

Underpass—A structure which provided for passage of the principal route under a highway, street, railroad or other feature.

Traffic Interchange—An overpass or underpass is also called a T.I. if on and off ramps are provided to the intersecting roadway.

Viaduct—A structure of some length carrying a roadway over various features such as streets, waterways or railroads.

Tunnel—A structure carrying a roadway through a hill or mountain.

Pedestrian Overpass—A structure carrying a pedestrian walkway over a roadway.

Pedestrian Underpass—A structure which provides for passage of a pedestrian walkway under a roadway.

102 DESIGN FEATURES

102.01 GENERAL

The general features of design shall be as specified in Section 2 of AASHTO except as clarified or modified in this manual.

102.02 DESIGN METHODS

ALL BRIDGE MEMBERS ARE TO BE DESIGNED IN ACCORDANCE WITH AASHTO AND THE REQUIREMENTS OF THIS MANUAL. (Other standards may be allowed with Department approval.)

102.03 VERTICAL CLEARANCE AT STRUCTURES (AASHTO 2.2.3)

The following are minimum vertical clearance standards for highway traffic structures, pedestrian overpasses, railroad overpasses, tunnels and sign structures. Lesser clearances may be used only under very restrictive conditions, upon individual analysis and with the approval of the Abu Dhabi Roads Section Project Manager.

102.03.01 Highway Traffic Structures

The design vertical clearance to structures passing over Freeways, Highways and all Rural and Urban Arterials shall be at least 6.00 meters over the entire roadway width, including auxiliary lanes and shoulders. An allowance of 150 millimeters is included to accommodate future resurfacing. This allowance may be waived if the roadway under the structure is surfaced with portland cement concrete.

The design vertical clearance to structures passing over all other highways and streets shall be at least 5.50 meters over the entire roadway width, including auxiliary lanes and shoulders. An allowance of 150 millimeters is included to accommodate future resurfacing. This allowance may be waived if the roadway under the structure is surfaced with portland cement concrete.

Certain routes have been designated as truck routes. On these routes, larger vertical clearance must be maintained. For future projects, these routes will be identified by the Abu Dhabi Roads Section Project Manager during the concept stage.

102.03.02 Pedestrian Overpasses

Because of their lesser resistance to impacts, the minimum design vertical clearance to pedestrian overpasses shall be 6.00 meters regardless of the highway system classification. An allowance of 150 millimeters is included to accommodate future resurfacing.

102.03.03 Railroad Overpasses

Structures over railways shall provide a minimum clearance of 7.00 meters above top of rail, except that overhead clearance greater than 7.00 meters may be approved when justified on the basis of railroad electrification. No additional allowance shall be provided for future track adjustments.