

# MASTER PLAN

## FOR THE LULA LAKE LAND TRUST IN THE ROCK CREEK WATERSHED ON LOOKOUT MOUNTAIN

*The Lula Lake Land Trust seeks to protect and preserve the natural beauty and abundant resources within the Rock Creek watershed of northwest Georgia by fostering education, research and conservation stewardship of the land.*



# MASTER PLAN

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## LULA LAKE LAND TRUST

IN THE ROCK CREEK WATERSHED ON LOOKOUT MOUNTAIN

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Ben Pierce

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Mary Beth Sutton

Gordon Whitehurst

*Supported by a grant from the Lyndhurst Foundation*

*Prepared by* **ROBINSON FISHER ASSOCIATES INC.**

330 Research Drive, Suite 210 Athens, Georgia 30605

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# PREFACE

Established in January 1994, the Lula Lake Land Trust seeks to protect and preserve the Rock Creek watershed by fostering education, research, and conservation stewardship of the land. The

Trust promotes sound land conservation principles and practices through long-term biological monitoring, encouraging basic and advanced scientific research and inquiry, creating informative educational offerings and working closely with neighboring landowners and the surrounding community to protect the rural and natural character of the landscape.

In little more than 6 years, the Trust has protected over 4400 acres within and adjacent to the 14,000-acre Rock Creek watershed. Of this, the Trust owns approximately 3500 acres and over 900 acres are protected with conservation easements and other landowner agreements.

The Trust today is a recognized leader in conservation on Lookout Mountain. It is supported by a growing membership of friends who enjoy its lands, work for its improvement, and contribute money to fulfill its mission. The Master Plan provides direction for this support.

Master planning occurred over an eighteen-month period and involved considerable discussion of objectives and alternatives for meeting them by the Board of Directors, its advisors and conservation professionals.

Master planning for a vital institution like the Lula Lake Land Trust is an on-going process. Policies and actions will produce effects, which must be monitored to inform follow-up policies and actions. The constant cycling of planning to policy to action to feedback will allow the Trust to respond to inevitable changes in the environment, human behavior, regional land use, government, and the economy.

# INTRODUCTION

Rock, landform, water, soils, plant and animal communities, and human history have produced a unique environmental complex around Lula Lake and within the Rock Creek watershed. Into this tapestry the master plan weaves the goals and objectives of the Trust. Planning is based on both the land and the program for human use. It formulates a physical pattern of use to sustain both. At a practical level the purpose of the master plan is to guide the physical utilization of the Trust's land and direct its capital improvements. It consists of two parts:

## **Part 1- A Plan for the Core Property -**

## **Part 2- Trail Plan for Trust Conservation Corridor from Cloudland Canyon to Lula Lake**



# GOALS & OBJECTIVES

***Protect the natural and cultural resources of the Trust's lands.***

***Connect people to the Trust's lands through education and recreation.***

***Contribute to the understanding of nature through research.***

***Encourage the conservation and sustainable utilization of Lookout Mountain.***

*Establish partnerships with other institutions for environmental education, research, and recreation.*

*Develop support facilities for environmental education*

*Preserve and interpret historical resources.*

*Preserve and interpret natural resources.*

*Develop facilities for recreation.*

*Develop support facilities for research.*

*Develop facilities for administration and property management.*

*Enhance utilization by groups for environmental education*

*Establish special protection areas for research.*

*Increase public utilization for day-use hiking and nature study.*

*Prepare a complete environmental inventory.*

*Promote low impact outdoor recreation*

*Develop a regional trail network anchored to the Trust's core property, that leads to Cloudland Canyon State Park, among other places.*

*Protect environmental quality through watershed conservation and the preservation and enhancement of biodiversity.*

*Promote the concept that conservation is good for the whole mountain community, including homeowners, large landowners, businesses, developers, and farmers.*

*Promote community involvement in planning*

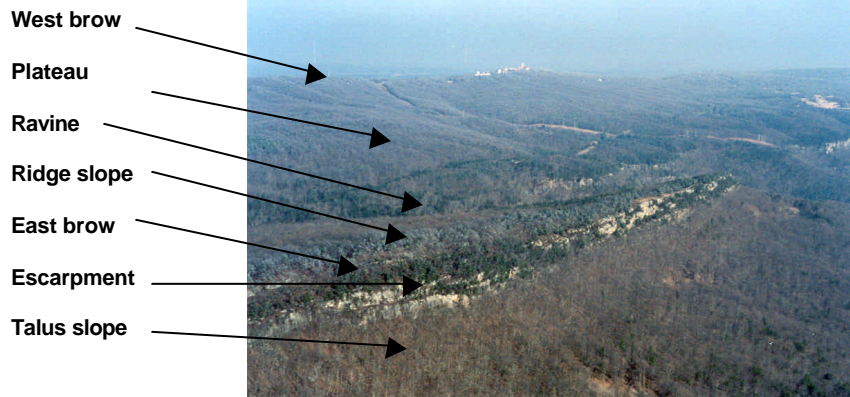
*Promote good land use planning and site development*

*Protect farmland, open space, and the rural landscape*

*Preserve historic settlement patterns and let them guide future development.*

# THE RESOURCE BASE

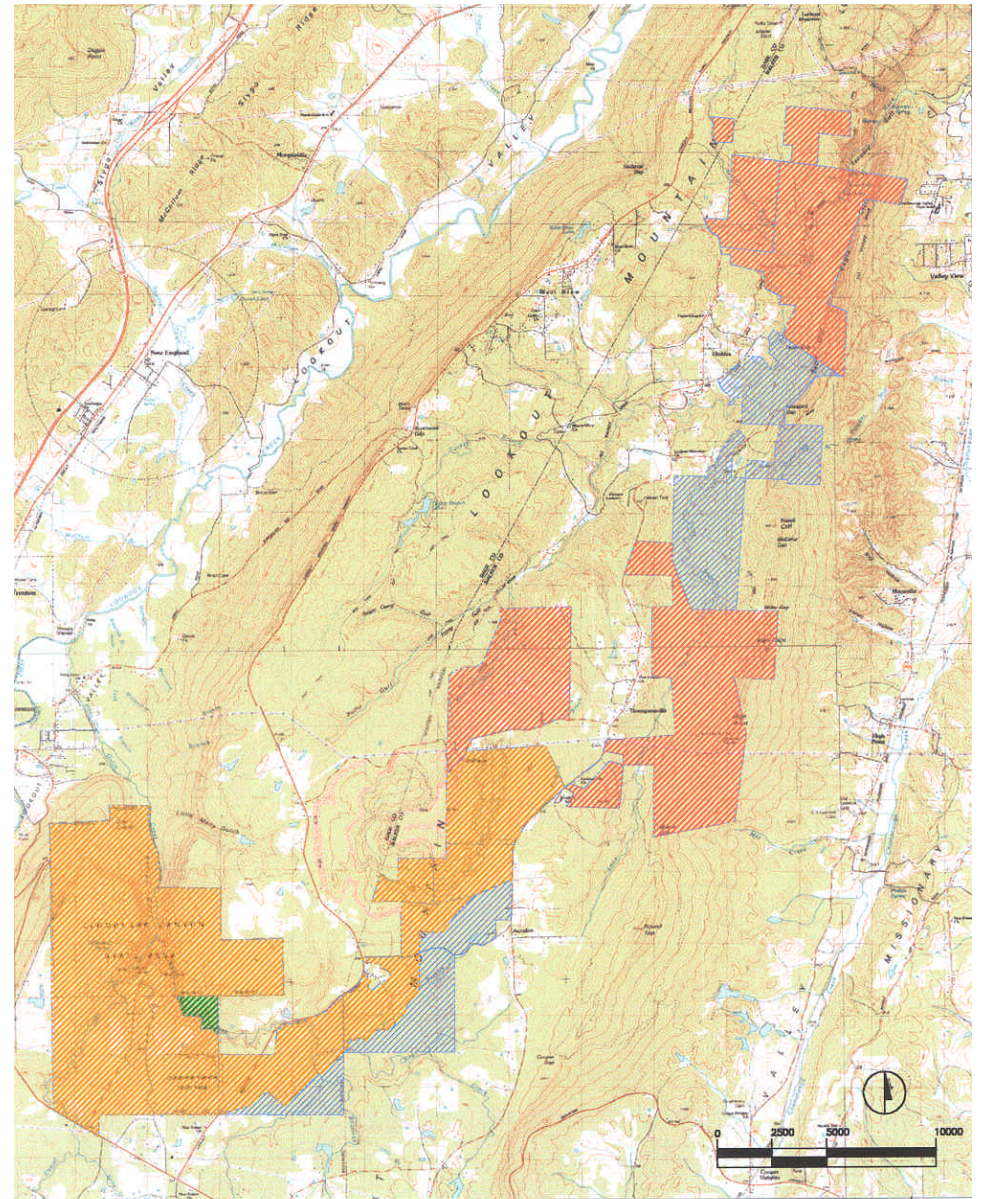
By and large the more than 4000 acres of land that is protected through the efforts of the Lula Lake Land Trust lie within the Rock Creek and Bear Creek watersheds on Lookout Mountain in Georgia. These lands embrace natural landscapes, rural landscapes, and historical settlements. They contain biodiversity and include endangered species. They possess dramatic physiography and geology typical of the Cumberland Plateau. All of this is expressed in its scenic beauty.



LLLT Core Property looking North and West



LLLT Core Property looking South up the Rock Creek Watershed



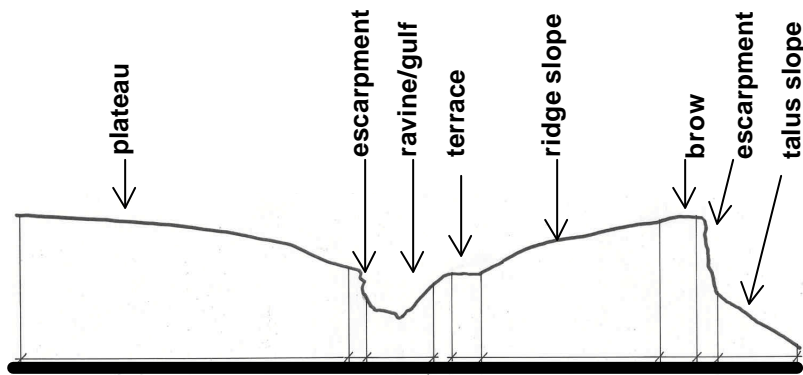
CONSERVATION LANDS OF LLLT AND STATE OF GEORGIA

- State-Owned Land
- Conservation Easements
- LLLT Core Property

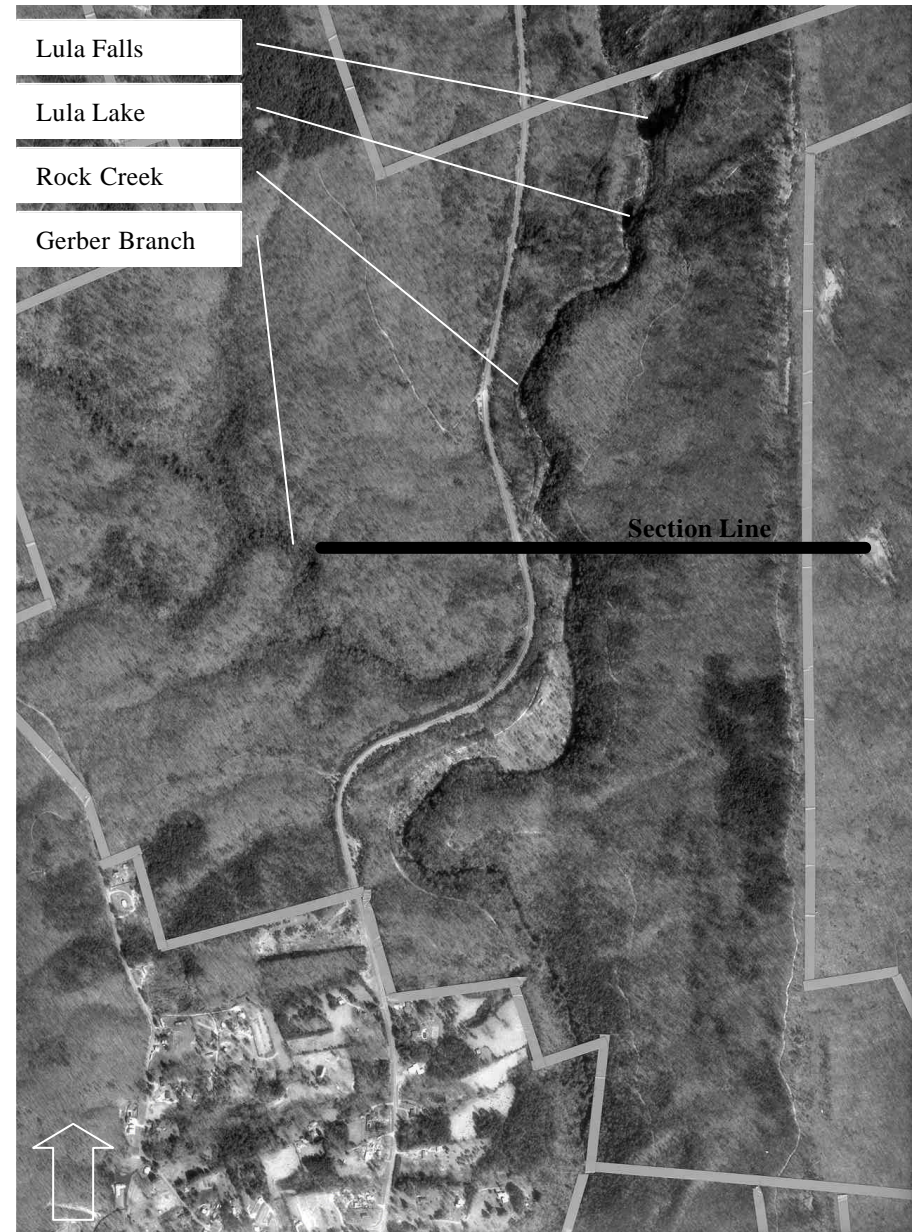


The apparent mottling in the air photograph indicates a landscape with different parts that have different histories, different values, different vulnerabilities and different potentials for human use. Some differences are the product of natural processes, others are the result of human use, such as mining, clearing, and farming.

This landscape is remarkable because of how many natural forms and distinct environments are compressed into its 750 acres. A property with a single waterfall would be distinguished, but one that also includes a 2-mile escarpment, a rocky stream, a rock-shrouded lake, sandstone chimneys and a complex of contrasting biotic communities is non pareil. The compression of so much into one area the size of a regional park has the highest value for environmental education, research, and outdoor recreation.

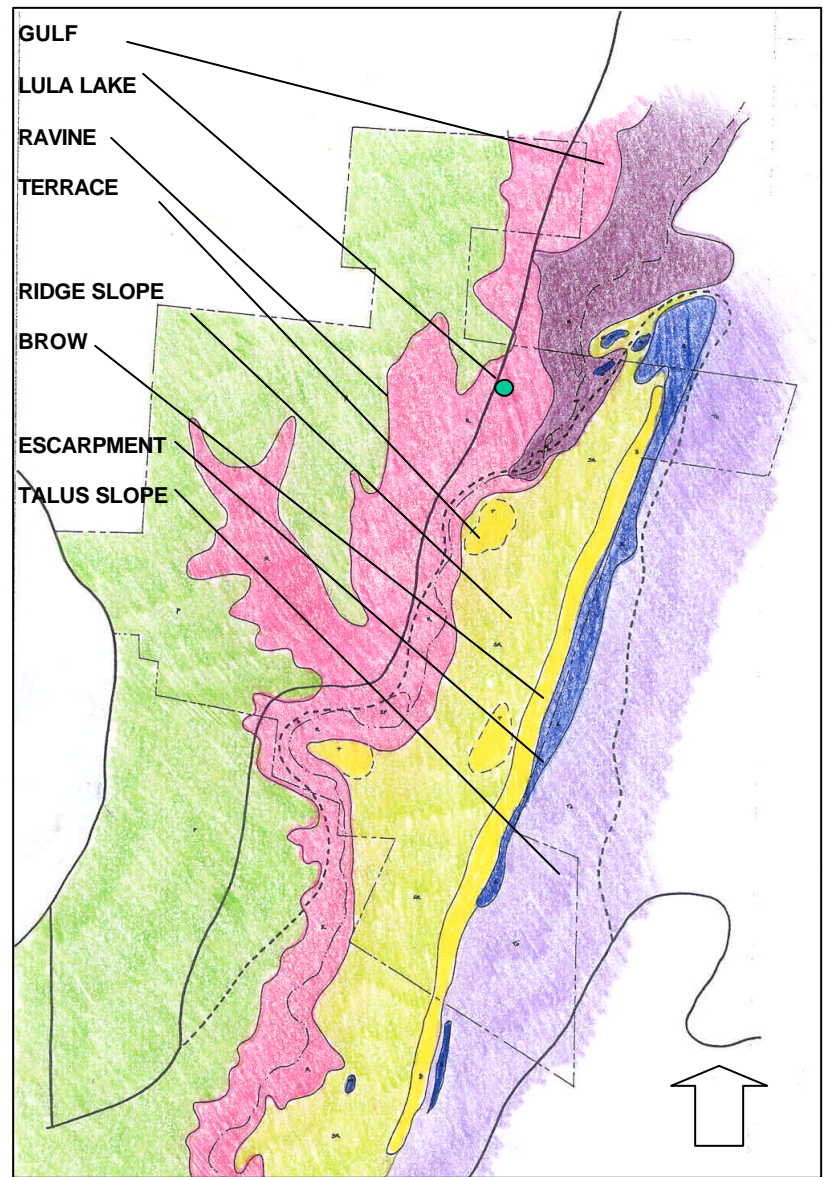
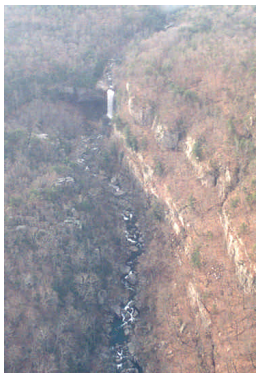
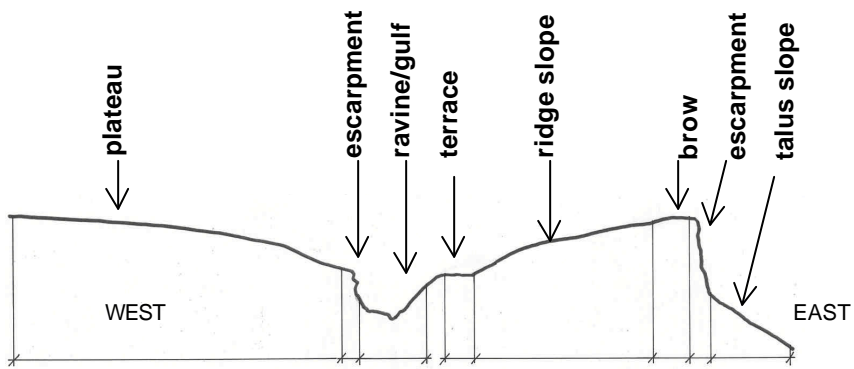


