



Bicycle Plan Implementation Report

IMPLEMENTATION REPORT
FOR THE
PROPOSED BICYCLE PLAN

DEPARTMENT OF CITY PLANNING

REVISED JULY, 1976

Accession # 390

INTRODUCTION AND SUMMARY

The Bicycle Plan proposes a number of policies and programs regarding bicycling in the City of Los Angeles, and describes a Citywide system of routes totalling approximately 600 miles. The Plan recommends eight programs deemed necessary to improve several aspects of bicycling during the life of the Plan. These are basically concerned with the safety of the bicyclist, minimizing the conflict with motor vehicles, encouraging the replacement of auto trips with bike trips wherever feasible and providing the necessary facilities.

By principle and tradition, the Plan itself does not address cost, sources of funding, nor the techniques or specific responsibilities of implementation. This report recognizes the need for an evaluation of such functions, and presents for consideration such information as is pertinent and available. Cost estimates are particularly difficult for the proposed programs, since some of these activities are a part of normal departmental responsibilities and functions. Implementation of all such programs which have a cost to the City will, of course, be subject to Council approval and control either through the normal budget process or by special appropriation.

With the sources of funding described herein and with a construction rate on the order of 25 miles of bicycle routes per year, the implementation cost to the City, of the Bicycle Plan, is nominal.

ACCOMPLISHMENTS TO DATE

CONSTRUCTION

Implementation of certain portions of the Bicycle Plan has in fact been in effect for several years. The cost experience provides at least a partial basis for projecting future expenditures. In the construction category, the following bicycle route projects have been completed:

NAME	TYPE	APPROX. LENGTH (MILES)	IMPLEMENTATION RESPONSIBILITY
Highland Park	Signs Only	9.8	Traffic Dept. /Bu. Eng.
Woodland Hills	Signs Only	4.3	Traffic Dept. /Bu. Eng.
San Vicente	Street Lane	1.3	Traffic Dept.
Venice Beach	Off-Street Path	1.4	Rec. and Parks Dept.
Dockweiler Beach	Off-Street Path	3.5	Rec. and Parks Dept.
Sepulveda Basin I	Off-Street Path	2.8	Bu. Engr/Rec. Parks
Sepulveda Basin II	Off-Street Path	4.7	Bu. Engr/Rec. Parks
Brown's Creek	Off-Street Path	<u>1.5</u>	Rec. Pks/Cnty Flood Control
TOTAL		29.3	

Construction Cost Experience

Construction costs, including design but not including land acquisition can be put in terms of dollars per mile, using 1975 dollars and averaged costs, based on Los Angeles bikeway design and construction over the past few years. For off-street bike paths 10 ft. to 14 ft. wide using concrete the average unit cost is approximately \$88,000 per mile. Striped lanes in existing streets, including removal of old marking, placement of new street marking and installation of signs have had a unit cost of approximately \$5,500 per mile. Routes marked with signs only cost approximately \$650 per mile. It should be recognized that cost projections using such data are subject to variations resulting from future dollar values, materials cost and labor cost. In some areas right-of-way may need to be acquired; these costs have not been included due to wide variations in land and easement cost, and lack of information at this time on exact location. All of these variables will probably tend to increase predicted cost of construction.

The cost control of construction will be by means of the Capital Improvement Program; bike lanes in streets may be implemented by Council resolution. In any case such work will require City Council approval.

The construction rate of bicycle routes and facilities to date has been limited to that which could be accomplished with available funding. This has included some City contribution on a matching basis. The total cost in any one year varies considerably and is dependent on the ratio of off-street path length to street lane length as well as total length and local construction conditions, to name a few important factors. It is expected that the City-wide route system will have 35% of its total length in off-street bike paths with the balance in street routes. Of the 65% (390 Mile) of planned street routes, approximately 310 miles or 52% of the system will be signs only. The total bike route construction cost to date is approximately \$1.70 million.

PROGRAMS

In the programs category, the Los Angeles Unified School District, and the Los Angeles Police Department have conducted classroom bicycle safety training. This work was aimed basically at elementary school students and has been on a limited basis. The LAPD team, using films and exhibitions, visits each elementary school periodically.

