Appendix A: Blank PRCAs



BOSTON REGION METROPOLITAN PLANNING ORGANIZATION



Central Transportation Planning Staff (CTPS) to the Boston Region MPO: www.ctps.org | 857.702.3700 | ctps@ctps.org

Ryan Hicks, Congestion Management Process Manager: www.ctps.org/cmp | 857.702.3661 | rhicks@ctps.org

Casey Claude, Bicycle and Pedestrian Program Manager: www.ctps.org/bicycle-pedestrian-activities | 857.702.3707 | cclaude@ctps.org

Pedestrian Report Card Assessment (PRCA):

Roadway Segment

Roadway Segment Location

Grading Categories ^[1]	Score	Rating
Safety		
System Preservation		
Capacity Management and Mobility		
Economic Vitality		

Transportation Equity^[2]

High Priority Area

Moderate Priority Area

Low Priority Area

[1] **Poor** = 0 to 1.7; **Fair** = 1.7 < 2.3; **Good** = 2.3 to 3.0

[2] Low = 0 or 1 Factor; Moderate = 2 or 3 Factors; High = 4 or 5 Factors

Grading Categories: Scoring Breakdown **Roadway Segment**

Capacity Management and Mobility			
Performance Measure ^[1]	Percentage	Score (out of 3.0)	Rating
Sidewalk Presence	50%		
Crosswalk Presence	33%		
Walkway Width	17%		
GRADING CATEGORY TOTAL ^[2] (Sidewalk Presence Score * 0.5) + (Crosswalk Presence Score * 0.33) + (Walkway Width Score * 0.17)	100%		

Economic Vitality

Performance Measure ^[1]	Percentage	Score (out of 3.0)	Rating
Pedestrian Volumes	50%		
Adjacent Bicycle Accommodations	50%		
GRADING CATEGORY TOTAL ^[2] (Pedestrian Volumes Score * 0.5) + (Adjacent Bicycle Accommodations Score * 0.5)	100%		

[1] Poor = 1.0; **Fair** = 2.0; **Good** = 3.0

[2] Poor = 0 to 1.7; **Fair** = 1.7 < 2.3; **Good** = 2.3 to 3.0

[3] Use these factors to determine Transportation Equity priority level (front)

Safety			
Performance Measure ^[1]	Percentage	Score (out of 3.0)	Rating
Pedestrian Crashes	60%		
Pedestrian-Vehicle Buffer	20%		
Vehicle Travel Speed	20%		
GRADING CATEGORY TOTAL ^[2] (Pedestrian Crashes Score * 0.6) + (Pedestrian-Vehicle Buffer Score * 0.2) + (Vehicle Travel Speed Score * 0.2)	100%		

System Preservation

Performance Measure ^[1]	Percentage	Score (out of 3.0)	Rating
Sidewalk Condition	100%		

Transportation Equity Factors^[3]

Area Condition	Yes/No
Low-Income Population ≥ 32.32%	
Minority Population ≥ 28.19%	
More than 6.69% of Population > 75 Years of Age	
More than 16.15% of Households w/o Vehicle	
Within 1/4 Mile of School/College	

Roadway Segment Notes

Detailed Performance Measure Information

Grading Category	Performance Measure	Features of Analyzed Locations
	Sidewalk Presence	
Capacity Management and Mobility	Crosswalk Presence	
	Walkway Width	
Economic	Pedestrian Volumes	
Vitality	Adjacent Bicycle Accommodations	
	Pedestrian Crashes	
Safety	Pedestrian-Vehicle Buffer	
	Vehicle Travel Speed	
System Preservation	Sidewalk Condition	



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Pedestrian Report Card Assessment (PRCA):

Signalized Intersection

Intersection Location

Grading Categories ^[1]	Score	Rating
Safety		
System Preservation		
Capacity Management and Mobility		
Economic Vitality		

Transportation Equity^[2]

