

GATES ROGERS FOUNDATION SOUTH FORK NATIVE PLANT PRESERVE MASTER PLAN

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Gates Rogers Foundation South Fork Native Plant Preserve

Master Plan

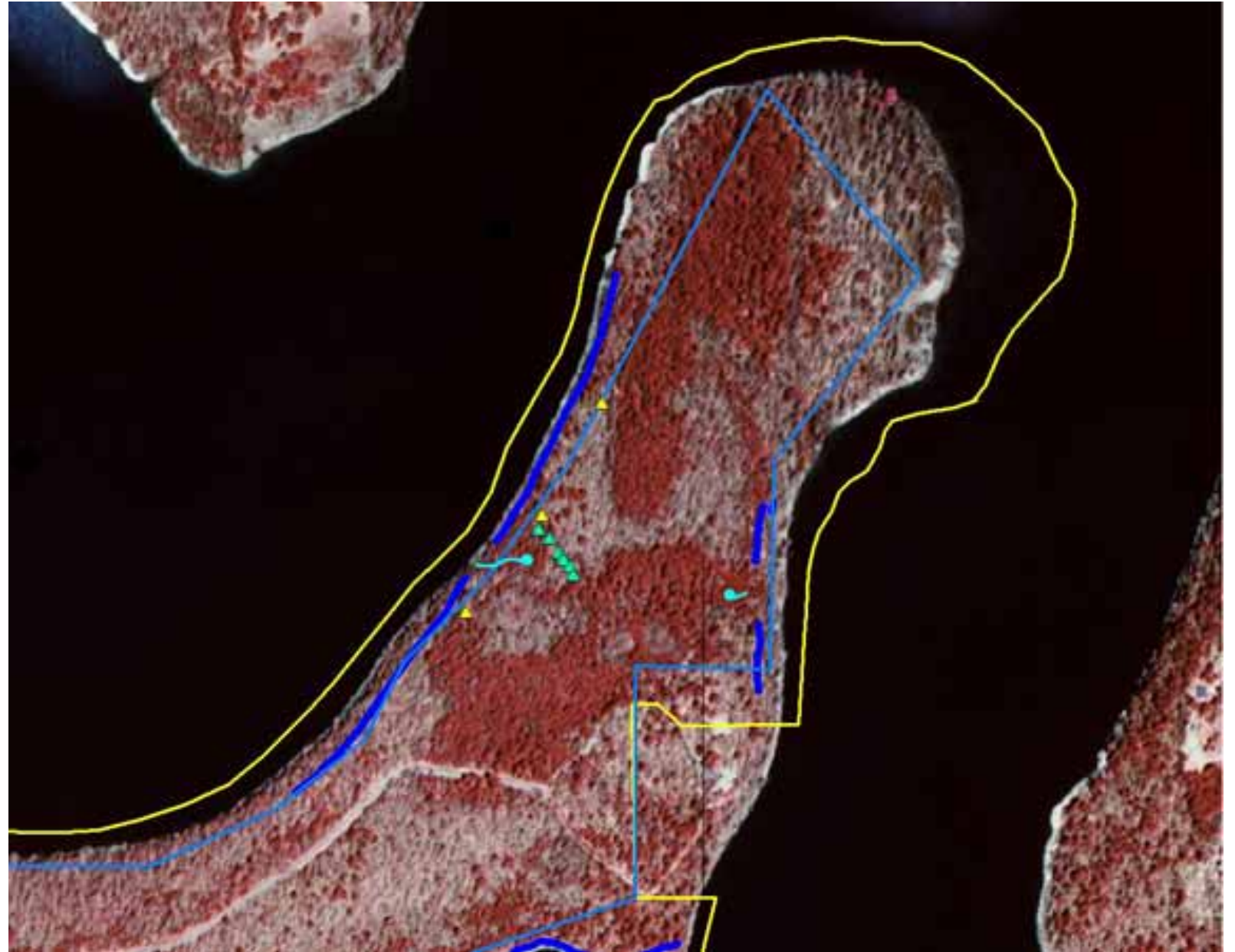
Table of Contents

•Existing Site Conditions	1
•Mission Statement	2
•Program	2
•Master Plan	3
•Core Visitor Area	4
•Sustainable Building Practices	4-5
•Visitor Center Floor Plan	6
•Visitor Center Sections	7
•Site Parking Area/Passive Elements	8
•Maintenance Area	9
•Phasing Plans	10
•Cost Estimates	11-12
•Conclusion	13
•Appendix	13-15
•Bibliography	16

Existing Site Conditions

The Gates Rogers Property is a 64 +/- acre tract encompassing part of Section 28, Township 11N, Range 13W, located in Van Buren County, Arkansas. The site is a peninsula located on Greers Ferry Lake approximately 5 miles southeast of Clinton, Arkansas, and is accessed from State Highway 330. The predominant vegetation on the site is mixed shortleaf pine and oak-hickory forest. Site topography varies from a high elevation of 570 feet above sea level to a low of 461 feet above sea level, Greers Ferry Lake's normal pool elevation. The site topography is extremely varied with slopes ranging from 3 percent along the spine of the peninsula to 20 percent slopes adjacent to the lake edges. Site soils consist of sandy to gravel loam over a sandstone or shale substrate. Evidence of earlier habitations and cultivations exist in the form of abandoned roadbeds, remnants of a fireplace, chimney, stone wall and dug holes suggesting wells or prospecting sites (Plant Community Classification of the South Fork Native Plant Preserve, Van Buren County, Arkansas (Witsell and Baker, 2006). Historical photographs of the site pre-dating the lake construction show open fields and pastures where large stands of coniferous and hardwood trees exist today. The site is located in a temperate climate with precipitation averaging around 50 inches of rain per year.

