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The Recreation Potential of Abandoned Railroad Rights-of-Way: Feasibility of the Smoky Mountain Railroad as an Urban Regional Hike/Bike Trail

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THE RECREATION POTENTIAL OF ABANDONED RAILROAD RIGHTS-OF-WAY:  
FEASIBILITY OF THE SMOKY MOUNTAIN RAILROAD AS AN  
URBAN REGIONAL HIKE/BIKE TRAIL  

A Thesis  
Presented to  
the Graduate Council of  
The University of Tennessee  

In Partial Fulfillment  
of the Requirements for the Degree  
Master of Science in Planning  

by  
Dale Clayton Eberhardt  
August 1970
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ABSTRACT

The provision of outdoor recreation facilities, easily accessible to our urban populations, has become a prime concern of federal, state, and local governments. A major problem encountered in the provision of such facilities, is the scarce supply of land available for outdoor recreation, in and around our urban areas. The abandoned right-of-way (railroad, canal, road, etc.), is seen as one solution to the existing land crisis. This thesis is concerned with the abandoned railroad right-of-way and its potential for trail oriented activities. The thesis utilizes the abandoned Smoky Mountain Railroad as a case study to illuminate the many problems that could arise when arranging for the reuse of such an abandoned right-of-way.

The study was developed from data obtained largely from various reports and articles on the subject matter, correspondence and interviews with various governmental agencies and individuals having knowledge of right-of-way development, and certain files of the National Park Service.

It was found that the abandoned railroad right-of-way will play an important role in alleviating the critical shortage of land devoted to outdoor recreation in and around our urban areas. However, the task of providing for the reuse of these rights-of-way will, in many cases, meet with a considerable number of obstacles. It is the conclusion of this thesis, that the state is best able to overcome these obstacles.
Through the passage of trail enabling legislation, states can incorporate into their Statewide Outdoor Recreation Plans, programs to effectively utilize the full outdoor recreation potential of abandoned railroad rights-of-way.
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CHAPTER I

INTRODUCTION

I. STATEMENT OF THE PROBLEM

On October 2, 1968, President Johnson approved an Act to establish a nationwide system of trails. The Act is cited as the "National Trails System Act," Public Law 90-543.

The Act recognizes the need for trails, primarily, near the urban centers of the nation, to provide low-priced recreational opportunities for the increasing numbers of people seeking to enjoy outdoor activities. The most recent estimates indicate that the number of people participating in activities such as walking, hiking, bicycle and horseback riding, will increase four-fold by the year 2000.\(^1\) The huge increase in this form of recreation will result, it is predicted, in an equally staggering increase in the land needed to support these activities. The outlook becomes quite frightening when one considers the rapid growth in our population, urbanization, urban sprawl, the automobile, and new highways, all of which have created a crisis in the amount of land available for outdoor recreation. Although many units of government are attempting to anticipate future land needs, the time is past when land can be acquired at a reasonable cost, and each year it becomes more and more

difficult to secure needed areas of land for recreational purposes.\textsuperscript{2} Unless there is a significant increase in the amount of land made available for outdoor recreation, especially around our urban areas, it will not be possible to meet the recreational needs of future Americans.

This land crisis has resulted in the concept of utilizing linear space, linear space being the abandoned right-of-way. Abandoned railroads, canals, aqueducts and roads could aid in the solution to our dwindling recreational space. No other country in the world has such an intricate system of rights-of-way as does the United States. Spanning the continent, linking cities, cleaving the smallest village, they stretch for an estimated eight million miles and cover a land area estimated to be somewhere between the size of Massachusetts and Tennessee.\textsuperscript{3}

Of all the abandoned rights-of-way in the country today, the railroad right-of-way holds the greatest recreational potential. During the past 10 years over 10,000 miles of railroad track have been abandoned, much of it being located in or near large urban areas.\textsuperscript{4} Utilizing these rights-of-way for recreational purposes would help alleviate the critical shortages of land devoted to recreation.


There are, however, many obstacles to be faced by those wishing to convert these obsolescent properties into recreational assets. Problems of liability, multiple-ownership, land acquisition, cost as a recreational area, and operational problems are frequently encountered. The greatest obstacle it seems is the mixed ownership of many railroad rights-of-way, which often makes purchasing the land and arranging for its use a seemingly impossible task.

Owing largely to federal programs, plans to turn these long narrow strips of land into recreational assets are now being proposed. However, the initiative to make these plans reality remains with private citizens, states, and local governments.

II. STATEMENT REGARDING THESIS

From the foregoing discussion one begins to see the number and complexity of the issues which may arise when planning for the reuse of abandoned railroad rights-of-way. This thesis will concern itself with defining and resolving these issues. Through a comprehensive study of the recreation potential of these rights-of-way, it will attempt to acquaint any agency (state, local or private) with the problems to be encountered and give them insight to anticipate those that have not yet emerged.

The thesis will utilize the case study approach in examining the proposed reuse of one abandoned railroad as an urban regional hike/bike trail. The Smoky Mountain Railroad was selected for several reasons: (1) because of its close proximity to a large urban population, (2)
because of the interest the proposed reuse of this railroad has generated throughout the State, and (3) because of the many problems that were encountered by the proponents of the hike/bike trail.

It is hoped that this thesis will provide the insight by which any unit of government can successfully utilize the recreation potential of abandoned railroad rights-of-way in and around its urban areas.

III. DEFINITION OF WORKABLE LIMITS

As previously stated, the intent of this thesis is to discuss the recreation potential of abandoned railroad rights-of-way. This thesis will not be concerned with investigating the multiformality of rights-of-way existing in this country. It is recognized however, that many of the obstacles and resolutions pertinent to the reuse of railroad rights-of-way will be identical, and therefore applicable to other types of right-of-way.

The case study will examine all relevant aspects involved in arranging for the reuse of the Smoky Mountain Railroad grade as a hike/bike trail. Although proposals pertaining to its design will be suggested, a detailed site plan of the trail will not be a goal of this thesis.

A limiting factor of the thesis is the lack of data on the federal government's role in improving or expanding the national trails system. Since President Johnson signed the National Trails System Act into law, very little has been done by the federal agencies to interpret and implement the law.
IV. METHODS OF ACCOMPLISHING THESIS

Basic research materials used in the development of this thesis, were obtained from the libraries of The University of Tennessee, periodicals, publications and local newspapers. Useful data was also provided by TVA, the East Tennessee Development District, the Bicycle Institute of America, and the National Audubon Society. A valuable source of information used in preparing the case study, were the files of the Great Smoky Mountains National Park. Interviews with the National Park Service and the Tennessee Department of Conservation provided additional information in this respect. The Wisconsin experience in developing abandoned railroad grades was a constant source of reference throughout the thesis.

V. ORGANIZATION OF THE THESIS

This thesis is divided into six chapters. Chapter I is a short introduction to the thesis. Chapter II provides the background for the thesis, discussing the emergence of interest in trails on the national, state and local level.

Chapter III deals with the economic and social benefits to be derived from trail development.

Chapter IV discusses trail development of railroad rights-of-way and is devoted almost entirely to a comprehensive study of the aspects of development.
Chapter V is the case study of The Smoky Mountain Hike/Bike Trail. It contains a brief background study of the area and of the railroad itself. The remainder of the chapter is devoted to the hike/bike trail, its proposal and development.

Chapter VI is the conclusion to the thesis.
CHAPTER II

TRAILS--A NEW DIMENSION IN RECREATION

I. RECREATION CRISIS

For the decade of the 1970's let us make our national goal a Net National Environment rather than a Gross National Product.

Walter J. Hickel

In attaining this national goal of environmental improvement, outdoor recreation is destined to play a key role. What indeed would constitute an environment satisfying to man, other than one with ample outdoor recreational opportunities. Opportunities to give human beings the time they need to wonder at nature, to flex their muscles, to explore the unknown.

Urban Need

In searching for answers to this nation's recreation problems, prime consideration must be given to the availability of outdoor recreation near man's home, the setting of his daily life. For seven out of 10 Americans the home is in an urban setting. By the year 2000 this number is expected to increase to nine out of 10. Also to be considered is that much of the recreation demand is for day-use, and must be satisfied close to the metropolitan residence. Opportunities near

the home however are limited, and our urban areas are becoming less and less suitable for inhabitation, let alone outdoor recreation. While urban sprawl devours our natural resources and pollution and noise destroy the quality of American life, the miseries of traffic congestion confronting the family seeking a one day outing often foreclose even this minor undertaking.

In a presentation to President Nixon and the Environmental Quality Council, Secretary of the Interior Walter J. Hickel noted that over 75 percent of all recreation occurs close to home after work and school, and on short outings, while only 25 percent of the recreation facilities and 3 percent of public recreation lands are reasonably accessible to urban America. It is evident from the above statement, that a person's overall opportunity to engage in a particular recreation activity depends upon its availability and accessibility. The problem then, confronting urban America, is that of meeting the demand for recreation close to home. This will be a most difficult problem to solve, as urban areas have the fewest recreation facilities (per capita) and the sharpest competition for land use.

Increased Leisure

The American heritage of leisure, some feel, is another cause of the current recreation crisis. There is, however, a discrepancy among

experts as to whether or not Americans actually do have more leisure time than past generations had. Sebastian de Grazia, Professor of Political Science, is of the opinion that the average work week is not declining as fast as many believe it is; nor is the amount of leisure time increasing at any appreciable rate. He supports his position by tabulating the amount of time the average full-time worker spends engaged in work, in the time spent traveling to and from work, in moonlighting, in repair work around the house, in household chores, and in shopping. Instead of a 35 or 40 hour work week, the average worker, according to Grazia, has a 64-hour week. 3

Others contend that the growth in the amount of leisure time available to us today has the potential of becoming a real problem. A leading economist has estimated that the United States will have 660 billion more leisure hours in the 2000 than it had in 1950. 4 Both positions lend additional support to the contention that outdoor recreational opportunities must be provided for the city inhabitant. Leisure time, coupled with increased income and greater health and longevity, will enable Americans of all ages to participate more fully in outdoor recreational opportunities which do not require a two-week vacation or a three-day weekend, but which are close enough to home to be enjoyed after a day's work, or on a one-day outing.


II. NATIONAL POLICY

With the passage of time, the federal government has recognized more and more that it has a definite responsibility to provide recreation for the people. Recreation contributes to the "general welfare," and therefore federal activity in this field is in accord with the purposes of the United States Constitution. Presently there are more than 30 federal agencies directly or indirectly involved in providing or assisting in the provision of recreation.\(^5\)

The formation of the Outdoor Recreation Resources Review Commission (ORRRC), created by an Act of Congress in 1958, was an early effort dealing in part with the recreational needs of metropolitan areas. The Commission itself was to determine the needs of outdoor recreation now, and in the years 1976 and 2000. In addition, it was to determine the recreation resources of the nation available to satisfy those needs, and to recommend policies and programs to ensure that those needs were met.

In its report, *Outdoor Recreation for America*, the commission concluded that simple activities such as driving and walking for pleasure are the most popular. This was found to be true regardless of income, education, age, or occupation. The Commission also paid tribute to Americans for walking and cycling as much as they do, considering that

little has been done to encourage these activities and quite a bit to discourage them. Billions of dollars have been spent on new roads having little, if any, provision for safe walking and cycling. Suburbs are fortunate to have sidewalks, let alone bicycle paths.6

The ORRRC report was followed in 1966 by the Trails for America report, conducted by the Bureau of Outdoor Recreation (BOR) in conjunction with the Forestry Service, National Park Service, and the Bureau of Land Management. The report was in response to President Johnson's Natural Beauty Message of February 8, 1965, in which he called for development and protection of a balanced system of trails in the nation's metropolitan areas as well as in the countryside.7 As suspected, the study reconfirmed the need for trails which could be located in and near urban areas to provide hiking and riding opportunities within easy reach of one's home. The study led to the granting of a total of $367,436 from the Land and Water Conservation Fund to 12 urban areas for trail development. These projects were intended to demonstrate the benefits of urban trails and encourage similar developments in other urban areas. In announcing the grants, Secretary Udall stated that he hoped they would stir the imagination of urban planners across the nation.8


8Trails for America, p. 120.
Additionally, the report listed the roles of the various public (federal, state and local) and private interest in helping to meet urban trail needs. The roles of the federal government were stated to be:

1. Develop vigorously additional trails on Federal lands in or near urban centers.

2. Permit and encourage the States and their political subdivisions to construct and maintain trail facilities on Federal lands when it is in the public interest to do so, taking into account the long-range comprehensive recreation plans of the States.

3. Work with States and their political subdivisions to plan sound, long-range trail programs and services for local areas to the end that the total recreation provisions by all levels of government shall be planned cooperatively.

4. Encourage local leadership, both public and private, to develop trail facilities adequate to meet the needs and desires of the hiker, horseman, and cyclist.

5. Provide technical guidance and assistance in the planning and development of trail facilities, including the collection and dissemination of necessary and desirable data pertinent to such planning and development through the Federal agencies concerned with recreation. Authority for such assistance exists in the Bureau of Outdoor Recreation Organic Act of 1963, the Urban Planning Assistance Program of the Urban Renewal Administration, and various Department of Agriculture programs.

6. Encourage and assist local agencies in obtaining financial assistance in acquiring the necessary land and in developing trails. Such assistance is available through programs such as: the Land and Water Conservation Fund Program of the Bureau of Outdoor Recreation; the Open Space·Land Program, Urban Beautification and Improvement Program, and Urban Planning Assistance Program of the Urban Renewal Administration; and the Highway Beautification Act of 1965 administered by the Bureau of Public Roads. In addition, a number of other Federal programs provide possible assistance or special incentives for trail development.9

9Ibid., pp. 133-134.
It was this study, *Trails for America*, which formed the basis for the *National Trails System Act* (P.L. 90-542), approved in October of 1968.

