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SAN FRANCISCO BIKEWAYS

INTRODUCTION

In response to a strong upsurge in bicycle use, San Francisco has responded by providing route facilities for bicyclists. The program is still in its infancy, but there already have been six routes designated. No evaluation has been made as yet of their use and safety record.

San Francisco does have unique problems in regard to bicycles. The densest automobile registration in the world, naturally results in a very heavy traffic usage on most of the City's streets. This, of course, causes safety problems for bicyclists using the streets. In addition, the hilly terrain results in severe grades on many streets and limits the possibility for bicycle routes. Unfortunately, the streets with lesser grades also are desired for use by motorists. And, finally, the high automobile ownership, combined with lack of garage space, results in a large amount of on-street parking taking place. This precludes the possibility in most areas of prohibiting parking in order to provide bike lanes along the curb. In spite of these obstacles, the City has adopted a policy of encouraging bicycle use, and the Department of Public Works, together with the Recreation and Park Department, is pushing ahead on a bike route program.

ACCOMPLISHMENTS

Two types of bicycle routes have been established in San Francisco: Commuter routes and recreational routes. There are now two commuter routes extant with a total length of about $7\frac{1}{2}$ miles. One route extends from Golden Gate Park to the Civic Center, a distance of 3 miles, and the other runs from the Presidio into the Golden Gateway in the heart of the San Francisco Financial District.

The four recreational routes have a total length of about $14\frac{1}{2}$ miles. Two of the routes, Lake Street and Great Highway, utilize City streets for their entire length. On the Lake Street route, two bike lanes, one for each direction and five feet in width, have been painted, and the street has been identified with bike route signs and the cross-streets have bike crossing signs. On the other recreational route on a City street, that on Great Highway, an 8-foot 2-way bike lane has been established with appropriate bike route signs. The third recreational route utilizes paths in

Golden Gate Park, and the fourth route uses a path alongside landscaped Sunset Boulevard. On this route, bike crossing and route signs have been installed, and the curbs have been lowered at street crossings so bicyclists will not have to dismount.

PARAMETERS IN CHOOSING A ROUTE

Two prime considerations that the Department uses in choosing a route are bicyclists' safety and the usability of the route.

Safety

In choosing a route, a lightly traveled street is preferred, although in San Francisco this is difficult to find. Another consideration is the presence of traffic control. It is desirable to have traffic control at every intersection which means either signals or STOP signs controlling the approaches. A third factor is width. It is desirable to paint bicycle lanes if possible, and we believe a bicycle lane should have a minimum width of 5 feet. Therefore, if on a street we want two 10-foot traffic lanes, two 8-foot parking areas, and two 5-foot bicycle lanes, we should have a minimum pavement width of 46 feet. Unfortunately, most of our streets have a width of about 39 feet, and where we have painted bicycle lanes, we usually provide two 7-foot parking strips, two 10-foot traffic lanes, and one 5-foot unidirectional bicycle lane. If it is desired to have another bicycle lane painted, we usually choose a parallel street for the other direction.

Usability

In choosing recreational routes, grades are a prime factor. The maximum grade should be no more than 20 per cent, and that for only a short distance. Normally we aim at a maximum of 5 per cent over long distances. The route itself should be interesting and scenic and have a minimum length of about five miles. If bike lanes are painted, they should have a minimum width of five feet for one direction and eight feet for two directions. The surface should be hard, and where a path intersects streets there should be curb cuts to avoid the necessity of getting on and off a bike.

In choosing a commuter route for usability, the prime consideration should be origin and destination. The route should lead from a residential area to a point of high employment concentration. It shouldn't be too long, a maximum of maybe seven or eight miles, and it is highly desirable to have terminal facilities provided for bicycles at the employment center. If possible, the terminal facilities should be off-street and supervised to prevent thievery.

Marking the Routes

In San Francisco, we have used signs and pavement markings to delineate bike routes. Along the route itself, green bike route signs are placed at strategic points, especially at turns to delineate the route. They also serve as a warning to the motorists that bicyclists are using the street. At cross streets, especially where there is no control, bike crossing signs have been installed. These are yellow signs that warn motorists on crossing streets that they are crossing a bike route. We believe this is especially important on recreational routes. Finally, wherever possible we have painted bicycle lanes on City streets. In the lanes we have painted the marking BIKE LANE. This is instructional for the motorist and it does not exclude him from crossing into a lane to park or to turn. As a supplementary marker, we have painted bike stencils on the street, which is a painting showing the outline of a bicycle. The cost of these bicycle routes have been relatively minor so far and have been absorbed in our striping and signing program.

CONCLUSION:

There is no doubt that there has been a great upsurge in bicycle popularity. It is too soon to determine whether or not it will signify a new era in transportation; however, it is incumbent upon the municipality to provide safe and usable facilities. The extension of these facilities naturally will depend upon the amount of use that they generate.

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