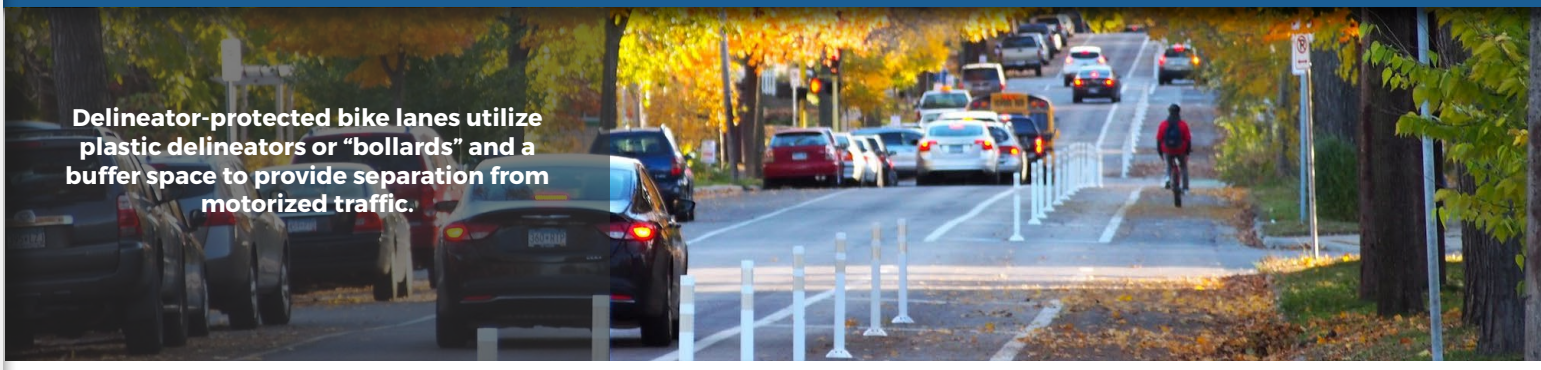
3.4C Delineator-protected bike lanes



Delineator-protected bike lanes utilize plastic delineators or "bollards" and a buffer space to provide separation from motorized traffic.

INTRODUCTION

Delineator-protected bike lanes utilize plastic delineators or "bollards" and a buffer space between the bikeway and travel or parking lane to provide physical separation from motorized traffic. Delineator-protected bike lanes should only be used with street retrofit projects; use a more robust protected bike lane type with vertical protection with permanent materials for street reconstruction projects.

Figure 3.4C.1:
Delineator-protected bike lane dimensions table

	Bike Lane (widths include gutterpan)			Buffer		Delineator		
Delineator-Protected Bike Lane	Preferred Width (ft)	Constrained Minimum Width (ft)	Maximum Width (ft)	Minimum Width (ft)	Maximum Width (ft)	Minimum Spacing (ft)	Maximum Spacing (ft)	Minimum Lateral Clearance (ft)
One-Way	6-7	5.5[a]	8	2[b]	None	10[c]	30′	1
Two-Way	12	8	14					

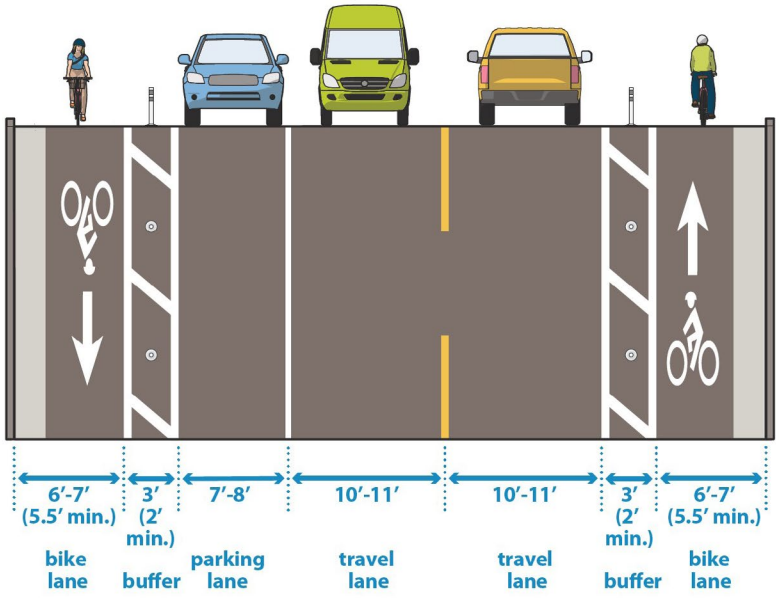
a Constrained minimum widths should only be used for short stretches in constrained right-of-way where every consideration has been taken to narrow roadway street zones. Constrained minimum widths are inclusive of the gutterpan.

b If buffer is adjacent to a parking lane, 3 or more feet is recommended.

c < 10′ delineator spacing may be used at intersection and conflict zone approaches where vehicular encroachment is anticipated.

