



Proposed Accessibility Guidelines
for Pedestrian Facilities
in the Public Right-of-Way

July 26, 2011

UNITED STATES ACCESS BOARD
A FEDERAL AGENCY COMMITTED TO ACCESSIBLE DESIGN

PROWAG Overview

Presented by:
Erin P. Eurek, P.E.
Kimley»»Horn

Agenda

- ADA Standards Overview
- Project Scoping
- Technical Requirements
 - PROWAG
 - MUTCD

ADA Standards Overview

- 1991 ADA Standards for Accessible Design (ADA Standards, 1991)
- Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG, 2004)
- Americans with Disabilities Act Standards for Transportation Facilities (2006)
- 2010 ADA Standards for Accessible Design (ADA Standards, 2010)
- Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG, 2011)



PROWAG Overview

- Originally intended to supplement the ADAAG to provide standards specific to public rights-of-way; most recently formatted as a stand-alone document
- Applicable to new construction and alterations (of existing facilities)
- Undergoing the rulemaking process (2011 Notice of Proposed Rule Making published w/ updated guidelines)

PROWAG Overview

- Currently enforceable by local government agencies who adopt the document (e.g., City of Fort Worth)
- Enforceable by DOJ and FHWA once adopted on a federal level
- FHWA/DOJ Best Practice until adopted:

https://www.fhwa.dot.gov/environment/bicycle_pedestrian/resources/prwaa.cfm



TDLR & PROWAG

TDLR adopted 68.102. Public Right-of-Way Projects, effective May 15, 2017:

(a) For public right-of-way projects, in addition to accepting compliance with applicable TAS requirements, the department will also accept compliance with the Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way, published by the Architectural and Transportation Compliance Board (Access Board) on July 26, 2011, 36 CFR Part 1190 or its final adopted guidelines.

PROWAG Overview

- Preamble
- Chapter R1: Application and Administration
- Chapter R2: Scoping Requirements
- Chapter R3: Technical Requirements
- Chapter R4: Supplementary Technical Requirements

Chapter R3: Technical Requirements

- R301: General
- R302: Pedestrian Access Routes
- R303: Alternate Pedestrian Access Routes
- R304: Curb Ramps and Blended Transitions
- R305: Detectable Warning Surfaces
- R306: Pedestrian Street Crossings
- R307: Accessible Pedestrian Signals and Pedestrian Pushbuttons
- R308: Transit Stops and Transit Shelters
- R309: On-Street Parking Spaces
- R310: Passenger Loading Zones

Chapter R4: Supplementary Technical Requirements

- R401: General
- R402: Protruding Objects
- R403: Operable Parts
- R404: Clear Spaces
- R405: Knee and Toe Clearance
- R406: Reach Ranges
- R407: Ramps
- R408: Stairways
- R409: Handrails
- R410: Visual Characters on Signs
- R411: International Symbol of Accessibility

Section Title

- The reference section title corresponds to the slide title
- The reference section number corresponds to the number in the upper-right hand corner of each slide



Project Scoping

Kimley»Horn

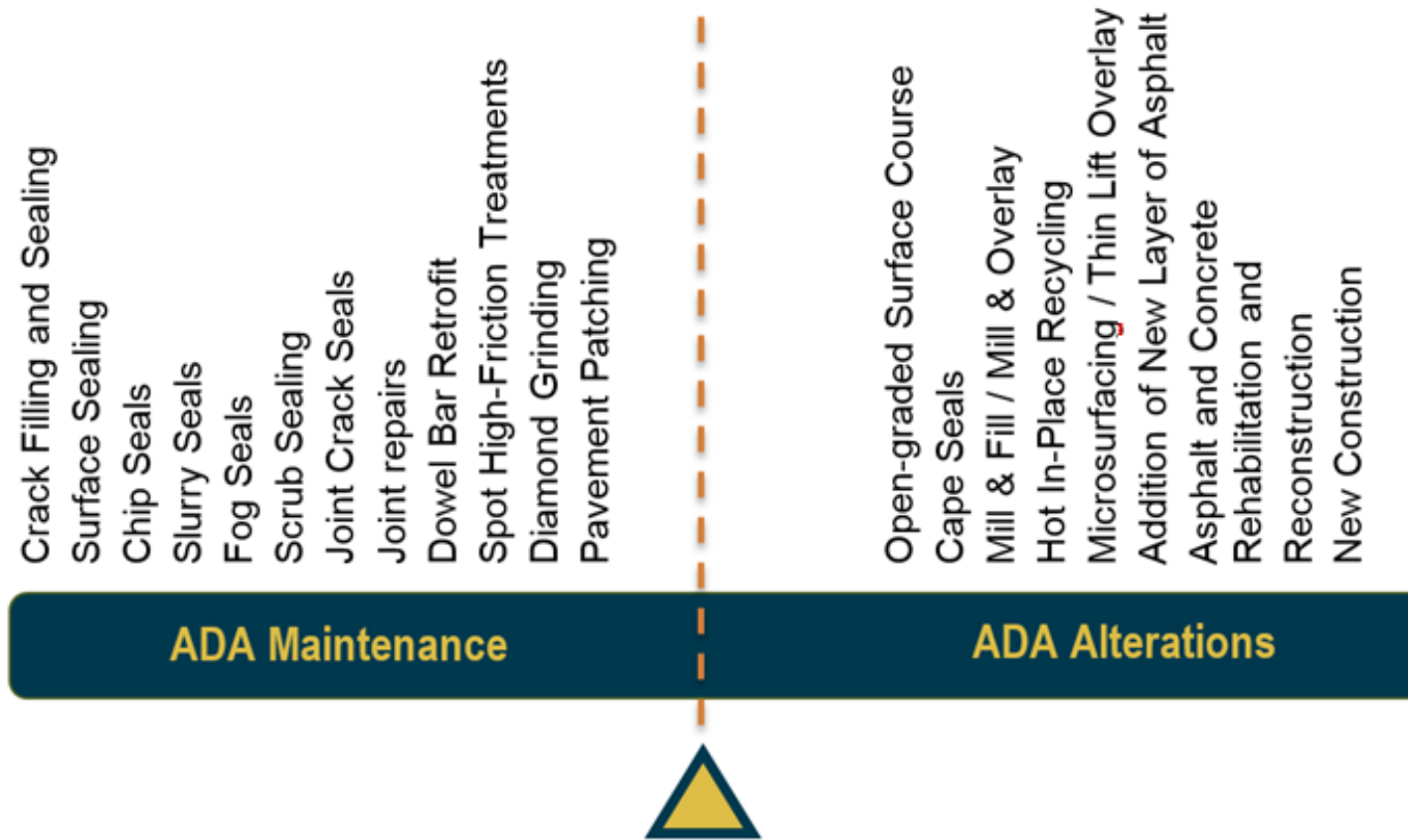
New Construction

- All newly constructed facilities located in the public rights-of-way shall comply with PROWAG

Alterations

- Alterations to existing facilities must comply with requirements for new construction to the **maximum extent feasible**
- **Reduction in Access Prohibited:**
Alterations shall not decrease or have the effect of decreasing the accessibility of a facility below the requirements for new construction

Maintenance vs. Alterations



Source: DOJ Briefing Memorandum on Maintenance versus Alteration Projects

Maintenance vs. Alterations

- DOJ/FHWA Alterations Memo:
https://www.fhwa.dot.gov/civilrights/programs/doj_fhwa_ta.cfm
- Glossary of Terms:
https://www.fhwa.dot.gov/civilrights/programs/doj_fhwa_ta_glossary.cfm

Alterations

- Alterations and elements added to existing facilities shall comply with R202
- Where elements are altered or added and the pedestrian circulation path to the altered or added elements is not altered, the pedestrian circulation path is not required to comply with R204

Alterations

- Where existing elements, spaces, or facilities are altered, each altered element, space, or facility within the scope of the project shall comply with the applicable requirements for new construction
- Where elements are added to existing facilities, the added elements shall comply with the applicable requirements

Technical Infeasibility

“...Something that has little likelihood of being accomplished because existing structural conditions would require removing or altering a load-bearing member that is an essential part of the structural frame; or because other existing physical or site constraints prohibit modification or addition of elements, spaces, or features that are in full and strict compliance with the minimum requirements.”

Physical Constraints – Examples

- Underlying terrain
- Right-of-way availability
- Underground structures
- Adjacent developed facilities
- Drainage
- Presence of notable natural or historical features
- Cost of an improvement is NOT a constraint!!

**MUST PROVIDE ACCESS TO THE
MAXIMUM EXTENT FEASIBLE**

Physical Constraints



Constrained ROW

Photo courtesy of Gary Schatz



Underlying Terrain

Photo courtesy of Heyden Black Walker

Number of Curb Ramps

- Two curb ramps must be provided at each street corner
- For alterations, a single diagonal curb ramp is permitted where existing physical constraints exist
- Project documentation shall be kept indicating why two ramps were not provided

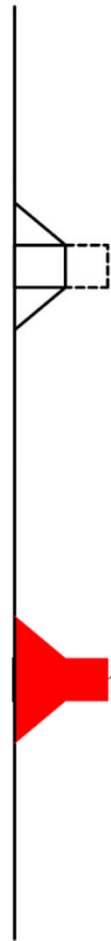
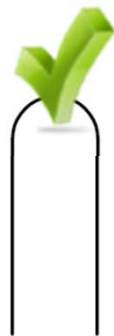
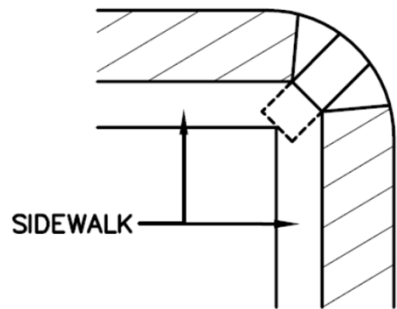
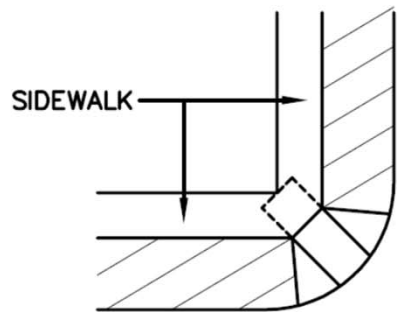
Where are curb ramps required?

- The ADA of 1990, Section 35.150, Existing Facilities, requires that the Transition Plan include a schedule for providing curb ramps or other sloped area **at existing pedestrian walkways**, which applies to all facilities constructed prior to 1992.
- For any sidewalk installations constructed from 1992 to March 15, 2012, the curb ramps should have been installed as part of the sidewalk construction project per the 1991 Standards for Accessible Design, Section 4.7 Curb Ramp, which states, **“curb ramps complying with 4.7 shall be provided wherever an accessible route crosses a curb.”**
- For sidewalk installations constructed on or after March 15, 2012 similar guidance is provided in the 2010 Standards for Accessible Design, Section 35.151 of 28 CFR Part 35, New construction and alterations, which states, **“newly constructed or altered street level pedestrian walkways must contain curb ramps or other sloped area at any intersection having curb or other sloped area at intersections to streets, roads, or highways.”**

Where are curb ramps required?



Where are curb ramps required?



RECEIVING CURB RAMP NEEDED

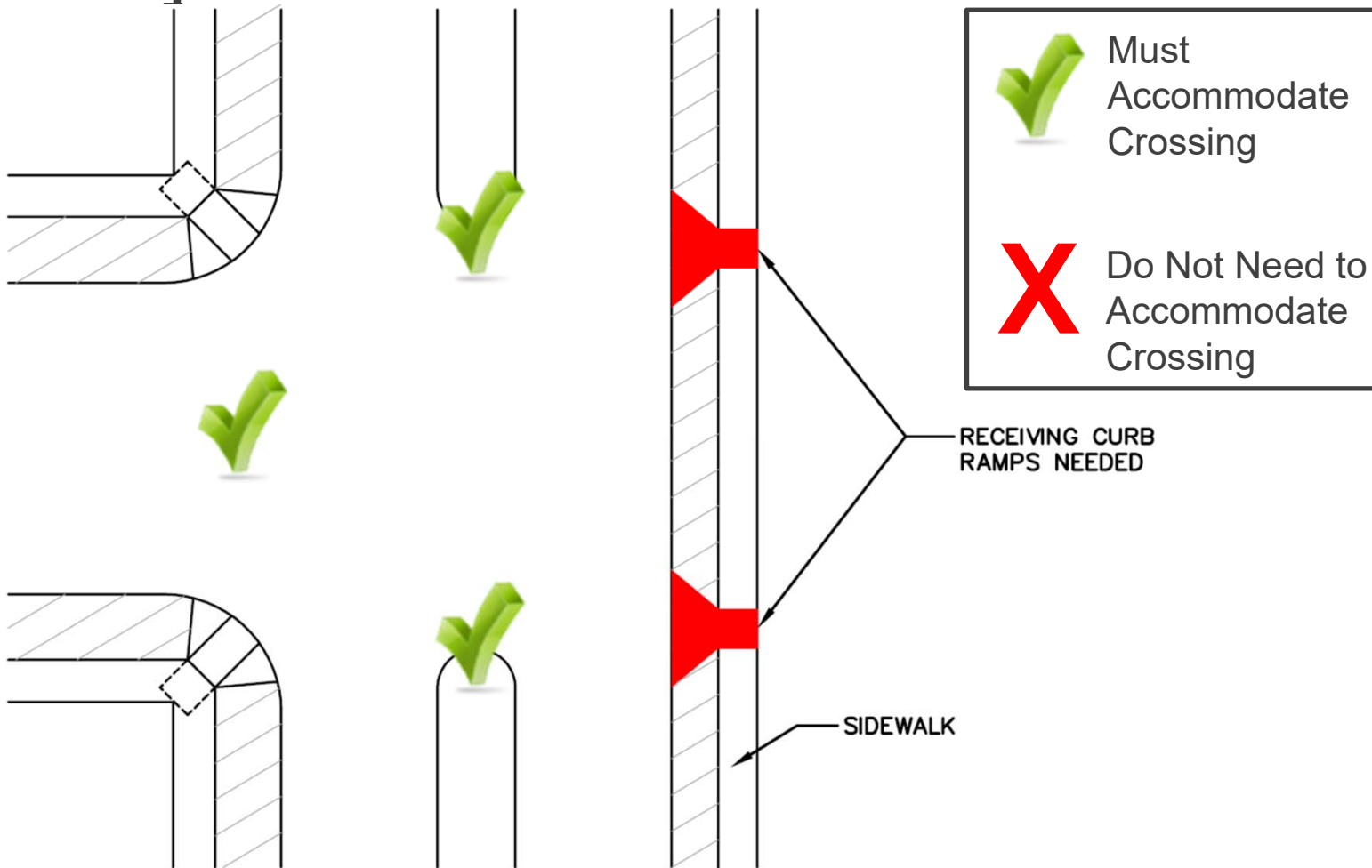


Must Accommodate Crossing

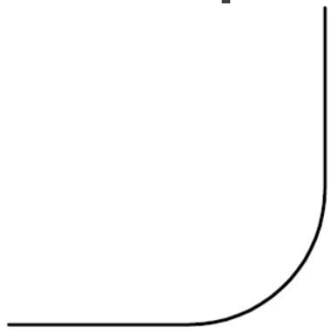


Do Not Need to Accommodate Crossing

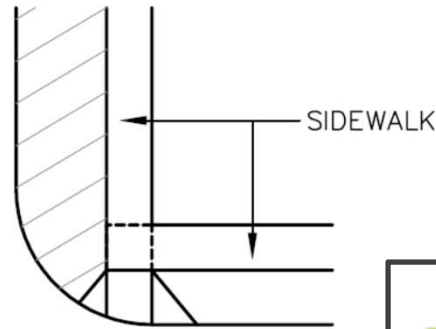
Where are curb ramps required?



Where are curb ramps required?