**TYPICAL WEST TO EAST CROSS-SECTION THROUGH THE CORE PROPERTY**

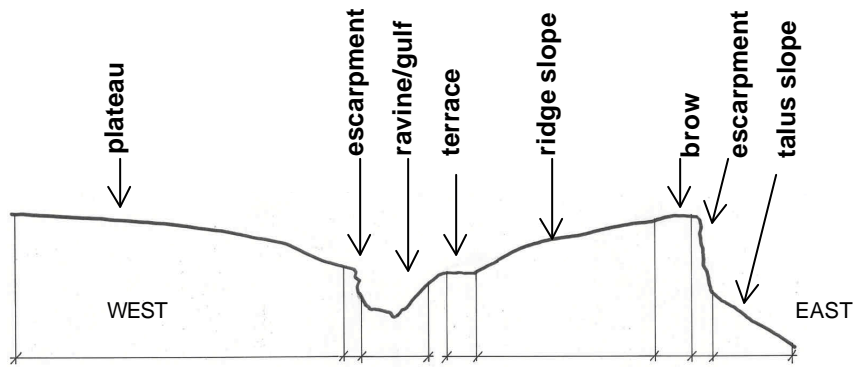


## **PART 1: The Core Property**

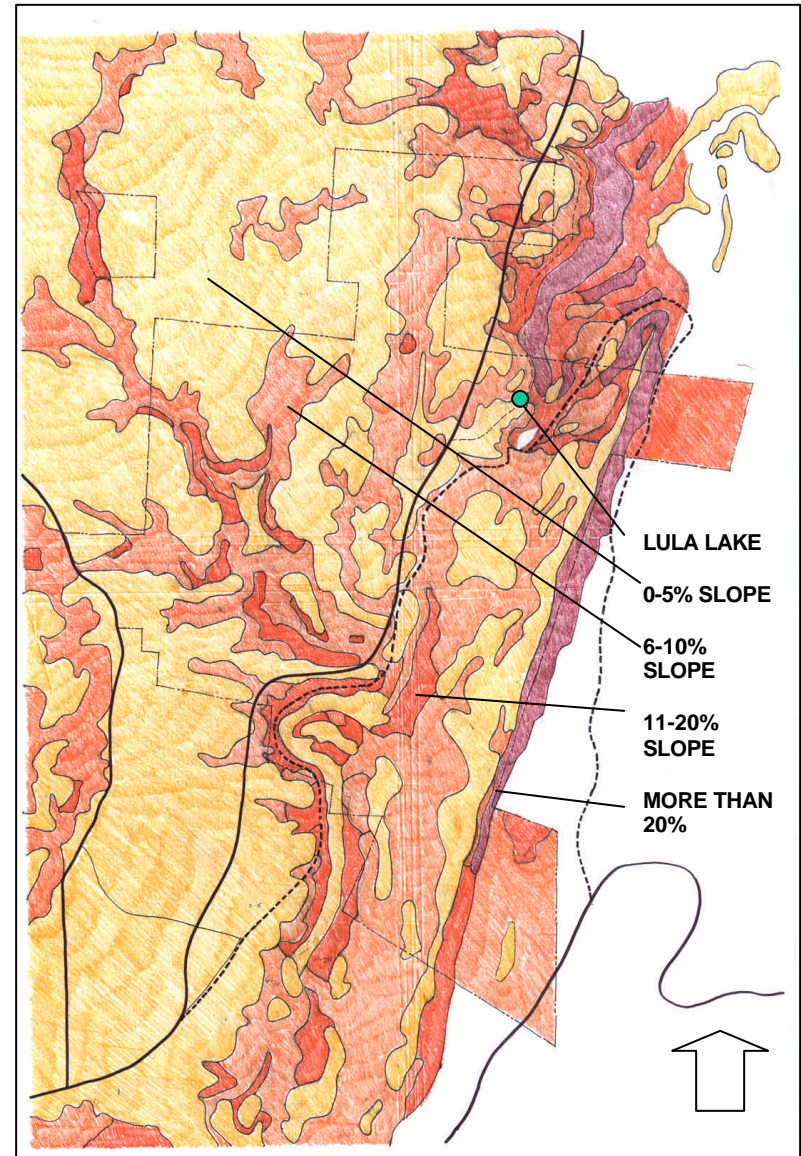




**LANDFORMS**

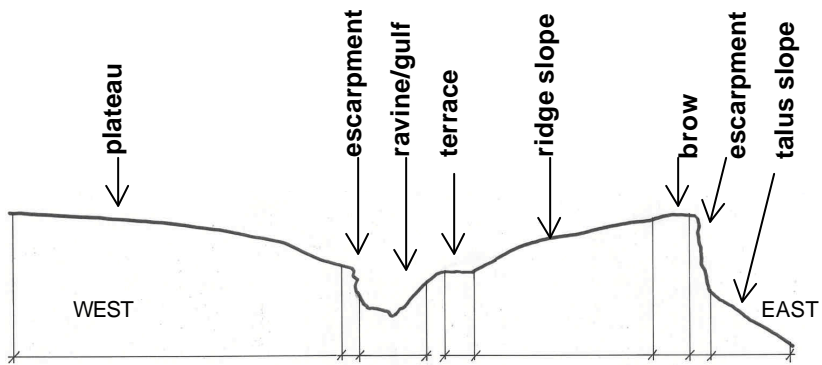


**TYPICAL CROSS-SECTION TRHUGH CORE PROPERTY**



**SLOPES**

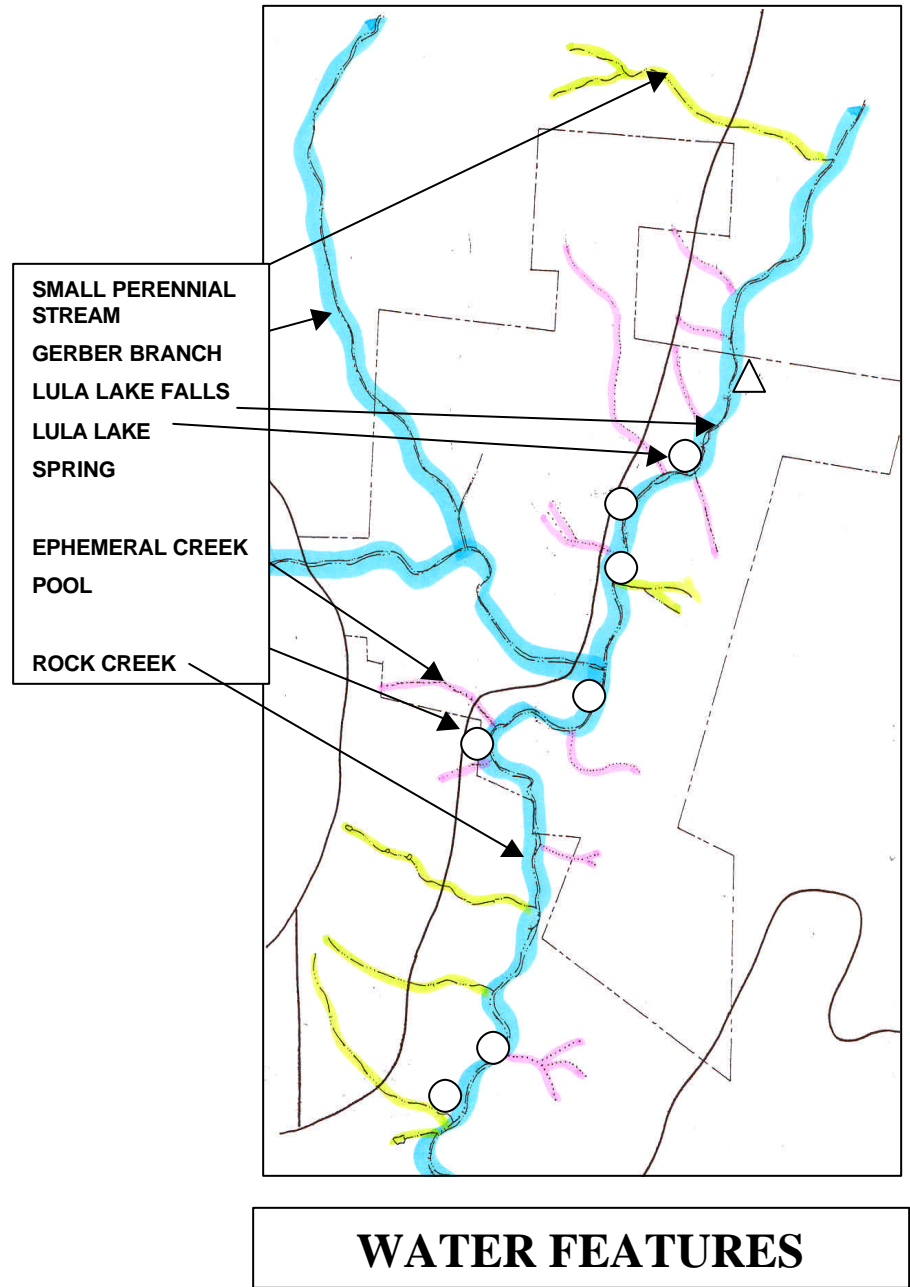




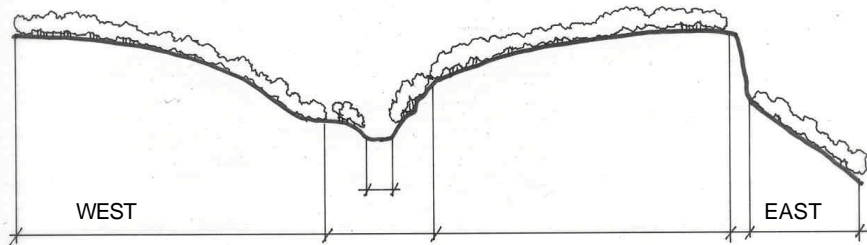
**TYPICAL CROSS-SECTION THROUGH CORE PROPERTY**



L-R Spring, Lula Lake, and Lula Falls on Rock Creek



**WATER FEATURES**



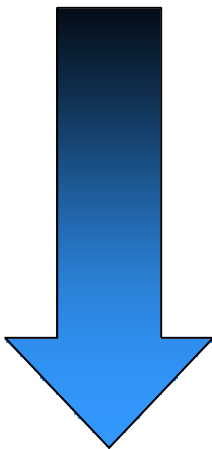
Pine, Hardwood,  
Hardwood-pine

Meadow

Wet-cliffs

Pine, Hardwood,  
Hardwood-pine

escarpment  
talus hardwoods



**MESIC**

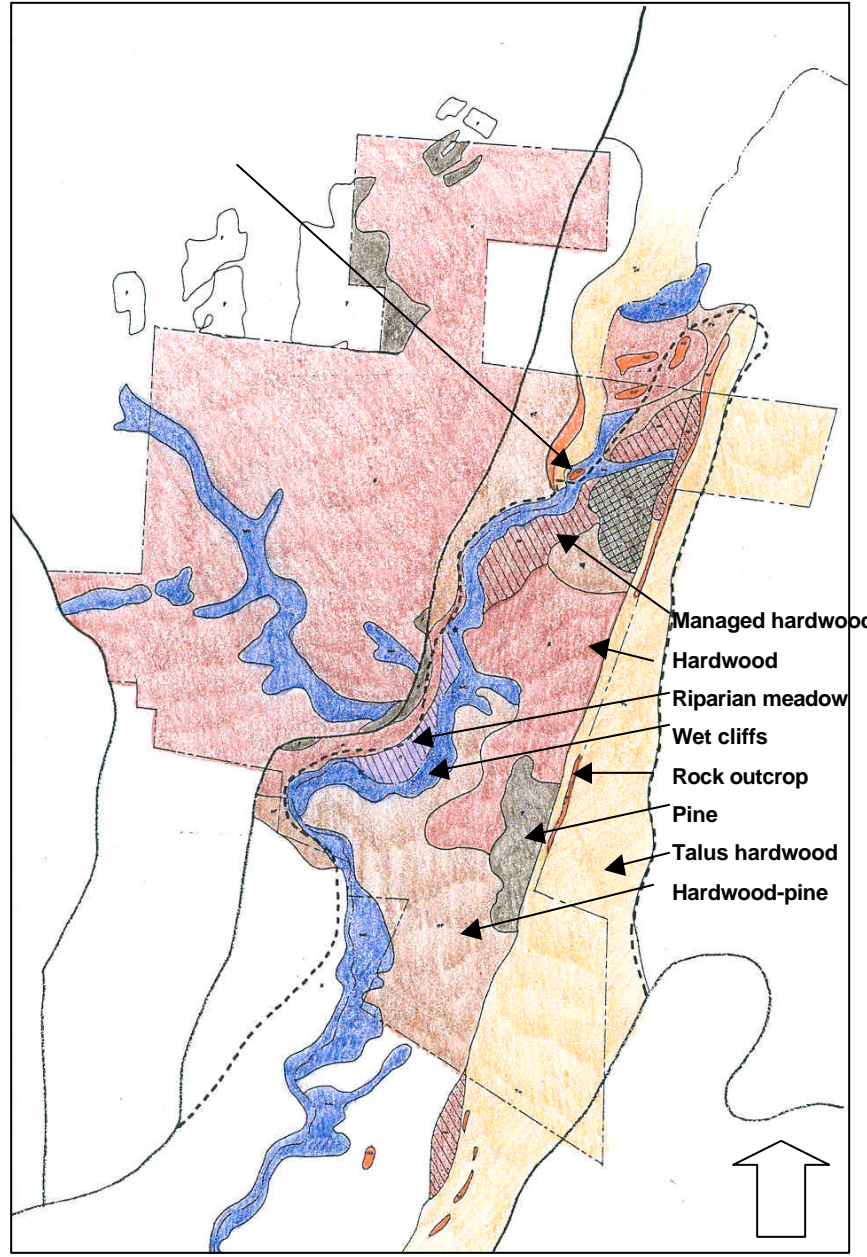
riparian meadow  
wet cliffs

**SUB-MESIC**

pine  
hardwood-pine  
hardwood  
talus hardwood

**XERIC**

rock outcrop



- Managed hardwood
- Hardwood
- Riparian meadow
- Wet cliffs
- Rock outcrop
- Pine
- Talus hardwood
- Hardwood-pine

**PLANT COMMUNITIES**



# Observed Forest Compositions

Talus Slope Forest - Rock chestnut oak, black oak, blackjack oak, hickory, black gum, shortleaf and Virginia pine, chestnut sprouts and middle-aged trees, and occasional red-cedar

Dry Woods – White oak, black oak, post oak, southern red oak, northern red oak, chestnut oak, red maple, hickory, sweetgum, shortleaf and Virginia pine with yellow poplar, dogwood and ash in moister swales.

Cove Forest – White oak, southern red oak, hickory, black locust, yellow poplar, black gum, red maple, sourwood, hemlock, black birch, American holly, and dogwood.

Riparian Forest – White oak, northern red oak, black birch, yellow poplar, black gum, red maple, beech, and Catawba rhododendron. Unusual *Stewartia* stand in riparian forest east of Middle Road near footbridge, stream edges contain *Spirea virginiana*.

Lowland Woods - Second growth white oak, yellow poplar, beech, ash, black cherry, red maple.

Planted White Pine, Chestnut and Hemlock – Dry woods with high overstory predominantly of white oak and hickory have been planted with white pine, and hemlock. This is the location of the planted chestnut research with the hybridized chestnut planted on the northern section of the research area and the American chestnut planted in the southern section.

Managed Grass, Shrub Area – A small number of remnant trees from the riparian forest were left when Hurricane Opal destroyed most of the trees and shrubs in this area. Some shrub remnants are along the stream edge, with grass as the predominant species in the open area.

Managed Azalea, Rhododendron Area – A high oak and hickory canopy provides cover for the dense shrub layer of Cumberland azalea and Catawba rhododendron. This area is managed by mechanical means to suppress understory tree seedling. Stand of *Scutellaria montana* is found along the roadside.

Managed Bluff Forest – Portions of the talus forest at the top of the eastern ridge is managed by mechanical means to create an open canopy with little understory and grass (*Spica* sp.) understory. This creates an open, park-like atmosphere right to the ridge edge.



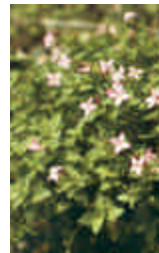
Hardwoods with managed understory

Addition to the Flora of Lula Lake  
Collected by Ashleigh Housewright  
'98-99

- Acer negundo* L.
- Aesculus sylvatica* Bartram
- Amelanchier arborea* Fernald
- Antennaria plantaginifolia* Richardson
- Anthemis arvensis* L.
- Aquilegia canadensis* L.
- Baptista lanceolata* Ell.
- Brassica napus* L.
- Calycanthus floridus* L.
- Chimophila maculata* Pursh
- Crataegus virodus* L.
- Disporum lanuginosum* Nicholson
- Duchesnea indica* Focke
- Epigaea repens* L.
- Fragaria x ananassa* Duchesne
- Geranium maculatum* L.
- Houstonia caerulea* L.
- Ilex opaca* Aiton
- Iris cristata* Aiton
- Iris verna* L.
- Krigia biflora* (Walter) Blake
- Liriodendron tulipifera* L.
- Lonicera canadensis* Marshall
- Lycopodium flabelliforme* Blanchard
- Malus pumila* Miller
- Oxalis dillenii* Jacquin
- Oxalis violacea* L.
- Pedicularis canadensis* L.
- Phlox amonea* Sims
- Plantago lanceolata* L.
- Podophyllum peltatum* L.

- Ranunculus abortivus* L.
- Ranunculus repens* L.
- Ranunculus sardous* Crantz.
- Rhododendron roseum* Rehder
- Rhododendron viscosum* Torrey.
- Rubus betulifolius* Small
- Rumex acetosella* L.
- Silene virginica* L.
- Sassafras albidum* Ness
- Styrax grandifolia* Aiton
- Tiarella cordifolia* L.
- Tradescantia ohioensis* Raf.
- Trifolium reflexum* L.
- Trifolium repens* L.
- Trillium lanceolatum* Boykin
- Veronica arvensis* L.
- Vicia sativa* L.
- Viola hastata* Michaux
- Viola hirsutula* Brainerd
- Viola macloskeyi* var. *pallens* C.L. Hitchcock
- Viola pedata* L.
- Viola rafinesquii* Greene
- Viola sagittata* Aiton
- Zizia aptera* (Gray) Fernald

## Endangered Plants Present at Lula Lake



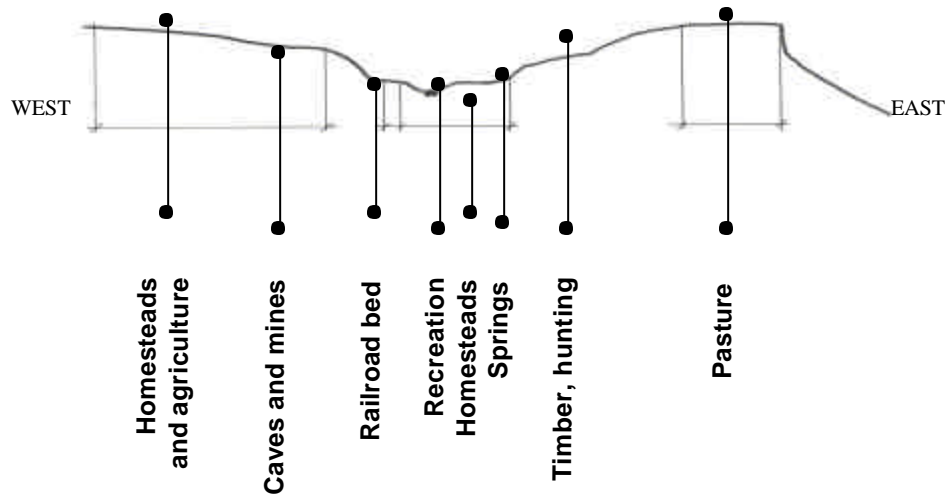
Round Mountain Blue *Spirea virginiana*



*Scutellaria montana*

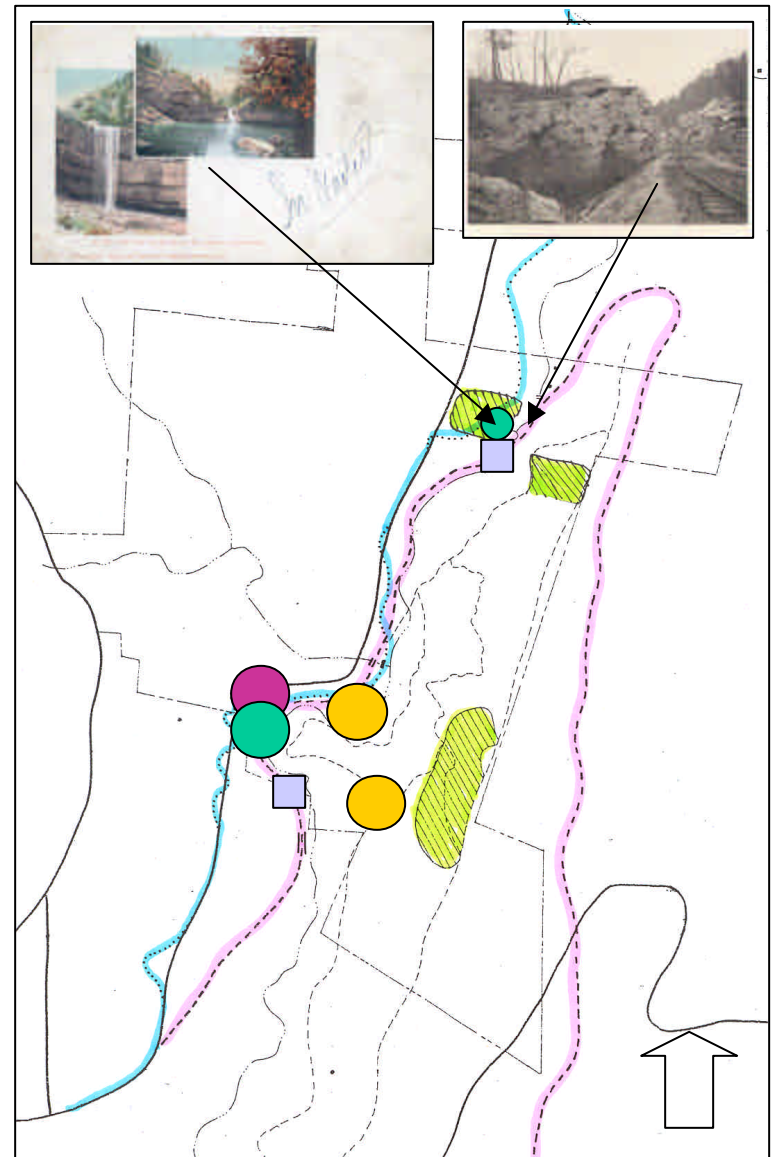


Chestnut Project



### HISTORICAL TIMELINE

- 10,000 Prehistory
- 1500 European-Native Peoples contact
- 1860 Civil War
- 1880 New South Philosophy
- 1900 Industrial Growth
- 1910 Age of Populism
- 1950 End of Mtn. Industrial Age
- 1960 Modern Age



### HISTORICAL RESOURCES

# MASTER PLAN PART 1:

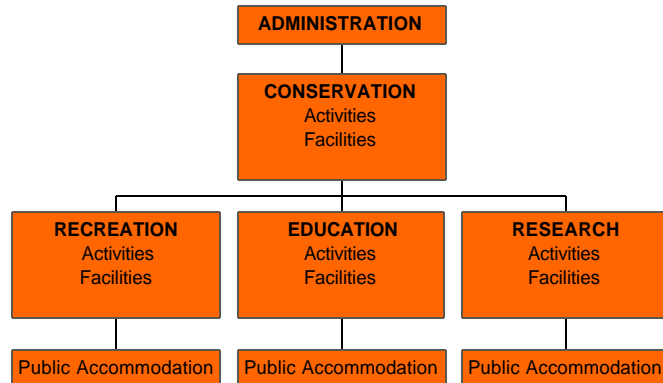
## The Core Property

On the basis of the review of environmental resources and in the spirit of the Land Trust's mission statement, certain principles are set forth to guide development.

### *Development Principles*

- *The Core property shall be accessible to the public for a high quality experience of a natural landscape.*
- *Do not impound major creeks.*
- *Protect unusual environments.*
- *Protect endangered species.*
- *Promote low impact outdoor activities.*
- *No structures shall be visible on the bluff.*
- *New man-made structures should be discrete in order to not detract from wild scenery.*
- *Wildlife shall be protected.*
- *No hunting.*
- *No swimming in Lula Lake*
- *No rock climbing in gorge.*
- *The view of Lula Lake, falls, and rock outcrops shall present wild scenery.*
- *Manage vegetation to climax communities.*
- *Preserve and interpret historical resources.*
- *Protect and enhance bio-diversity.*

# MASTER PLAN PART 1: Development Program



## POTENTIAL USERS

- Cloudland Canyon State Park Users - Many from out of the region. Many on vacation.
- Rural Users - Residents of surrounding rural area have some sense of ownership or rights to local forests and streams. Youth and adults.
- Retiree Users who have moved to the area.
- Adventure sports enthusiasts who are in area for biking, hang gliding, rock climbing, caving, etc.
- Nature enthusiasts
- History buffs
- Institutional Users - Public coming under the auspices of schools, churches, museums, etc.
- Suburban Users - Family-oriented users who live in communities like the City of Lookout Mountain, TN
- Researchers from state and local institutions.

