

# ELK KNOB STATE PARK

## General Management Plan



North Carolina Department of  
Natural and Cultural Resources

Division of Parks and Recreation

Mountains Region

SPRING 2022



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## I. MISSION AND PURPOSE

### GENERAL MANAGEMENT PLANS:

The 1987 State Parks Act (G.S.143B - 135.40) requires each park to have an individual General Management Plan(GMP). 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 GMP 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 individual park unit.

### N.C. STATE PARKS MISSION:

The 1987 State Parks Act also defines the purpose of the state parks system. 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.



## OUR MISSION

The North Carolina  
Division of Parks and Recreation  
exists to inspire all  
its citizens and visitors through  
conservation, recreation and education.

**CONSERVATION**  
To conserve and protect representative  
examples of North Carolina's natural beauty,  
ecological features, recreational and cultural  
resources within the state parks system;

**RECREATION**  
To provide and promote safe, healthy  
and enjoyable outdoor recreational  
opportunities throughout the state; and

**EDUCATION**  
To provide educational opportunities  
that promote stewardship of the state's  
natural and cultural heritage.





## I. MISSION AND PURPOSE CONTINUED

### PARK OVERVIEW:

Located in the mountain region of the state in Watauga and Ashe Counties, Elk Knob State Park is 9.5 miles north of Boone, NC. Traveling to Boone on US Highway 421, take NC 194 North approximately 4 miles and turn left onto Meat Camp Road. Follow Meat Camp Road 5.5 miles to the Elk Knob-Snake Mountain Gap and turn right into the Park.



HIKING IN AUTUMN AT ELK KNOB STATE PARK



## I. MISSION AND PURPOSE CONTINUED



**VIEW OF THE PEAK AT ELK KNOB STATE PARK**

### PARK PURPOSE:

Elk Knob State Park was established in 2003 from the Nature Conservancy to preserve the unique environment and diverse natural communities and to provide recreational activities in a mountain environment. Acquisition of the initial 549 acres for the park was funded by the General Assembly appropriation for state park land acquisition.

Located in Watauga County, Elk Knob was purchased by The Nature Conservancy in 2003 and soon afterwards was deeded to the State of North Carolina under the management of the Division of Parks and Recreation. One of a dozen amphibolite peaks in Watauga and Ashe counties, Elk Knob has been set aside to help protect from development one of the beautiful mountains of the area as well as to protect the headwaters of the North Fork of the New River, one of the oldest rivers in the world.



## II. HISTORY

Elk Knob was considered for a housing development during the late 1990s and early 2000s, until a group of concerned citizens, land owners, and the Nature Conservancy worked together to purchase the mountain. In 2003, it was deeded to the State of North Carolina, under the management of the Division of Parks and Recreation. The Division began the park master planning process in 2018 and the final master plan for the park was approved in 2020. Elk Knob State Park helps to protect the headwaters of the North Fork of the New River, one of the oldest rivers in the world. Its many species of flora and fauna, which include several rare and endangered species, will now be protected from development.

At an elevation of 5,520 feet above sea level, Elk Knob is one of the tallest peaks in Watauga County and offers spectacular views of the surrounding landscape. Standing on the summit of Elk Knob, hikers can look out over the land with panoramic views and imagine a time many years ago when elk grazed the valleys below in abundant herds. Unfortunately, elk no longer roam these mountains as they disappeared from this region because of over-hunting and loss of habitat. The last native elk in North Carolina were believed to have been killed in the late 1700s.

Several historic mountain communities, from Meat Camp to Sutherland, surround Elk Knob State Park. From the 1850s until the late 20th century, people from near and far would bring their goods to the Winebarger Grist Mill in the Meat Camp community to be processed. Just a few miles away, Sutherland had its thriving business in the cattle industry. Each of these small, bustling, dynamic communities had at least one general store, post office, school, and church, and they contributed a rich history to this area of Watauga County.



SUMMIT TRAIL AT ELK KNOB STATE PARK

### 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 subcategories called resource “themes”. There have been 108 themes identified that should be protected to preserve representative examples of unique resources. For this GMP only themes that are of high significance to Elk Knob State Park are shown.

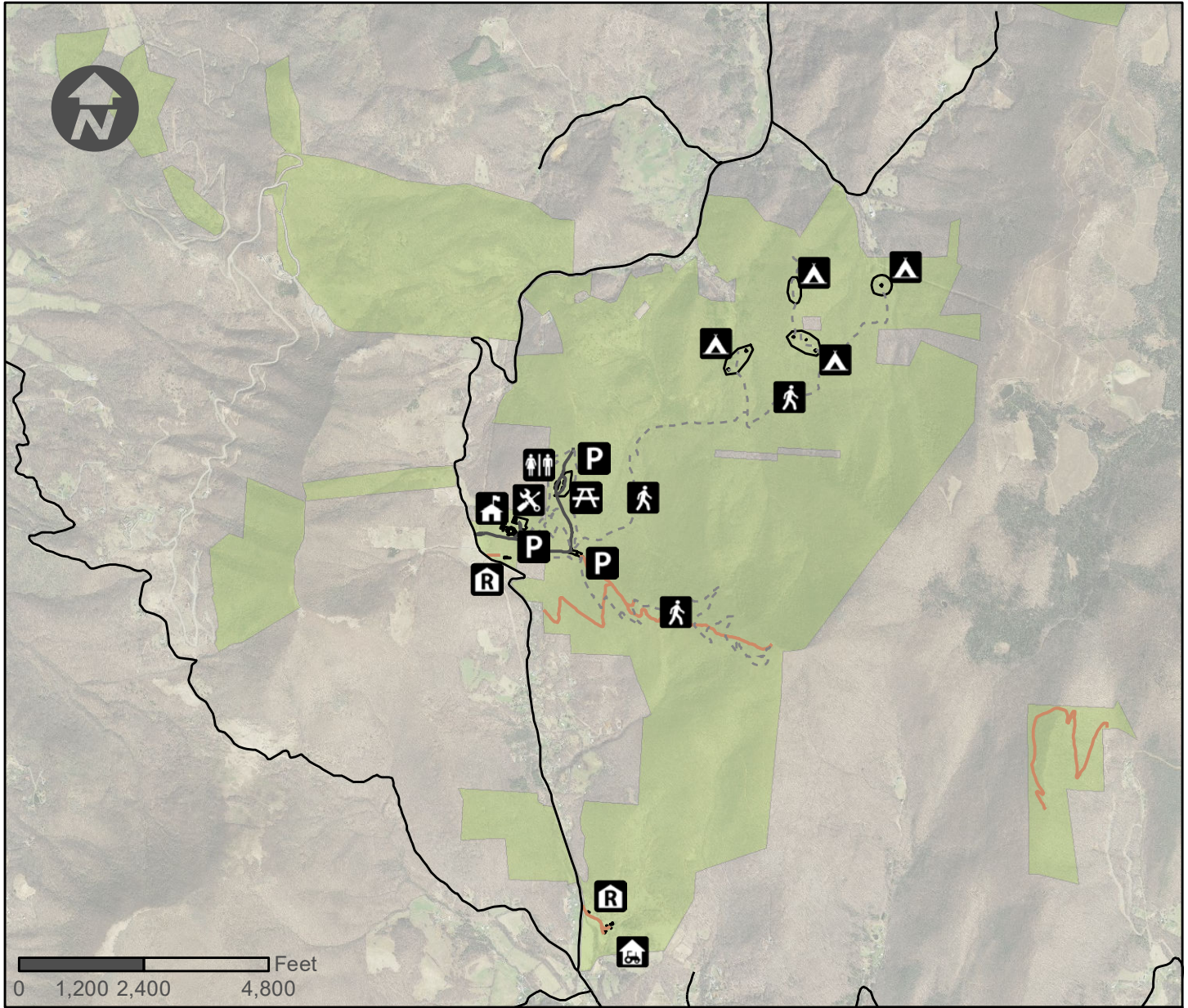
#### ELK KNOB STATE PARK THEME TABLE









CLASS	THEME	SIGNIFICANCE	REPRESENTATION
Archeological/Historic	Cemetery	High	Moderate
Biological	Grass and Heath Balds	High	Moderate
Biological	High Elevation Rock Outcrops	High	Moderate
Biological	Low Elevation Cliffs & Rock Outcrops	High	Moderate
Biological	Montane Oak Forests	High	Adequate
Biological	Mountain Bogs and Fens	High	Moderate
Biological	Mountain Cove Forests	High	Adequate
Biological	Northern Hardwood Forests	High	Adequate
Biological	Upland Seepages and Spray Cliffs	High	Moderate
Geological	Caves, Sinks, and Springs	High	None
Geological	Cliffs	High	Adequate
Geological	Dissected Uplands	High	Adequate
Geological	Gorges, Rapids, Waterfalls	High	Adequate
Geological	Mass Wasting Features	High	Little
Geological	Unusual Rock Types	High	None
Scenic	Caves/Cliffs	High	Moderate
Scenic	Forest	High	Moderate
Scenic	Meadows/Grasslands	High	Little
Scenic	Rock Outcrops	High	Adequate
Scenic	Scenic Vistas	High	Moderate
Scenic	Waterfalls	High	Adequate
Scenic	White Water Streams	High	Moderate

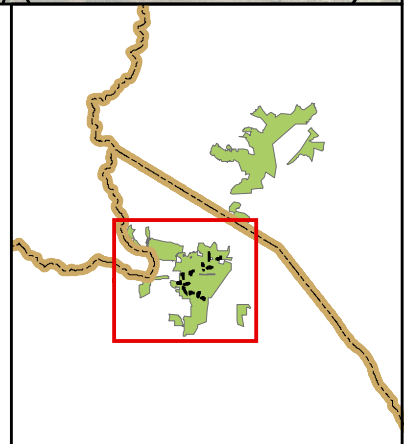
\*See the System-wide Plan for references to Theme and Inventory terms. Themes have both actual and “potential” future needs to be at a park.



