

## **APPENDIX F: PRIORITIZATION CRITERIA FOR BARRIER MITIGATION – PUBLIC RIGHTS-OF-WAY**



# City of Madera

## Appendix F: Prioritization Criteria

### Barrier Mitigation - Public Rights-of-Way

## **APPENDIX F: PRIORITIZATION CRITERIA FOR BARRIER MITIGATION – PUBLIC RIGHTS-OF-WAY**

### **Table of Contents**

**i. Definitions**

**ii. Activity Score**

a. Table 1: Activity Score Category Breakdown

**iii. Barrier Score**

- a. Table 2: Barrier Score Breakdown for Sidewalks
- b. Figure 1: Curb Ramp Measurements Diagram (Perpendicular)
- c. Table 3: Barrier Score Breakdown for Curb Ramps (Perpendicular)
- d. Figure 2: Curb Ramp Measurements Diagram (Parallel)
- e. Table 4: Barrier Score Breakdown for Curb Ramps (Parallel)
- f. Figure 3: Curb Ramp Measurements Diagram (Combination)
- g. Table 5: Barrier Score Breakdown for Curb Ramps (Combination)
- h. Figure 4: Pedestrian Signal Location Diagram
- i. Figure 5: Pedestrian Signal Pole Diagram
- j. Table 6: Barrier Score Breakdown for Pedestrian Signals

**iv. Priority Score**

## **Definitions**

**Access Compliance Survey** – Process taken to fulfill the requirements of a Transition Plan, by surveying and identifying physical barriers which impede accessibility to a program or service provided to the public.

**Activity Score** – Rating that summarizes a feature’s expected frequency of use and its impact on individuals with disabilities.

**Barrier Score** – Rating that summarizes the severity of a feature relative to its deviation from current State and Federal Standards.

**Curb Ramp** – A ramp graded down from the top surface of a sidewalk to the surface of an adjoining street to provide connectivity within the Public Rights-of-Way.

**Facility** – A place housing a program or service for the public.

**Feature** – An element provided in the Public Rights-of-Way, including public sidewalks and streets, crosswalks, curb ramps, street furnishings, pedestrian signals, parking, etc. The four main features surveyed are 1) sidewalks, including gaps, 2) curb ramps, 3) pedestrian signals, and 4) bus stops.

**Pedestrian Signal** – Devices used at signalized intersections to notify pedestrians when it is safe to cross the street.

**Priority Score** – Rating that is the summation of both Activity Score and Barrier Score. This rating is used as criteria for determining barrier mitigation schedules that are a requirement of a Transition Plan.

**PROW** – *Refer to definition of “Public Rights-of-Way (PROW)”*

**Public Rights-of-Way (PROW)** – Public infrastructure such as streets, roads, or walkways under the responsibility or authority of a public entity, such as a City or County.

**Title I** – Regulations from the Americans with Disabilities Act specific to employment.

**Title II** – Regulations from the Americans with Disabilities Act specific to State and local government entities, including City and County governments.

**Title III** – Regulations from the Americans with Disabilities Act specific to areas of public accommodations and commercial facilities.

**Transition Plan** - A living document that inventories the physical barriers identified which impede accessibility to a public entity’s programs and services. The document will identify

solutions to mitigate the barriers and set forth the steps necessary to achieve compliance via a timeline or schedule and designate an official responsible to maintain and update the document. The document is a requirement of the Americans with Disabilities Act and shall be made current and available for public inspection.

## Activity Score

An Activity Score is a rating that summarizes a feature’s (sidewalk (including gaps), curb ramp, pedestrian signal or bus stop) expected frequency of use and its impact on individuals with disabilities in the Public Rights-of-Way. A rating is assigned to a feature based on that feature’s location in proximity to several categories.

In total, the Activity Score is scored on a scale of 0 to 100, with 0 being the lowest activity, and 100 being the highest activity. An Activity Score of 0 indicates that the feature is not expected to see any use by pedestrians based on its location. An Activity Score of 100 indicates that the feature is expected to see significant use by pedestrians due to its location.

The following categories are used to rate an Activity Score for each feature in the Public Rights-of-Way:

**Table 1: Activity Score Category Breakdown**

Category	Sub-Category	Specifications	Weight	Value	Score
Streets	Arterial	Adjacent Arterial Street	10	100%	10
	Collector	Adjacent Collector Street		50%	5
Transit Stops	All forms of Public Transit	Within 1/4 Mile of a Transit Stop	10	100%	15
Schools	Elementary School (Primary Education)	Within 1/4 Mile of Primary Education	12	100%	12
Parks	All Parks within the City	Within 1/4 Mile of a Park	10	100%	0
City Attractors	City-Owned Buildings	Within 1/4 Mile of City Buildings	12	50%	18
Pedestrian Generators	Medical or Social Services	Within 1/4 Mile of Medical or Social Services	12	50%	18
Population Density*	Population per Square Mile in each Census Block, as delineated by the U.S. Census. *Categorized in GIS according to 4 Manual Intervals of 0%, 30%, 60%, and 100%	No Population	12	0%	0
		> 0%-30%		30%	4
		> 30%-60%		60%	8
		> 60%-100%		100%	12
Senior Population Density*	Population Age 65 and Older per Square Mile in each Census Block, as delineated by the U.S. Census. *Categorized in GIS according to 4 Manual Intervals of 0%, 30%, 60%, and 100%	No Population	12	0%	0
		> 0%-30%		30%	4
		> 30%-60%		60%	8
		> 60%-100%		100%	12
No Sidewalk	Adjacent to an Incorporated Street without Sidewalks	A sidewalk, curb ramp, or pedestrian signals that is adjacent to a street without sidewalks.	10	100%	15
<b>Total Weight</b>			<b>100</b>		

## **Barrier Score**

A Barrier Score is a rating assigned to a feature (sidewalk (including gaps), curb ramp, pedestrian signal, or bus stops) in the Public Rights-of-Way based on the severity of the feature’s existing conditions in comparison to current State and Federal Standards.

In total, the Barrier Score is scored on a scale of 0 to 100, with 0 being a feature that is compliant with current State and Federal Standards, and 100 indicating that the feature is completely noncompliant. All gaps along sidewalks and curb ramps that are required to be installed where there are none currently will be given a score of 100 to classify that they are the highest priority.

Categories used to rate a Barrier Score for each feature in the Public Rights-of-Way are specific to the feature being surveyed (sidewalk (including gaps), curb ramp, pedestrian signal, or bus stops).

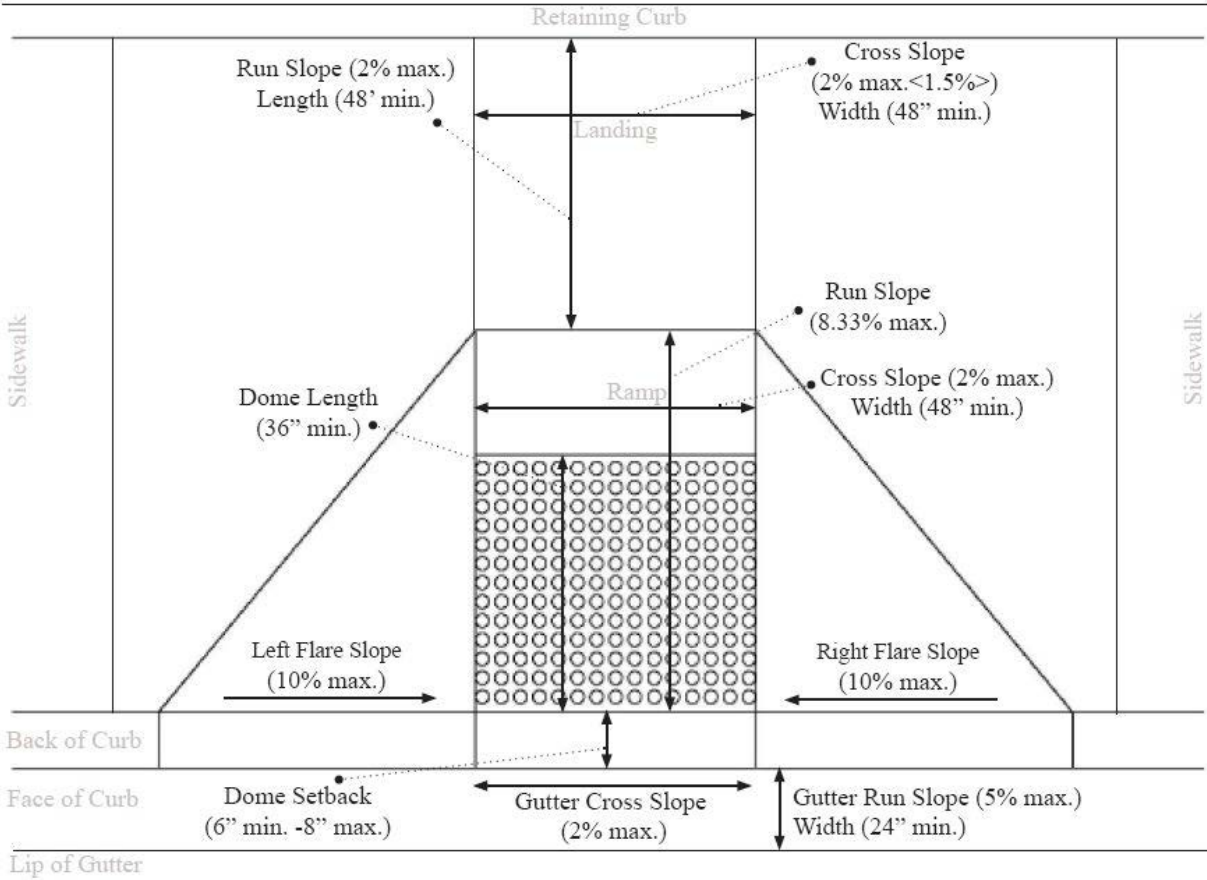
The following categories are used to rate a Barrier Score for Sidewalks:

