

**BIKEWAY**

**& RELATED**

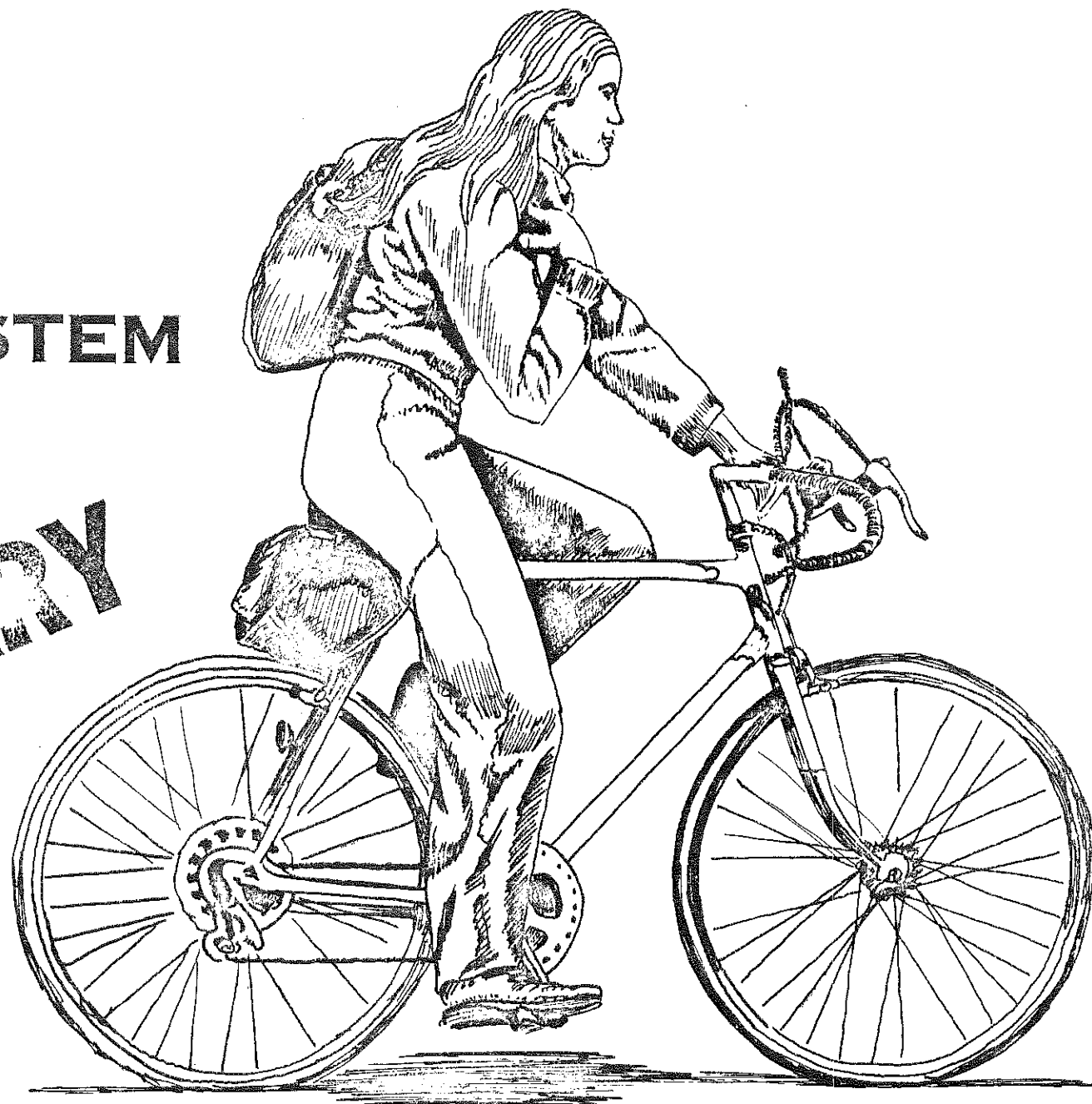
**TRAIL SYSTEM**

**PLAN**

**PRELIMINARY**

*GREATER ANCHORAGE AREA BOROUGH*

*JUNE 1973*



*REVISED JULY, 1973*



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## I. INTRODUCTION

### BACKGROUND

During the past several years, Anchorage has witnessed a rapidly increasing interest in the use of bicycles as a form of recreation and as a method of transportation between the home, the work place and commercial facilities. Enthusiasm for bicycling among a growing portion of the public has resulted in an accompanying desire for a viable, comprehensive network of bike routes, lanes and paths. The Borough and the City of Anchorage have recognized this desire on the part of the public. Such recognition has led to the development of this plan which is a necessary step in providing for the increasing needs of a population with more leisure time, larger incomes and a growing ecological awareness. In addition, the need of our community's youth for active recreation and physical exercise has been recognized and emphasized in the development of this plan.

The need for officially designated and properly designed bikeways has been demonstrated by the phenomenal rise in the use of bicycles throughout the Anchorage metropolitan area. The bicycle has progressed from its previous status as primarily a recreational vehicle to its present position--a serious means of transportation. Long-term trends throughout the country and in other parts of the world lend credence to the notion that interest in bicycling is not merely a temporary fad but is indicative of changes in social attitudes and behavior and a desire for

an inexpensive and physically healthful form of recreation for all ages.

In the Anchorage area, the need for an intelligently planned and implemented system of bikeways is clear. Present road conditions are inadequate for proper use by bicyclists of any age. People using bicycles are not afforded even a minimal measure of protection since most thoroughfares are dangerous. Cyclists, whether engaging in recreation or commuting, have no choice but to use high-speed, high volume traffic arterials and are subsequently exposed to a wide variety of hazards.

This planning effort, because of its urgent need, actually centers around a comprehensive bikeway system. It should be pointed out that this plan is only a part of a total comprehensive trail system plan which will eventually be developed for the Borough. Other trail uses which will be considered and planned for are dog mushing, snowmobiles, horses, cross-country skiing, and jogging. Many times trail use by one of these aspects is not suitable for another and there may be exclusive trails developed for any number of these various uses. Certain segments of the bikeway plan presented in this document do have the advantage, as outlined later, of being used by cross-country skiers and walkers, which affords an added benefit to the implementation of the system proposed here.

The popularity of bicycle use in particular, has resulted in a large segment of the population which has unique needs and preferences. Currently, these

needs are not being met; indeed, until now, they have largely been ignored. It is hoped that this document will serve as a useful tool for the evolution of a comprehensive bikeway and related trail system for Anchorage. The plan will present alternatives and suggest guidelines for development, use and possible acquisition of property for a comprehensive bikeway and related trail system in the Greater Anchorage Area Borough (G.A.A.B.). Analysis of the natural, physical and sociological features of the Borough which identify its character and define its potential for bikeway development is the primary purpose of this plan.

#### BENEFITS OF THE BICYCLE

Bicycling and the development of bikeways can offer to the community a number of distinct benefits. Bicycling provides a real choice of movement through the metropolitan area. It serves as an alternative mode of transportation, thereby expanding and diversifying the available methods of travel. Use of bicycles helps to minimize traffic congestion. Commuters on bikes take up a lesser amount of space than commuters in automobiles and are more maneuverable in traffic conditions. Air pollution and noise can be significantly reduced by the widespread use of bicycles as fewer people would use motorized vehicles. The bicycle is a tremendously efficient form of movement in terms of weight versus expended energy. Thus the consumption of energy would be lessened which is a wise use of power in a period of increasingly scarce and wasted fuels.

To the individual citizen, the use of bicycles offers several advantages as well. For distances of less than five miles, bicycling is often a fast

method of transport, particularly during the peak traffic times. It provides literally door-to-door travel, with no time or money utilized in parking. Moreover, the initial cost and lifetime maintenance is extremely low compared with the automobile. The bicycle, then, provides an inexpensive and healthful form of recreation, transportation and exercise.

One of the greatest benefits of a properly planned bikeway system within Anchorage is the fact that most of the same routes can be utilized in the winter months for cross-country skiing. This dual purpose trail system provides twice the benefit for the same amount of capital investment. This aspect of winter use by skiers was taken into consideration in the planning of a bikeway system in Anchorage.

An additional benefit which can be realized within the Borough by a comprehensive trail system plan is the provision of much needed walkways and hiking routes in the urban and suburban environment. Currently the Borough lacks adequate sidewalks, especially along major arterials, and a comprehensive bikeway and related trail system plan, when implemented, would provide such a system.

#### THE BICYCLE AND CHANGING SOCIAL ATTITUDES

The increase in enthusiasm for the bicycle as a serious form of transport in recent years has been due to more than an interest in recreational equipment. Changes in social attitudes and behavior have followed a period of intensive questioning about patterns of consumption, development of natural resources, quality of the environment, the relationship of work and leisure and more active forms of recreation for young and old alike.

Representative, at least in part, of changing life styles, the bicycle is presently unequalled as a vehicle that combines low cost and low pollution. An article in a recent issue of Scientific American has aptly stated the case for the bicycle:

*Since the bicycle makes little demand on material or energy resources, contributes little to pollution, makes a positive contribution to health, and causes little death or injury, it can be regarded as the most benevolent of machines... The bicycle offers a real alternative to the automobile; if we are prepared to recognize and grasp the opportunities by planning our living and working environment in such a way as to induce the use of these human machines.*

As a machine, the bicycle is considered human because it is engineered and scaled solely for people as individuals. As a piece of technology, the bicycle is relatively easy to comprehend yet is precisely designed and fitted together. It is also a technology which, in contrast to such other technologies as television and the automobile, requires active participation and involves a multiplicity of sensory and muscular portions of the body. Its low speed permits an awareness of the surrounding environment: wind, weather, terrain, the man-made environment, people and events.

Being highly maneuverable, the bicycle offers a real sense of freedom of movement. It combines a number of simple physical principles, such as leverage and rotation, to directly extend the energy of its user. In fact, a person on a bicycle is the most efficient system of movement in terms of weight and energy expended.

Bicyclists can enjoy the rather unique experience of moving under their own power.

The increasing interest in the bicycle is also indicative of changes in notions concerning work, leisure and entertainment. As a vehicle for commuting, the bicycle combines daily exercise with the regular workday routine. As a recreational vehicle, it combines muscular effort with possibilities for environmental contact, contemplation and learning about "new" elements in the community and their natural context. In addition, it offers a recreational form which can be utilized by youth and adults as well.

All these factors contribute to the image of the bicycle as an intelligent and non-destructive form of transportation. Many people are discovering or rediscovering biking as a personal expression of concern with the quality of life. People are beginning, also, to demand tools and resources that offer more individual control. The bicycle is seen as just such a tool.

#### SUMMARY OF RECOMMENDATIONS

(1) It is recommended that the Greater Anchorage Area Borough and the City of Anchorage establish, in cooperation with other local and state agencies, officially designated bikeways. These bikeways shall connect major centers of activity to residential areas and shall be implemented in a phased process. The bikeway network shall be recognized as a legitimate mode of transportation and shall therefore be included as an integral part of the evolving Comprehensive Plan for Anchorage and the respective Capital Improvements Programs (C.I.P.) of both the City and Borough.

(2) It is recommended that the bikeway system, as it evolves, be thoroughly evaluated with respect to its impact upon other modes of transportation, its comparative use, and the possible need for alternative or additional bikeways. This should be accomplished by the Borough Planning Department with adequate public input.

(3) It is recommended that this document serve as part of an ongoing process of public dialogue and participation whereby the public is informed about the problems and potentials of bicycle transportation and whereby local agencies responsible for implementation are apprised of the needs and preferences of bike-using citizens. This item should be implemented by the City and Borough Parks and Recreation Departments in conjunction with the Anchorage "Bike Day" Committee.

(4) It is recommended that a program of public information and dialogue be established to create an atmosphere of cooperative understanding between automobiles and bicyclists and to publicize bicycle security and safety measures. This should be implemented by the City and Borough Parks and Recreation Departments in conjunction with the Anchorage "Bike Day" Committee and the City and Borough Public Information Offices.

(5) It is recommended that at intersections involving bike and motorized traffic, a "zebra" type crosspath be applied to the pavement to delineate bike useage and to alert motorists to the presence of a bike crossing. This work should be implemented by the City and Borough Public Works Departments and the State Highway Department.

(6) It is recommended that additional surveys of bicycle users, their needs and routes be conducted by appropriate City, Borough and State agencies including the Borough Planning Department and City Traffic Engineering Department, in order to keep current this bicycle plan.

(7) It is recommended that lockable bicycle racks be provided in those areas where a cyclist might be absent from the area of his bike, such as nature study areas, recreational facilities, business districts and public buildings and office complexes. This project should be implemented by the City and Borough Public Works Departments and private businesses.

(8) It is recommended that standard signs, striping, stenciling and rest areas be developed along officially designated bikeways. This item should be implemented by the City and Borough Public Works Departments and the State Highway Department.

(9) It is recommended that a voluntary bicycle registration system be established within the Borough and operated by the Borough Department of Environmental Quality, Division of Parks and Recreation. This system should be closely coordinated with the City of Anchorage bicycle licensing system. In addition, it is recommended that the City of Anchorage Bicycle Code be adopted within the Spenard Service District.

(10) It is recommended that a list of "rules of the road" for bicyclists be adopted for areas of the Borough outside the limits of the City of Anchorage. These rules would consist primarily of the provisions taken from the existing City ordinance with suggested changes. This should be implemented by the Borough Department of Environmental Quality, Division of Parks and Recreation in conjunction with the "Bike Day Committee" of Anchorage.



## II. RESEARCH AND ANALYSIS

### BICYCLE USE QUESTIONNAIRE

In February, 1973, the Public Works Department of the City of Anchorage conducted a survey of bicycle users within the community. A questionnaire was distributed to all city utility users with their monthly utility bill.

The survey attempted to elicit responses that would indicate the intensity and extent of bicycle usage. A total of 2,000 responses were received from the 43,000 questionnaires that were mailed out. The rather low degree or percentage of response might have been due to errors in the design or format of the survey.

The results indicated that the average age of bicyclists answering the questionnaire was 28. Results also showed that the bicycle as a form of transportation was utilized more than public transportation or motorcycles, but used less than automobile or walking. It should be pointed out that this indicates present use, and not preferred use. Bicycles may not be used as much as they might be, simply because of a lack of available facilities. This assumption is supported by another response in which neighborhoods were overwhelmingly rated as being inadequate for the use of bicycles. Further reinforcing this assumption was the response to another question suggesting that people "would use bicycles for commuting and shopping if a safe means of using them were available." Even a

question on the degree to which inclement weather would restrict bicycle usage, indicated a desire to use bicycles in this region with its relatively adverse climate. As an emphatic indication of the demand for safe and convenient bikeways, another question resulted in an overwhelming support for bikeways regardless of where they might be located. Even if a bikeway were so located as to require cyclists to divert their travel, people indicated that they would be willing to go as much as a half mile out of their usual way in order to make use of an officially designated lane, route or path.

