x4 with 53 degree angles at end that will be screwed at the top of the truss
4. Cut 5 1 foot 5 in joists out of 2x4 wood
5. Take the 22.5 in post and using 3 1/2" deck screws drill in three screws to the 1 foot 5 inch joist first drilling pilot holes and then countersinking them before drilling the screws in
6. Make sure that none of the 1 foot 5 in wood from the joists overlaps over the 22.5 in post (as shown in figures 16 and 17)
7. We have just completed a truss.
8. Do this 4 more times.
9. Mark on the 2x4 that is 6 ft long 5 marks where the trusses will go (see figure 11). The two end marks need to be flush with the ends of the 6 foot long 2x4.
10. Attach using 3 1/2" deck screws first with a pilot hole being drilled and then countersinked to the 5 trusses to the 6 foot long 2x4 at the marks. The 2 end trusses

should be on the edge of the 6ft long 2x4.

11. Take 2 3/4" pressure treated plywood planks that are 2'x6'. Drill the plywood to the trusses using 3/4" pressure treated plywood that have been pilot holed and countersunk. The plywood should not hang off the end of the 6 foot long 2"x4".
12. Cover plywood with tar paper
13. Attach brown shingles to 3/4" pressure treated plywood using 3 7/8" galvanized roofing nails per shingle.

DAY FOUR

Team 5

Digging holes, placing wood for tree identification markers in holes

Number of Volunteers Needed

3 adults

5 scouts

Tools needed

Shovels

Post hole digger

Saw

Construction adhesive

Directions

1. Each scout goes to one tree. Chooses location 1-1.5 feet away from tree, towards nature trail path. Shows location to adult volunteer. Once scout gets the go ahead, they can dig holes 2 feet deep, 1-1.5 feet away from each tree that will be identified(15).
2. Cut 2"x6"x8's into 2"x6"x3' pieces with 45 degree angle at top. Look at figure 5.
3. Place 2"x6"x3's into holes. Pack dirt in around wood.
4. Use construction adhesive and 2 screws to glue tree identification markers (engraved plaques) onto top of 2'x6s.

DAY FIVE

Team 6

Build map box

Number of Volunteers Needed

2 adults

2 scouts

Tools needed

Table saw

Sand paper

1.5" hole saw for your drill

1/16" and 1/8" drill bit

drill

circular or hand saw

hot glue gun and some glue

Directions

1. Cut 5 pieces from your $\frac{1}{2}$ " plywood:
 - e) back $16'' \times 5 \frac{1}{2}''$ (1)
 - f) bottom $5 \frac{1}{2}'' \times 4 \frac{1}{2}''$ (1)
 - g) sides $5 \frac{1}{2}''$ on bottom, front panel $9 \frac{3}{4}''$ tall, back panel $10 \frac{3}{4}''$ tall (2)
 - h) top that flaps open and shut $7'' \times 7 \frac{1}{4}''$
2. Cut Plexiglas board to be $10 \frac{1}{2}''$ long $\times$ $5 \frac{1}{2}''$ wide
3. Drill starter holes for the nails using diagrams below. Glue pieces together with glue gun before nailing.

Step 1: Attach the sides to the back

Nail the back to the two sides as shown below:

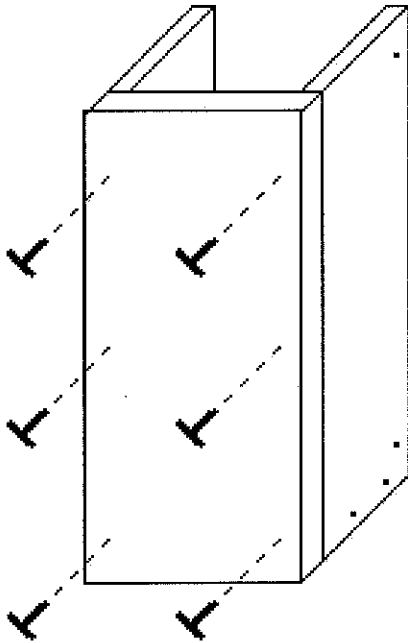


Figure 8, Attaching the map box sides to the back

Note that the sides should be placed so the pre-drilled holes are facing in the directions shown. It may be easier to get the back and sides nailed together if you ask a friend or one of your parents for help, or if you hot glue the pieces together before nailing.

Step 2: Attach the floor

Attach the floor as shown below:

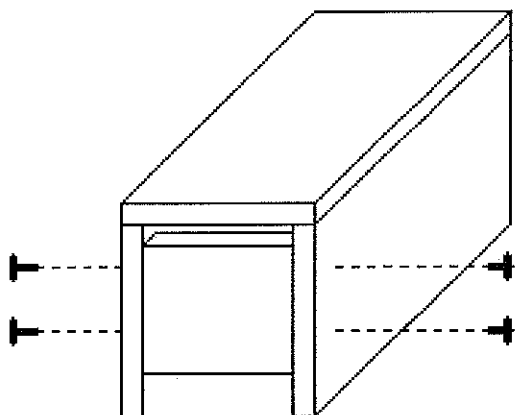


Figure 9, Attaching the floor of the map box
The floor should be flush with the bottom of the box.

