



Morrow Mountain State Park General Management Plan



North Carolina Department of
Natural and Cultural Resources
Division of Parks and Recreation
Mountain Region
April 2019





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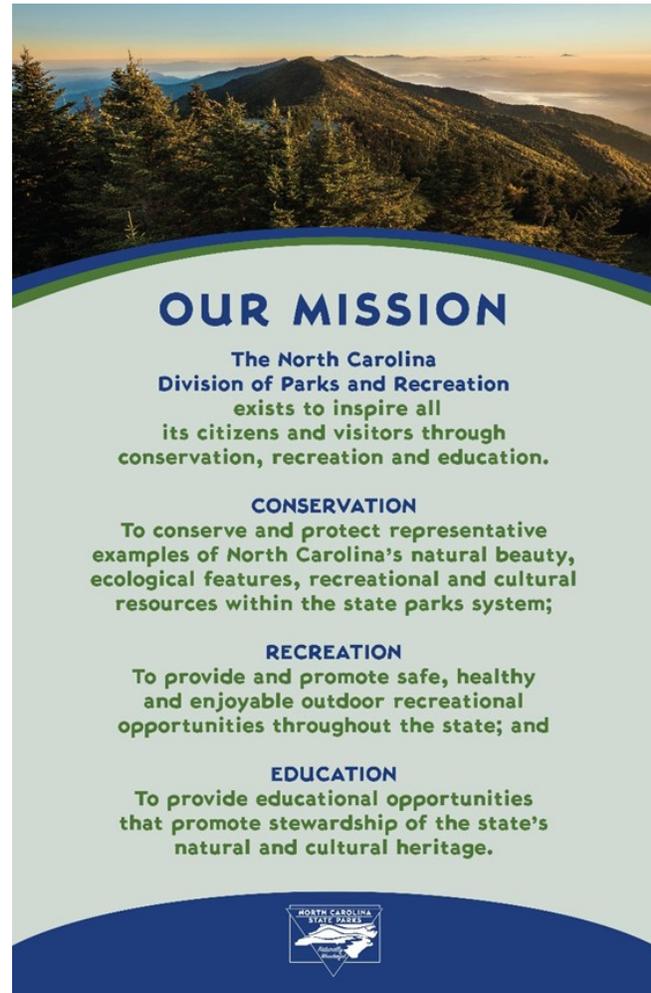
I. MISSION AND PURPOSE

General Management Plans:

The North Carolina General Statute 143B-135.52 requires each park to have an individual General Management Plan. As required, these plans seek to identify an individual parks purpose as a unit within the larger parks system and provide an analysis of the parks major resources and facilities. The General Management Plan also identifies current and future needs of the park and prioritizes a list of proposed projects intended to meet those identified needs. These plans are considered living documents, recognizing the various and dynamic factors which influence the planning process. Each park's GMP is scheduled to be revisited every five years, or sooner if needed, to reflect the direction and vision of the State Parks Division.

State Parks Mission

The 1987 State Parks Act also defines the purpose of the state parks system is within the mission statement. It establishes that: the State of North Carolina offers unique archaeological, geologic, biologic, scenic and recreational resources. These resources are part of the heritage of the people of this State. The heritage of a people should be preserved and managed by those people for their use and for the use of their visitors and descendants.

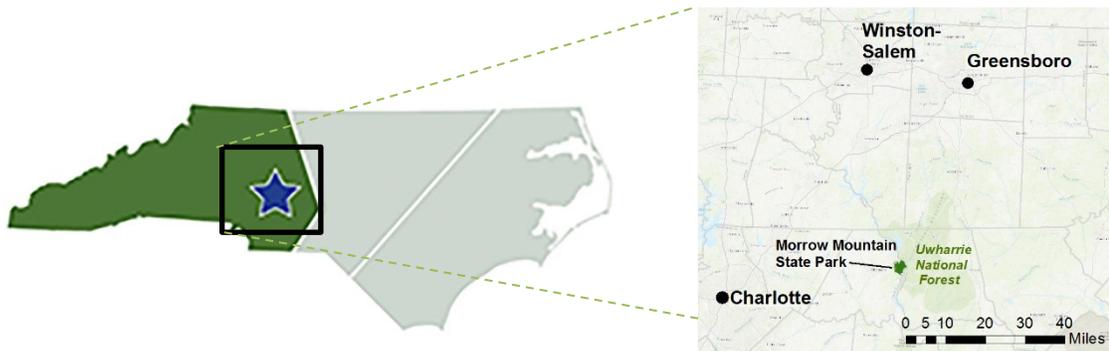




Park Overview:

Located in the central region of the State, within 2 hours drive of the urban centers of Raleigh and Charlotte, Morrow Mountain State park is 110 miles west of Raleigh and 45 miles east of Charlotte and 75 miles south of Triad region.

Morrow Mountain can be accessed by U.S. 27 from Charlotte, and US 1/Interstate 64 from Raleigh, Interstate 73 from Greensboro. The theme of the park is the unique archeological experience and rugged terrain within proximity to Uwharrie National Forest. Town of Badin provides a small-town experience.



Nestled into the western side of the Uwharrie National Forest, Morrow Mountain State park is just an hour drive from Charlotte and Greensboro.

PARK PURPOSE:

Morrow Mountain was made a state unit to protect the natural resources, water quality protection, interpretive historical sites and provide passive and active recreational opportunities.

The pinnacle of Morrow Mountain State Park are erosional remnants formed over hundreds of millions of years. In 1935, local advocacy to establish a State Park led to state legislation that authorized the Stanly County Board of Commissioners to issue bonds for the purchase



Community building is used for office space event and meeting space

of park land. Once the land was acquired, it was transferred to the State of North Carolina for development, management and administration. Over 1,800 acres were donated to the State by 1935 through this process, creating the park. Early park development was undertaken by Great Depression Era programs such as: Civilian Conservation Corps (CCC) and Works Progress Administration (WPA).

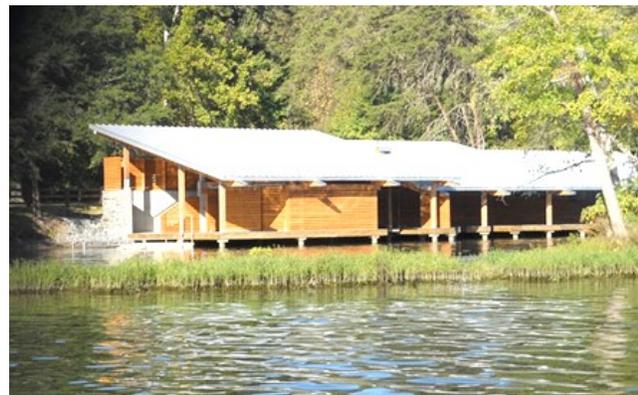
The most significant geological resources are the monadnocks, which are low mountains composed of extrusive igneous rock and capped with meta-rhyadacite, commonly known as *rhyolite*, an erosion-resistant rock of volcanic origin. Morrow Mountain is one of the tallest of several monadnocks that are remnants of the topography and geology of the ancient Uwharrie Mountains. One of the largest pre-historic quarries in North Carolina is found along the Mountain Loop Trail at the summit. Argillite, a rock often mistaken for slate, is found in many low areas, particularly along stream beds where it has been exposed by erosion. Meta-basalt and meta-gabbros make up the boulder fields found on the western side of the park.



Museum located near the office, was constructed out of argillite stone mined in the park

Significant biological resources include high quality plant communities, diverse and abundant wildlife populations, and habitat for the bald eagle. The park protects a 1,400-acre registered natural area containing five plant communities: piedmont monadnock forest, dry-mesic oak-hickory forest, mesic mixed hardwoods (piedmont subtype), and piedmont/coastal plains heath bluff, and piedmont/low mountain alluvial forest. The natural communities represent the diverse forest ecosystem.

Significant archaeological resources include both prehistoric and historic features. The hard, fine-textured rhyolite was valued by Native Americans for making tools and points, and the park protects one of the most significant prehistoric quarry sites in the southeastern United States. The Lowder Ferry site located by the boat house was partially excavated by Joffre Coe in 1949 and holds potential for future archeological studies. The park also contains prehistoric camps, villages, burial grounds, and seasonal fishing sites. Significant historic resources include the site of early ferry service crossing the Yadkin and Pee Dee rivers, the home site of physician and horticulturalist Dr. Francis Kron, and rural farmsteads, homesites and graveyards.



Boathouse overlooking Pee Dee is a destination area for the park.

The mountains, forests and the lakeshore provide large and diverse acreage to provide opportunities for recreational resources.



Exhibits inside museum interpret the unique geological and archeological significance of the region

II. HISTORY

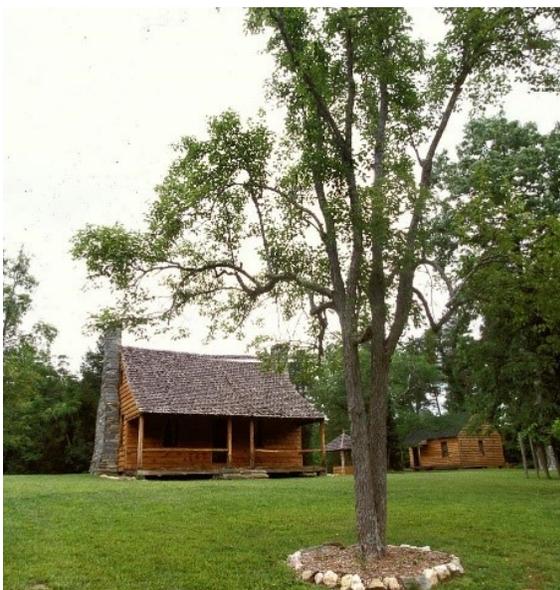
The discovery of artifacts in the area attests to the presence of Native Americans 12,000 years before European settlement. European colonization began along the banks of the Pee Dee River in the 1700's. A public ferry was established by the 1760's and was an integral part of the Salisbury Fayetteville Market Road. Development of the park began in the 1930s through the efforts of a local committee interested in establishing a state park in the area. By 1937, more than 3,000 acres of land had been acquired, much of it was donated by the citizens of Stanly County. The park was opened to the public in the summer of 1939.

Early development of park property was a cooperative effort between state and federal governments. Work crews of the Civilian Conservation Corps and the Work Projects Administration constructed many of the facilities from 1935 to 1941. Additional facilities were constructed with State funds in the 1950's and 1960's.

