

NW Broadway Ramp Improvements

Summary: This project, by increasing separation between people bicycling and driving, would improve conditions for bicycling on a key entry corridor from North and Northeast Portland into Portland’s Central Business District. The project consists of removing an outbound travel lane on NW Broadway from NW Hoyt Street to Lovejoy. That space would be repurposed to:

- Widen the existing 5’ standard bicycle lane to a 10’ buffered bicycle lane
- Widen the travel lanes from current 9.5’ to 11’
- Improve the turning radius at the Lovejoy-Broadway intersection.

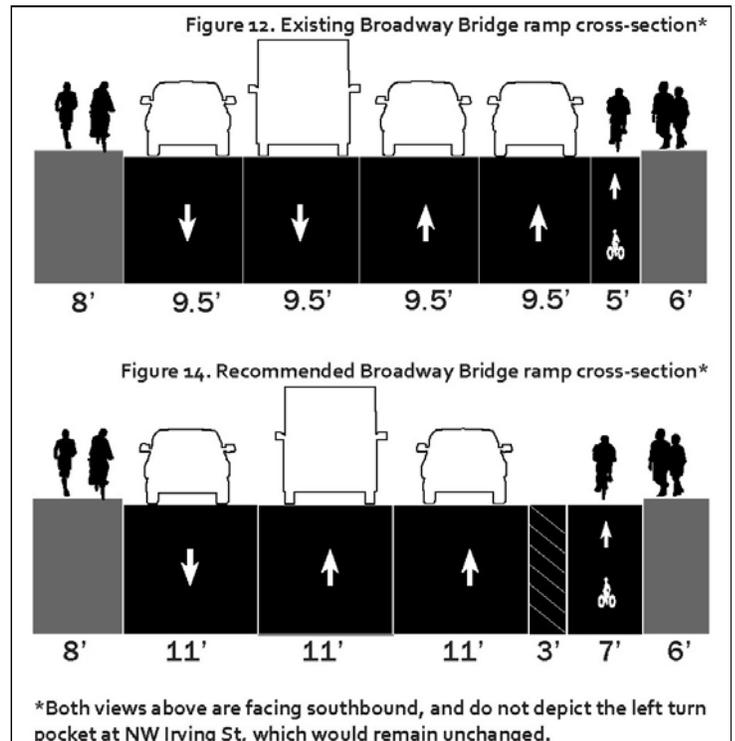
Because the Broadway Ramp from Hoyt to Lovejoy is fed by only one travel lane analysis demonstrates no drop in level of service for the movement of automobiles.

The total estimated cost for this re-stripping project is \$30,000.

This project was identified in the *Pearl District Access and Circulation Plan*, which was adopted by City Council on June 13, 2012.

Need. As a major entry point into the Downtown and Pearl District, the Broadway Bridge has seen considerable growth in bicycle traffic since 2005. Over that period, the number of bicycle trips on the bridge have increased from 2,081 daily trips to a peak of more than 5,200 daily trips in 2010. The Portland Bicycle Plan for 2030 recognized its importance in the city’s network by giving it the highest bicycle functional classification. This is a bikeway that must work well for all people bicycling. Unfortunately existing conditions create a situation that is uncomfortable for many. This is the result of the narrow width of the bicycle lane, the narrowness of the adjacent travel lane and the tight curve that is negotiated at the same time by people bicycling and people driving. Figure 1 shows the existing and proposed cross-section of the Broadway Ramp. Current practice in bikeway design would not support the existing configuration as this combination of narrow lanes, tight turns and movement occurring at the same time is recognized to produce

Figure 1. Before and after sections of NW Broadway Ramp. Taken from the “*Pearl District Access and Circulation Plan.*”



Scenario	Intersection Delay (per vehicle)	Intersection LOS	Volume /Capacity
Existing Conditions	14.2 s	B	0.71
With 1 northbound lane	15 s	B	0.73

uncomfortable conditions for all roadway users. Figure 2 is a schematic that shows how buffered lanes, by creating more separation between people bicycling and people driving (large) vehicles, creates more comfortable conditions for all road users.

Analysis. The northbound travel lanes on the Broadway Ramp are fed by only one travel lane, as the configuration of NW Broadway north from Burnside is one lane northbound and two lanes southbound. This project will extend that configuration to the Broadway bridgehead, at which point it will widen back to two (eastbound) lanes on the bridge. Analysis of the crux of the design—the intersection of Broadway and Lovejoy, which was analyzed at peak conditions—shows no appreciable impact on motor vehicle flow, as shown in Table 1.