III. THE *NATIONAL TRAILS SYSTEM ACT* (P.L. 90-543)

The *National Trails System Act* was the first legislative action taken by the federal government dealing solely with the provision of trails to serve the American public.

Federal legislation leading to its enactment began in 1945 when House Report No. 2142 was introduced to establish a national system of trails. The bill proposed that the Forest Service, cooperating with other federal agencies, states and political subdivisions, construct approximately 10,000 miles of trail. No action, however, was taken on the proposed legislation. In 1963, a bill (S. 1147) was introduced for the development of a system of roads and trails in the National Forest. Again, no action was taken. In 1964, Senator Gaylord Nelson of Wisconsin introduced a bill (S. 622) in the 88th Congress, and again in the 89th, to protect the Appalachian Trail from highway development and urban sprawl. This bill convinced Congress that not only should the Appalachian Trail be protected, but other trails across the country should be developed and protected in a similar way. The Senator also introduced a second bill (S. 2590) in the 89th Congress to authorize the establishment of a national hiking trail system.  

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Then, in 1967, Senator Nelson with Senator Henry Jackson of Washin
ton sponsored Senate Bill 827 which created the National Trail System.
In July of 1968, H.R. 4865, the House version of S. 827, was referred to
the Committee on Interior and Insular Affairs for study and recommenda-
tion. In H.R. 1631, the committee recommended that the Bill (H.R. 4865)
pass as amended.

In recommending the bill for passage the committee noted that:

1. The ultimate aim of H.R. 4865 as amended, is to lay the
foundation for expanding further the opportunities for
the American people to use and enjoy the natural, scenic, historic, and outdoor recreational areas of the nation;
through the establishment of a trails system composed of
(i) National recreation trails which will be located near
urban areas and developed so as to maximize their outdoor
recreation potential; (ii) National scenic trails which will
be located in more remote areas having natural, scenic, and
historic values of national significance; and (iii) connect-
ing or side trails which will be located so as to link trails
of the system together or to provide additional points of
public access.

2. The bill provides the guidelines and the mechanism for designat-
ing trails located near urban areas as national recreation
trails. It also establishes the Appalachian Trail as the
first national scenic trail and designates 14 others for
study for possible authorization by Congress at some
future date.\textsuperscript{11}

The National Trails System Act is of particular significance to
the states and their political subdivisions because of provisions made
in it for the development of trails within existing public-use areas
located in or near densely populated areas.\textsuperscript{12} Section 4, subsection (b),

\textsuperscript{11}U. S. Congress, House, National Trails System Act, 90th

\textsuperscript{12}The Text of the National Trails System Act is included in the
Appendix for further reference.
allows the Secretary of the Interior, where no federal land acquisition is involved, and with the consent of the states, their political subdivisions or other appropriate administering agencies, to designate as National Recreation Trails, trails in or reasonably accessible to urban areas.\(^3\) Since their basic aim is to provide outdoor recreation in the most desirable natural environment practicable, they are not restricted by the same considerations which must be taken into account when qualifying a trail for designation as a national scenic trail. This will allow, and may necessitate, the routing of some bicycle trails along uncongested back streets and unused roadways. Because these trails will be intensively used by the public, effort should be made to inventory lands located in or near urban areas which are administered by federal, state or local agencies. If these lands can be made available for trail development, it will greatly expand the opportunities for trail development without additional expenditures for land acquisition.\(^4\)

Section 7, subsection (e) states that where lands selected for a national scenic trail right-of-way are outside of federally administered areas, the states or local governments involved shall be encouraged to acquire the land outright or through written cooperative agreements. If within two years the land has not been acquired, the appropriate Secretary can enter into such written cooperative agreements or acquire the land in fee by donation or condemnation.

\(^3\)U. S. Congress, House, An Act, To establish a National Trails System, and for other purposes, Public Law 90-543, 90th Congress, Session 827, October 2, 1968, p. 2.

\(^4\)U. S. Congress, House, National Trails System Act, p. 2.
Subsection (g). The Appropriate Secretary may utilize condemnation proceedings without consent of the owner to acquire private lands or interest there in cases where, in his judgment, all reasonable efforts to acquire such lands or interest therein by negotiation have failed, and in such cases he shall acquire only such title as, in his judgment, is reasonably necessary to provide passage across such lands: provided that condemnation proceedings may not be utilized to acquire fee title or lesser interest to more than 25 acres in any one mile and when used such authority shall be limited to the most direct or practical connecting trail right-of-way.\textsuperscript{15}

Section 8, subsection (a), encourages states to consider in their comprehensive outdoor recreation plans, needs and opportunities for establishing trails on lands owned or administered by states and on lands in or near urban areas. Financial assistance for such projects is available through the Land and Water Conservation Fund. In addition, subsection (b) directs the Secretary of Housing and Urban Development to administer the 701 program of comprehensive urban planning and assistance, and the urban openspace program under title VII of the 1961 Housing Act, in a manner to encourage the planning of trails in connection with the recreation and transportation planning of metropolitan and other urban areas.\textsuperscript{16}

IV. RENAISSANCE OF HIKING AND BIKING

The forgotten outdoorsmen of today are those who like to walk, hike, ride horseback, or bicycle. For them we must have trails as well as highways. Nor should motor vehicles be permitted to tyrannize the more leisurely human traffic.

President Lyndon B. Johnson

\textsuperscript{15}U. S. Congress, House, \textit{An Act}, p. 6.

\textsuperscript{16}Ibid., p. 9.
Until recently, the nonessential pedestrian, the fellow who liked to walk, was looked upon with curiosity and suspicion. A stroll through a strange suburban neighborhood would be greeted by staring children, peering housewives and howling dogs. America was completely dependent upon motorized travel and transportation. But there has been a change in U. S. recreation trends, a change which has greatly affected the past credit rating of the pedestrian. It has come about through the phenomenal growth of hiking, biking and horseback riding. As stated in an earlier section, the ORRRC reported in 1962 that pleasure driving was the nation's most popular form of outdoor recreation. However, the report failed to include the urban outdoors in its study and therefore failed to see the significance of simple pleasures like walking and cycling as outdoor recreational activities. By ranking the importance of outdoor recreation activities according to what Americans do most on vacations, overnight trips and outings, rather than what they do most in everyday life, the ORRRC exaggerates the importance of the nonurban outdoors. 17 Even with this unfair ranking however, in 1967 the BOR reported that driving for pleasure had slipped to third place, and, when measured in millions of user-occasions, hiking, biking and horseback riding outpulled pleasure driving better than two to one. 18

It is just as difficult, if not more so, for the bicyclist to find a place to ride in peace and quiet. To this nation's 60 million


bicyclists, the most perplexing problem is that of finding quiet, safe, accessible and interesting places to pedal once the two-wheelers are out of the packing crates. As mentioned earlier, the tyranny of the automobile, the evolution of the megalopolis, and the disappearance of semi-rural areas convenient to cities, have all mitigated against our cycling citizens, and against what the Athletic Institute calls America's most popular participatory sport. 19

While only a minority of the nation's bicycle riders use their bicycles for excursions and holiday outings, they will need more planned paths in all types of areas: high-density, general outdoor, and areas of natural environment. Actually the requirements are quite simple: what satisfies the pedestrian will in most cases satisfy the bicyclists as well.

State Trails

In general, states have failed to realize the potential which exist for trail development. Only a few states have more than 100 miles of hike/bike trails. Recent state trail development, unfortunately, has been largely confined to providing foot access to recreational areas. 20

Some states, however, have realized the need to provide a variety of trails and are making efforts to do so. Maryland opened its first bicycle path in 1964 and is seeking to mark additional secondary roads


20Trails for America, p. 110.
in the State as bicycle routes. Michigan's riding and hiking trail system boasts of 650 miles of trails, 193 of which are devoted to bicycle. The State of Wisconsin scored a first when it dedicated the nation's first cross-state bikeway in 1966. Stretching for nearly 320 miles, it is the nation's longest and culminates the cooperative efforts of bike enthusiasts and private interests. It is also noteworthy that 30 miles of the route utilizes an abandoned railroad right-of-way. 21

Most states acknowledge the inadequacy of their trail systems, especially around their urban centers where there has been very little trail development. As mentioned earlier, what trails there are, are oriented to the hiker with no provisions for the bicyclist.

In recommending a state trail program, the report *Trails for America* stated:

> Every State is encouraged to give early and serious attention to development of balanced and adequate recreation trail programs as part of their park and forest system. Plans for such recreation trail systems should be incorporated in their Statewide Outdoor Recreation Plans and put into effect as appropriate by project grants from the Land and Water Conservation Fund. Urban areas should receive particular attention in State trail programs. Special efforts should be made to coordinate State trail development with systems of metropolitan area trails. 22

In addition, the report listed the roles of the states in helping to meet urban trail needs as follows:

1. Give consideration in their comprehensive statewide outdoor recreation plans to opportunities for trail development that will help to meet urban needs.

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21 *Success Story: The Growth of Bikeways*, p. 5.

22 *Trails for America*, p. 116.
2. Vigorously develop trails on State-managed lands in and near urban areas.

3. Encourage cooperative planning and development of trails by local units of government.

4. Jointly develop clear-cut lines of authority and responsibility for trails among the various units of governments and private interests.

5. Work actively with local public and private groups to provide necessary professional help in trail planning, development, and operation.

6. Provide uniform guidelines for trail development.

7. Assist in acquisition and development of lands for trails when local governments are restricted from prompt action by financial limitations. After acquisition of such lands, development and operation can be assumed by local agencies.

8. Distribute, through a system of priorities, Federal and State grant money for trail acquisition, development, and maintenance by local governments.

9. Transmit technical recreation data to local governments for their use in determining needs, construction standards, and operating procedures for trails.

10. Enact legislation where necessary to protect land owners from liability claims arising out of the use of trails on their lands for recreational purposes.

Metropolitan Area Trails

It was not until recently that trails located in or near metropolitan areas, adapted to the uses of hiking and biking, were recognized as one of the best means of accommodating urban recreationists. In 1961, national attention was focused on the need for such planned facilities through the efforts of the American Bicycle Industry and the citizens

\[23\text{Ibid.}, \ p. \ 134.\]
of Homestead, Florida. The citizens of Homestead formed a bike club which came up with a practical solution to the traffic problems faced by the cyclists of that city. They called it a bicycle safety route (Bikeway), and it consisted of secondary roads connecting residential areas with schools, playgrounds, shopping centers, and other centers of activity. The city fathers found in the bikeways an inexpensive ($7 - $10 per mile) new form of recreation to satisfy the leisure-time needs of its citizens.24

In recent years, spurred on by their own planners and trail enthusiasts, other local governments have followed the Homestead example. New York City recently closed Central Park, and other city parks, to motorized traffic on Saturday, Sunday and certain designated week nights. This action created many miles of "Instant Bikeways" for recreation-starved New Yorkers. Maricopa County, Arizona, with plans for 720 miles of trails, is making provision for trail users to cross busy intersections safely. Manually operated traffic lights at dangerous street crossings have been provided. Metropolitan Chicago has opened a bikeway covering some 17 miles of lake front paths. It is estimated that 10,000 cyclists a day make use of this facility. The city of Seattle, Washington, is developing a system of bikeways to accommodate its estimated 120,000 cyclists. Linking residential areas to schools, play fields, parks, beaches and colleges, the bikeways will be located along landscaped shoulder areas, along shorelines, and on abandoned railroad rights-of-way.25

24 *Success Story--The Growth of Bikeways*, p. 3.
25 *Trails for America*, pp. 121-126.
Private groups are also playing a very important role in trail planning and development within metropolitan areas. Organizations such as the American Youth Hostels, the Sierra Club, hiking clubs and many conservation groups help construct and maintain trails and explore new trail possibilities.

One of the results of the Nationwide Trail Study has been the development of criteria suggesting trail mileage needed in metropolitan areas. The following criteria for each 50,000 persons living in a metropolitan area are suggested:

- Bicycle 25 miles
- Foot 25 miles
- Horseback 5 miles

Many trails can serve multiple uses. For this reason the recommended criteria can mean as little as 25 miles of trail, or as much as 55 miles of trail per 50,000 people, where intensive use makes separate trails necessary. 26

There are many opportunities for trail location in and near our metropolitan areas, although there is a problem in identifying and developing the prospects to the best advantage. One of these prospects, the abandoned railroad right-of-way, will be investigated in a later chapter.

If properly planned, trails can become integral and valuable parts of the open space within metropolitan areas. Prime possibilities

26 Ibid., pp. 129-130.
for such trail development reside in the rights-of-way of natural gas lines, power lines, and abandoned railroad or streetcar rights-of-way. Other possibilities are stream-valleys and their flood plains, and easements for underground cables. Trails developed in conjunction with public projects such as irrigation canals, flood dikes, jetties and breakwaters should also be investigated.\textsuperscript{27}

Today, the idea of trails set aside for the enjoyment of cycling, hiking and horseback-riding, is recognized as a dynamic new dimension in community and recreational planning. Providing these trails is a task that can be handled best through the cooperative efforts of both the public and private interests involved. Financial help is available through federal financial assistance programs and through state programs to acquire and develop land and facilities for recreational purposes; however, the major responsibility still rest upon municipal and county parks departments. The \textit{Trails for America} report list the various roles of local and private interest in helping to meet the urban trail needs as follows:

\textbf{LOCAL}

1. Assume the major responsibility within metropolitan areas for acquisition, planning, development, and maintenance of trail systems.

2. Pursue an aggressive program of trail development on city and county lands.

3. Mobilize youth groups and hiking, riding, and cycling clubs to develop public support for trails.

\textsuperscript{27}Ibid., pp. 130-131.
4. Coordinate voluntary trail work by organized hiking and riding groups and other interested service organizations.

