

Slide 1



Slide 2



Great Lakes DBTAC
Teleconference
May 19, 2009

**Public Rights-of-Way
Accessibility**

Lois Thibault
US Access Board



Who we are...

The Access Board is an independent **Federal** agency charged to develop accessibility **guidelines** under several laws. Our finished work includes guidelines for:

- buildings** and facilities;
- transportation **vehicles**;
- telecommunications**, and
- electronic and **information technology**.

Several new guidelines are in development.

The Access Board is the Federal government's **accessibility specialist**. Our mandate includes responsibility for:

- rulemaking** (developing guidelines);
- technical assistance** and **training**;
- research**, and

EARLENE SESKER SUNY/BUFFALO



What we do...



*Access Board accessibility **staff** -- there are 13 of us -- include architects as well as specialists in **transportation**, recreation, historic preservation, and technology and communications. Several are themselves people with disabilities.*

*Check our **website** for individual contacts:*

www.access-board.gov/contact.htm

Big Cheese
Marsha Mazz

Vessels
Paul Beatty

Rec/Outdoor
Peggy Greenwell

PROW
Scott Windley

Transit/PROW
Dennis Cannon



In the works: new guidelines...

The Board's guidelines are **living documents**;
new applications are always in development:

- public rights-of-way** (Draft 2: 2005);
- passenger vessels** (Draft 2: 2006), and
- outdoor recreation** (NPRM: June 2007).

Transit vehicle guidelines are currently under
revision for USDOT/FTA.



PROW ACCESSIBILITY

The public right-of-way is the network of common space reserved for community mobility.



Regardless of your mode, you have a right to use of the right-of-way.



A little PROW history...

1992 *Proposed Rule for State/Local Government Facilities*

Section 11 Judicial, Legislative and Regulatory Facilities

Section 12 Detention and Correctional Facilities

Section 13 Residential Facilities

Section 14 Public Rights-of-Way

1994 *Interim Final Rule*

1998 *Final Rule (sections 13 and 14 were reserved)*

1994 *Technical assistance and outreach*

1999 *Advisory Committee*

2001 *Committee report: 'Building a True Community'*

2002 *First **PROWAG** draft*

PROWAG: Key issues in comment

Over **1400 comments** were received to the first PROWAG draft (June 2002):

--300 came from the highway community;

--almost 800 were submitted by people identifying themselves as having **blindness or low vision**.

The **2005 draft** was published to document changes recommended in comment and to develop a

cost/benefit analysis. No comments were sought.

Next steps...?

We are currently working with industry organizations to develop the required
cost/benefit assessment:

- regulatory assessment (summer 2009)*
- OMB review (fall 2009);*
- NPRM (winter 2009/10);*
- public comment (winter 2010);*
- final rule (late **2010**).*

Frequently-asked questions:



- 1/What type of work will trigger the requirement to comply with the PROW?
- 2/Will audible pedestrian signals be required at every intersection?
- 3/At intersections that have pedestrian signals that display the remaining time before the light changes will that information need to be audible?
- 4/In hilly areas will the sidewalk be required to be at a 1/12 maximum slope?
- 5/Will all public sidewalks have to comply with the PROW, residential areas, or just public sidewalks that are part of an accessible route?
- 6/Do these guidelines establish a minimum amount of time to cross a street before the light changes based on the distance from curb to curb?
- 7/Will accessible on-street parking be required in the same numbers required in the ADA standards?
- 8/Are there exceptions for the minimum width of a sidewalk where existing conditions won't allow full compliance with the guidelines?
- 9/What is going on with detectable warnings in this rule?
- 10/What type of technical assistance materials are available on these guidelines to assist designers and public works folks?

ACCESSIBILITY REGULATION

Laws are passed by Congress. Three laws govern access in the public right-of-way:

--the Architectural Barriers Act of 1968

(**ABA**) EX: Federal lands, NHS

--the Rehabilitation Act of 1973 ('Rehab

Act' or '**section 504**') EX: Federal-aid

highway funding to States

--the Americans with Disabilities Act of

1990 (**ADA**) EX: State/local governments

Each law is implemented by **regulations** developed by an appropriate Federal agency to establish legal requirements under the law.

Laws → Regulations → Standards

Implementing regulations:

- establish/identify requirements;
- provide **standards for new construction and alterations**; and
- assign compliance and enforcement responsibilities.

It's the regulations -- not the standards -- that establish what's required.

*Title II of the ADA is an **implementing regulation**. It has two parts: DOJ's Subtitle A (State/Local Governments) and DOT's Subtitle B (Transportation Facilities and Systems).*

SUBTITLE A

SUBTITLE B



ADA Title II/Subtitle A
28 CFR Part 35 (DOJ)

Subpart B – General Requirements

35.130 General prohibitions against discrimination.

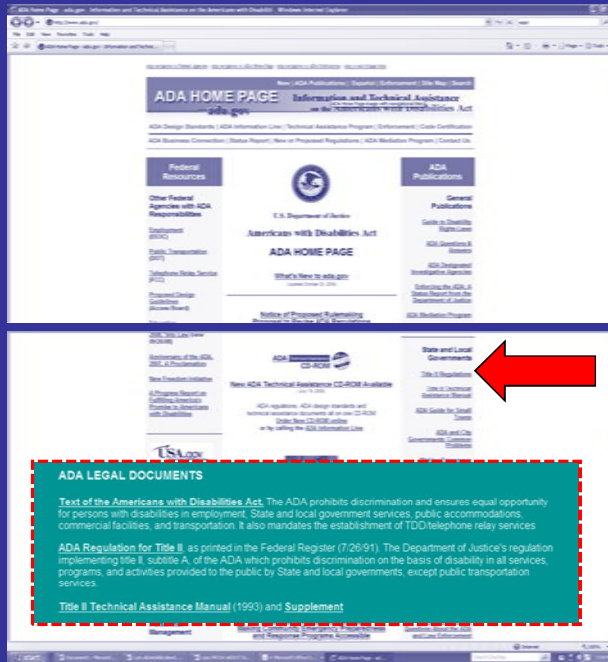
“No qualified individual with a disability shall, on the basis of disability, be excluded from participation in or denied the benefits of the services, programs, or activities of a public entity [...].”

ADA Title II/Subtitle B
49 CFR Part 37.5 (DOT)

Section 37.5 Nondiscrimination.

*“No entity shall discriminate against an individual with a disability in connection with the provision of transportation service... Notwithstanding the provision of any special transportation service to individuals with disabilities, an entity shall not, on the basis of disability, deny to any individual with a disability **the opportunity to use** a transportation service for the general public, if the individual is capable of using that service.”*

What's in Title II/Subtitle A?



Two parts:

- the 'preamble' or commentary; and
- the 'rule' or regulation.



Two design and construction standards are 'deemed to comply': UFAS (1984) and ADAAG (1991); **other methods** are permitted.

Relevant Title II/A provisions

- 35.130 General prohibitions against discrimination
- 35.130(7) Modification in policies, practices, or procedures ('accommodation')
- 35.133 Maintenance of accessible features
- 35.150 Existing facilities (program accessibility)
- 35.150(d) Transition plan/Curb ramps
- 35.151 New construction and alterations**
- 35.151(c) Accessibility standards**
- 35.160(a) Effective communication

Regulations set the requirements:

Four principal obligations:

1/New construction and alterations *must be accessible to and usable by* people with disabilities [35.151]; Cost is not a consideration. ~~Ⓢ~~

2/Existing facilities and programs *must achieve 'program accessibility'* [35.150]; Limit: undue burden (administrative or financial). Ⓢ

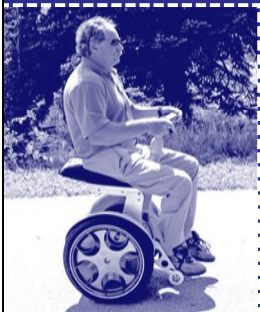
3/People with disabilities must be **accommodated** where reasonable and necessary for access [35.130(b)(7)]. Ⓢ

4/Steps must be taken to ensure **effective communications** [35.160] with people with disabilities. Ⓢ

Program accessibility

*Program accessibility is a broad concept first developed under section 504 of the Rehabilitation Act. It may have **policy, operational, design and construction, or other considerations.***

POLICY



EXTRA TIME



APS

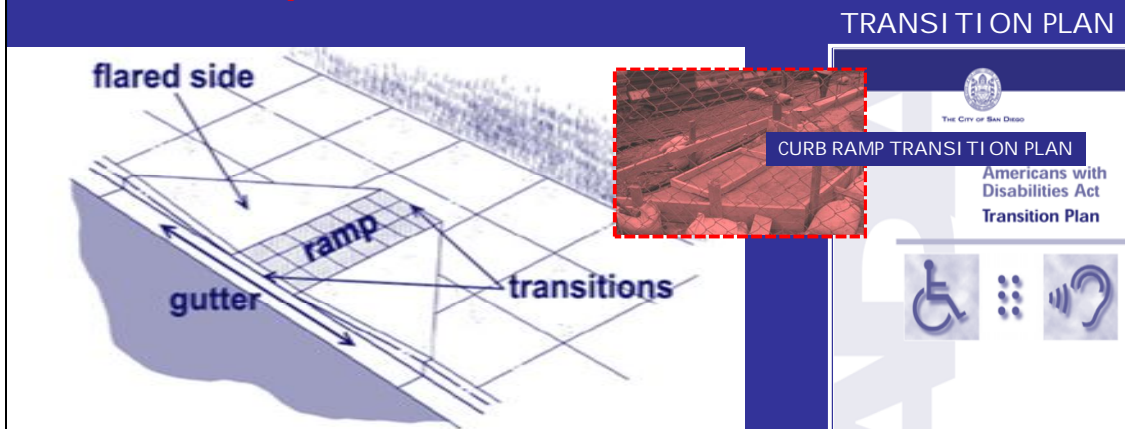


PARKING



Other obligations...

*Jurisdictions must **evaluate** their existing programs and facilities for discriminatory effects and identify and schedule remediation in a Transition Plan. That plan must include a **Curb Ramp Transition Plan** [35.150(d)(2).*



Title II: Accommodations

35.130 General Prohibitions against Discrimination.

[...]

(7) A public entity shall make reasonable **modifications** in policies, practices, or procedures when the modifications are necessary to avoid discrimination on the basis of disability, unless the public entity can demonstrate that making the modifications would fundamentally alter the nature of the service, program, or activity.

Example: Modification in policies...



STOP SIGN

Title II: 'Maintenance' vs Maintain

35.133 Maintenance of accessible features.

*"This section recognizes that it is not sufficient to provide features such as accessible routes [...] if those features are not **maintained in a manner that enables persons with disabilities to use them** [...] This section does not prohibit isolated or temporary interruptions in service due to maintenance or repairs."*

Maintenance of Accessible Features

SNOW?



FHWA on snow removal...

Preservation

MEMORANDUM

To: Directors of Field Services, Division Administration

From: Butch Winkler, Director, Office of Asset Management

Subject: **INFORMATION: Snow Removal on Sidewalks Constructed with Federal Funding** Date: August 27, 2008

The purpose of this memorandum is to address questions received by several FHWA District Offices about maintaining pedestrian facilities during the winter season.

