



Figure 4.38 Photograph of rest area on a bike trail.

blades. Communicating the rules of the road for these sometimes conflicting uses is best done with clear signage and pavement parking where possible, as shown in Fig. 4.40.

The rail-to trail routes have been so successful and popular because the grades are relatively flat and rarely ever exceed 3 percent, while mountain bike paths may approach 20 percent. In general, bike routes are best if limited to maximum grades of 4 or 5 percent with only short sections at steeper grades. The end of extended steeper sections is an ideal place for a wider path surface and perhaps a bench to allow cyclists to pull off the path and rest. At grades over 5 percent, it is difficult to ride without standing. Extended grades of 8 percent or more require most riders to dismount and walk the bike. Consideration should be given to installing wider riding surfaces on the steeper sections of routes with minimum travel lane widths to allow passing. Separating bicycles and automobiles may be accomplished by providing lanes divided by pavement marking or by constructing lanes separated by barriers, as shown in Figs. 4.41 through 4.45.

Drainage becomes a more important consideration when pathways are paved and drainage is restricted. Provision should be made in the design to assure positive drainage from the path surface. Pooled or standing water, such as shown in Fig. 4.46, represents a danger to cyclists anywhere but especially on curves or turns. Shallow standing water may be a hazard even to pedestrians as well if it freezes. There are many ways to prevent water from pooling on bike paths, and some are shown in Figs. 4.47 through 4.50.