It is obvious that there is a tremendous demand for a useable bikeway network, as the survey clearly illustrates. People in Anchorage indicated their preference for bicycling as a form of both utilitarian and recreational transportation even under rather adverse conditions.

### GENERAL BICYCLE-RELATED STATISTICS

Thefts: Data collected by the Anchorage Police Department has shown that thefts of bicycles have been on the increase in recent years. Reported thefts in 1972 came to a total of 481, more than a 90% increase compared with figures for 1971. This data also reflects only reported thefts; actual thefts could be much higher. This suggests a need for a program of public information about bicycle security measures and a need for the provision of bike racks for locked storage at strategic points around the Borough.

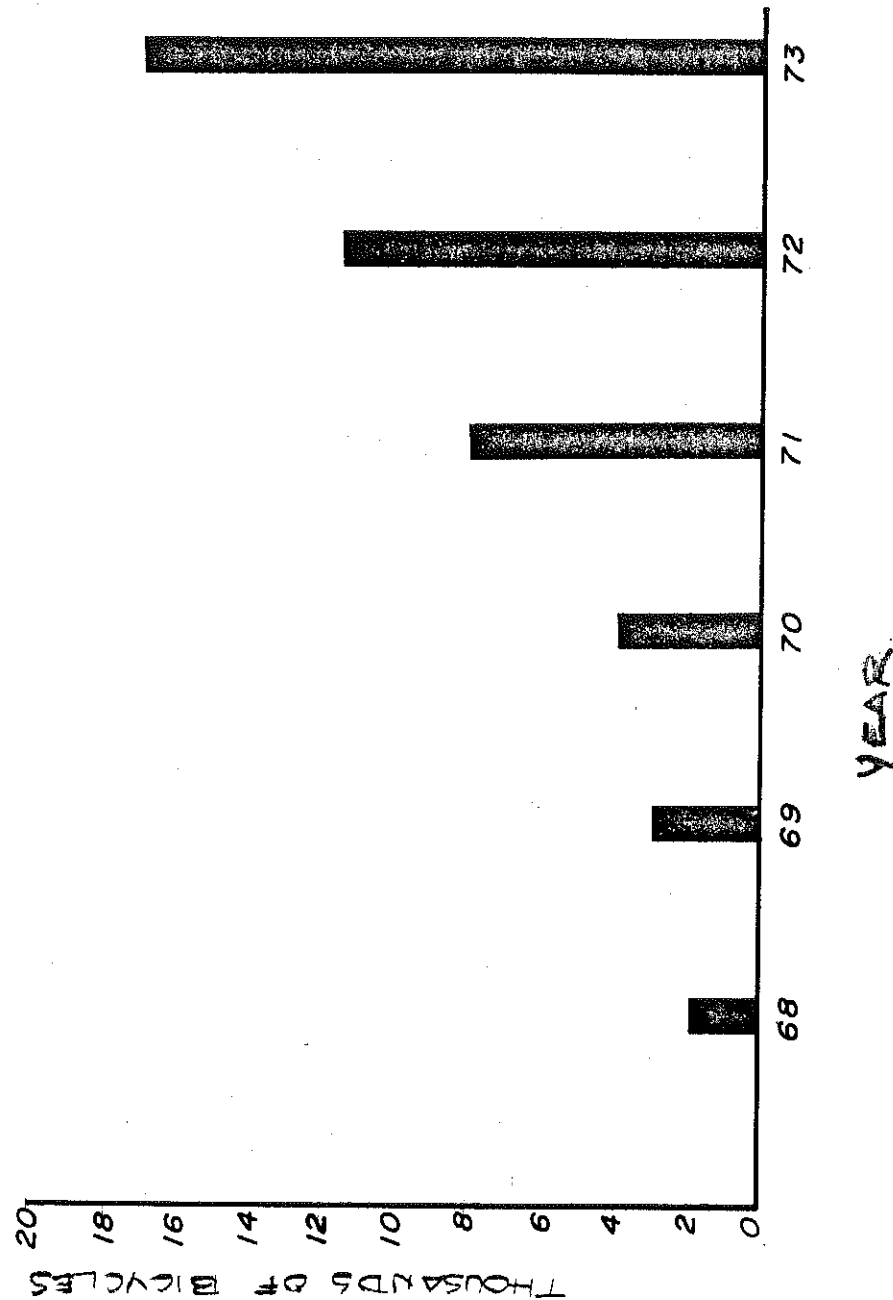
Bicycle Ownership: Information was sought from various sources in an attempt to determine how extensive bicycle useage was in the Anchorage metropolitan area and how useage here compared with other areas of the country. Figure 1 illustrates the increase in bicycle sales over the last several years.

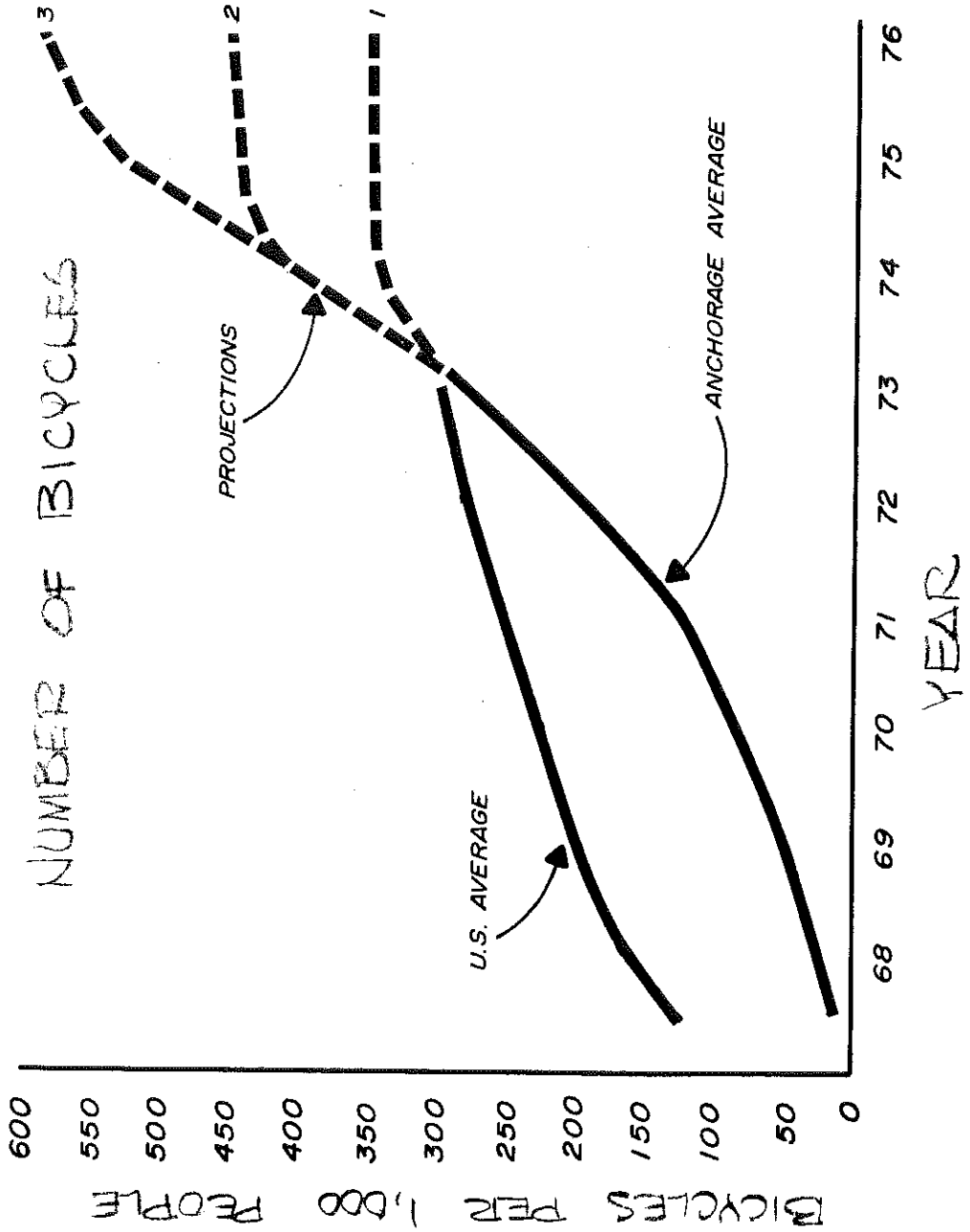
Local merchants estimate that in recent years the majority (possibly as much as 75%) of bikes sold have been adult models. Several merchants noted that a usual pattern of purchase was for a husband and wife to each buy a bicycle. Also noted was an enormous increase in the popularity of the more sophisticated ten-speed models.

Figure 2 represents an attempt to estimate the current number of bicycles in the Anchorage area, compared with the United States as a whole, and to predict the future popularity of the bicycle. The graph reveals that the upsurge in bicycle use in Anchorage has been a relatively recent phenomenon, and that the number of bicycles per thousand people is just now approaching the national average. The number of bikes per thousand in Anchorage, however, is increasing at a much faster rate than the national average.

Three rough projections have been made: Projection (1) assumes that the number of bicycles in Anchorage, now presently estimated at around 35,000, has reached a saturation level and useage will soon level out. Projection (2) assumes that the present trend will continue for a few more years and then begin to level off. Projection (3) assumes an increasing reliance upon the bicycle as an alternative form of transportation as its relative advantages to other forms of transportation increase. By 1976, then, the total number of bicycles in

BICYCLE SALES

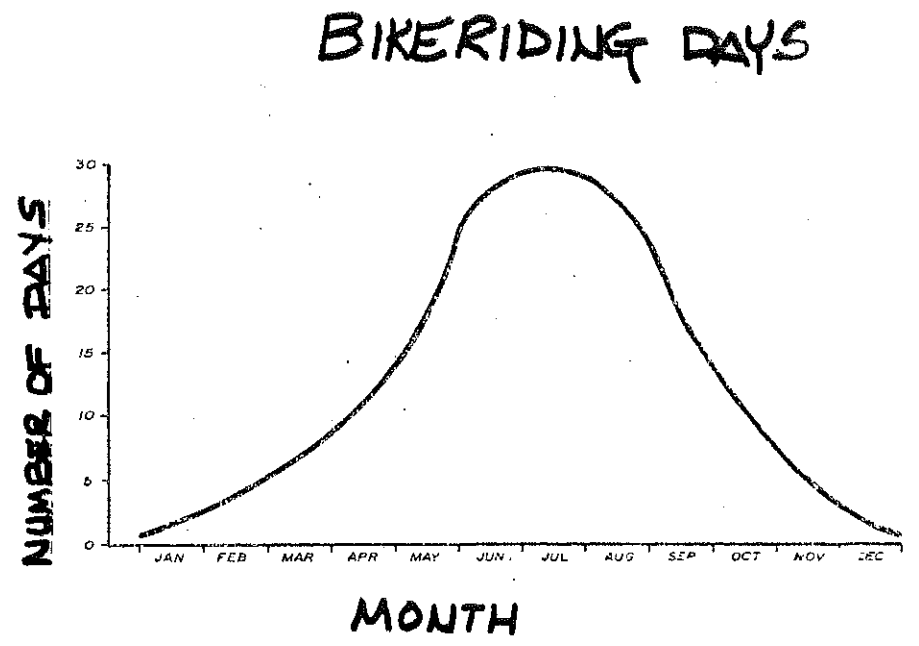




Anchorage may be 40,000 or as high as 80,000. In any case, a substantial proportion of the of the population owns and will continue to own and operate bicycles in the near future.

**PERIODS OF POSSIBLE BICYCLE USE**

Although Anchorage undergoes relatively long and often severe months of winter, it is still possible to enjoy bicycling during a large portion of the year. Some persons claim that they bicycle from March to November, except when roads are particularly icy. Most people, however, would primarily use bicycles during the summer months, especially with long hours of daylight. The following graph illustrates the periods of possible bike use.



It should also be emphasized that during the winter months, separated bike paths can and will be utilized as cross-country ski trails. Bikeways would see multiple use year-around--by bikers, skiers and pedestrians.

## SITE ANALYSIS

To designate and design a site for human use, it is necessary to recognize the limitations of that site and protect the important limiting factors when planning and developing it. If such limitations are not recognized and preserved, historic features, aesthetic characteristics, community values and an ecological balance may be destroyed.

The following factors have been analyzed in an attempt to identify the limitations, yet develop the area in a logical and useful way.

Topography: The topography of the Greater Anchorage Area Borough is moderately rolling to mountainous. Principal populated areas in the Anchorage "bowl" are the limits of this analysis. In this context, bikeways have been proposed primarily in areas of slight to moderate grade.

Development in areas of steeper grade might contribute significantly to soil erosion, cost of development and bicycling difficulty.

Aesthetics & Focal Points: The Anchorage area bounds with beautiful scenery and points of interest. The bikeway system has been designed to take maximum advantage of these areas. Examples are vistas of Mt. McKinley, the Alaska Range, the Chugach Mountains, and the Anchorage Plain and Cook Inlet which provide a breathtaking panorama when seen from the foothills on

the east. Rest stops can be positioned along the bikepath system to take advantage of these views.

Existing Facilities: The Greater Anchorage Area Borough has many interesting manmade facilities. The Log Cabin, buttress area and City Hall complex are but a few. There are a number of parks and playgrounds in the area. In addition, a variety of museums, schools, libraries, public facilities and historic sites are located around the Borough. The bikeway system has been designed in conjunction with these areas. Figure 4 indicates the important existing facilities in relation to the proposed bikeway plan.

## CRITICAL AREAS OF CONCERN

A number of problems unique to the bicyclist deserve special emphasis. The first involves conflicts resulting from motorized and bicycle traffic. Differences in vehicular speeds present special dangers to bicyclists and consequently bikeways should, when possible, not be located upon high speed thoroughfares.

The volume of traffic also presents particular hazards. Great amounts of motorized traffic, especially at peak rush-hour periods, can present the bicyclist with the possibility of being struck from any direction. The greater number of automobiles present makes it difficult for the cyclist to predict the behavior of traffic and decide upon a safe course of movement. Bikeways should not, if at all possible, be located on high volume thoroughfares. A possible solution to this and the problem outlined above with high speed thoroughfares would be to construct separate bike paths away from the roadway proper yet within the public right-of-way. In addition, bikeways should be routed along paralleling residential streets where this is practical and continuity permits.