## Administration

- Maintenance barn
- Storage
- Manager's office
- Property security--fences, gates, monitoring systems, etc.
- Communication systems
- Specialized vehicles and equipment

## Education

- Self-directed nature trails
- Indoor and outdoor exhibits
- Staff offices
- Volunteer office
- History activities
- Nature-oriented activities:
  - *birdwatching*
  - *plant identification*
  - *rock collecting*
  - *fossil hunting*
  - *photography*
  - *art*

## Recreation

- Hiking
- Picnicking
- Creek wading
- Mountain biking
- Horseback riding
- Fishing
- Primitive camping
- Group gathering

## Research

- Plots/research areas
- Security system
- Storage
- OfficeSpace/Support

## Public Accommodation

- Entrance
- Roads
- Parking
- Trails
- Restrooms
- Potable Water
- Outdoor Assembly
- Group Pavilion
- Public Safety
- Handicap

USER CHART – CORE PROPERTY							
Group (Contact person)	No. of users	Freq. of Use	Types of uses	Areas used	Facilities Requested	Size of Land Needed	General Comments
Lula Land Trust Members	5-30 5-15	12/yr	Monthly open days Work sessions	Trails, lake and falls, picnic tables, bluff overlook	<ul style="list-style-type: none"> <li>• Water, restroom</li> </ul>	Seem satisfied with size of land available	<ul style="list-style-type: none"> <li>• Would like another access point to creek besides at beach</li> <li>• Would like a trail along Rock Creek</li> </ul>
TN Wildlife Center (Jenny Frankenburg, Dir. Susan Russell, Prog. Dir. )	20-30 / program	2-3/yr	Now doing specialty program seasonally, (Spring & Fall) on geology, plants, and astronomy  15-20 cars	Trails, lake and falls, picnic tables	<ul style="list-style-type: none"> <li>• Facility for school bus so that 150 students (grade level) can have access i.e. 2 –3 buses.</li> <li>• Restroom and water, no shelter as activities cancelled in bad weather</li> <li>• Need better signage &amp; orientation maps</li> </ul>	<ul style="list-style-type: none"> <li>• Trails ¼ mi. to 2 mi. long for interpretive hikes, with easy to moderate rating.</li> <li>• Diversity of plant (and animal) communities, geologic features</li> </ul>	<ul style="list-style-type: none"> <li>• Would like to expand to 1 program/mo. in Fall months</li> <li>• Would like to expand for school students, but need good bus access</li> </ul>
Tenn. Aquarium (Bettv Miles. Prog. Dir)	20-25/program	4-6/yr	Nature walks, mtn. bikes, hiking w/ guide, photography, chestnut tree tour, sketching  2 vans or 5-10 cars	Trails, open area for parking and orientation, picnic tables, roads for bike riding, view lake and falls	<ul style="list-style-type: none"> <li>• Pavilion for picnicking, gathering, sunshade</li> <li>• Restrooms</li> <li>• Closed room for bad weather programs</li> <li>• Fireplace would be a bonus</li> </ul>	<ul style="list-style-type: none"> <li>• Trails ¼ mile to 5 miles for hiking, with easy (8% max. slope) to moderate (15% max. slope) rating.</li> <li>• Trails 5 to 15 miles for bike trips as loops, with easy to challenging rating</li> </ul>	<ul style="list-style-type: none"> <li>• Most programs for adults, some family turn-out, would do overnights if tent space available</li> </ul>
Boy Scouts (Carrington Montague)	~20 per troupe  40-50 special events	4-6/vr  1/yr	Hiking, camping, bicycling, nature study for merit badge work 2-3 cars  Campout for cub scouts 10-15 cars	Open space for camping, trails for hiking, roads for biking, creek for water play	<ul style="list-style-type: none"> <li>• Walk-in group camp site</li> <li>• Signage for trails, nature study, heritage info.</li> <li>• Washing station for small kids</li> </ul>	<ul style="list-style-type: none"> <li>• 2 acres for group camping in semi-secluded area.</li> <li>• Pit toilet or composting toilet</li> <li>• Trails 2 to 10 miles, easy to moderate rating</li> </ul>	<ul style="list-style-type: none"> <li>• Scouts don't fish here</li> <li>• No ATVs should be allowed</li> </ul>
Episcopal Church (Bill Crutchfield)	150 people	1/yr	Church Pentecostal gathering  ~100 cars	Open space for 100 cars, picnic tables, lake, beach and creek for water play	<ul style="list-style-type: none"> <li>• Shelter would allow inclement weather gatherings</li> </ul>	<ul style="list-style-type: none"> <li>• Trail ¼ to 2 miles, easy to moderate rating</li> <li>• 1 acre for parking</li> </ul>	<ul style="list-style-type: none"> <li>• Need easier access to water at open area</li> </ul>
Covenant College (Jerry Wenger)	10-15 students	2-3/sem	Fall semester ecology class does water studies, tree survey, short and long term research plots	Wooded areas, occasionally picnic tables	<ul style="list-style-type: none"> <li>• Would like permanent markers for plot corners, etc.</li> <li>• No need for building.</li> </ul>	<ul style="list-style-type: none"> <li>• One acre of secure land in an assortment of geophysical conditions with</li> </ul>	<ul style="list-style-type: none"> <li>• Would like to set up more permanent research. Plans to be at the College for</li> </ul>

## USERS OF THE TRUST'S CORE PROPERTY

Covenant College (Jerry Wenger)	10-15 students	2-3/ sem	Fall semester ecology class does water studies, tree survey, short and long term research plots  2-3 cars or 1 van	Wooded areas, occasionally picnic tables	<ul style="list-style-type: none"> <li>• Would like permanent markers for plot corners, etc.</li> <li>• No need for building, water would be nice.</li> <li>• Need better signage &amp; orientation maps</li> </ul>	<ul style="list-style-type: none"> <li>• One acre of secure land in an assortment of geophysical conditions with limited human intervention</li> <li>• Access to water for testing purposes at Rock Creek, Long Creek, and tributaries</li> </ul>	<ul style="list-style-type: none"> <li>• Would like to set up more permanent research. Plans to be at the College for another 10 years.</li> </ul>
UTC Botany Dept. (Dr. Gene Van Horn)	2-5	6/yr	Vascular plant inventory	Trails	None	<ul style="list-style-type: none"> <li>• Surveying Trust property</li> </ul>	<ul style="list-style-type: none"> <li>• Grad student just finished updating earlier inventory</li> </ul>
UTC Biological Sciences (David Aborn)	1-3	12/yr	Bird point counts for GA Breeding Bird Survey	Throughout Core and other LLLT properties	None	<ul style="list-style-type: none"> <li>• Access to multiple sites with limited human contact</li> <li>• Access to sites with exotic vegetation that is allowed to overtake native vegetation</li> </ul>	<ul style="list-style-type: none"> <li>• Plans to start research on disturbed riparian areas that have exotic shrubs to see bird species changes. Not on core property</li> </ul>
Satellite orchard for American Chestnut Foundation Research (Hill Craddock, UTC Christine Bock, TN Aquarium)	3-15	12/yr	Planting, monitoring of research sites	~4 acres on Middle Road  Cars left at open area, and 2 vehicles taken to site with tools	<ul style="list-style-type: none"> <li>• Water truck or pump for watering from creek</li> <li>• Small shed (8' x 10') for tool and riding mower storage</li> </ul>	<ul style="list-style-type: none"> <li>• Plans for expansion of orchard 1 this Fall.</li> <li>• Area for expansion of research plots, ideally 10-15 acres.</li> </ul>	<ul style="list-style-type: none"> <li>• New sites need light canopy, and easy access to water for irrigation.</li> </ul>

<b>SUMMARY OF USER INVENTORY</b>	<b>Estimated No. of users</b>	<b>Freq. of Use</b>	<b>Types of uses</b>	<b>Areas used</b>	<b>Facilities Requested</b>	<b>Size of Land Needed</b>	<b>General Comments</b>
	434 to 701 per year	1 to 12/yr	Recreation Research Education	All trails Lake and fall sites Open area Picnic sites	Covered picnic area Heated/cooled room for meetings/programs Potable water Restrooms Tool shed Defined car parking Bus access and parking		

## USERS OF THE TRUST'S CORE PROPERTY

## Scouting Use of Lula Lake

*Cub scouts (4<sup>th</sup> and 5<sup>th</sup> grade) have had overnight campout with parents in Oct. had 40-50 people in day, 30-40 spent night in 10-15 tents. Used existing fire pit, stayed in "parking area". Played in water, hiked, had native Am. specialist come for event with teepees and cooking pits. – big hit, would like to do it again.*

*Boy Scouts have regular clean up activities as directed by Bill Chipley for community service projects. They use the property to hike, bike, and camp. Use open area for camping, but never on bluff. Use pit for fires, cook on stoves.*

*Scouts of the John Ross District (5 county area) would like to use Lula Lake as a center for merit badge use – which would include Environmental Science, Forestry, Am. Heritage, Indian Lore. Would also like to set up Forestry badge with chestnut researchers or the like. Scouts would like to have their own walk-in group campsite that they create and maintain. They don't need tables or organized tent sites.*

*Source: Carrington Montague*

## Fossil Hunting

### Fossil hunting and occurrence in the area:

*The shale piles left by the Durham mines are listed in Fossil Hunting Guides. The fossils that occur here are plants (mostly ferns) that are not rare and have no significant commercial value. This is a great place for amateur collectors, hobbyists, and children to go fossil hunting. Everybody finds something and goes away happy.*

### Present Use of Trust Core Properties

*Mr. SantaMaria of the Weinman Mineral Museum in White, Georgia is allowed to fossil hunt here. There are Lepidodendron fossils here (giant club moss). Lepidodendron fossils are typically cross-sections of trunk and their pattern looks similar to tire tracks. There are not enough fossil deposits of importance on the core property to necessitate either allowing fossil hunting or guarding against poaching.*

### Present Use of Other Trust Properties

*The Durham mine shale piles are the best place in Georgia for fern fossil hunting. The main area is blocked by a barricade of trees. Mr. Santamaria would like to see a gate installed for car access when there are organized fossil hunts, and hopes that this area will always be available for this activity.*

*Source: Jose SantaMaria  
Weinman Mineral Museum, White, GA*

## USERS OF THE TRUST'S CORE PROPERTY



# PART 1 MASTER PLAN:

## Land Use

Land use defines the appropriate use of different parts of the property. They are based on program requirements of the Trust and are fitted to the composition of the natural environment. Each land use type has an environmental impact, which should be mitigated by both land management and regulation of use. Listed in order of the most to the least developed, the following land use zones account for all of the Core Property.

**Visitor Center Zone** is the principal reception area for visitors to the Core Property. Entrance, parking, orientation, information, and administration are the principal functions.

**Passive Recreation Zone** accommodates passive outdoor recreation, such as picnicking, in a park-like landscape.

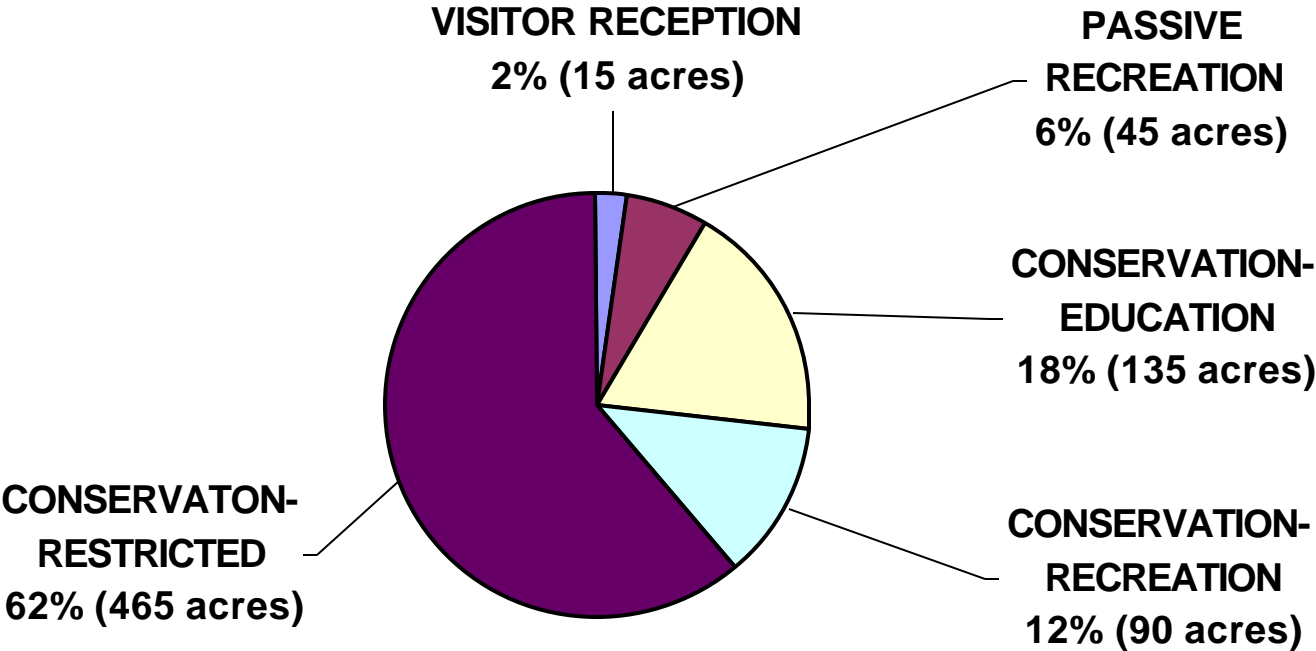
**CE-Conservation-Education Zone** is dedicated to site specific outdoor environmental education for individuals and groups.

**CR-Conservation-Recreation Zone** is a minimally improved natural area for low impact outdoor recreation.

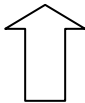
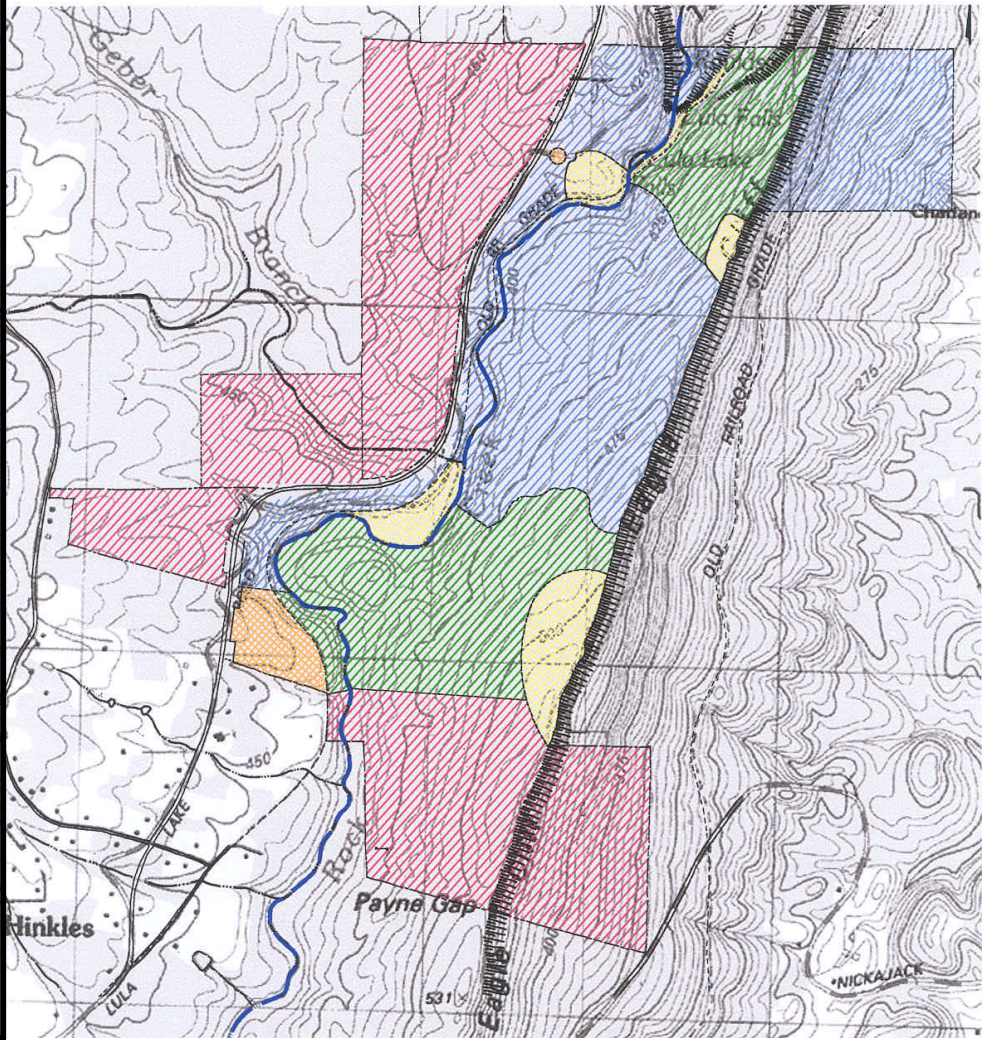
**R-Conservation-Restricted Zone** is a protection, refuge or research area with restricted public access.

# ZONING FOR CONSERVATION

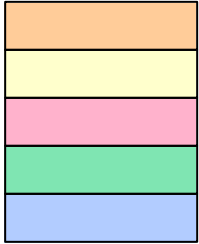
Probably the most critical decision in conservation land use planning is apportioning the different land uses to total property acreage. For the 750 acre Core Property, a minimum of 50 percent of total acreage should be placed in the Conservation-Restricted Zone. This acreage will offset the human activities represented by the other land uses, which will increase as Lula Lake Land Trust's educational and recreational programming become more effective and widely known. The following pie chart represents the master plan's land use allocation.







**LLLT LAND USE: Core Property**



- VISITOR RECEPTION**
- PASSIVE RECREATION**
- CONSERVATION RECREATION**
- CONSERVATION EDUCATION**
- CONSERVATION RESTRICTED ACCESS**



Listed in order of the most to the least developed, the following land use zones account for all of the Core Property.

**VC-Visitor Center Zone** is the principal reception area for visitors to the Core Property. Entrance, parking, orientation, information, and administration are the principal functions.

**VC-1** This is the main public entrance to the Core Property.

**VC-2** This is a secondary entrance used only by permission of LLLT administration. It is not for use by the general public and is meant to accommodate certain groups for special occasions.

**PR-Passive Recreation Zone** accommodates passive outdoor recreation, such as picnicking, and has a park-like landscape.

**PR-1** This is a centrally located area along Rock Creek with a mowed meadow landscape and accommodations for large groups (200 or less).

**PR-2** This area is located immediately upstream from Lula Lake and offers accommodation for small groups.

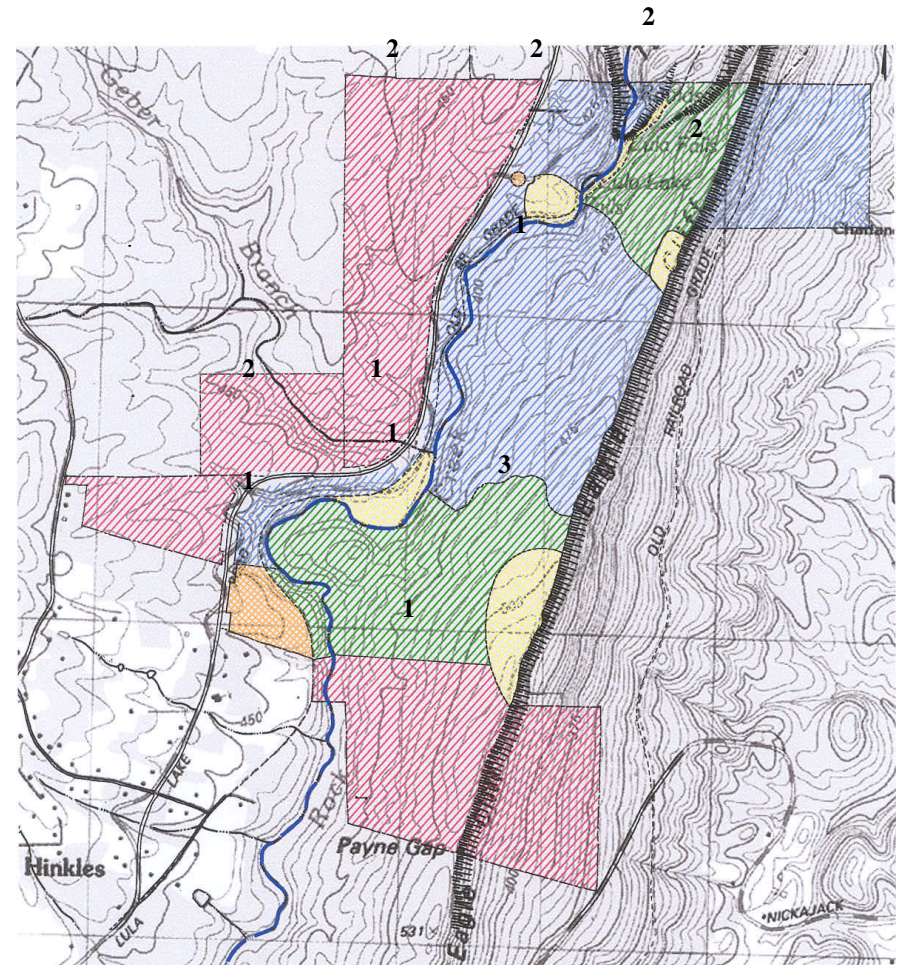
**PR-3** This is a small area on the brow for taking in the scenery and accommodating small groups.

**PR-4** This is a large area on the brow that is managed as parkland and accommodates medium sized groups (50 or less).

**CE-Conservation-Education Zone** is dedicated to site specific environmental outdoor education for individuals and groups.

**CE-1** This educational area contains a good spectrum of the habitats that exist along an east-west axis from the brow to Rock Creek, several plant communities, and evidence of historic human use.

**CE-2** This educational area is between Lula Lake and the brow and contains great natural scenery, evidence of historic use, dramatic geology/landform, and biological diversity.



## LLL T LAND USE: Core Property



**CR-Conservation-Recreation Zone** is a minimally improved natural area for low impact outdoor recreation.

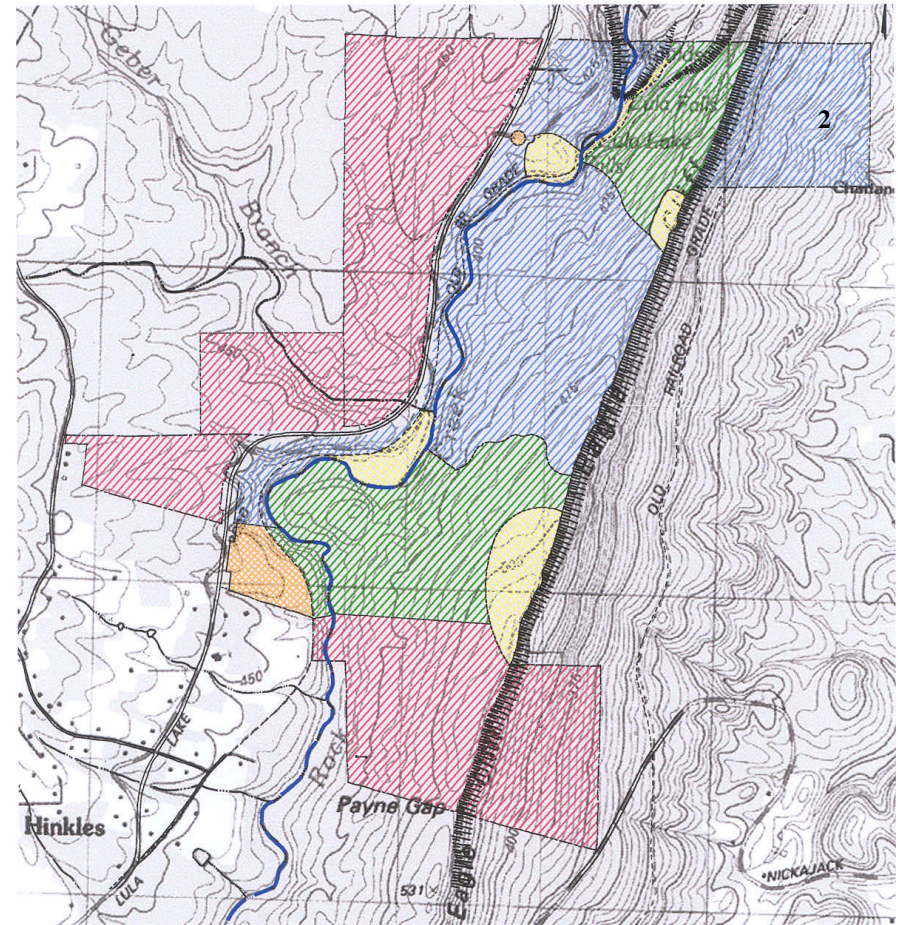
CR-1 This large area at the south end of the Core Property that includes the brow, the escarpment, and the talus slope extending out to Nickajack Road. This area is for hiking and, by permission, rock-climbing, and primitive camping. No facilities.