5. Seek technical and financial assistance in trail needs from State and Federal agencies.

6. Mark, maintain, and police trails and regulate their use.

7. Publicize the opportunities readily available for trail use and enjoyment by using the news media and trail guide maps.

PRIVATE

1. Stimulate State and local legislative action to authorize trail development and maintenance.

2. Advise public agencies of the needs for trail facilities, and participate in joint planning.

3. Assume responsibility for construction and maintenance of designated trails or segments.

4. Provide as much financial assistance for trails as possible to help realize joint aims.

5. Provide trail promotion necessary to realize joint aims.

6. Publicize and encourage activities along the trails and use of existing trail facilities.

7. Cooperate with community agencies to provide trail facilities and programs that meet the needs of Scouting groups and other worthy interests.

8. Encourage respect for the rights of others along trails, and teach trail manners. 28

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28 Ibid., p. 135.
CHAPTER III

ECONOMIC AND SOCIAL ASPECTS OF TRAIL DEVELOPMENT

In his Natural Beauty Message of February 8, 1965, President Johnson recognized the necessity and value of a balanced system of trails, not only to provide facilities for heretofore ignored trail activities, but as an answer to one of our more serious urban problems: lack of outdoor recreation in which all people can participate. This realization of the need and value of trails is no doubt based upon at least three factors: (1) as our cities become increasingly barren of human attributes, so does the quality of life within them; (2) the plight of the city is due in part to the practice of stamping out everything green within their boundaries; and (3) walking, hiking and biking are simple and pleasurable activities within the economic reach of virtually all of our urban millions.

America has a not too proud tradition of doing things primarily for economic gain. The priority of economic gain is especially severe and detrimental to the allocation of land and facilities for human enjoyment. Trails, especially those utilizing abandoned rights-of-way, can begin to right some of the wrongs that have been done to the personal and aesthetic values of people. They are one method of breathing new life into our metropolitan areas. The value of attractive and accessible trails would be inestimable to the people of these areas.

In addition, there are upward trends in at least three factors affecting the demand for trail oriented recreation which will make the
value of such recreation even more valuable in time. These are: the rapid rate of population increase; the increase in real income per capita which will enable a larger proportion to be spent for recreation of all kinds; and the increase in the amount of leisure time enabling more people to participate in trail activities.¹

In this day and age it has become standard operating procedure to justify recreation investments with a rather detailed analysis of the costs and benefits expected as a result of the investment. Such an analysis supposedly enables officials to make a more rational decision in the investment of scarce recreational resources. However, with many recreation projects, although calculation of cost estimates for the investment are relatively simple, benefit calculations are much less straightforward. The benefit or utility of an economic good or service is usually indicated by its market value in terms of real money. Unfortunately, market values are not available for recreation as they are for most goods and services. Therefore it is impossible as yet to value recreational services in this fashion. No one doubts that recreation has value; the problem arises when one attempts to measure that value. Another difficulty encountered is the measurement of benefits which may accrue to non-users of the recreational facility. Also, investments in recreation usually result in benefits extending over long periods of time. This uneven distribution of costs and returns over time further complicates

investment decision, requiring that calculations of the value of future benefits be discounted back to a present worth equivalent.²

The Tennessee Valley Authority however, is an example of one agency that does measure the utility of recreation. In measuring the recreation benefits provided by its water and related land development projects, TVA utilizes the federally developed Evaluation Standards for Primary Outdoor Recreation Benefits. In evaluating recreational developments, TVA views recreation as an economic product having a value for which people are willing to pay. TVA recognizes the impossibility of measuring, in monetary terms, the total value of the tangible and intangible benefits accruing to the recreationist; nevertheless, monetary values are assigned to the tangible recreation services provided by the project.³ The recreation day, which consists of a visit by one person to a recreation development or area for recreational purposes during any reasonable portion or all of a 24-hour period, is used as TVA's standard unit of measurement for determining primary outdoor recreation benefits. Estimates of total recreation days of use over the economic life of the project are developed, with a single unit value assigned per recreation day. The unit value reflects the quality of the activity, and the degree to which opportunities to participate in other activities are provided. Values ranging from $.50 - $1.50 are assigned

²Ibid., pp. 257-259.

to general recreation activities, which would include hiking and biking. Values ranging from $2.00 - $6.00 are assigned to specialized recreation activities for which opportunities are limited and often involve large personal expense by the user, as for example white water boating and canoeing. The unit values per recreation day are meant to measure the amount that users of the recreational activity should be willing to pay.  

The total dollar value of recreation benefits for the project is determined by applying the selected unit values to the estimated patterns of annual use over the life of the recreational project. In other words:

\[ \text{total visitation} \times \text{dollar value per visit} = \text{value of recreation benefits}. \]

TVA also claims as part of the total monetary benefit of recreation increases in wages over the federal minimum wage of $3,500 per year due to new employment created by the recreation project.

The methods employed by TVA in calculating recreation benefits in monetary terms have led to much discussion and controversies. Much reliance is placed on pure judgment evaluations in applying the standards discussed above. For this reason it is not suggested as a method for judging the value of trail development.

According to Carson, Deppe and Maclean, recreation is an end in itself, and therefore needs no justification other than satisfying the participants. There are however, values which accrue to society and to individuals, which though impossible to measure, make the money and effort spent on recreation worth while.

\[ ^4 \text{Ibid., pp. 3-6.} \]
\[ ^5 \text{Ibid., p. 7.} \]
\[ ^6 \text{Carlson, Deppe, and Maclean, op. cit., pp. 17-19.} \]
The most important aspects in determining the value of any recreational facility are the benefits which are realized by the people using the facility. These benefits represent no monetary gain for the beneficiaries and, of course, vary in value among the individuals themselves. Although indirect benefits are realized by the non-user, those valuing the facility the highest would be the direct user. Also affecting an individual's value of a particular facility is the location and setting of the facility itself.

The personal values which accrue from hiking, biking and other trail activities are not difficult to identify. Physical well-being, mental and emotional health, intellectual development, social adjustment, and aesthetic values are all benefits which emanate from trail oriented recreation. One of the most appealing facets of trails is that these benefits are not restricted to certain age or economic groups as most other recreation activities are. Walking for pleasure, hiking and biking, are activities which can be enjoyed by young or old, rich or poor, by the urban dweller as well as those residing in suburban or rural areas.

Physical well-being is one of the more obvious benefits of trail activities. Dr. Paul Dudley White, the eminent cardiologist would like to put everybody on bikes, not just once in awhile, but as an everyday routine. He has subscribed to the view that lack of exercise is a primary cause of heart disease and routine exercise on the bicycle will
actually prevent it. Another facet of physical fitness is given by Dr. W. W. Bauer of the American Medical Association, who stated:

There should be emphasis, during youth, on a personal sport or activity which can be carried on when the demands of adult life render participation in team sports, or activities requiring much time, space, or equipment, impractical. Then we shall need something like walking, cycling, or nature study involving field excursions, in order to get us out of the stands and on to the playing fields.

In addition to physical health, trail activities can also help promote mental and emotional health by offering an outlet for the cares and frustrations of today's urban living. Trails can become keys to the out-of-doors. Cycling in particular can provide much enjoyment with little skill required. The development of light, easy-to-pedal bicycles (and tricycles) for adults makes it almost effortless to travel 20 or more miles in an afternoon. Many retired citizens are discovering once again the pleasure and convenience of taking a bike to the market or on errands, or just the pleasure of cycling itself.

There are also social benefits which can be derived from trail activities. Besides providing a new dimension in the lives of the users, much satisfaction can be obtained from contact with people sharing the same recreation interest. One of the things that has tended to help build family unity is the availability of healthful and relatively

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inexpensive recreation which can be enjoyed in the family's leisure time.9

One usually ignored benefit of trails is their potential value to the handicapped. Tandem bicycles allow the blind to take part in and experience biking as no one else could. Usually a prisoner in an automobile, insulated from reality, on a bicycle the blind person can experience a number of things he seldom otherwise would. He can feel the sun on his back, the breeze in his face, sounds and smells of nature, and the thrill of going under his own power.

From the past discussion it is obvious that to put a dollar value on the personal benefits of trail activities is not possible. Possibly a value could be arrived at by determining how much the trail is worth to its users, how much would they be willing to pay to use the facility. However, the question could also be posed another way: how much would these people have to be paid if trail activities were taken from them, in order to make them feel as well off as before its loss? One would probably find the amount of money required to compensate the loss would be larger than the total cost of the facility itself.

Besides personal benefits, benefits to society as a whole are likely to occur. The attractiveness of a community will be enhanced. Trails utilizing abandoned rights-of-way can be landscaped and can be, in essence, linear parks. This attractiveness could be a drawing card

for future residents and even industry. Civic spirit may be improved if groups such as biking and hiking clubs take it upon themselves to help maintain and promote the trail. The author is not trying to suggest that the development of a trail in or near an urban area is a cure-all for all the ills of the community; however, it is a factor that will contribute to a healthier society.

Monetary benefit to society will probably be so slight it will be virtually unnoticed. Unlike some other recreational activities, one does not need expensive equipment to enjoy a pathway. As a result, economic benefit to the community in the form of increased sales will be minor with the possible exception of bicycle dealers.

The economic impact may however be felt in other ways. Increased recreation means a possible increase in employment to support the facility. Recreation, as mentioned earlier, is an attraction to residents and industry. Families with a choice select communities that offer leisure pursuits in which the entire family can participate. The importance of recreation to the location of industry is pointed out by the following words of Rudolph Bannow:

Nothing is more important to the physical and emotional health of the men and women of industry than proper recreation activities. So important is this considered that few modern companies would consider locating a new plant or facility in a community without first surveying its recreation possibilities.  

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Additional economic benefits may result depending upon the type and extent of the trail developed. The Wisconsin State Bikeway is a good example of a trail facility aimed at attracting an economic base, "bicycling tourists," to the State. Counties throughout the State are now proposing branch trails off the main route to take advantage of the tourist trade. Thousands of tourists come to the State each summer to ride the trail in segments for a one day visit, or cover the entire route in about a week.

In the foregoing pages no mention has been made of the intangible benefits of the trail right-of-way itself. A railroad right-of-way, usually about 100 feet wide, in addition to providing the trail, will help preserve flora and will provide nesting and winter cover for local fauna.

The expense incurred developing a trail may seem high, but is actually relatively low when compared to the cost of some other recreation facilities. A more complete analysis of development cost and methods of financing will be discussed in the next chapter. It will suffice to say here, that a trail developed from an abandoned railroad right-of-way has particular virtue in that the cost of purchasing or arranging for its use are not usually excessive. Except in commercial areas the land is not overly expensive and is usually purchased or reverts back to adjacent property owners at the time of abandonment. It may not be purchased at all, the fee title remaining with the railroad.

In most states the public purchase of the right-of-way has no adverse affect on the tax base because many railroads pay no property tax, but instead pay a tax on their gross earnings. In other cases
where the right-of-way has already been taken over by private individuals and is in use, purchase and lease-back arrangements can be negotiated thus protecting the trail right-of-way while allowing the previous owner to pursue current activities as long as they are compatible with the trail. In some situations, scenic easements would be sufficient to protect the trail. A scenic easement conveys to the public agency the right to prohibit the private owner from using his land in a manner harmful to recreational values. The actual title would remain in the owner's hands. 11

Because the need for outdoor recreation in and around our urban areas is so critical, states and their political subdivisions are entitled to receive financial assistance from the Land and Water Conservation Fund, and the Open Space Land Program. These federal programs will help defray development and acquisition cost by as much as 50 percent.

In conclusion, it seems economic justification of trail development will require a modified approach to the typical benefit-cost analysis. Until there are precise ways to quantify the values derived from certain types of recreation activity, the accuracy of such an analysis will be lacking. It appears to this author, that until such time as new methods are available to accurately value non-economic benefits accruing from recreation, the philosophy that recreation is an end in itself, and needs only to serve and satisfy the people to justify its existence, is a rule one could safely follow when developing trails oriented to urban America.

11. Trails for America, p. 27.
CHAPTER IV

DEVELOPMENT OF ABANDONED RAILROAD RIGHTS-OF-WAY

As previously mentioned, the abandoned railroad right-of-way holds one of the greatest potentials for trail development in the country today. Approximately 40,000 miles of railroad right-of-way have been abandoned since 1918, 10,000 miles in the last decade alone. The test is now to put these old transportation routes to a new use, a use reflecting this country's growing need for open space and recreation opportunities in and around its urban areas. The test will not be an easy one. Plagued with problems of multiple-ownership, liability and maintenance, trail advocates also come up against officials who recognize only one kind of park, the square kind that comes in chunks, and one kind of recreation, the supervised kind known as "organized sweating." With the growth of hiking, biking and horseback riding, three activities uniquely suited to abandoned railroad rights-of-way, recognition of the value of these linear sections of land is gaining.

The attractiveness of an abandoned railroad right-of-way is in its adaptability to hiking and especially biking. These abandoned roadbeds are generally level, clear and well drained, making them ideal for hiking and biking. In addition, since the railroad intersects many streets, a trail developed within the right-of-way is highly accessible.