# GREATER ANCHORAGE

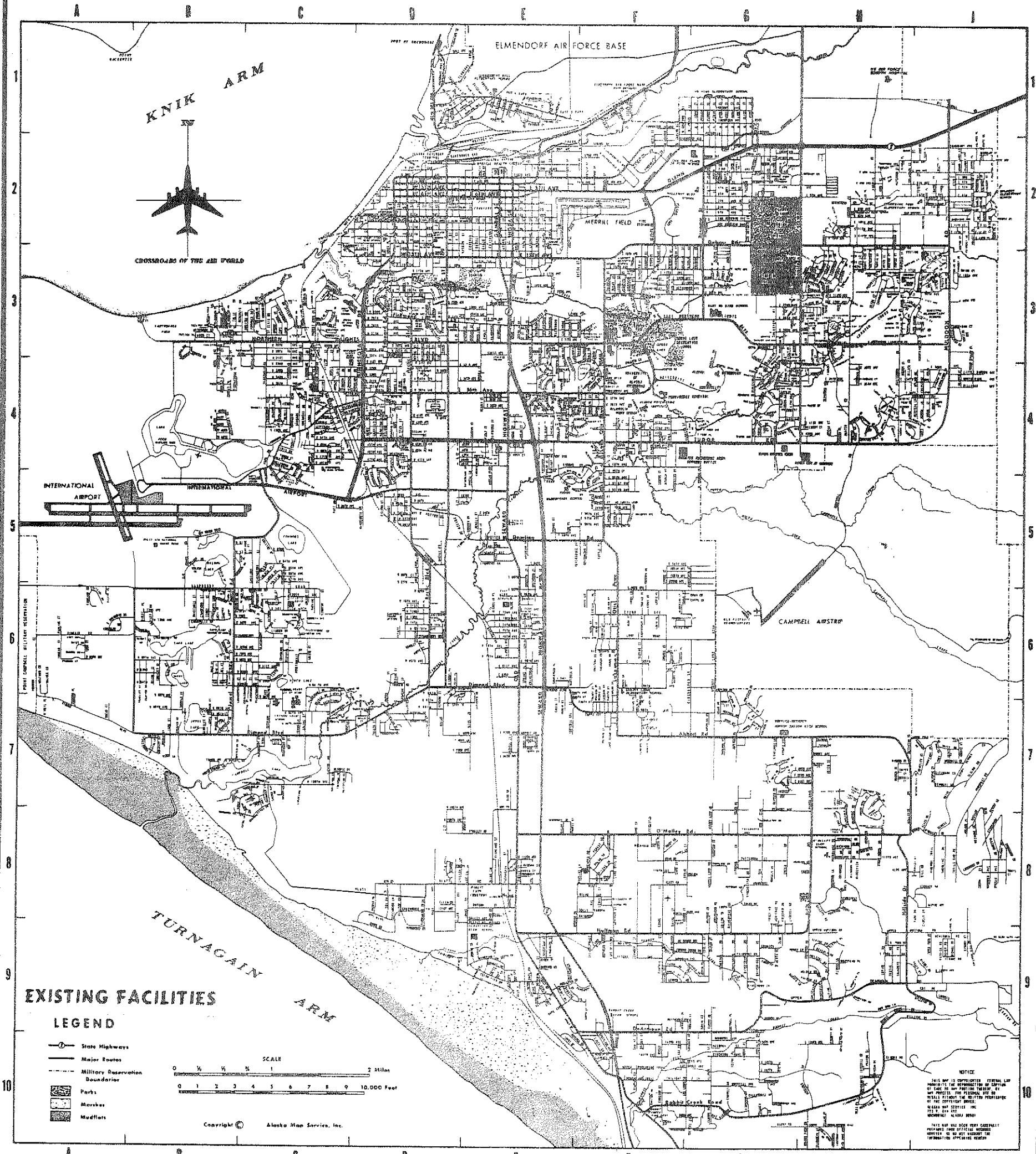
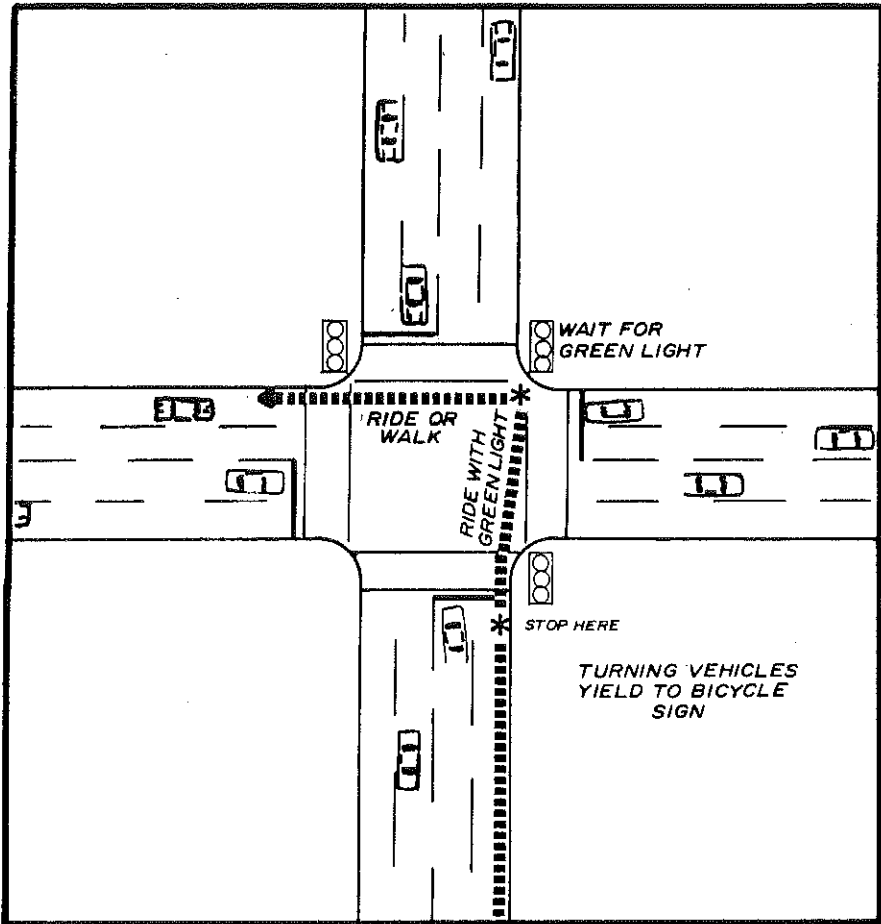
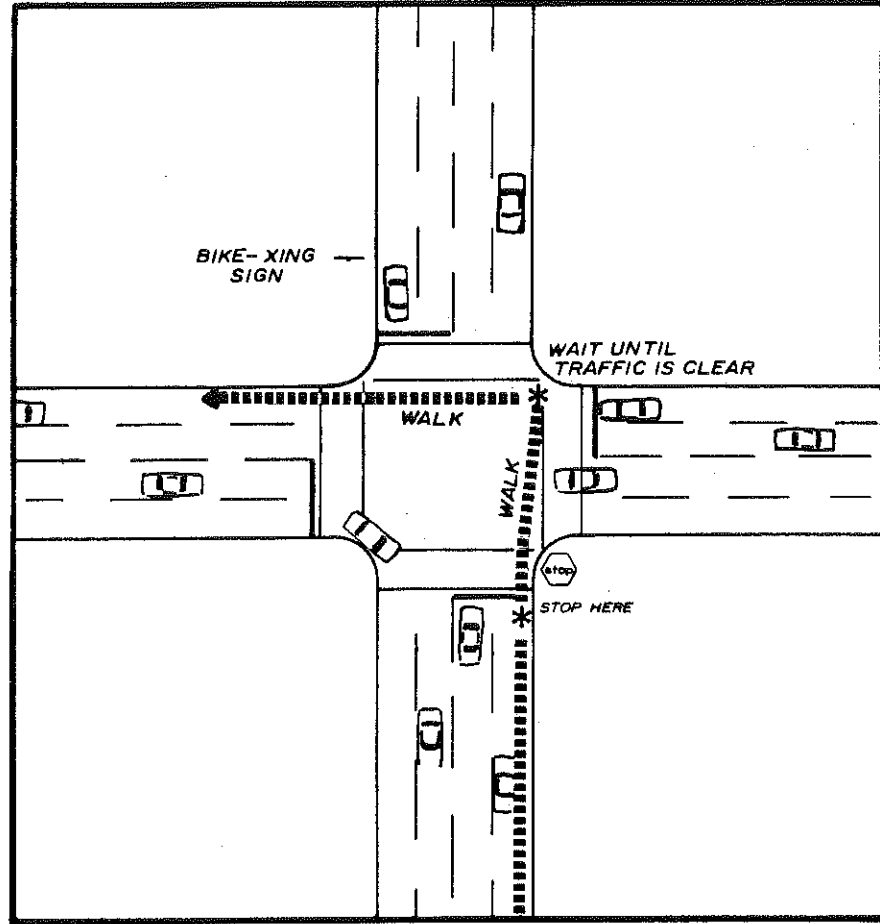


FIG. 4





FROM FOUR-LANE, TWO-WAY, INTO  
FOUR-LANE, TWO-WAY, WITH SIGNAL LIGHT.



FROM FOUR-LANE, TWO-WAY, INTO  
FOUR-LANE, TWO-WAY, WITH STOP SIGN.

The information for this drawing was taken from *The Balance*, a Bureau of Outdoor Recreation publication, November 24, 1972.

FIG. 5

Intersections are a critical problem for people using bicycles. Most bicyclists are uncertain as to the safe way to negotiate a turn or as to who has the right-of-way in any given situation. This puts bicyclists in an extremely dangerous position and gives rise to an unusually great amount of anxiety. It is therefore recommended that at intersections involving bike and motorized traffic, a "zebra" type crosspath be applied to the pavement to delineate bike useage, and to alert motorists to the presence of a bike crossing. In addition, the suggested method for bicycles to negotiate a left turn is illustrated in Figure 5.

The survey conducted by the City of Anchorage Department of Public Works revealed that bicyclists perceive several additional hazards: being struck from the rear, autos turning abruptly, cross traffic and night riding. A common practice of bicyclists is to treat stop signs as yield signs and pass on through if they believe there is no approaching cross traffic. This is a practice that should be soundly discouraged. Bicyclists must obey all traffic signs. It should be pointed out that automobiles and bicycles are equivalent from the standpoint of traffic regulations applicable when using public rights-of-way.

Another problem area involves conditions of pavement. Even minor obstructions such as bumps, holes, glass or rocks can be dangerous for bicycle riders. They can throw a rider off balance or cause the rider to swerve into other traffic. Bikeways, whether routes, lanes or paths, would require regular maintenance and cleaning, in order to be useable.

In addition, a hazard exists from the opening of car doors when riding bicycles along side a row of parked cars. This is estimated to be one of the two or three most frequent causes of accidents.

Finally, the bicyclist is affected by the attitudes of drivers of motorized vehicles. Drivers of trucks and automobiles are often discourteous or even dangerous as they seem to "brush" a cyclist. Streets are public places, and bicyclists have an equal right to use them. On the other hand, cyclists who disobey traffic codes, create nuisances or show a lack of respect for pedestrians or automobile users can present a bad image for other well-meaning bike riders. It is recommended, therefore, that a program of public information and dialogue be established to create an atmosphere of cooperative understanding.

#### NEED FOR INFORMATION

In order to adequately plan and provide for an evolving bikeway system, it is obvious that there is a requirement for an on-going information-gathering effort. It is recommended that data be accumulated by three basic techniques.

(1) Accident and Theft Reports: The Anchorage Police Department and State Troopers should keep an accurate, collated record of all bicycle accidents and thefts so that specific patterns of occurrence would be revealed as to accident type, seriousness and location, along with data on the thefts. Such information is necessary to determine needed areas of improvement in design, signage or regulations.



(2) Surveys: Periodically, brief surveys could be taken of bicycle users, motorists, agencies, community organizations and businesses to determine problems and preferences. Such surveys taken by local planning organizations in conjunction with volunteer groups such as the "Bike Day Committee" would indicate the degree of public interest and the need for dissemination of safety and legal information as well as provide information for revising, updating and extending this bikeway system.

(3) Transportation Analysis: A vitally important area of research would involve an in-depth analysis of bicycle use. Research would investigate the time, distance and frequency of typical bicycle trips. A survey of actual and desired points of destination would reveal what areas people travel to on bicycles and the "center" of intensive bicycle use. A "cordon count" would determine which streets and bikeways received the heaviest volumes of bicycle traffic and would indicate whether additional bikeways were needed in a given area. Finally, an analysis of the behavioral attributes of bicyclists could be undertaken, including the use of photographs and pictorial notations which would indicate difficulties encountered in bicycling or adherence to codes and signage.

A full scale research effort as outlined above should provide a much needed, solid base of data around which to make sound planning decisions with regard to the evolving network of bikeways. This does not imply, however, that more information is needed before bikeways can be implemented. Bikeways can be constructed now concurrent with a sound program of research and evaluation.

## SOURCES OF FUNDING

Finding a source of income large enough to sustain a continuous and expanding bike trail program calls for sound financial planning. The intense competition for local tax dollars and state and federal grant funds emphasizes the urgency of establishing a reliable source of funding with which to develop and maintain a viable bikeway system within the Borough.

Available sources of funding include:

- (1) Local Annual Budget
- (2) General Obligation Bonds
- (3) State Department of Highway Funds (possibly included as part of road improvement programs or as part of the Local Service Roads and Trails Program) or other State funds.
- (4) Local Government Road Funds (if built as part of local road improvement projects)
- (5) Federal Assistance (Department of Interior - Bureau of Outdoor Recreation)

Local Annual Budget: To date, there has been no local budgetary expenditures for bike trail development. The City and Borough annual budgets could provide an equitable means of funding for construction of bicycle routes as proposed under the 5-year development plan contained in this report. Funding for these capital construction costs should be identified within the Borough's and the City's Capital Improvements Program (C.I.P.). A popular alternative for generating local funds for purposes such as bikeway development is the mill levy. Based upon the 1973 original tax roll evaluation

of \$853,500,000 in Service Area 30 (Parks and Recreation Area), a .3 mill levy designated for bikeways would generate \$256,000 in one year. In addition, local budget funds should also include amounts designated for maintenance of trails once they are built.

General Obligation Bonds: Bonds enable a community to obtain public facilities when needed. In addition, these provide an equitable means by which the cost can be shared by both present and future users. Consideration might be given to scheduling a general obligation bond election, possibly in conjunction with other greenbelt or park development needs which would also allocate funds for bikeway construction and development.

State Department of Highway Funds (Local Service Roads and Trails Program) or Other State Funds: With cooperative planning for bike routes and other trails in the rights-of-way of limited access roads, some State Department of Highway funds can be made available, not only for acquisition of rights-of-way for trails, but also for construction of bike trails and paths. In addition, many times this bikeway construction can be implemented as part of state highway road improvement projects. The Local Service Roads and Trails Program operated by the State Highway Department provides funds to local governments which can be utilized for bikeways.

Local Government Road Funds: Bikeway development along the shoulders of existing roadways can be accomplished as part of local government road improvement projects if proper advance planning and designs take place. In addition, extension of shoulders or sidewalks specifically for bikeways might be accomplished as part of local road improvement or repaving projects.

