

### REPORT TO COUNCIL

#### **SUBJECT**

New Green Bike Lanes Implementation Standards (Information Only)

#### **BACKGROUND**

On April 15, 2011, the U.S. Department of Transportation Federal Highway Administration issued a Manual of Uniform Traffic Control Devices (MUTCD) Interim Approval (IA-14) for the optional use of green colored pavement for bike lanes. Over the last few years, a number of communities have moved forward with the implementation of green bike lanes, and the City of Sunnyvale is proceeding with a number of projects that will implement green bike lanes at pilot project locations. As the use of green bike lanes continues to increase, and their implementation becomes more standard, staff determined that it was necessary to develop operational standards to help guide the implementation of green bike lanes in the City. As part of the development of the standards, staff reviewed a number of jurisdictions best practices, typical vehicular and bicycle data, and a number of professional studies that analyzed the benefits and use of green bike lanes.

#### **EXISTING POLICY**

**General Plan, Chapter 3, *Land Use and Transportation*, Policy LT-1.9b** - Promote modes of travel and actions that reduce single-occupant vehicle trips and trip lengths.

**General Plan, Chapter 3, *Land Use and Transportation*, Policy LT-5.5** - Support a variety of transportation modes.

**General Plan, Chapter 3, *Land Use and Transportation*, Policy LT-5.8** - Provide a safe and comfortable system of pedestrian and bicycle pathways.

**General Plan, Chapter 5, *Housing*, Policy HE-6.3** - Continue a high quality of maintenance for public streets, rights-of-way, and recreational areas, and provide safe pedestrian, bike, and transit linkages (accessibility) between jobs, residences, transportation hubs, and goods and services.

#### **DISCUSSION**

For most jurisdictions, the evaluation to install green bike lanes at a particular location has been done on a case-by-case basis and most agencies have not established a minimum threshold to warrant the installation of green bike lanes. However, in general the use of green bike lanes seems to occur through an evaluation of vehicle and bicycle volumes, collision history analysis, and engineering judgment.

Staff determined it was important to develop Sunnyvale standards to help guide the process for implementation and requests. Staff desires to share these operational standards with the City Council to fully inform the City Council on the tools used to assess green bike lane implementation. These

standards are open to amendment upon policy input from the City Council and are intended to add to the discussion planned at the March 15 Study Session. The new standards are included as Attachment 1, and below are some of the high level elements that were taken into consideration:

- Advantages of green bike lanes
  - Attracts drivers' attention to the bike lane and bicyclists
  - Increases chances of drivers yielding to bicyclists
  - Increases bicyclist comfort in riding in designated bike lane
  - Discourages illegal parking in bike lanes
- Disadvantages of green bike lanes
  - May increase chances of slipping in wet and rainy conditions
  - Could lose effectiveness if overused
  - Currently only approved in an interim basis and would need to be removed if<sup>1</sup>
    - not approved as a permanent state standard traffic control device
  - Cost (to install and maintain)
- Typical engineering factors that help determine implementation include:
  - Conflict points between bicyclists and vehicles
  - A high number of vehicle-bicycle collisions
  - High traffic volumes of vehicles and bicyclists
  - Long radius roadway curves
  - Adjacent to freeway ramps
  - Unclear bicycle paths through intersections due to bike lane offsets
- The cost of implementing and maintaining

Taking all of this into consideration, the operational standards developed result in the installation of green bike lanes only at intersection conflict points that meet certain criteria and vehicular and bicycle volumes. Based on the standards, staff anticipates that 25-50 locations could initially qualify for green color treatment (any budgetary appropriations for green bike lanes would be considered separately by City Council). The estimated cost for initial installation will vary on the number of approaches and length of green lanes and is estimated to range between \$18,000- \$72,000 for each location. They would require maintenance within 2-5 years, and the cost will vary per location. Depending on the number of vehicles driving over the conflict points, a full re-striping process could be required as maintenance. The initial installation and future maintenance are not currently funded.

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The use of green bike lanes received interim approval by FHWA on April 15, 2011 - "MUTCD-Interim Approval for Optional Use of Green Colored Pavement for Bike Lanes (IA-14)". It was approved by Caltrans on an interim basis on August 12, 2011.

Staff does not envision these standards as final, but they provide a good starting point to inform the City Council and public of the professional assessment that is informing the operational standard. As initial installations happen, staff will review whether the criteria needs to be modified to allow for more or less locations and also study the benefits of the green color.

### **PUBLIC CONTACT**

Public contact was made by posting the Council agenda on the City's official-notice bulletin board outside City Hall, at the Sunnyvale Senior Center, Community Center and Department of Public Safety; and by making the agenda and report available at the Sunnyvale Public Library, the Office of the City Clerk and on the City's website.

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### **ATTACHMENTS**

1. Green Bike Lane Standards