High Priority Area

Moderate Priority Area

Low Priority Area

[1] **Poor** = 0 to 1.7; **Fair** = 1.7 < 2.3; **Good** = 2.3 to 3.0

[2] Low = 0 or 1 Factor; Moderate = 2 or 3 Factors; High = 4 or 5 Factors

Grading Categories: Scoring Breakdown Signalized Intersection

Capacity Management and Mobility			
Performance Measure ^[1]	Percentage	Score (out of 3.0)	Rating
Pedestrian Delay	43%		
Sidewalk Presence	29%		
Curb Ramp Presence	14%		
Crosswalk Presence	14%		
GRADING CATEGORY TOTAL ^[2] (Pedestrian Delay Score * 0.43) + (Sidewalk Presence Score * 0.29) + (Curb Ramp Presence Score * 0.14) + (Crosswalk Presence Score * 0.14)	100%		

Capacity Management and Mobility

Economic Vitality	
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Performance Measure ^[1]	Percentage	Score (out of 3.0)	Rating
Pedestrian Volumes	100%		

[1] Poor = 1.0; **Fair** = 2.0; **Good** = 3.0

[2] Poor = 0 to 1.7; **Fair** = 1.7 < 2.3; **Good** = 2.3 to 3.0

[3] Use these factors to determine Transportation Equity priority level (front)

Safety			
Performance Measure ^[1]	Percentage	Score (out of 3.0)	Rating
Sufficient Crossing Time (Index)	38%		
Pedestrian Crashes	38%		
Pedestrian Signal Phase Type	13%		
Vehicle Travel Speed	13%		
GRADING CATEGORY TOTAL ^[2] (Sufficient Crossing Time [Index] Score * 0.38) + (Pedestrian Crashes Score * 0.38) + (Pedestrian Signal Phase Type Score * 0.13) + (Vehicle Travel Speed Score * 0.13)	100%		

System Preservation

Performance Measure ^[1]	Percentage	Score (out of 3.0)	Rating
Sidewalk Condition	100%		

Transportation Equity Priority^[3]

Area Condition	Yes/No
Low-Income Population ≥ 32.32%	
Minority Population ≥ 28.19%	
More than 6.69% of Population > 75 Years of Age	
More than 16.15% of Households w/o Vehicle	
Within 1/4 Mile of School/College	

Signalized Intersection Notes

Detailed Performance Measure Information

Grading Category	Performance Measure	Features of Analyzed Locations
	Pedestrian Delay	
Capacity	Sidewalk Presence	
Management and Mobility	Curb Ramp Presence	
	Crosswalk Presence	
Economic Vitality	Pedestrian Volumes	
	Sufficient Crossing Time (Index)	
0.5.5	Pedestrian Crashes	
Safety	Pedestrian Signal Presence	
	Vehicle Travel Speed	
System Preservation	Sidewalk Condition	



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Pedestrian Report Card Assessment (PRCA): Non-Signalized Intersection

Grading Categories ^[1]	Score	Rating
Safety		
System Preservation		
Capacity Management and Mobility		
Economic Vitality		

Transportation Equity^[2]

High Priority Area

Moderate Priority Area

Low Priority Area

[1] **Poor** = 0 to 1.7; **Fair** = 1.7 < 2.3; **Good** = 2.3 to 3.0

[2] Low = 0 or 1 Factor; Moderate = 2 or 3 Factors; High = 4 or 5 Factors

Grading Categories: Scoring Breakdown Non-Signalized Intersection

Capacity Management and Mobility			
Performance Measure ^[1]	Percentage	Score (out of 3.0)	Rating
Sidewalk Presence	34%		
Curb Ramp Presence	33%		
Crosswalk Presence	33%		
GRADING CATEGORY TOTAL ^[2] (Sidewalk Presence Score * 0.34) + (Curb Ramp Presence Score * 0.33) + (Crosswalk Presence Score * 0.33)	100%		

Economic Vitality

Performance Measure ^[1]	Percentage	Score (out of 3.0)	Rating
Pedestrian Volumes	100%		

