www.access-board.gov

Public Right-of Way Accessibility Guidelines (PROWAG)

Juliet Shoultz, P.E
Transportation Systems Engineer

US Access Board

Standards vs. Guidelines

- Guidelines are developed by the Access Board but must be adopted by another responsible agency to become enforceable standards.
- Current enforceable standard is 2010 ADA Standards
- FHWA Memo 1/23/06
  PROWAG – "recommended best practices, and can be considered the state of the practice that could be followed for areas not fully addressed by the present ADA standards"

Rulemaking Update

- The Access Board's regulatory plan anticipated completion of a final rule for public rights-of-way and shared use paths.
- Executive Order 13771, *Reducing Regulation and Controlling Regulatory Costs* requires for every one new regulation issued, at least two prior regulations be identified for elimination.
- Updates on unified agenda

https://www.reginfo.gov/public/do/eAgendaMain

Public Right of Way Accessibility Guidelines

- R1 Application and Administration
- R2 Scoping Requirements
- R3 Technical Requirements
  - Pedestrian Access Route and Curb Ramps
  - Accessible Pedestrian Signals
  - Transit Stops/Shelters
  - On-street parking
- R4 Supplementary Technical Requirements
  - Takes ADA Building Standard Provisions and adapts them for ROW application
- 2013 SNPRM Incorporates Shared Use Path Guidelines

Application and Administration

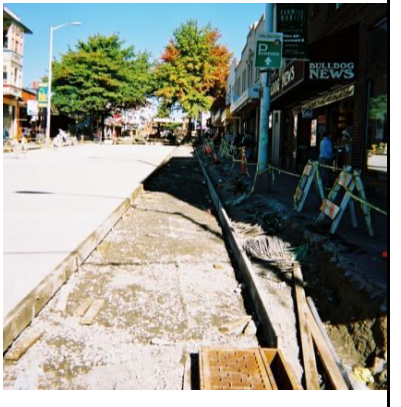
- **Facilities for pedestrian circulation and use located in the public right-of-way**
- **Equivalent facilitation permitted**
- **Referenced standards – MUTCD**
- **Definitions**

Scope of the Guidelines

- ADA and ABA Facilities
- New construction and alterations to existing facilities
- Temporary facilities are also covered (street fairs, block parties, farmers' markets, presidential inaugurations…)
- Existing facilities are covered by Standard setting agencies requirements

Alterations

- Accessible to the extent practicable within the scope of the project
- Recommend documentation of decisions
- Transitional segment compliant to the extent practicable



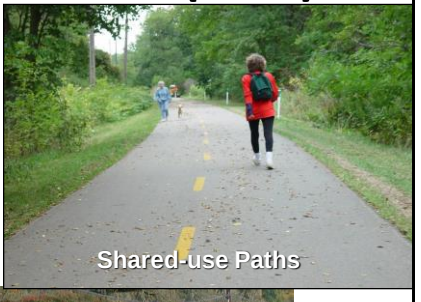
What's Required?

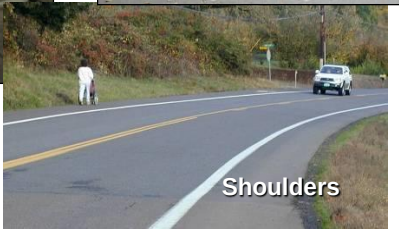
- PROWAG <u>does not</u> require Pedestrian Access Routes unless pedestrian facilities are provided.

- <u>If</u> sidewalks are provided, they are required to be accessible to and usable by persons with disabilities.

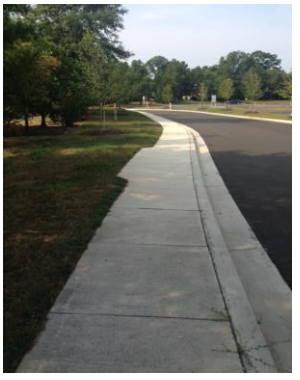
Types of Pedestrian Facilities Pedestrian Access Routes (PAR)

Sidewalks





Pedestrian Access Route Width



- 48” min <u>continuous</u> pedestrian access route (PAR)
- If <60” passing space at 200’ intervals

Shared Use Path Width

- Width determined by use and not accessibility and NOT controlled by our guidelines
- <u>Full width</u> must meet PAR requirements

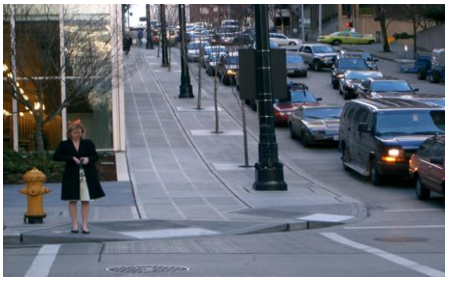
Clear Width Around Obstructions

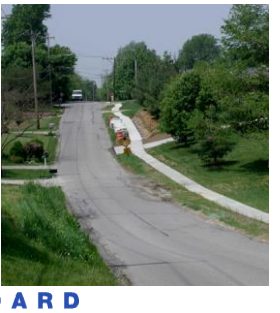
- 48” min clear width continued around obstructions

Pedestrian Access Route Running Slope

- Within 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.

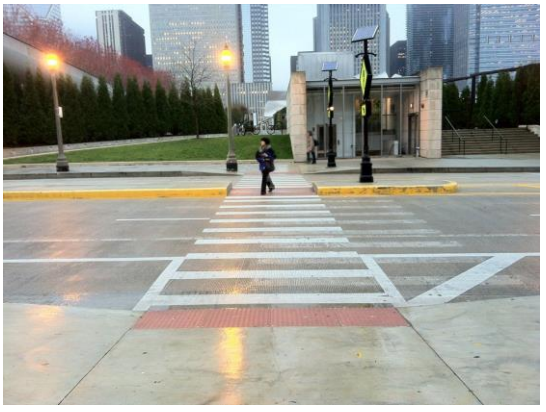
- Not Within Street or Highway Right-of-Way. The grade of pedestrian access routes shall be 5% maximum.





Pedestrian Access Route Running Slope

- Within pedestrian street crossings: 5% maximum



Pedestrian Street Crossings

- PROWAG does not specify when to mark…
- Or how to mark (meet MUTCD requirements)

Pedestrian Access Route Cross Slope

- 0% best for wheelchair users
- Some slope needed for drainage
- Max cross slope 2%
  - Exceptions for street crossings

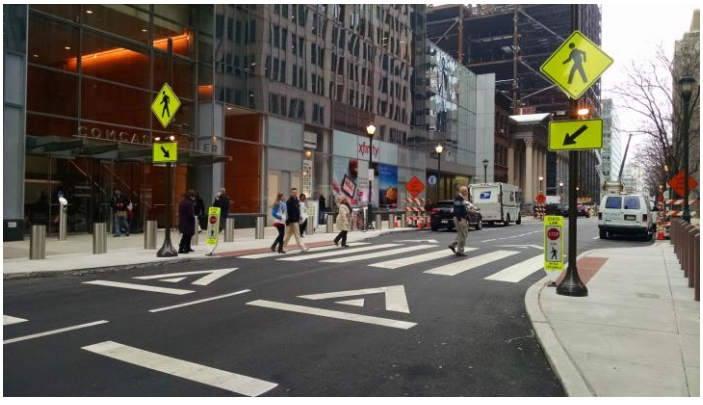
Pedestrian Access Route Cross Slope

- Within Traffic Signalized Pedestrian Street Crossings: 5% max

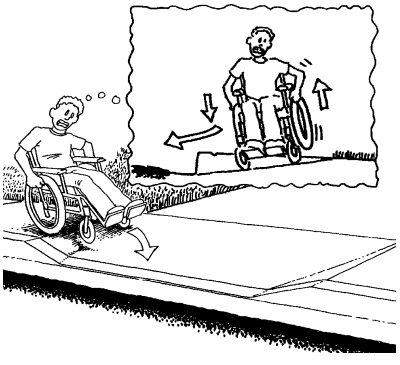
- Within Yield or Stop Controlled Pedestrian Street Crossings: 2% max

