Goth Park

Project Recommendations
and
Phasing Plan

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I. Project Overview

In 1987, Royce Goth bequeathed 20 acres of old agricultural fields and woodlands to the town of Middleton. His intention was to create a neighborhood park. The southern portion was to remain completely natural while the northern portion site amenities such as a shelter, restrooms and a parking lot could be established. Acceptable activities are either passive including wildlife observation, and nature studies, or low-intensity activities including hiking and picnicking.

With the exception of marking the boundaries, no work was completed on the site after its donation. In 1995 Professor Evelyn Howell and the Landscape Architecture 651 class became involved with the project. The class completed a design, implementation and management proposal for Goth Park. Included in the proposal was a complete site analysis (site and regional land use history, a vegetation survey, soil, hydrology, topography, glacial history and wildlife) alternative master plans and an implementation plan. (For more information on the site analysis consult the 1995 master plan).

Our LA 651 group took over the project in April 1996. After conducting an on site survey, we made several changes to the original proposal. The changes were in the areas of trail design and construction, site amenities and vegetation management. We have also been asked to provide a phasing plan with projects that can be completed by neighbors and volunteers, to point out projects requiring professional help, and assist with educational interpretation to explain the restoration process to neighbors and supporters of Goth park.

II. Goals and Objectives

The neighbors and the City of Middleton Park Commission have asked for the assistance of our class in developing a plan for the creation of a park natural area. Their goals include: restoration of the old fields to prairie, and restoration of the wooded parts of the site to oak woods and savanna. Their goals include providing passive outdoor activities such as walking, bird watching, nature education, improved species diversity, and attracting wildlife such as birds and insects. They would like to maintain the grape arbor as a tribute to Royce Goth who donated the land to the city. They would also like to provide some trails that will be wheelchair accessible.

A decision was made by local residents, not to provide picnic areas or restroom facilities. They felt the nearby city park covered these requirements. (see 1995 master plan, Neighborhood Survey Results section).

III. Site Analysis

Goth Park consists of 20 acres of old field and timbered wood lot. Evidence of past use include; grape arbor and old grape vines, utility road through center of site, stumps in eastern woods. Glacial land forms include 2 kettles, a small one on the west side of the site and a longer one, laying north/south, on the east side of the site. The utility road passes between these two depressions connecting old fields in the north and south sections of the site. Access is along Old Sauk Road at the south.

Remaining on the site are several open-grown bur oaks suggesting savanna-like conditions in the past. Other native species found on the site include hackberry, hazelnut, gooseberry, shagbark hickory. There do not seem to be any young oaks in the wooded areas, however, there are some small bur oaks along the edges of the southern field. There are many species present on the site, either exotic or opportunistic native, that signify an overall degraded condition. These include; honeysuckle and buckthorn (exotic), aspen, black locust, and box elder (opportunistic native). The old field areas contain many exotic cool season grasses.

- refer to previous report for more detailed site survey

IV. Project Recommendations

Plant Communities

We recommend that the north field and the south field be planted with prairie species native to southern Wisconsin. The south field should be completed first so that vehicles and equipment used in the restoration process can use the existing utility road. The western wooded area has several beautiful open-grown bur oaks. This section should be restored to open woods and savanna. The eastern section will be a more closed canopy woodland with widely spaced oaks planted at the southern edge to create a savanna. The existing utility road will eventually be planted with trees to discourage it's use and prevent further erosion.

- refer to Map of Master Plan and species lists in Appendix

Trail System

The proposed trail system varies greatly from the previous one. The trails will be for pedestrian use only. All other uses including skiing, bicycling, and horseback ridding are prohibited. This is because the trails are narrow and the soils are erodable, and cannot accommodate mixed uses.

The trail is designed as a large loop with several smaller ones to provide a variety of routes and experiences to the hiker. The **northern prairie loop** is designed to meet current ADA standards. This trail will start at the parking lot and wind through restored prairie and oak savanna. Construction specification suggest that the grade not exceed 8%, a minimum trail width of 5 feet. A paved surface of crushed limestone is acceptable. Unfortunately the steep topography of the central portion limits the ADA accessible trail to the northern portion of the site.

There will be two trails leading south through the park. The **west trail** begins at the handicap trail and follows a ridge created by receding glaciers. It provides hikers with a view east into the park, and also west, out of the park to a low-lying seasonal wetland/pond. This trail exits the wooded area through the old grape arbor and into the prairie in the south part of the park. The **east trail** begins from the handicap trail and moves through a proposed restored savanna into a woodland. It exits the woods at the east side of the southern prairie trail. The woodland trails will be 2 feet wide and will not require surfacing. We recommend trail blazes be attached to trees along the main trail to discourage visitors from leaving the trail and following deer paths (see Trail Marker section under Low Priority Projects).

The **south prairie trail** will loop around the edges of the prairie. This will be a mowed grass trail, 6 feet wide, which will also act as a natural fire break. This trail will be set in a minimum of 100 feet form the park boundary to protect neighbor's privacy and make the trail appear more natural.

- refer to Map of Master Plan in Appendix

Parking

A small parking lot will be located in the northwest corner of the park. It will be made of crushed stone and provide parking for 14 cars (plus one handicap space). There will also be a bike rack available. The Handicap trail loop will begin and end here. There will be interpretive signs here explaining the restoration process, a commemorative sign to the farmer who donated the land, and a map of the trails.

- refer to Map of Master Plan in Appendix

V. Phasing Plan and Priorities

Phase One

Exotic Tree Removal - (see Vegetation Removal Plan and Phase One Plan in Appendix) - There are several species of invasive exotic and opportunistic native woody species on the site [honeysuckle and buckthorn (exotic), aspen, black locust, and box elder (opportunistic native)]. It is important to control them before planting is begun. We have provided a copy of the DNR Exotic Species Control Manual for a reference source in dealing with problem species as they occur. It provides detailed information including several options for the best control for species that are of concern in natural areas in Wisconsin. The recommendations for controlling the woody species mentioned above, are taken from this manual.

note--Xerox pages from DNR Exotic Species Control Manual are included in this report for the species listed above. We have marked individuals with color coded system for identification and treatment recommendations.

