

Joe Yahl
Troop 680
Eagle Project
D.O.B 6/12/94

Vance Trails Park Trailhead Kiosk Valley Park, Missouri



Project Description

My Eagle Project is to build a Trail Head Kiosk at Vance Trails Park in Valley Park, Mo.

Vance Trails Park has a half-mile trail that leads to a park, benches, picnic area, and trash cans along the trail.

The kiosk will be a sturdy 4ft x 3ft display with a roof, plexi glass cover and a cork bulletin board for information. There will also be a small mail box on the side with maps in it for trail users. The kiosk will be painted green to match the other signs in the park.

WHO WILL MY PROJECT BENEFIT

The City of Valley Park has been making improvements to Vance Trails Park.

My project will benefit the city of Valley Park by having a place to put information about the park the trail and other community news. It will also benefit the park users by showing information about the trail.

I put together a plan for the project and contacted the Parks Director Mrs. Pam Kettler for the City of Valley Parks.

I set up an appointment with her and discussed the plan on November 9,2007.

She said the plan looked good but wanted to present it to the Board of Aldermen for City of Valley Park for approval. I put together a packet for the board to review, (See packet # 1) and gave it to Mrs. Kettler on November 13,2007.

The Board met on Tuesday November 20, 2007 and approved the project. Mrs. Kettler called and said that a letter of approval will be sent on November 26, 2007. She also said to save all of the receipts because the board approved to pay up to \$ 450.00 for my project. I met with Miss.Kettler on November 21,2007 and she signed the approval in my project workbook.

Vance Trails Park Project Details

The present condition is;

The city of Valley Park's Vance Trails Park has a one half mile trail that has no trail markings for the trail length, playground or picnic area.

A trail head kiosk constructed of pressure treated wood will have a cork board for trail and park information. A mailbox mounted on the side will hold trail maps (see fig. # 4) that trail users can take and know their way on the path.

The kiosk will be located at the parking lot end of the trail on Hanna road and will be handicap accessible (see picture # 1)

The project will be funded by the City of Valley Park (see fig. 2) and be built by the members of Troop 680. They will build it following detailed plans (see fig. # 1) of a similar kiosk in Buder park in St.Louis County. (see fig. # 3)

The materials (table # 1), the tools (table # 2) and the supplies (table # 3) will be gathered and stored in the Yahl garage the week before the project begins.

The construction teams (see table # 4) will work over three days to build and install the kiosk (see table # 5) and I estimate it will take approximately ninety-seven man-hours to construct. (see table # 6)

I will give a safety talk at the beginning of the project about eye, hand and ear protection, proper tool use and the safe way to handle pressure treated wood. I will also have a cell phone and a first aid kit in case of an emergency.



