CHAPTER 6. BRIDGES

6.01 Principal References

Except as specified below, King County bridges, whether on public roads or on private roads serving subdivided land, shall be designed and constructed to meet the minimum requirements set. forth in the latest edition, including all interim addenda, of "Standard Specifications for Highway Bridges," adopted by AASHTO and in accordance with the requirements of WSDOT/APWA Standard Specifications. Bridge and approach railings shall be provided in accordance with those references or with WSDOT/APWA Standard Plans. All new bridges shall be designed to carry an AASHTO HS 20-44 live load or greater. All bridge work shall comply with K.C.C. 21.54 regarding Special Control Areas and Flood Hazard Areas for stream and wetland protection and flooding concerns.

6.02 Bridge Geometrics

A. In the general case, the bridge shall comprise the full width and configuration of the road being served -- traveled way plus curb, sidewalks, walkway, bike lane, equestrian lane and/or shoulder on one or both sides. Requirements of utilities shall be duly considered. Bridge roadway width shall be measured between curbs or between faces of rails, whichever is less, but in no case shall be less than 28 feet.

B. Where typical speed is 35 MPH or higher and significant pedestrian, bike and/or horseback traffic can be expected, the Engineer may require that the lanes for these other modes of traffic be separated from motor vehicle traffic by use of a bridge traffic rail and further protected by a rail at outer edge. On designated bike routes, combination traffic and bicycle railings shall be used.

C. Approach railings ,shall be made structurally continuous with bridge railings and shall meet AASHTO specifications as cited in Section 6.01 above.

D. Overhead vertical clearances for motor traffic on the traveled way or under overpasses shall be 16.5 feet minimum. Vertical clearance of structures above a walkway or sidewalk shall be eight feet minimum and shall be 10 feet on designated equestrian routes.

E. The height of bridge clearance above streams shall be as required by the Surface Water Design Manual.

6.03 Bridge Desisn Criteria

A. Approach slabs will be required for all bridges and new bridge plans shall provide pavement seats for approach slabs unless otherwise approved by the Engineer. Waiver or modification of the requirement for approach slabs will be considered only on the basis of adequate geotechnical analysis. Approach slabs shall be constructed in accordance with WSDOT/APWA Standard Plan A-2.

B. New bridge decks and approach slabs shall be designed with a protective system to prevent corrosion of the reinforcing steel.

C. Criteria under other recognized road and bridge project classifications, such as those of 3-R projects, set forth in WSDOT Local Agency Guidelines, may be applied under conditions deemed appropriate by the Engineer.

D. The design of bridge expansion joints shall consider the presence of bicycle traffic.

6.04 Special Permits

Permit requirements for construction or reconstruction of bridges include but are not limited to the following:

A. Bridges over navigable waters require U. S. Coast Guard permits.

B. Bridges involving deposition of material in waters of the United States or their adjacent wetlands require a U. S. Army Corps of Engineers Permit.

C. Any work involving alteration of flow or bed materials below the ordinary high water line of any water body or water course requires a Hydraulic Project approval from the State Department of Fisheries or the State Department of Wildlife.

D. Any work within waters of the State requires a Water Quality Certification Waiver from the State Department of Ecology.

E. Where bridge structures lie on or over submerged lands a lease from the Washington State Department of Natural Resources may be necessary.

F. Structures located on shoreline zones as defined in King County Code Title 25 require a substantial development permit from the King County Department of Development and Environmental Services, subject to concurrence of the State Department of Ecology.

G. Bridges over waterways require the Engineer's approval of the size and shape of the hydraulic opening, the height of the superstructure over high water, the location of piers, channel improvement, and other hydraulic considerations.