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location of the wilderness road

CUMBERLAND GAP



NATIONAL HISTORICAL PARK/KENTUCKY, VIRGINA, TENNESSEE

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LOCATION OF THE WILDERNESS ROAD AT CUMBERLAND GAP NATIONAL HISTORICAL PARK

by
Jere L. Krakow

August 1987

United States Department of the Interior / National Park Service

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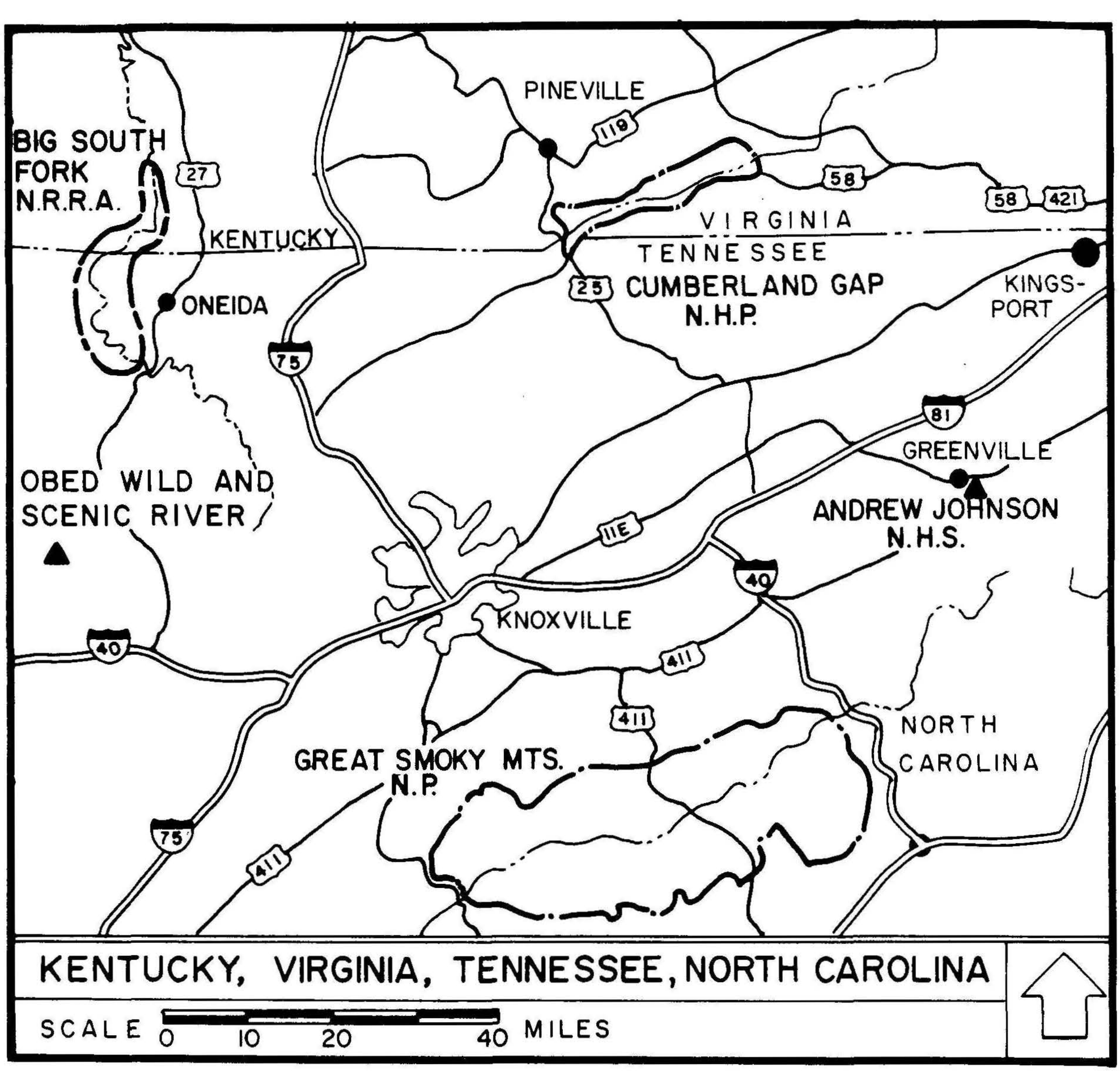
ACKNOWLEDGEMENTS

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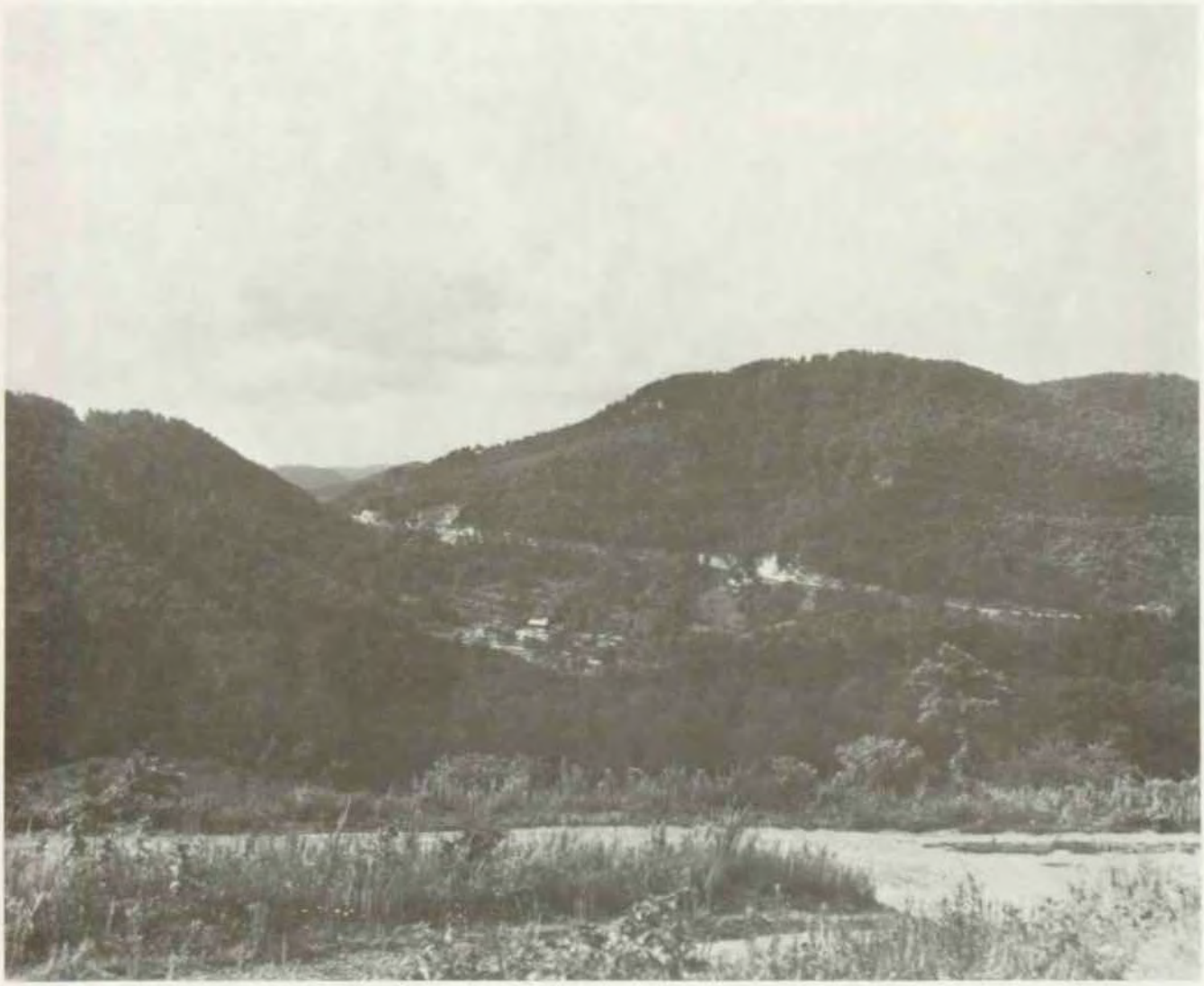
Federal Highway Administration staff at Cumberland Gap also helped me: J.R. Campbell, Donald Graff and Warren Lutz. Others to whom I am indebted are Charles Castner, Thomas P. Field, Neal O. Hammon and Ron Lee. A special thanks to Louis DeVorsey and Charles W. Wilson for files and records which helped shorten my research immeasurably. Errors of omission and commission are mine and mine alone.


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OBED WILD AND SCENIC RIVER
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NORTH CAROLINA
GREAT SMOKY MTS. N.P.
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KENTUCKY, VIRGINIA, TENNESSEE, NORTH CAROLINA
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Aerial view of Cumberland Gap vicinity, November 21, 1968.

Courtesy of the National Archives, Record Group 145, BUG--5JJ--186.





CHAPTER I

WILDERNESS ROAD: INTRODUCTION AND OVERVIEW

Among the many roads associated with the history of transportation in the United States the Wilderness Road and the natural access point through the Appalachians, Cumberland Gap, immediately come to mind. From the colonial period to just after the turn of the nineteenth century, the road saw an ever increasing volume of traffic, most of which faced westward. Documented generally in a variety of traveler accounts, on contemporary maps and passed along by word of mouth, the route into the great west dominated all others for a time. Eventually surpassed by improved routes across the old northwest, the Ohio River Valley and then by a network of railroads, the route continued to function as an important artery for trade and commerce, as indeed it yet continues to do.

OVERVIEW

The configuration of the Wilderness Road might aptly be described as a broad loop open on the north (see Figure 1.1). Its eastern leg begins in Virginia near the Potomac River, through a network of roads extending on northward into the Mid-Atlantic states; stretching up the Shenandoah Valley to Staunton and then to the Holston River down which the road continues to the Long Island (Kingsport); the southern base of the loop extending west to Cumberland Gap, and finally swinging northward to the falls of the Ohio at Louisville.[1] Historically the best known segment ran from the Long Island of the Holston to the Bluegrass area of north-

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1. Robert L. Kincaid. The Wilderness Road. (Middlesboro, Kentucky, Fourth Edition, 1973), Preface. (Hereafter Kincaid, The Wilderness Road).

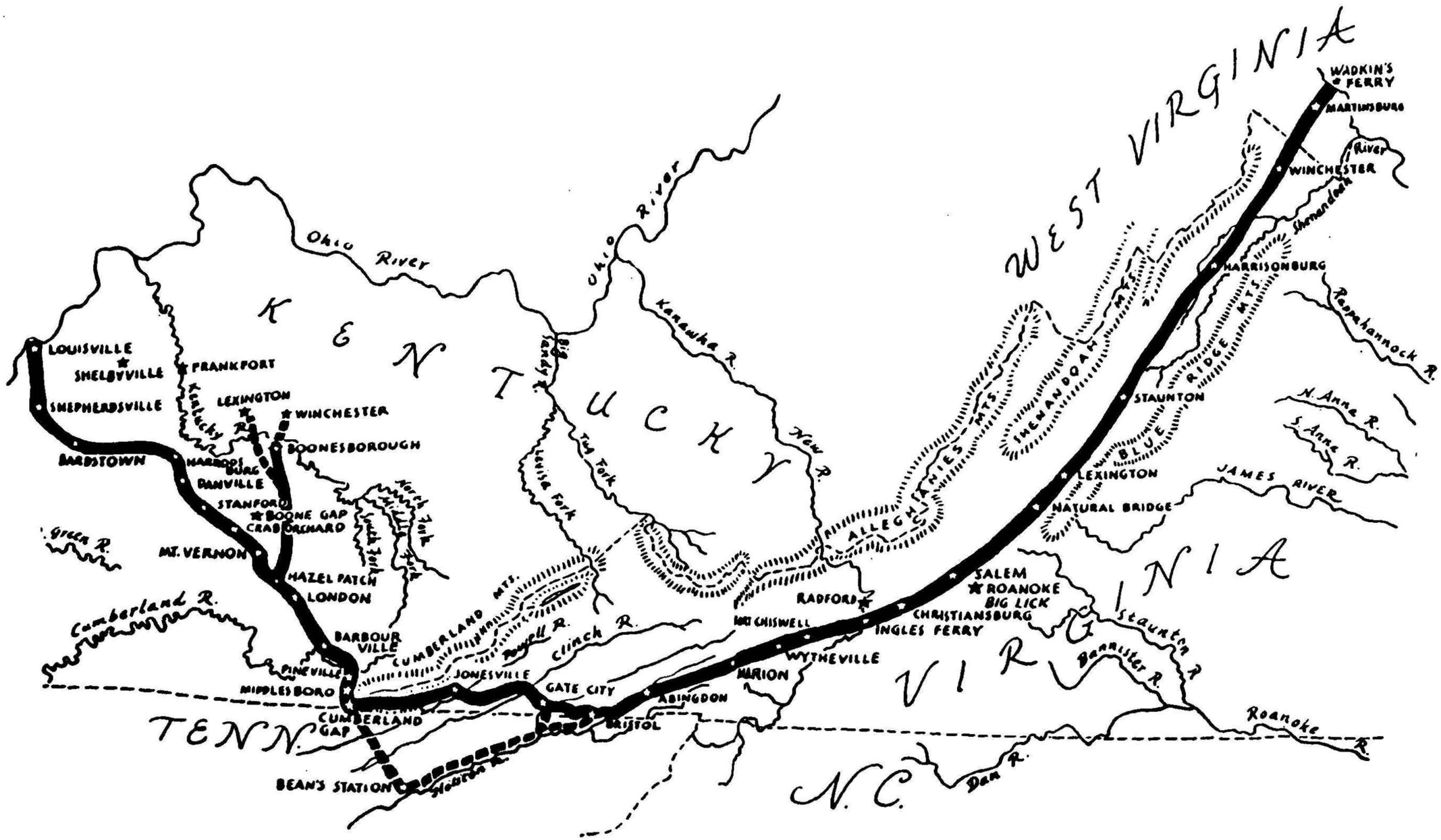


Figure 1.1. The Wilderness Road.

Courtesty of Robert L. Kincaid. The Wilderness Road. Middlesboro, Kentucky, 1973.

central Kentucky by way of Cumberland Gap and the Cumberland River Gorge through Pine Mountain (Pineville).[2] At Hazel Patch the road forked with one leg north to Boonesborough and the other northwestward to Crab Orchard, Harrodsburg and eventually Louisville.

During the early historic and prehistoric periods the route had origins as a game trail and path used by numerous native populations. A variety of animal trails existed on portions of what became the Wilderness Road, principally near and through Cumberland Gap. Of major significance for locating the route through the gap was the migration of bison from grazing area to grazing area, but more especially to and from salt licks in Virginia, Tennessee and Kentucky. These well defined traces, sometimes several yards wide, were used by a variety of Indian groups for purposes of hunting, trade and warfare. The trace or Warriors Path through Cumberland Gap had extensive use made of it by Shawnee, Cherokee and other eastern woodland tribes. In short, native peoples, and in due course, explorers, long hunters and land speculators, had access east and west via a network of existing trails and traces first used by animals. Following the vanguard came a floodtide of settlers, intent upon opening the great west to agriculture, commerce and industry.

As a transportation route the Wilderness Road provided a vital link between the seaboard and the trans-Appalachian country. It served as a pathway for exploration and settlement; a return route for Ohio-Mississippi River trafficers; a route by which to lay claim to the Mississippi River drainage during and after the American Revolution; an access point for many settlers into the old southwest which in turn spawned further settlement to and beyond the Mississippi; a vital communication line for information and passage of travelers; and a source of much trade and commerce, especially livestock.

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2. Ibid.

LITERATURE

Through the years a number of studies, books and articles, have focused on the Wilderness Road, including locating the original route or portions thereof. This study attempts to identify as closely as possible the route through Cumberland Gap National Historical Park; it is prompted by the relocation of Highway 25E away from the Gap and through a tunnel under Cumberland Mountain. In so doing the study is a linear descendant of the several studies preceding it and has thereby profitted accordingly.

Among the most important studies is that of Thomas Speed, The Wilderness Road, which presents a narrative account of the antecedents of the road, general description of the route, improvements made and the historical significance of it.[3] Speed uses a number of traveler accounts as descriptions of terrain, landmarks, weather, road and stream ford conditions, distance between points and dangers encountered. A chronological approach serves as an organizational scheme which conveys the role of major participants in the establishment and development of the road. Speed includes several primary documents in the text which facilitate a reader or researcher interested in various aspects of the Wilderness Road. In determining the significance of the route, Speed emphasizes the directness of the route for settlers to the old southwest and the involvement of travelers in economic, political or military affairs. For purposes of identifying specific locations of the road it is of very limited use.

Another of the studies, Volume 6 in the "Historic Highways of America Series" by Archer B. Hulbert, presents an idealized look at the

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3. Thomas Speed. The Wilderness Road: A Description Of The Routes Of Travel By Which The Pioneers And Early Settlers First Came To Kentucky (New York: Burt Franklin, 1886). Hereafter referred to as Speed, The Wilderness Road.

Wilderness Road and major historical figures associated with it.[4] He underscores the historical significance of the artery as a conduit of settlers, protecting the frontier during the American Revolution, the most direct path east from the settlements along the Ohio River and a nucleus of settlement in the old southwest and old northwest which laid solid claim to the Mississippi valley. Borrowing from Speed's study and with limited documentation, Hulbert waxes romantic much of the time. In a similar vein H. Addington Bruce wrote a similar piece which glorifies the road and its founders, particularly Daniel Boone.[5] An undocumented work, it conveys the image of considerable hardship, pluck, courage and ultimately the triumph of civilization over the wilderness.

A relatively well documented work by Charles A. Hanna utilizes extant traveler accounts of the route down the Great Valley of Virginia, through Powell's Valley and Cumberland Gap into Kentucky.[6] Hanna rather carefully traces the role of Indians in the Ohio Valley and the routes of the Warriors Path through Cumberland Gap and northeasterly into Virginia. In the course of the book a good bit of Indian place name and site specific information is made available. Details from the journeys of John Finley and Dr. Thomas Walker provide evidence of Wilderness Trail locations in the area around Cumberland Gap.

Another book also published in 1911, devoted much attention to roads of eastern Kentucky, in particular the Wilderness Road.[7] The

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4. Archer B. Hulbert. Boone's Wilderness Road (New York: AMS Press, 1971), reprint of 1903 edition.

5. H. Addington Bruce. Daniel Boone And The Wilderness Road (New York: The Macmillan Company, 1910).

6. Charles A. Hanna. The Wilderness Trail, Volume Two (New York: AMS Press, 1972), reprint of 1911 edition.

7. Mary Verhoeff. The Kentucky Mountains Transportation and Commerce 1750 to 1911 A Study In the Economic History of a Coal Field (Louisville: John P. Morton & Company, 1911). Hereafter referred to as, Verhoeff, The Kentucky Mountains.

author, Mary Verhoeff, uses a chronological approach in the section on transportation and documents much information pertaining to construction and maintenance of roads. Though no information on exact and detailed locations of the road is included, much other specific information related to state expenditures, toll charges and improvements can be found. Well documented and significant, in part because Verhoeff represents the first woman published by the Filson Club, the book contains much valuable information pertaining to the Wilderness Road in Kentucky.

The first attempt to detail precise locations of the route occurred in 1921 with the publication of William A. Pusey's book.[8] A physician by training, Pusey utilized a 1782 journal of the road kept by his grandfather William Brown. In corroboration with Brown he used studies by Thomas Speed and John Filson and field reconnaisance to plot locations on topographic maps at a scale of 1:125,000 from the Blockhouse on the Holston River to Harrodsburg and Boonesborough. Due to the map's scale the area at Cumberland Gap is very small, thus better detail can be found in the text descriptions. Accompanying the maps and text are several photos likely taken in 1919, 1920 and 1921, which depict many important sites and road conditions along the route.

Originally published in 1947, Robert L. Kincaid's book on the Wilderness Road has gone through four editions.[9] Likely the most popular book-length treatment of the topic, it weaves together many diverse vignettes of history related to the road. Kincaid drew upon valuable primary and secondary sources and interviewed several resource people during his research. It does not seek to identify specific locations for the length of the road but does provide much diverse information in a

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8. William A. Pusey. The Wilderness Road To Kentucky, Its Location And Features (New York: George H. Doran Company, 1921).

9. Robert L. Kincaid. The Wilderness Road.

chronological framework. The Kincaid study includes a useful bibliography for students of the Wilderness Road.

During the forepart of the 1970s the National Park Service contracted with the Geography Department of the University of Georgia for a research study to identify the location of the Wilderness Road within and nearby Cumberland Gap National Historical Park. The assignment went to a doctoral candidate, Charles W. Wilson, who submitted a significant interim report.[10]

Wilson conducted an impressive amount of research in primary sources ranging across travelers accounts, many cartographic sources and aerial photography; records of counties, toll roads, highway departments, livestock droving, stagecoaching, freighting and the Kentucky land office and governor's papers; plus laws of Virginia and Kentucky. He concluded the report with a series of topographic maps accompanied by annotation which identify the location of the Wilderness Road from Rose Hill, Virginia, to the Cumberland Ford at Pineville, Kentucky. The maps do not pinpoint location for the entire study area; however, in certain areas, supplemented by the text, they provide precise location. Unfortunately because of personal circumstances Wilson did not complete a final report.

Another study of note combines traditional research and "airphotointerpretation" or remote sensing methodology.[11] Clarke Dunlap defined the study area as Cumberland Gap to Fort Boonesboro State Park

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10. Charles W. Wilson and Professor Louis De Vorsey, Jr. "Preliminary Research Report: Wilderness Road - Cumberland Gap Historical Geography Research Project," (unpublished, November 1975), 63 pp. (Hereafter referred to as Wilson and De Vorsey, "Preliminary Research Report").

11. Clarke Dunlap. "A Remote Sensing Pilot Study On The Problem Of Locating And Mapping The Boone's Trace Portion Of The Historic Wilderness Road In Kentucky: 1775-1795," (unpublished typewritten manuscript, 1983), 181 pp.

with a focus on Boone's Trace (1775-1792) before the Wilderness Road improvement of 1795. From journals and travel accounts plus secondary literature, the author detected locations and features, then in combination with land survey records, aerial photos, photogrammetry, remote sensing and edge enhancement techniques identified relict segments of Boone's Trace. Dunlap concluded that ground truthing and land survey records should be used in tandem to corroborate information from traditional sources and remote sensing techniques. A final conclusion suggests that the National Park Service is best able to bring to bear an interdisciplinary approach to the location of the trace or road.

Through the years no journal articles address the question of specific locations in the area of Cumberland Gap save those of Neal O. Hammon. Writing in 1970, he declared an intent to document the location of historic roads before they disappeared from the scene.[12] After a general discussion Hammon focuses on segments of the route (road and trace used interchangeably) beginning at Cumberland Gap extending northward on Boone's Trace to Hazel Patch, to the Kentucky River, and via Skaggs' Trace to Saint Asaph's (Logan's Fort). He devotes a final section to road improvements after 1795 by the state of Kentucky. The article documents specific locations of historic Kentucky roads through a combination of traveler accounts, land survey records and field observations.

Literature about the Wilderness Road and the traces associated with it is numerous and of very mixed quality. Many articles in popular magazines and scholarly journals exist for the nineteenth and twentieth centuries, but few accurately address specific locations for such as the vicinity of Cumberland Gap. Most notable for purposes of this study is drawing upon several sources and disciplines including those above, in order to pinpoint locations of the road.

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12. Neal O. Hammon. "Early Roads Into Kentucky," Register Of The Kentucky Historical Society, Volume 68, No. 2, April 1970, pp. 91-131.

CHAPTER 2

CUMBERLAND GAP NATIONAL HISTORICAL PARK: SETTING AND ASSUMPTIONS

Prompted by the need to improve the safety conditions of U.S. Highway 25E through Cumberland Gap and the desire to restore the route to some semblance of its historic landscape, numerous efforts have been made over the years to relocate the highway. The most feasible alternative focused on building a tunnel through Cumberland Mountain paralleling the nearby Louisville and Nashville Railroad tunnel. Some 16 years following establishment of the park (1940) Acting Director E.T. Scoyen expressed the opinion of "restoration of the Gap to approximately its original topography with . . . the present highway through the Gap . . . removed from the scene. We favor construction of a tunnel . . . ."[1]

At the same time Virginia and Kentucky began to develop plans to widen the road to four lanes which alarmed the Park Service and the idea of restoring the Gap. Subsequently a recommendation became public which advocated a tunnel and both states approved it but refused to participate in funding the project. Time passed and other alternatives gained attention including a shorter, steeper grade tunnel but lack of monies held up the start.[2] In due course Congress asked the Appalachian Regional Commission to conduct a preliminary study with funding provided from parkways as authorized in Public Law 93-87 of August 13, 1973.

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1. U.S. Department of the Interior, National Park Service. Final Environmental Statement Master Plan Cumberland Gap National Historical Park, Kentucky, Tennessee, Virginia by the Denver Service Center. Denver, October 1978, p. 3.

2. Ibid., pp. 3-4.

Various delays stymied the project but ultimately a consulting firm presented a set of alternatives which included the present design. Another delay resulted from contentions over which agency would take the lead; finally the Office of Management and Budget declared the Park Service would fulfill the role. A revised Master Plan (1978) called for highway relocation and funding from Congress became available that year from the Highway Trust Fund. The estimate for the entire project in 1979 totaled $75,000,000 over a six-year period with the actual project subject to various additional delays due to funding cuts. Figure 2.1 shows the route of the highway relocation presently in progress.

A concern for the historical resources associated with the highway relocation project and restoration of the Wilderness Road prompted the initiation of a Historic Resource Study beginning in the fall of 1984. Its purpose: to determine the location of the Wilderness Road through the park, plus assemble a base map and set of historic photos, sketches and maps.

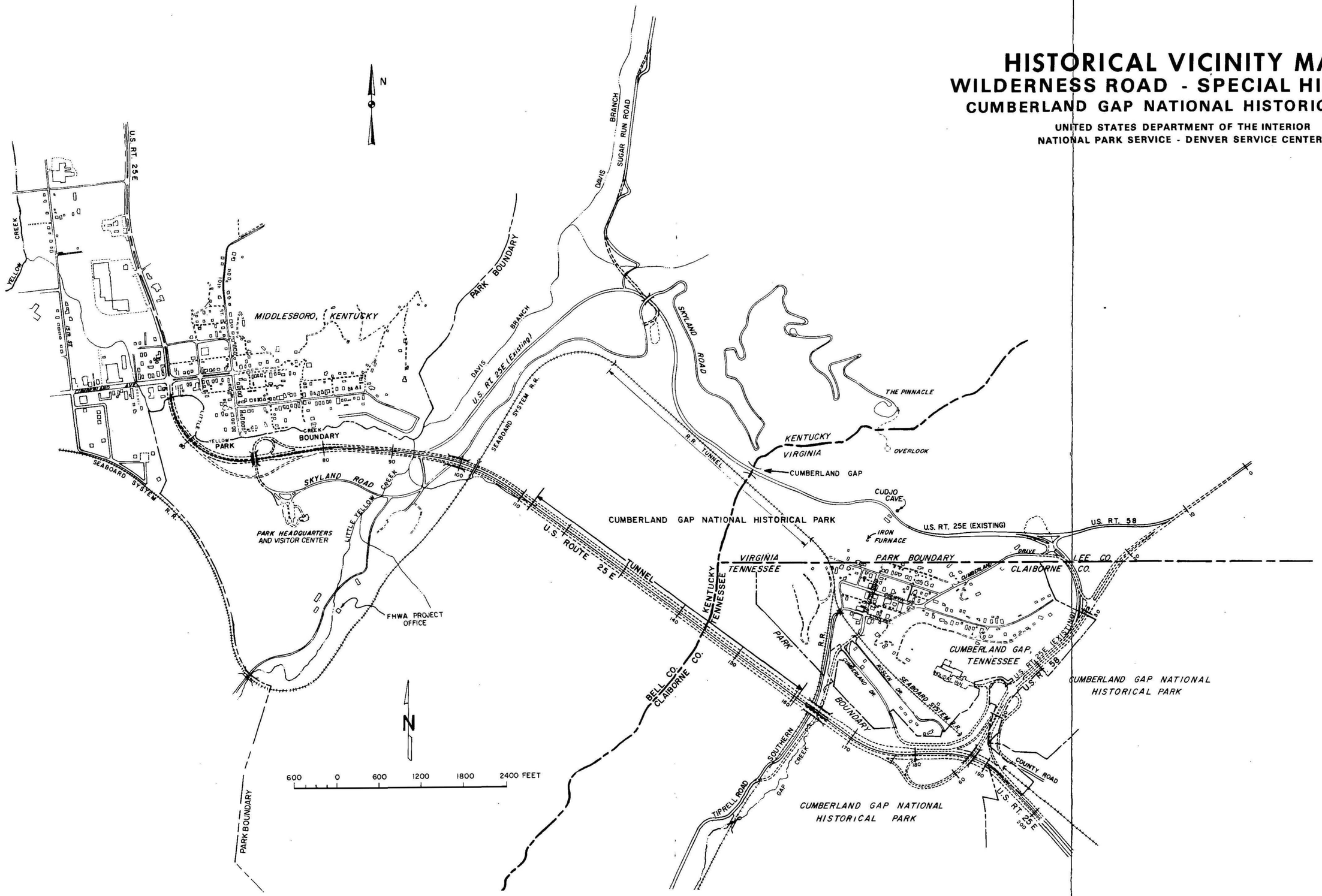
PHYSICAL SETTING

Physical characteristics of the landscape and human adaptation to them is integral to understanding the setting of Cumberland Gap and the location of the route(s) through the park. An admixture of geology, physiography, climate and natural resources explains much about human patterns of use in the immediate surroundings related to the Gap.

Old describes the Appalachian Mountain system when compared to the Rockies of the western United States. Once a sea, the uplifting action deposited the sediments as the uppermost rock types which has since been subjected to considerable erosion, mostly through significant precipitation and human activity. Not subjected to uplifts and tectonic

HISTORICAL VICINITY MAP
WILDERNESS ROAD - SPECIAL HISTORY
CUMBERLAND GAP NATIONAL HISTORICAL PARK

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE - DENVER SERVICE CENTER



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activity as in the west, the Appalachians are quite stable and made up of many subdivisions.[3] The Gap is in the Cumberland Mountains section.

Cumberland Mountains

Extending some 150 miles northeast to southwest and some 25 miles wide, the Cumberland Mountains encompass portions of Tennessee, Kentucky and Virginia.[4] Unique because of being bounded by geologic faults, in particular one which forms Pine Mountain and the other Cumberland Mountain, a differential erosion pattern created nearly vertical mountainsides in places.[5] Notable as well is the coincidence of gaps at Pine and Cumberland mountains which served as conduits of travel for game and humans. Cumberland Gap, formed initially by a stream and then an upthrust which diverted the stream northward to the Cumberland River, subsequently was enlarged and fashioned by wind and weather.[6] The dominance of landscape determined pathways for migration which influenced settlement patterns in the course of America's westering experience.

CLIMATE

A wide variety of climates exist in the Appalachian Plateaus due to latitude and altitude. For the Cumberland Mountains the climate is principally a moderate one with the average yearly temperature at

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3. Karl B. Raitz and Richard Ulack with Thomas R. Leinbach, Appalachia A Regional Geography (Boulder, Colorado: Westview Press, 1984), pp. 40-41, (hereafter cited as Raitz, Appalachia).

4. Nevin M. Fenneman, Physiography Of Eastern United States (New York: McGraw-Hill Book Company, Inc., 1938), p. 329.

5. Ibid.; Raitz, Appalachia, p. 51.

6. Ibid., pp. 330-332.

Middlesboro, Kentucky, 59.9 degrees and the annual precipitation 50 inches. Moisture falls rather evenly through the year but the late summer and early fall period is somewhat drier. Western slopes of the Cumberland Mountains receive more moisture as the prevailing westerly air masses rise over the mountains causing cooling, condensation and consequent precipitation.[7] Occasional snowfall each year drops from 3-6 inches per fall, perhaps as many as six times each winter. Drainage of precipitation is to the Gulf of Mexico, though by differing routes depending upon which side of the Cumberlands it falls. On the west the Yellow Creek drainage flows northward to the Cumberland River, while on the east, the flow is southwesterly via the Powell, Clinch and Tennessee rivers.

VEGETATION

Vegetation exhibits a great diversity at and near Cumberland Gap which is consistent with variances in climate and altitude. Originally the forests contained a number of species (mixed mesophytic): red oak, white oak, beech, chestnut, basswood, sugar maple, hemlock, tuliptree and sweet buckeye.[8] This virgin forest thrived in moist, deep soils and proved a boon to early settlers who reported, "stands of tuliptrees, sugar maple, beech and oak that were 5 feet (1.5 m) or more in diameter."[9] Variation of trees could be observed as latitude or altitude changed and an evolution from one forest type to another took place across physiographic provinces. Many species comprised the forest understory and ranged from ferns to flowers and herbs, mountain laurel to rhododendron.

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7. Raitz, Appalachia, p. 51-53.

8. Ibid., p. 68.

9. Ibid., pp. 70-71.

WILDLIFE

A hospitable combination of climate, vegetation, water and topography served to enhance habitat for many kinds of wildlife in the Cumberland Mountains. Large game including deer, elk, bear and bison inhabited the region with the latter especially preeminent in providing easy access because of traces laid down through migrations to grazing areas and salt licks. Numerous species of small game abounded too, ranging from squirrels and raccoon to reptiles and foxes. Bird life included wild turkey, grouse, owls, hawks and many kinds of songbirds. In short, arriving Anglos had a rich variety of wildlife from which to draw sustenance and pleasure.

ASSUMPTIONS

Several assumptions guided this study to identify the location of the Wilderness Road through Cumberland Gap National Historical Park. A basic assumption of considerable moment is the physical setting of the road; changes caused directly and indirectly by human occupation and use. As natural resources became known by frontiersmen and succeeding generations in the Cumberland Mountains region, exploitation became the rule in an unrestricted economic environment. A boom-bust psychology led to a trial and error system which created considerable change in the landscape and environment over time. From denuding the hillsides of timber resources in order to fire an iron furnace or for strategic purposes during the Civil War, or clearing a route for a wagon road and later roads and highways, the results remain to be coped with today. As vegetative cover disappeared, plant and animal communities went through a succession which in some instances fundamentally altered the environment or even the range. Additionally blasting and quarrying of rocks, reducing highway grades and road building technology in conjunction with greater demand for highway usage, combined to temper physical evidence of roadways and the restoration of the historic landscape.

Figure 2.2

The topography of the Wilderness Road at Cumberland Gap National Historical Park.

Compiled by Jere L. Krakow.

Drawn by Robert H. Todd.

HISTORICAL BASE MAP
WILDERNESS ROAD - TOPOGRAPHY
CUMBERLAND GAP NATIONAL HISTORICAL PARK

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE - DENVER SERVICE CENTER

LEGEND

WILDERNESS ROAD

- Upper Virginia Road
- Lower Virginia Road
- Kentucky Road
- Tennessee Road

- APPROXIMATE NATIONAL HISTORICAL PARK BOUNDARY
- STATE BOUNDARY

MIDDLESBORO
KENTUCKY

PARK
HEADQUARTERS

Cumberland Gap
TENNESSEE

KENTUCKY
BELL CO.
TENNESSEE
CLAIBORNE CO.
VIRGINIA
LEE CO.