Picture # 1

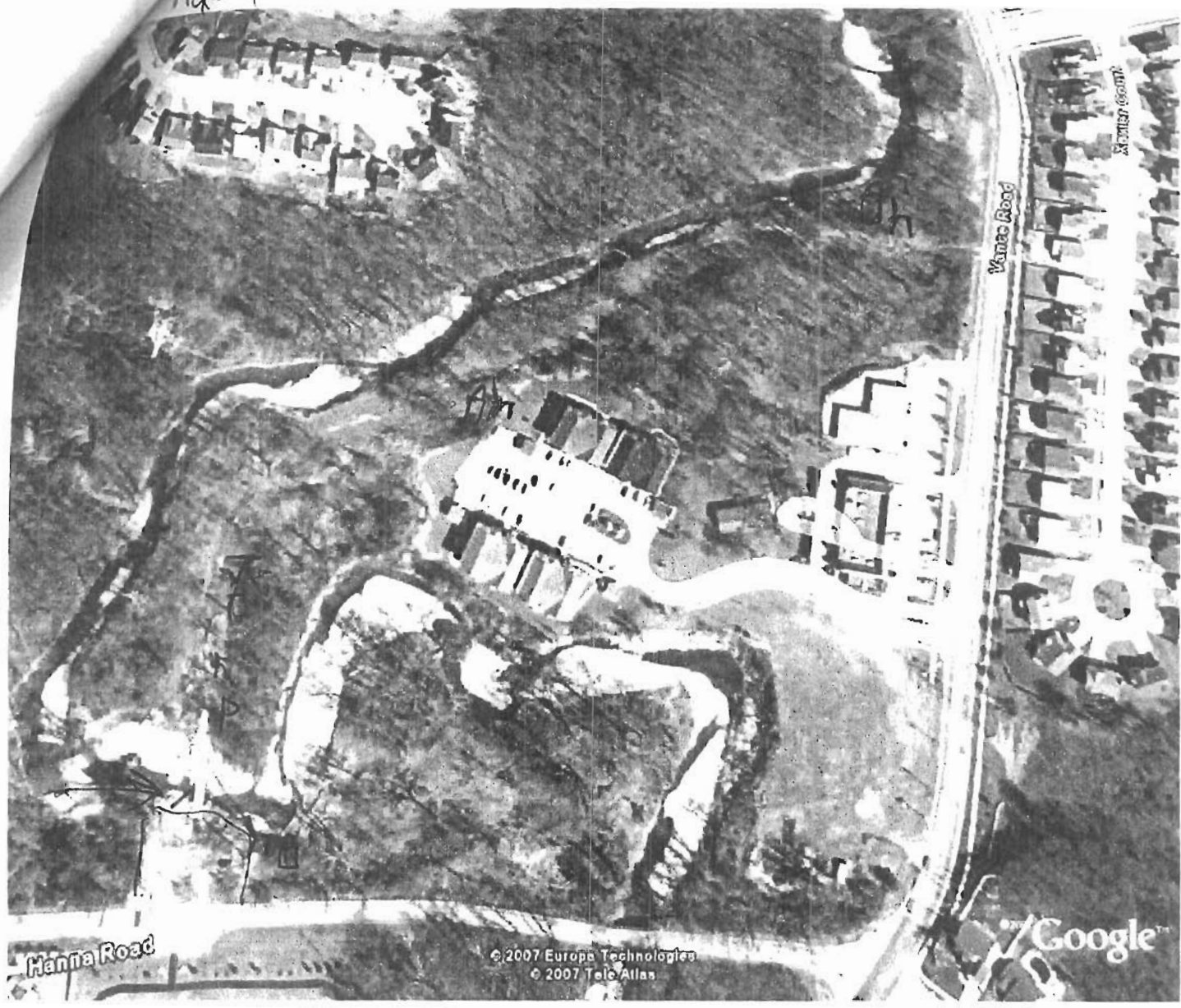




Figure #3



Fig-4



105K

P = Playground

↙ Picnic Area

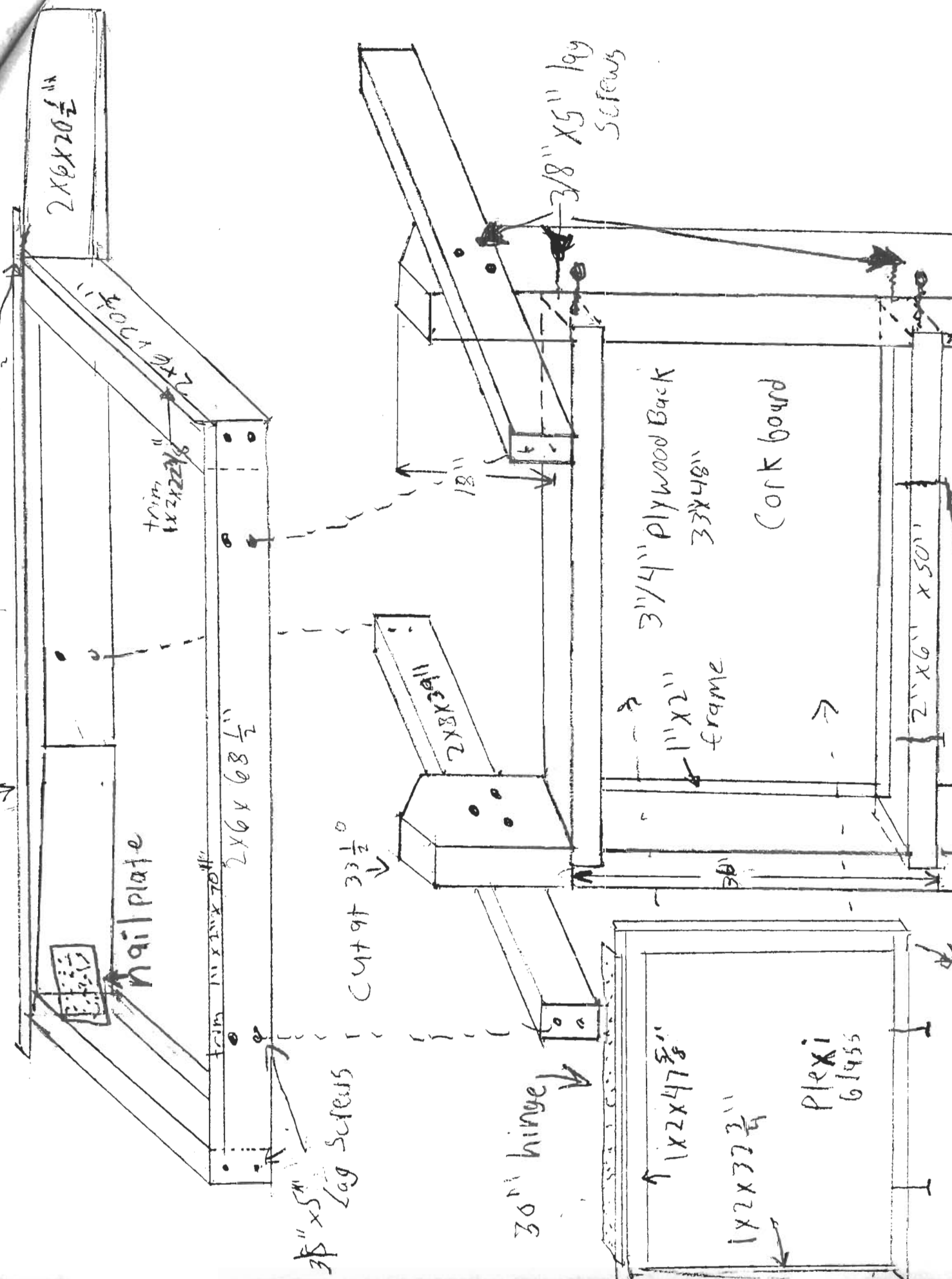
A Trash

B Bench

Figure #1

3/4" Plywood Panel 6'x2'

Cut at 33 1/2"



2x6x20 1/2"

Nail plate

trim 1x2x22 1/8"

2x6x68 1/2"

3/8" x 5" Lag screws

Cut at 33 1/2"

1 1/2 x 2 x 2

30" hinge

3/8" x 5" lag screws

1x2x47 5/8"

1x2x32 3/4"

