

VIRGINIA DEPARTMENT OF TRANSPORTATION
TRAFFIC ENGINEERING DIVISION
MEMORANDUM

GENERAL SUBJECT: Americans with Disabilities Act Requirements of Maintenance and Operational Projects		NUMBER: TE-376.0
		TO SUPERSEDE: N/A
SPECIFIC SUBJECT: Roles and Responsibilities for Compliance with the Americans with Disabilities Act, Curb Ramp Assessment, Curb Ramp Improvement		DATE: August 6, 2014
		SUNSET DATE: N/A
DIRECTED TO: District Administrators District Maintenance Managers District Infrastructure Managers District Pavement Managers District Construction Engineers District Location & Design Engineers Regional Operations Directors Regional Traffic Engineers	APPROVAL: /original signed/ Raymond J. Khoury, P.E. State Traffic Engineer Approved: August 6, 2014	

EFFECTIVE DATE

The requirements established herein is effective for all maintenance and operational projects planned for advertisement on or after September 1st, 2014 until rescinded or superseded.

PURPOSE AND NEED

This technical memorandum provides requirements for compliance with the Americans with Disabilities Act of 1990 (ADA) when developing and delivering maintenance and operational projects. These requirements were developed in collaboration with Location & Design and Maintenance Divisions.

For new construction and reconstruction projects, refer to the most recent version of IIM-LD-55 "Guidelines for the Placement of Curb Ramps for Pedestrian Access Routes".

BACKGROUND

Title II of the Americans with Disabilities Act of 1990 (ADA) requires that state and local governments ensure that persons with disabilities have access to pedestrian routes in the public

right-of-way (ROW). An important part of this requirement is the obligation whenever streets, roadways, or highways are altered to provide curb ramps where street level pedestrian walkways cross curbs.

STANDARDS

This memorandum establishes VDOT’s requirements for compliance with the requirements of the ADA when developing and delivering maintenance and operational projects. Specifically, this memorandum:

1. Provides the ADA requirements for “Maintenance” and “Alteration” projects;
2. Defines a Curb Ramp Functional Condition Assessment Protocol;
3. Establishes a Curb Ramp Improvement Prioritization Methodology; and
4. Outlines General Responsibilities for delivery of priority curb ramp improvements.

Section 1 – Maintenance and Alteration Project Requirements

In July 2013, the U.S. Department of Justice (DOJ) and U.S. Department of Transportation (DOT) issued a Joint Technical Assistance document (available at: <http://www.ada.gov/doj-fhwa-ta.htm>) clarifying what activities are considered “alterations” which would trigger the requirements of the ADA.

1.1 – Classification of Typical Maintenance and Operational Activities

Based on the DOJ/DOT Joint Technical Assistance document, Table 1 classifies common VDOT maintenance activities as either “Alterations” or “Maintenance”. Note that not all activities in Table 1 are found in the DOJ/DOT Joint Technical Assistance document.

Activity Type	Maintenance	Alteration
Pavement Activities	Crack filling and sealing Surface sealing Fog seals Chip seals Slurry seals Joint seals and repairs Dow bar retrofit Spot high-friction treatments Diamond grinding Patching	Open-graded surface courses Cape seals Hot in-place recycling Latex overlays / Microsurfacing Thin lift overlays Overlays Mill & fill / mill & overlay Rehabilitation Major Rehabilitation* Reconstruction*
Other Activities	Signal operational adjustment Sidewalk repair Sign repair Sign replacement	Signal install/replacement Pedestrian signal install/replace Sidewalk replacement

* require compliance with PROWAG Standards for all ADA features within project limits (PROWAG features and standards are included in supplemental information developed by TED)

Table 1 – Alteration vs. Maintenance Activities

1.2 – “Maintenance” Requirements

There are no requirements for ADA assessments or improvements when executing “Maintenance” activities.

1.3 – “Alteration” Requirements

Within the limits of an “Alteration” project, the functional condition shall be assessed of each location where a pedestrian walkway (sidewalk) crosses a curb (this includes median and island crossings).

Note: major rehabilitation or reconstruction projects require full compliance of ADA features within the project limits. Traffic Engineering publishes supplemental guidance on the full requirements of current ADA standards.