- **[1]** Poor = 1.0; Fair = 2.0; Good = 3.0
- [2] Poor = 0 to 1.7; Fair = 1.7 < 2.3; Good = 2.3 to 3.0
- [3] Use these factors to determine Transportation Equity priority level (front)

Safety			
Performance Measure ^[1]	Percentage	Score (out of 3.0)	Rating
Lanes of Traffic	38%		
Pedestrian Crashes	38%		
Pedestrian Refuge	13%		
Vehicle Travel Speed	13%		
GRADING CATEGORY TOTAL ^[2] (Lanes of Traffic Score * 0.38) + (Pedestrian Crashes Score * 0.38) + (Pedestrian Refuge Score * 0.13) + (Vehicle Travel Speed Score * 0.13)	100%		

System Preservation

Performance Measure ^[1]	Percentage	Score (out of 3.0)	Rating
Sidewalk Condition	100%		

Transportation Equity Priority^[3]

Area Condition	Yes/No
Low-Income Population ≥ 32.32%	
Minority Population ≥ 28.19%	
More than 6.69% of Population > 75 Years of Age	
More than 16.15% of Households w/o Vehicle	
Within 1/4 Mile of School/College	

Non-Signalized Intersection Notes

Detailed Performance Measure Information

Grading Category	Performance Measure	Features of Analyzed Locations
Capacity Management and Mobility	Pedestrian Delay	
	Sidewalk Presence	
	Curb Ramp Presence	
	Crosswalk Presence	
Economic Vitality	Pedestrian Volumes	
Safety	Sufficient Crossing Time (Index)	
	Pedestrian Crashes	
	Pedestrian Signal Presence	
	Vehicle Travel Speed	
System Preservation	Sidewalk Condition	

Appendix B: How to Score PRCA Manuals



How to Score Pedestrian Report Card Assessments (PRCA) Non-Signalized Intersections

Boston Region Metropolitan Planning Organization

Scoring Overview

- Signalized intersections are given a score of 1, 2, or 3 per performance measure
 - 3 points Good Quality
 - 2 points Fair Quality
 - 1 point Poor Quality

- If an element related to a performance measure is missing, give a score of 0
 - Sidewalks
 - Curb Ramps
 - Crosswalks
 - Pedestrian Refuge



Key points for GRADING PURPOSES



Curb Ramps with Detectable Warnings



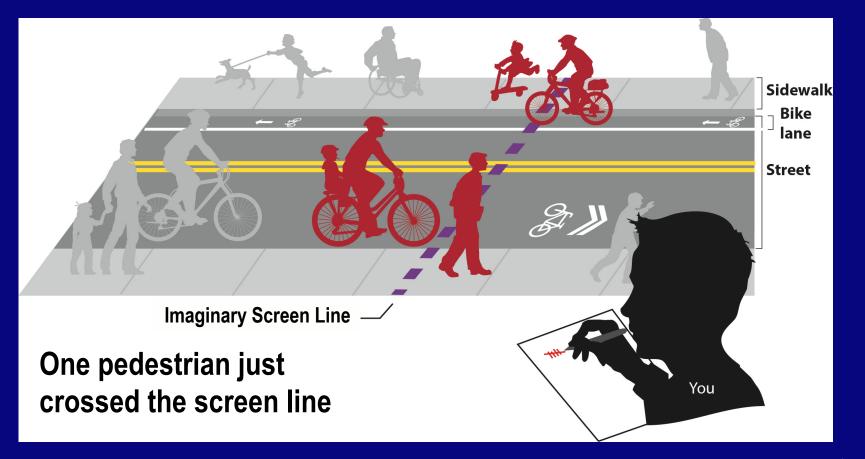


How to Count Pedestrian Volumes

Visualize an imaginary screen line across a path or roadway. Count pedestrians when they cross this line. Counts are conducted in 15-minute intervals, and comprise the total volume of pedestrians traveling in both directions past a given point.