Step 3: Attach the Plexiglas to the front

The Plexiglas should be even with the bottom and front sides of the box. Screw it to the wood sides and bottom with 5 screws, 2 on each vertical side and 1 on the bottom in the middle.

Step 4: Attach the top which flaps open and shut

Attach the top with 2 hinges that will allow it to open and close.

Team 7

Measure length of trail

Number of Volunteers Needed

1 adult

2 scouts

Tools Needed

Tool to measure trail with from Mr. Rohm

Writing Pad

Pencil/pen

Directions

2. Start at beginning of trail. Begin to measure length of trail. Write down the distance from the beginning to each of the trees that will be labeled on the trail so that they can be marked on the map of the nature trail.
3. On pad, write distances to each of the trees with names on them. List
 - a. Tree 1: Maple, 80 feet into trail
 - b. Tree 2: Red Oak, 110 feet into trail
4. Make sure you write complete length of trail on pad.



Figure10, Underside of the kiosk roof

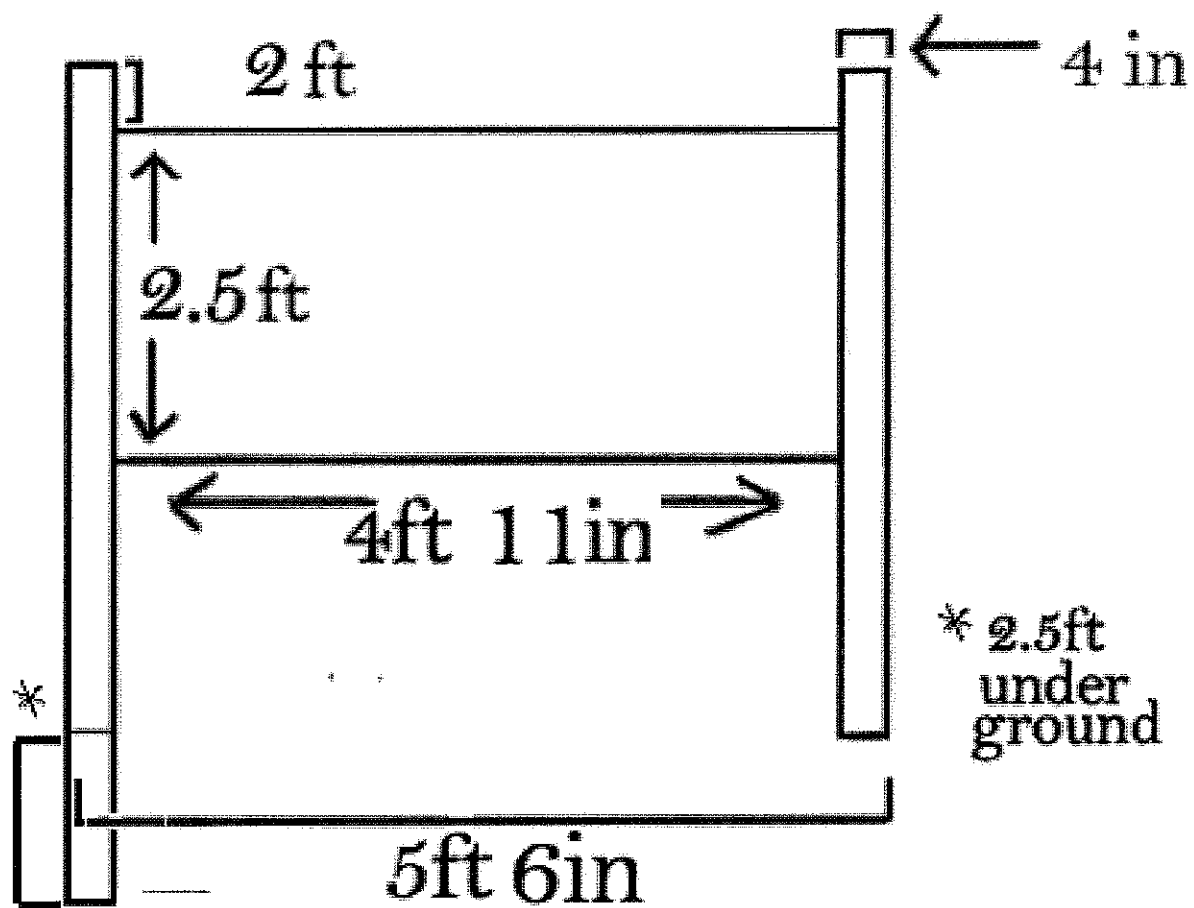


Figure 11, Front view of the kiosk

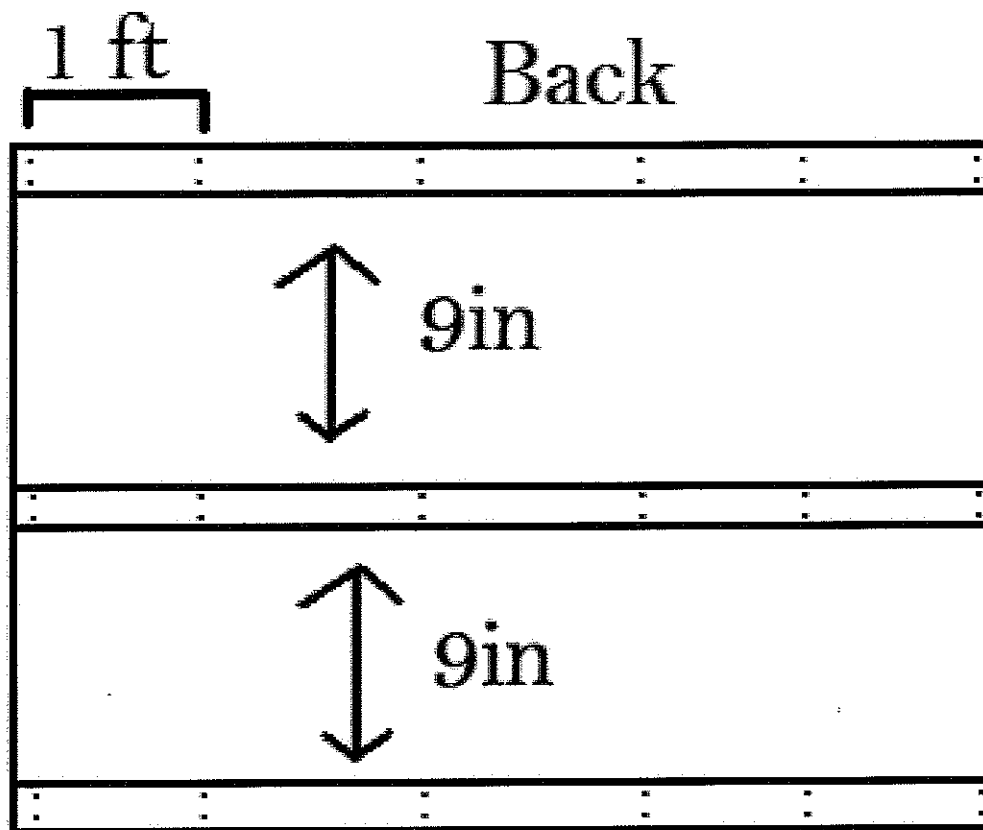


Figure 12, Back of kiosk

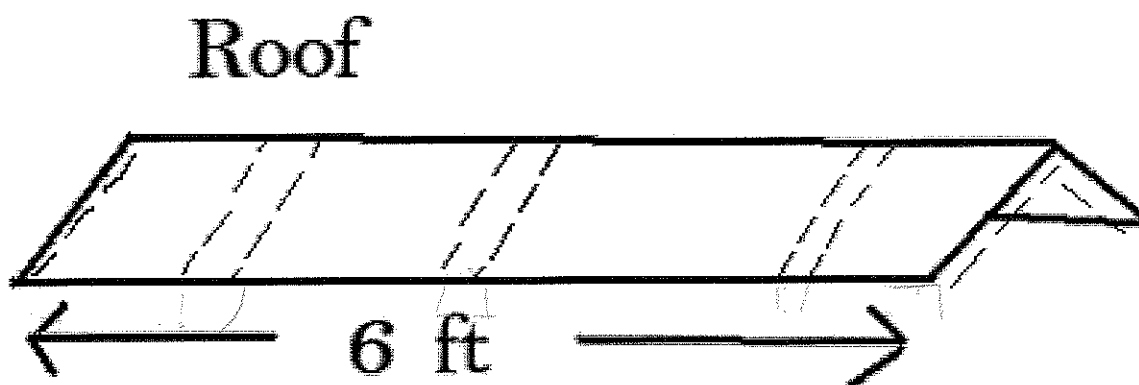


Figure 13, Kiosk Roof Length, 6 trusses

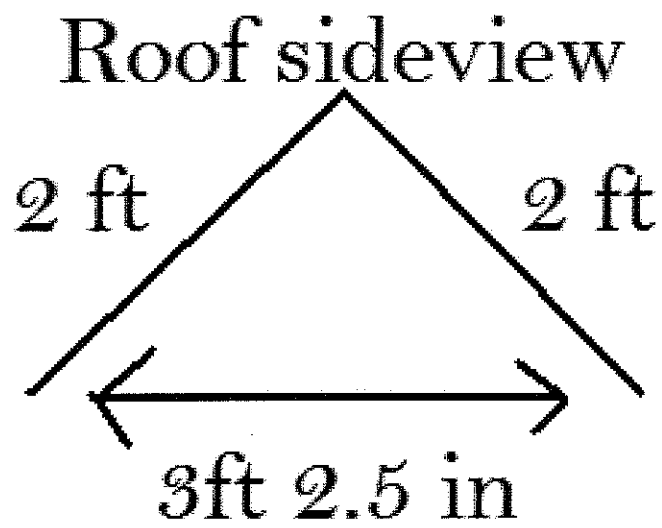


Figure 14, Kiosk Roof Sideview

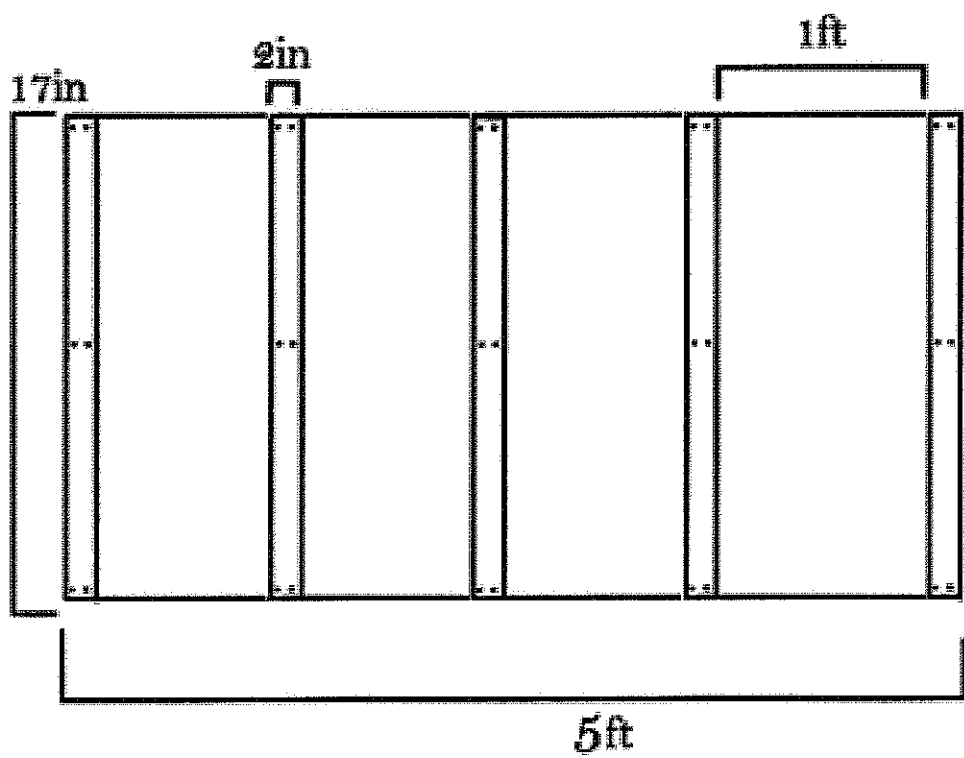


Figure 15, Underside of Kiosk Roof

Vertical Post Installation Detail

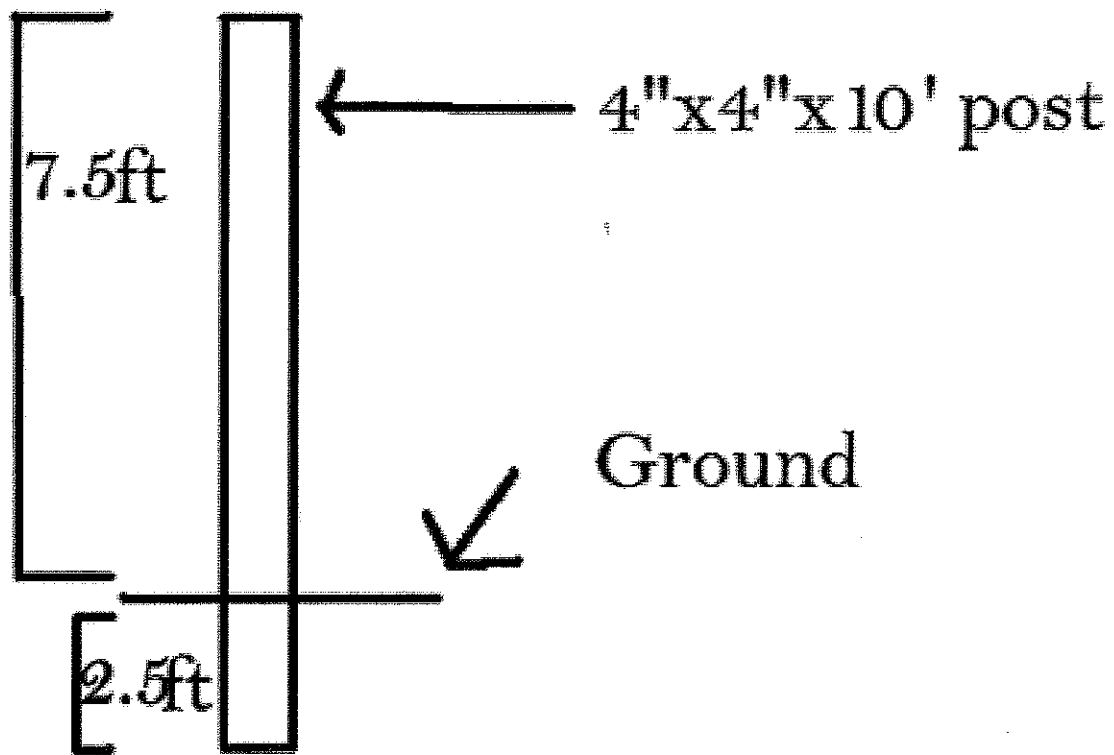


Figure 16, Kiosk vertical post measurements

Vertical Post Temporary Frame

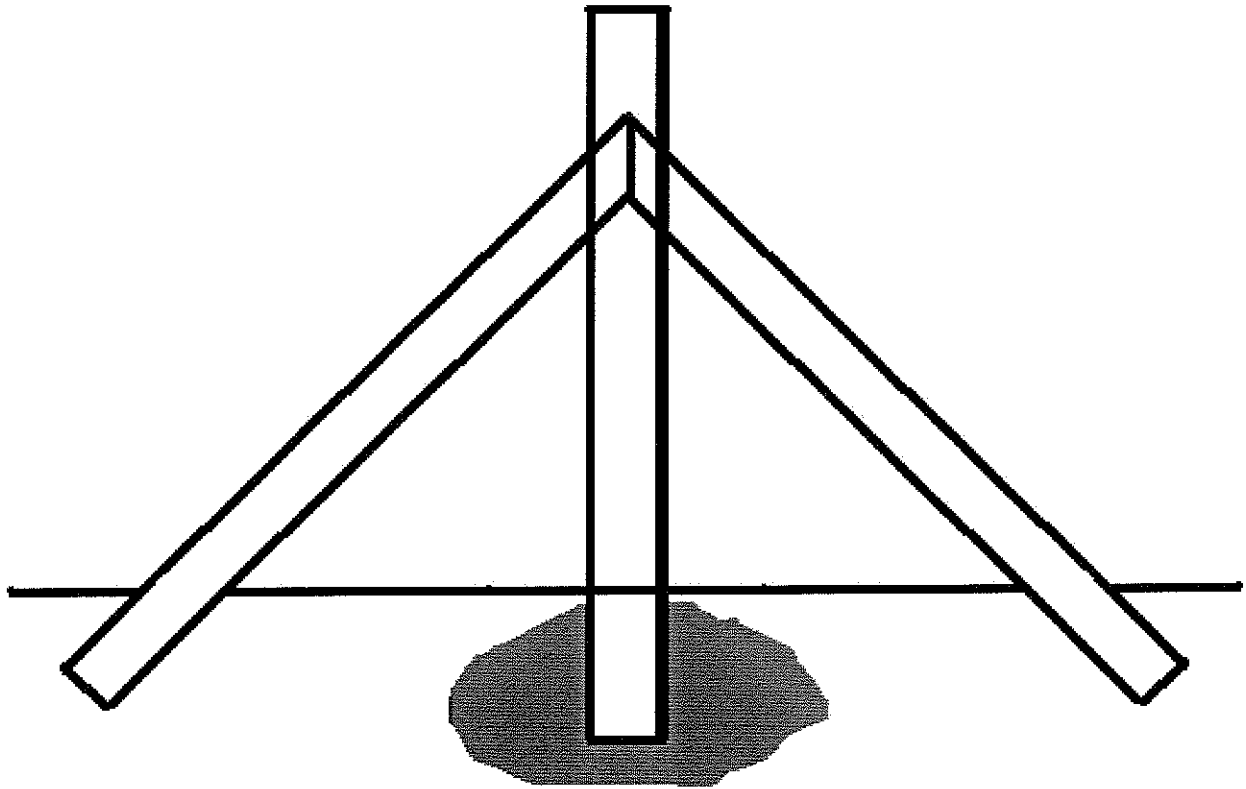


Figure 17, Kiosk vertical post temporary frame

Vertical Post Temporary Frame Sideview

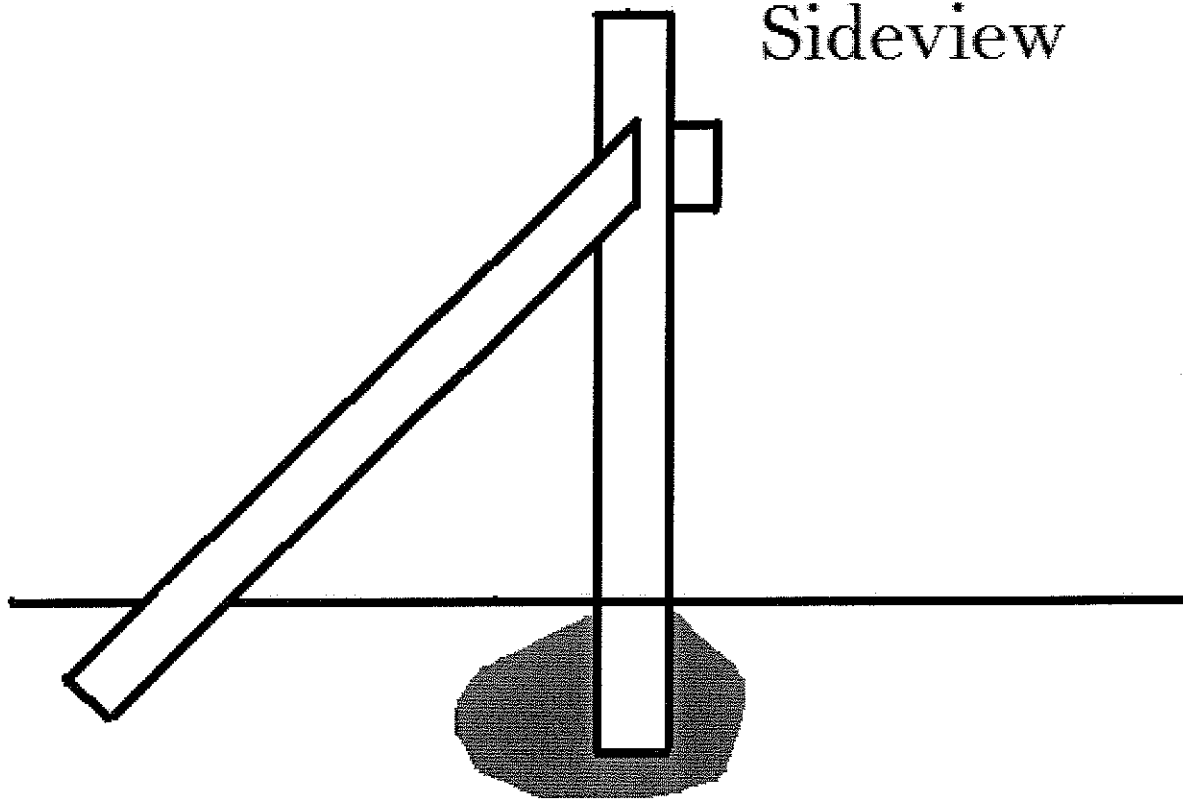


Figure 18, Kiosk vertical post temporary frame sideview