The site is home to a diverse variety of flora and fauna. According to Witsell and Baker, a total of 582 plant taxa exist on the site. This represents a significant percentage of the total plant taxa found in the state, and is the highest number known from any area of comparable size in Arkansas. Several species found on the site are species of Conservation Concern as designated by the Arkansas Natural Heritage Commission. These species include *rough-seeded fameflower*, *Canada white violet*, *false hop sedge*, *Nuttall's pleatleaf*, *Carolina spring beauty* and *Swan's sedge*.



Mission Statement

In keeping with goals to preserve the site's biologic diversity through good stewardship practices combined with public education and awareness, the Gates Rogers Foundation developed the following mission statement: *The Gates Rogers Foundation is committed to protecting and preserving Arkansas' native flora and fauna in a manner that encourages public understanding of the importance of ecologically sound biodiversity preservation practices. The Foundation is dedicated to the development, application and dissemination of ecologically sound habitat restoration and land management practices that further this mission* (Gates Rogers Foundation Central Document, 2005).

To execute the goals outlined in the mission statement, the Gates Rogers Foundation commissioned MESA Landscape Architects to develop a Master Plan for the project site.



Program

The Gates Rogers Foundation and MESA worked extensively to develop a program that incorporates the Foundation's needs while adhering to the goals and requirements set in the mission statement. These program elements include:

Visitor Center Complex:

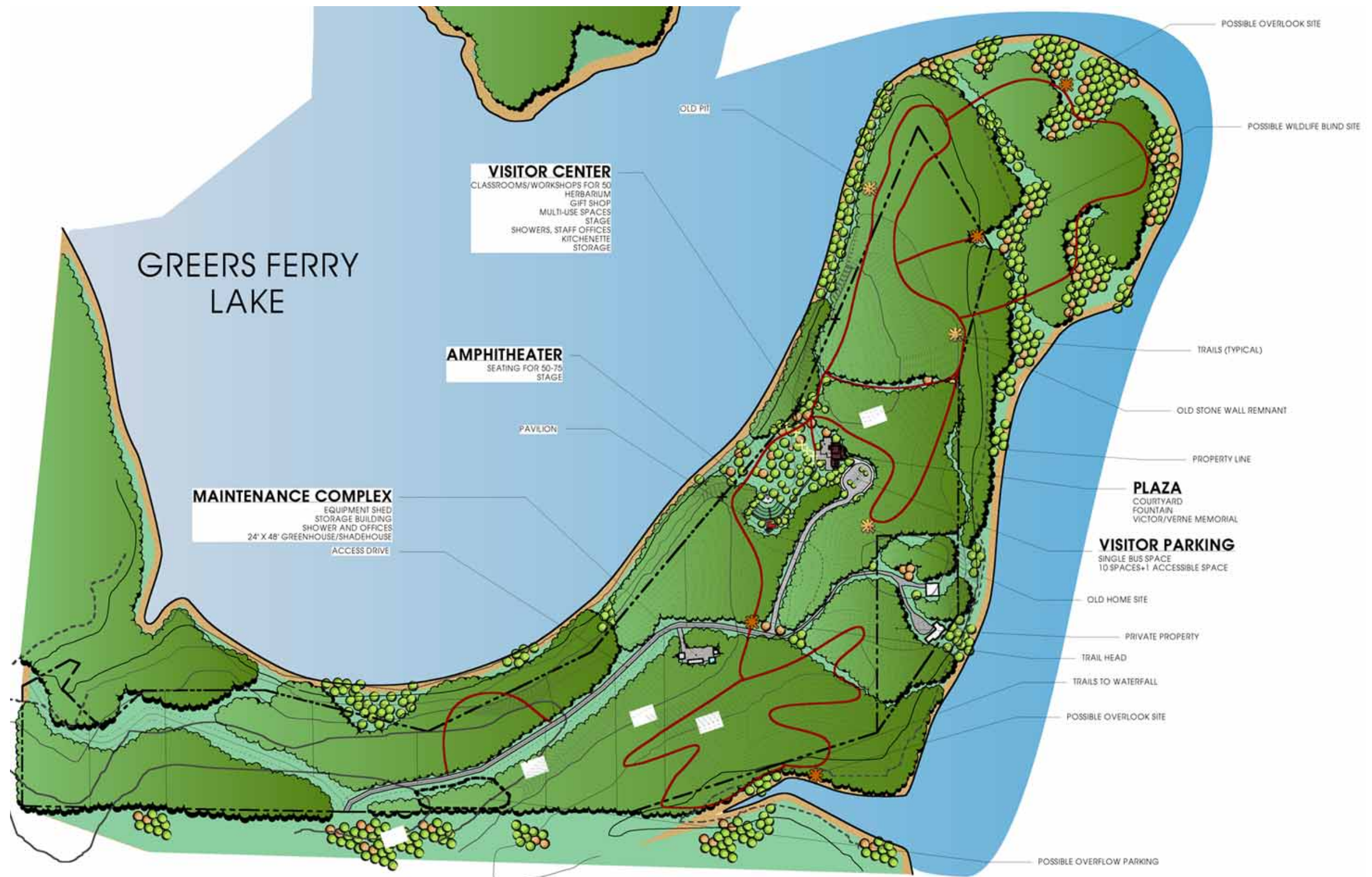
- All structures to aesthetically integrate with site
- Classrooms/workshops to accommodate 40-50
- Herbarium, laboratory, gift shop
- Spaces to allow for flexible use
- Ample storage space
- Fireplace with stage
- Showers, staff offices, kitchenette
- Assembly space for 100 (possibly combining classroom spaces)
- Pavilion
- Victor/Verne memorial
- Entry courtyard
- Outdoor amphitheater