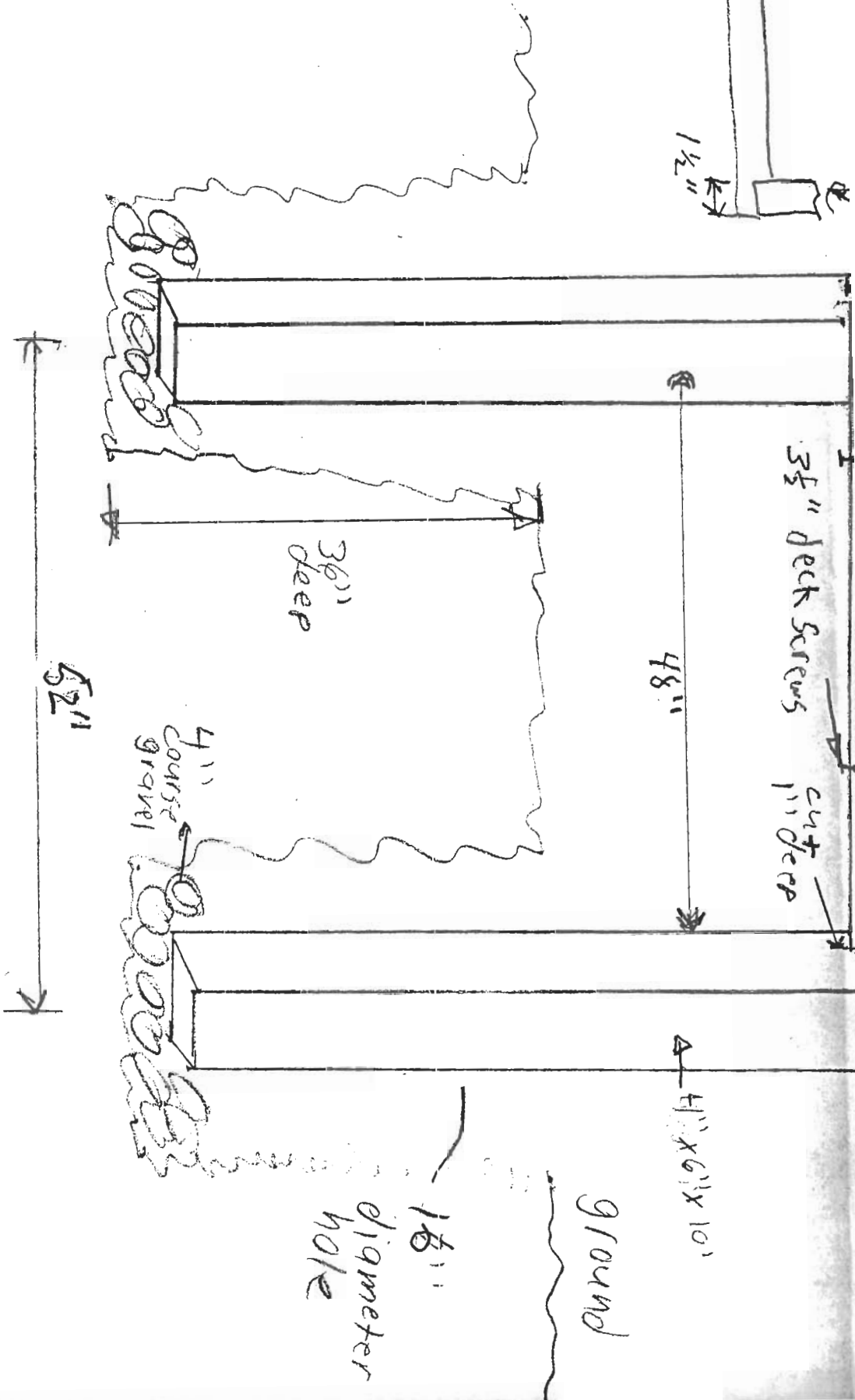
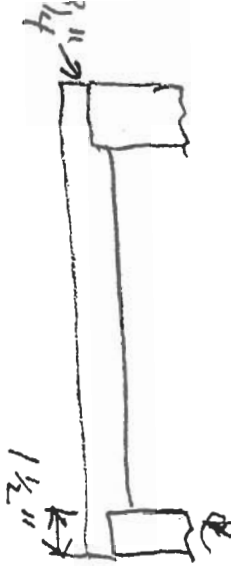
Plexi 61955

3 1/4" Plywood Back 33x48"

1" x 2" frame

Cork board

21" x 61" x 50"



2009-11-12

Scale 1" = 1'

Vance Trails Park Kiosk

Joe Yahl Eagle Project

Figure 1-page1

Team 1 Job Description:

Dig two holes for upright posts. The location will be marked by orange paint prior to the project.

Number of Volunteers needed:

- 2) Adults-Youth protection trained (1 needs a car and 1 needs a cell phone.)
- 2) Scouts

Tools Needed:

- 2) spade shovels
- 1) post hole digger
- 4) pair of work gloves
- 4) pair of safety glasses
- 1) pick axe
- 1) 5 gallon bucket
- 1) 10 ft tape measure

Directions:

Dig two holes at marked locations. Holes will be 16" in diameter and 36" deep. Center to center of holes will be 52" apart.