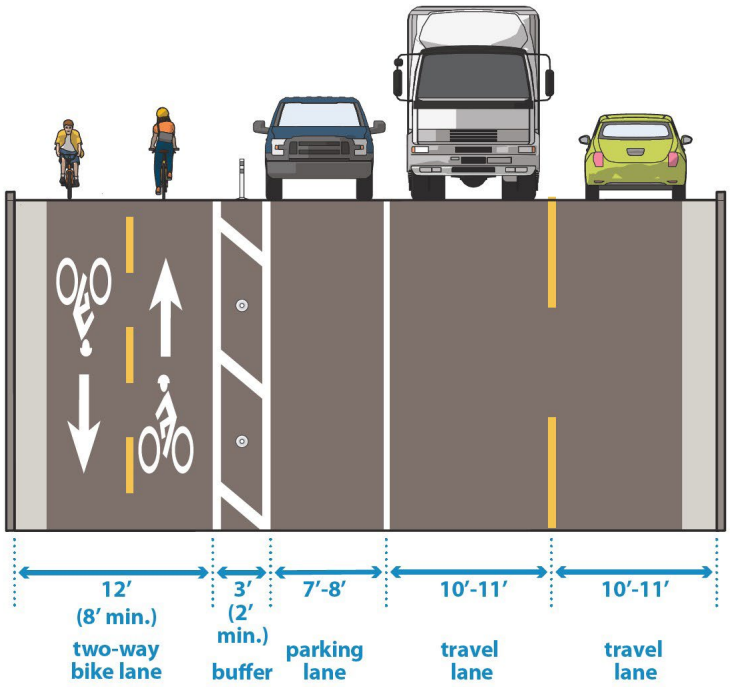
Figure 3.4C.2:
Delineator-protected bike lane dimensions graphic

1-Way Delineator Protected Bike Lanes



Preferred widths shown - see chart for more information

2-Way Delineator Protected Bike Lanes



Preferred widths shown - see chart for more information

DESIGN CONSIDERATIONS

A. Operation	Delineator-protected bike lanes may be designed for one-way or two-way bicycle traffic.
B. Gutter pan considerations	Delineator-protected bike lanes directly adjacent to the curb should generally include a minimum of 4 feet of smooth, ridable surface, excluding any adjacent gutter pan. In very constrained right of way where every consideration has been taken to narrow roadway street zones, 3.5' of smooth, ridable surface can be used for short stretches.
C. Buffer width	3' or wider buffers between the bike lane and traffic lanes are preferred. 2' buffers can be used for very space-constrained environments provided the location is not adjacent to a parking lane and the bike lane and buffer area generally maintain a minimum combined width of 8' (including the gutter).
D. Combined dimensions with parking	The total minimum combined dimensions of the bike lane, buffer, and parking lane for a one-way parking protected bikeway is: **1.** 16' along streets with lower traffic volumes and less parking demand, with 15' allowed for very short stretches. **2.** 17' along busier streets to prevent parking encroachments in the bike lane.
E. Delineator spacing	Delineators should be centered in the buffer area and spaced at increments between 10' and 30,' with closer spacing where vehicular encroachment into the bike lane is anticipated.
F. Bike lane width	Wider bike lanes are preferred in environments with higher bicycle volumes to support passing.
G. Buffer width	Wider buffers are preferred on corridors with a high percentage of heavy vehicles, established loading zones, and where adjacent parking utilization and/or turnover is high.
H. Parking lane considerations	**1.** When a parking lane is located on the same side of the street as a delineator-protected bike lane, the parking lanes should be located between the bike lane buffer and travel lane, sometimes referred to as "floating" parking. **2.** To prevent doors from encroaching into the bike lane, the buffer between the bike lane and parking lane is recommended to be a minimum of 3' to prevent doors from opening into the bike lane operating area, although 2.5'-wide buffers can be considered in for short stretches in constrained right of way where every consideration has been taken to narrow roadway street zones.
I. ADA considerations	Designers should implement strategies to support ADA access to parking spots, bus stops, and Metro Mobility drop off points along protected bike lanes. Additional details will be forthcoming in a future update to the Street Design Guide.
J. Intersection guidance	See also bikeway intersection design guidance.