Additional Steps. Explore the possibility of pro-time parking on the west side of NW Broadway from Glisan to Burnside during the morning peak hour to provide additional bikeway width during the time of highest demand.

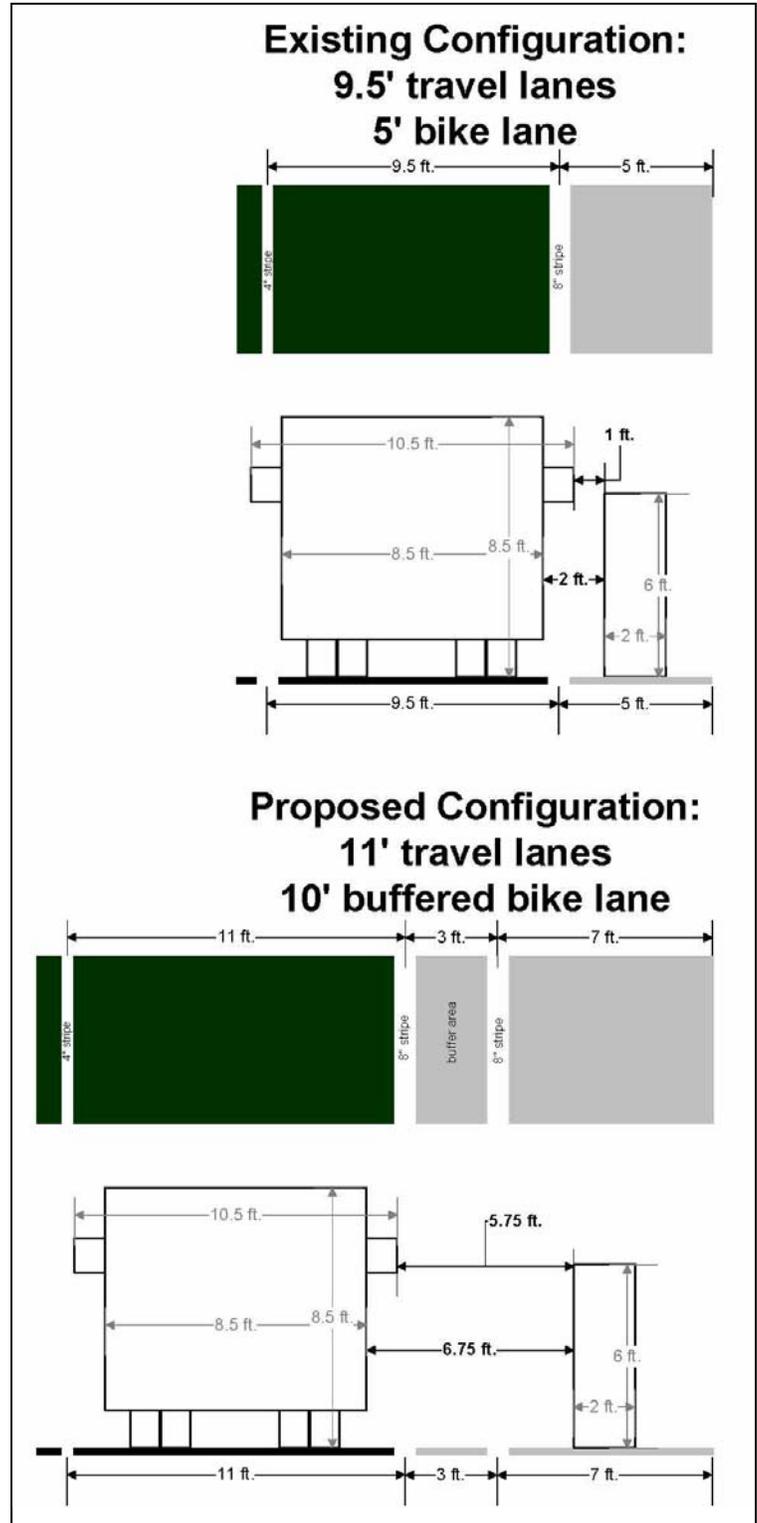


Figure 2. Greater separation between bicycles and (large) vehicles with buffered lanes create more comfortable conditions for all roadway users.