ADA* for Roads & Bridges
Incorporating PROWAG**

* Americans with Disabilities Act
** Public Rights of Way Accessibility Guidelines

Transportation Accessibility - LAP:
Responsibilities of Local Agencies Under the ADA to Provide Accessible Services and Programs, Including the Design and Construction of Sidewalks, Curb Ramps, Detectable Warnings, Crossings and Other Pedestrian Facilities within Public Rights of Way

Dean Perkins, Architect, ADA Coordinator
Introduction

- Brief overview of Title-VI, 504 & ADA
- How ADA impacts local agencies
- Features of Accessibility
- New Concepts
- Examples of roadway elements
  - Random images
  - Some good; some not so good
- How you can comply
Title VI & Nondiscrimination
At a Glance

The ADA did not occur in a vacuum, but as a part of a series of laws designed to protect people in the US based on immutable characteristics.
Cars come in different colors, shapes, sizes, models and are made in different countries.

Just like people, Title VI requires that Federal-aid recipients ensure they aren’t discriminating against, excluding from participation in or denying benefits to anyone based on race, color or national origin.
Other Federal and State authorities extend protection:

- Gender or Sex
- Age
- Disability
- Religion
- Family status
Thanks to the... Title VI nondiscrimination applies to all programs and services of a recipient, whether or not that activity receives federal funds.
Fed Aid Recipients also have affirmative action responsibilities

- Limited English Proficiency (LEP)
- Environmental Justice
- Small and Disadvantaged Business contracting
- Public Involvement
- Reasonable Accommodation
DOJ Enforces Federal Civil Rights Laws

1. All federal agencies must ensure their recipients and sub-recipients comply with nondiscrimination laws.
2. For FHWA, Title VI/ADA regulatory authority is at 23 CFR 200, 49 CFR 21/27, 28 CFR 35.105, et al.
3. Recipients must review each of their program areas annually for compliance.
4. Failure to comply can result in deficiency findings and, if not corrected, loss of funding.
Background of the ADA

- **ADA - Civil Rights Law**
  - 1964 - 1990 Federal Laws
    - 1964 Civil Rights Act
    - 1968 Architectural Barriers Act (federal buildings)
    - 1973 Rehabilitation Act (s. 504 - federal programs)
    - 1987 Civil Rights Reauthorization Act
Background of the ADA

1990 Americans with Disabilities Act
- July 26, 1990 - signed
- January 26, 1992 - effective date
- July 1, 1994 - Revised ADA Standards.
- July 26, 2004 - new ADA guidelines (ADA/ABA)
- Nov 23, 2005 - new PROW guidelines (PROWAG)
- Nov 26, 2006 - FHWA adopts ADA Standards for Transportation Facilities (ADASTF)
- July 23, 2011 - Access Board proposes issues NPRM for PROWAG
Statutory language

Section 504:
“No otherwise qualified individual with a disability in the United States . . . Shall solely by reason of her or his disability, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial Assistance.”
29 USC § 794 (a) (1973)

ADA:
“. . . no qualified individual with a disability shall, by reason of such disability, be excluded from participation in or be denied the benefits of the services, programs, or activities of a public entity, or be subjected to discrimination by any such entity.”
42 USC § 12132 (1990)
CRA Title VI - 1964
Federal funding necessary
(CRRA - 1987)

ADA - 1990
No federal funding necessary

504 - 1973
Federal funding necessary
ADA Requirements

- 5 Titles under the ADA
- **Under Title II...**
- **All** state and local agencies must:
  - Issue a policy statement describing intent to comply with 504 and ADA.

  - **NOTE**: This may part of a Title VI policy

Title II Regulations - 28 CFR 35.106
ADA Requirements

- In addition...
- State and local agencies with 50 or more employees must:
  - Have an accessibility Complaint Process
  - Designate an ADA coordinator and publish their contact information, and
  - Conduct Self-Evaluations and develop Transition Plans...

Title II Regulations - 28 CFR 35.105 & 35.107
NOTICE UNDER THE
AMERICANS with DISABILITIES ACT

In accordance with the requirements of Title II of the Americans with Disabilities Act of 1990 (ADA), the [Agency name] will not discriminate against qualified individuals with disabilities in the access to, and participation in, programs and activities which the [Agency name] operates.

