

Highway Design Manual Update

Bicycle Facilities



TAMC

**TAMC Bicycle & Pedestrian Facilities
Advisory Committee**

Doug Bilse, TE



The Highway Design Manual (HDM) Guides Highway Design Functions to Establish Uniform:

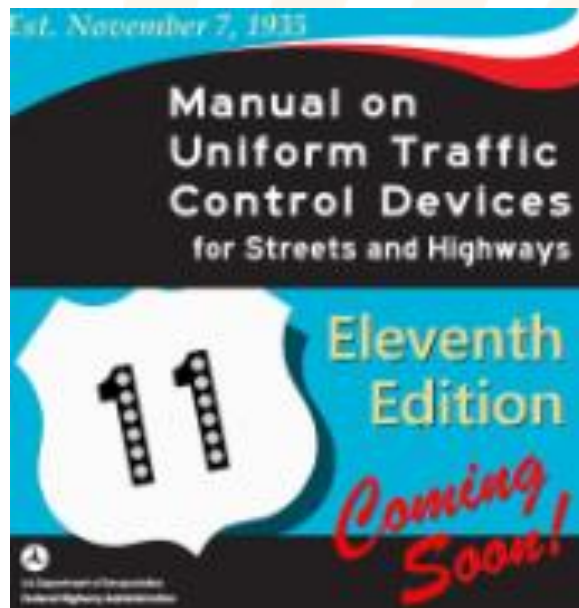
- Policies
- Standards
- Procedures
- Requirements

Highway Design Manual Seventh Edition



Other Planning Documents

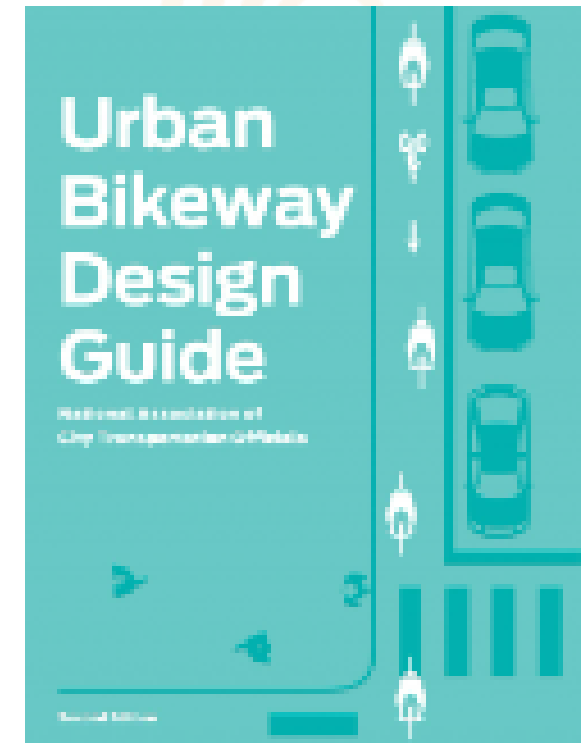
FHWA Manual of Uniform Traffic Control Devices (MUTCD)



