Transit Improvements Help Cyclists, Cut Traffic

By David Chase

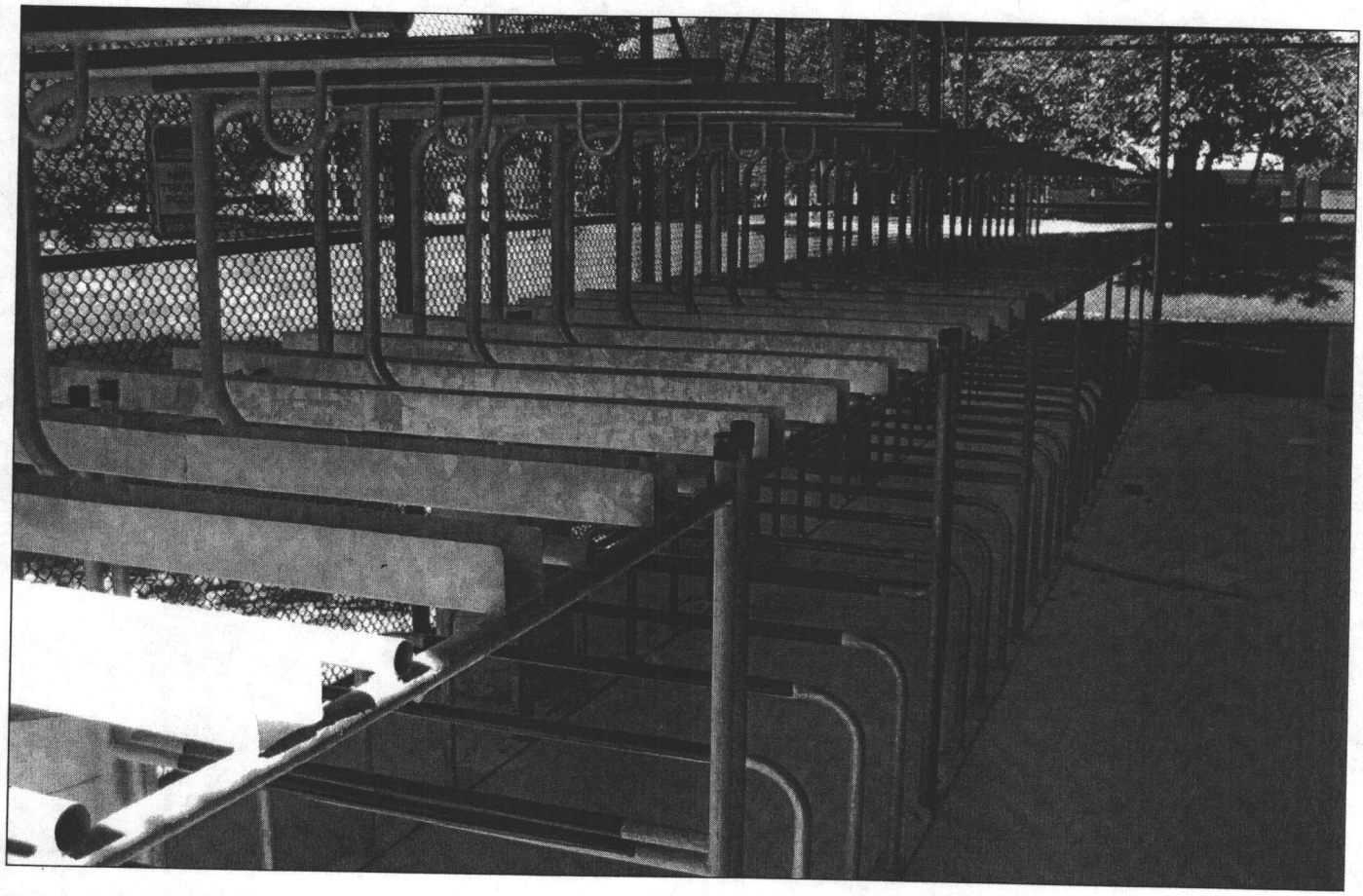
The MBTA is improving bicycle support on subways, buses, and trains over the next two years. These changes are not only good for people who might want to avoid driving; they also bring more riders to the T at a relatively low cost per additional rider.

In September 2008, the MBTA opened two Pedal & Park facilities, otherwise known as "bike cages". These enclosed bike parking areas have a capacity of 150 bicycles each. To increase security, each cage has a video camera and can only be opened with a Bike CharlieCard, available for free from staff at Pedal & Park stations. These cages have been successful; they are often full and they reduce theft. At Alewife, ca. 500 bicycles park each day, 300 in the cages. As of July this year, 20 bikes had been stolen from Alewife—but none from inside the bike cages.

Even with the cages, on good-weather weekdays almost all the racks outside the cages are filled with bikes, so there is ample demand. The two cages provide about a 10 percent increase in Alewife's "parking" capacity without consuming otherwise useful space or adding to the road traffic. Another cage opened at Forest Hills in September 2009.