Federal Assistance and Grants-In-Aid: The Bureau of Outdoor Recreation within the Department of Interior has available acquisition and development grants for a wide range of uses including bicycle routes, paths and trails. Facilities must be open to the general public and development of basic rather than elaborate facilities is favored. Priority consideration is generally given to projects serving urban areas. Fund monies are not available for the operation and maintenance of facilities.

Current Funding Allocated: Currently the City of Anchorage has set aside approximately \$250,000 for bike trail development within the City of Anchorage for 1973, with a portion of these funds anticipated from the State Highway Department's Local Roads and Trails Program. In addition, the City of Anchorage voters approved a bond issue last fall which specifically designated funds for bikeways. It is anticipated that approximately \$450,000 of this bond money, along with a similar amount of matched money from State funds, will be allocated for bikeway development within the City of Anchorage over the next few years. This total of approximately \$900,000 represents a substantial commitment to biketrail development by the City of Anchorage.

The Greater Anchorage Area Borough currently has allocated only \$60,000 for biketrail development from its Local Service Roads and Trails program over the next three years. It is recommended that strong consideration be given to a mill levy or general obligation bond proposal in order to generate a similar amount of funding for bikeway development outside the City of Anchorage.

### III. PROPOSED BIKEWAY AND RELATED TRAIL SYSTEM PLAN

#### PLANNING AND DESIGN OBJECTIVES

The bikeway and related trail system proposed in this document has been designed with an effort to achieve a number of functional objectives.

Safety: The primary, overriding objective was to arrive at a system that would afford the greatest degree of protection to the bicyclist and winter user while minimizing conflicts and hazards generated by the physical conditions of thoroughfares and motorized vehicular traffic. A network of officially designated bikeways would by its nature, encourage utilization by children of various ages. Therefore, the bikeways should, of necessity, be planned and implemented to provide a safe means of travel.

Convenience: To receive optimum use, bikeways should be located so as to be readily available to residents throughout the Anchorage community, and also possibly serve other population concentrations such as the Eagle River area. To the greatest extent possible, the bikeway network should pass through or near neighborhoods, housing developments and apartment complexes to encourage widespread participation and use. Bicyclists should be able to use the existing, low volume streets in the immediate vicinity of their homes to connect them with main circulatory bikeways.

Accessibility: Another objective of the bikeway system is to furnish bikers with access to major areas of activity such as public, institutional, commercial and recreational areas. Bikeways should ideally pass near schools, shopping centers, theaters, eating establishments, parks and playgrounds.

Bikeways should provide direct access to the Central Business District and other areas of employment so that commuting by bike becomes feasible. In addition, some bikeways should offer access to remote, less developed and more "natural" areas of the community such as greenbelts or large open spaces.

Continuity: Lanes, routes and paths for bicycles should be, at each stage of evolution, as continuous as practicable. Bikeways should not be isolated, suddenly terminated or lead to nowhere. They should provide a smooth, continuous network that does not necessitate retracing the same path to return to the point of origin. A bikeway system, to encourage use, should be comprised of a number of loosely arranged, intersecting loops or routes.

Diversity: Any system which provides for the movement of people should offer a variety of experiences. People should have opportunities to test their skill on upgrades and on downhills. They should be exposed to a variety of visual scenes and views of Anchorage, its water resources,

vegetation and distant panoramas. There should be opportunities to observe other people working, recreating and conducting business. A properly planned bikeway network should afford choices-- bicyclists should be able to decide among various alternative routes. They should be able to choose direct routes or circuitous routes; easy routes or difficult routes. Bikeways should periodically branch or change direction and pass unique points of interest.

Multiple Use: A properly planned bikeway system in Anchorage should lend itself to use by cross-country skiers in winter and walkers and hikers in the summer months. Therefore, the value of public funds expended on a bicycle path system could be extended to a very broad spectrum of community residents.

#### CLASSIFICATION OF BIKEWAYS

"Bikeway" as a general term shall be used to designate any officially designated lane, route or path that is set aside for use of bicycles, whether exclusively or otherwise, and so marked. Bikeways shall be divided into three general "classes":

Class I: to be called "Bike Routes", shall consist of bikeways that utilize existing street surfaces with no special markings other than signs or stenciling on pavement informing and alerting the motorist that bicyclists may be present and to respect their rights. The signs also would indicate to bicyclists that the street is a useable link in the total network of bikeways.

Class II: to be called "Bike Lanes", shall be divided into three subgroups:

- A. On shoulder(s), with signs and special striping and stenciling to indicate use by bicyclists.
- B. On extension of sidewalks, with signs. (This use should include modification to roll curbs from barrier curbs).
- C. On street surfaces with signs, special striping and graphics stenciled on the pavement to indicate bike use, direction and crossings.

Class III: to be called "Bike Paths", should be paved thoroughfares specifically for bike and pedestrian traffic and separated from the main-stream of motorized traffic by at least twelve (12) feet or located as a trail system within the greenbelts, parks or along streams.

As indicated previously, it is strongly recommended that Class III Bike Paths, in addition to serving as hiking trails in the summer, be developed and utilized as cross-country ski trails during winter months. They would complement and connect existing ski trails at Russian Jack Springs, Goose Lake, AMU, and Service-Hanshew High School. This would necessitate the installation of appropriate signs and maps.

All three classes of bikeways are illustrated in figures 6 through 10. The estimated costs associated with the different classes of bikeways are listed on Table 1.

These preliminary estimates are only approximate, and before any large scale construction is undertaken alternative methods of paving bikeways should be examined and detailed cost estimates determined. Proposed standards are included in the Section on Standards beginning on page 26.

Table 1. Estimated Construction Costs

SIGNS:		
"Bike Route", "Bike Trail", "Bike/Hike Path", "Bike Crossing", "Watch for Bikes", "Bikes Only", etc.		\$30.00 each, installed
PAINTING:		
5" wide striping for bike lanes		\$.06/LF
Arrows and/or bike stencils		\$12.00 each
"Zebra" striping for bike crossings		\$25.00 each
PAVING:		
2 - 3' lanes on shoulders each side of street		\$22,000/mi (avg.)
1 - 6' path on base (including adequate fill)		\$40,000/mi (avg.)
<u>Cost by Class of Bikeway:</u>		
CLASS I:		
8 signs/mile, each side		\$480/mile
CLASS IIA:		
paving, if required		
10,560 LF of striping/mile		
8 signs/mile, each side		
	TOTAL	\$22,800/mile
CLASS IIB:		
paving		
signs		
	TOTAL	\$20,480/mile
CLASS IIC:		
8 signs/mile, each side		
24 stencils/mile		
10,560 LF of striping/mile		
	TOTAL	\$2,800/mile
CLASS III:		
paving		
5 signs/mile (signs two-sided)		
	TOTAL	\$40,300/mile

CLASS I "BIKE ROUTES"

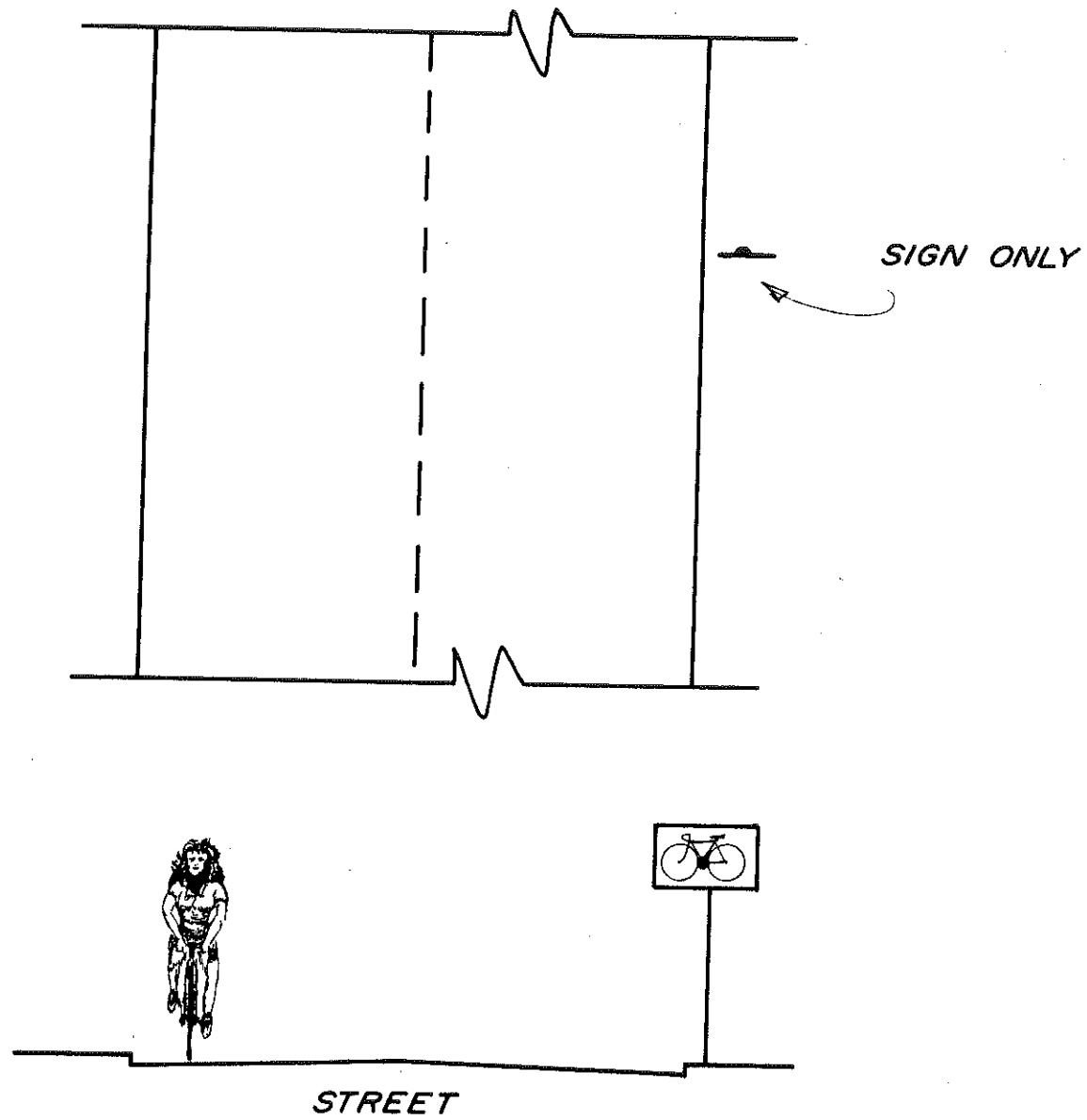
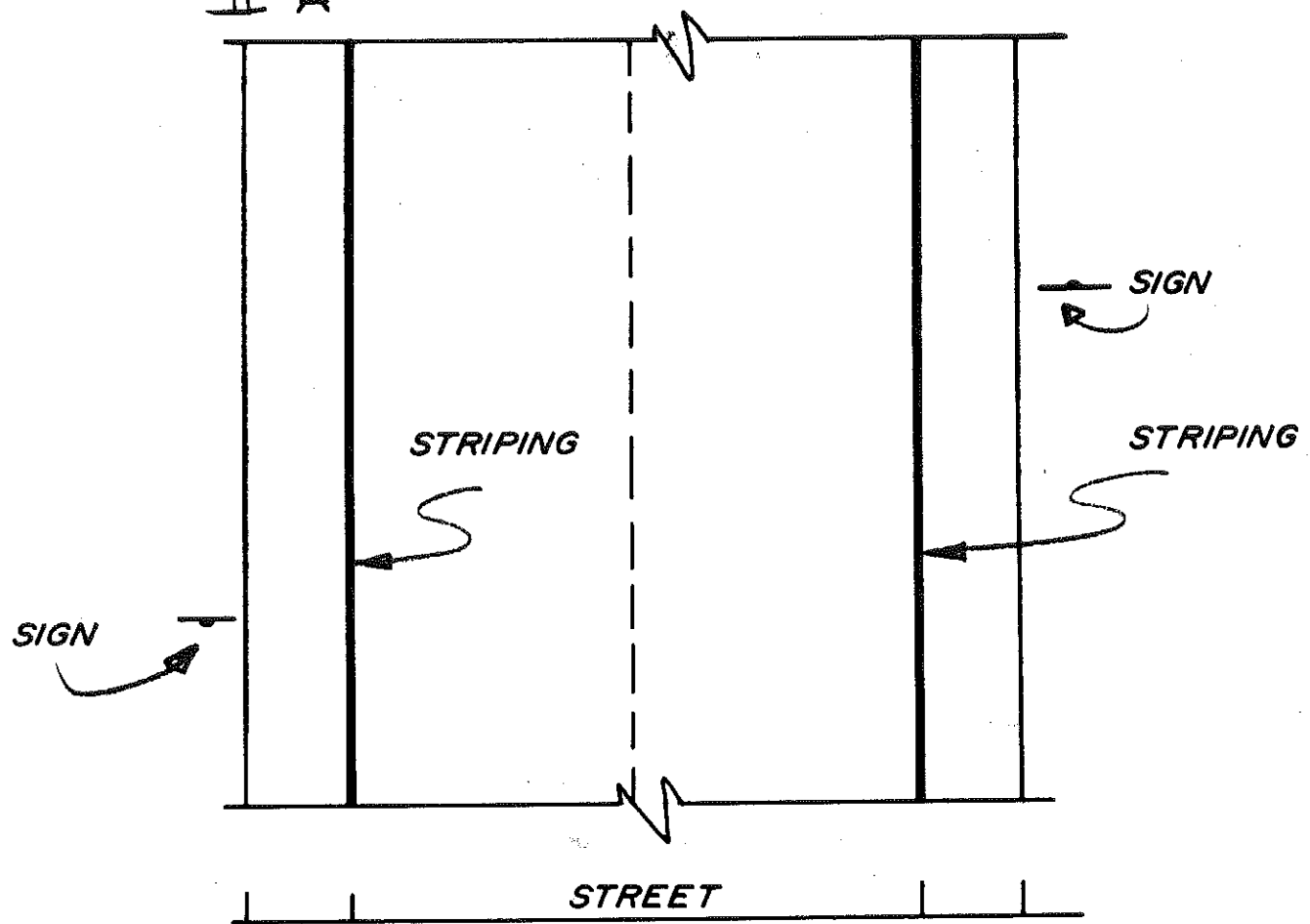


FIG. 6

II A "BIKELANES"