AASHTO Guidelines for Pedestrian and Bikeway Facilities



NACTO Urban Bikeway Design Guide



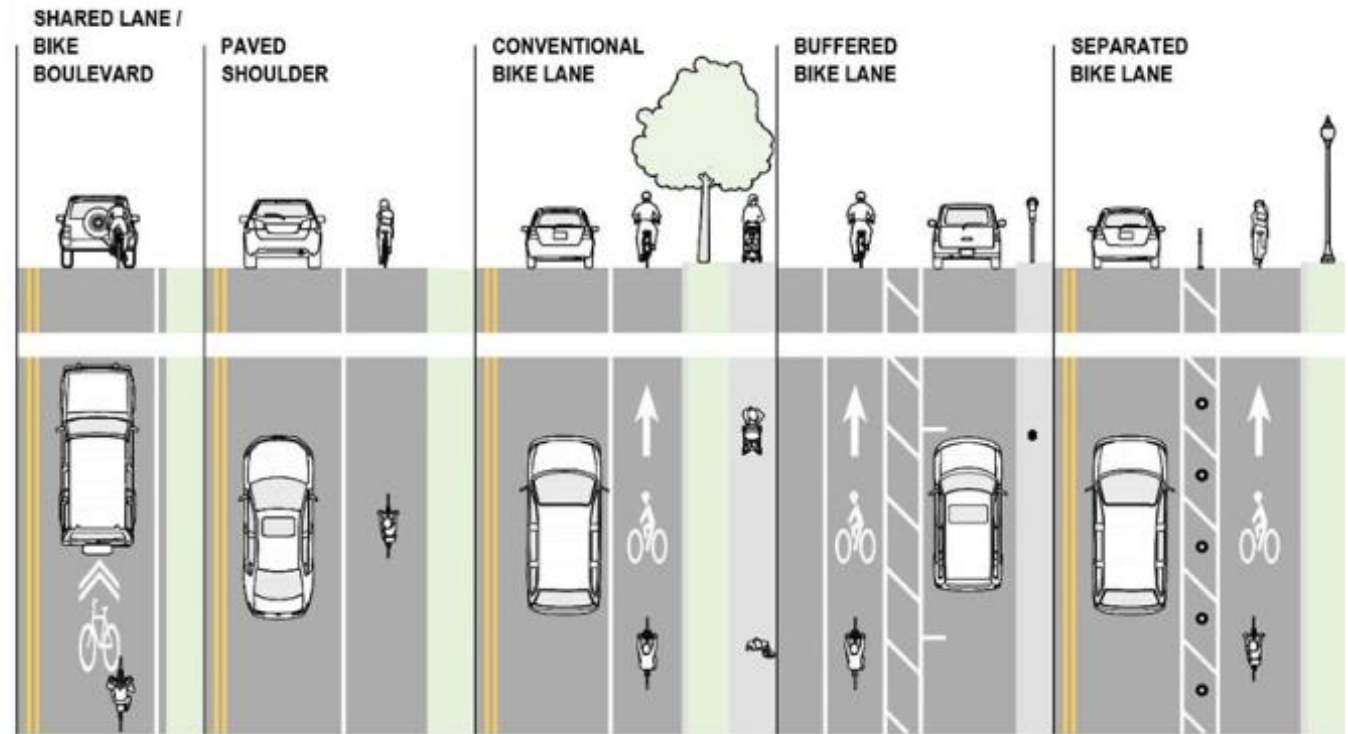
How Does the HDM Relate to These Documents?

- Must comply with California Vehicle Code (CVC)
- Must be consistent with California MUTCD
- Overrides NACTO and AASHTO



HDM is Flexible

- Not a “one-size-fits-all” design philosophy



HDM Looks for Balance

- Design for all modes of travel
- Tailor a project to unique circumstances and its location
- Balance interregional travel with needs of local communities



What is a Design Standard?

- Standards are written in **Boldface** type or Underlined
- Requirements of law, policy, or statute that do not allow exception include the terms “must,” “is required,” “without exception,” “are to be,” “is to be,” or “in no event”
- Standards are not intended to be applied retroactively



Bike Facility Classifications

- CLASS I: Bike Path
- CLASS II: Bike Lane
- Class III: Bike Route
- Class IV: Separated Bikeway, protected bike lane, or cycle track



Selecting the Appropriate Bikeway

- Don't misconstrue Class I, II, III, and IV bikeways as a hierarchy
- Continuity is important



Class I Bikeway: Bike Path

- Bike paths should offer opportunities not provided by the road system
- The CVC requires peds to use a pedestrian facility when immediately adjacent
- Use of bicycle paths adjacent to roads is not mandatory according to the CVC