CR-2 and 2b This large area lies west of Lula Lake Road and may be managed for hiking, primitive camping, mountain biking, etc. This area of plateau is incised with Gerber Branch and covered with successional forest. No facilities or improvements are planned aside from gates and trail work, although camping could be suitable.

**R-Conservation-Restricted Zone** This is a protection, refuge or research area with restricted public access. This acreage (465 acres) is set aside from routine public access. It is reserved for biotic refuge and research. Effort should be taken to restrict access in certain areas now used by the public. This will require posting of notice and blocking existing tracks. No facilities.

R-1 Lying between the brow and Rock Creek, this area contains the chestnut research program, and protects a long section of Rock Creek's shores.

R-2 This area protects the fragile biotic communities of the escarpment and the talus slope and offers a controlled setting for research.

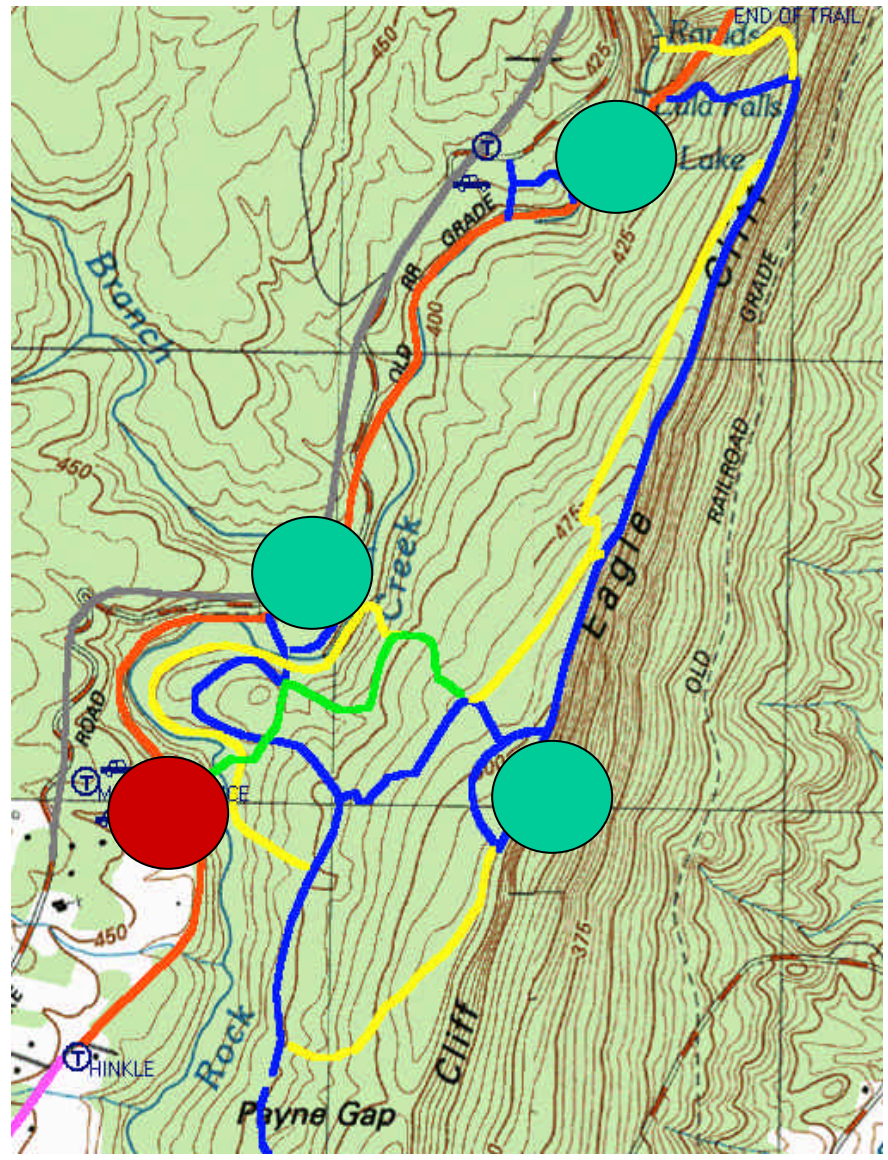
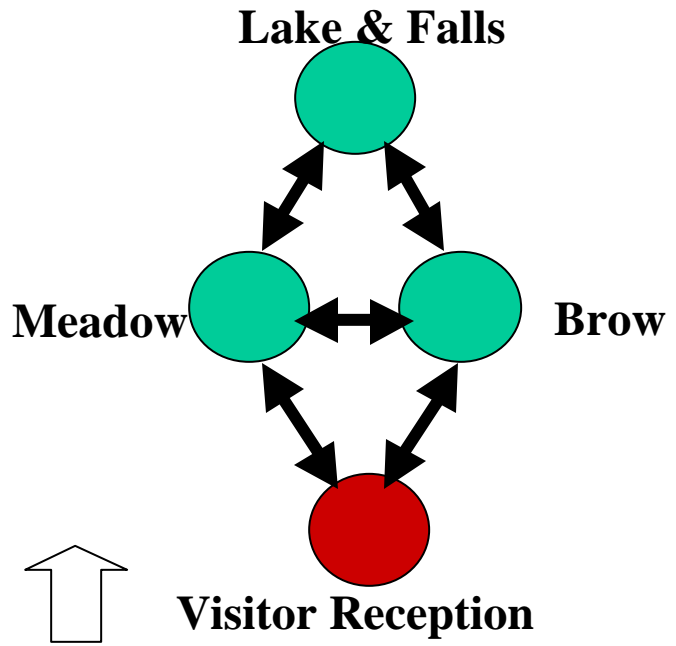


## LLLT LAND USE: Core Property



# PART 1 MASTER PLAN: Development and Circulation Concept

Given the linear distribution of the Core Property's attractions, the concept shown above seeks to distribute site utilization and visitor flow. At the Visitor Reception there is a choice of movement to go to the brow or stay along the creek. At each of the four major attraction nodes, there are at least two directions of movement to choose from.



**LLL T TRAIL SYSTEM      Lula Lake Core Property**

# MASTER PLAN PART 1:

## Trails

Trails are organized into a circulation network with a variety of characteristics that reflects both land use and the lay of the land. For the most part trails follow old logging tracks that were identified from air photographs. Some trail links will have to be developed from scratch. Except for maintenance and security vehicles, gas-powered vehicles should be restricted to the entrance road and parking area in the Visitor Reception Zone.

Visitors arriving to the Core Property should park their car at the entrance and proceed on foot or by bicycle.

A fleet of bicycles should be made available to visitors to travel along the two-mile stretch of the Old Railroad Grade between the Main Entrance and Lula Lake. On the Old Railroad Grade. Visitors could drop or pick up a bike at one of several sheds along the Old Railroad Grade to access the property's other trails and features. This type of livery system has been used in urban settings, but should be tested at Lula Lake with a pilot program.



Old Rail Bed

**Entrance Road** - 18 foot-wide stabilized surface for cars with control gates and signs.

**Primary Trail** - (Old Railroad Grade) Consisting primarily of the Old Railroad Grade, the primary trail is 12 to 15 feet wide with a stabilized surface suitable for bicycles. Grades are very gentle and use should be restricted to bicycles, foot traffic, and maintenance vehicles. There should be a number of waysides at which to stop, picnic, take in a view or read an interpretive marker.

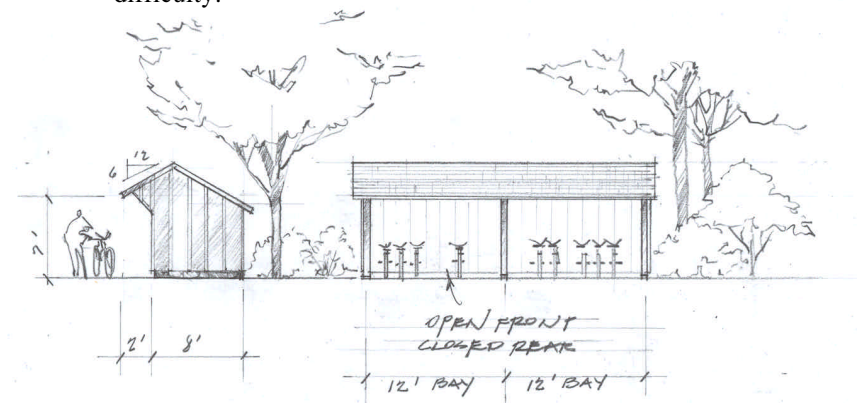
**Secondary Trail** - 8 feet wide with stabilized surface and grades less than 15 percent for foot traffic only and maintenance vehicles.

**Tertiary Trail** - 5 feet wide stabilized surface with grades less than 15 percent for foot traffic only.

**Challenge-Hiking Trail** - Cleared foot trails less than 4 feet wide with uneven surface and often on steep difficult terrain.

**Restricted Trail** - Restricted from general use by barrier and signage.

**Trail Signage System** - All trails marked with distance, orientation, and difficulty.



**Bicycle Stable**





Secondary vehicular entrance for use on a special need basis


Bridge required for pedestrians and light trucks over Rock Creek

Interpretive Trail

Important trail hub with bike stable (typical)

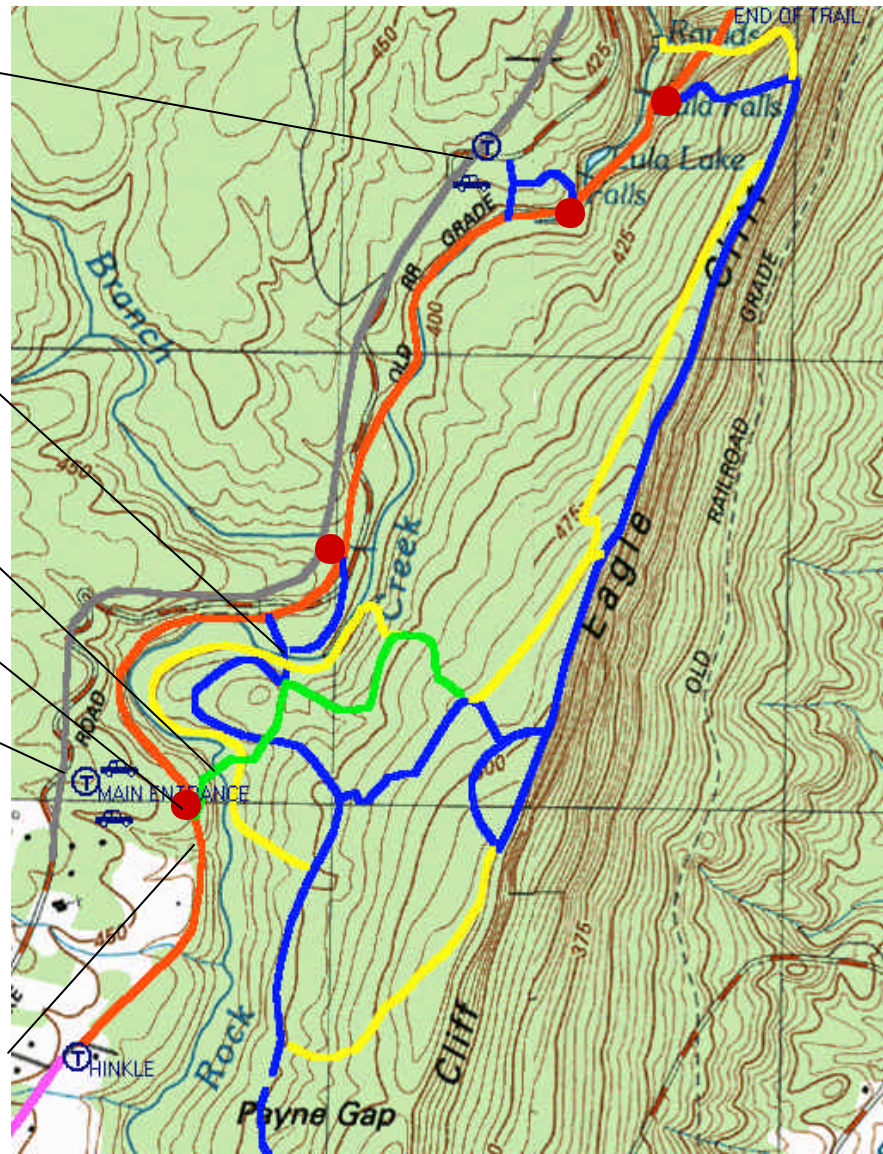
Main Vehicular Entrance to the Core Property

- PRIMARY TRAIL** — 100 % on existing rail bed
- SECONDARY TRAIL** — 95% on existing tracks
- TERTIARY TRAIL** — 50% on existing tracks
- CHALLENGE TRAIL** — 50% on existing tracks
- TRAIL IN ROAD R.O.W** —

**TRAILHEAD** 

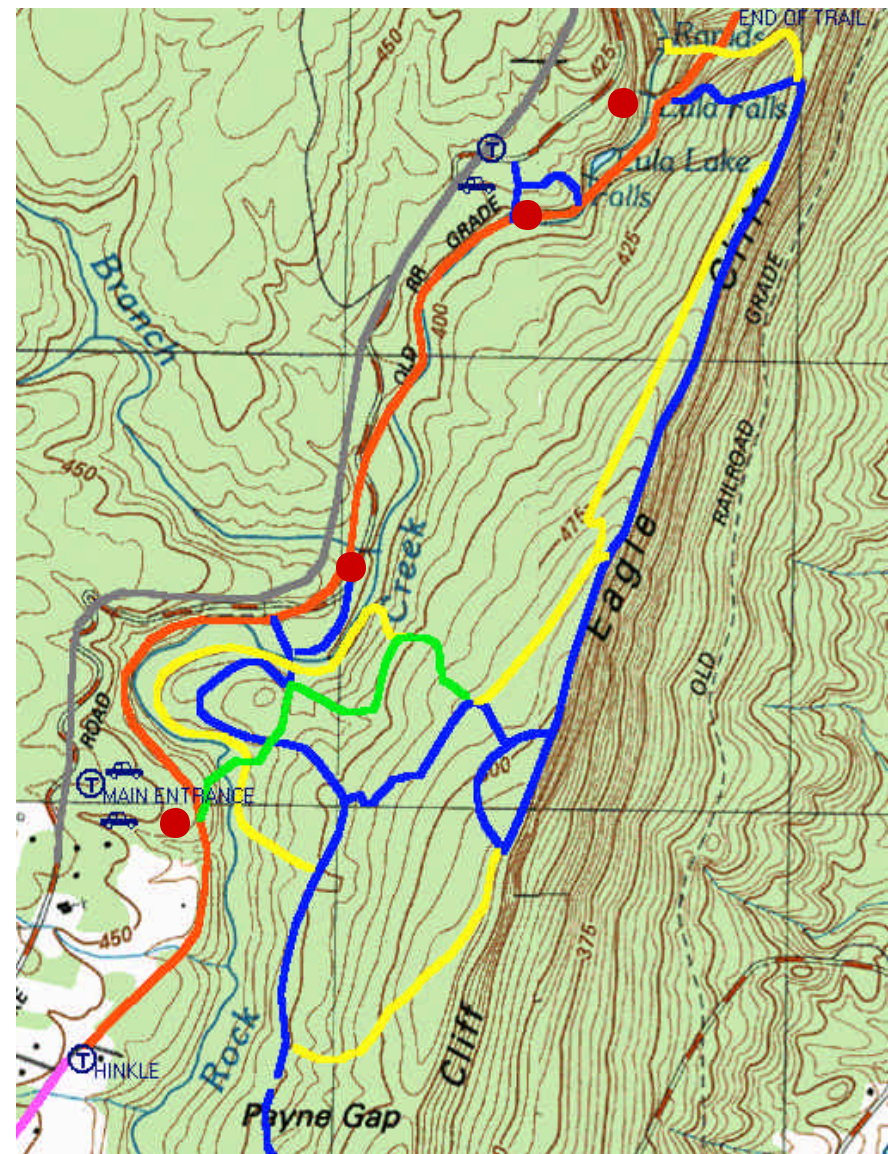
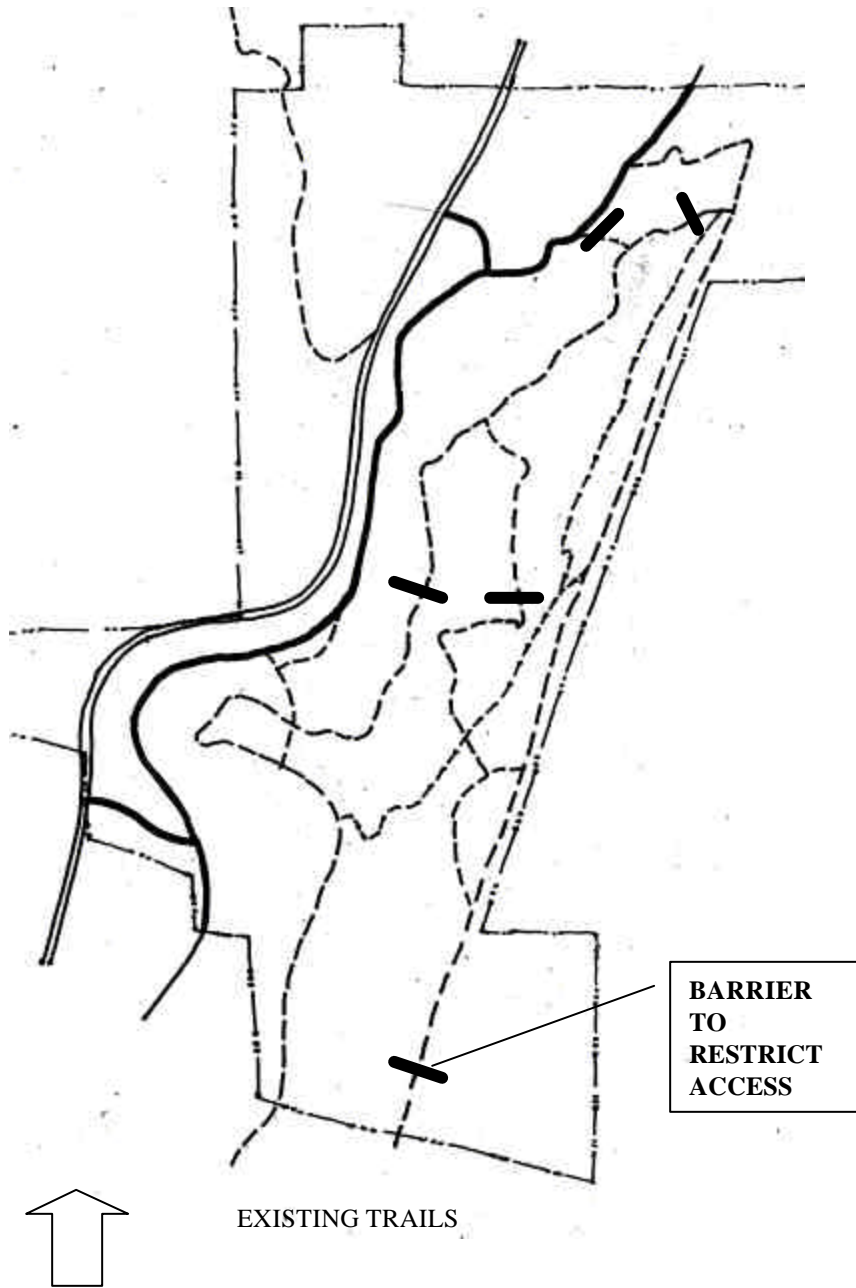
**PARKING** 

Bridge needed where RR trestle once stood



# LLL TRAIL SYSTEM Core Property





PROPOSED TRAILS

The proposed trail system is largely a modification of existing trails. A comparison of the two maps above will show where additions and restrictions occur. The biggest change from the existing trail use pattern is the restriction of access to Middle Road where it passes through the Conservation-Restricted Zone. Much of the yellow Challenge Trails are proposed.



# MASTER PLAN PART 1:

## Facilities

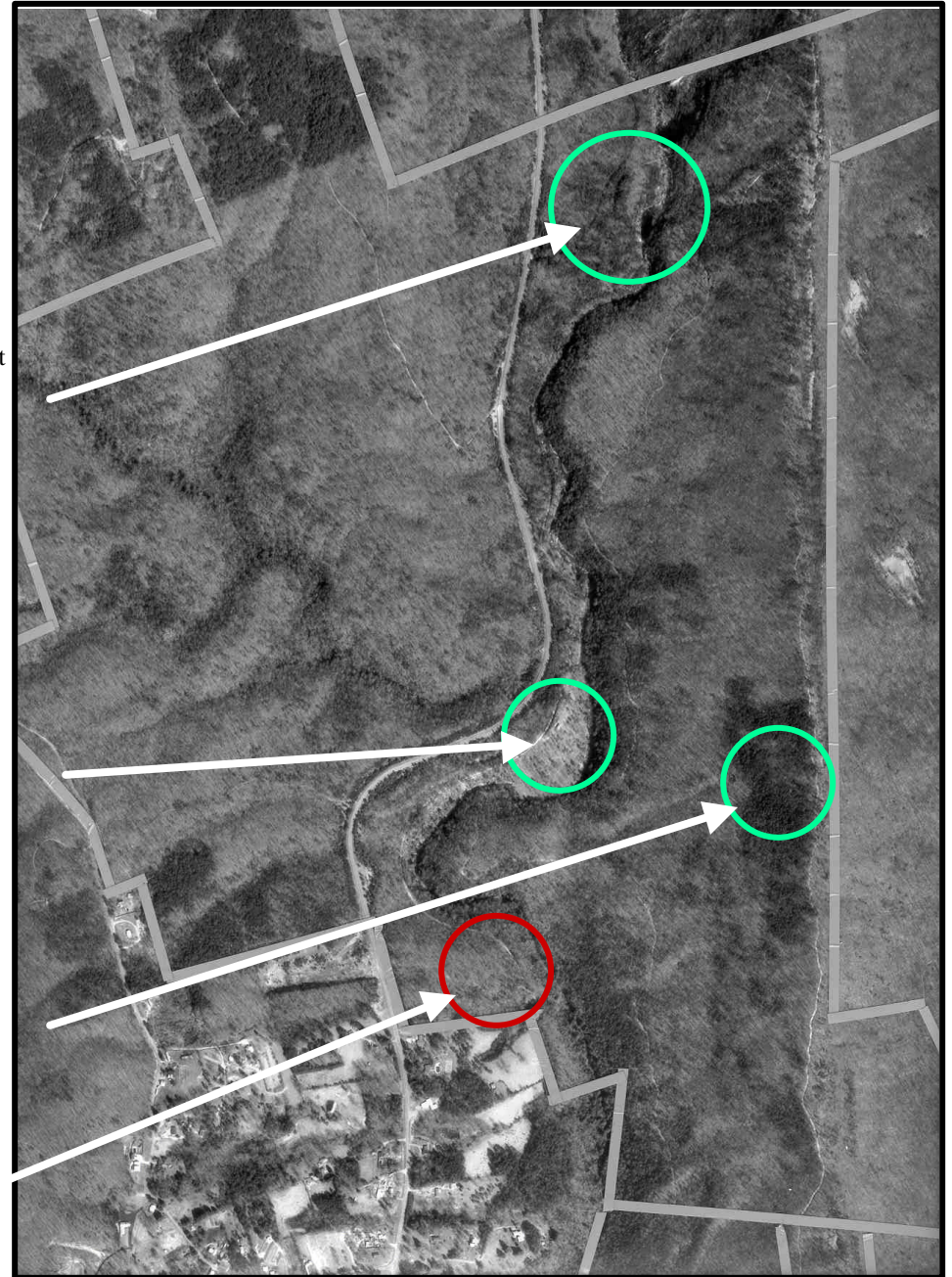
Facilities support land trust activities and public usage and include restrooms, picnic shelters, and interpretive exhibits. While they may be phased in over a number of years, their design and materials should be unified. For the most part proposed facilities are concentrated in the four zones identified in the development concept. These concentrations are a key part of managing the human impact on the landscape. Each relates to a palpable quality of place and with the design of their proposed facilities, each should become a memorable set of experiences for the user.

