

## VIII. DEVELOPMENT PLAN

### MAJOR CAPITAL IMPROVEMENT PROJECT PRIORITIES

As a part of the general management plan process, proposed capital improvement projects at Raven Rock State Park were carefully reviewed to determine if all the projects were still needed and if changes to the projects were desirable. In reviewing the proposed capital improvement projects, the general management plan evaluation team considered factors such as changes in environmental regulations, condition of facilities, natural heritage inventory, recreation demand, operational issues and needs, visitor safety considerations, State Parks Act mandates, and trends.

As a result of the general management plan review of the capital improvement projects, three projects were eliminated: *Tent and Trailer Campground*; *Lake and Swim Beach Development*; and *Rental Cabin Development*. Development of the lake and swim beach – both dependent upon additional land acquisition – had been planned in the early 1970s when environmental impact was given less consideration than today. It is unlikely that required permits for lake development could now be obtained. The rental cabins would have been built adjacent to the lake, and without the additional recreation that the lake would have provided, the park does not provide extensive enough recreational opportunities to attract people for weekly rentals. Most visitors that now camp in the park usually stay only for short visits that provide them with sufficient time to enjoy the park's natural and recreational resources.

The *Tent and Trailer Campground* project was eliminated for several reasons. Other camping opportunities exist in the Raven Rock area that help to meet existing demand, and to date, demand for camping at Raven Rock State Park has been light. Also, a suitable site within the park for the campground development was not identified. Tent and trailer campground development can be reconsidered in later years if future demand warrants and a suitable site is identified.

The *Visitor's Center* and *Picnic Area* projects were combined. Development of the picnic area and construction of the visitor's center is now planned for the same general location. The two projects also had some common project scope items, so combining the projects should result in more cost effective construction.

Four new capital improvement projects were added: *Campbell Creek Pedestrian Bridge*; *Ranger Residence Repair/Renovation*; *New Ranger Residence*; and *North Side Bike Trail/River Access Area*, a project that is dependent upon additional land acquisition. Land acquisition plans are described in Chapter X.

Each project was then evaluated and ranked using the Division's Project Evaluation Program (PEP), thus creating a revised project priority list of capital improvement projects for Raven Rock State Park, which is shown below. These projects were then combined with projects evaluated and ranked for other state park units, resulting in a priority list of capital improvement projects for the entire state parks system. The revised list of capital improvement priorities for Raven Rock State Park and descriptions of the projects follow.

## Revised Capital Improvement Priorities

Rank	Project Title	*Score	Cost
1	Campbell Creek Pedestrian Bridge	699	\$177,984
2	Visitor's Center & Picnic Area Expansion	657	3,993,592
3	Fish Creek/Cedar Rock Trail	572	980,692
4	Ranger Residence Repair/Renovation	566	166,860
5	New Ranger Residence	519	224,705
6	North Side Bike Trail/River Access Area (Land dependent)	518	1,826,408
7	North Side Bridle Trails Repair	507	<u>1,487,291</u>
	Total		\$8,857,532

*\* The score comes from the Division's Project Evaluation Program (PEP). The PEP uses an evaluation formula to rank projects that considers four factors: the objective of the project; the justification or urgency for funding; the estimated annual number of persons (visitors and/or employees) who are affected by the project; and the project's significance, ranging from local to national. The park superintendent, district superintendent, and division management evaluate projects. There are 15 objectives categorizing a project's purpose, and each project can have a primary and secondary objective.*

### Capital Improvement Project Descriptions

1. Campbell Creek Pedestrian Bridge: Project includes construction of (approximately) a 184-linear foot pedestrian trail bridge and removal of the existing bridge. The old bridge was washed out and damaged by floodwaters. The new bridge will have a larger span and higher elevation to avoid future damage from flooding. The bridge is needed for safe trail crossing of Campbell Creek and will allow much improved access to more of the park property.
  