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1"New Courses for Old Paths," p. 17.
2"Rights of Way," p. 15.
to the public. Finally, such a trail is usually long enough to provide opportunities for those who prefer short or long trips. 3

I. RIGHT-OF-WAY DEVELOPMENT IN OTHER STATES

When it comes to turning tracks into trails, Wisconsin and Illinois are well in the lead. Wisconsin's Elroy-Sparta Trail boasts of 32 miles of level scenic trail, with 1-1/2 miles of it underground. Abandoned by the Chicago and Northwestern Railroad in 1964, the use of the converted right-of-way has been increasing yearly with an estimated 10,000 users in 1969 alone. Wisconsin has also purchased a 72 mile abandoned right-of-way in the northern part of the State. In both purchases, the State had no serious problems with acquiring the land since the rights-of-way were owned by a single railroad company. In spite of the many landowners abutting on the rights-of-way, no reversionary clauses were found. 4

The Illinois Prairie Path, developed along 27 miles of the abandoned Chicago, Aurora and Elgin Electric Railroad, is a good example of the cooperative efforts of both private and public organizations. The Prairie Path Association, a citizens group interested in recreational facilities, together with the support of the Open Lands Project, have


4 Information on the Wisconsin experience was provided by A. E. Ehly, Director, Bureau of Parks and Recreation, Department of Natural Resources, Madison, Wisconsin. Personal correspondence to author.
leased the right-of-way from DuPage County, who had purchased the railroad's interest and obtained quitclaims from possible reversionary claimants when the railroad ceased operation. Private citizens interested in hiking and biking maintain most of the path with some towns and voluntary groups also contributing to the path's upkeep.\(^5\)

II. DEVELOPING THE TRAIL

When developing the abandoned railroad right-of-way for trail purposes, there are many factors to be considered. One factor is the use which is expected of the facility. Uses such as horseback riding, bicycling, hiking, or motorcycling will to a great extent determine construction standards of the trail. For example, the same type of surface will not be suitable for both horseback riding and bicycling. Another factor to be considered is land acquisition. In her article, Planning for Urban Trails, Mary Brooks states that the method of acquiring land in trail development is important because the kinds of use that can be made of property depends on the kinds of rights that are granted, and because the cost of acquiring the land can be the greatest part of the cost of the trail and could determine the feasibility of its development.\(^6\) Other factors to be considered in developing the abandoned right-of-way are access to the trail itself, trail facilities, and operational problems.

\(^5\)Brooks, *op. cit.*, pp. 3-4.  \(^6\)Ibid., p. 18.
Since all these factors are of importance to trail development, they will be discussed separately in the following pages. The author wishes to comment at this point that much of the discussion will be restated or taken directly where noted from the article Planning for Urban Trails by Mary E. Brooks, published by the ASPO Planning Advisory Service in December of 1969.

**Land Acquisition**

As stated earlier, the cost of acquiring the abandoned railroad right-of-way could determine the feasibility of its development. For this reason the various methods of acquiring the right-of-way will be discussed. Brooks has listed five methods for acquiring land or arranging for its use: purchase of full title, lease arrangements, purchase of easements, gifts or dedications, and zoning. 7

**Purchase of full title.** Acquiring the land in fee simply is usually the most expensive method, but it does guarantee full public control and use of the property. This is, as you recall, the method the State of Wisconsin used in its acquisition of abandoned roadbeds. Full ownership is always recommended for sections along the trail which will be developed in public rest or staging areas (parking areas, picnic and campground, sanitary and water facilities), but this type of acquisition is not necessary for the entire length of the trail because of the trail's limited use. The primary disadvantage of buying full title to

the land is cost. In addition to the expense of acquisition, public lands are removed from the tax base and no longer produce revenue. 8

If all attempts to purchase the abandoned right-of-way fail, fee title can also be acquired through condemnation proceedings. Since state and local governments have the constitutional power, and in most cases the statutory authority to provide recreation facilities, land for recreation can be acquired by eminent domain. The exercise of this power, however, must be justified by showing that the land is being taken for a public use by due process of law. The owner is also entitled to just compensation, as fixed through negotiation or by a jury, for the land taken. It should be pointed out here that the National Trails System Act encourages condemnation proceedings for acquiring land within the National Trails System if other attempts to acquire the land or interest in the land fail. However, in these cases only such title as is reasonably necessary to provide passage across the land can be acquired.

Before exercising the right of eminent domain, officials should, as stated above, make every attempt to acquire the land by a different method. Studies have shown that condemnation without negotiation causes resentment on the part of the property owners and results in bad publicity for the public agency. There is also the good possibility that the cost

of condemnation proceedings will far exceed that incurred in a negotiated purchase.9

**Less than fee arrangements.** Sometimes it is not financially possible nor economically sound to purchase all of the right-of-way. Arrangements for acquiring less than full title to the land include easements, leases, licenses, and covenants. Usually these arrangements allow minor development rights and the right of persons to walk or ride along the trail, and are therefore adequate for trail development. The major advantages of less-than-fee rights are: (1) the land is left in private ownership usually continuing its present use, (2) the land remains on the local tax roles, and (3) acquisition costs are usually less than if the land was acquired in fee simple.10 It should be noted here that state enabling legislation is usually required to permit state agencies to acquire less than fee interest. Of the four methods mentioned for acquiring less than fee title, easements and leases are the most popular.

An easement, with the exception of certain types of rights-of-way, gives no rights to the holder except the right of use. Easements have received wide publicity in recent years and are a common method for developing trails. They are usually obtained by gift, purchase, or

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condemnation. When purchased, the cost of an easement will usually vary with the restrictions placed on the owner. Easements specifying riding or hiking as the use to be made of the property are often the most expensive, as the land obtained usually cannot continue in its present use. 11

Since easements require a specific statement of the arrangement desired, they should set forth the rights of both parties, the amount of land covered by the easement, a time limit, the cost, liability coverage, and the preservation of any other rights about or within the property. 12

In addition to the sometimes high relative cost encountered in acquiring easements, there are also legal problems involved in the use of easements for outdoor recreation. The problems, rather than involving matters of constitutional law, materialize from the effect of common law doctrines upon matters not clearly covered by statute. 13 Questions must be answered as to the constitutional power of government agencies to acquire less than fee interest in land. Usually, in situations where the public has the right of entry on the land involved, state and local governments have the power to acquire easments the same as they would if they acquired the fee. There is also the question of what is proper statutory authorization for acquiring recreational easements. Most

statutes authorizing the acquisition of land for recreation also authorize the acquisition of the fee or of any interest in the land. However, this may not be adequate authorization to permit recreation easements. 14

Other legal problems may occur when dealing directly with a railroad in obtaining its abandoned right-of-way easement. Problems may arise concerning the railroad’s authority to sell the right-of-way. In some states, the granting of a right-of-way to railroad or the taking of rights-of-way by condemnation for railroad purposes creates a fee, and in other states merely an easement. Whether the conveyance of a right-of-way to a railroad passes a fee or an easement depends to a great extent upon the state statutes authorizing such grants or takings. For this reason state statutes should be investigated before any agreements are made. In addition, through right-of-way grants, a railroad may acquire the right of exclusive possession and most of the qualities of a fee title, subject to the limitation that the easement must be used for railroad purposes only. In such a case, the railroad would have no right to sell the right-of-way for trail purposes. Usually negotiation can be made with the railroad only in cases where the railroad owns the right-of-way in fee simple, in which case they can devote it to any use to which a private owner might put his land. 15

14 Ibid., pp. 46-47.
To clarify this particular legal tangle the following rule can be followed: if the right-of-way is an easement and not a fee, the fee remains in the grantor. A transfer of the land passes title to the underlying fee to the grantee, so when the right-of-way is abandoned, the then owner of the property and not the original grantor or his heirs takes possession of the property free of the burden of the easement. 16

In addition to easements, leases are sometimes used to acquire abandoned railroad rights-of-way for trail purposes. Obtaining rights to use of land by lease is a method used by many local governments. The use which can be made of land under a lease arrangement is usually less restrictive than with an easement and often involves only a nominal fee. The previously discussed Illinois Prairie Path was developed under a lease arrangement. In this particular case the county leased to local villages and city governments (for $1 a year) a 10-foot right-of-way to be reserved for the Prairie Path. Most leases usually run for 25 years or longer and must run for at least 25 years to qualify for financial assistance under the Land and Water Conservation Fund Act. 17 A lease usually requires that taxes, insurance, upkeep and maintenance be taken care of by the lessee.

Gifts and dedications. Abandoned railroad rights-of-way can also be acquired through gifts or dedications to public agencies for trail development. It would be wise for local officials to become familiar

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16 Ibid., pp. 537-538.

17 Outdoor Recreation: Land Acquisition, p. 9.
with the laws pertaining to land donation so that they can inform donors of possible inheritance and income-tax concessions. Some concerned citizens have made donations in the form of money or easements across their own land for the development of a trail.

**Zoning.** Although zoning cannot be used to acquire land, it is a planning tool which can aid cities in providing parks, recreation, and open space. For instance, flood plain zoning preserves open space suitable for recreation while protecting valleys from unsafe development. Similar zoning could protect and preserve the trail values of abandoned railroad rights-of-way by restricting and regulating development adjacent to them. Zoning of this nature would be highly appropriate in our congested urban areas where there is a critical need for preserving the quality of open space for recreational purposes.

**Construction**

Type and extent of construction must reflect the use which is expected of the facility and also depends upon the condition of the right-of-way. Since railroad rights-of-way are usually level, clear, and well drained, preparation of the roadbed for trails is relatively simple. If developed for hiking or horseback riding, the surface of the trail should be left as natural as possible. In most cases the right-of-way need only be cleared of vegetation before it is suitable for these activities. Where the trail is to be utilized as a bike path, an asphalt paving is recommended for the trail surface. This path should be at least three to four feet wide with adequate right-of-way to pass. A
six foot wide path is considered optimum.\textsuperscript{18} Figure 1 shows construction details of a typical bike path. The two inch prepared base can be local material and very often can be obtained from the roadbed itself. This type of surfacing, presuming that grading is minimal, would cost about $1.25 per linear foot, or $6,600 per mile.\textsuperscript{19}

Less expensive surfacing is available. The State of Wisconsin used crushed limestone screenings in surfacing the Elroy-Sparta Trail. The natural compaction and cementing of this material provides a surface satisfactory for bicycling and hiking. Wisconsin's costs for this material were approximately $1,000 per mile; however, limestone costs will vary with the material's availability.

Condition of the railroad right-of-way will also influence the cost of trail development. A key factor of condition is time. Rights-of-way abandoned years ago and only recently considered for use as trails are usually in a poor state of repair compared to those whose abandonment has just occurred. The State of Wisconsin offers a good example of how critical the factor of time really is. In establishing the Elroy-Sparta Trail, the State purchased the railroad grade in time to ensure that all the bridges and culverts crossing the many roads and streams were left intact, with the railroad company removing only

\textsuperscript{18}Brooks, \textit{op. cit.}, p. 21.

\textsuperscript{19}Cost figures and construction data were obtained from the Landscape Architectural firm of Oliphant and Kersey, Inc., Knoxville, Tennessee; also from \textit{Road Surfaces}, F.N. 353 D 351 (Madison: Department of Landscape Architecture, University of Wisconsin, n. d.), p. 1.
Figure 1. Detail of Typical Asphalt Bike Path
the tracks and ties. The result was 30 miles of level trail base with no breaks and a substantial saving in time and money. However, in the case of the Park Falls-Tuscobia railroad right-of-way, it was impossible for the State to acquire the railroad bed before bridges and culverts were removed. The State is now faced with having to bridge dozens of breaks in order to establish a continuous trail. In such cases, where incidental structures such as bridges and culverts have been removed and must be replaced, considerable expense may be encountered in addition to other trail cost.

In addition, rights-of-way that are not developed soon after abandonment will soon become overgrown with vegetation. They may be used as a dump for everything from trash to excess fill dirt, and private encroachments may occur on the right-of-way itself. All of the above factors will result in additional time and expense in developing the right-of-way for trail purposes.

Access

As stated earlier, a trail developed within a railroad right-of-way usually intersects many streets and is therefore easily accessible to the public. In order to adequately serve the public, small parking areas (10 - 30 cars) should be developed at a number of these intersections. Access to the Illinois Prairie Path has been provided for in a similar manner. In addition to these smaller areas, large staging areas providing adequate parking, space for preparing group trips, and related facilities such as water, sanitary, and bike rental stations, should also
be provided. These large areas would serve the public best located at the ends of the trail and at selected intervals along the trail itself.

Related Facilities

Since the trail will usually follow the abandoned roadbed, opportunities to design the trail in relation to specific points of interest are limited. However, every effort should be made to create an interesting trail. For example, signs identifying areas of historic significance, plant species, ecological phenomena, etc., will greatly enhance the attractiveness of the trail. Also, where the trail passes near to some significant point of interest, consideration should be given to establishing a side trail to make this area accessible to the main trail. There may also be opportunities to renovate abandoned railroad facilities to preserve railroad lore. With the many opportunities available to enhance a trail, there should be no excuse for a boring one.

In addition to the facilities discussed above, water and rest facilities should be located about every five to six miles along the trail.20

Cost

As stated earlier, the cost of developing an abandoned roadbed varies considerably, depending upon a number of factors. The least expensive trail will naturally be the one left as close to its natural form as possible. Though this will serve for hiking and horseback

20Brooks, op. cit., p. 22.
riding trails, surfaced trails are also needed and are considerably more expensive.