The [Agency name] does not discriminate on the basis of sex, national origin, race, color, age, religion, or disability. Sex discrimination includes sexual harassment.

Title II of the ADA requires that every state and local government give all citizens equal access to programs and services.

Grievance Procedure

This Grievance Procedure is established in accordance with the Americans with Disabilities Act of 1990 (ADA). It may be used by anyone who wishes to file a complaint alleging discrimination in the programs, services, or activities of the [Agency name]. The Grievance Procedure does not apply to complaints relating to employment by the [Agency name].

The complaint should be in writing and contain information about the alleged discrimination, such as name, address, phone number, and a description of the problem.

The complaint should be submitted by the person alleging the discrimination as soon as possible, but no later than 60 calendar days after the alleged violation to:

[Agency name]
[Address]
[Phone]
[Email]

Within 15 calendar days after receipt of the complaint, the ADA Coordinator or designee will forward the complaint to the individual or department responsible for addressing the complaint and resolving the problem. Within 15 calendar days of review of the complaint, the ADA Coordinator or designee will respond to the complainant by telephone and in writing, explaining the action taken on the complaint.

The Florida Department of Justice

ADA Grievance Procedure

Page 1
Self-Evaluations

• You must:
  • Review Policies and Procedures, etc. for obstacles that limit access for persons with disabilities.
  • Revise policies and procedures as appropriate to remove discriminatory language, practices that may limit ability of persons with disabilities to participate in programs, services or activities.

• You must also:
  • Provide opportunity for interested persons and groups to participate in self-evaluation(s) leading to transition plan(s).
  • Make self-evaluations available for public inspection.
Transition Plans

**You must:**
- Identify physical obstacles that limit access of persons with disabilities to public programs, services, activities or facilities, etc.
- Describe in detail methods to be used to correct deficiencies.
- Specify schedule for improving facilities by prioritizing needs of persons with disabilities in existing facilities.
- Indicate official responsible for implementation of plan.

**You must also:**
- Provide opportunity for interested persons and groups to participate in transition plan process.
- Make transition plans available for public inspection.
The Future of Facilities within Public Rights of Way(?)

USDOT / FHWA recommends using PROWAG criteria where ADASTF do not address an issue.

RECOMMENDATION:
Start learning PROWAG!

www.access-board.gov/prowac/nprm.htm
Transportation
ADA and Sidewalks

- ADA is a federal civil rights law
  - Enacted July 1990 - Effective January 1992
  - **Title II - Public Services** (of 5 Titles)
  - ADA: ‘Public services’ must be accessible
  - ADA: Public sidewalks along roadways **ARE** public services
  - ADA: Public sidewalks are public access routes
  - Curb ramps are part of public access route
  - Features along sidewalks must be accessible
Roadside Accessibility

- Accessible Route Requirements
  - *PROWAG - Pedestrian Access Route*
  - Widths
  - Running slopes
  - Cross Slopes
  - Surfaces
  - Changes in Level
  - Gaps / Grates
  - Protruding Objects
    - Signs & Equipment
    - Landscape Materials
Accessible Route (AR) & Pedestrian Access Route (PAR)

- **AR** = 36” continuous unobstructed path
  - **PAR** = 48” (FDOT Stds. & PROWAG)
- **AR** = 32” min. at a ‘point’ (24” max.)
  - **PAR** = 48” (FDOT Stds. & PROWAG)
- 60” x 60” passing space @ 200’
- Slopes:
  - ≤1:20 (≤5%) is not a ramp
  - >1:20 (>5%) is a ramp
  - 1:12 (8.33%) max. allowed *
- Cross-slope
  - 1:50 (2%) max. allowed *
  - 1:75 (1.5%) preferred

* Exceptions in PROWAG
Surfaces

- Firm, stable, slip-resistant
  - Dry or wet!