How to Count Pedestrian Volumes





Sidewalk Presence

- Good (3 points)—Intersections with five-foot wide sidewalks at all approaches
- Fair (2 points)—Intersections with five-foot wide sidewalks on at least half of all approaches
- Poor (1 point)—Intersections with five-foot wide sidewalks at less than half of all approaches or with sidewalks narrower than five feet
- Not present (0 points)—Intersections without sidewalks



Capacity Management and Mobility

Curb Ramp Presence

- Good (3 points)—Intersections where each approach has curb ramps with detectable warnings for each crossing
- Fair (2 points)—Intersections where two or three approaches have curb ramps with detectable warnings for each crossing
- Poor (1 point)—Intersections where there are fewer than two approaches that have curb ramps with detectable warnings for each crossing
- Not present (0 points)—Intersections without curb ramps



Capacity Management and Mobility

Crosswalk Presence

- Good (3 points)—Intersections with crosswalks at all approaches
- Fair (2 points)—Intersections with crosswalks at two or three approaches
- Poor (1 point)—Intersections with crosswalks on fewer than two approaches
- Not present (0 points)—Intersections without crosswalks



Pedestrian Volumes

- Good (3 points)—Intersections traversed by at least 60 pedestrians per hour
- Fair (2 points)—Intersections traversed by 5 to 60 pedestrians per hour
- Poor (1 point)—Intersections traversed by fewer than five pedestrians per hour



Lanes of Travel

- Good (3 points)—Intersections where pedestrians cross one lane of traffic at a time
- Fair (2 points)—Intersections where pedestrians cross two travel lanes, each for a different direction of travel
- Poor (1 point)—Intersections where pedestrians cross two or more lanes in the same direction of travel





Pedestrian Crashes

Most recent available five-year period

- Good (3 points)—Intersections NOT located in a Highway Safety Improvement Program (HSIP) Pedestrian Crash Cluster
- Fair (2 points)—Intersections with one pedestrian crash
- Poor (1 point)—Intersections with two pedestrian crashes
- Dangerous (0 points)—Intersections located in a HSIP Pedestrian Crash Cluster or with three or more pedestrian crashes

Contact the Boston Region MPO to learn if your intersection has been the site of pedestrian crashes and if it is an HSIP pedestrian crash cluster location.





Pedestrian Refuge

- Good (3 points)—Intersections where pedestrians cross one lane of traffic at a time
 - May be due to inherent intersection geometry or a median or island separating lanes of travel
- Fair (2 points)—Intersections where a median or island prevents pedestrians from crossing more than two lanes of traffic
- Poor (1 point)—Intersections where pedestrians cross more than two lanes of traffic without refuge
- Not present (0 points)—Intersections without a pedestrian refuge





Vehicle Travel Speed

- Good (3 points)—Intersections where average vehicle travel speeds are less than 25 miles per hour (mph)
- Fair (2 points)—Intersections where average vehicle travel speeds are between 25 mph and 35 mph
- Poor (1 point)—Intersections where average vehicle travel speed is 35 mph or more

Contact the Boston Region MPO to find average vehicle travel speeds at your intersection.





Sidewalk Condition

- Good (3 points)—Intersections with sidewalks in good condition at all approaches
- Fair (2 points)—Intersections with sidewalks in good condition at one to three approaches
- Poor (1 point)—Intersections without sidewalks in good condition at any approach
- Not present (0 points)—Intersections without sidewalks



Transportation Equity Factor

Use the PRCA Interactive Database OR Contact the Boston Region MPO to fill out this section of the PRCA:

> cclaude@ctps.org Casey Claude Bicycle and Pedestrian Program Manager



How to Score Pedestrian Report Card Assessments (PRCA) *Roadway Segments*

Boston Region Metropolitan Planning Organization

Scoring Overview

 Roadway segments are given a score of 1, 2, or 3 per performance measure

- 3 points Good Quality
- 2 points Fair Quality
- 1 point Poor Quality

 If an element related to a performance measure is missing, give a score of 0

- Sidewalks
- Crosswalks
- Pedestrian/Vehicle Buffer



Key points for GRADING PURPOSES



Curb Ramps with Detectable Warnings



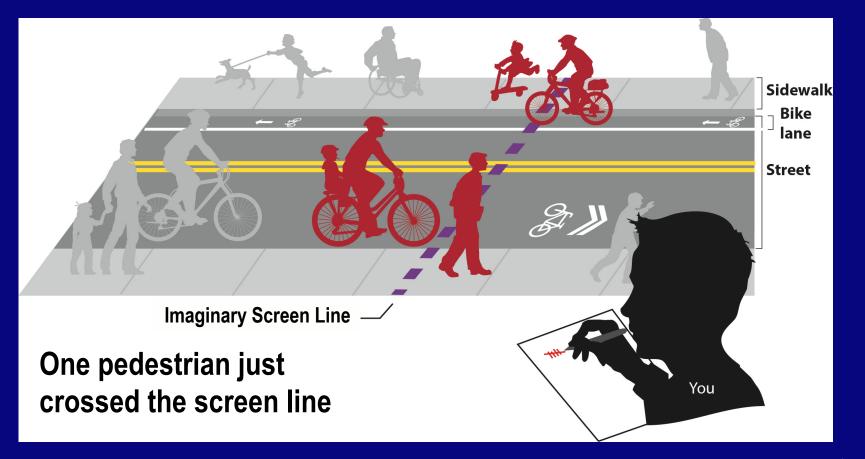


How to Count Pedestrian Volumes

Visualize an imaginary screen line across a path or roadway. Count pedestrians when they cross this line. Counts are conducted in 15-minute intervals, and comprise the total volume of pedestrians traveling in both directions past a given point.



How to Count Pedestrian Volumes





Sidewalk Presence

- Good (3 points)—Roadway segments with five-foot wide sidewalks on both sides of the street
- Fair (2 points)—Roadway segments that have fivefoot wide sidewalks on one side of the street
- Poor (1 point)—Roadway segments with sidewalks less than five-feet wide or sidewalks lacking continuity
- Not present (0 points)—Roadway segments without sidewalks



Crosswalk Presence

- Good (3 points)—Roadway segments with a minimum of 10 crosswalks per mile
- Fair (2 points)—Roadway segments with seven to nine crosswalks per mile
- Poor (1 point)—Roadway segments with fewer than seven crosswalks per mile
- Not present (0 points)—Roadway segments without crosswalks



Walkway Width

- Good (3 points)—Roadway segments with sidewalks along both sides that measure at least five feet wide
- Fair (2 points)—Roadway segments with sidewalks on one side that measure at least five feet wide
- Poor (1 point)—Roadway segments with less than half of sidewalks measuring at least five feet wide
- Not present (0 points)—Roadway segments without sidewalks



Pedestrian Volumes

- Good (3 points)—Roadway segments traversed by at least 60 pedestrians per hour
- Fair (2 points)—Roadway segments traversed by 5 to 60 pedestrians per hour
- Poor (1 point)—Roadway segments traversed by fewer than 5 pedestrians per hour



Adjacent Bicycle Accommodations

Do not use if peak travel hour bicycle counts are available

- Good (3 points)—Roadway segments with a designated bicycle travel lane
- Fair (2 points)—Roadway segments with sharrows or extra wide shoulders
- Poor (1 point)—Roadway segments without space for bicycle travel



Bicycle Volumes

Use if peak travel hour bicycle counts are available

- Good (3 points)—Roadway segments with more than 60 bicyclists per hour
- Fair (2 points)—Roadway segments with between 5 and 60 bicyclists per hour
- Poor (1 point)—Roadway segments with fewer than five bicyclists per hour



Pedestrian Crashes

Most recent available five-year period

- Good (3 points)—Roadway segments NOT located in a Highway Safety Improvement Program (HSIP) Pedestrian Crash Cluster
- Fair (2 points)—Roadway segments with one pedestrian crash
- Poor (1 point)—Roadway segments with two pedestrian crashes
- Dangerous (0 points)—Roadway segments located in a HSIP Pedestrian Crash Cluster or with three or more pedestrian crashes

Safety

Contact the Boston Region MPO to learn if your intersection has been the site of pedestrian crashes and if it is an HSIP pedestrian crash cluster location.