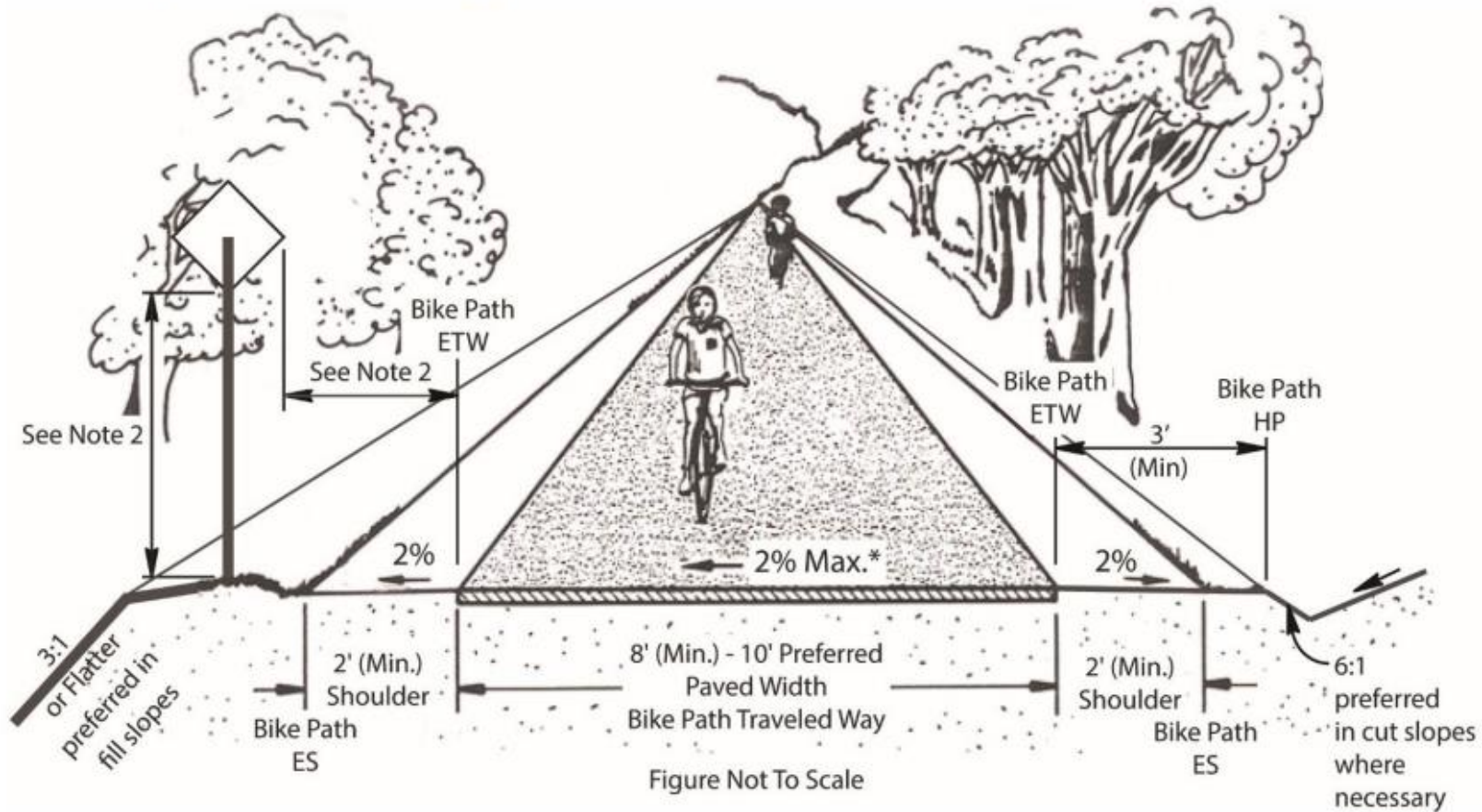


Design Parameters for Class I Bike Path



Cross Section Example

Two-Way Class I Bikeway (Bike Path)



Class II Bikeway: Bike Lane



Class III Bikeway: Bike Route



Design Parameters for Class III Bike Route



Class IV Bikeway: Separated Bikeways



Design Information Bulletin (DIB) 89-02

Separated Bikeways



- Expanded guidance for separated bikeway design considerations.
- Generally, the higher the speed and volume of a road, the more separation is needed for bicyclists.
- Sidewalk-level bikeways must be separated from the ped facility because the bikeway is for the exclusive use of bicycles.

Are Highway Shoulders Appropriate Bikeways?