- Changes in level
  - $\leq \frac{1}{4}''$ - Vertical
  - $> \frac{1}{4}'' \leq \frac{1}{2}''$ - 1:2 slope
  - $> \frac{1}{2}''$ - 1:12 slope (ramp)

- Gratings
  - $\frac{1}{2}''$ max. gap (!!!)
Protruding Objects

- 27” - 80” range above grade
- Post-mounted (≤12” offset) (≤4” in PROWAG)
- Wall mounted (≤4” offset)
- Overhanging (≤80” above grade)
R302.3 Continuous Width

- The minimum continuous and unobstructed clear width of a pedestrian access route shall be 4 ft., exclusive of the width of the curb.
The Sidewalk 'Zone' System

- Curb Zone
- Furniture Zone
- Pedestrian Zone (PAR)
- Frontage Zone
Zone System: Residential
Zone System: Commercial
Furniture Zone

Carefully arranged street furniture leaves the sidewalk clear.

Randomly arranged street furniture clutters the sidewalk and creates an ‘obstacle course’. 
A Cross Slope Solution

Change of Material/Texture
Another...
A difference between AR & PAR!
For sidewalks within the public right of way . . .

Sidewalk grade – **ADASTF** vs. **PROWAG**
- ADASTF: Provide accessible route (AR)
- PROWAG: Match roadway grade (PAR)
Ramps – “supported slopes” i.e., Bridges

5’ min. Top/Interim Landing
30’ – 40’ max. Depending on slope (see below)
5’ min. Bottom Landing

1:12 TO < 1:16
30 760
30 9

1:16 TO < 1:20
30 760
40 12

Fig 16
Components of a Single Ramp Run and Sample Ramp Dimensions

“Level” means: 2% or less slope
Sidewalks

- Are Pedestrian Access Routes (PAR)
  - 48” min. width
  - FDOT Design Standards - Index 310
  - PROWAG - Section R302

- Cross-slopes - 1:48 / 2% max.

- Check Surfaces - “Firm, Stable, Slip-resistant”

- Look for Level changes - $\frac{1}{4}”$ / $\frac{1}{2}”$

- Look for Protruding Objects - 27”-80”
Curb Ramps
R207 & R304

Detectable Warning
Curb Ramps

- **Running Slopes** (1:12 / 8.3% max.)
- **Cross-slopes** (1:48 / 2% max.)
- **Landing at top** (48” min.)
- **Detectable Warnings**

X = 48” min.
Curb Ramp Grade
R304

- Least slope possible is preferred
- Recommended maximum grade to allow for construction tolerance - 7.1%
- Maximum grade - 8.3%
- Exception: when “chasing grade,” ramp length need not exceed 15’, but slope must be uniform.
**Change of Grade (Counterslope) R303.3.5**

- **PROWAG** allows 8.3% ramp and 5% grade at the adjacent street = 13.3%

- **Recommendation:**
  - 11.3% maximum
  - Provide 2’ level area if greater than 11.3%

See notes in Index 304
Transportation........
Curb Ramps and Detectable Warnings

- Curbs are an 'edge cue' for pedestrians who are blind or have low vision
- Curbs are a barrier for persons in wheelchairs
- Curb ramps remove the barrier for wheelchairs
- Curb ramps remove edge cue for peds with vision impairments
- Detectable warnings are a replacement cue to indicate location of the street
Perpendicular Curb Ramps
R305.2.1

- Perpendicular Curb Ramp
  - Place DW at back of curb or at grade break
Directional/Linear Ramps
R305.2.1

- Greater than 5 feet setback...
  - Place DW on bottom landing if level landing is more than 5' deep at any point
Directional/Linear Ramps

R305.2.1

- Equal to or less than 5 feet setback from bottom of curb ramp . . .
  - Place DW at grade break if level landing at bottom of ramp is 5' deep or less
Parallel Ramps
R305.2.2

![Diagram of Parallel Ramps with a 24" landing between ramps.](image)
Blended Transitions
R305.2.3 – “Full Width!”
Detectable warning = 'Stop sign'

- Delineates the edge of the street
  - Does not designate the best crossing location for a pedestrian who is blind or visually impaired
  - Does not provide alignment information
Detectable Warning Alignment
To align or not to align . . .

- Detectable warnings ‘warn’ of roadway edge
- DW alignment NOT used as directional cue
  - Other methods: traffic sounds, APSs, etc.
- In a perfect world, all detectable warnings would be aligned with crossing
  - Easier to construct
  - Easier to use
- However . . .
  - Not all curb ramp configurations and site conditions permit DW alignment
Detectable Warning Alignment
To align or not to align . . .