# FACILITY INVENTORY - MAIN



- |   |  |                       |
|---|--|-----------------------|
| <b>P</b> Parking Area   |  Hiking Trail         | ----- Existing Trail  |
|  Maintenance Area |  Storage Building     | — Road - Paved        |
|  Bathrooms        |  Picnic Area          | — Road - Unpaved      |
|  Ranger Residence |  Backcountry Campsite | □ Existing Facilities |
|  Visitor Center   |  | ■ State Parks Unit    |



# NC STATE PARKS - FACILITY INVENTORY SPREADSHEET

State Park Unit(Alpha Code): ELKN	Park Area(If Applicable): Main	Date(MM/YY):	7/31/2020
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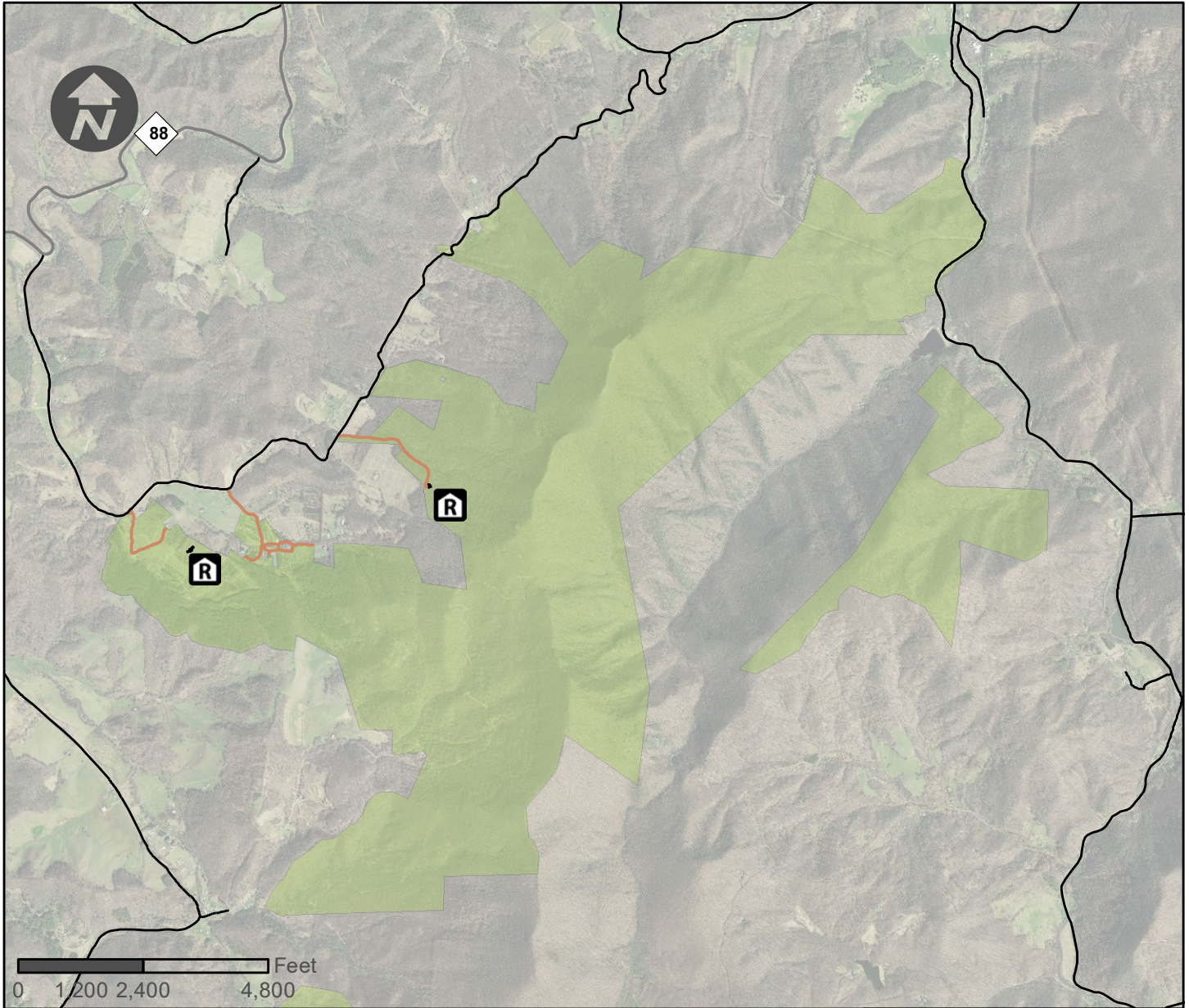
Public Buildings	Unit	Total #	Condition	Repairs needed(If Applicable)
Visitor Center - Temporary	BLDG	1	Good	Flooring needs to be replaced with laminate.
Restrooms	BLDG	1	Fair	Precast Concrete Vault Toilet. Cement Roof is Cracked.
Bathhouse	BLDG			
Showerhouse	BLDG			
Community Building	BLDG			
Picnic Shelter	BLDG			
Concession Stand	BLDG			
Entrance Station	BLDG			
Marina Buildings	BLDG			
Staff Buildings	Unit	Total #	Condition	Repairs needed(If Applicable)
Ranger Residence	BLDG	2	Good	
Maintenance Building	BLDG	1	Good	
Warehouse	BLDG			
Recreation Facilities	Unit	Number	Condition	Repairs needed(If Applicable)
Campsites with Hookups	SITE			
Electric Only	SITE			
3-Point Hookup	SITE			
ADA Accessible	SITE			
Total with Hookups				
Campsites No Hookups	SITE			
ADA Accessible	SITE			
Total No Hookups				
Cabin	BLDG			
Group Campsites	SITE	2	Good	
Primitive Campsites	SITE	3	Good	
Boat Ramp	RAMP			
Fishing Pier	PIER			
Marina	MARINA			
Ball Fields	SF			
Playground	SITE			
Courts	COURT			
Amphitheater	THEATER	1	Good	
Observation Deck	DECK			
Picnic Area	SITE	1	Good	
Other Facilities	Unit	Total #	Condition	Repairs needed(If Applicable)
Dump Station	STATION			
Dumpster	DUMPSTER	1	Good	
Septic Field	SITE			
Cemetery	SITE	2	Good	
Chapel	BLDG			

**ADDITIONAL NOTES:**

ELKN has a zone camp that is the equivalent of six primitive sites. The zone camp is in good condition.

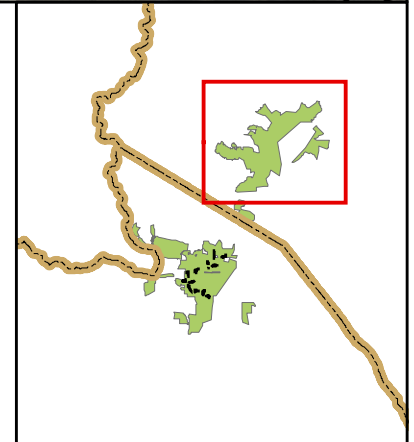


# FACILITY INVENTORY - NORTH SITE (THE PEAK)



Ranger Residence

- Existing Trail
- Road - Paved
- Road - Unpaved
- Existing Facilities
- State Parks Unit



# NC STATE PARKS - FACILITY INVENTORY SPREADSHEET

State Park Unit(Alpha Code):		ELKN	Park Area(If Applicable):		North Site - The Peak
				Date(MM/YY):	7/31/2020
Public Buildings	Unit	Total #	Condition	Repairs needed(If Applicable)	
Visitor Center - Tempora	BLDG				
Restrooms	BLDG				
Bathhouse	BLDG				
Showerhouse	BLDG				
Community Building	BLDG				
Picnic Shelter	BLDG				
Concession Stand	BLDG				
Entrance Station	BLDG				
Marina Buildings	BLDG				
Staff Buildings	Unit	Total #	Condition	Repairs needed(If Applicable)	
Ranger Residence	BLDG	2	Good		
Maintenance Building	BLDG				
Warehouse	BLDG				
Recreation Facilities	Unit	Number	Condition	Repairs needed(If Applicable)	
Campsites with Hookups	SITE				
Electric Only	SITE				
3-Point Hookup	SITE				
ADA Accessible	SITE				
Total with Hookups					
Campsites No Hookups	SITE				
ADA Accessible	SITE				
Total No Hookups					
Cabin	BLDG				
Group Campsites	SITE				
Primitive Campsites	SITE				
Boat Ramp	RAMP				
Fishing Pier	PIER				
Marina	MARINA				
Swimming Beach	SITE				
Pool	POOL				
Ball Fields	SF				
Playground	SITE				
Courts	COURT				
Amphitheater	THEATER				
Observation Deck	DECK				
Picnic Area	SITE				
Other Facilities	Unit	Total #	Condition	Repairs needed(If Applicable)	
Dump Station	STATION				
Dumpster	DUMPSTER				
Septic Field	SITE				
Cemetery	SITE	2	Good		
Chapel	BLDG				





## TRAIL INVENTORY

### Backcountry Trail:

The 2-mile (one way, strenuous) Backcountry Trail winds down into a valley where the backcountry campsites are located. The Backcountry Trail is known for the headwaters of the North Fork of the New River and the spring bloom of the Trout Lily.