**Table 2: Barrier Score Category Breakdown for Sidewalks**

Category	Barrier Type	Weight	Quantity**	Value	Score
Heaving/Change in Level	Minor Change in Level (0.26"-0.74")	10	1-2 Incidents	30%	3
			3-5 Incidents	60%	6
			6+ Incidents	100%	10
	Major Change in Level (0.75" or greater)	20	1-2 Incidents	30%	6
			3-5 Incidents	60%	12
			6+ Incidents	100%	20
Cross Slope	Cross Slope Low (2%-5%)	10	10' or less	50%	5
			>10'	100%	10
	Cross Slope Medium (5%-8%)	15	10' or less	50%	7.5
			>10'	100%	15
	Cross Slope High (>8%)	20	10' or less	50%	10
			>10'	100%	20
Run Slope*	Running Slope Low (5%-8%)	2.5	10' or less	50%	1.25
			>10'	100%	2.5
	Running Slope Medium (8%-11%)	5	10' or less	50%	2.5
			>10'	100%	5
	Running Slope High (>11%)	7.5	10' or less	50%	3.75
			>10'	100%	7.5
Obstructions	Obstructions	10	1-2 Incident	50%	5
			3+ Incidents	100%	10
Total Weight		100			

*\*Running Slope that matches street grade or less is considered compliant and therefore should receive a score of 0. Any running slope longer than 10 feet is assumed to match the street grade.*

*\*\* Incidents are the barrier count along a run. For slope data it is the length of the category for the run. A run is usually from one intersection to the next, however a run could end mid-block depending on several factors.*



**Figure 1: Curb Ramp Measurements Diagram (Perpendicular)**

The following categories are used to rate a Barrier Score for Curb Ramps (Perpendicular):

**Table 3: Barrier Score Category Breakdown for Curb Ramps (Perpendicular)**

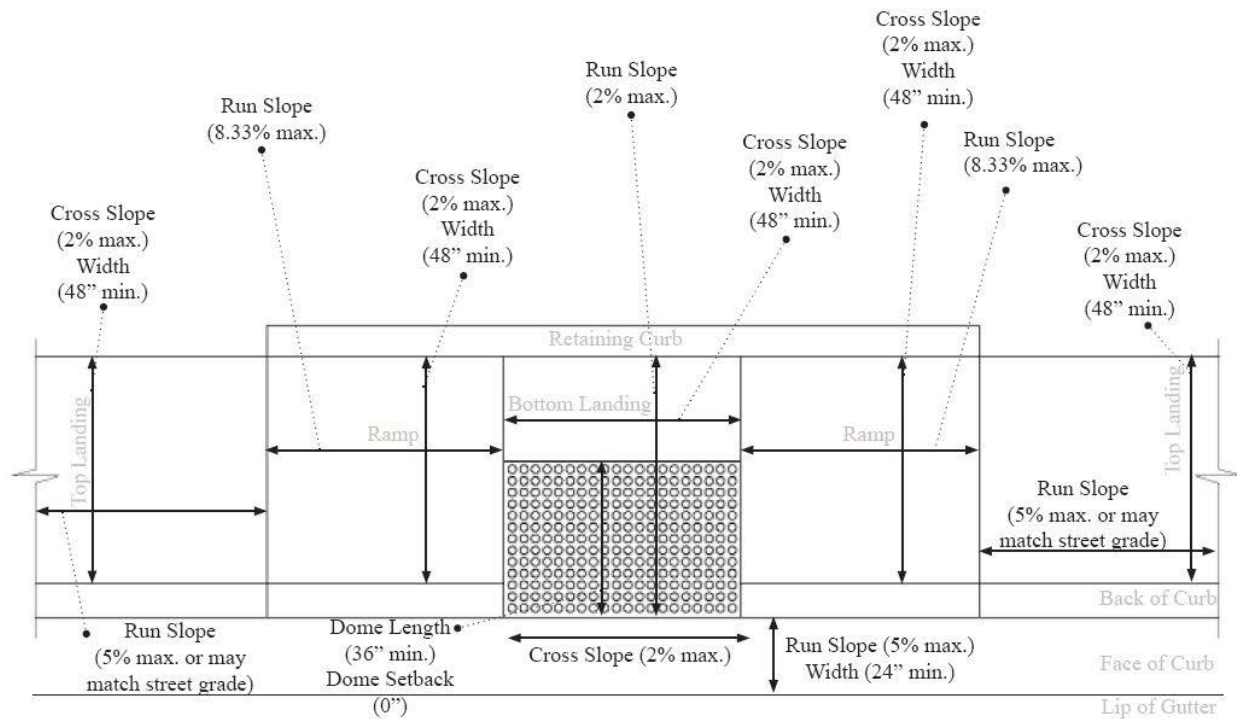
Barrier Type	Weight	Category	Value	Score
Width of Ramp	6	≤ 35.9"	100%	6
		36.0" - 41.9"	50%	3
		42.0" - 47.5"	25%	1.5
		≥ 48"	0%	0
Alignment with Marked Crosswalk	2	No	100%	2
		Yes	0%	0
Slope of Ramp	10	≥ 15%	100%	10
		12.5% - 14.9%	75%	7.5
		10.0% - 12.4%	50%	5
		8.4% - 9.9%	25%	2.5
		≤ 8.3%	0%	0