DAVIS BRANCH
CUMBERLAND MOUNTAIN
LITTLE YELLOW CREEK
GAP CREEK

Radio Tower
WAFI
Cemetery

1300
1400
1200
1800
1302

N

400 0 400 800 1200 1600 FEET

380 | 25,000
OCT 86 | DSC

Another major assumption is that historic period roads followed game and Indian trails. From the valley of Yellow Creek to the Powell River Valley the route ascended to the saddle (narrowest confines) of Cumberland Gap along contours and watercourses and descended along similar terrain (see Figure 2.2). These well defined trails served as a relatively easy means for explorers, hunters, land speculators and ultimately travelers and settlers, to penetrate the interior of the trans-Appalachian west. Additionally it is assumed that the location of the road remained the same until heavy equipment and technology permitted greater construction capabilities beginning early in the twentieth century.

A final assumption is one of focus; paramount to this study is the location of the Wilderness Road, developed in 1795, as opposed to Daniel Boone's trace, an earlier route through Cumberland Gap. Of course the trace and the road are not mutually exclusive, often sharing the same route, however, in places they diverged from one another. In reconstructing the past as accurately as possible evidence of all kinds is taken into account and basic assumptions need explication as they bear on the evidence borne in historical sources.

CHAPTER 3

WILDERNESS ROAD: ANIMAL TRACE TO MODERN HIGHWAY

ANTECEDENTS

When a herd of American buffalo left the area of canebrakes along Little Yellow Creek in what later became Kentucky, they began a gradual ascent along the wooded hillsides toward the saddle of Cumberland Gap some 500 feet (1,649' elevation) above. This oft repeated phenomena had ceased about 500 A.D., but some 1,100 years later renewed itself as once again buffalo penetrated the southeast portions of North America.[1] Besides grazing areas these pathmakers sought the numerous salt licks that dotted present Kentucky and Virginia, and in so doing beat out a well defined trace. Writing in 1784 John Filson described such a trace near Frankfort, Kentucky, as "large enough for wagons . . . sloping with an easy descent from the top to the bottom of a very steep hill."[2] Other animals, but principally the buffalo, laid a basis for trails and later roads in the southeast

> . . . which greatly facilitated the movement of white settlers into the region. Kentucky's Wilderness Road through Cumberland Gap to Louisville followed a series of buffalo traces . . . . Indeed, travelers in the nineteenth century leaving the Big Lick near Roanoke, Virginia, could travel over a thousand miles to the Grand Prairie of Illinois without leaving roads originally derived from buffalo traces.(3)

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1. Erhard Rostlund, "The Geographic Ranges of the Historic Bison In The Southeast," Annals of the Association of American Geographers, Volume 50 (December 1960), pp. 405-406.

2. John Filson, The Discovery, Settlement, and Present State of Kentuckey (sic) (Wilmington, Delaware: J. Adams, 1784), p. 30.

3. John A. Jakle, Images Of The Ohio Valley, A Historical Geography of Travel, 1740 to 1860 (New York: Oxford University Press, 1977) pp. 57-58.

The network of traces laid down by buffalo form the most important element in the location of what became a most significant trail used by American Indians and in due course, frontiersmen and settlers. Notes William E. Myer, the search for food, water and salt by many wild animals led native people to utilize them for a variety of reasons.[4] Such trails followed a path of least resistance avoiding difficult terrain as much as possible. Foremost among such trails in the eastern half of the United States was the Warriors Path. Following a number of buffalo traces the route extended from the Ohio River southward to Cumberland Gap, looped through it then paralleled the Cumberland Mountains northeasterly to the Great Valley of Virginia (see Figure 3.1, route #5). Specifically it departed the Lower Shawnee Town, moved south to the North Fork of the Kentucky River, struck the Cumberland River and traveled along it through Pine Gap (Wasiota), up Yellow Creek and ascended the Cumberland Mountains, crossing at Cumberland Gap; from there branches continued southeast to the Cherokee and Creek settlements or northeast through Kane and Moccasin gaps, along Poor Valley across the New, Roanoke and James rivers, then down the Shenandoah Valley to the Potomac River. For several centuries the path had widespread use by migrating animals and native peoples and as such became an easily adapted route by frontiersmen in search of opportunities to the west.

ANGLOS

A variety of individuals from the original thirteen colonies traversed portions of the trail during the eighteenth century with speculation that Gabriel Arthur, captured by Indians, had the distinction of being the first colonial traveler through Cumberland Gap in 1673-1674. Significantly associated with Cumberland Gap however, is Dr. Thomas Walker who not

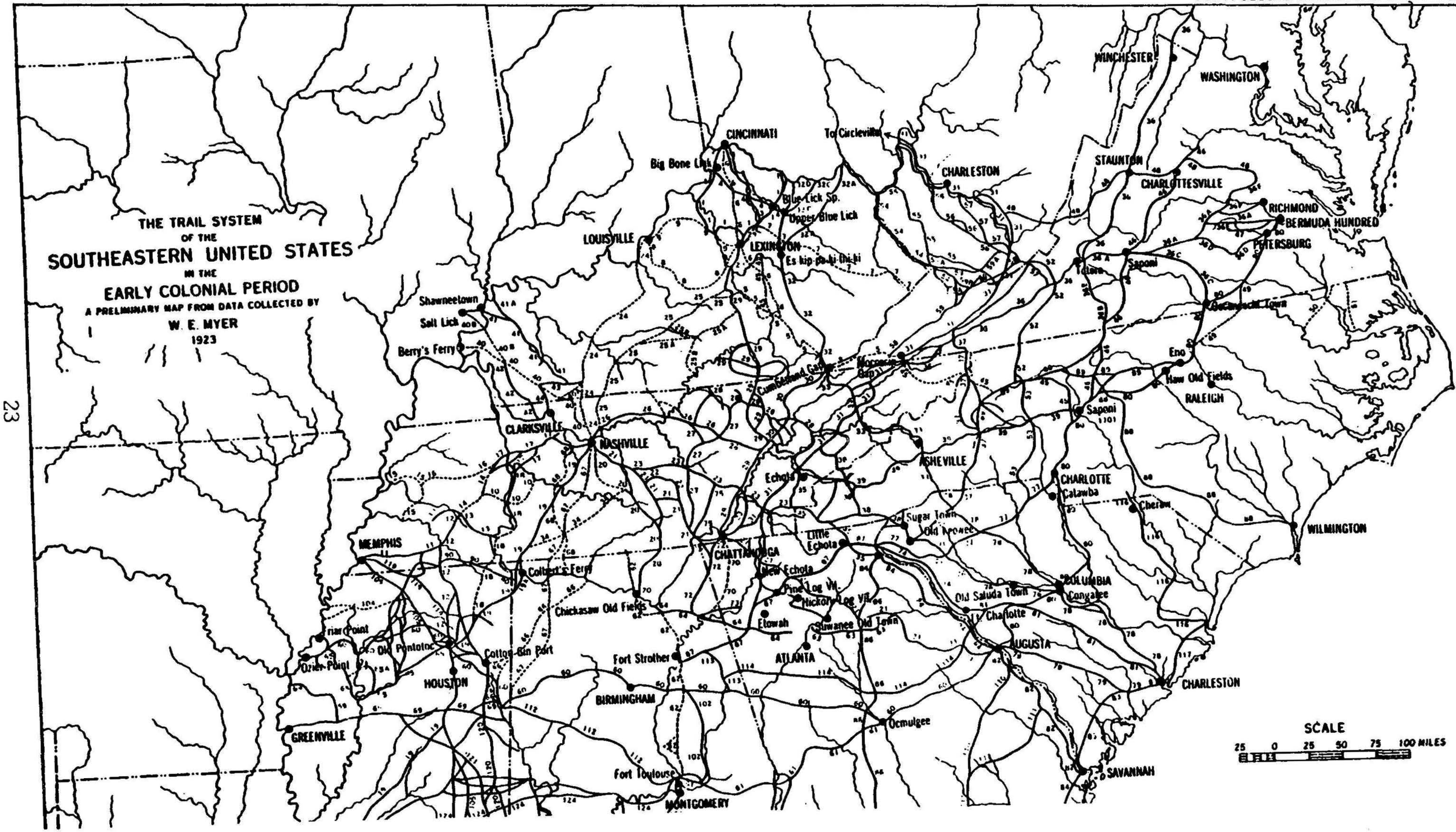
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4. William E. Myer, "Indian Trails of the Southeast," 42nd Annual Report of the Bureau of Ethnology (Washington, D.C.: U.S. Government Printing Office, 1928), p. 735.

Figure 3.1

The Trail System of the Southeastern United States; note Trail No. 5 and the trail network converging on Cumberland Gap.

Courtesy of William E. Myer, "Indian Trails of the Southeast," 42nd Annual Report of the Bureau of Ethnology. Washington, D.C.: U.S. Government Printing Office, 1928.


THE TRAIL SYSTEM
OF THE
SOUTHEASTERN UNITED STATES
IN THE
EARLY COLONIAL PERIOD
A PRELIMINARY MAP FROM DATA COLLECTED BY
W. E. MYER
1923
CINCINNATI
To Circleville
Big Bone Lick
Blue Lick Sp.
Upper Blue Lick
LOUISVILLE
LEXINGTON
Es kip-po-ki-thi-ki
Shawneetown
Salt Lick
Berry's Ferry
CLARKSVILLE
NASHVILLE
MEMPHIS
Colbert's Ferry
CHATTANOOGA
Chickasaw Old Fields
Friar Point
Old Pontotoc
Ozier Point
Cotton Gin Port
HOUSTON
Fort Strother
BIRMINGHAM
GREENVILLE
Fort Toulouse
MONTGOMERY
Echota
Little Echota
New Echota
Pine Log Vil.
Hickory Log Vil.
Etowah
Suwanee Old Town
ATLANTA
Ocmulgee
CHARLESTON
WINCHESTER
WASHINGTON
STAUNTON
CHARLOTTESVILLE
RICHMOND
BERMUDA HUNDRED
PETERSBURG
Saponi
Tutelo
Occaneechi Town
Eno
Haw Old Fields
RALEIGH
Saponi
ASHEVILLE
CHARLOTTE
Catawba
Cheraw
WILMINGTON
Sugar Town
Old Arrowee
COLUMBIA
Congaree
Old Saluda Town
Charlotte
AUGUSTA
CHARLESTON
SAVANNAH
SCALE
25 0 25 50 75 100 MILES

only traveled through it but documented the fact in a written account of the 1750 journey. Though a physician by training, Walker became involved as a land speculator with the Loyal Land Company; abundant land brought him west of the Blue Ridge Mountains as an entrepreneur. Walker's group intersected the old Indian Road near Big Lick (present Roanoke, Virginia) and journeyed down it eventually reaching the foot of the Cumberland Mountains in April. On the thirteenth of that month he recorded the first written acount of the Gap:

> April 13th. We went four miles to large Creek, which we called Cedar Creek, being a Branch of Bear-Glass, and from thence Six miles to Cave Gap, the land being Levil [sic]. On the North side of the Gap is a large Spring, which falls very fast, and just above the Spring is a small Entrance to large Cave, which the Spring runs through, and there is a constant Stream of Cool air issuing out. The Spring is sufficient to turn a Mill. Just at the foot of the Hill is a Laurel Thicket, and the Spring Water runs through it. On the South side is a plain Indian Road. On the top of the Ridge are Laurel Trees marked with crosses, others Blazed and several Figures on them. As I went down on the Other Side, I soon came to some Laurel in the head of a Branch. A Beech stands on the left hand, on which I cut my name. This Gap may be seen at a considerable distance, and there is no other, that I know of, except one about two miles to the North of it, which does not appear to be So low as the other. The Mountain on the North Side of the Gap is very Steep and Rocky, but on the South side it is not So. We called it Steep Ridge. At the foot of the hill on the North West Side we came to a Branch, that made a great deal of flat Land. We kept down it 2 miles, Several other Branches Coming in to make it a large Creek, and we called it Flat Creek. We camped on the Bank where we found very good Coal. I did not Se [sic] any Lime Stone beyond this Ridge. We rode 13 miles this day.
>
> April 14th. We kept down the Creek 5 miles Chiefly along the Indian Road.
>
> 15th. Easter Sunday. Being in bad grounds for our Horses we moved 7 miles along the Indian Road, to Clover Creek. Clover and Hop Vines are plenty here.(5)

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5. J. Stoddard Johnson, First Explorations of Kentucky, Filson Club Publication No. 13 (Louisville: John P. Morton And Company, 1898), pp. 48-50.

Walker's account gives confirming information as the description incorporates observations of Cudjo Cave, the spring which flows past the iron furnace and the Indian road followed by the explorers. His notation of vegetation is valuable: laurel, beech and in the valley, clover and hop vines, and he purportedly chose the name Cumberland (after the Duke of Cumberland) for both the gap and the large river encountered at Pine Mountain Gap.[6] During the French and Indian War (1754-1763) exploration and travel temporarily halted but in 1763 a group of long hunters led by Elisha Walden (Wallen) crossed into Kentucky through Cumberland Gap.[7] Typically their successful hunt brought others along the same route for similar purposes. Unfortunately no record remains of their observations pertaining especially to the trail in and about Cumberland Gap.[8]

No single individual has been associated with the Gap more than Daniel Boone who used it for the first time in 1769. In that year he accompanied John Finley, a compatriot from the French and Indian War, on a hunting trip to Kentucky. During the exposure to Kentucky, including central and northern portions, he determined to relocate there with his family who at the time resided in the Yadkin Valley. Though Boone tried to move, he found that difficulty with the Indians and demands of Richard Henderson, lawyer and land speculator, intervened in his resettlement. On a retainer from Henderson as agent and advisor, Boone agreed to mark the trail "from Long Island on the Holston [River]

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6. Thomas L. Connelly, "Gateway to Kentucky: The Wilderness Road, 1748-1792," Register Of Kentucky Historical Society, Volume 59 (1961), pp. 112-113, (hereafter cited as Connelly, Gateway To Kentucky). Connelly briefly discusses origins of the Cumberland label on several natural phenomena in the region.

7. Ibid., pp. 114-115.

8. Numerous long hunters traveled through the Gap at this time including Isaac Lindsay (1767); John Finley (1767); and Kasper Mansker, John Rains, Joseph Blake, Abraham Bledsoe (1769). See Connelly, Gateway To Kentucky, pp. 109-132.

through Cumberland Gap to the Kentucky River."[9] With some thirty men Boone left the Holston Valley March 10, 1775, and completed the task by mid-April, a tribute to diligence, but more to the fact he followed "Indian, hunter, or buffalo trails . . . occasionally he would need to make a short cut by chopping out underbrush, removing logs . . . ."[10] Initially this appears to be a remarkable effort, however, assessment should be tempered as the route had been used for centuries by wild game and native peoples. "The chief contribution of this party was made in trimming back limbs, removing logs, and selecting suitable fords at streams and crossings."[11] Known in part as Boone's Trace, it served as a walking and pack animal route on the same track as the Warriors Path to Flat Lick before bearing northwest toward Hazel Patch and Rockcastle River (see Figure 3.2).

GOVERNMENT EXPENDITURES -- VIRGINIA

In 1779 the first government funding for a road across the Cumberland Mountains into the County of Kentucky took place. The Virginia legislature passed into law an act for purposes of building ". . . a good waggon [sic] road through the great mountains . . . [which will permit] cementing in one common interest [for] all the citizens of the state. . . ."[12] Evan Shelby and Richard Callaway received the appointment as commissioners to explore and make the recommendation of the route; however, John Kinkead(e) and William McBride did the actual

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9. Connelly, Gateway To Kentucky, p. 121.

10. Ibid., p. 121; Kincaid, The Wilderness Road, pp. 99-105.

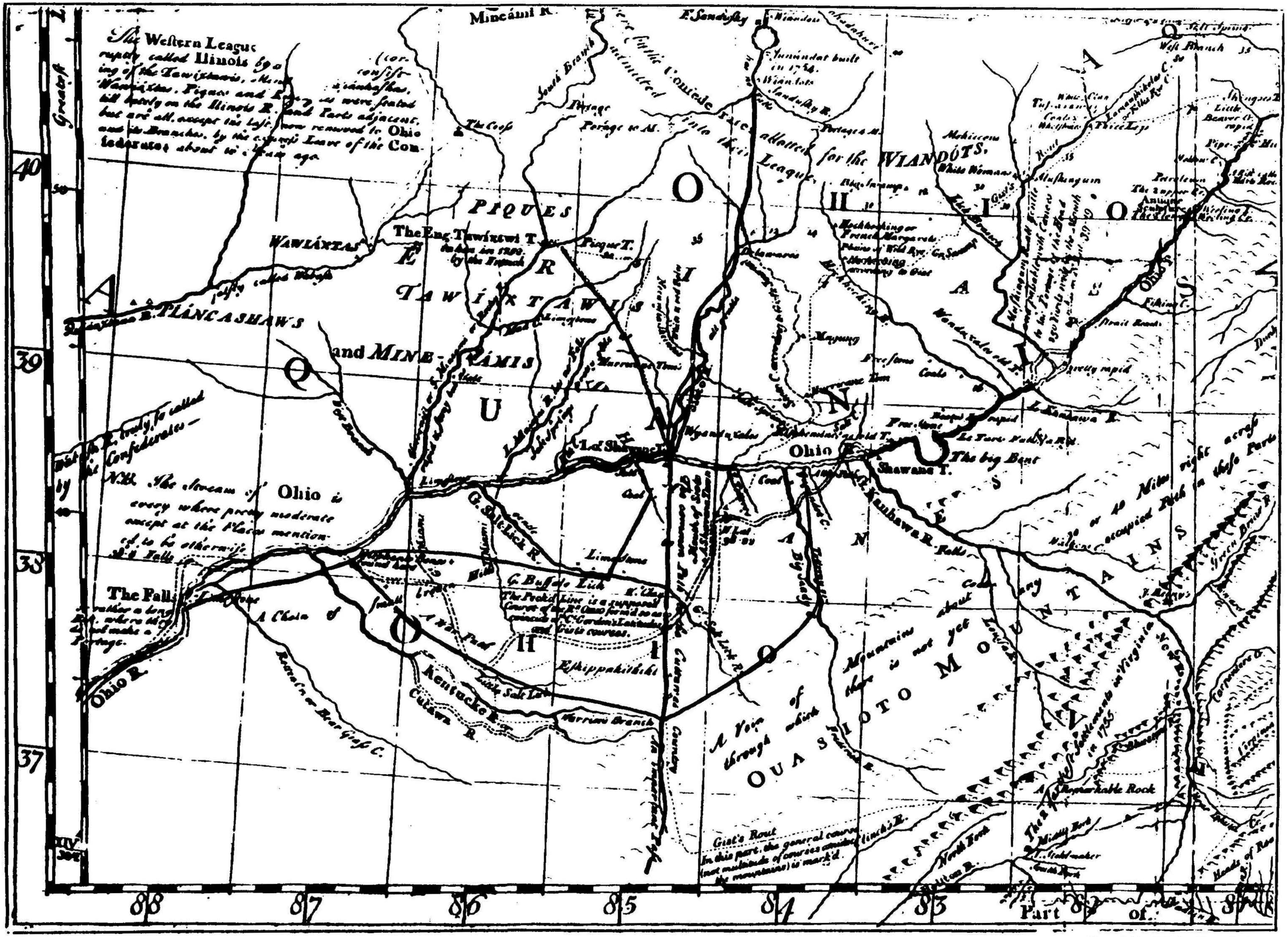
11. Thomas D. Clark, A History of Kentucky, (Lexington, Kentucky: The John Bradford Press, 1960), p. 179, (hereafter cited as Clark, A History).

12. William Waller Hening, The Statutes at Large, Being A Collection Of All The Laws of Virginia, 1619-1792, Volume 10 (Richmond: George Cochran, 1822), p. 143. See Appendix A for copy of the Act.

Figure 3.2

Warriors Path as shown on Pownall-Evans Map.

Courtesy of Mary Verhoeff. The Kentucky Mountains Transportation and Commerce 1750-1911: A Study in the Economic History of a Coal Field, Filson Club Publication No. 26. Louisville, Kentucky: John A. Morton Company, 1911.



Copyright, 1911, by Mary Verhoeff

SECTION OF THE POWNALL-EVANS MAP, SHOWING THE "WARRIOR'S PATH," 1755-1776.

work having been appointed by Washington and Kentucky counties.[13] The General Assembly asked the commissioners

> . . . to cause such road, with all convenient despatch [sic], to be opened and cleared in such manner as to give passage to travellers with pack-horses, for the present, and report their proceedings therein to the next session of assembly, together with a computation of the distance, and the best estimate they can make of the practicability and charge of completing the same and making it a good waggon [sic] road.(14)

Laborers working on the project received compensation of 300 acres of unclaimed land or 120 pounds, their choice if they worked the entire time.[15]

At the time road law in Virginia adhered to requirements enacted during the 1748 session of the colonial General Assembly. County courts, the law said, had dominion over road repair and construction and as such roads should be convenient for travel to and from Williamsburg, county court houses, churches, mills and ferries.[16] The guidelines specified roads to be "thirty feet broad at least"; and free from obstructions; anyone felling a tree across a highway or killing trees "within a distance of sixty feet from such highway, would be subject to fine."[17] All male laborers, similar to English road law, donated time each year between April and August for purposes of building and maintaining roads under direction of a county court appointed surveyor.[18] Additional

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13. Ibid.; Letter by Earl G. Swem in Mississippi Valley Historical Review, Volume 11, Number 1, (June 1915), pp. 120-121.

14. Ibid., Hening, The Statutes at Large, p. 143.

15. Ibid., p. 144.

16. William Waller Hening, The Statutes at Large, Being A Collection Of All The Laws of Virginia, Volume 6 (Richmond: George Cochran, 1819) p. 64.

17. Ibid., pp. 64-65.

18. Ibid., pp. 65-66.

requirements specified bridges have a level floor twelve feet wide and that points at which two roads intersect should have signposts for travelers to the "most noted place" on a particular road.[19]

Once Kinkead(e) and McBride completed the work on the road over Cumberland Mountain (July-August 1780) they petitioned the Virginia General Assembly for payment for themselves and their employees (see Appendix B). Likewise they billed for expenses of workers who supplied principally packhorses and beef[20] (see Appendix C). Specific details on the nature of the work within the area of Cumberland Gap are not extant except that in the bill presented by Kinkead(e) he spoke of work ". . . Completed so that waggons [sic] has passd [sic], and has rendered much ease and Expedition to Travelers, etc."[21]

Again in 1790 the General Assembly passed an act designed to make improvements to the Wilderness Road (see Appendix D). A rationale given in the Act's preamble stated:

> . . . the road leading through the Wilderness to the district of Kentuckey [sic], is much out of repair, whereby the intercourse between the inhabitants of the said district and the eastern part of this state [Virginia] is greatly obstructed.(22)

Particularly noted in the legislation was the section of road from the Russell County line ". . . to Englis's station [3 miles from Crab Orchard] in the said district."[23]

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19. Ibid. pp. 66-68.

20. "Cumberland Gap Road," Sons Of The Revolution in State of Virginia Semi-Annual Magazine (July 1929), pp. 96-100.

21. "Notes and Documents," Mississippi Valley Historical Review, Volume II (June 1915), p. 122.

22. William Waller Hening, The Statutes at Large, Being A Collection Of All The Laws Of Virginia, Volume 13 (Richmond: George Cochran, 1823), p. 184.

23. Ibid.

Like the work authorized in 1779, details remain obscure though it seems demonstrable that an intent to make the route usable by wagons began with legislation in 1779 and 1790. Vegetative cover rapidly reclaimed the landscape in the humid climate of the Cumberlands requiring regular road repair. The need to maintain and use the road with regularity during the 1780s points to the demise of buffalo herds that kept it defined and moderately passable; sustained settler traffic during the next three decades, contributed as well to the need for maintenance.

For the remainder of the 1790s a variety of actions pertaining to the road through the wilderness continued to emanate from the General Assembly of Virginia. In late 1790 the assembly passed an act to protect travelers on the road.

> That the commanding officers . . . are hereby authorized and directed to order out of their respective counties alternately in every year, thirty effective men, in the months of October and November, to rendezvous on the road leading through the wilderness, at the east foot of Cumberland Mountain, on the fifteenth of October, and on the tenth day of November: . . . whose duty it shall be to guard and protect such company through the wilderness, as may be in readiness at the place and on the days above mentioned.(24)

Continued concern responsive no doubt to public petitions and concerns, manifested itself in another act legislating improvement of the road to Kentucky. In November of 1792 the Virginia assembly once again sought to facilitate movement of goods and people over the Cumberland Mountains.[25] The wagon road would extend

> . . . from the blockhouse in the western extremity of the county of Washington [Virginia], to the top of Cumberland Mountain, in the county of Russell (now Lee) being where the road from the state of Kentucky terminates. . . .(26)

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24. Ibid., p. 202. For the complete text see Appendix E.

25. Ibid., p. 544.

26. Ibid. For the complete text see Appendix F.

Further, the assembly appointed seven commissioners to study the feasibility, distance and expenditure for such a road.

A remarkable amount of recognition and importance of roads gained momentum in the 1790s on the frontiers of the former thirteen colonies. An ever increasing flow of population west of the Appalachians created much of the demand for roads, especially as population soared in frontier Kentucky where population in 1790 stood at 73,000 and a decade later reached 220,000.[27] As increases mounted, more demand for improved transportation (water and land routes) arose, particularly as Spanish threats to close the port of New Orleans became known. In Kentucky the desire for statehood also came to the fore and subsequently Virginia released her claims; Kentucky entered the Union June 1, 1792, as the fourteenth state. Thus a combination of events and expansion onto the western frontier caused pressure to build for government services, including transportation improvements.

Kentucky's response began in the private sector with a number of individuals subscribing to improvements on the Wilderness Road directed by Colonel John Logan and James Knox.[28] During the summer of 1792 one Harry Innis disbursed money for "men . . . employed as 'road cutters,' as 'surveyors,' to 'carry provisions,' to 'grind corn,' and 'collect bacon.'"[29] The portion of the route repaired and improved extended from the Crab Orchard to Powells Valley with the work completed in twenty-two days. It is difficult to imagine much more than cursory improvements in such a relatively short period of time, and the work dovetailed with the improvements Virginia made (see above) during the Fall of 1792.

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27. Speed, The Wilderness Road, p. 30.

28. Ibid., pp. 4850.

29. Ibid., p. 50.

State funded projects on the Wilderness Road in Kentucky transpired after Indian depredations took place. Governor Isaac Shelby addressed the legislature in November 1793 noting, ". . . the President of the United States [authorized him] to establish two blockhouses on the Wilderness Road leading to the Holston Settlements, provided they could be garrisoned by militia. . . ."[30]

Shelby stationed troops at a blockhouse on Laurel River and at one on Turkey Creek for up to a period of six months and in 1794, after the battle of Fallen Timbers (Ohio), attacks ceased. Muster rolls and payrolls for the militia during 1793 and 1794 specifically use the name "Wilderness Road."[31] It is the earliest formal, official designation identified for the Wilderness Road; earlier ones refer to the road as, "to" or "through the wilderness."

Actual physical work on the road by Kentucky commenced in November 1795, with "An Act opening a Wagon Road to Cumberland Gap," and appropriating £2,000 for the project.[32] Crab Orchard was chosen as a beginning point and it would ". . . terminate on the top of Cumberland Mountain, in the gap through which the present road passes."[33] The law authorized commissioners to employ workers of various kinds and specified the road should be built to standards of 30 feet wide, except for bridges, and accommodating wagons up to "one ton weight."[34] It further stated that "when completed the road was to be considered as "established," and might not be "changed, altered, or obstructed by private individuals, or

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30. Verhoeff, The Kentucky Mountains, p. 105.

31. "Muster Rolls 1787-1861," folders, Kentucky State Historical Society Collections, Frankfort.

32. Speed, The Wilderness Road, p. 51.

33. Verhoeff, The Kentucky Mountains, p. 106.

34. Ibid.

by the court of any county, without consent of the Legislature."[35] Among those who sought to be a commissioner was Daniel Boone; at 62 years of age he applied to Governor Shelby to head the project (see letter in Appendix G), but the governor chose, instead, Colonel James Knox and Colonel Joseph Crocket.[36] The latter announced the road open in the "Kentucky Gazette," October 15, 1796 (see Appendix H).[37] Though the route somewhat changed location north of the Cumberland River, south to Cumberland Gap it remained on the old Warriors Path. According to Kincaid the only opposition to the improvement came from packhorse entrepreneurs who saw widening of the road as tantamount to being put out of business by wagon freighting.[38]

TURNPIKE ERA -- KENTUCKY

During this significant period in the history of the Wilderness Road when much traffic used it, an ongoing need for maintenance and improvement continued. Due to many demands on the treasury of the United States, funds for transportation became scarce and various states attempted to raise money for roads through tolls assessed users. Both Kentucky and Virginia developed a system of turnpikes as a means to pay for roads and the maintenance of them. Each assumed responsibility for major roads from the counties who previously functioned as the main administrative unit; however, pressure for improved roads led to state

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35. Ibid., pp. 106-107.

36. H. Addington Bruce, Daniel Boone And The Wilderness Road (New York: The Macmillan Company, 1910), p. 299; Kincaid, The Wilderness Road, pp. 188-190.

37. Kincaid, The Wilderness Road, p. 191.

38. Ibid., p. 191.

control of major thoroughfares.[39] Kentucky, concerned about the Wilderness Road, enacted legislation in 1797 for purposes of creating a turnpike with a tollgate at Cumberland Ford.[40] A toll schedule for users ranged from 4½ cents to $1.00 depending upon the kind of animal, size of wagon, sex and age of user.[41] A year later in order to encourage settlers to move to Kentucky, the legislature exempted persons "removing with their families to this commonwealth."[42] Despite legislation the Wilderness Road "remained little more than a pack road until 1818," when improvements began in earnest.[43] More and more Kentucky turned management of major roads over to private interests.

Legislative acts in Kentucky through the nineteenth century illustrate concern with the turnpike system and many pertain to the "Wilderness Turnpike Road." A good bit of emphasis focused on funding of the road and insuring that toll charges would be used to defray maintenance and repair costs. Kentucky borrowed the system of supplying labor for road repair from Virginia. Over the years requirements varied related to work responsibilities; the following typifies arrangements:

> Every male citizen in Bell county, Kentucky, between the age of sixteen years and forty-five years, living within one mile of said road, shall, under the direction of an overseer, work at

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39. Turner W. Allen, "The Turnpike System In Kentucky: A Review Of State Road Policy In The Nineteenth Century," The Filson Club History Quarterly 28 (July 1954): 24 (hereafter cited Allen, "The Turnpike System").

40. Ibid. The state purchased two acres of land for the tollgate at present Pineville and the highest bidder (Robert Craig) collected tolls from which road repairs were paid.

41. Verhoeff, The Kentucky Mountains, p. 108.

42. Allen, "The Turnpike System," p. 244.

43. Clark, A History, p. 180.

least four days out of each year on repairing and keeping in repair the aforesaid road, bridges, and so forth; but the said county court may excuse any person from working on said road on account of disease or infirmity.(44)

Road Standards

Requirements and standards often reflected the amount of money available from the Kentucky legislature; in 1839 it directed $40,000 be spent improving the Crab Orchard to Cumberland Gap portion of the road.[45] Studies to determine priorities ascertained that the "descent from Cumberland to Yellow Creek" deserved first place.[46] Later the same year Resident Engineer for Kentucky, H.J. Eastin, filed a full report (see Appendix I) and detailed plan. Specific mention of Cumberland Mountain included:

1. maximum grade -- 4 degrees (one foot rise in fifteen feet base).
2. revetment walls instead of sloping embankment.
3. 26 feet wide road.[47]

Engineering standards and requirements sought to improve conditions for users; in the following law specific requirements are listed:

The road must be made --
1. Of the best and most durable material that can conveniently be procured in its neighborhood.
2. The stone or gravel must be at least ten inches deep and that part of the road covered with it must be at least ten feet broad. If the road is made of wood it must be at least eight

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44. "Laws of Kentucky," Acts of the General Assembly of Kentucky, 1883-1884, p. 1361.

45. "Appendix To The House of Representatives' Journal," Kentucky Legislative Documents 1839-1840, Vol. 1 (Frankfort, 1840), p. 225.

46. Ibid., p. 226.

47. Ibid. pp. 305-307.

feet broad and covered with plank not less than two and a half inches thick, with suitable turnouts at convenient distances.
3. If a turnpike, it shall have a grade not exceeding three degrees, with all necessary dirt turnouts; and if a plank road, a grade not exceeding two degrees.
4. It shall be so made as to present, or to obtain with use, a smooth, hard, permanent surface.
5. It shall have good convenient embankments and necessary culverts to facilitate its being crossed by other roads.
6. It shall have all needful side drains, culverts, and bridges.
7. The planks, stone, or gravel part shall be made near to one side of the road, except in crossing fills or deep cuts.(48)

Point number three restricts the ascent or descent on the road thereby accommodating wheeled traffic and providing insight into road locale for the Cumberland Gap area.

No satisfactory management system evolved and a variety of commissions representing sectors of the turnpikes, by county, were tried. Early in the nineteenth century the governor appointed directors by county as the search for improved administration continued. Predictably the turnpike system in Kentucky had many demands placed on it as population increased and livestock in particular crowded the roads, especially the Wilderness Road, as drovers moved stock to northern and southern markets. Unfortunately more traffic required more expenditures for maintenance and repair; for a frontier state the lack of capital served as a hinderance to development, including the transportation system. This resulted in increased pressure for state government and private investors to assume more responsibility for roads and other aspects of transportation.[49] In due course pressures reached the federal government, which increased support for roads at the turn of the twentieth century.

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48. "Laws Of Kentucky," Acts of the General Assembly of Kentucky, 1851-1852, p. 246.

49. During the first half of the nineteenth century this was referred to as "internal improvements."

TURNPIKE ERA -- VIRGINIA

Similar kinds of pressures and problems existed on the Virginia segment of the Wilderness Road. To the consternation of many Kentuckians, Virginia established a tollgate in the "saddle" of the gap near the state line.[50] Responding to a petition from Lee County in 1804 to repair the road so that "wheeled carriages" would no longer travel to Beans Station, then back north to the gap, the Virginia Legislature authorized construction of a turnpike in 1805. The County Court of Lee County moved ". . . to erect a turnpike" on the road leading from "Mokerson" [sic] Gap through Lee County to Cumberland Gap."[51] Virginia intended the toll charges to be used to repair that road but access to many nearby roads depended on crossing Cumberland Gap. Numerous travelers protested and even the governor and legislature of Kentucky remonstrated to their counterparts in Virginia for relief (see Appendix K). Despite these efforts, however, "a body of armed men . . . guard[ed] and compel[led] the payment of toll. . . ."[52] Relief followed in 1807 when the legislature of Virginia repealed the act and moved the tollgate[53] (see Appendix L).

Early on Virginia looked to the ocean and the cities of Baltimore and Philadelphia for goods and markets. In time demands for roads to the interior increased, but sparsely populated areas could not provide the labor or taxes needed under traditional road laws.[54] Consequently,

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50. Verhoeff, The Kentucky Mountains, p. 107. The "saddle" of Cumberland Gap refers to the narrowest point between the mountains through which the Wilderness Road passed.