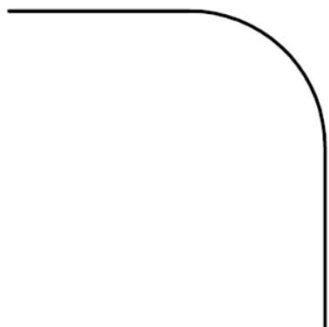


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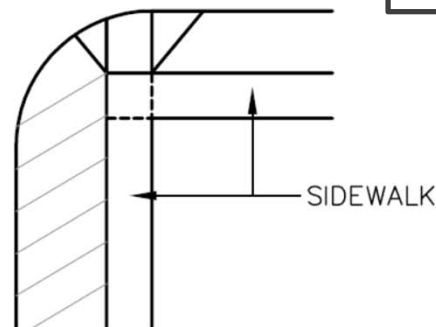


Must Accommodate Crossing

X

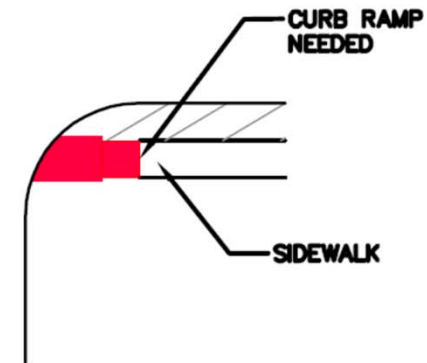
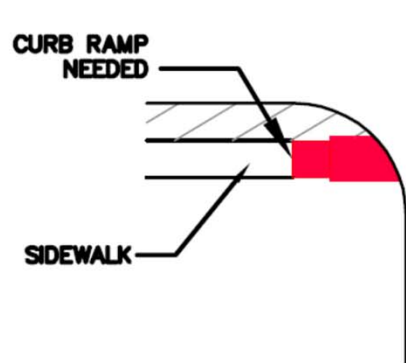
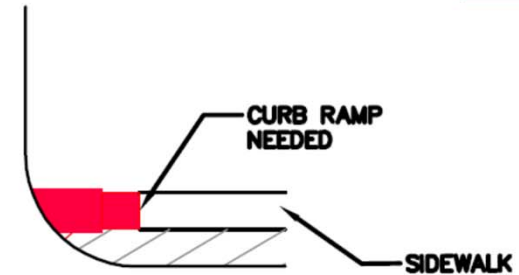
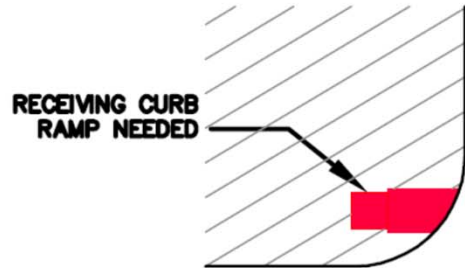


X



Do Not Need to Accommodate Crossing

Where are curb ramps required?



Must Accommodate Crossing



Do Not Need to Accommodate Crossing

Closing a Pedestrian Crossing

- Perform engineering study to determine if the crossing is safe for any user. If it is not safe:
 - Provide a physical barrier (a strip of grass or other non-traversable material between the sidewalk and the curb is acceptable)
 - Install no pedestrian crossing signage
 - Adopt a reasonable and consistent policy on how to determine if a crossing should be closed

Pedestrian Access Routes

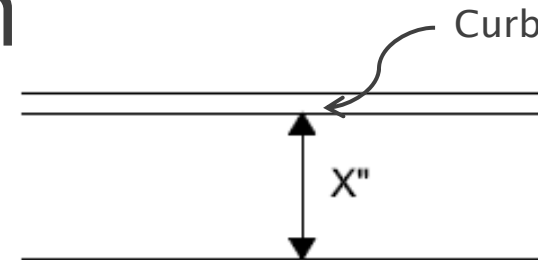
Section R302

Kimley»Horn

Pedestrian Access Route Components

- Sidewalks
- Pedestrian street crossings
- At-grade rail crossings
- Pedestrian overpasses and underpasses
- Curb ramps and blended transitions
- Ramps
- Elevators
- Platform lifts
- Doors, doorways, and gates

Continuous Width



- Sidewalk
 - PROWAG: 4.0' min., exclusive of curb
 - Where sidewalks are wider than 4.0', only a portion of sidewalk is required to comply with R302.3 – R302.7
- Shared Use Path: full width of shared use path
- Medians/Pedestrian Refuge Islands: 5.0' min.

Continuous Width

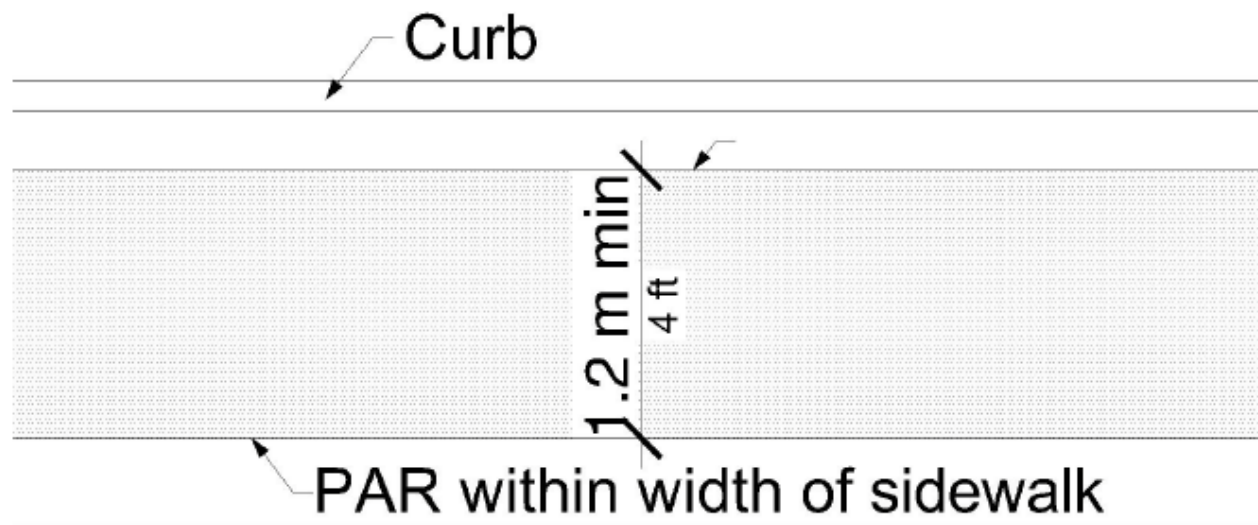


Figure R302.3
Continuous Width

Clear Width – Pinch Points

- 2010 ADA
 - 36" min.
 - Exception: 32" (24" max. distance and 48" min. separation)

- PROWAG: Not addressed; comments have require this

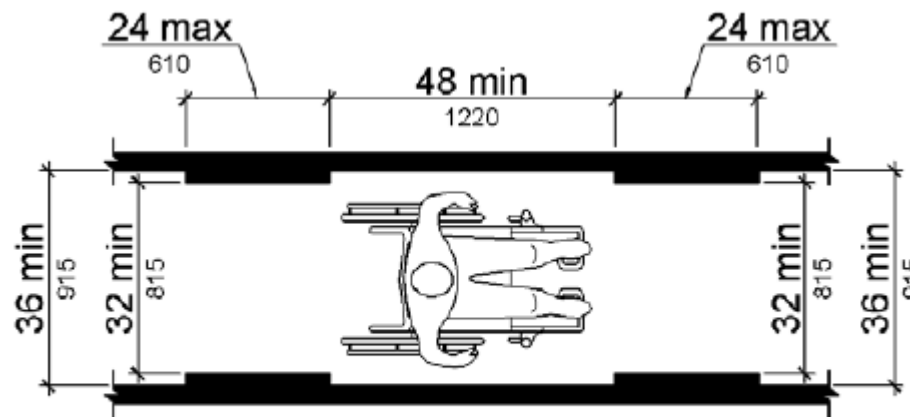


Figure 403.5.1
Clear Width of an Accessible Route

Clear Width

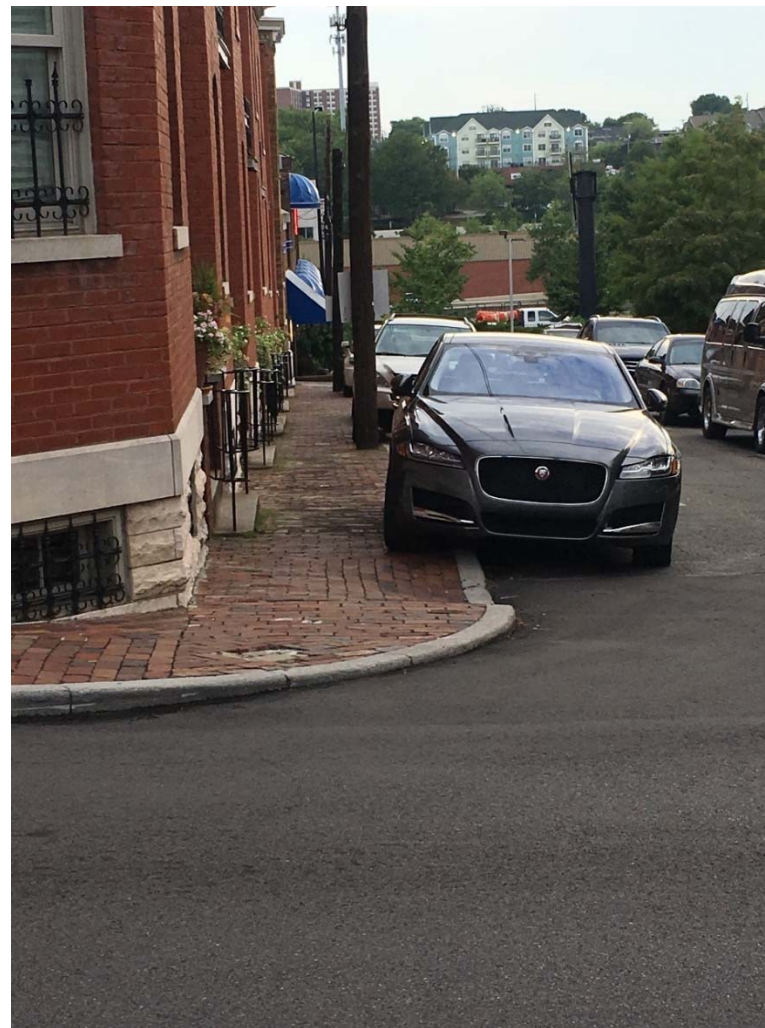


Source: civilnews.com



Source: streetblog.org

Clear Width



Passing Spaces

- If clear width < 5.0', required every 200.0' max.
- Passing space dimensions: 5.0' x 5.0'
- May overlap pedestrian access routes
- Driveways and lead walkways serving residences or businesses meeting requirements may be used as passing zones

Passing Spaces

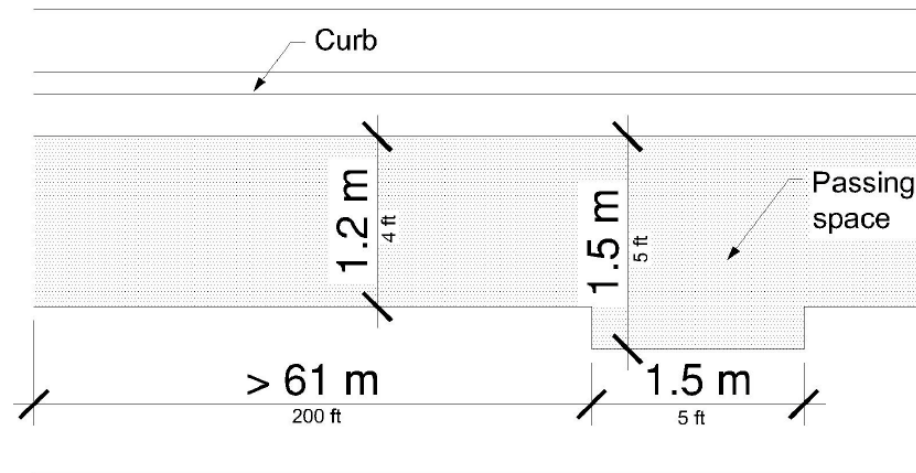
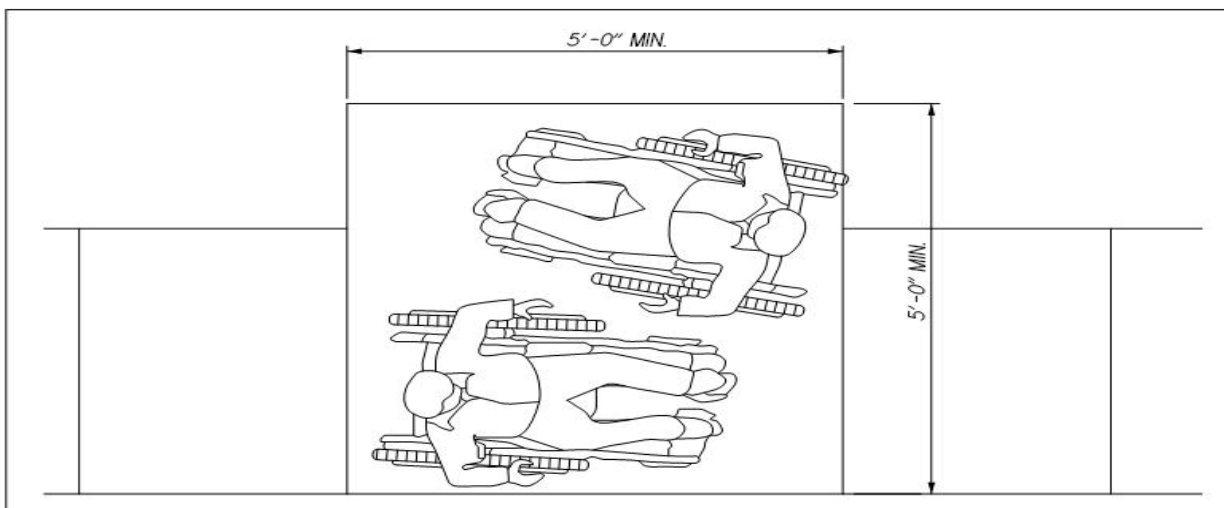


Figure R302.4
Passing Spaces



Grade (Running Slope)

- Measured parallel to the direction of pedestrian travel

Location	Sidewalk	Pedestrian Street Crossings	Shared Use Path
Inside ROW <u>and</u> serving adjacent street or highway	May follow grade of adjacent street or highway	5% max.	May follow grade of adjacent street or highway to the extent practical where compliance is not practicable due to physical constraints and where compliance is precluded by regulatory
Inside ROW <u>but not</u> serving adjacent street or highway	5% max.		
Outside ROW	5% max.		

Grade (Running Slope)

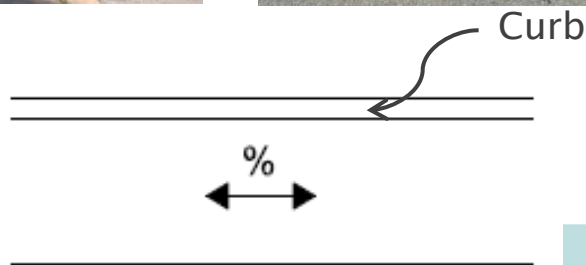
- Sidewalk within the ROW serving adjacent street



Back of Curb

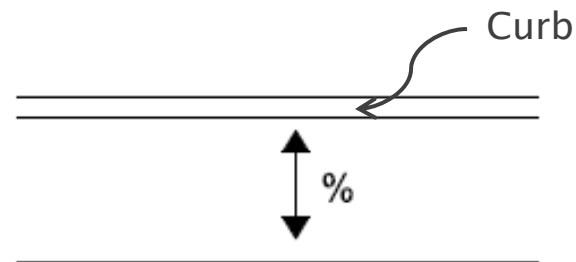


Offset



Cross Slope

- Measured perpendicular to direction of pedestrian travel
- Includes driveway and entrance crossings
- Sidewalk: 2% max.



Cross Slope

Street Crossings

- With Yield or Stop Control: 2% max.
 - Unsignalized, yield control approaches
 - Unsignalized, stop control approaches
- Without Yield or Stop Control: 5% max.
 - Unsignalized, free-flow approaches
 - Signalized, all approaches
- Midblock: may equal grade of street or highway

Surfaces

- All pedestrian access route surfaces must be firm, stable, and slip resistant
- Typical materials
 - Concrete
 - Bituminous Concrete Asphalt

Surfaces

Accessible Exterior Surfaces Technical Article

Submitted by:

Peter W. Axelson, M.S.M.E., A.T.P. Project Director
Denise Chesney, M.E.S.M.E. Research Coordinator

Beneficial Designs, Inc.
Santa Cruz, California

Research Team:

Patricia Longmuir, M.Sc. Exercise Science Consultant
Ken Courts, Ph.D. Exercise Physiology Consultant
Stacy Rose Research Assistant
Jeremy Smith Research Technician
Joe Ysselstein, B.S. Research Assistant

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Surfaces

- Vertical Alignment
 - Generally planar and smooth (easy “rollability”)
 - Consider vibrations when choosing surface material
 - Flush grade breaks
 - At rail crossings, level and flush with rails
- Vertical Surface Discontinuities
 - With beveled edge across entire vertical surface discontinuity: 0.5” max.
 - Without beveled edge: 0.25” max.