Cross Slope of Ramp	10	≥ 7.0%	100%	10
		5.0% - 6.9%	75%	7.5
		2.9% - 4.9%	50%	5
		2.1% - 2.8%	25%	2.5
		≤ 2.0%	0%	0
Top Landing Running Slope	5	≥ 9.0%	100%	5
		5.0% - 8.9%	75%	3.75
		2.9% - 4.9%	50%	2.5
		2.1% - 2.8%	25%	1.25
		≤ 2.0%	0%	0
Top Landing Cross Slope	10	≥ 9.0%	100%	10
		5.0% - 8.9%	75%	7.5
		2.9% - 4.9%	50%	5
		2.1% - 2.8%	25%	2.5
		≤ 2.0%	0%	0
Flare (Right)	10	≥ 14%	100%	10
		12.1% - 13.9%	60%	6
		10.1% - 12%	40%	4
		≤ 10.0%	0%	0

Barrier Type	Weight	Category	Value	Score
Flare (Left)	10	≥ 14%	100%	10
		12.1% - 13.9%	60%	6
		10.1% - 12%	40%	4
		≤ 10.0%	0%	0
Top Landing Length	9	≤ 32.9"	100%	9
		33.0" - 35.9"	75%	6.75
		36.0" - 41.9"	50%	4.5
		42.0" - 47.9"	25%	2.25
		≥ 48"	0%	0
Truncated Domes	4	No	100%	4
		More than 2" each side	60%	2
		Yes	0%	0
Gutter Lip (Transition from Gutter to Ramp)	4	≥ 1"	100%	4
		0.75" - .99"	75%	3
		0.5" - .74"	50%	2

		0.1" - 0.49"	25%	1
		Flush	0%	0
Cross Slope of Gutter	10	≥ 9.0%	100%	10
		5.0% - 8.9%	75%	7.5
		2.9% - 4.9%	50%	5
		2.1% - 2.8%	25%	2.5
		≤ 2.0%	0%	0
Gutter Slope	10	≥ 9.0%	100%	10
		6.7% - 8.9%	75%	7.5
		5.4% - 6.6%	50%	5
		5.1% - 5.3%	25%	2.5
		≤ 5.0%	0%	0
<b>Total Weight</b>	<b>100</b>			



**Figure 2: Curb Ramp Measurements Diagram (Parallel)**

The following categories are used to rate a Barrier Score for Curb Ramps (Parallel):