Site elements:

- Maintenance structures: Shed, storage, shower, office, greenhouse
- Trails
- Perimeter parking (12 spaces + 1 bus/RV)
- Wildlife observation blinds
- Interpretive exhibits



MASTER PLAN

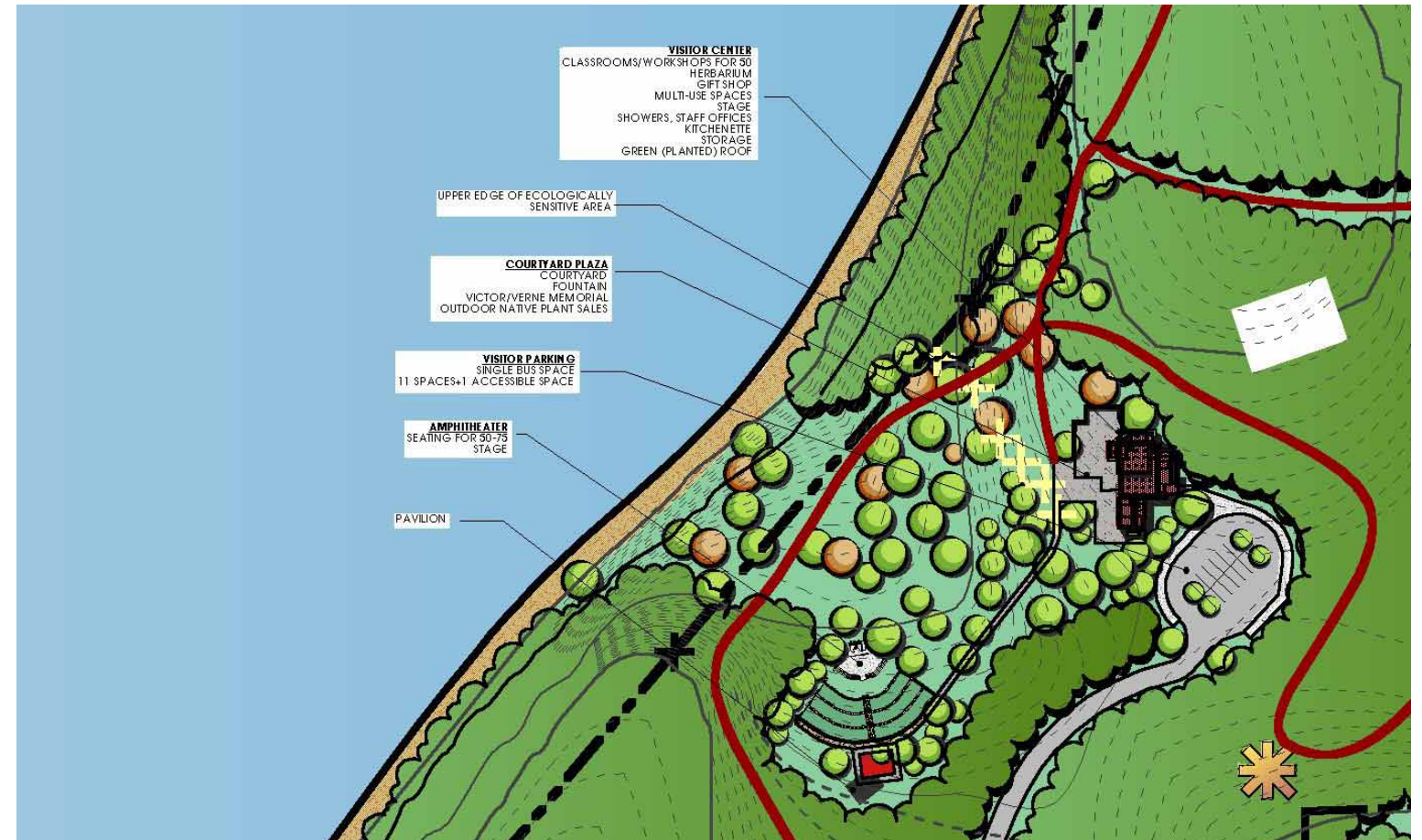


Core Visitor Area

Accomplishing the mandates of the mission statement and the program elements for the Core Visitor Area requires carefully integrating the building with the site. After a thorough site investigation and analysis, MESA determined the best location for the core visitor area is the existing draw on the west side of the peninsula. This particular area makes the most effective use of the site's gradual slopes and attractive viewsheds. Although this particular area of the site is desirable for the building location, a number of the "conservation concern" plant species also thrive in this area. After meeting on site with the Foundation's ecological consultant and delineating the outer edge of the sensitive areas, MESA developed a site plan placing the building as near as possible to the sensitive area without adversely affecting it, yet close enough to take advantage of interpretive possibilities.



VISITOR CENTER PLAZA



CORE AREA SITE PLAN

Sustainable Building and the Visitor Center

As part of the Foundation's effort to preserve and protect ecologically sensitive areas, the Visitor Center incorporates a number of environmentally friendly or "green" building concepts. To minimize site disturbance including site clearing and grading, the Visitor Center structure is integrated into the existing hillside with the building walls retaining approximately 5 feet of earth. This places the Visitor Center on the site with a minimum amount of disturbance and preserves the desirable views to the west.