Surfaces

Allowance intended for sidewalk expansion joints and utilities that cannot be placed outside sidewalks (not curb ramps and blended transitions)

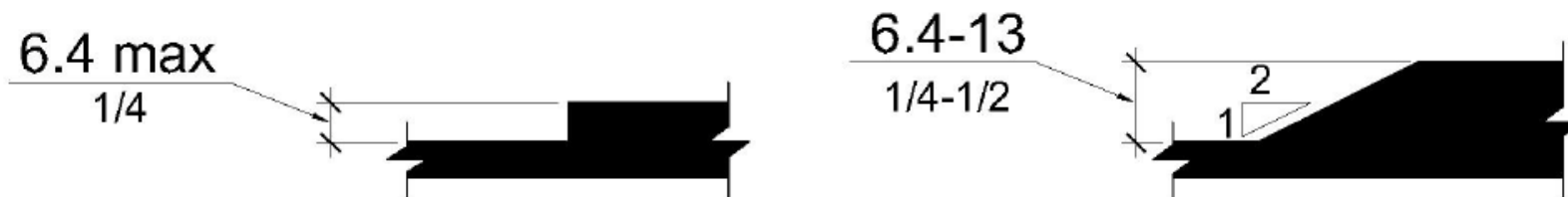


Figure R302.7.2
Vertical Surface Discontinuities

Surfaces

Utility covers and property access covers

- Do not locate in pedestrian access route
- If must be located in pedestrian access route, covers and approaches must be ADA compliant
 - Firm, stable, slip-resistant
 - No vertical elevations greater than $\frac{1}{4}$ "
 - No gaps greater than $\frac{1}{2}$ "

Surfaces



Avoid utility covers in pedestrian street crossings

Surfaces



Avoid utility
covers in curb
ramps

Surfaces: Vertical Discontinuities



Cracking



Sinking



Heaving

Surfaces: Vertical Discontinuities



Non-Flush Curb Ramp
Transition

Surfaces: Vertical Discontinuities



Non-Flush Curb Ramp
Transition

Surfaces: Vertical Discontinuities



Non-Flush Curb Ramp
Transition

Surfaces: Horizontal Openings

- Includes gratings and lateral sidewalk joints
- Shall not permit passage of a sphere 0.5" in diameter
- Elongated openings in gratings must be placed with long dimension perpendicular to dominant direction of travel

Surfaces

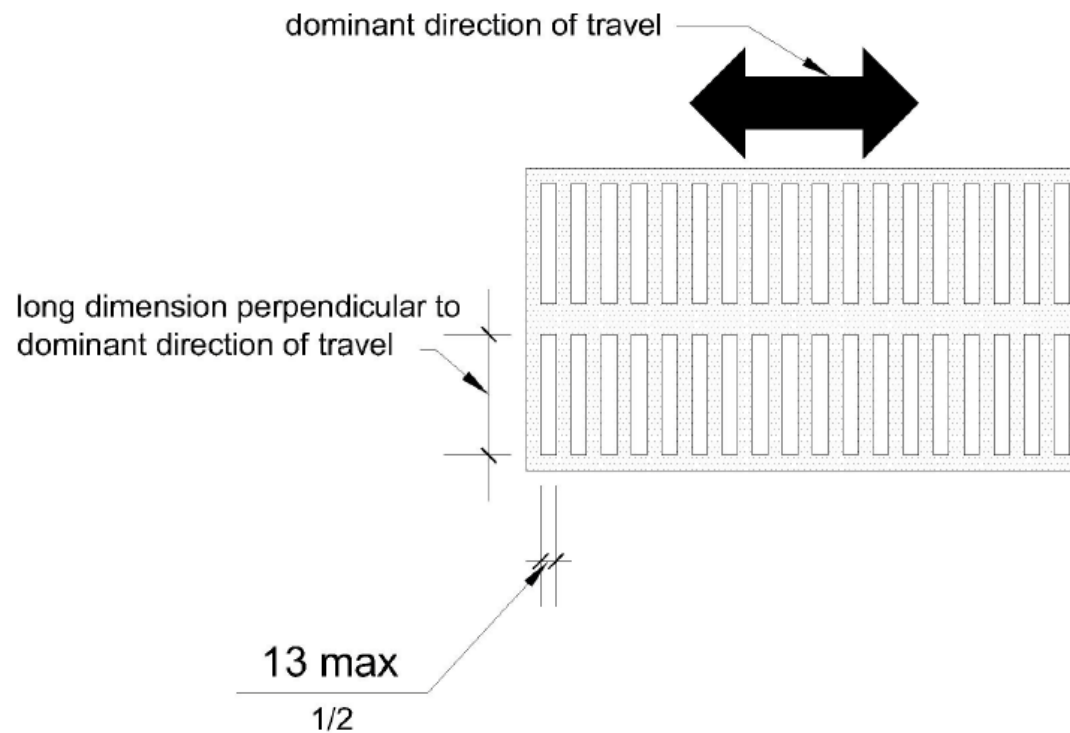


Figure R302.7.3
Horizontal Openings

Accessible Grate in Pedestrian Access Route



Surfaces

Non-Compliant



Source: universaldesignstyle.com



Protruding Objects

Section R402

Kimley»Horn

Defined Terms

- **Pedestrian Circulation Path:** A prepared exterior or interior surface provided for pedestrian travel in the public ROW
- **Pedestrian Access Route:** A continuous unobstructed path of travel provided for pedestrians with disabilities within or coinciding with a pedestrian circulation path

Protruding Objects

- Objects along or overhanging any portion of a ***pedestrian circulation path*** shall not reduce the clear width required for ***pedestrian access routes***
- Requirements for protruding objects apply across the entire width of the ***pedestrian circulation path***, not just the ***pedestrian access route***

Protrusion Limits

“Cane detectable range”

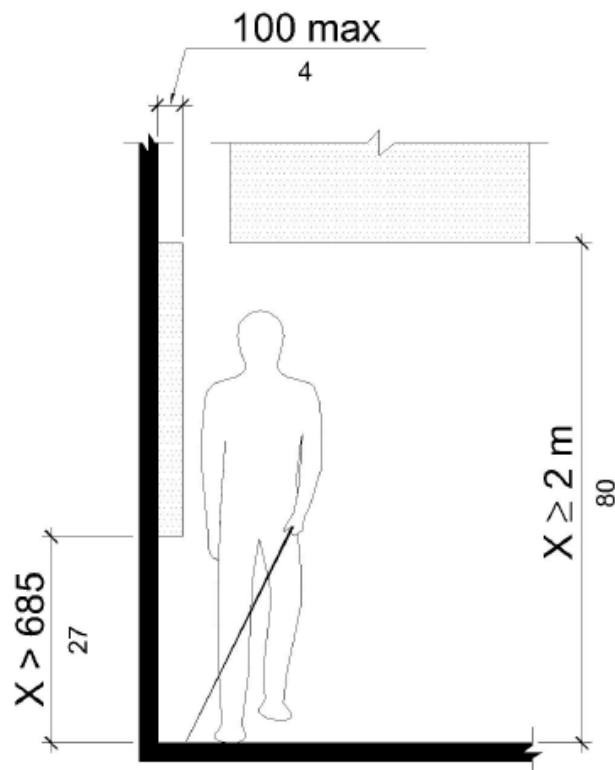


Figure R402.2
Protrusion Limits

Post-Mounted Objects

Mounted on free-standing posts or pylons

- If object height: 27" – 80" above finish surface
- Then horizontal overhang: 4" max. from post or pylon
- If base, base thickness: 2.5" min.
- Regulatory, warning, or guide signs: mount 84" above finish surface

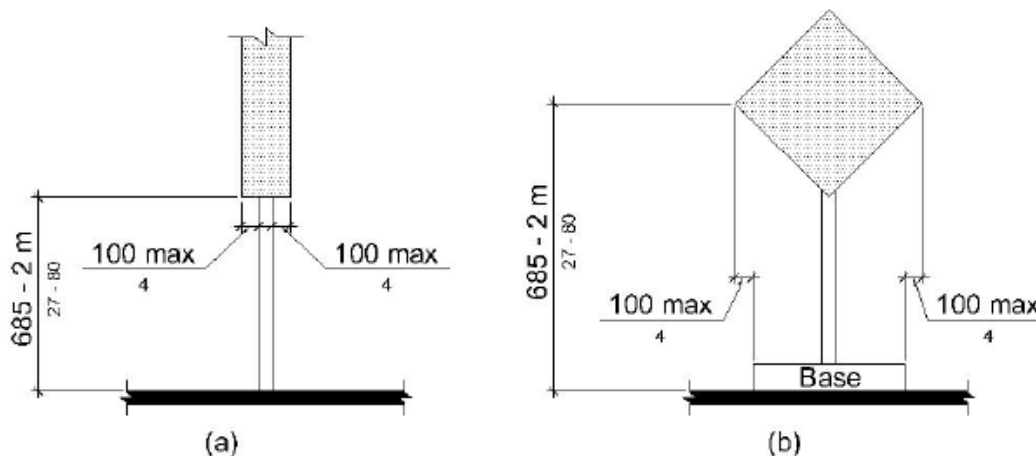
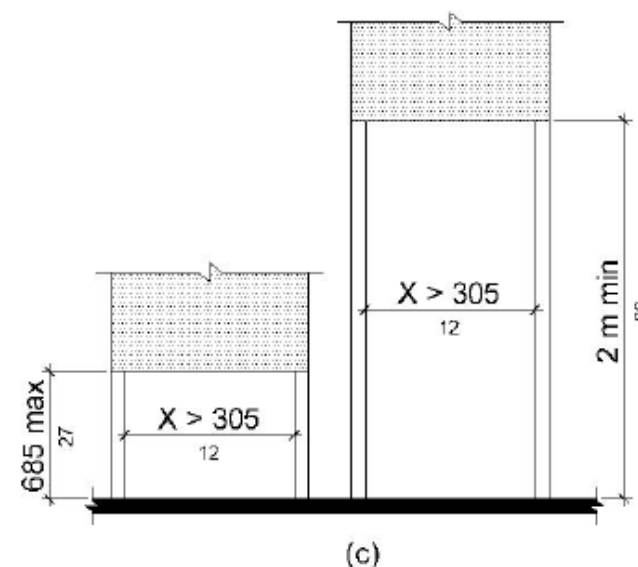


Figure R402.3
Post-Mounted Objects

Post-Mounted Objects

Mounted between posts or pylons and clear distance between posts or pylons is greater than 1.0'

- Allowable Object Heights:
 - 2.25' max. above finish surface
 - 6.7' max. above finish surface



Reduced Vertical Clearance

- Guardrails or other barriers (e.g., planters or benches) to pedestrian travel must be provided when vertical clearance is less than 80" high
- Leading edge of guardrail must be located 27" max. above finish surface

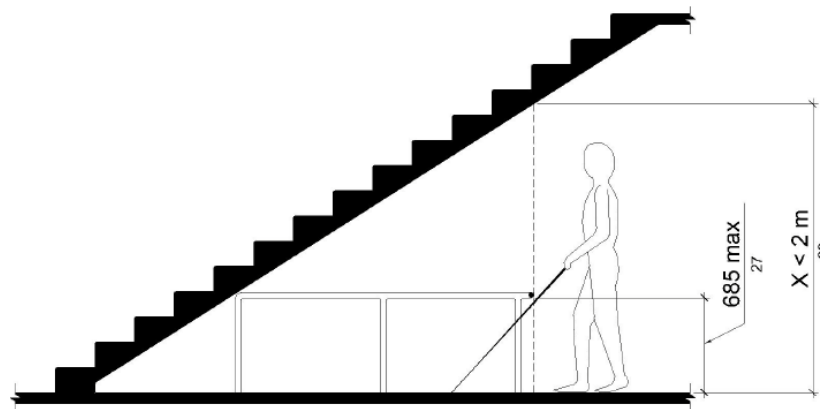
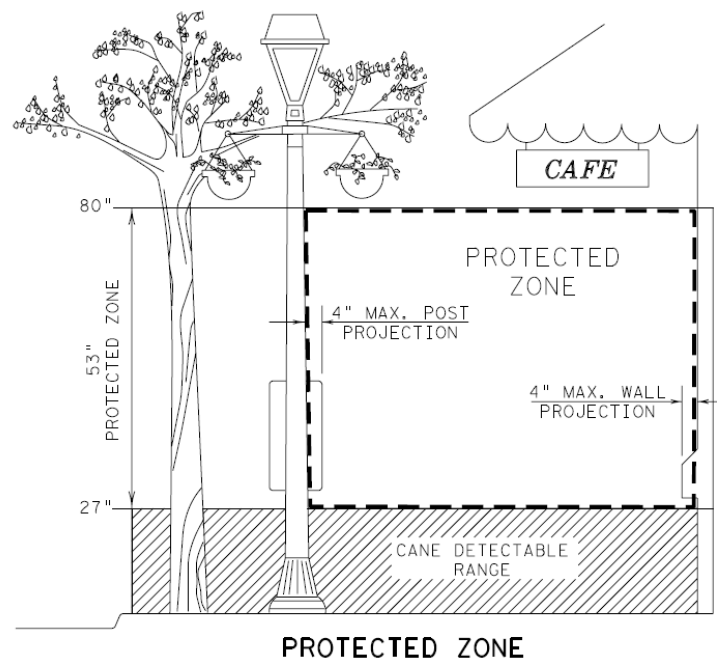


Figure R402.4
Reduced Vertical Clearance

Reduced Vertical Clearance

Temporary obstructions such as low-hanging tree branches must also be considered



PROTECTED ZONE
In pedestrian circulation area, maximum 4" projection for post or wall mounted objects between 27" and 80" above the surface.



Curb Ramps and Blended Transitions

Section R304

Kimley»Horn

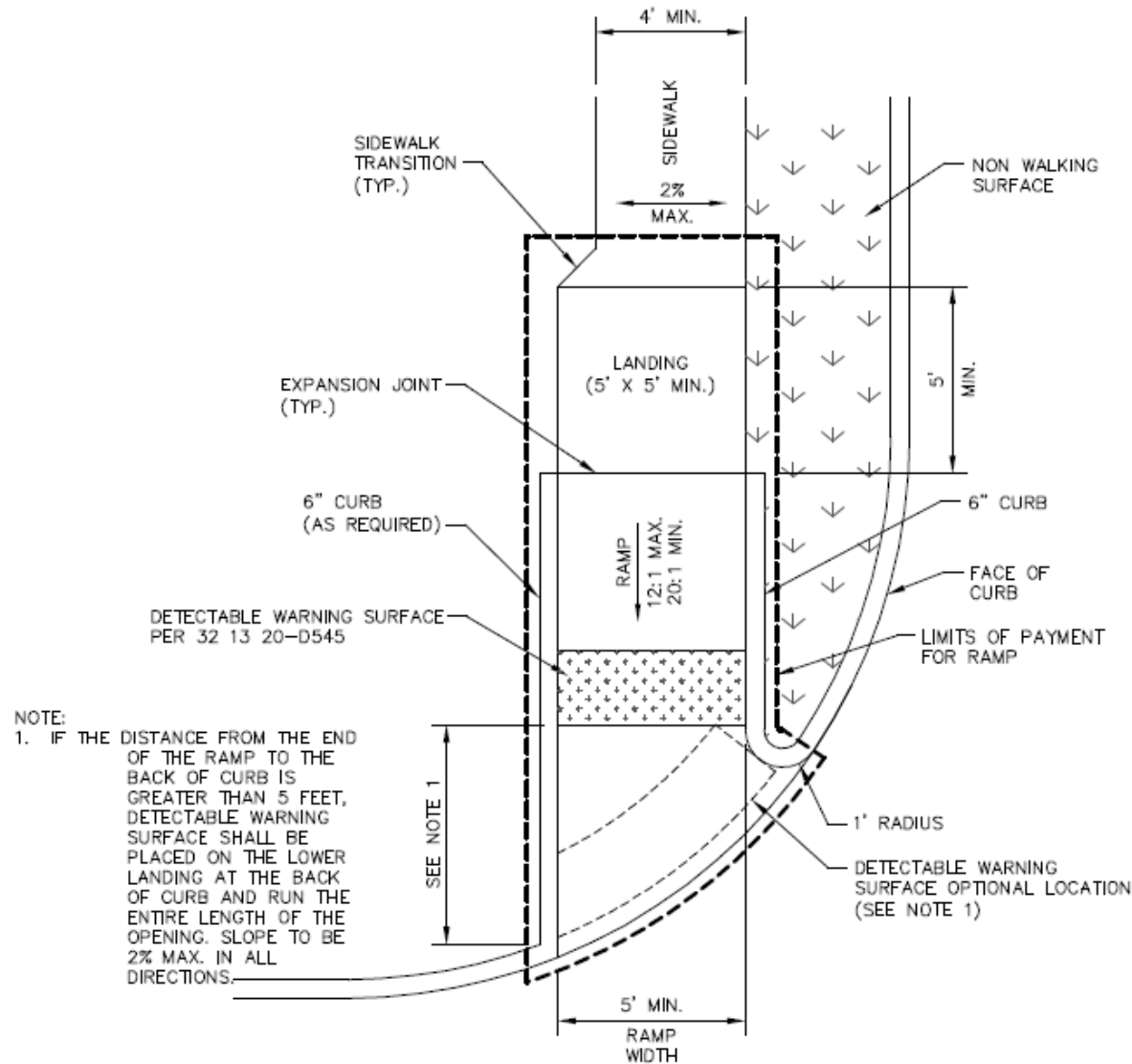
Defined Terms

- **Curb Ramp:** A ramp that cuts through or is built up to the curb. Curb ramps can be perpendicular or parallel, or a combination of parallel and perpendicular ramps. A short ramp cutting through a curb or built up to it.
 - Perpendicular
 - Parallel
 - Combination