The provisions provide the FHWA with authority to require snow-removal on pedestrian facilities constructed with Federal funding. It also states current statutory and regulatory maintenance requirements.

The maintenance requirements of 23 CFR 320.101 apply to all transportation facilities that are constructed with Federal funds. Section 101 requires a State DOT to maintain projects constructed with Federal aid funding in order into a maintenance program with the appropriate local official where such projects are located:

23 CFR 320.101 a public agency must maintain its facilities in an accessible condition for all pedestrians, including persons with disabilities, with only limited or temporary interruptions of accessibility. If the maintenance obligation includes reasonable snow-removal efforts. See FHWA, Questions and Answers.

Note that the maintenance requirements described in this memorandum also apply to other sidewalk construction. For more information see section 421. Surface Requirements, Snow Removal, and Inspection in the 2007 FHWA Guide for the Planning, Design, and Operation of Pedestrian Facilities (July 2008).

Current maintenance provisions require pedestrian facilities built with Federal funds to be maintained in the same manner as other roadway assets. In some cases, however, local agencies may have policies that reasonably limit removal of snow from their own roadways and adjoining pedestrian facilities. State agencies have generally established levels of service on various roads especially as related to Snow and Ice events. This is particularly important in heavy snow events, which it is possible to have snow on the ground for many months from late fall to early spring.

Contact: Celia Gerchell, Office of Asset Management, 202-366-7400, Email: Celia.Gerchell@dot.gov

“Part of this maintenance obligation includes snow removal...”

Title II: Communications

Subpart E - Communications

35.160 General.

*"A public entity shall take appropriate steps to ensure that **communications** with applicants, participants, and members of the public with disabilities are **as effective as communication with others.**"*

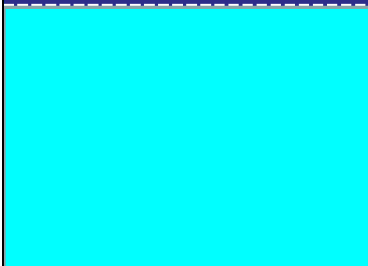
3/At intersections that have pedestrian signals that display the remaining time before the light changes will that information need to be audible?



Title II: Communications

*A jurisdiction's dealings with the public must be available to all. Highway agencies must make sure that people who have **sensory disabilities** can access the information they provide, have input to its decision-making, and understand the possible effects of agency proposals and projects.*

OUTREACH



PUBLIC MEETINGS



DETOURS



Limits/Measures of compliance:

Newly-constructed facilities *must achieve a 'high degree of **convenient** access'.*

Altered facilities *must be accessible to/usable by people with disabilities to the '**maximum extent feasible**'.*

*Programs, services, and benefits must be **available** to people with disabilities, but not all **existing facilities** need to be altered if other methods are effective in achieving program access .*

Accommodations *must be **reasonable** for both user and provider and are independent of the standards.*

Title II: New construction

"35.151(a) Design and construction.

Each facility [...] *constructed by, on behalf of, or for the use of a public entity shall be designed and constructed **in such manner** that the facility [...] is **readily accessible to and usable by** individuals with disabilities [...]."*

New construction

"A HIGH DEGREE OF CONVENIENT ACCESS..."(DOJ)



Title II: Alterations

"35.151(b) Alteration.

Each facility [...] altered by, on behalf of, or for the use of a public entity shall, **to the maximum extent feasible**, be altered in such manner that the altered portion [...] is **readily accessible to and usable by** individuals with disabilities [...]."

8/Are there exceptions for the minimum width of a sidewalk where existing conditions won't allow full compliance with the guidelines?

Title II: Alterations

“35.151(e) Curb ramps.

Newly constructed or altered **streets, roads, and highways** *must contain curb ramps [...] at any intersection having curbs or other barriers to entry from a [...] pedestrian walkway. Newly constructed or altered [...] pedestrian walkways must contain curb ramps [...] at intersections to streets, roads, or highways.”*

'Maximum extent feasible':

*“[...] applies to the **occasional** case where the nature of the existing facility makes it **virtually impossible** to comply fully with applicable accessibility standards through a planned **alteration**.*

*In these circumstances, the alteration shall provide the **maximum physical accessibility feasible**. Any altered features that can be made accessible shall be made accessible [...].”*

Alterations

Changes that affect **usability** are defined as alterations. Alterations to **sidewalks and streets** must include **curb ramps** if there are pedestrian facilities [35.151(e)]

REPAIR: NO

RESURFACING: YES

RECONSTRUCTION: YES



STANDARDS

Our focus today...

*We are going to focus more narrowly, on **standards for new construction and alterations** -- the principal Access Board mandate.*

*DOJ (and DOT) oversee **program access**, existing facility compliance, facility operation, and other provisions of the implementing regulations that prohibit discrimination.*

Title II Standards/Subtitle A

*"35.151(c) **Accessibility standards.***

*Design, construction, or alteration of facilities in conformance with UFAS [1984] or with ADAAG [1991/1994] shall be **deemed to comply** with the requirements of this section [...].*

***Departures** from particular requirements [...] by the use of other methods shall be permitted when clearly evident that **equivalent access** [...] is provided."*

Title II Standards/Subtitle B

"37.9 Standards for accessible transportation facilities.

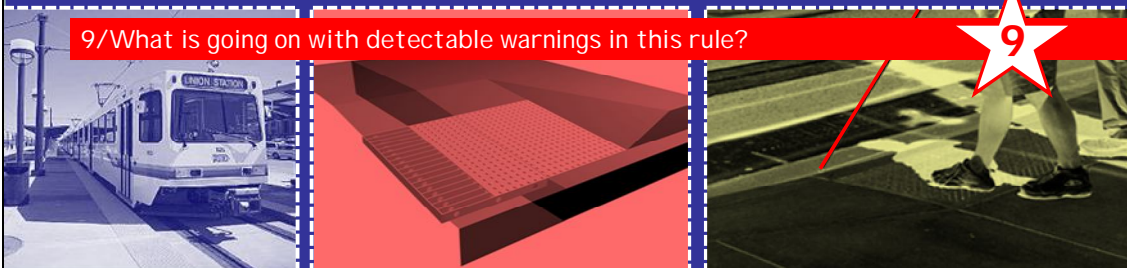
(a) For purposes of this part, a transportation facility shall be considered to be readily accessible to and usable by individuals with disabilities if it meets the requirements of this part and the requirements set forth in Appendices B and D to 36 CFR part 1191 [ADAAG 2004], which apply to buildings and facilities covered by the Americans with Disabilities Act, as modified by Appendix A to this part."

406.8 Detectable Warnings on Curb Ramps in Transportation Facilities

Added by DOT (adopted from previous ADAAG):

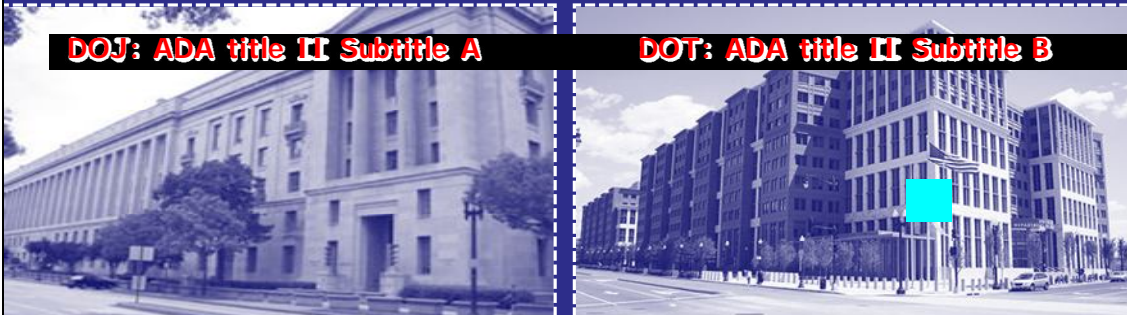
"A curb ramp shall have a detectable warning complying with 705. The detectable warning shall extend the full width of the curb ramp (exclusive of flared sides) and shall extend either the full depth of the curb ramp or 24 inches (610 mm) deep minimum measured from the back of the curb on the ramp surface."

9/What is going on with detectable warnings in this rule?



Guidelines...? Standards...?

Although the Access Board is responsible for developing accessibility **guidelines**, other Federal agencies, as stipulated in the **laws**, must adopt or reference the guidelines to make them **enforceable standards**.

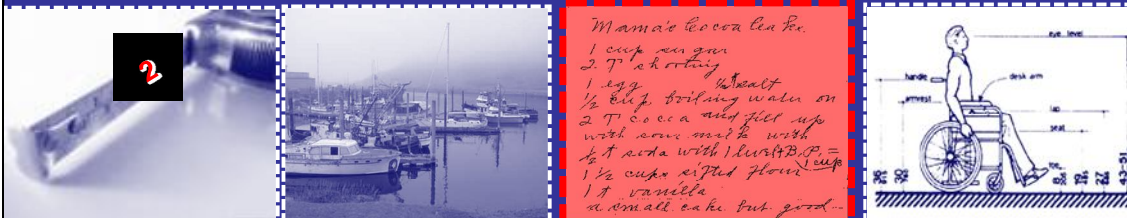


Measuring compliance...

It is the ADA **regulations** that require new construction, and -- to the maximum extent feasible -- alterations, to be 'accessible to/usable by people with disabilities'.

Standards are a **measure** of compliance with that requirement and a **safe harbor** for designers -- they are not themselves the 'requirements'. Think of them as a **recipe** for the accessibility that the regulations require.

No provision in the standard? Access is still required.



Accessibility standards are...

- a **'gold standard'** for new construction;
- a **'goal'** for alterations (meet new construction standards **'to the maximum extent feasible'**);
- a **'guiding idea'** for program access improvements to existing facilities not otherwise being altered, and
- not applicable to accommodations.**

Design and construction standards

Subtitle A (DOJ) of Title II permits covered entities to use **ADAAG [1991]**, **UFAS [1984]** or **equivalents** as a measure of the required accessibility and a safe harbor for designers and jurisdictions;

Subtitle B (DOT) requires use of **ADAAG [2004]** for transportation facilities and includes an additional requirement for detectable warnings;

DOJ's regulation **designates DOT** to oversee transportation implementation [35.190(8)].

Using ADAAG in the PROW

*Because the ADAAG standards adopted by DOJ (in 1991) and DOT (in 2005) do not yet include provisions specific to the public right-of-way, designers today must **adapt current building standards** in order to meet the law's requirements for accessibility.*

Results?

- uncertainty;*
- complaints and lawsuits;*
- court orders to re-do new work.*

But ADAAG isn't a good PROW fit:

ADAAG was developed for **buildings** and facilities on **sites**:

- one** accessible route per site;*
- slopes > 5% must be treated as **ramps**;*
- no provisions for **signals and crossings**;*
- 20% **path-of-travel** requirement;*
- uses **architectural** rather than engineering 'language'.*

*How to remedy? Develop a **PROW-specific** standard.*

ACCESSIBLE ROUTE ON SITE

How many...?
One route or many...?