**LAKE AND FALLS** Facilities in this area must be subtle and play a supporting role to the splendor of the lake and falls. They are a natural draw for everyone coming to the Trust property, but this demand should not translate into any man-made elements that diminish the natural beauty. There may be tables for picnicking, but there should not be a picnic shelter. There should be access to a comfort station, but it should be out of site. Swimming should not be permitted on a regular basis, but access (albeit arduous) to the water's edge of the lake should.

**GOOD SHEPHERD MEADOW** Facilities in the meadow should support general passive recreation of families and groups enjoying the outdoors and each other. Ten or twelve acres should be regularly mowed for games and blanket-picnicking. A group shelter and comfort station should be designed for groups. Wading in the adjacent creek should be allowed and encouraged as a way to diminish the appetite for swimming in Lula Lake.

**BROW** Facilities in this former pasture on the Brow should be geared to general passive recreation appetites. A group picnic shelter and comfort station will establish this as a base for a day visit to the Trust property. No man-made forms should be visible from off the mountain. Attention should be paid to a grounds program in this area to reduce vulnerability to fire.

**VISITOR RECEPTION** In this area the design of the man-made facilities will be the primary means of establishing a memorable character. A building, amphitheater, trail hub, and interpretive boardwalk are part of the visitor's reception and support.



# V-1 Visitor Reception - Main Entrance (14 acres)

This is the main public entrance to the Lula Lake Core Property. It is connected to Lula Lake Road for those arriving by car or bus, and to the greenway trail from Hinkle that enters the Core Property over a proposed new footbridge at the site of a former railroad trestle. Cars should be parked at the Visitor Center, where there is information, administrative offices, a small exhibit area and restrooms. An amphitheater nearby provides a venue for orienting groups and for giving presentations and concerts. A bicycle livery stable stores should be conveniently located adjacent to the old railroad bed, which is the main trail along Rock Creek.

**Facilities:**

*Entrance sign*

*Entrance road with piers, gate and handicap drop-off*

*Parking for 100 cars and 2 buses (approximately 1 acre)*

*Overflow parking in the right-of-way of Lula Lake Road*

*Small, climate-controlled building (1500sf) with exterior terraces (2500sf) to house offices, and restrooms*

*Rustic amphitheater to seat 200*

# CE-1 Conservation Education – South (84 acres)

This diverse area extends eastward from the main visitor reception area to the brow and affords the opportunity to follow a significant ecological cross-section from plateau to creek to brow. Along a network of paths there are abundant opportunities for active and passive environmental interpretation. The visitor will pass through distinct environments from upland to lowland, xeric to hydric, early succession to climax vegetation. A boardwalk connects the old railroad grade and the creek bed and affords a walk through the vertical layers of a mature ravine forest. Rock Creek figures significantly in learning about hydric systems and the stream community.

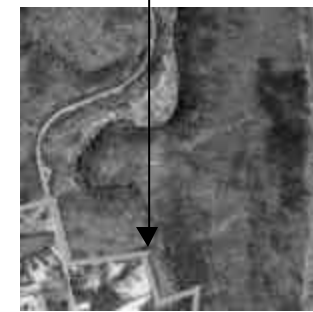
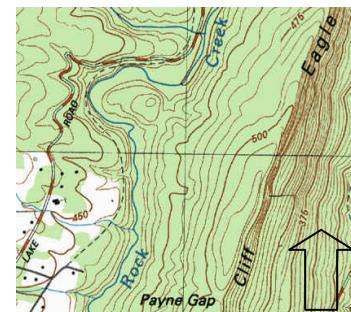
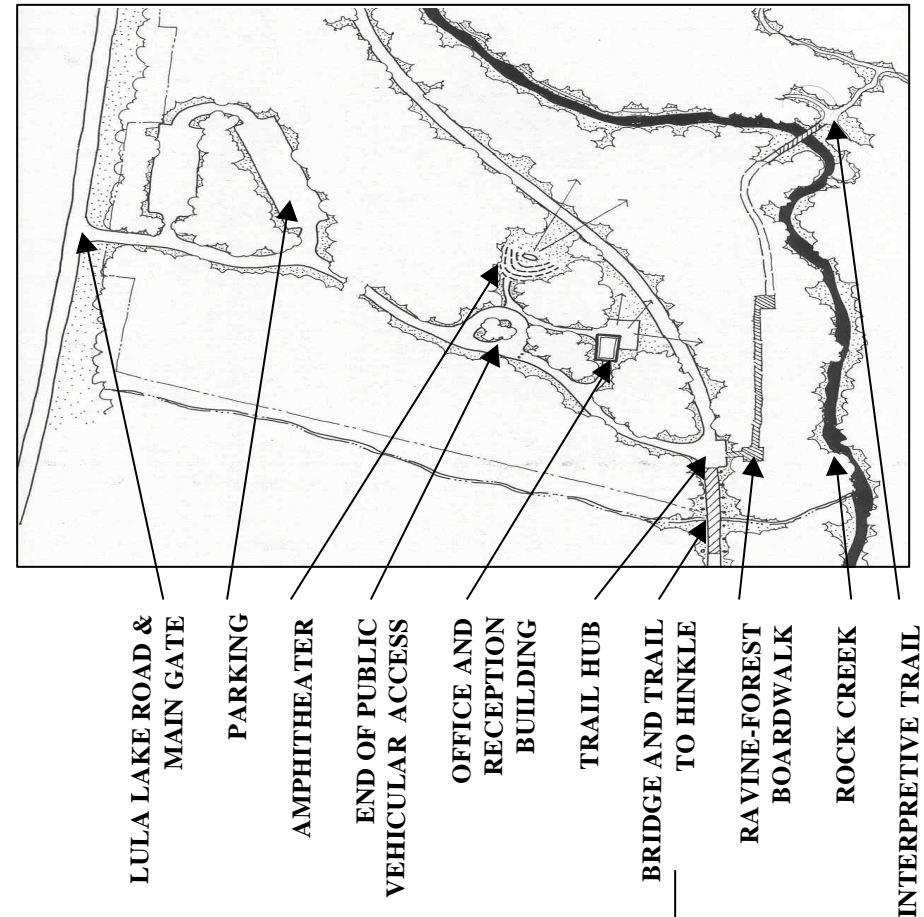
**Facilities**

*Ravine escarpment interpretive boardwalk*

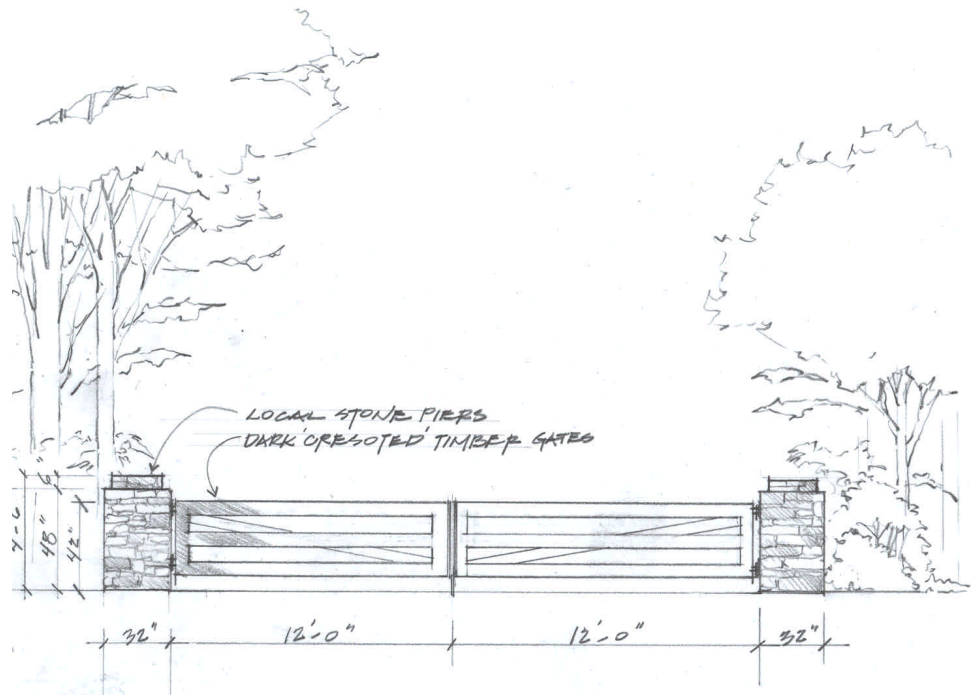
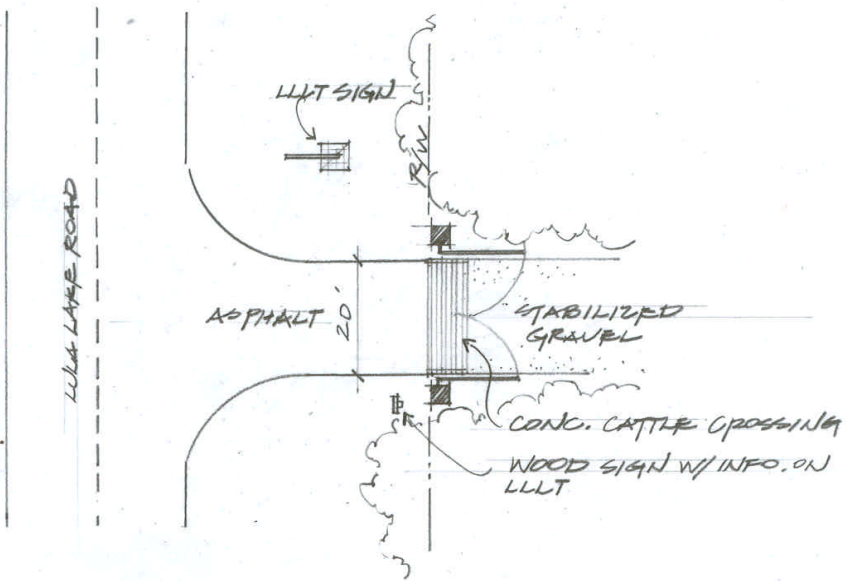
*Pedestrian bridge over Rock Creek*

*Trails*

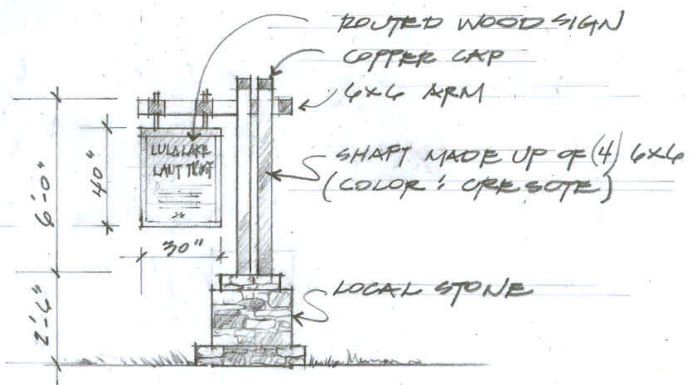
*Interpretive signage*





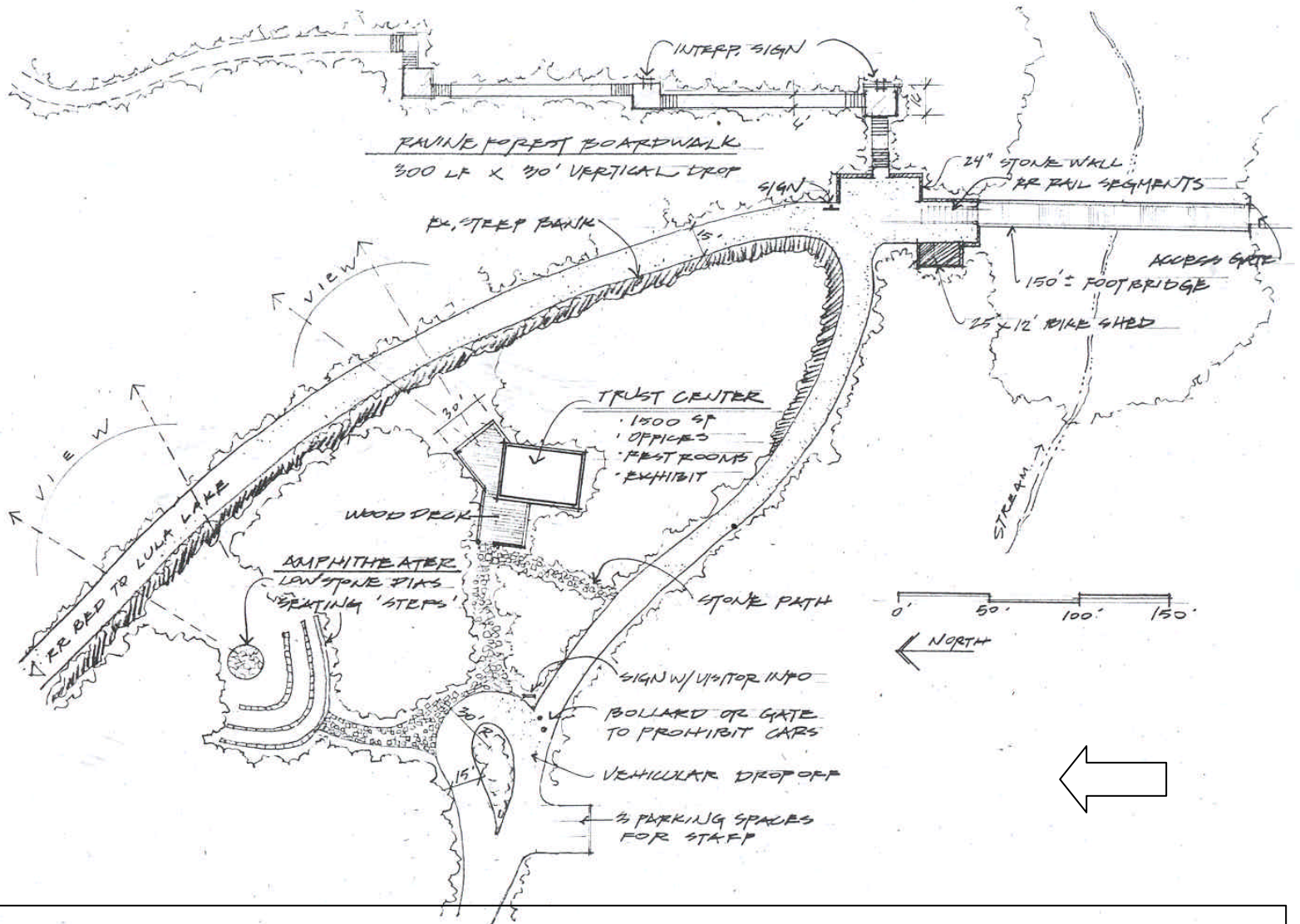


**Entrance Gate**



**Entrance Sign**

**LLL T FACILITIES      Visitor Reception - Main Entrance South**



**LLLT FACILITIES**

**Visitor Reception - Main Entrance South**

## CE-2 Conservation-Education – Falls and Lake Area (117 acres)

This educational area extends from the old railroad grade above the lake and falls to the brow and eastern escarpment. Trails through this area pass through thickets of rhododendron and laurel, beside dramatic rock forms, and give spectacular overlooks into the gorge and vistas from the brow. An historic exhibit of old rails and railroad machinery should be located on the rock walls of the Old Railroad Grade just to the north of the pedestrian bridge over Rock Creek. Another historic exhibit should be located at the Lula Lake overlook.

*Facilities:*

*Falls overlook*

*Lake overlook and gathering area on old rail bed for about 80 people*

*Challenge-level steps leading down to lake level (existing)*

*Interpretive RR display and artifacts*

## PR-2 Passive Recreation - North Rock Creek (15-acres)

This area flanking the old railroad grade contains a picnic area along rock creek with its small sand beach. A restroom is located above the old railroad grade, as well as a walkway to the small parking area at the north entrance.

*Facilities:*

*Restrooms with potable water*

*Picnic tables*

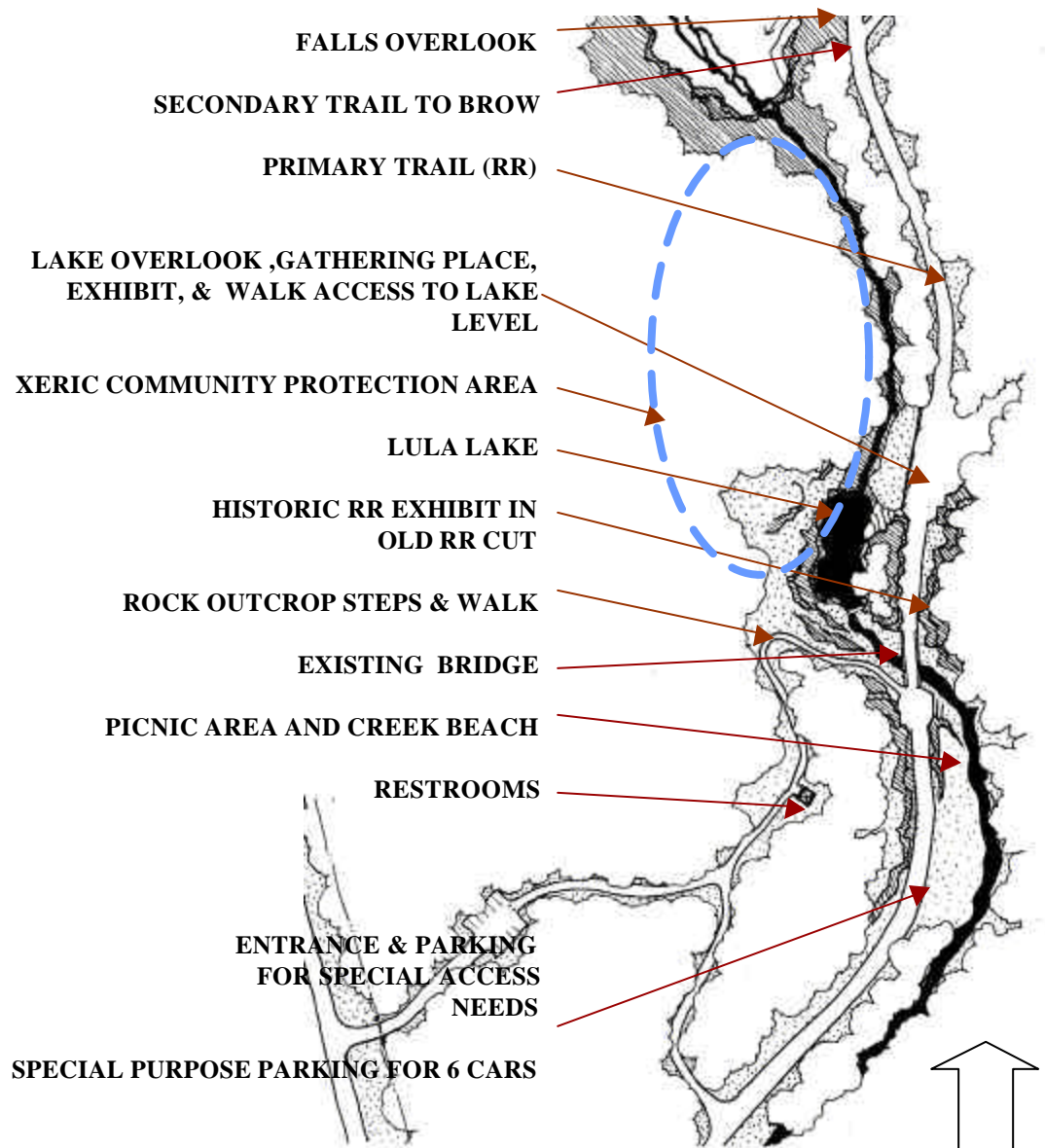
## VC-2 Visitor Reception - Secondary

This is an unsigned entrance and parking area for occasions when special visitors require more proximate access to Lula Lake.

