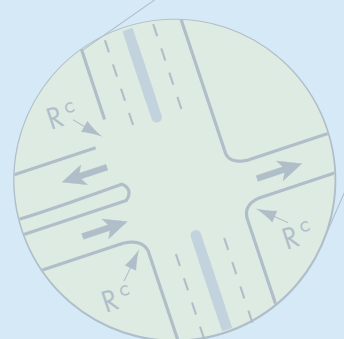


# Bicycle Technical Guidelines



**A Guide for Local Agencies in Santa Clara County**

1.  $R_h$  - Radius of horizontal curve per site conditions (no bike/ped conflicts with motor vehicles)
2.  $R_c$  = Curb radius at ramp terminal intersections to be 20-25 feet maximum for optimum ped bike accommodation.
3. Posted speed limit on Arterial 35 mph maximum.



SANTA CLARA  
Valley Transportation Authority

*Part of every trip you take®*




# **Bicycle Technical Guidelines**

## **A Guide for Local Agencies in the Planning, Design and Maintenance of Bicycle Facilities and Bicycle-Friendly Roadways**

Prepared by the  
Santa Clara Valley Transportation Authority  
Adopted September 2, 1999  
Revision 1 adopted December 13, 2007  
Revision 2 adopted December 13, 2012



## HOW TO OBTAIN THE CURRENT VTA BICYCLE TECHNICAL GUIDELINES (BTG)

The current version of the BTG is available on the VTA website at [http://www.vta.org/bike\\_information/bicycle\\_technical\\_guidelines.html](http://www.vta.org/bike_information/bicycle_technical_guidelines.html). Pages are updated individually as the need arises; individual pages should be downloaded by holders of this manual as needed. Sign up to receive an email notice of future revisions by going to [http://www.vta.org/bike\\_information/bicycle\\_technical\\_guidelines.html](http://www.vta.org/bike_information/bicycle_technical_guidelines.html) and clicking on this icon: 

Revisions to the Board-adopted version of the December 2007 BTG are itemized below.

Date Effective	Page or Section	Topic
10/02/08	App. A-4	Caltrans DD 64-R1 replaced DD64
Dec 2012	i- x	New table of contents to reflect changes below
Dec 2012	Chapters 1, 3, 5, 7, 9	Entire chapters revised and new information added on (e.g Ch 3 Bus rapid transit, Ch. 7.5 Cycle Tracks, Ch 9.4 Bollards.)
Dec. 2012	2-1, 4-1, 6-1, 6-5, 6-8, 8-1, 8-8	Minor updates to cross reference new sections and to reflect updated MUTCD and State Laws
Dec. 2012	Section 8.4	New section 8.4 on woonerfs
Dec 2012	Appendix C	New appendix on bridge railings

### Form

As in the Highway Design Manual (HDM), the loose-leaf form was chosen for the BTG because it facilitates change and expansion. New guidelines will be issued as pages in the format of this manual; these may consist of additional pages or new pages to be substituted for those superseded, as listed in the Table above.

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## **FOREWORD**

The VTA Bicycle Technical Guidelines (BTG) reproduce many of the Caltrans Highway Design Manual's (HDM) standards and guidelines as well as those from other manuals. The BTG are intended to supplement and augment these manuals, by providing guidance on when and how to better accommodate the many types of bicyclists; to the extent that the Caltrans standard is a "minimum" dimension or practice, this manual presents best practice options for some situations. The VTA "Best Practices" included herein are not a substitute for professional engineering judgment and may not be appropriate for a specific situation. As with the HDM, the BTG is not a substitute for engineering knowledge, experience, or judgment. Reference to and knowledge of the original design manuals is assumed.

The California Manual of Uniform Traffic Control Devices includes both FHWA's Manual of Uniform Traffic Control Devices (MUTCD) and all policies on traffic control devices issued by the California Department of Transportation (Caltrans). When FHWA issues a revised MUTCD, it is not effective in California until Caltrans and the California Traffic Control Devices Commission (CTCDC) review it and incorporate the changes into the California MUTCD through formal efforts. Therefore it is the California MUTCD (MUTCD-CA) that is the official manual for use in California and the manual used in the Bicycle Technical Guidelines as reference. In the few cases where there is a section that is only in the California MUTCD and not in the federal MUTCD, the citation will be followed by "(CA)", e.g. MUTCD-CA Section 4D.104(CA). Similarly, when a sign or figure is cited in the BTG, the corresponding sign number is followed by "(CA)", e.g. R81 (CA) to denote a sign or figure that only appears in the California MUTCD. In all other cases, the citation refers to the MUTCD number, e.g. R4-4.

Since the Highway Design Manual is the primary manual for bikeway design in California, the purpose of the HDM has been reprinted below and is hereby incorporated.

## ***From the Foreword to the Caltrans Highway Design Manual, 2012***

### **Purpose**

This manual was prepared for the California Department of Transportation (Department) by the Division of Design for use on the California State highway system. This manual establishes uniform policies and procedures to carry out the State highway design functions of the Department. It is neither intended as, nor does it establish, a legal standard for these functions.

The standards, procedures, and requirements established and discussed herein are for the information and guidance of the officers and employees of the Department.

Many of the instructions given herein are subject to amendment as conditions and experience warrant. Special situations may call for deviation from policies and procedures, subject to Division of Design approval, or such other approval as may be specifically provided for in the text of this manual.

It is not intended that any standard of conduct or duty toward the public shall be created or imposed by the publication of this manual. Statements as to the duties and responsibilities of any given classification of officers or employees mentioned herein refer solely to duties or responsibilities owed by these in such classification to their superiors. However, in their official contacts, each employee should recognize the necessity for good relations with the public.

### **Scope**

This manual is not a textbook or a substitute for engineering knowledge, experience, or judgment. It includes techniques as well as graphs and tables not ordinarily found in textbooks. These are intended as aids in the quick solutions of field and office problems. Except for new developments, no attempt is made to detail basic engineering techniques; for these, standard textbooks should be used.