2. Visitor's Center & Picnic Area Expansion: Project includes construction of a standard visitor's center with all modules including staff offices and exhibits; two picnic shelters; picnic sites with tables and grills; water fountains; two 50-car parking lots; entrance road realignment and improvements; sewer; water and electric line extensions; placing existing overhead electric lines underground; and a septic field. The visitor's center will eliminate the need for the trailer now inadequately serving as a park office, and the trailer will be removed. The visitor's center will also allow space for indoor environmental education, which the park currently does not have and badly needs. The park currently has no picnic shelters. Construction of the two shelters will help meet group picnicking needs while also offering covered outdoor space for environmental educational programs (See Figure VIII-3, *Proposed South Side Facilities*).
  
3. Fish Creek/Cedar Rock Trail: Project includes six miles of general trail development and two pedestrian bridges needed to cross Fish Creek. The location of this trail is shown on Figure VIII-I, *Raven Rock Park Development Plan*.

4. Ranger Residence Repair/Renovation: Project includes repairs and renovations to a 1675-square foot, two-story frame house built in 1920. Work is to include jacking up the structure, underpinning, floor joist and other structural repairs, adding a bathroom, and upgrading plumbing, electrical, heating and air conditioning, and electrical improvements. The project also includes adding a deck and a detached carport. Improvements are needed to bring the structure up to current standards.
5. New Ranger Residence: Project includes constructing a 1,700-square foot standard ranger residence with detached carport, septic system, and water and electric line extensions. The residence will be located on the north side of the Cape Fear River. A suitable ranger residence may be purchased in lieu of this proposed construction as a part of the park's land acquisition program.
6. North Side Bike Trail/River Access Area (Land dependent): Project includes an entrance gate and sign, septic field, river access area, 40-car parking lot, one-mile access road, water and electric line extension, visitor contact station, small maintenance shed with an enclosed shop area, and approximately 12 miles of new, single track trail development. Additional land acquisition is needed for the project to take place. See Figure VIII-1, *Raven Rock Park Development Plan*, for the location of this proposed facility development.
7. North Side Bridle Trails Repair: This project includes three miles of new bridle trail development, five stream crossings, seven miles of existing trail repair, sewer system, and water and electric line extension. It also includes 150 linear feet of gravel access road, a gate at the entrance off River Road, a toilet with an expanded chase, and parking lot expansion and improvements (See Figure VIII-4, *Proposed North Side Trailhead*). Split rail fencing will be installed around the parking lot to direct horseback traffic to safe trail access areas and to minimize unsafe horse-vehicle interactions within the parking lot. A horse tie area with a tie line and water spigot will be located south of the parking lot.

More bridle trail miles are needed in order to make the equestrian experience more rewarding and appealing to people that trailer their horses into the park, and restroom facilities are needed to serve these park visitors. The existing gravel lot will be expanded and reconfigured in order to accommodate additional users. The expanded chase will allow rangers to have an area on the north side of the park for storage and office use.

## **REVISED DEVELOPMENT PLANS**

Figure VIII-1, *Raven Rock Park Development Plan*, shows the revised development plan for all of Raven Rock State Park. Figure VIII-2, *Existing South Side Facilities*, is a site plan of the park's major facilities on the south side of the Cape Fear River. These existing visitor facilities, except for the trailer now serving as the park office, will remain. Figures VIII-3 and VIII-4 show areas of the *Raven Rock Park Development Plan* in greater detail. Figure VIII-3, *Proposed South Side Facilities*, shows the revised development plan for the primary visitor use area on the south side that includes construction of the following new park facilities: extension of the main park entrance

road, additional car and bus parking, two picnic shelters, park visitor's center, toilet building, and trail connectors. Figure VIII-4 shows proposed north side trailhead improvements. The four figures, along with narrative describing and explaining the development plans, follow. The plans shown are not construction drawings, and changes to the development plans shown may take place in the design process prior to construction.