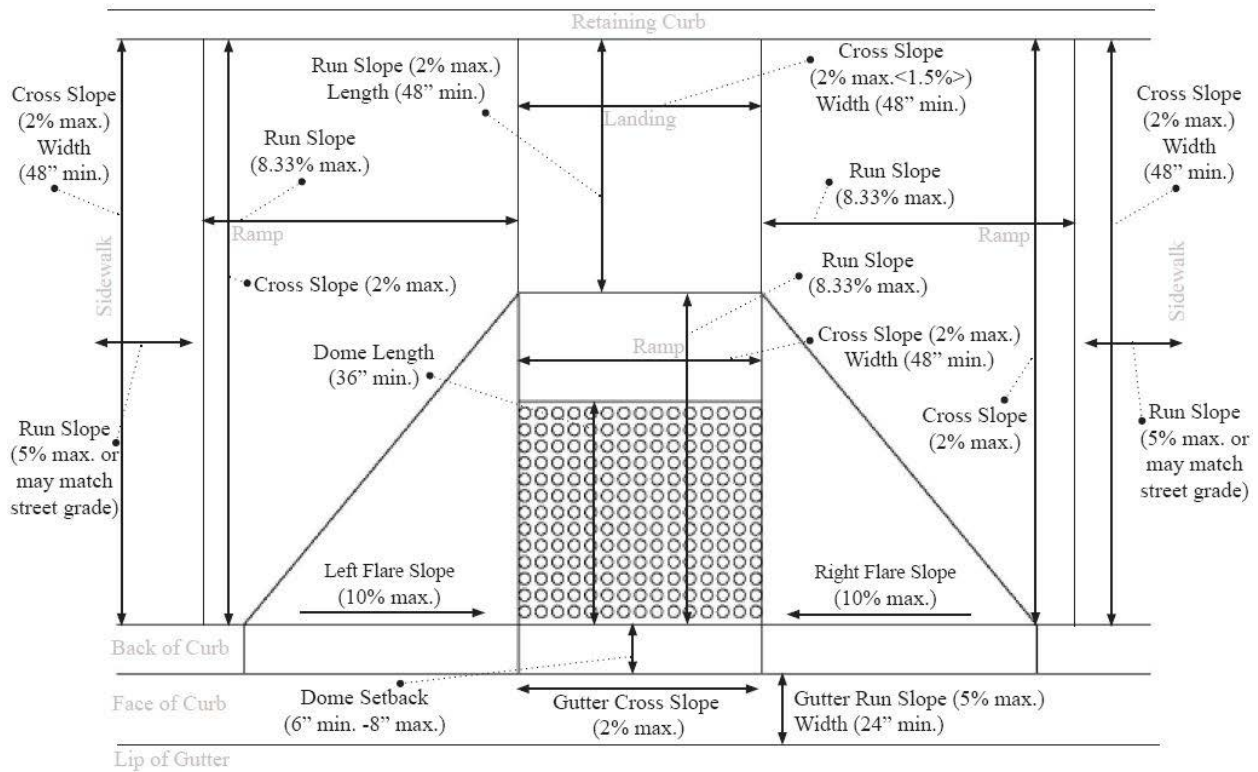
**Table 4: Barrier Score Category Breakdown for Curb Ramps (Parallel)**

Barrier Type	Weight	Category	Value	Score
Width of Ramp (Right)	6	≤ 32.9"	100%	6
		33" - 35.9"	75%	4.5
		36.0" - 41.9"	50%	3
		42.0" - 47.9"	25%	1.5
		≥ 48"	0%	0
Width of Ramp (Left)	6	≤ 32.9"	100%	6
		33" - 35.9"	75%	4.5
		36.0" - 41.9"	50%	3
		42.0" - 47.9"	25%	1.5
		≥ 48"	0%	0
Alignment with Marked Crosswalk	5	No	100%	5
		Yes	0%	0
Slope of Ramp (Right)	6	≥ 15%	100%	6
		12.5% -14.9%	75%	4.5
		10.0% - 12.4%	50%	3
		8.4% - 9.9%	25%	1.5
		≤ 8.3%	0%	0
Slope of Ramp (Left)	6	≥ 15%	100%	6
		12.5% -14.9%	75%	4.5
		10.0% - 12.4%	50%	3
		8.4% - 9.9%	25%	1.5
		≤ 8.3%	0%	0
Cross Slope of Ramp (Right)	6	≥ 7.0%	100%	6
		5.0% - 6.9%	75%	4.5
		2.9% - 4.9%	60%	3.6
		2.1% - 2.8%	30%	1.8
		≤ 2.0%	0%	0
Cross Slope of Ramp (Left)	6	≥ 7.0%	100%	6
		5.0% - 6.9%	75%	4.5
		2.9% - 4.9%	60%	3.6
		2.1% - 2.8%	30%	1.8
		≤ 2.0%	0%	0

Barrier Type	Weight	Category	Value	Score
Top Landing Running Slope (Right)*	4	≥ 9.0%	100%	4
		5.0% - 8.9%	75%	3
		2.9% - 4.9%	50%	2
		2.1% - 2.8%	25%	1
		≤ 2.0%	0%	0
Top Landing Running Slope (Left)*	4	≥ 9.0%	100%	4
		5.0% - 8.9%	75%	3
		2.9% - 4.9%	50%	2
		2.1% - 2.8%	25%	1
		≤ 2.0%	0%	0
Top Landing Cross Slope (Right)	5	≥ 9.0%	100%	5
		5.0% - 8.9	75%	3.75
		2.9% - 4.9%	50%	2.5
		2.1% - 2.8%	25%	1.25
		≤ 2.0%	0%	0
Top Landing Cross Slope (Left)	5	≥ 9.0%	100%	5
		5.0% - 8.9	75%	3.75
		2.9% - 4.9%	50%	2.5
		2.1% - 2.8%	25%	1.25
		≤ 2.0%	0%	0
Truncated Domes	5	No	100%	5
		More than 2" each side	60%	3
		Yes	0%	0
Gutter Lip (Transition from Gutter to Ramp)	6	≥ 1"	100%	6
		0.75" - .99"	75%	4.5
		0.5" - .74"	50%	3
		0" - 0.49"	25%	1.5
		Flush	0%	0
Cross Slope of Gutter	6	≥ 9.0%	100%	6
		5.0% - 8.9%	75%	4.5
		2.9% - 4.9%	50%	3
		2.1% - 2.8%	25%	1.5
		≤ 2.0%	0%	0