Lacking useful standards for trail cost, Brooks, in her article Planning for Urban Trails, suggests the possibility of making a budget for trail development by identifying the variables which are involved. She identifies the three major categories of cost as those involved with acquiring the land or arranging for its use, construction cost, and operational cost. Acquisition cost consist primarily of legal condemnation of parcels and purchase of land. Construction cost includes paving, grading, bridges, fencing and guard rails, parking facilities, and shelters and sanitary facilities. Operational cost involves maintenance, policing, traffic control and path signs, and insurance.21

There are a number of ways to lighten the financial burden of developing a trail. Staging the development over a period of several years will benefit the public agency with limited funds for capital improvement. Deferring development of portions of trail or certain structures to other development stages will ensure that capital improvement monies are not depleted in one year. Another method of financing, bond issues, has permitted many local agencies to undertake recreational development which otherwise would have been impossible. Bonds enable communities to obtain recreation facilities when needed, while providing a means by which the cost is shared by both present and future users.22

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21 Ibid., p. 22.  
22 Ibid., p. 23.
Besides local funds, two federal programs, the Land and Water Conservation Fund Act and the Open Space Land Program make financial assistance available through federal and state grants-in-aid. The Land and Water Conservation Fund assists states and their political subdivisions in the acquisition and development of recreational areas and facilities. In order to qualify for such assistance, the state must have a comprehensive statewide outdoor recreation plan, and must update and refine it on a continuing basis. Grants are made on a 50-50 matching basis based on the project's costs. The project must be in accord with the state plan. Priority is generally given to projects serving urban populations and the public-at-large, and also for basic rather than elaborate facilities. From this it would seem that trails oriented to our urban populations would be given priority over most other projects.

In addition, the Open Space Program enables cities to acquire open space areas for recreation, conservation and scenic purposes. Administered by the Department of Housing and Urban Development, the program provides up to 30 percent of the cost of acquiring potential recreational land within urban areas.23

Agencies applying for federal grants should investigate all appropriate sources of federal financial assistance as there are over 100 of these programs. The applying agency should check to see if there is specialized federal legislation which would provide assistance in

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23Ibid., p. 23.
addition to that provided by some other federal program. For example, if the proposed project is located in Appalachia, it could qualify for a 30 percent increase in financial assistance.

**Operational Problems**

In developing the trail, operational problems involving maintenance, regulations, signs, and liability are likely to occur.

The trail developed within a railroad right-of-way generally needs little maintenance other than keeping it free of vegetation and debris. If the trail is surfaced, occasional resurfacing will be necessary to keep it in good condition. Past experience has shown that many trails are maintained by local citizen groups such as hiking clubs, Boy Scouts, and other groups interested in trail activities.

Regulations and signs are needed to ensure the safety and enjoyment of trail users. The best regulations are simple and straightforward, spelling out just what is and is not allowed on the trail. Although regulations should be developed for each individual trail, most usually prohibit smoking, except in specified areas, discharging firearms, use of vehicles on the trail, and trespassing on private property. 24

From the author's readings, it seems as though one of the most important regulations is that of restricting the use of the trail to that for which it was designed. Mechanized man is the most serious threat to the unlawful use of the trail. Motorized bikes now make it possible

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to tear into the most remote kinds of country. These bikes can quickly convert a hike/bike trail into a rutted nightmare. To keep the motorcycle from mixing with hikers and bicyclists, those developing the trail should require and enforce the necessary regulations. Signs are necessary to give both warning and direction to users and non-users of the trail. Signs should given warning when ever the trail crosses a road, changes direction, etc. The Bureau of Outdoor Recreation together with the Bureau of Roads have recently developed National Bikeway signs, fulfilling a long felt need for uniform markers which can be recognized by both cyclists and motorists.

**Liability**

Though it is the responsibility of local governments to provide recreation, certain risks are inherent in furnishing this service to citizens. Injuries sustained by users of the trail may result in legal action. When the trail is developed on public property, liability usually rests with the public agency. In some states immunity may be granted to a recreational function which is open to the public free of charge; however, state statutes and court decisions are increasingly imposing at least some degree of liability on local government. Brooks states that when the trail crosses private property or is using an easement where third parties might be involved, the question of liability should be resolved before the trail is used.\(^{25}\) Purchasing liability insurance

should also be carefully evaluated. In some states, such a purchase is a waiver of existing immunity. In any case, public officials should be familiar with laws in their jurisdiction that can result in legal action taken against them.
"Hikers, Bikers Take Heart; Trails are Being Planned." "Chances for Biking/Hiking Trails to Smokies Excellent." Such were the headlines of newspaper articles back in 1967. Enthusiasm was sky-high for a hiking and biking trail from Knoxville to The Great Smoky Mountains National Park. The trail would consist, in part, of the abandoned Smoky Mountain Railroad right-of-way. Enthusiasm is still high; however, legal complications have prevented additional planning for the reuse of the 27 miles of abandoned right-of-way. The railroad is presently tied up in Chancery Court in receivership proceedings. Although the hike/bike trail is still not reality, the author feels the events leading to its proposal and the ensuing difficulties are noteworthy in themselves, and will provide an excellent example of the entanglement that can occur when attempting to utilize an abandoned railroad right-of-way for recreational purposes. This is one of the reasons the Smoky Mountain Railroad was chosen as the case study. The other reasons, as stated in Chapter I, are its close proximity to a large urban area, and the interest it has generated throughout the State.

Before examining the proposed hike/bike trail, a short discussion of the need and growth of interest in trail oriented recreation in Tennessee will be of value.
Like so many other states, Tennessee has failed to provide sufficient trails for its people. The State can boast of only 84 miles of trails, 72 of which are foot trails and 12 miles for horseback riding. There are no trails for bicycling. East Tennessee is more fortunate than the rest of the State due to its location. It is generally within an hour's drive of numerous hiking trails in the Great Smoky Mountains and the Cherokee National Forest. However, trails in and around its urbanized areas are virtually nonexistent.

In a study appraising the potentials for outdoor recreation within Knox County, conducted by the United States Department of Agriculture Soil Conservation Services in cooperation with various state agencies, 11 types of potential recreational developments were separately evaluated. In evaluating these recreational areas or enterprises, several factors were used. Among these were: population size and distribution, age and occupations, and income levels; proximity and access to local roads, tourist routes, cities and urban centers; and rural ownership and land use patterns.

Of the 11 recreational developments evaluated, only three were rated as having high potential in both need and in demand. It is significant that bicycling and horseback riding were both rated as having this high

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potential in the Knox County area. It was determined that bicycling, as an enterprise, could consist of a headquarters where bikes could be rented, sold, stored and repaired, and that bike trails could be included as part of the enterprise. This type of activity could be operated as a concession at a public recreation area. In any event, the report concluded that bicycling, as a recreational activity in demand, has not been developed in the Knox County area.

The Smoky Mountain Railroad is not the only abandoned railroad in Tennessee with plans of becoming a hike/bike trail. A group of bicycling Blount County women, having become interested in biking through European experiences and Scout activities, discovered three abandoned railroad beds in Blount County upon which they wish to establish hike/bike trails. Although the railroad lines were abandoned in the middle 30's, the rights-of-way are relatively intact, running largely through farm and woodland. There are some areas of encroachment where private buildings and county roads have been built upon the rights-of-way, but these obstacles are not considered insurmountable to the development of the trails. The one major difficulty which up to now has prevented the reuse of the rights-of-way is the question of acquisition. Apparently the rights-of-way have been sold to the adjoining property owners, or, in cases where easements were obtained for the right-of-way, the land reverted back to the owner when the railroad was abandoned. Convincing

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3 Ibid., p. 9.
the state and/or county to purchase right-of-way easements has proved to be the stumbling-block in developing the trails.

The State of Tennessee, it is felt, will soon have trail legislation of its own. A bill is now being readied to be presented to the 87th General Assembly. The bill, modeled closely after the National Trails System Act, will be a revised copy of a bill (HB 1795) which failed to be presented in the 86th General Assembly. Its preamble read as follows:

An act to create a Tennessee Scenic Trails System; to provide for the designation, administration, regulation, and acquisition of scenic trails and trail rights-of-way; and to authorize the zoning of adjacent property. 4

As stated, the new bill will be modeled after the National Trails System Act with the Tennessee Department of Conservation replacing the Secretary of the Interior in authority. The bill will be modified from HB 1796 to consider, in particular, rights-of-way of abandoned railroads. The Tennessee Department of Conservation is seeking the authority to evaluate all abandoned railroad rights-of-way for possible inclusion in the proposed Tennessee Scenic Trails System. In view of the fact that a major problem in acquiring abandoned rights-of-way stems from the difficulty in determining what legally constitutes abandonment (this will be brought out later in the chapter), it is recommended that the bill include definite criteria to ascertain the operational status of any railroad right-of-way. It is of interest to note that the revisions are a

direct result of the problems confronting officials seeking to establish the Smoky Mountain Hike/Bike Trail.

II. SMOKY MOUNTAIN HIKE/BIKE TRAIL

**Historic Background: Smoky Mountain Railroad**

The railroad, chartered by the State of Tennessee in 1907, ran between Knoxville and Sevierville, Tennessee, a distance of some 26 miles, and for a time extended an additional nine miles to McCooksville, just east of Pigeon Forge. Promoted and built by William J. Oliver, a Knoxville, Tennessee, industrialist, under the guise of becoming an interstate branch of a major railroad, exploitation of the Smoky Mountains abundant timber resources was the primary reason for the construction of the railroad. Experts realized that any railroad built into Sevier County was doomed to failure since the topography of the Smoky Mountains made it impractical to build a line across them.

During its life the railroad operated under a number of corporate names and was frequently leased by other railroads. The first company to operate the line was the Knoxville, Sevierville and Eastern Railroad. During World War I the line was extended nine miles to McCookville. The rail for this nine mile stretch was purchased on credit from Southern Railroad and was never completely paid for. As a result, suit was brought

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to recover the rail which was taken up in the late 1920's. Operated for personal gain, the KS&É became indebted and was sold to local businessmen in 1921. The new company was chartered as the Knoxville and Carolina Railroad. The new company fared no better than the first and after five years of operating at a loss, the decision was made to sell the railroad, either for junk or for operating purposes. In October of 1926 the railroad was sold and renamed the Smoky Mountain Railroad. The railroad was leased to the Tennessee and North Carolian Railroad which operated the line until October of 1938. In the meantime, however, the line was again sold to the Midwest Steel Corporation of Charleston, West Virginia.

The inability of the railroad to operate at a profit was now apparent. The remote dream of a connection with a larger railroad became completely infeasible with the creation of The Great Smoky Mountain National Park in the early 1930's. This action removed from private ownership large acreage of timber which was the chief source of freight revenue. Knowing this, Midwest Steel had purchased the road in 1937 intending to scrap it. However, a request to abandon the road in April of 1938 was rejected by the Interstate Commerce Commission on grounds that the railroad was a public necessity, it being the only rail connection between Sevier County and the outside world.

In 1942 the Smoky Mountain entered into a contract with TVA in connection with the construction of Douglas Dam. TVA agreed to build an

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7Ibid., p. 45. 8Ibid., p. 56. 9Ibid., p. 58.
access line from the dam site connecting with the Smoky Mountain line at Ewing. The Smoky Mountain was to haul all construction material to the dam site. This was the most profitable period in the history of the railroad. The owners, however, more interested in personal gain, did little if anything to improve the operating condition of the railroad. As construction of Douglas Dam neared completion, business again became slack. While the railroad continued to operate at a loss, its owners continued to use every opportunity to drain it financially. In March of 1947 application for abandonment was again filed with the ICC; however, legal complications prevented abandonment at that time. The railroad operated under a receiver appointed by the court for the next nine years.\(^{10}\)

For purposes of clarity:

\[\ldots\text{ a receiver will be appointed where it appears that such relief is necessary to preserve and protect the property and the rights of those interested there-in, and a court may, when necessary, intervene by the appointment of a receiver to protect the interests of creditors or stockholders.}\]

In 1957 the railroad was sold to a group of Sevierville businessmen. Their efforts proved no more successful than that of their predecessors, and on April 17, 1963, a joint meeting of the board of directors and stockholders voted to abandon the line. Receiving formal application to abandon the railroad line on December 18, 1963, the ICC issued

\(^{10}\text{Ibid., p. 88.}\)

\(^{11}\text{Francis J. Ludes and Harold J. Gilbert, Corpus Juris Secundum, A complete restatement of the entire American Law as developed by all reported cases, Vol. LXXIV (Brooklyn: The American Law Book Company, 1951), p. 912.}\)
a certificate and order on April 15, 1964, granting the Smoky Mountain Railroad permission to abandon its entire line.\textsuperscript{12} Mr. J. B. Waters, Sr., a stockholder in the railroad was appointed receiver and is presently serving in this capacity. The railroad was not abandoned at this time, however, and a year later an attempt was made to study the possibility of rehabilitating the old line. The Sevier County Area Redevelopment Committee requested that the Tennessee State Planning Commission lend technical assistance to determine whether or not to renovate the railroad. The committee pointed out that the right-of-way not held in fee simple would be lost if the railroad was abandoned. In their request they proposed the possibility of rebuilding the abandoned lines to Pigeon Forge and Douglas Dam in addition to operating an old steam locomotive as a tourist attraction.\textsuperscript{13}

The study was never initiated. In October of 1965, railroad consultants estimated the cost of rehabilitating the line to be from $3,000,000 to $5,000,000. This huge expenditure, in their opinion, was simply not feasible.\textsuperscript{14} Earlier, in September of 1968, J. B. Waters, as receiver of the railroad, stated that if rehabilitation was impractical the railroad properties would be sold to the highest bidders. The steel rails, which were determined to be too light to operate on, had already been sold to Midwest Steel for $95,000.\textsuperscript{15} Now, owing to the negative opinion of the railroad consultants, the assets of the railroad

\begin{footnotes}
\item[12]\textit{Ibid.}, p. 99.
\item[13]\textit{Ibid.}, pp. 101-104.
\item[14]\textit{Ibid.}, p. 104.
\item[15]\textit{Ibid.}, p. 105.
\end{footnotes}
were slowly sold. As of February 1967, all that remained were two or three box cars and the right-of-way itself.