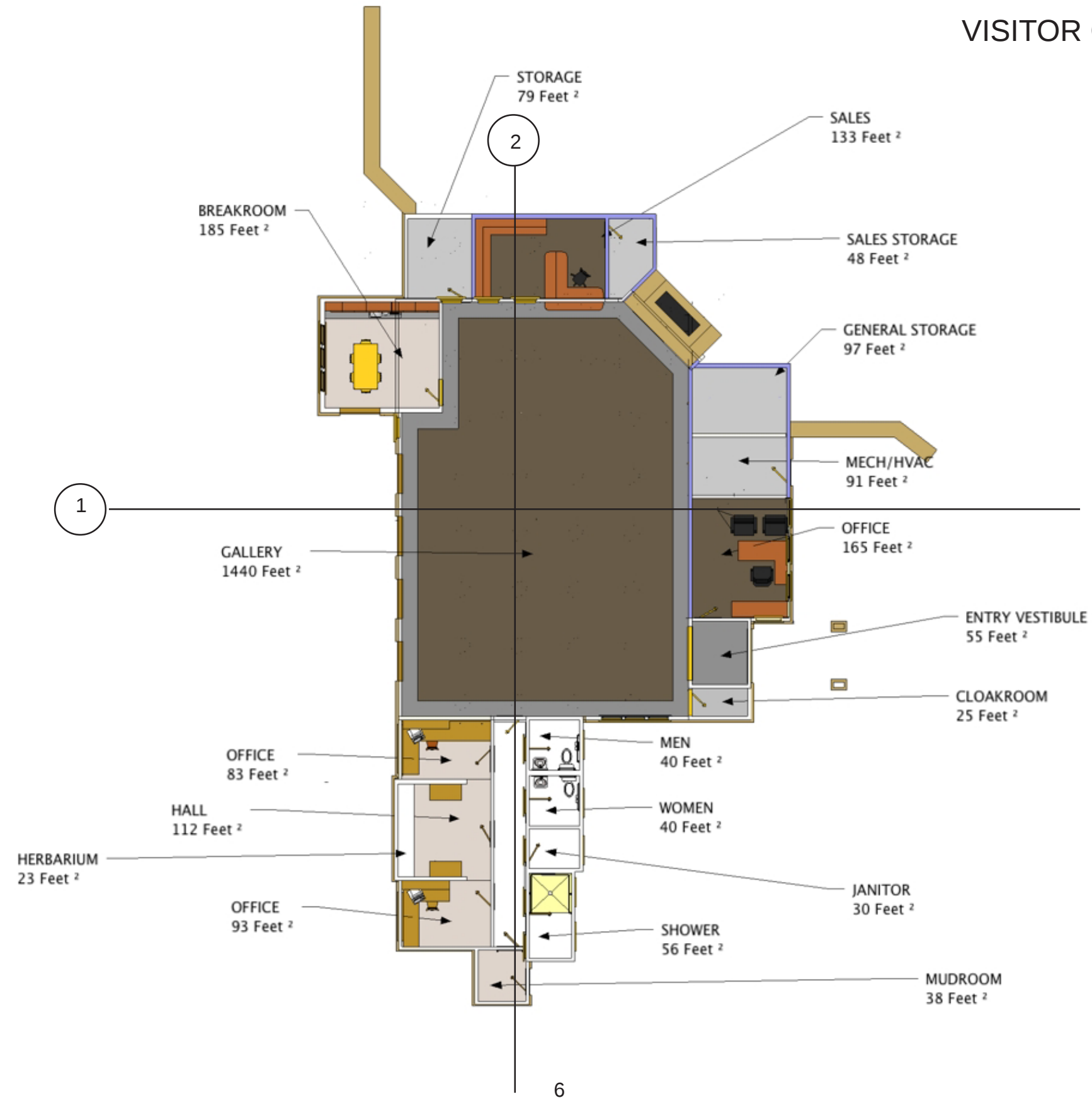




The Visitor Center itself incorporates the features listed in the program in an environmentally sensitive and friendly design that includes: windows designed and located to maximize the benefits of natural lighting while minimizing heat gain, as well as vegetated roofs that reduce storm water runoff, provide non-potable irrigation water, and provide natural cooling benefits that reduce the need for large HVAC systems. The building also includes composting toilets that do not require a septic system, locally available and recycled materials such as native stone, steel and wood which comprise the building structure, indoor and outdoor sheathing. Within the approximately 3000 sq. ft. footprint, modular multi-use spaces maximize use potential while minimizing building area, while low VOC paints, finishes and surfacing preserve the health of building occupants. Outdoor surfaces utilize native and locally available materials. Site furnishings incorporate recycled components and full cut-off light fixtures that do not light-pollute the dark sky.



VISITOR CENTER FLOOR PLAN



VISITOR CENTER CROSS SECTION



1 SECTION LOOKING NORTH



2 SECTION LOOKING WEST

Site/Parking Elements and Features



TRAIL

Site Passive Areas

While the Visitor Center serves the more active needs of the public, a system of trails networking through the site provide the public with a more passive experience. Interpretive and interactive exhibits stationed at points of interest along the trail serve to enlighten and educate the public about the ecological diversity found on site. Depending on the function and use, trail construction types might range from bare dirt on the more gradual slopes, to wood chips and gravel on the steeper slopes found throughout the site. Accessible trails will include hard non-skid surfaces such as concrete or asphalt and will minimize the impact on ecologically sensitive areas. At various points along some trails, wildlife observation blinds provide the public an opportunity to experience and view diverse wildlife species like deer, turkey, woodpeckers and reptiles that call the site home.