51. Ibid. See Appendix J.

52. Ibid.

53. Samuel Shepherd, The Statutes at Large of Virginia (Richmond, 1836), p. 327.

54. Phillip Morrison Rice, "Internal Improvements in Virginia, 1775-1860" (Ph.D. dissertation, University of North Carolina, 1948), p. 44, (hereafter referred to as Rice, "Internal Improvements.")

turnpikes, a pancea for some, could not be justified either as traffic did not generate enough revenue to pay for and maintain them. Only when the commercial advantages of trade with the Ohio Valley came to be recognized did Virginia merchants realize the market potential of the interior and thereby demand roads.[55] Significantly this did not develop during the period of highest travel along the Wilderness Road, as Virginia spent only a relatively small amount of money between 1785-1815 on the route.[56] During the first decade of the nineteenth century Virginia's General Assembly permitted toll privileges in Montgomery and Lee counties and in 1816 passed legislation creating funding for "internal improvements" through a newly created Board of Public Works. This Board received authorization from the General Assembly in 1831 to survey a route from Abingdon to Cumberland Gap ". . . by way of the Scott and Lee court-houses."[57] The route some 262½ miles long would connect with Price's Turnpike between the Roanoke and James rivers. A more specific act passed in 1832 directed the survey route and standards for construction including grades ". . . not [to] exceed five degrees"; brush, timber and rock to be removed for a smooth 18 foot-wide surface; timber cut back 12 feet from the road shoulders "except on steep hill-sides [where it] shall be left standing on the lower side of the road"; and ditches cut to drain water across the road through "paved gutters or culverts."[58]

Road Standards

Further legislation in 1834 noted that the state and counties would fund a portion of the cost and private subscriptions be willingly accepted.

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55. Ibid., p. 115.

56. Ibid., p. 384.

57. Virginia Acts, 1830-1832, p. 164.

58. Virginia Acts, 1831-1832, p. 94. For the route mapped out see Map No. 1.; unfortunately the 1833 map contains little detail for the immediate environs of Cumberland Gap.

In short, funding utilized a very eclectic approach.[59] Various legislation addressed construction and maintenance standards for roads in Virginia. Road grades set at five degrees in 1832 and revamped in 1835 were to not ". . . exceed a maximum of four degrees of ascent or descent, except upon special permission from the county courts, the reasons whereof to be stated and recorded."[60] Again in 1837 the General Assembly found it necessary to adjust the standards:

> That the width of the said road may be reduced to fifteen feet, in places where there are great difficulties to be overcome in constructing the same; and that where the said road cannot be constructed at the grade required by the aforesaid act, without expensive excavation, it may be constructed at a grade not exceeding six degrees.(61)

James H. Piper, writing to the Board of Public Works in 1839, reported that grades ". . . were reduced from 5 and 6 degrees to 3, 3¼ and 3½, without any increase of distance on the general line," for locations ". . . on Cumberland Mountain, Powell's river hill, over Wallin's ridge, and on the north side of Powell's mountain."[62] A rather detailed map of the work to improve the road at Cumberland Gap in 1838 illustrates the 3 degree grade for the Virginia Road (Cumberland Gap and Price's Turnpike) and the switchbacks for the route up Gap Creek on the Tennessee Road from Beans Station (see Figure 3.3). Road width became an issue for farmers along it and in 1839 the General Assembly reduced it to six feet ". . . where it passes through fields and open lands clear of timber, so as to make the aggregate width in such cases, thirty feet."[63] During 1840 Virginia suspended funding of public roads by the Board of

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59. Virginia Acts, 1833-1834, p. 106-107.

60. Virginia Acts 1834-1835, p. 66.

61. Virginia Acts, 1836-1837, p. 91.

62. "Twenty Third Annual Report of the Board of Public Works," (Richmond: Shepherd and Colin, 1839), p. 448.

63. Virginia Acts, 1839, p. 63.

Figure 3.3

Tennessee (lower Virginia) and Virginia Road portions of Wilderness Road near Cumberland Gap, 1833.

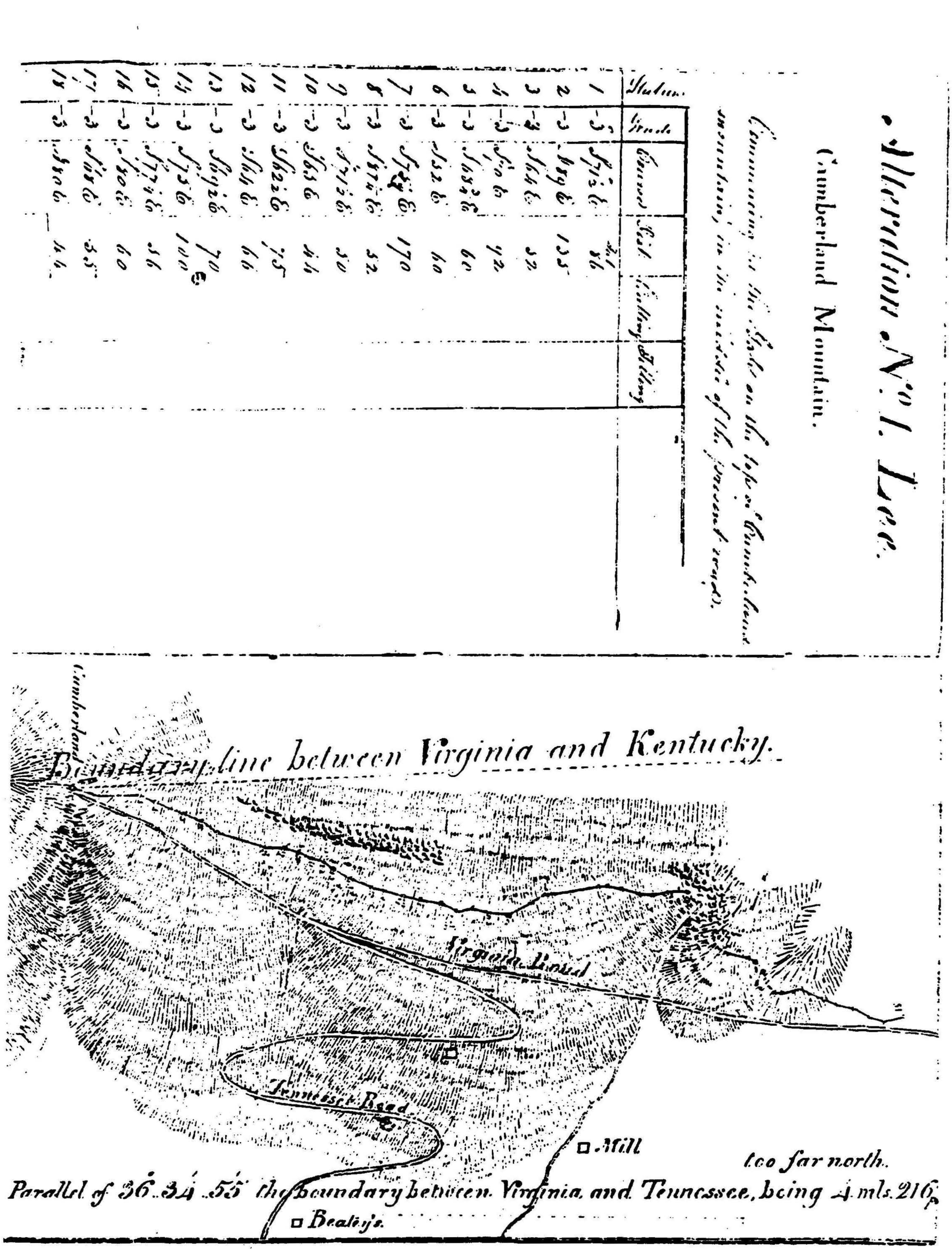
Courtesy of *Book B*, "Alteration in the Location of the Cumberland Gap and Price's Turnpike in the Counties of Lee and Scott Made in the Year 1838," Virginia State Papers, Virginia State Library, Richmond.

Illustration No. I. Page.

Cumberland Mountain.

Commencing on the State line on the top of Cumberland mountain, and ending on the summit of the first ascent.

Stations	Distance	Feet	Miles	Remarks
1	Top of Mountain			
2	1 mile down	1320		
3	2 miles down	2640		
4	3 miles down	3960		
5	4 miles down	5280		
6	5 miles down	6600		
7	6 miles down	7920		
8	7 miles down	9240		
9	8 miles down	10560		
10	9 miles down	11880		
11	10 miles down	13200		
12	11 miles down	14520		
13	12 miles down	15840		
14	13 miles down	17160		
15	14 miles down	18480		
16	15 miles down	19800		
17	16 miles down	21120		
18	17 miles down	22440		



Public Works due to economic reasons associated with hard times in the nation (Panic of 1837) and the lack of agreement with the counties to share in the funding. Once the responsibility for maintenance and upkeep fell to the counties the road resorted to a series of county roads and not a state highway.[64] Tolls collected did not always get used properly and the combination of factors created numerous problems by 1850 (see Appendix M for example of toll charges). Yet at the time some improvements were made by the Principal Engineer who reported, ". . . the Cumberland Mountain is ascended at 3 degrees without loss of distance, instead of 6 degrees, assumed by the old location."[65] An assessment of the results from changing the grade was included in a report by John H. Yawter who wrote:

> Red Sulphur Springs, Sept. 1, 1841.
> J. Brown, Jr. Second Auditor.
>
> Dear Sir,
>
> In yours of 6th July informing me of my appointment by the Board of public works as engineer of the Price's turnpike and Cumberland gap road, you request me (after I shall have visited the whole line of road) to communicate the result in a report to the Board of public works. Having accepted that appointment and entered upon the duties thereby imposed, and having visited the whole line of said road, I proceed now to give such information as I have been able to collect in relation to the road and its management, as follows, to wit: The first section of said road commencing at the gap of Cumberland mountain and extending eastwardly along the face of the mountain, was undertaken by Nelson Preston for the sum of $5000, at the rate of $1000 per mile. The first location made at this place was on a grade of six degrees, and on that location the road might have been made at considerable less expense, but it seems that the late engineer, after consultation with the county director, was induced to change that location, and to

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64. Rice, "Internal Improvements," pp. 394-396; Thirty First Annual Report of the Board of Public Works (Richmond: Shepherd and Colin, 1846), p. 262.

65. Claudius Crozet, "Report On The Examination Of The Cumberland Gap And Price's Turnpike Road," Twenty Sixth Annual Report, Board of Public Works (Richmond: Shepherd and Colin, 1841), p. 9.

place it on a grade of three and three and a half degrees, which (from the peculiar formation of the mountain) was the only other grade that could be adopted. This alteration was no doubt a valuable one, not only on account of the former grade being objectionable, but also because there is another road leading from Abingdon by the way of Bean's station, and uniting with this road in the gap of the mountain, which road has heretofore usually been preferred by travellers, and with which this road must necessarily come in direct competition. And it is therefore not an unreasonable calculation, that the additional cost, of constructing the road upon the new location, will be more than counterbalanced by the additional travel thereby secured. The construction of this section of road on the new location was regarded as being so very difficult, that it is said the proposals made at public auction for its construction, ranged from thirteen to seven thousand dollars. A contract was subsequently made with Mr. Preston on the terms above stated. Mr. Preston has been actively engaged during the season and a part of last fall, has nearly completed about four miles, and will, he thinks finish the whole in the course of this season. He has received the sum of $1500, and has lately received an order on the treasurer of Lee for $1700 more. It appears that this contract was made with Mr. Preston, the 19th June 1839, and the road was to be finished by the 1st December 1840. The second section of five miles adjoining the former and extending from the fifth to the end of the tenth mile, has not yet been placed under contract, in consequence of a want of funds; notice has been given, however, that it will be offered for contract on the 17th of this month.(66)

This account illustrates the amount of grade preferred by highway builders and users for wagon traffic on roads like the Wilderness Road. With the technology available at the time, the amount of cutting and filling over small creeks appears negligible, rather roads tended to follow the contour upstream by means of loops to accomplish a gradual ascent or descent where the creek narrowed.

Vawter's comment about the relative use of the two roads which met in Cumberland Gap serves to illumine a traffic pattern for the 1840s.

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66. Twenty Sixth Annual Report of the Board of Public Works (Richmond Shepherd and Colin, 1841), p. 270.

Studies underscore that a sizeable amount of stock drovers used the Wilderness Road in the nineteenth century with many herds destined for Tennessee, Georgia and the Carolinas (see Appendix N).[67] Of course the major market in the southeast served to emphasize the route to Beans Station, which would have followed the branch descending or ascending from Cumberland Gap, Tennessee. For the years 1790-1810 when the greatest numbers of people used the road, the preferred route followed the contour lines around Cumberland Mountain into the Gap; it logically extended southwestward from the Great Valley via Abingdon through Moccasin and Kane gaps to Jonesville and Cumberland Gap.

Through circumvention of routes, bypasses, armed force and various other tactics, turnpikes began to lose effectiveness in both Kentucky and Virginia as the nineteenth century neared a close. Both states began to authorize purchase of such routes if a small percentage of the electorate so desired.[68] In Kentucky a tollgate war broke out and the raiders caused wholesale abandoment of the tollroads and many fees went uncollected.[69] According to Allen, by 1900 most counties in Kentucky had purchased the stock of the turnpike companies (public and private) and the roads became free.[70] Early this century both state and federal government became much more involved in financing, constructing and maintaining public roads.

CANAL

A rather unique scheme to improve transportation in southeast Kentucky and adjacent areas came about during the canal boom era in the

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67. Wilson and DeVorsey, "Preliminary Research Report, " pp. 44-47.

68. Allen, "The Turnpike System," p. 255.

69. Ibid., p. 256.

70. Ibid., p. 257.

United States. Kentucky's Board of Internal Improvements authorized a feasibility study in 1835 to ascertain whether navigation on the Kentucky River and its tributaries could be improved.[71] While doing the survey the engineer, R.P. Baker, examined the area beyond Cumberland Ford toward Cumberland Gap and concluded that navigation could be connected between the Cumberland and Powell rivers by means of canals and a tunnel through Cumberland Mountain.[72] He proposed that the tunnel be 700-800 yards long and the water be acquired from the spring flowing out of the mouth of Cudjo Cave. Explaining further, he said the rate of flow provided enough water for a canal to convey water traffic down Gap Creek to Powell River; after that the route lay by the Clinch, Tennessee, Hiwassee and Okoa rivers, a canal to Augusta, and the Savannah River to the Atlantic Ocean.[73] Descending Cumberland Mountain the canal served as a route to Yellow Creek and then the Cumberland, Kentucky and Ohio rivers and finally the Gulf of Mexico. Financial considerations and the Panic of 1837 brought the scheme to a halt and land transport continued to serve the residents of the tri-state area.

OBJECT LESSON ROAD

Just after the turn of the twentieth century the first major realignment and modernization of the Wilderness Road over Cumberland Gap was initiated. Under the umbrella of the United States Department of Agriculture, the Office of Public Roads, created in 1893 and a precursor of the present Federal Highway Administration, had charge of the project.

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71. R.P. Baker, "Report Of The Principal Engineer, To The Board Of Internal Improvements, January 19, 1836, in Journal Of The House Of Representatives Of The Commonwealth Of Kentucky, (Frankfort, Kentucky: Albert G. Hodges, 1836) pp. 16-17.

72. Ibid., p. 85.

73. Ibid., p. 90; for the complete text of the report see Appendix O.

It sought to demonstrate the efficacy of improved road building techniques topped with a macadamized surface, smooth and water resistant. Called object lesson roads, the Office of Public Roads hoped that by constructing them at many locales they would quickly find favor and be diffused throughout the nation.

Federal participation in road building had been cyclic with heavy involvement beginning in 1806 with an appropriation to fund construction of the Cumberland or National Road. Ultimately some $7 million found its way into that project by 1838.[74] Numerous other projects received funding but the Panic of 1837 and the growth of railroads slowed activity to a trickle until late in the nineteenth century. With the push for "good roads" the new bureau launched several efforts including object lesson roads which had no federal funding, instead providing expertise for demonstration projects.[75] Local governments supplied monies and sometimes labor, machinery and materials in the partnership.

For the residents of the Cumberland Gap area the beginning of what became a 2½-mile roadbed over Cumberland Mountain eventuated with the arrival of Fay McClure, project supervisor and "Road Expert." McClure traveled to the area from a nearby Tennessee project in February 1907, for the purpose of assessing the nature of the work and estimating the costs.[76]

After spending time in the field he wrote, "The work will be a difficult piece of construction, as a considerable portion will be side hill work, along a shelf on the side of the mountain . . .," a reference to

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74. W. Stull Holt, The Bureau Of Public Roads: Its History, Activities And Organization, Institute For Government Research No. 26 (Baltimore: The Johns Hopkins Press, 1923), p. 3.

75. Ibid., pp. 7-10.

76. McClure to Loder (Acting Chief Engineer, Office of Public Roads, U.S. Department of Agriculture), February 28, 1907, RG 30, NA, File 329.

the area along present 25E in Virginia.[77] Local counties subscribed money to pay the costs in proportion to road distances as follows:

Bell County, Kentucky	5,000 feet
Middlesboro, Kentucky	2,000 feet
Claiborne County, Tennessee	1,100 feet
Lee County, Virginia	4,400 feet
Total	12,500 feet[78]

In actuality the final distance came to 13,200 feet (2½ miles), with a surfaced width of 14 feet made of crushed, compacted and rolled limestone.[79] (See text of letter, Appendix P, and see Illustration 4.14, depicting a portion of road). Final costs totaled $7,220,72 per mile.[80] (See Final Report, Appendix Q)

Project Director McClure identified the road construction problems at the gap in terms very similar to his eighteenth and nineteenth century counterparts when he wrote, "For 150 years the road has been badly needed, so if we solve the problem satisfactorily, it will bring great credit to the office."[81] He went on to say that the maximum grade would be 8 percent as the steep grade on the Kentucky side needed to be reduced; to accomplish this McClure increased the road distance ". . . about 1,400 feet . . . on much better ground."[82] Most of the

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77. Ibid.

78. Director to Chairman (Logan Waller Page, Office of Public Roads to J.H. Bartlett, Cumberland Gap Road Committee), May 11, 1907, RG 30, NA, File 329.

79. Director to Don C. Edwards, House of Representatives, Kentucky, March 3, 1910, RG 30, NA, File 329.

80. Final Report Of Object Lesson Road, December 14, 1908, RG 30, NA.

81. McClure to Pierce (Road Expert to Chief Engineer Vernon M. Pierce), March 24, 1907, RG 30, NA, File 329.

82. McClure to Pierce, March 19, 1907, RG 30, NA, File 329.

distance came as a result of road loops along contour lines farther up watercourses where bridging was easier (see aerial photo, Illustration 4.18).

Work began on the project in July of 1907 and consumed some 15 months before completion in October 1908. An inspection report of June 1910 detailed its condition, noting maintenance in the intervening months after it opened for traffic, and the impact it had on the nearby communities, especially road building methods and mileage in Middlesboro.[83] The project did make available for the first time, a very good road over Cumberland Mountain and served to diffuse ideas about improved road construction in the region. In July 1908 as the new road neared completion the Bell County Court formally abandoned the old county road from the Virginia-Tennessee state line at Cumberland Gap "N'ly down the mountain to the Jno [John] C. Colson house."[84] The property occupied a tract of land on Cumberland Mountain along the "old state road" above the brewery, subsequently the J.F. Schneider Packing Company.

DIXIE HIGHWAY

A principal figure in the road improvement program at Cumberland Gap and later in all of Kentucky, Joe F. Bosworth, used the example from the object lesson road to launch a good roads movement in Kentucky.[85] In time perfected sections of the road such as at

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83. L.E. Boykin, "Report Of Inspection Of Cumberland Gap Road," June 11, 1910. RG 30, NA, File 329.

84. Louisville and Nashville Railroad "C.V. Div. Mile 218," mile marker right-of-way map. The map is annotated with contract data and cites Bell County Order Book #7, p. 430, which is missing from the Bell County courthouse in Pineville. The Louisville and Nashville Railroad is now merged with and known as the Seaboard and Southern.

85. Kincaid, The Wilderness Road, pp. 352.

Cumberland Gap were linked and helped draw together an organization to promote a thoroughfare from Detroit, Michigan, to Miami, Florida, known as the Dixie Highway.[86] A portion followed the Wilderness Road, notably through the Yellow Creek Valley and Cumberland Gap, present highway 25E.

What began as a buffalo trace and Indian trail in due course became a pathway for explorers and land speculators, then a major route for settlers, travelers and drovers. As more usage occurred demands for improvements resulted in efforts to identify, build and maintain a road over the historic Wilderness Road. A remarkable flow of humans has continued now for centuries across Cumberland Mountain and through Cumberland Gap.

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86. Ibid., pp. 352-353.

CHAPTER 4

WILDERNESS ROAD LOCATION AT CUMBERLAND GAP NATIONAL HISTORICAL PARK: SOURCES AND EVIDENCE

A diverse body of evidence collectively serves to identify the route of the Wilderness Road through Cumberland Gap National Historical Park in Kentucky, Tennessee and Virginia. Unlike overland journals on the Oregon Trail, for example, or ship logs and manifests, little extant information remains from first-hand accounts by travelers through the Cumberlands. This compilation of evidence is therefore dependent upon historic maps, sketches, travelers descriptions, photographs, legislative actions (see Chapter 3) road construction records, land entry records, recollections, aerial photographs and ground-truthing the locale. Basic assumptions, explicated earlier, add to the knowledge base for determining road location.

CARTOGRAPHIC SOURCES

A variety of cartographic materials exist to aid in identifying locations of the Wilderness Road. Many are of a scale that make it difficult to precisely locate particular small sections of the trail at a point such as within Cumberland Gap National Historical Park. Generally the eighteenth century maps serve as a means for orientation to an entire region of the southern Appalachians. As more intensive activities took place in the locality of the study area, map makers completed larger scale maps to document information pertaining to turnpikes, strategic defensive emplacements, land entries, industrial developments and highway construction.

Designations for the Wilderness Road vary on the maps and explication of terms needs to be underscored. Earlier in the study the route of the Wilderness Road was defined but in a locale such as

Cumberland Gap a number of labels appear, especially given the junction there of three states and several alternative roads. Particular attention should be paid to Figure 4.1 in which the roads from Virginia through the Gap that continue into Kentucky, are called the Wilderness Road. Separate sections are known by other names: 1) the upper Virginia Road which follows the contour lines along Cumberland Mountain, past Cudjo Cave to the saddle of the Gap; 2) the lower Virginia Road which swings down along a tributary of Gap Creek into the community of Cumberland Gap, Tennessee; 3) the Tennessee Road which approaches from the south (Beans Station and Tazewell) and junctions with the lower Virginia Road along Gap Creek; and 4) the Kentucky Road which begins at the state line in the saddle of the Gap and continues down the northwest flank of Cumberland Mountain, along Yellow Creek Valley to the Cumberland River.

Eighteenth Century

Mapping the Wilderness Road during the eighteenth century occurred most often as a byproduct of a larger effort to map a region or state. Because of this maps tended to be drawn in small scale and specific details cannot be found for particular locations. Of importance, however, is the fact that the route by mere inclusion exhibits credence and significance. A year after Boone marked the trail through the Gap in 1775, an unknown map maker explicitly labelled Cumberland Gap on a map of Indian towns.[1] Imlay's "Map Of Kentucky" in 1793 located the "Road to Virginia" and Cumberland Mountain on it, and in 1794 "A Map of The Tennessee Government," included the "Kentucky Road" across Cumberland

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1. Map, US 1776, G 3860, 1776, .G4, Library of Congress, (see Map No. 2).

Gap.[2] Also in 1794 the Russell map clearly delineates roads in Kentucky including the Wilderness Road and the Cumberland Gap.[3]

Early Nineteenth Century

Larger scale maps drawn in the eighteenth and nineteenth centuries are of marginal use in identifying the road location, although of general use within the vicinity of Cumberland Gap. Among these early maps showing the Wilderness Road is an 1801 map of roads in the southern Appalachians; Munsell's map is the best pre-Civil War map of Kentucky.[4]

A prominent mapping project instituted by the Board of Public Works in Virginia, produced a set of maps for the entire length of the Cumberland Gap and Price's Turnpike. Mile markers and stations are noted on the map with "zero mile" marker being within the Gap itself.[5] Another extant map completed during the railroad era plots a proposed rail line from Abingdon to the Virginia border at Cumberland Gap. The Virginia and Kentucky Railroad survey gives a glimpse of road location through southwestern Virginia to the Gap.[6] An undocumented map drawn

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2. "A Map of The State of Kentucky," 1793 from Verhoeff, The Kentucky Mountains, p. 74, see Map No. 3.; "A Map of The Tennessee Government formerly Part of North Carolina taken Chiefly from Surveys by Gen. S. Smith & Others," 1794, Map Collection, Library of Congress, see Map No. 4.

3. "Map of the State of Kentucky with the Adjoining Territories, 1794," Map Collection, Filson Club, Louisville, Kentucky, see Map No. 5.

4. "Carte De La Partie Meridionale Des Etats-Unis," 1801, Map Collection, Library of Congress, G 3860, 1801, .T3; "A Map of the State of Kentucky," 1818, Luke Munsell, see Map No. 6.

5. "Cumberland Gap and Price's Turnpike," 1833, MS 755.82, R6, 1833 Pt. 1, Virginia State Library, Richmond, Virginia. The entire set consists of 10 sheets with the first 20 miles reproduced in Map No. 1.

6. "Map of Railroad from Abrington [sic] to Cumberland Gap," 1849?, 755.82, R15, Virginia State Library, Richmond, Virginia, see Map No. 7.

after the Henderson and Walker survey line discrepancy, records distances and some physical features in addition to the roads leading into Cumberland Gap from Tennessee and Kentucky.[7]

A large scale map drawn in 1838 depicts a small section of the Wilderness Road along Gap Creek in the community of Cumberland Gap, Tennessee, and the upper or Virginia Road which follows the contour of Cumberland Mountain (see Figure 3.3). The map, attached to the 1838 "Report of the Board of Public Works," notes improvements made in the road, most significantly the percent of grade (3%) and the survey stations along the Virginia Road; the route of the Tennessee Road leading to the saddle of the Gap is also shown.[8]

Civil War

During the Civil War Cumberland Gap held strategic importance for both Union and Confederate forces. In the Fall of 1861 at the behest of Jefferson Davis, President of the Confederacy, Maj. Gen. George B. Crittenden proceeded to occupy the Gap.[9] Before they could fully complete fortifications the Confederates found a Union Army commanded by Brig. Gen. George W. Morgan threatening to cut off supply lines and force them from the strategic heights of the Gap. Early in the summer of 1862 Morgan's troops assumed control, forcing evacuation by the Confederates.[10] In due course Morgan, beleaguered by the enemy,

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7. Miscellaneous map, date unknown, Charles W. Wilson map files, Cumberland Gap National Historical Park, Middlesboro, Kentucky, see Map No. 8.

8. "Alterations in the Location of the Cumberland Gap and Price's Turnpike in the Counties of Lee and Scott made in the year, 1838," Board of Public Works, Cumberland Gap and Price's Turnpike Papers, Book B, Virginia State Library, Richmond, Virginia.

9. U.S. Department of the Interior, National Park Service, History Of Cumberland Gap National Historical Park, by Edward E. Tinney, p. 13.

10. Ibid., p. 14.

Figure 4.1

The Route of the Wilderness Road through Cumberland Gap National Historical Park.

Compiled by Jere L. Krakow.

Drawn by Robert H. Todd.

HISTORICAL BASE MAP
WILDERNESS ROAD-SPECIAL HISTORY
CUMBERLAND GAP NATIONAL HISTORICAL PARK

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE - DENVER SERVICE CENTER

LEGEND

WILDERNESS ROAD
- Upper Virginia Road
- Lower Virginia Road
- Kentucky Road
- Tennessee Road

APPROXIMATE NATIONAL HISTORICAL PARK BOUNDARY

STATE BOUNDARY

OBJECT LESSON ROAD - 1908

MIDDLESBORO
KENTUCKY

PARK
HEADQUARTERS

DAVIS BRANCH

YELLOW CREEK

LITTLE YELLOW CREEK

LOUISVILLE AND NASHVILLE

CUMBERLAND MOUNTAIN

KENTUCKY BELL CO.

TUNNEL

Cumberland Gap

VIRGINIA LEE CO.

Cudjo Cave

Iron Furnace

58

Virginia Corner 2

KENTUCKY BELL CO.

TENNESSEE CLAIBORNE CO.

25 E

32

Cumberland Gap
TENNESSEE

SOUTHERN GAP CREEK


N

400 0 400 800 1200 1600 FEET

380 | 25,001
OCT 86 | DSC

Figure 4.2

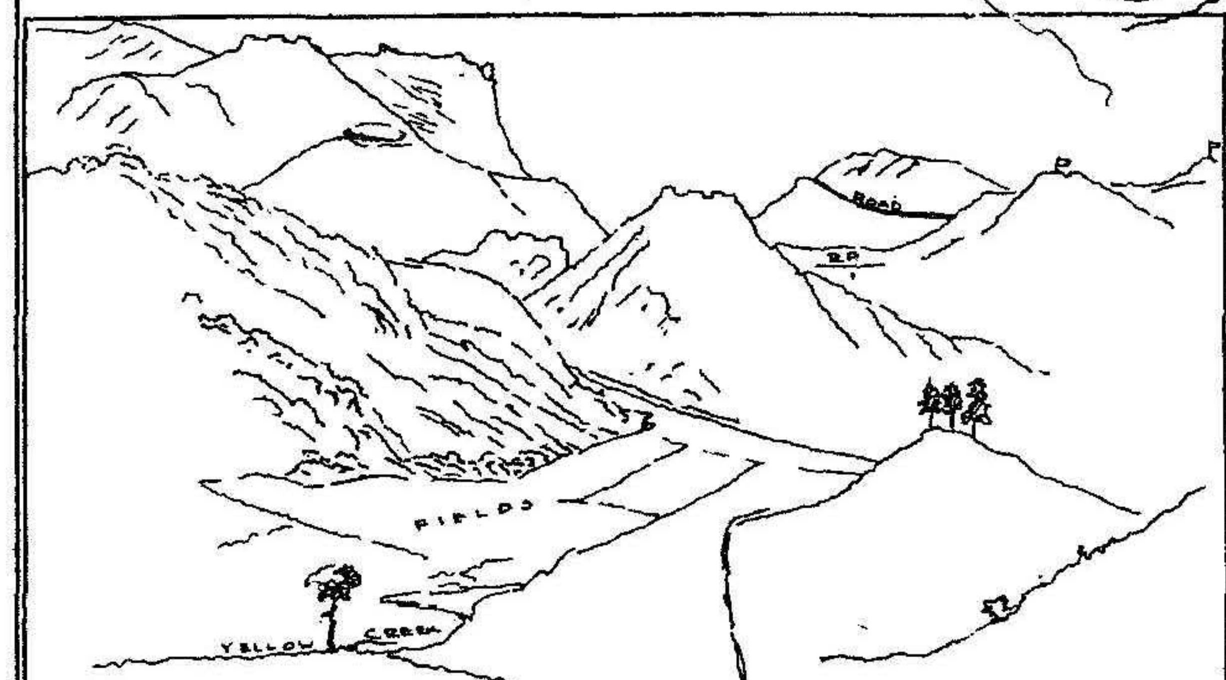
"Tracing of War-Time Map Cumberland Gap & Vicinity, 1862," from Survey by Capt. Sidney S. Lyon. Courtesy of The National Archives, Record Group 77, Civil Works Map File.



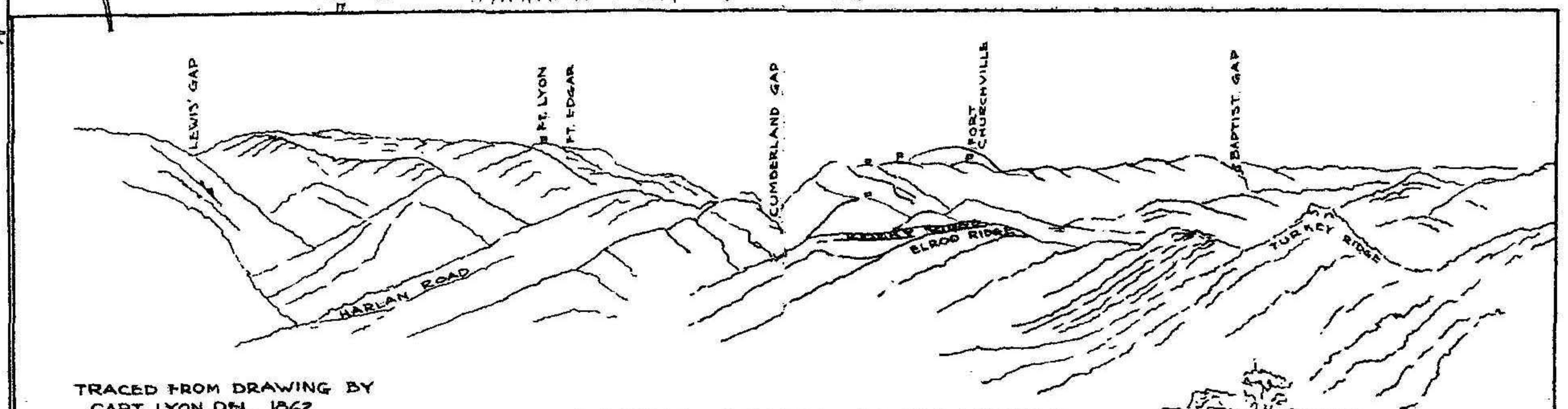
TRACING of WAR-TIME MAP CUMBERLAND GAP & VICINITY, 1862

FROM SURVEY BY CAPTAIN SIDNEY S. LYON, ACTING, TOPOGRAPHICAL ENGINEER, UNDER ORDER OF GENERAL GEO. W. MORGAN, U.S.A. FROM THE ORIGINAL MANUSCRIPT IN THE FILES OF THE WAR DEPARTMENT AT WASHINGTON, D.C. LETTERING REARRANGED AND ENLARGED FOR THE PORPOSE OF THIS REPORT

SCALE 2 INCHES EQUALS 1 MILE



CUMBERLAND GAP SEEN FROM KENTUCKY ROAD
TRACED FROM DRAWING BY CAPT. LYON, DEL., APRIL 30, 1862



TRACED FROM DRAWING BY CAPT. LYON, DEL. 1862

LOOKING SOUTH FROM McTEES

". . . began one of the masterful retreats of the Civil War," thus by September 1862, the south resumed control of the area.[11] A year later Confederate Brig. Gen. John W. Frazer found the cycle continuing when he surrendered 2,000 troops and supplies to Maj. Gen. Ambrose E. Burnside.[12] From then on the Gap saw little action during the remainder of the war, although Lt. Gen. Ulysses S. Grant toured there in early 1864 ". . . and deemed the road unsuitable for military travel."[13]

Large scale maps are few and the most significant ones were drawn during the Civil War by Union Capt. Sidney S. Lyon attached to General Morgan's forces. A set of 1862 maps (see Figure 4.2) at a scale of two inches to one mile detail a number of cultural features, in particular, road location. By utilizing overlay and composite techniques (see Figure 4.1) it is possible to determine rather specific road position. An assumption identified earlier is that roads remain basically in the same location despite the passage of time, and the changing technology of users and construction techniques. Correspondence supportive of Lyon's maps supply added knowledge about the physical setting for the roads. A practical surveyor and Kentucky State Geologist, Lyon described the road from Lexington, Kentucky, to Cumberland Gap.[14] About the area at the Gap he wrote:

> From the Gap to the foot of the Mountain 1¼ miles, Road crooked, running generally under a steep rocky escarpment 15 to 60 feet high, in many places the road is cut into the face of a cliff which decends [sic] almost vertically from 10 to 75 feet below the road bed. In two or three places only is the road sufficiently wide to allow the passing of wagons. The rocks forming the Cumberland Mountain, at and near the Gap, dip to

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11. Ibid., pp. 14-15.

