CITY OF WOODLAND PARK, COLORADO

TITLE 9

BIKEWAYS & TRAILS STANDARDS

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9.1 DESIGN

Bikeway design shall conform to "A Bikeway Criteria Digest" prepared for the U. S. Department of Transportation, and the Manual on Uniform Traffic Control Devices. Generally, for trails an eight (8') feet minimum trail width is allowed. Bikeway widths shall have a minimum finished surface width of eight (8') feet.

All projects shall optimize pedestrian and bicycle travel within the City by providing bikeways, trails and pathways in all new developments in accordance with the City's Trails Plan.

Off-site improvements may also be required to provide residents with access to schools, and local commercial and community facilities. The bikeway and pathway system shall make use of, but not be limited to, the drainage and open space system.

Bicycle paths, lanes or routes, where required by applicable City ordinances, approved site plans or development agreements, shall be shown on the approved construction plans and shall meet, at a minimum, these Regulations.

All trails shall have a minimum of 12 feet clear vertical distance above the path.

Where possible, bikeways and trails shall be located to minimize the loss of trees and disruption of natural environmental conditions. A minimum of three (3') feet is required between the trail/bikeway edge and any vertical obstructions such as trees, utility poles, signs or other obstacles.

The materials used in the construction of bike paths and bikeways shall be in conformance with the appropriate chapter of the Engineering Specifications. Exceptions are listed below.

When Bikeways/Trails are to be constructed, maintenance and operation responsibility will be determined during the site/subdivision plan approval process. Public access/trail easements shall be conveyed to the City. The easement width shall be clearly indicated on the site plan or construction plans.

9.2 STANDARDS AND CRITERIA

A. BIKEWAY/TRAIL LOCATION

Bikeway/Trail location shall be based on safety, circulation, and access considerations. Trails designated on the City plan generally parallel to existing or proposed roadways shall be constructed wholly within the road right-of-way. These bikeways/trails shall be constructed in the general location designated as a sidewalk on a typical road section.

Where the typical road section does not include sufficient width to meet the minimum required bikeway/trail easements specified in the following table, the deduction of additional land adjacent to the street right-of-way will be necessary.

Trail Type	Minimum Required Easement Width (Feet)
Bikeway (8')	20 foot minimum
Walkways (8')	20 foot minimum
Equestrian/Hiking Trails (8')	20 foot minimum

B. GRADE

A plan and profile of the proposed trail construction shall be included in the construction plans or site plan. Typical cross-sections shall be provided for all critical points along the length of the trail.

Minimum Allowable – A minimum grade of 1.5 percent is recommended except in sags where proper drainage is provided by cross slope.

Maximum Allowable – A maximum grade of six (6) percent is recommended. However, staff will consider on a case-by-case basis grades up to ten (10) percent. Short dips or excessively long grades are discouraged.

C. CROSS SLOPE

Minimum allowable – ¼ inch per foot of width (2.08% slope)

Maximum allowable – ½ inch per foot of width (4.16% slope)

Where required, design shall conform to applicable ADA requirements.

D. TURNING RADIUS

Minimum Allowable – A twenty 20 foot radius is recommended; however, the actual minimum allowable should be computed by the Consulting Engineer based on expected use and site conditions.

E. DRAINAGE

All trail designs shall be in accordance with the storm drainage requirements as listed in Title 4 of these Engineering Specifications.

Appropriate drainage improvements shall be provided along slopes exceeding six (6) percent.

Trails located within the State right-of-way shall meet CDOT standards.

As a general guide, where a trail is cut into a hillside, a ditch shall be placed along the high side of the path to prevent sheet flow across the trail.

F. SAFETY CONSIDERATIONS

Trail and Bikeway location shall be based on safety, circulation, and access considerations.

The safety of potential pedestrians, and others, who may use or travel on a trail, shall be a prime consideration in the trail design.

Trails which are to be located adjacent to roads with speed limits exceeding 25 mph, and which have slopes greater than six (6) percent, may require special safety measures such as the installation of barriers or other safety devices, or an increase in the distance between the trail and highway.

Standard signing and markings from the MUTCD shall be included in the design and construction of the trail to alert trail users of potential hazards and to convey regulatory messages.

The Consulting Engineer shall address stopping and intersection sight distance at all trail intersections, curves, and particularly where steep grades are proposed at trail/roadway intersections. Obstructions to the visibility of motorists or trail users shall be removed or the trail aligned around the obstruction to maximize visibility.

Standard handicapped ramps will be provided at all trail curb crossings to allow continuity of trail use by bicyclists and the handicapped. For trails equal to or greater than eight (8) feet in width, curb depressions equaling the trail width shall be used, with the trail surface sloping to the pavement at one (1') foot for every inch of curb height.

G. PEDESTRIAN BRIDGES

Pedestrian bridges shall be prefabricated using a standardized steel truss design with pressure treated timber decking or other designs as approved by the City Engineer or appointed representative.

Bridge Width – A minimum of ten (10') feet wide. Bridge widths are to be two (2') feet greater than the trail width for trails greater than eight (8') feet wide.

9.3 MATERIALS AND CONSTRUCTION

The standards and criteria in this chapter and other chapters as relating to materials used and methods of construction shall be used in the design and review of proposed Bikeways and Trails.

Pavements shall be designed to support wheel loads from vehicles, which will require access to them. These may include emergency, patrol, snow removal, maintenance and other motor vehicles.

Aggregate quality shall meet the requirements of the CDOT “Standard Specifications for Road and Bridge Construction” Section 703.04.

A. SUBGRADE

Prior to construction, all vegetation shall be cleared, including stumps and roots along the trail for a minimum of three feet outside the edge of the proposed pavement. All subgrade preparation shall conform to the requirements of Title 7 and exceptions listed in Title 9. Soil sterilants and or inhibitors are to be placed prior to placement of asphalt.

B. ASPHALT

Where a trail/bikeway is constructed as part of the roadway section the criteria as listed in Title 5 here in shall apply. Asphalt depth for the trail/bikeway shall be the same as for the roadway section and will be dependent upon the Geotechnical Engineer’s report or have a minimum thickness of three (3”) inches of asphalt with a six (6”) inch base course. The asphalt and base course shall be placed per the “Pikes Peak Regional Asphalt Paving Specifications”.

C. CONCRETE

All concrete bikeway construction shall conform to Section 6.2 and 6.3 of these specifications with respect to sidewalks.

Where a trail/bikeway is constructed as part of the sidewalk system the criteria as listed in Title 6 shall apply. Minimum concrete thickness shall be four (4”) inches and six (6”) inches at driveway cuts.

D. GRAVEL

Gravel bikeway construction is to be discouraged. When special permission is given by Council for gravel bikeways, the surface shall be reviewed and approved by the City Engineer.