

VIRGINIA DEPARTMENT OF TRANSPORTATION

LOCATION AND DESIGN DIVISION

INSTRUCTIONAL AND INFORMATIONAL MEMORANDUM

GENERAL SUBJECT: Curb Ramps and Sidewalks	NUMBER: IIM-LD-55.16
SPECIFIC SUBJECT: Guidelines for the Placement of Curb Ramps for Pedestrian Access Routes	DATE: July 15, 2014
	SUPERSEDES: IIM-LD-55.15
APPROVAL:	B. A. Thrasher, P.E. State Location and Design Engineer Approved July 15, 2014

Changes are shaded.

CURRENT REVISION

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- This memorandum has been revised to reorganize the information and to delete the curb ramp examples and the curb ramp application details. The curb ramp examples and the curb ramp application details are now in the VDOT Road Design Manual, Appendix A, Section A-5.
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EFFECTIVE DATE

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- This memorandum is effective upon receipt.
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POLICY

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- VDOT's policy is to provide facilities for persons with disabilities in accordance with the Code of Virginia, Section 15.2 –2021:
<http://leg1.state.va.us/cgi-bin/legp504.exe?000+cod+15.2-2021> .

“§ 15.2-2021. Ramps on curbs of certain streets; specifications. Notwithstanding the provisions of subsection A of § [15.2-2000](#), every locality requiring curbs along its streets that incorporate accessible routes for pedestrian use, such as existing or proposed sidewalks, shall require that curb ramps be constructed at

intersections for use by persons with mobility impairments. The ramps shall comply with the Virginia Department of Transportation's Road and Bridge Standards. Local option, variance, or waiver of these standards is prohibited. (1974, c. 169, § 15.1-381; 1975, c. 74; 1976, c. 477; 1990, c. 186; 1993, c. 258; 1997, c. 587; 1999, cc. 409, 417.)”

- The Americans with Disabilities Act (ADA) became effective January 26, 1992. Additional regulations to be adopted by the U.S. Access Board include specific provisions for compliance within “Public Rights-of-Way”. These additional regulations are the “Final Report of the Public Rights-of-Way Access Advisory Committee” dated January 2001, the “Draft Guidelines for Accessible Public Rights-of-Way” dated June 17, 2002, the “Revised Draft Guidelines for Accessible Public Rights-of-Way” dated November 23, 2005 and the “Public Rights-of-Way Accessibility Guidelines” (or PROWAG). However, the official title of the current proposal (PROWAG) is “Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way” dated July 26, 2011 (referred to as the 2011 Proposed Guidelines) as per the U.S. DOT FHWA, Memorandum dated January 23, 2006.
http://www.fhwa.dot.gov/environment/bicycle_pedestrian/guidance/accessibility_guidance/prwaa.cfm.
- The U.S. Access Board and the Federal Highway Administration are in agreement with VDOT’s policy to adhere to these proposed guidelines. VDOT is also guided by the “2010 ADA Standards for Accessible Design”, dated September 15, 2010, which sets minimum requirements – both scoping and technical – for newly designed and constructed, or altered, State and local government building facilities, public accommodations, and commercial facilities to be readily accessible to and usable by individuals with disabilities. This document consists of the Title II regulations at 28 CFR 35.151 and the 2004 ADAAG at 36 CFR part 1191, appendices B and D.

PEDESTRIAN ACCESS ROUTE (SIDEWALK OR SIDEWALK SPACE)

- New Pedestrian Access Routes (Sidewalks or Sidewalk Space) shall be 5 feet wide **excluding the width of curb**. However, in unique situations where this is not feasible, a minimum clear width of 4 feet shall be provided excluding the width of curb. Pedestrian Access Routes less than 5 feet wide require the submission of a Design Waiver ([See IIM-LD-227](#)). **Design Exceptions are not applicable for sidewalks less than 4 feet wide.**
- **For On-Street Parking Situations, see the Road Design Manual, Appendix A, Section A-5.**
- New Pedestrian Access Routes (Sidewalk or Sidewalk Space) less than 5 feet in continuous width **excluding the width of curb shall** provide a pedestrian passing area a minimum of 5 feet x 5 feet at reasonable intervals not to exceed 200 feet. These passing areas can be provided at street intersections with cross slopes no greater than 48:1 (2%).

