



April 15, 2025

Mr. Clay Thistle
City of Healdsburg
401 Grove Street
Healdsburg, CA 95448

DRAFT March Avenue Striping Design Alternatives

Dear Mr. Thistle;

As requested, W-Trans has prepared an analysis of striping design alternatives for March Avenue from Healdsburg Avenue to University Street in the City of Healdsburg. The purpose of this letter is to address the feasibility of parking-protected bike lanes on March Avenue, and if not feasible, recommend other alternatives for achieving enhanced bicycle facilities.

Design Criteria

Three main sources were used to design the striping on March Avenue including the *Urban Bikeway Design Guide*, Third Edition, National Association of City Transportation Officials (NACTO), Design *Information Bulletin 94 – Complete Streets: Contextual Design Guidance*, 2024, Caltrans, and the *California Manual on Uniform Traffic Control Devices (CA-MUTCD)*, 2024.

Based on a combination of NACTO, Caltrans and engineering judgement the following items were prioritized.

- While no longer recommended by NACTO or Caltrans, gutters have historically been included in the design width of the bike lane in Healdsburg and Sonoma County. As the gutter is often avoided by cyclists due to the non-uniform nature, and that area can be utilized more effectively by parking, gutters will not be considered a part of the bike lane widths.
- According to Caltrans, bike lanes should be either four to seven feet wide when adjacent to buffers or five to seven feet wide when adjacent to curbs or parked vehicles. NACTO recommends that bike lanes have a “rideable width” of 6.5 to 7 feet, which can include a rideable buffer.
- Should a bike lane be protected by a parking lane, there must be a 2-foot buffer between the bike lane and parking lane to accommodate the swing of a car door.
- In favor of increased rideability of bike facilities, parking lane widths can be reduced from eight to seven-and-a-half feet. Parking lanes shall not be any smaller than seven-and-a-half feet as, in practice, vehicles park in the adjacent bike lanes/buffers when given only seven feet of parking space.
- Per the City of Healdsburg preferences, vehicle lanes should be kept to a width of 11 feet to support transit, emergency vehicle, and truck uses.

Existing Conditions

Currently March Avenue has a posted speed limit of 30 miles per hour (mph), with a planned reduction to 25 mph, and an average daily traffic volume of 3,100. According to NACTO this will be considered a low-speed, low-volume roadway. This roadway is classified as a collector according to the City of Healdsburg’s General Plan. As shown in Plate 1, there is currently an eleven-foot travel lane, six-foot bike lane and an eight-foot parking lane which includes the two-foot gutter in each direction.



Plate 1: March Avenue – Existing Conditions

Design Alternatives

In response to comments from the City Council and the public, alternative design solutions for March Avenue including parking-protected bike lanes were explored; two alternatives have been provided below. It is noted that parking-protected bike lanes cannot be accommodated on both sides of March Avenue as the absolute minimum widths needed would be two feet for the gutter, five feet for the bike lane, two feet for the buffer, seven-and-a-half feet for the parking lane and 11 feet for travel lanes in either direction, or a total of 55 feet. This exceeds the 50-foot width of the street by five feet.

Alternatives including a two-way cycle track were reviewed but were deemed infeasible due to the substantial cost of connecting the new cycle track to adjacent bike lane facilities. To connect a two-way cycle track to the intersection of Healdsburg Avenue/ March Avenue-Dry Creek Road modification of the existing traffic signal would be required to transition the bicycles that are riding against traffic to the other side of the roadway. Parking would potentially need to be eliminated adjacent to driveway entrances to provide sufficient visibility of the protected bike lane.

Alternative 1 – Parking Protected Bike Lane and Buffered Bike Lane

To accommodate a single parking-protected bike lane, Alternative 1 was created which includes 2-foot gutter, 5-foot-wide bike lanes, 3-foot buffers, 11-foot vehicle lanes and an 8-foot parking lane on one side. This alternative is shown in Plate 2. Parking would need to be prohibited on either the north side, with approximately 65 spaces being eliminated, or on the south side, resulting in the loss of approximately 70 parking spaces. Based on field observations, it was noted that parking is heavily used along March Avenue, so any loss of parking would result in vehicles being parked illegally or diverting to surrounding neighborhoods. Parking would also potentially need to be eliminated adjacent to driveway entrances to provide sufficient visibility of the protected bike lane.



Plate 2: March Avenue – Alternative 1

Alternative 2 – Buffered Bike Lanes

Due to the negative effects it would have on adjacent neighborhoods if parking were eliminated on one side of March Avenue, Alternative 2 was created. This alternative not only accomplishes all the priorities above, but also adds a separation between the vehicle lane and the travel lane which does not currently exist on March Avenue. It should be noted that there are differing guidance on the location of the placement of the buffer as NACTO states the buffer should be placed between the bike lane and the parking lane to provide room for doors on parked vehicles to swing open; however, with this configuration the cyclist is closer to the vehicle travel lanes. Per the Caltrans guidelines, the buffer should be placed between the vehicle lane and the bike lane as shown in Alternative 2. Due to the nature of March Avenue, and the fact that it is the direct route for ambulances, having the buffer between the vehicle lane and bike lane as shown in Alternative 2 (Plate 3) is recommended.



Plate 3: March Avenue – Alternative 2

Comparison of Alternatives

Based on the cross-sections shown above, a comparison of how well each alternative meets the project goals was prepared, as shown in Table 1.

Table 1 – Comparison of Alternatives			
Goal	Existing Conditions	Alternative 1	Alternative 2
1. Parking on Roadway	Both Sides	One Side	Both Sides
2. Bike Lane Width	6'	5'	4.5'
<i>Buffer width</i>	-	3'	2'
<i>Unallocated Gutter width</i>	-	2'	-
3. Parking Lane Width	8'	8'	7.5'
4. Vehicle Lane Width	11'	11'	11'

Conclusion and Recommendations

As parking-protected bike lanes are not feasible and eliminating half the parking would result in undesirable effects on adjacent neighborhoods and illegal parking, the best way to protect bike lanes on March Avenue would be the implementation of Alternative 2. This option is recommended as it will provide greater separation between cyclists and vehicle traffic than exists today while retaining the on-street parking, which is heavily utilized.

Thank you for giving W-Trans the opportunity to provide these services. Please call if you have any questions.

Sincerely,

Allison C. Moser, CE, TE
Traffic Engineer

Dalene J. Whitlock, CE, TE, PTOE
Senior Principal

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