The core area also includes an outdoor plaza and patio located outside the west doors of the Visitor Center. This patio provides a native landscaped area which serves as a starting point for the trails that wind through the site. Also located in the plaza is a memorial dedicated to Foundation benefactors Victor Gates and Verne Rogers. To provide an outdoor congregating area for small groups, an amphitheater located to the south and west of the Visitor Center provides an opportunity for outdoor lectures and demonstrations. A covered pavilion just above the amphitheater area serves as a shelter for outdoor gathering in the event of inclement weather.

The parking area provides vehicular requirements stated in the program utilizing most compact area possible. Siting the parking area on a relatively gently sloped area minimizes the need for large cut and fills and screens the parking lot from the trails and interpretive areas to the north and east. Permeable and light colored paving will minimize the heat gain effects from the parking area and prevent storm water from entering the ecologically sensitive area below the Visitor Center.



OBSERVATION BLIND



Maintenance Area

To provide the support needs of the Visitor Center and associated facilities, the Foundation expressed a need for a dedicated maintenance area in the Master Plan Program. This facility remotely located from the Visitor Center, includes a 1000 square foot pole barn equipment shed, a 400 square foot materials storage building, a 500 square foot office with shower and a 1200 square foot greenhouse or shade house. This complex is intended to provide Foundation staff members areas to perform maintenance duties, tend plant collections and perform research without interfering with the public activities of the Visitor Center. Though located within the main gates of the Foundation property, a separate gated and fenced enclosure surrounds the gravel surfaced maintenance yard.