Additionally, there have been several privately sponsored bicycle "clinics", where bicycles are inspected and adjusted for proper fit and operation. These "clinics" may include obstacle course competition and on-the-bike coaching. Usually shopping center parking lots and other facilities are made available as a public service. Participants have included: Auto Club of Southern California (bike examinations) USC Inst. of Traffic Safety (DOT Contract), PTA, Optimists and other service clubs, police and schools, bicycle clubs and associations.

The Department of Recreation and Parks carried out a six-session pilot program in bicycle safety training during 1975, making use of the City's recreation centers. These included films, coaching and competition.

In the matter of design criteria and standards, the Bureau of Engineering is continuously reviewing and evaluating guidelines presently in use in the United States and some foreign countries. An example of this activity is the nationwide survey conducted in 1974/75, jointly by the Bureau and the American Public Works Association. These criteria and standards are compared with those proposed, for example, by the Institute of Transportation and Traffic Engineering, and current City practices according to needs. Such on-going effort is in the best interest of establishing appropriate City standards.

With regard to legal evaluation, members of the Bicycle Advisory Committee and affiliated bicycling organizations have monitored State legislature proposals for several years. They have urged improvement in the motor vehicles code and the highways code, for recognition of the bicyclist's right to use public roadways, and matters pertaining to safety and equipment. The Chief Legislative Analyst regularly reviews State legislation for impact on the City. This procedure identifies legislation affecting bicycle ownership and operation and alerts City departments of the possible need to recommend City positions on any such bills.

PROGRAM COST AND RESPONSIBILITY

The Bicycle Plan recommends eight programs which are designed to assist the attainment of the Plan objectives. Since one or more City Departments may be involved with each program, they should be subject to Council approval on an individual program basis. In some instances the departmental activity will be liaison only, involving comparatively few labor hours. It is not anticipated that the City's participation in the proposed bicycle programs will require any significant expenditure for materials and/or equipment.

It should be emphasized that the activities described by the Plan programs generally fall within the existing responsibilities of various City departments and some programs are actually underway on a continuous, limited basis. However, some departmental activities may be proposed for expansion and such expansion should be interpreted as additional cost to the City. Cost control of programs can be by Department budget/authorized positions subject to Council approval. In the interest of clarity, each of the proposed programs will be repeated here, and discussed.

1. *Bicycle Education: Proper training for riders, drivers, and law enforcement people should be provided if bicycle involved accidents are to be minimized. The Los Angeles City School System should expand and continually improve bicycle safety training classes and programs. This effort should be coordinated with City activities and similar Regional and State programs. Competitive bicycle events should be encouraged as an organized sport in schools in the interest of improving bicycling skills. Private sponsorship of bicycle safety training sessions should be encouraged.*

The Los Angeles Unified School District is the lead agency for this program. Classroom training, making use of films, demonstrations, reading material and special lectures is the basic approach. It is still

on a volunteer basis for the teachers, and should be made a regular required subject at each grade level. This would entail additional funding within the Unified School District; the Los Angeles Police Department now participates in school safety training with approximately three officers on regular assignment, equivalent to approximately 500 labor hours per month. The Police Department estimates that this effort should be expanded to approximately 800 hours per month, since it now requires more than a year between school visits by the training team.

The Bureau of Engineering, along with the Traffic Department will actively participate in a separate "Bike Routes to School" program. The Department of Traffic and Recreation and Parks should at least maintain liaison with the school safety program. These Departments estimate an effort of approximately 40 hours per month for each department. The schools program could thus be aided with information on City bike routes, traffic needs and the advantage of bicycle use for personal transportation as an example. This program should be continuous.

2. *Safety Analysis: Accident data should be gathered and evaluated. This should yield recommendations for the improvement of training programs, and should assist in the formulation of safe design standards to minimize the hazards of bicycling.*

Bicycle involved accident data analysis should be a proportion of the total effort on traffic accidents. This program should be re-established.

3. *Legal Evaluation: Studies of existing laws, codes and regulations that affect the bicycle owner/operator should be made, resulting in recommendations for improvement. The need for rider licensing should also be evaluated. The problem of bicycle theft should be analyzed, and recommendations made for minimizing loss. Input will thus be provided for the training courses under "bicycle safety".*

The Lead Agency for Legal Evaluation is the Los Angeles City Chief Legislative Analyst. The Citizens Bicycle Advisory Committee also follows State and Federal legislation affecting bicycling, and usually takes a position on proposed measures. In the CLA activity, the program requirement is already handled as a continuing effort which needs no expansion, and amounts to approximately 5 hours/month. The Bureau of Engineering, Traffic Department and Police Department should also be involved in matters relating to licensing and theft prevention, at a level of 10 hours/ month each. This work should be advisory, with particular regard for proposed legislation. This activity should be accelerated for the first 5 years.