12. Ibid.

13. Ibid., p. 15.

14. Craighill to Totten (1st Lieutenant Engineers to Brigadier General, Chief Engineer), December 25, 1962, RG 77, NA, Box 53, C 5027.

the north at angles varying from 30° to 80°. The road decends [sic] the Mountain in a North Westwardly direction, the alignment of the road contains two acute angles and owing to this & the narrow road bed, the difficulties of the road are greatly increased. The grade is not greater than one foot in twelve. The road bed in many places is a notch cut into rocks dipping across the road at an angle of from 30 to 50 degrees. The strata forming the bed of the road being very different in hardness, travel soon cuts the road into deep ruts, wearing away the softer parts of Strata much more rapidly than the harder ones; the hard ones are frequently found lying between two soft ones. The alignment of the road on the slope of the Mountain might be greatly improved, and a permanent road bed made by covering the road bed with broken limestone, which can be had in any quantity near the notch of the Mountain. All the hauling of the material would be down hill. From the foot of the Mountain the road is necely [sic] level to Crawfords, at the foot of 3rd Log Mountain--5 3/4 miles-crossing Little & Big Yellow Creeks. The Bridge over Big Yellow Creek was destroyed in the Spring of 1862 by a flood. The Creek is fordable only in dry Seasons.(15)

Correlation between the maps and the narrative indicate the descent on the Kentucky side followed contour lines so to make the grade negotiable for teams and wagons. A path of least resistance is indicated by evidence such as notching a road bed from the rocks laying at 30° to 80° angles, and the acute turns, one of which bends sharply west-northwest after passing the saddle area. Once down the mountain the road closely follows Little Yellow Creek and Yellow Creek north to the Cumberland River ford at Pineville. A general correlation is observable with two other Civil War maps drawn by a participant during the war and redrawn by him in 1899. The maps (see Map No. 9) by William F. Jones depict the roads, fortifications and structures in 1862 when he served

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15. Captain Sidney S. Lyon, "Itinerary of a march made by a body of U.S. Forces, under Brig. Genl. Geo. W. Morgan from Cumberland Gap to Greensburg Ky. between Sep 17th & Oct 3d 1862," September 17, 1862, RG 77, NA, Box 53 C 5005.

with Morgan's army, and redrafted many years later.[16] Without scale and preciseness, nevertheless relationships may be observed between Jones' and Lyon's maps which provide corroborative information for road location.

Confederate maps of the region around Cumberland Gap, drawn at a relatively small scale (1 inch = 6 miles), are marginal for road location in the historical park. Only very general information may be gleaned from them.

Late Nineteenth Century

Other important large scale maps drawn because of minerals exploration in the Cumberlands and adjacent mountains after the Civil War, brought word of promising deposits of coal in the region. A variety of speculators and potential entrepreneurs considered mining and transporting of coal as a means to fame and fortune; the individual who personified industrialization in southeastern Kentucky came from Scotland via Montreal and Boston, Alexander A. Arthur.[17] He arrived near the Gap in 1886 on a scouting trip and moving quickly, secured monies from British investors to launch his speculative, exploitive enterprise called the American Association Limited in the Middlesboro Basin of Kentucky. An early effort of Arthur resulted in a race by competing railroads to tap the coal-rich seams of the nearby mountains: his Knoxville, Cumberland Gap and Louisville Railroad reached the foot of the Gap first while the

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16. Jones to cousin, March 21, 1899, William F. Jones Papers, 1846-1916, Collection 831. Joint Collection University of Missouri, Western Historical Manuscript Collection - Columbia and State Historical Society of Missouri Manuscripts, Columbia, Missouri; William F. Jones, "Map of Cumberland Gap," Filson Club, Louisville, Kentucky.

17. Kincaid, The Wilderness Road, pp. 312-313.

competing Louisville and Nashville arrived the same summer of 1889.[18] Prior to the railroads pushing into the area, construction of a railroad tunnel under the Cumberlands commenced in 1888 and the two gangs working from opposite ends completed the bore in August of 1889.[19] Linking the two lines the tunnel provided a nearby alternative transportation form and route to the Wilderness Road over Cumberland Gap. At the time prominent writers traveled to Middlesboro to cover activities of the American Association, including Charles Dudley Warner who described the 1888 journey on the Wilderness Road from Pineville over Cumberland Gap to Harrogate:

> We drive from Pineville to Cumberland Gap, thirteen miles, over the now neglected Wilderness Road, the two mules of the wagon unable to pull us faster than two miles an hour. The road had every variety of badness conceivable--loose stones, ledges of rock, bowlders, sloughs, holes, mud, sand, deep fords. . . . Settlements were few--only occasional poor shanties. . . . We climbed up to the top of the mountain over a winding road of ledges, bowlders, and deep gullies, rising to an extended pleasing prospect of mountains and valleys. The pass has a historic interest, not only as the ancient highway, but as the path of armies in the civil war. It is a narrow, a deep road between overhanging rocks. . . . On our way down the wild and picturesque road we crossed the state of Virginia and went to the new English hotel in Tennessee.(20)

Available maps from the period of rapid development and industrialization support road locations shown on previous maps. Tracts suitable for purchase by the American Association were mapped and segments of the Wilderness Road appeared on them, such as the upper Virginia Road, the Tennessee Road and the switchbacks from the town of Cumberland Gap to the saddle of the Gap (see Map No. 10).

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18. Kincaid, The Wilderness Road, pp. 317-325.

19. Ibid., pp. 324-325.

20. Ibid., p. 320.

Twentieth Century

A map from the period of rapid industrial development shows the railroad right-of-way for mile 218 (Kentucky portal area); this Louisville and Nashville Railroad map contains a notation of, "old state road--Rd xd Cumb. Gap," which places it ascending a ridge adjacent to the former John C. Colson property.[21] This alignment correlates with other evidence from maps, photographs and recollections of early settlers. Several years later the Kentucky Utilities Company mapped the area below Fern Lake to the lower portion of Little Yellow Creek, including a small portion of the Wilderness Road. Labelled at the junction with the Baptist Gap Road is the "Old Cumberland Gap Road" which passes by the Colson property as it climbs toward the summit.[22] Two maps of the same vintage as the previous map, show the road from Cumberland Gap, Tennessee, toward the summit along the switchback route and correlate with earlier maps and with one another.[23] A significant feature drawn on the second map listed in the footnote entry, is a rock slide across a portion of the road near the top of the Gap.

One other map of importance drawn during the 1930s has no labels for the roads depicted on it; however, the road configuration fits well with earlier maps, in particular the roads on the Kentucky side of Cumberland Gap. The two roads are the "old state road" which ascends

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21. Map of right-of-way, Mile 218, C.V. Div. (Corbin Division) Louisville and Nashville Railroad, Real Estate Department, Jacksonville, Florida. The Seaboard System Railroad presently owns the Louisville and Nashville Railroad, see Map No. 11.

22. Kentucky Utilities Company Map, August 18, 1930, District Office, Pineville, Kentucky, in Cumberland Gap National Historical Park map files, Middleboro, Kentucky, see Map No. 12.

23. "Plat of Lots at Cumberland Gap Va (sic) Made by The Eastern Ky Land Co, W.A. Jones, Sur," undated see Map No. 13. "LMU Forest Tract South of U.S. Highway 25E To Cumberland Gap, Tennessee," Jack Williams, November 22, 1936, both in map files of Cumberland Gap National Historical Park, Middlesboro, Kentucky, see Map No. 14.

the west side of Cumberland Mountain after crossing the Louisville and Nashville Railroad tracks near the former Colson property, and the object lesson road completed in 1908 across the Cumberland range in Kentucky and Virginia.[24]

One other important source of mapped information falls in the general category of land entry records--survey plats. These legal documents map and record the descriptions of lands granted to individual owners under the metes and bounds system of survey. Though of limited use in pinpointing location because of the extreme variance in mapping skills, a lack of scale and a propensity toward free-hand drawing, nevertheless some historical information may be gleaned from them. Those located for the study area when aligned with the probable route of the Wilderness Road often contain a designation of "Kentucky Road," plus other features such as streams, structures, landforms and a letter code corresponding to boundary points used in the written legal description. Often the survey system used stream banks and vegetation, usually trees, thus ground-truthing proved of little value since stream meander and disappearance of trees eliminated points of reference. Some caution is advised even though the Wilderness Road appears on a plat map, yet some general idea of location might be ascertained. Writing about the problem for a report on the location of Davis Tavern, National Park Service Historian Ricardo Torres-Reyes observed:

> Some of the plats have the junctions [streams] unmarked; others do not show the path of the Wilderness Road, especially the point where the road met Little Yellow Creek; one plat has the station on the right while another has it on the left of the Road. It is quite obvious that the creeks and the road had not

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24. Map "Copied by C.F. Otey, from Original Map, August 13, 1937, in map files of Cumberland Gap National Historical Park, Middlesboro, Kentucky, see Map No. 15.

been accurately surveyed at the time the plats were prepared . . . .(25)

Of those plats examined which illustrate the relative advantages and disadvantages, the Green Clay plat (see Figure 4.2) best exemplifies that type of evidence. Mapped in 1806 near the end of greatest usage of the Wilderness Road for settlers going to Kentucky and beyond, the map and accompanying legal description convey information about property, streams and the Kentucky Road along Little Yellow Creek and Yellow Creek (see Appendix R). A conceptualization of the route accompanied by other corroborative evidence serves to narrow down location of the Wilderness Road.

SKETCHES AND PHOTOGRAPHS

Complementary evidence in the form of illustrations serve to enhance accumulated knowledge of road locations at Cumberland Gap. From a vantage point on the slopes of Poor Valley Ridge an unknown artist sketched a view of Gap Creek Valley, the upper and lower Virginia roads, iron furnace, and spring, at an undetermined date though conjectured to be at mid-nineteenth century (see Illustration 4.1). Prominent in the sketch are two roads, one ascending from Gap Creek (site of the present town of Cumberland Gap, Tennessee) via switchbacks to the saddle of the Gap, the second appears as the upper road along the contours of Cumberland Mountain. The sketch includes depiction of wagon traffic, structures and a notable absence of vegetation on the hillsides.

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25. U.S. Department of the Interior, National Park Service, Davis Tavern Site Location Study, Cumberland Gap National Historical Park, Kentucky-Tennessee-Virginia, by Ricardo Torres-Reyes. (Denver: Division of History, Office of Archeology and Historic Preservation, 1969), p. 3.

Illustration 4.2 depicts the scene below the summit of the Pinnacles looking nearly due west with the Kentucky Road in the foreground and the Yellow Creek Valley at the right below Mingo and Third Log mountains. Drawn by Capt. Sidney S. Lyon in 1862, the relationship of a section of the road and terrain is visible.

A Confederate engineer in Gen. Braxton Bragg's forces drew the scene in Illustration 4.3, from a vantage point looking east across Little Yellow Creek Valley. Significantly the road is shown crossing the valley before entering the tree-covered hillside en route up Cumberland Mountain to the Gap. Defensive earthworks and fortifications dot the mountainsides of what proved to be a strategic locale during the war. From the same period an anonymous photograph (see Illustration 4.4) provides insight into the road system on the Tennessee and Virginia side, especially the upper and lower roads. Note the absence of trees on the mountainside which succumbed to the armies occupying the area, to the iron furnace and to travelers along the Wilderness Road.

William Cullen Bryant accompanied by illustrator Harry Fenn traveled through Cumberland Gap in 1872, to prepare an article that contained several depictions of the setting.[26] Illustration 4.5 again serves to reinforce route locations from Virginia and Tennessee into the Gap as previously described. Located at the summit are buildings such as Jones Store which Fenn captured in Illustration 4.6 along with a bridge constructed over a rather narrow defile through which the road passed.[27] Another Fenn sketch (Illustration 4.7) presents a careful look at the mill alongside the stream emanating from Cudjo Cave, and above it wagons moving along the upper Virginia Road toward the saddle of the Gap. A final portrayal of the setting (see Illustration 4.8) permits a glimpse of

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26. William Cullen Bryant, ed., Picturesque America; or The Land We Live In, Vol. 1, (New York: D. Appleton And Company, 1872), pp. 230-237.

27. Ibid., p. 235.

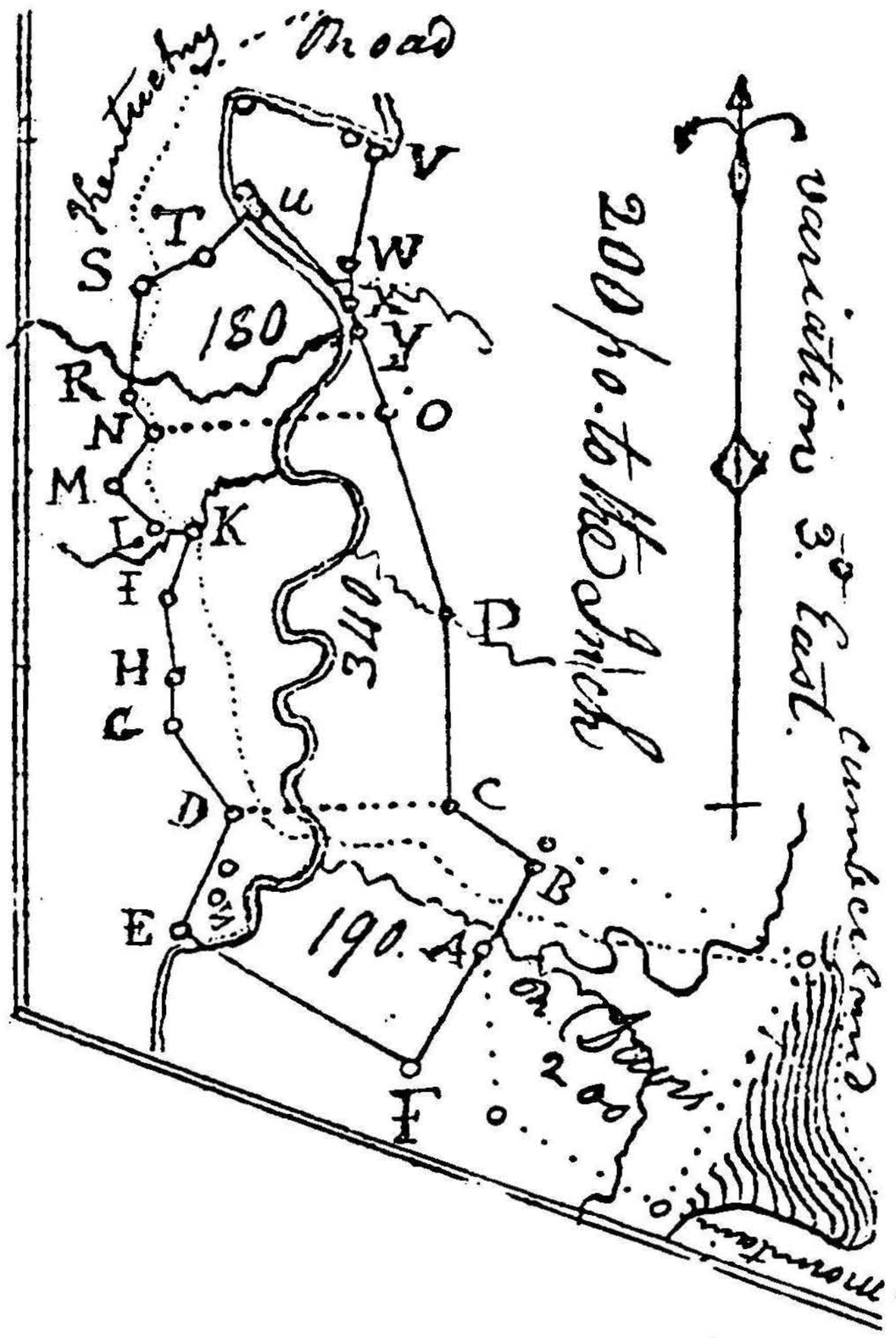


Figure 4.3

Green Clay tract along Little Yellow Creek, 1806.

the saddle area, including Jones Store, the bridge and the road into and out of the Gap.

During 1886 well-known Kentucky author James Lane Allen wrote an article on Cumberland Gap which also contained an illustration by Fenn.[28] The picture (see Illustration 4.9) delineates the roadway, structures and the natural setting on the Tennessee side of the summit. Allen describes the setting in a sentimental and progressional way anticipating the famous passage by Frederick Jackson Turner some seven years later:

> It was late in the afternoon when our tired horses began the long, winding, rocky climb from the valley to the brow of the pass. As we stood in the passway, amid the deepening shadows of the twilight and the soleumn repose of the mighty landscape, the Gap seemed to be crowded with two invisible and countless pageants of human life, the one passing in, the other passing out; and the air grew thick with ghostly utterances--primeval sounds, undistinguishable and strange, of creatures nameless and never seen by man; the wild rush and whoops of retreating and pursuing tribes; the slow steps of watchful pioneers; the wail of dying children and the songs of homeless women; the muffled tread of routed and broken armies--all the sounds of surprise and delight, victory and defeat, hunger and pain and weariness and despair, that the human heart can utter. Here passed the first of all the white race who led the way into the valley of the Cumberland; here passed that small band of fearless men who gave the Gap its name; here passed the "Long Hunters"; here rushed the armies of the civil war; here has passed the wave of westerly emigration, whose force has spent itself only on the Pacific slopes; and here in the long future must flow backward and forward wealth beyond the dreams of avarice. Beneath the shadows of the pinnacle--the limit of our journey reached--we slept that night in the Poor Valley of Tennessee.(29)

From a spot similar to the Fenn depiction of a freighter, a photograph in 1888 shows the Tennessee side and the road ascending to the Gap (see Illustration 4.10). At the saddle area the bridge and a

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28. James Lane Allen, "Through Cumberland Gap On Horseback," Harpers New Monthly Magazine, Vol. LXXIII, (June 1886): pp. 50-66.

29. Ibid., p. 66.

building are still standing while new growth timber has once again reclaimed the mountainside. Approximately of the same vintage, a photo taken near the vicinity of Fort Farragut to the west of Cumberland Gap, Tennessee, provides an excellent panorama of the road network in Virginia and Tennessee (see Illustration 4.11) just prior to development by the American Association and the railroad. A blow-up view of the lower center portion depicts the iron furnace area and a road scar along the upper Virginia Road near Cudjo Cave (see Illustration 4.12).

The best photograph of the building complex and bridge over the Wilderness Road in the saddle of the Gap is found in Illustration 4.13. An estimated date for the photo is 1900, or just prior to building the object lesson road in 1907-1908, at the time of development of the American Association holdings in the tri-state area. Road improvements made in 1907-1908 by the U.S. Agriculture Department as an object lesson, may be seen in Illustration 4-14 that permits examination of the road surface, shoulders, fill, materials and general engineering qualities.

Changes, ever present and seemingly accelerated in the twentieth century, cropped up in myriad ways around Cumberland Gap. The two-part photographs in Illustration 4.15 documents modernity at Cumberland Gap with the very observable railing running the length of U.S. Highway 25E (upper Virginia ne Wilderness Road), remnants of the lower or Tennessee road, the railroad which penetrated the area in 1889 and the pre-cast concrete tiles in the foreground. This late 1920s photograph illustrates the relatively few trees at the time and the scattering of structures in the town of Cumberland Gap. Later changes in the saddle of the Gap appear in Illustration 4.16 taken in the 1930s; an earlier service station and the entrance to Skyland Road appear on the left and the amount of road cut may be observed on the right. A successor service station and the intersection of Skyland Road and 25E in the saddle is apparent in Illustration 4.17.

A significant early aerial photograph (1939) serves as a measure of change in the landscape at Cumberland Gap where a variety of roads lace

the area, yet not as many as during the Civil War (see Illustration 4.18). Engineering know-how plus heavy construction equipment have fundamentally altered aspects of the physical setting for the historic Wilderness Road; however, vegetation hides scars quickly in a humid climate thereby obscuring many changes. Careful scrutiny of the photograph reveals traces of the lower Virginia Road ascending up a tributary of Gap Creek and a portion of the Kentucky Road descending down the mountain to Little Yellow Creek valley. Much more pronounced is the upper Virginia Road which highway builders enhanced, especially during 1907-1908 when the object lesson road was completed; in Kentucky the road is very pronounced too, as it descends the mountain on much of the same route, with few exceptions, as present Highway 25E.

TRAVEL ACCOUNTS AND RECOLLECTIONS

Research efforts have identified very few travel accounts which contain descriptions of the landscape and Wilderness Road at Cumberland Gap. Latter day travelers tended to be as brief as their eighteenth and nineteenth century counterparts with notations typically a brief, "crossed Cumberland Gap today."

James Lane Allen journeyed over the route in 1885 from Pineville south to Cumberland Gap and described the road as replete ". . . with . . . sloughs and sands, . . . mud and, holes, and jutting ledges of rock and loose bowlders and twists and turns, and general total depravity."[30]

Five years later Allen described a "mountain boy" who passed by in an ox drawn wagon near Middlesboro and began to climb up to the pass.

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30. James Lane Allen, "Mountain Passes Of The Cumberlands," The Cumberlands (Lexington, Kentucky: King Library Press, reprint ed., 1972), p. 10.

"Slowly, slowly, winding now this way and now that across the face of the mountain, now hidden, now in sight they went. . . ."[31] Approaching the summit by gradually ascending via turns and easier contours gives an insight into road placement on the Kentucky side of Cumberland Mountain.

A Civil War veteran, B.F. Stevenson, writing twenty years following the war recalled the impact of the war on the terrain of the mountain. When General Morgan abandoned the Gap in 1862, his troops mined the area and upon evacuation,

> huge masses of sandstone were at various points detached and made ready for a blast of powder to turn them into the road, and at other points the roads were mined and great pits blown out after the rear guard had passed.(32)

No doubt large scars, quarry-like holes and pits that dot the roadside and adjacent areas, stem not only from road construction over many decades, but from military action too. Additional insight into road conditions and remnants of the Civil War are recorded by an anonymous traveler in 1891:

> We drove from Pineville to Cumberland Gap, thirteen miles, over the now neglected Wilderness Road, the two mules of the wagon unable to pull us faster than two miles an hour. The road had every variety of badness conceivable--loose stones, ledges of rock, boulders, sloughs, holes, mud, sand, deep fords. We crossed and followed up Clear Creek (a muddy stream) over Log Mountain (full of coal) to Canon Creek. Settlements were few--only occasional poor shanties. Climbing over another ridge, we reached the Yellow Creek Valley, through which the Yellow Creek meanders in sand. The north side of Cumberland Mountain, like the south side of Pine, is a conglomerate covered with superb oak and chestnut trees. We

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31. Ibid., p. 12.

32. B.F. Stevenson, "Cumberland Gap, A Paper Read Before The Ohio Commandery Of The Loyal Legion of the United States," (Cincinnati: H.C. Sherick & Co., 1885), p. 17.

climbed up to the mountain over a winding road of ledges, boulders, and deep gullies, rising to an extended pleasing prospect of mountains and valleys. The pass has an historic interest, not only as the ancient highway, but as the path of armies in the civil war. It is narrow; a deep road between overhanging rocks. It is easily defended. A light bridge thrown over the road, leading to the rifle-pits and breastworks on the north side, remains to attest the warlike occupation. Above, on the bald, highest rocky head on the north, guns were planted to command the pass. Two or three houses, a blacksmith's shop, a drinking tavern, behind which on the rocks four men were playing old sledge, made up the sum of its human attractions as we saw it.

Just here in the pass Kentucky, Tennessee and Virginia touch each other. Virginia inserts a narrow wedge between the other two. On our way down the wild and picturesque road we cross the State of Virginia. . . . We passed a magnificent spring, which sends a torrent of water into the valley, and turns a great millwheel--a picture in its green setting--saw the opening of the tunnel, with its shops and machinery, noted the few houses and company stores of the new settlement, climbed the hill and sat down to look at the scene. The view is a striking one.(33)

Recollections gathered by Robert L. Kincaid in 1938 contain observations of road location and condition in addition to information about buildings and settlers on Cumberland Mountain. Sterling K. Turner and his brother Samuel J.T. (born in 1861 and 1876 respectively) recalled their Grandfather, who came from North Carolina in the late eighteenth century, telling about the mass of canebrakes along the Yellow and Little Yellow Creek valleys and the difficulty getting through them despite the buffalo trails that wound all through them.[34]

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33. Cumberland Gap Park, (New York: Press of J.J. Little & Co., 1891), p. 23.

34. Transcript of Oral History Interview of Marcellus Turner by Robert R. Kincaid, Kincaid Papers, Cumberland Gap National Historical Park Library, July 29, 1938.

> The road across Cumberland mountain was in an awful condition in those days [1880s]. There were places where the wagon wheels had worn into solid rock for a foot or more. Huge boulders and rocks of all kinds were strewn about.(35)

All of the Turners reported in their interviews that Sam Jones kept a store at the saddle of the Gap, which included part of the bridge built by the Union Army in order to move guns over the saddle: "Before the war the Gap was a narrow saddle, and the sides on each wall were steep."[36] Just beyond the crest of the saddle on the Kentucky side flowed a sizeable spring used for watering thousands of head of stock driven through during the nineteenth century; its flow stopped after completion of the railroad tunnel in 1889.[37] In all likelihood the spring has since been covered by the present Highway 25E and the loop in the object lesson road on the Kentucky side of the Gap circumvented the spring.

Sources noted above--cartographic data, photographs, sketches and traveler observations--are complementary and corroborative of Wilderness Road locations within Cumberland Gap National Historical Park. From diverse sources patterns emerge which isolate and point toward specific routes on both sides of the Gap.

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35. Transcript of Oral History Interview of Sterling K. Turner and Samuel J.T. Turner by Robert L. Kincaid, Kincaid Papers, Cumberland Gap National Historical Park Library, August 10, 1940, p. 2.

36. Ibid.

37. Ibid., (see Appendix N for data on livestock droving as reported by turnpike managers).

CHAPTER 5:
WILDERNESS ROAD LOCATION: FINDINGS AND CONCLUSIONS

A considerable variety of sources contain information bearing on the location of the Wilderness Road through Cumberland Gap National Historical Park. Inquiry into the documents and graphic materials serves to illuminate patterns for identifying road whereabouts. To reiterate, underlying assumptions used to guide the study include: 1) early traces and trails followed paths of least resistance first employed by animals, especially buffalo, and native population; 2) the location of roads remain basically on the same routes though certain locales experienced relocations due to changes in road engineering and technology; 3) environmental changes in the landscape occurred in the vicinity of Cumberland Gap because of human occupation and use; and 4) the study focuses on the Wilderness Road and seeks to pinpoint it rather than Boone's trace, an earlier, less developed and more difficult route to specifically situate.

Certain documentation that enables findings and conclusions to be drawn for this study include the timeless use of the Cumberland Gap by game animals, in particular the eastern buffalo migrating to grazing lands and salt licks to the east of the Cumberland Mountains. Well defined and beaten down, the trace from the crossings of the Ohio River into the Atlantic coast states formed the basis for one of the most important routes of prehistoric and historic native populations in all of North America. This trace and natural passageway over Cumberland Mountain permitted early Anglo hunters and explorers to penetrate western hinterlands well before the American Revolution on a known, albeit risky, well marked path.

Observations such as that of Dr. Walker in 1750 document specific natural phenomena in the immediate area of Cumberland Gap: Cudjo Cave, the spring emanating from it that feeds Gap Creek, the physical setting of the mountains and Gap, the Indian road, Indian markings on

nearby trees and the route into and along Yellow Creek valley to the Cumberland River at Pine Gap. Other observations and associations with Cumberland Gap stem from Daniel Boone, prominent frontiersman of the trans-Appalachian region. Boone, a frequent user of the trace, improved it for Judge Henderson in 1775, and four years later Virginia enacted legislation designed to build a wagon road to tie the county of Kentucky to the rest of the state. When the builders petitioned for payment in 1780 they noted that wagons had used the road, a probable ending date to Boone's Trace in the Cumberland Gap locale.

Road maintenance and improvements continued to be addressed in the last two decades of the eighteenth century. Both Virginia and Kentucky sought to repair what appeared to be a rather miserable road, looked after by local residents who worked off road law requirements each year for a specified number of days. Virginia attempted to standardize roads with criteria of: bridges twelve feet wide with level floors, signing at intersections and roads of thirty foot width, though it is doubtful such width ever existed over Cumberland Gap until the twentieth century. During 1795-1796 Kentucky committed a sizeable expenditure for upgrading roads; from Crab Orchard to the state boundary line at Cumberland Gap the road underwent improvement to accommodate wagons. This effort consisted of bridging and widening the road to a thirty-foot standard. Concern for traveler safety caused the establishment of blockhouses and guard details to protect groups en route to or from Kentucky.

When public monies grew scarce after the War of 1812, more and more states turned to private enterprise to fund road building and maintenance. The era of turnpikes had begun. At the time Kentucky found the section of the Wilderness Road most in need of repair to be the stretch from the Gap to Yellow Creek; and it specified the maximum grade to be four degrees with a road width of twenty-six feet.

Virginia, somewhat earlier than Kentucky, entered into turnpikes too. Standards enacted in the 1830s required a grade not to exceed four

degrees and a smooth surface some eighteen feet wide. Later in the 1830s the legislature reduced width to fifteen feet and due to pressures from farmers, to six feet through fields. During the same period the grade at Cumberland Gap changed to three degrees, although earlier some evidence suggests the upper Virginia Road may have been a six degree grade. The steepness may have contributed to more traffic using the road via Beans Station and Tazewell in Tennessee rather than through Jonesville in southwest Virginia.

It seems apparent that from early on Kentucky and Virginia devoted a good bit of attention to the Wilderness Road through Cumberland Gap. Confirming data about the importance of the route exists from a variety of secondary sources that detail the role of the two states, plus the importance of the route for early travelers, native populations and migrating animals. Evidence of actions taken to improve the route and establish standards for road building and maintenance exist in a number of primary sources.

A variety of primary and secondary sources supportive of road building and maintenance data, also address the location issue of the Wilderness Road through Cumberland Gap National Historical Park. Cartographic sources examined did not contain a single large scale map that delineated all precise locations of the Wilderness Road at Cumberland Gap; rather several maps serve as a basis, in conjunction with other kinds of documents, to enable the identification of the road.

Maps drawn prior to the turn of the nineteenth century depict large regions and thus at small scale do not permit exactness. The major purpose of such maps revolves around the inclusion of Cumberland Gap and the trail passing through it; it calls attention to the importance of the natural feature in the Cumberland Mountains. Most designations label the road either the Kentucky or Virginia road. As the Wilderness Road approaches the Gap several maps differentiate out the upper and lower Virginia roads and the Tennessee Road, most of these, however, date from the nineteenth century.

Important large scale maps appeared with the Civil War armies. Captain Lyons 1862 map shows roads, defensive emplacements, houses, streams and other features. Noteworthy for this study is the road configuration showing the routes along the contour line of Cumberland Mountain from Virginia; the roads into the settlement of Cumberland Gap, Tennessee, from Virginia and Tennessee; and the switchbacks ascending from the valley of Gap Creek to the summit. On the Kentucky side the road configuration coupled with contours gives the first cartographic record of the routes descending into the Yellow Creek drainage. Lyon reports two sharp turns in the road descending into Kentucky, one of which occurs after passing through the saddle of the Gap about 700 feet while the other switches back approximately 1,600 feet farther down the mountain at the head of a drainage. Maps of railroad and utility companies corroborate the configuration on the Kentucky side and refer to the road by names of "old state road" and "old Cumberland Gap road." Meanwhile on the Virginia-Tennessee side the upper and lower roads appear on maps that confirm location and configurations still yet in evidence.

Ground-truthing during the fall and winter of 1984-1986 on the slopes of Cumberland Mountain substantiates the existence of road beds, shoulders, cuts and fills of early roads that appear on the maps noted above. Though some portions have been considerably reclaimed by vegetation, mostly timber, evidence points rather conclusively to routes addressed by travelers and map makers. At one location on the lower end of the Kentucky side several parallel wagon ruts may be seen. Road grades observed during ground-truthing correlate rather closely to recommendations on requirements made by legislatures in Virginia and Kentucky; and road supervisors likewise reported grades that ground-truthing verified. The route conformed to contour lines requiring greater distance but more gradual ascents.

The preponderance of illustrations and photographs portray the Virginia and Tennessee side of Cumberland Gap. All reinforce the facts of an upper and lower road, switchbacks on the one ascending from Gap

Creek valley and the relative lack of trees on the mountainsides. A few good illustrations and photographs present the character of the saddle area as a narrow passageway over which the Civil War armies built and maintained a bridge; a portion of the bridge apparently found use in Jones' store. Later photographs document some of the quarrying and scarring as road builders employed more technology, especially at the summit.

Recollections and travel accounts from 1885 into the twentieth century point out over and over the rough, pot-holed, rocky character of the road with its many twists and turns. Additional rememberances include the springs near the summit, the rather steep-walled portion of the saddle and insights into the flora in the vicinity of the Gap.

The combination of basic assumptions, road clearing, building and maintenance; standards pertaining to degree of grades, width and other requirements; and the corroborative evidence from historical, cartographic and graphic documents all lead to particular conclusions about the location of the Wilderness Road at Cumberland Gap National Historical Park. Specific findings for the Wilderness Road location study follow:

1. The Virginia road divided about 600 feet east of the present intersection of highways 25E and 58.

2. The upper Virginia Road maintained elevation along the contour line and ascended to the summit of Cumberland Gap on a route that looped to the head of hollows and drainages much like the object lesson road of 1908. In so doing it passed the mouth of Cudjo Cave and over the spring issuing from it.

3. The lower Virginia Road descended into the valley of Gap Creek (present village of Cumberland Gap, Tennessee) where it intersected with the Tennessee (Tazewell) Road; and on the same route via switchbacks, went upward to the summit where it intersected with the upper Virginia Road.

4. The Kentucky (State) Road began on the state line at the summit (saddle) of the Gap and descended down the mountain turning sharply west about 700 feet from the state boundary; continuing along contour lines to the valley floor of Little Yellow Creek, it wended through canebrake and swamp to Yellow Creek; following that stream northerly it passed through Pine Gap and across the Cumberland River ford (Pineville).

5. The configuration of the saddle prior to the Civil War (1861-1865) constricted travel to a rather narrow passage which has since been widened and flattened by quarrying and filling.

6. The grades of the road as determined by the states of Virginia and Kentucky prior to 1840 were not to exceed four degrees, while width of roadway varied from eighteen to twenty-seven feet.

7. Where terrain permitted it, the road shifted to parallel locations due to deepening rock cuts, mud or other impediments to travel; a notable locale of such may be observed about 300 feet above the Louisville and Nashville Railroad tracks on the Kentucky side of Cumberland Mountain.

From time immemorial animal and human traffic utilized a natural passageway across the Cumberland Mountains. No other important statement need be made except to underscore the continued use of the route of the Wilderness Road by travelers in the late twentieth century--a continuum across time, a link with the past.