When digging, put hole dirt approximately 3ft from hole to use for final cover when project is complete. Excess dirt will be put in nearby creek bed.

When holes are 36" deep, fill with 4" of coarse gravel from nearby creek bed for drainage.

Team 2 Job Description

Construct kiosk roof

Number of Volunteers needed:

(3) One must be able to use power saws

Tools Needed:

10'' Miter Saw

10'' Circular Saw

10' Tape Measure

Hand Saw

Protractor

Straight Edge

(2) hammers

(1) razor utility knife

(3) pair of work gloves

(3) pair of safety glasses

(3) pair ear plugs

cordless drill with # 2 phillips bit

Air brad nailer with 2'' staples

Directions:

Cut $\frac{3}{4}$ plywood into (2) 6 x 2 roof panels using 10'' circular saw.

Figure 1- page 3

Cut (2) fascia panels from 2"x 6"x 68 1/2" long using 10" miter saw.

Cut (4) roof truss boards 2"x 6"x 20 1/2" . cut at 20 degrees angle using 10" miter saw.

Cut (2) fascia trim slats from 1"x 2" x 70" long using 10" miter saw.

Cut (4) truss trim slats 1"x 2" x 22" 3/8 long out at 20 degree angle.

Assemble (2) truss boards by butting two cut ends together and using a nail plate, hammer together. (make two of these)

Attach the completed trusses to the back of the fascia boards using 3 1/2" long coated deck screws. use two screws per end, spaced 4" apart.

Center 3/4" plywood roof panels on roof frame and attach to frame using 1 1/6" coated deck screws. Space 6' apart the entire frame.

Attach 1"x 2" roof trim under lip of roof and attach with brad nailer.

Turn roof section upside down and paint the underside. Flip over and paint all outer boards.

Begin installing shingles by cutting tabs off of shingle rows and install first row on lower edge of roof. Leave 1" overhang of shingles on all edges of roof Attach with 3 evenly spaced roofing nails.

Continue installing shingles by overlapping every third tab and using locating lines marked on shingles. (3 nails per shingle)

Figure 1- page 4

At the top, use cut off shingles overlapping on the roof peak set 90 degrees from the shingle rows.

Trim all shingle edges $\frac{1}{2}$ " from using utility knife and straight edge.

Team 3 Job Description

Construct plexi glass frame for bulletin board cover

Number of Volunteers: (3)

Tools Needed:

10" Miter Saw

Hand saw

Brad Nailer

Cordless Drill

1/4" Drill Bit

2 Phillips head screw driver bit

Tape Measure

L square

Jig Saw

(3) Pair of Gloves

(3) Pair of Safety Glasses

(3) Pair ear plugs

Directions:

Cut (4) frame pieces from 1"x 2"x 47 5/8". Using hand saw, cut a notch 1 1/2" long and 3/4" deep on the end of each piece. (see fig. #1)

Cut (4) vertical frame pieces 1"x 2"x 32 3/4".

Lay vertical and horizontal frame sections flat on the floor and attach using brad nailer, (build two of these).

Once both frames are complete, sandwich plexi glass panel between frames and clamp together.

Figure 1- page 6

Mark any excess plexi glass with marker and using jig, saw cut off plexi glass to match frame.

Re-Clamp plexi glass sandwich between two frames and using 1/8" drill bit, drill pilot holes for deck screws. Drill holes evenly spaced 6" around the frame making sure not to drill all the way through.

Using 1/4" deck screws, screw frames and plexi glass together. Do not over tighten or you will break the plexi glass.

Attach the hinge to the top of the panel using screws in a huge package. Make sure hinge is located outside of the frame.

Paint frame.

Remove protective plastic coating from both sides of the plexi glass.

Attach to complete up right frame.

With panel closed, drill two 1/8" holes up through the bottom of the horizontal 2"x 6" and into the panel.

Install two 3 1/2" screws to hold the panel closed.