Defined Terms

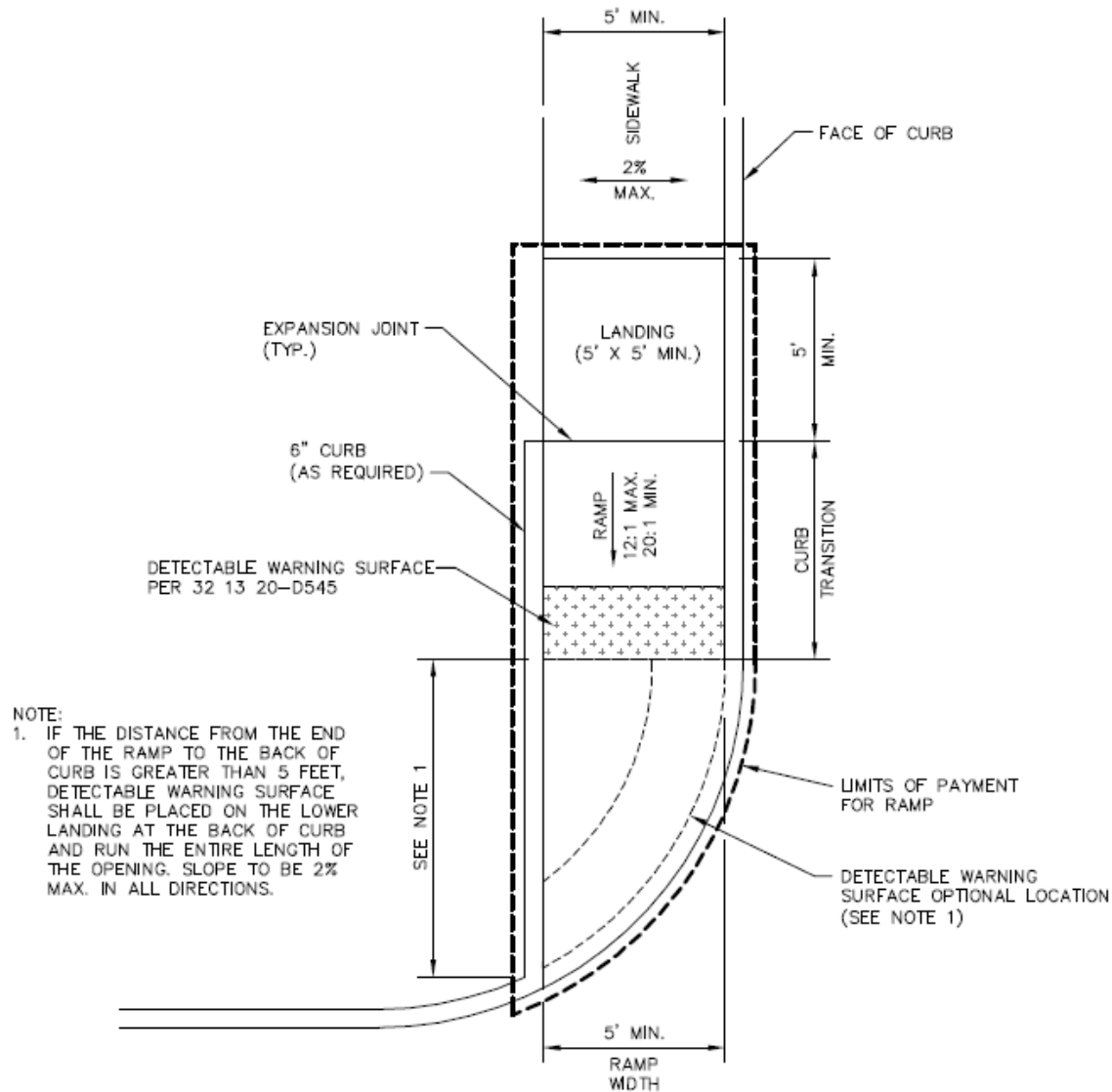
- **Blended Transition:** A raised pedestrian street crossing, depressed corner, or similar connection between the pedestrian access route at the level of the sidewalk and the level of the pedestrian street crossing that has a grade of 5% or less.

Perpendicular Curb Ramp – Type P-1

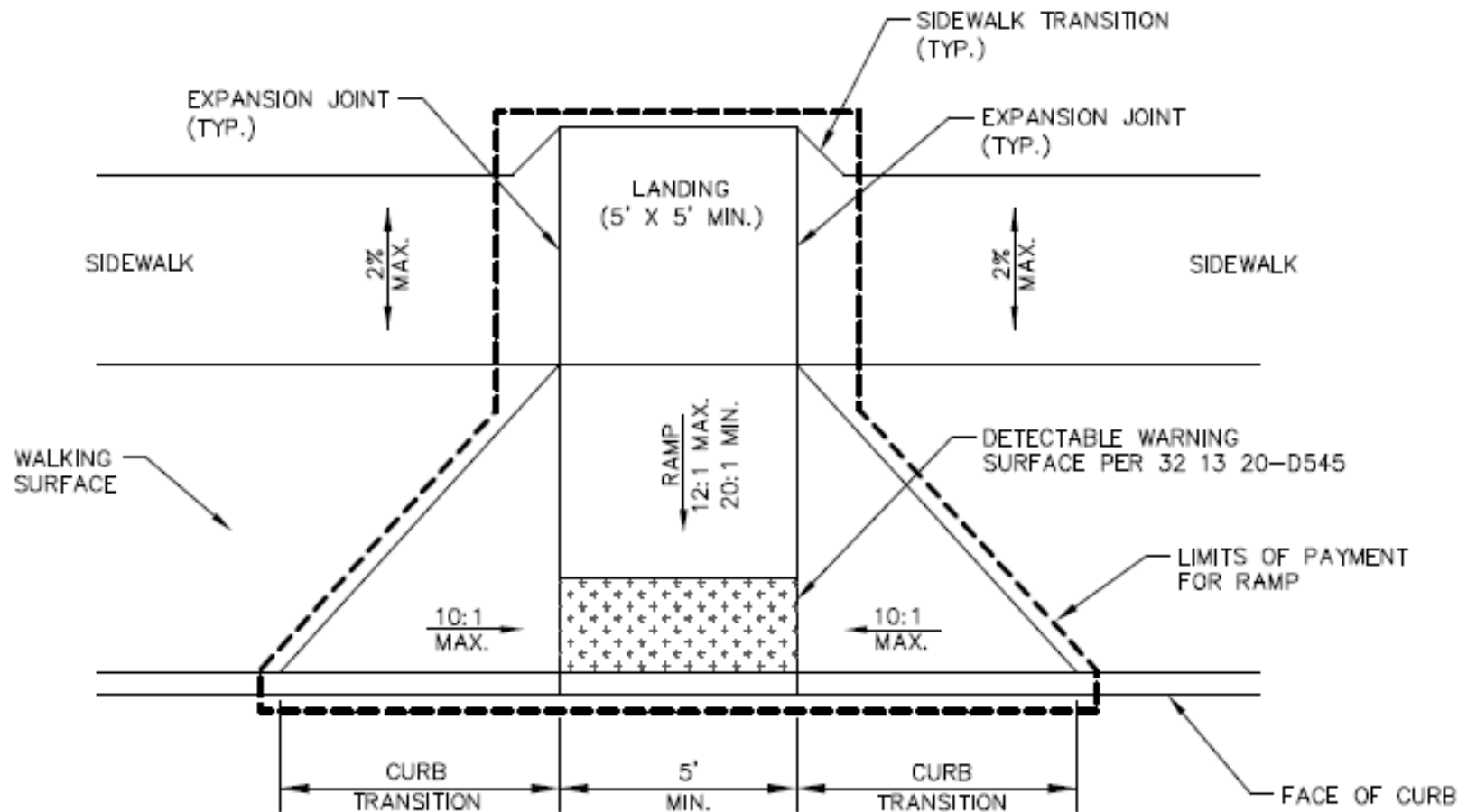


NOTE:
1. IF THE DISTANCE FROM THE END OF THE RAMP TO THE BACK OF CURB IS GREATER THAN 5 FEET, DETECTABLE WARNING SURFACE SHALL BE PLACED ON THE LOWER LANDING AT THE BACK OF CURB AND RUN THE ENTIRE LENGTH OF THE OPENING. SLOPE TO BE 2% MAX. IN ALL DIRECTIONS.

Perpendicular Curb Ramp – Type P-2

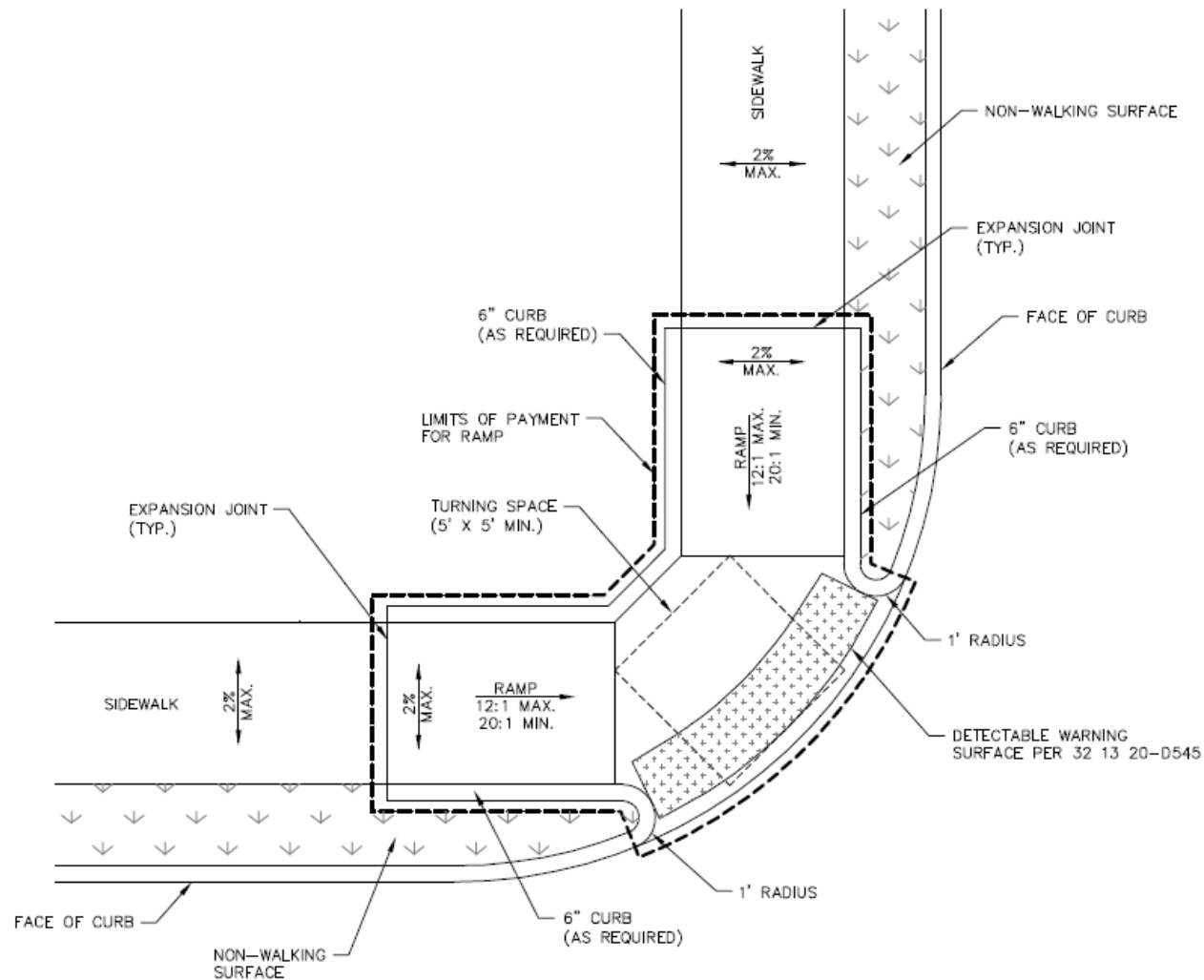


Perpendicular Curb Ramp - Type M-1



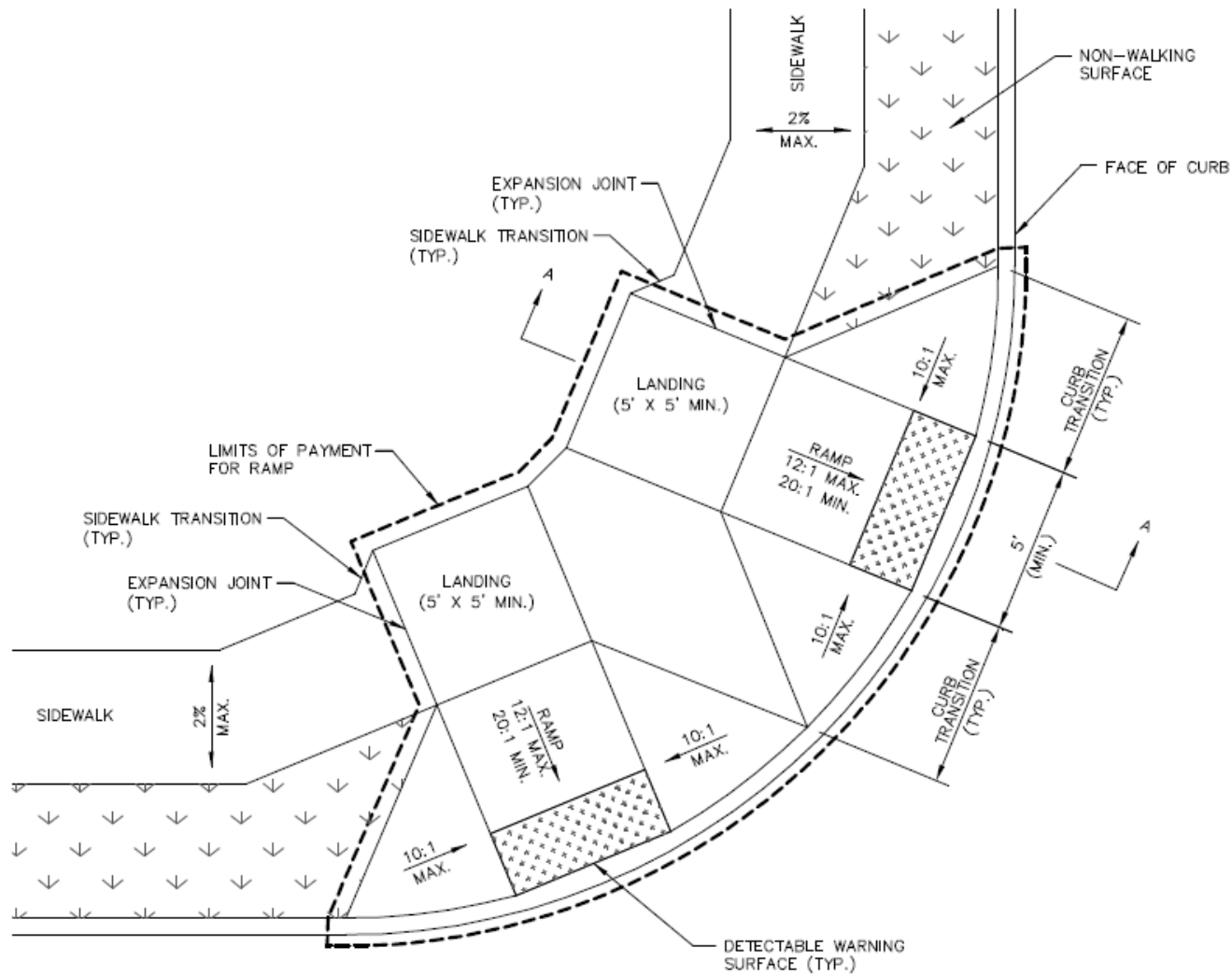
Perpendicular Curb Ramps – CoFW D535

Residential Intersection (Type R-1)



Perpendicular Curb Ramps – Urban Arterial Intersection (Type U-1)

CoFW D536



Perpendicular Curb Ramps

- Turning Space (Landing)
 - Located at top of curb ramp
 - May overlap other turning spaces and clear spaces

Condition	Turn Space Size
Unconstrained by back of sidewalk	4.0' x 4.0' min.
Constrained by back of sidewalk	<ul style="list-style-type: none">• 4.0' x 5.0' min.• 5.0' dimension provided in direction of ramp run
Shared Use Paths	4.0' x 4.0' min.