Buckthorn and Honeysuckle - **Red** - cut and herbicide (pull out small shrubs when possible). We marked many honeysuckle bushes but decided to stop because there were too many to mark them all. If workers begin with the marked shrubs, they will quickly be able to identify them on their own. Some of the buckthorn shrubs have been marked. Further marking will be required to assist in identification of this shrub.

Buckthorn is a small tree that may look like a cherry tree to some. It was imported from Europe for landscaping use and has become a problem in natural areas throughout the midwest and many other parts of the country. It has a few distinguishing features. Between the two leaves at the tip of each branch there is a narrow thorn. While the bark looks like a cherry tree, with horizontal patterning, if scraped or scratched, a bright orange color is revealed. The Latin name *Rhamnus cathartica* is appropriate.

Birds love to eat the black berries, but they have a laxative effect, which assists in the spread of buckthorn seeds and doesn't provide the bird with much nutritional benefit.

We are recommending that buckthorn be cut and the stumps herbicided with Roundup. Without the herbicide treatment, these stumps would resprout. All stems should be cut as low to the ground as possible. Herbicide should be applied either by spraying or dabbing on the cut stump. The important area to treat is the ring just under the bark, where nutrient and water exchange occurs. It is best to apply the herbicide right after the stem has been cut. Be careful to avoid getting the herbicide on other plants. Roundup is non-specific and will kill any type of plant. A dye is often added to herbicide to help identify those stumps that have been treated and those that need treatment.

If stems are very small, they can be pulled out. This should not be done extensively because it disturbs the soil and may invite more of these problem species to the site.

Honeysuckle is a shrub with pale bark that has a paper-like peeling appearance. It has a vase shaped branching pattern. This shrub also has berries that birds love to eat, which assists in the spread of its seeds. This shrub was imported from Japan for landscaping use, and like buckthorn has become a problem in natural areas throughout the midwest and many other parts of the country.

We recommend these shrubs be cut and the stumps herbicided with Roundup. Without the herbicide treatment, these stumps would resprout. All stems should be cut as low to the ground as possible. Herbicide should be applied either by spraying or dabbing on the cut stump. It is best to apply the herbicide right after the stem has been cut. Be careful to avoid getting the herbicide on other plants. Roundup is non-specific and will kill any type of plant. A dye is often added to herbicide to help identify those stumps that have been treated and those that need treatment.

If stems are very small, they can be pulled out. This should not be done extensively because it disturbs the soil and may invite more of these problem species to the site.

For both Honeysuckle and Buckthorn, we have chosen the herbicide Roundup because it has been shown to be effective for both. Also it is available at most garden centers and does not require a license to apply. As with all herbicides, care should be taken when applying these chemicals.

- see attached DNR Exotic Species Control Manual sheet for more information.

Aspen - <u>Yellow</u> - girdle all stems (even small ones). This tree is an opportunistic native species that colonizes open or disturbed sites. Aspen have very straight stems that appear yellow-green when young and whiter with dark warty bands when older. It reproduces vegetatively forming a large clump of stems that are connected underground. Controlling this species requires that all of the stems of a clone are treated. If any are missed, the clone will not be killed but instead a signal will be sent that the clone is in danger and new shoots will be sent from buds along the roots. Girdling each stem of the clone will prevent sugars, produced in the leaves by photosynthesis, from reaching the roots. The flow of water should not be interrupted. In this way, the tree will starve over a long period and not realize that it is in danger. No sprouting will occur.

We recommend these trees be girdled in late spring or early summer when sap is flowing. Girdling is easier at this time because water is flowing through the cambium layer, just below the bark, creating a slippery surface. Girdling removes a strip of bark in a band around the tree. As mentioned above, it will interrupt the flow of nutrients and effectively starve the tree. There are several methods for girdling at the recommended time of year.

Girdling Method One - This method is quick and useful for medium sized trees whose bark is not real thick. Use a sharpened blade to cut a strip that goes through the bark to the wet layer beneath (be careful not to cut too deep, ending up in the wood). Next, use a flat tool like a wood chisel, putty knife, wide screwdriver, etc., to pry between the bark layer and this wet layer. Scrape the tool around the trunk of the tree between these layers, being careful to complete the circle, separating the bark layer from the tree.

Girdling Method Two - This method works well for bigger trees that may have thick bark. Use a saw to cut two parallel rings around the trunk. Make sure you are through the bark. Next, use a hammer to knock off bark between the cuts.

Girdling Method Three - for very small stems. Even the small stems need to be girdled. A good way to do this easily would be to use pliers to grip the stem. Turn the pliers around the stem scraping off the bark in a ring. They can also be scraped with a pocket knife.

- see attached DNR Exotic Species Control Manual sheet for more information.

Black Locust - White - herbicide each stem. Black locust is a species that is a native in the southern part of the country. It was introduced into this area and has become a problem in open areas and prairies. It does not survive well in shaded areas. Young stems have many sharp thorns on the trunk and branches. As the tree gets older these seem to disappear. This species, like the aspen, reproduces vegetatively forming a large clump of stems that are connected underground. Controlling this species requires that all of the stems of a clone are treated. If any are missed, the clone will not be killed but instead a signal will be sent that the clone is in danger and new shoots will be sent from buds along the roots. This species is sensitive to girdling.

The most effective method for controlling black locust is a bark application of herbicide. The herbicide to use is Garlon 4 in a mixture of 2 1/2 ounces of Garlon 4, to one gallon of diesel fuel. This should be sprayed in a ring at the base of each stem until it begins to run down. The effect is to girdle the trunk with the herbicide. It will soak through the bark and be taken into the nutrient flow of the tree. The best time for this control is during a time when the tree is actively growing. As mentioned before, care should be taken when applying any chemicals. Follow directions for use and wear proper clothing. **This chemical requires a license for its use and a professional should handle it.**

- see attached DNR Exotic Species Control Manual sheet for more information.

Box Elder - not marked at this time - cut and herbicide. Box elder is a native species, it is shade tolerant and fire sensitive and does not occur in oak woods. The

removal of this species will allow light and space for oak regeneration, and allow for the use of fire as a management tool to control the growth of shrubs, and encourage native forbs.