The homestead of Dr. Francis Kron, who was born in Prussia and immigrated to America in 1823, is located at the foot of Fall Mountain in the park. He is recognized as the first medical doctor to settle and practice medicine in the



Exhibits explain the history of Native American, European and Civilian Conservation Corps in the park



Kron house represents homestead and unique horticulture practices

southern piedmont region of North Carolina. He was a noted horticulturalist that grew a wide variety of fruits, vegetables, and flowers. He conducted many experiments grafting trees, an innovative technique at the time. His home, doctor's office, infirmary, and greenhouse were reconstructed in the 1960's and represent the historical context of the 1870's.



III. THEMES AND INVENTORY

Themes

The significant archeological, geologic, scenic, recreational and biological resources of North Carolina should be represented in the State Park system. These resources, as cited in the State Parks Act, are divided into sub-categories called resource “themes”. There have been 108 themes identified that should be protected to preserve representative examples of unique resources. For this General Management Plan, only themes that are of high significance to *Morrow Mountain State Park* are shown.

Morrow Mountain State Park Themes Table

Theme Type	Theme	Morrow Mountain Significance	State Parks System Representation
Archeological/Historic	Cemetery	High	Adequate
Archeological/Historic	Commercial	High	Moderate
Archeological/Historic	Recreation	High	Adequate
Archeological/Historic	Rural-Domestic	High	Adequate
Archeological/Prehistoric	Burial/Cemetery	High	Moderate
Archeological/Prehistoric	Campsite/Activity Area	High	Adequate
Archeological/Prehistoric	Quarry-Other	High	Adequate
Archeological/Prehistoric	Rock Art	High	Moderate
Archeological/Prehistoric	Trail/Path	High	Adequate
Archeological/Prehistoric	Village	High	Moderate
Archeological/Standing Structure	Rural-Domestic	High	Adequate
Biological	Piedmont and Coastal Plain Mesic Forests	High	Adequate
Biological	Piedmont and Coastal Plain Oak Forests	High	Adequate
Biological	Piedmont and Mountain Floodplains	High	Moderate
Biological	Piedmont and Mountain Glades and Barrens	High	Little
Biological	Piedmont Upland Pools and Depressions	High	Moderate
Geological	Gorges, Rapids, Waterfalls	High	Adequate
Geological	Inselbergs (Monadnocks)	High	Adequate
Geological	Intrusions	High	Adequate
Geological	Metamorphic Features	High	Adequate
Geological	Sedimentary Features	High	Moderate

Geological	Volcanic Features	High	Adequate
Scenic	Scenic Vistas	High	Moderate
Scenic	Reservoirs/Lakes	Adequate	High
Scenic	Rivers	Moderate	High
Scenic	Forests	Moderate	High
Scenic	Meadows/Grasslands	Little	High
Scenic	Rock Outcrops	Little	Moderate
Scenic	Caves/Cliffs	Little	High

*See the Systemwide Plan for references to Theme and inventory terms. Themes have both actual and “potential” future needs of *Morrow Mountain State Park*.



Scenic Vista of Lake Tillery



Morrow Mountain has examples of themes: Rivers, Lakes and Rock outcrops



Inventory:

While Morrow Mountain State Park is moderately developed, however, it received 500,000 visitors a year. Due to the proximity to the Triad region, and urban centers of Charlotte and Raleigh, this park has become a destination park central to the State of North Carolina.

Ensuring our facilities are of adequate size and numbers and are in good operable condition helps us to provide quality visitor experiences. The following section inventories the parks facilities and trails.

Facility Inventory:

Morrow Mountain State Park was established in 1935. However, numerous facilities and infrastructure systems need to be replaced due to extensive age and usage. The inventory chart explains the condition of the structures in detail.

Trails inventory:

18 miles of equestrian and 36 miles of hiking trails provides, beginner and advanced trails. However, due to use by equestrian and hikers in challenging terrain, many of the trails need reroutes and improvements.

PADDLE TRAILS:

Lake Tillery and the lower river section of the Pee Dee River and Yadkin River is bisected by the Alcoa dam structure.



NC STATE PARKS - FACILITY INVENTORY SPREADSHEET

State Park Unit(Alpha Code):		MOMO	Park Area(If Applicable):		Morrow Mountain State Park
				Date(MM/YY):	Nov-18
Public Buildings	Unit	Total #	Condition	Repairs needed(If Applicable)	
Office/ Visitor Center	BLDG	1	Fair		
Boathouse	BLDG	1	Good		
Showerhouse house	BLDG	4	Bad		
Museum	BLDG	1	Good		
Picnic Shelter	BLDG	3	Fair		
Concession Stand at Pool	BLDG	1	Fair		
Lodge	BLDG	1	Good		
Pool	BLDG	1	Fair		
Picnic Area Bathhouses	BLDG	2	Bad		
Summit Bathhouse	BLDG	1	Good		
Toilet Building - Non-Flush	BLDG	1	Good		
Pit Toilet - Primitive Backpack Campground	BLDG	1	Bad		
Staff Buildings	Unit		Condition	Repairs needed(If Applicable)	
Ranger Residence	BLDG	3	Fair		
Maintenance Building	BLDG	1	Good		
Maintenance Garage	BLDG	1	Good		
Warehouse	BLDG	1	Good		
Barn	MAINT	1	Bad		
Pole Barn	MAINT	1	Fair		
Small Storage Shed	MAINT	1	Fair		
Haz Mat Shed	MAINT	1	Fair		
Woodshed	MAINT	1	Fair		
Recreation Facilities	Unit		Condition	Repairs needed(If Applicable)	
Electric Hookups	SITE	12	Good		
ADA Accessible with Electrical hookups	SITE	6			
Total with Hookups					
RV Campsites non - Electric, Loop A	SITE	36	Good		
RV Campsites non - Electric, Loop B	SITE	32	Good		
RV Campsites non - Electric, Loop C	SITE	15	Good		
Primitive Backpack Campsites	SITE	4	Fair		
Improved Group Sites	SITE	5	Fair		
Improved Group Sites ADA	SITE	1	Fair		
Total No Hookups					

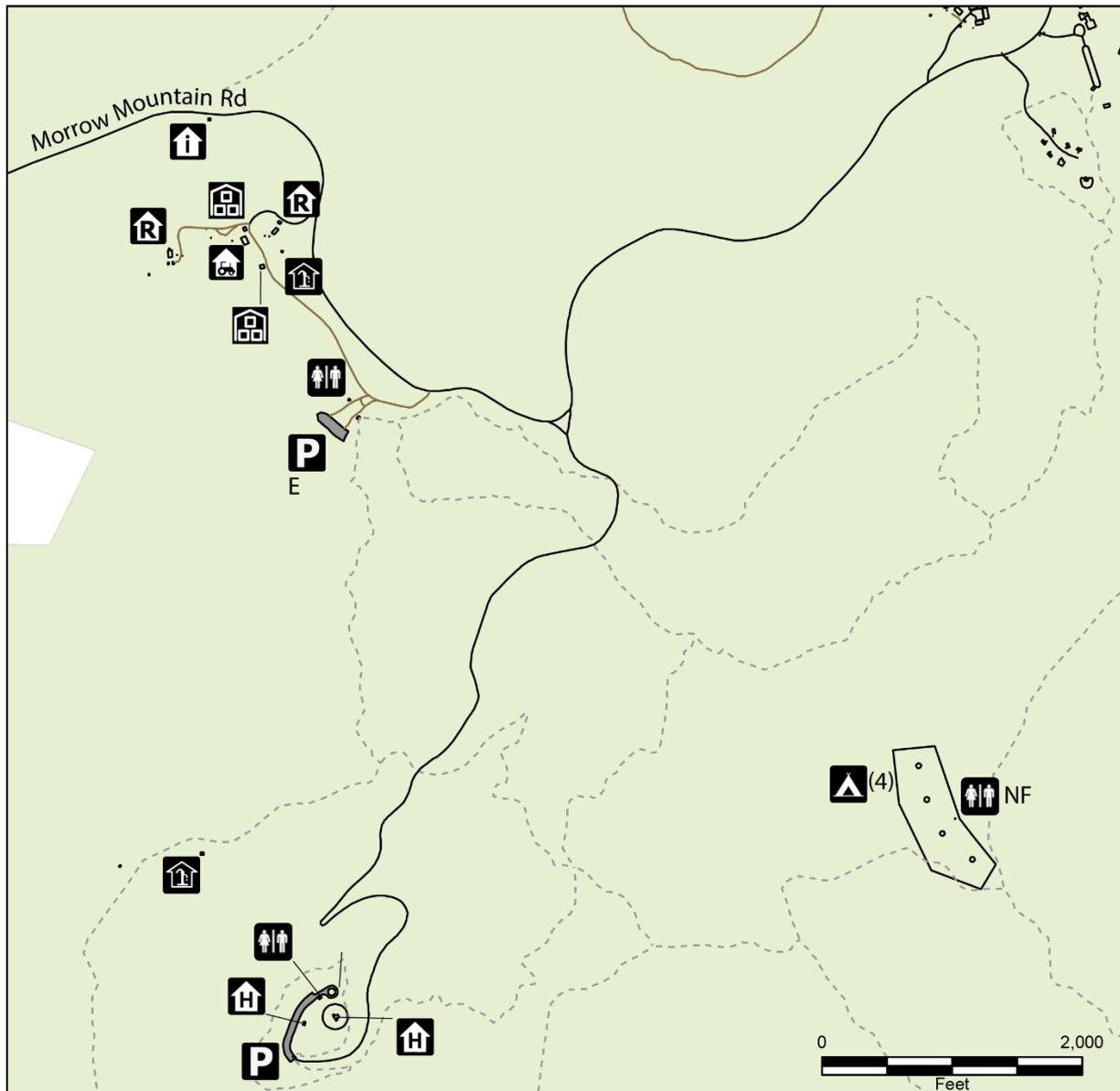


Cabin	SITE	5	Fair	
Cabin - ADA	SITE	1	Good	
Boat Ramp	RAMP	1	Bad	
Fishing Pier	PIER	1	Bad	
Pool Filter Building	BLDG	1	Fair	
Pool First Aid Building	BLDG	1	Fair	
Observation Deck	DECK	1	Bad	
Ampitheater	AMPITH.	1	Fair	
Picnic Area	PICNIC	3	Bad	
Parking Area - Paved	PARKING	8	Fair	
Parking Area - Unpaved	PARKING	3	Bad	
Other Facilities	Unit	Total #	Condition	Repairs needed(If Applicable)
Kron house	HISTORICAL	1	Fair	
Kron Doctors Office	HISTORICAL	1	Fair	
Kron Greenhouse	HISTORICAL	1	Fair	
Information station	HISTORICAL	1	Fair	
Old CCC Bathhouse	HISTORICAL	1	Bad	
Rock walls along road way	HISTORICAL	4	Bad	
Rock walls on edge of parking lots	HISTORICAL	5	Fair	
Rock stadium seating at pool	HISTORICAL	1	Bad	
CCC electrical buildings	HISTORICAL	4	Bad	
CCC barbeque building	HISTORICAL	1	Bad	
Cemeteries	HISTORICAL	5	Bad	
Reservoir water system	HISTORICAL	3	Bad	
Main drinking water systems	HISTORICAL	4	Bad	
Wellhouses	WATER	7	Bad	
Pumphouses	WATER	4	Fair	
Water tanks	WATER	2	Bad	
Septic Systems	WATER	17	Fair	

ADDITIONAL NOTES:

Morrow Mountain was established in 1935 and a majority of the facilities are past the lifespan. The showerhouses need to be demolished and constructed to current design and construction standards. Archeological study needs to be done prior to construction due to sensitive areas.