PEDESTRIAN ACCESS ROUTES IN PROW



Which one...?
Sidewalk grade: match roadway or provide accessible route?

ADAAG PROWAG



How deep...?

Detectable warnings: full ramp length or just **2 feet deep**?

ADAAG

PROWAG



Choices...?

One curb ramp type...or *many*?

PERPENDICULAR: ADAAG

PROWAG



Thus PROWAG...

The Access Board began work on rights-of-way guidelines to supplement ADAAG in 1992:

- section 14 (I FR 1994);*
- sidewalk video and design manual (1997);*
- advisory committee (1999);*
- PROWAAC report (2001);*
- draft guidelines (2002);*
- revised draft guidelines** (Nov '05)*

How is PROWAG different?

*The PROWAG draft **adapts** ADAAG to the rights-of-way environment. The new guidelines are a **stand-alone** document using rights-of-way measures and language.*

Key differences:

- all sidewalks must contain PAR;*
- sidewalk slope may follow roadway;*
- expanded curb ramp types;*
- reduced DW area;*
- no path-of-travel requirement;*
- new signalling provisions, and*
- new provisions for roundabout design.*

5/Will all public sidewalks have to comply with the PROW or just public sidewalks that are part of an accessible route? Subdivisions?



2005 draft PROWAG

- R1 *Application and Administration*
- R2 **Scoping** *Requirements*
- R3 **Technical** *Provisions*
 - Pedestrian access route (PAR)*
 - Alternate circulation path*
 - Curb ramps and blended transitions*
 - Detectable warning surfaces*
 - Pedestrian crossings*
 - Accessible pedestrian signals (APS)*
 - Street furniture*
 - On-street parking*
- R4 **Supplementary** *Technical Provisions*
(from ADA/ABA-AG)

Draft PROWAG

*Key Provisions: A high degree of **convenient** access is easiest to achieve in new construction.*



NEW CONSTRUCTION: THE 'CORN FIELD IN KANSAS'

Draft PROWAG

*Key Provisions: In alterations, you may not be able to optimize conditions for every user (follow new construction guidelines to the **maximum extent feasible**; add curb ramps where needed)*

RESURFACING

RECONSTRUCTION



Draft PROWAG

*Key Provisions: Provide a 4-ft-wide **pedestrian access route (PAR)** within every sidewalk, curb ramp and street crossing; provide a 5 ft passing space @ 200 ft intervals*



Draft PROWAG

*Key Provisions: The running slope of the PAR may **match** -- but not exceed -- that of the adjacent roadway.*

OK...

NOT!



Draft PROWAG

Key Provisions: A PAR carried on structure must meet accessible route requirements.

NO...



OK!



Draft PROWAG

Key Provisions: Limit PAR **cross slope** to a maximum of 2%, measured perpendicular to the PAR centerline.

NEW CONSTRUCTION

ALTERATION



Draft PROWAG

Key Provisions: Where two directions of travel **intersect** at corners (or where a turn must be made), the PAR must be 'level' (<2% in both directions) or '**tabled**'.

THIS...

....NOT THIS!



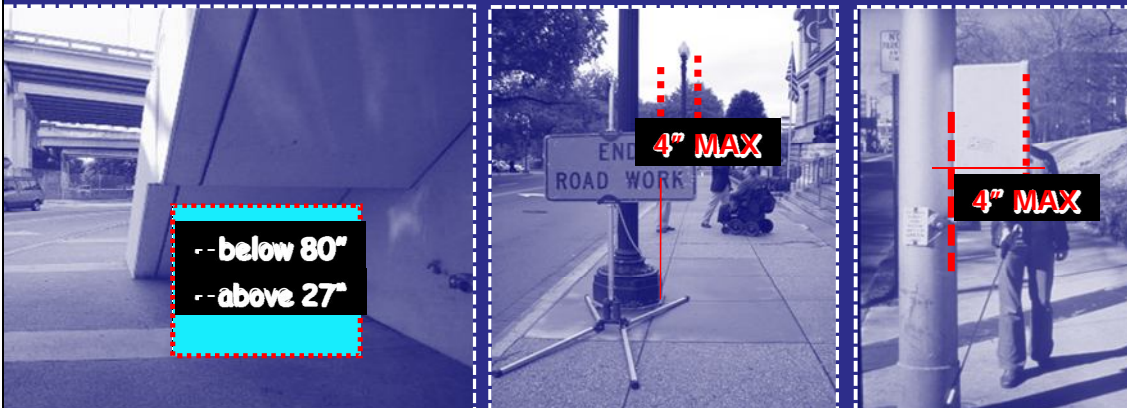
Draft PROWAG

Key Provisions: Provide accessible/detectable **alternate routes** when the PAR is detoured; same-side is best, if feasible...



Draft PROWAG

Key Provisions: Be mindful of **protruding objects** (4" max) across the whole width of the pedestrian walkway; elements above 27" and below 80" aren't detectable.



Draft PROWAG

Key Provisions: Provide a **curb ramp** (slope > 1:20) or a **blended transition** (slope < 1:20) for each crossing.

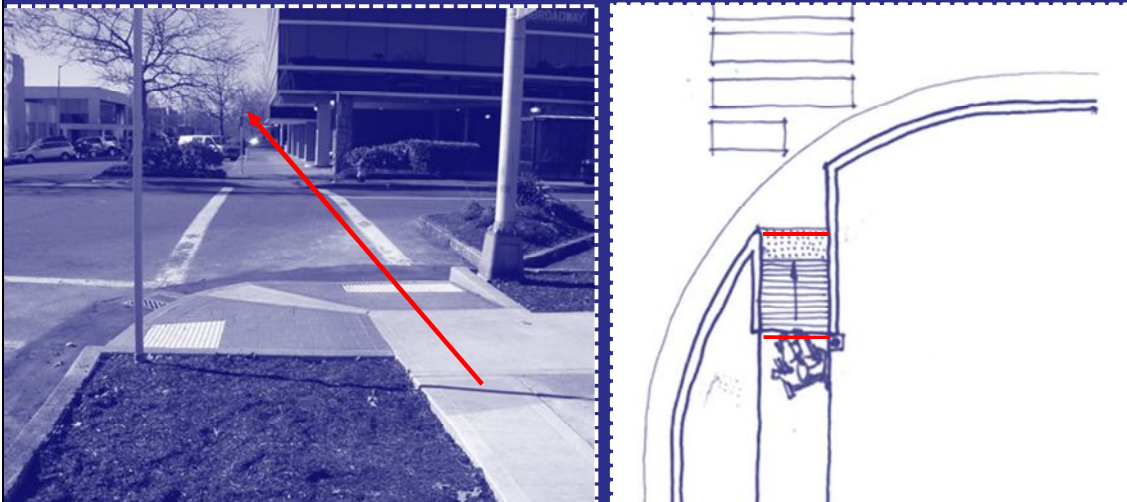
CURB RAMP

BLENDED TRANSITION



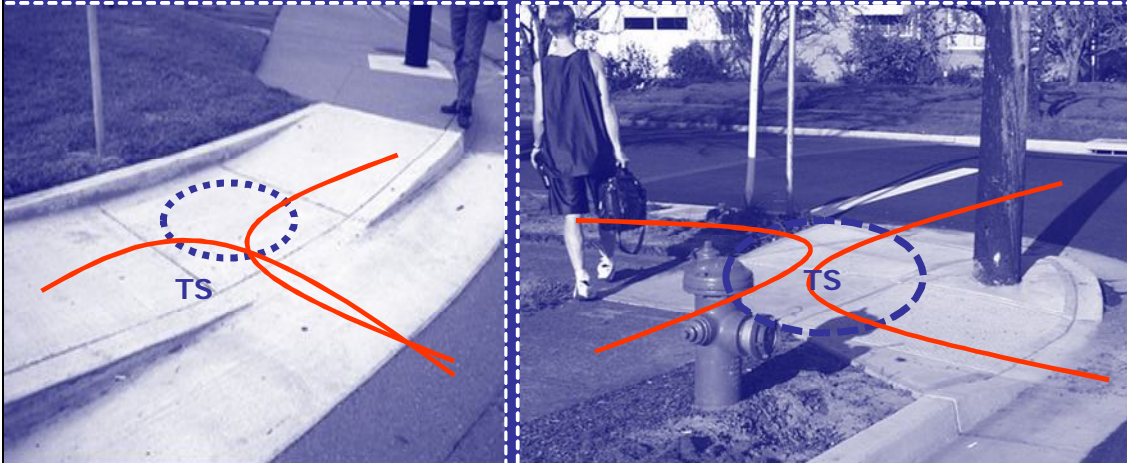
Draft PROWAG

Key Provisions: Design top and bottom gradebreaks to be parallel (and **in-line** with travel direction, if possible).



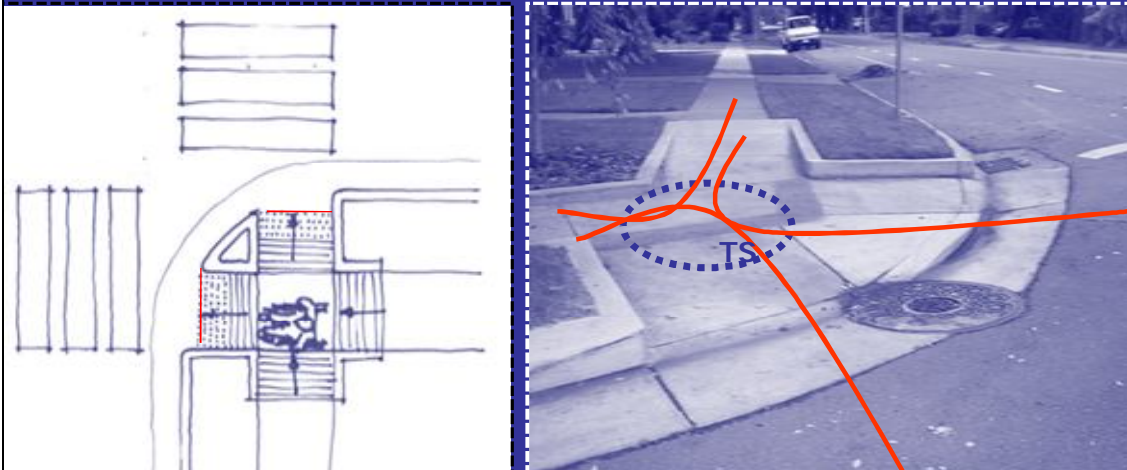
Draft PROWAG

*Key Provisions: Provide a **level turning space** at the top of a perpendicular ramp, at the bottom of a parallel ramp, and at all corners.*



Draft PROWAG

*Key Provisions: Combined ramps *slope the sidewalk down* in order to shorten the perpendicular run to the street; the turning space is at an intermediate level.*

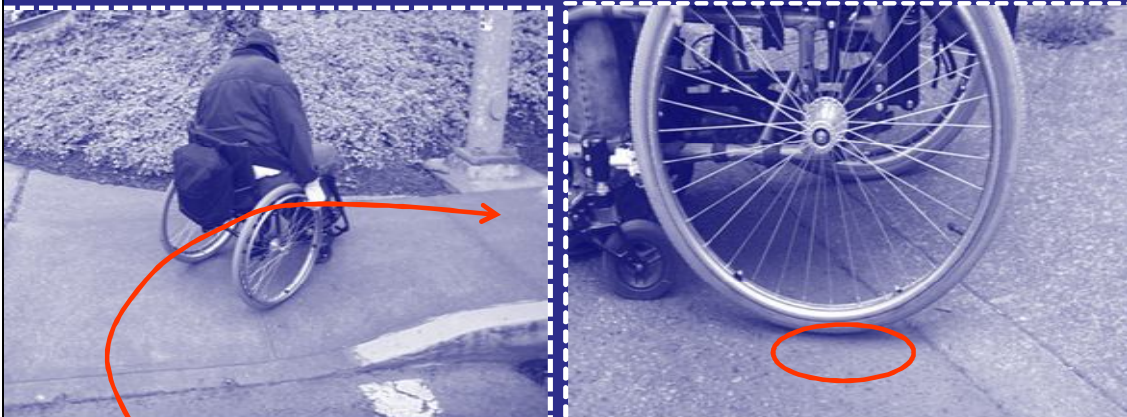


What's wrong with this picture?