The fate of what remains of the old railroad is unclear at this time. Although permission to abandon the railroad was obtained from the ICC, that agency, to this author's knowledge, has not as yet declared the railroad abandoned. J. B. Waters, Jr., the attorney for the receiver, has taken the position that there is no abandonment as long as the receiver is in the process of liquidating the company's assets. A proposal has been made to reuse the right-of-way for a hike/bike trail, but legal complications ensuing from receivership proceedings, still pending in Chancery Court, have halted any immediate plans to acquire the right-of-way. The right-of-way, its acquisition and reuse, is the subject matter of the following sections.

**Hike/Bike Trail Proposal**

The idea of using the old Smoky Mountain Railroad right-of-way as a hike/bike trail originated, it appears, with two Knoxvilleians in the summer of 1966. Their idea was for a trail just inside the Knoxville city limits, or possibly extending to the Sevier County line. About the same time, another Knoxvillian, Harvey Broome, president of the Wilderness Society, also had an idea to utilize the abandoned right-of-way as part of a trail from Knoxville to Clingman's Dome in The Great Smoky Mountains National Park. Mr. Broome's proposal called for a bike trail at least to Sevierville, and a hiking trail to Clingman's Dome (Figure 2). The bike trail would utilize the entire length of the abandoned railroad.
Figure 2. Smoky Mountain Hike/Bike Trail
LEGEND

Smoky Mountain Hike-Bike Trail
side trail (proposed) ————
extension (proposed) ————
hiking only (proposed) ————

SCALE OF MILES
1 inch equals \( \frac{1}{2} \) miles (approx.)

FIGURE 2
SMOKY MOUNTAIN HIKE-BIKE TRAIL
right-of-way. The hiking trail would break away from the rail right-of-way at Shook's Gap and would follow the high ground of the water divide to the national park where it would tie into the system of park trails. Mr. Broome took his scheme to George B. Hartzog, Jr., director of the National Park Service, who was very much impressed with the idea. The trails would be the first bicycle and major hiking trails in the State of Tennessee, and would link Knoxville and adjacent counties with the 600 mile system of trails in the national park. Other federal officials were also enthusiastic about the proposal. Luther S. Wensor, from BOR's Atlanta office, stated that "this is the type of project we are looking for." United States Secretary of the Interior, Stewart L. Udall, was said to be very much in favor of the project.

It should be noted here that although the trail proposal includes a hiking trail from Shook's Gap to Clingman's Dome, this paper will concern itself only with the portion of the hike/bike trail utilizing the abandoned railroad grade.

Problems and Approaches to Development

With the support of the National Park Service and the Department of the Interior, no major difficulties were anticipated. However,

16 Keith Neilson, Superintendent, The Great Smoky Mountains National Park, Correspondence files (D 30-H/B) located in office--made available to author. The author is indebted to Mr. Neilson for making available his extensive file on the proposed Smoky Mountain Hike/Bike Trail. This chapter contains much information obtained from correspondence on the subject matter to which, at times, the author added his own interpretation.

19 Ibid.
getting the proposal off paper and on to the ground proved to be more
difficult than anyone had imagined. Questions were raised as to who would
own, maintain, operate and administer the trail after it was developed.
These functions, it was brought out, must reside in a public body for
the trail to be eligible for federal assistance. It was thought that
the role of administrator would most likely fall to counties through
which the trail would pass; however, the State Conservation Commission
was also mentioned as the managing agency.

The question of who would purchase and develop the right-of-way
was also raised. In this case, it was generally agreed upon by all
involved that the Conservation Commission should be the sponsoring agency
as the trail could be included in the State's overall recreation plan.
The State could acquire the right-of-way and build the trail. Then it
could obtain 50 percent of the project's cost from the Federal Land
and Water Conservation Fund. Furthermore, it was thought that the
State could probably get an Appalachia Program Grant for an additional
10 - 30 percent of the cost. Although Land and Water Conservation fund-
ing is virtually assured, Appalachia funding is not. Most of Appalachia
programs are merely supplemental to existing federal programs, such as
the Land and Water Conservation Fund Act and the Open Space Program of
the Department of Housing and Urban Development. Of the money allocated
to Tennessee under the Appalachia Supplemental Funds Program, a maximum
of 5 percent is assigned to conservation type projects. Tennessee
receives approximately 2.5 million annually in supplemental funds of
which a maximum of $125,000 (5 percent) is earmarked for conservation
type projects. This $125,000 is distributed to the various projects on a basis of priority. Unless the hike/bike project has high priority, significant assistance from the Appalachia Program is not likely. Priority scheduling is usually dependent upon the type of project, whether or not the project is located in designated growth areas, and the social benefits which will accrue from the project.

In a letter to George W. Fry, Superintendent of the Great Smoky Mountains, a representative of the U. S. Department of the Interior expressed the opinion that a workable solution would be for the State Conservation Commission to be the sponsoring agency. It was also suggested that the Commission could enter into some sort of cooperative agreement with the appropriate counties for such management responsibilities as they feel should be assumed at the county level.

These questions were trivial, however, when compared to the legal issues which had to be resolved before state acquisition of the right-of-way could proceed. As previously stated, the assets of the railroad, which included the right-of-way, were tied up in receivership proceedings in the Sevier County Chancery Court. The situation in February of 1967 was as follows. Practically all of the right-of-way in Sevier County had been purchased in fee; consequently, there was no question about reversion when the railroad was abandoned. However, most of the right-of-way in Knox County was acquired through condemnation proceedings in

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which the railroad acquired only an easement. So far no landowner had raised the question of reversion of the right-of-way by reason of abandon-
donment, but creditors were agitating for a termination of the receivership and a distribution of funds. This would compel the railroad to sell the right-of-way it held in fee with the remainder reverting to the abutting landowners. Therefore, immediate action was needed to obtain time to study the right-of-way and arrange for its purchase. This study would include an investigation to determine exactly what portion of the right-of-way was owned in fee and what was merely an easement; a deter-
mination of whether the right-of-way would be acquired in fee or by ease-
ment; and a determination of the value of the right-of-way.

It was hoped that the State would file an intervening petition to gain the additional time needed to complete the investigation. It would first be necessary, however, to obtain an opinion from the State Attorney General as to the authority of the State to file an interven-
ing petition in a railroad receivership case.

A round table meeting was held in Gatlinburg, Tennessee, on April 21, 1967, to resolve these questions. Among those invited were the judges from the affected counties, county park board officials, Tennessee Conservation Commission representatives, The Great Smoky Mountains National Park representatives, and representatives from the Bureau of Outdoor Recreation. In general the meeting went very well. It was brought out that the State had the authority to acquire lands for such a project by virtue of Chapter 181 of Public Acts of 1965. It was also disclosed that the State had the authority and would intervene in the railroad.
receivership case to ask for an appraisal of the right-of-way. The attorney for the receiver of the railroad proposed that the court appoint an appraisal board of three men to evaluate the right-of-way. The attorney stated that he thought its value was approximately $10,000 per mile.

A month later the State's position was altered considerably. The State Attorney General had raised two questions concerning the request of the Department of Conservation for the State to file an intervening petition. One question dealt with the possibility that portions of the right-of-way acquired through condemnation may have already reverted to the original land owners. Also, some of the railroad's holdings were found to be easements purchased for railroad purposes only. This raised the question of the railroad's authority to sell these particular sections of right-of-way. Since the entire right-of-way would be needed, reversions of portions of it would cause serious complications. The second question concerned the basis for the appointment of the three-man appraisal board which the attorney for the receiver had suggested.

The Conservation Department informed the Attorney General that these questions would be decided by the court following the filing of the intervening petition. Nevertheless, the Attorney General's office refused to intervene in the case until these questions were resolved.

The situation was further complicated when a Sevier County landowner filed an intervening petition seeking title to a section of the right-of-way owned by the railroad in fee simple. He claimed that the deed to the property gave the railroad only the right to have and use the right-of-way for the operation of a railroad, and now that the tracks
had been removed, it was apparent that the railroad company had abandoned any intention to operate a railroad on the property. Upon investigation, it was found that where the railroad acquired its right-of-way through purchase, it took a deed purporting to convey an estate in fee simple; however, these deeds contained a habendum clause reading: "To have and to hold, the above described premises to the said grantee, its successors and assigns for railroad purposes, in fee simple, forever." There was a good possibility that the phrase "for railroad purposes" created a terminable fee. If so, then the railroad had no real title to any of its real estate upon abandonment and therefore would have nothing to sell.

Thus, the pressing questions at this point became (1) did the railroad own the approximately 75 percent of the right-of-way that had been acquired in fee simple, and (2) where the railroad held only an easement, was the easement lost when the rails were taken up; in other words, did the removal of the rails constitute an abandonment of those sections of right-of-way?

The Commissioner of Conservation was of the opinion that the easements were lost when the rails were taken up, which would make it necessary for the State to acquire the railroad's portion of the right-of-way in a piecemeal fashion. This was deemed impractical. Consequently, even with a favorable ruling from the court that the railroad

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did own the 75 percent of the line acquired in fee, this 75 percent was not continuous, but was broken by sections on which the railroad held only an easement, and as such, would not by itself be useful as a hike/bike trail.

It seemed as if the entire situation depended upon whether or not the railroad had actually been abandoned. If abandoned, the railroad no longer had any claim on portions of the right-of-way acquired through condemnation, and in fact, may have lost title to those portions owned in fee, depending upon the court's ruling on the suit filed by the Sevier County landowner.

It was felt that before the State could further be interested in the matter, the Chancery Court, besides ruling on the Sevier County landowner's petition, should also rule on the questions of (1) whether removal of the rails constituted abandonment and therefore reversion of those sections on which the railroad held only an easement, and (2) whether the court could legally authorize the sale of the condemned portions of the right-of-way. In order for the court to make such a ruling, it would be necessary for someone holding reversionary interest in an easement parcel to file an intervening petition as did the Sevier County landowner. It was realized that if the person filing such a petition was successful, it could be the deathblow to the entire project. However, there was little chance of the State's continued interest unless all the above questions were resolved.

During his research the author came upon the legal description of what constitutes abandonment. Whether a right-of-way has been abandoned,
accordina to Corpus Juris Secundum, "is largely a question of intent, and it is generally held that in order to constitute an abandonment there must be an intent to relinquish, together with external acts by which the intent is carried into effect."\(^2\) A mere nonuse, no matter how long it is continued, does not in itself establish abandonment. However, where the nonuse is accompanied by definite acts by the railroad company clearly showing an intention to abandon, an abandonment may be inferred. Specific acts on part of the company have been held, of themselves, to constitute abandonment, as for example, the tearing up and removal of tracks, and the attempt to convey land to others to be dedicated to other purposes.\(^2\)

For the next three years the Smoky Mountain Hike/Bike Trail proposal was a relatively dead issue. No decision had been reached as to who owned the right-of-way, the railroad or the 114 original owners, and until a decision was made the project would remain dormant. Although some additional intervening petitions had been filed, no action had been taken on them by Chancery Court. The statement "once in Chancery, always in Chancery" appeared to have much validity. Today, the status of the court case is virtually unchanged from what it was three years ago.

Rather than wait for a court ruling, it appears that an alternative method must be found to acquire the railroad right-of-way if the hike/bike trail is to become reality. John O. Morrell, Management Assistant for the Great Smoky Mountains National Park, stated, that in his opinion:

The only way the State could safely acquire this railroad right-of-way for a hike/bike trail would be to agree with

\(^{23}\text{Ludes and Gilbert, op. cit., p. 541.} \quad ^{24}\text{Ibid., p. 543.}\)
the creditors and stockholders as to price (or failing that, to put in a formal bid), the money to be retained in Chancery Court until the State could complete a blanket condemnation suit in Circuit Court in order to clear any adverse claims to title. Should any such claimants be successful, the amount of their claim to be paid from the fund in escrow in Chancery Court.  

This indeed may be one approach to acquiring the right-of-way. As mentioned earlier, the Commissioner of Conservation has the authority (Chapter 181, Public Acts of 1965) to acquire lands by purchase, gift or lease for the development and operation of outdoor recreation areas and facilities of the State. The State of Wisconsin utilized similar legislative authority to purchase three abandoned railroad grades for State trails. The Wisconsin Conservation Act gives the State Conservation Commission the authority to acquire by purchase, condemnation, lease or agreement, lands or waters suitable for State park purposes. Tennessee may encounter legal difficulties in initiating a blanket condemnation suit since nowhere in Public Chapter 181 is there mention of condemnation as a means of acquiring land.

An uncontestable approach to acquiring the right-of-way would be for the State to pass new legislation giving the State Conservation Commission the authority to acquire railroad grades for recreational purposes anytime such railroad grades are determined to be abandoned as defined by the new legislation. As discussed earlier in the chapter, such legislation is on the way. A bill creating a Tennessee Scenic Memorandum, John O. Morrell to Superintendent, The Smoky Mountains National Park, June 12, 1970, The Great Smoky Mountains National Park, Correspondence files (D 30-H/B).
Trails System will be presented to the 87th General Assembly. If passed, the Act will make acquisition of abandoned railroad grades for state trails a relatively simple procedure.

In summation, the author has an optimistic feeling that development of the proposed hike/bike trail will occur, and not in the too distant future. The key factor will undoubtedly be the passage of Tennessee trails legislation.

**The Trail**

The hike/bike trail will follow the abandoned railroad grade from South Knoxville to Sevierville, with a route to be selected from Sevierville to Gatlinburg. The length of the abandoned grade is 27.4 miles. When extended to Gatlinburg, the total length of the pathway will be 40.8 miles.

In a detailed reconnaissance of the entire right-of-way, the Smoky Mountain Hiking Club found that with a reasonable amount of corrective work the right-of-way would make an excellent hiking and biking trail. The route of the trail is rich both in scenic and historic attractions. Views of open farmland with the Smokys serving as a backdrop are plentiful. The bottom lands of the Boyds Creek and French Broad River valleys were the sites of Sevier County's only plantations. The earliest settlements were in these valleys which also became the scene for some Indian

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battles. Figure 3 shows a typical elevation of the proposed trail.

