

ATTACHMENT

Based on additional Member Agency comments received within the past two weeks, the following edits will be incorporated into the 2007 Bicycle Technical Guidelines (BTG).

1. Include a reference to the *Foreword of the Caltrans Highway Design Manual (shown below)*

The Highway Design Manual (HDM) is referenced throughout the BTG. As a result, it was requested that a quote be added to the BTG from the foreword of the HDM.

FOREWORD to the Highway Design Manual

Purpose

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

The policies established 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 seem to warrant. Special situations may call for variation from policies and procedures, subject to Division of Design approval, or such other approval as may be specifically provided for in the text.

It is not intended that any standard of conduct or duty toward the public shall be created or imposed by the publication of the 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.

2. Make the following edits as indicated

Chapter 1, PAGE 9

The VTA Bicycle Technical Guidelines (BTG) present standards and guidance for (add text “planning”), designing, operating, retrofitting and maintaining roadways and bikeways.

Chapter 1, PAGE 12

1.3.1 Relation to State and Federal Design Manuals

The California Department of Transportation (Caltrans) *Highway Design Manual* (HDM), Chapter 1000 is the primary source for bikeway standards in California. The American Association of State Highway Transportation Officials (AASHTO) *Guide for the Development of Bicycle Facilities* (hereafter referred to as the AASHTO Guide) also presents guidelines to follow when constructing or improving highways and designing and constructing bicycle facilities. It’s used by states that don’t have their own guidelines and also contains some guidance that is not included in the HDM. (Add text “Pursuant to SHC 890.6, HDM Chapter 1000 provides minimum design criteria”)-(delete text “~~and the AASHTO Guide generally identify minimum~~”)

~~acceptable dimensions~~) for various aspects of bikeways and (Add text “together with the AASHTO Bike Guide also”) (delete text “~~and~~”) (Add text “provides some”) discussion on best practices, as well as practices to avoid.

SHC 890.6

The Department shall establish minimum safety design criteria for the planning and construction of bikeways and roadways where bicycle travel is permitted. See Appendix A2 for the full text.

Chapter 2, PAGE 17

2.1 OPTIMUM, SHOULD AND SHALL

In referencing widths and other measurements, the BTG make frequent use of the word “optimum” to present optimal design guidelines for bikeways and for roadways where bicycles are permitted. In these cases, “optimum” means the best or most favorable condition for a particular roadway or bikeway, from the perspective of the safety and convenience of the typical bicyclist expected to use the facility, (see Section 2.2 and 2.3). The purpose of providing optimum as opposed to minimum standards is to set high expectations, build projects to higher design standards, improve the quality of bicycle facilities and encourage bicycling as a transportation mode. (Add text “The extent to which “optimum” is provided is in accordance with the resources available”) Similarly, “should” is used where a practice would result in optimum conditions for bicyclists, and “shall” is used to reference a State or Federal design standard. In some contexts, the design standard refers to the minimum allowable dimension, but larger dimensions are not only permissible but preferable.

Chapter 4 PAGE 33 - Table 4-1 Title

(Replace word “Recommended” with word “Optimal”) Maintenance Frequencies for Roads and Trails

Chapter 9 PAGE 85

(Replace word “Trail” with word “Bike Path”) Hours

Similar to the roadway system, bike paths that are used for transportation should be open 24 hours a day.

NOTE:

~~(Delete text “Regardless of the operator, the bike path as a transportation corridor often funded with transportation dollars must be open 24 hours a day, 365 days a year.”).~~

(Add text “VTA views bike paths as part of an integrated, multimodal, countywide and regional transportation system consistent with the TEA-21 federal mandate “to develop transportation facilities that will function as an intermodal transportation system.”” end add text).

The responsible department for maintaining and operating a (replace word “~~trail~~” with words “bike path”) can vary (Add text “among”) Public Works (Add text “Departments”) to Parks and Recreation (Add text “Departments and”) special districts. (Add text “The issues faced by the various trail operators in keeping trails open 24 hours a day are discussed in the inset “Issues Facing Bike Path Operators and Bike Path Users.”” end add text).

