



**Revised November 7, 2018**

**May 9, 2017**

**Design Memorandum No. 2017.04**

**TO: All DPW Engineering and Construction Staff, and Consultants**

**THRU: Melody Park, PE  
Chief Engineer  
Department of Public Works**

**FROM: Mark H. Zwoyer, PE  
Administrator – Engineering Design  
Department of Public Works**

**RE: Curb Ramps**

**EFFECTIVE: Immediately**

Curb ramps shall be designed in accordance with the current Americans with Disabilities Act and Architectural Barriers Act Accessibility Guidelines; commonly called the ADA. INDOT Standards were developed to comply with the ADA and with the Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way; commonly called the PROWAG. DPW utilizes INDOT Standards Series E 604-SWCR for curb ramps with certain detail changes as noted in this Design Memorandum. INDOT Standards for curb ramps are located on the following website:

<http://www.in.gov/dot/div/contracts/standards/drawings/sep16/e/sep600.htm>

DPW requires grooving of ramps that is not included on INDOT Standard Drawings. See attached detail 604-DPW-063d. A unique special provision shall be included with the contract information book, see attached specification 604-DPW-063.

With the exception of curb ramps for the Indianapolis Cultural Trail, brick surfaces shall not be used as detectable warning surfaces. A unique special provision or technical specification shall be included with the contract documents, see attached specification ~~604-DPW-108~~ **604-DPW-131**.

Detectable warning surfaces should not be placed in conjunction with alleys, uncontrolled commercial driveways, or residential driveways. Detectable warning surfaces should be placed at commercial driveways that are controlled by yield sign, stop signs, or have traffic signal control.

Perpendicular curb ramps are the preferred method when designing pedestrian facilities. Parallel curb ramps are second choice in preferred methods and should only be used when perpendicular ramps are impractical. Blended transition curb ramps are third place in preferred methods and should only be used when perpendicular or parallel curb ramps are impractical. Diagonal curb ramps shall not be used without written guidance from the Chief Engineer.

Existing HMA pavement shall have 1½ inches of milling that is 4 feet wide adjacent to the bottom of new curb ramps as show in detail 604-DPW-063d.

CURB RAMP GROOVING

The cost of grooving the surface of curb ramps shall be included with the cost of the curb ramp.

---

## DETECTABLE WARNING ELEMENTS

The Standard Specifications are revised as follows:

SECTION 604, BEGIN LINE 109, DELETE AND INSERT AS FOLLOWS:

### **1. Brick Surfaces**

~~Brick elements shall be placed in a mortar setting bed within the hardened concrete block out. The concrete base of the block out shall have a rough textured finish, such as would be produced by a screed or wood float. The depth of the block out shall be such that a mortar bed thickness of 3/8 to 3/4 in. is achieved for the nominal depth of the element. The hardened concrete base shall be free of all material which might prevent the mortar setting bed from adhering. The concrete base shall be dampened with water, but be surface dry immediately prior to the placing the mortar setting bed. The mortar setting bed shall be laid out the desired thickness, no more than 2 ft ahead of laying the elements. The elements shall be buttered with mortar on the bottom before placement into the setting bed. Elements from various manufacturers shall not be mixed at any individual concrete ramp location.~~

~~Brick elements shall be laid out in a running or stacked bond pattern with a 1/16 in average joint width. The joint width shall not exceed 1/8 in. Whole elements should be laid first, followed by elements cut to size, keeping the number of joints to a minimum. A masonry saw shall be used to produce a clean, accurate, straight cut. The joint between elements shall be completely filled with a dry fine aggregate. The fine aggregate may be obtained from a new Certified Aggregate Producer, but it shall be natural sand having a gradation where at least 95% of the material passes the No. 4 sieve. Excess fine aggregate shall be removed from the surface of the elements.~~

~~*Brick surfaces shall not be used.*~~

### **2. Cast Iron Surfaces**

~~Cast iron elements shall be installed in accordance with the manufacturer's recommendations. When required, cutting of the elements shall be in accordance with the manufacturer's recommendations. Cut edges shall be ground to a smooth shape consistent with the manufactured edges.~~

### **3. Other Surfaces**

~~Approved ~~elements~~ *surfaces* other than brick or cast iron shall be installed in accordance with the manufacturer's recommendations.~~

604-DPW-131 DETECTABLE WARNING ELEMENTS

The Standard Specifications are revised as follows:

SECTION 604, BEGIN LINE 131, DELETE AND INSERT AS FOLLOWS:

**1. Brick Surfaces**

~~Brick elements shall be placed in a mortar setting bed within the hardened concrete block out. The concrete base of the block out shall have a rough textured finish, such as would be produced by a screed or wood float. The depth of the block out shall be such that a mortar bed thickness of 3/8 to 3/4 in. is achieved for the nominal depth of the brick. The hardened concrete base shall be free of all material which might prevent the mortar setting bed from adhering. The concrete base shall be dampened with water, but be surface dry immediately prior to the placing the mortar setting bed. The mortar setting bed shall be laid out the desired thickness, no more than 2 ft ahead of laying the bricks. The bricks shall be buttered with mortar on the bottom before placement into the setting bed.~~

~~Brick surfaces shall be installed in a running or stacked bond pattern with a 1/16 in average joint width. The joint width shall not exceed 1/8 in. Whole bricks should be laid first, followed by bricks cut to size, keeping the number of joints to a minimum. A masonry saw shall be used to produce a clean, accurate, straight cut. The joint between bricks shall be completely filled with a dry fine aggregate. The fine aggregate may be obtained from a non-Certified Aggregate Producer, but it shall be natural sand having a gradation where at least 95% of the material passes the No. 4 sieve. Excess fine aggregate shall be removed from the surface of the bricks.~~

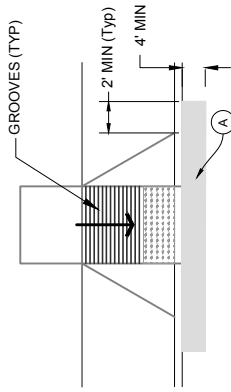
*Brick surfaces shall not be used.*

**2. Cast Surfaces**

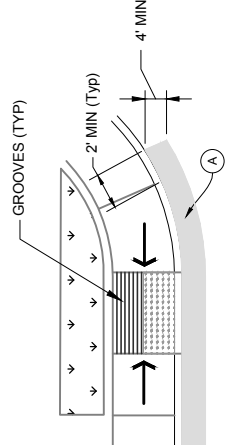
Cast iron surfaces shall be installed in accordance with the manufacturer's recommendations. When required, cutting of the cast iron shall be in accordance with the manufacturer's recommendations. Cut edges shall be ground to a smooth shape consistent with the manufactured edges.

**3. Other Surfaces**

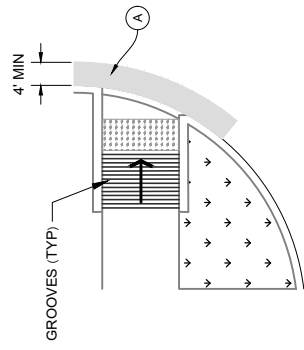
~~Approved elements other than brick or cast iron shall be installed in accordance with the manufacturer's recommendations. *Other surfaces shall not be used.*~~



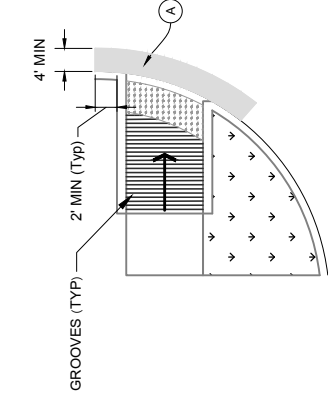
**PERPENDICULAR CURB RAMP**



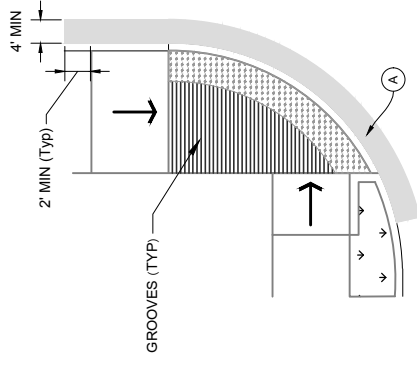
**PARALLEL CURB RAMP**



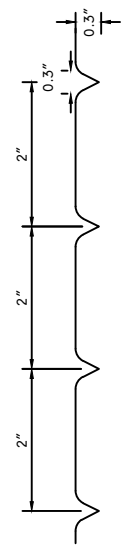
**ONE-WAY DIRECTIONAL PERPENDICULAR CURB RAMPS**



**BLENDED TRANSITION CURB RAMP**



**DEPRESSED CORNER CURB RAMP**



**DETAIL OF RAMP GROOVES**

**LEGEND:**

- Buffer or Other Non-Walkable Surface
- Detectable Warning Surface
- Ramp
- 1 1/2" Asphalt Milling  
165 lbs/syd HMA Surface, Type C

	<b>INDIANAPOLIS DEPARTMENT OF PUBLIC WORKS</b> MISCELLANEOUS RAMP DETAILS	<b>NOT TO SCALE</b>
	<b>FIGURE 604-DPW-063d</b>	UPDATED: 02/14/2017