Pedestrian Access Route Cross Slope

- Midblock Pedestrian Street Crossings: Street or highway grade

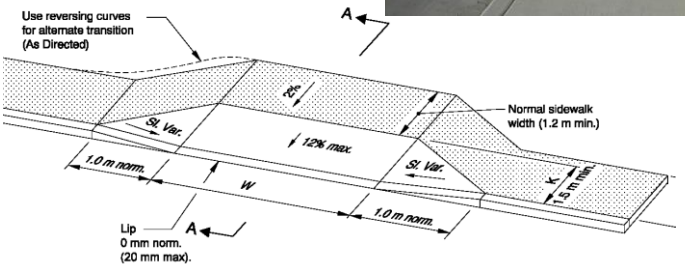


Cross Slope at Driveways



- Pedestrian design does not have to be an after thought

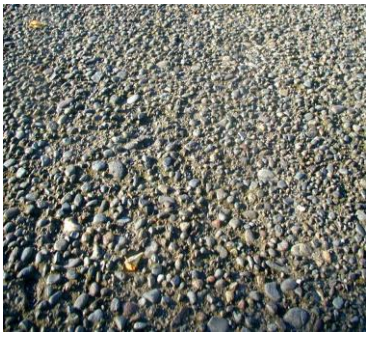
Driveways



- If ROW is available…

Surfaces

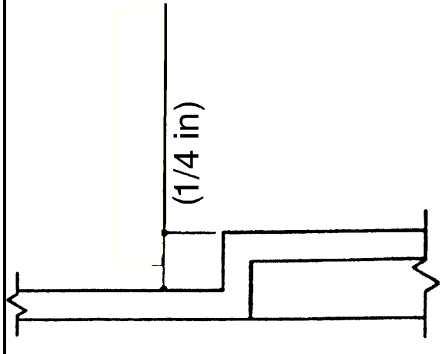
- Firm, stable, and slip-resistant
- No large openings or gaps
- *New* ASTM E17 Committee has added provision on walking surface roughness

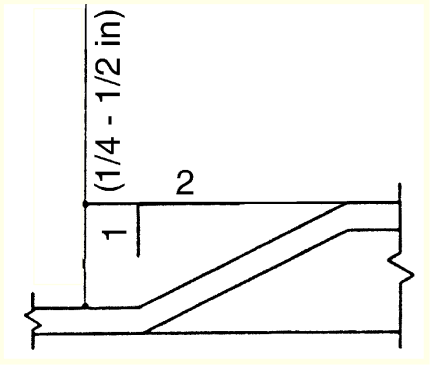


Surfaces

- Properly installed, and well maintained bricks and flagstone and paving stones can work.

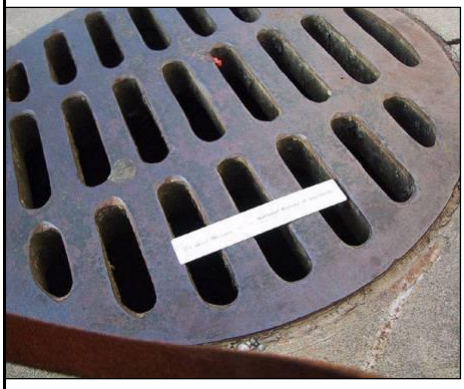
Changes in Level





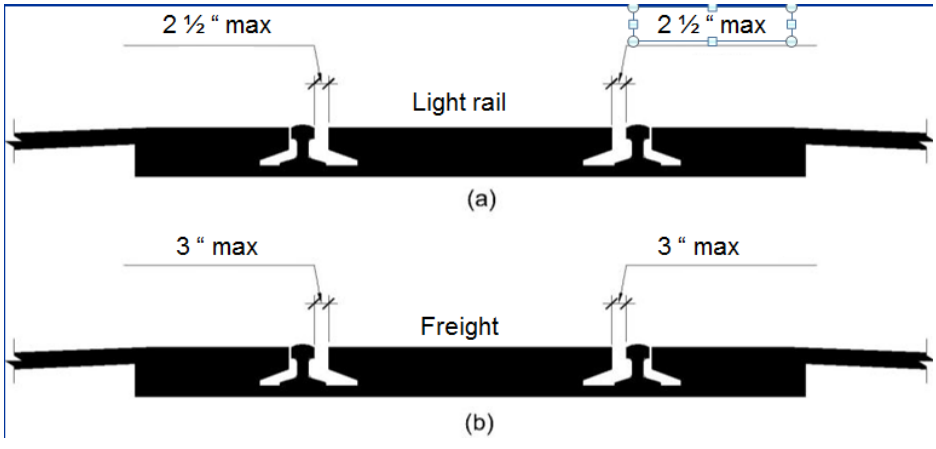
- Must be beveled if greater than ¼ inch.

Horizontal Openings



- No more than ½ inch opening in the direction of travel.

Flange Way Gap

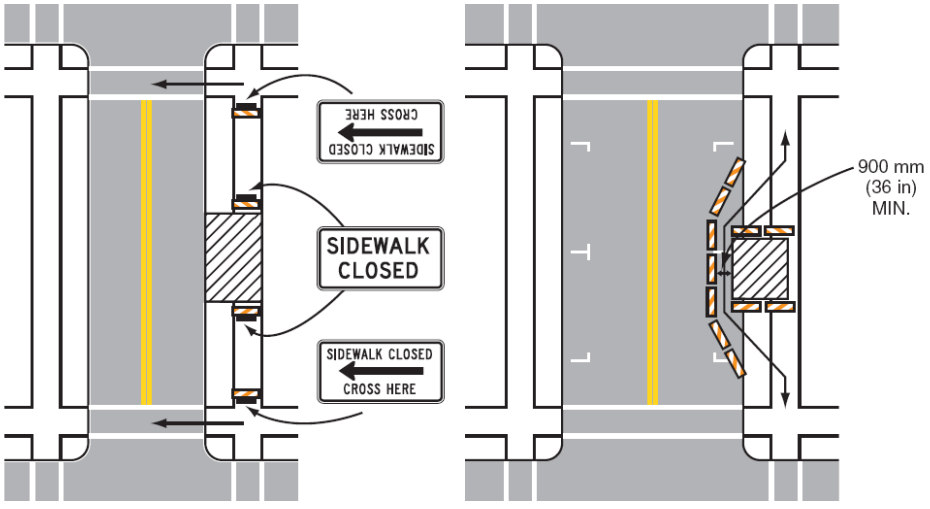


Alternative Pedestrian Access Routes

Temporary Route Basics

- PROWAG references MUTCD (section 6)
- Maintain pedestrian usability
- Same-side alternate routes if feasible
- Consider APS if extra crossings required
- Cane-detectable barricades