### Beech Tree Trail:

The Beech Tree Trail-our Kid's Track Trail-is an easy 1-mile loop around the picnic area. The majority of the trail penetrates a large American Beech forest at 4,600 ft. The Kid's Track Trail is part of the Kids in Parks initiative. This program rewards kids with small prizes for their hiking achievements.

### Maple Run Trail:

The 0.5 mile Maple Run Trail (still under construction) is designed for cross country skiing and hiking. This easy loop trail connects the office to the trailhead parking area. Ill-scented and Great White Trilliums may be seen from the trail in spring.

### Summit Trail:

The 1.9-mile (one way, advanced) Summit Trail was completed with the help of over 6,000 hours provided by many volunteers over a five year span. The beautiful and well maintained trail is a big part of the adventure but the breathtaking view from the top is the icing on the cake. Upon reaching the summit of Elk Knob hikers have spectacular views of The Peak, Three Top and Bluff Mountains, Mount Jefferson, Grandfather Mountain, Mount Mitchell, Mt Rodgers (Va.), and the Iron Mountains in Virginia and Tennessee.

## TRAIL INVENTORY CONTINUED

TRAIL INVENTORY	HIKING ONLY
BACKCOUNTRY TRAIL	(One Way) 2.00
BEECH TREE TRAIL	(Loop) 1.00
MAPLE RUN TRAIL	(One Way) 0.50
SUMMIT TRAIL	(One Way) 1.90
<b>ELK KNOB STATE PARK TOTALS</b>	5.40

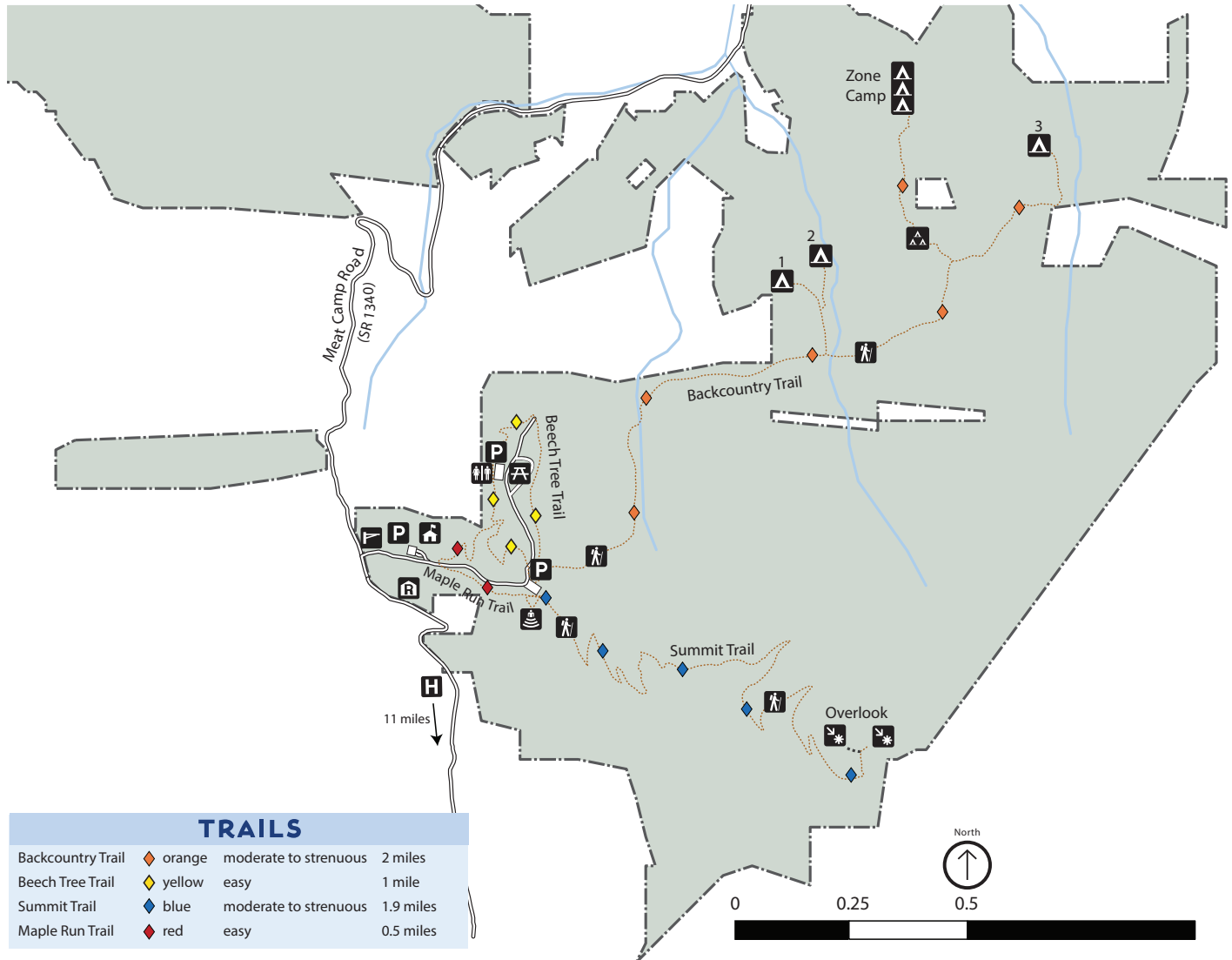
### TRAILS CONDITION AND PRIORITY SCORE:

TRAILNAME	Status	Popularity	Prioroty Score
Backcountry Trail	1	1	2
Beech Tree Trail	1	2	3
Maple Run Trail	1	2	3
Summit Trail	2	4	6

Status	Description
1	Good condition/some routine trail maintenance required
2	Moderate trail maintenance required
3	Heavy erosion in places and/or unsustainable grades.
4	Trail closed due to erosion, damage, or other reasons. Make comments on closure reason.
Popularity	Description
4	Single most popular trail in the park w/ most visitors hiking this trail
3	Very popular trail with heavy usage in the park
2	Moderate usage by park visitors but other trails in the same park are more popular
1	Very little traffic overall or compared to other trails in the same park



# TRAIL INVENTORY - TRAIL MAP



## IV. PLANNING

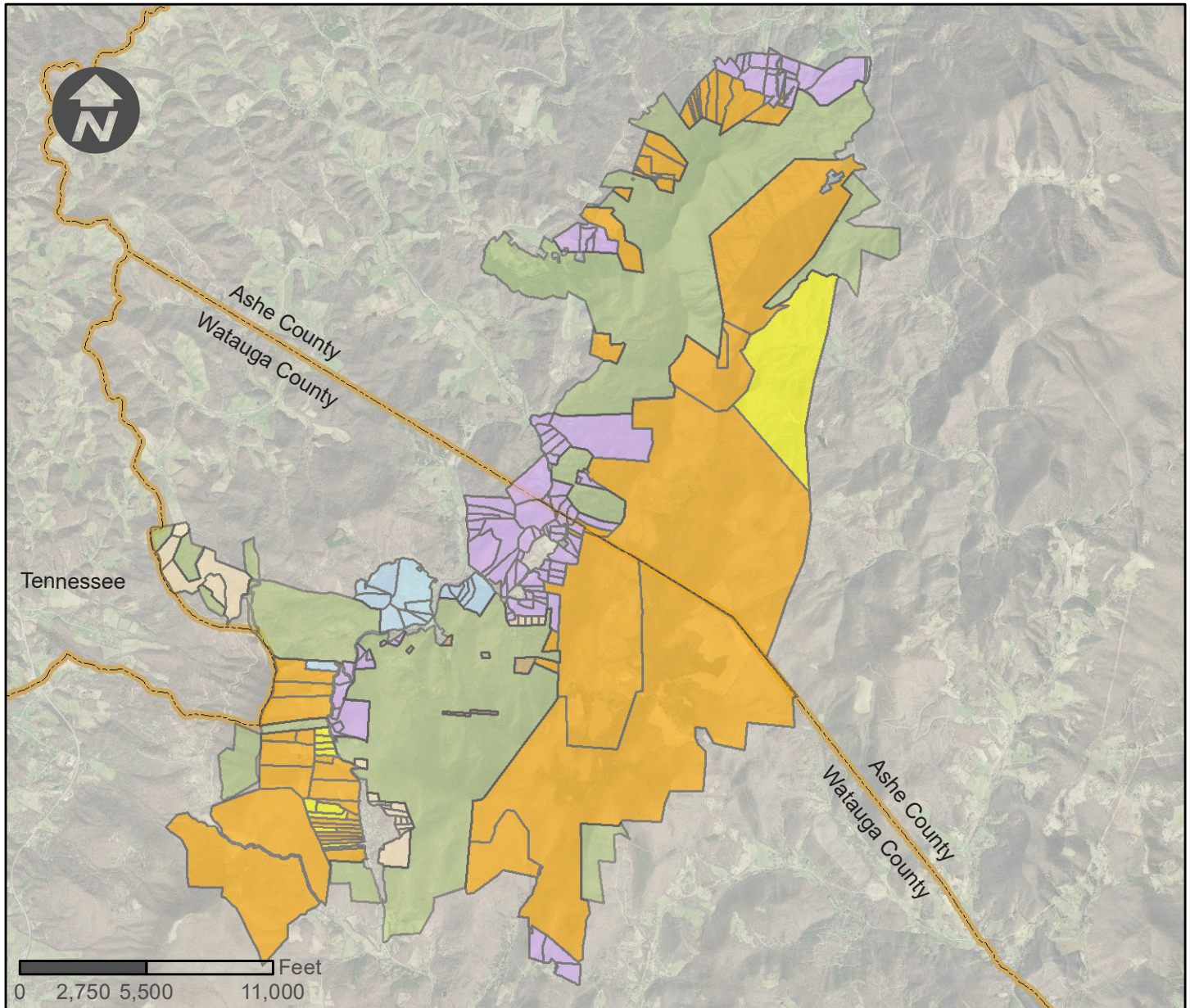


### LAND PROTECTION FOR STATE PARKS:

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 Elk Knob State Park.










