

Design and Construction Transportation Infrastructure

Bridges, Structures and Expressways

This design standard provides the standard for the design and construction of infrastructure within the city of Toronto. Such elements and/or systems include, but are not limited to, bridges, overhead sign structures, earth retaining structures, buried structures and miscellaneous roadway appurtenances.

Implementation

This design standard is effective as of December 3, 2021.

Background

As per the MTO Structural Manual (August 2021) – PREFACE:

Although the Ministry of Transportation (MTO) has developed this manual as a standard for their use, other bridge owners may use it as a resource document from which they can develop their own standards and policies. However, any variation should not be a substantial departure from the Structural Manual or cause an adverse effect on the safety and movement of people and goods. Any deviation from this manual should be based on operational experience and objective analysis. The MTO does not accept responsibility in any connection with the variations.

City Policy and Standard

The City of Toronto, adopts the MTO Structural Manual as the standard for design and construction of the City's Transportation Services Division owned and/or maintained infrastructure including, but not limited to bridges, culverts, retaining walls, overhead sign structures, tunnels and miscellaneous roadway appurtenances.

MTO Design Supplement for Transportation Association of Canada (TAC) Geometric Design Guide (GDG) for Canadian Roads dated April 2020, Section 3.3.5.5 Minimum vertical clearances for new structures over roadways is deleted and replaced with the following:

New Structures over Roadways

The minimum vertical clearance over the roadway for new structures shall be:

- 5.0 m for all vehicular bridges
- 5.3 m pedestrian and bicycle bridges

- 5.0 m for rail carrying bridges over roadways
- 5.3 m for fixed attachments, such as large sign panels, of sign support structures
- 5.6 m for the lowest structural members, such as bottom chord, of sign support structures

The minimum vertical clearance over sidewalks, bikeways and snowmobile trails shall be 2.5 m.

Exemptions and Deviation

Any deviation or exemption from the above standards, policies and guidelines may be allowed only with the written approval from the Senior Manager, Bridges, Structures and Expressways.