Perpendicular Curb Ramps

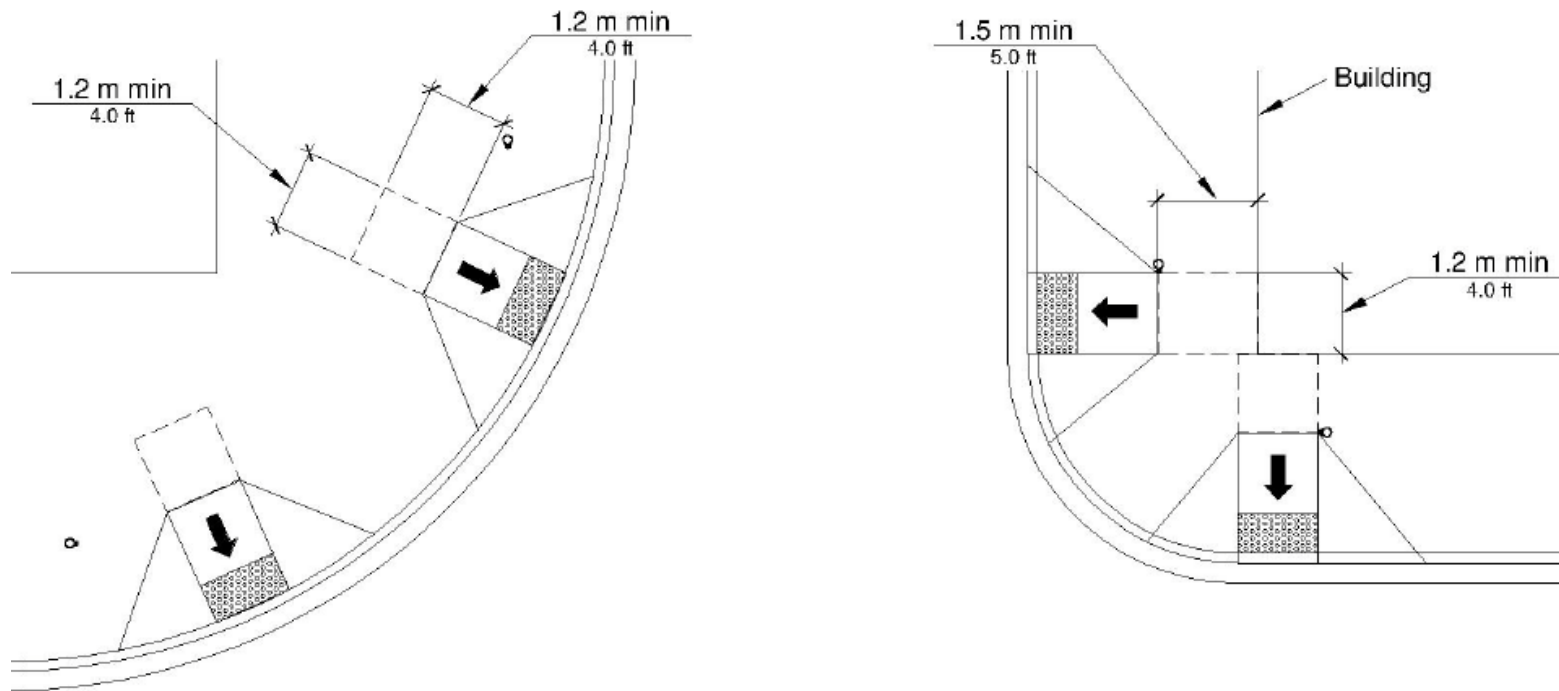
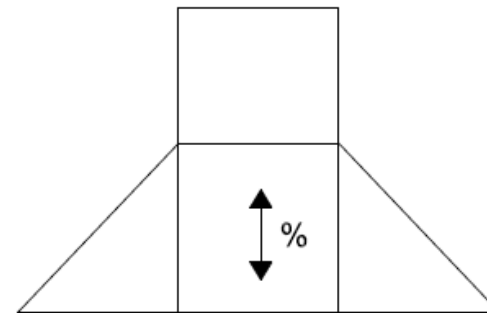


Figure R304.2.1
Turning Space

Perpendicular Curb Ramps – Running Slope

- Curb Ramps
 - Cut through, built up to curb at right angles, or meets gutter grade breaks at right angles where curb is curved
 - Min: 5% (for ramp length considerations)
 - Max: 8.3%
 - Ramp Length Max: 15.0'
- Turning Spaces
 - Max: 2%



Perpendicular Curb Ramps



Non-compliant:
Sides not 90°



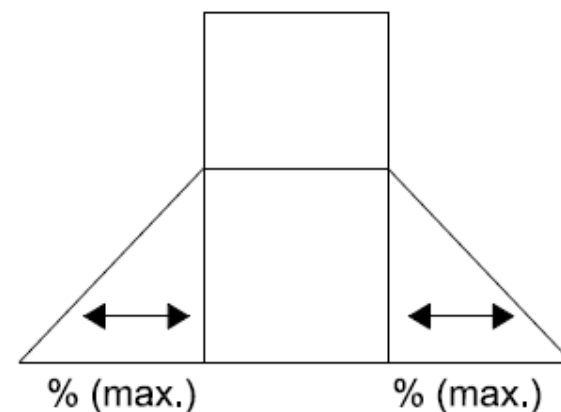
Perpendicular Curb Ramps



Compliant:
Sides 90°

Perpendicular Curb Ramps

- Flared Sides
 - Required where pedestrian circulation path crossed curb ramp
 - Flared sides not allowed where curb ramp is adjacent to a non-walking surface
 - Max. slope: 10%
 - Measured parallel to curb line



Perpendicular Curb Ramps

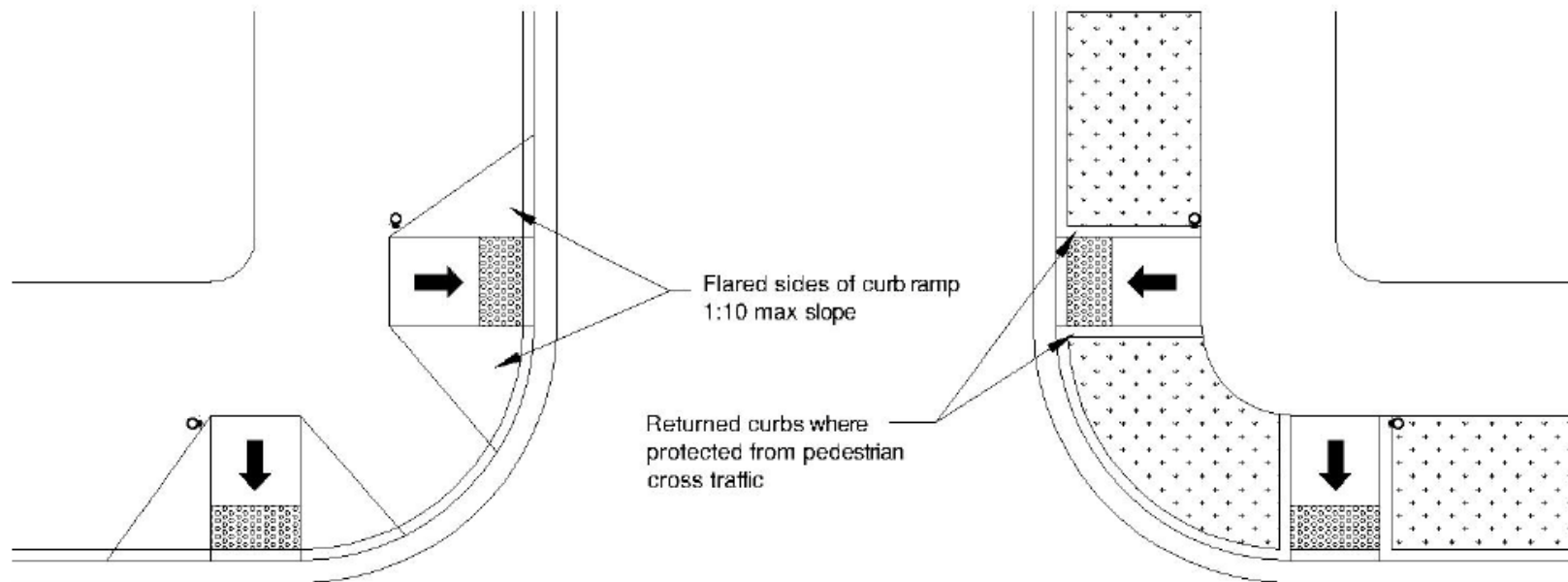
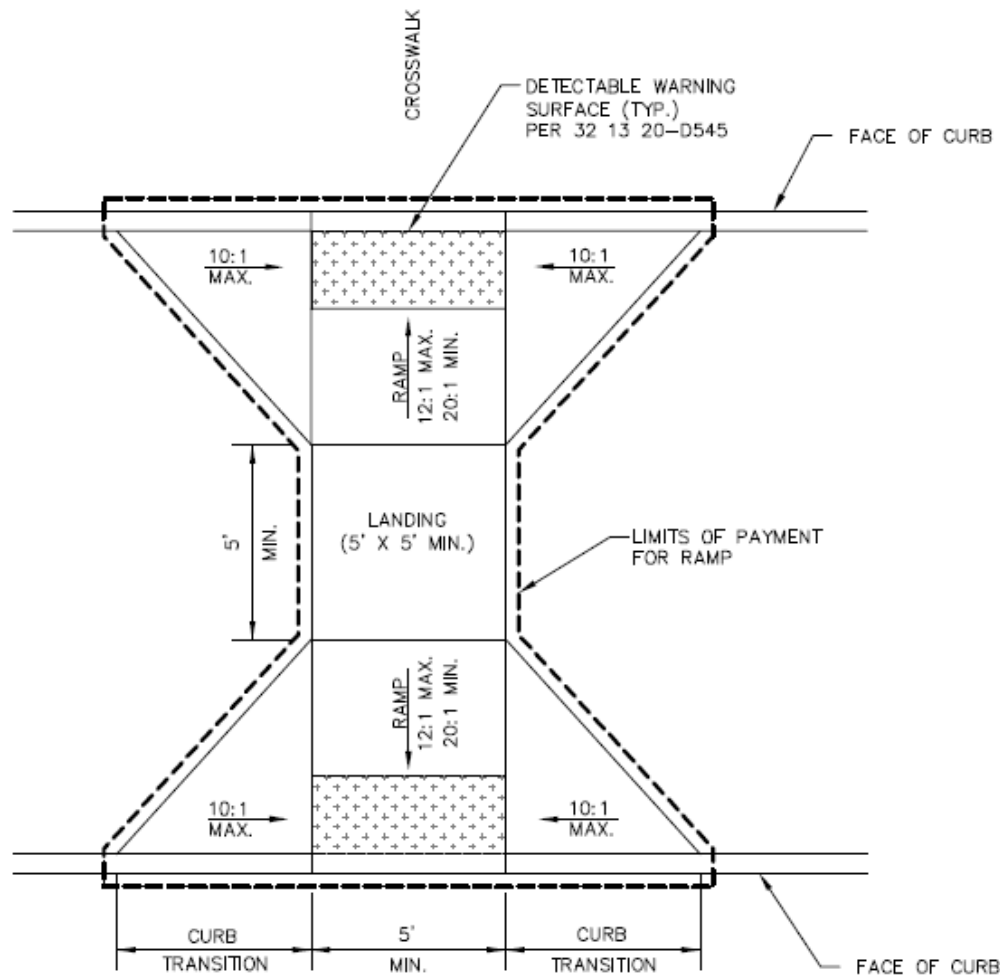
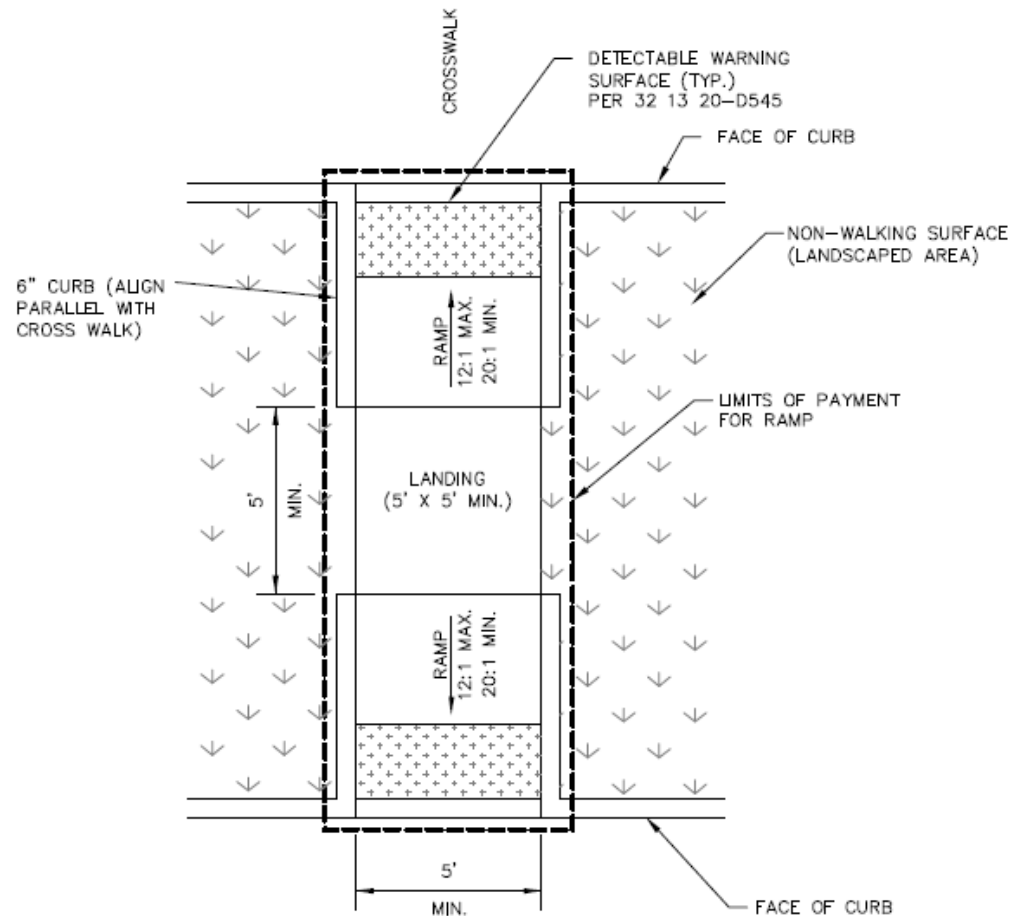


Figure R304.2.3
Flared Sides

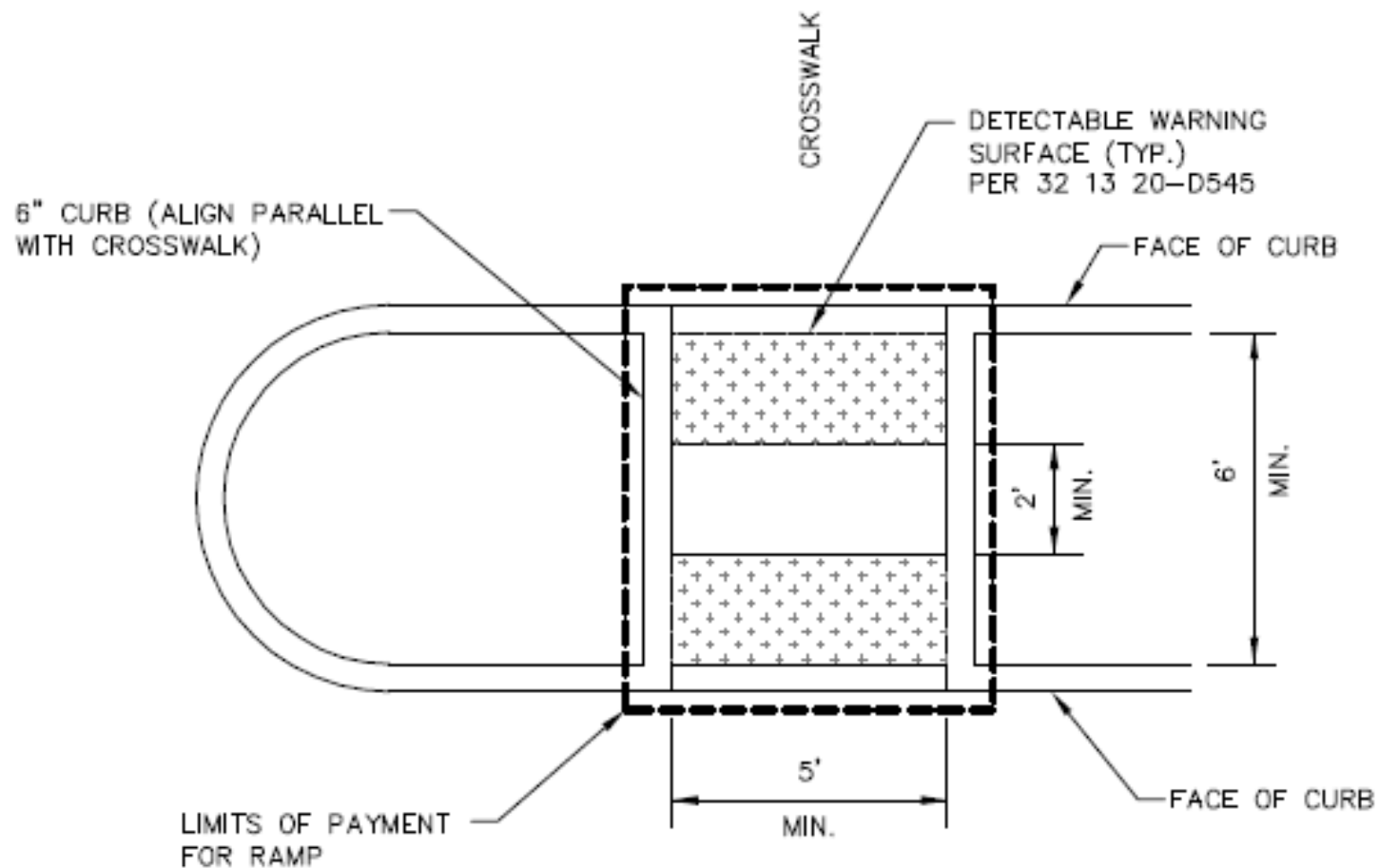
Perpendicular Curb Ramps – Median or Island (Type C-1)