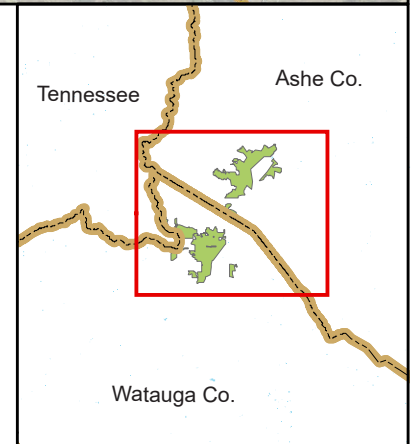
# LAND PROTECTION PLAN



## Land Protection Plan

### Acquisition Objective 1

-  Primary resource protection
-  Inholding
-  Scenic protection
-  Water quality protection
-  Facilities development
-  Buffer
-  State Parks Unit
-  County Line





## PROJECT LIST

GMP PROJECTS		
PROJECT #	PROJECT TITLE	*CONCEPTUAL COST
1	Eight New Primitive Group Campsites	\$50,000
2	Trail From South Site	\$355,000
3	Backcountry Trail Loop	\$215,000
4	Day Use Area (South Site)	\$3,109,957
5	Visitor Center and Day Use Area	\$11,692,989
6	Campground Phase 1 (North Site)	\$6,363,082
7	Campground Phase 2 (North Site)	\$4,786,877
	Ongoing: Northern Peaks State Trail	\$776,738
	TOTAL*	\$27,349,643

\*Planning estimated project cost does not include design fee nor escalation.





## GMP PROJECT DESCRIPTIONS

### **1. Eight New Primitive Group Campsites**

Park staff recommends the removal of campsites 1 and 3. The project will add 8 individual campsites – 3 off the first half mile of trail, 2 up the stream from campsite 2, and 3 where the zone camp used to be. These sites are not for groups. There will be a maximum of 6 people allowed per site and they will be listed as ‘Primitive Campsites’. Final location of campsites to be determined by staff and they must be approved by the regional biologist.

### **2. Trail from South Site**

This trail from the south site to the summit of Elk Knob will be approximately 3.5 miles in length. Final trail alignment to be determined by park staff, regional trail specialist, and regional biologist.

### **3. Backcountry Trail Loop**

This project will renovate about 1 mile of trail, build approximately 3.7 miles of new trail, and decommission approximately 2 miles of unsustainable trail. Final trail alignment to be determined by park staff, regional trail specialist, and regional biologist.

### **4. Day Use Area (South Site)**

The day use area is given first priority in the master plan for two main reasons. The site is lower in elevation giving it the greatest potential for year-round use and it is also located the closest to a population center(Boone). The project consists of a group pavilion with enclosable doors, a picnic area with open space, a mini-maintenance area, and a trailhead for a newly proposed Elk Knob south slope trail. Wayfinding and interpretive vehicular pull-off area is also proposed on Meat Camp Road to orient first time visitors.

### **5. Visitor Center and Day Use Area**

The Temporary visitor center at the main park entrance will be replaced with a permanent one, other amenities in this project include a nature play area, day use picnic area, a pavilion for large groups, an amphitheater/stage at the entrance lawn, a primitive group campsite, an estimated 5-6 miles of trail, and parking with stormwater control measures.

### **6. Campground Phase 1 (North Site)**

Phase 1 of the campground project includes, a primitive drive-in campground loop, showerhouse, group interpretive area with fire pit, 6-7 miles of trail, approximately 0.5 miles of ADA campground connector trail, and trailhead parking.

### **7. Campground Phase 2 (North Site)**

Phase 2 completes the campground. Amenities included in this project include an RV/Trailer campground loop, an additional showerhouse, and a comfort station.



## GMP PROJECT DESCRIPTIONS

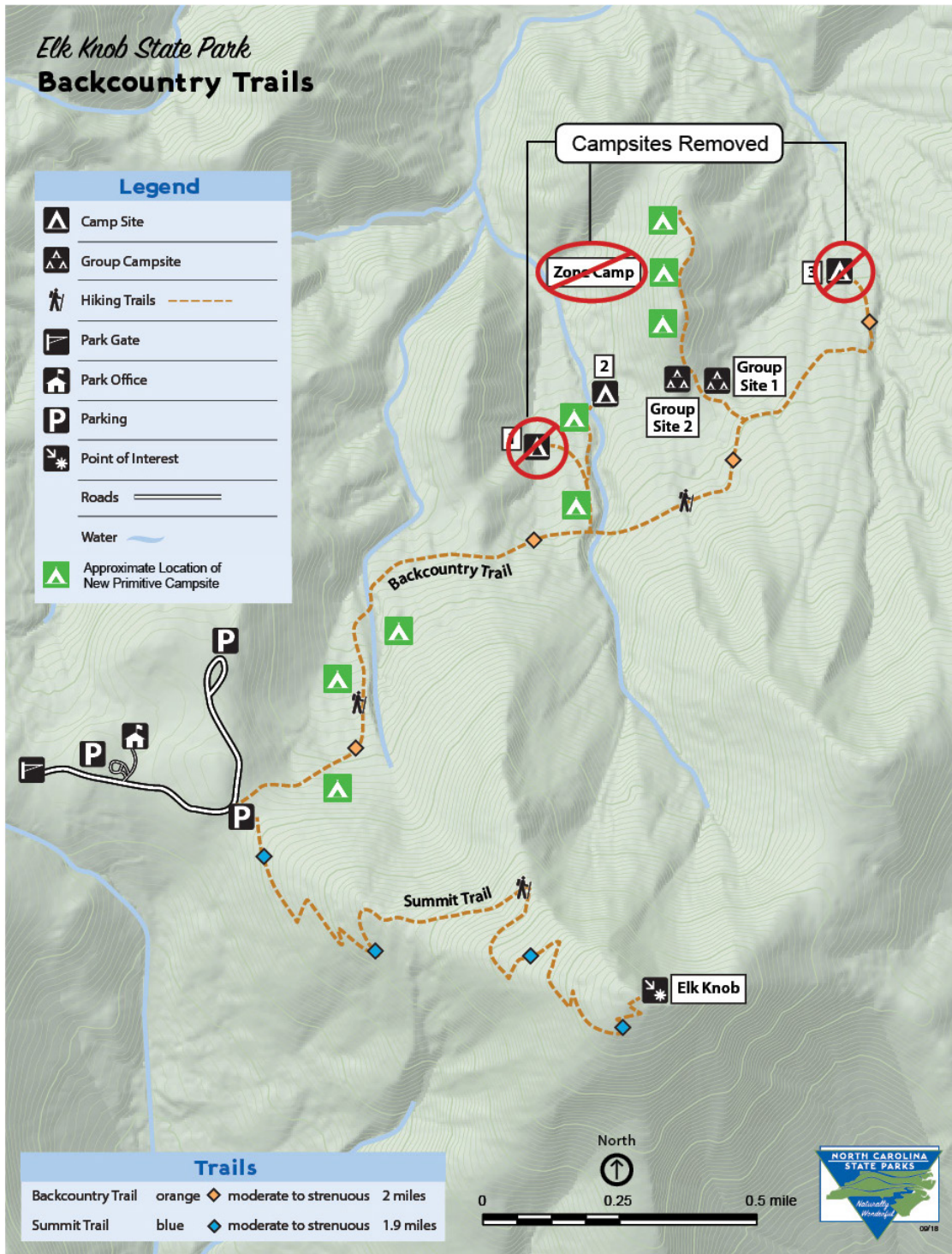
### **Ongoing: Northern Peak State Trail**

It is estimated that around 10-11 miles of the Northern Peaks State Trail will go through Elk Knob State Park. The trail corridor will be sustainably designed to protect rare and endangered sensitive species and their habitats. This corridor is land dependent and will be developed as land is acquired. This ongoing project will complete the remainder of the Northern Peaks State Trail through Elk Knob State Park.