Team 4: Job Description

Construct kiosk upright posts following plan in Figure 1

Volunteers Needed: (2)

(1) Adult

(1) Scout

Tools Needed:

10" Miter saw

10" Circular saw

10' Tape measure

L square

Protractor

Straight edge

Cordless drill

$\frac{3}{4}$ " Wood bit

$\frac{1}{4}$ " Drill bit

$\frac{3}{8}$ " Ratchet

$\frac{1}{2}$ " socket

(2) Pair of work gloves

(2) Pair of safety glasses

(2) Pair ear plugs

Directions:

Cut (1) $\frac{3}{4}$ " plywood back panel 33"x 48" using circular saw.

Cut (2) horizontal cross boards 2"x 6"x 50" using miter saw.

Cut (2) roof supports 2"x 8"x 38 $\frac{3}{4}$ "

Cut (4) back panel trim boards horizontal 1"x 2"x 38 $\frac{3}{4}$ "

Figure 1- page 8

Cut (4) back panel trim boards vertical 1"x 2" x 31 1/2"

Cut (2) tops of upright posts. Mark center of 6' side of 4"x 6"x10' posts. Use protractor and straight edge, mark 20 degree angles on the left and right top of posts, use miter saw to make cuts.(see fig. #1)

Measure from top of peak and mark inside posts; 18", 19 1/2" and also at 52 1/2" and 54". Place X marks between the 18" and 19 1/2" lines and also between the 52 1/2" and 59" marks.

Using a circular saw set at a depth of exactly 1", make multiple cuts to remove the X'd out areas.

On the outside edge of upright posts notches, mark for two drill holes at the center of notches, 2" from edge, 4" apart.

Use 3/4" wood bit and drill recess holes 1/2" deep.

Place 2"x 6"x 50" horizontal posts in slots and drill pilot holes with 1/4" drill bit.

Attach horizontal posts with 3/8"x 5" lag bolts

Locate 1"x 2" trim on inside of frame. Space 1/2" from outer edge and attach with 1 1/4" screws evenly spaced 6" apart.

Install rear wall with 1/4" screws

Install 1"x 2" trim on inside of back wall.

Install corkboard on inside back panel with brad nailer.

Figure 1- page 9

Place 2"x 8" x 38³/₄" roof supports on outside of upright posts 4" up from top of upper horizontal board.

Measure for three holes in roof support to attach to uprights. Locate holes 2" from outside edges, spaced 4" apart.

Use L square to make sure roof is square with up right posts, drill recess holes 1/2" deep with 3/4" wood bit.

Drill pilot holes with 1/4" bit through roof supports into upright posts.

Attach with 3/8"x 5" lag bolts.

Paint assembled upright posts

After uprights are set in concrete, install roof section onto uprights. Attach with 3/8"x 5" lag screws through fascia boards into roof supports.

Table 1 Materials

Quantity	Description	Price each	Total
2	3/4" Treated Plywood sheet For roof and back panel	24.88	49.76
2	4"x6"x12' pressure treated posts for vertical posts	19.97	39.94
7	2"x6"x8' pressure treated boards for horizontal posts	5.39	37.73
1	2"x8"x8' pressure treated boards for roof supports	7.97	7.97
10	1"x2"x8' pressure treated lumber for glass frame, roof trim	1.79	1.79
1	20 year asphalt shingles 1 square, color charcoal gray	10.25	10.25
2	Outdoor paint , quart BEHR ultra exterior flat, color shaded spruce green	13.98	27.96
1	6"x15" horizontal mail box for trail maps	9.79	9.79
1	3 1/2 " deck screws, green coated, 1lb box	6.97	6.97
1	1 1/4" deck screws ,green coated, 1 lb box	6.97	6.97
1	7/8" galvanized roofing nails, 1 lb box for shingles	1.74	1.74
22	3/8"x5" galvanized lag screws for attaching horizontal posts, roof supports	1.67	36.74
22	3/8" galvanized cut washers for lag screws	0.17	3.74
1	1/2"x30" continuous hinge, nickle finish for plexi glass cover	9.27	9.27
1	36"x72"x.220 thick acrylic plexi glass sheet	72.99	72.99
2	metal tie plates for inside roof truss	0.72	1.44
6	50lb.bags quickset concrete	5.97	35.82
1	cork bulletin board 4'x3'	55.99	55.99
		Total, _____	432.97