SHOULDER (PAVED)  
& BIKELANE

SHOULDER (PAVED)  
& BIKELANE

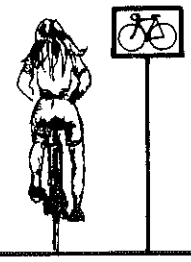


FIG. 7

II B

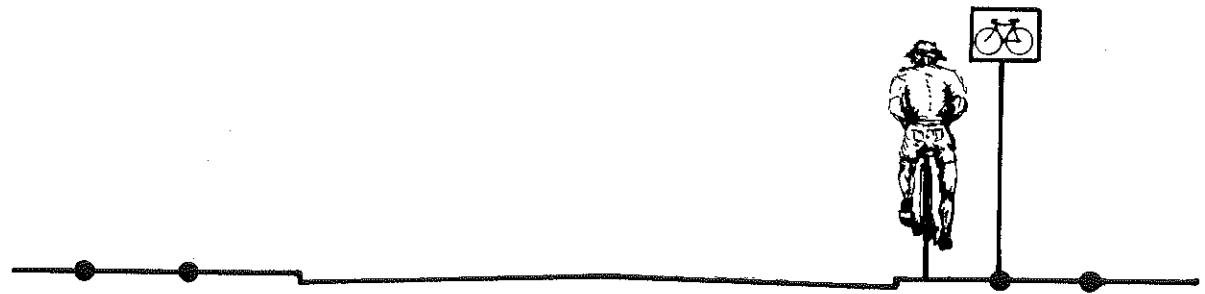
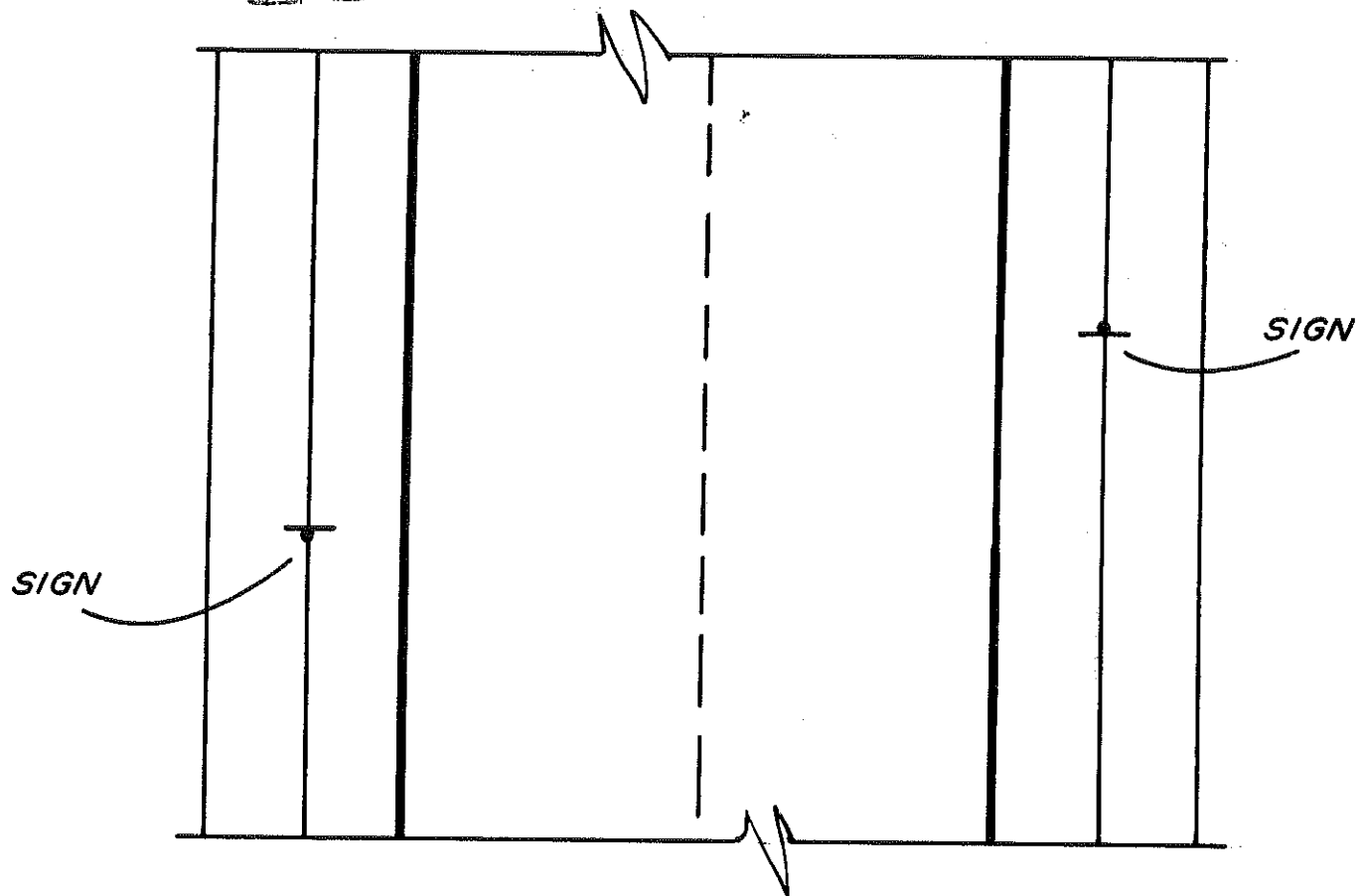


FIG. 8



II c

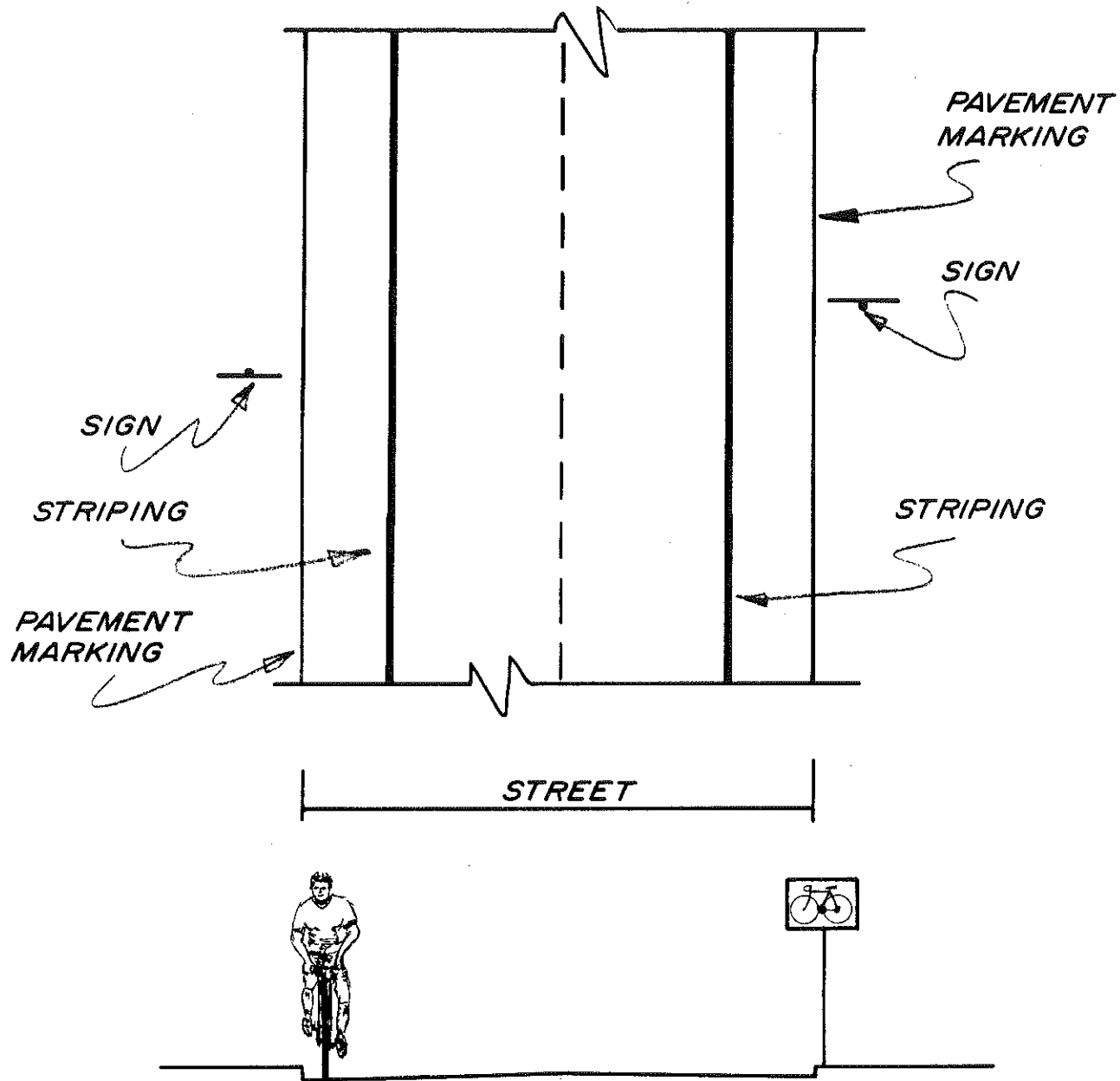


FIG. 9

# III "BIKE PATHS"

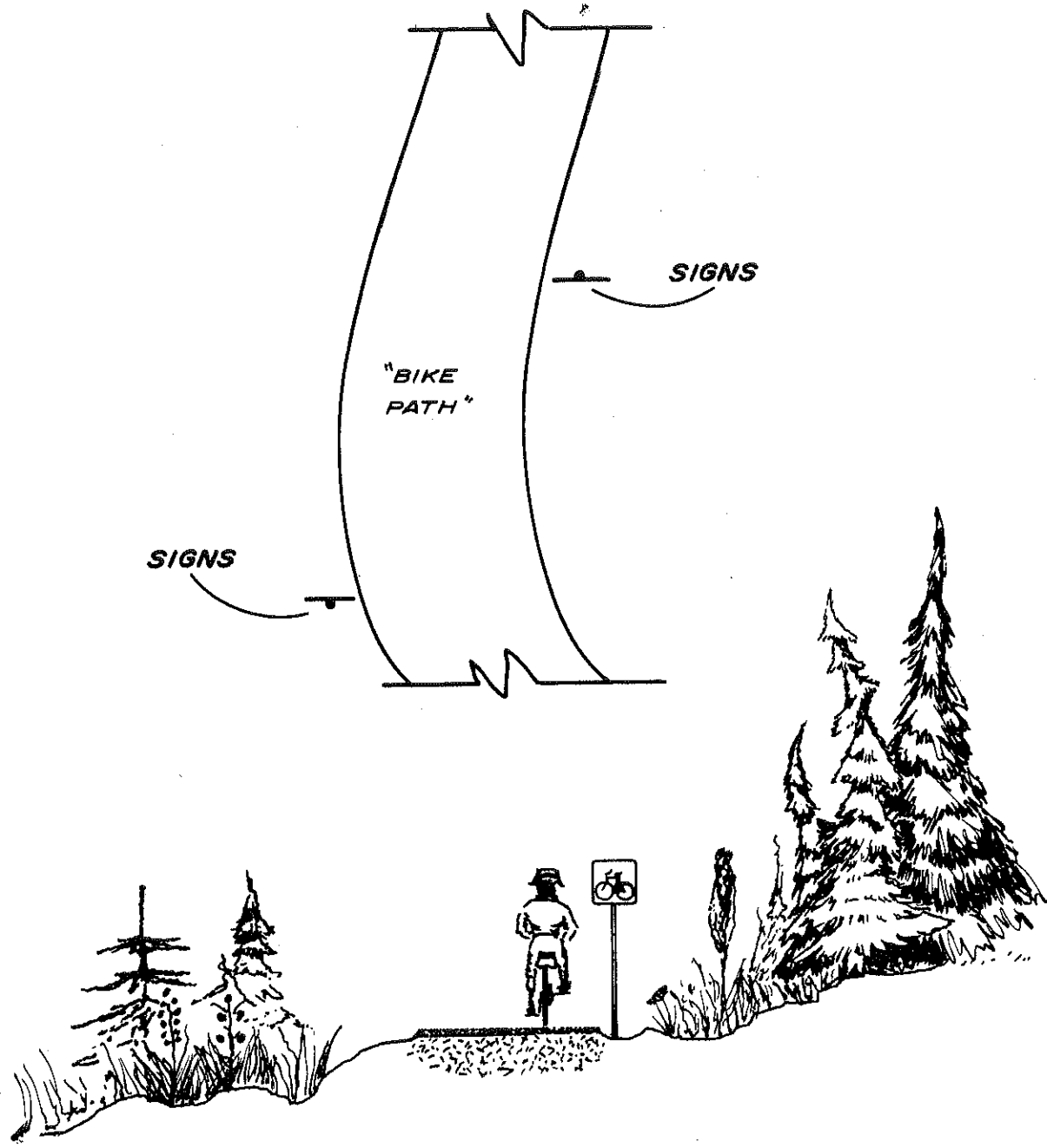


FIG. 10

## BIKEWAY AND RELATED TRAIL PLAN

It is anticipated that the bikeway and related trail system as proposed in this report could be implemented in a phased manner over a period of five years, including six summers as shown in Figure 11.

A certain measure of overlap between phases is shown to permit a degree of flexibility in implementation. The final details of one phase may be finished during the initial construction of the succeeding phase.

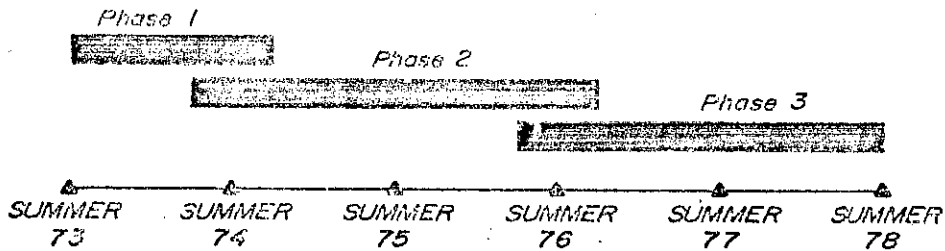


FIG. 11

Five years is suggested as a preferable time frame in which to achieve a fully-operational bikeway network. However, the exact time frame could be compressed according to public demand, availability of funds, the cooperation of agencies involved and the changes in other transportation networks.

In addition, all parties should recognize that the Phase construction outlined under this Plan must, of necessity, be flexible. As time passes, some routes may prove to be unacceptable, or it may be desirable to rephase the construction of certain routes.

The maps included in this report graphically illustrate the proposed location of bikeways during each phase of implementation. A detailed chart has also been provided to give a more "fine-grained" description of each segment of the bikeway system.

## STANDARDS

Standards for both the construction and signing of bicycle paths must be set. Construction standards can be set to provide an economical yet durable product depending on Alaskan requirements. Signing should conform to national standards. Such standards have been developed specifically with safety and legibility in mind. With the influx of tens of thousands of motoring tourists in Alaska during the bicycling season it is wise to use signage familiar to visitors as well as Alaskans. Standard signs should be used at the rest areas to inform bicyclists of facilities available at the area.