4. *Law Enforcement:* The Police Department should be encouraged to cite bicycle riders for traffic and code violations on the same basis as other vehicles using the public streets. Attention should be given the problem of citation consequences, so that the action taken will be appropriate for the age of the offender and the offense. The objective will be to improve the offender's safety habits.

Here the lead agency is the Police Department, and the established activity needs no expansion, only some redirection, which may be at the request of the Bicycle Advisory Committee, the appropriate Council Committees and the Traffic Department. There appears to be no City cost directly attributable to the Bicycle Plan.

5. *Design Standards:* Input from safety studies and operational data from existing bike routes, along with operating experience from other cities and other countries should be used to establish and update bike route design standards.

The lead agency is the Bureau of Engineering, with the Traffic Department and Recreation and Parks Department participating. The program is self-explanatory. The activity is not new to the departments involved, and does not appear to need expansion. Currently, design criteria and standards used are in accordance with the guidelines provided by the State Department of Transportation's Highway Design and Traffic Manuals. These are minimum guidelines which must be followed in order to qualify for a major portion of the external bikeway funding available. It is expected that the Bureau of Engineering will have an expenditure of approximately 20 hours per month on work related to bikeway standards with the other departments requiring approximately 5 hours per month each for their contributions. This work can be decreased to a maintenance level of effort after the first 5 years.

6. *Priority, Location and Type:* A task force comprised of representatives from the Bureau of Engineering, Department of Traffic, Department of Recreation and Parks, and the Planning Department should be established. This task force, with the advice of the Bicycle Advisory Committee, should recommend corridor priority, precise location, and type of bikeway within each segment.

The Bicycle Plan Route Map only shows corridors, so that precise location and type of bikeway need to be determined before construction. The Traffic Department has the basic responsibility for street traffic lanes, and the Department of Recreation and Parks has independent bike path construction capability, indicating the need for coordination. A preliminary prioritized listing of the proposed bikeway projects is prepared and reviewed annually. The Bureau of Engineering develops the project listing, and it is subsequently reviewed by the Task Force and Bicycle Advisory Committee prior to being processed through the normal capital programming procedures. The annual review process of the 5-year Capital Program determines project priorities based on funding availability and Council District input.

The Bureau of Engineering should be the lead agency and it is expected that they will expend approximately 60 hours per month, not including the meeting time required as a member of the Task Force. This task force may meet as often as once per week, for a meeting time of perhaps 2 hours. The actual time required will be dependent on the pace of authorized construction. For the purpose of this report it is assumed that individual department expenditures chargeable to the Plan will be 100 hours per month. This is a charge not previously encountered. This kind of effort should continue as long as construction is actually pursued.

7. *Publicity and Information:* A publicity program to encourage the use of bicycles for personal transportation, with particular emphasis on replacing automobile trips, should be undertaken. Media advertising should be used to some extent along with appropriate news releases to call attention to available bike routes, and the benefits of bicycling, and may cover such "how to" items as: carry a payload, equip a bike, prevent accidents, and prevent theft. Competitive events should be encouraged when they contribute to the objectives of this plan through publicity and safety education.

The participants are expected to be the Mayor's Office, the Bureau of Engineering, the Bicycle Advisory Committee, and the Department of Recreation and Parks, with the Mayor's Office probably taking the lead. The Bicycle Advisory Committee is already involved in promoting bicycle safety and in publicizing and encouraging competitive bicycling events. The City Engineer, in cooperation with the Interdepartmental Bikeway Task Force and the Automobile Club of Southern California, is presently involved in the preparation of a bicycle route map which will include rules of the road, bike riding tips and other pertinent information. With the exception of the Bureau of Engineering requiring about 120 hours per month for an initial two months to complete the maps, city time will probably be on the order of 5 hours per month for the City participants. The activities will include preparation of news releases, brochures, arrangements for spot TV films or tapes. Sponsors of production costs other than City cost might be bicycle manufacturing and sales organizations, and the Auto Club of Southern California. This program should be continuous.