New inset referred to in NOTE on Page 85

Potential Issues Related to 24 hour Access on Bike Paths

The information presented below is intended to outline the concerns and potential issues that bike path users and operators may face by allowing or not allowing extended access to bike paths for the full 24-hour day. VTA hopes that by identifying these issues and concerns and by opening a dialog, Member Agencies, VTA and other interested agencies, advocates and stakeholders can work together to resolve the concerns regarding 24-hour use of bike paths.

The BTG, as guidelines, does not require changes to existing bike paths or to the policies of a respective department or agency. However, VTA and the at-large bicycle community maintain that more bicycle trips will occur if bike paths are more fully integrated with the on-street bicycle and roadway system and are accessible at all times as are roadways and sidewalks. The concomitant benefits of more bicycle trips include improved air quality and public health, and reductions in green house gasses, global warming, and roadway congestion. Moreover, there are social justice and economic equity issues related to access to affordable transportation that argue for 24-hour access to bike paths, especially considering that many lower-income members of the community use bicycles as their primary mode of transportation, and temporal exclusion of access to key transportation corridors may have significant safety or quality of life implications and cause hardships to these groups.

Issues Related to 24-Hour Access to Bike Paths

- *Environmental and Regulatory Setting:* There may be legal, environmental, regulatory, permitting or other issues related to the development of a particular bike path, bike path segment, or bike path extent that create conditions where 24-hour access may not be feasible or desirable. One intended purpose of the Bicycle Technical Guidelines (BTG) is to provide information and tools to both users and operators that may allow the conditions to be addressed and improved over time.
- *Policies and Guidelines:* It is understood that some jurisdictions have policies and/or guidelines that limit access to bicycle trails that reside within parks or at certain locations. These policies and/or guidelines should undergo periodic review and reconsideration as local agencies develop and revise plans and ordinances.
- *Availability of Resources:* There are staffing costs associated with patrolling bike paths both if they are open and if they are closed at night. However having the trail open for 24-hour access may involve the need for additional staff and/or operating and maintenance funds. Several jurisdictions in Santa Clara County have expressed a desire to continue this dialog internally and with neighboring jurisdictions and VTA; the BTG is intended to function as a reference tool and a technical resource document in these discussions. In addition, there may be opportunities for partnerships to share resources. For example, some cities have created win-win situations by allowing police officers either in patrol cars, motorcycle, or bicycles - or a combination of all three - to use bike paths and bike bridges as a way to increase the range and response time of the police officers to calls in all areas, as well as to provide patrols of the trail itself.
- *Potential Liability:* Potential liability may exist whether a bike path is open or closed at night. VTA encourages each jurisdiction to work with its residential and business community, and with bicycle advocacy groups to identify and work to resolve bike-path-related liability issues in order to provide access and maximize use.
- *Lighting Bike Paths at Night:* While appreciated by most bicyclists who must bicycle after-dark, lighting bike paths is not always feasible. State and Federal environmental laws prohibit lighting of riparian corridors as it can impact many nocturnal species. Addressing this issue is beyond the control of one local agency, and as a result, may be a long-term challenge for installation of lighting. The provision of lighting in any form (i.e., type, intensity, hours of lighting, etc.) should be carefully evaluated for each location. For example, some trails may pass through sensitive habitat areas that should remain dark at night; or the funds to construct and/or operate lighting may simply not be available.

Issues Related to Closing Bike Paths at Night

- *Inconsistent Hours:* A bike path that travels through many jurisdictions is potentially subject to several different sets of "hours" such that a bike commuter could cross the city limit(s) on the way home from work and could enter another jurisdiction after its park had closed and thus be in violation of that jurisdiction's ordinances.
- *Multimodal access-* Bicyclists who also use transit may expect trails to be open after dark in coordination with the hours of service offered by buses or light rail. (Most VTA lines operate 13 to 18 hours per day).
- *Direct Routing and Safety:* The trails system can, and often does, provide a more direct and safer route than the roadway network. Restrictions on hours of operation would direct cyclists and pedestrians onto alternative routes of travel at night that could result in additional travel time or less safe conditions.
- *Connectivity:* Ideally, the trails system would be seamlessly interconnected with the rest of the valley's transportation system. The BTG is designed to facilitate movement toward this goal by providing best practices on planning, design, and operation of these facilities.