### **Raven Rock Park Development Plan**

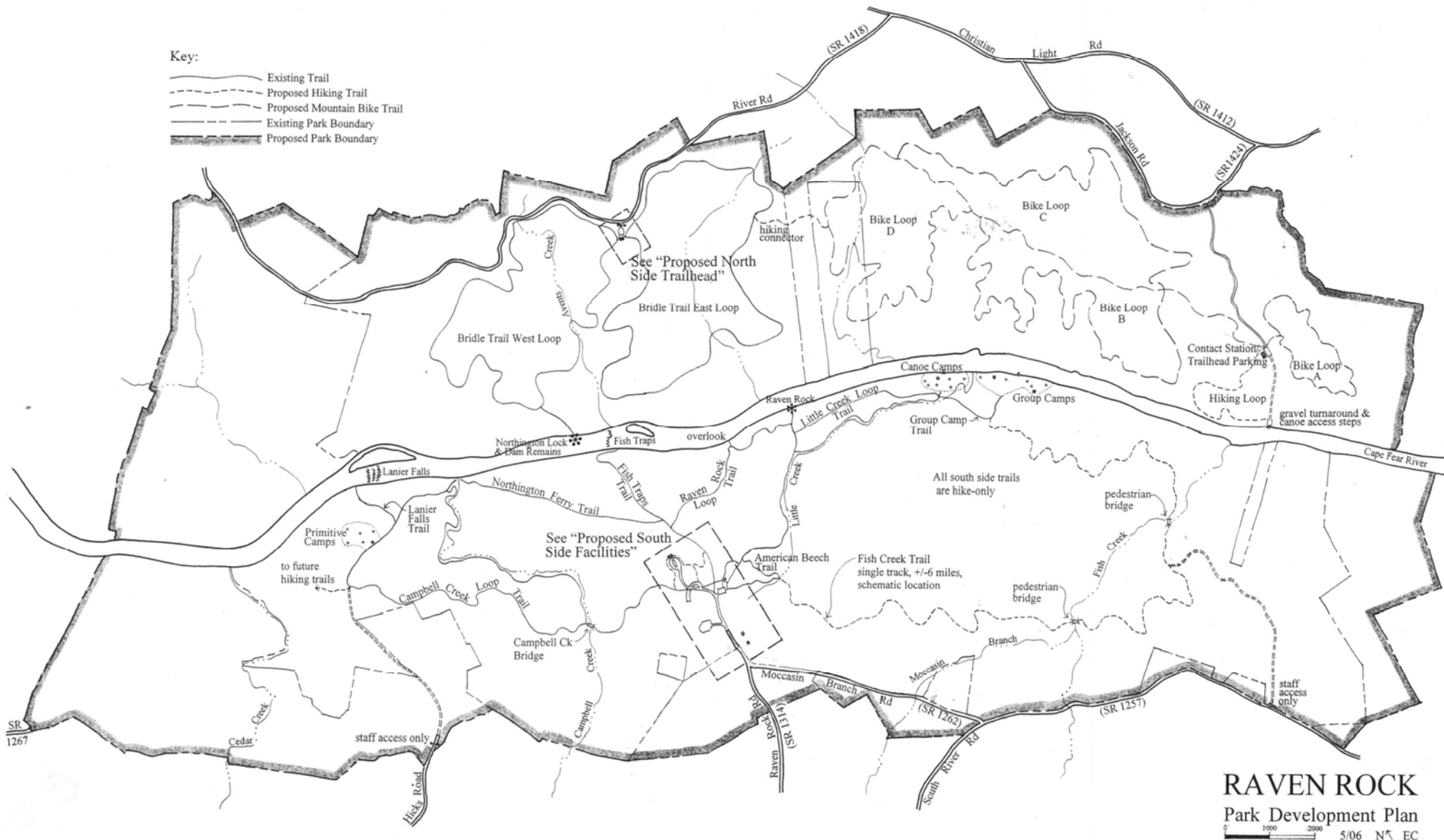
Figure VIII-I, *Raven Rock Park Development Plan*, shows the revised development plan for the entire park and shows the expanded park boundary (see Chapter X for a discussion of land acquisition). Proposed land to be acquired in the vicinity of Cedar Creek in the southwest park would support future hiking trails and also provide needed staff access to the park off of Dickens Road and SR 1267. All trails on the south side of the Cape Fear River are now and will continue to be hiking trails; all equestrian and bike trails are located on the north side of the river.