Temporary Traffic Control



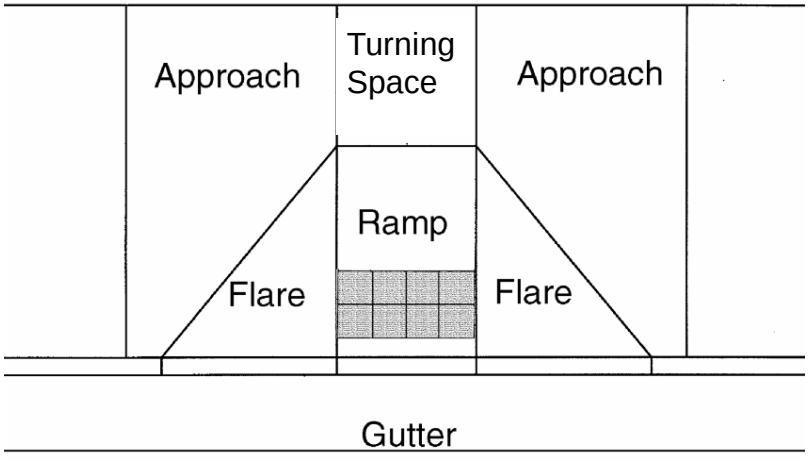
- From Part 6 of MUTCD

Temporary Traffic Control

Curb Ramp Basics

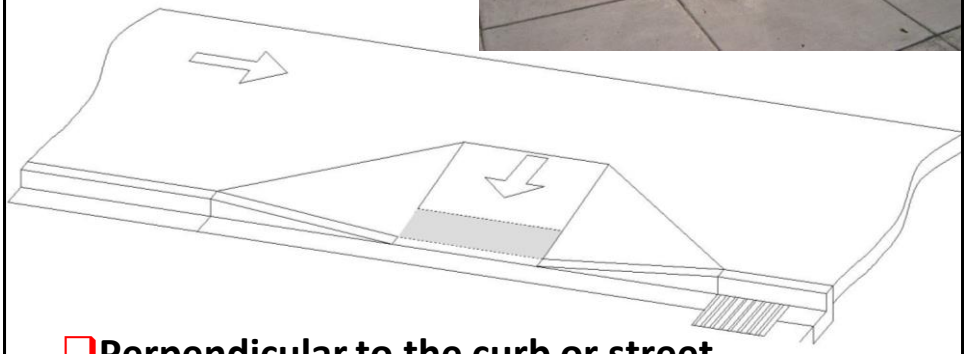
- 1:12 max running slope (with length limit as exception to slope limit)
- 1:48 cross slope (with exceptions for stop condition)
- Width – PAR is 48" min, Shared use path is full width
- Landing at top of perpendicular curb ramp
- Clear space at the bottom outside of parallel travel lane
- Flush transitions (no lips)
- Perpendicular grade breaks

Curb Ramps



- The 'cookie cutter' curb ramp

Perpendicular Curb Ramps



- Perpendicular to the curb or street

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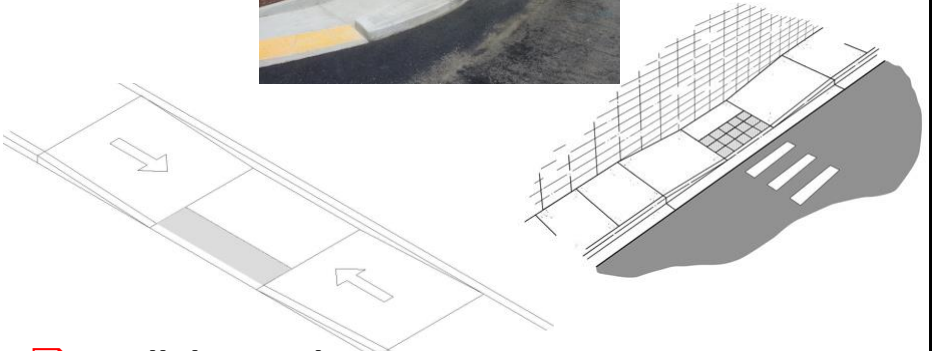
Parallel Curb Ramps



- Parallel to curb or street

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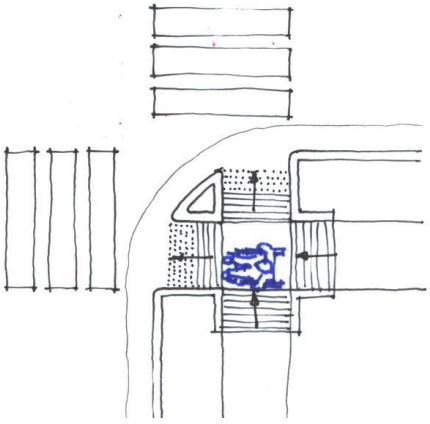
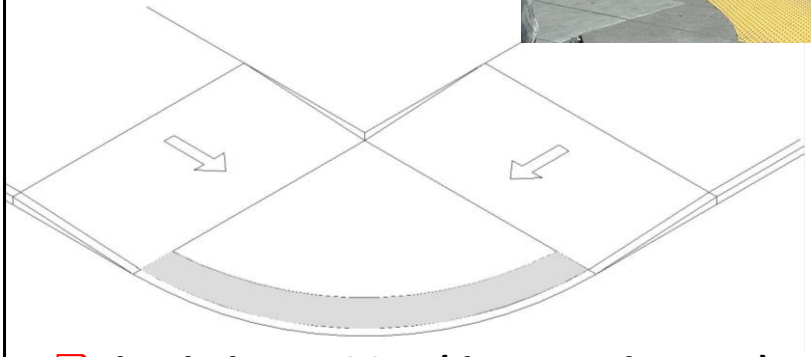
Types - Combination



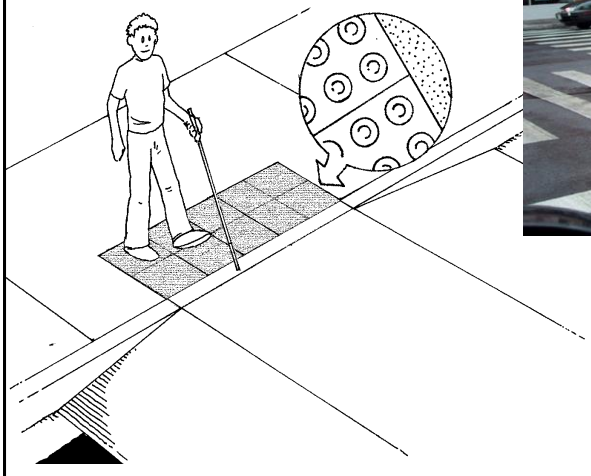
- Combination ramps slope the sidewalk down and can shorten the perpendicular run to the street

Blended Transitions



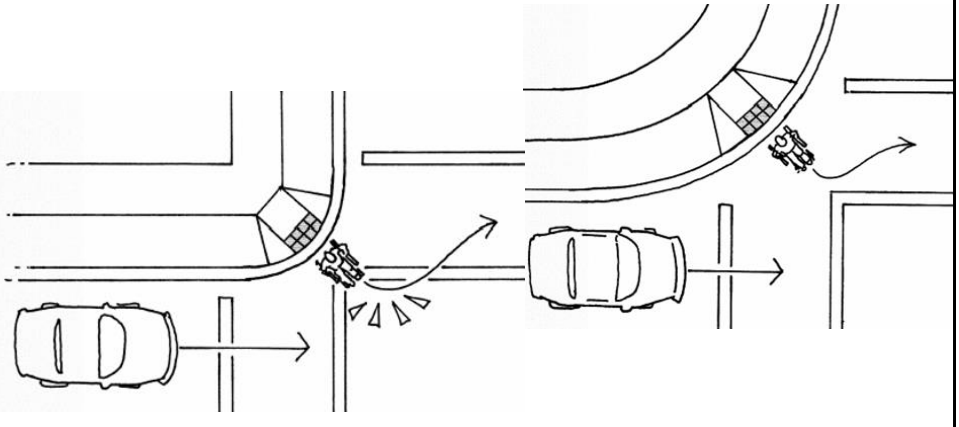
- Blended Transition (depressed corner)

Blended Transition



- Blended Transition (raised crossing)

Diagonal Curb Ramps

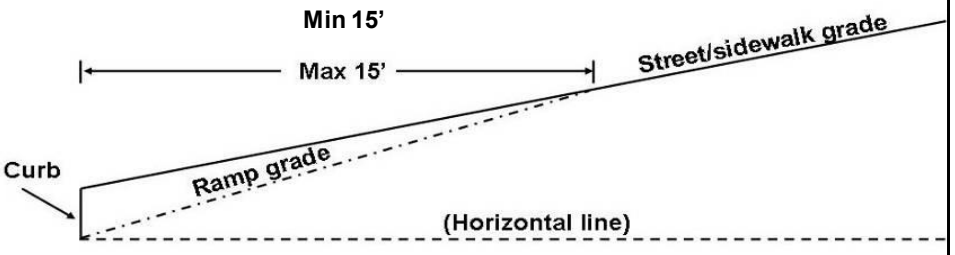


- Diagonal/Apex can cause dangerous conflicts
- Only permitted in alterations as last option

Street Crossing = Curb Ramp

- Two ramps per corner

Curb Ramp Running Slope



- Maximum curb ramp slope 1:12
- When 'chasing grade' length of the ramp can be limited to 15 feet.