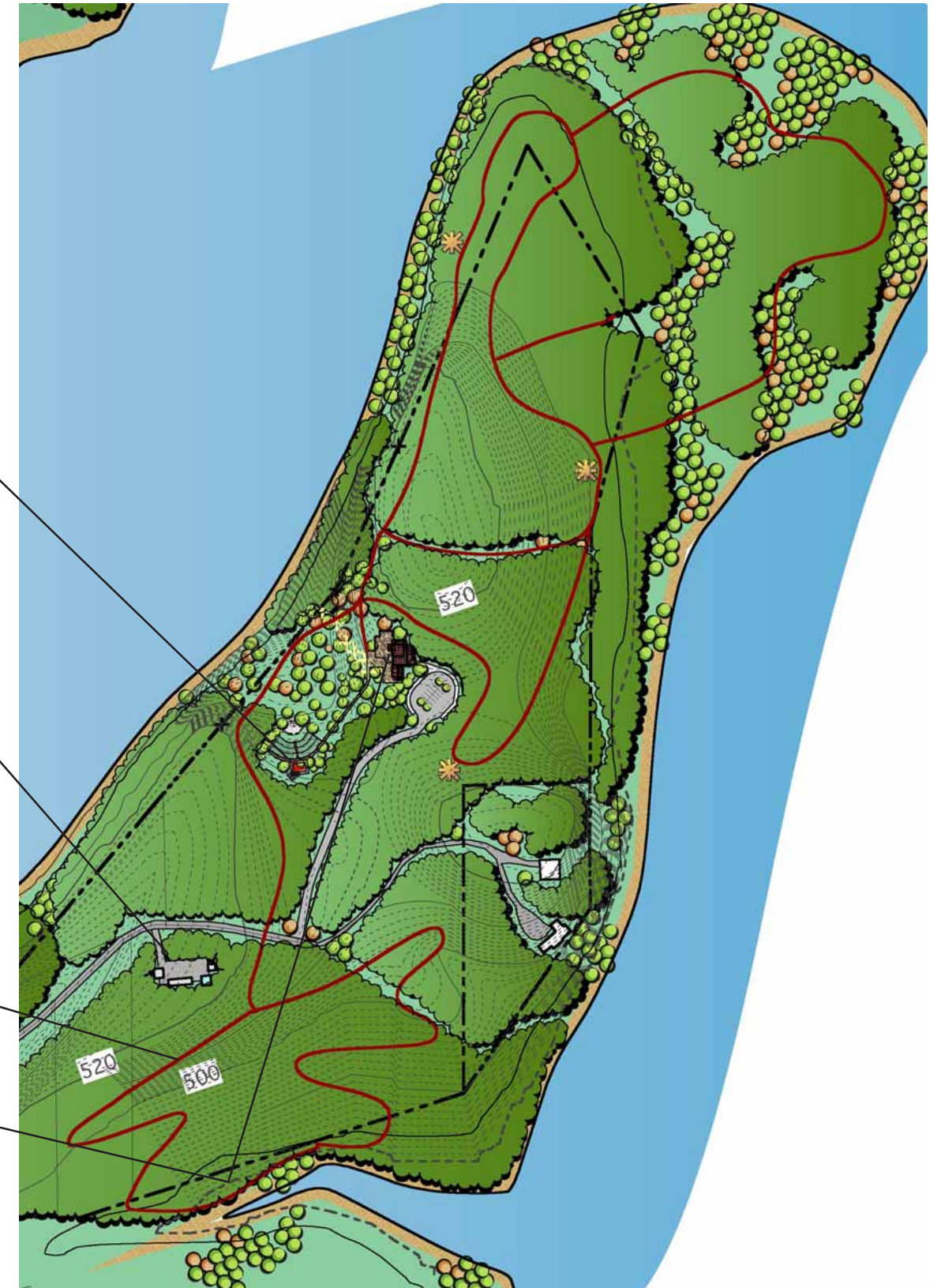


EQUIPMENT SHED

Phasing Plans

To accommodate the significant costs associated in implementing any master planning process, a phasing scheme that prioritizes maximum benefit of the Foundation's funding is necessary. The recommended phasing plan for the Gates Rogers Foundation is as follows:

- Phase 1: Construct the pavilion, rough grade the road and parking and surface with gravel. Also provide a temporary gravel trail connecting the parking with the pavilion. By providing an interesting and engaging pavilion design, public interest is kindled with the hint of bigger and better things to come.
- Phase 2: Construct the maintenance complex. The addition of this facility provides space for staff to continue research without traveling to and from another location. Construction of the facility will also allow work to begin on trail design and construction. The office may also serve as a temporary Visitor Center and staging point.
- Phase 3: Construct trails and associated observation areas and interpretive exhibits.
- Phase 4: Construct the Visitor Center and plaza, complete the landscaping, and, if desired, pave the parking areas.



Cost Estimates

The cost estimates shown below are as accurate as possible for a schematic design level. As design proceeds into development and construction phases, decisions made may raise or lower the costs of each component facility. As part of any master planning process initial estimates are best served in assisting fund raising and helping the foundation prioritize goals. Please note these estimates are approximations based on preliminary design concepts as applied to 2006 national average building costs.

Visitor Center

Visitor Center	quantity	unit	unit price	total
building	3000	sf	\$225.00	\$675,000.00
plaza stone veneered	3000	sf	\$12.50	\$37,500.00
bollards	10	ea	\$700.00	\$7,000.00
earthwork	500	cy	\$12.00	\$6,000.00
benches	5	ea	\$1,100.00	\$5,500.00
trash cans	5	ea	\$700.00	\$3,500.00
landscape/irrigation	1	ls	\$50,000.00	\$50,000.00
memorial	1	ls	\$10,000.00	\$10,000.00
retaining walls	1200	sf	\$65.00	\$78,000.00
electrical service (primary service not included)	1	ls	\$5,000.00	\$5,000.00
water service	1	ls	\$2,000.00	\$2,000.00
sewer	1	ls	\$2,000.00	\$2,000.00
				\$881,500.00



VISITOR CENTER PLAZA

Visitor Center Parking

VIC Parking	quantity	unit price	total
asphalt paving	11000 sf	\$3.00	\$33,000.00
earthwork	500 cy	\$12.00	\$6,000.00
lights	3 ea	\$3,500.00	\$10,500.00
wheelstops	12 ea	\$100.00	\$1,200.00
signing/stripping	1 ls	\$2,000.00	\$2,000.00
entry road	14157 sf	\$3.00	\$42,471.00
			\$95,171.00