# GREATER ANCHORAGE

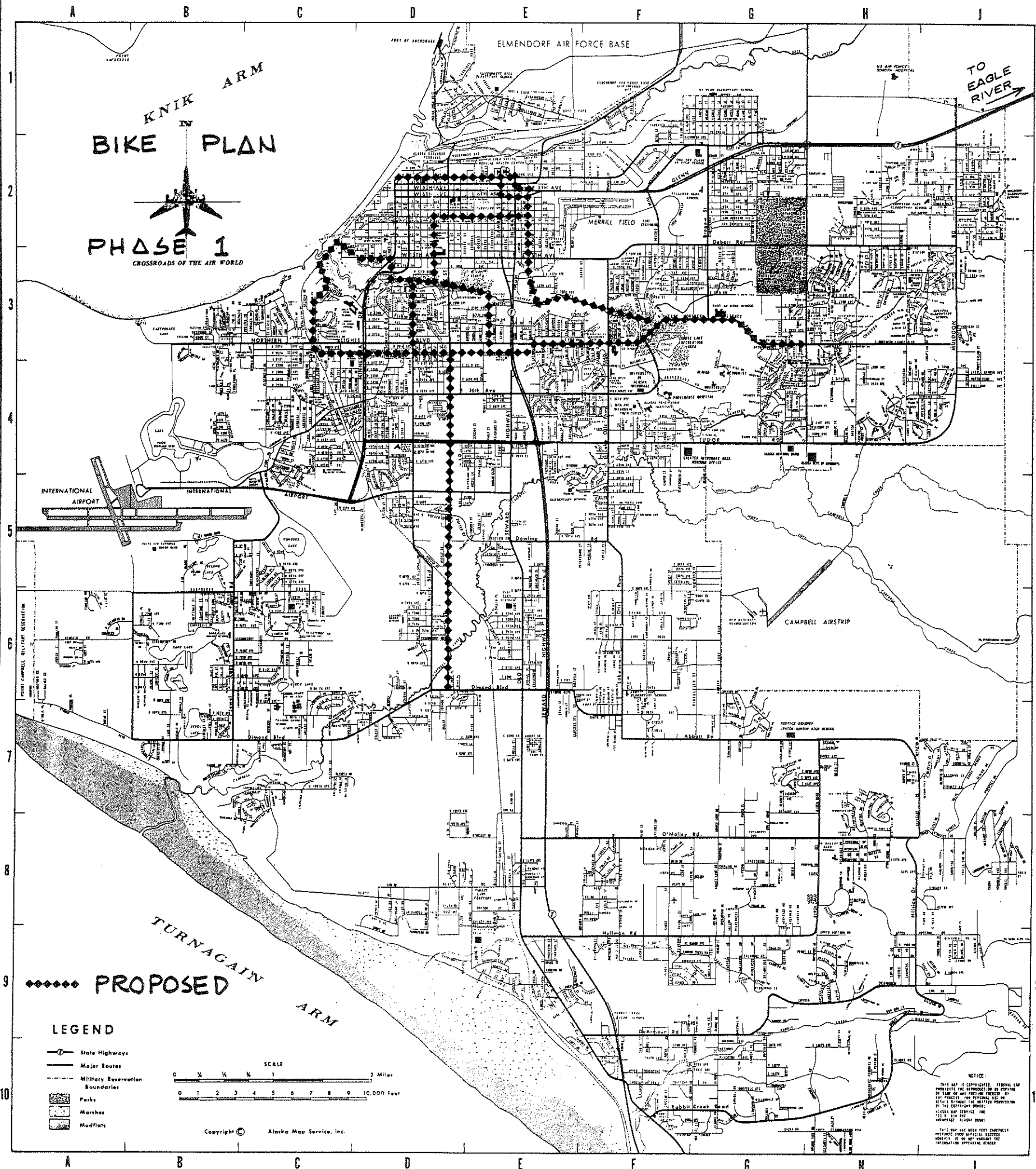
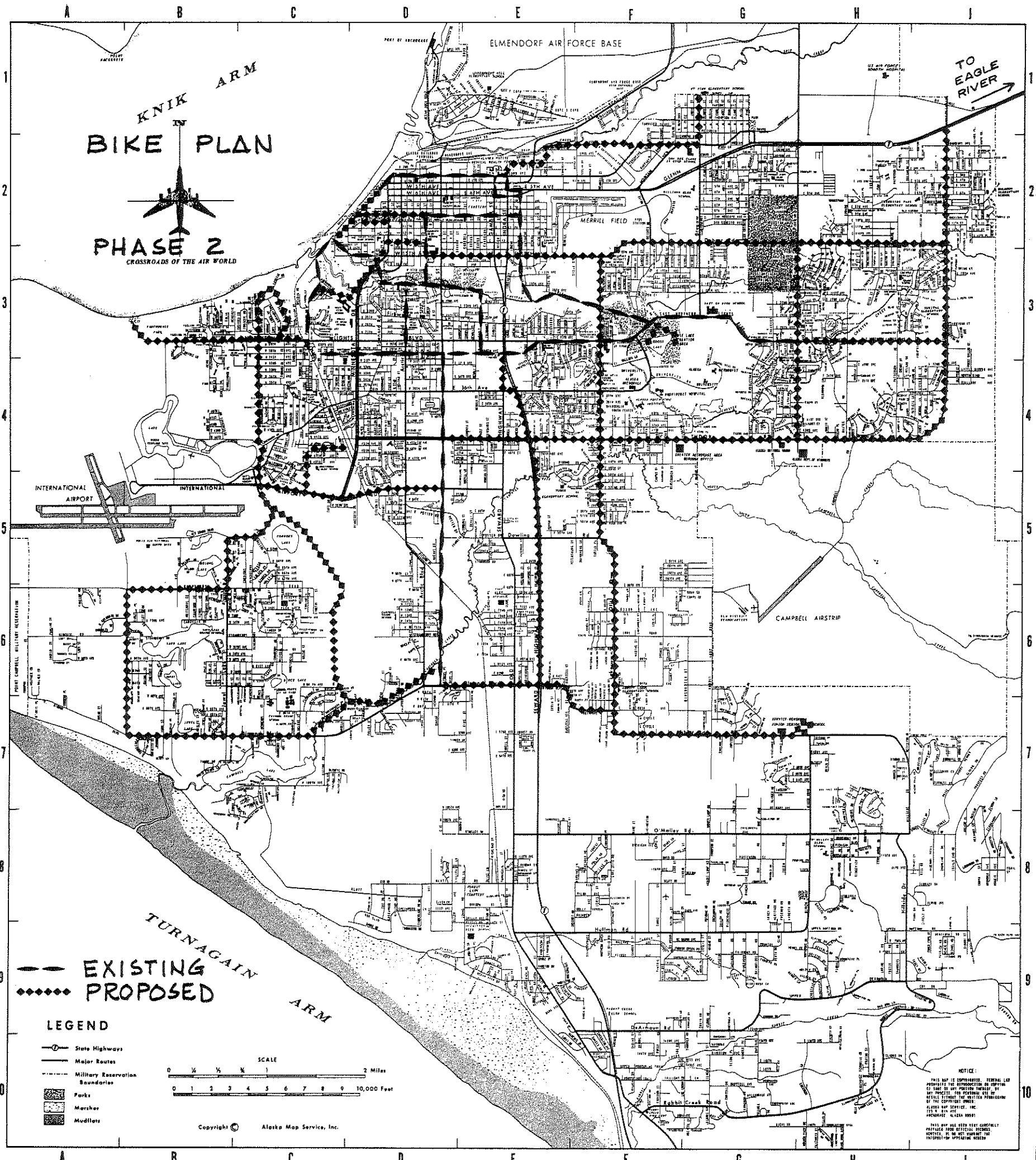


FIG. 12

# GREATER ANCHORAGE

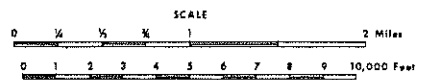


**KNIK ARM**  
**BIKE PLAN**  
  
**PHASE 2**  
 CROSSROADS OF THE AIR WORLD

——— EXISTING  
 ◆◆◆◆◆ PROPOSED

**LEGEND**

- State Highways
- Major Routes
- Military Reservation Boundaries
- ▨ Parks
- ▨ Marshes
- ▨ Mudflats



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FIG. 13

# GREATER ANCHORAGE

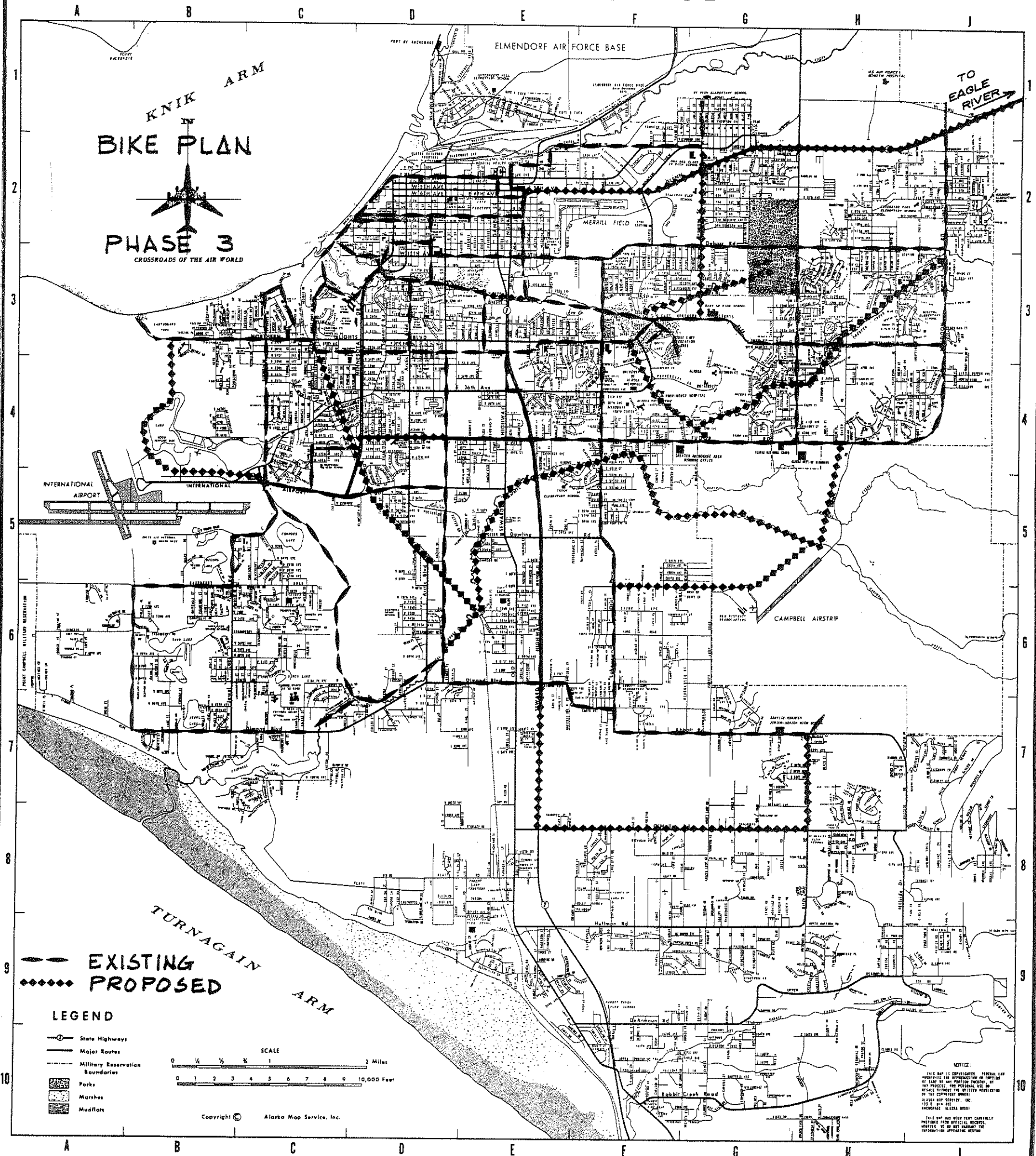


FIG. 14





Table 2

PHASE I					LOCATION			PROPOSED MODIFICATIONS & IMPROVEMENTS	COST ESTIMATE	REMARKS
CLASS	SECTION	FROM	TO	DISTANCE						
I	IIA	IIB	IIC	III						
●					Ingra/5 Ave.	3 Ave.	Karluk	.2	\$ 100	Right side, one way
●					Gambell/6 Ave.	3 Ave.	Karluk	.3	150	Right side, one way
		●			9 Ave.	L Street	Karluk	1.2	20,000	Extend sidewalk along north side of Park Strip 2-way lane
●					3 Ave.	L Street	Ingra	1.4	1,300	
				●	Chester Creek	Minnesota Bypass	Eagle	2.1	84,000	8 ft. wide, 2-way path includes 3 bridges
				●	Chester Creek	Karluk	Northern Lights	1.5	174,000	8 ft. wide, 2-way path includes 1 bridge
				●	30 Ave. Couplet	A.R.R.	Lake Otis	3.5	*	8 ft. wide, 2-way path to be implemented by State Highway Department
	●				Northern Lights	Lake Otis	Boniface	2.3	80,000	shoulders require widening and paving
●					Forest Park Dr.	Northern Lights	A.R.R.	.8	700	
				●	C Street	Diamond Blvd.	36 Ave.	2.7	40,000	To be implemented by G.A.A.B. - D.F.O.
		●			C Street	36 Ave.	30 Ave. Couplet	.5	10,000	
			●		Arctic Blv. 17 Av.	30 Ave. Couplet	E Street	1.3	27,000	street should be widened and repaved could be accomplished as part of street improvement
			●		E Street	17 Ave.	9 Ave.	.5	1,375	
●					Eagle	30 Ave. Couplet	Chester Creek	.6	550	street requires partial paving could be accomplished as part of street improvement
			●		Karluk	Chester Creek	5 Ave.	1.2	1,800	
●					15 Ave. Area	A.R.R.	Minnesota Bypass	.4	200	
3.7	2.3	1.7	3.0	9.8				20.5	\$ 441,175	