#### Fish Creek/Cedar Rock Trail

Existing land within the park east of the main facility area will accommodate the proposed trail to be constructed under the *Fish Creek/Cedar Rock Trail* capital improvement project. This trail, to be a single-track trail approximately six miles in length, is shown schematically on the park development plan and will need to be field located. Two (and possibly more) pedestrian bridges will be needed to cross Fish Creek. Staff access will be provided from South River Road (SR 1257) up to or close to the trail. Fish Creek/Cedar Rock Trail is not intended to support vehicular traffic, but during emergency situations staff will be able to drive a full size vehicle within close proximity to the trail and then access the trail using a utility vehicle or all terrain vehicle. Hiking is a very popular activity at Raven Rock, and Fish Creek/Cedar Rock Trail will offer an adventurous hiker the option of a longer backcountry hike with a greater opportunity for solitude.

#### North Side Bike Trail/River Access Area

The major change for the north side of the Cape Fear River involves the new development being proposed under the *North Side Bike Trail/River Access Area* capital improvement project. All of this proposed development, shown on Figure VIII-1, is dependent upon future land acquisition. An access road off of Jackson Road (SR 1424) would lead to a visitor contact station with trailhead parking. From the trailhead, park visitors would be able to drive to the gravel turnaround adjacent to the river to put in or take out a canoe, kayak or other small watercraft at the river access, which will not be as large as a traditional boat ramp. This turnaround area is only for loading and unloading at the river, and all parking will be located at the trailhead parking area at the contact station. A short hiking-only loop will go from the contact station to the river and along the river to the river access.



**RAVEN ROCK**  
 Park Development Plan  
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**Figure VIII-1. Raven Rock Park Development Plan**

Four mountain bike loops are proposed as a part of this project to meet the demand for bike trails. Bike Loop A is designed for younger or less experience riders. It is shorter and located on gentler topography than the other loops. Bike Loops B, C and D are longer, stacked loops. Park staff will work to establish partnerships with area bike clubs to help with the maintenance of any bike trails that are developed.

Since hikers are allowed on all public trails within the park, a hiking-only connector is shown that links the bridle trails with the bike trails. This connector will allow hikers to move through the entire north side trail system but would prevent bikes and horses from mixing for safety and trail stability/design reasons. Bike trails will be designed as single-tract trail.

A small maintenance area to serve the park on the north side of the Cape Fear River will be established to aid park management and eliminate the necessity of long trips to the south side for repairs and supplies. A ranger residence on the north side will also be needed. There may be an opportunity to acquire a suitable existing residence as a part of the land acquisition needed to develop this area. The north side of the park will continue to be used for day-use recreation only.

### **Proposed South Side Facilities**

Figure VIII-2, *Existing South Side Facilities*, shows the park's major facilities on the south side of the Cape Fear River. The trailer now serving as the park office/contact station, an old pump house and the v-groove tin barn adjacent to the superintendent's residence are to be demolished/removed. All of the other existing facilities shown will remain.

Figure VIII-3, *Proposed South Side Facilities*, is the revised development plan for the park's major public use area. It shows the facilities proposed for construction under the *Visitor's Center & Picnic Area Expansion* capital improvement project.