*Facilities:*

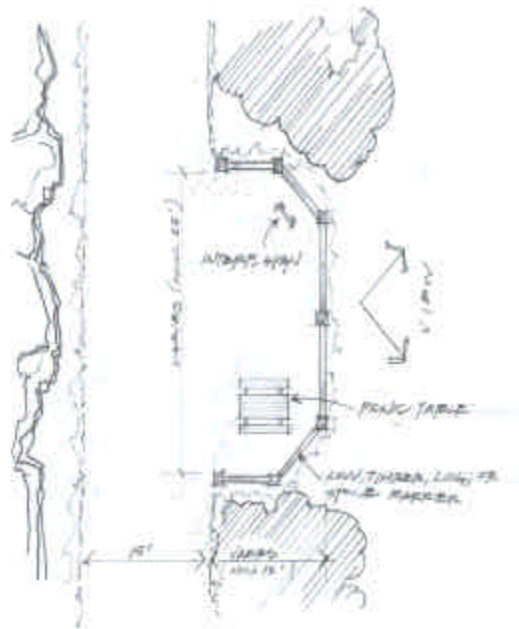
*Entrance road with piers and gate*

*Parking for 12 cars and 1 bus*



**North Entrance and Lake Area**





**Typical Primary Trail Wayside**



The old railroad cut above Lula Lake should be interpreted using railroading artifacts, such as putting old rails into the pathway surface. The cut rockl could support signage with historical photographs as well as highlighting geology



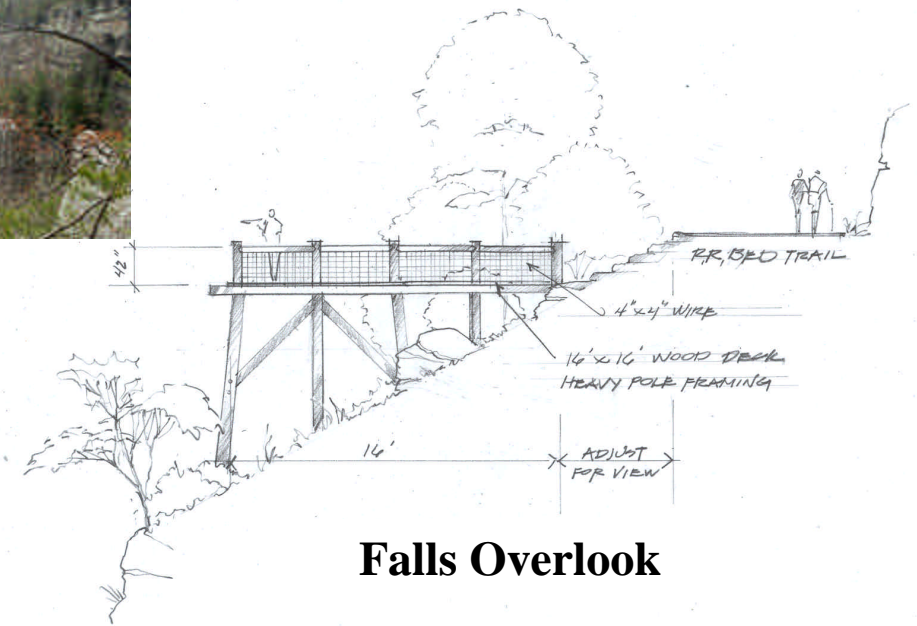
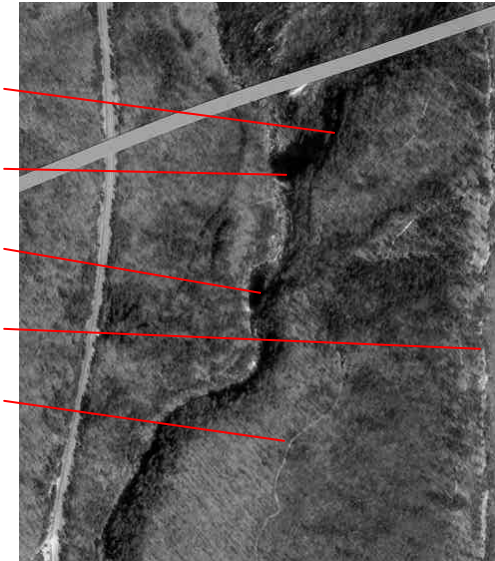
**Overlook**

**Falls**

**Lake**

**Brow Trail**

Existing trail that should be closed to public access because this is a Restricted Zone



**Falls Overlook**

**LLLT FACILITIES:**

**Primary Trail Waysides, Overlooks, and Interpretation**

## PR-1 Passive Recreation – Good Shepherd Meadow (15-acres)

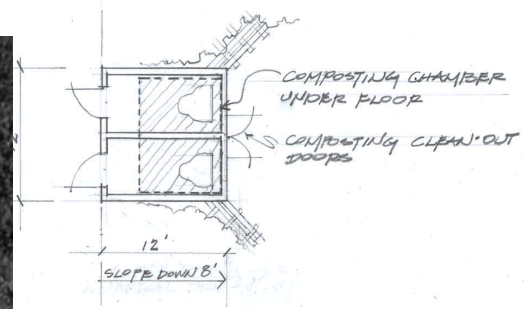
This area accommodates assemblies and large group picnics with a mown meadow, group picnic shelter, picnic tables, and restrooms. Rock Creek here is open for wading.

*Facilities:*

*Group picnic shelter with fireplace (1800sf) and tables*

*Restrooms with potable water*

*10'- wide bridge over Rock Creek that can carry a light maintenance vehicle*



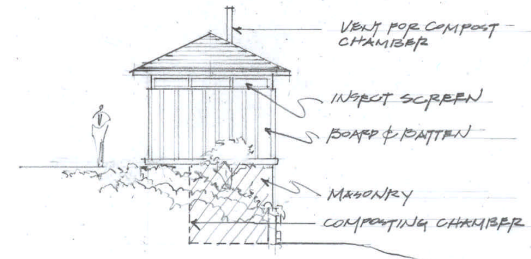
## PR-3 Passive Recreation - North Brow (7 Acres)

This area accommodates individuals and small groups for picnics and enjoying the view. It is alwaysidealong the brow trail.

*Facilities:*

*Rock bench seats for small group*

*Interpretive map for view*



## PR-4 Passive Recreation - South Brow (8 Acres)

This is the principal recreational area on the brow. It is located in the area of a former pasture.

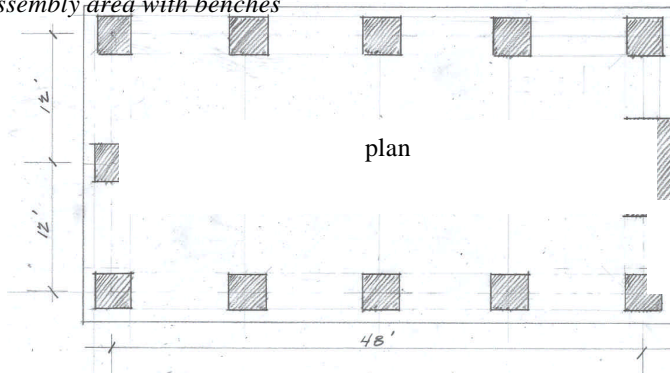
*Facilities:*

*Restrooms with potable water*

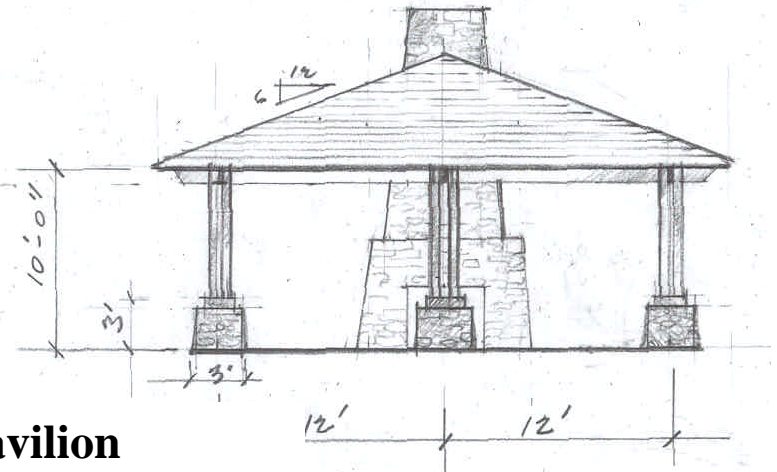
*10 tent platforms and fire ring for supervised group camping*

*Picnic tables*

*Small assembly area with benches*



## Composting Toilet



**Pavilion**

**LLLT FACILITIES**

**Good Shepherd's Meadow and Brow Areas**



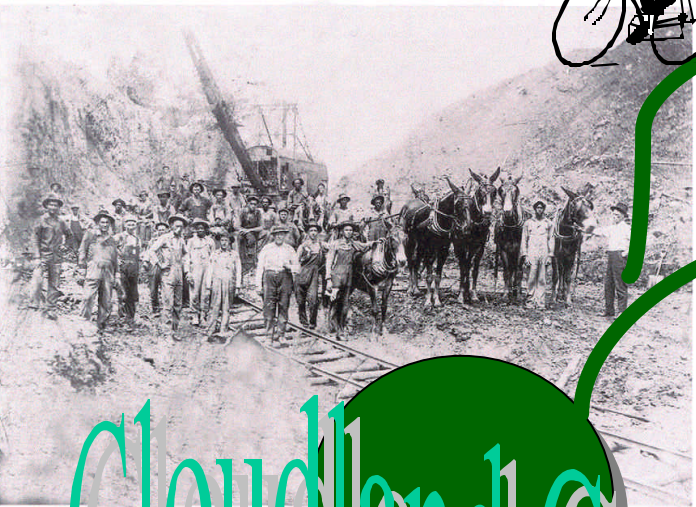
# MASTER PLAN PART 2: Conservation Corridor from Cloudland Canyon to Lula Lake

Master planning of Trust properties links some of Lookout Mountain's most remarkable natural and historical resources from Lula Lake to Cloudland Canyon.



Hinkle

Lula Lake



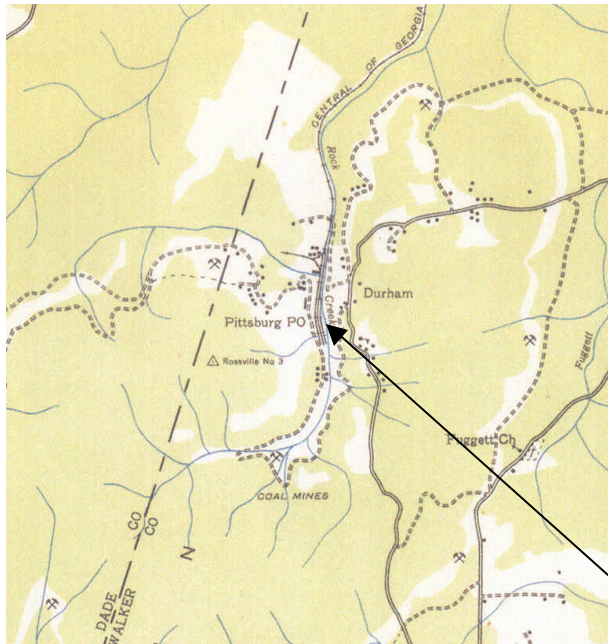
Cloudland Canyon



## **Principles for the Conservation Corridor**

- The public should be able to move along at least one continuous greenway between Cloudland Canyon State Park and Lula Lake
- Develop a comprehensive outdoor recreational plan
- Preserve important historical resources that provide a window to past land use and way of life
- Protect the natural landscape
- protect scenic qualities of the rural landscape
- Protect farmland and open space
- Preserve the historic rural settlement pattern and use it to guide future development
- Promote affordable housing to sustain the economic diversity of rural living
- Promote good land use planning and site development
- Promote community involvement in planning
- Protect watersheds and water quality
- Protect biodiversity

# HISTORICAL RESOURCES: The Durham Mines

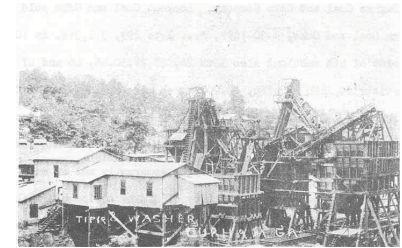


1935 Map of  
Durham

Strip mining was started in 1920. Steam shovels used to construct the Panama Canal were used in Durham. State prisoners were used in the mines, along with mountain residents. The majority of mines closed in 1947. Tracks were removed in 1955; the last coal was removed from the mines in 1964. Bob Thompson was the last mine operator (with Will Miller). Georgia Power wanted to identify community east of Durham and called it Thompsonville. During a fierce storm the bell at the Durham school was knocked out of the tower by lightning, breaking the cast iron hanging arm. The bell was moved off Lookout Mtn. Mr. John Miller recently tracked down the bell, purchased it and had it repaired for the Mt. Pleasant community on Lookout Mtn. It is rung yearly at the Durham reunions.



Dig it



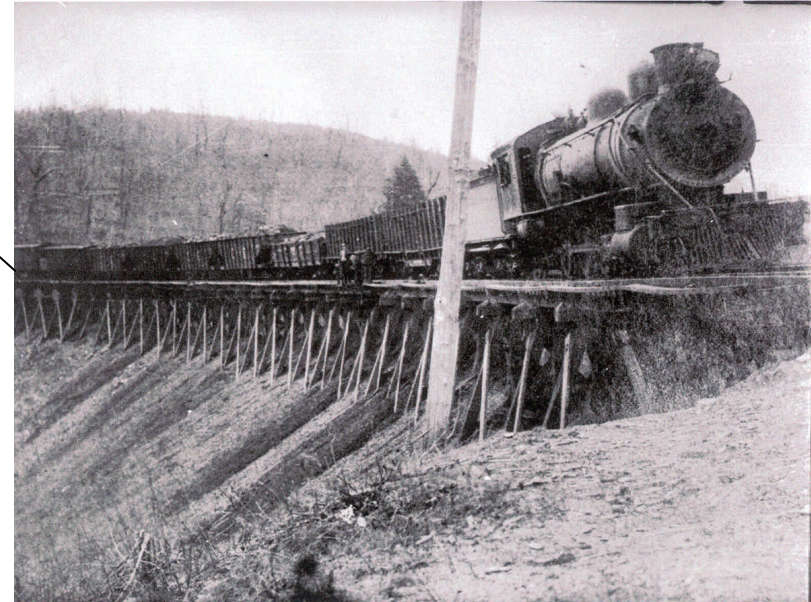
Tip it



Train it

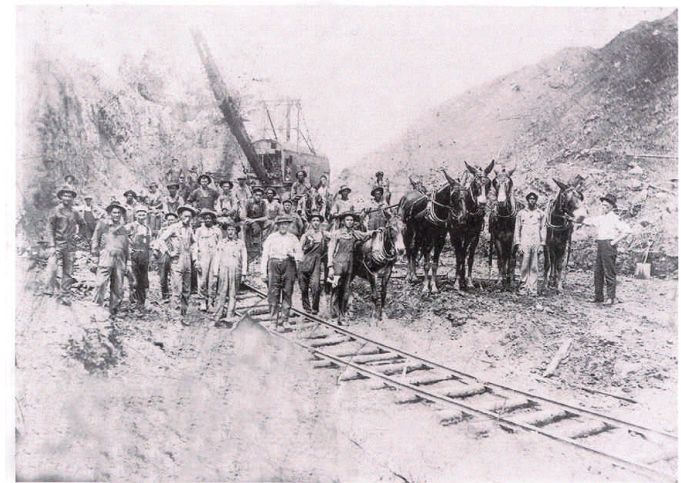
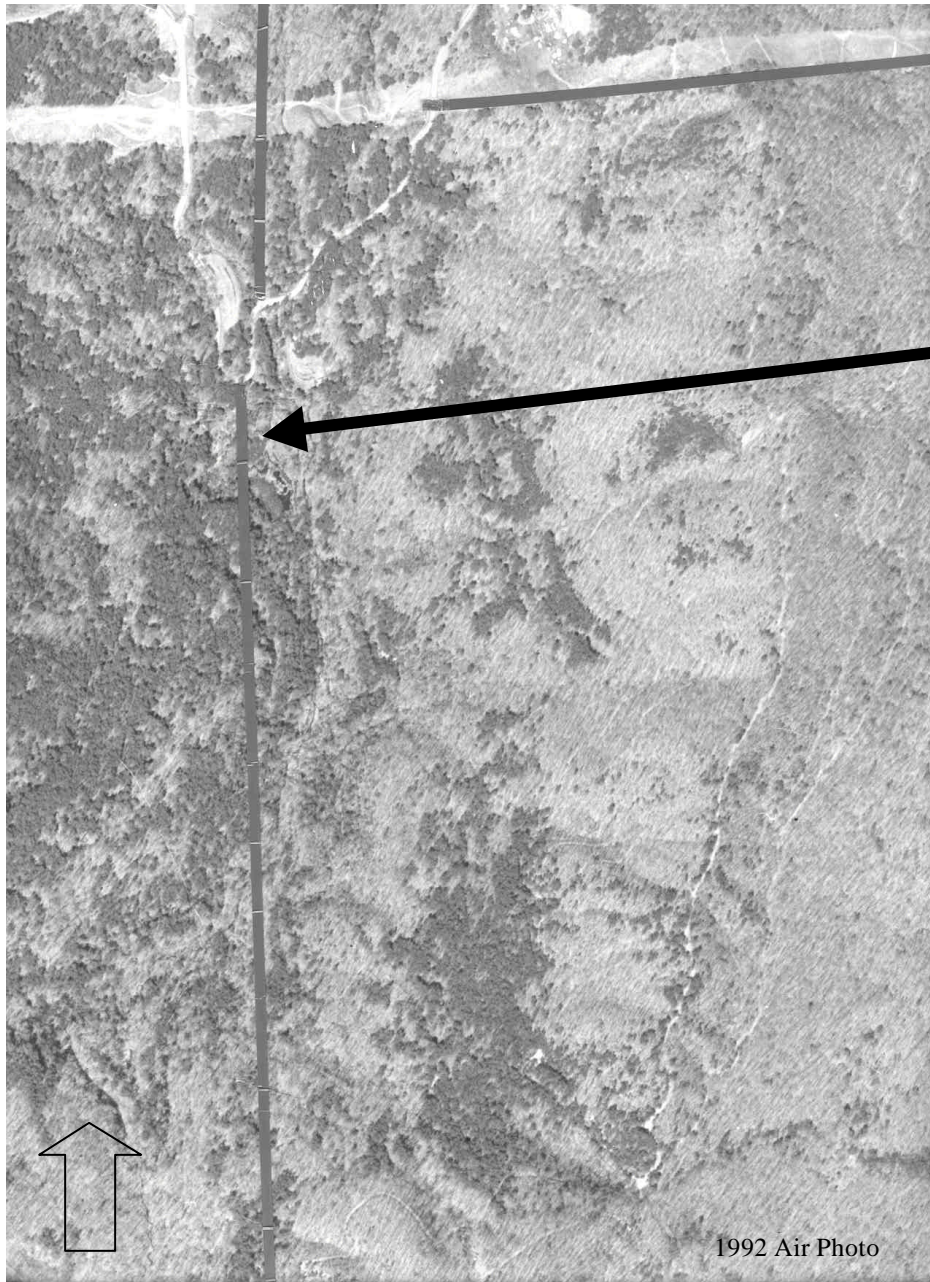


Cook it

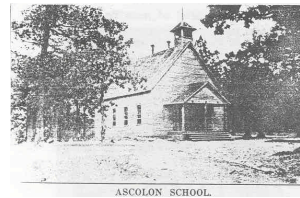


The coal train from Durham to Chattanooga passed by Lula Lake

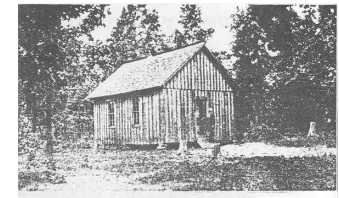




Steam shovel from Panama Canal

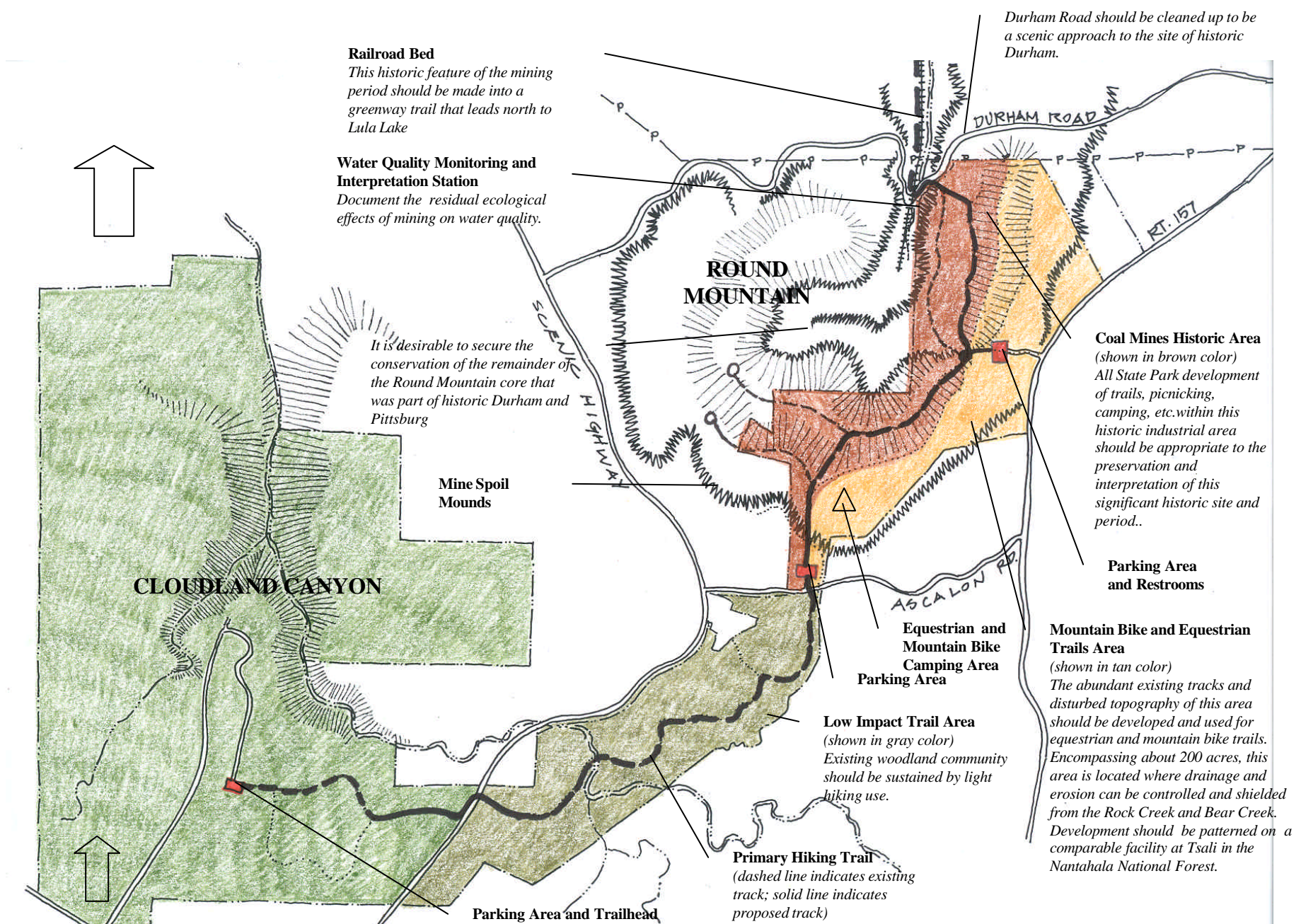


ASCOLON SCHOOL



DILLON SCHOOL





**Railroad Bed**  
 This historic feature of the mining period should be made into a greenway trail that leads north to Lula Lake

**Water Quality Monitoring and Interpretation Station**  
 Document the residual ecological effects of mining on water quality.

It is desirable to secure the conservation of the remainder of the Round Mountain core that was part of historic Durham and Pittsburg

**Mine Spoil Mounds**

**CLOUDLAND CANYON**

**ROUND MOUNTAIN**

Durham Road should be cleaned up to be a scenic approach to the site of historic Durham.

**Coal Mines Historic Area**  
 (shown in brown color)  
 All State Park development of trails, picnicking, camping, etc. within this historic industrial area should be appropriate to the preservation and interpretation of this significant historic site and period..

**Parking Area and Restrooms**

**Mountain Bike and Equestrian Trails Area**  
 (shown in tan color)  
 The abundant existing tracks and disturbed topography of this area should be developed and used for equestrian and mountain bike trails. Encompassing about 200 acres, this area is located where drainage and erosion can be controlled and shielded from the Rock Creek and Bear Creek. Development should be patterned on a comparable facility at Tsali in the Nantahala National Forest.

**Equestrian and Mountain Bike Camping Area**  
 Parking Area

**Low Impact Trail Area**  
 (shown in gray color)  
 Existing woodland community should be sustained by light hiking use.