<b>Barrier Type</b>	<b>Weight</b>	<b>Category</b>	<b>Value</b>	<b>Score</b>
Gutter Slope	6	≥ 9.0%	100%	6
		6.7% - 8.9%	75%	4.5
		5.4% - 6.6%	50%	3
		5.1% - 5.3%	25%	1.5
		≤ 5.0%	0%	0
Bottom Landing Cross Slope	6	>9.0%	100%	6
		5.0% - 8.9%	75%	4.5
		2.9% - 4.9%	50%	3
		2.1% - 2.8%	25%	1.5
		≤ 2.0%	0%	0
Bottom Landing Slope	6	≥ 9.0%	100%	6
		5.0% - 8.9%	75%	4.5
		2.9% - 4.9%	50%	3
		2.1% - 2.8%	25%	1.5
		≤ 2.0%	0%	0
Bottom Landing Length	6	≤ 32.9"	100%	6
		33" - 35.9"	75%	4.5
		36.0" - 41.9"	50%	3
		42.0" - 47.9"	25%	1.5
		≥ 48"	0%	0
<b>Total Weight</b>	<b>100</b>			

*\*Top Landing Running Slope that matches or is less than the street grade is considered compliant and therefore should receive a score of 0.*



**Figure 3: Curb Ramp Measurements Diagram (Combination)**

The following categories are used to rate a Barrier Score for Curb Ramps (Combination):

**Table 5: Barrier Score Category Breakdown for Curb Ramps (Combination)**

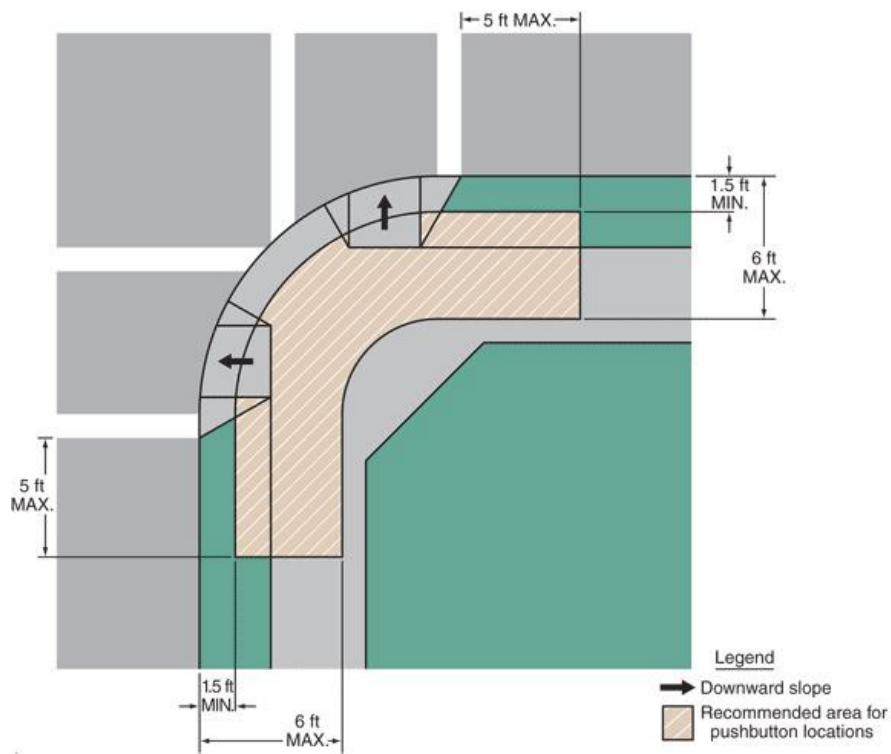
Barrier Type	Weight	Category	Value	Score
Width of Ramp (Right)	6	≤ 32.9"	100%	6
		33" - 35.9"	75%	4.5
		36.0" - 41.9"	50%	3
		42.0" - 47.9"	25%	1.5
		≥ 48"	0%	0
Width of Ramp (Left)	6	≤ 32.9"	100%	6
		33" - 35.9"	75%	4.5
		36.0" - 41.9"	50%	3
		42.0" - 47.9"	25%	1.5
		≥ 48"	0%	0
Alignment with Marked Crosswalk	5	No	100%	5
		Yes	0%	0