Curb Ramp Cross Slope

- 1:48 max where crossing is stop or yield
- 1:20 max where crossing may be free flow

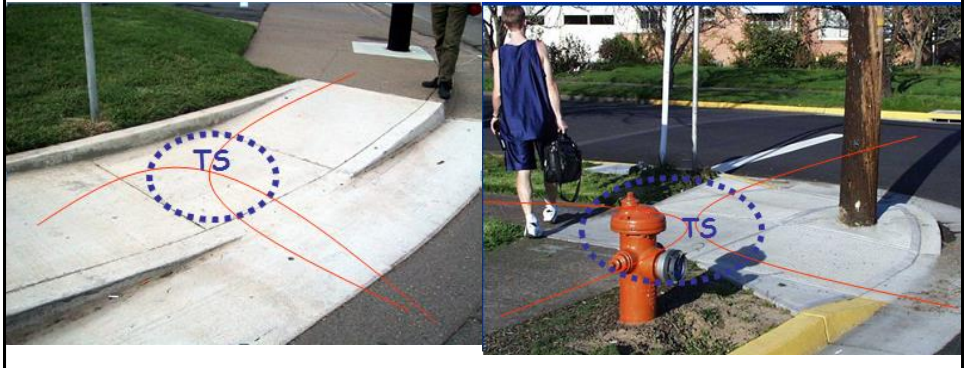
Curb Ramp Width

- PAR 48 inches minimum width.
- Curb ramp must extend full width of a shared use path.

Landings

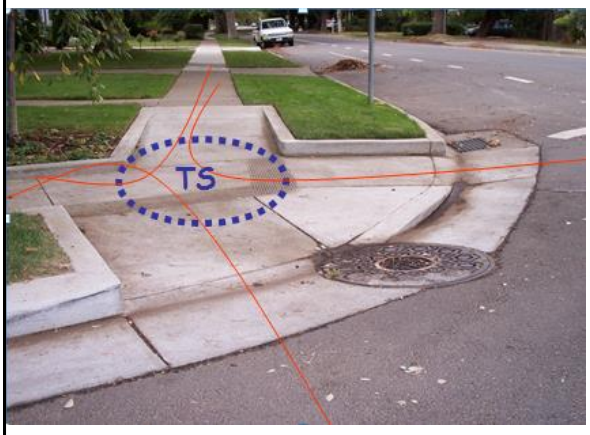
- Landings are required at the top of perpendicular curb ramps for change in direction of travel (4’ x 4’ min)

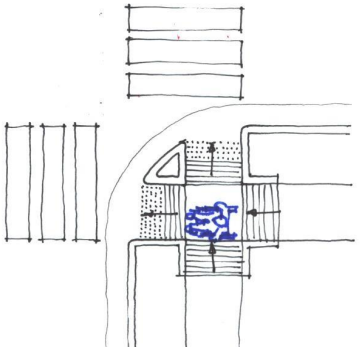
Landings



- Provide a level landing at the top of a perpendicular ramp, at the bottom of a parallel ramp

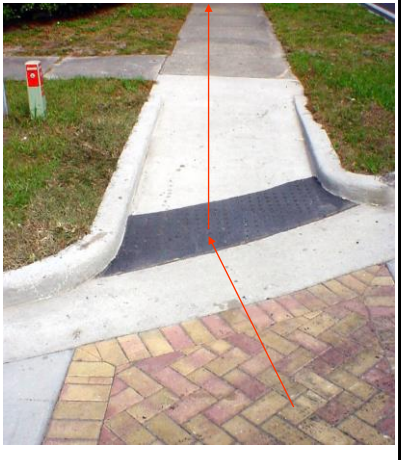
Landings





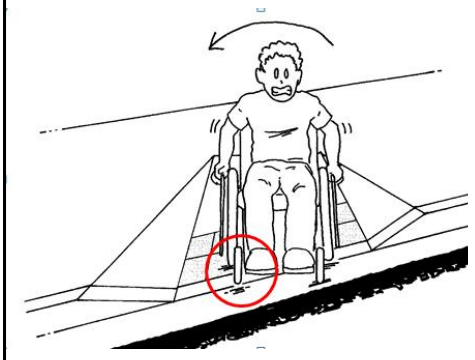
- The landing is at an intermediate level on a combination curb ramp.

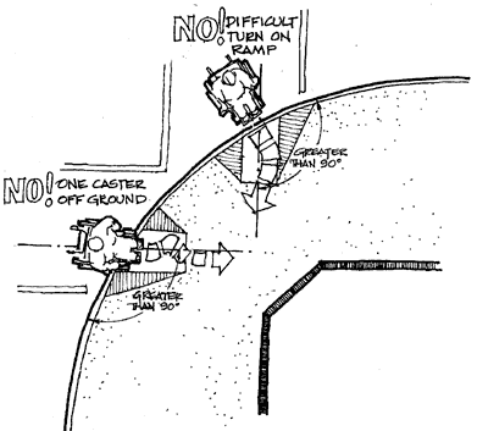
Grade Breaks



- Grade breaks must be perpendicular to direction of travel

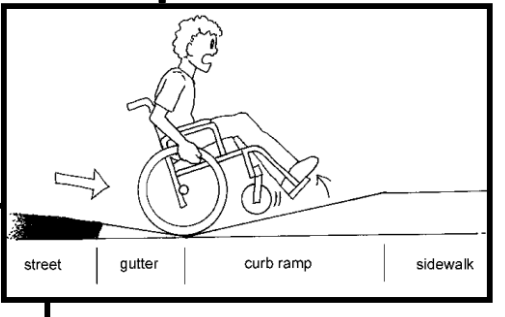
Perpendicular Grade Breaks

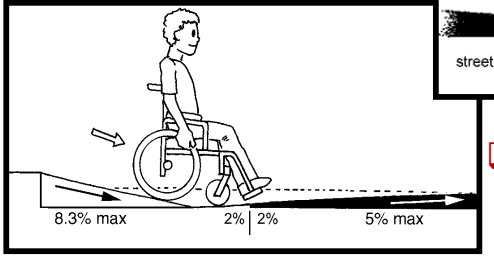




- Both wheels must hit the break at the same time for stability (especially manual wheelchairs)