- Where pedestrian access routes are contained within a street or highway right-of-way, the grade of pedestrian access routes shall not exceed the general grade established for the adjacent street or highway. Where pedestrian access routes are not contained within a street or highway right-of-way, the grade of pedestrian access routes shall be 5% maximum.
 - The Pedestrian Access Route surfaces shall be firm, stable, and slip resistant and openings that are more than 1/2" in one dimension are prohibited. The pedestrian access route is permitted level changes up to 1/4" without treatment and level changes between 1/4" and 1/2" that are beveled with a slope no greater than 2:1.
 - Where sidewalks cross rail systems at grade, the surface of the pedestrian access route shall be level and flush with the rail top at the outer edge and between the rails.
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CURB RAMPS

- Curb ramps shall be provided wherever a pedestrian access route (sidewalk or sidewalk space) crosses a curb regardless of whether sidewalk is existing, proposed, or non-existent. For example, if the current typical section or the proposed typical section includes a pedestrian access route (sidewalk or sidewalk space), curb ramps shall be installed. **However, if a pedestrian access route (sidewalk or sidewalk space) does not exist and is not being proposed, do not install a curb ramp.**
- The width of curb ramps (excluding the flares) for shared use paths shall be the same width as the width of the shared use path and include detectable warning surfaces on the entire width of the path.
- **One curb ramp shall be provided for each direction of an intersection crossing, where feasible. Curb ramps shall be in-line with the direction of pedestrian travel to improve wayfinding for visually impaired pedestrians.**
- **Diagonal Curb Ramps for all three Types (A, B and C) can only be used when certain conditions apply and a 4 feet by 4 feet square landing area at the bottom of the ramp and outside of the travelway shall be provided within the marked crosswalk. See VDOT Road Design Manual, Appendix A, Section A-5, Figure A-5-17 and Figure A-5-18.**
- **Crosswalk markings shall be located so that the curb ramps are within the extension of the crosswalk markings.**
- Curb ramps shall conform to the Road and Bridge Standard CG-12, Type A, B or C and Sections 502 and 504 of the [Road and Bridge Specifications](#). The designer shall ensure curb ramps are graphically depicted accurately on plans, drawn to scale, and annotated to denote the Type of Curb Ramp (CG-12, Type A, B or C). Curb ramps shall be constructed of hydraulic cement concrete with a detectable warning surface in accordance with the Special Provision "CG-12 Detectable Warning Surface."

- Construction of the entire Standard CG-12, Type A, B or C is required. Construction of the wiped down section of curb only, with intentions of installing the curb ramp when/if a sidewalk is installed along the pedestrian access route, is **not** acceptable.
 - If on-street parking is provided, accessible parking spaces shall be provided in accordance with ADA regulations. See Road Design Manual, Appendix C, Parking Spaces at:
http://www.extranet.vdot.state.va.us/locdes/Electronic_Pubs/2005%20RDM/appendc.pdf
 - **See VDOT Road Design Manual, Appendix A, Section A-5 for additional information.**
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CURB RAMP TYPES

- **See VDOT Road and Bridge Standards, [Road and Bridge Specifications](#) (Sections 502 and 504) and Road Design Manual, Appendix A, Section A-5.**
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CURB RAMP APPLICATION DETAILS

- **See [VDOT Road Design Manual, Appendix A, Section A-5](#) for additional information.**
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MEDIANS AND REFUGE ISLANDS