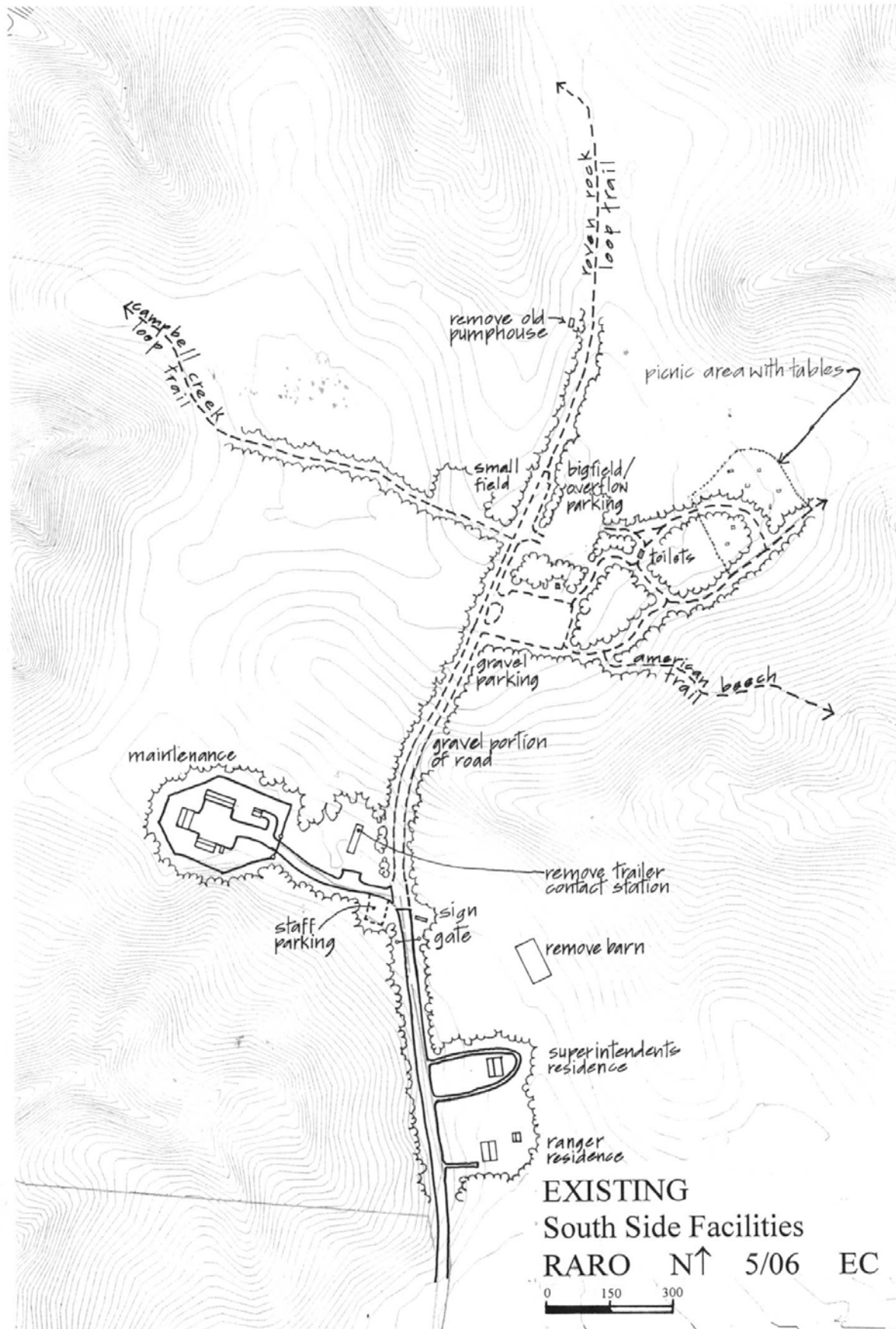
At the entrance, a traffic island is to be installed in the vicinity of the existing park entrance gate in order to visually break up this long, straight segment of the entrance road and to aid in slowing down visitor traffic entering the park. The island may also contain the "Raven Rock State Park" sign. The first choice for the traffic island location is just beyond the current gate location, if enough room exists between the gate and the road to the maintenance area. If there is insufficient room, then the gate and traffic island should be shifted south.

Once the trailer now serving as the park office is removed, the parking at that location can then serve the maintenance area, allowing the existing gravel parking lot near the entrance road to be revegetated. The abandoned park office area should then be allowed to revegetate to provide additional visual screening of the maintenance area from the park road.