If there's a landing at the top, you can take a run at a ramp, pushing with both arms. If you have to turn while climbing, you must brake with one hand, leaving only one arm for pushing.

INEFFICIENT, LOSES MOMENTUM

ONE WHEEL OFF GROUND



Draft PROWAG

*Key Provisions: **Blended transitions** have a slope of **less than 5%**; because they are not ramps, they needn't have a perpendicular relationship with the street.*



Draft PROWAG

Key Provisions: Detectable warnings provide notification underfoot of the change from pedestrian to vehicular route

RETROFIT PORTLAND, OR



DWs AT WHITE HOUSE



9/What is going on with detectable warnings in this rule?

Draft PROWAG

Key Provisions: Detectable warnings are particularly useful at medians. New technical specification requires only 24".



Q: Do driveways need DWs?



USUALLY NOT,
UNLESS
COMMERCIAL
AND DESIGNED
LIKE STREETS

NO...



Draft PROWAG

*Key Provisions: Provide adequate time to cross
(3.5 fps), measured **curb-to-curb**.*



6/Do these guidelines establish a minimum amount of time to cross before the light changes based on the distance from curb to curb?



Draft PROWAG

Key Provisions: Include pedbutton-integrated APS where pedestrian signals are newly installed.

PRI SMATEK



NOTE MAPPING

POLARA



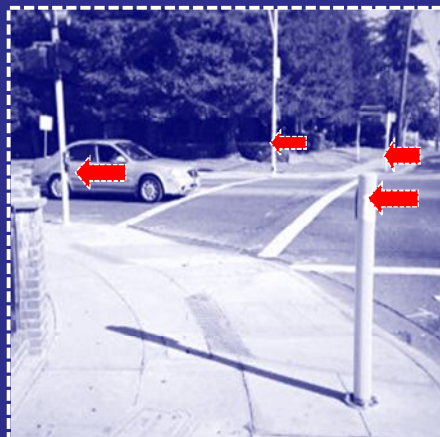
2/Will audible pedestrian signals be required at every intersection?



Draft PROWAG

Key Provisions: Provide clear ground space at pedbuttons within maximum reach ranges (48" V, 10" H). This may require a stub pole.

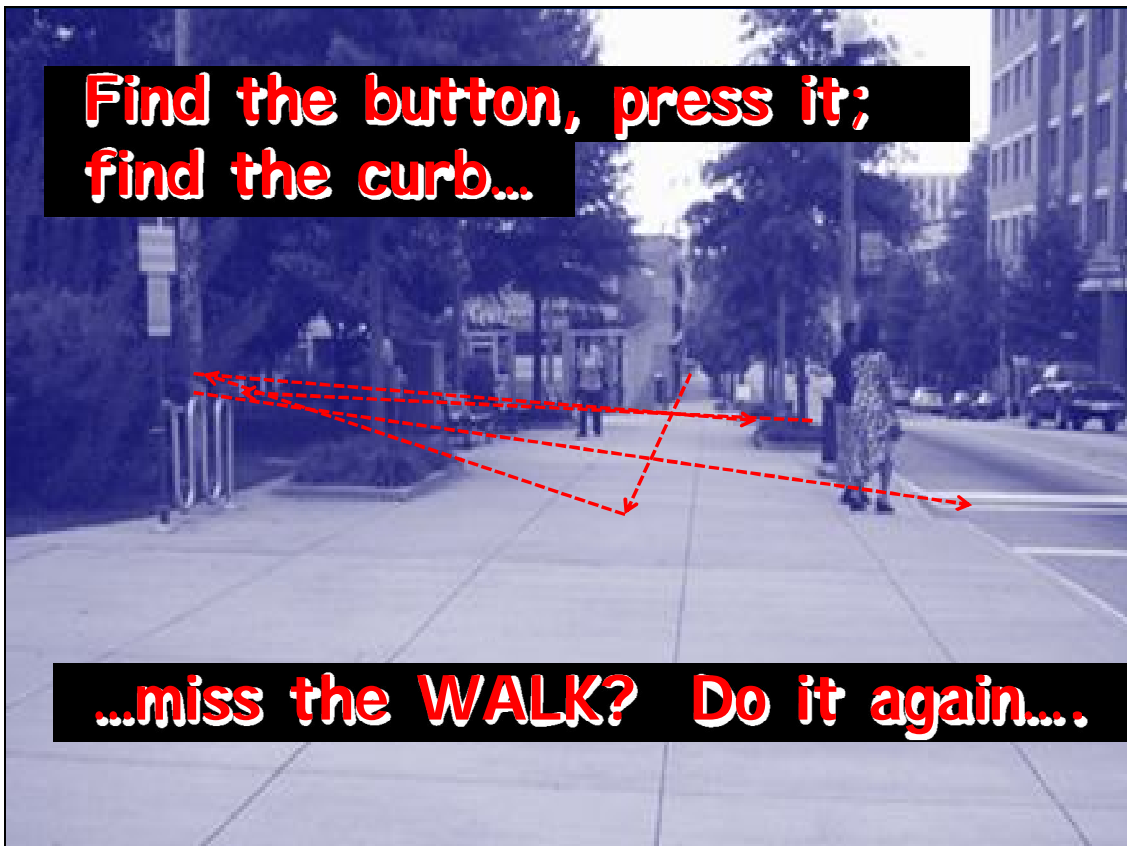
STUB POLES





Location, location, location...

*The APS must be within close range of the departure curb for the **vibrotactile** feature to work for users.*



Draft PROWAG

Key Provisions: Provide pedestrian demand signals at **roundabouts** where pedestrian crossings are more than one lane.

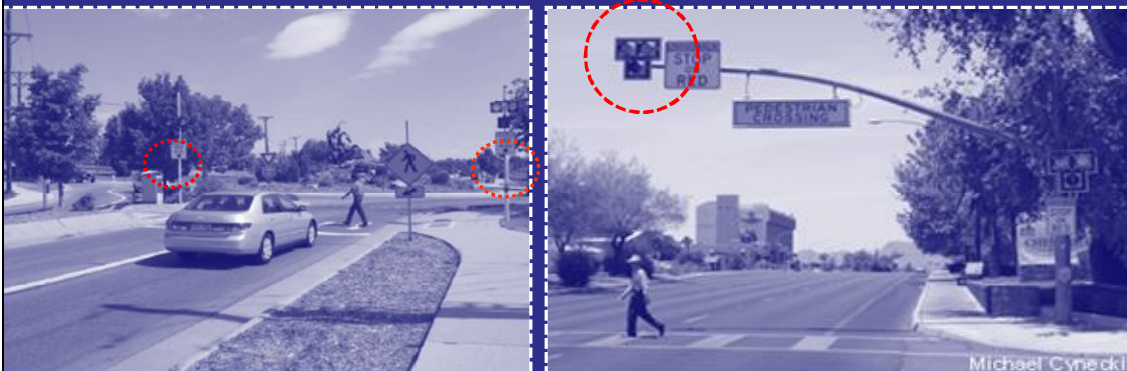


Pedestrian crossings: Roundabouts

HAWK signals have been used in several cities to provide a pedestrian crossing opportunity on demand. The signal has been approved for the 2009 **MUTCD**, with a special provision for use at roundabouts -- dark unless activated.

GOLDEN, CO

TUCSON, AZ



Draft PROWAG

Key Provisions: **Separate** sidewalks from the curb to provide non-visual **wayfinding** cues to crossing locations.

FENCED

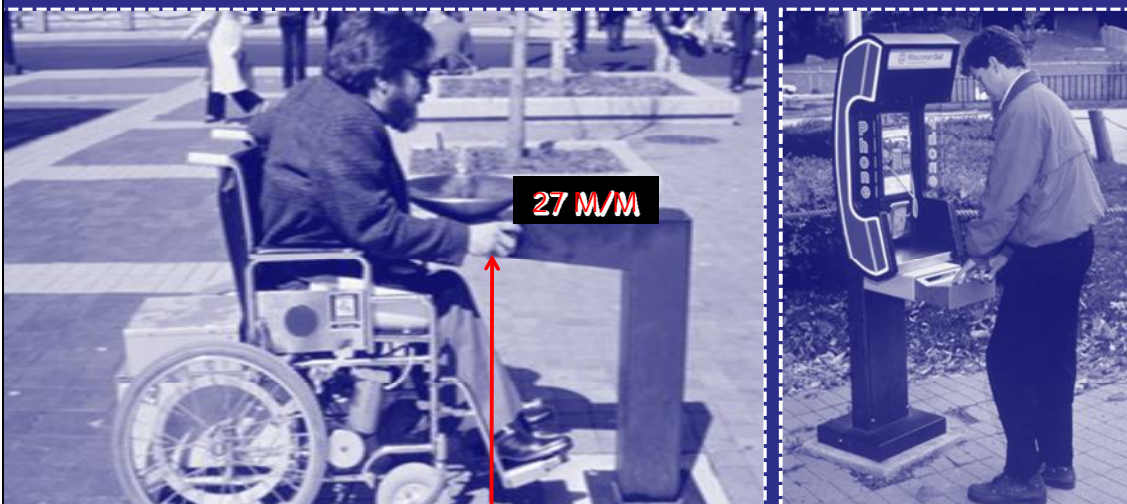
SEPARATED



Draft PROWAG

Key Provisions: **Street furniture** must be usable, but not in the way.

KNEE ROOM



Draft PROWAG

Key Provisions: Accessible **on-street** spaces are scoped like parking lots, based upon total numbers provided on a block.