Trail Improvement - The trail system has been laid out. The trail through the south field needs to be mowed. The trail through the north field can be mowed until the time comes when it will be replaced with stone. The trails through the wooded areas should be graded where necessary and shrubs and trees that block the path should be removed. To prevent people from wandering off the trails and following deer trails, we suggest that the walking trails be marked (see Trail Markers in Project section).

Phase Two

Plant Prairies - The fields should be burned occasionally, every 3 or 4 years to discourage shrub encroachment, until the prairie plantings can be begun. The south field should be completed first so that vehicles and equipment used in the restoration process can use the existing utility road. We are providing several options for the creation of prairies at Goth Park.

South Prairie Restoration - Restoration of the south prairie should be done before restoration of the north prairie and planting of oaks has begun. The utility road used by Mr. Goth will serve as access for restoration equipment.

- A description of the restoration process is included in the Photo Section. Pricing information is included in Appendix C

- see map of Phase Two Plan in Appendix
- see list of common prairie species in Appendix #

Phase Three

North Prairie Restoration -

Parking Lot and Handicap Trail Construction -

Phase Four

Oak Planting - Planting of bur and perhaps white oak will help to fill in the open rise immediately south of the park entrance. These species, especially the bur oak, are consistent with a prairie-savanna restoration. Plantings in areas where aspen, black locust, and honey suckle have been removed are also recommended. If white oaks are included they should be mixed with bur oak near the existing tree line then going over to bur oak alone further out.

To maintain a savanna like appearance tree placements should be random (no straight lines) and widely spaced. Take a look at the scattering of oaks in the far southwestern corner of the park. Trees should be spaces far apart or in clumps of 2 to 4 individuals. Clumping trees allows for some losses due to stress.

- see Phase Four Plan for oak planting and spacing.

A brief description of bur and white oak

Bur oak (*Quercus macrocarpa*) is the most distinctive of the eastern oaks and is characteristic of savannas here in Wisconsin. It is a very hardy, fire resistant tree with an interesting gnarled appearance even when young. It commonly reaches a height of 70-80' with dark, deeply ridged bark.

White oak (*Quercus alba*) is a large, slow growing tree with the diameter of a mature specimen often greater than 4'. The trees you plant will be open grown and so will develop a wide-spreading crown of rugged appearance. White oaks can live for more than 400 years on good sites so you'll be planting something with staying power.

Utility Road - After establishing the south prairie, oaks will be planted to close off utility road connecting the 2 wooded areas. A mixture of white and bur oaks will be planted (see plan). We advise closing off this path through the park because of the erosion problem it creates, and it visually divides the park making it seem small. By planting trees here, we are visually blocking this path and encouraging use of the marked trails. Further measures may be needed to keep people from walking up this closed road. Temporarily roping off of the area, or fencing, may be required.

East Woods - establish young oak trees in woodland. Red oaks are most shade tolerant and should be used to augment the oak population of this woodland. Oaks are fire tolerant. Their leaves provide the fuel needed to carry a fire through the woods. The shade produced by oaks is less dense than most other tree species allowing light to enter woods and encourage the growth of woodland forbs and grasses.

North Prairie - As the black locust trees are killed, scattered oaks can be planted. These will be widely spaced or planted in small clumps to create a savanna planting. Prairie species will survive nicely under these young trees. As the trees mature, many years from now, more shade tolerant species can be added. Bur and white oak are recommended for this area.

Phase Five

Woodland Flora Planting - When money is available, woodland species can be planted. Many can be added as seed, which may be available for free from local organizations, or native plant gardeners. If large patches of bare ground are exposed after cutting down woody species, Plantings of native annual woodland grasses and sedges will help prevent weeds from invading.

- see list of common woodland species in Appendix #

Ongoing Maintenance

Maintain trails - Ongoing maintenance. Repair damage, pick up trash, block un-mapped/illegal trails, police for proper use (no bikes, horses).

Prescribed Burns - Ongoing - Prairie areas should be burned every 2 to 3 years in the spring to discourage shrubs and encourage prairie grasses. Wooded and savanna areas should be burned every 3 to 4 years to remove leaf litter and discourage shrubs and exotic species. No more than half of any unit should be burned in any given year. The Department of Landscape Architecture will be available to assist with burns in the future.

Exotic Plant Patrol - Ongoing - Watch for resprouting of cut trees and shrubs, and reappearance of problem species. Watch for new problem species in prairies, such as white sweet clover and wild parsnip. Watch for new problem species in the wooded areas such as garlic mustard.

- Future Landscape Architecture 651 classes will be available to assist with prescribed burns and exotic species identification.

List of Low Priority Projects

This is a list of projects that can be done at any time. They will all greatly benefit the users of Goth Park.

Trail Markers - A simple method for marking trails is to use the circular ends of tin cans. They can be painted (blue is the least intrusive color and most often used to mark trails) and they do not rust. These can be nailed to trees along the trail using rust proof nails. By marking the trails, we can discourage the use of deer paths and avoid erosion problems that may result.

It may be helpful to mark the entrances of the woodland trails with signs or posts. This will make them very visible to park users.

Bluebird Nest Boxes - These can be constructed and placed in the fields at the edges of the wooded areas. This can be done even before prairies have been established.

- Appendix E includes construction plans for the building of Bluebird nest boxes as well as bat houses

Repair Grape Arbor - Remove shrubs and saplings from the arbor. Repair the posts and wire of the arbor. Prune the grape vines (this is best done in early spring before the vines begin growing). Mow grass in and around arbor. The mowed area will act as both a walking path and a firebreak.

Build Benches - Split log benches were recommended in the previous report, and would make a great addition to the park. Several sites for benches have been suggested in the plan. Others can be added at your discretion.

Interpretive Sign - A large sign/bulletin board at the parking area would be a great asset. It can include information about the previous landowner, educational information about the restoration process, and a trail map, plus it can be changed as needed to announce events.

Other Recommendations

Keep gate locked to discourage driving into the park until the parking area has been built and the utility road has been closed off.

Remove debris - A large amount of barbed wire was found at the south edge of the east woods. If there are other debris problems they should be removed early to prevent visitors from getting hurt.