\*cost not included

Table 3

PHASE					II									
CLASS					LOCATION			DISTANCE	PROPOSED MODIFICATIONS & IMPROVEMENTS	COST ESTIMATE	REMARKS			
I	IIA	IIB	IIC	III	SECTION	FROM	TO							
					Bootlegger Cove	5 Ave.	Chester Creek	1.0		480				
					Trail	Chester Creek	Hillcrest	.4	widening of existing path to 8 ft.	18,000				
					Hillcrest Drive	Forest Park Dr.	West High School	.3		1,100				
					Wisconsin	Northern Lights	Int. Airport Rd.	1.6	street requires widening and paving	10,500	could be accomplished as part of street improvement			
					Int. Airport Rd.	Spenard Road	C St.	1.8		*	to be implemented by State Highway Dept.			
					Northwood	Int. Airport	46 St.	.5		3,500				
					46 St.	Northwood	A.R.R.	.3		1,800				
					Jewel Lake Rd.	Spenard Road	Raspberry	1.5	shoulders should be widened & paved, lower speed limit for trucks	35,500				
					Raspberry Road	Jewel Lake Rd.	Sand Lake Road	1.0	lower speed limit for trucks	1,500				
					Sand Lake Road	Raspberry	Dimond Blvd.	1.5	lower speed limit for trucks	2,250				
					Dimond Blvd.	Sand Lake Road	Jewel Lake Rd.	1.0	lower speed limit for trucks	1,500				
					Dimond Blvd.	Jewel Lake Rd.	Campbell Creek	.8	shoulders require widening & repaving, lower speed limit for trucks	19,000				
					Campbell Creek	Dimond Blvd.	C St.	1.7	8 ft. wide, 2-way	68,000	to be implemented by G.A.A.B. Div. of Parks & Recreation			
					Sewer Line Easement	Jewel Lake Rd.	Campbell Creek	2.2	8 ft. wide, 2 way	30,900	utilize existing gravel base			
					Dimond Blvd.	C St.	Lake Otis Pkwy.	2.0	shoulders require widening & paving	47,000	contingent upon traffic light or grade separated interchange at New Seward Highway.			
					Abbott Rd.	Lake Otis Pkwy.	Service-Hanshaw	2.0	shoulders east of Abbott Loop require widening & paving	25,000				
					Lake Otis Pkwy.	Abbott Road	Northern Lights	4.2	portion of shoulders require widening & paving	76,000	possible participation by State Hwy. Dept. for section between Tudor & Northern Lights			

\* cost not included

CLASS					LOCATION			DISTANCE	PROPOSED MODIFICATIONS & IMPROVEMENTS	COST ESTIMATE	REMARKS
I	IIA	IIB	IIC	III	SECTION	FROM	TO				
					Lake Otis Pkwy.	Northern Lights	15 Ave.	.9		\$ 1,350	
					New Seward Highway	Diamond Blvd.	North of 36 Ave.	3.0		95,000	
					North of 36 Ave.	New Seward Highway	Old Seward Highway	.1		3,000	2-way path
					Old Seward Highway	North of 36 Ave.	30 Ave.	.5		9,600	
					Tudor - 44 Ave.	Lake Otis	C St.	1.6	shoulders east of New Seward Highway require widening	17,850	
					Northern Lights	Boniface	Muldoon	1.6	street should be paved with wide shoulders	4,200	could be accomplished as part of street improvement
					Boniface	DeBarr	Tudor	2.0	improvement of Boniface should include underpass at Chester Cr.	*	to be implemented by State Highway Department
					DeBarr	Muldoon	Airport Hts. Rd.	3.0		*	to be implemented by State Highway Department
					15 Ave.	Airport Hts. Rd.	E St.	2.6	consider lowering speed limit	9,200	
					Northern Lights	Forest Park Dr.	Earthquake Park	2.0	shoulders require widening and paving	47,000	
					9 Ave.	L St.	P St.	.4		700	
					Goose Lake			.5		24,550	
					Mt. View Area	Mt. View Elem. Sch.	Commercial Drive	1.0		480	
					Commercial Drive	Bragaw	Buttress Haul Rd.	.1	shoulder(s) require widening and paving	2,280	
					Buttress Haul Rd.	Commercial Drive	1 Ave.	1.3	shoulder(s) require widening and paving	29,640	
					1 Ave. Orca	Buttress Haul Rd.	Ingra	.5		480	
					Tudor - Muldoon	Glenn Highway	Lake Otis	6.5		*	to be implemented by State Highway Dept.
2.9	21.1	.1	6.2	21.1				51.4		\$ 587,560	

\* cost not included

Table 4

PHASE					III									
CLASS					LOCATION			DISTANCE	PROPOSED MODIFICATIONS & IMPROVEMENTS	COST ESTIMATE	REMARKS			
I	IIA	IIB	IIC	III	SECTION	FROM	TO							
	●				Int. Airport Rd.	Spenard Rd.	Airport & area north	2.5		\$ 24,000	include section north to Northern Lights along Lake Hood			
				●	A.R.R. R.O.W.	Northern Lights	Campbell Creek	2.0	possibly include physical barrier between path & tracks	81,500	one side of R.O.W. only			
				●	Campbell Creek	C St.	Campbell Airstrip	6.5	include underpass at New Seward Highway	260,000	to be implemented by G.A.A.B. Div. of Parks & Recreation			
				●	Campbell Airstrip	Campbell Creek	E. 68 Av. & Tudor	1.3		39,850				
●					E. 68 Ave.	BLM	Lake Otis Pkwy.	1.1		850				
				●	Chester Creek	Karluk	Eagle	.4	include underpass at Gambell	16,400	Underpass at Gambell to be installed by State Hwy. Dept.			
				●	Russian Jack	Jack Springs Park		.6		24,000				
				●	North Chester Creek	Northern Lights	Rus. Jack Spr. Park	1.7		69,400				
				●	South Chester Creek	Northern Lights	Muldoon	5.0		203,000				
	●				44 Ave.	A.R.R. R.O.W.	C St.	1.2		1,000				
				●	Glenn Hwy.	Karluk	Eagle River Rd.	10.0		*	to be implemented by G.A.A.B. & State Hwy. Dept.			
				●	Eagle River Rd.			9.0		*	to be implemented by State Highway Dept.			
●					Birch	Service-Hanshew	O'Malley	1.0		480				
	●				O'Malley	Birch	New Seward Hwy.	2.7		61,500				
				●	New Seward Hwy.	O'Malley	Dimond Blvd.	1.5		60,000				
●					Bragaw	Commercial Drive	Northern Lights	1.7		820				
3.8	6.4	0	0	38.0				48.2		\$ 842,800				

\* cost not included



Separate bike paths should be a minimum of 6 feet wide, where possible, and have a vertical clearance of 8 feet. They should be surfaced with asphalt over a gravel base. Other surface treatments such as seal coat, slurry or cold mix should be analyzed for their suitability for paving of bikeways. This would not preclude in areas of special soil conditions the use of other methods of bikepath construction such as timber planks or "boardwalks". In addition, consideration might be given to a well-prepared and maintained gravel or dirt surface for some bicycle paths within parks, greenbelts or large open space areas. This alternative surface would allow a reduction in the estimated cost of bicycle path construction for portions of the overall trail system.

The bicycle is a much more spatially efficient vehicle than the auto. Fifteen bikes can be parked in the same space as one automobile (typical auto parking spot is 9' x 20'). One disadvantage, however, is that bicycles are much more easily stolen than autos. Lockable racks must be provided in those areas where a cyclist might be absent from the immediate area of his cycle. Nature study areas, recreation facilities, and business districts and public facilities and office buildings are some of the areas at which these racks must be provided. For instance, every block or second block in the Central Business District should have a designated bicycle parking area. The cooperation of local businesses should also be enlisted to insure the provision of adequate bicycle parking facilities.

It is recommended that the grade for any bikeway be generally less than 8% in slope. For relatively short distances (300-500 ft.), however, the grade

might be as much as 20%. Grades steeper than this or over longer distances are difficult to negotiate on a bicycle and should be discouraged.

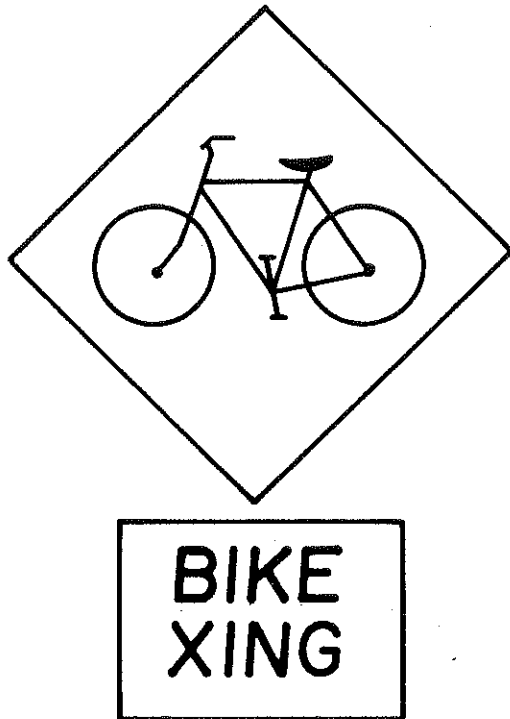
Consideration might be given to the provision of bikeway lighting along certain segments of the bikeway system which could not utilize existing street lighting. However, the long daylight hours in Alaska's summers, when most bicycle riding will take place, might lessen the justification of expenditures for a bikeway lighting system. Because of a limited availability of funds this plan does not propose lighting of the trail system at this time.

#### REST AREAS

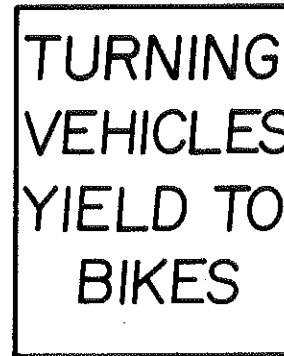
Rest areas should be provided, where possible, at regular intervals along the route. These areas should be positioned to allow for adequate rest for cyclists yet must be far enough apart so they are economically feasible. A distance of two to three miles should be adequate to accommodate individuals, especially the older, or less physically fit cyclist. Where possible, areas of natural value should coincide with the rest areas. These may include exceptional views, historic areas, or points where nature study areas can be developed. A more elaborate stop in the outlying areas might consist of a shelter from the weather, picnic table, fireplace, garbage disposal, sanitary facilities and bicycle racks. The norm, however, should consist of no more than a minimal weather shelter, bench and bike rack. Consideration should be given to combining rest areas and bike racks with bus stops so that bicycle and bus might be utilized together for commuting or traveling.

Signing - Route signing must be carefully done to provide adequate information to the cyclist and warnings for both the cyclist and motorist. Where feasible, signs should be placed on existing sign standards to prevent cluttering the streets with signage. Illustrated below are four bicycle signs that could be used in the bicycle route system. Each sign has a particular use and location as indicated.

The bicycle "XING" sign is a nationally approved warning sign for placement on a street or highway just in advance of a point where an officially designated bicycle trail crosses the street or highway. Its finish of black on a yellow background should also be reflectorized for night use. Because it is a warning sign, its shape is that of a diamond.



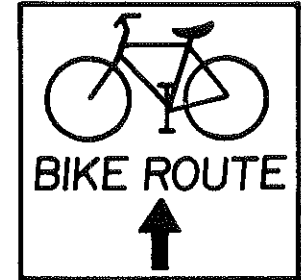
The "TURNING VEHICLES YIELD TO BICYCLES" sign would be located immediately adjacent to an on-street bicycle lane at major cross streets and one-way cross streets. This informational sign would alert motor vehicles as to the bicycles' right-of-way through the intersection. Its finish will be black lettering on a white background.



The "BIKE LANE ONLY" sign will be located immediately adjacent to an on-street bicycle lane. It is an informational sign to motor vehicles as well as to bicycles. Its finish will be black lettering on a white background.



The "BIKE ROUTE" sign is a nationally approved sign for marking an officially designated bicycle route, appropriate where a trail is separate from a street or highway and where a trail may be routed on selected roads or streets. Its finish of white on a green background can be reflectorized for night use.



Painting - All on-street bicycle lanes, as well as all intersections involving either an on-street or off-street bicycle route, will require various pavement markings of a bright white paint. These markings will aid both the bicyclist and motorist in safely negotiating an intersection. A 5" white strip will separate an on-street bicycle lane from the automobile lanes. Bicycle street messages (stencils) will also be provided for additional marking of lanes and/or paths. These street messages will be located at the beginning of each block in the direction of the bike lane.



FIG. 15

See Figure 16 for design of typical rest area and shelter along bicycle paths.

## BICYCLE REGISTRATION

For any bicycle program within a community to be successful there is a need for an effective means of registration. Only a very small proportion of the total number of bikes in the Anchorage area have been registered. At present, people see no tangible benefits from registration. Yet, if a major part of a bicycle registration fee were to go specifically to improvement of bikeways, there might be an incentive to register bicycles. Uniform registration would also aid in recovering stolen bikes, identification of an injured driver and possibly expedite medical assistance.

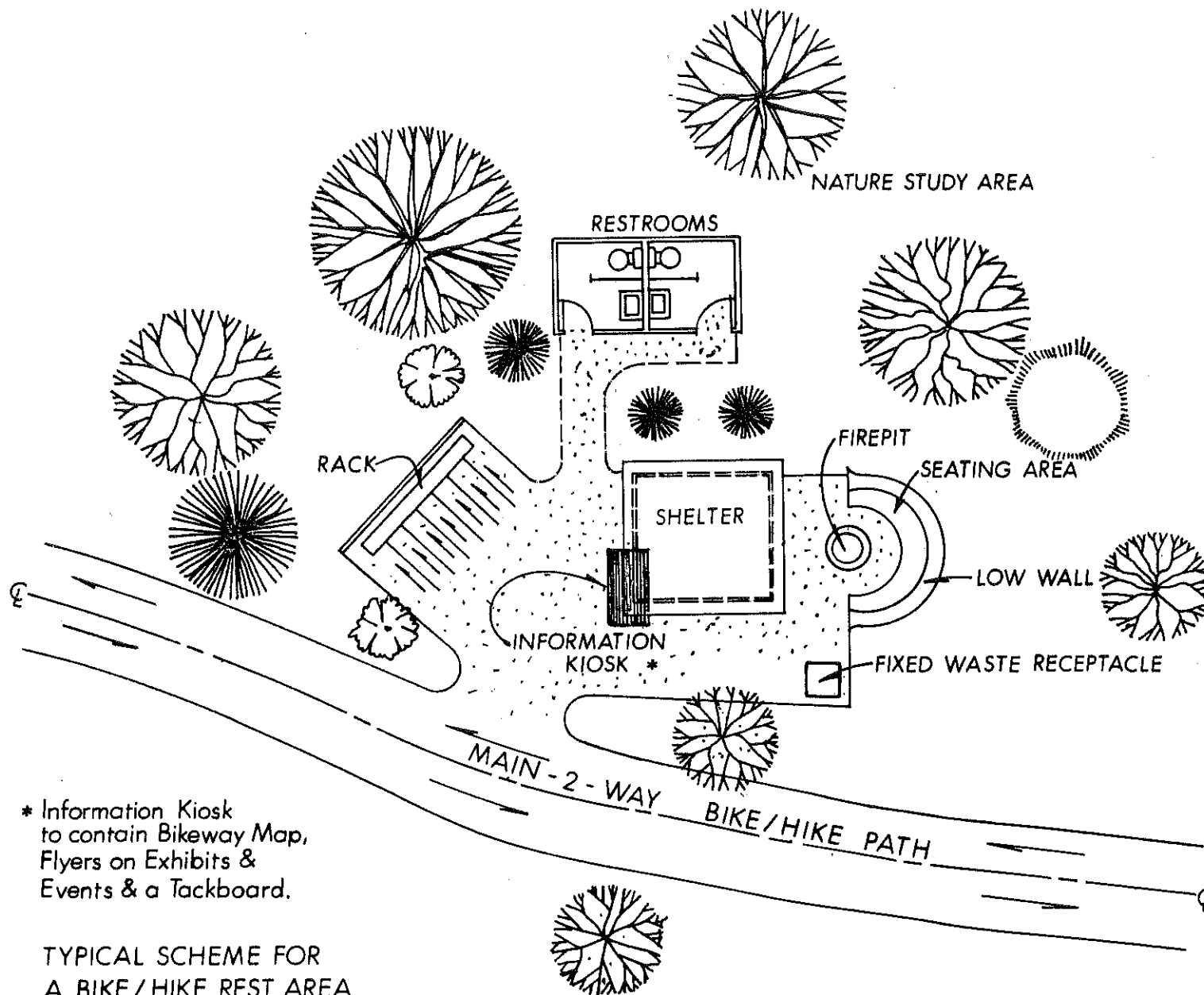
An investigation was made concerning the possibility of enacting and enforcing borough-wide bicycle ordinances. The possibility of doing this is somewhat deterred by the fact that the Borough presently does not have police powers (except within the Spenard service district) and will probably not have them in the near future. This could make the enforcement of ordinances and a mandatory system of bicycle licensing an impracticability for the present time because of legal complication. Moreover, it has been the experience of other communities that citizens, for the most part, are reluctant to pay a fee, even if minimal, for a purpose from which they see no tangible benefits. Bicycle ordinances, too, seem to be minimally enforced, as limited police manpower is directed toward problems deemed more important.