# PROJECT CONCEPT PLANS

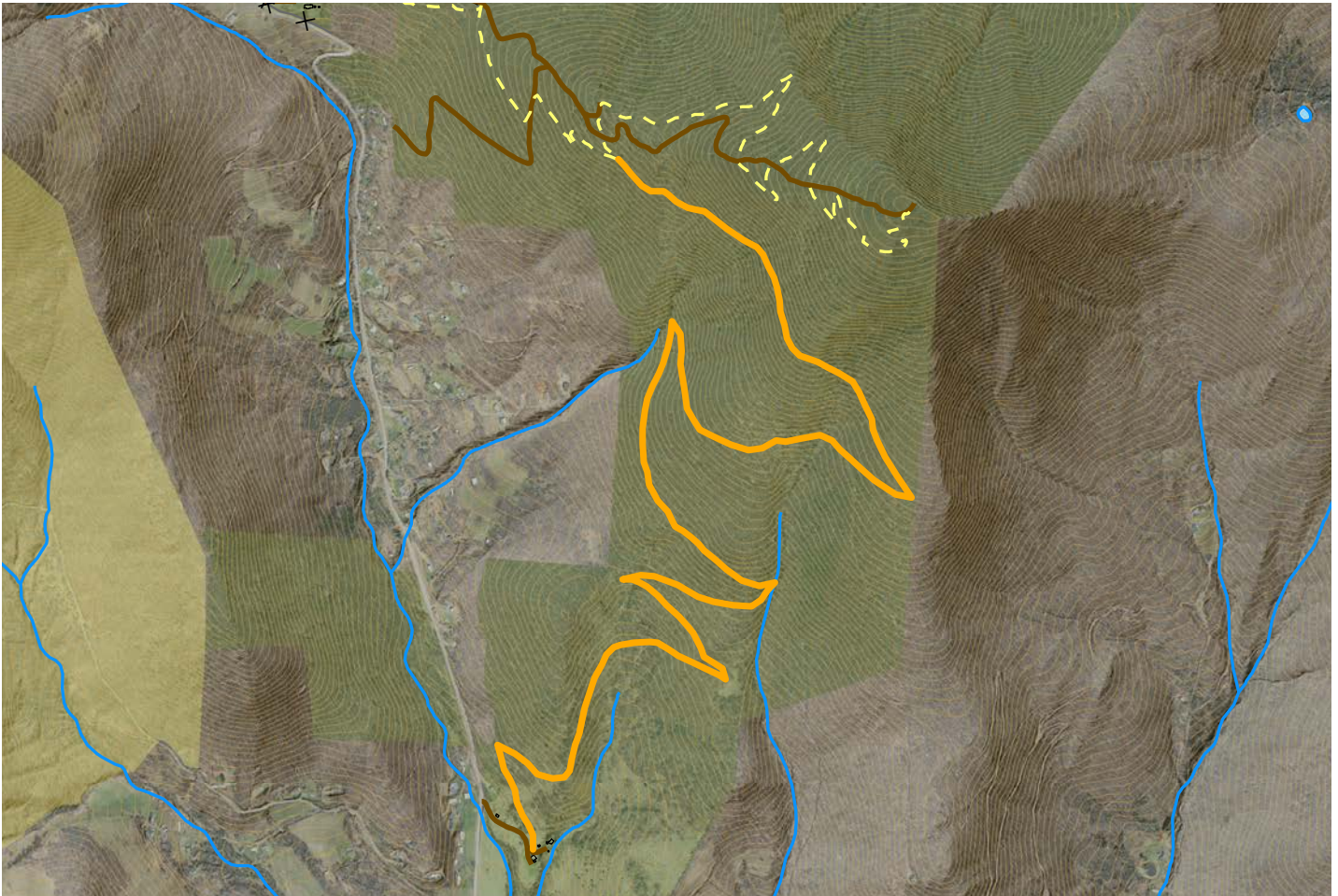
## GMP PROJECT 1 - Three Primitive Group Campsites



Final campsite locations determined by park staff. Each location shall be approved by the regional biologist.

# PROJECT CONCEPT PLANS

GMP PROJECT 2 -Trail From South Site

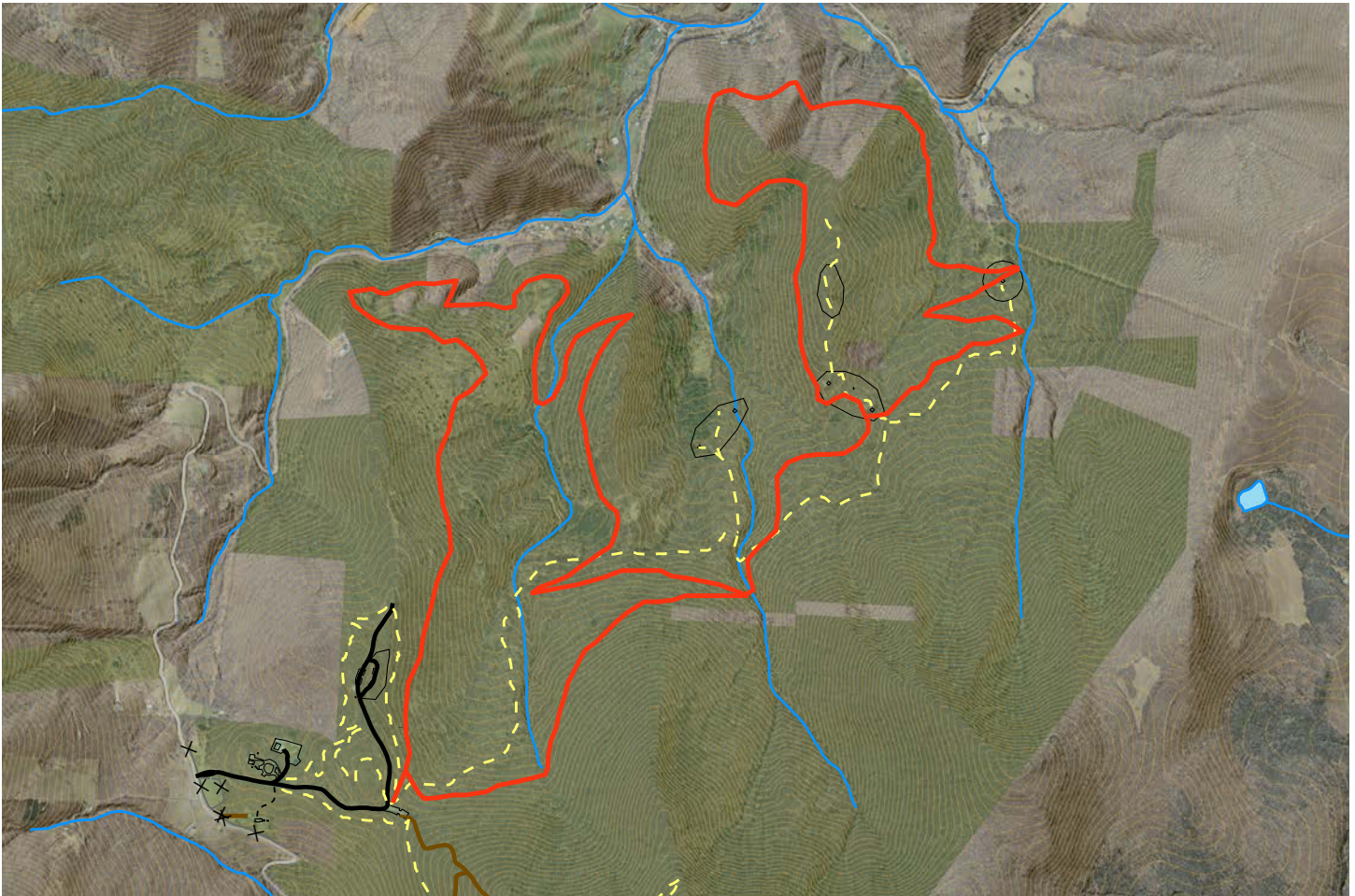


Final trail alignment to be determined by park staff, regional trail specialist, and regional biologist.



# PROJECT CONCEPT PLANS

## GMP PROJECT 3 - Backcountry Trail Loop



Final trail alignment to be determined by park staff, regional trail specialist, and regional biologist.