Adjoining Land Uses - Consider purchasing woods to the east of the park if it becomes available in the future. If this is not a possibility, develop a working relationship with the current land owner to manage invasive species on his land.

VI. Conclusion

Our group has provided the next step in an evolving project. Future Projects may include: assistance with exotic vegetation management, prescribed burns, and possibly prairie planting. It is our hope that the information contained in this report will help Goth Park neighbors begin work on this community supported project.

Appendix A

Maps

Maps included in this section:

Master Plan

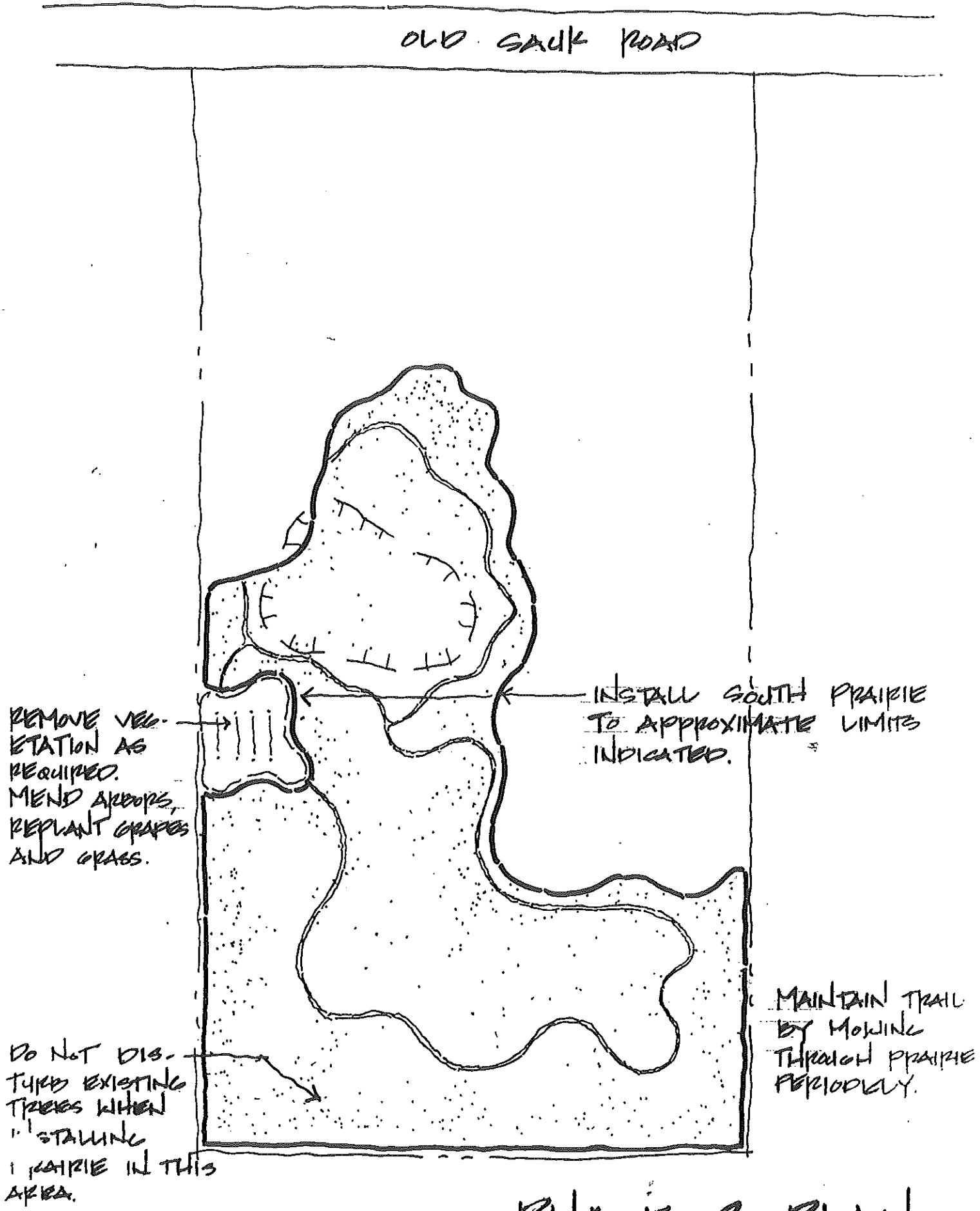
Vegetation Removal Plan

Phase One Plan

Phase Two Plan

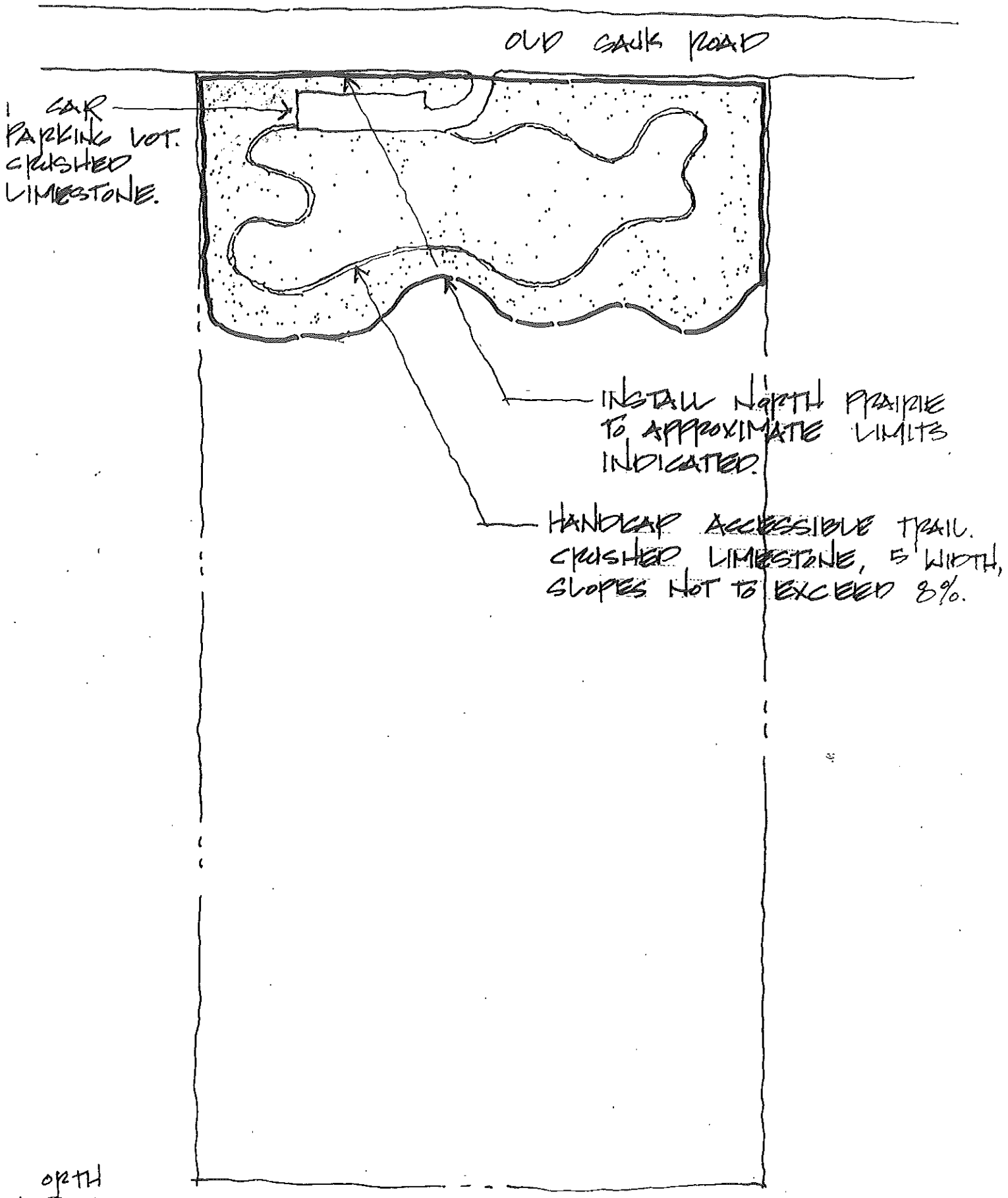
Phase Three Plan

Phase Four Plan



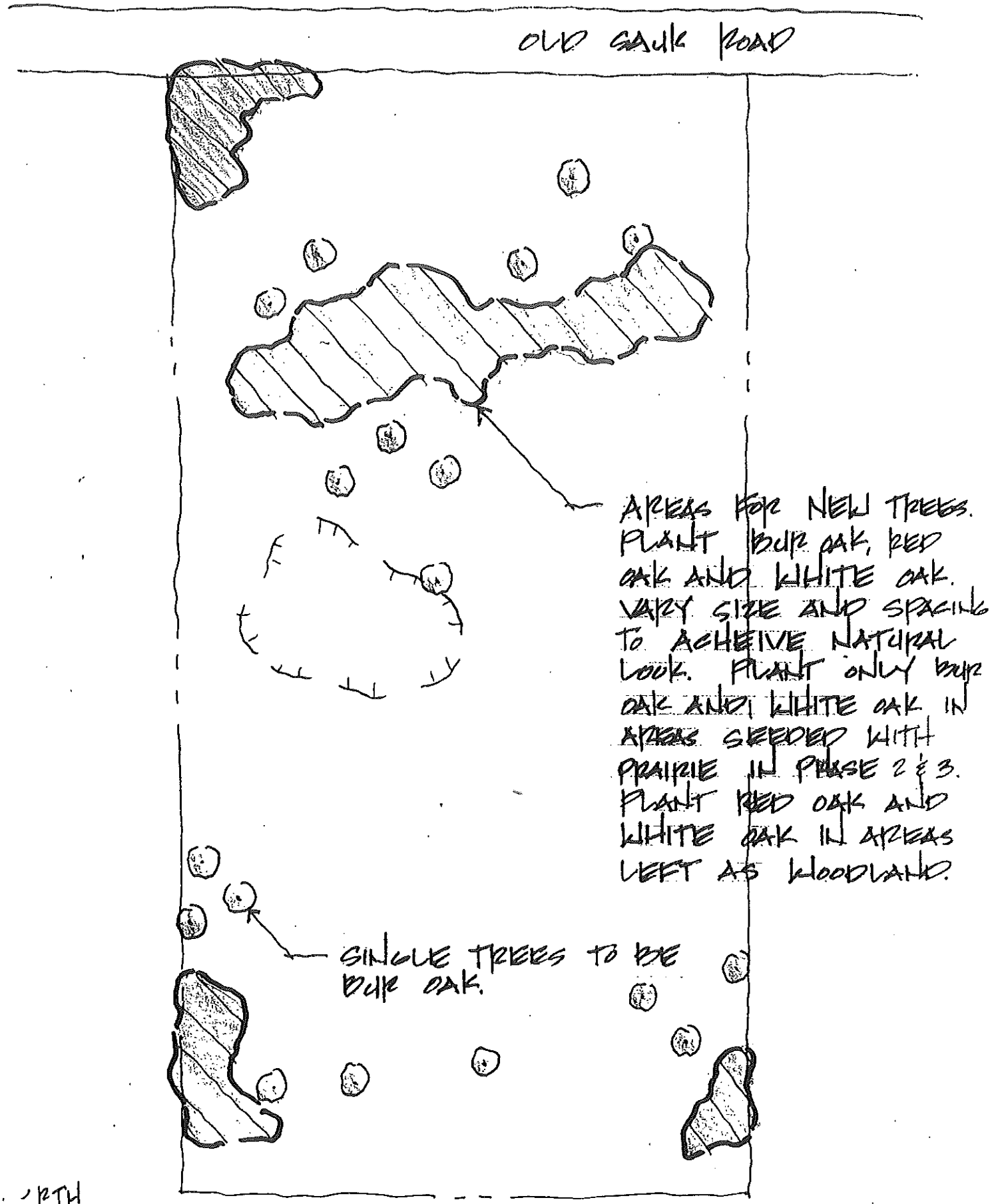
PHASE 2 PLAN

60TH PARK



PHASE 3 PLAN

GOTH PARK



PHASE 4 PLAN

GOTH PARK

Appendix B

Public Education and Photos

Public Education

A few steps can be taken to help educate the public as to what's taking place at Goth park as the prairie sites are being restored.