Pedestrian/Vehicle Buffer

Total distance between vehicular traffic and pedestrian traffic

- Good (3 points)—Roadway segments with at least a 10foot buffer
- Fair (2 points)—Roadway segments with a 5- to 10-foot buffer
- Poor (1 point)—Roadway segments with buffers narrower than five feet wide
- Not present (0 points)—Roadway segments without buffers





Vehicle Travel Speed

- Good (3 points)—Roadway segments where average vehicle travel speeds are less than 25 miles per hour (mph)
- Fair (2 points)—Roadway segments where average vehicle travel speeds are between 25 mph and 35 mph
- Poor (1 point)—Roadway segments where average vehicle travel speed is 35 mph or more

Contact the Boston Region MPO to find average vehicle travel speeds at your intersection.





Sidewalk Condition

- Good (3 points)—Roadway segments with sidewalks in good condition on both sides of the street
- Fair (2 points)—Roadway segments with sidewalks in good condition on one side of the street
- Poor (1 point)—Roadway segments with less than half of sidewalks in good condition
- Not present (0 point)—Roadway segments without sidewalks



System Preservation

Transportation Equity Factor

Use the PRCA Interactive Database OR Contact the Boston Region MPO to fill out this section of the PRCA:

> cclaude@ctps.org Casey Claude Bicycle and Pedestrian Program Manager



How to Score Pedestrian Report Card Assessments (PRCA) Signalized Intersections

Boston Region Metropolitan Planning Organization

Scoring Overview

- Signalized intersections are given a score of 1, 2, or 3 per performance measure
 - 3 points Good Quality
 - 2 points Fair Quality
 - 1 point Poor Quality

- If an element related to a performance measure is missing, give a score of 0
 - Pedestrian Signals
 - Sidewalks
 - Curb Ramps
 - Crosswalks



Key points for GRADING PURPOSES



Curb Ramps with Detectable Warnings



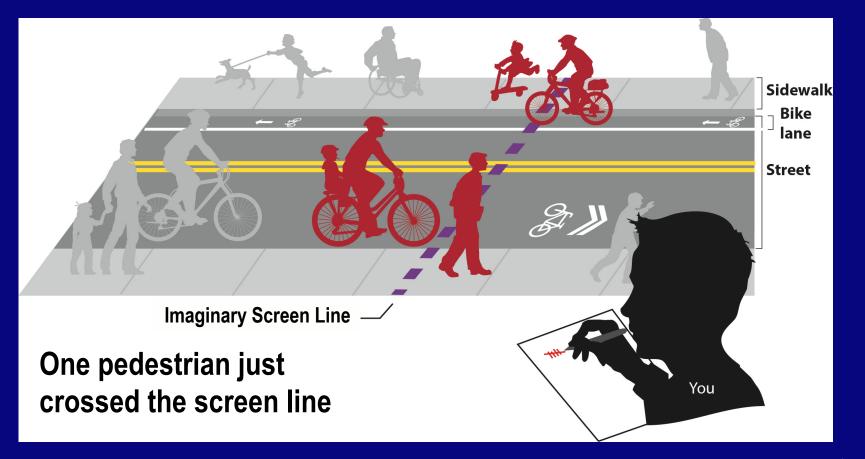


How to Count Pedestrian Volumes

Visualize an imaginary screen line across a path or roadway. Count pedestrians when they cross this line. Counts are conducted in 15-minute intervals, and comprise the total volume of pedestrians traveling in both directions past a given point.