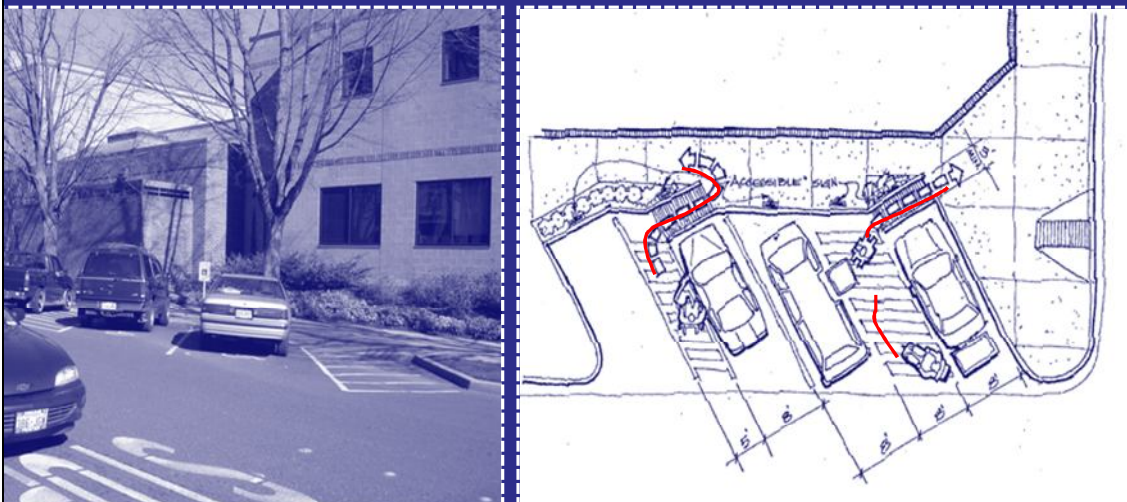
NARROW SW

SIDEWALK WIDTH > 14 FT



Draft PROWAG

Key Provisions: Angled (or perpendicular) on-street parking can provide good Van access



Draft PROWAG

Key Provisions: Facilities provided at bus stops must be accessible: sign, pad, shelters, benches... and a route to get to them (and by them!).

HELICOPTER IN?



Program access:

United States Department of Justice
CIVIL RIGHTS DIVISION

Letter 205
December 11, 2008

The Honorable Rick Warren
U.S. House of Representatives
Washington, D.C. 20515-2002

Dear Congressman Warren:

I am responding to your letter in behalf of your constituent for accessibility regarding the requirements of the Americans with Disabilities Act (ADA) for sidewalks at new highway construction projects. Please excuse our delay in responding.

Generally, the ADA does not require installation of pedestrian walkways in new construction projects where no such walkways are claimed. When public entities build new facilities or alter existing facilities, the Department of Justice's regulation implementing the Act requires that the newly constructed or altered areas be made accessible to individuals with disabilities. The regulation specifically provides that new construction of or alterations to streets give rise to accessibility obligations for curb ramps. 28 C.F.R. § 32.119(a). Therefore, if a State or local government were constructing a new street or intersection or were altering an existing street or intersection, it would be required to provide accessible curb ramps or ramps where pedestrian walkways that are needed or called for intersect with the new or altered street or intersection. 28 C.F.R. § 32.119(a)(1). In addition, if the State or local government were building or altering a pedestrian walkway, it would be required to provide curb ramps or ramps as needed where the walkway intersects streets or intersections. 28 C.F.R. § 32.119(a)(2).

In addition to the requirements for new construction and alterations, title II of the ADA also requires public entities to ensure that existing programs, services, and activities are accessible. 28 C.F.R. § 32.119(b). If installation of a curb ramp or of a pedestrian walkway is necessary to ensure that individuals with disabilities have access to a particular State or local program, such as a school, accessible to the access available to non-disabled individuals, the public entity may, in some circumstances, be required to install a ramp or walkway where none existed previously.

Of course, the ADA does not prohibit State or local governments from exceeding the requirements of the ADA. Nor does it limit their discretion to provide new pedestrian walkways and ramps as they see fit to serve interests in addition to accessibility.

I hope this information is helpful to you in responding to your constituent.

Case study: Bus stop costs

Cost of providing a bus stop and improving the pedestrian facilities to it:

--\$7,000 per stop (post and sign and minor fixing of sidewalks);

--\$58,000 per stop (for post, sign, lighted shelter, bench, trash can, trenching for electricity, and replacing/fixing portions of sidewalk).

[Cost assessment from the Maryland Transit Administration (MTA)]

Case study: Paratransit costs

Cost of providing paratransit to one person (estimate from MD-MTA):

--\$ 77 (per trip)

--\$ 770 (per work week)

--\$ 38,500 (per year assuming a 2 week vacation)

By improving a bus stop so that one paratransit rider can now use it, the transit agency recoups its costs for a basic improvement (\$7000) in slightly more than 2 months.

Rulemaking is a 2-step process:

The Access Board develops minimum guidelines:

--under the **ADA**, DOJ and DOT adopt enforceable standards **consistent with Board guidelines**

--under the **ABA**, DOD, GSA, HUD and USPS adopt enforceable standards

--**Rehab Act/504** standards are set by individual agency rulemaking

Can I use the 2005 PROWAG now?

Yes! *Title II of the ADA and regulations implementing the Rehabilitation Act ('504') require new construction to be 'accessible to and usable by people with disabilities'.*

PROWAG is a well-vetted measure:

- title II admits 'other methods'*
- FHWA memorandum (January 2006);*
- DOJ policy letter (1993);*
- better fit for the PROW.*

*Most agencies are already using some provisions (**DWs, PAR, POT, CRs...**), and several States have adopted.*

Curb ramp design

Many intersection features can be manipulated to optimize the usability of curb ramps set into existing developed streetscapes.

- curb radius;
- sidewalk setback;
- curb height;
- ramp location/directionality;
- roadway surface;
- ramp edge conditions.

Here are some basic rules...

RESOURCES

10/What type of technical assistance materials are available on these guidelines to assist designers and public works folks?

Technical assistance from PROWAAC:

<http://www.access-board.gov/prowac/alterations/guide.htm>

PLANNING AND DESIGN FOR ALTERATIONS: WORK-AROUNDS FOR CONSTRAINED CIRCUMSTANCES AND LOCATIONS

Public Rights of Way Access Advisory Committee

Special Report:
ACCESSIBLE PUBLIC RIGHTS-OF-WAY
PLANNING AND DESIGNING FOR ALTERATIONS

ADD EXPLECTABLE WALKWAY

ADD CURB CUTS

LANDING BUILDING

APRON 3:1

ASPHALT CONC CURB RAMP

LANDING

LANDING

NOT STEEPER THAN 1:12

CENTERLINE

SECTION A-A

4 DESIGN SOLUTIONS

CONSTRAINED - LIMITED RIGHT-OF-WAY

Paper copy:
email
baes@access-board.gov; ask for 'ROW ALT'

Other resources...

<http://www.access-board.gov/prowac>

Access Board website: PROW homepage

Public Rights-of-Way

ABOUT THIS INFORMATION

Access Board website: PROW homepage

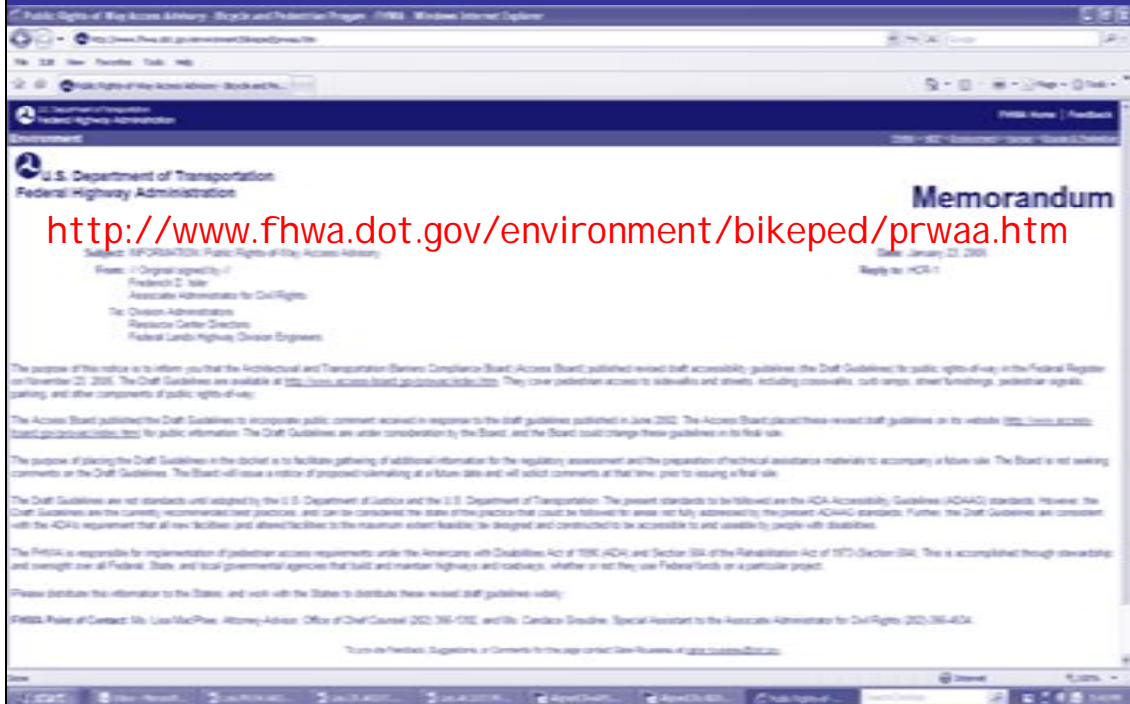
RELATED INFORMATION

GUIDANCE MATERIAL

Other resources...



Other resources...



Other resources...

<http://www.fhwa.dot.gov/environment/sidewalk2/index.htm>



The screenshot shows a web browser window displaying the FHWA website. The page title is "Designing Sidewalks and Trails for Access Part II of II: Best Practices Design Guide". The page content includes a "Program Manager" section listing various authors and their credentials, an "Illustrations" section crediting "City Surfer", and an "Acknowledgements" section. A red dashed box highlights the title and subtitle of the document. The browser's address bar shows the URL: <http://www.fhwa.dot.gov/environment/sidewalk2/index.htm>.

QUESTIONS...?

Contact us directly...