FACILITY INVENTORY – WESTERN REGION

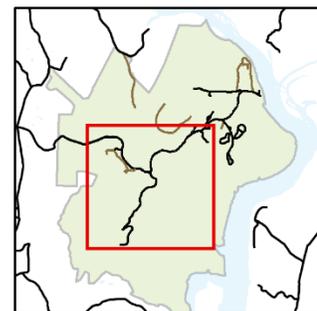


Morrow Mountain State Park Facility Inventory

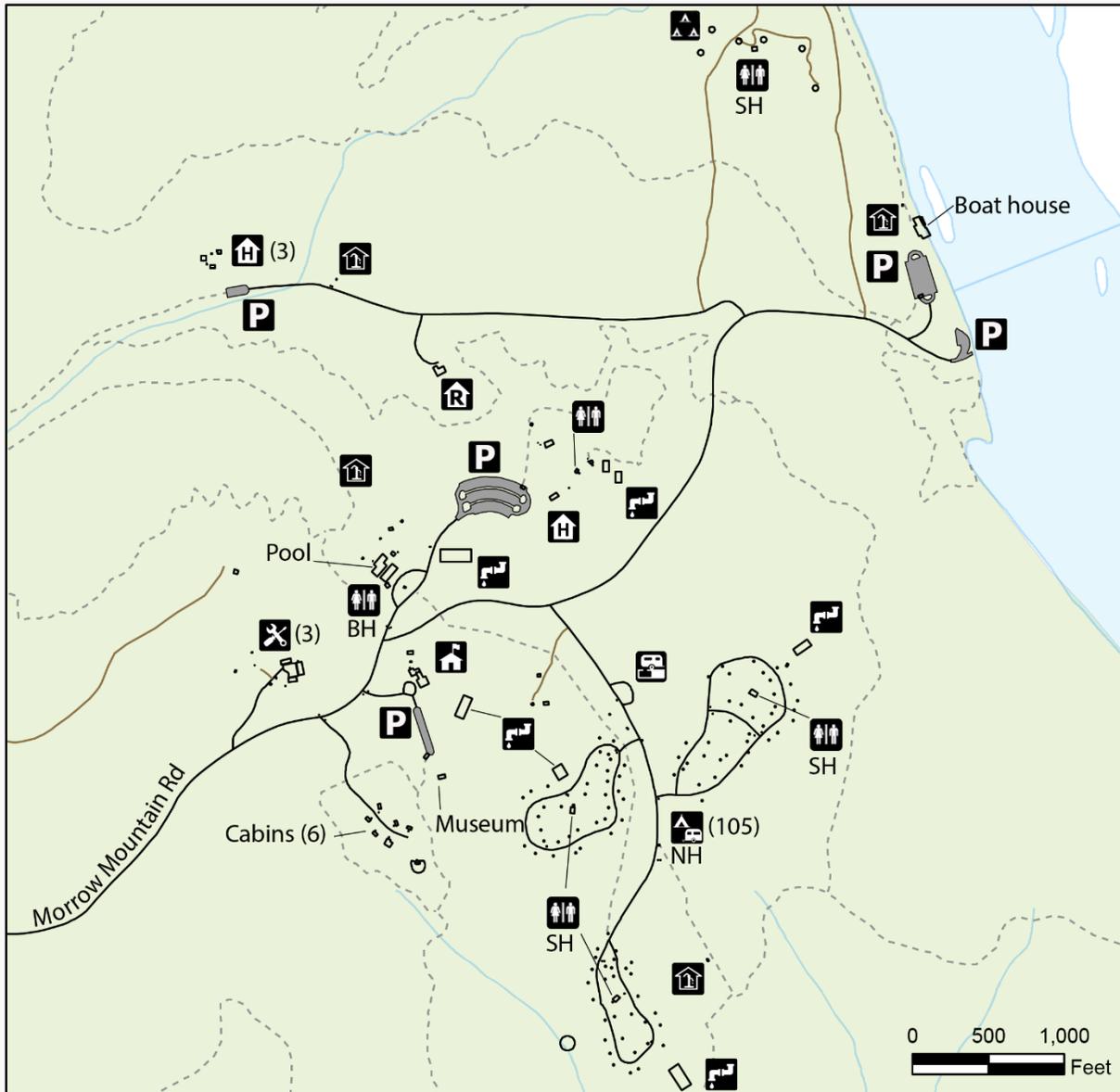
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|---------------------------|---------------------|
| State Parks Unit | Information station |
| Existing Facilities | Equipment shed |
| Existing Trails | Storage building |
| Road - Paved | Ranger residence |
| Road - Unpaved | Primitive camping |
| Parking | Picnic shelter |
| E = Equestrian | Historic building |
| Well house | Overlook |
| Restroom (NF = non flush) | |



FACILITY INVENTORY - EASTERN REGION

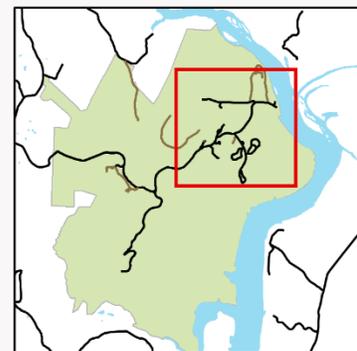


Morrow Mountain State Park Facility Inventory

April 2019



- | | |
|------------------------------|----------------------|
| State Parks Unit | Picnic shelter |
| Existing Facilities | Office |
| Existing Trails | Maintenance Building |
| Road - Paved | Ranger residence |
| Road - Unpaved | Septic field |
| Parking area | Group Camping |
| Historic building | Restrooms |
| Well house | Shower House |
| Campsites | Bath House |
| Campsites
NH = No Hookups | Dump station |





TRAILS INVENTORY

Trails Inventory	Hiking	Equestrian	Paddle Trail
Backpack Trail	2.00		
Bridle Short Loop	3.90	3.90	
Fall Mountain Trail	4.10		
Hattaway Mountain Trail	2.00		
Laurel Trail	0.60		
Long Loop Trail	9.30	9.30	
Middle Loop Trail	5.50	5.50	
Morrow Mountain Trail	2.60		
Mountain Loop Trail	0.80		
Quarry Trail	0.60		
Rocks Trail	1.30		
Sugarloaf Mountain Trail	2.80		
Three Rivers Nature Trail	0.80		
Morrow Mountain SP Totals (miles)	36.30	18.70	
Yadkin River Paddle Trail			2.50

HIKING:

Backpack Trail: This out and back 2-mile-long hiking trail that is located on the mountain portion of the park.

Bridle Short Loop Trail: This 3.90-mile long hiking and equestrian trail located in the southern portion of the park.

Fall Mountain Trail: This 4.10-mile loop trail starts at the parking lot at the boathouse along Lake Tillery and traverses a wide variety of habitats and points of interest including chestnut oaks and geological features of rhyolite rock outcrops. The top of Fall Mountain offers scenic views of Lake Tillery and the surrounding countryside.

Hattaway Mountain Trail: This 2-mile loop trail offers a steep climb up Hattaway Mountain. The chestnut oaks and sourwoods along this trail are typical of the dry, rocky ridges found throughout the Uwharrie Mountains.

Laurel Trail: This 0.60-mile loop trail starts at the park museum and meanders along Sugarloaf Creek and passes near the cabins. This trail acts as a connector of the Laurel Trail and the Sugarloaf Mountain Trail.



Long Loop Trail: This 9.30-mile-long equestrian loop trail has trailhead parking at the park entrance area. The trail has scenic views of Lake Tillery located on the southeast corner of the park. A portion of the Long Loop trail doubles as the Carolina Thread trail, which is a network of trails that link 15 counties in North and South Carolina.

Middle Loop Trail: This 5.50-mile-long equestrian loop trail is located between Short and Long Loop. The route has scenic views of Mountain Creek.

Morrow Mountain Trail: This 2.60 mile out and back trail connects the parking lot at the park office to picnic area on top of Morrow Mountain. This trail utilizes portions of four (4) other trails: Backpack Trail, Laurel Trail, Sugarloaf Mountain Trail, and Mountain Loop Trail which are connected by the Morrow Mountain Trail. It is an easy trail, except for a steep section which ascends, or descends the summit of Morrow Mountain for a quarter mile.

Mountain Loop Trail: This 0.80-mile loop trail circles the top of Morrow Mountain, the highest point in the park and Stanly County. Rock debris from thousands of years of pre-historic quarrying can be found along the trail. Native American Indians used this rock, called rhyolite, to make spearheads, knives, axes and scrapers.



Mountain Loop Trail

Quarry Trail: This 0.60-mile loop trail located near the swimming pool. The trail is a “Kids in Park Track Trail”, featuring interpretive examples of stream crossings and a historic quarry site.

Rocks Trail: This 1.30-mile out and back trail is an easy hike that ends at a 35-foot-high rock outcrop overlooking the Pee Dee River.

