NOTE: This document is intended as a collection of information. If any discrepancies exist, the most recent version of the referenced document(s) shall prevail.

Last updated June 11th, 2019. - More coming monthly! - If you have any questions about this document, please contact PBOT's ADA CREEC Program at adacreecprogram@portlandoregon.gov

Design Element	Typical Design Range	Design Limit	Existing Ramps	Notes/Explanation	ADA 2010 Limit	Reference	PBOT requirement	Reference2	Other References (Name)	Guide Limit	Reference3
Ramp Running Slope	6% to 7.2%	7.2% max	8.3% max	Any grade above 5% is considered a ramp, but it is good design practice to make a ramp steep enough that it can be easily distinguished from the adjacent sidewalk.	1:12 (8.33%) max	Sections 405.2, 406.1	8.33% max	PBOT Standard Drawings P-547 & P-548			
Relative slope on ramp wings	8% - 9%	9.5% max	10% max	For ramp wings only, slope is measured relative to the adjacent street grade instead of true level.	1:10 (10%) max	Section 406.3	10% max	PBOT Standard Drawing P-548			
Height of lip allowed	0.0" max	0.0" max	0.0" max	Even a 1/4" lip can be a tripping hazard or make it difficult to roll over. No lip is allowed, as 2010 ADA Standards say "The adjacent surfaces at transitions at curb ramps to walks, gutters, and streets shall be at the same level."	0.0" max	Section 406.2					
Ramp length	3' to 6'	15' max	15' max	If a slope at 8.33% for 15 feet is not adequate, and a steeper grade is required to match existing, a design variance approved by an ADA Technical Advisor is required. This guideline exists to avoid chasing a grade indefinitely on steep topography.			15' max	PBOT Standard Drawings P-547 thru P-550			
Ramp throat width	4' to 6' (more in high ped areas)	4' min	4' min	Midblock ramps should match the width of corresponding sidewalk, up to 6 feet.	36" min	Sections 405.5, 406.1	4' min	PBOT Standard Drawings P-547 thru P-550			
Cross Slope change	0.5% per linear foot (in direction of travel)	0.5% per foot max		This is a design guideline to prevent the cross slope of an accessible route from warping too quickly. A highly warped panel may cause one wheel of a wheelchair to come off the ground, and makes it more difficult for all users to traverse. Note: no lumps, bumps or humps allowed (workmanship issues).							
Transition Panel placement	About 6' long (to existing score line)	See 'Cross Slope Change' and 'Ramp Running Slope'	See 'Cross Slope Change' and 'Ramp Running Slope'	The purpose of a Transition Panel is to serve as a semi-permanent transition from a fully compliant ADA ramp to existing sidewalk that has one or more non-standard grades. When a future project replaces the non-standard sidewalk, a sawcut will be made at the edge of the fully compliant ADA ramp and the transition panel will be removed along with the sidewalk to be upgraded. If the existing sidewalk has fully ADA compliant slopes or no sidewalk exists, a transition panel is not needed.				PBOT Standard Drawings P-547 thru P-550			
Length of ramp wings (measured along gutter)	3' - 6'	3' min		This minimum length ensures that the minimum curb exposure of 3" between two single ramps can be attained.				PBOT Standard Drawings P-548 and P-550			
Sidewalk grade	1% to 4.5%	4.5% max	5.0% max	A running slope greater than 5% is considered a Ramp, and is subject to additional requirements such as length maximums and placement of landings.	1:20 (5%) max	Sections 402.2, 403.3	5% max				
Gutter Pan width at ramp	24"			A 24" gutter pan allows a transition between an 8.3% ramp slope and a 5% street slope (greater than 11% algebriac difference). The concrete gutter pan also allows greater control of grades, and provides a surface that is easier to pave to and create a smooth transition (no lip). See "Algebriac difference in running slopes" for additional requirements when grade break between existing street and ramp is 11% or greater.					FHWA	24" minimum, when used to mitigate grade break 11% or greater	7.3.7
Landing Area size	4' to 5' square	48" x 48" min. (w/o obstruction)	48" x 48" min. (w/o obstruction)	Landings must always be at least as wide as the ramp leading to the landing. If there is a vertical obstruction (including curb) within 1' of the landing, landing must be at least 5' in that dimension to provide clearance from the obstruction. Landings at the bottom of ramps must be located completely outside any travel lanes, including bike lanes.	Obstruction above XX" high		48" x 48" min. (w/o obstruction)	PBOT Standard Drawings P-547 thru P-550			
Inlet and ramp proximity	Inlet should be outside of wing and crosswalk	Inlets must be outside of ramp throat & accessible route	Inlets must be outside of ramp throat & accessible route	Ideally, inlets should be located beyond the ramp wings and along a tangent (beyond the PT or PC of a corner). See PBOT Std. Drawing P-202. In some cases, inlets may land outside the ramp throat but within the pedestrian through zone. New inlets (and new curb ramps) must be located such that the inlet is outside the curb ramp throat, not in the accessible path, and does not pose a hazard to any person using the crossing (no lips or drops in or near crossing).				PBOT Std. Drawing P-202			
Cross slope of accessible path, Landing Area slope (both directions)	1% to 1.5%	1.5% max	2% max	Components designated as Flat or Level include the cross slope of any portion of the accessible route, and the slope in both directions of a landing or turning space.	1:48 max (2%)	Section 405.3	2% max	PBOT Standard Drawings P-547 thru P-550			

NOTE: This document is intended as a collection of information. If any discrepancies exist, the most recent version of the referenced document(s) shall prevail.

Last updated June 11th, 2019. - More coming monthly! - If you have any questions about this document, please contact PBOT's ADA CREEC Program at adacreecprogram@portlandoregon.gov

Design Element	Typical Design Range	Design Limit	Existing Ramps	Notes/Explanation	ADA 2010 Limit	Reference	PBOT requirement	Reference2	Other References (Name)	Guide Limit	Reference3
Algebriac difference in running slopes	7% to 10%	10% max	11% max	Combining the maximum allowed ramp running slope (8.3%) with the maximum allowed slope in the street (5%) will result in an algebriac difference (13.3%) that is higher than the maximum allowed. If a 24" gutter pan is used with a 2% slope, this will create a set of two grade breaks (8.3% + 2% = 10.3% and 5% - 2% = 3%) that are both acceptable.			11% max	PBOT Standard Drawings P-547 thru P-550	FHWA	11% max	7.3.6, 7.3.7
Minimum distance between grade breaks	2' to 6'	24" (2') min	24" (2') min	If grade breaks are less than 24" apart, it is counted as a single grade break for the purposes of calculating algebriac difference.					FHWA	24" (2') min	7.3.7