Scott Windley, PROW Team Leader 202/272-0025 (v) or windley@access-board.gov;

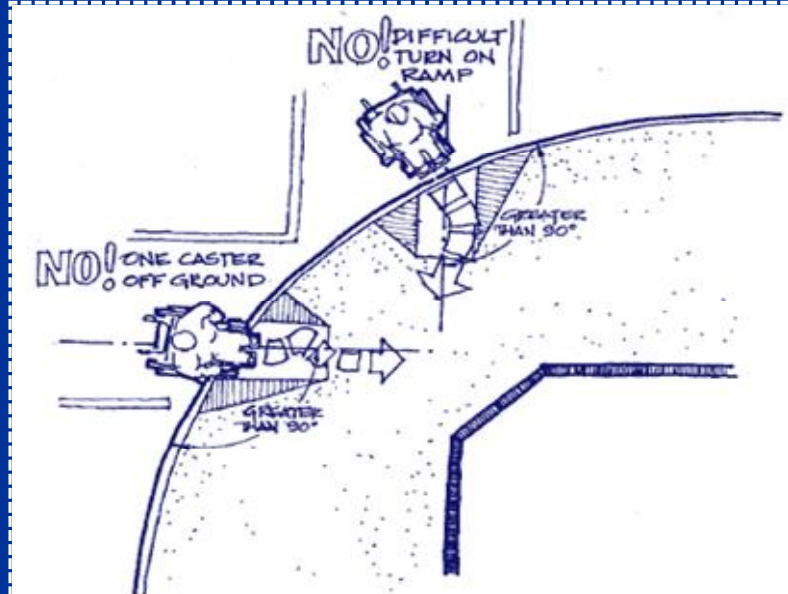
Dennis Cannon, Transportation Specialist 202/272-0015 (v) or cannon@access-board.gov;

Lois Thibault, Coordinator of Research 202/272-0023 (v) or thibault@access-board.gov



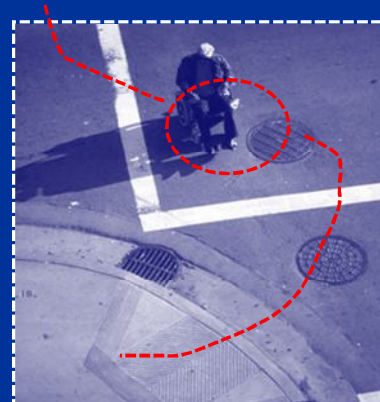
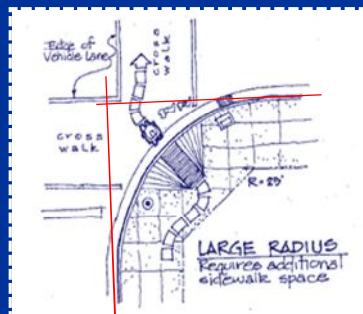
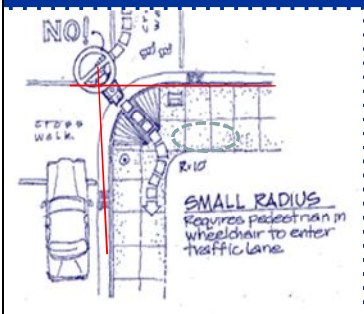
KEY USABILITY FEATURES

1/Top and bottom grade breaks on a curb ramp must be parallel.

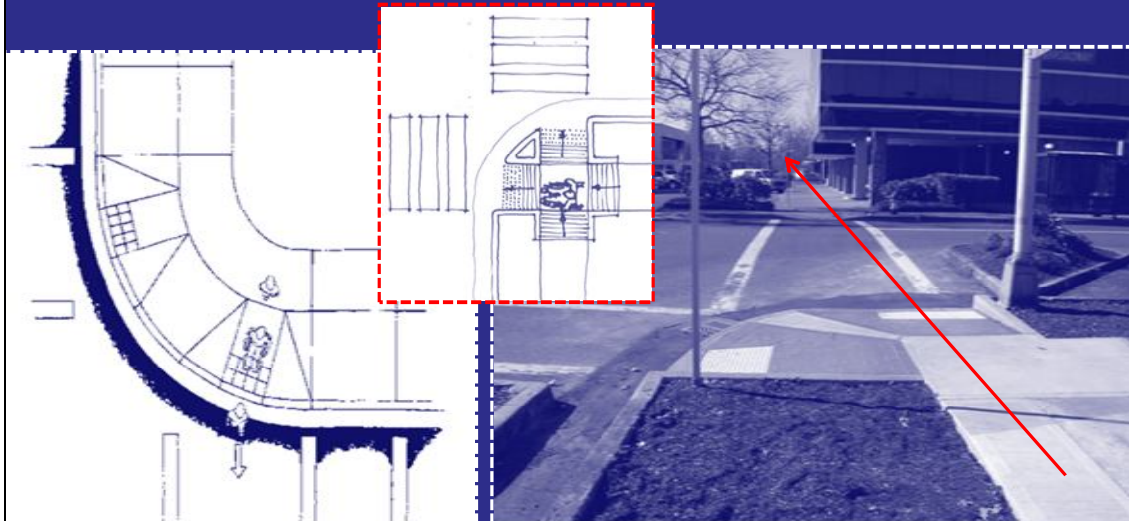


2/Where a turn must be made to access the crossing (or sidewalk), a 'level' turning space (2% B/W) must be provided. In the roadway, it must be out of parallel vehicle travel lanes.

NO: SMALL RADIUS



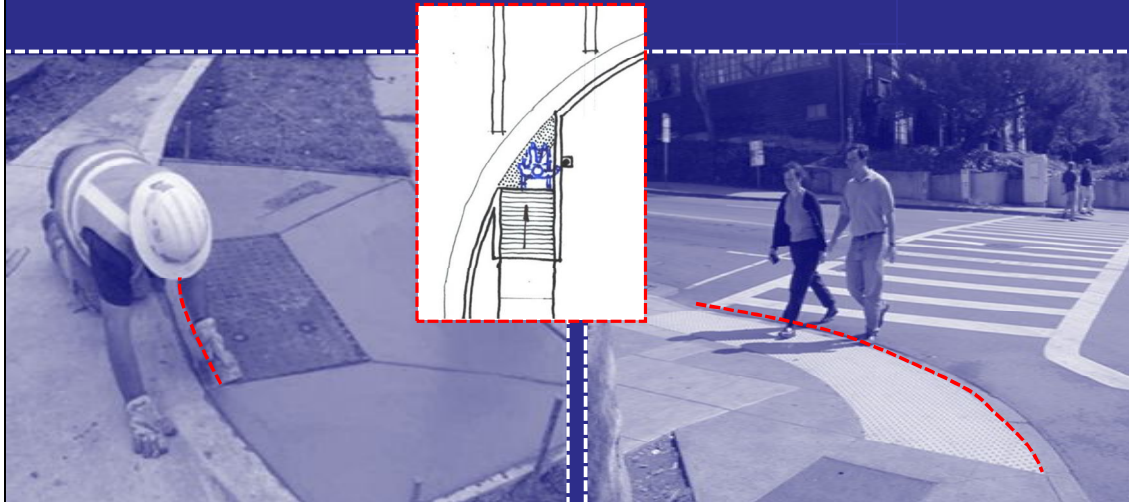
3/Perpendicular curb ramps may be skewed or in-line with crossing, but in-line ramps give better directional cues.



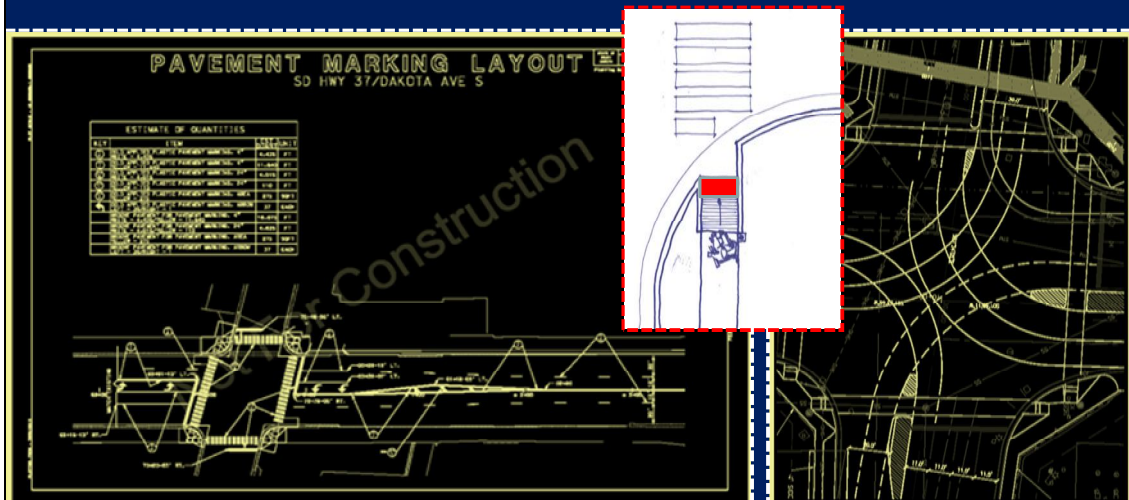
4/Flares are not required if ramp edges are shielded from cross traffic...



5/DWs mark the sidewalk/street boundary and should be installed along and at the back-of-curb as a 'sign' for the feet.

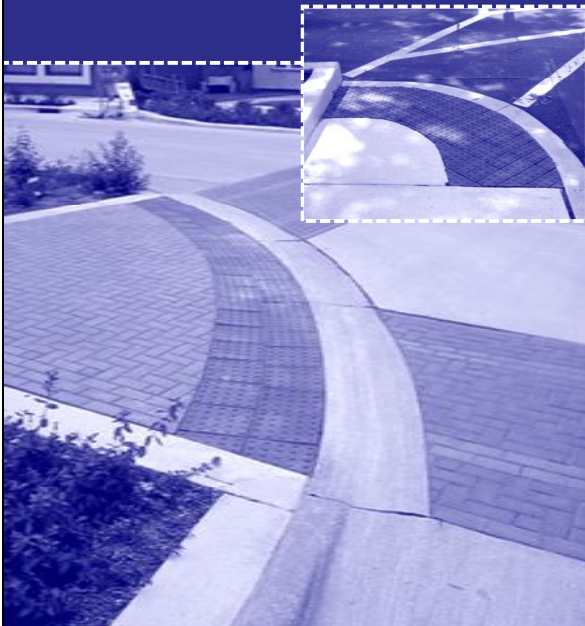


6/When DWs are installed on directional ramps ONLY, panels shall be perpendicular to the path of wheelchair travel.

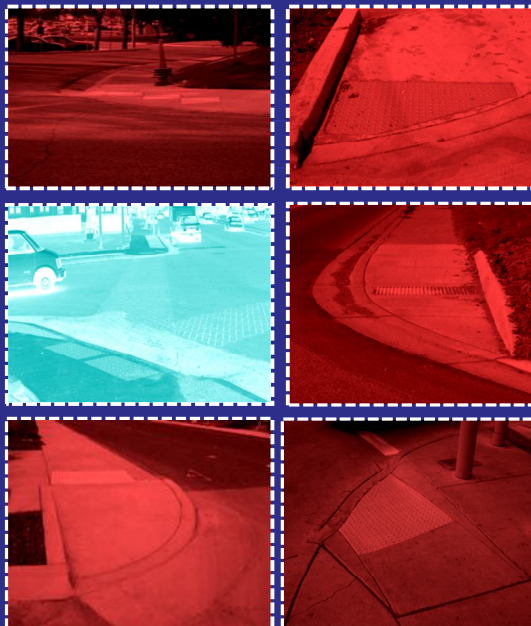


Q: Where do DWs go?

GOOD JOB!

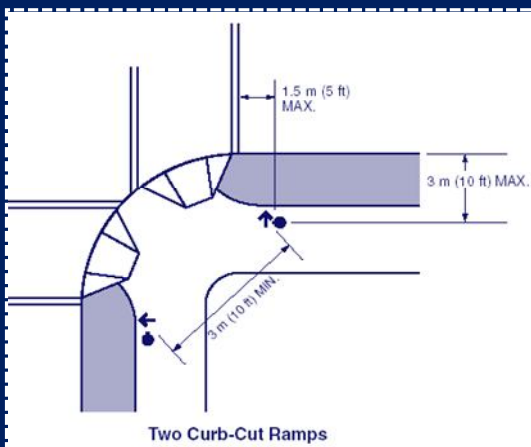


WHAT ABOUT THESE?