The American Recovery and Reinvestment Act funded the addition of up to eight more Pedal & Park bike cages. The cage in South Station is under construction, Oak Grove and Braintree facilities are out to bid, and those at Ashmont, Davis Square, and Malden are still being designed. To increase security, starting in 2011 the bike cages will require use of registered Bike CharlieCards to open the cages. To register your Charlie Card, visit www.mbta.com/riding_the_t/bikes/ .

Compared to parking spaces, bicycle cages provide more than 1 space for every 9 square



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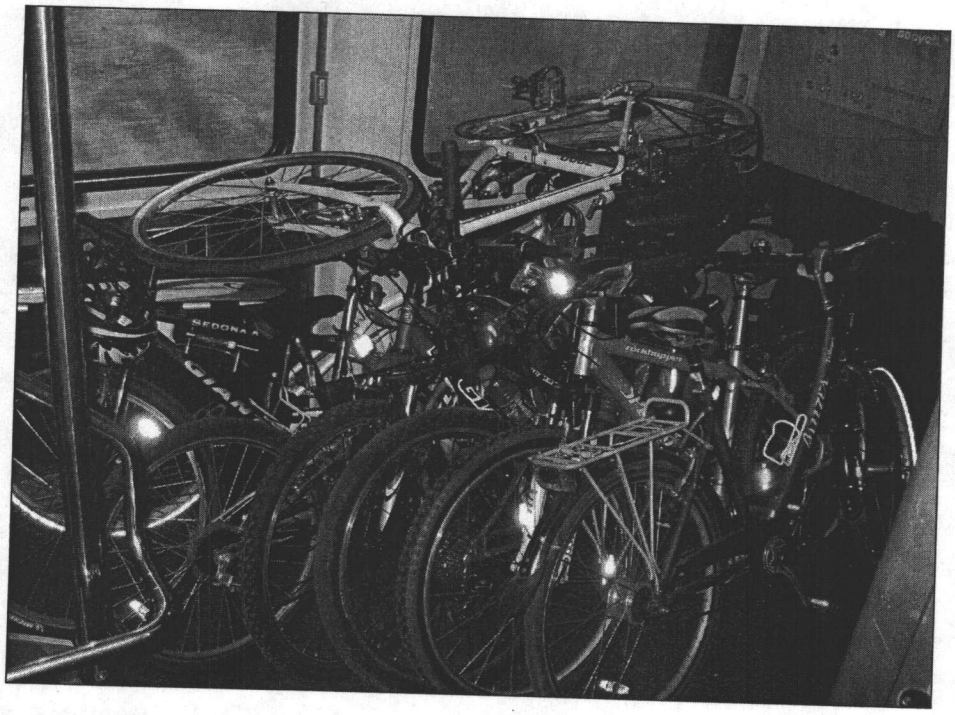
View of bicycle racks in the Pedal & Park bike cage parking at the Forest Hills MBTA station.

feet of floor area. A nose-in car parking space (18 feet by nine feet) takes 18 times as much room, plus all the space required for lanes to access the spaces. The cages will cost a total of $4.8 million for 150 spaces/cage, or roughly $4,000 per space. The cost of each bicycle space, including the structure, video cameras, and card key access, appears to be about the same as a simple ground-level auto parking space; spaces in garages cost anywhere from $20,000 to $40,000 per space.

Bicycle accommodations in the bus system are also being improved. Right now, 70 percent of buses are equipped with front racks that can hold two bicycles. In the next two years, through upgrades and replacement of older buses, all buses will be equipped with racks. Soon, if you need to transport a bike on a bus you can be sure that the bus will have a rack on it.



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Bikes piled in the space near a Boston commuter rail door.

Commuter Rail adds Bike Parking

The commuter rail is adding covered bicycle parking at 13 stations. This parking will not be as secure as Pedal & Park, but it will provide protection from the weather. Not all stations have parking lots, and many of them fill up in the early morning; there is demand, but no additional capacity. Improving conditions for bicycling commuters is a relatively cheap and space-effective way to increase use of the commuter rail, which helps defray the MBTA's fixed costs and reduces regional automobile traffic. Bringing more passengers to the commuter rail on bicycles also has a much lower impact on the surrounding community than bringing them on cars.