# PROJECT CONCEPT PLANS

## GMP PROJECT 4 - Day Use Area (South Site)



Day Use Area Site Concept

DRAFT FOR PUBLIC REVIEW

|Elk Knob State Park MASTER PLAN| 32





# 1 PHASE 1: Day Use Area (South Site)

	Units	Quantity	Cost Per Unit	Costs
<b>Mobilization</b>				
Mobilization (includes mobilization for all work including grading)	LS	1	5% of Construction Cost	\$107,704
			<b>SUB-TOTAL</b>	<b>\$107,704</b>
<b>Grading, Trail Work, Hard surface</b>				
Clearing and grubbing	AC	3.5	\$10,000.00	\$35,000
Earthwork	AC	1.9	\$29,000.00	\$55,100
Fine grading	SY	5300.0	\$18.00	\$95,400
Storm drainage	LF	65.0	\$50.00	\$3,250
Asphalt surface	SY	3990.0	\$50.00	\$199,500
Concrete paths	CY	882.0	\$400.00	\$352,800
Gravel parking	CY	2300.0	\$60.00	\$138,000
Crushed stone paths (ADA)	SY	735.0	\$23.00	\$16,905
Trail kiosk	EA	1.0	\$10,100.00	\$10,100
Trail (loop connector, natural surface)	LF	3564.0	\$8.00	\$28,512
Erosion control	AC	3.5	\$22,000.00	\$77,000
			<b>SUB-TOTAL</b>	<b>\$1,011,567</b>
<b>Structures</b>				
Stream crossings (pedestrian)	EA	2.0	\$2,500.00	\$5,000
Vehicular bridge (90' with 60" culvert)	EA	1.0	\$60,000.00	\$60,000
Pavilion (roll down doors)	LS	1.0	\$270,000.00	\$270,000
Poll barn	SF	1500.0	\$85.00	\$127,500
Maintenance building	SF	1200.0	\$116.00	\$139,200
Interpretive pull-off	LS	1.0	\$32,000.00	\$32,000
			<b>SUB-TOTAL</b>	<b>\$633,700</b>
<b>Traffic Control</b>				
Parking striping	LS	1.0	\$3,500.00	\$3,500
Wheel stops	EA	28.0	\$77.00	\$2,156
Gate	EA	1.0	\$2,500.00	\$2,500
			<b>SUB-TOTAL</b>	<b>\$8,156</b>
<b>General Amenities</b>				
Stormwater control measures	EA	3.0	\$23,000.00	\$69,000
Wayfinding signage	LS	1.0	\$8,000.00	\$8,000
Interpretive signage	EA	2.0	\$1,500.00	\$3,000
Lawn	SY	1040.0	\$24.00	\$24,960
Plantings	AC	0.4	\$68,000.00	\$23,800
Picnic tables	EA	21.0	\$1,300.00	\$27,300
Trash & recycle receptacles	EA	3.0	\$25,000.00	\$75,000
Trails (natural surface)	LF	22000.0	\$8.00	\$176,000
Park sign (park gateway and plantings)	LS	1.0	\$17,500.00	\$17,500
			<b>SUB-TOTAL</b>	<b>\$424,560</b>
<b>Natural Community Restoration</b>				
Stream buffers and wetland enhancements	AC	2.4	\$30,500.00	\$73,200
Meadow	AC	0.2	\$14,500.00	\$2,900
			<b>SUB-TOTAL</b>	<b>\$76,100</b>
<b>Units:</b>	<b>Sub-Total Cost</b>			<b>\$2,261,787</b>
EA= each	<b>25% Contingency</b>			<b>\$565,447</b>
LS= lump sum	<b>10% Design/Engineering/Permitting</b>			<b>\$282,723</b>
LF= linear foot	<b>Total Cost</b>			<b>\$3,109,957</b>
TN= ton				
SY= square yard				
MI= Mile				

## Notes on the Probable Cost Estimate

- \$8/LF cost for trails does not include any possible rock work.
- These are planning level cost estimates and should not be used to estimate for construction.
- Estimates are rounded up in the cost summary and may vary slightly from the detail cost estimates here.
- Costs are based on recent bid or cost estimates. *Inflation of 3-4% annually to estimates beyond the year 2020.*
- *Estimates assume a 25% contingency, 10% design fee, and 5% mobilization for each phase.* A larger contingency fee may be applicable due to the remoteness of much of the park.
- *Costs not included in this estimate include:* Utilities (beyond septic for campground), geotechnical/soils investigation, rock removal, surveying, permitting, bonding requirements, archeology investigations, septic investigations, demolitions, environmental surveys, and stream and wetland determinations.

# PROJECT CONCEPT PLANS

## GMP PROJECT 5 - Visitor Center and Day Use Area







## 2

## PHASE 2: Visitor Center & Day Use Area (Main Park Area)

PROBABLE COST ESTIMATE FROM MASTER PLAN 2020

Cost estimates are preliminary and subject to change

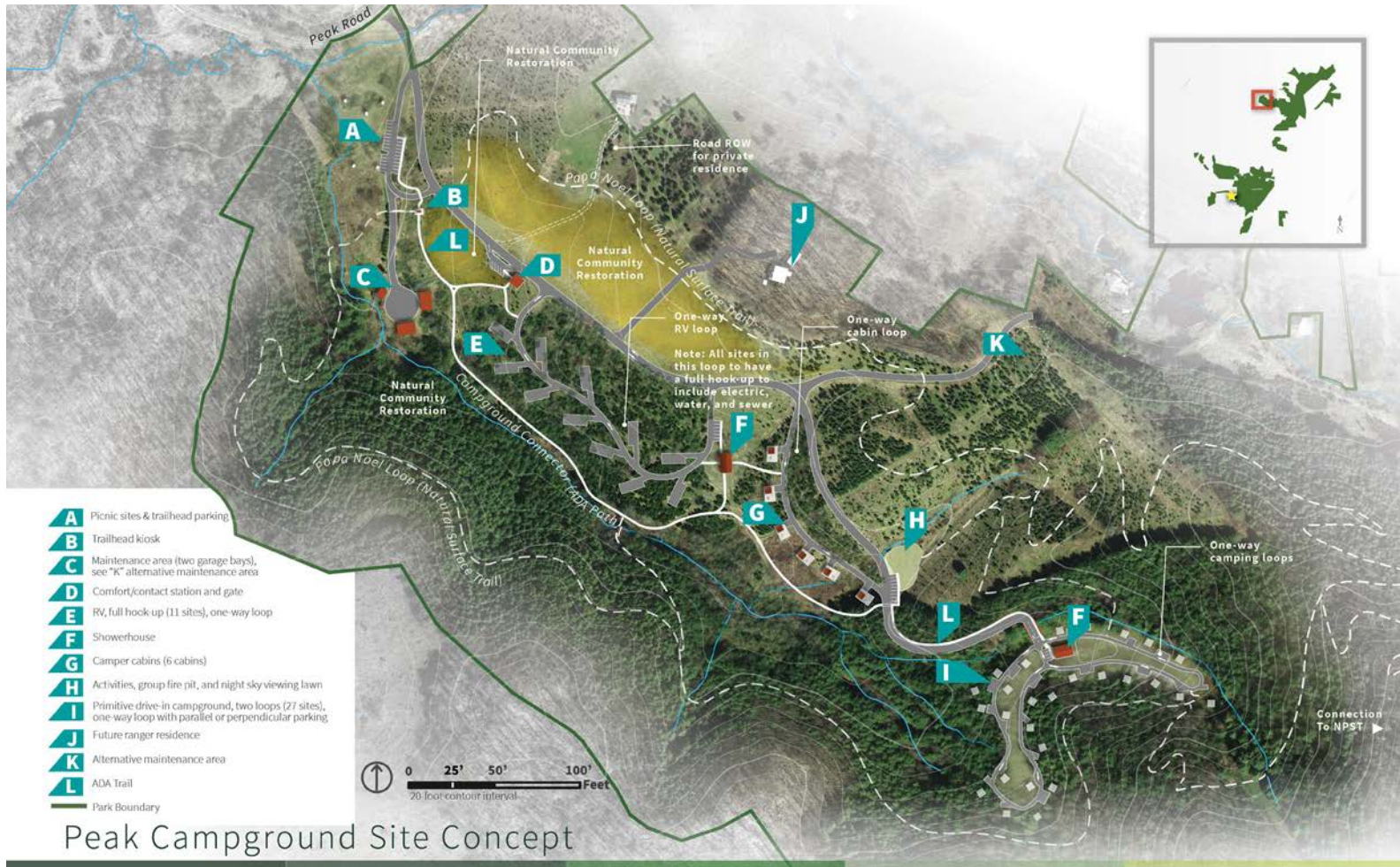
	Units	Quantity	Cost Per Unit	Costs
<b>Mobilization</b>				
Mobilization (includes mobilization for all work)	LS		5% of Construction Cost	\$404,952
			<b>SUB-TOTAL</b>	<b>\$404,952</b>
<b>Grading, Trail work, Hard surface</b>				
Clearing and grubbing	AC	7.2	\$10,000.00	\$72,000
Earthwork	AC	6.9	\$27,000.00	\$186,300
Fine grading	SY	7900.0	\$18.00	\$142,200
Storm drainage	LF	160.0	\$50.00	\$8,000
Asphalt surface	SY	7800.0	\$50.00	\$390,000
Concrete paths	CY	93.0	\$400.00	\$37,200
Gravel parking	CY	700.0	\$60.00	\$42,000
Trail kiosk	EA	2.0	\$10,100.00	\$20,200
Erosion control	AC	7.2	\$23,000.00	\$165,600
			<b>SUB-TOTAL</b>	<b>\$1,063,500</b>
<b>Visitor Center</b>				
Building	SF	9500.0	\$640.00	\$6,080,000
Natural play	LS	1.0	\$34,000.00	\$34,000
Plantings	AC	0.8	\$70,000.00	\$56,000
Enhance picnic area	LS	1.0	\$35,000.00	\$35,000
			<b>SUB-TOTAL</b>	<b>\$6,205,000</b>
<b>Additional Structures</b>				
Stream crossings (trail, max. 10')	EA	3.0	\$6,600.00	\$19,800
Stage	LS	1.0	\$100,000.00	\$100,000
Pavilion	SF	2400.0	\$80.00	\$192,000
Overlook	LS	1.0	\$150,000.00	\$150,000
Primitive camping sites	EA	4.0	\$5,500.00	\$22,000
Stormwater control measures	EA	3.0	\$24,000.00	\$72,000
			<b>SUB-TOTAL</b>	<b>\$555,800</b>
<b>Traffic Control</b>				
Crosswalk	EA	5.0	\$2,300.00	\$11,500
Parking striping	LS	1.0	\$11,000.00	\$11,000
Wheel stops	EA	103.0	\$80.00	\$8,240
Parking lot gate	EA	1.0	\$2,500.00	\$2,500
			<b>SUB-TOTAL</b>	<b>\$33,240</b>
<b>General Amenities</b>				
Wayfinding signage (on site, off site not included)	LS	1.0	\$5,000.00	\$5,000
Interpretive signage	EA	3.0	\$1,500.00	\$4,500
Picnic tables	EA	12.0	\$1,300.00	\$15,600
Trash & recycle receptacles	EA	4.0	\$2,100.00	\$8,400
Trails (natural surface)	LF	26000.0	\$8.00	\$208,000
			<b>SUB-TOTAL</b>	<b>\$241,500</b>
<b>Units:</b>	<b>Sub-Total Cost</b>			<b>\$8,503,992</b>
EA= each	<b>25% Contingency</b>			<b>\$2,125,998</b>
LS= lump sum	<b>10% Design/Engineering/Permitting</b>			<b>\$1,062,999</b>
LF= linear foot	<b>Total Cost</b>			<b>\$11,692,989</b>
TN= ton				
SY= square yard				
MI= Mile				