APPENDIXES

APPENDIX A:

Text of Virginia Legislation Marking and Opening Road over Cumberland Mountain, October 1779.

CHAP. XII.

An act for marking and opening a road over the Cumberland mountains into the county of Kentuckey.

Preamble.

WHEREAS great numbers of people are settling upon the waters of the Ohio river, to the westward of the Cumberland mountains, in the county of Kentuckey, and great advantages will redound to the commonwealth from a free and easy communication and intercourse between the inhabitants in the eastern and western parts thereof, enabling them to afford mutual aid and support to each other, and cementing in one common interest all the citizens of the state, to which a good waggon road through the great mountains into the settlements in the said county will greatly contribute; but such road necessarily passing, for a considerable distance through a tract of rough and uninhabitable country, can neither be made in the usual way by the adjacent inhabitants, nor can the practicability or charge be properly judged of, until the country hath been explored and such road traced out: *Be it enacted by the General Assembly*, That Evan Shelby and Richard Callaway, be appointed for that purpose, and they are hereby empowered and authorized to explore the country adjacent to, and on both sides the Cumberland mountains, and to trace out, and mark the most convenient road from the settlements on the east side of the said mountains, over the same, into the open country, in the said county of Kentuckey; and to cause such road, with all convenient despatch, to be opened and cleared in such manner as to give passage to travellers with pack-horses, for the present; and report their proceedings therein to the next session of assembly, together with a computation of the distance, and the best estimate they can make of the practicability and charge of completing the same and making it a good waggon road; and the said Evan Shelby and Richard Callaway, shall lay before the auditors of publick accounts a fair account, on oath, of the disbursements made, and charges incurred in the execution of this act; which the said auditors are

Commissioners appointed for marking and opening a road over the Cumberland mountains to Kentucky.

hereby required to adjust and settle, and give a warrant on the treasury for such sum as shall to them appear justly due thereon; except the wages and pay of the labourers and militia guard, each of whom on the certificate of the said Evan Shelby or Richard Callaway that he hath been employed during the whole time of that service, shall be entitled to a grant of three hundred acres of any waste or unappropriated lands within this state, for which no purchase money shall be demanded on behalf of the commonwealth, or one hundred and twenty pounds at the option of the claimant; and in the same proportion for the like certificate of service during a lesser time, and except the compensation to the said Evan Shelby and Richard Callaway, for their own trouble, which is hereby reserved to the judgment of the general assembly.

Guard, for protection against Indians, how procured.

And whereas the persons employed in making and clearing the said road may be exposed to danger from the Indians, the said Evan Shelby and Richard Callaway, are hereby empowered, from time to time, to apply to the commanding officer of the most convenient county or counties, for such militia guard, not exceeding *(with the labourers employed)* fifty men, as they shall think necessary for protection; which guard, such commanding officer is empowered and required to furnish accordingly. In case of the death, disability, or refusal to act of either of the commissioners, the court of the county in which he resided, shall nominate a proper person to fill up the vacancy, which nomination shall give the person named, the same powers, and entitle him to the like compensation as if he had been hereby particularly appointed.

APPENDIX B:

John Kinkead Petitions Virginia Legislature for Payment,
December 1, 1781.

PETITION OF KINKEAD TO GENERAL ASSEMBLY OF VIRGINIA,
December 1, 1781

[Virginia State Library, Petitions from Washington county, 1776-1860]

TO THE HONOURABLE THE SPEAKER AND GENTLEMEN OF THE HOUSE OF DELEGATES.

The petition of John Kinkeade humbly sheweth That your petitioner was appointed a commissioner by the Court of Washington County, in the room of Evan Shelby, (agreeable to an act of Assembly,) in conjunction with the Commissioner from the County of Kentuckey to Superintend and open a road through the Cumberland Mountains to the open country of Kentuckey. — and although Dangerous and difficult as the Task was, at that Critical Juncture, the Business was Completed so that waggons has passd, and has rendered much ease and Expedition to Travelers, etc.

Your Petitioner therefore beg that your honourable house will take his Case into Consideration, and make him such allowance as will be Just and adequate to his service.

And your petitioner as in duty bound shall pray.

THE FRENCH SETTLERS AT GALLIPOLIS

The copy of the following letter has been sent the managing editor by Mrs. Charles P. Noyes of St. Paul, Minnesota, a descendant of the writer. Joseph Gilman of Exeter, New Hampshire, became a member of the Ohio Company and was later appointed one of the judges of the Northwest territory. There are in existence several letters of his written during this period. The following letter concerning the French settlers at Gallipolis gains a particular interest from the discussion of the Scioto speculators by Mr. Hulbert, which is concluded in this issue of the REVIEW. The recipient of the letter was the Hon. Nicholas Gilman of New Hampshire.

MARIETTA 6th January 1793.

DEAR SIR

I shall make no apology for troubling you with this Letter, your own benevolent heart will apologize for me the moment you are informed that the Subject of it is in favour of Strangers who have been grossly imposed upon by some Speculating Americans. As you have been for a long time at the Seat of Government, you must have heard that Certain persons calling themselves the Scioto Comp^{a}, by their Agent Mr. Barlow in France sold large tracts of land in this part of the Country

APPENDIX C:

Bill for Services and Supplies in Road Building Over Cumberland Mountain, April 20, 1781.

CUMBERLAND GAP ROAD

The old Cumberland Gap road was a principal way of passage for people moving to the west in the early days, and it figures conspicuously in the history of the early westward movement. The following account of Kinkead and McBride for "clearing" this road affords many interesting items for those who are interested in families living in Revolutionary War times in that famous frontier section. The "bill" was discovered by Dr. E. G. Swem, Librarian of William and Mary College, Williamsburg, while going through a bundle of "Vouchers referring to roads and boundaries in Virginia," in the Virginia State Library, and a copy thereof given to the editor for publication in this magazine. An interesting note on the old Cumberland Gap Road, prepared by Dr. Swem, was published in the Mississippi Valley Historical Review, Volume 2, page 120.

Dr. The Commonwealth of Virginia to John Kinkead and Wm. McBride Commissioners Appointed by the Court of Washington & Kentuckey Counties to direct and Superintend the Clearing of a road over the Cumberland Mountain. According to an Act of Assembly passed October 1779.*

No. 1780

		th		
1	July	12	To paid Joseph Kinkead for 9 yds Linen at 50 dollars yd.....	£135
2		15	To pd. Christopher Acklon for 2 packhorses	1900
3		17	To pd. Thomas Mountgomery for 69 yd. Linen at 18£ per yd.....	1242
4		19	To pd William Boid for one Beef.....	309
5		29	To pd Francis Byrd for ten Beaves....	4500
6	Aug.	1	To pd. Samuel Yuille for one packhorse	600
7		1	To pd. Samuel Duff for one ditto	1050
8			To pd. Jno. Baity for one ditto £1200.. for 4 Beeves £1200 & 500 lb. flour £500 in all	2900
9		18	To Pd Francis Baily for two Beaves....	600
10		28	To pd. David Baily for one ditto	300
11	Sept.	14	To pd. Charles Killgore for 3 Beaves..	750
12			To pd. Jonathan Langdon for 2 ditto	550
13		19	To pd. Robert Hughston for 3 ditto	900
14			To pd. Halbert McClure for two ditto	400

*Vouchers referring to roads and boundaries, Virginia State Library.

No. 1780

15			To pd. James Mountgomery for two ditto	600
16		18	To pd. William Cowen for one ditto ..	150
17	Aug.	7	To pd. Joseph Scott for one Packhorse	1000
18		9	To pd. Alexander Mountgomery for one Ditto.....	1150
19	Aug.	9	To pd. James Mountgomery for four Ditto	£4400
20			To pd. Thomas Berry for one . . Ditto	900
21			To pd. William Conner for one . Ditto	1000
22			To pd William Miller for one . . . Ditto	1000
23		19	To pd. Jno. Hays . . . for one . . . Ditto	600
24		24	To pd. Elijah Smith for one . . . Ditto	1000
25			To pd. William Davidson for two ditto	1800
26			To pd. Jno. Keys for two beeves.....	600
27			To pd. Samuel Scott for one Beef.....	300
28		25	To pd. Benjamin Allen for three beeves	900
29			To pd. Francis Wright for ditto.....	900
30		28	To pd. Hugh Crison? [ms. defective] for two ditto.....	550
31		27	To pd. Edward Stevenson for one Packhorse	900
32			To pd. Ephram Dunlap for one ditto ...	900
33	Sept.	1	To pd. Jno. Whitcraft for one . . ditto	700
34			To pd. Elizabeth Kinkade for two ditto	1500
35			To pd. James Kincannon for one ditto	1050
36			To pd. Joseph Kinkead for one ditto..	900
37			To pd. Joseph Black for two ditto.....	2000
38		23	To pd. William Rogers for 4 yds Linen @ £24 p. yd.....	96
39	Octr.	2	To pd. Hobson Kinkead for 8 days service driving of cattle.....	192
40	Aug.	22	To pd. Christopher Acklen for 3 horses & one Waggon.....	5500
41	Octr.	10	To pd. Richard Pryer for 20 days Bullock driving at 80 dollars p. day.....	480
42	Aug	30	To pd. Richard Pryer for a Gun Appraised to.....	£200

No. 1780

43		29	To pd. Sundry persons for 2116 lb. flour	2116
41			To pd. . . . . ditto for 414 lb. flour	332
	July	29	To pd. for three Bushells & 3 pecks of salt	500
			To pd. for one Bell	16.10
			To pd. for 149	
			To pd. for a Drum	125
			To pd. Dury Puckett for Wintring 1 Packhorse	200
			To pd. William McBride for repairing the tools used in Clearing the road	200
			To pd. 2 axes lost Appraised to	72
			To pd. for one Bagg	30
			To pd. Hobson Kinkead for wintring three p. Horses	300
			To pd. Joseph Packston for the service of one horse 47 days @ 12 dollr p. day	157
			To pd. James More for do. the same time @ ditto	157
			To pd. Jno. Grayham for do. 27 days @ ditto	133
			To pd. Jno. Smith for one horse 58 days @ ditto	208.16
			To pd. Jno. Shadweek for two do. 25 days @ ditto	180
			To pd. Jno. Snoddy for one do. 60 days @ ditto	216
			To pd. James Black for one do. 60 days @ ditto	216
			To pd. James Carr for one do. 43 days @ ditto	154.16
			To pd. Rob. Buckhanan for two do. 43 days @ ditto	309.12
			To pd. Rob. Harrald for one do. 26 days @ ditto	93.12
			To pd. Tho. Jenkins for herding horses 11 days at 15 dolls. p. day	49.10

No. 1780

	To pd. Wm. Jinkins for ditto 11 days @ ditto	49.10
	To pd. J. Clemens for ditto ditto 11 days @ ditto	49.10
	To pd. Andrew Colvey for pasturage	350
	To pd. Francis Ligot for driving pack-horses [ms. defective] at 15 dolls	130.10
	To pd. Joseph [ms. defective] for do	130.10
	To pd. Christopher Acklen as Contractor	500
		54003.11

1780	Contra	CR. t
	By one Packhorse Sold Jno. Kenkanon	930
	By one beef hide Sold Christopher Acklen	24
	By 20 y'ds Linen Sold ditto at £18 p. yd.	360
	By one Packhorse Sold ditto	701
	By 100 lb. beef sold ditto	100
	By 1 hide & off all of a Beef	45
	By 2 Baggs 3 Yds each Sold William Cowen	108
	By 1 horse shoe Sold Joseph Packston	4.10
	By 1 pr. ditto Sold James Moore	9
	By 2 Baggs [ms. defective . . Jno. [ms. defective]	108
	By 1 broken Gun Sold . . . . ditto	45
	By 4½ Yds Linen Sold Rob. Buck-hannan	81
	By 2 Baggs Sold to Rob. Harold	108
	By 1 pair of Horse Shoes Sold ditto	9
	By 3½ Yds Linen Sold Tho. Jenkins	63
	By 1 Bagg Sold Wm. Jenkins	54
	By 9 Yds. Linen Sold Wm. McBride	162
	By 1 old Bagg Sold . . . ditto	15
	By 1 Bucket Sold . . . ditto	10.10
	By 1 Waggon & Cloth Sold ditto	1500

No. 1789

By 1 Iron Pick Sold .... ditto.....	9	
By 1 Dutch oven Sold .... ditto.....	186.15	
By 4½ yards Linen Sold Jno. Brit.....	81	
By 2 Kettles 20 lb. Weight Sold to Jno. Kinkead	180	
By Sundry Small articles Sold Amounting to	30	
		4923.5
Bal. due		£49080.6
		£54003.11
By Cash reced of Chrisr. Ackin.....	100000	
Bal. due		£39080.6

Apl. 20th 1781

Sworn to before

H. Randolph.

APPENDIX D:

Virginia Law Removing Obstructions on Wilderness Road, December 25, 1790.

CHAP. LIV.

An act removing obstructions from the road leading through the Wilderness to Kentuckey.

(Passed the 25th of December, 1790.)

Preamble.

SECT. 1. WHEREAS it is represented to this present General Assembly, that the road leading through the Wilderness to the district of Kentuckey, is much out of repair, whereby the intercourse between the inhabitants of the said district and the eastern part of this state is greatly obstructed.

Part of the taxes due from certain counties appropriated to open the road to Kentuckey.

Commissioners appointed.

SECT. 2. *Be it enacted by the General Assembly*, That a sum not exceeding six hundred pounds, out of the public taxes due from the counties of Jefferson, Nelson, Lincoln, Mercer and Madison, shall be and the same is hereby appropriated to the purpose of opening and improving the said road leading through the Wilderness from the line of Russel county to Englis's station in the said district, and that John Logan, Harry Innes, Isaac Shelby, Samuel M'Dowell and John Miller, gentlemen, be appointed commissioners, who or any three of them are hereby impowered and directed to superintend the said work, and to contract with some fit person to undertake the clearing and improving the said road.

Undertaker to give a preference to the inhabitants of said counties for necessaries, &c. furnished;

To grant them certificates therefor;

which shall be receivable in discharge of the taxes due from said counties.

SECT. 3. *And be it further enacted*, That it shall be a condition in the said contract, that a preference shall be given by the said undertaker for labour, provision or any other necessaries that may be wanted and furnished, or that can be obtained from the inhabitants of the said counties in discharge of the public taxes due from their respective counties; and the several accounts of such persons who may have discharged their taxes as aforesaid, shall be liquidated and adjusted by the said undertaker, and a certificate granted by him for the amount thereof, expressing the time and number of days served, the time when the service was performed, and the allowance for such service, which said certificate granted as aforesaid, shall be receivable by the sheriff of that county, in which the said person performing the said service was resident, in discharge of the public taxes due from that county, and the same shall be received in settlement of his accounts with the receiver, who shall be allowed the same in the settlement of his account with the treasurer.

Undertaker to give bond with security for the performance of his contract.

SECT. 4 *And be it further enacted*, That the said undertaker shall, before he enters into the execution of the said work, enter into bond with approved security in the penalty of twelve hundred pounds, with the said board of commissioners, for the faithful performance of the said undertaking, to be recoverable on failure, by motion in any court of record, upon giving ten days previous notice thereof.

APPENDIX E:

Virginia Law Ordering Military Protection Along Wilderness Road, November 27, 1790.

CHAP. LXVI.

An act to authorize and direct the commanding officers of certain counties within the district of Kentuckey, to order out guards for certain purposes.

(Passed the 27th of November, 1790.)

Preamble.

SECT. 1. WHEREAS the intercourse between this country and Kentuckey is much interrupted by the depredations and murders committed by the hostile tribes of Indians who live contiguous to the road leading through the wilderness.

Guards to be furnished by certain counties to protect travellers through the wilderness.

SECT. 2. *Be it enacted*, That the commanding officers of the counties of Mercer, Lincoln and Madison, shall be and they are hereby authorized and directed to order out of their respective counties alternately in every year, thirty effective men, in the months of October and November, to rendezvous on the road leading through the wilderness, at the east foot of Cumberland mountain, on the fifteenth day of October, and on the tenth day of November: That the said guard shall be commanded by such person as the commanding officer of the county from which they are taken shall think fit to appoint, whose duty it shall be to guard and protect such company through the wilderness, as may be in readiness at the place and on the days abovementioned. The guards shall be called out and perform the duty herein required, alternately in the order in which the counties are herein beforenamed in this act.

To provide themselves with arms, provisions, &c.

Their pay;

SECT. 3. *And be it further enacted*, That the said officer appointed as aforesaid, and the guard under him ordered out, shall furnish themselves with the necessary arms, ammunition and provision for the purposes aforesaid. The said officer shall receive for his services six shillings per day, and each of the guard four shillings per day: Their several accounts shall be liquidated and adjusted by the commanding officer of the county from which they were ordered, who shall transmit on oath to the receiver of the taxes for the said district, a pay roll specifying particularly the names of those belonging to each company, and the time of their entering into and leaving the service: he shall also grant to each person a certificate expressing the number of days he served, the time when the service was performed, and the allowance for such service, which said certificate granted as aforesaid, shall be receivable by the sheriff of the said county in discharge of the public taxes due from the said county, and the same shall be received from him in the settlement of his accounts with the receiver, who shall be allowed the same in the settlement of his accounts in like manner as he is by law allowed for other certificates receivable for the taxes of the said district.

Certificates therefor receivable in discharge of taxes.

APPENDIX F:

Act of Virginia to Open Wagon Road to
Top of Cumberland Mountain, November 17, 1792.

CHAP. XXXVI.

An act to facilitate the intercourse of the inhabitants of this Commonwealth with the State of Kentucky.

(Passed November 17, 1792.)

Preamble.

SECT. 1. WHEREAS it is represented to the present General Assembly, that opening a waggon road from the blockhouse in the western extremity of the county of Washington, to the top of Cumberland mountain, in the county of Russell. (now Lee) being where the road from the state of Kentucky terminates, will be of great public utility in facilitating the intercourse from the extreme southwestern parts of this state with our eastern brethren at the seaport towns, and as the same, on account of the length of the way and the many difficulties attending the opening thereof, cannot be cleared by the ordinary method prescribed for opening roads; and as this Assembly are at all times willing to coutribute every encouragement to such designs as are represented to be of general utility, as far as is consistent with prudence and good œconomy.

Commissioners to view and mark a way for a road from the blockhouse in Washington, to the top of Cumberland mountain. Their report to be made to the next Assembly

SECT. 2 *Be it enacted*, That William Tate, John Anderson, Charles Cox, Walter Preston, James Fulkerson, Thomas Berry and Thomas Wallen, gentlemen, be, and they are hereby appointed commissioners, to explore, view, and mark out the best and most eligible way for a waggon road, from the said block-house, in the county of Washington, to the top of Cumberland mountain, in the said county of Russell, (now Lee) and to report to the next General Assembly, their opinion, with respect to the practicability of said road, the distance between the said places, and also an estimate of the expence which would necessarily be incurred in opening a waggon road as aforesaid.

APPENDIX G:

Letter by Daniel Boone Applying for Contract to Improve Wilderness Road, February 11, 1796.

feburey the 11th 1796

Sir

after my Best Respts to your Excelancy and famyly I wish to inform you that I have sum intention of undertaking this New Rode that is to be Cut through the Wilderness and I think My Self intiteled to the ofer of the Bisness as I first Marked out that Rode in March 1775 and Never Re'd anything for my trubel and Sepose I am No Statesman I am a Woodsman and think My Self as Capable of Marking and Cutting that Rode as any other man Sir if you think with Me I would thank you to wright mee a Line By the post the first oportuneaty and he Will Lodge it at Mr. John Miler son hinkston fork as I wish to know Where and When it is to be Last So that I may atend at the time

I am Deer Sir your very omble sarvent

Daniel Boone

To his Excelancy governor Shelby.

[100]

APPENDIX H:

Kentucky Gazette Announcement the Wilderness Road Open for Wagons, October 15, 1796.

THE WILDERNESS ROAD from Cumberland Gap to the settlements in Kentucky is now compleated. Waggons loaded with a ton weight, may pass with ease, with four good horses,—Travellers will find no difficulty in procuring such necessaries as they stand in need of on the road; and the abundant crop now growing in Kentucky, will afford the emigrants a certainty of being supplied with every necessary of life on the most convenient terms.

JOSEPH CROCKETT
JAMES KNOX
Commissioners

APPENDIX I:

Engineer H.J. Eastin Report on Standards and Expenditures for Crab Orchard to Cumberland Gap Turnpike.

REPORT OF H. J. EASTIN, RESIDENT ENGINEER.

Crab Orchard and Cumberland Gap Turnpike Road.

ENGINEER'S OFFICE,
Frankfort, May 1st, 1839.

SIR:

I have located, and assisted in placing under contract, such portions of Crab Orchard and Cumberland Gap Turnpike Road, as you directed to be located in April last. The total length of the various sections is 25 miles and 17.55 poles. The estimated cost of the grading, including grubbing, clearing, draining, culverts, and all the masonry in small bridges, together with the superstructures of such bridges as have a span of less than thirty feet, is $54,858 58, or $2,147 00 per mile. The cost of the bridges over the Cumberland and Rockcastle rivers will be $41,957 89. The estimated cost, per mile, for grading and bridging, is $3,787 00. The contract price, per pole, for grading, when averaged, is $7,628. The total cost of the grading per contract, is $62,364 28; and the total cost of the grading and the bridges, per contracts, is $104,332 17. The detailed cost of the particular sections are given in schedule A, accompanying this report.

PLAN OF THE ROAD.

Grubbing and Clearing.—The whole of the work to be improved, is to be cleared fifty feet, and graded thirty feet wide, clear of the road drains, which will require the grubbing of thirty five feet. The maximum grade is four degrees, which only occurs on one section, (the Cumberland mountain;) the residue, in no place, exceeds three and one half degrees.

Culverts and Drains.—These are provided for in all instances where they will be required to carry off the water. They vary in their dimensions—being from two feet to three and one half feet in their axis. Drains will be made on the mountain sections, under the embankments, when built on sideling ground, from which any water flows during the wet seasons of the year.

Embankments and Excavations.—Embankments made of common earth are estimated with a side slope of 33½°, or to have bases of one and a half feet for each foot rise. In sandy earth they are to be left to settle to their natural slope, or at bases of two feet to one foot perpendicular height. Those embankments made of the loose rock are to have a base of one foot to each foot rise, or to slope at an angle of 45°. On the mountain side, where the natural slope exceeds 20°, the face of the hill is to be cut into horizontal benches, large enough to receive the embankment and prevent

App. to H. R. J. 39

its sliding down. Revetment walls are to be used in all cases where the transverse slope of the hill is too steep to allow the road to be constructed with a sloping embankment. In a few instances, on the Cumberland and Log mountains, they will be necessary and must be constructed, estimated, and laid out by the direction of the Superintendent, and an additional price paid to the contractor for them—at a price not exceeding $1 50 per perch of 25 cubic feet.

Retaining Walls may also be necessary in some instances; they cannot be specified, and their positions must be fixed by the Superintendent, as the work progresses, and paid for at a price not exceeding $1 per perch of 25 cubic feet.

Excavations of common earth will have side slopes of one foot base to one foot perpendicular, or an angle of 45°; in sandy loam, 33½°; in slate, or other soft rock, 71½°; the slope should be more gentle, if the slate or rock disintegrates by the action of frost. Where the excavations are made in hard sandstone, or solid limestone, the face of the work will be left as nearly vertical as the workmen can have it; the slopes in all instances are to be left smooth.

Road Bed.—The road bed has, in all instances, except on Cumberland mountain, been estimated to have a width of thirty feet clear of the side drains. On the Cumberland mountain, the road is to be 26 feet wide, exclusive of the side drain, longitudinally—the road is to be finished, as called for in the notes of the survey. The transverse section will have an inclination to the hill side of three inches in thirty feet; in level grading, and through cuts and fills, the road bed will be eliptical, and have a semiconjugate axis of one foot.

Side Ditches, are estimated, in all cases, on mountain locations, (where the ditch is to be cut from rock,) ten inches will be the width at bottom, 14 inches wide at top, and the bottom to be not less than 10 inches below the road bed. In common excavations the ditches, in the highest part, are to be at least 18 inches below the middle part of the road bed; and the ditches will, in all cases, descend or lead to a culvert or drain, or to some natural outlet for the water, so that it may pass off from the road. At a few points, some low, wet lands have to be passed: one instance occurs in crossing Lynn Camp creek bottom, where the road bed will be raised two feet above the natural surface, and deep ditches cut along each side, at a distance of eight feet from the edge of the road bed and ditches—these deep ditches will communicate with the fork of Lynn Camp creek.

Bridges.—Two bridges, with a span of 30 feet, are required in passing Cannon creek, between the Log mountains; one of 20 feet span over Lynn Camp creek, near James Ford's; one of 20 feet span over White Oak creek, near the foot of the Big Rockcastle mountains; these four bridges will have rubble stone abutments, single roadways, open, 18 feet wide, and will be substantially finished.

At the Cumberland river there is to be a bridge, having a single span of 160 feet, with a double roadway; the abutments are to be of rubble stone.

The chords of the bridge will be 45 feet above the low water mark of the river. The bridge over the Rockcastle river will be built about half a mile below the present crossing; it will have a single span of 130 feet—the abutment on the north side. A rubble stone abutment will be built, 42 feet high, from the plane of low water to the bottom of the chords of the bridges. The abutment on the south side is of natural limestone rock. This bridge will be constructed with a single roadway. These two superstructures are to be built by James Carothers, one of the very best mechanics in the west, and who has built for the State, and the different Turnpike Companies, four large and substantial bridges in the two last years.

The grading, masonry, drainage, &c., and all plans, specifications, and contracts are in accordance with the instructions furnished by the Chief Engineer, and approved by the Board of Internal Improvement.

The grade or inclination of the road, up the Cumberland mountain, is four degrees, or one foot rise in fifteen feet base. The height of the Cumberland Gap, above the valley of Yellow creek, at Dickenson's tavern, is 563.2 feet. The distance up the mountain is 7344 feet. The grade of the first Log mountain is variable—the maximum inclination being three degrees; it is easily passed by a gap in the mountain. The greatest inclination used on the Log mountain, near the Cumberland Ford, is 3½ degrees; and it ascends 202.38 feet in a distance of 3,332 feet on the south side, or one foot rise in 16½ feet. On the north side, a gradient of 3½ degrees is used, and the valley of Clear creek is reached by descending 380.34 feet in 6,678 feet, or about one foot descent in 16½ feet.

At Mr. McHargue's hill the road will be variable in its inclination; the length is about 142 poles; the work will be light.

An entirely new road will be made from James Word's, passing the dividing ridge, in the forks of Lynn Camp creek, without any gradiant of magnitude; the gradients are variable; the excavations and embankments light. This avoids a very bad mountain. Laurel river hill will be graded at an inclination of 3½ degrees, it is 155.56 feet high—rises one foot in 16½ feet, and is 2,608 feet long.

Little Rockcastle mountain is 12,905 feet long. The maximum grade is 3 degrees; the planes vary so as to avoid hard, rocky points and steep slopes, it is 300 feet high. Where the present road passes, the inclination is 12 degrees, or one foot rise in five feet. This hill is nearly a complete and insurmountable obstruction to the very extensive travel on this road. The road is so laid out as to pass along the bank of Little Rockcastle river, from Henry's to the Big Rockcastle; thence up the latter stream, between the river and the mountains. The gradients or inclinations are variable—three degrees being the greatest. The length is about six miles, and will all be new road, and will avoid one of the worst mountains on the whole road.

The road around the Pine mountain is to be made anew for about 2½ miles, the inclination being variable; 3½° is the greatest; the work is light and will be easily executed. The residue of the line is so laid out as to improve the worst point in the road with the least expense, and at grades not exceeding three degrees. The contracts were made under the supervision of the Board of Managers; the bids were abundant; the work taken at very fair rates; the plans of the bridges, specifications, and contracts, &c. filled up and furnished by me, with a clause that no contractor shall begin his work until thirty days after notice from the President of the Board of

Internal Improvement, informing them that funds were provided to pay them by the State, unless any of them choose to proceed on the individual stock of the company. In some instances the contractors have adopted the latter course, and are at work; and many of them are preparing to begin during the winter and spring. If funds could be provided this work could be completed by the 1st of January, 1840.

This is to be a dirt turnpike, except at the dividing ridge between the Rockcastle and Kentucky rivers, where as much McAdamised road is to be made as will use the limestone excavations in forming the road bed. The limestone, in this ridge, lies in horizontal strata, varying in thickness from four to twenty inches; and the planes in passing these strata require McAdamising to make the road bed even and smooth.

The completion of this work will make the whole 100 miles of road, from Crab Orchard to the Cumberland Gap, a fine road, available for wagons laden with from 6 to 7 thousand pounds, and relieve the interior stock traders with the south eastern States, from great difficulty and loss of time in passing the mountains and rivers.

The soil is composed of a sufficiency of sand to dry early, at all points south of Mount Vernon, and will make a fine road.

Very respectfully, yours, &c.,

H. . EASTIN, *Resident Engineer.*

To SYLVESTER WELCH, Esq.,
Chief Engineer of Kentucky.

APPENDIX J:

Virginia Law Establishing Turnpike from
Cumberland Gap to Moccasin Gap, December 21, 1805.

CHAP. 12.—*An ACT to authorize the county court of Lee to erect a turnpike or toll-gate on the road leading from Mockerson gap to Cumberland gap, through the said county.*

(Passed December 21, 1805.)

Whereas it is represented to this general assembly, that a turnpike or toll-gate on the road leading from Mockerson gap to Cumberland gap, through the county of Lee, for the purpose of keeping the said road in repair, would be of public utility:

1. *Be it therefore enacted*, That the court of the said county of Lee are hereby authorized, at their next March court, or as soon thereafter as shall be convenient, a majority of the members being present, to fix upon such place on the said road, for the erection of such gate, as to them shall seem most expedient, and shall have power to contract for the building and completing such gate, and shall moreover appoint a keeper thereof, who shall enter into bond and sufficient security to the court then sitting, in such sum as the said court shall think just, for the faithful performance of the duties of his office, and shall account with the said court monthly upon oath, for all monies he shall receive by virtue of this act: *Provided nevertheless*, That such gate shall not be erected on that part of the said road lying between its junction with the Russell county road and Lee courthouse.

2. *And be it further enacted*, That the said court shall have power from time to time, to lay off such districts on said road, as to them shall seem most to require the aid of this act, and shall appoint superintendants over such districts, who shall severally take an oath, and enter into bond with sufficient securities, in such sums as the said court shall direct, for the faithful performance of the duties required of them by this act. Such superintendants, when required by the said court, shall employ so many labourers, horses and carriages as they shall deem necessary, and shall proceed to make such repairs on their respective districts, as to them shall appear most to promote the public good. They shall make monthly returns of their proceedings to the said court, and shall be subject to the control of, and be removable from office by the said court, for any misconduct or neglect in the discharge of the duties thereof; and shall receive for their services such allowances as to the said court shall seem just.

3. *And be it further enacted*, That as soon as the said gate shall be erected, it shall be lawful for such gate-keeper to demand and receive of all persons passing through the same, the following rates or tolls, viz: For every man, six and one quarter cents; for every horse, mule or ass, six and one quarter cents, and for every carriage of any kind, including team and driver, twelve and one half cents per wheel: *Provided*, That persons not residing more than four miles from such gate, shall not be subject to payment of toll for passing through the same.

4. A fair list of the tolls payable by this act, or established by the court of said county, as hereinafter directed, shall be kept up at the toll-gate, from time to time, for the information of passengers. And the toll-gatherer or gate-keeper, shall be subject to a fine of two dollars for every day the same shall be omitted, to be recovered with costs, by warrant, before any justice of the peace in the said county of Lee, for the use of the party complaining.

5. *And be it further enacted*, That the money arising from such gate, shall be deposited in the hands of the clerk of the said court, and shall constitute a fund for the improving and keeping the said road in repair, and shall be paid by order of the said court, to such superintendants and labourers, as shall be employed under this act, the said court being satisfied of the justice of their accounts: *Provided nevertheless*, That if at any time, the tolls received shall be more than sufficient for the purpose herein mentioned, it shall be the duty of the said court to reduce the tolls so as to produce a fund equal to the purposes contemplated by this act.

6. This act shall commence and be in force from and after the first day of March next, and shall continue in force for the term of ten years, and no longer.