Rafter Diagram on Post Sides

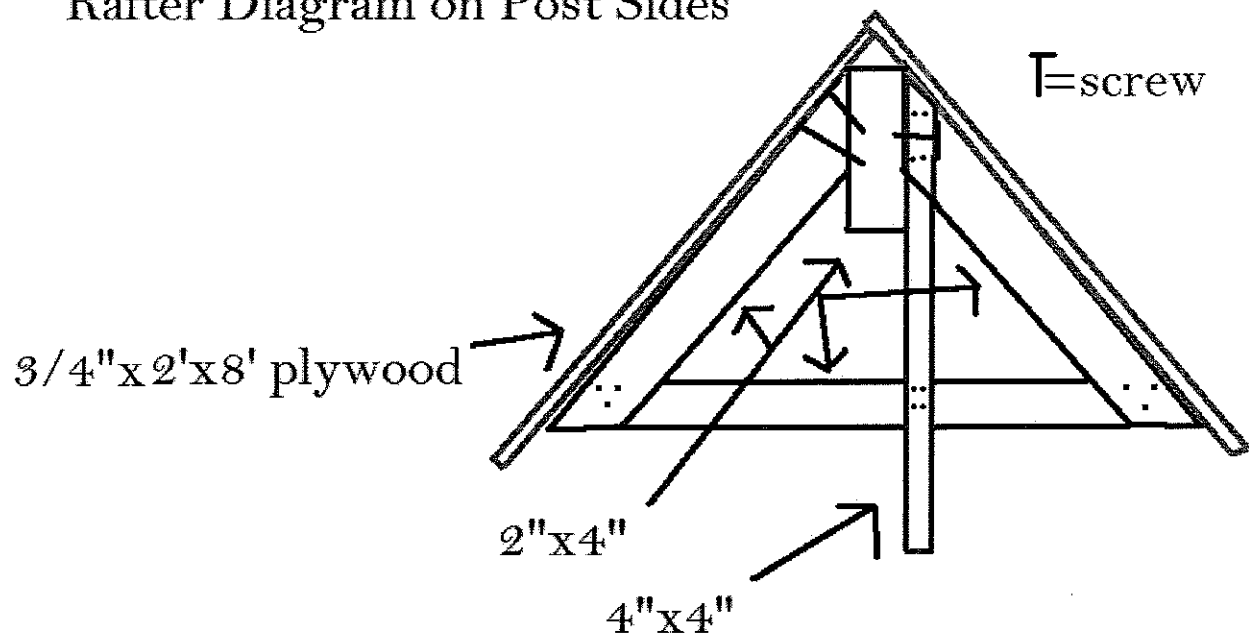


Figure 19, Kiosk Rafter Diagram on Post Sides

Rafter Diagram in Middle, Not on Post Sides

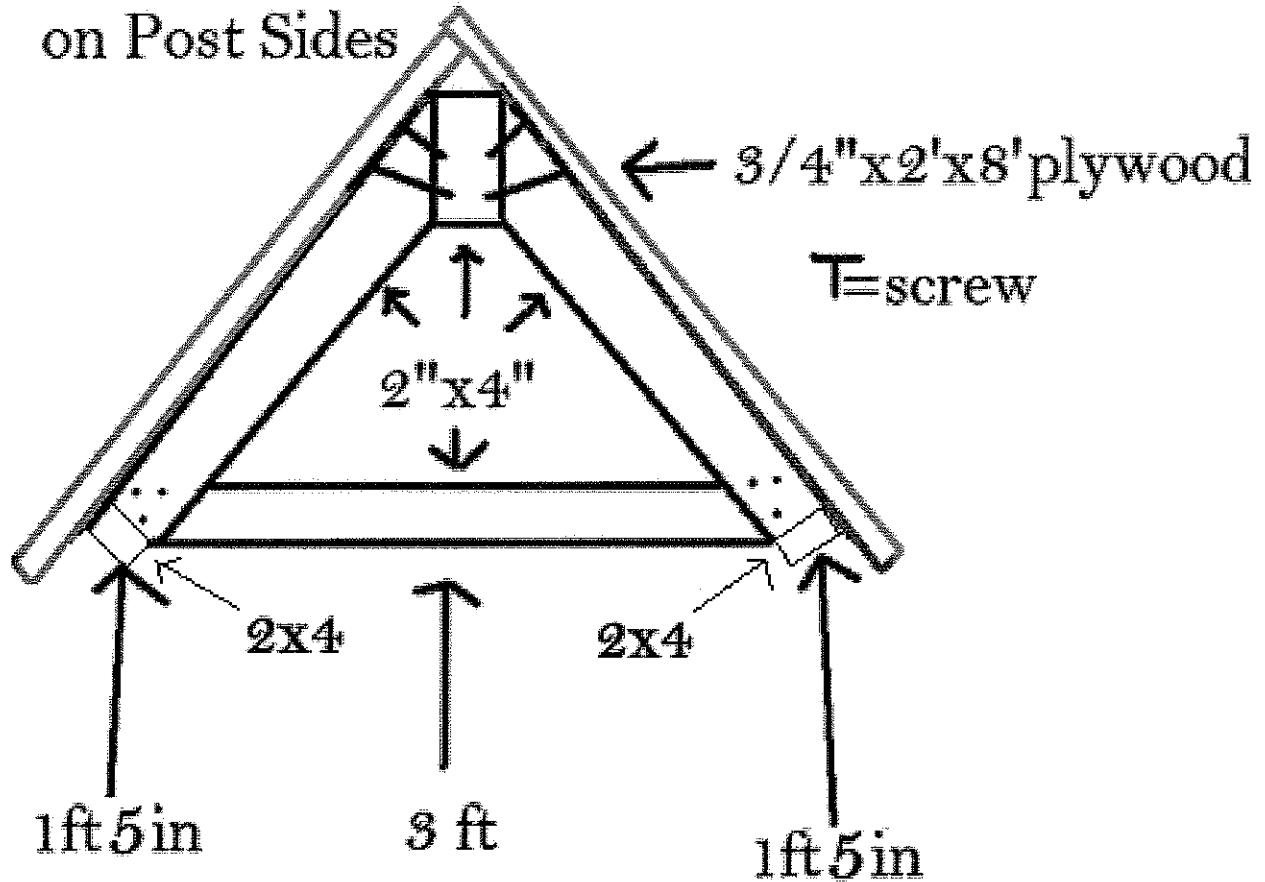


Figure 20, Kiosk Rafter Diagram in Middle

Welcome to the
Greer Gecko Nature Trail

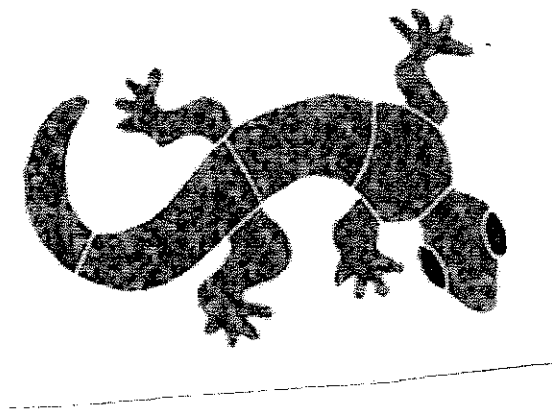


Figure 21, Kiosk Welcome Sign Template

Work Performed	Date	No. of Hours
Met with Mr. Lyles, Mrs. Lemieux, and Mr. Beiter. My mom drove me and waited for me	01/12/10	.5
Went to the nature conservancy with mom	12/30/09	.25
Called the cooperative extension and spoke with Bill Graham	1/22/10	.25
Went to better living to get an estimate on the cost of benches with mom, and spoke with Robert Cash	12/30/09	.5
Emailed Robert cash with measurements	12/31/09	.25
Met with Mary Alice Bond to walk trail	7/10	1