- So...
  - Dome alignment is desirable, but not required
Pedestrian Controls
R306 & MUTCD 4E.06

- **In reach ranges** (48” max.)
  - 42” FDOT Standard
  - 10” max. reach - over obstruction/edge of sidewalk
  - 2” dia. raised buttons

- **Maneuvering space** (30” x 48” min., level)
Accessible Pedestrian Signals
MUTCD 4E-09

- For pedestrians with vision impairments
- Used in conjunction with pedestrian signal timing
- Add “non-visual” information:
  - Tactile features
  - Audible tones
  - Vibrating surfaces
  - Speech messages
- Must indicate which crossing is served by each device
Accessible Pedestrian Signals

Speakers

Tactile Arrow
Pushbutton Locations
R403 & MUTCD 4E

- NOTE: It must be clear which button controls which crossing. (per MUTCD).
- If APSs cannot be placed at least 10 apart, they must 'speak' to you.
APS Location

Good placement of APSs

Not-so-good placement
Pedestrian Crossings
R306

- Slope of crossing = cross-slope of roadway
- Cross-slope of crossing = grade of roadway
- Cross Slope of crossing:
  - ‘STOP’–‘YIELD’-controlled: 2% max.
  - Non-‘STOP’-controlled: 5% max.
    - i.e., signal or no control
  - Mid-block: Match grade of roadway
This is who we are working for
**RRFB**
Rectangular Rapidly Flashing Beacon

- **Strobe lights**
- **Push button**
RRFB
Upon activation of push button...
HAWK
Pedestrian Hybrid Beacon

- Stays dark for vehicles and solid 'hand' for pedestrians until activated, then:
  - **For vehicles:**
    1. Flashing Yellow light,
    2. Solid Yellow light,
    3. Solid Red lights
    4. Alternating Red lights,
    5. Then dark
  - **For pedestrians:**
    1. Solid Hand,
    2. Solid Hand,
    3. Solid Walk,
    4. Flashing Hand
    5. Solid Hand
Bus Stops
R308

When siting a new bus stop...

- **Must** be on PAR
  - 48” min.
  - 60” recommended
  - This may be sidewalk or paved shoulder

- **Must** have accessible approach to bus stop
  - 48” min. width - 60” recommended
    - Leads to / part of boarding & alighting area
    - Meets running slope/cross slope criteria
    - Firm, stable & slip-resistant

- **Must consider** potential construction of boarding and alighting area & other features
Bus Stops

- **If provided - Boarding & Alighting area:**
  - Place for bus lift/ramp to deploy
  - “Firm, stable and slip-resistant” surface (ADAS & PROWAG)
  - “Firm and stable” surface (ADASTF)
  - Must connect to streets, sidewalks, etc
    - Sidewalk, curb ramps, etc.
  - 5’ min. width - parallel to roadway
  - 8’ min. depth - perpendicular to roadway

**NOTE:** If low-floor, ramp-equipped bus is used, the B&A area should be raised (curb height).
Bus Stops

**If provided – bus bench:**

- **Must be on PAR**
- **Must not block PAR**
  - 48” min. clearance - 60” recommended
- **Must have maneuvering space adjacent to bench**
  - 30” x 48” min.; firm, stable & slip-resistant surface
  - Allow shoulder-to-shoulder seating for companion
- **Allow transfer to bench (if desired)**
  - Seat length: 42” min.
  - Seat height: 17”-19”
  - Seat back: 2”-18” above seat
  - Armrest recommended
Bus Stops

**If provided – bus shelter:**
- Must be on PAR
- Must not block PAR
  - 48” min. clearance – 60” recommended
- 30” x 48” min. clear floor area within shelter
- 48” min. approach to clear floor area
- 48” min. approach to boarding & alighting area
Rural bus stops

- **Primary Issues:**
  - Flush shoulder - No curb
  - Shoulder is sloped away from the roadway
  - Most ‘kneeling’ buses are designed to deploy front ramps onto 6” high curbs
    - Up to 1:4 slope allowed on bus ramp deployed onto curb (ADAASTV, 49 CFR 38.23(c)(5))*
  - Use on flush shoulder causes ramp to be too steep for safe use.

