From: "John Forester" <forester@johnforester.com>
Subject: Santa Cruz sidewalk bike-path proposal
Date: Sat, 14 Feb 1998 11:53:21 -0800

The bike paths proposed in Santa Cruz , between the sidewalk and the parked cars, have been tried before in California and were officially rejected. The description of "elevated" clearly does not mean grade separated, with a path up in the air above the tallest trucks, so that motor traffic can cross and turn under the bike path. The word "elevated," in this case, simply means at the same height as the sidewalk, as is done in Holland and in Germany.

This proposal was generated by the three persons chosen from the Santa Cruz City Transportation Commission who were "dedicated, active bike riders," and was supported by the Assistant Director of the Regional Transportation Commission on the basis of personal experience in Germany. The City Traffic Engineer, said to be "well versed in these issues," didn't dare oppose these political masters, and contented himself by passing off the responsibility onto CalTrans, saying that this design was against CalTrans standards and would require a waiver from CalTrans. CalTrans will probably say, "No, never."

Santa Cruz is a small rural beachfront city that contains a major university known for its environmental and counterculture leanings (Its university mascot is the locally prevalent banana slug.) and where cycling is popular. This whole incident is one more illustration of the dangers and failure of the strategy that is so often recommended by, and for, cyclists, that of relying on political action instead of on strict engineering standards. Because of the cyclist inferiority superstition, people whom the public and the government respect as bicyclists achieve such positions from which they can promulgate such extremely dangerous designs as this without raising a word of complaint until a few real cyclists attend the public meetings to object. Against this politically powerful engineering nonsense the only protection that cyclists have is a strict engineering standard. The cycling organizations need to concentrate on getting the engineering standards changed to reflect the safety and convenience of cyclists, not the convenience of motorists. However, this particular design is so dangerous that even the convenience of motorists does not outweigh its dangers. This design is specifically cautioned against by both the California standard and the ASHTO standard that started out as a copy of the California standard.

Why is this design prohibited, when it is not a sidewalk bike path? It is prohibited because, operationally with respect to the motor traffic, it is a sidewalk. The only respect in which this design is safer than a sidewalk is that it separates, except at intersections, the cyclists from the pedestrians. This design has all the dangers of car-bike collision at driveways and intersections as does the normal sidewalk. It is only a sidewalk with a stripe along it. When I first tested such a design (but without a stripe), that in Palo Alto, I concluded that this design was at least 1,000 times more dangerous than the normal roadway. I experienced imminent car-bike collsions, which I was able to avoid only by emergency actions in which I was expert and for which my knowledge of the hazards had prepared me to take, at an average spacing of 0.7 miles. As those of you know who have been reading these postings, I have been severely criticized for attempting to ride the Palo Alto sidewalk paths at the same speed as I rode on the roadway. However, that was the point of the investigation. Only by riding at the same speed and assuming the same right of way as I had on the roadway could a valid comparison be made. Those who criticize that test as exceeding the safe speed for the facility have admitted that the facility was extremely dangerous at normal road speeds, which is all that I was attempting to demonstrate.

Subsequent to my tests have come three others. (1) Kaplan's data for LAW cyclists in 1974 showed that paths were 2.6 times as dangerous as average roadways. (2) Wachtel's analysis of the accident data for the same Palo Alto sidewalks showed that, even when the cyclists were proceeding at what they considered to be safe speeds for the facilities, cycling on the right-hand sidewalk was about twice as dangerous as cycling on the adjacent roadway, while cycling on the left-hand sidewalk was four times as dangerous. (3) Moritz's recent study

of LAB cyclists, an attempted replication of Kaplan's survey with additional details, separated sidewalks from other paths and concluded that cycling on these was 16 times more dangerous than cycling on the average roadway.

The reason why sidewalk cycling causes so many car-bike collisions is simple. The great majority of car-bike collisions are caused by turning and crossing maneuvers, either by the cyclist or by the motorist. The bicycle side-path prevents the participants in the collision from operating in the normal manner, conceals them from each other until the collision occurs, creates more conflicting movements, and makes these movements more difficult to do safely, in fact makes some impossible to do safely. The only way that has been invented to prevent these conflicts from causing car-bike collisions is to have traffic signals with separate bicycle and motor-vehicle phases at every intersection and every driveway. Even if only at every intersection, the additional delay to both cyclists and motorists becomes significant, sufficient to drive cyclists to the use of streets that don't have bicycle sidepaths. While the sight of a green bicycle traffic signal light makes some bicycle activists chortle with pleasure at the idea that they are being taken care of, the fact is that the green bicycle traffic signal light indicates that cyclists can proceed only for a much smaller portion of the total time available, which is a detriment to cyclists.

The governmental standards for bicycle facilities have always been written to foster motorist convenience by maintaining most, or all, of the roadway clear of cyclists. However, in the first of these, California cyclists, led by me, were able to get eliminated the more dangerous ways of getting cyclists off the roadways, using the threat of lawsuits growing out of the car-bike collisions caused by the designs. The almost-prohibition of bicycle side-paths was one result of our work. However, sadly, the latest AASHTO Guide was rewritten without the input of experienced and expert cyclists, and other governmental documents have been created in the same way. It is vital that cyclists regain at least sufficient control of the governmental documents concerning cycling to ensure that these documents reflect the safety and convenience of cycling transportation with an equitable disposition of the conflicts between motorist convenience and cyclist safety and between the convenience of both types of user.

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