

Appendix G. StreetPlan Analysis



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A critical component of bikeway analysis was the use of Alta Planning + Design’s ‘StreetPlan’ model. The StreetPlan model is a method to determine how an existing roadway cross section can be modified to include bike lanes. Assuming acceptable minimum widths for each roadway element, the model analyzes a number of factors to determine strategies to retrofit bike lanes on each surveyed roadway segment. Factors used in this analysis include:

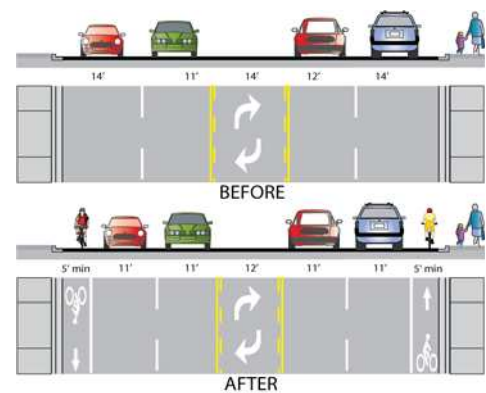
- Current roadway width
- Raised or painted median
- Number and width of travel lanes
- Presence and number of turn lanes and medians
- Location and utilization of on-street parking
- One-way vs. two-way traffic

In some cases, the retrofit is simple and only requires the addition of a bike lane in readily available roadway space while other circumstances may be more challenging and require the narrowing of a travel lane, the removal of on-street parking or a more detailed engineering study. This model is useful as it clearly illustrates locations where projects can be completed easily and locations where adding bike lanes may be challenging. Retaining a uniform roadway configuration throughout a corridor can simplify travel for motorists and cyclists alike, creating a safer and more comfortable experience for all users.

For the model, acceptable minimum roadway dimensions were set at the following widths provided by the County of Los Angeles:

- Travel lane width:^v 11 feet
- Right turn lane width: 12 feet
- Left or Center Turn Lane width: 10 feet
- Parking lane width: 8 feet

In running the StreetPlan model, multiple strategies for accommodating bike lanes were possible for many segments of roadway. During the first public workshop, approximately 100 members of the public were given the strategies below for retrofitting bike lanes within existing County collectors and arterials. The participants were asked to rate each strategy according to their level of support. The following section lists the options for retrofitting bike lanes given the physical curb-to-curb roadway constraints found in the County. These options were analyzed in this order through the public workshop feedback and project steering committee feedback. Not all of the options below were possible strategies for all segments.



^v The County will consider reduced travel lane widths of 10 feet on a case by case basis and as recommended using engineering judgment considering such factors as vehicle speeds, and truck and bus volumes.

Bike Lanes Fit With Existing Roadway Configuration – In this option, enough surplus road space exists to simply add the bike lane stripes and stencils without impacting the number of lanes or configuration of the roadway. This is by far the most desirable and easily implemented option available.

Narrow Travel Lanes and/or Parking Lanes – In this option bike lanes can be added by simply adjusting wide travel lanes or parking lanes within the established minimums presented above. As before, no modifications to the number of total lanes are required.

Remove Redundant or Unneeded On-Street Parking – In this option, unnecessary on-street parking on one side of the street is removed to create space for bike lanes. Acceptable situations for this scenario include collector or arterial roadways that pass by back fences of homes rather than frontages, or areas that have large surface parking lots adjacent to existing on-street parking.

Remove Center Turn Lane – In this option, the center turn lane is removed to provide road space for the addition of bicycle lanes. This strategy preserves all on-street parking. The turn lane can be restored at intersections if needed. This option will have minor impacts to turning vehicles mid-block, however this situation already exists in several locations within Los Angeles County and is common throughout the country.

Remove On-Street Parking – In this option, on-street parking is removed on one side of the road even if it may currently be utilized in residential or commercial areas. This option is seen as a less desirable option and may only be considered as a last resort in short sections to maintain bike lane continuity. A full parking study should be conducted to determine if excess parking capacity exists before making changes to the roadway configuration.

Bike Lanes Will Not Fit – In this last case, the existing roadway geometry will not allow for the addition of bike lanes. Either a bike route or major reconstruction of the roadway may be necessary for bikeway continuity.