7/APS pedbuttons must be located close to the departure curb for hand contact, access from a wheelchair, and quiet operation.

MUTCD 2003



8/PAR surfaces should be planar, not warped.

SAN FRANCISCO



RECAP

Recap: Regulations/Standards...

- ✓ *new construction must be accessible to and usable by people with disabilities;*
- ✓ *ditto for alterations, to the maximum extent feasible;*
- ✓ *standards are a measure of the required accessibility; if no standards, research...*
- ✓ *existing facilities must achieve program access, requiring self-evaluation, transition planning, a curb ramp retrofit plan/schedule, and accommodation of individuals where barriers to use are encountered.*

Recap: Curb ramps...

- ✓ *wherever a walkway crosses a curb;*
- ✓ *rectangular in plan!*
- ✓ *1:12 maximum running slope;*
- ✓ *level landing at turns;*
- ✓ *CFS at foot within crosswalk markings;*
- ✓ *flush transitions (no lips);*
- ✓ *24" detectable warning at street edge.*

Recap: Sidewalks...

- ✓ *wide enough for 2-way travel;*
- ✓ **containing** *1.2 m PAR;*
- ✓ *1:50 maximum cross slope in PAR;*
- ✓ *no protruding objects between .6–2.0 m;*
- ✓ *CFS at entrances, pushbuttons, and other pedestrian features (DF, telephones, kiosks, ATMs...)*

Recap: Street crossings

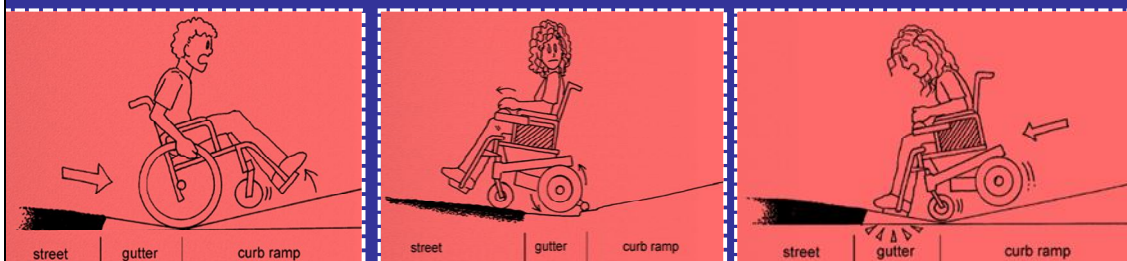
- ✓ *ped signals w/non-visual information: APS*
- ✓ *adequate crossing time (3.5 fps or less);*
- ✓ **a curb ramp for each crossing;**
- ✓ *'level' (2%) corners and crosswalks*
- ✓ *5% maximum crowning in crosswalk*

Recap: Temporary work

- ✓ maintain pedestrian usability;
- ✓ same-side alternate routes if feasible (extra crossings increase risk);
- ✓ consider audible signage;
- ✓ cane-detectable barricades; and
- ✓ temporary facilities are also covered (street fairs, block parties, farmers' markets...)

"Q: When a project contains existing sidewalk at **10%+ grade**, how practical is it to limit new curb ramps to ADA standards? "

It's the **gutter/ramp angle** that is key -- and it's critical to getting out of the street. PROWAG sets the sum of the gutter counterslope and the ramp slope at 13%; advocates prefer 11%.



*"Q: Can we use **exposed aggregate** for the curb ramp surface?"*

We'd rather you didn't....

*When VDOT made exposed aggregate their standard for curb ramps (in lieu of detectable warnings) they found it to be very **slippery** when wet.*

*Research shows that textured surfaces adversely affect **rollability**, requiring extra pushing energy and triggering painful spasms in some wheelchair users who have spinal cord injuries.*

BEST PRACTICES



Embrace SW setbacks!

www.pedestrians.org

Sidewalk Placement
What are the advantages of setting back the sidewalk with a planting strip?

Sidewalks can be built right at the edge of the street... or sidewalks can be separated from the curb by a planting strip, that is just several feet of grass between the sidewalk and the street. What a difference the green space can make!

We can think of more than a dozen benefits from planting strips. Click on any photo for a larger view.

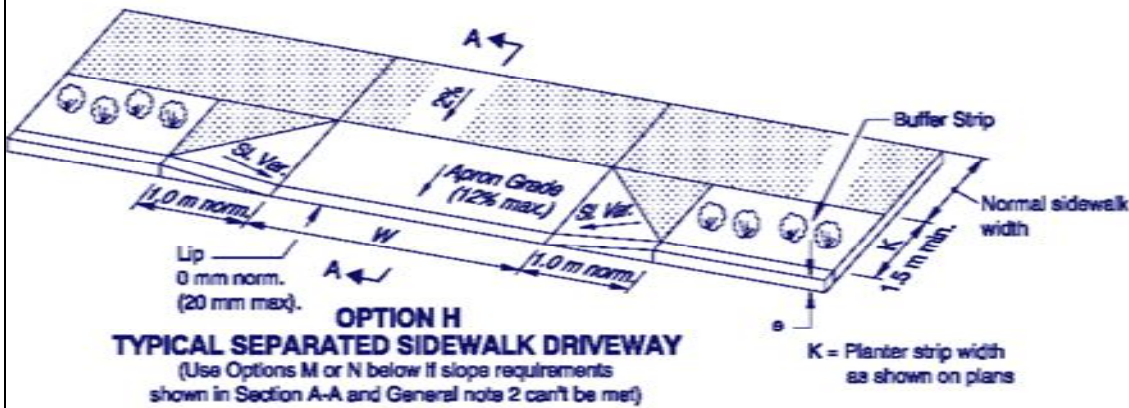
-  **Increased pedestrian safety.** Every now and then, a reckless driver will run up on the sidewalk. The extra separation makes that less likely.
-  **Increased pedestrian comfort.** It is very uncomfortable for pedestrians to walk close to traffic. A green buffer makes a world of difference.
- Provide clearance from side mirrors.** Side mirrors and overhanging cargo on large vehicles can stick over the curb. A setback keeps pedestrians beyond their reach.
-  **A place to plant trees.** In the summer, pedestrians welcome the shade provided by a row of street trees. Trees also provide substantial environmental benefits.
- To provide a place to absorb runoff** when it rains. The environmental impact of sidewalks is minimized when a wide grassy area separates sidewalks from the gutters.

Best Practices

Key Issues: Driveways



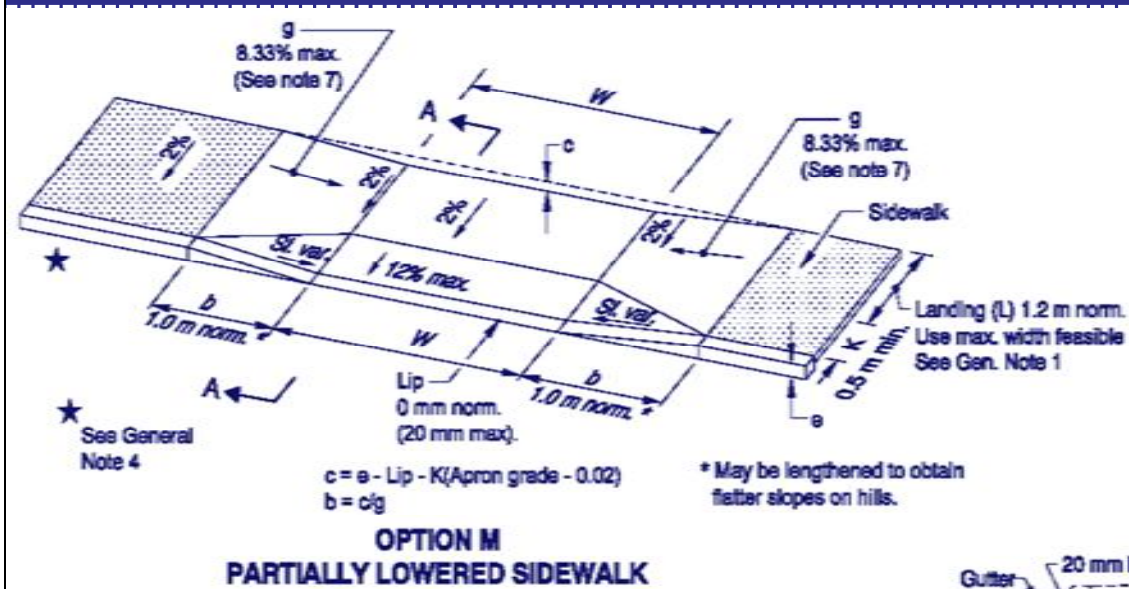
USABLE ROUTE ACROSS DRIVEWAY



Best Practices

Key Issues: Driveways

RAMP SIDEWALK DOWN, IF NEEDED

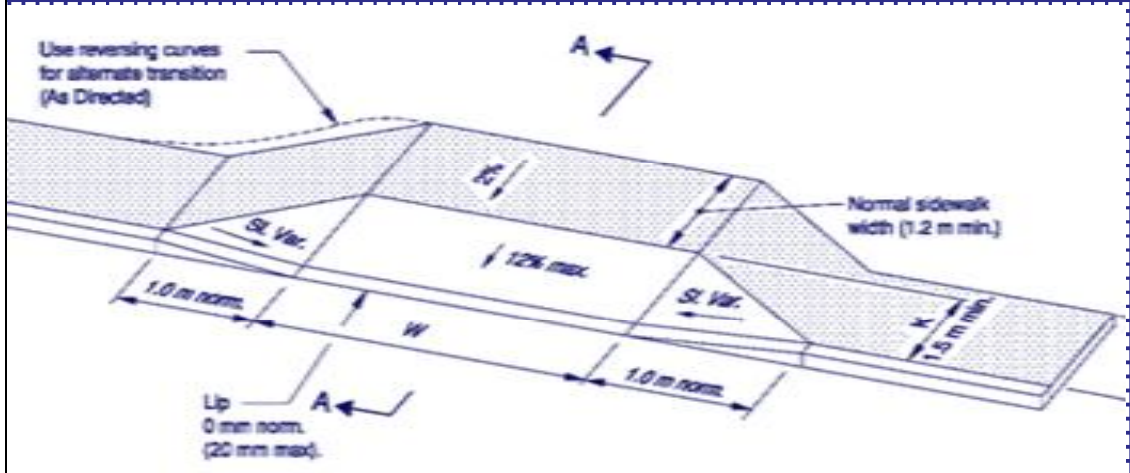


Best Practices

Key Issues: Driveways



OR GO AROUND IT...



Best Practices

Key Issues: Accessible Entrances

SIDEWALK RAMP
ELIMINATES STEP



SPLIT SIDEWALK
CONTINUES AT
GRADE ON OTHER
SIDE OF WALL

Best Practices

Key Issues: Accessible Entrances

NEW GRADING
ELIMINATES
STEP AND
WOODEN RAMP

CHECK OUT NEW
WORK TO LEFT...