- **Pedestrian Access Routes that cross medians and refuge islands shall be a minimum of 6 feet in length and include a break or cut-through a minimum of 5 feet wide and include detectable warning surfaces. Detectable warning surfaces shall be truncated domes. See VDOT Road and Bridge Standard CG-12 and Median (Type M1 or M2) or Refuge Island (Type R11 or R12).**
- **In situations where a median break or cut-through 6 feet in length is **not** feasible due to existing conditions, detectable warning surfaces shall **not** be provided (i.e. 4 feet medians).**
- **Appropriate curb ramps and landings shall be provided as necessary. The designer shall ensure medians and refuge islands are graphically depicted accurately on plans, drawn to scale, and annotated to denote the Type of Median (M1 or M2) or Refuge Island (Type R11 or R12). See VDOT Road and Bridge Standard CG-12.**

DETECTABLE WARNING SURFACES

Detectable warning surfaces shall be provided only at the following locations:

- Where a sidewalk or shared use path crosses a vehicular way, excluding un-signalized driveway crossings (private entrances).
- At pedestrian at-grade rail crossings, boarding platforms and boarding and alighting areas see R305.2.5 thru R305.2.7 of 2011 Proposed Guidelines dated July 26, 2011.
- Pedestrian Access Routes that cross medians and refuge islands. A cut through less than 6 feet in length shall **not** have Detectable Warning Surfaces installed. See Roads and Bridge Standard CG-12 and Median (Type M1 or M2) or Refuge Island (Type RI1 or RI2).

GRATES WITHIN PEDESTRIAN ACCESS ROUTES

- New construction should **not** contain grates within the Pedestrian Access Route. However, should grates be located in Pedestrian Access Route, they shall have spaces no greater than 1/2" wide in the direction of traffic flow. If grates have elongated openings, they shall be placed so that the long dimension of the opening is perpendicular to the dominant direction of travel.

PAY ITEMS

14100	Removal of Sidewalk and Entrance	SY	SQ M	To remove existing sidewalk
14120	Removal of Comb. Curb and Gutter	LF	M	To remove existing C&G (or curb only)
13108	CG-12 Detectable Warning Surface	SY	SQ M	For the detectable area
13220	Hydr. Cement Conc. Sidewalk 4"	SY	SQ M	For the SW concrete portion of ramp
13222	Hydr. Cement Conc. Sidewalk 7"	SY	SQ M	For the SW concrete portion of ramp
12600	St'd. Comb. Curb & Gutter CG-6 *	LF	M	For the proposed C&G
12700	St'd. Comb. Curb & Gutter CG-7 *	LF	M	For the proposed C&G
12020	St'd. Curb CG-2 *	LF	M	For the proposed Curb
12030	St'd. Curb CG-3 *	LF	M	For the proposed Curb

* (Std. Type -match existing conditions)

- Curb ramps should be graphically depicted accurately on plans, drawn to scale, and annotated to denote the Type of curb ramp (CG-12, Type A, B or C) to ensure required quantities and placement can be readily ascertained.

- Where there is an existing curb and gutter, the contractor may choose to remove only the curb utilizing a saw cut in which case the contractor is still paid only for the plan quantity item for Removal of Combination Curb and Gutter.
- Where there is existing curb (with no gutter), the removal will be paid for by the same item (Removal of Combination Curb and Gutter) as if there was curb and gutter.
- Where curb ramps are constructed adjacent to commercial entrances or street connections with heavy truck traffic, Hydraulic Cement Concrete Sidewalk 7" should be considered. See Road and Bridge Standards CG-13.

REFERENCES

DOJ and DOT Issued Guidance on Street Resurfacing Project Requirements to provide Curb Ramps when Street, Roads, or Highways are Altered through Resurfacing dated July 8, 2013: <http://www.ada.gov/doj-fhwa-ta.htm>
<http://www.ada.gov/doj-fhwa-ta-glossary.htm>

The Access Board commonly refers to the requirements of this rulemaking as the "Public Rights-of-Way Accessibility Guidelines" (or PROWAG). However, the official title of the current proposal is "**Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Rights-of-Way**" dated July 26, 2011.

Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Rights-of-Way dated July 26, 2011:

<http://www.access-board.gov/guidelines-and-standards/streets-sidewalks/public-rights-of-way/proposed-rights-of-way-guidelines>

The Access Board: About Rulemaking on Public Rights-of-Way:

<http://www.access-board.gov/guidelines-and-standards/streets-sidewalks/public-rights-of-way>

The Access Board current status of Public Rights-of-Way: Background dated July 26, 2011:

<http://www.access-board.gov/guidelines-and-standards/streets-sidewalks/public-rights-of-way/background>

The Access Board Streets and Sidewalks: <http://www.access-board.gov/guidelines-and-standards/streets-sidewalks>

The Access Board Shared Use Paths: <http://www.access-board.gov/guidelines-and-standards/streets-sidewalks/shared-use-paths>

The United States Access Board Home Page: <http://www.access-board.gov/>

Special Report: Accessible Public Rights-of-Way Planning and Design for Alterations, dated July, 2007: <http://www.ewgateway.org/pdf/files/library/trans/ada/adaspecialrpt.pdf>

U.S. Department of Justice ADA Best Practices Tool Kit for State and Local Government issued December 5, 2006: <http://www.usdoj.gov/crt/ada/pcatoolkit/toolkitmain.htm>.
<http://www.usdoj.gov/crt/ada/pcatoolkit/abouttoolkit.htm>.

FHWA Office of Civil Rights Memorandum dated September 12, 2006:
http://www.fhwa.dot.gov/civilrights/memos/ada_memo_clarificationa.htm.

U.S. DOT FHWA Memorandum dated January 23, 2006:
www.fhwa.dot.gov/environment/bikeped/prwaa.htm.

The Access Board Revised Draft Guidelines for Accessible Public Rights-of-Way dated November 23, 2005: <http://www.access-board.gov/guidelines-and-standards/streets-sidewalks/public-rights-of-way/background/revised-draft-guidelines>

Publication FHWA-EP-01-027: Designing Sidewalks and Trails for Access Part II (Best Practices Design Guide dated September 2001) at:
www.fhwa.dot.gov/environment/sidewalk2/index.htm. See this guide for crossing refuge islands and median crossings.

Publication FHWA-HEP-99-006: Designing Sidewalks and Trails for Access Part I (Review of Existing Guidelines and Practices dated July 1999):
www.fhwa.dot.gov/environment/sidewalks/index.htm.
Please see this publication for information on ramp orientation.

The current Manual of Uniform Traffic Control Devices (MUTCD) provides design guidance and recommendations with respect to pedestrian crosswalk markings:
<http://mutcd.fhwa.dot.gov/>.

The 2010 ADA Standards for Accessible Design dated September 15, 2010:
www.ada.gov/2010ADAstandards_index.htm

ROAD AND BRIDGE STANDARDS

- See the Road and Bridge Standards for St'd. CG-12 Type A, B, C and St'd. CG-13 at:
http://www.virginiadot.org/business/locdes/2008_road_and_bridge_standards.asp

SPECIAL PROVISIONS

- Please refer to the Special Provision for “CG-12 Detectable Warning Surface” on all projects using Standard CG-12, Type A, CG-12, Type B or CG-12, Type C and/or Standard CG-13.

Specification and Special Provisions are available for applicable projects as follows:
<http://www.virginiadot.org/business/const/spec-default.asp>

STANDARD CG-9A, CG-9B, CG-9D and CG-13 ENTRANCES

- Standards for CG-9A, CG-9B, CG-9D and CG-13 entrances incorporate pedestrian access route treatment within the design. See the Road and Bridge Standards at:
http://www.virginiadot.org/business/locdes/2008_road_and_bridge_standards.asp
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INSERTABLE SHEETS

- Insertable sheets IIS02_01 through IIS02_05 are available on the Falcon DMS, under the UPC#: eng-ser, for insertion into applicable plan assemblies.
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DESIGN DETAILS FOR SIDEWALKS, CURB RAMPS AND BUFFER STRIPS

- Design details for sidewalks, curb ramps and buffer strips are available in Appendix A, Section A-5, of the VDOT Road Design Manual, available at:
<http://www.virginiadot.org/business/locdes/rdmanual-index.asp>.