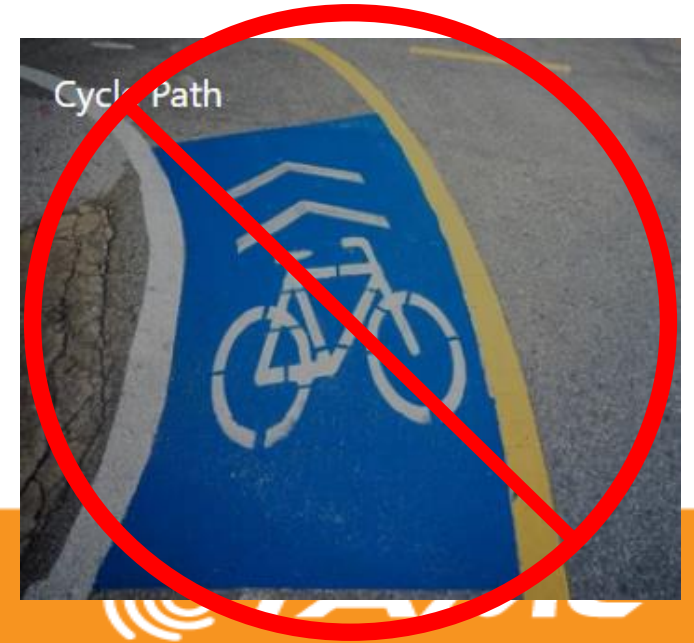


Shared Roadway: No Bikeway Designation



HDM on Green Paint

- Statewide approval for to use green colored pavement for Class II and IV Bikeways
- Eliminates the need to obtain approval from FHWA.
- Local agencies must notify the California Traffic Control Devices Committee
- Consideration should also be given to skid resistance, durability, weatherization, and maintenance



Extra Credit

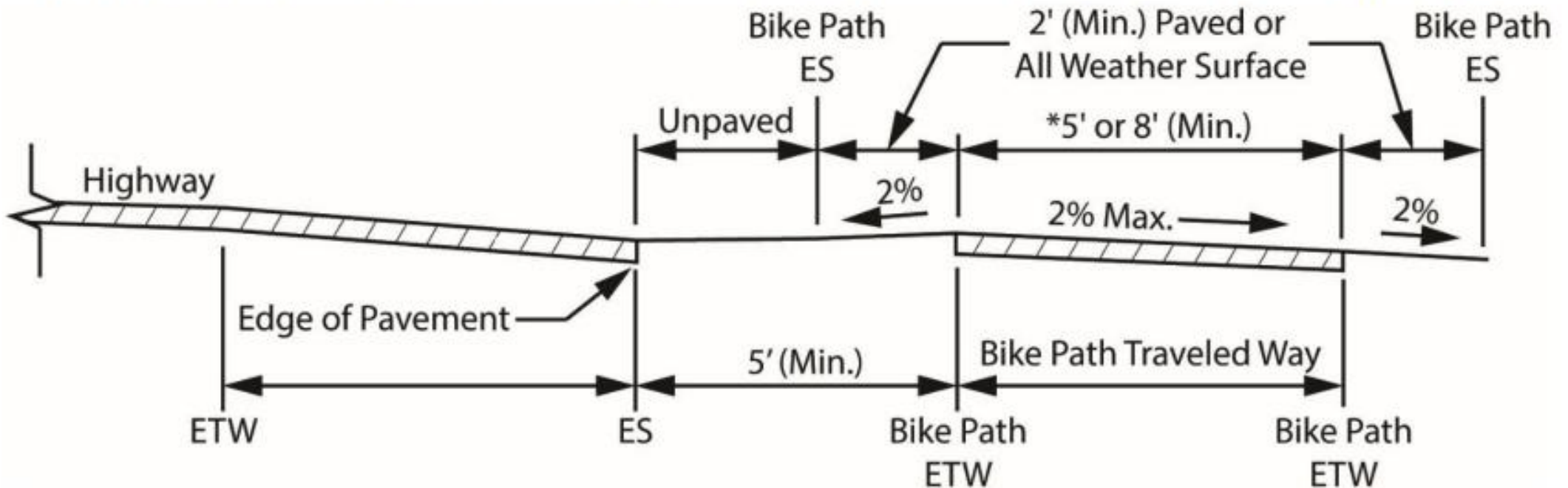
- Sidewalks are not to be designated for bicycle travel
- The surface to be used by bicyclists should be smooth, free of potholes, and with uniform pavement edges
- Drainage inlet grates, manhole covers, etc., should be located out of the bicyclist's travel path when possible
- Driveways should avoid a vertical lip from the driveway to the gutter

Questions???



Figure 1003.1B

Typical Cross Section of Class I Bikeway (Bike Path) Parallel to Highway



NOTE:

(1) See Index 1003.1(6) for guidance on separation between bike paths and highways.

*One-Way: 5' Minimum Width

Two-Way: 8' Minimum Width