**Primary Hiking Trail**  
 (dashed line indicates existing track; solid line indicates proposed track)

**Parking Area and Trailhead**

**CLOUDLAND CANYON STATE PARK EXTENSION**

# MASTER PLAN PART 2: Trail from Cloudland Canyon to Lula Lake

A group of users and conservation professionals identified a range of trail uses that are appropriate to this corridor. Several conclusions were reached.

The Round Mountain area acquired by the Georgia Department of Natural Resources should become the focus of mountain biking and horseback riding on Lookout Mountain. Its rugged terrain, mining disturbance, abundance of old roads, and low ecological value make it suitable for these activities, including mountain biking competition. Accommodating these trail activities will complement the recreational offerings of Cloudland Canyon State Park. A trail management program, such as the one at Tsali, N.C. that alternates usage between horses and bikes should be established. A parking area should be established off Ascalon Road for bikers and horse trailers. A rustic camping area should be provided.

Hiking should predominate on trails along Long Branch and up to Highpoint.

Trails within the Core Property should be oriented to hiking, environmental interpretation, birding, nature study and sightseeing.

Historical interpretation should be developed by the State of Georgia in the Durham mine area to document a significant industrial and cultural use that has shaped the present landscape.

The old railroad grade north of Durham Road should be developed as a multi-purpose, unpaved trail leading north to Hinkle and Lula Lake.

Motorized trail bikes and All-Terrain-Vehicles should not be permitted.

## Trail Types

### Multi-purpose Trail

8-12 feet wide with stabilized surface and grades less than 10 percent for bicycles, pedestrians, and equestrians. and maintenance vehicles.

### Hiking Trail

5 feet wide with grades less than 15 percent for foot traffic only.

### Challenge Hiking Trail

Cleared foot trails less than 4 feet wide with uneven surface and often on steep difficult terrain.

### Mountain Biking Trail

10-15' corridor with rugged tracks for mountain biking and horses (not simultaneously used).

### Restricted Trail

Restricted from general use by barrier and signage.

## Signage

All trails should be blazed with permitted uses, distance, orientation, and difficulty.

## Access Points

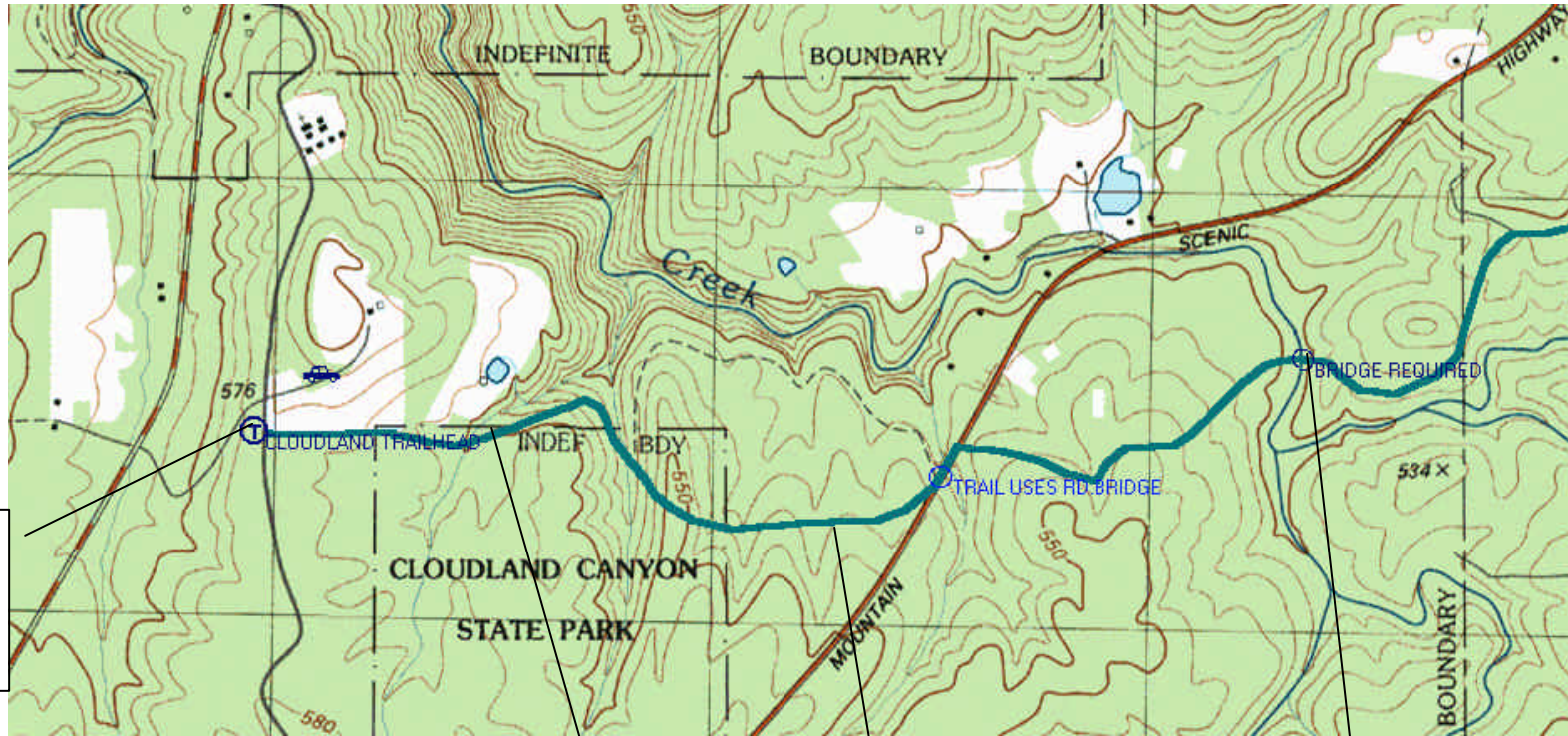
Trails should have an entrance sign, a regulations sign, and a trail map. All should be of a unified design. All should have a trail gate to regulate use.

From north to south the access points are:


- Main Entrance (South Gate) of the Lula Lake Core Property.
- Nickajack Road - day-use parking for cars on site considered for church building. This area is preferable over a parking facility located within the bend of Nickajack Road, which would be an eyesore and less secure.
- Highway 157 at Round Mountain – Day use parking for the Round Mountain area.
- Ascalon Road – parking for cars and horse-trailers with large overflow parking area for special events. Includes overnight camping area for special events.
- Cloudland Canyon State Park- trail head parking near tennis courts.

**LLLT CONSERVATION CORRIDOR TRAIL SYSTEM**





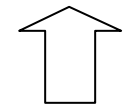
6 miles from trailhead to Durham  
13 miles to Lula Lake

- TRAIL ON LLLT PROP. — EXISTING TRACK
- TRAIL ON PRIVATE PROP. — EXISTING TRACK
- TRAIL ON PRIVATE PROP. — PROPOSED
- TRAIL ON STATE PROP. — EXISTING TRACK
- ROAD R/W —
- TRAILHEAD PARKING 

Existing road and trail

New trail required along this stretch

Footbridge required over Bear Creek



**LLLT TRAIL SYSTEM      Cloudland Canyon to Lula Lake - section 1**





Spoil mounds separate public and private land

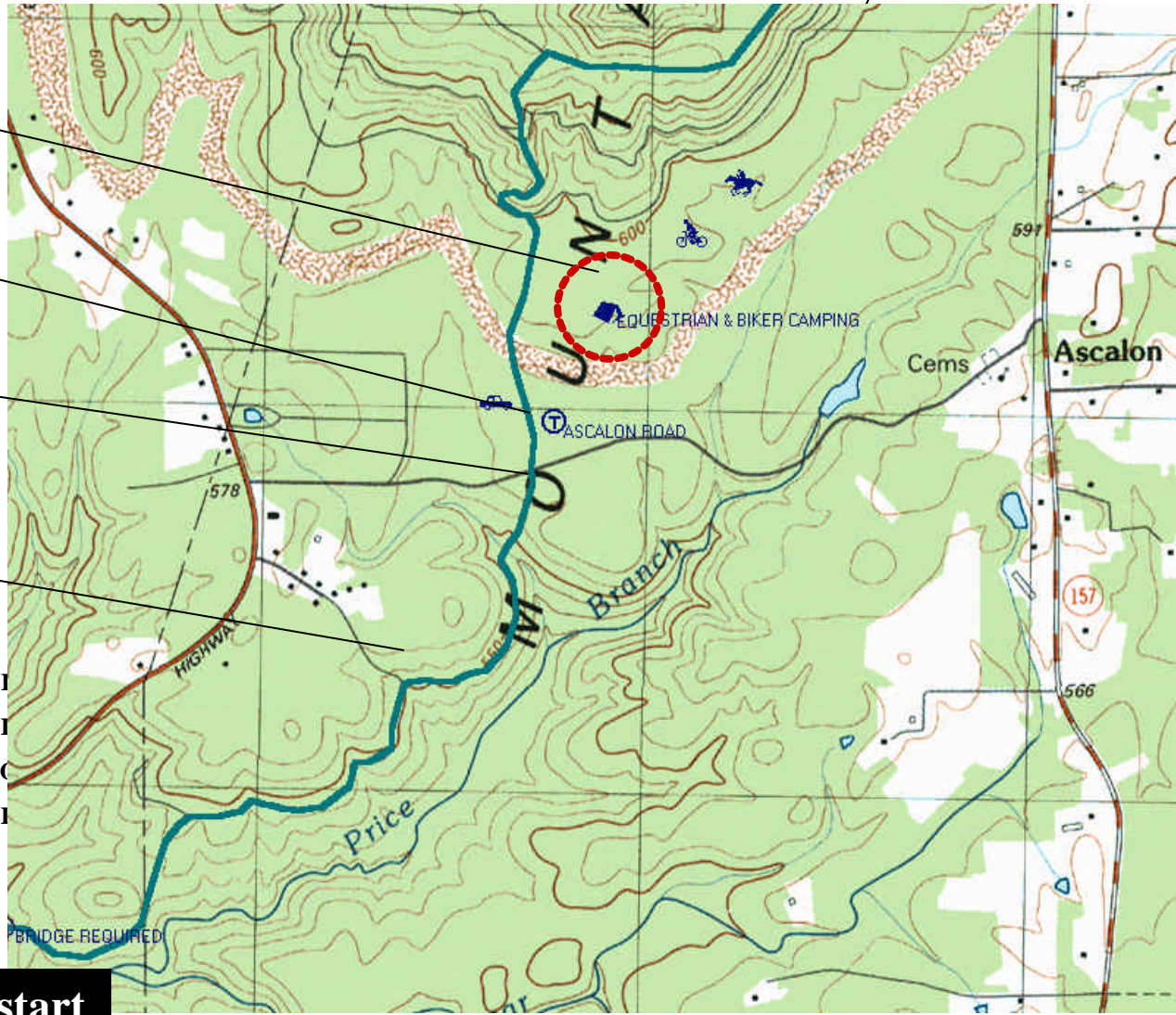
Campground for mountain bikers and equestrian. Clearing for limited pasturage

Parking for hikers, cyclists, and horse trailers

Land south of Ascalon Road has higher quality woodlands than north of the road. Trails and usage should be guided by this resource difference.

Existing forest track

- TRAIL ON LLLT PROP. — EXI
- TRAIL ON PRIVATE PROP. — EXI
- TRAIL ON PRIVATE PROP. — PRC
- TRAIL ON STATE PROP. — EXI
- ROAD R/W —
- TRAILHEAD 
- PARKING 



**LLL T TRAIL SYSTEM      Cloudland Canyon to Lula Lake - section 2**

No horses or mountain bikes on this side of mound. This side for hiking and historic interpretation only


Horses and mountain bike trail system developed on east side of mound

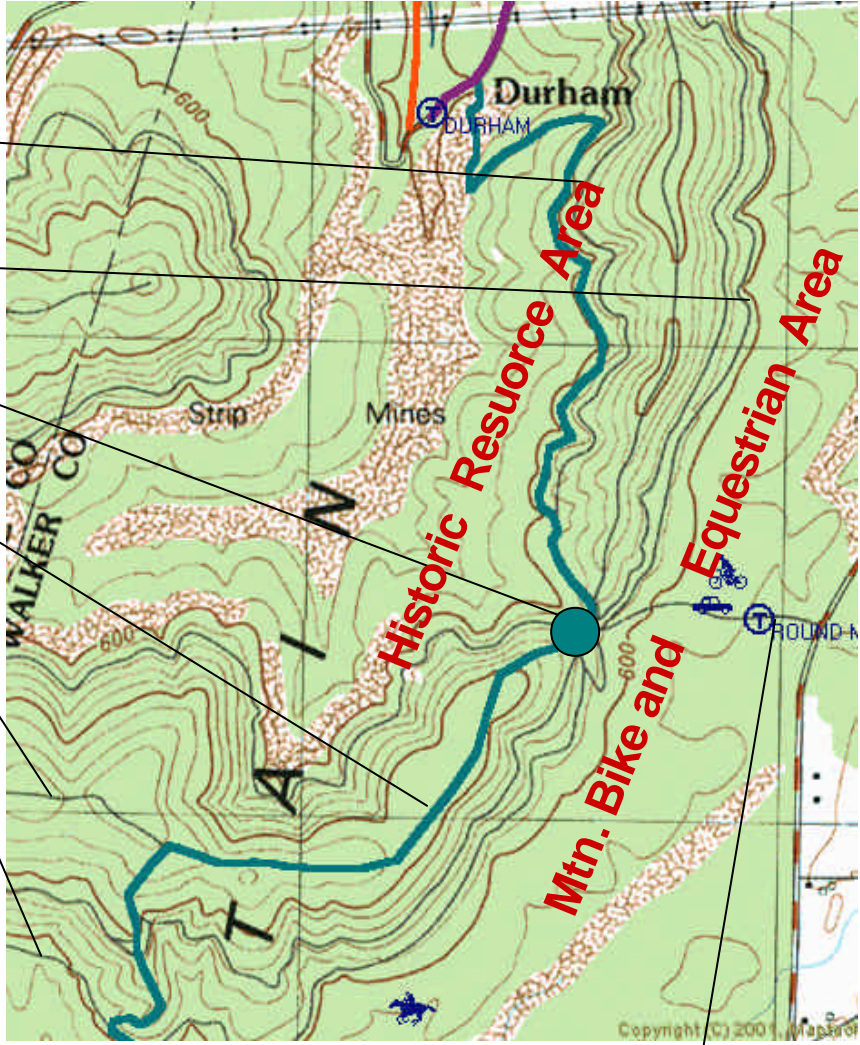
Major trail hub

Scenic mountain top area suitable for hiking, and walk-in tent camping

Existing track to nearby residential area

Existing track to nearby residential area

- TRAIL ON LLLT PROP. — EXISTING TRACK
- TRAIL ON PRIVATE PROP. — EXISTING TRACK
- TRAIL ON PRIVATE PROP. — PROPOSED
- TRAIL ON STATE PROP. — EXISTING TRACK
- ROAD R/W —
- TRAILHEAD PARKING 



**start**



Day-use access point and parking

**LLL T TRAIL SYSTEM      Cloudland Canyon to Lula Lake - section 3**



Trail on old RR bed. The railroad was the industrial connection between the Durham mines and Chattanooga, passing by Lula Lake on its way. The old rail bed follows Rock Creek.

Durham Road cleaned up and referenced to history.

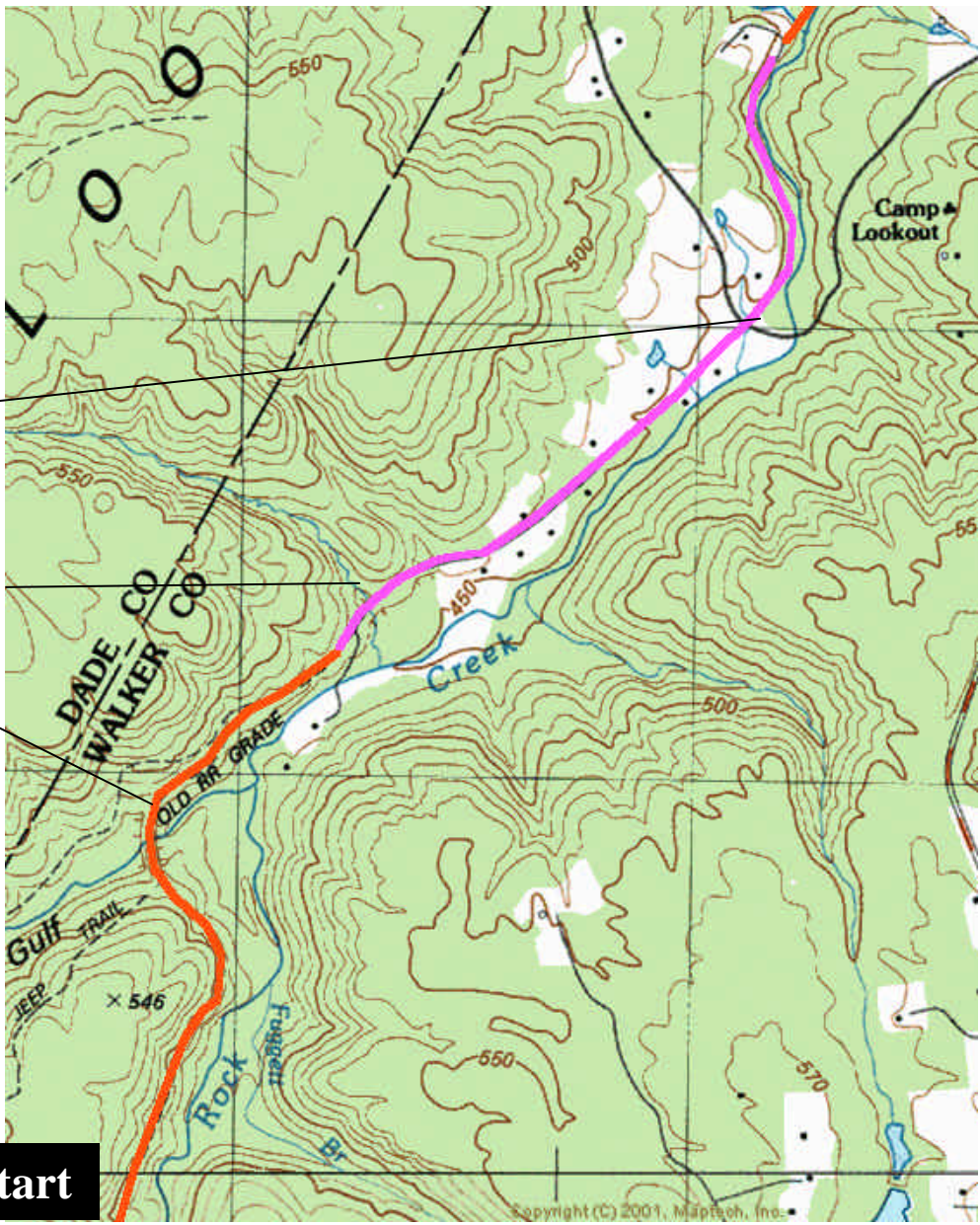
- TRAIL ON LLLT PROP. — EXISTING TRACK
- TRAIL ON PRIVATE PROP. — EXISTING TRACK
- TRAIL ON PRIVATE PROP. — PROPOSED
- TRAIL ON STATE PROP. — EXISTING TRACK
- ROAD R/W —
- TRAILHEAD 
- PARKING 

6 miles to Hinkle



**LLL T TRAIL SYSTEM      Cloudland Canyon to Lula Lake - section 4**







Camp Lookout can connect to the trail for camper access to Lula Lake and Cloudland Canyon

Trail along road

Trail on old rail red

- TRAIL ON LLLT PROP. — EXISTING TRACK
- TRAIL ON PRIVATE PROP. — EXISTING TRACK
- TRAIL ON PRIVATE PROP. — PROPOSED
- ROAD R/W —
- TRAILHEAD 
- PARKING 

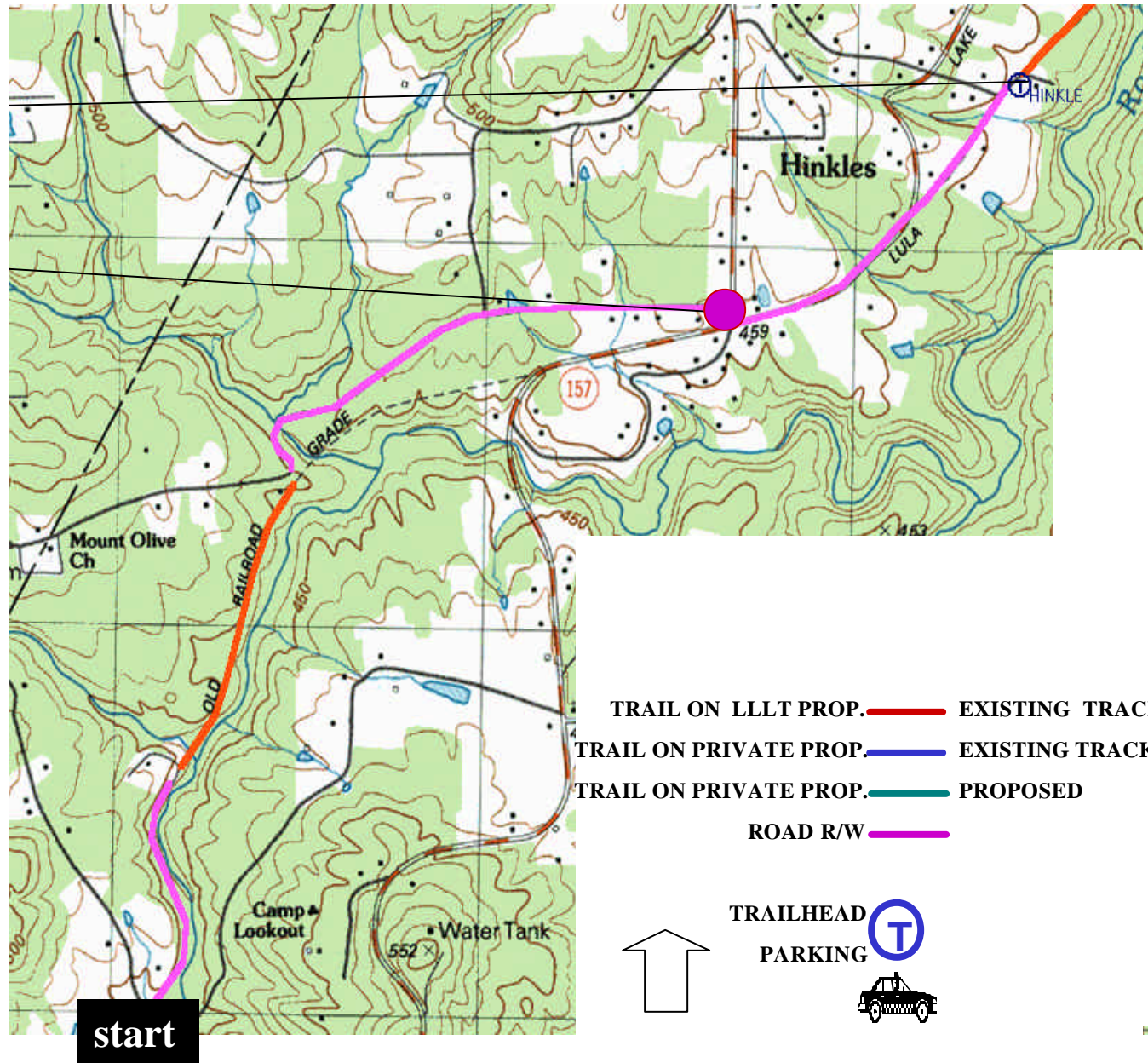
**start**

**LLL T TRAIL SYSTEM      Cloudland Canyon to Lula Lake - section 5**

At the end of this residential street is the pedestrian connection from Hinkle to Lula Lake along the old rail bed.