8. *Implementation:* State and Federal legislation should be continually monitored to identify and evaluate those items which have the potential capability of funding City bicycle planning, facility design and construction. Appropriate applications for funding will be made. All other aids to Plan implementation, including private grants, donations, advertising, dedications, special use easements and manufacturers and sales organization sponsorships should be pursued. Dedication of trails right-of-way internal and adjacent to land development and improvement may be required.

This is a continuing activity already well established as a searching function for funding external to the City for many projects. The Bureau of Engineering is the lead agency since the majority of funding currently available is administered by SCAG and the City Engineer is the chairman of the FAU Technical Committee for SCAG. In addition to this important function, the overall implementation of the Bicycle Plan requires an overall, continuing coordinating and managing effort. Other participants are expected to be the Planning Department, Traffic Department and Recreation and Parks. The Engineering effort should be approximately 40 hours/month, with the other Departments needing an estimated 10 hours/month each. Dedications for bikeways (including improvements) may be obtained at no cost to the City where an adopted bike route passes through or adjacent to land development or redevelopment. This program should continue for the duration of the Plan.

Section 21207 of the Vehicle Code gives the legal responsibility of providing for bike lanes to the Traffic department.

Authority to stripe a lane for bike use originates with a Council Resolution introduced by the Councilman representing the district where the lane is to be striped.

Some Bikeways (Sepulveda Basin) built to date have been a part of CIP street projects, go out with the CIP work order and are funded with the rest of the project.

The cost of the departmental activities attributable to the 8 suggested programs on the foregoing assumptions can be expected to average 1500 hours per month.

SOURCES OF FUNDING

Fortunately, several sources of funding for bikeway planning and construction are available to the City which practically eliminate construction costs to the City at the current construction rate. These sources also make substantial contributions to salary costs. For example, the City Engineer's applications to SCAG for monies available through the provisions of State Senate Bill 821 yielded a total of over a million dollars from fiscal years 1974/75 and 1975/76. Of this, approximately \$100,000 was allocated for salaries (in Engineering, Traffic, Recreation and Parks and Planning) funding a total of five positions for bicycle planning and preliminary design. The balance, of over \$900,000 was allocated to design and construction of bikeways. Other State and Federal legislation has been proposed or is pending which may improve the future financing outlook.

LOCAL TRANSPORTATION FUND

The Local Transportation Fund is the major potential source of funding for the proposed bikeway system. This funding originates with a State sales tax on gasoline. A portion of revenues derived from this source (approximately \$142 million per year) is distributed to Regional Transportation Agencies throughout the state for allocation to local entities. After deducting administrative costs, 2% of the remaining

funds are set aside exclusively for bicycle and pedestrian facilities. The allocation to local jurisdictions is made according to the magnitude and priority of the projects proposed as well as by population formula. The City Engineer is responsible for the claim application to SCAG. Funds received by the City are accumulated in a special account designated the "Local Transportation Fund." Monies expended from this account are subject to direct Council authorization or as part of the Capital Programming process.

BICYCLE LANE ACCOUNT

The Bicycle Lane Account, established by provisions of SB 36, consists of \$360,000 set aside annually by the State Department of Transportation for bicycle facilities construction. Allocation of these funds is made by way of a grant and is in accordance with a prescribed schedule of priorities. The city has applied for and received grants from this source in the past. However, SB 244 (California Bikeways Act) recently enacted, but without necessary appropriation, authorizes some changes in the Bicycle Lane Account. Consequently, grants from this source are currently not receivable pending completion of the guidelines and procedures for implementation of SB 244. Depending on statewide project priorities there is a continuing potential for funding certain segments of the proposed Bikeway System from this source.

GAS TAX FUNDING

Gas Tax monies are a direct State tax on gasoline, and are available to cities for street transportation. These funds are apportioned among California cities according to their population. The State Controller has stated that Gas Tax funds may be applied to bikeway construction, but only where the bikeway is to be adjacent to a given street and where its construction would help to relieve congestion on that street. Even given the above limitations, there is potential for at least partial funding for a part of the proposed Bikeway System.

FEDERAL HIGHWAY ADMINISTRATION FUNDING

The Federal Aid Highway Act of 1973 allows continued use of Federal Aid Highway Program funds for bicycle facilities construction as an incidental feature of highway construction projects. There is no restriction as to the amount of funds which can be used. However, the bikeway must be within the highway right of way and constructed concurrently with the Federal Aid highway project.