Embankment in cubic yards.	Price per yard.	Bridges, spans in feet.	Price per lineal foot.	Bridge masonry.	Price per perch.	Excavation of pits &c	Price per yard.	Bridge embankments.	Price per yard.	Estimated cost of each section.	Estimated cost per lineal rod.	Total cost of bridges.	Contract price per lineal rod.	Total cost of each section.	NAMES OF THE CONTRACTORS.
Yards.	Cents.	Feet.	Dollars.	Perch.	Dollars.	Yards.	Cts.	Yards.	Cts.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	
2065.0	10	-	-	-	-	-	-	-	-	6,165 00	13 85	-	15 00	6,676 54	Thomas Drake.
3008.0	10	-	-	-	-	-	-	-	-	3,109 00	6 86	-	8 64		
2786.0	10	-	-	-	-	-	-	-	-	1,853 00	7 19	-	8 64	8,039 13	J. W. Graig.
4314.0	12	30 / 30 60	4 00	248.88	2 00	-	-	-	-	2,039 62	7 41	769 76	8 64		
660.0	12	-	-	-	-	-	-	-	-	1,791 00	8 86	-	10 00	2,019 00	R. H. T. Prather.
1269.0	08	-	-	-	-	-	-	-	-	1,334 00	7 02	-	7 56	1,436 40	R. H. T. Prather.
2116.0	10	-	-	-	-	-	-	-	-	2,248 80	10 46	-	10 56	2,269 34	R. H. T. Prather.
2019.0	10	-	-	-	-	-	-	-	-	1,602 85	5 86	-	4 96		
2154.0	10	20	4 00	43.20	2 00	-	-	-	-	1,133 68	3 48	182 40	4 96	5,500 00	J. W. Graig.
3869.0	08	-	-	-	-	-	-	-	-	1,724 38	3 72	-	4 96		
245.0	10	-	-	-	-	-	-	-	-	605 50	4 68	-	5 15	731 81	J. Light.
825.0	10	-	-	-	-	-	-	-	-	700 66	4 44	-	4 80	772 62	J. Light.
1111.0	10	-	-	-	-	-	-	-	-	1,383 24	7 18	-	7 88	1,523 20	Geore Brown.
824.0	12	-	-	-	-	-	-	-	-	3,571 80	10 75	-	11 82	3,920 60	George Brown.
287.0	10	-	-	-	-	-	-	-	-	1,741 20	8 41	-	9 25	1,920 30	George Brown.
1386.0	10	20	4 00	109.94	2 00	-	-	-	-	1,638 90	7 00	315 88	7 70	1,802 79	W. Camplin.
2105.0	12	-	-	-	-	-	-	-	-	1,703 85	5 52	-	6 07	1,975 78	Camplin & Smith.
1123.0	10	-	-	-	-	-	-	-	-	1,809 87	5 86	-	6 45	2,068 75	Camplin & Smith.
1375.0	10	-	-	-	-	-	-	-	-	1,595 86	5 02	-	5 52	1,755 45	Camplin & Smith.
1060.0	11	-	-	-	-	-	-	-	-	1,515 16	4 62	-	5 09	1,616 68	U. Gresham.
1831.0	10	120	22 00	2943.2	3 25	3554.00	12½	2820.0	12½	1,198 30	10 80	13,530 15	11 98	1,318 13	Taylor Gresham.
1353.0	10	-	-	-	-	-	-	-	-	1,808 23	5 40	-	7 37	2,019 30	R. H. T. Prather.
979.0	15	-	-	-	-	-	-	-	-	2,254 05	6 34	-	5 94	1,834 27	R. H. T. Prather.
780.0	00	-	-	-	-	-	-	-	-	249 70	1 82	-	2 00	275 00	R. H. T. Prather.
1225.0	10	-	-	-	-	-	-	-	-	2,078 65	8 12	-	10 00	2,563 00	J. P. Parsons & Co.
2555.0	12	-	-	-	-	-	-	-	-	2,730 39	7 47	-	10 00	3,073 00	J. P. Parsons & Co.
621.0	09	-	-	-	-	-	-	-	-	840 49	4 56	-	5 83	1,070 22	Ingersoll & Co.
1749.0	15	-	-	-	-	-	-	-	-	2,199 05	5 31	-	5 83	2,412 45	Ingersoll & Co.
417.0	12	-	-	-	-	-	-	-	-	1,773 52	8 08	-	8 00	1,988 56	Joseph Wilson.
-	-	150	30 00	7423.0	2 75	7108.0	12½	7108.0	12½	-	-	27,109 70			
-	-	-	-	-	-	-	-	-	-	54,858 58	6 71	41,907 89	7 63	62,364 28	

-	-	$2,147 00
-	-	54,858 58
-	-	3,787 00 per estimate.
-	-	36,776 47 per estimate.
-	-	7 63
-	-	62,364 28
-	-	104,332 17
-	-	5,000 00
-	-	109,332 17

NAMES OF THOSE PORTIONS OF THE ROAD THAT HAVE BEEN PUT UNDER CONTRACT.	Section.	Length of each section.	Grubbing.	Price per pole.	Masonry.	Price per perch.	Excavation of earth.	Price per yard.	Excation of loose rock.	Price per yard.	Excavation of solid rock.	Price per yard.	Total amount of excavation.	Price per yard.
	No.	Poles.	Poles.	Dollars.	Perches.	Dollars.	Yards.	Cts.	Yards.	Cts.	Yards.	Cts.	Yards.	Cts.
umberland Mountain,	–	445.1	340.0	1 25	180.0	1 50	8638.0	10	8802.0	25	5723.0	40	22923.0	23
uth side of First Log Mountain,	–	466.2	370.0	1 50	210.0	1 50	8691.0	10	5231.0	30	–	50	8922.0	22
rth side of First Log Mountain,	1	258.3	258.0	1 50	100.0	1 50	2470.0	12	2470.0	30	–	50	4940.0	21
uth side of First Log Mountain,	2	375.4	197.0	1 50	80.0	1 50	2507·0	10	1912.0	25	956.0	35	5375.0	20
uth side of Second Log Mountain,	–	201.9	200.0	1 50	110.0	1 50	3172.0	10	2160.0	25	1099.0	40	6431.0	20
rth side of Second Log Mountain,	1	190.0	127.0	1 50	100.0	1 50	2718.0	12	871.0	25	871.0	40	4460.0	20
the dividing ridge at Lynn Camp, near James Ward's,	1	317.4	287.0	1 50	110.0	1 50	7043.0	–	–	–	–	–	7043.0	15
the dividing ridge at Lynn Camp, near James Ward's,	2	325.8	250.0	1 50	60 0	1 25	3904.0	–	–	–	–	–	3904.0	12
the dividing ridge at Lynn Camp, near James Ward's,	3	464.5	464.5	1 25	160.0	1 50	4552.0	–	–	–	–	–	4952.0	12
Mr. McHargue's, (Robinson creek,)	–	142.1	120.0	1 25	80.0	1 50	2650.0	–	–	–	–	–	2650.0	14
Laurell River,	–	158.0	92.0	1 25	25.0	1 50	3582.0	–	–	–	–	–	3582.0	13
Little Rockcastle Mountain,	68	183.3	103.3	1 25	60.0	1 50	6718.0	–	–	–	–	–	6718.0	14
Little Rockcastle Mountain,	69	332.2	332.0	1 50	110.0	1 50	10416.0	12	5200.0	30	–	–	15616.0	18
Little Rockcastle Mountain,	70	267.6	267.0	1 50	50.0	1 50	3800.0	10	3788.0	25	–	–	7588.0	18
ound the Big Rockcastle Mountain,	71	234.6	234.0	1 25	60.0	1 50	4440.0	12	2220.0	25	–	–	6660.0	17
ound the Big Rockcastle Mountain,	72	325.5	120.0	1 50	110.0	1 50	6525.0	10	2175.0	25	–	–	8700.0	14
ound the Big Rockcastle Mountain,	73	323.9	323.9	1 25	90.0	1 50	9590.0	–	–	–	–	–	9590.0	13
ound the Big Rockcastle Mountain,	74	307.8	230.0	1 50	110.0	1 50	6774.0	–	–	–	–	–	6774.0	14
ound the Big Rockcastle Mountain,	75	328.2	260.0	1 50	100.0	1 50	4367.0	11	1500.0	25	–	–	5867.0	15
ound the Big Rockcastle Mountain,	76	219.2	110.0	1 50	70.0	1 50	7452.0	–	–	–	–	–	7452.0	10
ound the Pine Mountains,	80	308.8	288.0	1 50	120.0	1 50	3903.0	11	1940.0	25	–	–	6003.0	10
ound the Pine Mountains,	81	355.4	327.0	1 25	100.0	1 50	10323.0	15	–	–	–	–	10323.0	15
ound the Pine Mountains,	82	137.5	–	–	60.0	1 50	1708.0	11	–	–	–	–	1708.0	11
agford's Hill,	–	256.3	190.0	1 25	60.0	1 50	7239.0	10	3619.0	25	–	–	10858.0	15
ount Vernon Hill,	–	267.3	192.0	1 50	90.0	1 50	7464.0	10	2503.0	20	1872.0	40	11019.0	17
ams's Hill,	–	184.6	134.0	1 00	50.0	1 25	2300.0	10	708.0	25	384.0	40	3452.0	17
dge between Cumberland and Kentucky rivers,	–	413.8	320.0	1 25	100.0	1 25	2352.0	10	2354.0	25	1176.0	50	5882.0	24
ck's River Hill,	–	219.6	204.0	1 25	60.0	1 50	2248.0	11	2415.0	23	1282.0	45	5940.0	23
umberland River Bridge,	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Totals,	–	6175.3	–	–	–	–	–	–	–	–	–	–	–	–

Total length, 25 miles 175.3 poles.
Estimated cost for grading per mile, - -
Total cost for grading, per estimate, - -
Cost per mile, for grading and bridging, - -
Total cost for grading and bridging, - -
Contract price per pole for grading, - -
Total cost of grading per contract, - -

Total cost of grading and bridges, per contract,
Add $5,000 for contingencies, - -

Aggregate cost of all the work, - -

APPENDIX K

Christopher Greenup Protests Toll Gate at Cumberland Gap, September 12, 1806.

Christopher Greenup to the Governor.

1806. Sept. 12, Frankfort, Kentucky

I have the honor of inclosing you an affidavit of Mr. Nath'l Hart and the *certificates of Messrs. Andrew Crockett and James True (all respectable characters) concerning a Toll gate lately erected near the top of the Cumberland Gap, on the Virginia side, complaining of the unjust conduct of those who have the direction of it. I have also many verbal complaints made to me on that subject, and believe the conduct of those who have fixed the gate to be reprehensible. It has also been represented to me that the inhabitants who live near the foot of the mountain on the west side, are obliged to pass thro' the Gap to a mill at the foot of the mountain on the east side, and consequently are compelled to pay toll without deriving any benefit from it. I have, therefore, to request your Excellency to interpose and rectify the abuse if in your constitutional power; if otherwise, that you cause the same to be represented to your next General Assembly.

Sept. 12, Frankfort, Kentucky

Christopher Greenup to the Governor.

Dec. 27, Frankfort Kentucky

By direction of the General Assembly of this State, I have the honor of enclosing to your Excellency an address respecting the Turnpike or Toll-gate erected in the gap of Cumberland mountain, and to request you to cause the same to be laid before the Legislature of the State over which you preside.

I have, &c.

In General Assembly, *December 6th, 1806.*

1806. Dec. 27, Frankfort, Kentucky

The General Assembly of the Commonwealth of Kentucky have with concern received information that the Court of Lee in the State of Virginia, under an act of that State passed December 21st, 1805, entitled "an act to authorise the County Court of Lee to erect a Turnpike or toll gate on the road leading from Mockerson Gap to Cumberland Gap through said County," have erected said gate near the top of Cumberland mountain within a few feet of their State line—a place evidently not warranted by the act of Assembly, and not within the contemplation of the Legislature of the State of Virginia, inasmuch as it is expressly the object of the law that the said Turnpike should be erected for the purpose only of "keeping the said road in repair," and its present situation subjects to the payment of toll an immense number of travellers using other roads than that leading from Mockerson Gap to Cumberland gap.

The Executive of the State of Kentucky communicated some time since this impropriety to the Executive of Virginia, and it was with pleasure that this General Assembly received information that his Excellency, the Governor, and Executive council of Virginia had taken the subject into consideration and had directed a suspension of said Toll gate erected on Cumberland mountain until the meeting of the Legislature of that State. But as it is represented to this General Assembly that the said Toll gate still remains on Cumberland mountain with a body of armed men to guard it, and compel the payment of toll, they take the liberty of remonstrating against this improper conduct of the county court of Lee, and have every confidence that the Legislature of Virginia will at their present session adopt measures to remove the evil.

Resolved, That the Governor of this State be, and he is hereby requested to transmit as early as may be, a copy of the foregoing remonstrance to the Executive of the State of Virginia with a request that the same may be laid before the Legislature of that State.

William Logan, S. H. R.
Green Clay, S. S. P.

Approved Dec. 26, 1806.

Christo. Greenup,
Governor of the Commonwealth of Kentucky.

By the Governor:

John Rowan, Sc'ty.

A copy—Attest:

John Rowan, Sc'ty.

APPENDIX L

Virginia Legislation to Move Toll Gate from Immediate Cumberland Gap Area, January 2, 1807.

CHAP. 72.—An ACT to amend and explain the act authorizing the county court of Lee to erect a turnpike or toll-gate on the road leading from Mockerson gap to Cumberland gap, through the said county.

(Passed January 2, 1807.)

Whereas it is represented to this general assembly that a turnpike or toll-gate authorized by an act of the last session of assembly, has been erected on Cumberland mountain by the direction of the county court of Lee, for the purpose of collecting a fund to keep the road in repair from Mockerson gap to Cumberland gap, through the county of Lee; and it appears to this general assembly that it is not reasonable that the said turnpike or toll-gate should be erected at the before mentioned place, because travellers using the Tennessee or main Kentucky road are subject to the payment of tolls, as well as those who travel the road proposed to be repaired by the proceeds of the said turnpike: For remedy whereof,

1. *Be it enacted and declared*, That it shall not be lawful for the said court of Lee to continue a turnpike or toll-gate on Cumberland mountain, or so near the same that travellers using the Tennessee or main Kentucky road will be subjected to the payment of tolls at said gate; but it shall and may be lawful for the said court, and they are hereby required to erect the said turnpike or toll-gate at any suitable place on the said road leading from Cumberland gap to Mockerson gap, eastward of the junction of the said road with the Tennessee or main Kentucky road, in all respects conforming to the restrictions, limitations and provisions of the act of the last session of the general assembly.

2. *And be it further enacted*, That all sums collected at the toll-gate heretofore erected and not yet disbursed, shall be applied exclusively to the improvement of the pass at Cumberland gap over the Cumberland mountain.

3. This act shall commence and be in force from and after the first day of March next, and shall continue in force for the term of nine years and no longer.

APPENDIX M:

Toll Rates on Price's Turnpike and Cumberland Gap Road,
April 12, 1843.

Board of Public Works.

RATES OF TOLLS

On the Price's Turnpike and Cumberland Gap Road,

[Prescribed by the Board of Public Works 12th April 1843, in conformity to act of March 9, 1843, chap. 98.]

For every horse and rider, 10
every led or drove horse, 5
every two wheeled riding carriage, or Jersey wagon, drawn by one horse, 20
every two wheeled riding carriage, cariole, or Jersey wagon, drawn by two horses, 25
every four wheeled riding carriage, or stage, drawn by two or three horses, 45
every four wheeled riding carriage, or stage, drawn by four horses or more, 60
For a cart and one horse, 15
a cart and two horses, 20
a wagon and two horses, 35
a wagon and three horses, 40
a wagon and four horses, 45
a wagon and five horses, 60
a wagon and six horses, 65
For every empty cart 5 cents, or wagon 10 cents, and 5 cents for each horse drawing the same.
For every head of cattle, 2
every score of sheep, 5
every score of hogs, 10

And in proportion to the above rates of tolls for such distances as may be travelled on either side of any gate.

A true copy from the minutes.

THOMAS H. DE WITT,
Ass't Secretary B. P. Works.

APPENDIX N:

Livestock Droving Census at Cumberland Ford and Cumberland Gap, 1822-1850.

Livestock Passing Cumberland Ford Or Through Cumberland Gap

1822

Type	Numbers	Value
Hogs	45,421	$317,947
Horses and Mules	5,446	$435,680
Stall-fed Steers	236	$9,440

1825

Type	Numbers	Total Value
Horses	4,019	
Mules	1,019	$905,892
Hogs	63,036	
Cattle	1,393	

1827

Type	Numbers	Value
Horses	3,529	$270,000
Mules	1,840	
Hogs	111,283	$667,000
Steers	2,700	
Wethers (sheep)	1,097	

1,383 Drovers Used

1828

Type	Numbers	Total Value
Horses	3,412	
Mules	3,288	$1,167,302
Hogs	97,455	
Sheep	2,141	
Stall-fed Beef	1,525	

1838

Type	Numbers	Value
Horses	4,039	$577,280
Mules	3,177	
Beef Cattle	4,540	$227,450
Hogs	68,764	$962,696
Sheep	3,250	$13,000

1841-42

Type	Numbers
Horses	2,765
Mules	2,247
Beef Cattle	2,406
Hogs	54,813
Sheep	718

1849-50

Type	Numbers
Hogs	63,000

APPENDIX O:

Proposed Canal System Via Cumberland Gap,
February 23, 1836.

waters of the Cumberland and Kentucky rivers, in the vicinity of that town, with a view of ascertaining "*whether it would be practicable to connect the two rivers by a canal*," and suggesting a request for my views as to "the beneficial effects *of the improvement*" if found practicable.

In pursuance of these instructions, I made the examination of the contiguous sources of the tributaries of the two rivers, extending the examination of the Cumberland to Cumberland Ford, 16 miles above Barbourville. The result of these examinations satisfied my mind that "*it would be practicable to connect the two rivers by a canal*" by taking the water out of the Cumberland river at Cumberland Ford.

Taking into consideration, however, the circumstances of the country, and the character, as respects its navigable capacity, of the Cumberland river, there being perpendicular falls, and other serious obstructions below, it appeared to me that, considered as a merely isolated measure, confined to any trade likely to be presented by that country, or dependent upon auspices to be furnished by the navigation of these rivers alone, that no equivalent object would be obtained by the connexion of their navigation.

At the same time, however, as observed in the former report, the result of observations and enquiries extended through a residence of several years in professional employment in that region of country, had some years ago, created on my mind a strong impression of the practicability of a canal which would connect the Savannah and Tennessee rivers.

From representations made me by the Hon. James Love and other gentlemen of Barbourville, and others at Cumberland Ford, of the topography of the country between Cumberland Ford and Cumberland Gap, and from their suggestions of the probability of an adequate source of water for supplying the summit level of a canal through the Cumberland Mountain at the latter named point, it appeared to me to be possible that a connexion could be by this means effected between the Cumberland and Powell's river, (which latter stream is a copious tributary of the Tennessee, flowing along the southern base of the Cumberland Mountain,) and thus continue the connexion of the navigation of the Kentucky and Cumberland rivers, through to the Tennessee river. If this could be effected there would, it is thought, be no invincible obstacle to the continuance of an unbroken chain of water communication from the Ohio river, at the mouth of the Kentucky, to the mouth of Savannah on the Atlantic coast in Georgia.

From Cumberland Ford it is 13 miles, in a southwardly direction to Cumberland Gap, a narrow depression in the Cumberland Mountain, and from thence it is five miles to Powell's river. Upon hearing the suggestions and representations above mentioned, I determined to proceed to Cumberland Gap with a view of enquiring into these probabilities. The result of this reconnoissance satisfied me of the [illegible] practicability of connecting the navigation of these two rivers, (Cumberland and Powell's), by a canal, made to pass by a tunnel through the mountain at Cumberland Gap. The length of the tunnel which would perforate the mountain at this point, would not, it is thought, exceed

700 to 800 yards. For supplying the water for this summit level, a source believed to be superabundant is presented by a fountain which issues from the southern brow of the mountain, several hundred feet above the plane of the canal.

The face of the mountain at the point where this water issues, is a vertical ledge of rocks of probably 1500 feet in height, and the water poure out of an aperture in the face of the rocks, several hundred feet above the base. A part only of this water is collected in a race and conveyed a short distance below, where it has been applied to drive a grist mill, a saw mill, and an iron forge.

The great depth of the sources of this water below the surface of the earth, gives to it an uniform flow during the whole year. At a few hundred yards from its source, the water which becomes scattered by falling among a lodgement of broken rocks at the base of the mountain, is collected into one channel and forms a considerable stream, which flows down a valley five miles, where it enters Powell's river. This is on the Tennessee side of the mountain, the line dividing that State from Kentucky passing along the summit at this point.

The distance over the ridge at Cumberland Gap, following the road by zigzag windings along the steep acclivities of the mountain, is about a mile and a quarter; but directly through the base, upon a straight line, such as would be followed by a tunnel, the distance as before stated is estimated to be about 700 to 800 yards.

From the northern base of the mountain, on the Kentucky side, Yellow Creek, a considerable stream, flows through a broad valley of level low grounds to the Cumberland river, which it enters 4 miles above Cumberland Ford. The distance from Cumberland Gap, following the valley of Yellow Creek to its mouth is, I am informed, 12 miles. I rode along the bank of this creek seven miles. The low grounds through this distance are very level, and generally several miles wide, and the creek appeared to have but very little fall. The remaining distance of the creek valley, next the Cumberland river, I did not personally examine, but I was informed by the proprietor of the lands lying along it, that from the point where my observations terminated, to the Cumberland river, the Creek Valley presented the same character, except its width. He stated that its average breadth was probably about one fourth of a mile, varying from a few hundred yards to half a mile wide, and that it was uniformly level and unbroken, and that the current of the creek was equally level and sluggish as upon the parts I had witnessed.

According to the route it is proposed to follow, the Cumberland Mountain would form the most elevated point between the Ohio river and the Atlantic coast, and if the above facts are correctly judged of, they would seem to indicate the practicability of constructing a canal through this mountain, between Powell's and Cumberland rivers.

The bed of the Cumberland river is considerably more elevated than that of the Kentucky. About 6 miles from Barbourville, the contiguous tributary waters of the Cumberland and the Kentucky flow in opposite directions from the same low ridge. At one point the sources of these waters are within probably 100 steps from each other, and in

another they flow in opposite directions from the same source. These waters pass in one direction to the Cumberland by the northwardly fork of Richland Creek, and on the other side by Collins' Fork of Goose Creek to the Kentucky river. The elevation of this ridge above the high water mark of Cumberland river is estimated to be about 40 to 45 feet. The water for a canal, however, cannot be taken out of the Cumberland in this vicinity, inasmuch as the necessary height of a dam would inundate a large area of country. It would therefore be necessary to pursue the river farther up until the fall of the stream would give sufficient elevation. Sixteen miles above Barbourville, at Cumberland Ford, the river breaks through the Pine mountain, over a succession of abrupt rapids. The fall over these rapids, including the fall of the river between Barbourville and this point, would, it is thought, give a sufficient elevation at this place to require a dam of only moderate height to turn the water into a canal.

The locality is highly favorable for the construction of a dam; the whole bed and banks of the river being of rock, and any required height could be given to it. A canal could here be taken out and be continued along the basis of the hills, in the rear of the low grounds of the Cumberland river, and passing by a cut, through the ridge above described, would be conducted into the bed of Collins' Fork, whence it could be continued through Goose creek and the South Fork of Kentucky into the Kentucky river at the Three Forks.

There appears in the way of effecting this, but one difficulty, and it is regarded to be doubtful whether that need be considered as invincible. It is this—It is feared that on the lower part of the canal, the water brought from Cumberland Ford, owing to the distance it would have to travel from its source, might in very dry seasons be found insufficient for a full supply. The distance from the dam to the dividing ridge, where the canal would enter Collins' Fork, is about 22 miles. From that point to Manchester in the vicinity of the Saltworks is 16 miles, making the distance from the dam to Manchester, 38 miles. From Manchester to the Three Forks, the supply of water is thought to be sufficient, but there would be a distance of 16 miles upon which the water of Collins' Fork could only be calculated on for a partial supply, and this portion of the canal would be at the greatest distance from the dam, the source of the supply. In very dry seasons, therefore, it is possible that the water might be found to be faint upon this part of the improvement. The whole distance, however, from Cumberland Ford to Manchester being 38 miles, is but 3 miles greater than the distance from the city of Pittsburg to the Feeder dam at Leechburg, on the Kiskiminitas, that distance being 35 miles. The Pennsylvania canal is supplied, throughout that whole distance, from that dam, without any auxiliary; whereas, the water of Collins' Fork would in this case furnish some help. Upon the whole, however, I am inclined to be apprehensive that in very dry seasons a scarcity of water would be felt along this part of the canal. In such an event, the example furnished by the reservoirs upon the Ohio canals may be, it is thought, successfully followed here. By a resort to this means, they have succeeded in furnishing a supply for some parts of their canals without any aid

in the Ohio, at the mouth of the Kentucky river. The following would be the modes of improvement, and the estimated distances:

From the mouth of Kentucky to the Three Forks and thence up the South Fork and Goose creek to Manchester by slackwater navigation—distance 255 miles. From Manchester to Cumberland Ford by a canal, 38 miles. In the pool of the dam at Cumberland Ford by slackwater, 4 miles to the mouth of Yellow creek. From the mouth of Yellow creek, by a canal, up the valley of that creek through Cumberland mountain by a (tunnel 700 to 800 yards long,) into Powell's river, distance 18 miles. From thence by slack water navigation through Powell's and Clinch, into Tennessee river, 100 miles; down the Tennessee to the mouth of Hiwassee, 70 miles; up that river to the mouth of Okoa, 30 miles, making in this stretch of slack water, 200 miles. From the latter named point, by a canal around the southwestern base of the Apalaching mountains to Augusta, (distance 150 to 200 miles,) say 200 miles. From Augusta by slack water through the Savannah river, 150 miles, to the Atlantic ocean.

The entire distance according to this computation would be 925 miles, to wit: Rivers improved for slackwater navigation, 669 miles, and of artificial canals, 256 miles.

In regard to the cost of effecting this communication, if practicable at all, it could probably be effected at a greatly more economical expense than any work hitherto proposed.

Having been engaged in the construction of improvements in the Tennessee, enable me to speak with certainty of the capacity of that river. My opportunities have also, given me a tolerably familiar acquaintance with the Clinch and the Hiwassee. My knowledge of the character of Powell's river, is derived chiefly from third persons. But judging from the general topography of that country, it does not probably materially differ from the others in any respect, that would increase the expense of its improvement.

The Tennessee and Clinch, are well known large rivers. The former affords a good winter navigation for steam boats, and has a volume of water, fully equal to the Ohio at Cincinnati; and as regards either of the others, their susceptibility of improvement at a very moderate expense, admits of no doubt.

The same may be inferred of the Savannah, inasmuch as that river is now navigable for steam boats in winter, and for light craft at all seasons.

The fall of the Tennessee, is very nearly the same as that of the Kentucky, and there is probably no material difference in this respect, between that river and the others, Powell's, Clinch and Hiwassee. The latter river is especially remarkable for its gentle fall. It is thought that a single lock and dam, would be all that would be required to effect 6 feet depth of water, as far as the improvement would extend up this river. The breadth, however, of the Tennessee, and of the Clinch, both of which are large rivers, would require dams of greater length. The fall also, of the South Fork of Kentucky, and of Goose creek, would be steeper, which would increase the requisite amount of lockage.

Now the estimated cost of improving the Kentucky, from the mouth,

to the Three Forks, upon the best plan of works, for 6 feet water, is $669,503. The distance being 255 miles, the average per mile, is about $2508.

But if, for the considerations above named, we exclude this portion of Kentucky river, and allow about $1,000, per mile over this average cost for all slack water improvements required upon the remaining extent of rivers embraced in the line of communication, the estimate for lock and dam navigation would stand thus:

Kentucky river, from the Ohio to the Three Forks, distance 255 miles, at $2508 per mile.	$ 669,503
Aggregate extent of other rivers, distance 414 miles at $3500 per mile,	1,449,000
Total extent 669 miles. Total cost,	$2,118,503

This would be equal to an average cost throughout, of nearly $3,107 per mile, for the slack water portion of the improvement.

The cost of canals, depends much upon the topographical character of the ground, and especially upon the amount of lockage required. In both these respects, it is thought that the features of this route are highly favorable. It is believed that the average amount of lockage, would be found to be less than one half of that encountered either upon the Chesapeake and Ohio canal, or upon the Pennsylvania line of improvements, including the inclined planes upon the rail roads connected with the latter. The canals of New York and Ohio, outflank the mountains on the north. This line would turn their southern extremity. The extreme compression of the mountain at Cumberland Gap, may be regarded as a highly fortunate circumstance, inasmuch as the construction of a tunnel of moderate length, which is rendered of easy accomplishment by this conformation of the mountain, would obviate a great amount of ascending and descending lockage, which would be required to surmount the elevation at any other point. Including the tunnel among the items of expense of constructing the canal through that portion embraced in Kentucky, and the unusually favorable character of the route in other respects, would render its cost probably below the average cost of similar works upon routes already improved, or where works are in progress. In regard to the scale of the works it is obviously unnecessary to enter into any discussion. I will only make the passing remark that the capacity of the canal would probably be required to be equal at least to the dimensions to which the Erie canal of N. York is now undergoing enlargement, to wit: for the navigation of boats of 120 to 150 tons. The Muscle Shoals canal in Alabama is of about this capacity. The length of this canal is 15 miles. In this distance it has 20 guard and lift locks, and 6 dams, and occupies ground of a generally very expensive character. A considerable part of the distance being along steep rock cliffs in the edge of the Tennessee river. That work is about being completed at an average cost per mile, I believe, of about 40,000. The smaller canals which have been constructed in various other sections of the country have varied in their cost from $20,000 down to $10,000, according to the ground and the cir-

cumstances under which they have been constructed. The cost of the Erie and the Champlain canals in N. York was, I think, about $19,000. That of the Juniata division of the Pennsylvania canal upon which there is a great amount of lockage, was constructed more latterly at a cost of $19,000 and the average cost of the canals of Ohio was about $10,000 per mile. But if we take the Muscle Shoals canal as the standard, and make a fair allowance for the difference in the character of the ground, and the reduced average amount of lockage, it is thought that $25,000 per mile may be assumed as the probable cost of constructing the intermediate canals required in this case. The aggregate extent of canals has been estimated at 250 miles. This would make the total cost of this item $1,400,000. The grand total distance and cost of the whole line of improvement would then be thus shown:

Slack water,	669 miles—total cost,	$2,118,503
Canals,	256 miles—total cost,	$6,400,000
Total distance,	925 miles—grand total cost,	$8,518,503

This is equal to an average cost throughout, slack water and canals inclusive, of $9,117 per mile, and is about one half the ordinary average cost of a double track rail road of wood and iron. The Portage Rail Road in Pennsylvania has cost about four times this sum. The first 13 miles of the Baltimore and Ohio Rail Road cost near six times as much.

On the best Rail Road that can be made, the cost of transportation would be more than three times greater than its cost upon such a navigation.

With a view of more fully illustrating this subject, a map showing the general geographical features, and principal lines of communication of the U. States, as also two other maps on a larger scale, showing in detail the topography of that part of the route lying between the Three Forks of the Kentucky river, and the State line at Cumberland Gap, have been constructed.

It is possible that the attention devoted to this subject, may be found to have been gratuitous, inasmuch as closer enquiry may develope the impracticability of the scheme upon the plan proposed. In the event however of a communication by canals, between the rivers spoken of, being found impracticable, the same route is open to the construction of Rail Roads, which might be substituted upon any portion where a canal could not be made. By this means the general advantages presented by the route would be secured, and the superior economy of steam boat transportation on the river portions of the improvement, would probably compensate for transhipments, and still reduce the entire cost of transportation considerably below what it would be upon a continuous Rail Road extending throughout. The amount of business would immediately establish regular and punctual lines of transportation, and when this is the case, and transhipment becomes reduced to a systematic business, it is effected at a very reduced expense. It is effected at Albany from the Erie canal boats into steam boats upon the Hudson river at 15 cents a ton, as I observe from a late report of the N. York engineers.

If, however, a water communication throughout can be effected, it would, it is thought, be greatly better suited to the wants and circumstances of the country than either a partial or a continuous Rail road.

If we suppose a continuous water communication completed and in operation, independently of the substantial benefit of the greatly lower cost of freight, it would present many other positive advantages.

We have seen that the cheapest mode of procuring artificial improvements in this country, where the fall of rivers is usually moderate, is that by locks and dams. This line would intersect a number of rivers upon which this mode of improvement could be readily applied, and which led into extensive regions and to voracious markets. The interests of the people living along those rivers, would induce their improvement simultaneously with, or soon after the main line. Any citizen could then build his own boat, and propel it with whatever kind of power he could most readily command; on this he could embark his cargo and travel at his pleasure, either fast or slow, to whichever he might choose among the numerous markets that have been pointed out, accordingly as the one or the other might offer the best prices for his produce. The construction of the main line would be all that would be required to effect this advantage of a choice of markets. All lateral channels would be the work of competitors for the trade.

A great proportion of the route it is seen would consist of rivers improved for steam boats of heavy tonnage, and the intermediate canals could be calculated for the passage of the same, or very nearly equally eligible boats.

This would seem to set at rest the objection of slow traveling. Again, the mildness of the climate, places this route compared with those of the North, measurably beyond the reach of frost. Even that portion situated in the most elevated part of Kentucky would have a great advantage, in this respect, over the more northern improvements.

I shall not detain the Board by any attempt to calculate the business that would be drawn to such an improvement, nor shall I undertake to portray its effect upon the social prosperity of the extended communities who would share its benefits; it would seem to be sufficient to point to the sweeping regions of productive country for whose commercial intercourse it would evidently become the most eligible thoroughfare.

Believing the accomplishment of this project to be worthy of the attention of the State, I shall conclude by suggesting to the Board the propriety of placing the subject before the Legislature, in such shape as may elicit from that body, an invitation to the governments of the States of Tennessee and Georgia to co-operate in the examinations or surveys necessary to ascertain its practicability.

I will also add before closing, that the extension of the improvement of the Kentucky river to the State line at Cumberland Gap, even if it were to terminate at that point, would, it is believed, be a measure of judicious public policy, calculated to secure the transportation, and bring into the State a portion of the trade of a large section of country in East Tennessee and Western Virginia, including the neighboring portions of North Carolina and Georgia, and also calculated to develope the

113

mineral resources of the mountain districts of Kentucky, and to provide employment for the water power furnished by the improvements in the Kentucky river.

I shall apologise for the late appearance of this Report, and perhaps for its defective character, by stating that it has been written, especially the latter half of it, under the disadvantage of very bad health.

All which is

Respectfully submitted,

R. P. BAKER,

Ch'f. Engineer,

St. Ky.

Frankfort, 23d Feb. 1838.

APPENDIX P:

Object Lesson Road Summary, March 3, 1910.

March 3, 1910.

Hon. D. C. Edwards,

U. S. House of Representatives.

Dear Sir:

Your letter of February 28 addressed to the Secretary of Agriculture, requesting information concerning the Cumberland Gap Road has been referred to this Office for reply.

The total cost of this road was $16,821.59. We do not have this divided between the counties as you request. We also find the following information concerning this road:

Total length graded, 13,200 lineal feet,

Width out to out of ditches, 24 ft.

Width out to out of shoulders, 21 ft.

Length surfaced, 12,300 lineal feet,

Width of surfacing, 14 feet,

Total depth of surfacing, loose, 12 in.

Total depth of surfacing, compacted, 8½ in.

The material used was native limestone.

This Office cooperates with local highway officials by testing road building materials, inspecting and giving advice in regard to them, and also concerning methods of construction. We also have a small force of expert

highway engineers who are sent free of charge in response to proper application, so far as possible, to superintend the construction of short stretches of object-lesson roads. We have no appropriation for the purpose of granting financial assistance.

The authority for our work is contained in the appropriation bill for the Department of Agriculture, passed each year by Congress.

I enclose herewith Annual Report for 1909, which describes the work of this Office for that year.

Trusting that this will give you the desired information, I am

Very respectfully,

Director.

Enclosure
Ann. Rept.
CHH/CF

APPENDIX Q:

Final Report on Object Lesson Road, December 14, 1908.

Form 34.

OFFICE OF PUBLIC ROADS
RECEIVED
DEC 14 1908
U. S. DEPT. OF AGRICULTURE

UNITED STATES DEPARTMENT OF AGRICULTURE,
OFFICE OF PUBLIC ROADS.

REPORT OF OBJECT LESSON ROAD.*

PLACE: Cumberland Gap.. COUNTIES Claiborne, Lee, Bell STATE Tenn-Va-Ky.
NAME OF ROAD: Tri State Road. DIRECTION: NW FROM Cumberland Gap TOWARD Middlesboro, Ky

1. DATES.

(a) Name each man's arrival: McClure July 10-07 — Town, Aug 6:07 Rodgers Oct 1-07 Millet Oct-10-07

(b) Name each man's departure: [McClure Oct 21-07 Blount Feb 1-08] Town Oct-10-07 Rodgers Jan. 6-08; Millet Oct 26-07

(c) First work started (state character): Excavation Aug 1 07 July 31

(d) Road entirely completed: Oct 9 07 (e) Machinery arrived Oct 1-1907

(f) Shipped: Oct 27 07 (g) Crusher set up: Oct 20-1907

(h) Taken down: Oct 27 07 (i) Excavation started: Aug-1-07

(j) Excavation completed: Sept 20 07 (k) Crushing started: Oct. 23 07

(l) Crushing completed: Oct 6 07 (m) Surfacing started: Oct. 23 07

(n) Surfacing completed: Oct. 6 07

(o) Days' delay on account of rain or bad weather: 76 days + 9 Sundays in winter when work

(p) Days' delay on account of other causes; name causes: Crushing delayed 15 days on account of bad boulders on crusher engine.

2. EXCAVATION.

(a) How was earth loosened, loaded, hauled, and spread?

Approx 40% loosened with plows and hauled with scrapers Remainder loosened with explosives and loaded by hand into wheelbarrows and carts, and spread by hand.