The assessment shall be executed and recorded per the protocol established in Section 2 of this Memorandum and the results prioritized for improvement by the methodology established in Section 3 of this Memorandum. These procedures are applicable to all sidewalk-curb crossings, including but not limited to, all curb ramps, median crossings and pedestrian refuge islands. For simplicity, this document uses the term “curb ramps” in reference to all sidewalk-curb crossings.

Section 2 – Functional Condition Assessment Protocol

This section defines the protocol by which the functional condition of any sidewalk-curb crossing can be assessed. It is intended for use in the identification and documentation of priority curb ramp improvements when planning an “Alteration” project.

2.1 – Components of a Typical Curb Ramp

A typical curb ramp installation is shown in Figure 1. The primary components of a curb ramp are the ramp, detectable warning surface at the bottom of the ramp, landing at the top of the ramp, flares between the ramp and the approaches and approaches to the ramp along the pedestrian access route.

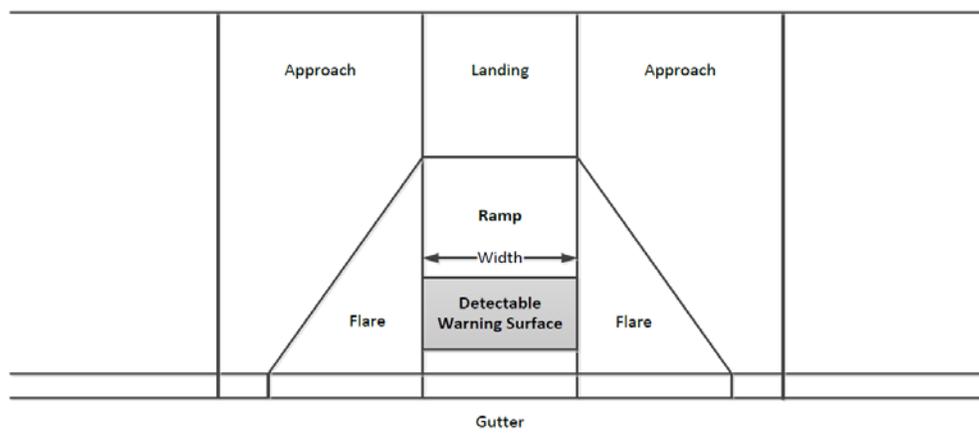


Figure 1 – Typical Curb Ramp Installation

2.2 – Curb Ramp Attributes Informing Functional Condition Rating Protocol

The functional condition rating protocol characterizes ramp condition through three key attributes:

1) Ramp Width

Ramp width was selected as a focus of the protocol because the minimum ramp width required by the VDOT Standards has increased over time.

2) Material Condition

When a curb ramp and/or adjacent surfaces have deteriorated significantly, the curb ramp may no longer adequately function to provide access across the curb crossing. For this reason, the material condition of the curb ramp (and adjacent surfaces) is included within the functional condition rating protocol.

See TED's Curb Ramp Material Condition Assessment Guidance for details of rating.

3) Type of Detectable Warning Surface

The detectable warning surface is included within the protocol because a comparison of the current ADA curb ramp standard with VDOT's curb ramp standards showed that the Department has historically met or exceeded the current ADA standard with the exception of the requirement for a Truncated Dome detectable warning surface. Truncated Dome detectable warning surfaces were not required by the VDOT Standards until 2002. Prior to 2002, with the understanding and approval of the Federal Highway Administration, VDOT required an Exposed Aggregate detectable surface for curb ramp installations.

4) Other Physical Attributes

Both VDOT and ADA standards exist for other physical aspects of a curb ramp (such as the slope and grade of the ramp and slope of flares) but those standards have remained constant over time and have always been met or exceeded by VDOT designs. As a result, these attributes were not selected for inclusion in the functional condition rating protocol.

Where significant, obvious deficiencies in these other physical attributes exist, they should be noted during the evaluation and the functional condition grade may be adjusted accordingly.

5) Other Pedestrian Crossing Concerns

Beyond the physical characteristics of a curb ramp (listed above), there are other factors which can contribute to accessibility of sidewalk-curb crossings. These factors include the alignment and orientation of the curb ramps relative to existing roadway and pavement markings (such as stop bars), signal timing and phasing and other operational components of the intersection.

Although not a part of the rating criteria, the following characteristics of the curb ramp should be noted during the assessment for consideration by a design engineer:

- Ramp aligned with the logical direction of pedestrian travel (Yes/No?)
 - If No, is there a 4' maneuvering area provided at the bottom of the ramp?
- Ramp located in potential conflict with existing pavement markings (Yes/No?)