Sugar Loaf Mountain Trail: This 2.80-mile Sugarloaf Mountain Trail ascends the second highest peak in the park at 858’ above sea level. During winter months, the mountaintop provides scenic views of the Yadkin River and surrounding countryside. The trail is rocky and rugged in places and more challenging than many of the other trails.

Three Rivers Nature Trail: This 0.80-mile trail is named for the confluence of the Uwharrie River, which joins the Yadkin River, then changes names and becomes known as the “Pee Dee River”, creating an intersection of three rivers. Floodplain trees, such as river birch and sycamore, can be found in low areas while the ridgetop is dominated by trees such as the Chestnut oak and American beech communities.



PADDLE TRAIL:

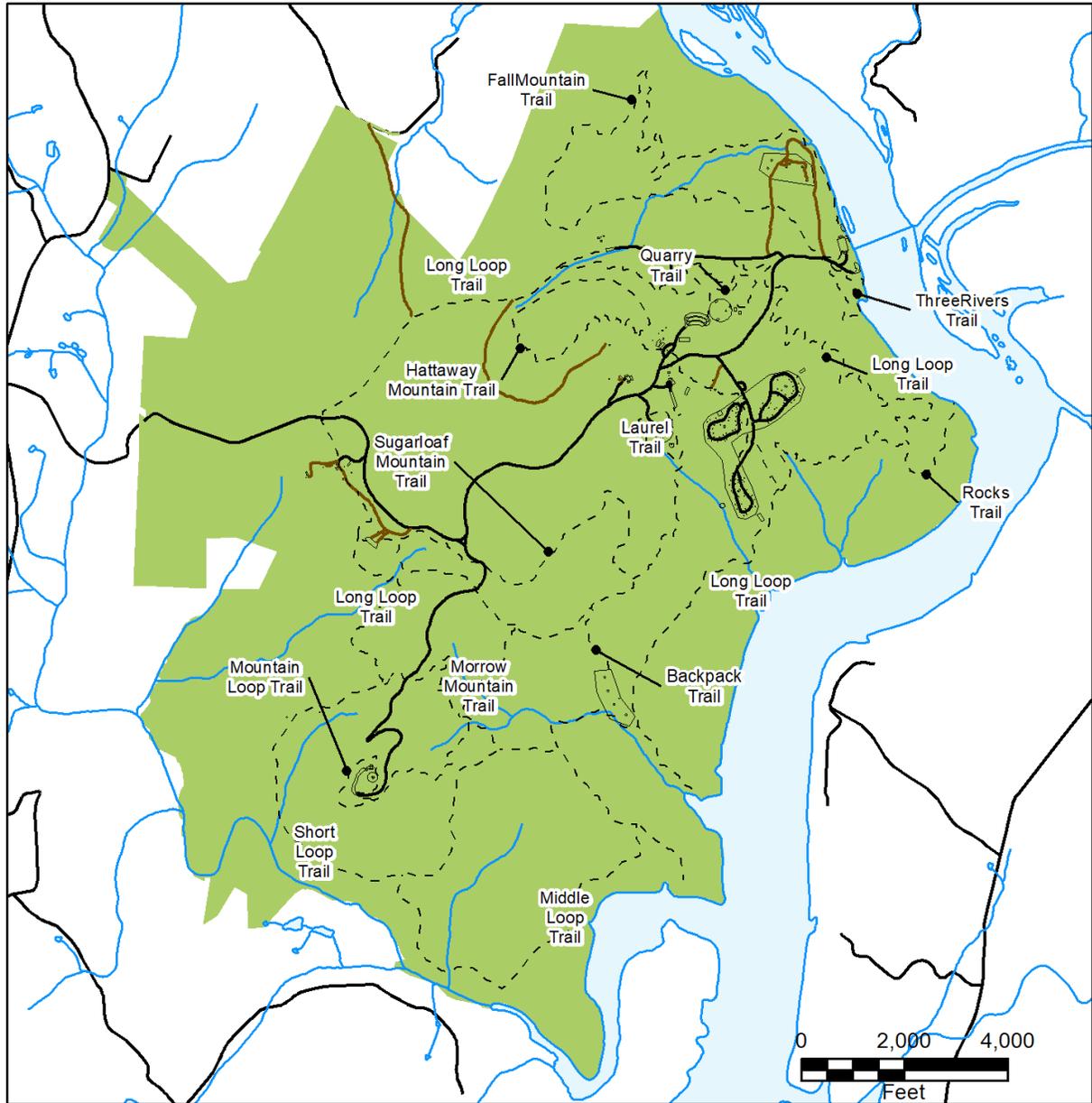
2.50 miles of the Yadkin River Paddle trail is managed by State Parks.



Yadkin River Paddle Trail is a slow-moving piedmont river, which is ideal for beginner canoe access



TRAIL INVENTORY

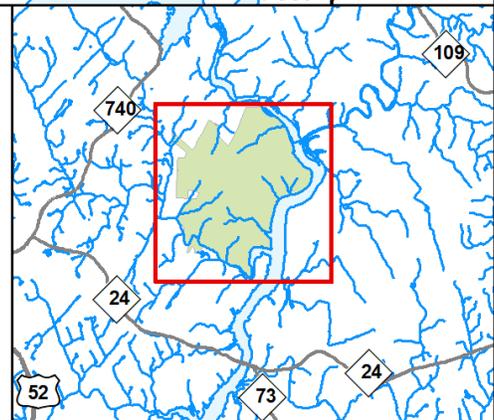


Morrow Mountain State Park Trail Inventory

April 2019



- Trails
- Road - Paved
- Road - Unpaved
- Facilities
- State Park



IV. PLANNING



Summit of Morrow Mountain



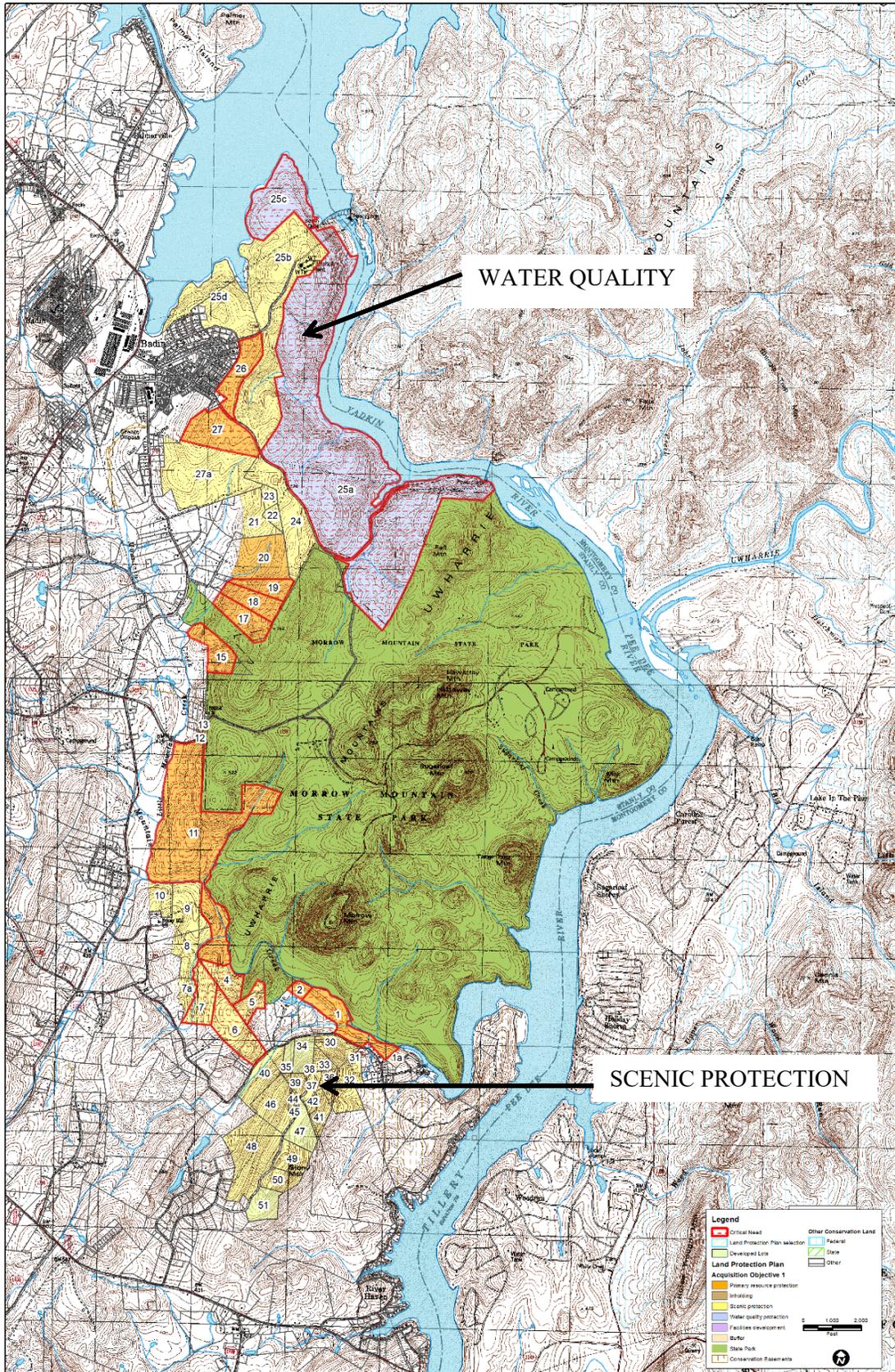
LAND PROTECTION FOR STATE PARKS

To achieve the highest level of connectivity between park properties already owned by the State of North Carolina, further acquisition of land is expected to take place. Additional land will ensure the maximum protection of natural resources, scenic preservation, outdoor recreation and public access. Each park has several tracts of land that have been distinguished as a future need or a critical need for the park. The following map shows Land Acquisition needs for *Morrow Mountain State Park*.