First, we would recommend a sign be erected by the road, near the Goth Park sign, stating something to the effect: "Natural Area Restoration In Progress" to reassure citizens and visitors alike that what is happening at the park is intended to happen.

Second, we would suggest that a newsletter could be distributed among the residents, explaining what is happening at the park. It can feature these photos, and along with text that states: "This is what you can expect in the first year ...", "This is what you can expect in the second year ...", etc., using the information we have just provided. Additionally, the newsletter could also explain why so many of the trees (i.e. the aspen, black locust, buckthorn, and honeysuckle) are being removed.

It should be noted that this is just one example of the progression of a prairie planting. Other plantings can progress much differently; dependent upon a number of variable factors, such as preparation of the site before planting, condition of the site at the time of planting, time of year the planting occurred, species mix planted and climatological conditions during the growing seasons.

Additionally, there is no one "right" way to go about planting a prairie for the "best" results. Many different approaches are taken, and all have their good points and bad points. The one thing to remember is that once the planting has been done, as long as things progress in a general fashion as represented here, it is best to just stand back and let nature take its course.

Photos

Prairie Restoration Process

For the first three photos, please note the tallest tree in the middle, this is the control point. It indicates that, in all images, the point of view is always the same, and the same area is always being looked at. These photos were also taken at roughly the same time of year for comparison. These images look at the progression of one prairie restoration planting at the International Crane Foundation, in Baraboo, Wisconsin. The fourth prairie photo shows an established prairie, many years after restoration.

First Prairie Photo (taken November 1989)

This is a brome field that has been burned over. The site was then treated with herbicide twice during the growing season of 1990. Prairie species were then planted in November 1990. Preparation of the site may vary according to the characteristics of the site, and the personal preferences of the persons doing the restoration work.

After the first growing season, the composition of dominant species by cover is mostly "weedy" species, ragweed, horsetail and pigweed. This is typical in that the prairie species will put their growing energy primarily into establishing their root structures, rather than into above ground growth. Therefore, the appearance of "weedy" species in the first few growing seasons should not be a concern, and will disappear after several growing seasons, as the prairie species begin to establish themselves above ground.

Second Prairie Photo (taken October 1992)

The second growing season is now complete. The species now appearing are Canada wild rye and mullein. Canada wild rye is a native grass, planted as "nurse" species to provide protective cover to the plant species that will eventually compose the final prairie plant community. As the forbs and warm season grasses that will compose this final community begin to grow above ground, the Canada wild rye and mullein will begin to become less dominant.

Also note that ragweed is still common, but no longer as dominant, indicating that the "weedy" species are beginning to disappear.

After the third growing season, Canada wild rye is still abundant, but is becoming less dominant. The warm season, native grasses are now starting to become evident. Also, forbs, such as aster, are also starting bloom. The warm season, native grasses (some of the common species of this variety are little bluestem, big bluestem, Indian grass and prairie dropseed) and the forbs are the species that are the final outcome on the prairie restoration.

Third Prairie Photo (taken October 1995)

This photo shows a prairie restoration after 5 growing seasons. The warm season grasses have now become dominant, but will continue to increase in the percentage of the total cover they will represent.

Fourth Prairie Photo

This photo shows an established prairie, many years after restoration. Many blooming native prairie herbs are visible, as well as the warm season grasses. This is what the Goth Park prairies will look like ten years from planting.

Prescribed Burn

Fire is a necessary part of managing prairie, savanna, and oak woods. Historically, fire was used by native Americans to reduce brush and encourage the growth of grasses. The grasses were important for attracting grazing animals such as bison and elk which the native Americans depended on for survival. Fires also started naturally from lightning strikes. In pre-settlement times, fires would burn thousands of acres at a time, burning across states.

The plant species that naturally grow in these communities are adapted to, and many depend on periodic fires. Over several growing seasons, the dead stalks of prairie grasses build up. The removal of this built up duff encourages vigorous growth and seed production. Oak trees

are adapted to periodic fire as well. They have very thick bark that protects them from fire that would kill other more sensitive species. They also have the ability to resprout after being top killed, if a fire was too intense. The many species of herbs growing in prairie and oak communities have very deep root systems. This is an adaptation that allows these plants to survive grazing, drought, and fire.

Prescribed Burn Photo

Prescribed burns are commonly used to manage prairie and oak communities. A burn crew is trained to use fire safely. A fire will only be started if the weather conditions allow for a safe burn, with desired wind direction and wind speed to reduce the chance that the fire will spread to adjacent land. A backpack sprayer, containing 10 gallons of water, is carried by each person on the burn crew. This water is used to control the spread and direction of a fire, but is not sufficient to put out a fire that gets out of control. A drip torch uses a mixture of diesel fuel and gasoline to drop a bead of ignited fuel. . Some crews use rakes to carry burning grasses as an ignition tool. A flapper is a rake handle with a flap of rubber attached. This tool is used to smother small flames. In some cases, a truck with a water tank and pump is kept nearby for emergencies and to refill backpack tanks.

Oak Savanna Photo

This is a picture of an established oak savanna. The oak savanna was once a major landscape type in southern Wisconsin. Since the times of settlement and the absence of fire, these savannas have grown into woods. The oak trees with open grown branching patterns are still evident in many wooded and grazed areas in this part of the state. Early settler accounts spoke of oak savanna as having an open park-like feel. They are characterized by widely spaced open grown trees with an understory of small shrubs, grasses and forbs.

There are several of these open grown oak trees present in Goth Park, suggesting a savanna was present on this site in the past. Planting widely spaced oaks in several locations will result in a re-establishment of this community type. It will take many years for the plantings to look like this photo, but this is the goal.

Appendix C

Goth Park Prairie Planting Estimates

As a part of the Goth Park master plan, we have contacted two landscaping firms in the Madison area that offer a full range of consulting, restoration, and management services for native landscaping projects. The two firms we have contacted and received materials from are CRM Ecosystems Prairie Ridge Nursery, located in Mount Horeb, and Agrecol Ecological Agricultural Technologies, in Sun Prairie. The materials from the landscaping firms included in the master plan package are not to be taken as price quotes for Goth Park because prairie restorations costs are site specific. The figures offered in these materials should be used only as rough estimates for prairie plantings that may be suitable for a 12 acre dry mesic prairie site much like yours.