It is the author's opinion that, other than the basic trail facilities discussed in Chapter IV, a trail of such quality needs little else to make it more attractive to the user. To preserve this quality, it is recommended that the basic trail facilities be located in the small communities through which the trail passes. These communities are spaced relatively evenly along the trail and would be ideal rest and concession stations. The facilities provided in these communities, besides being more elaborate than what could be provided in undeveloped areas along the trail, would also suffer little from vandalism compared to their counterparts in more rural and isolated areas. In addition, it is very conceivable that these communities could benefit economically from the trail traffic itself. Besides providing accommodations for weary travelers, bicycle and tourist shops are also definite possibilities. The old locomotive, stranded at Shook's Gap before the railroad was abandoned, could be rehabilitated and serve as a unique tourist attraction within one of the communities.

To add versatility to the trail, the author recommends the provision of some additional facilities along the trail. Picnic facilities should be provided at strategic locations. In addition to picnic areas along the more isolated parts of the trail, it is recommended that facilities also be provided at selected access points for those who do not wish

to utilize the trail in order to avail themselves of its opportunities. The 100 foot width of the right-of-way would provide ample room for such facilities. Undoubtedly, some cyclists and hikers will wish to camp overnight on the trail. If permitted, it may be wise to set aside certain areas for this purpose. For those who would rather sleep indoors, consideration should be given to the provision of hostel facilities which would be an economical alternative to motels. It is, however, necessary to be a member of the American Youth Hostels to take advantage of their facilities. All hostels provide, for a small daily fee ($1 or $2), a bunk, kitchen and a common room where hostellers can get together until lights out. Those planning on using a hostel should carry a sheet, sleeping sack, eating utensils and towels.28

The possibility of side trails should also be investigated. Taking advantage of little used county roads, they could take bicyclists to various points of interest. There is one point along the trail where a side trail would give easy access to the French Broad River (Figure 2, page 64). It is recommended that this particular area be studied for possible development of picnic and camping facilities along the banks of the historic river.

As mentioned earlier, during the construction of Douglas Dam, a spur line of the Smoky Mountain Railroad was extended across the Little Pigeon River to the site of the dam. The dismantled spur line would make an ideal side trail. Following the path of the old railroad grade,

the trail would take bicyclist and hiker along the banks of the French Broad River to the dam itself where picnic and camping areas are already available. The side trail would be approximately 5.5 miles in length (Figure 2, page 63).

For surfacing material, the author recommends the use of crushed limestone screenings. The material is readily available in this area and, from the Wisconsin experience, provides a smooth surface for hikers and bikers alike. Besides being much more expensive, an asphalt surface would be hot and hard for hikers.

Since the trail, it is felt, will be operated as part of a state-wide trails system, responsibility for managing and maintaining the trail will fall to the State. However, the State can and should enter into cooperative agreements with the counties for such maintenance and management responsibilities which can best be performed at the county level.

Interested groups could also help develop and maintain the trail. Youth groups could have clean up projects, Audubon groups could set out plants to attract birds, and naturalists could set out simple identification markers. The following list of some of the groups supporting the hike/bike trail gives one some idea of the role they could play in promoting and maintaining the trail: Tennessee Citizens for Wilderness Planning, Smoky Mountain Hiking Club, Wilderness Society, Great Smoky Mountain Conservation Association, and the Boy Scouts of America.

An aspect of development which will give national accreditation and prestige to the trail will be its trail identification markers.
Under the **National Trails System Act** (P.L. 90-543), it appears that the Smoky Mountain Hike/Bike Trail will qualify as a side trail to the Appalachian Trail as provided in Section 6 of the Act. Although the trail will not be eligible for funds appropriated for the Appalachian Trail, it would receive the distinction of being designated and marked as a component of the national scenic trail. The uniform markers, provided by the federal government, would have an appropriate and distinctive symbol of the Appalachian Trail.

In conclusion, it would seem that the proposed trail, as a recreation facility, is completely free of shortcomings. However, this is not the case. There is one inherent deficiency in that the location of the trail's beginning in South Knoxville will make it necessary for many Knoxvillians to drive to the facility. In addition, not everyone will support the trail, and there will occur problems in its development and operation. Using the Wisconsin experience, one can anticipate some of these problems. Difficulties will likely be encountered with some landowners abutting on the trail. They may press for a right-of-way, cattle pass or similar structure across the trail to connect their bisected lands. Trespassing by trail users on the bordering farmlands will be another minor problem, and vandalism is bound to occur to some of the trail's facilities. Everything considered, however, the author feels that Tennessee will be more than pleased with the use of its first railroad trail. The author shares the opinion of others who feel that the development of such a trail within its own strip park will be wise planning.
Not only will it be a different and unique addition to the State's recreation program, it could with attending publicity, become a significant tourist attraction for East Tennessee.
Despite the achievements of this country's multifaceted recreation system, a large and formidable task lies ahead if adequate recreation resources are to be provided for its growing population. This thesis has attempted to put forth the basic arguments in discussing abandoned railroad rights-of-way as potential recreation resources. In doing so, it has become apparent to this author that these abandoned strips of land are destined to play an important role in alleviating the critical shortage of recreational opportunities in the nation's metropolitan recreation regions. The linear park character of railroad rights-of-way lends itself ideally to certain types of recreational pursuits (hiking, biking, horseback riding) which, up to now, have been virtually non-existent. In addition, unlike conventional parks of similar acreage, linear parks utilizing abandoned railroad rights-of-way would be highly accessible to a much larger portion of an area's population.

The task of providing for the reuse of these abandoned rights-of-way will, in many cases, meet with difficulty. The proposal to convert the abandoned Smoky Mountain Railroad right-of-way to a hike/bike trail provided an excellent example of the difficulties which can be encountered. The railroad is ideally located, connecting a large urban population with the Great Smoky Mountains, the most popular national park in the country. Yet, despite these enviable advantages, problems of multiple
ownership, land acquisition, and operational problems arose which completely stymied the acquisition of the right-of-way.

To effectively utilize the recreation potential of unused railroad rights-of-way will require the cooperative and integrated efforts of both the public and private interests involved. The major responsibility, however, will fall to the state. All states, it is felt, should incorporate into their Statewide Outdoor Recreation Plans programs to develop a comprehensive statewide trails system with the emphasis on trail development to help meet urban recreation needs. In most states this will necessitate the passage of state enabling legislation. To be effective, this legislation must give the state the authority to acquire and develop any railroad right-of-way, once such right-of-way is determined to be abandoned, for inclusion in its state trails system. (The author has suggested that definite criteria to determine whether or not a right-of-way has been abandoned be included in all state trail legislation.)

The state agency administering such legislation should also assume the responsibility of compiling, and periodically updating, an index of all abandoned railroad rights-of-way in the state. This index should include the name of the railroad, location of the abandoned right-of-way, year abandoned, and condition and mileage of the right-of-way. From such an index, a schedule of priorities could be established which would best implement the state trail plan while at the same time coordinating it with trail development at the local level.
Tennessee has taken the initial step toward acquiring state trail legislation. How effective the State is in utilizing the impending legislation to better State and local recreation programs is yet to be seen. Its successful application will depend upon the coordinated efforts of the State, its local governments, and its citizens.
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APPENDIX
Public Law 90-543
90th Congress, S. 827
October 2, 1968

AN ACT

To establish a national trails system, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SHORT TITLE

SECTION 1. This Act may be cited as the "National Trails System Act."

STATEMENT OF POLICY

SEC.2. (a) In order to provide for the ever-increasing outdoor recreation needs of an expanding population and in order to promote public access to, travel within, and enjoyment and appreciation of the open-air, outdoor areas of the Nation, trails should be established (i) primarily, near the urban areas of the Nation, and (ii) secondarily, within established scenic areas more remotely located.

(b) the purpose of this Act is to provide the means for attaining these objectives by instituting a national system of recreation and scenic trails, by designating the Appalachian Trail and the Pacific Crest Trail as the initial components of that system, and by prescribing the methods by which, and standards according to which, additional components may be added to the system.

NATIONAL TRAILS SYSTEM:

SEC.3. The national system of trails shall be composed of--

(a) National recreation trails, established as provided in section 4 of this Act, which will provide a variety of outdoor recreation uses in or reasonably accessible to urban areas.

(b) National scenic trails, established as provided in section 5 of this Act, which will be extended trails so located as to provide for maximum outdoor recreation potential and for the conservation and enjoyment of the nationally significant scenic, historic, natural, or cultural qualities of the areas through which such trails may pass.
(c) Connecting or side trails, established as provided in section 6 of this Act, which will provide additional points of public access to national recreation or national scenic trails or which will provide connections between such trails.

The Secretary of the Interior and the Secretary of Agriculture, in consultation with appropriate governmental agencies and public and private organizations, shall establish a uniform marker for the national trails system.

NATIONAL RECREATION TRAILS

SEC. 4. (a) The Secretary of the Interior, or the Secretary of Agriculture where lands administered by him are involved, may establish and designate national recreation trails, with the consent of the Federal agency, State, or political subdivision having jurisdiction over the lands involved, upon finding that—

(i) such trails are reasonably accessible to urban areas, and, or

(ii) such trails meet the criteria established in this Act and such supplementary criteria as he may prescribe.

(b) As provided in this section, trails within park, forest, and other recreation areas administered by the Secretary of the Interior or the Secretary of Agriculture or in other federally administered areas may be established and designated as "National Recreation Trails" by the appropriate Secretary and, when no Federal land acquisition is involved—

(i) trails in or reasonably accessible to urban areas may be designated as "National Recreation Trails" by the Secretary of the Interior with the consent of the States, their political subdivisions, or other appropriate administering agencies, and—

(ii) trails within park, forest, and other recreation areas owned or administered by States may be designated as "National Recreation Trails" by the Secretary of the Interior with the consent of the State.

NATIONAL SCENIC TRAILS

SEC. 5. (a) National scenic trails shall be authorized and designated only by Act of Congress.
There are hereby established as the initial National Scenic Trails:

(1) The Appalachian Trail, a trail of approximately two thousand miles extending generally along the Appalachian Mountains from Mount Katahdin, Maine, to Springer Mountain, Georgia. Insofar as practicable, the right-of-way for such trail shall comprise the trail depicted on the maps identified as "Nationwide System of Trails, Proposed Appalachian Trail, NST-AT-101-May 1967", which shall be on file and available for public inspection in the office of the Director of the National Park Service. Where practicable, such right-of-way shall include lands protected for it under agreements in effect as of the date of enactment of this Act, to which Federal agencies and States were parties. The Appalachian Trail shall be administered primarily as a footpath by the Secretary of the Interior, in consultation with the Secretary of Agriculture.

(2) The Pacific Crest Trail, a trail of approximately two thousand three hundred fifty miles, extending from the Mexican-California border northward generally along the mountain ranges of the west coast States to the Canadian-Washington border near Lake Ross, following the route as generally depicted on the map, identified as "Nationwide System of Trails, Proposed Pacific Crest Trail, NST-PC-103-May 1967" which shall be on file and available for public inspection in the office of the Chief of the Forest Service. The Pacific Crest Trail shall be administered by the Secretary of Agriculture, in consultation with the Secretary of the Interior.

(3) The Secretary of the Interior shall establish an advisory council for the Appalachian National Scenic Trail, and the Secretary of Agriculture shall establish an advisory council for the Pacific Crest National Scenic Trail. The appropriate Secretary shall consult with such council from time to time with respect to matters relating to the trail, including the selection of rights-of-way, standards of the erection and maintenance of markers along the trail, and the administration of the trail. The members of each advisory council, which shall not exceed thirty-five in number, shall serve without compensation or expense to the Federal Government for a term of five years and shall be appointed by the appropriate Secretary as follows:

(i) A member appointed to represent each Federal department or independent agency administering lands through which the trail route
passes and each appointee shall be the person designated by the head of such department or agency;

(ii) A member appointed to represent each State through which the trail passes and such appointments shall be made from recommendations of the Governors of such States;

(iii) One or more members appointed to represent private organizations, including landowners and land users, that, in the opinion of the Secretary, have an established and recognized interest in the trail and such appointments shall be made from recommendations of the heads of such organizations: Provided, That the Appalachian Trails Conference shall be represented by a sufficient number of persons to represent the various sections of the country through which the Appalachian Trail passes; and

(iv) The Secretary shall designate one member to be chairman and shall fill vacancies in the same manner as the original appointment.

(b) The Secretary of the Interior, and the Secretary of Agriculture where lands administered by him are involved, shall make such additional studies as are herein or may hereafter be authorized by the Congress for the purpose of determining the feasibility and desirability of designating other trails as national scenic trails. Such studies shall be made in consultation with the heads of other Federal agencies administering lands through which such additional proposed trails would pass and in cooperation with interested interstate, State, and local governmental agencies, public and private organizations, and landowners and land users concerned. When completed, such studies shall be the basis of appropriate proposals for additional national scenic trails which shall be submitted from time to time to the President and to the Congress. Such proposals shall be accompanied by a report, which shall be printed as a House or Senate document, showing among other things—

(1) the proposed route of such trail (including maps and illustrations);

(2) the areas adjacent to such trails, to be utilized for scenic, historic, natural, cultural, or developmental, purposes;

(3) the characteristics which, in the judgment of the appropriate Secretary, make the proposed trail worthy of designation as a national scenic trail;
(4) the current status of land ownership and current and potential use along the designated route;
(5) the estimated cost of acquisition of lands or interest in lands, if any;
(6) the plans for developing and maintaining the trail and the cost thereof;
(7) the proposed Federal administering agency (which, in the case of a national scenic trail wholly or substantially within a national forest, shall be the Department of Agriculture);
(8) the extent to which a State or its political subdivisions and public and private organizations might reasonably be expected to participate in acquiring the necessary lands and in the administration thereof; and
(9) the relative uses of the lands involved including the number of anticipated visitor days for the entire length of, as well as for segments of, such trail; the number of months which such trail or segments thereof will be open for recreation purposes; the economic and social benefits which might accrue from alternate land uses; and the estimated man-years of civilian employment and expenditures expected for the purposes of maintenance, supervision, and regulation of such trail.