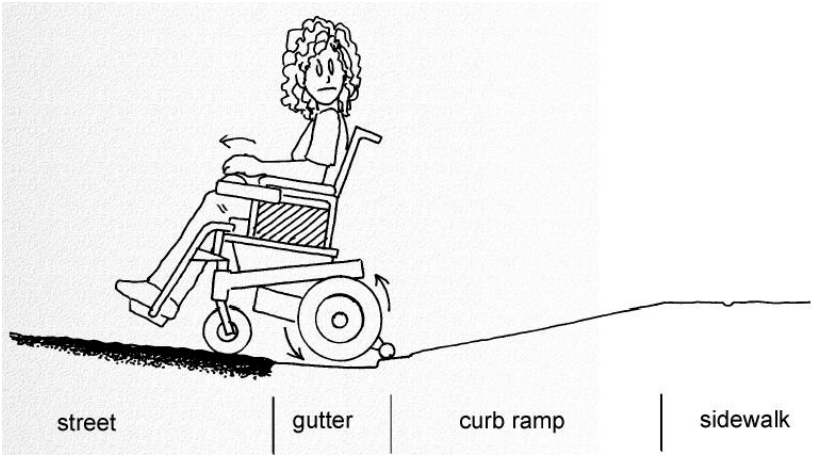
Counter Slope





- Algebraic difference of the ramp or landing slope and the street crown 13% max

Counter Slope

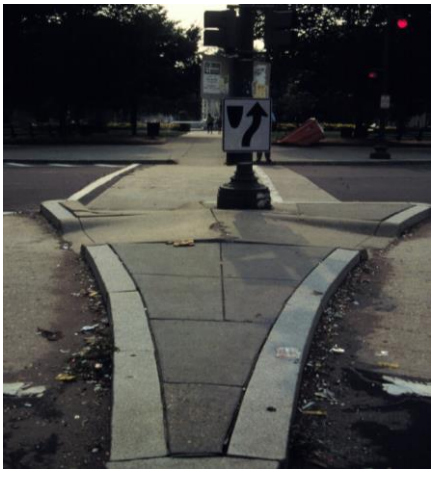


- Transition must be flush at all grade breaks

Usable Curb Ramps?

Usable Curb Ramps?

Usable Curb Ramps?



- What is wrong with these?

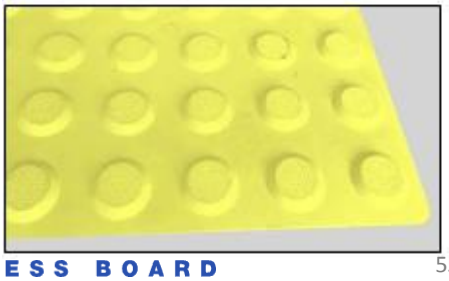
Before

After

Detectable Warnings

Detectable Warnings

- Required at all street crossings
  - Driveways??
- Provide warning to the visually impaired that they are about to enter a hazardous area.
- 24” min. in the direction of travel and full width of curb opening
- Contrasting in color



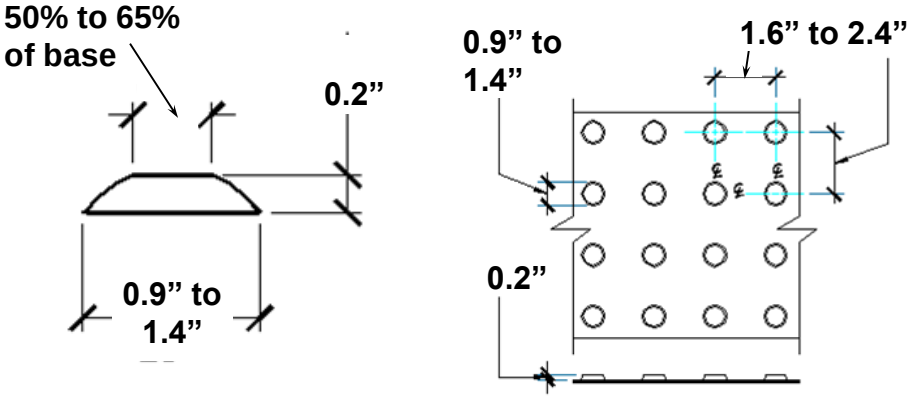
Detectable Warnings

- Required at boarding platforms
- Boarding and alighting areas at sidewalk or street level transit stops for rail vehicles

Detectable Warnings

- All ramps and raised crossings must have detectable warnings to provide notice of the change from a pedestrian to a vehicular route.

Detectable Warnings



- Due to their distinctive design, truncated domes are detectable by cane and underfoot

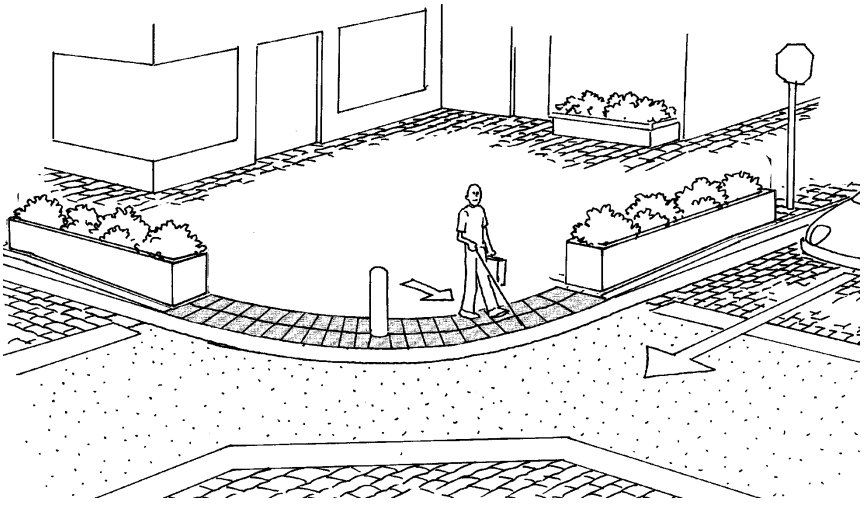
Detectable Warnings

ADAAG: Full depth and width of curb ramp

PROWAG: 24 inches and width of curb ramp

- Minimum 24” in the direction of travel

Detectable Warnings

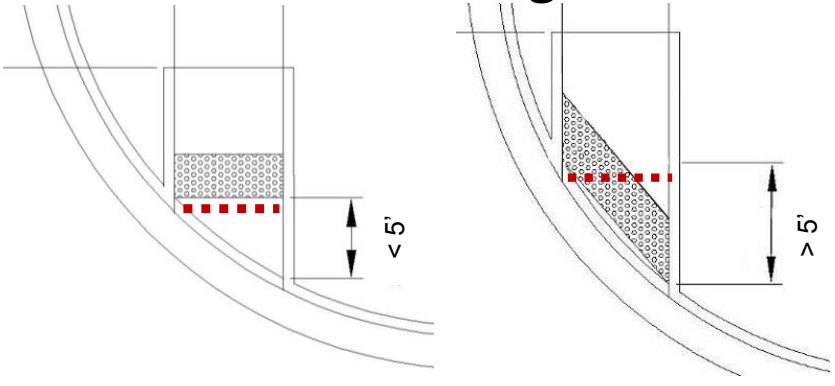


- DW needs to cover the entire flush edge

Detectable Warning Location

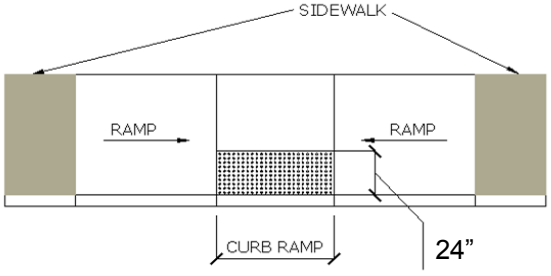
- DW is placed at back of curb or at grade break

Detectable Warning Location

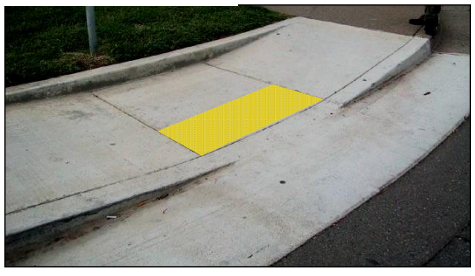


- Place DW on curb ramp at grade break if space at bottom of ramp is less than 5’ deep
- Place DW on bottom behind the back of the curb if space is more than 5’ deep at any point