(b) Give method of rock excavation: Drilled by hand and loosened with explosives, loaded into carts and hauled to fills.

(c) Average cut, 2' to 10' ft.; maximum cut, 21 ft.

(d) Average fill, 2' to 10' ft.; maximum fill, 22 ft.

(e) Minimum grade on old road, 5 per cent; maximum grade, 15 per cent.

(f) Minimum grade on new road, 3 per cent; maximum grade, 16 per cent.

*Any discrepancy between final report and daily reports must be explained in this report by the expert in charge. If spaces left for answers are not sufficient, the answers may be continued on the blank pages following, repeating the number and letter of question.

3. DRAINAGE.

(a) Is adjacent land level, rolling, or hilly? Mountainous

(b) Nature of soil from station to station: 0 to 25 clay soil with many boulders, 3 ft. deep over solid sandstone ledges. Sta. 25 to 65, loose rock with many ledges of solid rock. Sta. 65 to 125, clay, loose rock and solid rock.

(c) Give in their order all cross drains constructed, stating location, kind, size, and length: Sta. 5, 10" pipe 30' long; Sta. 50, 10" pipe 30' long; Sta. 14, 12" pipe, 30' long; Sta. 16, 12" pipe 35' long; Sta. 20+30, 12" pipe 30' long; Sta. 23, 12" pipe, 42' long; Sta. 25 10" pipe, 30' long; Sta. 27+50 10" pipe, 28' long, Sta. 82 12" pipe 36' long; Sta. 36 rock wall culvert with cap stone, 24" x 18".

(d) Give in their order all underdrains constructed, stating location, kind, size, and length:

None

(e) Give method of construction of end, size, and abutment walls when such were built: Dry rubble walls built at ends of all pipe cross drains.

4. MACHINERY.

(a) Give list (name, size, and type) of machinery furnished by Office: 4, #2 wheel scrapers, 4 #2 drag scrapers, 1 #6 plow, 1 tractor plow, 2 2-yd dump wagons, 1 - 450 gal sprinkler, 1 ten-ton roller; 1 #40 Champion crushing plant.

(b) Give list (name, size, and type) of machinery furnished by local authorities: Plows, scrapers, carts and wagons as required.

(c) Average capacity of crusher for 10 hours: 100 ~~tons~~ / cu. yds. Maximum: 130 tons / cu. yds.

(d) Capacity of bins for each size of stone: 10 cu. yds each ~~tons~~ / cu. yds.

(e) Height material was raised to screens: 15 ft.

(f) Pitch of screen: 24 in. to 10 ft.

(g) Diameter and length of screen: Diam 30' length 10 ft.

(h) Length of each section: 3/4" 3 ft long; 1 1/2" 3 ft long; 3" 4 ft long

(i) Diameter of holes in each section: 3/4" - 1 1/2" - 3"

(j) Dimensions of dust jacket and size of mesh: None used

(k) Kind and capacity of wagons used for different purposes:
For excavation and hauling stone
Dump wagons, 2 cu. yds:
Slat bottom wagons, 1 & cu. yds.

5. DISTANCES.

(a) Average haul for excavation: 200' Maximum: 800'

(b) Quarry to crusher: 500'

(c) Average from crusher, pit, or car to road: 2250 ft

(d) If material is shipped in, state mileage by rail:

(e) Average haul of water for crusher: Water piped 900 ft to crusher

(f) Average haul of water for sprinkler: 1200 ft.

(g) Average haul of water for roller: 1200 ft.

6. MATERIALS.

(a) Kind used for foundation: Limestone 1 3/4" to 3".

(b) Kind used for surfacing: " " 3/4" to 1 3/4"

(c) What is your opinion as to its binding and wearing qualities?
Excellent for the conditions of traffic.

(d) Method of spreading surfacing material: Spread from wagons and leveled with shovels.

(e) Method of transportation to crusher: By wagons.

(f) Method of loading crushed material: Loaded by gravity from elevated bins

7. DIMENSIONS.

(a) Total length graded ..... 13260 ft.

(b) Width graded in cuts ..... 24 ft.; in fills ..... 29 ft.

(c) Total graded ..... 3582 sq. yds

(d) Length and width of subgrade prepared for surfacing: 12300' long, 14' wide.

(e) Subgrade prepared for surfacing ..... 19133 ..... 19135 sq. yds.

(f) Total length surfaced ..... 12300 ft.

(g) Width surfaced ..... 14' ft.

(h) Width of finished roadway outside to outside of shoulders ..... 21 ft.

(i) Total surfaced ..... 19133 ..... 19135 sq. yds.

(j) Depth of first course, loose ..... 8 in.; compacted .. 6 in.

(k) Depth of second course, loose ..... 3 in.; compacted .. 2 in.

(l) Depth of third course, loose .. Enough to fill voids, in.; compacted .. 1/2 in.

(m) Total depth of surfacing material, loose .. 12 in.; compacted .. 8 1/2 in.

(n) Size of material in first course, maximum and minimum ..... 3" 1 3/4"

(o) Size of material in second course, maximum and minimum ..... 1 3/4" 3/4"

(p) Size of material in third course, maximum and minimum ..... 3/4 To dust.

(q) Crown of surfaced roadway ..... Between 3/4" and 1 in. to 1 ft.

(r) Dimensions of end, side, or abutment walls:

All end walls approx 3' high, 6' long, and 1' thick

8. QUANTITIES.

(a) Earth excavation ..... Unclassified earth and rock for side 22994 cu. yds.

(b) Rock excavation ..... for macadam ..... 6380 cu. yds.

(c) Surfacing material crushed ..... 6380 cu. yds.

(d) Surfacing material used ..... 6380 cu. yds.

(e) Surfacing material purchased ..... None cu. yds.

(f) Fuel used at quarry ..... None tons.

(g) Fuel used at crusher } Mined by day labor, no accurate estimate of quantity possible. Approx 75 } tons.

(h) Fuel used by roller } tons.

(i) Materials in culverts and bridges: See page 7.

(j) Materials in underdrains: None

(k) Materials in end, side, or abutment walls:

(l) Any other materials:

9. COSTS.

(a) Excavation, per cu. yd	$0.382 (was 0.270)	total,	$878.14
(b) Shaping subgrade, per sq. yd	$0.037	total,	$695.90
(c) Culvert pipe per linear ft., delivered See page 7	$0.25 Below	total,	$388.39
(d) Labor for above	$	total,	$107.90
(e) Drain pipe per linear ft., delivered None	$	total,	$
(f) Labor for above None	$	total,	$
(g) End walls, per cu. yd	$	total,	$
(h) Side walls, per cu. yd	$	total,	$325.00
(i) Abutment walls, per cu. yd	$	total,	$
(j) Surfacing material on siding, in pit or quarry (when purchased), per cu. yd	$	total,	$
(k) Quarrying, per cu. yd for labor, tools & explosives	$0.36	total,	$2304.36
(l) Hauling to crusher, per cu. yd	$0.093	total,	$592.10
(m) Crushing, per cu. yd See page 7	$0.295	total,	$1885.80
(n) Hauling from crusher, pit, or car to road, per cu. yd	$0.14	total,	$884.45
(o) Spreading material, per cu. yd	$0.07	total,	$439.17
(p) Sprinkling, per sq. yd	$0.01	total,	$200.80
(q) Rolling, per sq. yd	$0.02	total;	$384.83

(r) Cost per day of each machine hired by local authorities, and cost of its operation: None

r' Assistants on Surveying work; total, $228.75

(*s*) Cost of explosives, per cu. yd. of rock quarried ..... $ .005 ....; total, $.....

(*t*) Unit cost of incidentals (repairs, etc.): .....

.....

.....

.....; total, $.....

(*u*) Cement per bbl., delivered..... $.....; total, $.....

(*v*) Sand per cu. yd., delivered ..... $.....; total, $.....

(*w*) Brick per M, delivered..... $.....; total, $.....

(*x*) Building stone per cu. yd., delivered ..... $.....; total, $.....

(*y*) Size and unit cost of other materials, delivered: .....

.....

.....

.....

.....

.....; total, $.....

.....

(*z*) Total cost of road to the community..... $16821.59

(*aa*) Total cost per sq. yd. to the community for macadam: ..... $ 0.35 879

(*bb*) Rate per mile..... { Excavation ..... $ 3360.
Macadam, Drain tile, 3690.
Total rate per mile, 7050.00

7220.72

The above is based on labor, teams, etc., as follows:

(*cc*) Labor per day ..... $ 1.25

(*dd*) Teams per day..... $ 3.00

(*ee*) Fuel per ton..... Appx ..... $ 2.00

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Signature: Fred McClure Title: Superintendent Road Const.

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NOTE.—In the foregoing report the term "excavation" will mean all excavation to approximate grade, and the term "shaping subgrade" will mean the finishing to the exact grade. Give special features, such as difficulties encountered and methods used to overcome them, and the result of same. What changes would you suggest to accomplish better results under like conditions? How did you organize the working force? What steps have been taken by the local authorities to continue similar work?

→ See page 8.

3 C. Sta. 40, 10" pipe 26' long; Sta 45, 10" pipe 24' long, sta 53 rock wall culvert, 18"x18", 23' long, Sta 64, 2 lines of 10" pipe, 28' long; Sta 69 12" pipe 38' long; sta 71, 15" pipe, 42' long Sta 75, 12" pipe 30' long; Sta 85, 12" pipe 28' long, Sta 89 10" pipe 25' long, Sta. 99, 24" pipe 40' long, Sta 100, 12" pipe, 30' long Sta 103, 12" pipe 30' long, sta 112 2 lines of 24" pipe. 52 ft long.

B. 1	10"	sewer pipe	252 ft.
	12"	sewer pipe	329 ft.
	15"	" pipe	92 ft.
	24"	pipe	144 ft

9. C.	10" pipe	B 0.25	per ft.
	12" "	B 0.35	per ft.
	15" pipe	B 0.50	per ft.
	24" "	B 1.20	" ft.

} Includes hauling to road and allowing for breakage.

9. K. Cost of Quarrying.

Labor	B 1659.94
Explosives	518.76
Tools	125.66
	= B 2304.36

9. M. Cost of Crushing.

Labor	B 1079.53
Oil, hardware, repairs, incidentals	119.97
Material and equipment, lumber for bins, and platform, belt, water tank, and water pipe.	172.80.
Approx cost to community for crusher Engine	360.00
Fuel.	76.25
	B 1808.50

Organizeton of Working Force. season of 1908.

Superising Engineer

1. Foreman Excavation
- Excavation. Men. 8 to 12.
- Teams. 2 to 5.
- Subgrade. Men, 4 to 8.
- Teams. 2.
- Cross Drains, Men as required

2. Foreman Quarry
- Drilling 3
- Breaking & quarrying 6.
- Loading into Wagons. 6.
- Water Boy.
- Blacksmith.

3. Foreman, Crusher
- Engineman 1
- Crushersman 1
- Unloading Wagons 4
- Feeding Crusher 3
- Teams from Quarry, 3 to 4
- Teams Hauling to Road. 3 to 9
- Watchman 1

4. Foreman Macadam
- Roller man. 1
- Roller night watch. 1
- Sprinkler Teams. 1 to 2.
- Stone Spreaders 4 to 7.

5. Miscelaneous, Grades & Alignment.
Tools, & Materials,
Supplys.

APPENDIX R:

Metes and Bounds Legal Description for Green Clay Tract, April 9, 1806.

A copy of several surveys appear in files.

Knox County Kentucky, April 9th, 1806. Surveyed for G. Clay, 190 acres on above entries beginning (A) two beeches and ash tree corner to land of Richard Davis, standing on Indian line at foot of Black Mingo Mountain about 10 poles south Little Yellow Creek: running with said Davis' line N 31 E 72 poles crossing Little Yellow Creek and said Davis' field to (B), a white oak at the foot of said Mingo Mountain: N 54 W 80 poles to 2 black oaks hickory and post oak on east

side marshy ground having passed a place called the Gap at (C): West 190 poles crossing Big Yellow Creek to (D), a black oak and gum in a gap between two knobs: S 30 W 95 poles crossing the knobs to (E), 2 white oaks 2 sour woods, a beech and black oak on the sharp point of a ridge about 30 poles above the Cole branch on Yellow Creek: S 60 E 200 poles crossing Big Yellow Creek to (F) N 31 E 105 poles to Beginning.

Also 340 acres on the same warrant and entry adjoining said survey on the lower side. Beginning at (C) 2 black oak hickory and post oak corner to above survey, with a line of same West 190 poles crossing Big Yellow Creek to corner at (D) a black oak and gum: N 35 W 80 poles to (G) a white oak: N 2 E 37 poles to (H) a white oak and black oak: N 6 W 58 poles to (I) a dogwood and white oak: N 22 E 53 poles to (K) a white oak near a branch by the State road below William Lain's field: N 79 W 30 poles to (L) two white oaks called William Robertsons corner: N 44 W 42 poles to (M) a white oak on hill above Bauchman's house: N 37____248 poles to (N) a white oak and sweet gum on the State road: East crossing Yellow Creek 175 poles to (O), a black oak and hickory near the top of hill below Henry Rains' plantation: S 17 E 158 poles to (P) a white oak and sweet gum on a small branch near the edge of the creek bottom: S 4 E 120 poles to Beginning.

Also 180 acres on same warrant and entry. Beginning (N), white oak and sweet gum corner last survey standing on State road just above Four Mile Creek: N 27 W 35 poles to (R), beech, corner to a 50 acre survey made this day on Four Mile Creek, branch Beg Yellow Creek: N 6 E 80 poles crossing said Four Mile Creek near State road with line of said 50 acre survey to (S), white oak and sourwood on hill: N 66 E 45 poles crossing State road and Pine Ridge to (T), white oak: N 46 E 52 poles crossing Yellow Creek to (W), white oak beech, and black oak on east bank said Creek: running down binding on meanders Yellow Creek N 29 W 19 poles: N 3 E 65 poles S 69 E 85 poles S 57 E 21 poles to double poplar and two maples standing at the foot of hill at the upper end of the narrows (T): S 14 W 90 poles to (W), white oak on point of a ridge below a branch: S 27 poles crossing branch to (X), beech on east bank Yellow Creek at narrows below Henry Rains' house 1/4 mile: Up with meanders said creek S 17_____21 poles to large chestnut on bank of creek below said narrows the course continued 68 poles to (O), black oak and hickory corner to 340 acre survey above mentioned: running with a line of same West 175 poles crossing Big Yellow Creek and State road to Beginning.

28

ILLUSTRATIONS

Illustration 4.1

Prominently located in the sketch are the upper and lower Virginia roads looking toward Cumberland Gap from the southeast. Dark linear area to the right is spring from Cudjo Cave, at the bottom of which is the iron furnace complex. Artist unknown and date approximately mid-nineteenth century.

Courtesy of Cumberland Gap National Historical Park photo collection.

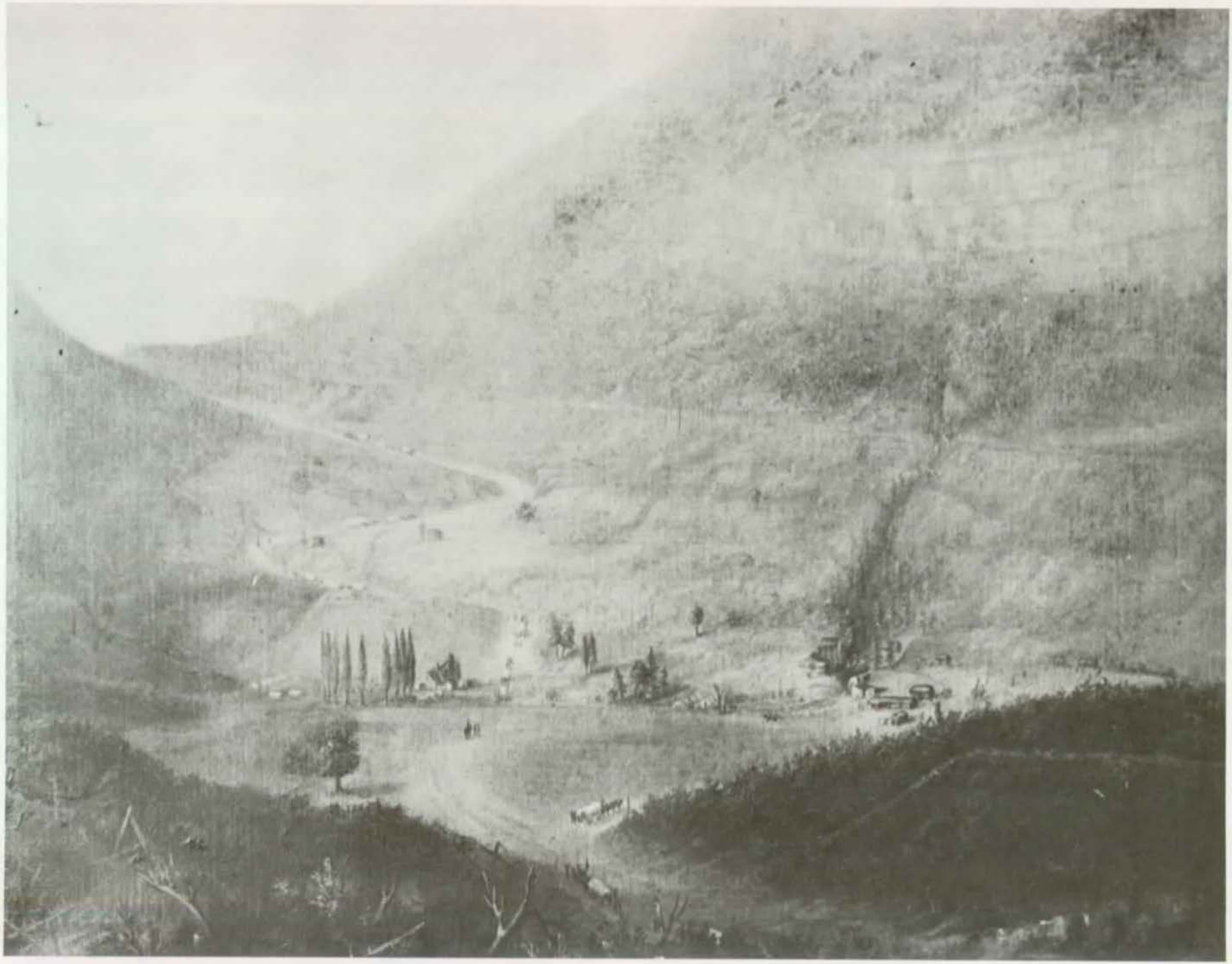


Illustration 4.2

The view is 80° west of north looking across saddle of Gap, Kentucky Road and Yellow Creek Basin on right. Drawn by Capt. Sidney S. Lyon, Union Army, 1862.

Courtesy of The National Archives, Record Group 77, Civil Works Map File, T-63, Washington, D.C.

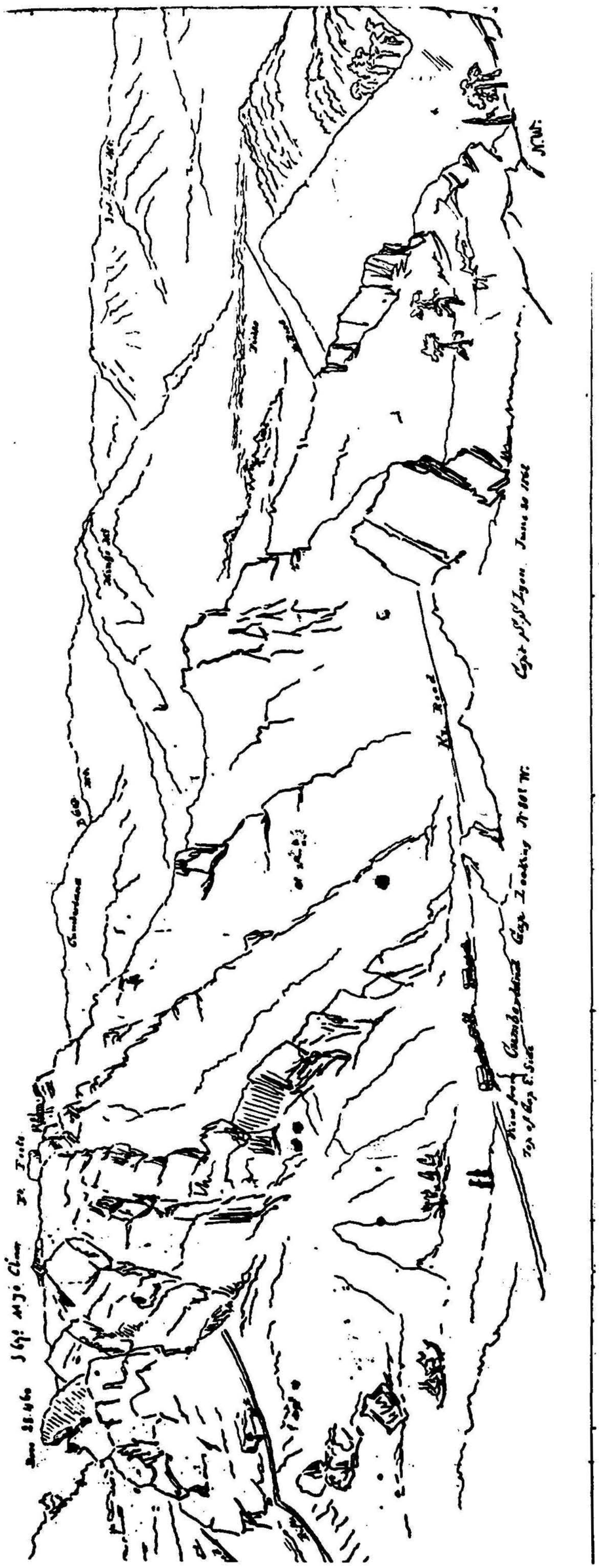


Illustration 4.3

Drawn by an engineer in the Army of the Confederacy commanded by Gen. Braxton Bragg, the view looks east across Little Yellow Creek valley toward Cumberland Gap. The Wilderness Road is in the foreground.

Courtesy of the U.S. Army Signal Corps, Signal Corps Photographic Laboratory, Washington, D.C.; Cumberland Gap National Historical Park photo collection.



CUMBERLAND HEIGHTS, TENNESSEE, FROM THE KENTUCKY SIDE.—The narrow pass through the Cumberland Mountains known as the Gap is on the county line between Kentucky and Tennessee at the western extremity of Virginia. It is nearly whereas and at a time extremely important for the Confederates at the commencement of the Civil War. It was abandoned on about January 19, 1862, and occupied by the Federal forces under [illegible] W. Morgan. In October, 1862, Gen. E. Kirby Smith, confronted there [illegible] for a month, through Big Creek Gap, and compelled General Morgan to abandon and destroy the works. On September 9, 1863, General Frazer, who held the Gap for a brigade of Buckner's troops, surrendered after a siege of four days to General Burnside. The Gap itself is a cliff 300 feet deep, and in some places only wide enough for a wagon road. From a sketch by an engineer of Bragg's army.

Illustration 4.4

A view of the Cumberland Gap massif with the upper and lower Virginia roads prominently shown. Structures in the saddle area are depicted. Drawing by Harry Fenn from William Cullen Bryant, ed., Picturesque America; or the Land We Live In, Vol. 1, (New York: D. Appleton And Company, 1872).

Courtesy of Cumberland Gap National Historical Park, photo collection.



Illustration 4.5

Taken by an anonymous photographer during the Civil War (1861-1865) from the settlement of Cumberland Gap, Tennessee, toward Cumberland Gap. Both the upper and lower Virginia roads are visible along with the denuded mountainside.

Courtesy of photograph collection, Cumberland Gap National Historical Site.

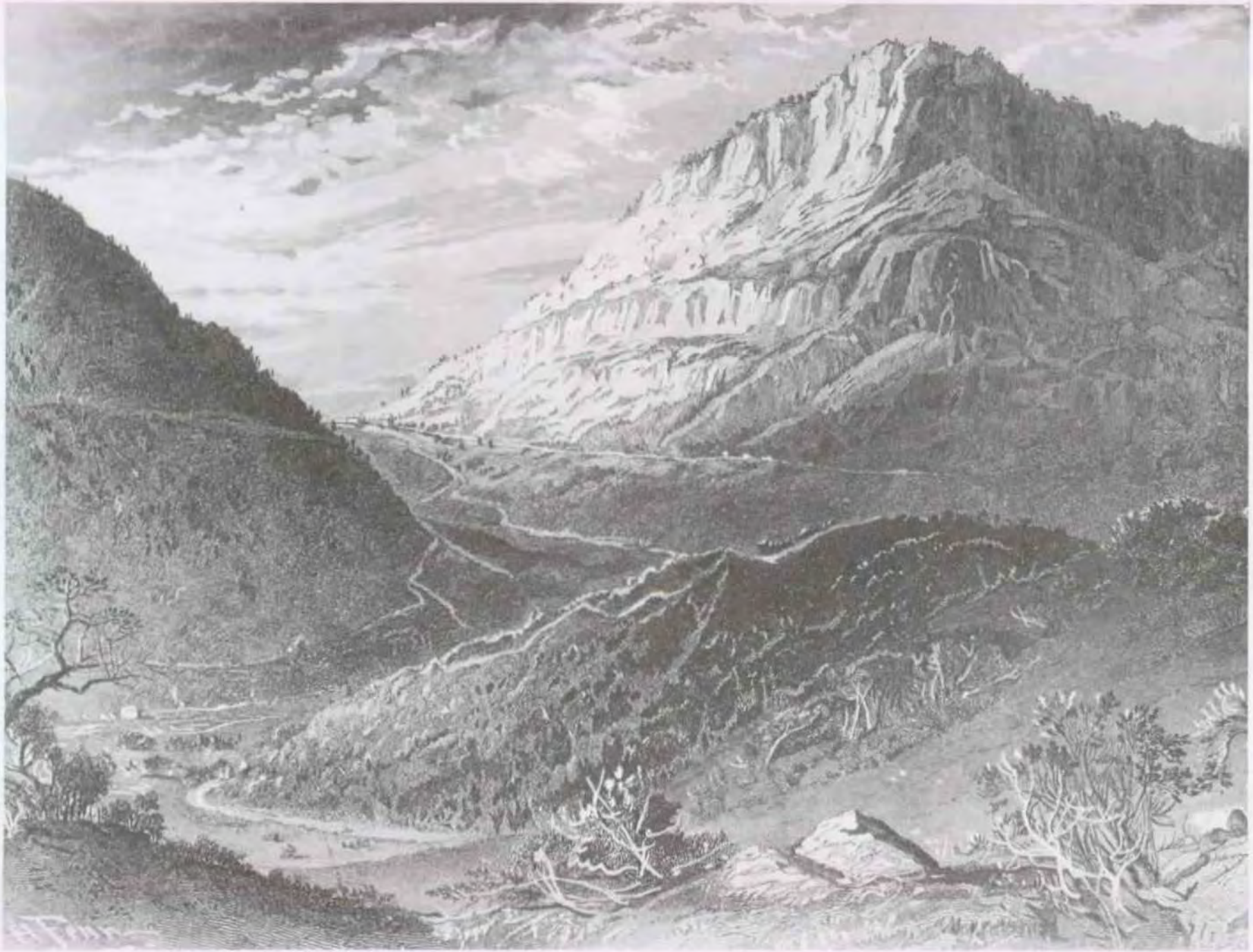


Illustration 4.6

Harry Fenn also sketched a view of the bridge over the saddle of the Gap and a corner of the Jones store in 1872. Illustration in, William Cullen Bryant, ed., Picturesque America; or The Land We Live In, Vol. 1, (New York: D. Appleton And Company, 1872).

Courtesy of The Filson Club photo collection, Louisville, Kentucky.

CUMBERLAND GAP.

WITH ILLUSTRATIONS BY HARRY FENN.

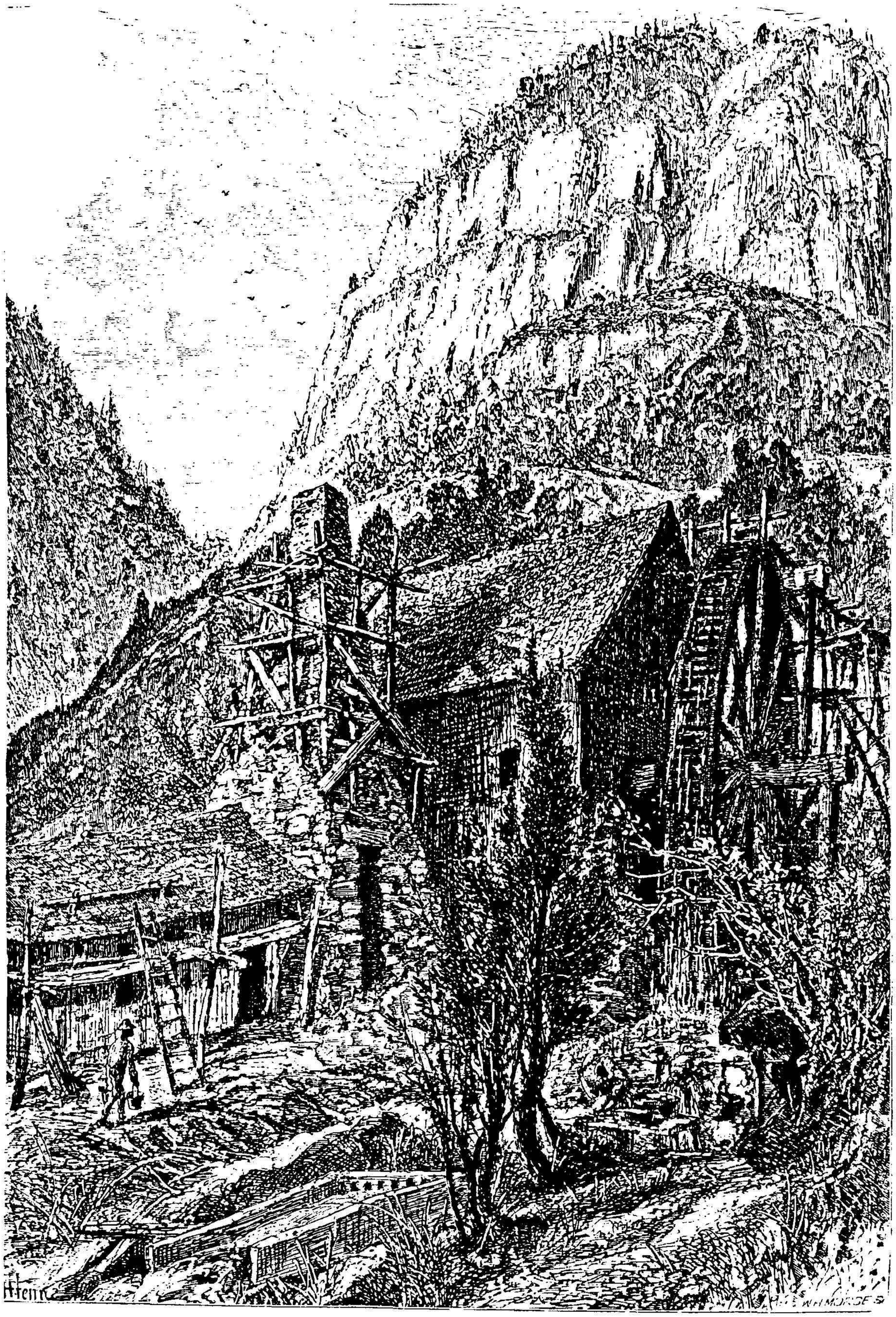


A Glimpse of Kentucky, from Cumberland Gap.

Illustration 4.7

In the foreground is the mill complex alongside the stream emanating from Cudjo Cave. Above the mill are wagons moving toward Cumberland Gap. The sketch is from William Cullen Bryant, ed., Picturesque America; or The Land We Live In, Vol. 1, (New York: D. Appleton And Company, 1872).

Courtesy of The Filson Club photo collections, Lousiville, Kentucky.

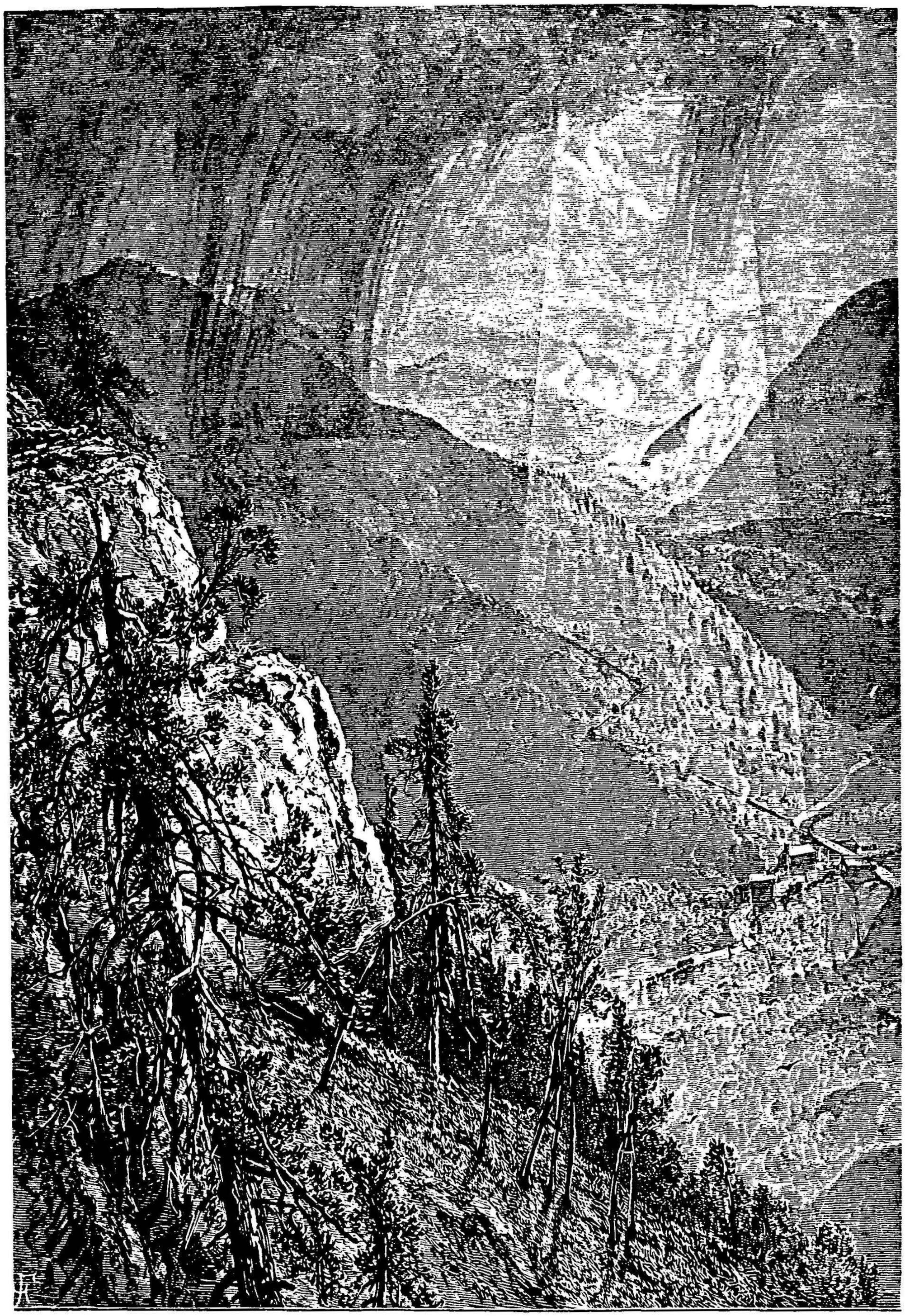


CUMBERLAND GAP, FROM THE EAST.