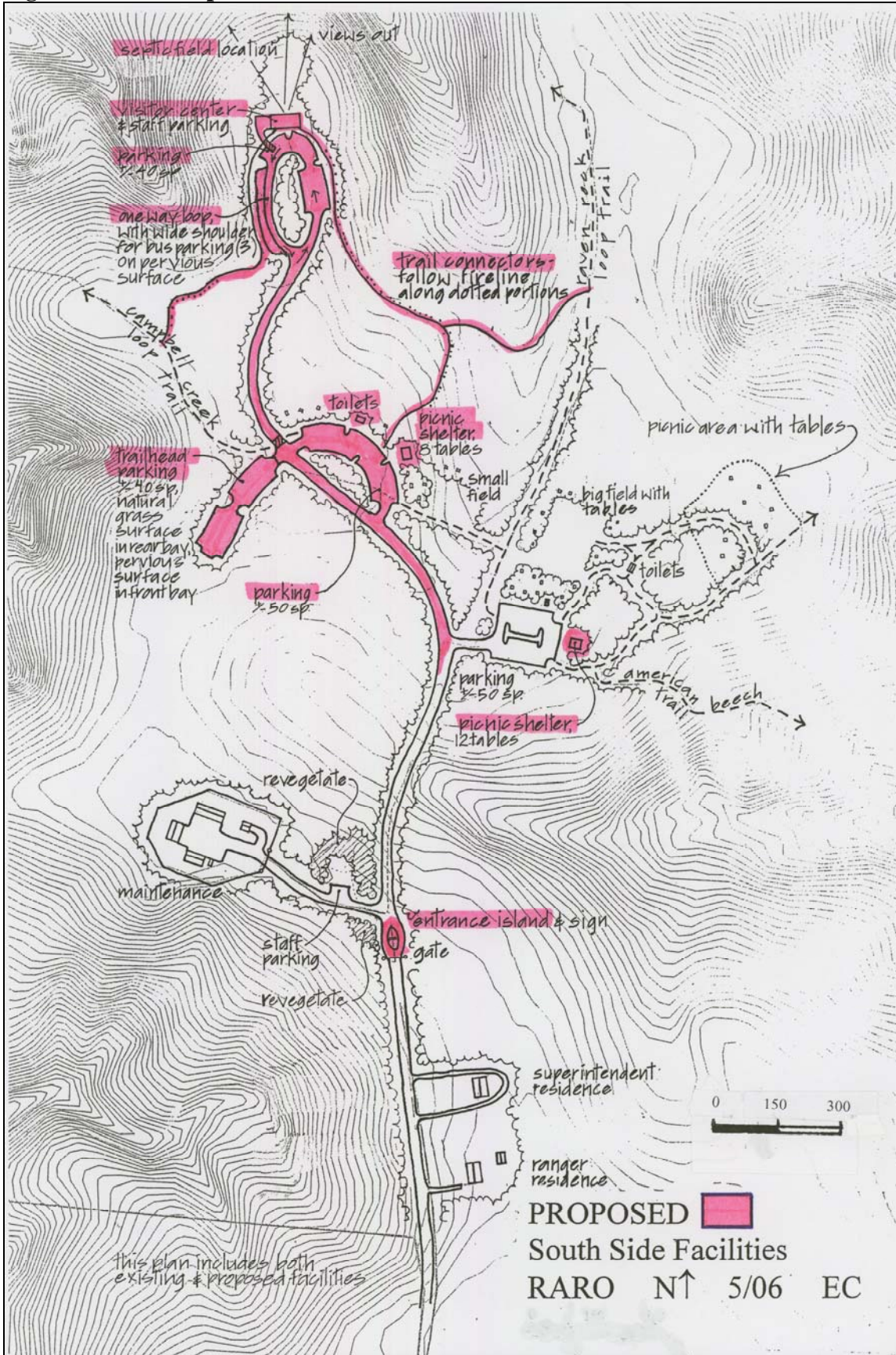
### Day Use Areas

The park road will be slightly realigned at its current terminus and extended past the existing and proposed day-use areas along a ridge before terminating at the proposed visitor's center. The existing gravel parking lot with approximately 50 spaces will be paved with a center island established and vegetated. A 12-table picnic shelter will be constructed just east of this parking lot in order to provide easy access for picnickers that bring heavy, bulky items such as coolers, cookers, food and drinks for large gatherings. The big grassy field that

Figure VIII-2. Existing South Side Facilities



**Figure VIII-3. Proposed South Side Facilities**



currently serves as overflow parking for busy days will have the wheel stops removed and will be converted to an open area available for recreation. Picnic tables will be added around the big field and in the area between the big field and the parking lot to the south. The existing toilet building will continue to serve this area.