Note that VDOT curb ramp and detectable warning surface standards can be found in Section 200 of the VDOT Road and Bridge Standards (R&B Standards).

R&B Standards are available at <http://www.virginia-dot.org/business/locdes/LDPPQ.asp>.

2.3 – Functional Condition Assessment Protocol

The following protocol is applicable to all locations where a pedestrian walkway (sidewalk) crosses a curb, regardless of whether a curb ramp exists at the location.

Through this protocol, the location is assigned a functional condition rating (Grade A through Grade D) based on the:

- **Ramp Width** (measured to the nearest inch);
- **Material Condition** (visual inspection per curb ramp material assessment guidance);
- **Detectable Warning Surface** (visual inspection).
 - Note: Detectable Warning Surface requirements do not apply for curb ramp crossings at driveways (unless there is heavy truck traffic)

Grade N/A may be assigned if a curb ramp is not needed at the location under evaluation.

Further details of each functional grade are provided below:

Grade A: The curb ramp is evaluated to be fully functional, meeting current VDOT and 2010 ADA Standards. The curb ramp shall be rated as Grade A if **all** of the following characteristics are documented:

- **Ramp Width:** 48" or greater
- **Detectable Warning Surface:** Truncated Dome
 - Does not apply to curb ramps at driveway crossings (unless heavy truck traffic)
- **Material Condition:** Fair or better condition, characterized by:
 - Limited or tight cracking, faulting (<1/4") and isolated spalling
 - See TED's "Curb Ramp Material Condition Assessment Guidance" for further detail

Grade B: The curb ramp is evaluated to be adequately functional under a majority of circumstances though it may not meet all current VDOT and 2010 ADA Standards. The curb ramp shall be rated no better than Grade B if **one or more** of the following characteristics are documented:

- **Ramp Width:** > 36" to < 48"
- **Detectable Warning Surface:** Exposed Aggregate surface
 - Does not apply to curb ramps at driveway crossings (unless heavy truck traffic)
- **Material Condition:** Poor condition, characterized by:
 - Moderate cracking, faulting (1/4"-3/4"), moderate spalling

- See TED's "Curb Ramp Material Condition Assessment Guidance" for further detail

Grade C: The curb ramp is evaluated to provide some functionality though it may not meet all current VDOT and 2010 ADA Standards. The curb ramp shall be rated no better than Grade C if **one or more** of the following characteristics are documented:

- **Ramp Width:** 36" or less
- **Detectable Warning Surface:** No detectable warning surface
 - Does not apply to curb ramps at driveway crossings (unless heavy truck traffic)
- **Material Condition:** Very Poor, characterized by:
 - Severe cracking, faulting (>3/4"), extensive spalling
 - See TED's "Curb Ramp Material Condition Assessment Guidance" for further detail

Grade D: A curb ramp is needed but does not exist at the location under evaluation. A Grade D should be assigned where a curb ramp is needed to access an existing sidewalk where it crosses a curb. This includes locations where a median crossing is necessary (but not provided) to allow for the most direct pedestrian street crossing.

Grade N/A: A curb ramp (or proposed curb ramp) is not needed at the location under evaluation. A Grade N/A should typically be assigned where a sidewalk does not exist or there is no curb to act as a barrier between the street and the sidewalk.

Table 2 provides a summary of the detailed requirements listed above.

Grade	Ramp Width	Detectable Warning Surface	Material Condition
A (rated only if all listed conditions exist)	48" or greater	Truncated Dome	<u>Fair or Better Condition</u> Limited or tight cracking, faulting (<1/4"), isolated spalling
B (maximum rating if any of the listed condition exists)	>36" to <48"	Exposed Aggregate Surface	<u>Poor Condition</u> Moderate cracking, faulting (1/4"-3/4"), moderate spalling
C (maximum rating if any of the listed condition exists)	36" or less	No detectable warning surface	<u>Very Poor Condition</u> Severe cracking, faulting (>3/4"), extensive spalling
D	A curb ramp is needed but does not exist at the location to access an existing sidewalk where it crosses a curb.		
N/A	A curb ramp is NOT needed at the location (typically because either a sidewalk does not exist or there is no curb at this location).		