* ADAASTV = ADA Accessibility Specifications for Transportation Vehicles
Rural bus stops
Parking

- **Accessible space**
  - Width = 12’-0” min.

- **Access aisle**
  - Width = 5’-0” min.

- **Curb ramp**
  - Outside space & aisle

- **Slopes**
  - 1:50 max. any direction
On-Street Parking Spaces R214 & R309

- Accessible on-street parking space per block perimeter - approx. 4% of total
  - Table R214

- Parking spaces are best located where the street has the least crown & grade and close to key destinations (i.e., near crosswalks)
On-Street Parking Spaces  
R214 & R309

- Accessible on-street parking space per block perimeter - approx. 4% of total
Maintenance of PAR
28 CFR 35.133

- Title II of the ADA requires public entities to maintain equipment and features of facilities that are required to provide ready access to individuals with disabilities.
Potential Solutions

- Sidewalk Grinding
- Flexible Pavement
- Joint Materials
Alternate Pedestrian Routes
R205 & R303 & MUTCD 6D & 6G

Alternate Pedestrian Access Routes are required when an existing pedestrian access route is blocked by construction, alteration, maintenance, or other temporary condition.
Alternate PARs

References Part 6 of the MUTCD

See similar requirements in FDOT Index 660
Alternate PARs

- R205 specifies that the alternate pedestrian access route shall be:
  - Provided on the same side of the street as the disrupted route, to the maximum extent feasible
  - Where exposed to adjacent construction, traffic or other hazards, shall be protected with a pedestrian barricade or channelization device
    - Continuous, stable, non-flexible
    - Consist of features identified in the MUTCD Chapter 6F
  - Plastic tape is not acceptable!!!
  - Rows of barrels and/or cones is not acceptable... unless they are connected by a continuous 'detectable' edge
12. For pedestrian longitudinal channelizing devices, the device shall have a minimum of 8” continuous detectable edging above the walkway. A gap not exceeding a height of 2” is allowed to facilitate drainage. The top surface of the device shall be a minimum height of 32” and have smooth connection points between the devices to facilitate hand trailing. The bottom and the top surface of the device shall in the same vertical plane. If pedestrian drop-off protection is required, the device shall have a footprint or offset of at least 2’, otherwise the device must be 42” in height above the walkway and be anchored or ballasted to withstand a 200 lb. later point load at the top of the device.
Examples of LCDs

≥32”

2”-8”
Construction Work Zones

- Unfortunately, too many bad examples...
Latest from DOJ & DOT!

- Resurfacing and Curb Ramps
- Clarification of existing regulations:
  - 28 CFR 35.151, "alterations require the inclusion of accessible features"
- New "Joint Technical Assistance"
  - What is an 'alteration', and
  - What is 'maintenance'

Please Note: These are not new requirements, but, clarification of current requirements.
Department of Justice/Department of Transportation Joint Technical Assistance\(^1\) on the Title II of the Americans with Disabilities Act Requirements to Provide Curb Ramps when Streets, Roads, or Highways are Altered through Resurfacing

Title II of the Americans with Disabilities Act (ADA) requires that state and local governments ensure that persons with disabilities have access to the pedestrian routes in the public right of way. 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.\(^2\) This requirement is intended to ensure the accessibility and usability of the pedestrian walkway for persons with disabilities.

An alteration is a change that affects or could affect the usability of all or part of a building or facility.\(^3\) Alterations of streets, roads, or highways include activities such as reconstruction, rehabilitation, resurfacing, widening, and projects of similar scale and effect.\(^3\) Maintenance activities on streets, roads, or highways, such as filling potholes, are not alterations.
Where Curb Ramps are Required?

• Generally, curb ramps are needed wherever a sidewalk or other pedestrian walkway crosses a curb.

• Curb ramps must be located to ensure a person with a mobility disability can travel from a sidewalk on one side of the street, over or through any curbs or traffic islands, to the sidewalk on the other side of the street.
Where Curb Ramps are NOT Required?