Best Practices

Key Issues: Accessible Entrances

TWO STEPS
REPLACED BY
RAMP/STAIRS

WORK WITH
GRADE



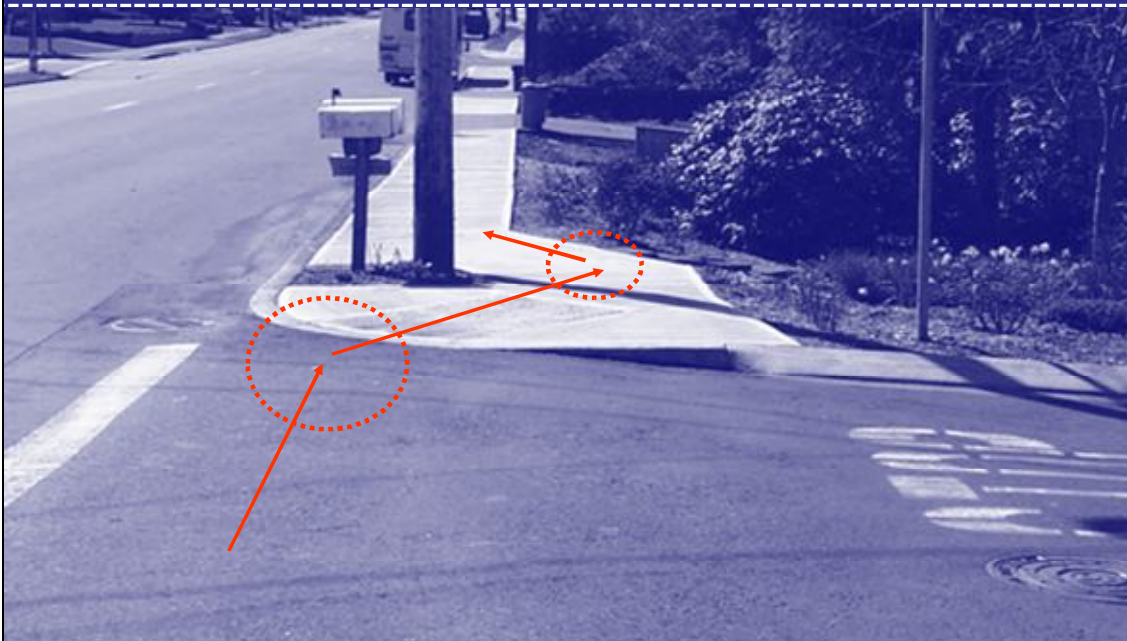
Best Practices

Key Issues: Obstructions in the PAR



Best Practices

Key Issues: Provide a level landing where turn is required



Best Practices

Key Issues: Consider Bulb-outs

ADDS LEVEL SIDEWALK SPACE FOR RAMP, SHORTENS CROSSING



Best Practices

Key Issues: Curb Ramp Directionality

RETURNED CURB
GIVES GOOD CUE
TO CROSSING
DIRECTION

VANCOUVER, WA

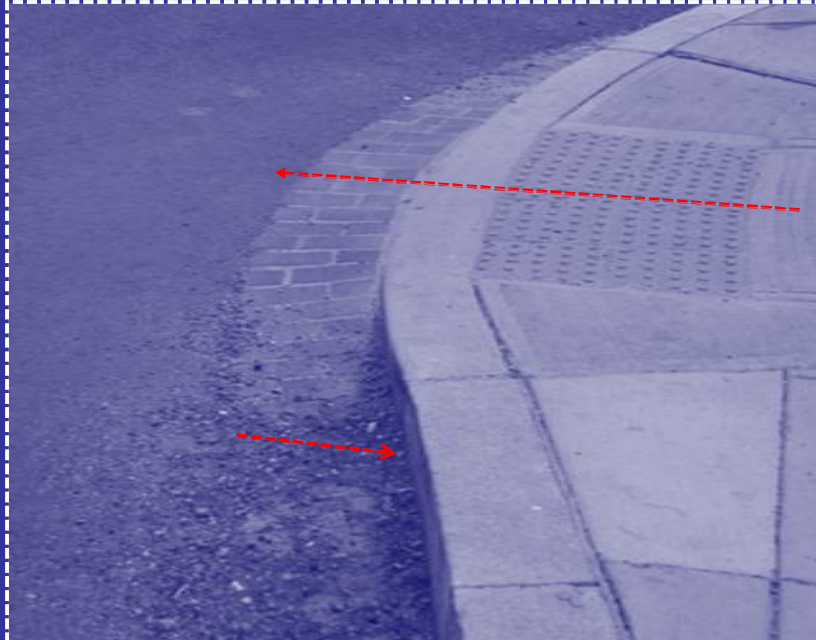


Best Practices

Key Issues: Dry at toe...and less SW space needed, too

GUTTER PAN
SLOPED TO
EXTEND RAMP
LENGTH, MEET
STREET GRADE
AT HIGHER
POINT

WASHINGTON, DC

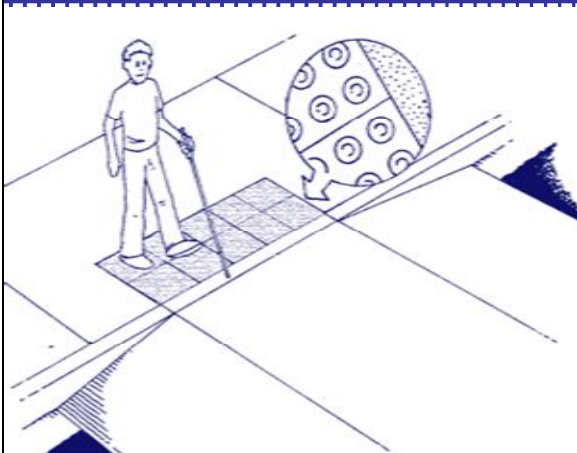


Best Practices

Key Issues: Retrofit [Raised Crossing]

NO LANDING...

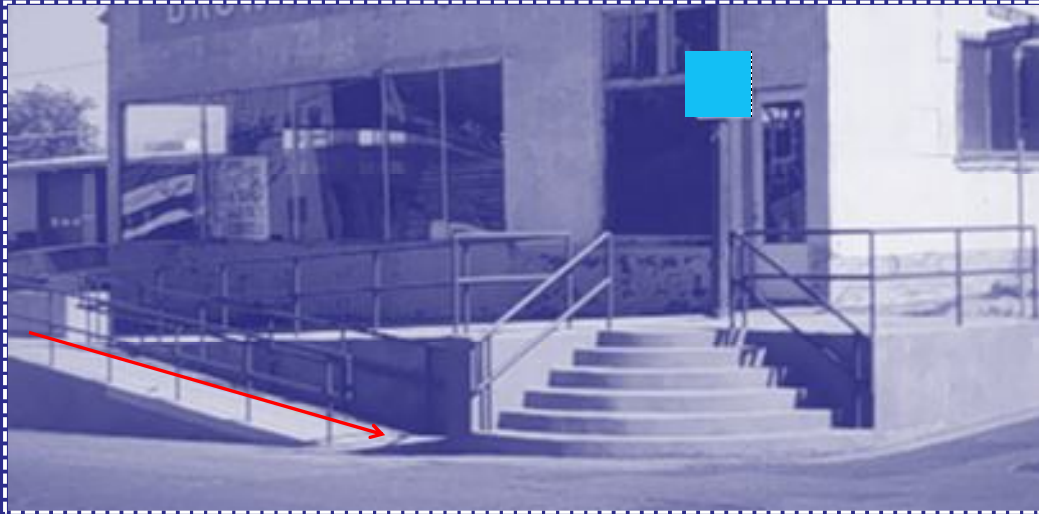
A GOOD SOLUTION FOR NARROW SIDEWALKS....



Best Practices

Key Issues: Raised Sidewalks

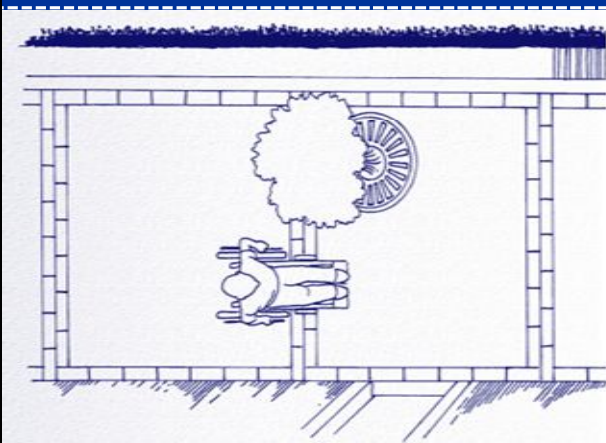
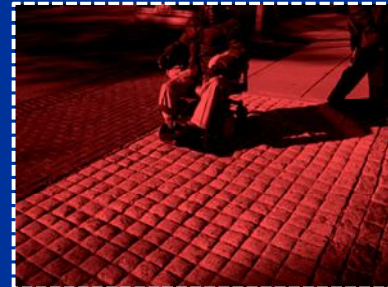
RAMP SERVING RAISED SIDEWALKS IN SILVER CITY, NM



Best Practices

Key Issues: Surfaces

USE TEXTURE SPARINGLY, AS DECORATION

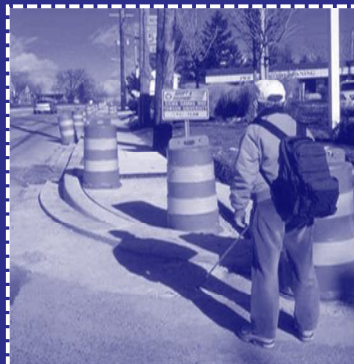


Best Practices

Key Issues: Detours and Temporary Signage



AUDI BLE MESSAGE
TRIG GERED BY PROX I M I T Y
SWI T C H



Best Practices

Key Issues: Pedestrian Crossings

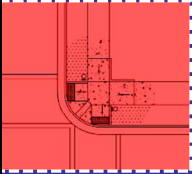
FULL-WI DTH
CURB RAMP,
BARCELONA

GOOD
DI RECTI ON-
AL CUES,
SHORTEST
CROSSI NG
DI STANCE



Best Practices

Key Issues: Pedestrian Pushbutton Locations



USING THE
VIBROTACTILE
FEATURE



Best Practices

Key Issues: On-street Parking

ACCESS AISLE CAN BE ON
EITHER SIDE OF CAR



ROCKVILLE, MD

Best Practices

Key Issues: Temporary Curb Ramps

SAN FRANCISCO, CA



Best Practices

Key Issues: Temporary Routes

AUDIBLE DETECTABLE



Best Practices

Key Issues: Information at Intersections
[HAWK Signals at Roundabouts]



AU

For more information:

Regional DBTAC/IT Center: www.adata.org
800.949.4232

US Access Board: www.access-board.gov

Technical assistance: row@access-board.gov;
800.872.2253 (v); 800.993.2822 (tty)

Access Board Publications:

- accessible sidewalks design manual*
- accessible sidewalks video on DVD*
- synthesis on detectable warnings*
- troubleshooting APS*
- bulletin and research on roundabout accessibility*
- research on contrast in detectable warnings*