Important Considerations

An important thing to remember when considering a consulting firm is to look locally. There are at least two advantages to contracting a local firm. First and most importantly, local firms usually have access to seeds that are of a local ecotype. This means that the species will be well adapted to the local environment offering the best chances for survival. Secondly, consulting and management services include travel time and the cost of moving equipment to the site in their estimates. The more locally you hire, the less travel expenses you will encounter, leaving more funds available for restoration efforts. Many firms that charge by the acre for restorations include travel, activation, and daily equipment costs in the price of the first acre. Subsequent acres would be cheaper, but still often include charges for travel.

When contacting a consulting firm, the first thing they will tell you is that they need to visit the site to inventory the soils, slopes, sun exposure, moisture conditions and present vegetation. Consultation also includes discussing priorities, goals, and budgets for the project. For a successful restoration free of unforeseen costs, a site consultation may be an excellent first step towards your restoration. Most firms can accomplish a site inventory in a couple of hours and usually offer a follow-up letter outlining their recommendations, as well as a written guarantee for the quality of their workmanship.

CRM Ecosystems, Inc.

An option offered by CRM Ecosystems is group consulting classes which cover the sequence of information needed to begin a successful restoration. For example, CRM is offering a course on identifying seedlings on July 13th, a course on site preparation for sunny or shady sites on August 3rd, and a class on burning decisions on September 28th. The sessions last approximately two hours offering individualized attention for $25 per session or $95 for four sessions. We have included an outline of these classes in the packet, but feel free to call their office at 437-5245 for any additional information.

CRM recommends scheduling a site visit by their senior consultant and founder, Joyce Powers, to determine the correct process by which the establishment should take place. Her billing rate is $100 per hour, or $1000 per day. Another option offered by CRM is a site visit by their prairie specialist and nursery manager, Carmen Hardin, who's billing rate is $60 per hour.

Either of these experts would be able to offer recommendations for site preparation and installation given a few hours visit. Once they have seen the site they could give you a more accurate estimate of the costs for site preparation, seed mix, and installation.

CRM Ecosystems provides site preparation, installation of seeds and plants, and maintenance for native plant communities. Included in the packet are cost estimates for prairie installation and seed mixes, as well as a listing of potential species for your restoration. Also, if you are interested in consultation but wish to do much of the work yourselves, CRM is happy to provide you with instructions. Included is a price list for CRM's tall grass prairie seeds needed for one acre. The base seed price for five grass species and approximately 20 wildflower species from CRM Ecosystems is $1123.50 for one acre with no site preparation. A rough estimate for installation of the prairie would be $2850.00 for the first acre (including seeds, equipment and labor), with subsequent acres costing $250 plus the cost of the seeds. An itemized list detailing other planting options is included in the packet. A listing of potential Custom Blended Wildflowers available from CRM Ecosystems for Goth Park is also highlighted in their 1996 price list.

Agrecol Ecological Technologies

We have also received some initial price estimates from Agrecol Ecological Agricultural Technologies for Goth Park. Agrecol also offers a full range of seeds, potted plants, contract growing, as well as consulting and installation services. As a general guideline they use 4.5 lbs/acre of native grasses at a cost of $95.00 per acre, and 3.5 lbs/acre of native forbs at a price of $750.00 per acre. An estimated $100 (not per acre) charge for mobilization of equipment to the site will also be included. As far as installation charges for a 11+ acre site are concerned, Agrecol estimates the price to be $90.00 per acre.

Non Profit Organizations

In addition to exploring the services offered by professional firms for prairie seeds and restoration services, it may be to your advantage to contact certain non-profit organizations that may offer comparable services. For example, certain organizations like the Wisconsin Department of Natural Resources, or the Madison Audubon Society may offer seed stock in exchange for volunteers to collect seeds. Another option might be to contact the University of Wisconsin Arboretum for possibilities of any excess seeds.

If you have any questions regarding the costs of prairie restorations or seeds feel free to contact CRM Ecosystems at 437-5245, or Agrecol Ecological Agricultural Technologies at 825-9398.

CRM ECOSYSTEMS

GROUP CONSULTING OFFERINGS

CRM Ecosystems is providing group consulting instruction for people who desire cost effective help with native plant projects. A series of classes will be held at Prairie Ridge Nursery designed to cover the sequence of information needed to begin a successful restoration. Each session may be taken as a self contained unit, or register for the complete series.

Class size will be limited so everyone can receive individualized attention for their project. A hands on approach will be used as much as possible with classes being held outdoors for most of the time. Sessions will last approximately two hours. Each session is $25.00, or register for four classes at $95.00.

Site Preparation - Sunny, Open Sites - April 20, 2:00 PM & August 3, 10:00 AM

Learn the techniques for preparing a site for planting. Determine which methods will work best for your plot and goals. Bring notes, diagrams, plant samples, soil samples, etc. from your site.

Site Preparation - Shaded or Woodland Sites - April 20, 2:00 PM & August 3, 2:00 PM.

Discover how to prepare the ground for seeding or planting. Look at areas in the field, and discuss different options for the preparation. Learn advantages, shortcomings, time needed, costs, and probable differences in planting results of the various methods.

Burning Decisions - April 20, 10:00 AM & September 28, 10:00 AM.

Learn when and how to burn your plantings. The advantages of burning your planting, fire control methods, and burning equipment will be discussed and demonstrated.

Identification Seedlings - July 13, 10:00 AM

Determine how to recognize the prairie plants and weed species in your planting during the first years of you seeding.