- ADA does not require installation of ramps or curb ramps in the absence of a pedestrian walkway with a prepared surface for pedestrian use.
  - *(i.e., Where there are no sidewalks)*
- Nor are curb ramps required in the absence of a curb, elevation, or other barrier between the street and the walkway.
- Detectable warnings?
When Curb Ramps are **NOT** Required - Maintenance

- Treatments that serve solely to seal and protect the road surface, improve friction, and control splash and spray are considered to be maintenance because they do not significantly affect the public's access to or usability of the road.
  - *Basically, if you're just protecting the asphalt surface and not adding asphalt material.*
When Curb Ramps ARE required - Alterations

- Curb Ramps are required if resurfacing involves work on a street or roadway spanning from one intersection to another, and includes overlays of additional material to the road surface, with or without milling.
  - Basically, if you're adding or replacing asphalt.
Prior to DOJ/DOT Agreement...

**MAINTENANCE**

**USDOJ**
- Patching
- Potholes

**USDOT**
- “Non-structural” resurfacing

**ALTERATION**

**USDOJ**
- Everything Else

**USDOT**
- “Structural” resurfacing
After DOJ/DOT Agreement...

MAINTENANCE

Addition of New Layer of Asphalt
Mill & Fill / Mill & Overlay
Cape Seals
New Construction
Hot In-Place Recycling
Open-graded Surface Course
Microsurfacing / Thin-Lift Overlay
3-R

plus

Chip Seals
Crack Filling & Sealing
Diamond Grinding
Joint repairs

Fog Seals
Joint Crack Seals
Spot High-Friction Treatments
Dowel Bar Retrofit

Scrub Seals
Slurry Seals
Pavement Patching

ALTERATION

Addition of New Layer of Asphalt
Cape Seals
Hot In-Place Recycling
Microsurfacing

Caution: In some cases, the combination of several maintenance treatments occurring at or near the same time may qualify as an alteration and would trigger the obligation to provide curb ramps.
Please Note:

- This TA *does not* describe new requirements from DOJ or DOT.

- This TA *does not* change Florida DOT policy.

- **This is a clarification of current requirements.**
Very good! Measure **before** you build
(Identity withheld)
Random Images

- Some good
- Some not so good
This is what we want...
Not this . . .
Nice!
Umm...
This (sorta) works
Maintenance please!!!
Well Done!
Has been corrected - Thank you!
Curb Ramps OK, but ...
Nice!
Close... DW needs to be full width
Very Good!
We’re not finished, right...?
Very Good!
This is a little hard to fix.
Creative path around large tree up and over the roots
Combination return curb and flared side
Large Gap . . . BAD!!

Full Width . . . Good!
Ummm!
Good start, but...
Looks good. Might want to check that limb, tho'.
Very Good!
Very Good!
This CAN be fixed.
Walk around at driveway apron
Nice shelter – but, how do I get here?
Potentially unsafe for all peds, especially those using mobility aids
Summary

ADA Title II - Public Services

- Public services must be accessible
- Public sidewalks are public services
- Public sidewalks are pedestrian access routes
- Curb ramps are part of pedestrian access route
- Features along sidewalks and curb ramps must be accessible
Help is available

- **Local**
  - YOUR ADA Coordinator(s)
- **State:**
  - FDOT District ADA Coordinator
  - FDOT C.O. ADA Coordinator
- **Federal:**
  - U.S. Access Board
  - U.S. Department of Justice
  - U.S. DOT
Resources

U.S. Access Board
- Accessibility Guidelines - ADAAG
- www.access-board.gov

U.S. Dept. of Justice - ADA
- Accessibility Standards for Facilities & Sites
- www.ada.gov

U.S. Dept. of Transportation - FHWA
- Accessibility Guidance & Standards for Public Rights of Way

Florida Dept. of Transportation - FDOT
- ADA information on Website
- http://www.dot.state.fl.us/projectmanagementoffice/ADA/
Contact us...

Dean Perkins, Architect
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or
Your ADA Coordinator(s)
Thank You!

**Merci!** Todah Rabbah

**Arigato!**

**Dhanya Vaad!**

**Xie Xie!**

**Gracias!**

**Shokran!**

**Danke!**

Live long and prosper!
What WERE they thinking!?!