Barrier Type	Weight	Category	Value	Score
Slope of Ramp (Right)	5	≥ 15%	100%	5
		12.5% - 14.9%	75%	3.75
		10.0% - 12.4%	50%	2.5
		8.4% - 9.9%	25%	1.25
		≤ 8.3%	0%	0
Slope of Ramp (Left)	5	≥ 15%	100%	5
		12.5% - 14.9%	75%	3.75
		10.0% - 12.4%	50%	2.5
		8.4% - 9.9%	25%	1.25
		≤ 8.3%	0%	0
Slope of Ramp (Combination)	5	≥ 15%	100%	5
		12.5% - 14.9%	75%	3.75
		10.0% - 12.4%	50%	2.5
		8.4% - 9.9%	25%	1.25
		≤ 8.3%	0%	0
Cross Slope of Ramp (Right)	5	≥ 7.0%	100%	5
		5.0% - 6.9%	75%	3.75
		2.9% - 4.9%	60%	2.5
		2.1% - 2.8%	30%	1.25
		≤ 2.0%	0%	0
Cross Slope of Ramp (Left)	5	≥ 7.0%	100%	5
		5.0% - 6.9%	75%	3.75
		2.9% - 4.9%	60%	2.5
		2.1% - 2.8%	30%	1.25
		≤ 2.0%	0%	0
Cross Slope of Ramp (Combination)	5	≥ 7.0%	100%	5
		5.0% - 6.9%	75%	3.75
		2.9% - 4.9%	60%	2.5
		2.1% - 2.8%	30%	1.25
		≤ 2.0%	0%	0
Top Landing Running Slope (Right)*	4	≥ 9.0%	100%	4
		5.0% - 8.9%	75%	3
		2.9% - 4.9%	50%	2
		2.1% - 2.8%	25%	1
		≤ 2.0%	0%	0
Top Landing Running Slope (Left)*	4	≥ 9.0%	100%	4
		5.0% - 8.9%	75%	3
		2.9% - 4.9%	50%	2

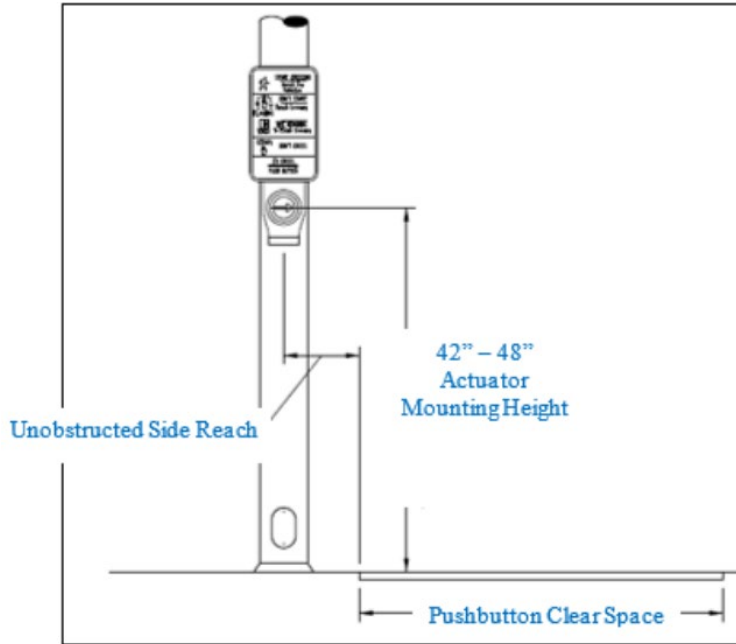
Barrier Type	Weight	Category	Value	Score
		2.1% - 2.8%	25%	1
		≤ 2.0%	0%	0
Top Landing Cross Slope (Right)	5	≥ 9.0%	100%	5
		5.0% - 8.9	75%	3.75
		2.9% - 4.9%	50%	2.5
		2.1% - 2.8%	25%	1.25
		≤ 2.0%	0%	0
Top Landing Cross Slope (Left)	5	≥ 9.0%	100%	5
		5.0% - 8.9	75%	3.75
		2.9% - 4.9%	50%	2.5
		2.1% - 2.8%	25%	1.25
		≤ 2.0%	0%	0
Truncated Domes	5	No	100%	5
		More than 2" each side	60%	3
		Yes	0%	0
Gutter Lip (Transition from Gutter to Ramp)	5	≥ 1"	100%	5
		0.75" - .99"	75%	3.75
		0.5" - .74"	50%	2.5
		0" - 0.49"	25%	1.25
		Flush	0%	0
Cross Slope of Gutter	5	≥ 9.0%	100%	5
		5.0% - 8.9%	75%	3.75
		2.9% - 4.9%	50%	2.5
		2.1% - 2.8%	25%	1.25
		≤ 2.0%	0%	0
Gutter Slope	5	≥ 9.0%	100%	5
		6.7% - 8.9%	75%	3.75
		5.4% - 6.6%	50%	2.5
		5.1% - 5.3%	25%	1.25
		≤ 5.0%	0%	0
Bottom Landing Cross Slope	5	>9.0%	100%	5
		5.0% - 8.9%	75%	3.75
		2.9% - 4.9%	50%	2.5
		2.1% - 2.8%	25%	1.25
		≤ 2.0%	0%	0
Bottom Landing Slope	5	≥ 9.0%	100%	5
		5.0% - 8.9%	75%	3.75