Contact our office to register or with questions: (608)437-5245

CRM ECOSYSTEMS, INC.
RR2 9738 OVERLAND RD.
HOREB, WI 53572-2832
608-437-5245
FAX 608-437-8982

CRM ECOSYSTEMS

Tallgrass prairie - Seed for one acre

.5 lbs	Big bluestem	$ 8.50
2 lbs	Sideoats grama	$ 100.00
3 lbs	Little bluestem	$ 135.00
.5 lbs	Switch grass	$ 5.00
3 lbs	Indian grass	$ 90.00
3 lbs	Canada wild rye	$ 60.00
3 lbs	Custom blended wildflower mix	$ 825.00
		$1223.50

With 1 lbs Needle grass	$1358.50
With 4 lbs Custom blended wildflower mix	$1498.50
With 2 lbs Custom blended wildflower mix	$ 948.50
With 3 lbs Starter & 1.5 lbs Follow-up mix	$1411.00
With 2 lbs Starter & 1.0 lbs Follow-up mix	$1073.50

Shortgrass prairie - Seed for one acre

5 lbs	Sideoats grama	$ 225.00
5 lbs	Little bluestem	$ 200.00
4 lbs	Canada wild rye	$ 80.00
3 lbs	Custom blended wildflower mix	$ 825.00
		$1330.00

With 3 lbs Starter & 1.5 lbs Follow-up mix	$1517.50
With 2 lbs Starter & 1.0 lbs Follow-up mix	$1180.00

Installation Estimates

Cost will vary for every client, dependent upon several factors including:

1- Distance from nursery
2- Size of seeding
3- Planting method - Drill with tractor (larger seedings) or Hand seeding (smaller seedings)
4- Seeding rate and mixes
5- Site preparation needed

The cost of installation will includes a guarantee if CRM Ecosystem consultants direct, manage, or perform all aspects of site evaluation, site preparation, seed mix specifications, seed procurement, and installation. This guarantee provides two years of site visits with recommendations. A timely response to these recommendations will guarantee the establishment of an early successional prairie at the site.

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PRICING INFORMATION

The first step in installing the prairie would be to schedule a site visit by Joyce Powers. She will be able to determine the correct process by which the establishment should take place. She will give specific recomendations for site preparation and for the installation of the prairie. You could figure a few hours for this visit.

At this point, the consultant would be able to give you an estimate for site prep, seed mix and installation.

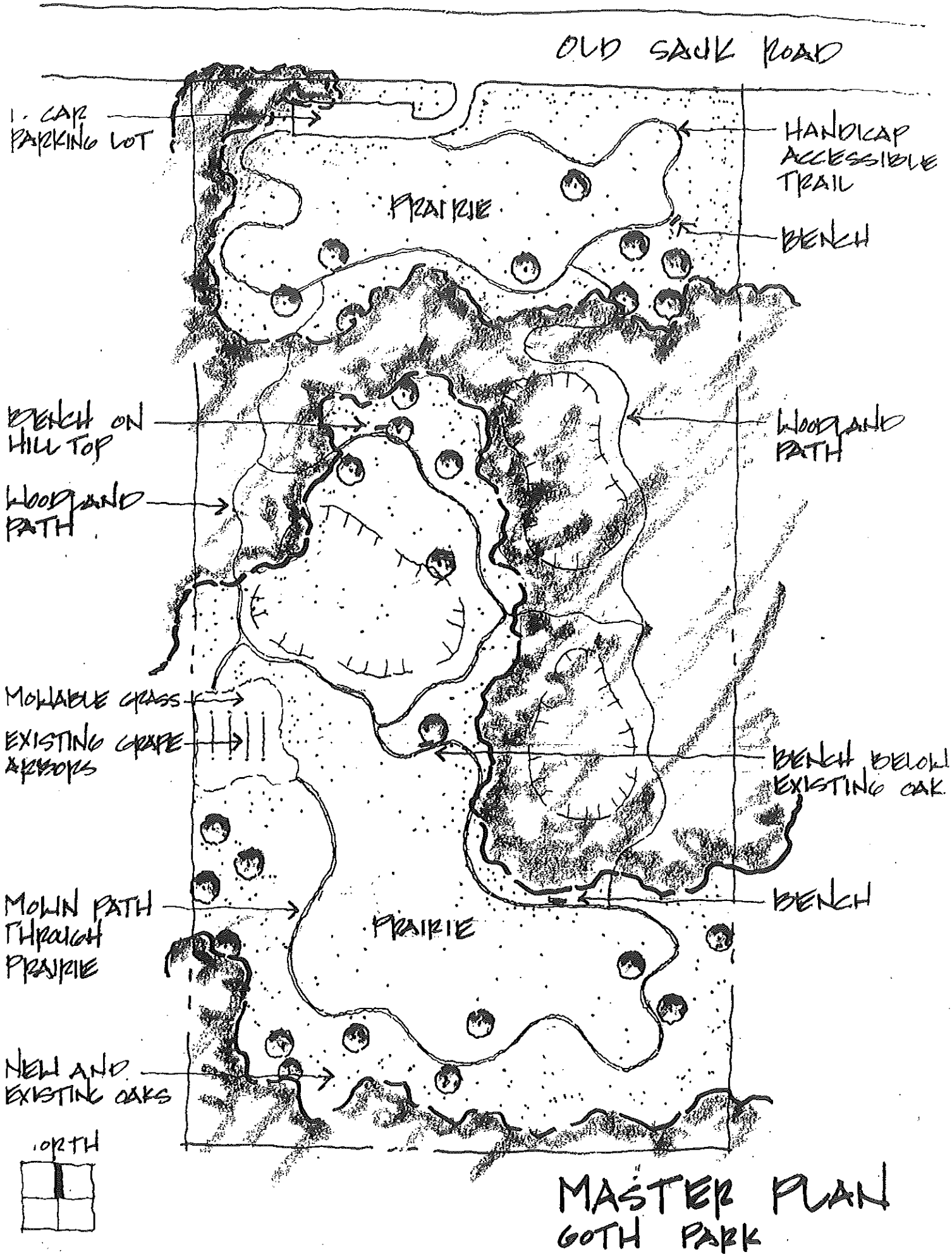
I can not give you an estimate for site prep at this time.

A rough estimate for installation of the prairie would be as follows:

1st acre -- $2850, this price includes seeds, equipment and labor.
Subsequent acres -- cost of seed plus $250

The reason for the cost of the first acre includes travel, activation and daily equipment costs.

In our price list I have highlighted some species which <u>may</u> be included in the Custom Blended Wildflower Mix.



MASTER PLAN
GOTH PARK