The Act also allows use of Federal Aid highway funds for independent bicycle facilities construction provided that the facilities serve bicycle traffic which would normally desire to use a Federal Aid highway route. A state may spend up to \$2 million of Federal aid funds per year for such construction provided a nation wide total of \$40 million annually is not exceeded.

It should be noted that the Federal share is limited to 83% of project costs and moreover funds available under this Act are not reserved exclusively for bicycle facilities, but are in fact highway funds which

may be used for highways, bikeways and walkways. Use of these funds for highway improvements. Nevertheless, there is a potential for funding at least a part of the proposed Bikeway System.

US ARMY CORPS OF ENGINEERS

The Corps is currently engaged in a "Code 710 Cost sharing Program." Through this program, the Corps develops recreational facilities in rights of ways previously improved with Corps constructed flood control facilities. Project construction costs are shared on a 50-50 basis with the local sponsoring agency. Local projects proposed or recommended for the Code 710 Program are subject to Corps' district wide priorities. Moreover, projects are based on reasonable assurance (letter of intent) that the local sponsoring agency will enter into a contract with the Corps prior to construction and agree to assume the operation and maintenance responsibilities for the completed recreation area. Rights-of-way must be free of any encumbrances, or at least have a 50 year irrevocable lease for the proposed recreation development.

This type of funding would only have a limited application to our proposed Bikeway System. An example of the use of Federal funding for bikeway construction, the Tujunga Wash project is a landscaping and general improvement project which includes a bikeway. It was funded on a 50-50 basis with the County Flood Control District providing half of the money from their general fund and the Army Corps of Engineers providing the other half from Federal funds. This work is being accomplished within the city limits at no cost to the City.

CITY GENERAL FUND

The City of Los Angeles has a number of revenue sources that are not designated for a specific use as is for instance the Gas Tax monies. These specific monies, the bulk of which consist of property tax and business tax revenues, are all thrown into the General Fund. This fund can be used for any City purpose at the discretion of the City Council. There is some potential here for a portion of the Bikeway funding.

CAPITAL IMPROVEMENT PROGRAM

This is not per se a funding source for bikeway program, but it is the final step before implementation of the project. The various City departments each make up a list of projects proposed for CIP funding and submit it to the CAO. The City Administrative Officer and the Technical Committee for Capital Programming evaluate the individual projects as to cost/benefit, feasibility, need and fund availability among other things and derive a final list which becomes the Five Year Capital Program.

AIRPORTS AND HARBORS DEPARTMENT

These are revenue producing departments and as such, have the capability of implementing bikeways within their jurisdictions. Such expenditures are at the department's discretion, not subject to the City's

Capital Improvement Program process. These departments will have a rather limited participation in bikeways construction.

TIDELANDS OIL FUND

These monies are produced by State taxes and fees on coastal oil production. A portion is made available to municipalities for recreational facilities. This process yielded the major source of funding for the Venice and Dockwieler Beach bikeways, which were designed and constructed by the Department of Recreation and Parks. This work was independent of the City's Capital Improvement Project process.

Other sources of funding made use of by the Department of Recreation and Parks for bike path construction include: State Oil Bonus, State Land and Water Conservation, Federal Emergency Employment Act (construction labor) and a small proportion from the City General Fund (Council appropriation).

FUTURE FUNDING

Future funding is necessarily tied to the general condition of the economy, and because of its inflated condition, funds provided for highways in particular are not allowing the development of facilities to keep pace with the demand for these facilities. The condition is worsening each year and there is no relief in sight. Therefore, based on current information it must be assumed that most of the available transportation money will be needed to provide automobile related facilities and/or various forms of public transportation.

Recreational funds are a little more promising, but here again the bicycle is competing with other recreational needs for funding. The Code 710 money used by the Army Corps of Engineers as used on the Tujunga Wash improvement is a good potential tool for bikeways on Federal lands. It provides 50% financing for engineering, design, and construction of recreational facilities on existing Corps projects.

The Federal Land and Water Conservation grants are a potential for select projects. This program would provide money for bikeway projects extending through recreational areas, and as such might be applied in cases such as Griffith Park.