Barrier Type	Weight	Category	Value	Score
		2.9% - 4.9%	50%	2.5
		2.1% - 2.8%	25%	1.25
		≤ 2.0%	0%	0
Bottom Landing Length	5	≤ 32.9"	100%	6
		33" - 35.9"	75%	4.5
		36.0" - 41.9"	50%	3
		42.0" - 47.9"	25%	1.5
		≥ 48"	0%	0
<b>Total Weight</b>	<b>100</b>			



**Figure 4: Pedestrian Signal Location Diagram**



**Figure 5: Pedestrian Signal Pole Diagram (Image Obtained from Google)**

The following categories are used to rate a Barrier Score for Pedestrian Signals.

**Table 6: Barrier Score Category Breakdown for Pedestrian Signals**

Barrier Type	Weight	Category	Value	Score
Clear Floor Slope	6.5	≤ 2.0%	0%	0
		2.1% - 3.9%	25%	1.625
		4.0% - 6.9%	50%	3.25
		7.0% - 9.9%	75%	4.875
		≥ 10.0%	100%	6.5
Clear Floor Cross Slope	6.5	≤ 2.0%	0%	0
		2.1% - 3.9%	25%	1.625
		4.0% - 6.9%	50%	3.25
		7.0% - 9.9%	75%	4.875
		≥ 10.0%	100%	6.5
Button Height (from ground to center of button)	6.5	> 58.1"	100%	6.5
		< 42"	50%	3.25
		48.1" - 58"	50%	3.25
		42" - 48"	0%	0
Button Reach (from Clear Floor Space)	6.5	>25.01"	100%	6.5
		20.01" - 25"	75%	4.875

Barrier Type	Weight	Category	Value	Score
		15.01" - 20"	50%	3.25
		10.01" - 15"	25%	1.625
		< 10"	0%	0
Button Pressure (force required to push button)	6.5	≥ 10 lbs	100%	6.5
		6 lbs - 9 lbs	50%	3.25
		≤ 5 lbs	0%	0
Button Diameter	6.5	≤ 0.5"	100%	6.5
		1.9" - 0.6"	50%	3.25
		≥ 2"	0%	0
Accessible Path (to button)	6.5	No	100%	6.5
		Yes	0%	0
Clear Floor Space (30"x 40" area adjacent to button)	9	No	100%	9
		Yes	0%	0
Closed Fist Operation (able to push button with more than just a finger)	6.5	No	100%	6.5
		Yes	0%	0

Button Visual Contrast (light on dark background)	6.5	No	100%	6.5
		Yes	0%	0
Button Vibrotactile (button vibrates)	6.5	No	100%	6.5
		Yes	0%	0
Audible Walk Indicator	6.5	No	100%	6.5
		Speech	0%	0
		Chirp	0%	0
		Audible Tone	0%	0
Button Locator Tone	6.5	No	100%	6.5
		Yes	0%	0
Tactile Directional Arrow	6.5	No	100%	6.5
		Not Tactile	50%	3.25
		Yes	0%	0
Within 5 ft from Crosswalk	3	NO	100%	3
		YES	0%	0
1.5 - 6.0 ft from Curblin	2.5	NO	100%	2.5
		YES	0%	0
10 ft Minimum Separation between Buttons	1	<10ft	100%	1
		>10ft or N/A	0%	0
<b>Total Weight</b>	<b>100</b>			

## **Priority Score**

The Priority Score is a summation of both a feature's Activity Score and Barrier Score and is used as a criterion in planning out schedules for the order of barrier mitigation work.

*Activity Score + Barrier Score = Priority Score*

The Priority Score is rated on a scale of 0 to 200, with 0 being a feature that should have no priority for barrier mitigation work and 200 being a feature which should be at the forefront of any planned barrier mitigation work that uses funds dedicated solely for mitigating accessibility barriers identified in an ADA Transition Plan.

The Priority Score is designed to be equal in scale across the four primary features surveyed in the PROW (sidewalks, curb ramps, pedestrian signals, and bus stops), i.e. a Priority Score of 200 given to a curb ramp is equal to a Priority Score of 200 given to a sidewalk.

Note that the Priority Score serves as only one methodology for creating a schedule. Other methods and criteria can be used (and is encouraged) as the basis for forming a schedule including: 1) barriers identified by constituents through a special request, 2) barriers that overlap with a project already funded and scheduled, 3) barriers that can be resolved internally with maintenance staff, 4) grouping work geographically for cost efficiency, 5) etc.

Documentation for any additional methodology should be kept on record for justifying a barrier mitigation schedule.