A second picnic area will be constructed that includes a 50-car parking lot, an eight-table shelter, a toilet building and picnic tables. This picnic shelter will be located in close proximity to the parking lot and to the existing small field that will continue to be used for recreation.

Across the road from the second picnic area will be trailhead parking with approximately 40 spaces. The first bay of 20 spaces will be surfaced with permeable grass pavers, and the second bay of 20 spaces will have a natural grass surface. This second bay will serve as an additional open recreation area during times of light visitation but will accommodate overflow parking during special events or heavier visitation. Many repeat park visitors looking to access the Campbell Creek section of the park will likely use the first bay as their main trailhead access.

### Visitor's Center

The main park road will terminate at the visitor's center in a one-way loop with approximately 40 angled parking spaces. Staff parking is provided on the west side of the visitor's center. The island in the middle of the one-way loop will retain as much of the existing vegetation that can be protected during the construction process as possible. A widened shoulder is provided on the right-hand side of the one-way loop to accommodate parking for up to three buses. This widened area is to be surfaced with permeable grass pavers.

The site where the visitor's center and associated parking are to be located is an old abandoned field in the early stages of succession. Ideally, all disturbances for this construction would occur within this old field. A fire line runs around the edge of the old field. The septic field and repair area will be located north of and just downhill from the visitor center within the old field. Clearing for the septic field and repair area will open up scenic views from the back of the visitor's center into the mature hardwood forest beyond.

### Trails

The Campbell Creek Loop Trail will be slightly rerouted as shown on Figure VIII-3 to accommodate the new facilities. Trail connectors will be added to connect the visitor's center and day use areas with the parks existing trails. The design will allow visitors to enter the park, park their vehicles, and then use the trail system and other park facilities without the need to drive. Portions of the proposed trail connectors between the visitor's center and the Campbell Creek Loop Trail and the Raven Rock Loop Trail follow existing fire lines.