There are some funding sources for bikeways only. Senate Bill 244 is one of these, and looks promising. It is designed to help implement commuter bikeways and its provisions make funding available only to functional commuting facilities and their related hardware. (Parking facilities, signs, rest facilities, etc.) This bill provides matching funds with the applicant providing 10% of total construction costs. Senate Bill 244 was "chaptered" in September, 1975, with funding deleted by Governor. Funding may be restored by the State Legislature and Governor at a future date.

Senate Bill 821 will continue to provide 2% of the proceeds from the gasoline sales tax to be utilized for the development of Bicycle and Pedestrian facilities. This Bill also stresses the transportation rather than recreational

intent in providing for construction of Bikeways and Pedways. Bill 821 is a part of the "Local Transportation Fund" group of Bills so it, once again, is competing with other transportation modes for money.

Senate Bill No. 283, approved and "Chaptered" in September 75 makes part of the State Transportation Planning and Research Fund (in the amount of \$4,940,000) available to the Department of Transportation for the purpose of: a) construction of a commuter bikeway in each "County Group"; b) improving the Bikecentennial route. This bill also provides for state acquisition of abandoned railways, by condemnation if necessary, for local transportation needs. User agencies (City or County) would be required to reimburse the State the full transaction amount within three years. Rights of way acquired in this manner could be used for Bikeways.

In summary, there are funding sources available for bikeways, but they each contain strict limitations within their requirements. Each can be used for a part of the total Los Angeles Bikeway System, but none are all inclusive and most require either a specific function, working with another governmental agency or a fund matching system before they are allocated. None of these requirements are insurmountable however and the overall picture seems to be promising.

THE BENEFITS OF IMPLEMENTATION

In evaluating the costs and responsibilities of implementing the Bicycle Plan, one should also consider the expected results. With implementation we are buying certain benefits, and the basic comparison is cost vs. benefits.

To begin with, the sheer number of bicyclists now using City streets is worth consideration. They have a legal right to be there, with certain restrictions, but we find increasing conflict with motor vehicles. This is evidenced by letters to the editor* and bicycle involved accidents.** The basic difficulty in a freely shared right-of-way is a significant differential in speed, visibility, maneuverability, size, weight and operator protection between bicycles and motor vehicles.

Some measure of separation as proposed by the Plan seems essential. To ignore the needs of bicyclists is negligent; to bow to their every demand is impossible.

With the current widespread concern for energy conservation particularly in the field of transportation, the bicycle is a natural. With a bicycle functioning basically as a torque converting machine, the man/bicycle combination is the most efficient mode of transportation known.*** Further, the energy source, being human, is not directly dependent on limited source fuels.

* Los Angeles Times, August-September 1975

** Background Report, Page 16.

***S. S. Wilson "Bicycle Technology"
Scientific American

The Los Angeles Regional Transportation Study, a major 1976 project showed that out of at least 10 million daily auto trips made in Los Angeles, one-half were less than 3.5 miles long.**** This trip length (3.5 miles) is an easy bicycle ride, even for a novice. One can conclude that there is a good potential for replacing some of these short auto trips with bike trips. Suppose, for example, that 1% of the short trips are converted, and that the average length of these short trips is 1-1/2 miles. The number of affected trips is $(.01)(1,000,000) = 10,000$; the VMT = $1-1/2(10,000) = 15,000$. The amount of gasoline saved per day is therefore approximately 1,000 gallons in the City alone, from capturing just 1% of the short trips (less than median length).*

Not only is a distinct energy saving available as a benefit, but reduced VMT will reduce atmosphere pollutants due to auto emissions a proportional amount. There will also be a beneficial effect on ambient noise level and traffic congestion.

From the recreational point of view, bicycling provides a change of pace from the work-day routine that is remarkably convenient, since one can usually ride the local streets or residential neighborhoods with reasonable safety. Bike paths such as those along the beach front provide additional recreational opportunities.

Households find a direct economic benefit from the replacement of auto trips with bicycle trips, particularly when a second or third car is eliminated and replaced with a bicycle. This is evident from every cursory comparison of capital investment, maintenance and other operating costs.

The contribution of bicycling to good health has been much discussed and little disputed. It can require as vigorous an effort as one is willing to expend, or simply enough to keep moving. "Warm-up", a must for many sports is easily accomplished by beginning a ride at a slow pace. Dr. Paul Dudley White, heart specialist to presidents and an authority in his field, was recommending bicycling as a generally beneficial form of exercise long before the current boom in bicycling.