Table 2 -tools

	Quantity	Source
Gloves	15	Unigroup donation
Safety Glasses	15	Unigroup donation
Ear Plugs	15	Unigroup donation
Jigsaw	1	Dad
for cutting plexi glass		
1/2"Drill (cordless)	2	Dad and Mr.Biondo
Circular saw ,10"	1	Dad
for cutting ply wood and vertical posts		
Hammers (claw type)	3	Dad
for nailing shingles		
Hand saw	1	Dad
for making final trim cuts		
10" compound miter saw	1	Dad
for cutting frame lumber		
Assorted drill bit set	1	Dad
3/4" wood bit	1	Dad
for counter sink lag bolts		
Broom	2	Dad
for clean up		
Dust pan	1	Dad
Pick axe	1	Dad
Post hole digger	1	Dad
Spade shovel	2	Dad
Air compressor	1	Dad
Cell phone	2	Dad
for EMERGENCY		
First aid kit	1	Troop
for EMERGENCY		
Cooler	1	Dad
for drinks		
Camera	1	Dad
for document process	1	Dad
3/8" ratchet		
1/2" Socket	1	Dad
Concrete mixing tub	1	Dad
4 ft level	2	Dad
Tape measures	3	Dad
L square	1	Dad
Protractor	1	Home depot
Metal straight edge	2	Dad
Utility razor knife	1	Home depot
Brad nailer	1	Dad
Air compressor	1	Dad
5 gallon bucket	1	Dad
for gathering gravel from creek		
2 pound sledgehammer	1	Dad
for temporary post anchors		
6'x10' trailer	1	John's Lawn Service
to haul kiosk to job site		
Portable work benches	2	Dad
Wood clamps	4	Dad
Orange cones	4	Yahl soccer cones
for putting around holes during lunch		

Table 3 - Supplies

Description	Quantity	Source
Paint brushes 2"	6	home depot
Plastic drop cloth 10 x 10 for painting in garage	1	Dad
Trash bags (large)	2	Dad
Pencils	10	Dad
Sharpir marker	1	Dad
3/4 brad nails	1 box	Dad
Gravel for post holes	2 buckets	Creek
Scap 2x4x8' posts for supporting posts while concrete dries	4	Dad
2"x2" stakes for support anchors	4	Dad

Table 4

POSSIBLE HELPERS (SCOUTS)

Matt Cooley	636-205-1275
Dustin Biondo	636-255-3947
Michael Stachiw	636-255-4974
Jimmy Yahl	636-225-3559
John Yahl	314-620-4158
Joe Kuczka	636-677-1058
Matt Kuczka	636-861-9252
Nick Scarfino	636-391-1927
Ty Diersen	636-861-3858
Sam Kemp	636-343-0393
Aaron Dains	636-225-7738
Sam Green	636-391-4194
Craig Dains	636-225-7738
Jaime Biondo	636-225-3947
Patrick Seibert	636-225-4768
Kyle Lehmann	636-225-0760
Justin Efken	636-861-0346
Brendan McClew	636-225-1441

POSSIBLE HELPERS (LEADERS)

Dr. Mike Stachiw	636-225-4974
Mr. Dino Biondo	636-225-3947
Mr. Ted Yahl	636-225-3559
Mr. Joel Efken	636-861-0346
Mrs. Cyndi McClew	636-225-1441

