

Ramping up

Road construction, reconstruction, patching? How to decide which curb ramps you need to update—and how to make them legal when you do.

Editor's note: While cities are working to make sidewalks more accessible, many are learning that their curb ramps don't comply with the Americans with Disabilities Act (ADA). This article, the second in a three-part series, discusses product options. Part three will cover real-world examples.

The Americans with Disabilities Act (ADA) requires curb ramps on streets or roads "wherever there are curbs or barriers to entry from a pedestrian walkway." This means that all sidewalks—whether they're part of new road construction or a reconstruction—must have curb ramps.

Stamping out the competition

An exclusive survey reveals readers' top five choices for making curb ramps ADA-compliant. Source: PUBLIC WORKS

Stamps



Cast-in-place tiles



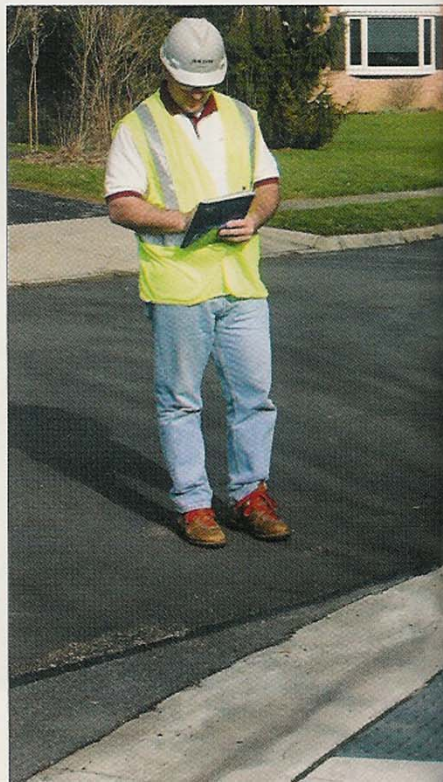
Modular pavers



Metal forms/panels



Detectable guidance strips



Polymer concrete tiles

For curb ramps and crosswalks, the STEP-SAFE skid-resistant tiles are



made from a precast polymer concrete matrix that makes them high-strength and resistant to wear, weather, and corrosion. Available in 300 mm squares. Transpo Industries Inc. www.transpo.com. Circle 1.

To be considered compliant, curb ramps must include a ramp and a landing at the top—each with specified cross-slopes and running slopes. They must provide a smooth transition onto the sidewalk and crosswalk, and prevent water from ponding in the gutter. In some circumstances, street-level landings are required. Wherever pedestrians must cross a ramp, it must have side flares with specified slopes to prevent people from tripping.

Curb ramps also are required where a sidewalk intersects with the road. These ramps are designed primarily to allow those with mobility impairments safe access to sidewalks and other pedestrian areas. While all new construction must include curb ramps, alteration projects may not require curb ramps to be retrofitted to existing sidewalks.

For instance, if you resurface a street or sidewalk it is considered an “alteration” under the ADA and therefore requires the addition of curb ramps, while simply filling potholes is considered maintenance and doesn’t require the installation of new curb ramps.

Whether curb ramps that are not undergoing other alterations at the time are

Because this street was resurfaced, the addition of detectable warning systems was required on this curb ramp.
Photo: HR Gray



Urethane pads

Ultra-WarningPads are designed with truncated domes to alert the visually impaired to upcoming intersections. The pads come in several sizes and colors, and are made from heavy-duty, flexible urethane

material. They install quickly and easily in new construction or as a retrofit. UltraTech International Inc. www.spillcontainment.com. Circle 2.



Polymer tiles



Armor-Tile detectable warning products come in five styles:

cast-in-place, surface-applied, modular pavers, detectable directional, and detectable guidance. These diamond-hard vitrified polymer tiles offer weather and wear resistance. Available in nine colors. Engineered Plastics Inc. www.armor-tile.com. Circle 3.

Bumps in the road

Whatever the curb design, truncated domes must meet certain standards.

One of the biggest issues that has surfaced in relation to curb ramps is the addition of detectable warnings, which help the visually impaired determine when they are entering a roadway. These warnings initially were required by the Americans with Disabilities Act (ADA) Accessible Guidelines for curb ramps, hazardous vehicular roadways, and transit platform edges.

However, the requirement for curb ramps and vehicular roadways was soon suspended to determine the most effective type of warning.

After 10 years of research, truncated domes proved to be the most viable solution, beating out other options such as grooves, striations, and exposed aggregate.

On July 26, 2001, the suspension on the requirement expired, and truncated domes are now required on all new curb ramps.

Generally, retrofit detectable warning devices are not required for old ramps. However, if a project like street resurfacing is implemented that requires installation of curb ramps, and the existing ramps are otherwise compliant, retrofit detectable warning devices are required.

When installing truncated domes, each curb ramp is unique in its design needs; however, there are certain specifications that are universal regardless of the individual ramp design. All detectable warnings must extend 24 inches in the direction of travel and cover the full width of the

curb ramp. Research has shown that this length is sufficient in signaling the beginning of a roadway 90% of the time.

In addition, the warnings must be placed 6 to 8 inches from the curb line to give blind pedestrians enough stopping distance between the curb and the street, and to give wheelchair users a smoother transition from the curb to the street. The domes must be aligned on a square grid so they can be rolled over easily, and each dome has very specific dimensions (best practices indicate 0.9 to 1.4 inches diameter on bottom, top diameter of 50% to 65% of the base diameter, 0.2 inches high, and base-to-base spacing of 1.6 to 2.5 inches from center to center) designed for maximum detectability.

retrofitted to sidewalks is left up to the discretion of city governments. One way to ensure the proper integration of curb ramps throughout a city is to set a series of milestones for curb ramp compliance in the city's transition plan. It also may be appropriate for a city government to establish an ongoing procedure to install curb ramps (see October 2006, page 67, for an example).

Conversely, certain projects do not require curb ramp construction, such as maintenance projects of any kind within the public right of way, including those that replace an insignificant portion of the roadway surface or sidewalks near an intersection that includes existing sidewalks. New roadway construction or an alteration in areas where there are no existing sidewalks or other pedestrian facilities does not require curb ramp construction. A curb cut may be required to make the path accessible if there is an existing unimproved pedestrian path. This applies with or without the presence of curbs. **PW**

— *Sexton is construction manager with H.R. Gray, Columbus, Ohio.*