Perpendicular Curb Ramps – Median or Island (Type C-2)



Perpendicular Curb Ramps - Median Cut-Thru Ramp (Type C-3)

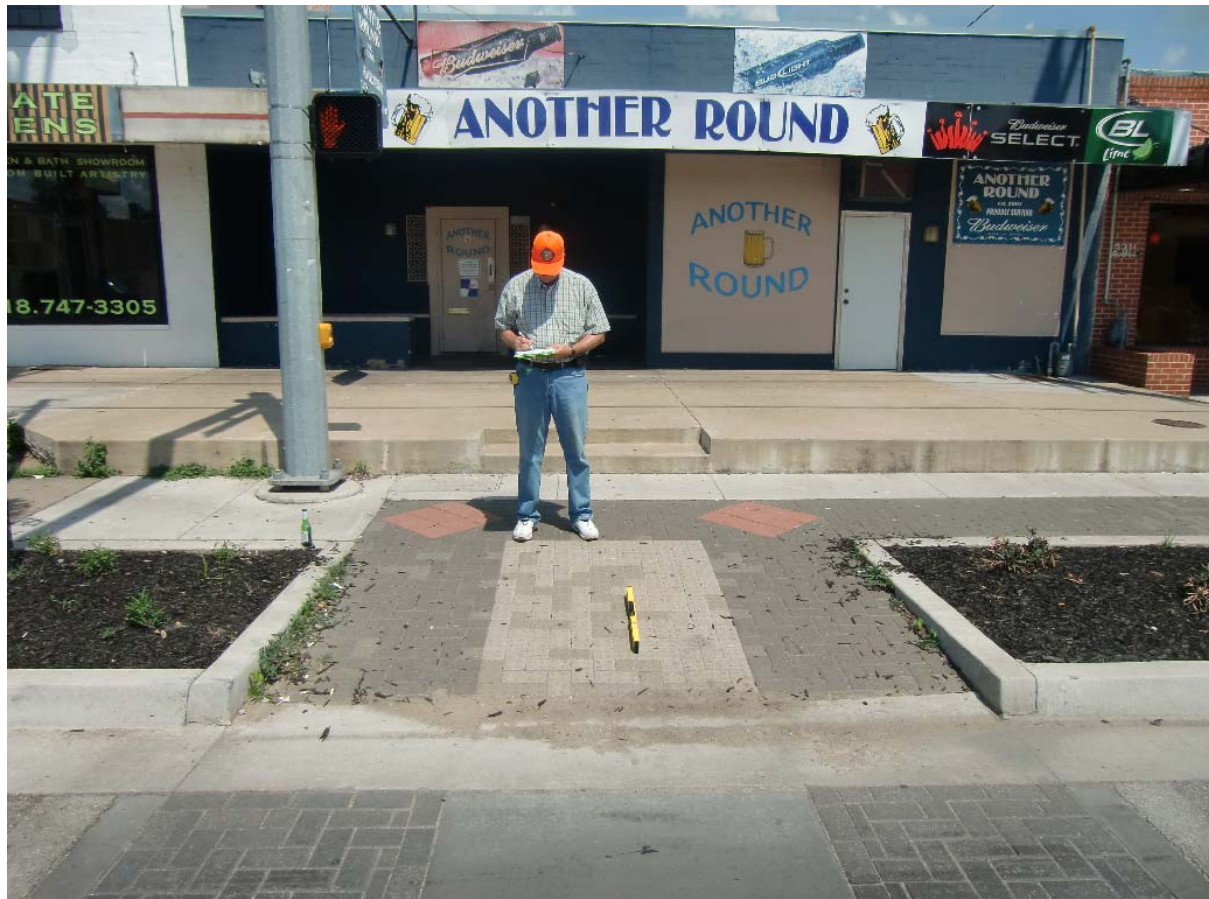


Perpendicular Curb Ramps



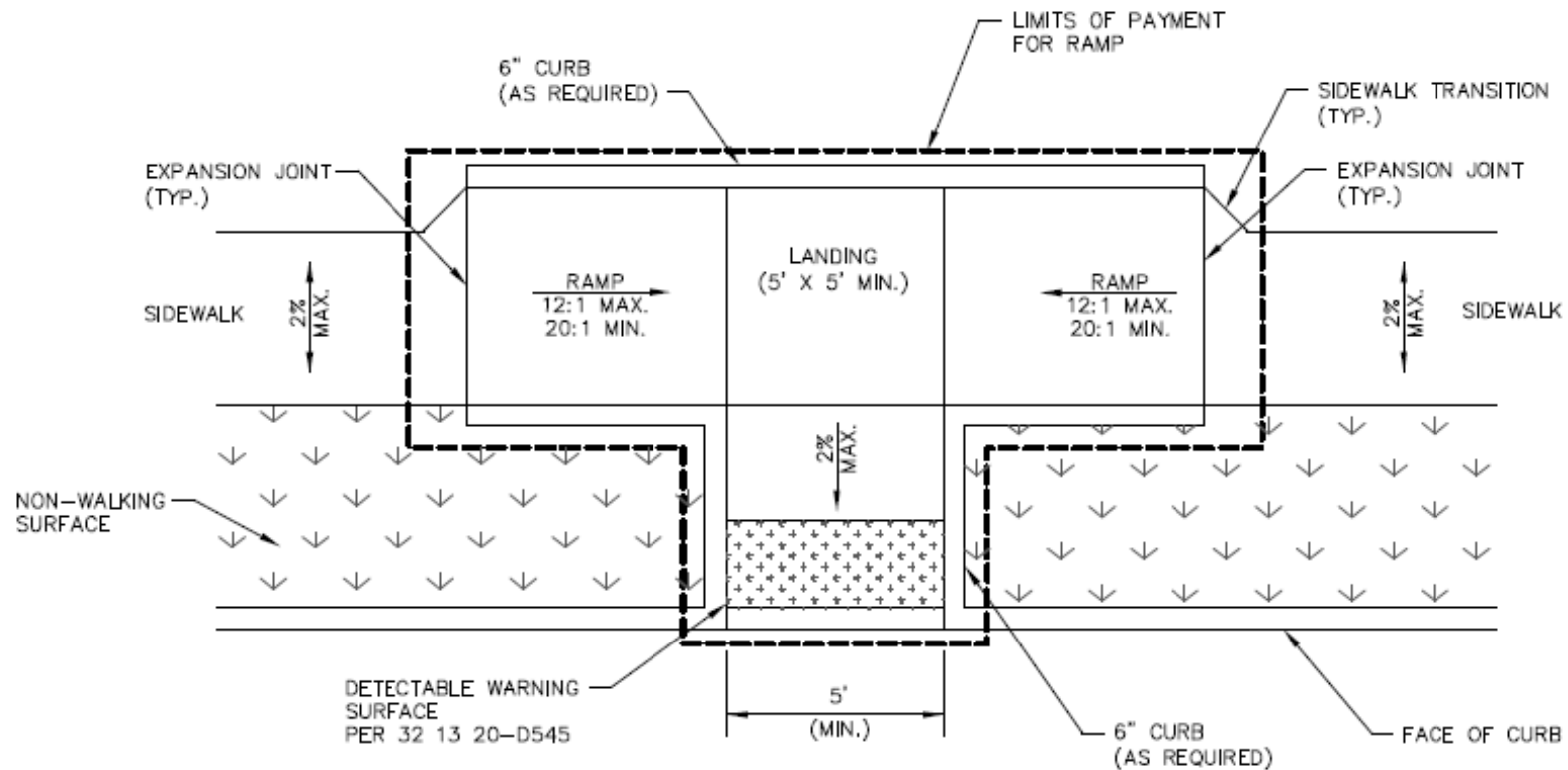
NON-COMPLIANT
(traversable adjacent
surface)

Perpendicular Curb Ramps

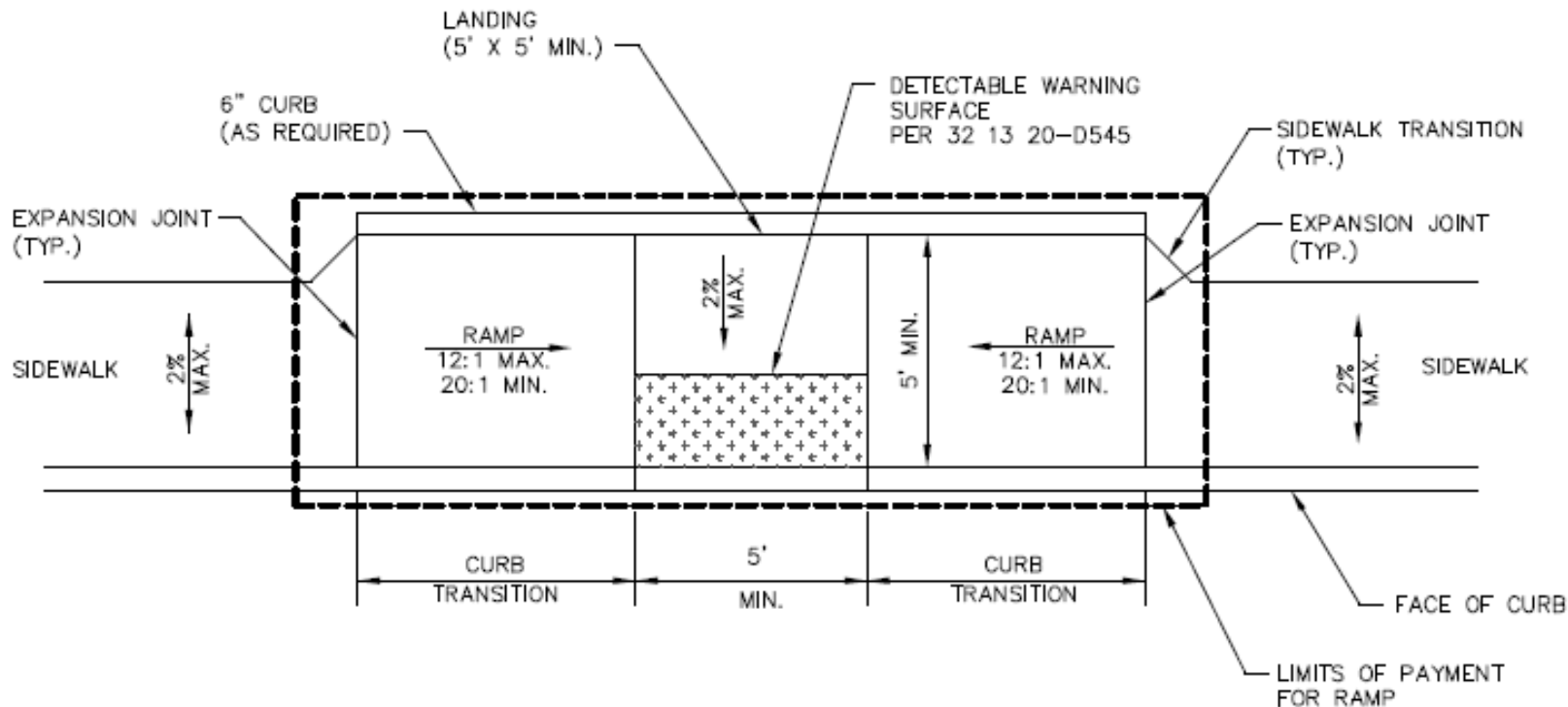


COMPLIANT
(protected with landscaping;
non-traversable)

Parallel Curb Ramp - Type M-2



Parallel Curb Ramp - Type M-3



Parallel Curb Ramps

Turning Space (Landing)

- Located at bottom of curb ramp
- May overlap other turning spaces and clear spaces

Condition	Turning Space Size
Unconstrained on 2 or more sides	4.0' x 4.0' min.
Constrained on 2 or more sides	<ul style="list-style-type: none">• 4.0' x 5.0' min.• 5.0' dimension provided in direction of pedestrian street crossing
Shared Use Paths	4.0' x 4.0' min.

Parallel Curb Ramps

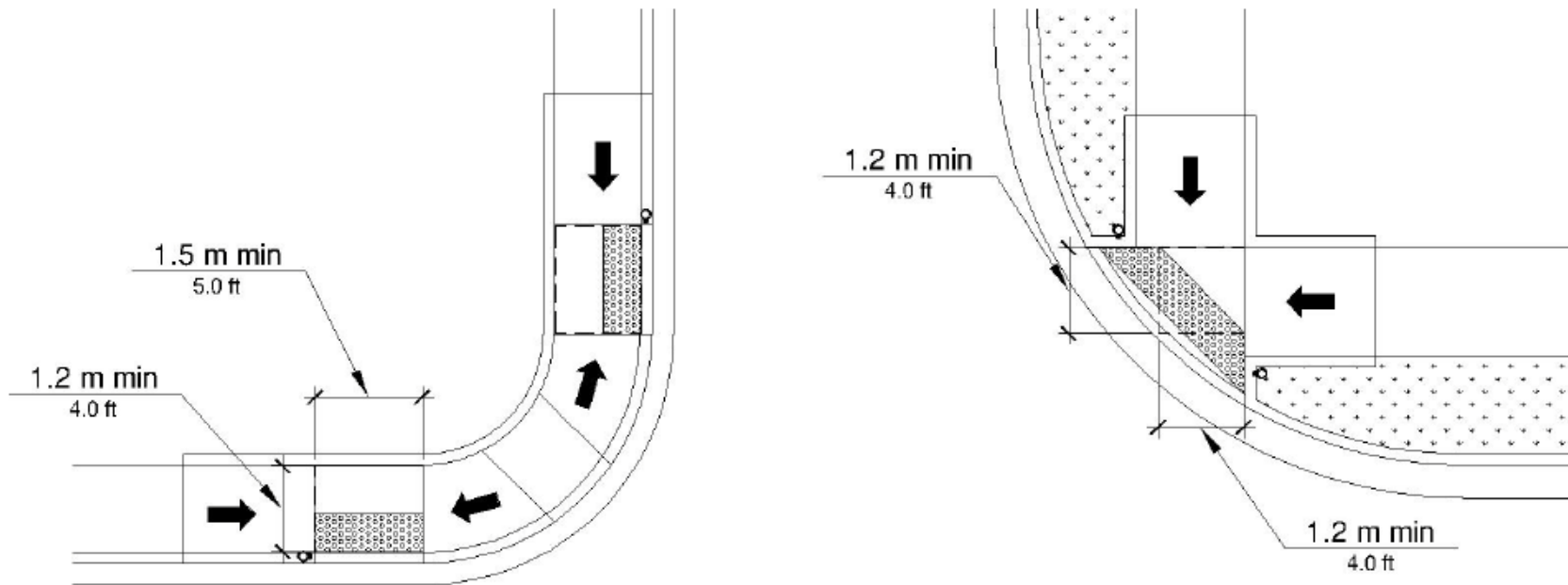


Figure R304.3.1
Turning Space

Parallel Curb Ramps – Running Slope

- Curb Ramps
 - In-line with direction of sidewalk travel
 - Min: 5%
 - Max: 8.3%
 - Ramp Length Max: 15.0'
- Turning Spaces
 - Max: 2%



Blended Transitions

- Treatment type for entire curb radius
- Running Slope: 5% max.