Table 2 – Summary of Functional Condition Grade Criteria

Section 3 – Curb Ramp Improvement Prioritization Methodology

Due to limited funding for ADA improvements associated with “Alteration” projects, a methodology to prioritize curb ramp installations, replacements and retrofits is needed. This section defines the methodology by which curb ramp improvement should be prioritized.

The methodology below is based on the functional condition of the curb ramp, however it is acceptable to further prioritize investments by population density, proximity to pedestrian attractors (e.g. transit stops, hospital or civic centers) or other similar factors.

Regardless of existing priorities, in no case shall immediate investment be required beyond the funding allocated by Central Office for District ADA improvements. Additionally a portion of these funds may be dedicated to address pedestrian accessibility concerns reported by the local community.

3.1 – Priorities for Curb Ramp Improvement

Curb ramp improvement priorities (from Highest to Lowest) are as follows:

- 1) Installation of curb ramps where needed but do not currently exist (Grade D)
- 2) Retrofit and/or replacement of Grade C curb ramps
- 3) Retrofit and/or replacement of Grade B curb ramps (particularly retrofits to replace exposed aggregate surfaces with truncated domes)

Investment of ADA Improvement Funds should not be made in improvements or proposed installations where the curb ramp will not serve an existing sidewalk (Grade N/A).

Note: The ADA Improvement Funds are intended for investment in lower cost, high benefit improvements. If an individual location poses significant constraints to improvement (such as the acquisition of right-of-way or significant utility relocation), improvements may be deferred to a future project, regardless of priority.

Section 4 – General Responsibilities

The following section provides details on the responsibilities of District and Regional staff to implement the requirements described herein as well as the support that will be provided from the Central Office.

4.1 – District and/or Regional Responsibilities

It is the responsibility of each District/Region to modify their maintenance and operational project delivery process to comply with the requirements established herein. While flexibility is afforded to each District/Region, the following distribution of responsibilities is recommended.

Alteration Project Developers (District Maintenance or Regional Operations)

- Identify proposed maintenance or operational project locations
- Screen the proposed locations for potential ADA requirements
 - Identify scope of work as “Alteration” or “Maintenance”
 - Review right-of-way within “Alteration” project limits for pedestrian walkways requiring field investigation
- Conduct & record Curb Ramp Functional Condition Assessments

- Record Ramp Width, Detectable Warning Surface type and Material Condition
- Provide photographs of all assessed locations
- Review & fund priority curb ramp improvements (investment is not required beyond allocated funding)
 - Dedication of a portion of the funds to address documented pedestrian accessibility priorities of the local community (at the discretion of the District)
- Prepare and issue curb ramp improvement Task Orders
 - Ensure efficient delivery of improvements (quantity, location selection, etc.)
 - Deliver improvements prior to associated “Alteration” project where possible
- Administer On-Call Curb Ramp Improvement Contract
- Track condition assessments and improvements
 - Ensure reporting of location, quantity and results of assessments and improvements is possible

Designers (District Location & Design or Regional Traffic Engineering)

- Review functional condition assessment results, other pedestrian crossing concerns (and assessment/site pictures) at priority locations and screen improvement recommendations
 - Ensure appropriate engineering and operational considerations are made prior to task order development
 - Provide engineering support to maintenance and operational project developers as needed to refine improvement recommendations
 - Note: PE Sign and Seal is not required

Civil Rights

- Document pedestrian accessibility concerns of the local community

4.2 – Central Office Responsibilities

The Central Office will provide programmatic oversight and assistance in the delivery of these ADA requirements. There are numerous stakeholder Divisions involved at the Central Office level, responsibilities are as follows:

Civil Rights Division

- Administrative oversight of Agency ADA Compliance
- Public outreach

Traffic Engineering Division

- Develop and maintain Design Guidance, Specifications and Standards (in cooperation with L&D)
- Development of On Call Curb Ramp Improvement Contract template and procurement assistance to Districts
- ADA Improvement Fund distribution recommendations
- Incorporation of ADA requirements within Operational project development process
- Training (in cooperation with Maintenance)

Location & Design Division

- Develop and maintain Curb, Median and Entrance Standards
- Develop and maintain Design Guidance and Requirements (in cooperation with TED)

Maintenance Division

- Incorporation of requirements within Maintenance project development process
- Training (in cooperation with Maintenance)

REFERENCE

- Americans with Disabilities Act of 1990
- VDOT Road and Bridge Standards, Section 200 – Curbs, Medians and Entrances

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