In summary, bicycling provides a number of benefits not only to the user, but also to the City. The Bicycle Plan is needed to at least minimize, if not eliminate, some disadvantages of bicycling while maximizing and capitalizing on the benefits. Since a large majority of Los Angeles residents are able to acquire and use bicycles, we can no longer consider bicyclists as a limited, special interest group. The staff position is that the benefits of this plan are, at least, worth the cost.

*The median trip length was 3.34 miles

BICYCLE PLAN PROGRAMS

Project	Agency Involved	Unit Hrs/Mo.	Source of Funding	Benefits
Bicycle Education	LAPD	800	Department Operational Fund	Classroom Training
	L. A. School Dist. Rec. and Parks BAC Pub. Interest	40	Personal Time	On-the-bike training = accident reduction Bike Safety Clinics
Safety Analysis	Traffic Dept. LAPD	20 20	Department Operational Fund	Bike Involved Accident Data Available
	USC Institute of Traffic & Sys. Management		Federal DOT	
Legal Evaluation	Chief Legis. Analyst	5	Department Operational Fund	Identity of proposed Legis. to improve bicycling and/or provide funding
Law Enforcement	LAPD	Cont.	Department Operational Fund	Encourage ticketing, improve consequence of citations and accident and theft reduction
Design Standards	Engineering Traffic	40	Department Operational Fund	
Priority and Type	Inter-Dept. Committee	140	Department Operational Fund	
Publicity and Information	Rec. & Parks Mayor's Office	10	Department Operational Fund	More people aware of facilities for, and capabilities of bikes

BICYCLE PLAN
CONSTRUCTION PROJECTS

	Bike Paths	Bike Lanes (In Streets)
Agency's Miles: Accomplishments Through Calendar Year 1975	Bur. of Eng. (7.5) Rec. and Parks (4.9) LAFCD and Corps of Engrs. (1.5)	Traffic Dept. 1.3
Average Use (Bikes per day)	Sepulveda Rec. Basin 917 Venice Beach Fr. 2400 Dockweiler 1870	San Vicente 670
Cost Per Mile	\$88,000	\$5,500
Total Cost Through 1975 Calendar Year = \$1,700,000		
Source of Funding	2% LTF, Aide to Hwys Federal) City General Funds Tidelands Oil	Operational Funds
Expected Cost Next 5 Years		53.9 miles = \$2,018,700
Expected Cost to Complete 600 Miles	2.2 million	18.5 million = \$20.7 million total

It is recognized that on City roadways, bicyclists have essentially the same privileges and responsibilities as motorists. However, in the interest of accident prevention, streets having heavy traffic volume in a confined space or streets carrying high speed traffic are not, in general, designated as Bike Routes. Alternate routes carrying less traffic and/or operating at lower speeds are so designated.

Bike Routes are designated in locations which are especially suited for recreational riding, since the proposed system is not only a part of the overall transportation system of the City, but also provides recreational facilities.

The Plan stresses safety and convenience. Accident prevention, through training, education, equipment, legislation, law enforcement, and Bike Route design should be of prime consideration. Competitive events under controlled conditions should be encouraged as an important part of safety training.

To the extent feasible, Bike Routes should be selected to complement other present and future transportation modes such as, but not limited to, the automobile, car pool, busses, commuter rail and rapid transit.

Bike Routes should be landscaped wherever feasible. Landscaping may be used to emphasize the separation from motor vehicle traffic and/or from pedestrian traffic. In addition, landscaping may be used to screen adjacent development, and in general, provide an attractive appearance as well as some shade for the riders. Rest areas, including lockable bicycle parking, telephone and educational material should be provided where feasible and appropriate.

CRITERIA

The following general criteria should be used in the selection of specific Bike Route locations and in the consideration of priorities for development:

- Bicycle trip demand, based on observed or estimated and projected volume, must be sufficiently high to warrant the costs of development.
 - Cost vs. available funding is influenced by the benefit to be gained from a particular Bike Route, but generally favors those Bike Routes that can be put into operation at minimum cost in existing rights-of-way. All scheduled street openings and widenings should be considered in this evaluation.
 - Impact on local neighborhoods and on the City as a whole should be considered.
 - Safety may best be enhanced by off-street locations. However, special treatment may be required where Bike Paths intersect a street.
 - Bike Routes should be located so as to minimize exposure of the bicyclist to exhaust fumes and excessive noise.
 - Individual Bike Routes should represent useable segments of the total planned Citywide grid system. This does not preclude local neighborhood route development, to serve schools for example.
 - Bike Routes should be continuous and compatible with the planned routes of other jurisdictions including Non-Motorized Trails Corridors, and with the Regional System.
- Development standards for Bike Routes involve lane or path width, overhead clearance, Bike Lane designation and lane separation, maximum grade, length of grade, signs, lighting, fencing, materials, workmanship, intersection design, traffic pattern and traffic control. No generally accepted set of standards for the design and construction of Bike Routes exists, although the State Highway Design Manual is used where appropriate. More information is required for the proper evaluation of those standards which are in tentative use.

The City should continue to develop a basic set of standards which will be consistent with the needs of bicyclists and the community. Each segment of the planned system of Bike Routes should have a specific design suited to local conditions, with consideration given to

overall traffic control, safety and convenience.

Programs

The objectives and policies of this Bicycle Plan suggest a number of continuing programs. The described actions require the use of a variety of implementation methods. Continuing citizen participation (as represented by the Bicycle Advisory Committee) is encouraged.

1. **Bicycle Education:** Proper training for riders, drivers, and law enforcement people should be provided. The Los Angeles City School District should expand and continually improve bicycle safety training classes and programs. This effort should be coordinated with other City activities and similar Regional and State programs. Competitive bicycle events should be encouraged as an organized sport in schools. Private sponsorship of bicycle safety training sessions should be encouraged.
2. **Safety Analysis:** Accident data should be gathered and evaluated for needed improvements in training programs and in the formulation of safe design standards.
3. **Legal Evaluation:** Existing laws, codes and regulations that affect the bicycle owner/operator should be studied. The need for rider licensing should be evaluated. The problem of bicycle theft should be analyzed, and methods developed for minimizing loss.
4. **Law Enforcement:** The Police Department should cite bicycle riders for traffic and code violations on the same basis as operators of other vehicles using the public streets. Corrective actions should be appropriate to the age of the offender and the offense.
5. **Design Standards:** Safety studies and operational data from existing Bike Routes, along with operating experience from other cities and countries, should be used to establish and update Bike Route design standards, and to develop equipment and techniques for improvement of overall traffic control.
6. **Priority, Location and Type:** A task force comprised of representatives of the Bureau of Engineering, Department of Traffic, Department of Recreation and Parks, and the Planning Department, should be established. This task force, with the advice of the Bicycle Advisory Committee, should recommend corridor priority, precise location, and type of Bike Route within each segment.
7. **Publicity and Information:** A publicity program to encourage the use of bicycles for personal transportation, with particular emphasis on replacing automobile trips, should be undertaken. This program should stress the benefits of bicycling, and cover such "how to" items as: carry packages, equip a bike, prevent accidents, and prevent theft. Competitive events should be encouraged when they contribute to the objectives of this plan through publicity and safety education.
8. **Implementation:** State and Federal legislation should be continually monitored to identify and evaluate those items which have the potential capability of funding City bicycle planning, facility design, and construction. Appropriate applications for funding should be made. Other appropriate financial aids to Plan implementation, including private grants, donations, advertising, dedications, special use easements, and manufacturers and sales organization sponsorships, should be pursued. Dedication and improvement of trail rights-of-way within and adjacent to land developments may be required.

Revisions recommended by the Citywide Citizens Bicycle Advisory Committee during a review period from July 14 through October 6, 1975, and by the General Plan Advisory Board on January 21, and February 18, 1976, have been included.



PROPOSED

BICYCLE PLAN MAP

A PART OF THE CIRCULATION ELEMENT OF THE GENERAL PLAN

CITY OF LOS ANGELES

LOCATIONS SHOWN ARE CORRIDORS, CONSIDERED TO BE HUNDREDS OF FEET WIDE. EXACT LOCATIONS OF ROUTES WITHIN EACH CORRIDOR WILL BE MADE AT THE TIME OF SPECIFIC ENGINEERING DESIGN, AS DESCRIBED IN THE PLAN TEXT.

- BACKBONE SYSTEM
- REMAINDER OF CITYWIDE SYSTEM
- SYSTEMS BY OTHERS

MILES

PREPARED BY THE TRANSPORTATION SECTION LOS ANGELES CITY PLANNING DEPARTMENT APRIL 1976

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