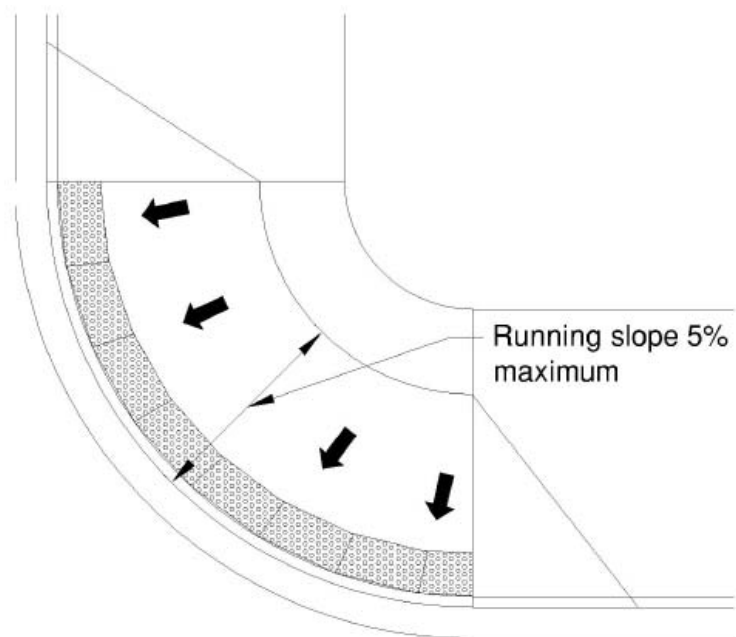


Figure R304.4.1
Running Slope

Common Requirements – Width

- Sidewalk
 - 4.0' min.
 - Excludes any flared sides
- Shared Use Path
 - At least as wide as path width
 - Excludes any flared sides

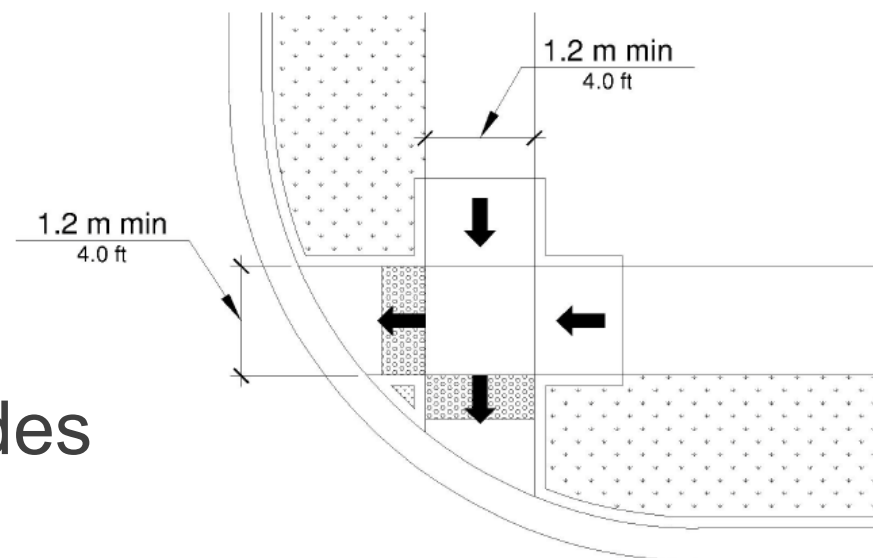


Figure R304.5.1
Width

Common Requirements – Grade Breaks

- Must be perpendicular to direction of ramp run at top and bottom of curb ramps
- Not permitted on surface of ramp runs and turning spaces
- Surface slope that meet at grade breaks must be flush

Common Requirements – Grade Breaks

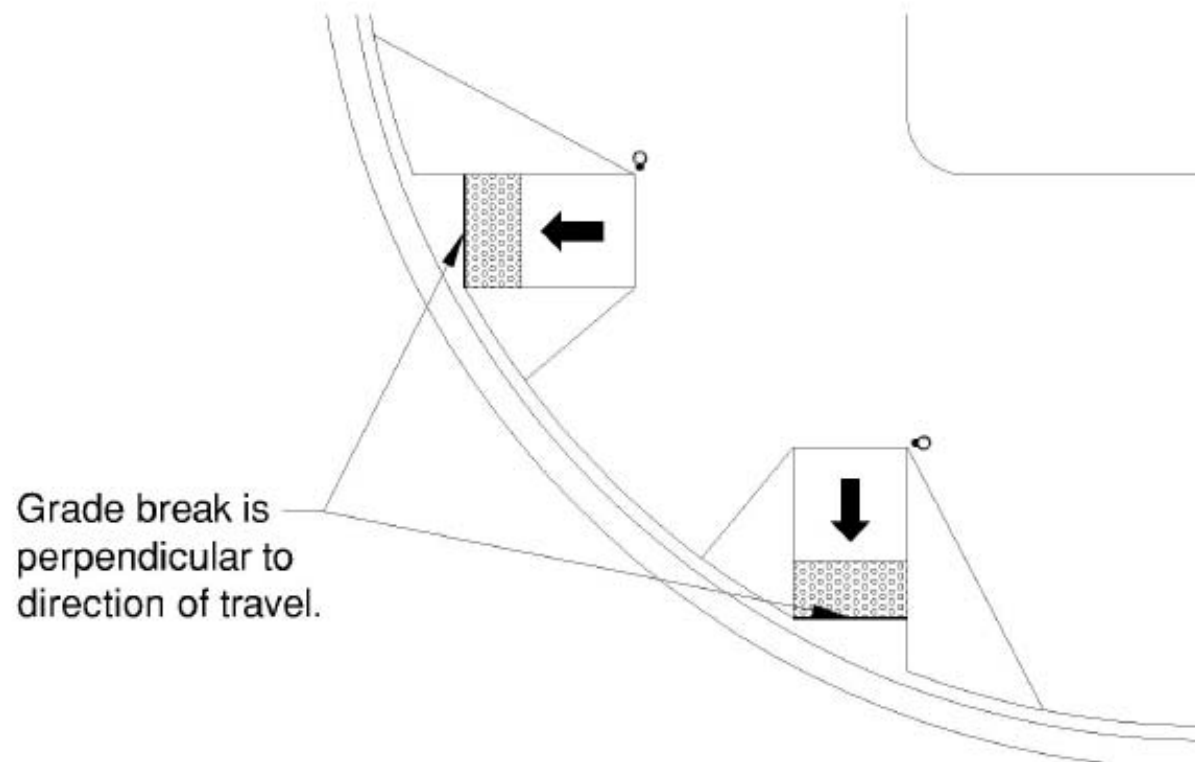
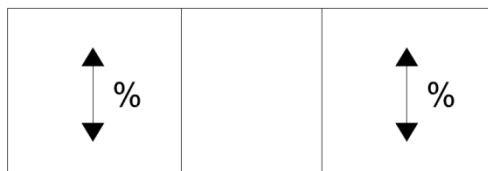


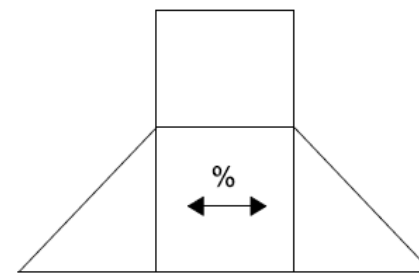
Figure R304.5.2
Grade Breaks

Common Requirements – Cross Slope

- Measured perpendicular to the pedestrian path of travel
- 2% max.



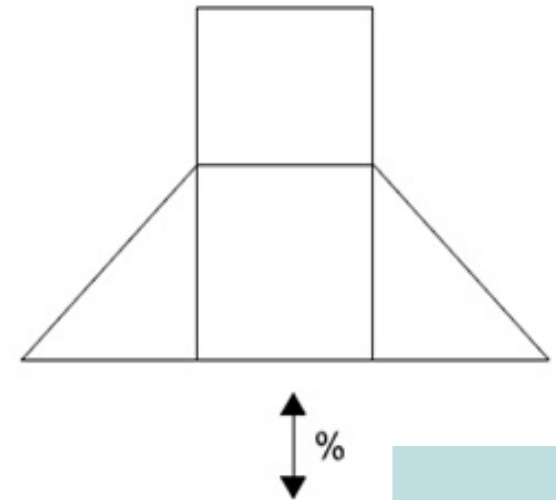
Parallel Curb Ramp



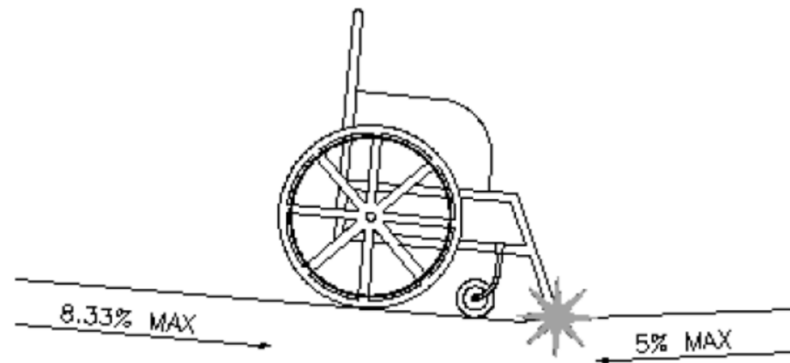
Perpendicular
Curb Ramp

Common Requirements – Counter Slope

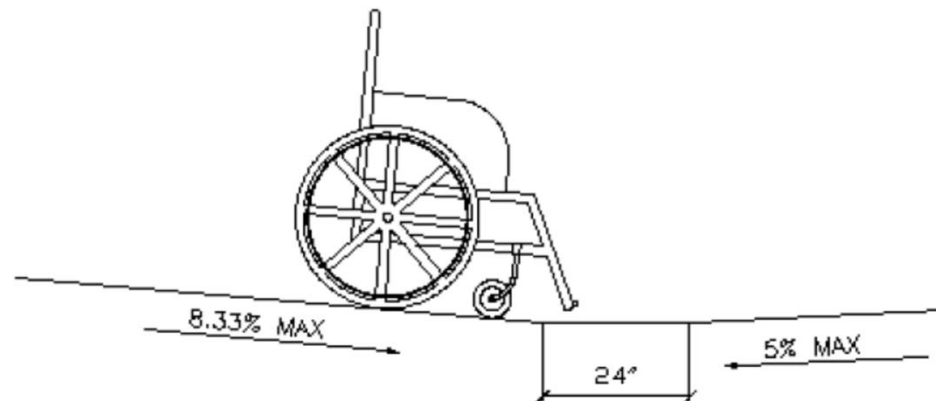
- Measured in gutter or street at foot of curb ramp runs, blended transitions, and turning spaces
- PROWAG: 5% max.
- **US Access Board Guidance:**
 $G = g2 - g1 = 11\%$ max.
 - $g1$: curb ramp running slope
 - $g2$: crosswalk slope



Common Requirements – Counter Slope



ALGEBRAIC DIFFERENCE
GREATER THAN 11% NOT
PERMITTED



PROVIDE 24" LEVEL STRIP IF
ALGEBRAIC DIFFERENCE
EXCEEDS 11%

Common Requirements – Clear Space

- Measure beyond the bottom grade break
- 4.0' x 4.0' min.
- Within the width of pedestrian street crossing
- Wholly outside the parallel vehicle travel lane

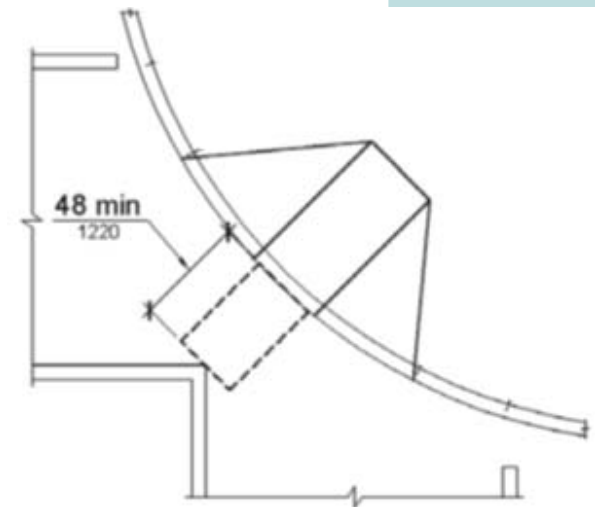


Figure 406.6
Diagonal or Corner Type Curb Ramps

Common Requirements – Clear Space

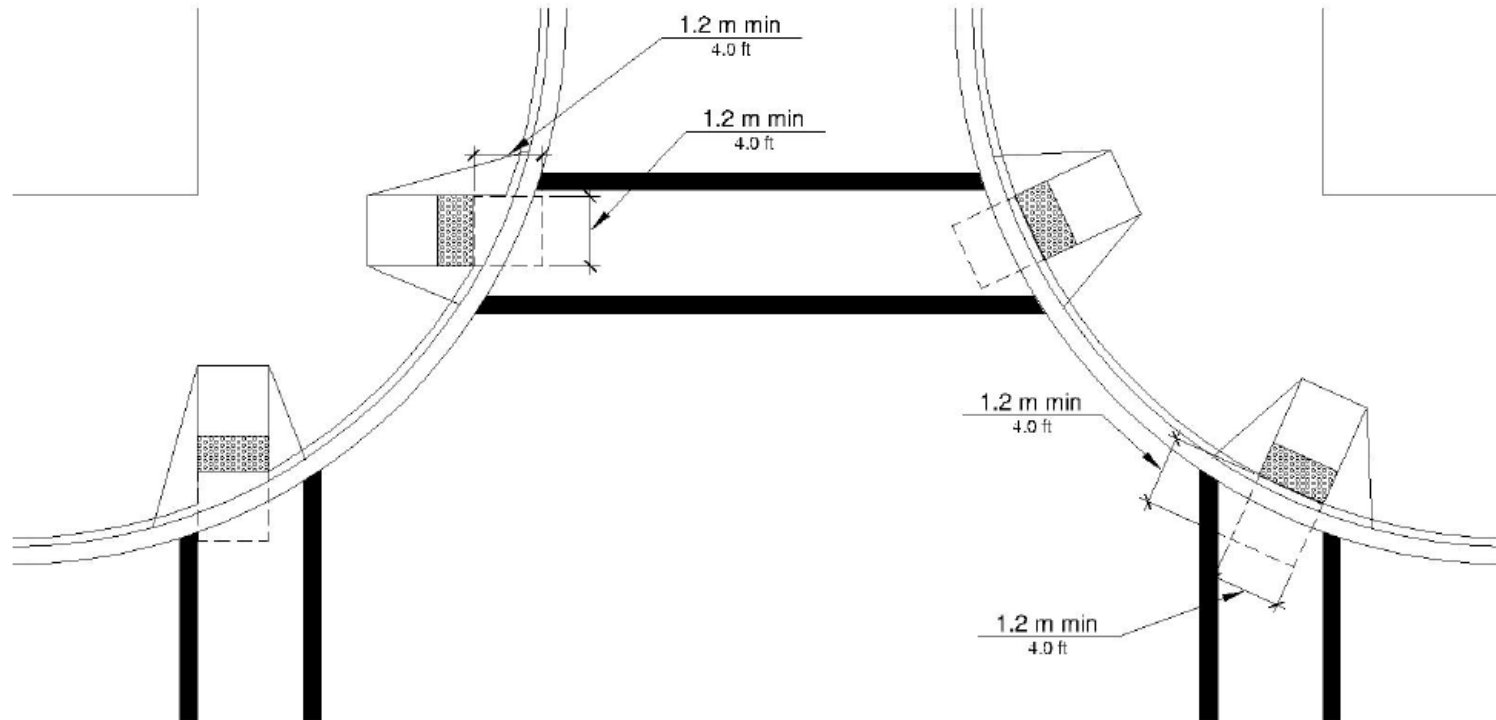


Figure R304.5.5
Clear Space



Detectable Warning Surfaces

Section R208.1/Section
R305

Kimley»Horn

Where Required

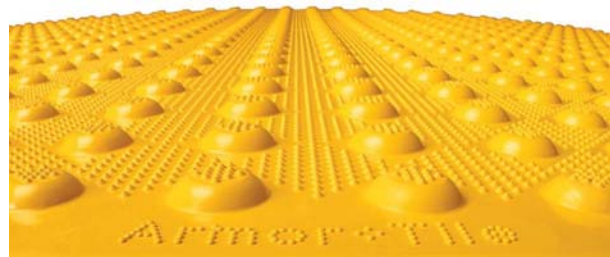
- Curb ramps and blended transitions at street crossings
- Pedestrian refuge islands $\geq 6'$ in length
- Pedestrian at-grade rail crossings not located within street or highway
- Boarding and alighting areas at sidewalk or street level transit stops for rail vehicles where the side of the boarding and alighting areas facing the rail vehicles is not protected by screens or rails
- Commercial driveways with yield or stop control