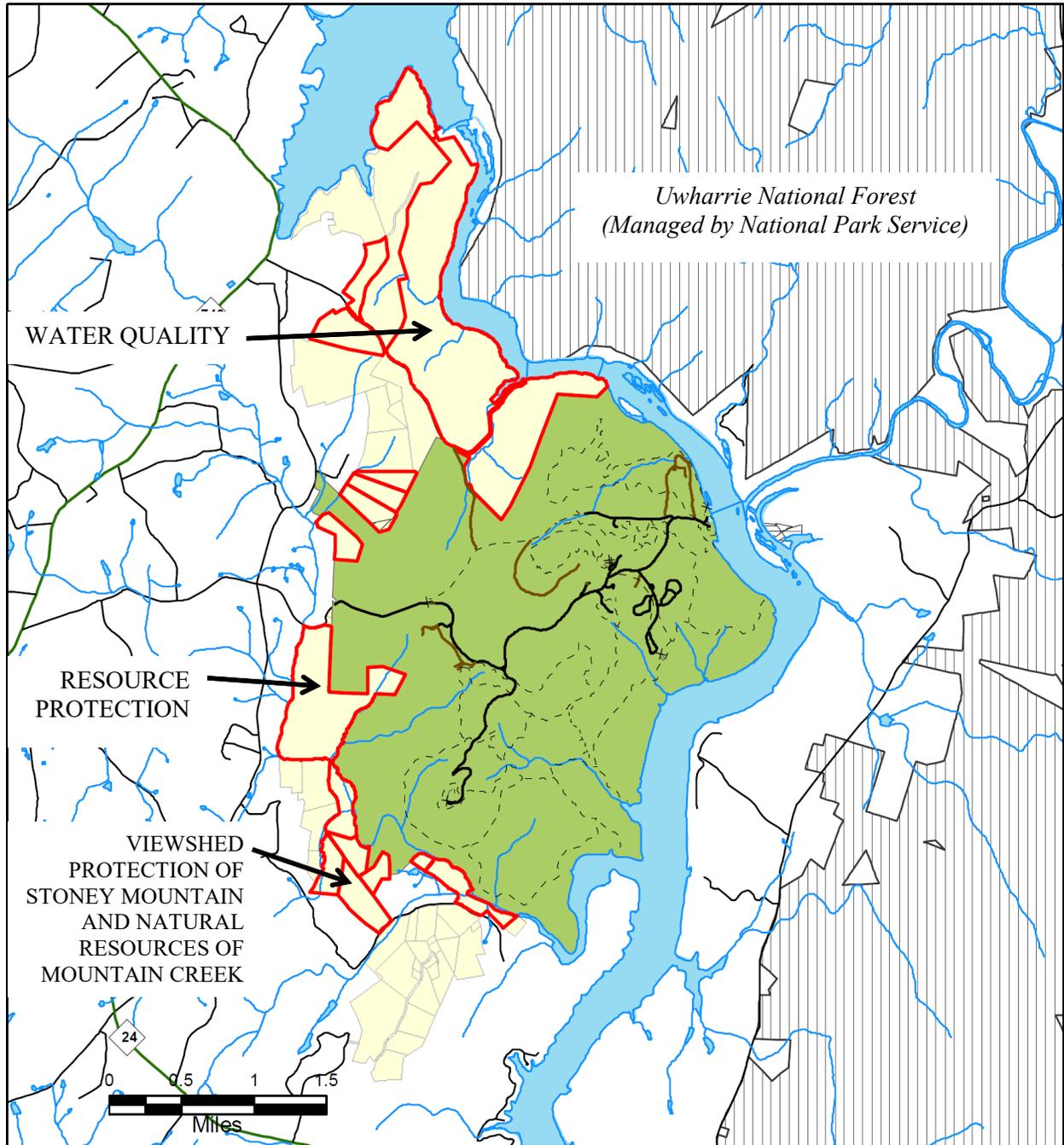
Needed for water quality protection within the Pee Dee River Basin

LAND PROTECTION PLAN





LAND PROTECTION PLAN – CRITICAL ACRES



Morrow Mountain State Park

- Critical need
- State Parks Unit
- Land Protection Plan**
- Future Need

Other Conservation Land

- Federal
- State
- Other



June 2018





PROJECT LIST

Project #	Project Title	Probable Cost
	RENOVATON PROJECTS (Special Funding)	
A	Cabin Renovations (5)	\$500,000
B	Bathhouse/shower house renovations (3)	\$900,000
C	Swimming pool renovations	\$250,000
D	Summit overlook improvements	\$450,000
E	Trail improvements	\$200,000
F	Road improvements	\$1,000,000
G	Equestrian parking	\$250,000
	SUB - TOTAL RENOVATION PROJECTS	3,550,000
	General Management Plan Projects	
1	Camper cabins and proposed shower house at campground Loop C	\$1,500,000
2	Water system inventory and analysis by Consultant	\$50,000
3	Water and sewer improvements	\$3,300,000
4	Road Improvements at central section of park	\$400,000
5	Trail connecting from campground, cabins, lodge and pool	\$250,000
6	Proposed shelter at Pool area	\$250,000
7	Stonework Improvements (Bridges, Kron Parking, Pool parking lot, boathouse)	\$250,000
8	Parkwide internet connection	\$100,000
9	Phase 2: Group camp road improvements	\$500,000
10	Byles Road improvements	\$1,000,000
11	Additional Five (5) Camper Cabins in Loop A or B	\$310,000
12	L-Proposed Byles campground	\$800,000
	TOTAL	\$8,710,000

** Estimated project cost does not include contingencies, design fee, nor escalation.



Renovation Projects

RR PROJECT A: CABIN RENOVATIONS (5)

Cabins need to be updated due to cramped bedrooms, and old construction practices. Cabin #6 was recently updated to accessible design standards.

RR PROJECT B: BATHHOUSE/SHOWERHOUSE RENOVATIONS (3)

Existing shower houses in Loop A, B and Group Campground were constructed in 1960's. The stalls and showers need to be updated to standard accessible compliance and construction practices.

RR PROJECT C: SWIMMING POOL RENOVATIONS

Swimming pool needs to update HVAC system, redesign the concessions area and provide adequate storage space.

RR PROJECT D: SUMMIT OVERLOOK IMPROVEMENTS

The overlook needs to be removed and replaced with recycled plastic timber boards and new railings. The overlook has major safety concerns and the railing is deteriorating. The accessible complaint and expanded overlook area will provide an opportunity for events or gathering space.

RR PROJECT E: TRAIL IMPROVEMENTS

Approximately 5-10 miles of trails need re-routes evaluated and constructed to sustainable trail design and construction practices. Several pedestrian bridges, such as Fall Mountain Trail, needs to be replaced along with stabilization of sections that borders the edge of Yadkin River. Reroute steep sections of the Hattaway Mountain Trail and Sugarloaf Mountain Trail or install stone steps. Reroute and repair eroded areas on Short Loop bridle Trails

RR PROJECT F: ROAD IMPROVEMENTS

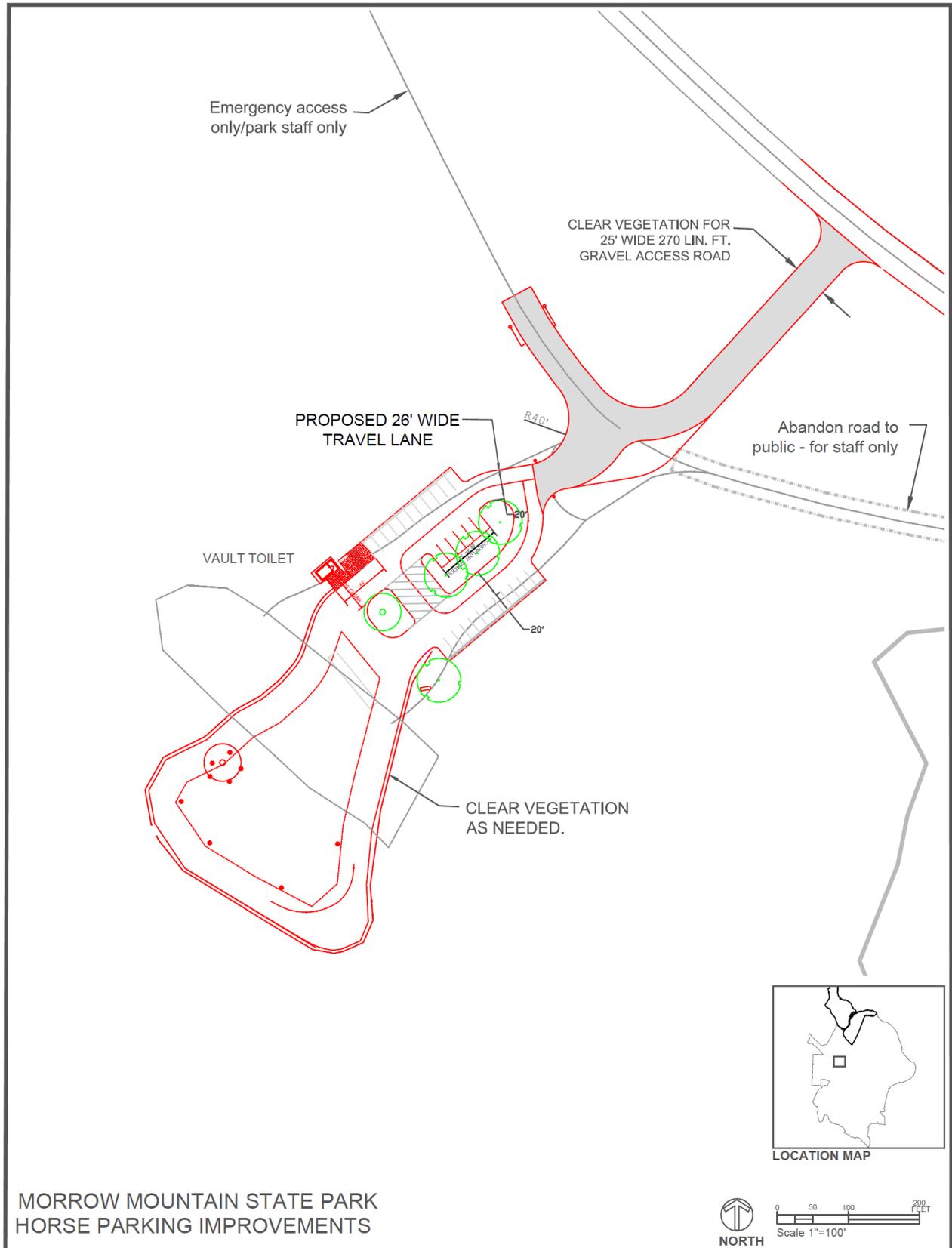
Additional directional NCDOT and wayfinding signs need to be installed for efficient circulation pattern. Staff will coordinate with NCDOT to upgrade park access road to standard design standards.