Went on tree identification walk at Ivy Creek with Ellen Powell, Virginia Dept of Forestry.	11/14/10	2
Met with Ellen Powell, Va Dept of Forestry	11/14/10	.25
Met with Mr. Matt Landahl, Principal Greer Elementary	August 2010	1
Created survey on Survey Monkey and sent survey to Greer Staff	October 2010	2
Compiled survey results and made adjustments to plan	October 2010	1.5
Met with Mrs. Bond to discuss the location of the outdoor classroom	Dec 5, 2010	2
Met with the Eagle Advancement Committee	November 2010	.5
Emailed Mrs. Bond about meeting to walk trail	Dec 11, 2010	.25
Emailed Mrs. Rohm About eagle scout project	January 16 2011	.25
Phone conference with Mr. Landahl	January 19.2011	.50
Met with Mr. Rohm	April 1 2011	1
Emailed Mr. Dan Brown to set up an appt for him to look through our construction plans and advise us.	May 2011	.25

Approval Signatures for Project Plan

Project plans were reviewed and approved by:

Religious institution, school, or community representative:

_____ Date: _____

Scoutmaster/Coach/Advisor:

_____ Date: _____

Unit committee member:

_____ Date: _____

Council or district advancement committee member:

_____ Date: _____

IMPORTANT NOTE: You may proceed with your leadership project only when you have ...

- Completed all the above mentioned planning details
- Shared the project plans with the appropriate persons
- Obtained approval from the appropriate persons

CARRYING OUT THE PROJECT

Record the progress of your project. Keep a record of how much time you spend planning and carrying out the project. List who besides yourself worked on the project, the days they worked, the number of hours they worked each day, and the total length of time others assisted on the project.