Where Not Required

- Residential driveways
- Commercial driveways without yield or stop control (NOTE: driver handbook implies stop or yield control, even if not posted)
- Refuge islands that are cut-through at street level and less than 6.0' in length in direction of pedestrian travel

General - Contrast

- Must contrast visually with adjacent gutter, street or highway, or pedestrian access route surface
- Either light-on-dark or dark-on-light



Source: armor-tile.com

General - Contrast



Non-compliant
(No contrast)

General - Size

- Length: 2.0' min. in direction of pedestrian travel
- Width:

Location	Installation width
Perpendicular Curb Ramps	Full width of ramp run (excluding flares)
Parallel Curb Ramps	Full width of turning space
Blended Transitions	Full width of blended transition
At-grade Rail Crossings	Full width of crossing

General - Size

- NOT needed on entire ramp run
- Avoid using brick pavers – the dimensions will become non-compliant over time



Source: armor-tile.com



General - Size

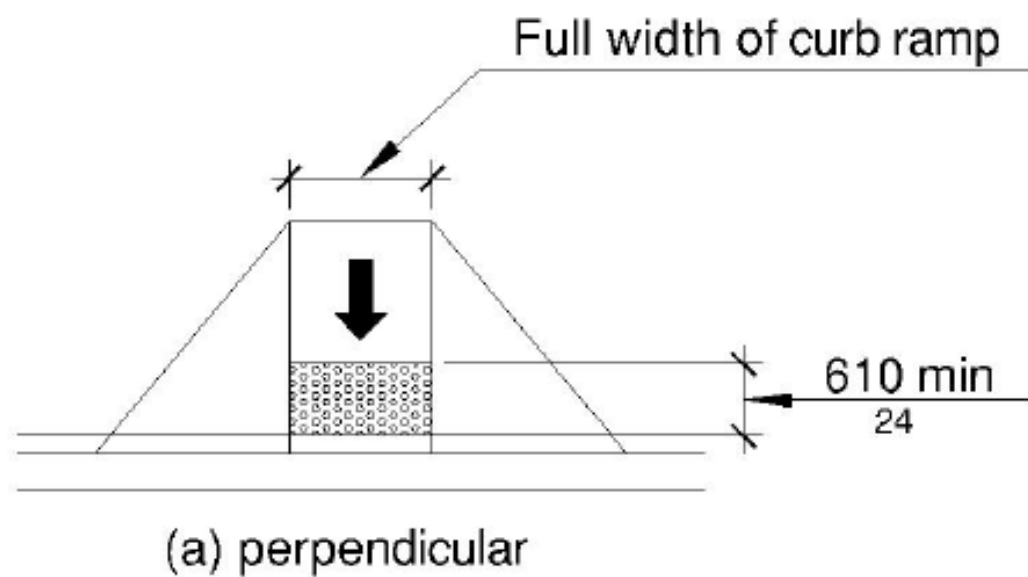


Figure R305.1.4
Size

General - Size

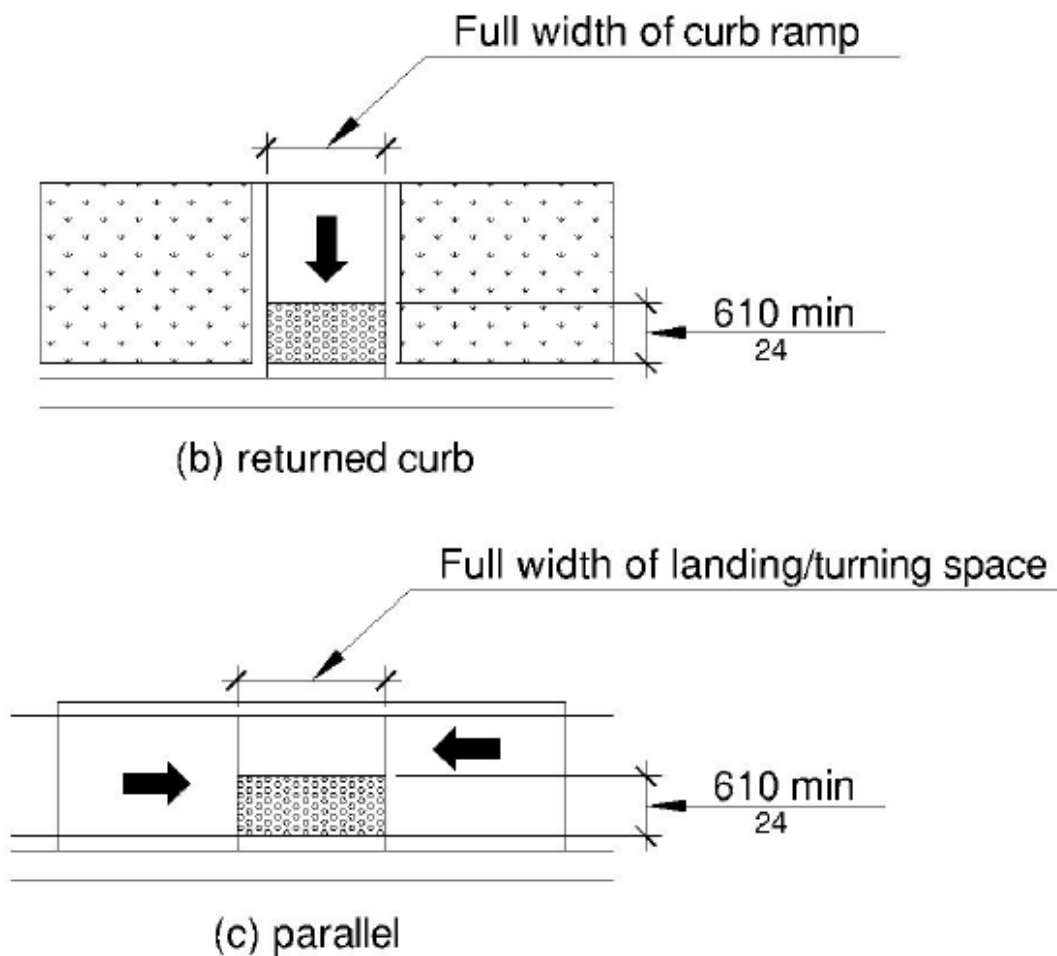


Figure R305.1.4
Size

Placement – Perpendicular Curb Ramps

Grade Break Location	Warning Surface Placement
Where ends of bottom grade break are in front of back of curb	At back of curb
Where ends of bottom grade break are behind back of curb and distance from either end of bottom grade break to back of curb is 5.0' or less	On ramp run within one dome spacing of bottom grade break
Where ends of bottom grade break to back of curb is more than 5.0'	On lower landing at back of curb

Placement - Perpendicular Curb Ramps

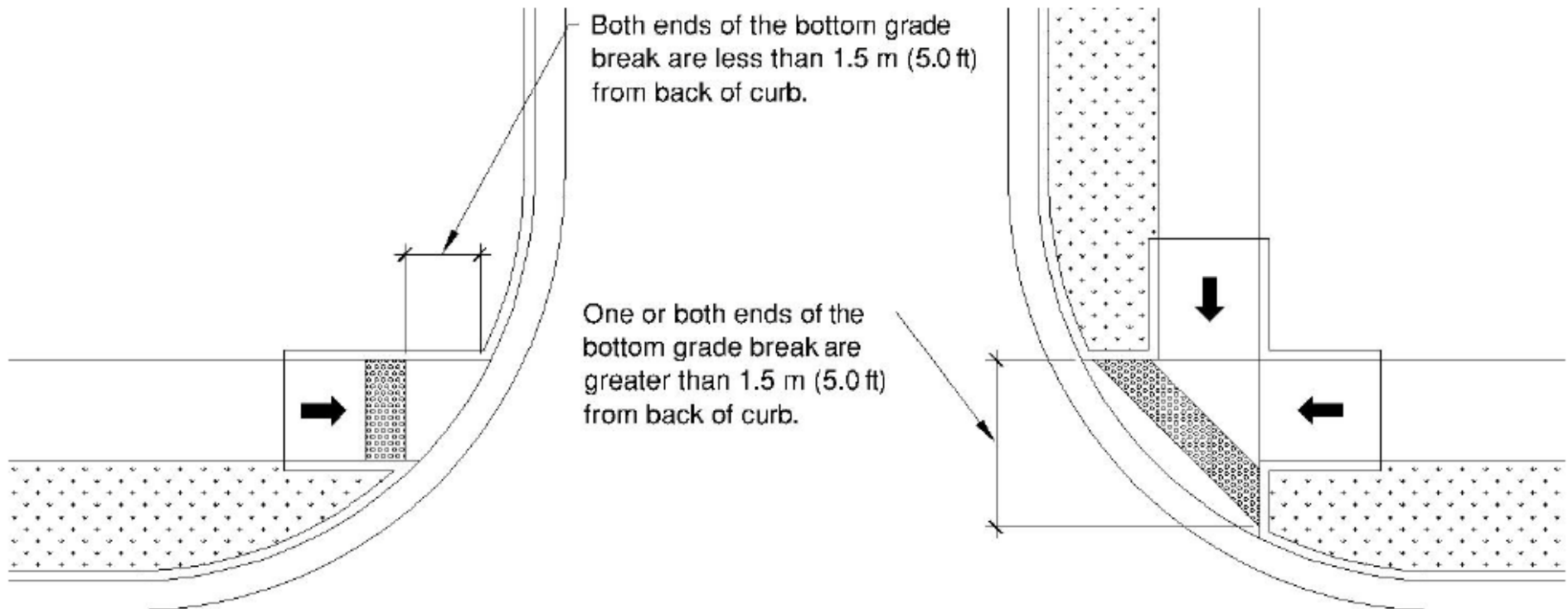


Figure R305.2.1
Perpendicular Curb Ramps

Placement – Blended Transitions

- Need domes along entire length of removed curb
- **INCORRECT:**



Placement - Pedestrian Refuge Islands

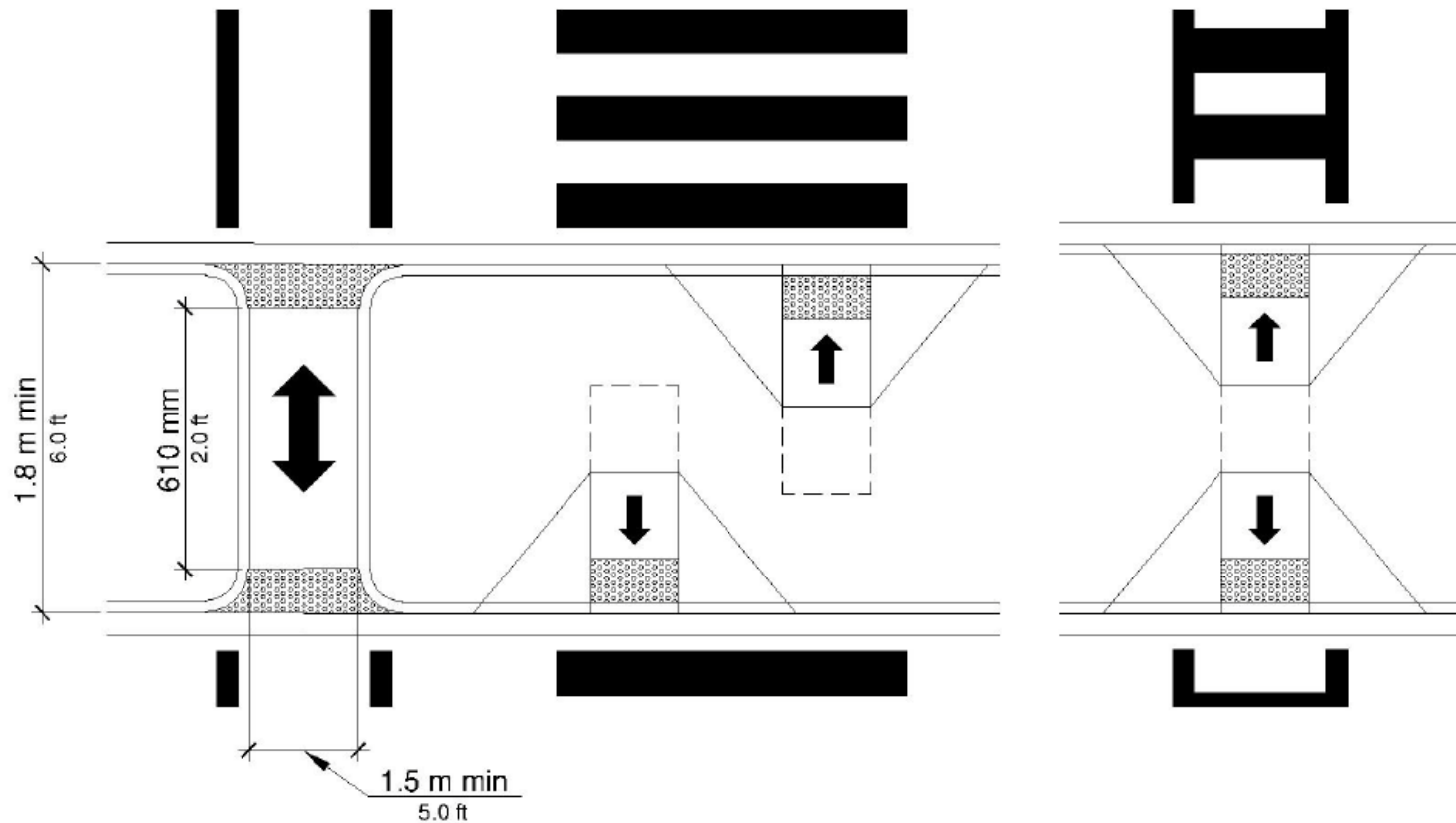


Figure R305.2.4
Pedestrian Refuge Islands



Major Differences between 2010 ADA Standards and PROWAG

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Major Differences between 2010 ADA Standards and PROWAG

ELEMENT	2010 ADA STANDARDS	2011 PROWAG
Pedestrian Signal Equipment	Not addressed, with exception of operable parts requirements	<ul style="list-style-type: none"> ▪ Incorporates MUTCD by reference ▪ Requires installation of Accessible Pedestrian Signals (APS) and pedestrian pushbuttons when pedestrian signals are newly installed or replaced at signalized intersections
Pedestrian Access Route Clear Width	36 in. min.	4 ft. min., exclusive of curb
Pedestrian Access Route Grade	5% max.	When contained within a street or highway ROW, grade of pedestrian access route shall not exceed the general grade established for the adjacent street or highway

Major Differences between 2010 ADA Standards and PROWAG

ELEMENT	2010 ADA STANDARDS	2011 PROWAG
Detectable Warning Surfaces on Curb Ramps	Not addressed	Guidance provided
Curb Ramp Length	Not addressed	15-ft. run max., to limit indefinitely “chasing grade”
Pedestrian Street Crossing Cross Slope	2% max.	<ul style="list-style-type: none"> ▪ 5% max. for free-flow approaches ▪ Permitted to equal the street or highway grade for midblock crossings
On-Street Parking	Not addressed	Guidance provided

Major Differences between 2010 ADA Standards and PROWAG

ELEMENT	2010 ADA STANDARDS	2011 PROWAG
Perpendicular Curb Ramp Turning Space	3 ft. min. x at least as wide as curb ramp	<ul style="list-style-type: none"> ▪ 4 ft. min. x 4 ft. min. ▪ 4 ft. min. x 5 ft. min., if constrained at back-of-sidewalk
Parallel Curb Ramp Turning Space	Not addressed	<ul style="list-style-type: none"> ▪ 4 ft. min. x 4 ft. min. ▪ 4 ft. min. x 5 ft. min., if constrained on two or more sides
Push Button Clear Space	2% max. slope in all directions	<ul style="list-style-type: none"> ▪ 2% max. cross slope ▪ Running slope consistent with grade of adjacent pedestrian access route
Shared-Use Paths	Not addressed	Addressed in 2013 PROWAG Supplement



References

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References

2010 ADA Standards

http://www.ada.gov/2010ADASTandards_index.htm

2011 PROWAG

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

2013 PROWAG Supplement: Shared-Use Paths

<https://www.access-board.gov/guidelines-and-standards/streets-sidewalks/shared-use-paths/supplemental-notice>

References

Final Guidelines for Outdoor Developed Areas

- <https://www.access-board.gov/guidelines-and-standards/recreation-facilities/outdoor-developed-areas/final-guidelines-for-outdoor-developed-areas>
- <https://www.access-board.gov/attachments/article/1637/outdoor-guide.pdf>

2011 Texas MUTCD

<https://www.txdot.gov/business/resources/signage/tmutcd.html>

Questions?

Erin Eurek, P.E.

Kimley-Horn

erin.eurek@kimley-horn.com

817-335-6511 (office)

817-339-2262 (direct)