- *Potential Liability:* As discussed above, potential liability may exist whether a bike path is open or closed at night.
- *Availability of Resources:* As discussed above, there are staffing costs associated with patrolling bike paths both if they are open and if they are closed at night. Closing trails also involves staff time if an agency expects to successfully enforce any such ordinance.

Trail Safety:

- All of the issues above have some bearing on the issue of trail safety. Ordinances requiring bicyclists (and even pedestrians) to use lights at night, restricting use of the trail to transportation purposes or to commuters with lights, implementing teen curfews, prohibiting loitering or vagrancy, and/or providing call-boxes have all been used by Member Agencies and other agencies in California to address safety issues. Moreover, a “closed” facility, with no eyes-on-the-trail may be more attractive to vagrants and loiterers than one that is open and used by cyclists (and/or pedestrians). Although most bicyclists and pedestrians, including wheelchair-bound pedestrians, and pedestrians using mobility devices, would feel safer traveling on trails with adequate lighting, the ultimate decision in where to travel is up to the individual.

Chapter 9, PAGE 86

(Change word “Trail” to “Bike Path”) Lighting

Optimally, (Change word “trails” to “bike paths”) should be lit at night year-round to increase (Delete the words “the use and”) safety (Add text “and to maximize the number of trips made by bicycle”), (delete text “of the trail. In practice,”). For some (Replace the word “trails” with the words “bike paths”) or trail segments, however, (Add text “lighting may not be appropriate or allowed within sensitive wildlife habitat areas”). (Delete the words “environment considerations may restrict lighting”). (Add text “Cost and other inhibiting factors may place limits on the feasibility of trail lighting. See discussion in inset “Issues Facing Bike Path Operators and Bike Path Users” ” end add text). (Delete the words “some trails or trail segments”).

(Delete the words “All four”) (Add text “Federal, state and local”) design manuals (add text “(see Section 9.1.2)”) (recommend (Add text “contain”) lighting (Add text “guidance”) for commuter bike paths trails, particularly (Add text “during the”) winter months when (add text “commuter bike paths would be”) dark (Add text “during the hours before sunrise and after sunset. If used, special consideration should be given to the placement of lighting on bike paths located within environmentally-sensitive areas and near residential areas.”). (Delete text “at 5:00 p.m.”). Lighting is considered an important (Add text “safety measure to provide”) at the intersections of bike paths (delete text “trails”) with surface streets; at night; and in underpasses and tunnels (add text “in the daytime as well as after dark.”) (delete text “24 hours a day”). (Add text “See appropriate design manuals for intersections and underpasses”).

Caltrans HDM- Chapter 1000

1003.1 Lighting *Fixed-source lighting reduces conflicts along paths and at intersections. In addition, lighting allows the bicyclist to see the bicycle path direction, surface conditions, and obstacles. Lighting for bicycle paths is important and should be considered where riding at night is expected, such as bicycle paths serving college students or commuters, and at highway intersections. Lighting should also be considered through underpasses or tunnels, and when nighttime security could be a problem.*

<Also add lighting language from other manuals to the sidebar.>

VTA Best Practice:

(Delete text :”Optimally, trails should be lit at night year round to increase the use and safety of the trail. In practice, environmental considerations may restrict lighting some trails or trail segments”).

Where used, lighting should be pedestrian and bicycle-scale and should meet the following criteria: No uplighting from any light fixture.

All light fixtures should include shrouds (either fixed or adjustable), louvers, other shielding, or be directed in such a way as to block direct light from all sensitive receptors (e.g. residences, wildlife habitat areas) adjacent or in close proximity to the trail.

- Stray light should be controlled through use of low-brightness fixtures with optical lens or reflector controls.