If appropriate, list the type and cost of any materials required to complete the project. If your original project plan changes at any time, be sure and document what the change was and the reason for the change.

Hours I Spent Working on the Project

The length of time spent should be as adequate as is necessary for you to demonstrate your leadership of two or more individuals in planning and carrying out your project.

Hours I spent ...

Planning the project:

Carrying out the project :

Total hours I spent working on the project:

Hours Spent by Scouts, Venturers, or Other Individuals Working on the Project

Name

Date

No. of Hours

Total number of hours others worked on the project:

For a grand total, add the total number of hours you spent on the project to the total number of hours others worked on the project:

Materials Required to Complete the Project

Type of Material

Cost of Material

Changes

List any changes made to the original project plan and explain why those changes were made.

Photographs

“AFTER” Photographs

Including photographs of your completed project (along with the "before" photographs with the project description) helps present a clearer overall understanding of your effort.

Approval Signatures for Project Plan

Project plans were reviewed and approved by:

Religious institution, school, or community representative:

Matt Randall Date: 5/6/11

Scoutmaster/Coach/Advisor:

John R. [Signature] Date: 5/17/11

Unit committee member:

Christopher A. Beto Date: 5/17/11

Council or district advancement committee member:

_____ Date: _____

IMPORTANT NOTE: You may proceed with your leadership project only when you have ...

- Completed all the above mentioned planning details
- Shared the project plans with the appropriate persons
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