Amphitheater

Amphitheater	quantity	unit price	total
drainage	1 ls	\$5,000.00	\$5,000.00
concrete paving	1600 sq. ft.	\$5.00	\$8,000.00
hydroseed include mat	10000 sq. ft.	\$0.55	\$5,500.00
amphitheater	2300 sq. ft.	\$2.00	\$4,600.00
flagstone stage	320 sq. ft.	\$15.00	\$4,800.00
timber border	420 lf	\$7.00	\$2,940.00
waste receptacles	2 ea	\$1,100.00	\$2,200.00
stage lighting	2 ea	\$1,500.00	\$3,000.00
electrical service	1 ls	\$5,000.00	\$5,000.00
lighting bollards	33 ea	\$500.00	\$16,500.00
pavilion	600 sf	\$75.00	\$45,000.00
benches	18 ea	\$800.00	\$14,400.00
			\$141,540.00

Wildlife Observation Blinds

Wildlife Blind (large)	quantity	unit price	total
earthwork	350 cu yds.	\$12.00	\$4,200.00
demolition	1 ls	\$2,000.00	\$2,000.00
hydroseed include mat	3000 sq. ft.	\$0.55	\$1,650.00
boardwalk	80 sq. ft.	\$35.00	\$2,800.00
filter fabric	3000 sq. ft.	\$0.25	\$750.00
wildlife blind	424 sq. ft.	\$75.00	\$31,800.00
			\$43,200.00

Wildlife Blind (small)	quantity	unit price	total
earthwork	350 cu yds.	\$12.00	\$4,200.00
demolition	1 ls	\$2,000.00	\$2,000.00
hydroseed include mat	3000 sq. ft.	\$0.55	\$1,650.00
boardwalk	80 sq. ft.	\$35.00	\$2,800.00
filter fabric	3000 sq. ft.	\$0.25	\$750.00
wildlife blind	150 sq. ft.	\$50.00	\$7,500.00
			\$21,300.00



Trails

Trails	quantity	unit	unit price	total
site clearing	1 ls		\$20,000.00	\$20,000.00
non-improved trail	98000 sf		\$0.75	\$73,500.00
ADA trail	6000 sf		\$3.00	\$18,000.00
earthwork	1000 cy		\$12.00	\$12,000.00
interpretive areas	10 ea		\$500.00	\$5,000.00
drainage	1 ls		\$5,000.00	\$5,000.00
				\$133,500.00

Maintenance Yard

Maintenance Facility	quantity	unit price	total
gravel yard and drive	9000 sf	\$1.75	\$15,750.00
equipment shed	1000 sf	\$30.00	\$30,000.00
storage building	400 sf	\$55.00	\$22,000.00
office with shower	500 sf	\$85.00	\$42,500.00
fencing	500 lf	\$25.00	\$12,500.00
security lights	3 ea	\$3,500.00	\$10,500.00
greenhouse	1200 sf	\$25.00	\$30,000.00
elec service	1 ls	\$5,000.00	\$5,000.00
water	1 ls	\$3,000.00	\$3,000.00
sewer	1 ls	\$2,000.00	\$2,000.00
seeding	2000 sf	\$0.25	\$500.00
			\$173,750.00

Project Total wth 18% design fees and contingency \$1,733,019.00



AMPHITHEATER



Conclusion

The Gates Rogers Foundation's South Fork Native Plant Preserve with its rich and interesting diversity of plants and wildlife is a treasure for the state of Arkansas. Opportunities provided by the implementation of the master plan will provide great educational, research and recreational benefits for generations to come.

APPENDIX

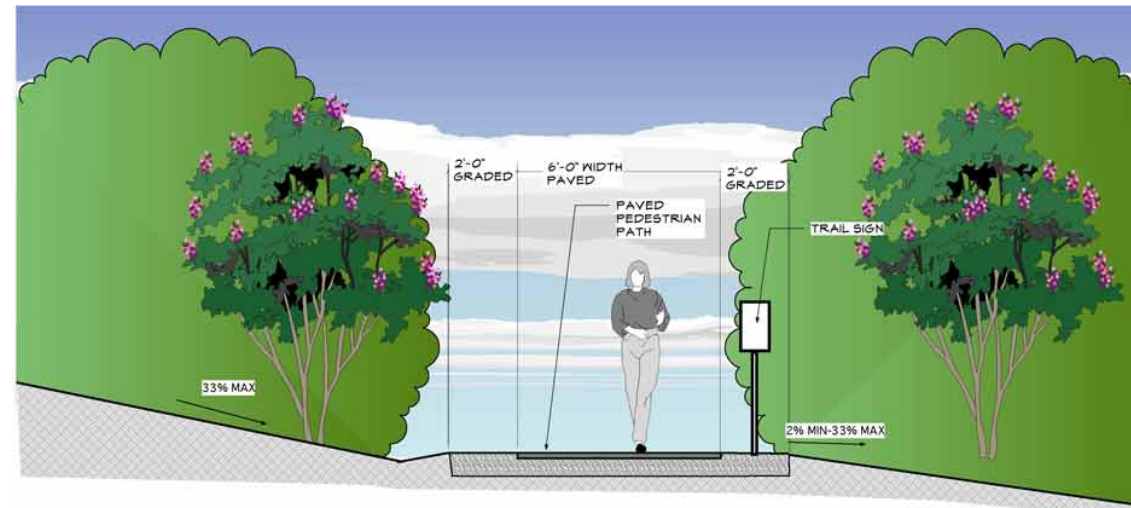
Sheet One - Typical Trail Cross Sections