### Notes on the Probable Cost Estimate

- \$8/LF cost for trails does not include any possible rock work
- These are planning level cost estimates and should not be used to estimate for construction.
- Estimates are rounded up in the cost summary and may vary slightly from the detail cost estimates here.
- Costs are based on recent bid or cost estimates. *Inflation of 3-4% annually to estimates beyond the year 2020.*
- Visitor center structure cost was determined using 2010 Gorges SP visitor center cost and applying a 4% annual construction cost inflation based on construction cost trends over the last decade. Considerations of the remoteness of the site were also factored into the mobilization cost.
- *Estimates assume a 25% contingency, 10% design fee, and 5% mobilization for each phase.* A larger contingency fee may be applicable due to the remoteness of much of the park.

# PROJECT CONCEPT PLANS

## GMP PROJECT 6 - Campground Phase 1 (North Site)



Peak Campground Site Concept





### 3 PHASE 3: The Peak Campground: Part 1

Probable Cost Estimate from Master Plan 2020

Cost estimates are preliminary and subject to change

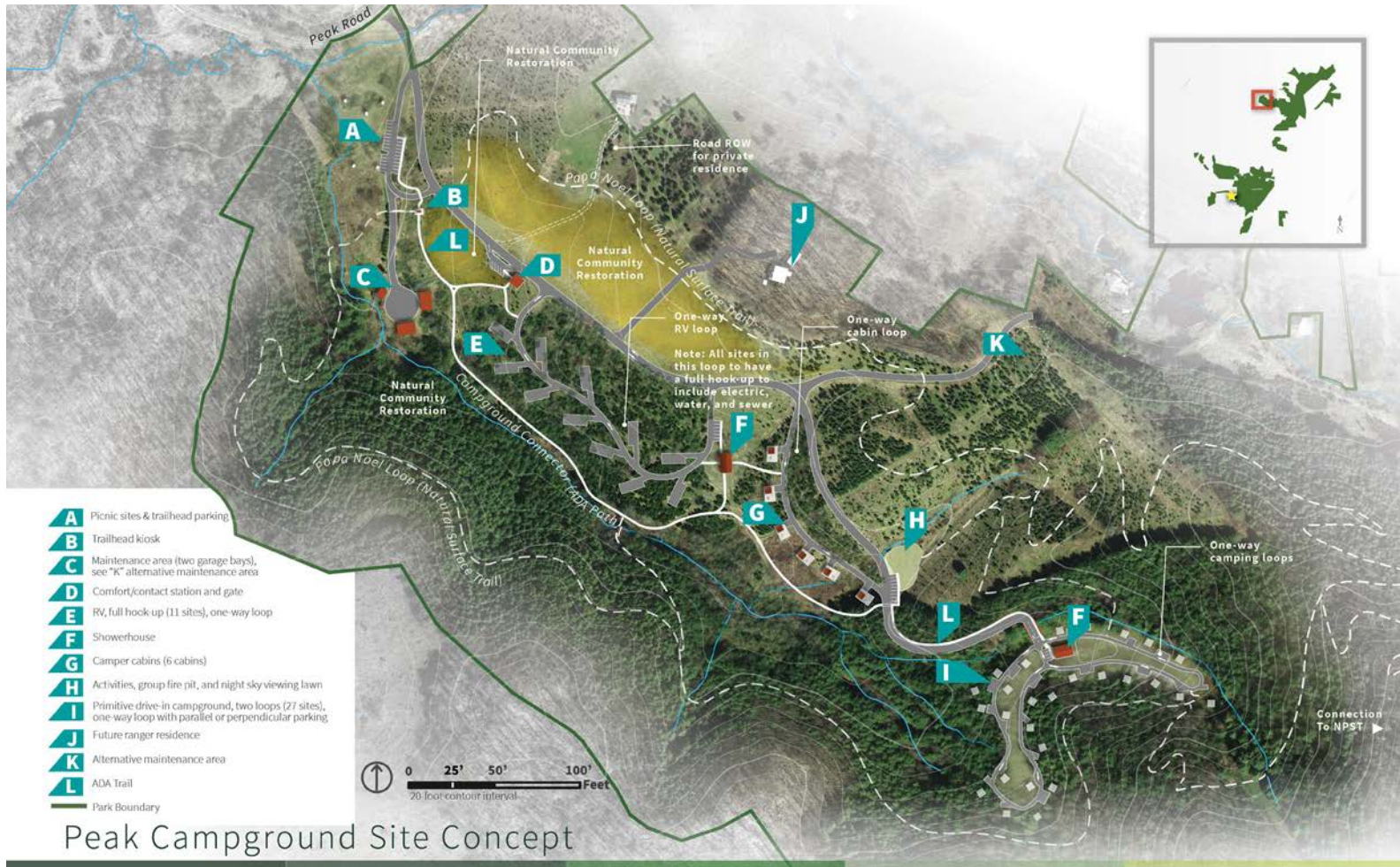
	Units	Quantity	Cost Per Unit	Costs
<b>Mobilization</b>				
Mobilization (includes mobilization for all work)	LS	1	5% of Construction Cost	\$213,819
			<b>SUB-TOTAL</b>	<b>\$213,819</b>
<b>Grading, Trail Work, Hard Surface</b>				
Clearing and grubbing	AC	13.3	\$10,000.00	\$133,000
Earthwork	AC	12.0	\$29,000.00	\$348,000
Fine grading	SY	20800.0	\$18.00	\$374,400
Storm drainage	LF	60.0	\$50.00	\$3,000
Asphalt surface	SY	13520.0	\$50.00	\$676,000
Concrete paths	CY	27.0	\$400.00	\$10,800
Crushed stone paths (ADA)	SY	1740.0	\$23.00	\$40,020
Trail kiosk	EA	1.0	\$10,100.00	\$10,100
Erosion control	AC	13.3	\$23,000.00	\$305,900
			<b>SUB-TOTAL</b>	<b>\$1,901,220</b>
<b>Campground</b>				
Camping pads (hook, fire ring, pad, and picnic table)	EA	27.0	\$7,000.00	\$189,000
Shower house	LS	1.0	\$750,000.00	\$750,000
Plantings	AC	2.8	\$67,000.00	\$187,600
Dumpster	EA	1.0	\$21,700.00	\$21,700
			<b>SUB-TOTAL</b>	<b>\$1,148,300</b>
<b>Additional Structures</b>				
Stream crossings (pedestrian, max. 10')	EA	3.0	\$2,500.00	\$7,500
Vehicular bridge (Arch crossing ~50LF)	EA	1.0	\$75,000.00	\$75,000
Ranger residence (house rehab)	LS	1.0	\$55,000.00	\$55,000
Maintenance buildings (two poll barns and a garage)	SF	4750.0	\$100.00	\$475,000
Sewer pre-treatment	LS	1.0	\$250,000.00	\$250,000
			<b>SUB-TOTAL</b>	<b>\$862,500</b>
<b>Traffic Control</b>				
Crosswalk	EA	3.0	\$2,300.00	\$6,900
Parking striping	LS	1.0	\$10,000.00	\$10,000
Wheel stops	EA	41.0	\$77.00	\$3,157
Entrance gate (electric sliding gate by comfort station)	EA	1.0	\$30,000.00	\$30,000
			<b>SUB-TOTAL</b>	<b>\$50,057</b>
<b>General Amenities</b>				
Wayfinding signage (on site, off site not included)	LS	1.0	\$7,500.00	\$7,500
Interpretive signage	EA	3.0	\$1,500.00	\$4,500
Entry monument and plantings	LS	1.0	\$16,000.00	\$16,000
Fire pit and viewing lawn	LS	1.0	\$12,000.00	\$12,000
Picnic tables	EA	6.0	\$1,300.00	\$7,800
Trash & recycle receptacles	EA	5.0	\$2,100.00	\$10,500
Trails (natural surface)	LF	32000.0	\$8.00	\$256,000
			<b>SUB-TOTAL</b>	<b>\$314,300</b>
<b>Natural Community Restoration</b>				
Natural community restoration (Fir restoration only, does not include white pine)	AC	55.0	\$2,500.00	\$137,500
			<b>SUB-TOTAL</b>	<b>\$137,500</b>
<b>Units:</b>	Sub-Total Cost			<b>\$4,627,696</b>
EA= each	25% Contingency			<b>\$1,156,924</b>
LS= lump sum	10% Design/Engineering/Permitting			<b>\$578,462</b>
LF= linear foot	<b>Total Cost</b>			<b>\$6,363,082</b>
TN= ton				
SY= square yard				
MI= Mile				

• *Costs not included in this estimate include:* Utilities (beyond septic for campground), geotechnical/soils investigation, rock removal, surveying, permitting, bonding requirements, archeology investigations, septic investigations, demolitions, environmental surveys, and stream and wetland determinations.