### Green Building and L.E.E.D. Opportunities

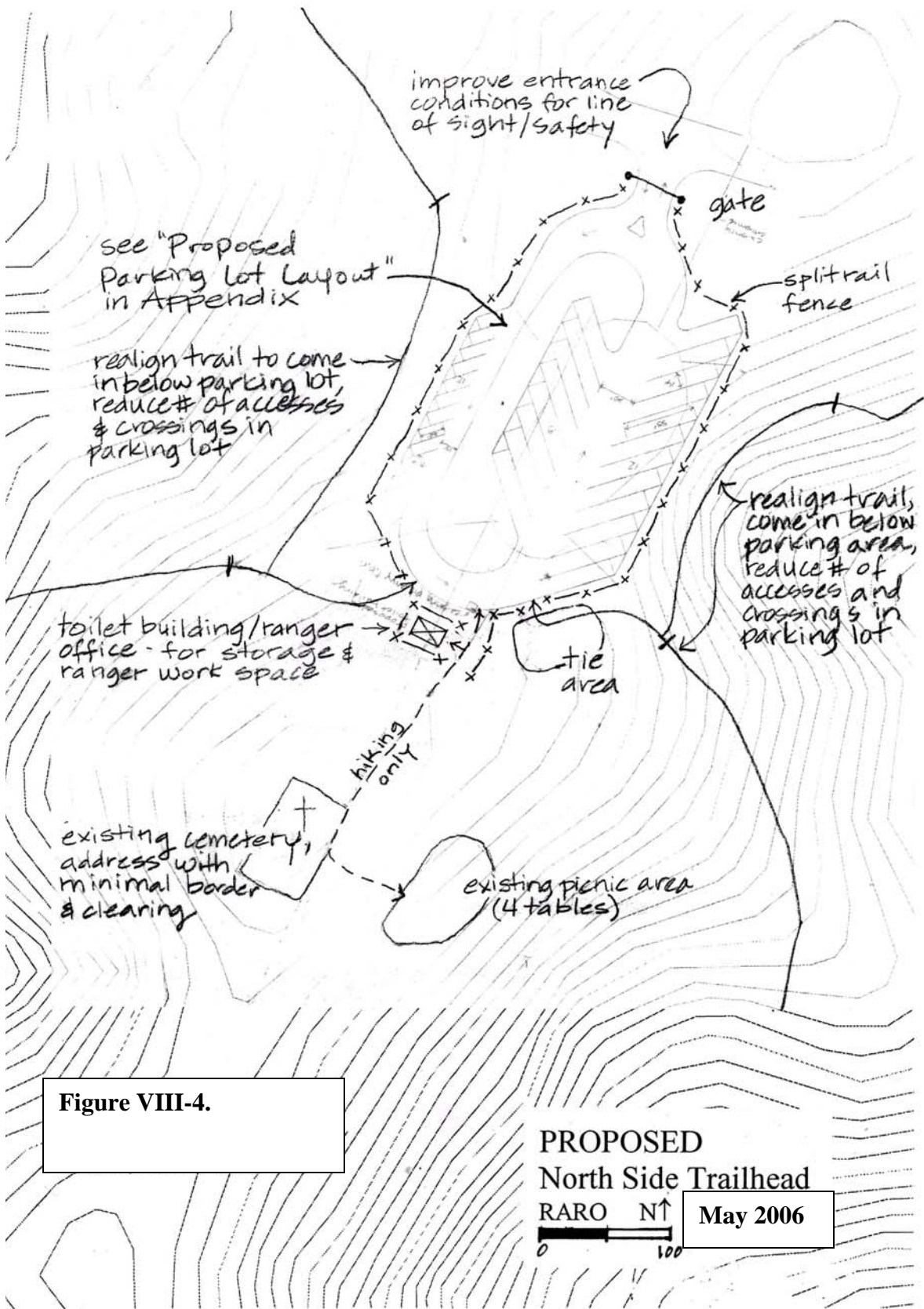
Construction of the south side facilities offers several green building/leadership in energy and environmental design (LEED) opportunities:

- east/west orientation of the visitor's center for solar gain opportunities;
- water efficient landscaping without need for irrigation;
- landscape plantings composed entirely of locally native plants;
- pedestrian trail connectivity, permitting visitors to enter the park, leave their vehicles, and then access other parts of the park on foot;
- pervious pavement opportunities (grass, gravel, pervious pavers) in areas of low use and overflow parking; and
- no curb and gutter or storm water concentration and sheet flow through vegetated areas for surface runoff.

### **North Side Trailhead Improvements**

The proposed *North Side Bridle Trails Repair* capital improvement project would expand and improve the existing north side trailhead. Figure VIII-4, *Proposed North Side Trailhead*, shows the location and improvements planned for the trailhead. The new layout overlays the existing gravel lot. The majority of the new clearing and grading will occur to the west of the existing lot due to gentler slopes in this area. The new lot will contain approximately 12 car parking spaces and 20 vehicle/trailer spaces of a size adequate to serve the larger vehicles and trailers more commonly in use today. The existing pit privy south of the existing parking lot will be demolished and replaced with a toilet building with flush toilets. An expanded central pipe chase will function as a ranger office, providing the first ranger space on the north side of the park.

The layout provides for one-way traffic through the parking lot and one driveway access on River Road. Vehicles needing to circle back through the parking lot may do so without re-entering River Road. The exact location of the parking lot entrance will be identified in the design phase to assure adequate lines of sight for drivers traveling River Road and for users of the parking lot. If the parking lot entrance shifts, the proposed parking lot layout may also need to be adjusted. Vegetation should be maintained in the center island to help break up the expanse of parking.



**Figure VIII-4.**