RR PROJECT- G. Equestrian parking Lot improvements

This gravel parking lot needs to be re organized based on safety, circulation pattern, provide adequate designated parking spaces and split rail fencing to enclose the space. Equestrian road alignment needs to be perpendicular to main park road.



EQUESTRIAN PARKING





GENERAL MANAGEMENT PLAN - PROJECT LIST

1. Camper Cabins and Proposed shower house at Campground C

As camper cabins become more main stream in parks through the country and North Carolina, the demand is increasing for these facilities. This project will include: the installation of 8 camper cabins, a newly constructed shower house, storm drainage improvements, and internal road improvements to “Loop C” campground.

2. Water system inventory and analysis by Consultant

The water system for this park is outdated and not efficient. The reservoir system is over 50 years old and is a costly maintenance issue for the park. A SUE (Subsurface Utility Engineering) survey is needed to fully understand the issues associated with all (electric, water, and sewer) utility systems and a feasibility study needs to be completed to evaluate volume/usage/current and future capacity of system.

3. Water and sewer improvements

The water and sewer infrastructure of the park needs to be upgraded to current standards. This will be based on staff priority and feasibility. Additional funding sources will be evaluated due to escalating cost of construction.

Reservoir zones include:

- **Summit Water system** needs replacement of distribution lines from the reservoir to the toilet building and drinking fountains.
- **Residence water system** has poor water quality. The distribution system and new 2” PVC lines to the summit area well house needs to be replaced.
- **Boathouse water system** needs to increase size of pipe to minimum of 1.5” dia. PVC of distribution system (min. 300 lin. feet).
- **Swimming Pool reservoir** needs the installation of chain link fencing around the perimeter and installation of a pier to the intake pipe.

After the SUE survey is completed, in order to determine the infrastructure and capacity improvements. Then the infrastructure of the park needs to be upgraded to current standards. Most of the system is over 50 years old and dates to the late 1930’s.



Sewer upgrades: Morrow Mountain has 15 different sewer systems ranging in size from 1,000 gallons to 7,500 gallons. Tree root infiltration and paper clogging the system have caused significant damage to the system. Scope of work includes: Drain field replacement and new manhole risers.

Water upgrades: The park is served by four separate water systems, with each system having minimum one or more 6" diameter water wells for the water supply. The distribution system is composed of either PVC, galvanized or transit pipe. Majority of the distribution piping is inefficient, aged and needs to be replaced. The Hattaway system, needs replacement of three miles (15,840 lin. ft) of waterline and valves. The study of a 50,000-gallon concrete reservoir needs internal structural repaired due to significant use and age. This system has exceeded the expected facility lifespan.

4. Road Improvements at central section of park

Due to hazardous traffic circulation issues, staff will coordinate with NCDOT for design and construction of a T- intersection for efficiency and safety. The visibility and sites lines are difficult on the inner section. Scope of work includes: grading, directional signs, paving, widened road for larger vehicles.

5. Trail connecting from campground, cabins, lodge and pool

Due to safety concerns and circulation issues, a paved concrete walkway needs to be installed to connect the existing cabin access road to the pool. Minimal grading and storm drainage will be integrated into the design and construction of this walkway.

6. Proposed shelter at Pool Area

The kiddie pool needs to be removed and/ or filled in due to high maintenance issues. The facility is not accessible compliant and would take extensive construction to make it code compliant. The pool area has significant use over 3 months during the summer. A proposed shelter will provide an additional amenity, shade and 'outdoor classroom' for programs and interpretation.

7. Stonework improvements (Bridges, Kron Parking, Pool parking lot, boathouse)

Civilian Conservation Corps (CCC) style walls includes: walls, bridges, curbing and walkways have deteriorated to the point that it poses safety hazards to visitors. Repairs need to be made to prevent further deterioration. Stone curbing can be protected by installing concrete wheel stops to act as a barrier.

The existing rock stadium seat wall located on the west side of the pool deck needs to be graded for positive drainage and install a wall cap to enclose the structure and prevent vandalism.



8. Parkwide Internet connection

Parkwide internet service is needed to improve the camping experience, improve administrative staff duties and provide adequate emergency response for operational services. Improved internet service is also needed at concession facilities including the swimming pool and boathouse for collecting revenue. The pool is a cash-only facility and the boathouse has satellite internet that only works when weather conditions permit. The current system at the office fails regularly, impairing the ability for staff to properly perform their job duties. The internet was down for 22 consecutive days during summer of 2018, which is prime season for revenue generation for the park.

9. Phase 2: Group Camp Road Improvements

The group camp road is very narrow and has side slopes of 3:1. Significant grading is needed with possible retaining wall and slope stabilization measures. The road needs to be widened from 12 feet wide to 25' wide.

10. Byles Road Improvements

This proposed project includes paving improvements due to age and use. This route is needed to access the future Alcoa property. The project scope and costs will be adjusted for work that is undertaken by NCDOT road maintenance funds. This route is listed in the emergency response and evacuation plan as the evacuation route, however this route is currently impassible.

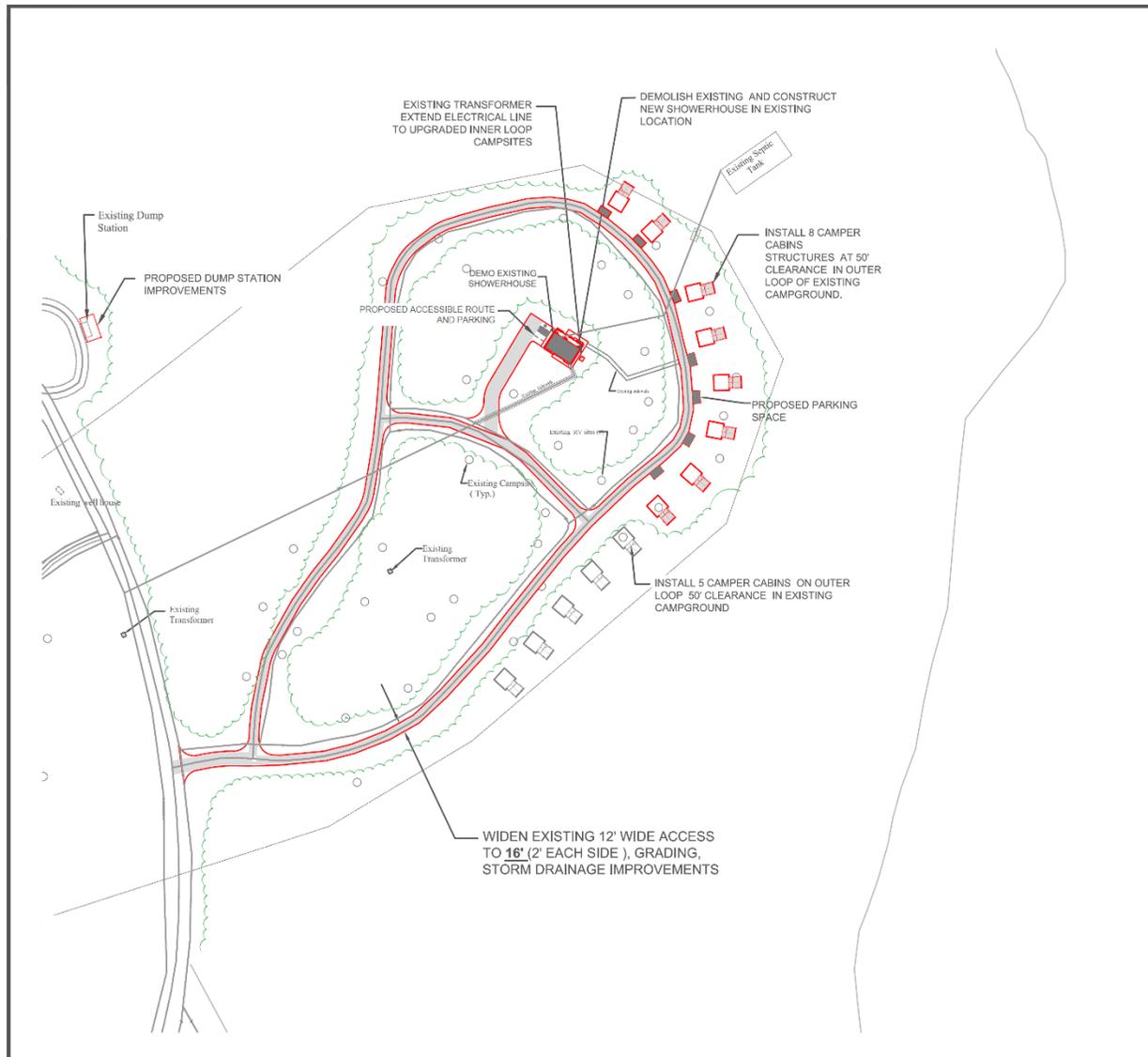
11. Additional Five (5) Camper Cabins in Loop A or B

Loop A or B need to be updated for consistency after loop C is completed. Staff will evaluate the 'opportunity sites' in each loop area based on location of utilities, circulation, feasibility and use.

12. L-Proposed Byles Campground

A land dependent primitive type campground will be constructed with access off the main entrance road. This will allow campers to leave after park hours and use future improvements and trails in the northern section including Alcoa Tract.