Detectable Warning Location



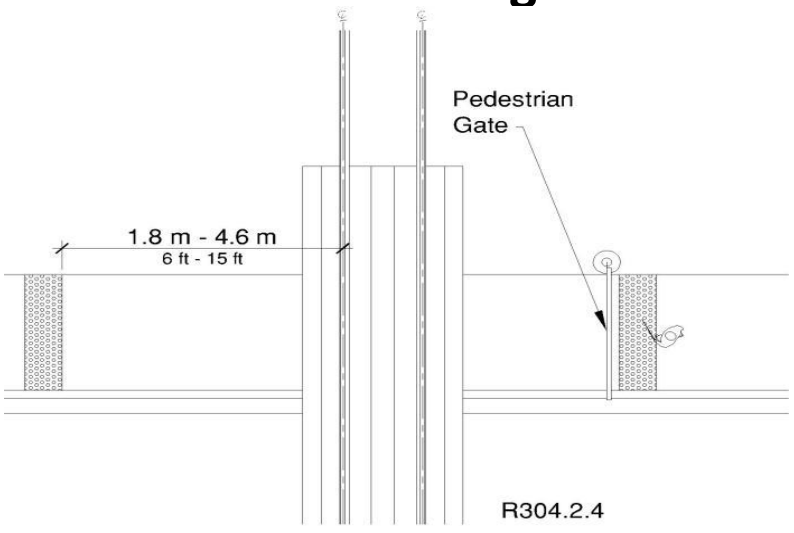
- Place at back of curb on landing



Detectable Warning Location

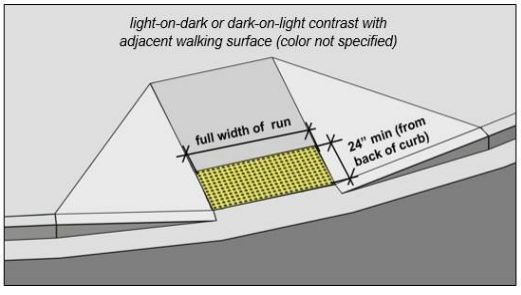
- Pedestrian refuge islands greater than 6 feet
  - DWs placed at front edge of island

Detectable Warning Location



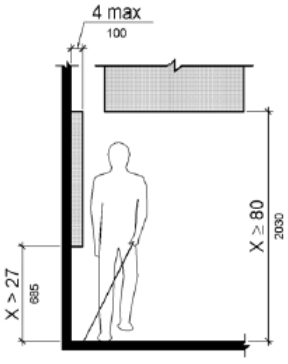
- Detectable warnings at pedestrian/rail crossings

Detectable Warnings



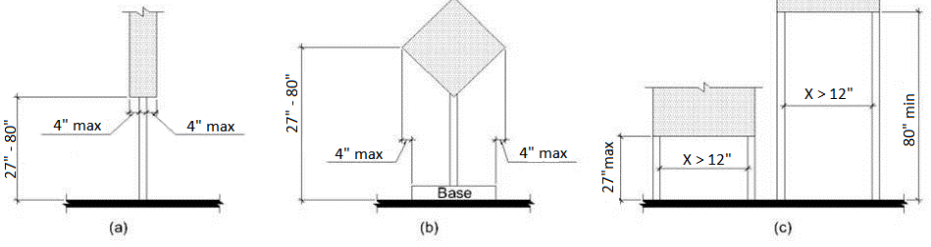
- DW shall have a visual contrast with the surrounding surfaces (light on dark or dark on light)
- No specific color required

Protruding Objects



- Objects between 27” and 80” may not protrude more than 4”.
- Entire pedestrian circulation route!

Protruding Objects



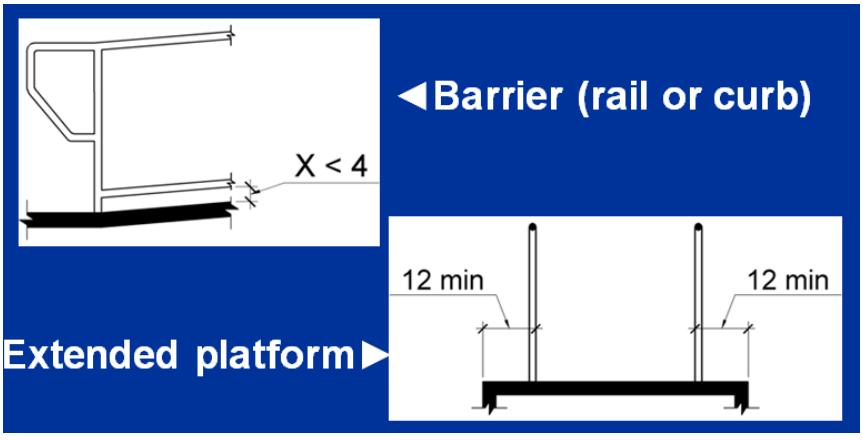
- Post mounted objects must not protrude more than 4” beyond the base
- Space greater than 12” between posts must be detectable

Detectable Warning Quiz

Ramps

- Slope: 1:12 max
- Cross slope: 1:48 max
- Clear width: 36” min
- Rise for each run: 30” max
- Level landings
- Handrails (both sides)
- Edge protection

Ramps

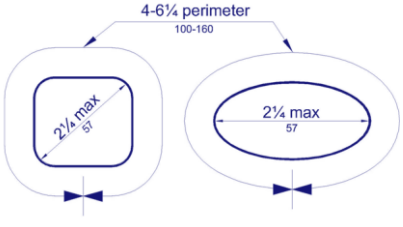


❑> 6” elevation change requires edge protection

Handrails

Required on ramps and stairs, <u>if provided</u> on walkways, <u>not required on curb ramps</u>

- Knuckle clearance: 1 ½” min
- Diameter: 1 ¼” – 2” (applies to outer diameter)
- Circular & noncircular cross sections



Pedestrian Street Crossings

- Pedestrian heads with visual and audible information provided (Accessible Pedestrian Signal)
- Adequate crossing time (3.5 feet/second(fps))
- Multi-lane roundabouts needs some type of pedestrian demand signalization

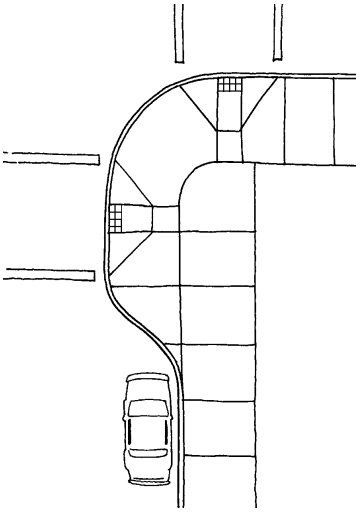
Crossing Time

WALKING SPEED AN ISSUE

START-UP TIME AN ISSUE

- 3.5 fps from top of curb ramp to opposite curb
- PROWAG references MUTCD requirements