Time	Description
Day 1	
8:30	My dad and I take digging tools down to Vance Trails Park and mark dig site.
9:00	All volunteers meet at Vance Trails Park for project overview. Provide donuts and water for volunteers.
9:15	Plans are reviewed with all volunteers and safety talk about using power tools and working with pressure treated lumber. 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 4 teams. Team 1 stays at site to dig post holes. 2 adults (Youth Protection trained) and 2 Scouts will have cell phone to communicate progress when needed.
10:00	All remaining volunteers (including myself) go to Yahl garage in adult volunteers cars.
10:15	I review all tools available and review detail drawing (see Fig. # 1). Each Team gets a copy of the detail drawing.
10:30	Team 2- Begin building roof according to plans (see fig.# 1) Team 3-Begin building plexi glass frame according to plan (see fig. # 1) Team 4-Begin building up-right posts according to plan (see fig. # 1)
10:30	Call team 1 to check on progress
11:00	Call team 1 to check on progress
11:30	Call team 1 to check on progress
11:45	Call to order pizza
12:00	Call team 1 to come up to Yahl garage to eat lunch. Tell them to bring tools and surround holes with orange cones.
12:15	All workers wash hands due to handling Pressure Treated wood so they can eat lunch. Lunch break.
1:00	All workers return to jobs
1:15	My dad and I return to Vance Trails Park with team one to check on progress and make sure it is going as planned
1:30	My dad and I return to Yahl garage. Teams 2,3 and 4 begin painting assembled kiosk components as they complete construction.
2:00	Check on team 1's progress of the post holes and tell them to clean up area, put orange cones around holes and be up to Yahl garage around 2:30
2:30	All workers begin clean up and stack wood in corner of the garage.
3:00	All workers go home

Day 2

- 8:00 Me and my dad go get trailer to carry kiosk to Vance Trails Park
- 9:00 All workers arrive. (only six workers needed)
- 9:30 Load kiosk completed roof section, upright post sections, concrete, full water jugs and tools on to trailer and transport to Vance Trails Park.
- 9:45 Arrive at Vance Trails Park, unload kiosk and tools get posts in holes. Support with scrap 2 x 4's install roof section onto upright posts and screw in place.
- 10:00 Mix concrete in tub and fill holes according to plan (see fig. # 1)
- 10:30 Allow concrete to set (allow to dry for 24 hours) clean up site and return to Yahl garage to clean up concrete tub and tools.
- 11:00 All workers go home

Day 3

- 9:00 My dad and I and two volunteers return to site and remove temporary supports.
Do final touch up paint, Install mailbox, install Built by Troop 680 sign and post trail information on bulletin board.
- 10:00 Clean up site and take final pictures.

The final step is to contact the Valley Park Director of Parks, Mrs. Pam Kettler to inspect the Kiosk and sign off on the completed project. I will submit all receipts for the materials to get reimbursed from the City of Valley Park.

A 5"x9" sign will read;

Boy Scout Troop 680
Joe Yahl
Eagle Project
December xx, 2007

Table 6

Estimate of Project man hours (not including Joe)

Description	people working	hours
Shop for materials	Dad, John	4hrs x 2 = 8 hrs
Day 1		
Drive to site and prep for holes	Dad, with Joe	30 mins .5 hrs
Team 1 9:00am- 3:00 pm	4 people	6 hrs x 4= 24 hrs
Team 2 9:00am-3:00 pm	3 people	6 hrs x 3= 18 hrs
Team 3 9:00am-3:00 pm	3 people	6 hrs x 3= 18 hrs
Team 4 9:00am-3:00 pm	2 people	6 hrs x 2= 12 hrs
Day 2		
Drive to pick up trailer	Dad, with Joe	1 hour
Take Kiosk to park and set up 9:00am-11:00am	6 people	2 hrs x 6= 12 hrs
Day 3		
Remove temporary supports		
Clean up	Dad, 2 people	1 hour x 3= <u>3 hrs</u>
	Total	<u>96.5 hrs</u>

Joe hours spent on project

9/23/07	Took pictures and drew plans	2 hours
10/15/07	Walked trail and drew map	30 mins
10/2-10/12-10/23	Called to set up appointment	30 mins
11/9/07	met with Parks Director	30 mins
11/11/07	went to store and priced material	2 hours
11/11/07	Material list write up	1 hour
11/13/07	put together project packet for City of Valley Park board to review	2 hours
11/19/07	made tool list	1 hour
11/23/07	worked on write up	3 hours
11/24/07	worked on write up	4 hours
11/25/07	worked on write up	3 hours
11/26/07	worked on write up	<u>2 hours</u>
	Total Joe hours to date	21.5 hrs
	Estimated Joe hours during project	<u>13.5 hrs</u>
	Total Joe project hours	35 hrs.