

Research Need for Operations and Maintenance Technical Advisory Group

Posted: 8/14/2026

1. Issue Identified:

Crosswalk Crossing Prohibition — Durable Artificial PROWAG Compliant Non-Prepared Surface

2. Summary of Problem:

When an area adjacent to a pedestrian crosswalk or sidewalk is not intended for use, features are required to alert pedestrians with visual impairments. The U.S. Access Board indicated the best practice is to cement 3-to-5-inch stones into an area between the sidewalk and curb to create a “non-prepared surface” consistent with PROWAG (Public Right-of-Way Accessibility Guidelines) requirements. The Illinois Department of Transportation is concerned that the rocks could become dislodged during freeze-thaw cycles, creating loose-object or tripping hazards adjacent to the roadway. There is a need to develop an alternative method, such as a stamped concrete surface with a detectable vertical differential, tactile walking surface indicators, or a cast-iron unit, that provides a comparable warning to pedestrians with visual impairments. The selected approach should minimize hazards present to pedestrians and motorists, be visually appropriate and require minimal maintenance.

IDOT must prohibit pedestrian crossings in certain cases such as when pedestrian crossings are consolidated into a single protected accommodation. When a pedestrian circulation path is altered and a person with a visual impairment requires guidance, appropriate accommodation is required. See Exhibits A and B.

PROWAG R203.6.1.1, “Crosswalks at an Intersection,” states: “When pedestrian crossing is prohibited...the pedestrian circulation path shall be either (a) separated from the roadway with landscaping or other non-prepared surface or (b) separated from the roadway by a detectable vertical edge treatment.”

IDOT has examined these accommodations with the following conclusions:

- Landscaping may be unsustainable in some locations. Adjacent property owners may be unwilling to assume maintenance responsibilities, IDOT may be unable to maintain the area, or available space may be too limited for landscaping that can withstand salt and other seasonal roadway treatments.

- A vertical edge treatment by itself may create a tripping hazard. Pairing it with a railing could introduce a fixed-object hazard within the clear zone or vehicle operational offset. The U.S. Access Board has informed IDOT that a supplemental 6-inch raised curb is not suitable or compliant as a vertical edge treatment.
- The U.S. Access Board has indicated that 3- to 5-inch rocks may be acceptable as a non-prepared surface treatment. IDOT has reservations about placing loose cobbles on the roadside, because they could be intentionally or inadvertently moved into the roadway or sidewalk. However, the U.S. Access Board did not accept a simulated rock surface because of a lack of research. IDOT's current solution is to cement the rocks in place to prevent movement. However, freeze-thaw durability remains a concern. See Exhibits A and B for photos. See Exhibits C and D for current D1 special provision and detail.

Therefore, the proposed research would develop a design acceptable to the U.S. Access Board as a non-prepared surface while reducing IDOT's maintenance liability. Research will consist of the following tasks:

- Conduct a literature review. This could be an initial nine-month stand-alone project to determine whether other states or countries have addressed this issue. Solutions used in the United States would fall under the jurisdiction of the U.S. Access Board, but there may be alternatives in other countries.
- Propose designs for testing. Evaluate proposed designs using methods appropriate for introducing new accommodations to the U.S. Access Board.
- Coordinate testing and tactile evaluation with accessibility organizations such as the Great Lakes ADA Center, University of Illinois Chicago College of Applied Health Sciences and Illinois-based organizations serving people with visual impairments.
- Create draft IDOT standards, specifications and design guidance for consideration by the Technical Research Panel.

A more durable treatment could improve separation between pedestrian circulation paths and the roadway while reducing maintenance costs. Lower-maintenance treatments could also make local agencies more willing to assume responsibility for sidewalk maintenance.

3. Desired Results/Outcome:

The desired outcome is a durable non-prepared surface that is accepted by the U.S. Access Board, along with draft IDOT standards, specifications and design guidance.

Exhibit A — Pedestrian Route Closed with Current Non-Prepared Surface Treatment

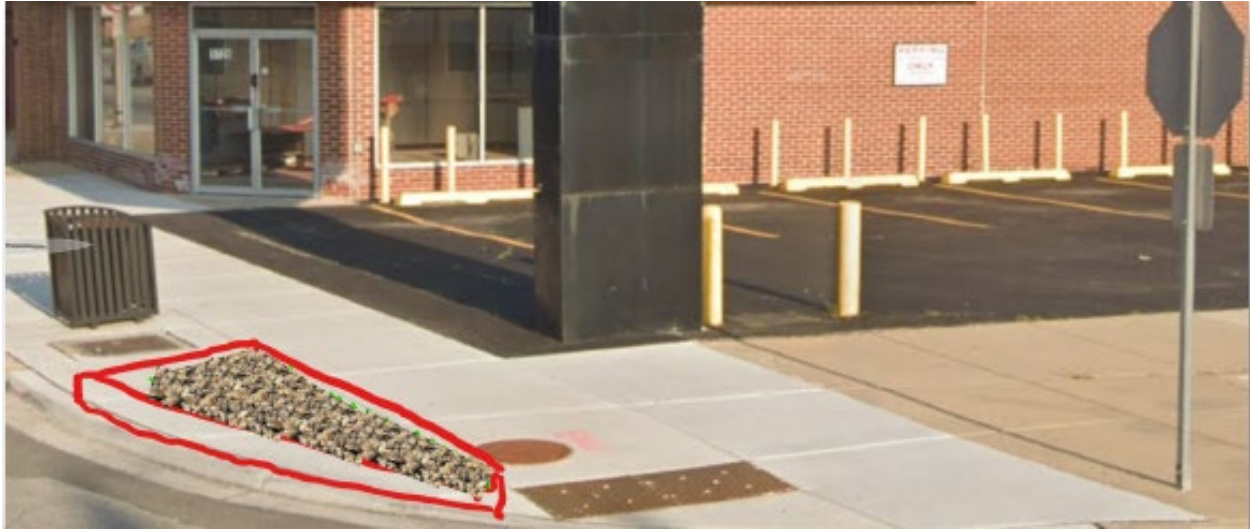


Exhibit B — Close-up of Current Non-Prepared Surface Treatment





Exhibit C – Current Special Provision for PCC Sidewalk 5 Inch (Special)

PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH (SPECIAL)

Description. This work shall consist of constructing portland cement concrete sidewalk with an exposed aggregate surface. Work shall be performed in accordance with Sections 424 and 1004 of the Standard Specifications and as specified herein. Work shall comply with requirements in PROWAG (Public Right-of-Way Accessibility Guidelines) R203.6.1.1.

Construction Requirements.

Width of sidewalk shall be a minimum of 1 foot or as directed by the Engineer.

Diameter of exposed aggregate shall be between 3 and 5 inches.

Exposed aggregate shall protrude a maximum of 0.5" above surface of sidewalk.

Method of Measurement. This work will be measured for payment in place in square feet.

Basis of Payment. This work will be paid for at the contract unit price per square foot for PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH (SPECIAL) which shall include all required expansion joints, special texturing, and variable height edge treatment at sidewalk ramps to install according to ADA specifications.

Exhibit D – Current D1 Detail for PCC Sidewalk 5 Inch (Special)

See Attachment