Crossing Time

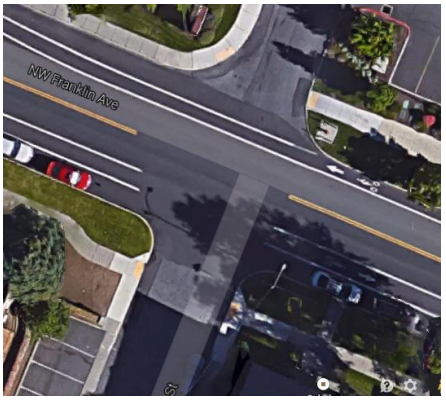


- Curb extensions can reduce crossing distance

Pedestrian Street Crossings

- Refuge islands can be useful

Pedestrian Street Crossings



- Prohibiting crossings happens…
- Prohibit for ALL pedestrians

Crossing Information

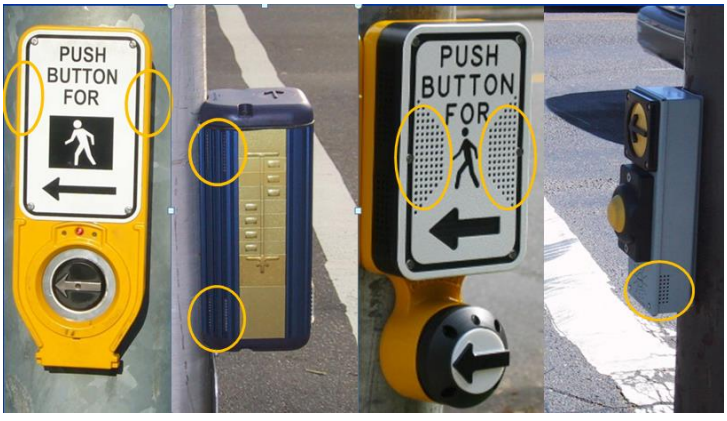
- Usable information about pedestrian street crossings

Accessible Pedestrian Signals (APS)

Communication Features

- ❑ Locator tone
- ❑ Audible and vibro-tactile detectors required
- ❑ Tactile arrow indicating direction
- ❑ 10 ft. separation, or speech indication
- ❑ Volume adjusts for ambient noise
- ❑ Speech walk criteria MUTCD 4E.11
- ❑ Extended Press Features

Accessible Pedestrian Signals (APS)



- ❑ Speakers are located on the device; at pedestrian level

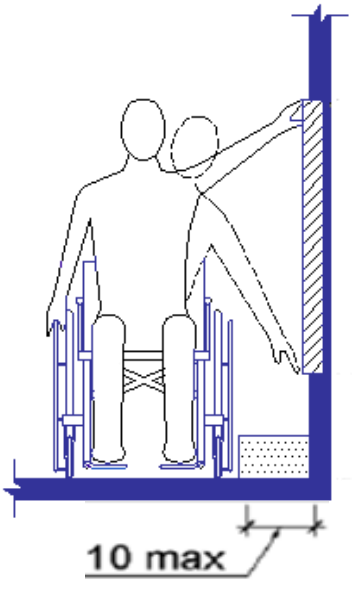
Accessible Pedestrian Pushbuttons

- **Button**
  - Face of button parallel to crosswalk
  - Mounted at 48” max (42” max used in MUTCD)
  - Max 5 lbs pressure needed to activate
- **Sign & Arrow**
  - Sign adjacent to button – explains purpose and use (MUTCD option)
  - Arrow must indicate crosswalk direction

Accessible Pedestrian Pushbuttons

Reach Ranges

- 48” max.
- 15” min.
- Side reach within 10”
- No obstruction permitte on forward reach

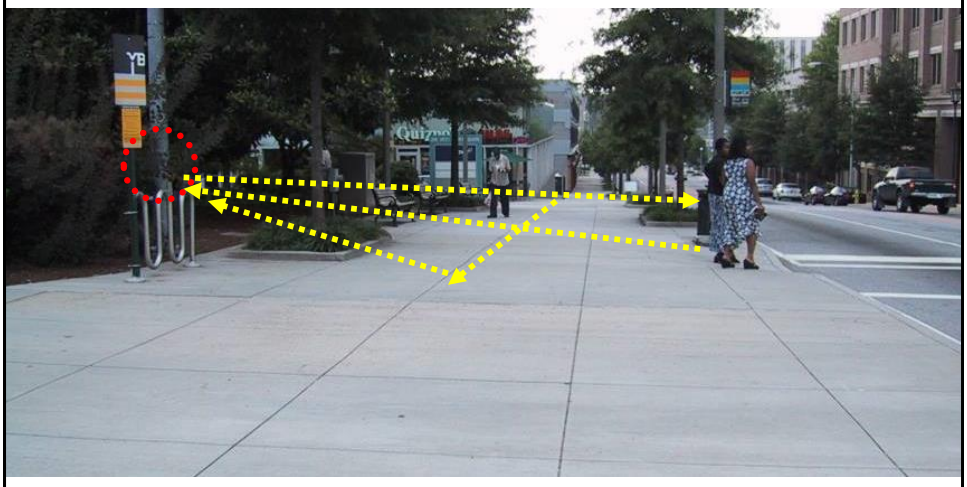


Accessible Pedestrian Pushbuttons

- Usable with a closed fist

Tactile Arrow

Pushbutton Location



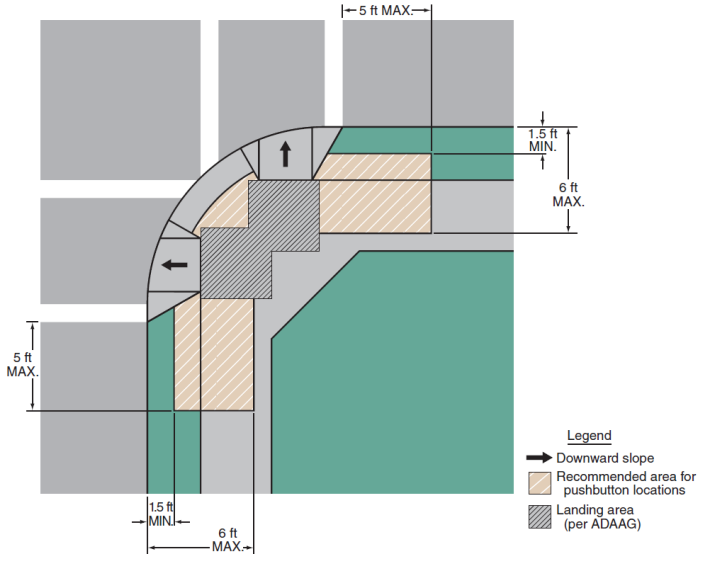
- Find the pushbutton. Now line up to cross.
- Missed your chance? Do it again

Pushbutton Location

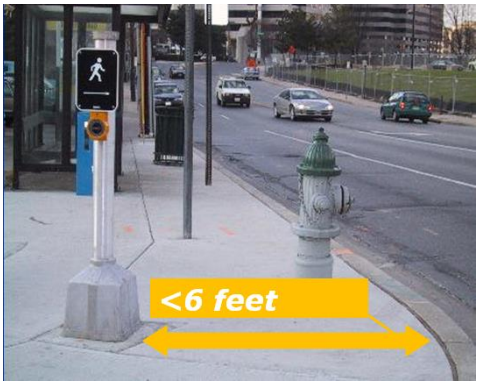
- Must be connected to a pedestrian access route

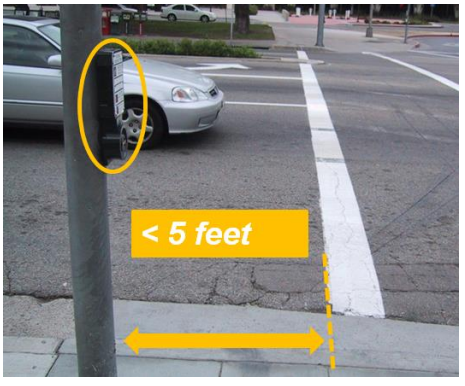
Pushbutton Location

Figure 4E-3. Pushbutton Location Area



Pushbutton Location





- Between 1 1/2 ft and 6 ft from the edge of curb, shoulder or pavement
- No more than five feet from crosswalk line

Pushbutton Location

Pushbutton Location

- Face of pushbutton must be parallel to the crosswalk

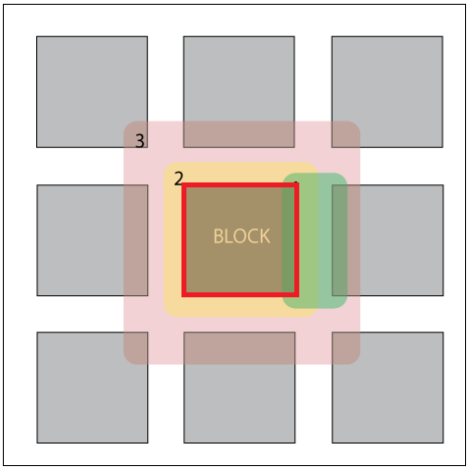
Roundabouts

- Sidewalks shall be separated for wayfinding
- Where pedestrians cross more than one lane, pedestrian-activated signals shall be provided.