Sometime in the future the center of Hinkle may have some commercial establishments that relate to trail usage- refreshments, bike service, etc.

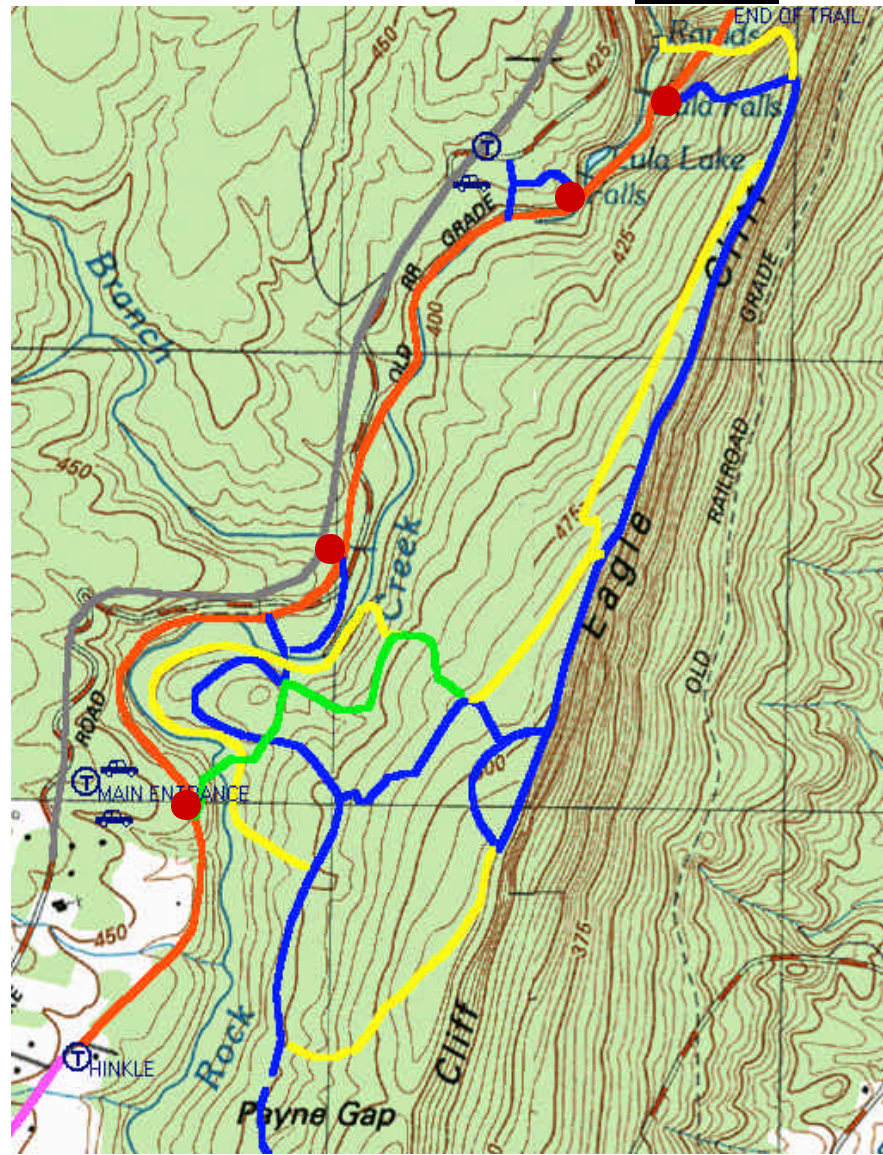
Trail follows Mt. Olive Road






**LLL TRAIL SYSTEM      Cloudland Canyon to Lula Lake - section 6**



start



- PRIMARY TRAIL — 100 % on existing tracks
  - SECONDARY TRAIL — 95% on existing tracks
  - TERTIARY TRAIL — 50% on existing tracks
  - CHALLENGE TRAIL — 50% on existing tracks
  - TRAIL IN ROAD R.O.W —
- 
- TRAILHEAD 
  - PARKING 
  -  Trail hub with bike stable

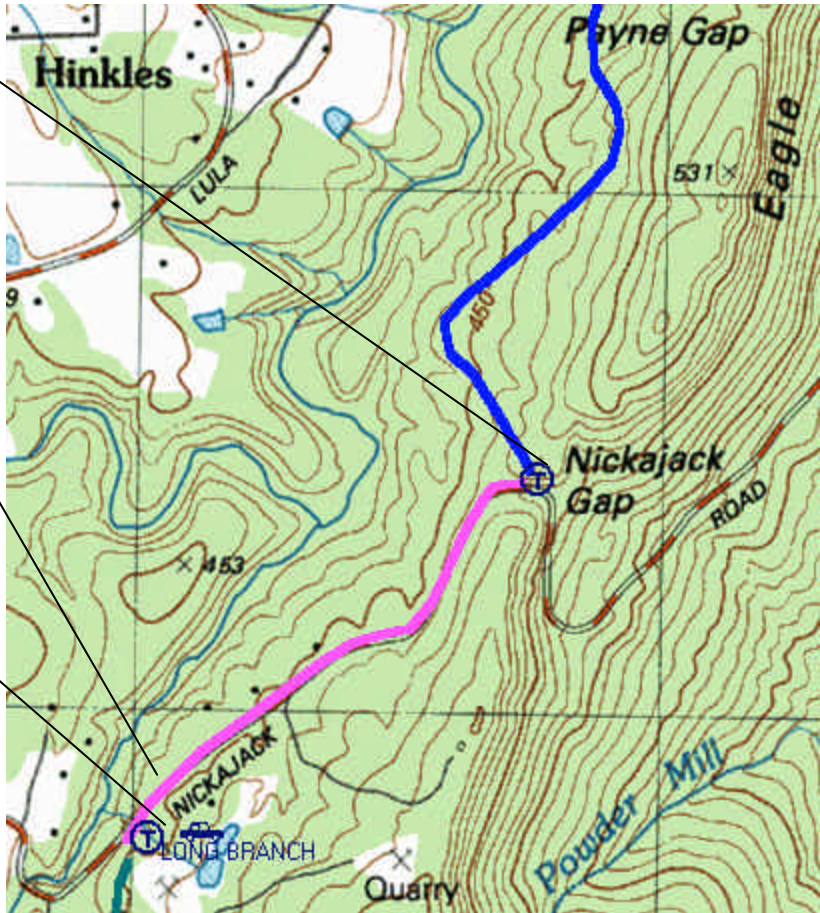
**LLL T TRAIL SYSTEM      Lula Lake Core Property to Hinkle and Payne Gap**

start

No parking permitted at this trailhead. Trail north along old Middle Road should be clearly defined from drive into private conservation easement property.

Unpaved trail on west side of road. Trail crosses at trailhead and parking area to avoid conflict with vehicular entrance to private conservation easement property.

Parking for 15-20 cars in lot screened from road, which may be multi-use with future church. Foot path should lead along old quarry track to join the trail from Nickajack to Durham along Long Branch.

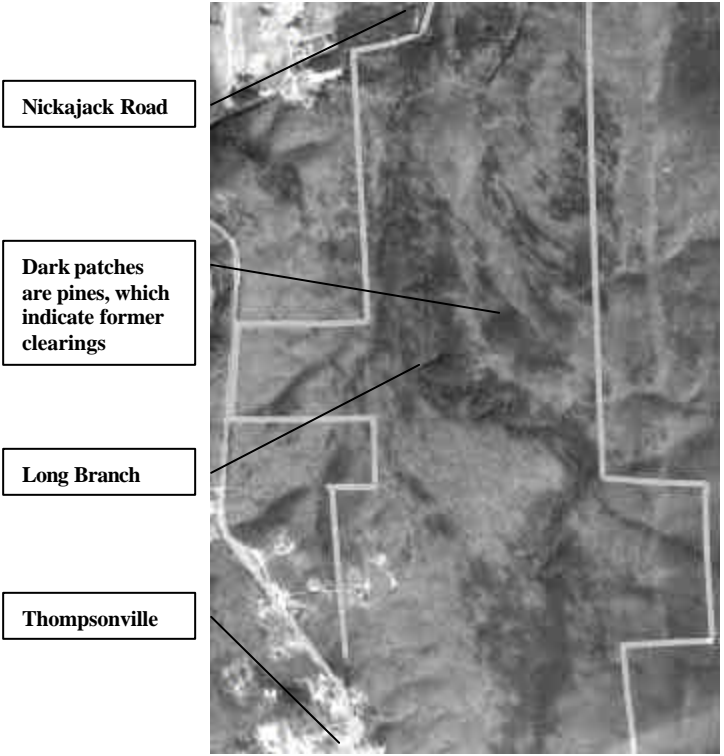


- TRAIL ON LLLT PROP. — EXISTING TRACK
- TRAIL ON PRIVATE PROP. — EXISTING TRACK
- TRAIL ON PRIVATE PROP. — PROPOSED
- ROAD R/W —



**LLLT TRAIL SYSTEM     Payne Gap to Nickajack Road**



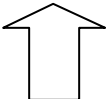


TRAIL ON LLLT PROP. — EXISTING TRACK

TRAIL ON PRIVATE PROP. — EXISTING TRACK

TRAIL ON PRIVATE PROP. — PROPOSED

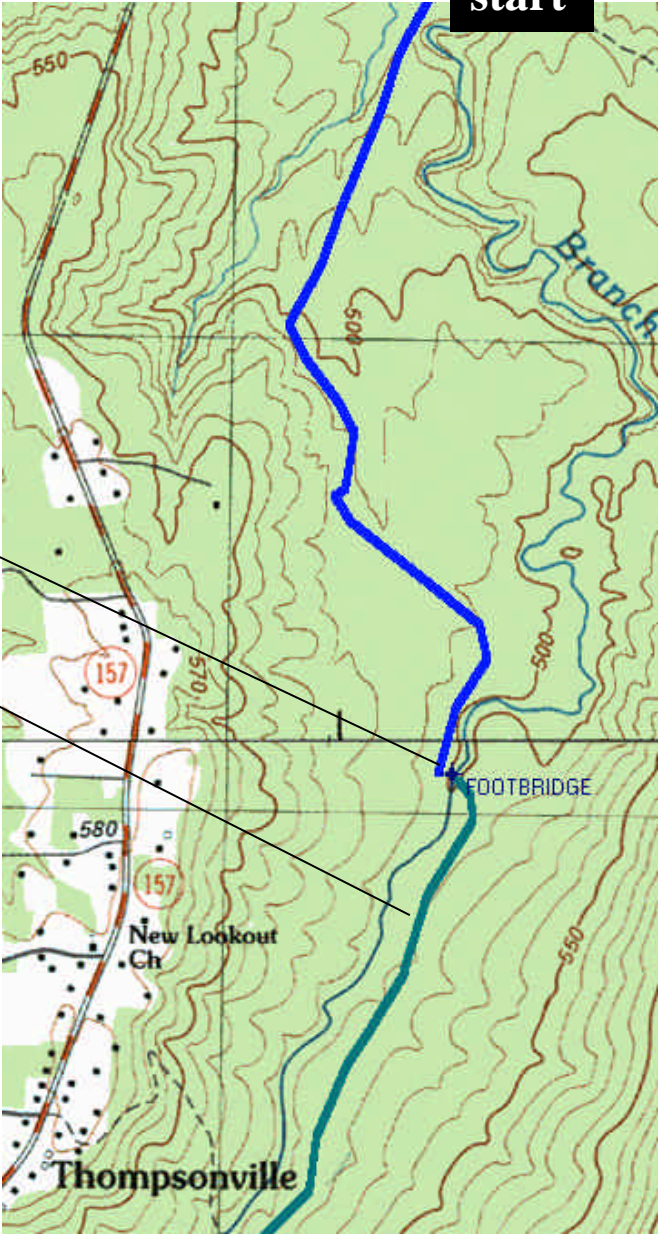
ROAD R/W —



**LLLT TRAIL SYSTEM      Nickajack Road to Durham - section 1**



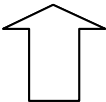
start



Footbridge or stream crossing required

Newly blazed trail along bottomland

- TRAIL ON LLLT PROP. — EXISTING TRACK
- TRAIL ON PRIVATE PROP. — EXISTING TRACK
- TRAIL ON PRIVATE PROP. — PROPOSED
- ROAD R/W —



**LLLT TRAIL SYSTEM      Nickajack Road to Durham - section 2**





Trail follows the Central of Georgia RR bed along Rock Creek to Lula Lake

This trail head is an important junction of trails and should be clearly signed

Trail follows old mining roads. This was the center of coal mining.



- TRAIL ON LLLT PROP. — EXISTING TRACK
- TRAIL ON PRIVATE PROP. — EXISTING TRACK
- TRAIL ON PRIVATE PROP. — PROPOSED
- TRAIL ON STATE PROP. — EXISTING TRACK
- ROAD R/W —
- TRAILHEAD 
- PARKING 

This powerline easement is very steep along this 2000 feet stretch. Alternatives to it should be found.

Existing 1- mile gravel road up to High Point

For historical reasons it is important to cleanup and use this 1.5 mile stretch of Durham Road as the approach to the coal mine.

**LLL T TRAIL SYSTEM      Nickajack to Durham - section 3**

Secondary vehicular entrance for use on a special need basis

Bridge required for pedestrians and light trucks over Rock Creek

Interpretive Trail

Important trail hub with bike stable (typical)

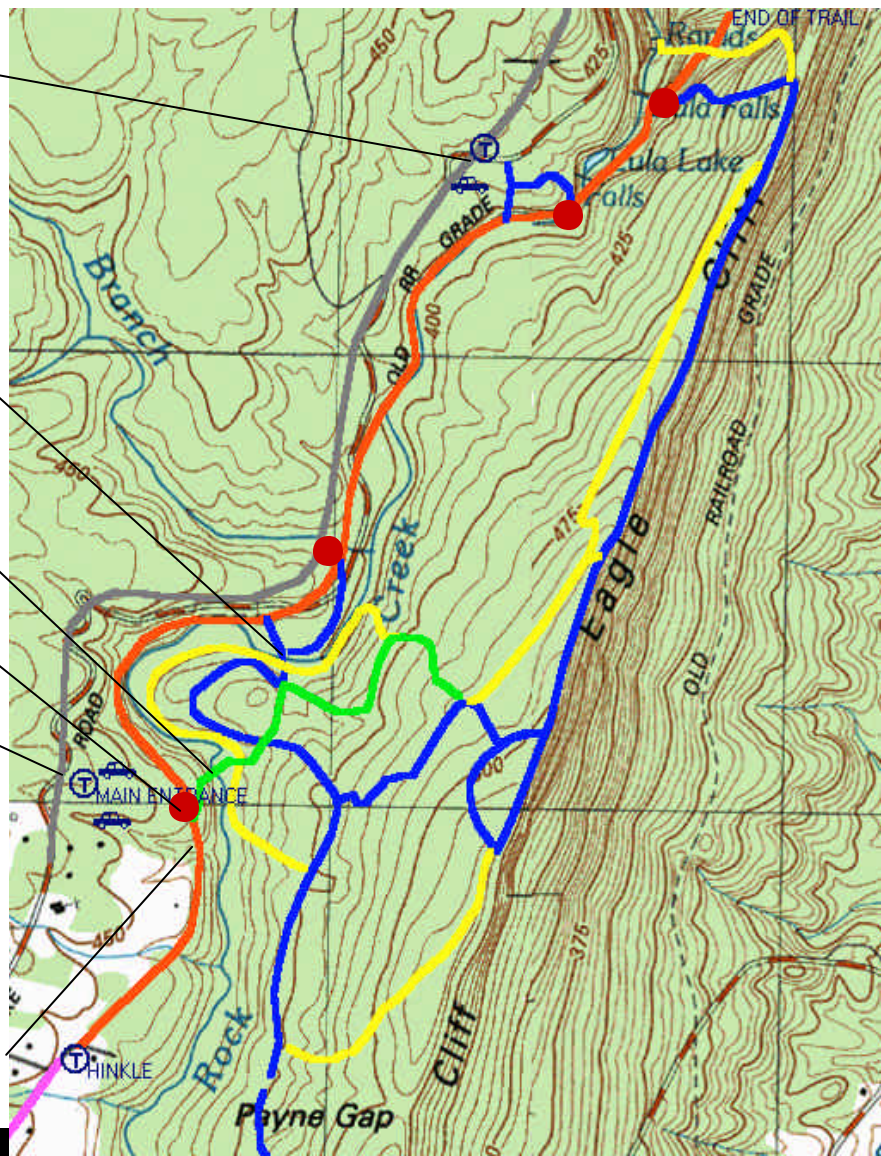
Main Vehicular Entrance to the Core Property

- PRIMARY TRAIL — 100 % on existing rail bed
- SECONDARY TRAIL — 95% on existing tracks
- TERTIARY TRAIL — 50% on existing tracks
- CHALLENGE TRAIL — 50% on existing tracks
- TRAIL IN ROAD R.O.W —



Bridge needed where RR trestle once stood

**start**



**LLL TRAIL SYSTEM      Cloudland Canyon to Lula Lake - section 7**



# MASTER PLAN PART 1:

## Cost Estimate for Core Property

### COST ESTIMATE

ITEM BY ZONE	QTY	UNIT	UNIT COST	SUBTOTAL	TOTAL
<b>Visitor Reception-Main Entrance</b>					<b>209000</b>
Entrance Sign	1	LS		2500	
Piers and Gate	1	LS		6500	
Road and parking (unpaved) 100 cars	36000	LS		12000	
Admin and Visitor Center	1500	SF	100	150000	
Utilities (Water, Electricity, Telephone, Septic System)		LS		10000	
Visitor Center Site Work		LS		15000	
Amphitheater-rustic 200 people		LS		10000	
Orientation Map Sign	1	each	3000	3000	
<b>North Entrance (secondary)</b>					<b>12500</b>
Road and parking (unpaved) 12 cars		LS		5000	
Piers and Gate	1	LS		6500	
Orientation Sign				1000	
<b>Passive Recreation-1 Creekside</b>					<b>269500</b>
Site Work		LS		5000	
Picnic Shelter	1	EACH	85000	85000	
Picnic Tables	20	each	200	4000	
Restrooms - 1 unisex	1	LS		15000	
Well (including direct burial electric service)	1	LS		5000	
Septic System	1	LS		2500	
Signage	3	each	1000	3000	
Footbridge 100' car worthy	1	LS		150000	
<b>Passive Recreation-2 North Entrance</b>					<b>29500</b>
Site Work (incl grading and walks)		LS		10000	
Picnic Tables	15	each	200	3000	
Restroom - 1 unisex	1	LS		15000	
Well (including direct burial electric service)	1	LS		4000	

Signage	3 each	1000	3000	
Septic system	1 LS		2500	
<b>Passive Recreation-3 Brow North</b>				<b>2000</b>
Bench seats for 20 people	20 each	100	2000	
Interpretive Sign	1 each	1000	1000	
<b>Passive Recreation-3 Brow South</b>				<b>31000</b>
Restrooms - 1 unisex	1 LS		15000	
Well (including direct burial electric service)	1 LS		4000	
Septic system	1 LS		2500	
Tent platforms	10 each	500	5000	
Stone fire ring	1 LS		500	
Assembly bench seats for 40 people	40 each	50	2000	
Picnic Tables	10 each	200	2000	
<b>Conservation-Education-1 South</b>				<b>200000</b>
6'-wide Boardwalk on east side of ravine	1800 sf	50	90000	
Interpretive signage	10 each	2000	20000	
Footbridge over Rock Creek 100'	1 LS		75000	
Homestead site exhibit	1 LS		15000	
<b>Conservation-Education-2 North</b>				<b>37000</b>
History exhibit	LS		5000	
Falls overlook platform	800 sf	50	40000	
Lake overlook with bench or wall seats for 40	LS		20000	
Interpretive waysides	10 each	2000	20000	
<b>TOTAL</b>				<b>790500</b>
Design and Contingency-25%				<b>197625</b>
<b>TOTAL CAPITAL COST</b>				<b>\$ 988,125</b>
<b>ENDOWMENT FOR MAINTENANCE INCOME - 65% of Capital Costs</b>				<b>\$ 642,281</b>
				<b>\$ 1,630,406</b>



# MASTER PLAN PART 1: Implementation of Core

The first steps of implementation should be guided by the notion that basic functional patterns of human use should be established as soon as possible and subsequently refined over time with the development of facilities. This means that the land use component of the master plan should be implemented first.

**ENTRANCE** Establish the existing south entrance as the Core Property's Main Entrance.

**RESTRICT CARS** Provide parking at the Main Entrance and restrict cars from going farther into the Core Property.

**ALTERNATIVE TRANSPORTATION** Establish the bicycle system for movement along the old railroad grade, which is the functional spine of the property.

**TRAIL NETWORK** Establish the basic trail network leading to the brow and to the lake and make it legible to the public with maps and signs (these may be crude to begin with and refined latter).

**DESTINATIONS** Diversify the public 's movement through the Core Property by developing the three passive recreational destinations of the property: the brow, the creek, and the lake/falls. Establish these destinations through usage, mowing, facilities, programmed use, etc.

**EDUCATIONAL VARIETY** Reinforce outdoor environmental education through enhanced programming, exhibits, interpretive waysides, etc. Highlight the full spectrum of education, including historical geology and landform, biological communities, hydrology, and history. Variety in educational content, presentation, and experience can foster greater use by different groups.

**ON-SITE OFFICE** Establish an office presence on the Core Property – could initially be a temporary structure.

**Financial and administrative resources ultimately govern TIMING Implementation**, but priorities should be based on instituting the plan's functional patterns.

**STRATEGIC PLAN** The Board of Directors should create a 3-5 year strategic plan, which should be updated annually and appended to the master plan.

**MARKETING** A concerted marketing effort should be undertaken to promote the master plan and the vision of the land trust that it represents. Marketing should focus on benefits to the public and should portray an implementation momentum that builds with each improvement.

**DEVELOPMENT DIRECTOR** While initial changes can proceed immediately, a development director should be hired to head up capital improvements and fund-raising.

**FUND-RAISING** Establish a fund-raising committee with clearly written roles, responsibilities and authorities. Leadership should come from the Board of Directors

**ENVIRONMENTAL INVENTORY** Undertake an ecological inventory and mapping of the Core Property.

**PRIORITY/YEAR**

