

**8820.9951 MINIMUM DESIGN STANDARDS, ON-ROAD BICYCLE FACILITIES FOR URBAN; RECONDITIONING PROJECTS.**

The bicycle facility design standard in this part applies when the road authority has determined that the roadway will be specifically designed to include an on-road bicycle facility.

Reconditioning projects for urban roadways must meet or exceed the minimum dimensions indicated in the following design chart.

Number of Through Lanes and Present Traffic Volume	Design Speed	Lane Width (a)	Parking Lane Width (d)	Proposed Structural Design Strength	Bikeway Design	
	(mph)	(feet)	(feet)	(tons)	(ADT)	(feet)
Two-Lane with ADT <10,000	25-30	10-11 (b)-(c)	7-8	9 (e)	<1,000	SL
					1,000-5,000	WOL 14-16 or BL 5-6
					5,000-10,000	BL 5-6
	35-45	10-11 (b)-(c)	7-8	9 (e)	<500	SL or BL 5-6
					500-10,000	BL 5-6 or PS 8
50 or over	11-12	8-10	9 (e)	<10,000	BL 5-6 or PS 8 or SUP	
Two-Lane With ADT >10,000 (a)	25-30	10-11 (b)-(c)	7-10	9	>10,000	BL 5-6
	35-45	10-11 (b)-(c)	7-10	9	>10,000	BL 5-6 or PS 8 or SUP
	50 or over	11-12	Not allowed	9	>10,000	BL 6 or PS 8-10 or SUP
Four-Lane with ADT <10,000	25-30	10-11 (b)-(c)	7-8	9 (e)	<10,000	WOL 14-16 or BL 5-6
	35-45	10-11 (b)-(c)	7-8	9 (e)	<10,000	BL 5-6
	50 or over	11-12	8-10	9 (e)	<10,000	BL 5-6 or PS 8 or SUP
Four-Lane with ADT >10,000	30-45	10-11 (c)	7-10	9	>10,000	BL 6 or PS 8-10 or SUP

	50 or over	11-12	Not allowed	9	>10,000	BL 6 or PS 8-10 or SUP
Six-Lane		11-12	Not allowed	9	Not allowed	SUP

(SL = shared lane; BL = bicycle lane; WOL = wide outside lane; PS = paved shoulder; SUP = shared use path)

Engineering judgment should be used to choose a lane-width, on-road bicycle facility, or shoulder width dimension other than the widths indicated in the chart. Factors to consider include safety, speed, population/land use, benefit/cost analysis, traffic mix, peak hourly traffic, farm equipment, environmental impacts, terrain limitations, bicycle traffic, pedestrian traffic, on-street parking, intersection and driveway spacing, rights-of-way constraints, vehicle turn lane configuration, sight distance, sight lines, bus routes, other nonmotorized uses, functional classification, or other factors. Dimensions less than those indicated in the chart require a variance in accordance with parts 8820.3300 and 8820.3400.

(a) Eleven feet minimum is required on four-lane, undivided facilities. Twelve feet should be considered in industrial areas.

(b) Ten feet may be considered where truck and bus volumes are relatively low, rights-of-way are constrained, and design speeds are 35 mph or less.

(c) A combination of all minimum widths for the driving lane, on-road bicycle lane, and parking lane is only permissible with a variance.

(d) In determining the parking lane width, the roadway ADT and the vehicle mix shall be taken into consideration. In commercial or industrial areas, the minimum parking lane width is eight feet.

(e) When ADT is less than 5,000, seven-ton axle load structural design strength is permissible.

A minimum curb reaction of one foot shall be provided unless on-street parking, a bicycle facility, or a wide outside lane are provided adjacent to the curb. The dimensions for wide outside lanes include the curb reaction distance. When a raised median is included in the design of the two-way roadway, a one-foot minimum curb reaction distance to the median is required on either side of the median. Minimum median width is four feet.

For ADT less than 150, the widths of bridges to remain must be at least the sum of the lanes. For ADT greater than or equal to 150, the widths of bridges to remain must be at least the sum of the lanes plus one-half the sum of the shoulders, parking lane, and curb reaction distance. Bridges to remain must have a load rating factor of at least 0.75 using the AASHTO Manual for Bridge Evaluation, LRFR (load and resistance factor rating) for inventory level.

**Statutory Authority:** *MS s 14.386; 162.02; 162.155*

**History:** *37 SR 697; 42 SR 485*

**Published Electronically:** *November 20, 2017*