

- When using longer grades, consider an additional 4 to 6 feet of width to permit slower bicyclists to dismount and walk uphill, and to provide more maneuvering space for fast downhill bicyclists.
- For long downgrades, and/or downgrades not readily apparent to approaching cyclists*
 - Install hill warning signs for bicyclists (W7-5) and advisory speed plaque, if appropriate, per the [MUTCD](#).
 - Provide signage that alerts path users to the maximum percent of grade as shown in the [MUTCD](#).
- Exceed minimum horizontal clearances, recovery area, and /or install protective railing.
- If other designs are not practicable, use a series of short switchbacks to traverse the grade. If this is done, an extra 4 to 6 feet of path width is recommended to provide maneuvering space.
- Provide resting intervals with flatter grades to permit users to stop periodically and rest.

* Rev. 1/17