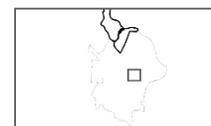
PROJECT #1: CAMPER CABINS AND PROPOSED SHOWERHOUSE AT CAMPGROUND LOOP C



CAMPGROUND IMPROVEMENTS AT LOOP C

- Demolish showerhouse and construct facility at former location.
- Road improvements: widen to 16' wide, asphalt paving, storm drainage, parking areas
- Proposed Camper Cabin structures (including 2 ADA) close to the existing showerhouse
- Accessible sidewalk connections to new showerhouse
- Extend electrical line and connections and to new campsites from existing transformer at showerhouse

MORROW MOUNTAIN STATE PARK PROPOSED CAMPGROUND IMPROVEMENTS



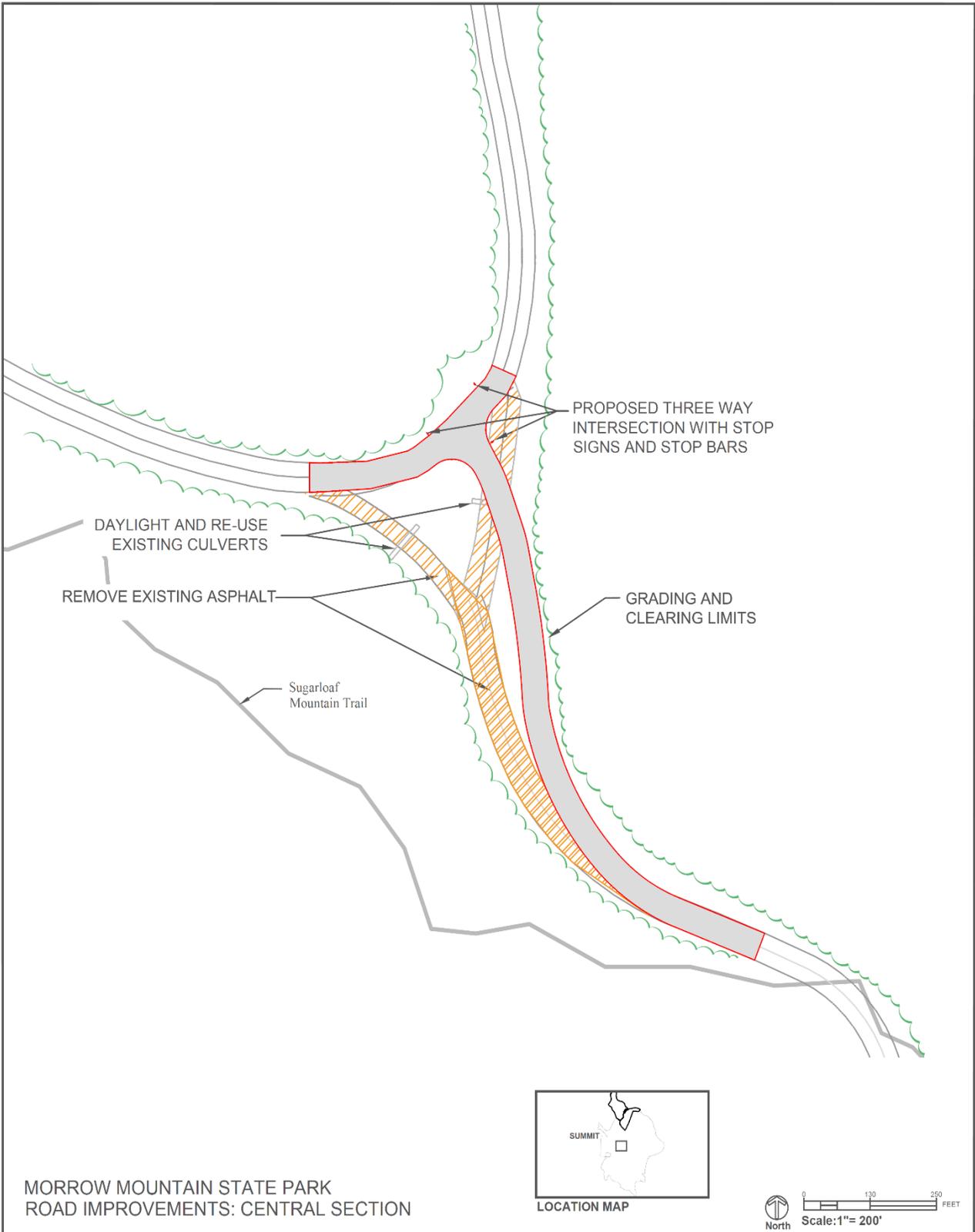
LOCATION MAP



Scale: 1" = 200'