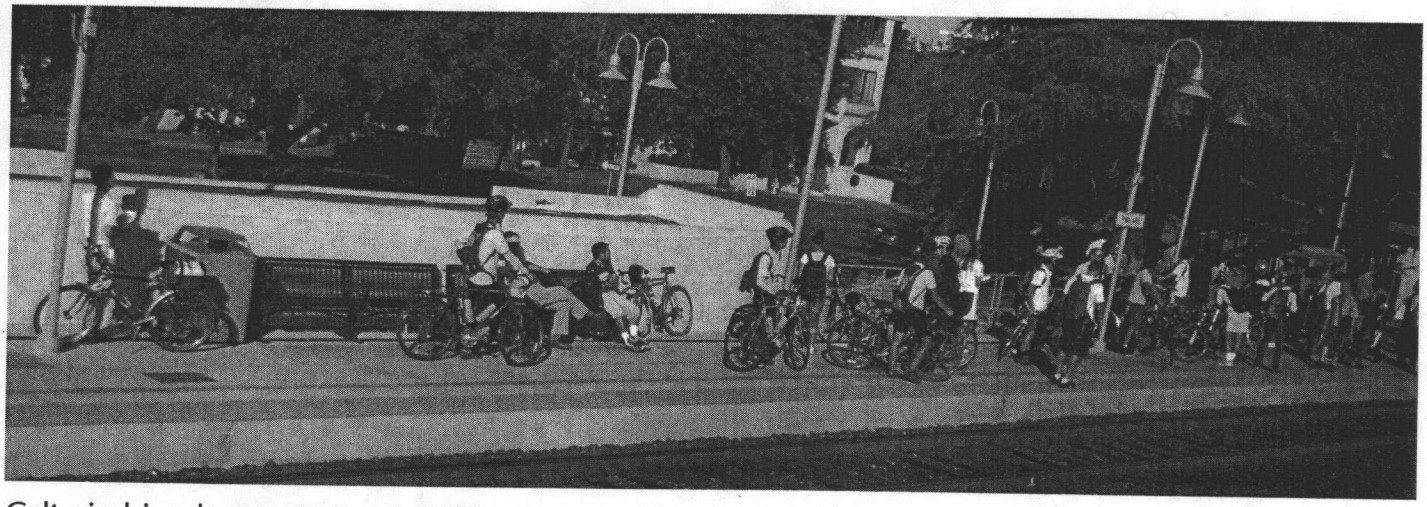
The new double-decked passenger cars will have slightly improved bike accommodations, but non-folding bicycles are still not allowed on trains at rush hour in rush directions. Bikes take up space on crowded trains, but even on non-crowded trains, they board slowly, which can push the train off schedule and may delay later trains.

Off-peak trains are less crowded and schedule slips are less critical because they do not affect other trains. It is possible to stack five to 10 bikes in the free space near the door, if the conductor is willing to allow it.

Putting Bikes on Trains Means Tradeoffs

Some transit systems allow bicycles at rush hour. On the one commuter rail (California's Caltrain) that does allow up to 40 bicycles per train at rush hour, the railroad deals with delays and crowding by using center-boarding cars with wide doors. Caltrain converted one end of a double-decker car into a bicycle area, with riders seated above on the second level. The aisle is wide, bicycles only inconvenience other bicycles, and new train/bicycle commuters quickly learn the ropes. Nonetheless, bicycle boarding times can delay express trains,and hefting a bicycle on or off the train requires some upper-body strength.

Creating a bike-car requires a tradeoff between maximum capacity and accommodating a wider variety of commuters. There is no extra cost to take a bike on the train, but the seats removed for 40 bicycles would hold about 80 commuters if the train were completely full. In Caltrain's



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Caltrain bicycle commuters waiting for the train.

case, the train usually has empty seats for regular commuters, while the bike-car often runs so full that sometimes cyclists are not allowed to board.

Commuters expect their transit to be regular and dependable. If it is hard to know whether a bus will have a rack, then bicycle commuters will not rely on racks on buses, and generally not use them.

Some other transit systems (Portland, Oregon; Los Angeles) share the space for less-able passengers with bicycles. These spaces must be provided in case they are needed by handicapped passengers, but they are often available for other passengers. Because there is room for a wheelchair, and because they are close to entrances and exits, these spaces are also a good fit for a bicycle. Of course, if an elderly or disabled passenger boards the bus or subway, the bicycle must be removed.

Measuring demand for bicycle facilities can be difficult. Surveys have shown that most people are easily deterred from commuting by bicycle; in particular, if any portion of a commute is not comfortable for cycling, then most people will not bike. Commuters expect their transit to be regular and dependable. If it is hard to know whether a bus will have a rack, then bicycle commuters will not rely on racks on buses and generally not use them. Putting racks on buses is a relatively low-risk experiment because it does not displace other passengers; however, it is also an inconclusive experiment, because if the racks are frequently used, cyclists must weigh the chances of finding a rack that is empty.

Pedal & Park was a low-cost experiment that discovered a tremendous, latent demand. Based on its success, the program is being expanded. Caltrain's bike cars succeeded, but they were a relatively risky experiment because of the passenger space required. It's also worth noting that the Alewife Pedal and Park benefits from the Minuteman Trail. Commuters from Arlington, Lexington, and even Bedford have a stress-free route directly to the subway. Sheltered bike parking at commuter rail stations is likely to draw more cyclists if there are good routes to the stations.

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