(c) The following routes shall be studied in accordance with the objectives outlined in subsection (b) of this section:

(1) Continental Divide Trail, a three thousand one hundred mile trail extending from near the Mexican border in southwestern New Mexico northward generally along the Continental Divide to the Canadian border in Glacier National Park.

(2) Potomac Heritage Trail, an eight hundred twenty-five mile trail extending generally from the mouth of the Potomac River to its sources in Pennsylvania and West Virginia, including the one hundred and seventy mile Chesapeake and Ohio Canal towpath.

(3) Old Cattle Trails of the Southwest from the vicinity of San Antonio, Texas, approximately eight hundred miles through Oklahoma via Baxter Springs and Chetopa, Kansas, to Fort Scott, Kansas, including the Chisholm Trail, from the vicinity of San Antonio, or Cuero, Texas, approximately eight hundred miles north through Oklahoma to Abilene, Kansas.
(4) Lewis and Clark Trail, from Wood River, Illinois, to the Pacific Ocean in Oregon, following both the outbound and inbound routes of the Lewis and Clark Expedition.

(5) Natchez Trace, from Nashville, Tennessee, approximately six hundred miles to Natchez, Mississippi.

(6) North Country Trail, from the Appalachian Trail in Vermont, approximately three thousand two hundred miles through the States of New York, Pennsylvania, Ohio, Michigan, Wisconsin, and Minnesota, to the Lewis and Clark Trail in North Dakota.

(7) Kittanning Trail from Shirleysburg in Huntingdon County to Kittanning, Armstrong County, Pennsylvania.

(8) Oregon Trail, from Independence, Missouri, approximately two thousand miles to near Fort Vancouver, Washington.

(9) Santa Fe Trail, from Independence, Missouri, approximately eight hundred miles to Santa Fe, New Mexico.

(10) Long Trail, extending two hundred and fifty-five miles from the Massachusetts border northward through Vermont to the Canadian border.

(11) Mormon Trail, extending from Nauvoo, Illinois, to Salt Lake City, Utah, through the States of Iowa, Nebraska, and Wyoming.

(12) Gold Rush Trails in Alaska.

(13) Mormon Battalion Trail, extending two thousand miles from Mount Pisgah, Iowa, through Kansas, Colorado, New Mexico, and Arizona to Los Angeles, California.

(14) El Camino Real from St. Augustine to San Mateo, Florida, approximately twenty miles along the southern boundary of the St. Johns River from Fort Caroline National Memorial to the St. Augustine National Park Monument.

CONNECTING AND SIDE TRAILS

SEC. 6. Connecting or side trails within park, forest, and other recreation areas administered by the Secretary of the Interior or Secretary of Agriculture may be established, designated, and marked as components of a national recreation or national scenic trail. When no Federal land acquisition is involved, connecting or side trails may be located across lands administered by interstate, State, or local governmental
agencies with their consent: Provided, That such trails provide additional points of public access to national recreation or scenic trails.

ADMINISTRATION AND DEVELOPMENT

SEC. 7. (a) Pursuant to section 5(a), the appropriate Secretary shall select the rights-of-way for National Scenic Trails and shall publish notice thereof in the Federal Register, together with appropriate maps and descriptions: Provided, That in selecting the rights-of-way full consideration shall be given to minimizing the adverse effects upon the adjacent landowner or user and his operation. Development and management of each segment of the National Trails System shall be designed to harmonize with and complement any established multiple-use plans for that specific area in order to insure continued maximum benefits from the land. The location and width of such rights-of-way across Federal lands under the jurisdiction of another Federal agency shall be by agreement between the head of that agency and the appropriate Secretary. In selecting rights-of-way for trail purposes, the Secretary shall obtain the advice and assistance of the States, local governments, private organizations, and landowners and land users concerned.

(b) After publication of notice in the Federal Register, together with appropriate maps and descriptions, the Secretary charged with the administration of a national scenic trail may relocate segments of a national scenic trail right-of-way, with the concurrence of the head of the Federal agency having jurisdiction over the lands involved, upon a determination that:

(i) such a relocation is necessary to preserve the purposes for which the trail was established, or
(ii) the relocation is necessary to promote a sound land management program in accordance with established multiple-use principles: Provided, That a substantial relocation of the rights-of-way for such trail shall be by Act of Congress.

(c) National scenic trails may contain campsites, shelters, and related-public-use facilities. Other uses along the trail, which will not substantially interfere with the nature and purposes of the trail, may be permitted by the Secretary charged with the administration of the trail. Reasonable efforts shall be made to provide sufficient access opportunities to such trails and, to the extent
practicable, efforts shall be made to avoid activities incompatible with the purposes for which such trails were established. The use of motorized vehicles by the general public along any national scenic trail shall be prohibited and nothing in this Act shall be construed as authorizing the use of motorized vehicles within the natural and historical areas of the national park system, the national wildlife refuge system, the national wilderness preservation system where they are presently prohibited or on other Federal lands where trails are designated as being closed to such use by the appropriate Secretary: Provided, That the Secretary charged with the administration of such trail shall establish regulations which shall authorize the use of motorized vehicles when, in his judgment, such vehicles are necessary to meet emergencies or to enable adjacent landowners or land users to have reasonable access to their lands or timber rights: Provided further, That private lands included in the national recreation or scenic trails by cooperative agreement of a landowner shall not preclude such owner from using motorized vehicles on or across such trails or adjacent lands from time to time in accordance with regulations to be established by the appropriate Secretary. The Secretary of the Interior and the Secretary of Agriculture, in consultation with appropriate governmental agencies and public and private organizations, shall establish a uniform marker, including thereon an appropriate and distinctive symbol for each national recreation and scenic trail. Where the trails cross lands administered by Federal agencies such markers shall be erected at appropriate points along the trails and maintained by the Federal agency administering the trail in accordance with standards established by the appropriate Secretary and where the trails cross non-Federal lands, in accordance with written cooperative agreements, the appropriate Secretary shall provide such uniform markers to cooperating agencies and shall require such agencies to erect and maintain them in accordance with the standards established.

(d) Within the exterior boundaries of areas under their administration that are included in the right-of-of lands.

way selected for a national recreation or scenic trail, the heads of Federal agencies may use lands for trail purposes and may acquire lands or interests in lands by written cooperative agreement,
donation, purchase with donated or appropriated funds or exchange: Provided, That not more than twenty-five acres in any one mile may be acquired without the consent of the owner.

(e) Where the lands included in a national scenic trail right-of-way are outside of the exterior boundaries of federally administered areas, the Secretary charged with the administration of such trail shall encourage the States or local governments involved (1) to enter into written cooperative agreements with landowners, private organizations, and individuals to provide the necessary trail right-of-way, or (2) to acquire such lands or interests therein to be utilized as segments of the national scenic trail: Provided, That if the State or local governments fail to enter into such written cooperative agreements or to acquire such lands or interests therein within two years after notice of the selection of the right-of-way is published, the appropriate Secretary may (1) enter into such agreements with landowners, States, local governments, private organizations, and individuals for the use of lands for trails purposes, or (2) acquire private lands or interests therein by donation, purchase with donated or appropriated funds or exchange in accordance with the provisions of subsection (g) of this section. The lands involved in such right-of-way should be acquired in fee, if other methods of public control are not sufficient to assure their use for the purpose for which they are acquired: Provided, That if the Secretary charged with the administration of such trail permanently relocates the right-of-way and disposes of all title or interest in the land, the original owner, or his heirs or assigns, shall be offered, by notice given at the former owner's last known address, the right of first refusal at the fair market price.

(f) The Secretary of the Interior, in the exercise of his exchange authority, may accept title to any non-Federal property within the right-of-way and in exchange therefor he may convey to the grantor of such property any federally owned property under his jurisdiction which is located in the State wherein such property is located and which he classifies as suitable for exchange or other disposal. The values of the properties so exchanged either shall be approximately equal, or if they are not approximately equal the values shall be equalized by the payment of cash to the grantor or to the Secretary as the circumstances require. The Secretary of
Agriculture, in the exercise of his exchange authority, may utilize authorities and procedures available to him in connection with exchanges of national forest lands.

(g) The appropriate Secretary may utilize condemnation proceedings without the consent of the owner to acquire private lands or interests therein pursuant to this section only in cases where, in his judgment, all reasonable efforts to acquire such lands or interests therein by negotiation have failed, and in such cases he shall acquire only such title as, in his judgment, is reasonably necessary to provide passage across such lands: Provided, That condemnation proceedings may not be utilized to acquire fee title or lesser interests to more than twenty-five acres in any one mile and when used such authority shall be limited to the most direct or practicable connecting trail right-of-way: Provided further, That condemnation is prohibited with respect to all acquisition of lands or interest in lands for the purposes of the Pacific Crest Trail. Money appropriated for Federal purposes from the land and water conservation fund shall, without prejudice to appropriations from other sources, be available to Federal departments for the acquisition of lands or interests in lands for the purposes of this Act.

(h) The Secretary charged with the administration of a national recreation or scenic trail shall provide for the development and maintenance of such trails within federally administered areas and shall cooperate with and encourage the States to operate, develop, and maintain portions of such trails which are located outside the boundaries of federally administered areas. When deemed to be in the public interest, such Secretary may enter written cooperative agreements with the States or their political subdivisions, landowners, private organizations, or individuals to operate, develop, and maintain any portion of a national scenic trail either within or outside a federally administered area.

Whenever the Secretary of the Interior makes any conveyance of land under any of the public land laws, he may reserve a right-of-way for trails to the extent he deems necessary to carry out the purposes of this Act.

(i) The appropriate Secretary, with the concurrence of the heads of any other Federal agencies administering lands through which a national recreation or scenic trail passes, and after consultation with the States, local governments, and organizations concerned, may issue regulations, which may be revised from time to time, governing the use,
protection, management, development, and administration of trails of the national trails system. In order to maintain good conduct on and along the trails located within federally administered areas and to provide for the proper government and protection of such trails, the Secretary of the Interior and the Secretary of Agriculture shall prescribe and publish such uniform regulations as they deem necessary and any person who violates such regulations shall be guilty of a misdemeanor, and may be punished by a fine of not more than $500, or by imprisonment not exceeding six months, or by both such fine and imprisonment.

STATE AND METROPOLITAN AREA TRAILS

SEC. 8. (a) The Secretary of the Interior is directed to encourage States to consider, in their comprehensive statewide outdoor recreation plans and proposals for financial assistance for State and local projects submitted pursuant to the Land and Water Conservation Fund Act, needs and opportunities for establishing park, forest, and other recreation trails on lands owned or administered by States, and recreation trails on lands in or near urban areas. He is further directed, in accordance with the authority contained in the Act of May 28, 1963 (77 Stat. 49), to encourage States, political subdivisions, and private interests, including nonprofit organizations, to establish such trails.

(b) The Secretary of Housing and Urban Development is directed, in administering the program of comprehensive urban planning and assistance under section 701 of the Housing Act of 1954, to encourage the planning of recreation trails in connection with the recreation and transportation planning for metropolitan and other urban areas. He is further directed, in administering the urban open-space program under title VII of the Housing Act of 1961, to encourage such recreation trails.

(c) The Secretary of Agriculture is directed, in accordance with authority vested in him, to encourage States and local agencies and private interests to establish such trails.

(d) Such trails may be designated and suitably marked as parts of the nationwide system of trails by the States, their political subdivisions, or other appropriate administering agencies with the approval of the Secretary of the Interior.
RIGHTS-OF-WAY AND OTHER PROPERTIES

SEC. 9. (a) The Secretary of the Interior or the Secretary of Agriculture as the case may be, may grant easements and rights-of-way upon, over, under, across, or along any component of the national trails system in accordance with the laws applicable to the national park system and the national forest system, respectively: Provided, That any conditions contained in such easements and rights-of-way shall be related to the policy and purposes of this Act.

(b) The Department of Defense, the Department of Transportation, the Interstate Commerce Commission, the Federal Communications Commission, the Federal Power Commission, and other Federal agencies having jurisdiction or control over or information concerning the use, abandonment, or disposition of roadways, utility rights-of-way, of other properties which may be suitable for the purpose of improving or expanding the national trails system shall cooperate with the Secretary of the Interior and the Secretary of Agriculture in order to assure, to the extent practicable, that any such properties having values suitable for trail purposes may be made available for such use.

AUTHORIZATION OF APPROPRIATIONS

SEC. 10. There are hereby authorized to be appropriated for the acquisition of lands or interests in lands not more than $5,000,000 for the Appalachian National Scenic Trail and not more than $500,000 for the Pacific Crest National Scenic Trail.

APPROVED OCTOBER 2, 1968.
VITA

Dale Clayton Eberhardt was born in Milwaukee, Wisconsin, on June 10, 1939. He attended public schools in Milwaukee and graduated from Washington High in June of 1957. Entering The University of Wisconsin in 1962, he received a Bachelor of Science degree in Landscape Architecture in June of 1966. In September of 1968, after two years experience with the City Planning Commission of Huntsville, Alabama, he entered the Graduate School of Planning at The University of Tennessee.

He is married to the former Patricia Anne Peltier of Escanaba, Michigan, and has two children, Lori Anne and Steven Dale.