Illustration 4.8

A view of the saddle of the Gap looking west with structures of the bridge and Jones' store in the right center. The illustration was in William Cullen Bryant, ed., Picturesque America; or The Land We Live In, Vol. 1, (New York: D. Appleton And Company, 1872).

From The Filson Club photo collection, Louisville, Kentucky.



CUMBERLAND GAP, FROM EAGLE CLIFF.

Illustration 4.9

From the Tennessee side of Cumberland Gap one can glimpse the physical setting and a sense of the road. The sketch, by Harry Fenn, appeared in an article by James Lane Allen, "Through Cumberland Gap On Horseback," Harpers New Monthly Magazine, Vol. LXXIII, (June 1886).

Courtesy of The Filson Club photo collection, Louisville, Kentucky.

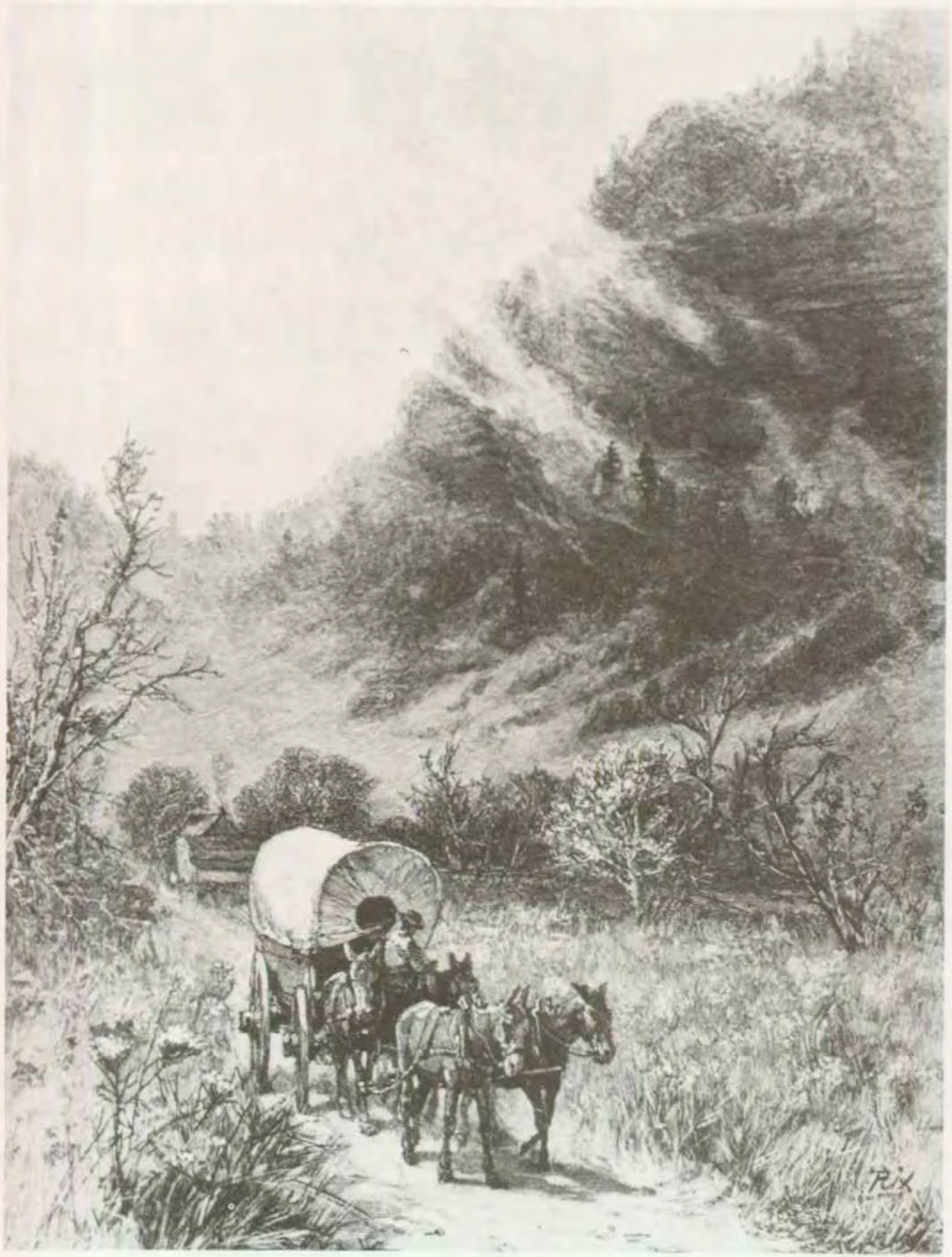

RIX

Illustration 4.10

This 1888 photograph from the area of Cumberland Gap, Tennessee, provides insight into the lower Virginia Road, the rapid growth of timber on hillsides that only twenty odd years before were barren; depicts extant structures in the saddle of the gap. Photographer unknown.

Courtesy of Cumberland Gap National Historical Park photo collection.



Illustration 4.11

A panoramic view of the Virginia and Tennessee side of Cumberland Mountain looking northeast. Note the road network in this late 1880s photograph taken just prior to American Association development and the railroad reaching Cumberland Gap, Tennessee. Photographer unknown.

Courtesy of The Filson Club photo collection, Louisville, Kentucky.



Illustration 4.12

A close-up view of a portion of Illustration 4.11. The iron furnace complex is located in the left center portion of the photograph. Photographer unknown.

Courtesy of The Filson Club photo collection, Louisville, Kentucky.



Illustration 4.13

This excellent photograph of the saddle portion of Cumberland Gap demonstrates the narrowness of the locale and gives a view of the bridge and commercial structures adjacent to it. It is a photograph taken about 1900 by Inman Photographers, Middlesboro, Kentucky.

Courtesy of Cumberland Gap National Historical Park photo collection.



Illustration 4.14

The object lesson road built across Cumberland Mountain by the U.S. Department of Roads (USDA) in 1907-1908 is depicted here. Note the cuts, fills, shoulders and surface of the newly completed road.

Courtesy of the National Archives, Record Group 30-R-Kentucky-4817, Washington D.C.



Illustration 4.15a

From the period of the 1920s this photograph serves to document the upper road (white railing alongside it), portions of the lower road and the iron furnace complex in lower center. The picture looks northward and was taken by an unknown photographer from a vantage point in the community of Cumberland Gap, Tennessee.

Courtesy of Cumberland Gap National Historical Park photo collection.



Illustration 4.15b

The other half of the previous photograph shows remnants of the lower road, a small portion of the railroad at left and the continuation of the railing along the upper road. Note the sparsity of trees on the mountainside.

Courtesy of Cumberland Gap National Historical Park photo collection.

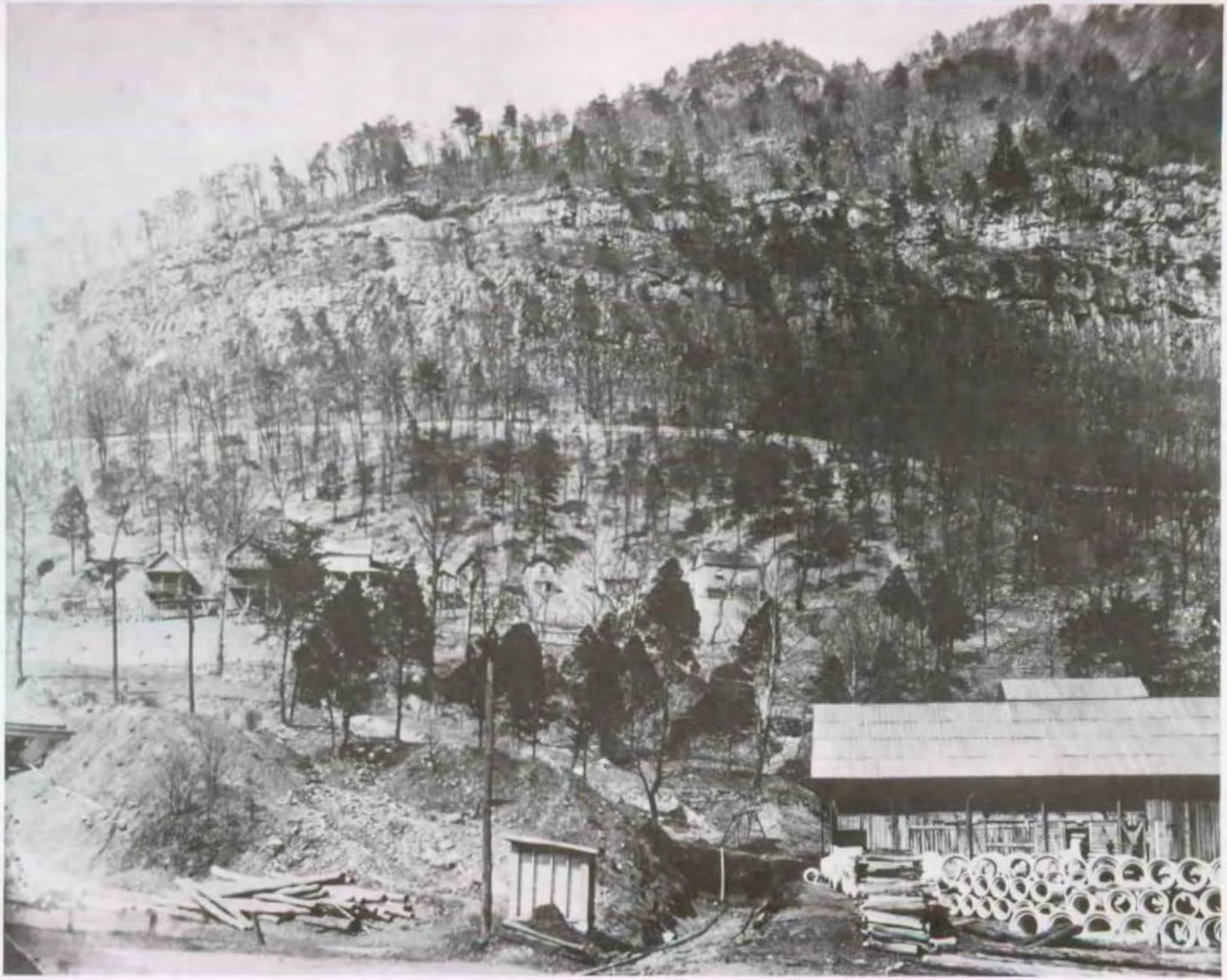


Illustration 4.16

Taken in the late 1930s the character of the saddle portion has changed considerably due to highway construction. Note the amount of leveling in the foreground and the embankment on the right. Unknown photographer.

Courtesy of Tennessee State Library and Archives, Nashville, Tennessee.


PINNACLE

Illustration 4.17

A 1940s (early 1950s) depiction of the saddle of Cumberland Gap with a widened and leveled appearance. The entrance to Skyland Road is to the left. Photographer unknown.

Courtesy of Cumberland Gap National Historical Park photo collection.


THIS IS CUMBERLAND GAP

Illustration 4.18

This is the earliest known aerial photograph (1939) of the vicinity at Cumberland Gap. A very pronounced road system laces the area: note the well defined upper and lower roads, the object lesson road (1908), the present 25E and Skyland Road. Very significantly the road descending from the Gap to the Yellow Creek drainage may be seen in the upper center. Photograph taken for the USDA Agriculture Stabilization and Conservation Service, April 8, 1939.

Courtesy of the National Archives, Record Group 145, can #2340, BUG 18-69.


4-8-39
BUG-18-69

MAPS

Map No. 1.

Price's Turnpike and Cumberland Gap Road.

Courtesy of the Virginia State Library, Richmond.

Cumberland Sal

Gibsons

Fork of Road

Creek

Indian

Jnº. Colsons

Balls

Henry Ayrs

Colo Heiskils

Jnº. Taylors

Doctr. Ewings

Joshua Ewings

Sowels

Map No. 2

"A General Map of the New Settlement called Transylvania," including the notation of Cumberland Gap, 1776.

Courtesy of Library of Congress.

TRANSYLVANIA.

Ohio R.

Low Country

Mississippi

Cumberland River

Green River

Rock Castle R.

Cumberland R.

South Cumberland R.

Cumberland Gap

Cumberland Valley and River

Powells Mountains

Clinch River

Clinch R.

Holston River

Louisa R.

Source of Louisa River

Kentucky

Holston

Long Island

Watauga R.

Watauga Settlements

Fort Lee

Fort Patrick Henry

Reedy Creek

Wataga

Over Hill Towns

Fort Loudon

Tellico

Tennessee or Cherokee River

Hiwassee River

Hiwassee Town

Middle Towns

CHEROKEES

Appalachian Mountains

Lower Towns

Keowee Towns

Fort Prince George

Saluda R.

Broad R.

Pacolet R.

Enoree R.

Tyger R.

Congaree

Congaree Towns

Branches of Mobile

Coweta Towns

CREEK INDIANS.

NORTH CAROLINA

SOUTH CAROLINA

Map No. 3

"A Map of the State of Kentucky," by Imlay, 1793. It shows road to Virginia through Cumberland Gap.

Courtesy of Mary Verhoeff, The Kentucky Mountains Transportation and Commerce 1750 to 1911: A Study In the Economic History of a Coal Field, Filson Club Publication No. 26 (Louisville, Kentucky: John P. Morton Company, 1911), p. 74.

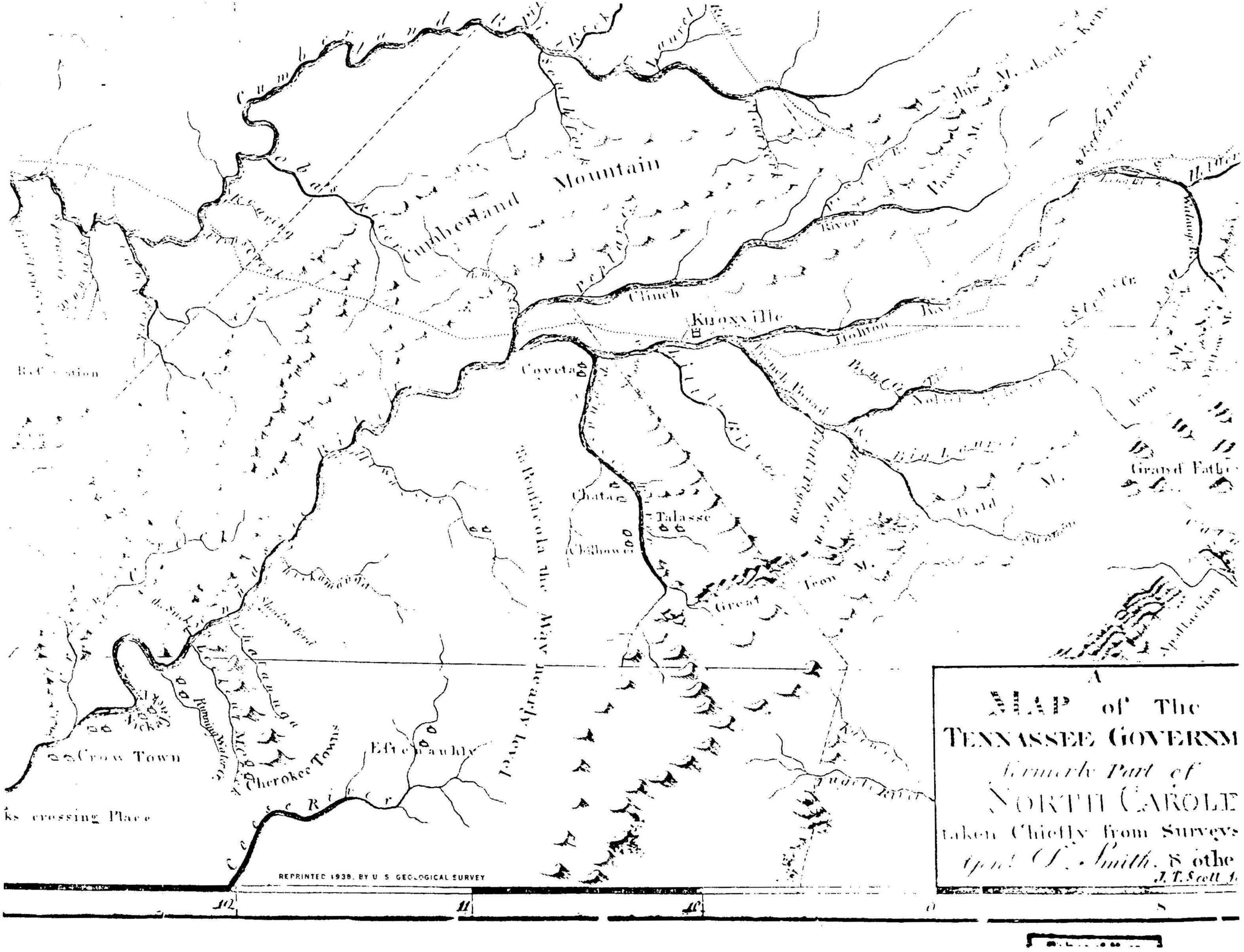


IMLAY'S MAP OF KENTUCKY, SHOWING COUNTIES IN 1793 AND THE VIRGINIA ROADS.

Map No. 4

"A Map of the Tennessee Government formerly Part of North Carolina," depicts Kentucky Road, 1794.

Courtesy of Library of Congress.


Cumberland Mountain
Clinch
Knoxville
Holston
Coweta
Chatuge
Talasse
Chilhowee
Great
Grand Fathe
Cherokee Towns
Crow Town
Ellijay
Ocoee River
Great Iron Mountain
Appalachian
REPRINTED 1938, BY U S GEOLOGICAL SURVEY
A
MAP of The
TENNASSEE GOVERNM
formerly Part of
NORTH CAROLI
taken Chiefly from Surveys
by Col. Smith, & othe
J. T. Scott &
12
11
10
9
8

Map No. 5

"Map of the State of Kentucky; with the Adjoining Territories," by J. Russell, 1794.

Courtesy of the Filson Club.

JEFFERSON COUNTY
NELSON COUNTY
GREEN RIVER
MERCER COUNTY
LINCOLN COUNTY
LOGAN COUNTY
FAYETTE COUNTY
MASON COUNTY
MADISON COUNTY
CUMBERLAND MOUNTAIN
SUMMER COUNTY
DAVIDSON COUNTY
RESERVED FOR THE NORTH CAROLINA TROOPS
SOUTH WESTERN TERRITORY
PART OF GEORGIA
PART OF SOUTH
TENNESSEE RIVER
OHIO
Salt River
Louisville
Clarksville
Henderson's Grant
Danville
Lincoln
Madison
Lystra
Bairds Town
Herods Town
Boonsborough
Lexington
Nashville
Clarksville
Coyeta
Cumberland River
Clinch River
Holston River
Elk River
Duck River
Big Barren
Logan Court House
Price Settlement
Muscle Shoals
Fort
Town
Creek
River
Fork
Settlement
Station
Court House

May No. 6

Munsell's map of Kentucky including Wilderness Road and Cumberland Gap.

Courtesy of the Library of Congress.

Richland Cr.
Middle Fork
Rocky Fork
BARBOURVILLE
Swan Pond
Swamp pond Cr.
Flaherty Cr.
Shinking
Turkey Cr.
Todds Fork
Flattick
Left hand Fork
Straight Cr.
Pine Mountain
Howard
Clear
Loam
Cr.
X
Martins Fork
Mountain
Little Black
Catherines Cr.
Gen. Britons
Puckets Cr.
Browneys Cr.
Stone Mountain
Little Poplar Cr.
Brush Cr.
Grassy Cr.
Turkey Cr.
M. Cr.
Ford
Yellow Cr.
Common Cr.
Clear Cr.
Clear Fork
Cumberland Mountains
Laurel Fork
Log Mt.
Bennets Fork
Little Yellow Cr.
Cumberland Gap
Y

Scale of Miles 69.5 to a degree.

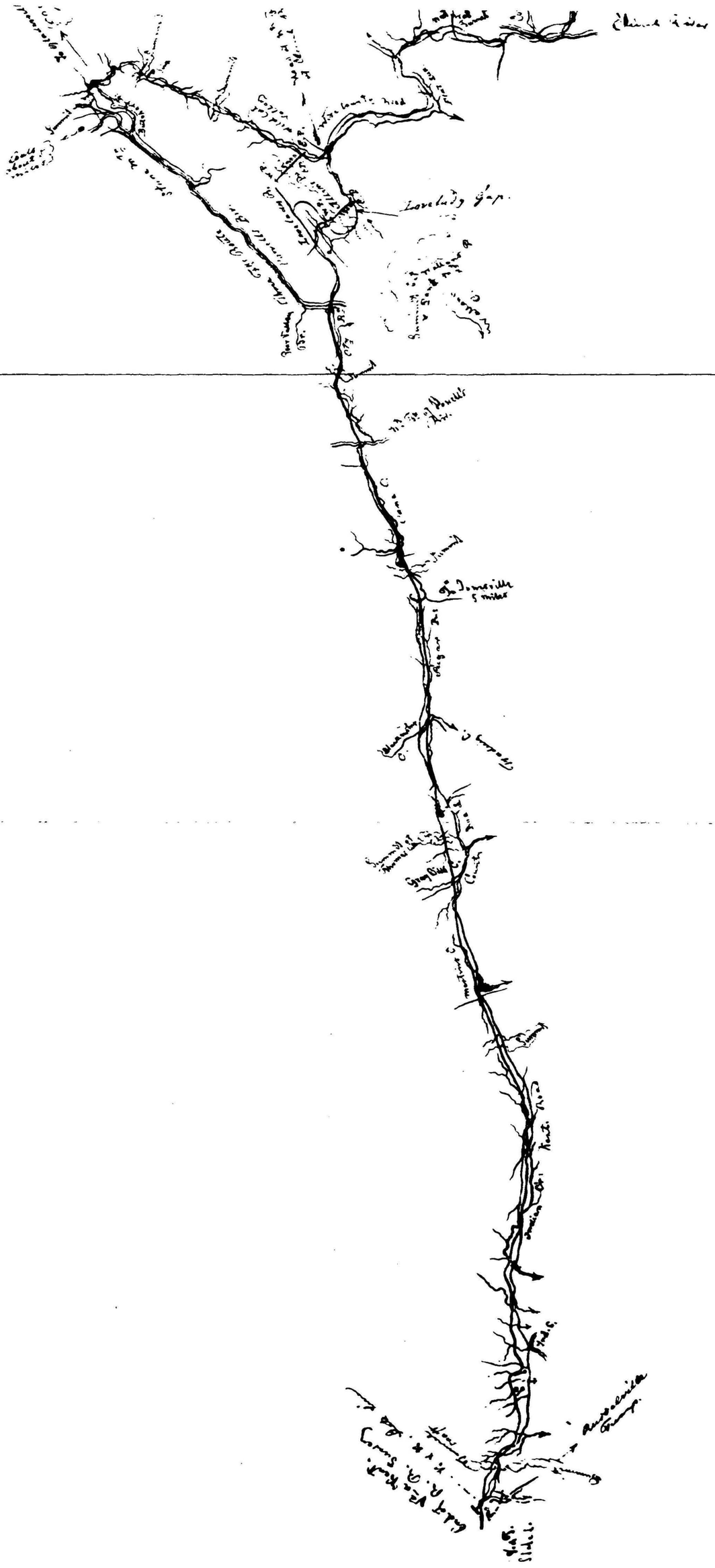
5 4 3 2 1 0 5 10 15 20

The whole engraved under the immediate superintendance of the Author, by H. Anderson of Philad.ª

Map No. 7

"Virginia and Kentucky Railroad Survey," 1849?

Courtesy of Virginia State Library.



Map No. 8

Survey discrepancy in Walker and Henderson Survey Line, late eighteenth century.

Courtesy of Charles Wilson files, Cumberland Gap National Historical Park.

Mobile

Tenessee

Chuchaghatchee

Highwassey

Tenessee

Chiota

36

Channel Broad

Washington

Walachuckey

82 miles to Gulf

Buchanan Sullivan Co.

Holston

Fort Henry

Williamsburg

Big Moccasin Island

Fort Blount

Clinch river

Powell's river

Boone

Cumberland Gap

West Line

2½ miles distant from each other

Virginia

Kentucky road


Kentucky

The Black lies between Walker's & Henderson's Lines

Map No. 9

William F. Jones map of Civil War era at Cumberland Gap, drawn from memory in 1899.

Courtesy of Filson Club, Louisville, Kentucky.



Road
Pike
Rifle Pitt
cannon
Virginia Road
Rocky Ridge
Rifle Pitt
County Road
Rocky Ridge
Rifle Pit
Tazewell Road
R. Pitt
Rocky Ridge
Rifle Pitts
Knoxville Road
Rifle Pitts
Cumberland Pike
Cumberland Pike
Camp
Creek
Camp Hospital
Road
County Road

Map No. 10

Lower (Tennessee) and upper Virginia roads at Cumberland Gap, late nineteenth century.

Courtesy of Cumberland Gap National Historical Park.

Road

Road

Tennis Court Road

Hummel

Road

24

25

26

27

28

29

30

31

32

33

34

35

36

37

38

39

40

41

1

2

3

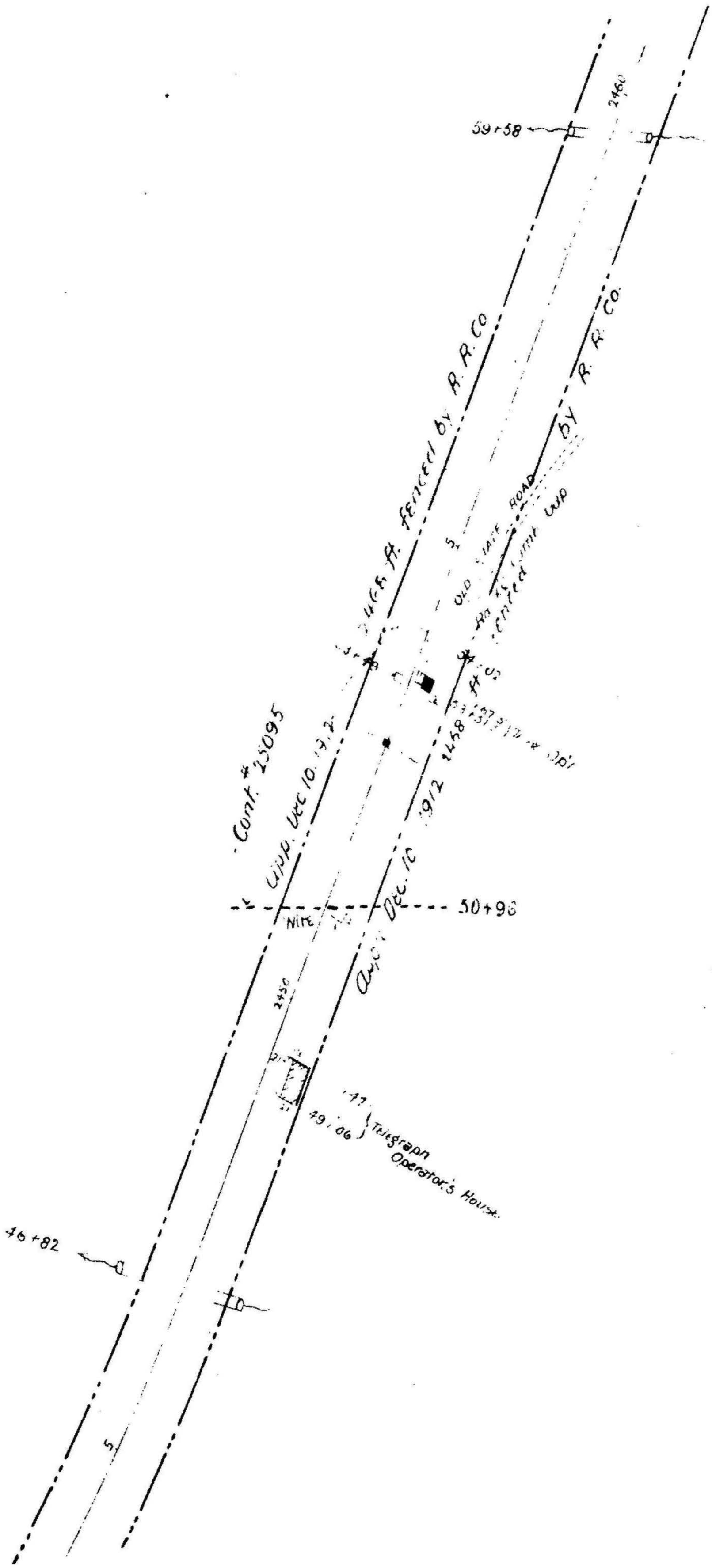
Fields Survey Completion Line

N 89½ E

Map No. 11

Mile 218 of Louisville and Nashville Railroad where "old state road crossed Cumberland Gap."

Courtesy of the Seaboard System Railroad, Jacksonville, Florida.


59+58
2460
U.G.& A. fenced by R.R.Co
Old State Road
Am. St. fenced by R.R.Co
Cont. #25095
Dec. 10, 1912
1458
Dec. 10
50+98
Mile
2450
49.06
Telegraph Operator's House
46+82

Map No. 12

"Old Cumberland Gap Road," near Colson Property, 1930.

Courtesy of Cumberland Gap National Historical Park.

NO. 3

CORPORATION

CHAS. BALL

LAKE

BILLINGSLEY & ELY

J. C. COLSON ESTATE

U. S. HIGHWAY

BARTLETT PARK

OLD CUMBERLAND GAP ROAD

NO 2

PARK ROAD

LINE

J. F. SCHNEIDER & SONS

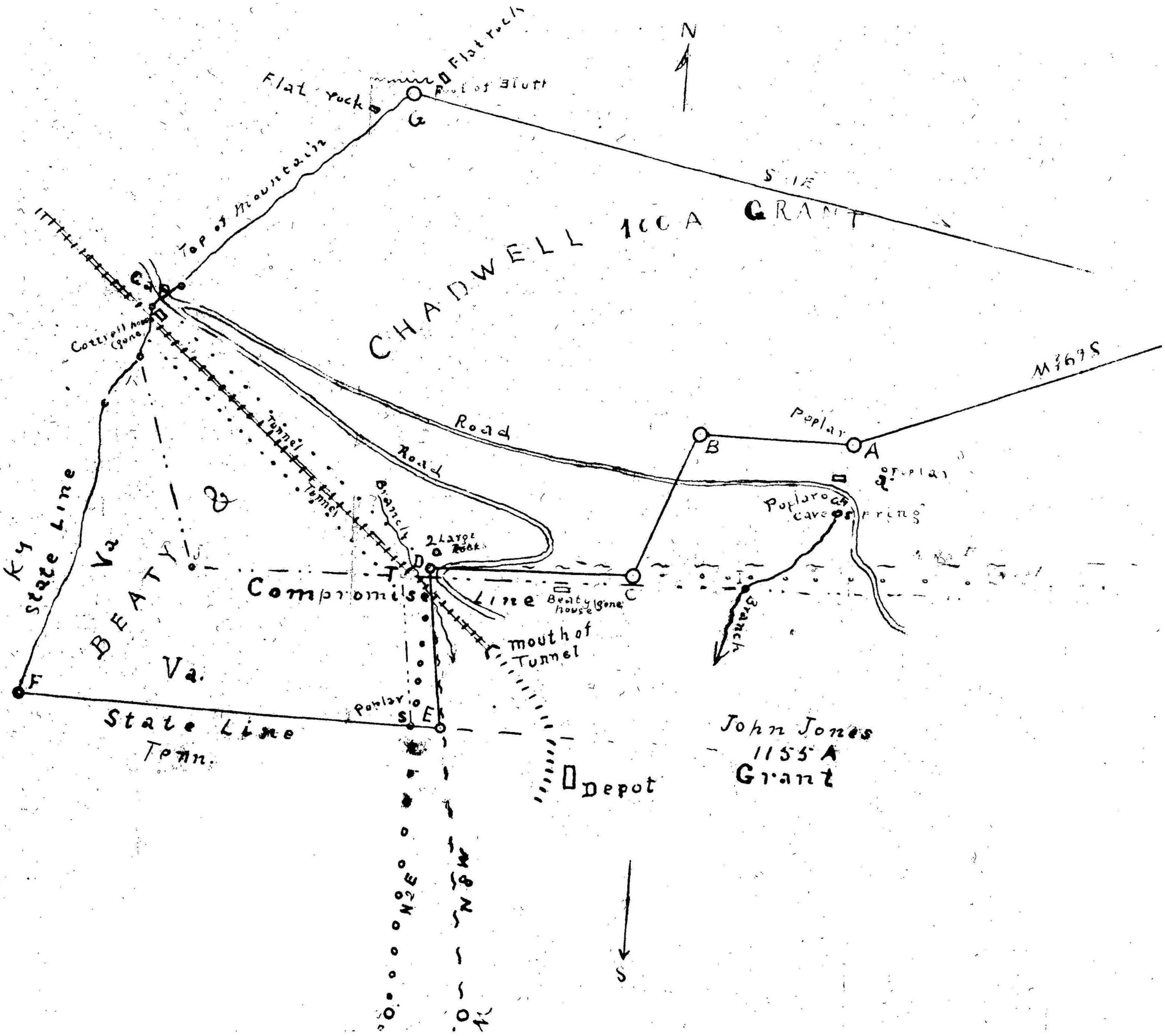
TO NORTON

RAILROAD

Map No. 13

Switchback route ascending Cumberland Mountain from Gap Creek.

Courtesy of Cumberland Gap National Historical Park.


N
Flat Rock
Flat Rock
Foot of Bluff
G
S 12E
CHADWELL 100A GRANT
Top of Mountain
Cottrell House (gone)
Tunnel
Tunnel
Branch
Road
Road
Poplar
B
A
Poplar
Poplar Cave
Spring
2 Large Rocks
D
Compromise
Line
Beaty house (gone)
C
mouth of Tunnel
Branch
Ky
State Line
Va
BEATY
Va.
F
Poplar
S E
State Line
Tenn.
Depot
John Jones
1155 A
Grant
N 2° E
N 18° W
S
N

Map No. 14

Route of lower Virginia Road from Cumberland Gap, Tennessee, toward the summit of Cumberland Gap, 1936.

Courtesy of Cumberland Gap National Historical Park.

N

W E

S

U S HIGHWAY 25

← To Middlesboro

N 19 W

TRAIL

SIDE

LOCATION OF OLD ROAD

Goforth's House

RES

CABIN

N 85

Map No. 15

Road configuration on Kentucky side of Cumberland Mountain, 1937.

Courtesy of Cumberland Gap National Historical Park.

HIGHWAY

3 Marked S

Gutt
5 Lime Tree

EVA PATTISON
13.7 A.

KING & BEATY
9100
AMER. ASSN. ET. EL.

S45-05E - 875.5

N46-40W - 1750

1473

N43-20E

Marked Boulder

Standing Stone

Set Stone
At 2 Oak Corner

Cor. Line

Amer. Assn.

Approx.

L. & N. R.R.

S2-45E - 3531.0

Set Stone

N44-30W - 198.0

Concr. Mon.

S 1581

N52-30W

S15-15W

5 Corn

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