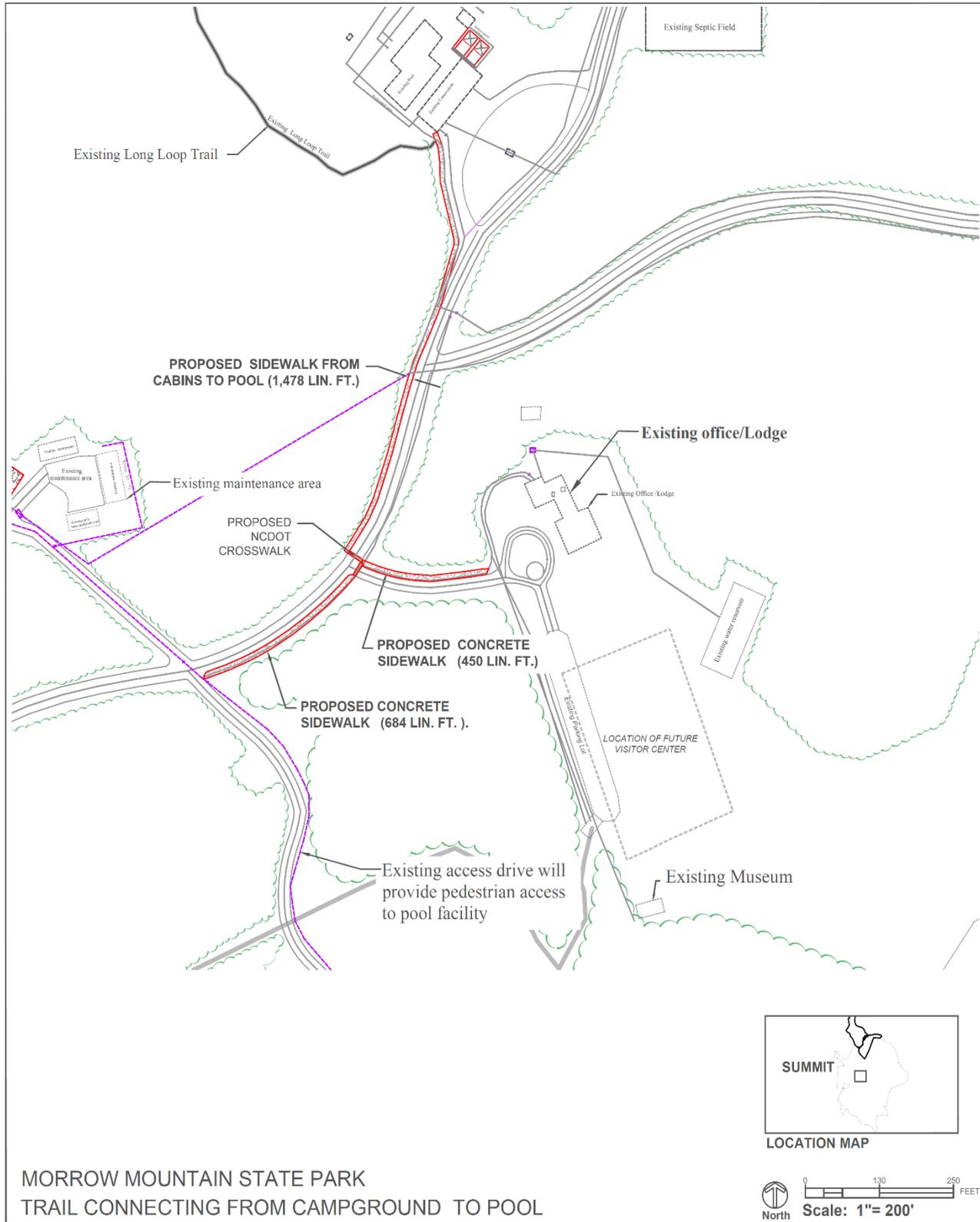


PROJECT #4: ROAD IMPROVEMENTS AT CENTRAL SECTION OF PARK



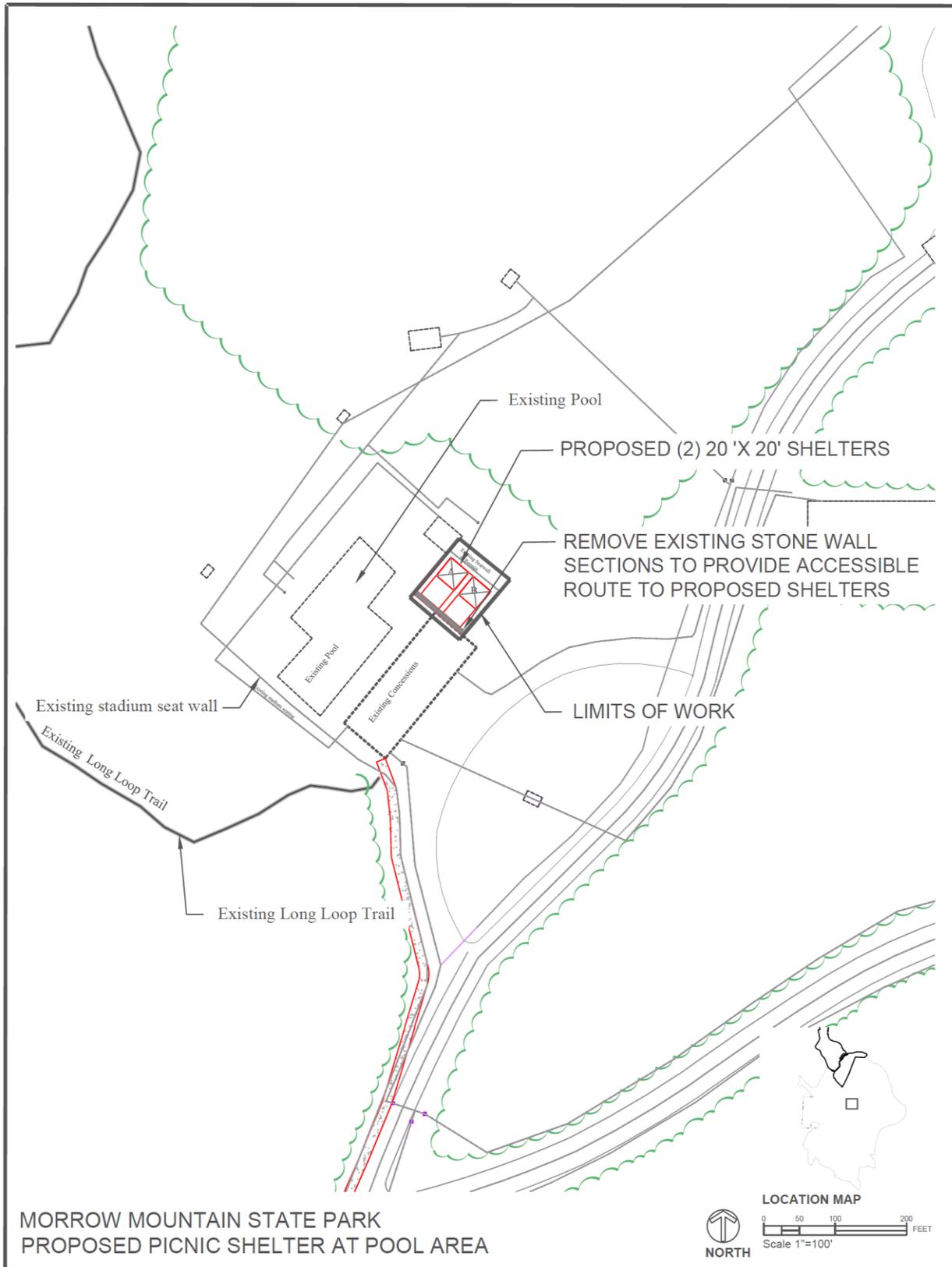


PROJECT #5: TRAIL CONNECTING CAMPGROUND, CABINS , LODGE AND POOL



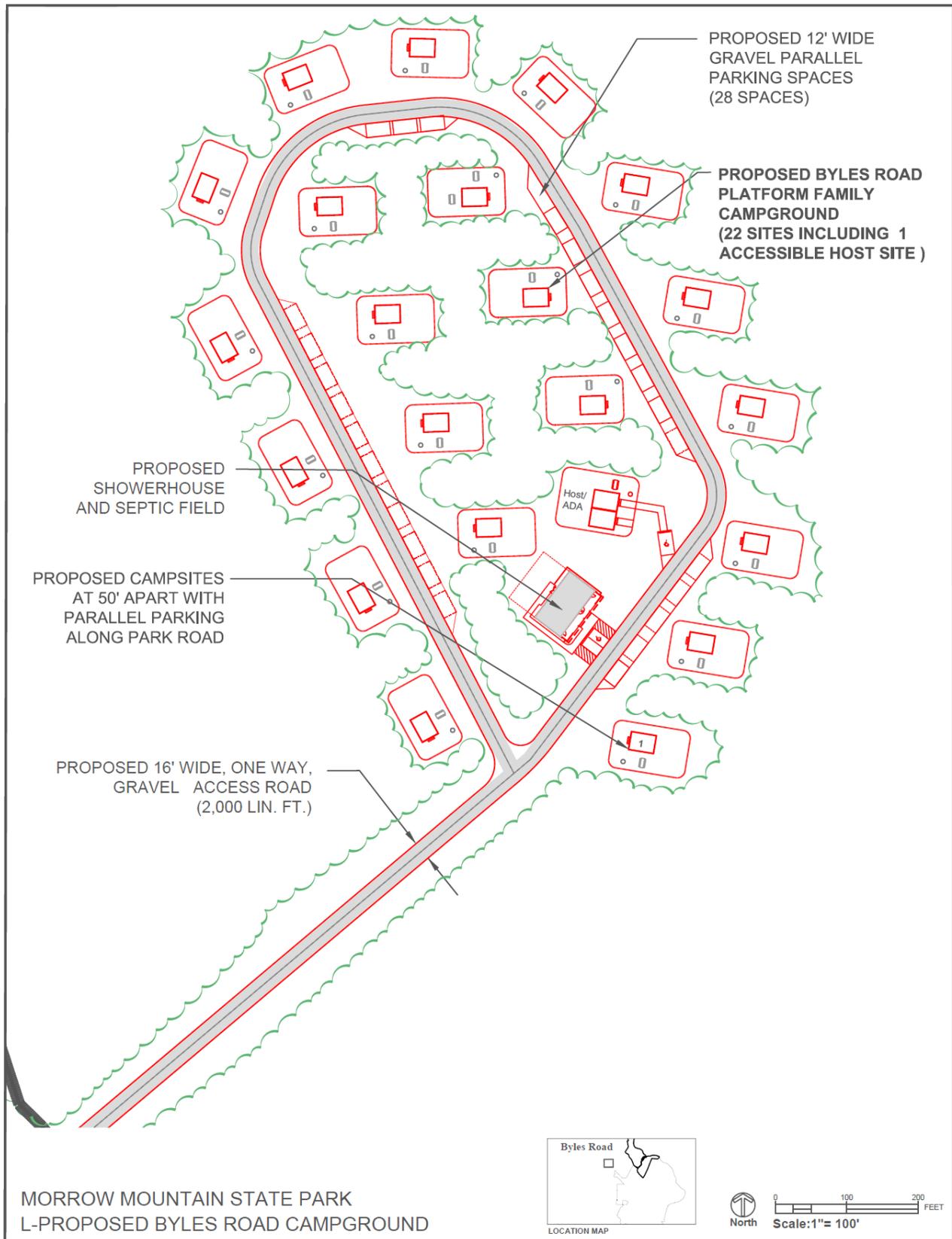


PROJECT #6: PROPOSED SHELTER AT POOL AREA





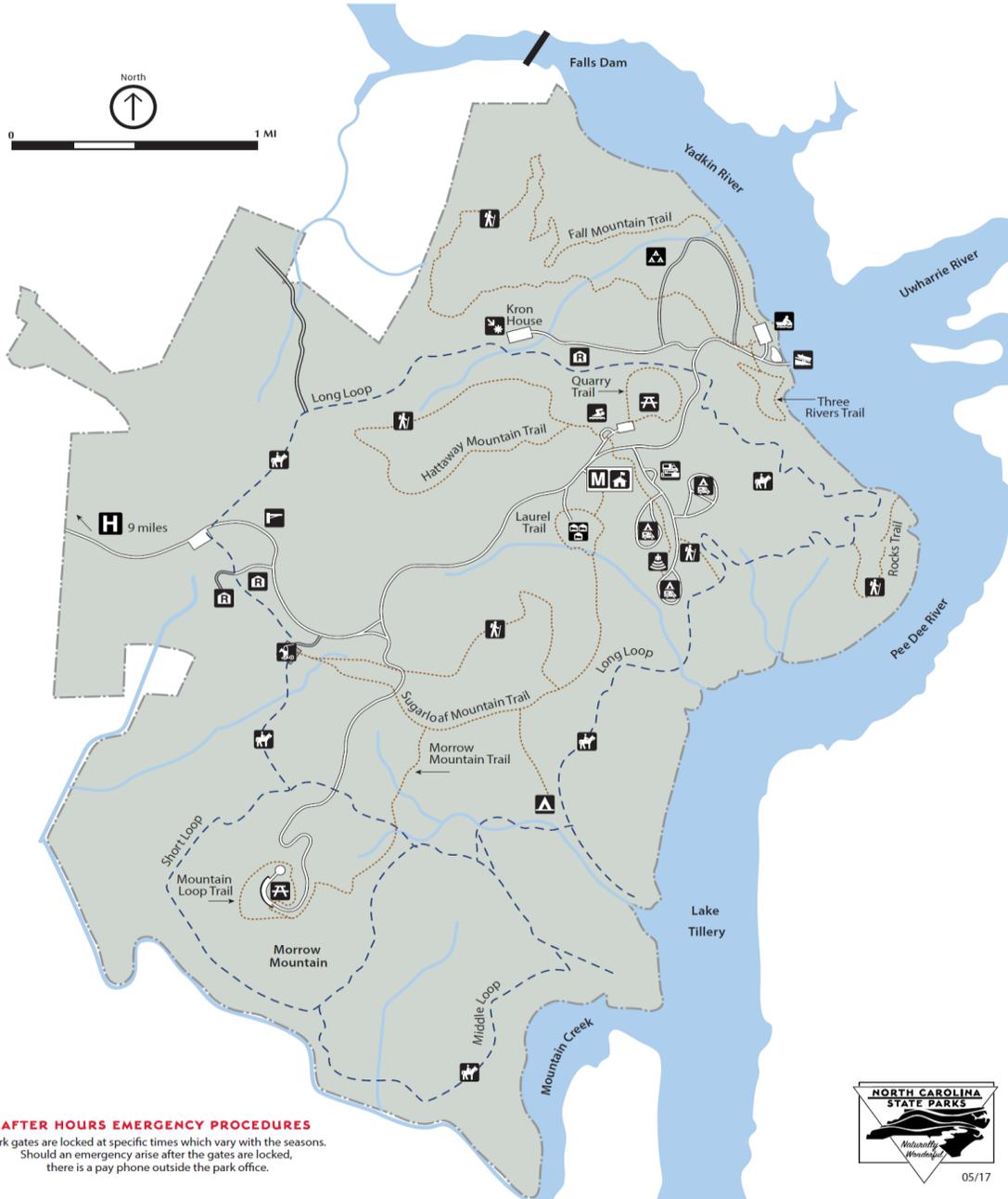
PROJECT #12: L-PROPOSED BYLES CAMPGROUND





PARK MAP

MORROW MOUNTAIN STATE PARK



AFTER HOURS EMERGENCY PROCEDURES
 Park gates are locked at specific times which vary with the seasons. Should an emergency arise after the gates are locked, there is a pay phone outside the park office.



LEGEND

Amphitheater	Museum
Boat Ramp	Park Boundary
Boat Rentals	Park Gate
Bridle Trail	Park Office
Dump Station	Picnic Area
Family Camping	Point of Interest
Family Vacation Cabin	Primitive Camping
Group Camping	Ranger Residence
Hiking Trail	Road - Gravel
Horse Trailer Parking	Road - Paved
Hospital - Stanly Regional Medical Center 704-984-4000	Swimming Pool

TRAILS

Backpack	2.0 miles	easy	
Bridle: Short Loop*	3.9 miles	moderate	
Bridle: Middle Loop*	5.5 miles	moderate	
Bridle: Long Loop*	9.3 miles	moderate	
Campground/Pool	0.8 miles	easy	
Fall Mountain	4.1 miles	moderate	
Hattaway Mountain	2.0 miles	strenuous	
Laurel	0.6 miles	easy	
Morrow Mountain**	2.6 miles	moderate	
Mountain Loop	0.8 miles	easy	
Quarry	0.6 miles	easy	
Rocks**	1.3 miles	easy	
Sugarloaf Mountain	2.8 miles	strenuous	
Three Rivers	0.8 miles	easy	

* All bridle trails may be used for hiking
 ** Distance is measured one way, double distance for round trip



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