Sheet Two - Typical Site furnishings

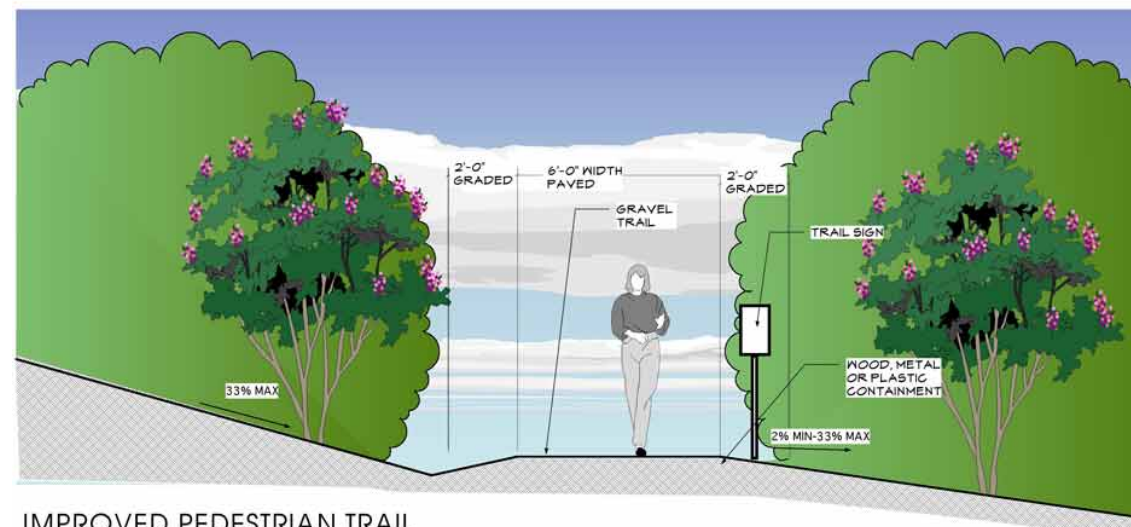


VISITOR CENTER PLAZA

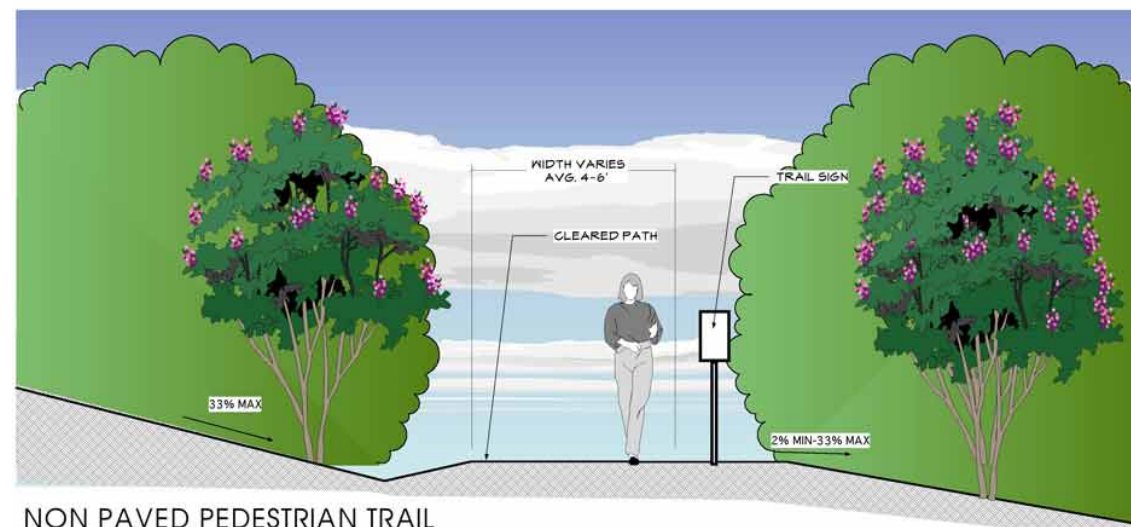
TRAIL DESIGN STANDARDS



ACCESSIBLE PEDESTRIAN TRAIL



IMPROVED PEDESTRIAN TRAIL



NON PAVED PEDESTRIAN TRAIL

TYPICAL SITE FURNISHINGS



PICNIC TABLE



BOLLARD LIGHT



BOLLARD LIGHT



AMPHITHEATER BENCH



PLAZA BENCH



WASTE/RECYCLE RECEPTACLE

Literature Cited

Witsell, T. and Baker, B. 2006. Plant Community Classification of the South Fork Native Plant Preserve, Van Buren County, Arkansas

Gates Rogers Foundation, Inc. 2005. Gates Rogers Foundation Central Document.