How to Count Pedestrian Volumes





Pedestrian Delay

Pedestrian Delay = <u>0.5 (Cycle Duration – WALK Duration for pedestrians)</u>² Cycle Duration (seconds)

- Good (3 points)—Intersections with less than a 20 second delay
- Fair (2 points)—Intersections with a delay between 20 and 40 seconds
- Poor (1 point)—Intersections with longer than a 40 second delay
- Not present (0 points)—Signalized intersections without pedestrian signals



Capacity Management and Mobility

Sidewalk Presence

- Good (3 points)—Intersections with five-foot wide sidewalks at all approaches
- Fair (2 points)—Intersections with five-foot wide sidewalks on at least half of all approaches
- Poor (1 point)—Intersections with five foot-wide sidewalks at less than half of all approaches or with sidewalks narrower than five feet
- Not present (0 points)—Intersections without sidewalks



Capacity Management and Mobility

Curb Ramp Presence

- Good (3 points)—Intersections where each approach has curb ramps with detectable warnings for each crossing
- Fair (2 points)—Intersections where two or three approaches have curb ramps with detectable warnings for each crossing
- Poor (1 point)—Intersections where there are fewer than two approaches that have curb ramps with detectable warnings for each crossing
- Not present (0 points)—Intersections without curb ramps



Capacity Management and Mobility

Crosswalk Presence

- Good (3 points)—Intersections with crosswalks at all approaches
- Fair (2 points)—Intersections with crosswalks at two or three approaches
- Poor (1 point)—Intersections with crosswalks on fewer than two approaches
- Not present (0 points)—Intersections without crosswalks



Pedestrian Volumes

- Good (3 points)—Intersections traversed by at least 60 pedestrians per hour
- Fair (2 points)—Intersections traversed by 5 to 60 pedestrians per hour
- Poor (1 point)—Intersections traversed by fewer than five pedestrians per hour



Sufficient Crossing Time Index

Sufficient Crossing Time Index = <u>Length of Crossing/3.5 feet per second</u>

Duration of the Pedestrian Change Interval + Duration of the Red Clearance Interval

- Good (3 points)—Intersections with a sufficient crossing time index greater than 1.3
- Fair (2 points)—Intersections with a sufficient crossing time index from 1.0 to 1.3
- Poor (1 point)—Intersections with a sufficient crossing time index less than 1.0
- Not present (0 points)—Signalized intersections without pedestrian signals

Satetv



Pedestrian Crashes

Most recent available five-year period

- Good (3 points)—Intersections NOT located in a Highway
 Safety Improvement Program (HSIP) Pedestrian Crash Cluster
- Fair (2 points)—Intersections with one pedestrian crash
- Poor (1 point)—Intersections with two pedestrian crashes
- Dangerous (0 points)—Intersections located in a HSIP Pedestrian Crash Cluster or with three or more pedestrian crashes

Satetv

Contact the Boston Region MPO to learn if your intersection has been the site of pedestrian crashes and if it is an HSIP pedestrian crash cluster location.



Pedestrian Signal Phase Type

- Good (3 points)—Intersections with concurrent pedestrian signals accompanied by No Right Turn on Red signage and/or a Leading Pedestrian Interval (LPI)
- Fair (2 points)—Intersections with an exclusive pedestrian signal
- Poor (1 point)—Intersections with concurrent pedestrian signals that do not include No Right Turn on Red signage or a LPI
- Not present (0 points)—Signalized intersections without pedestrian signals

Safety



Vehicle Travel Speed

- Good (3 points)—Intersections where average vehicle travel speeds are less than 25 miles per hour (mph)
- Fair (2 points)—Intersections where average vehicle travel speeds are between 25 mph and 35 mph
- Poor (1 point)—Intersections where average vehicle travel speed is 35 mph or more

Contact the Boston Region MPO to find average vehicle travel speeds at your intersection.

Safetv



Sidewalk Condition

- Good (3 points)—Intersections with sidewalks in good condition at all approaches
- Fair (2 points)—Intersections with sidewalks in good condition at one to three approaches
- Poor (1 point)—Intersections without sidewalks in good condition at any approach
- Not present (0 points)—Intersections without sidewalks



Transportation Equity Factor

Use the PRCA Interactive Database OR Contact the Boston Region MPO to fill out this section of the PRCA:

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