One possible alternative which might be given consideration is requiring a city bicycle license for anyone riding within the City of Anchorage, even if that person resides outside the city limits. At the present time anyone living outside the city can purchase a city license if they so desire. This approach does not seem feasible because of the enforcement problems involved.

Because of these factors, two proposals are recommended. First, it is suggested that a list of "rules of the road" for bicyclists be adopted for areas of the Borough outside the limits of the City of Anchorage. These would consist primarily of provisions from the existing ordinances that have been adopted by the City (Article XVIII, Sec. 19-18.01 through 19-18.10) with a few suggested changes. The ordinances and proposed modifications are included at the end of this section and within the Appendix.

Second, rather than institute a bicycle licensing system for the Borough, or utilize the present city system, a program of voluntary registration should be conducted by the Borough Division of Parks and Recreation, Department of Environmental Quality. The description and serial numbers of all bikes registered would be kept on file. The possible registration fee might consist of \$2.00 to \$3.00 per year, with \$1.00 to \$2.00 of this amount allocated into a fund specifically earmarked for the development, maintenance or signing of bicycle lanes, routes and paths in the Borough area. It is also recommended that the City of Anchorage increase their fee to this amount with \$1.00 to \$2.00 also allocated into a bikeway development fund.





\* Information Kiosk  
to contain Bikeway Map,  
Flyers on Exhibits &  
Events & a Tackboard.

TYPICAL SCHEME FOR  
A BIKE/HIKE REST AREA

SCALE: 1" = 10'

FIG. 16

However, if bicycling is to be encouraged, the fees from registration will obviously have to be nominal. There would then be two programs: (1) a continuation of compulsory licensing by the City for its residents, and (2) a voluntary registration program for the remainder of the Borough. At which time an areawide police and law enforcement system is established the two programs should be integrated into one areawide licensing and enforcement system. Both programs, however, initially would have the advantage of offering a real incentive, the provision of safe and convenient bikeways. It is hoped that such a program, by producing tangible results, would encourage widespread participation. (The Borough could issue the registrants a sticker which would have a registration number and a phrase such as "I support bikeways").

Collection of registration fees should be tied with a method of making the use of the fees clearly accountable; citizens should be able to readily see how a portion of their fees are being put to use. However, bikeway construction from registration fees as a source of funds should not be considered too significant, as the administration of a registration plan will likely require a good portion of the funds taken in.

It should be pointed out that this program, if implemented, would be unique because it would rely upon the voluntary cooperation of bicycle riders and would help bring about a comprehensive bikeway system, partially with the support of the users of the system. The greater the number of registrants, the more funds that would be available for development. In addition, consideration might be given to establishing speed limits for bike paths as the new 10-speed bikes can be

made to easily reach a speed that would make it dangerous for riders and pedestrians as well.

#### CITIZEN PARTICIPATION

A major component of the process of planning and providing bikeways in the community consists of a full-scale program of citizen participation. Participation should be actively solicited with respect to planning, funding and implementation.

A program of participation in funding is proposed in the section, REGISTRATION. Foundations have already been laid for a mechanism of participatory planning by the formulation of the "Bike Day Committee" in Anchorage. This should be supplemented by a program of dialogue in schools, agencies and organizations and via various communications media.

Individuals and groups should also have available a means by which to become physically involved in implementation. Depending upon the type of bikeway to be constructed, there could be techniques to allow people to help designate lanes, routes or paths or rest areas. For example, community groups could check out graphic stencils or signs from the Borough Parks Department and be shown where and how to install them. Shelters or benches could be of a simple enough design that would permit construction by citizens. In addition, small plaques could be attached to identify the sponsoring party.

Such a program, by actively involving citizens, would contribute to a real sense of participation in community improvement.

## CHANGES IN CITY OF ANCHORAGE TRAFFIC CODE

It is suggested that one addition be made to the Traffic Code of the City of Anchorage:

(1) It shall be unlawful for motorcycles, automobiles or other motor-driven vehicles (except for emergency and public maintenance vehicles) to be operated on an officially marked bicycle lane or bicycle path. This does not preclude a designated bicycle route, path or lane from being used for emergency parking.

## BIKEWAYS - A NEW COMMUNITY DIMENSION

According to the Bicycle Institute of America, bicycle popularity is at an all-time high in the United States with an estimated 61 million pedal-pushing Americans. The Athletic Institute calls cycling the nation's number one participation sport, and a recent Department of the Interior study showed that bicycling has grown faster than any other summer-time activity-- up 150% since 1960. In fact, studies indicate that in 1972 in the United States, bicycles outsold automobiles.

Along with this increased popularity has been the dramatic growth of marked and signed bicycle routes, paths and trails. The nation's first bikeway called a "safety route" opened in Homestead, Florida in 1962. Today, hundreds of communities across the country have identified streets leading to and from schools, parks, recreation areas and points of scenic or historical interest as official bikeways. In addition, these bikeways are well-marked to remind motorists that the route he is following has been designated to be shared with bicycles.

The bikeway concept is so important to the future recreation needs of a community that it has been endorsed by the President of the United States, key governmental leaders, medical and recreational authorities around the country. Bikeways can add an important new dimension to community development.



## APPENDIX



CITY OF ANCHORAGE TRAFFIC CODE

ARTICLE XVIII, Operation of Bicycles and Play Vehicles

Sec. 19-18.01 Effect of regulations.

(a) It is a misdemeanor for any person to do any act forbidden or fail to perform any act required in this article.

(b) The parent of any child and the guardian of any ward shall not authorize or knowingly permit any such child or ward to violate any of the provisions of this act.

(c) These regulations applicable to bicycles shall apply whenever a bicycle is operated upon any highway or upon any path set aside for the exclusive use of bicycles subject to those exceptions stated herein.

Sec. 19-18.02 Traffic laws apply to persons riding bicycles.

Every person riding a bicycle upon a roadway shall be granted all of the rights and shall be subject to all of the duties applicable to the driver of a vehicle by this act, except as to special regulations in this article and except as to those provisions of this act which by their nature can have no application.

Sec. 19-18.03 Obedience to traffic-control devices.

(a) Any person operating a bicycle shall obey the instructions of official traffic-control devices applicable to vehicles, unless otherwise directed by a police officer.

(b) Whenever authorized signs are erected indicating that no right or left U turn is permitted, no person operating a bicycle shall disobey the direction of any such sign, except where such person dismounts from the bicycle to make any such turn, in which event such person shall then obey the regulations applicable to pedestrians.

Sec. 19-18.04 Riding on bicycles.

(a) A person propelling a bicycle shall not ride other than upon or astride a permanent and regular seat attached thereto.

(b) No bicycle shall be used to carry more persons at one time than the number for which it is designed and equipped.

Sec. 19-18.05 Clinging to vehicles

No person riding upon any bicycle, coaster, roller skates, sled, skis, or toy vehicle shall attach the same or himself to any vehicle upon a roadway.

Sec. 19-18.06 Riding on roadways and bicycle paths.

(a) Every person operating a bicycle upon a roadway shall ride as near to the right side of the roadway as practicable, exercising due care when passing a standing vehicle or one proceeding in the same direction.

(b) Persons riding bicycles upon a roadway shall not ride more than two abreast, except on paths or parts of roadways set aside for the exclusive use of bicycles.

(c) Wherever a usable path for bicycles has been provided adjacent to a roadway, bicycle riders shall use such path and shall not use the roadway.

Sec. 19-18.07 Riding on sidewalks.

(a) No person shall ride a bicycle upon a sidewalk within a business district.

(b) The City Traffic Engineer is authorized to erect signs on any sidewalk or roadway prohibiting the riding of bicycles thereon by any person and when such signs are in place no person shall disobey the same.

(c) Whenever any person is riding a bicycle upon a sidewalk, such person shall yield the right of way to any pedestrian and shall give audible signal before overtaking and passing such pedestrian.

Sec. 19-18.08 Parking.

No person shall park a bicycle upon a street other than upon the roadway against the curb or upon the sidewalk in a rack to support the bicycle or against a building or at the curb, in such a manner as to afford the least obstruction to pedestrian traffic.

Sec. 19-18.09 Carrying articles.

No person operating a bicycle shall carry any package, bundle or article which prevents the driver from keeping at least one hand upon the handle-bars.

Sec. 19-18.10 Lamps and other equipment on bicycles.

(a) Every bicycle when in use at nighttime shall be equipped with a lamp on the front which shall emit a white light visible from a distance of at least 500 feet to the front and with a red reflector on the rear which shall be visible from all distances from 100 feet to 600 feet to the rear when directly in front of lawful lower beams of head lamps on a motor vehicle. A lamp emitting a red light visible from a distance of 500 feet to the rear may be used in addition to the red reflector.

(b) No person shall operate a bicycle unless it is equipped with a bell or other device capable of giving a signal audible for a distance of at least 100 feet, except that a bicycle shall not be equipped with nor shall any person use upon a bicycle any siren or whistle.

(c) Every bicycle shall be equipped with a brake which will enable the operator to make the braked wheels skid on dry, level, clean pavement.

Sec. 19-18.11 License required.

No person who resides within this city shall ride or propel a bicycle on any street or upon any public path set aside for the exclusive use of bicycles unless such bicycle has been licensed and a license plate is attached thereto as provided herein.

Sec. 19-18.12 License application.

Application for a bicycle license and license plate shall be made upon a form provided by the city and shall be made to the Chief of Police. An annual license fee of \$1.00 shall be paid to the city before each license or renewal thereof is granted.

Sec. 19-18.13 Issuance of license.

(a) The Chief of Police, upon receiving proper application therefor, is authorized to issue a bicycle license which shall be effective until the next succeeding first day of June.

(b) The Chief of Police shall not issue a license for any bicycle when he knows or has reasonable ground to believe that the applicant is not the owner of or entitled to the possession of such bicycle.

(c) The Chief of Police shall keep a record of the number of each license, the date issued, the name and address of the person to whom issued, and the number on the frame of the bicycle for which issued, and a record of all bicycle license fees collected by him.

Sec. 19-18.14 Attachment of license plate.

(a) The Chief of Police upon issuing a bicycle license shall also issue a license plate bearing the license number assigned to the bicycle, the name of the city, and the calendar year for which issued.

(b) The Chief of Police shall cause such license plate to be firmly attached to the rear mudguard or frame of the bicycle for which issued in such position as to be plainly visible from the rear.

(c) No person shall remove a license plate from a bicycle during the period for which issued except upon a transfer of ownership or in the event the bicycle is dismantled and no longer operated upon any street in this city.

Sec. 19-18.15 Inspection of bicycles.

The Chief of Police, or an officer assigned such responsibility, shall inspect each bicycle before licensing the same and shall refuse a license for any bicycle which he determines is in unsafe mechanical condition.

Sec. 19-18.16 Renewal of license.

Upon the expiration of any bicycle license the same may be renewed upon application and payment of the same fee as upon an original application.

Sec. 19-18.17 Transfer of ownership.

Upon the sale or other transfer of a licensed bicycle the licensee shall remove the license plate and shall either surrender the same to the Chief of Police or may upon proper application but without payment of additional fee have said plate assigned to another bicycle owner by the applicant.

Sec. 19-18.20 Alteration or mutilation of serial number or registration.

It shall be unlawful for any person to willfully or maliciously remove, destroy, mutilate or alter the number of any bicycle frame licensed pursuant to this section. It shall also be unlawful for any person to remove, destroy, mutilate or alter any license plate, seal or registration card during the time in which such license plate, seal or registration card during the time in which such license plate, seal or registration card is operative. Provided, however, that nothing in this section shall prohibit the Police Department from stamping numbers on the frames of bicycles on which no serial number can be found, or on which said number is illegible or insufficient for identification purposes.

Sec. 19-18.21 Penalties.

Every person convicted of a violation of any provision of this article shall be punished by a fine of not more than one hundred dollars or by removal and detention of the license plate from such person's bicycle for a period not to exceed sixty days.



## SAFETY HINTS

Observe traffic signals. Stop at stop signs. Obey traffic lights and all other rules of public rights-of-way. Remember, bicycles are vehicles, and traffic regulations apply to both automotive vehicles and bikes.

Watch for turning cars and opening doors.

Look both ways at intersections before crossing.

Watch for cars entering traffic lanes.

Ride in an orderly fashion; don't "horse around" or use the bicycle for "clowning".

Maintain bicycles in a safe working order.

Install reflectors and a light for night riding.

Wear light-colored clothing.

Use bikeways where they are available.

When on streets or shoulders, ride single file when with a group.

Use proper hand signals.

ORGANIZATIONS TO CONTACT

Bicycle Institute of America  
122 East 42nd Street  
New York, New York 10017

American Youth Hostels  
National Headquarters  
20 West 17th Street  
New York, New York 10011

The Anchorage "Bike Day" Committee  
913 West 6th Avenue  
Anchorage, Alaska 99501

The League of American Wheelmen  
5645 North Talman  
Chicago, Illinois 60645

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Department of Public Works, G.A.A.B.

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