## Probable Cost Estimates

# PROJECT CONCEPT PLANS

## GMP PROJECT 7 - Campground Phase 2 (North Site)



Peak Campground Site Concept



# 4

## PHASE 4: The Peak Campground: Part 2

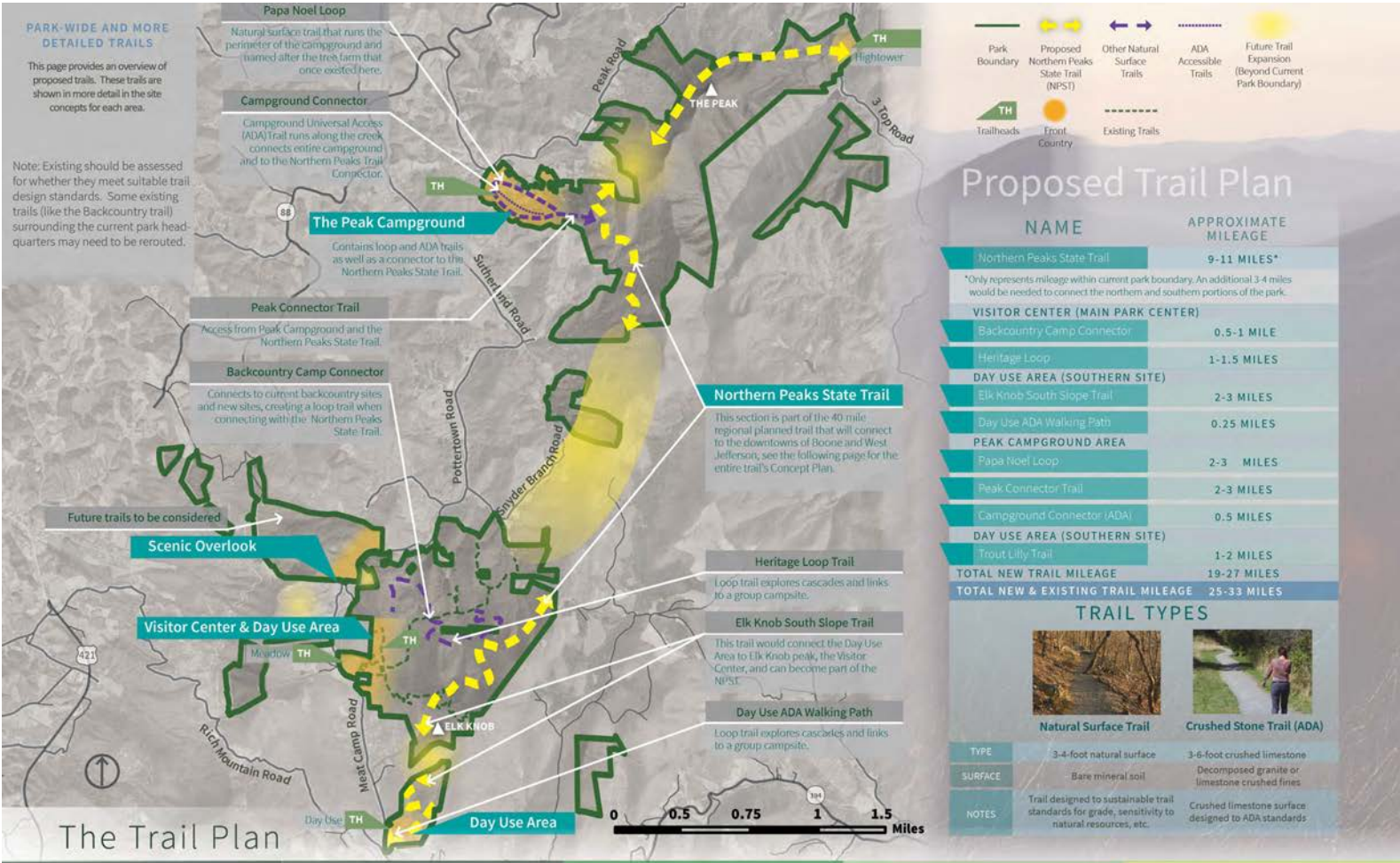
PROBABLE COST ESTIMATE FROM MASTER PLAN 2020

Cost estimates are preliminary and subject to change

	Units	Quantity	Cost Per Unit	Costs
<b>Mobilization</b>				
Mobilization (includes mobilization for all work)	LS	1.0	5% of Construction Cost	\$165,779
			<b>SUB-TOTAL</b>	<b>\$165,779</b>
<b>Grading and Hard surface</b>				
Clearing and grubbing	AC	6.0	\$8,500.00	\$51,000
Earthwork	AC	5.7	\$27,500.00	\$156,750
Fine grading	SY	7,140.0	\$15.00	\$107,100
Storm drainage	LF	70.0	\$46.00	\$3,220
Asphalt surface	SY	7,140.0	\$44.00	\$314,160
Concrete	CY	157.0	\$400.00	\$62,800
Erosion control	AC	6.0	\$22,000.00	\$132,000
			<b>SUB-TOTAL</b>	<b>\$827,030</b>
<b>Structures</b>				
RV sites (include hook ups and plantings)	EA	11.0	\$66,530.00	\$731,830
Cabins (include utilities and plantings)	EA	6.0	\$71,600.00	\$429,600
Shower house	LS	1.0	\$750,000.00	\$750,000
Comfort station	LS	1.0	\$300,000.00	\$300,000
Sewer pre-treatment	LS	1.0	\$225,000.00	\$225,000
			<b>SUB-TOTAL</b>	<b>\$2,436,430</b>
<b>Traffic Control</b>				
Parking striping	LS	1.0	\$3,200.00	\$3,200
Wheel stops	EA	38.0	\$77.00	\$2,926
			<b>SUB-TOTAL</b>	<b>\$6,126</b>
<b>General Amenities</b>				
Stormwater control measures	EA	2.0	\$23,000.00	\$46,000
			<b>SUB-TOTAL</b>	<b>\$46,000</b>
<b>Units:</b>	<b>Sub-Total Cost</b>			<b>\$3,481,365</b>
EA= each	<b>25% Contingency</b>			<b>\$870,341</b>
LS= lump sum	<b>10% Design/Engineering/Permitting</b>			<b>\$435,171</b>
LF= linear foot	<b>Total Cost</b>			<b>\$4,786,877</b>
TN= ton				
SY= square yard				
MI= Mile				

# PROJECT CONCEPT PLANS

Ongoing Project: Northern Peaks State Trail





## >> Ongoing: Northern Peaks State Trail (NPST)

### Visitor Center Section

Probable Cost Estimate from Master Plan 2020

Cost estimates are preliminary and subject to change

	Units	Quantity	Cost Per Unit	Costs
<b>Mobilization</b>				
Mobilization (includes mobilization for all work)	LS		5% of Construction Cost	\$15,134
			<b>SUB-TOTAL</b>	<b>\$15,134</b>
<b>Grading &amp; Trail Work</b>				
Trails (natural surface) from Ashe county to South site	LF	24397.0	\$8.00	\$195,176
			<b>SUB-TOTAL</b>	<b>\$195,176</b>
<b>Structures</b>				
Stream crossings (trail, max. 10') or other trail structures	EA	14.0	\$6,600.00	\$92,400
			<b>SUB-TOTAL</b>	<b>\$92,400</b>
<b>General Amenities</b>				
Wayfinding signage/other signage (on site, off site not included)	LS	1.0	\$5,000.00	\$5,000
Trail kiosk	EA	1.0	\$10,100.00	\$10,100
			<b>SUB-TOTAL</b>	<b>\$15,100</b>
<b>Units:</b>				
			Sub-Total Cost	<b>\$317,810</b>
EA= each			25% Contingency	<b>\$79,452</b>
LS= lump sum			10% Design/Engineering/Permitting	<b>\$39,726</b>
LF= linear foot			<b>Total Cost</b>	<b>\$436,988</b>
TN= ton				
SY= square yard				
MI= Mile				

### Peak Area Section

Probable Cost Estimate from Master Plan 2020

Cost estimates are preliminary and subject to change

	Units	Quantity	Cost Per Unit	Costs
<b>Mobilization</b>				
Mobilization (includes mobilization for all work)	LS	1	5% of Construction Cost	\$26,900
			<b>SUB-TOTAL</b>	<b>\$26,900</b>
<b>Grading &amp; Trail work</b>				
Trails (natural surface)	LF	30000.0	\$8.00	\$240,000
3 Top trail head (kiosk and parking for 15 cars)	LS	1.0	\$225,000.00	\$225,000
			<b>SUB-TOTAL</b>	<b>\$465,000</b>
<b>Structures</b>				
Stream crossings (trail, max. 10'), or other structures	EA	21	\$3,000.00	\$63,000
			<b>SUB-TOTAL</b>	<b>\$63,000</b>
<b>General Amenities</b>				
Wayfinding signage (on site, off site not included)	LS	1	\$10,000.00	\$10,000
			<b>SUB-TOTAL</b>	<b>\$10,000</b>
<b>Units:</b>				
			Sub-Total Cost	<b>\$564,900</b>
EA= each			25% Contingency	<b>\$141,225</b>
LS= lump sum			10% Design/Engineering/Permitting	<b>\$70,613</b>
LF= linear foot			<b>Total Cost</b>	<b>\$776,738</b>
TN= ton				
SY= square yard				
MI= Mile				