Roundabouts

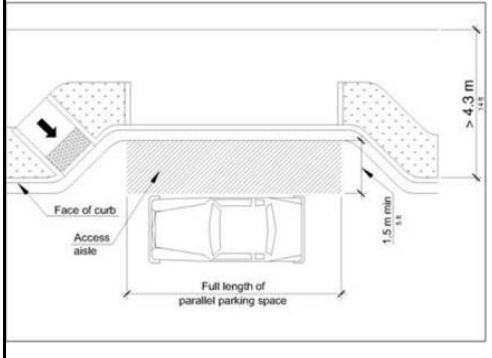
- Example of: Curb attached sidewalk and fencing to guide pedestrians to crossing location.

On-Street Parking



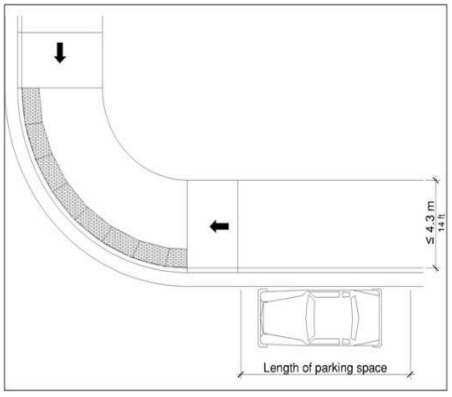
- Number of accessible spaces is based on total marked or metered spaces on a block perimeter
- Scoping Section Table R214

On-Street Parking



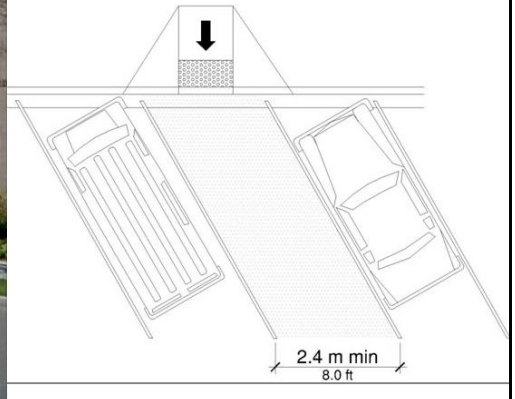
- Where the width of the adjacent sidewalk or available right-of-way exceeds 14 ft. an access aisle is required (new construction)

On-Street Parking



- Narrow sidewalks –access aisle not required
- Alterations – access aisle only required when scope of project involves curb and road work

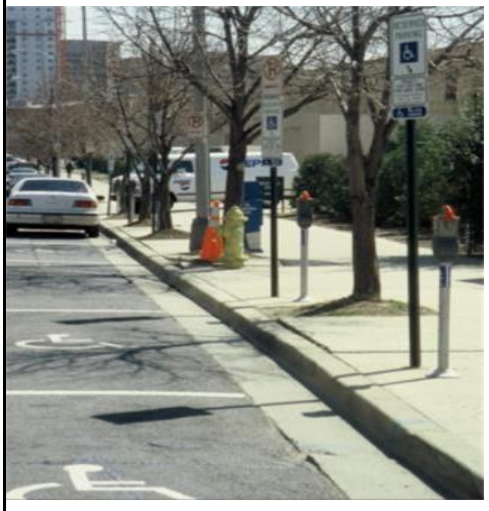
On-Street Parking



- Angled (or perpendicular) on-street parking; requires an 8ft access aisle

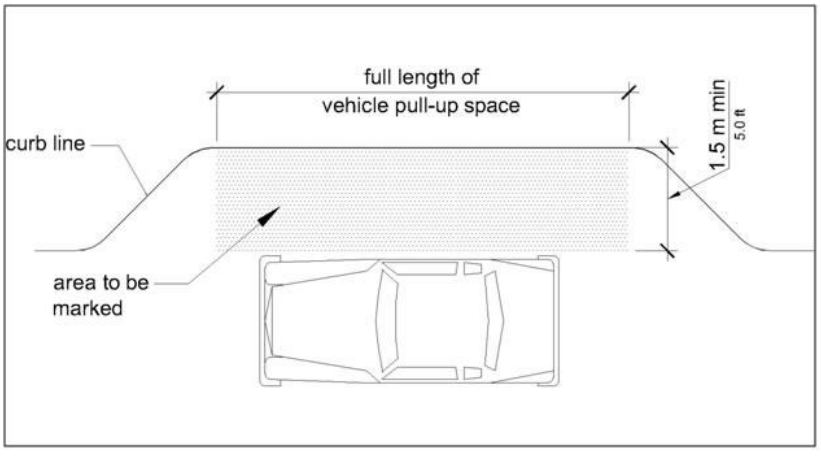
On-Street Parking

Parking meter/pay station displays and information



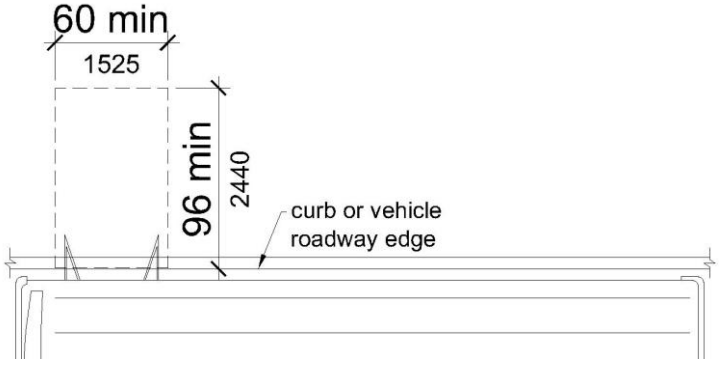
- **Information must be visible from a point 3.3 ft. max above the center of the clear space**
- **Must meet operable parts requirements**

Passenger Loading Zones



- **The access aisle must be connected to the pedestrian access route**

Bus Boarding and Alighting Areas

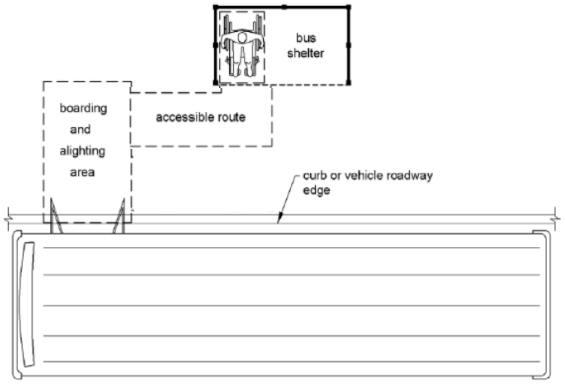


- Clear space: 96”x60”
- Perpendicular to road – 1:48 max slope;
- Parallel to the road can match grade of road

Bus Boarding and Alighting Areas

Bus Shelters

- Space for wheelchair entirely within shelter
- Pedestrian accessible route connection to boarding/alighting area



Questions?

Juliet Shoultz, P.E.
Transportation Systems Engineer
U.S. Access Board
202-272-0045
shoultz@access-board.gov