



London
CANADA

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Chapter 16

Noise Attenuation Measures

Design Specifications & Requirements Manual

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City of London

Design Specifications and Requirements Manual

The design information contained in this manual is intended to provide guidance beyond legislative and standard design practices for use in the City of London (the City). There will be site specific situations where the design will depart from these practices as it is not possible nor is it the intention of the City to anticipate every situation. The City intends to review and revise the Manual from time to time. The City also acknowledges that other references such as the 'Standard Contract Documents for Municipal Construction Projects' are to be used in conjunction with this manual. The 2012 update of this manual incorporates design information from the City's former 'Subdivision & Development Guide Manual' to provide consistent and current design information for development projects.

The City of London maintains its right to accept or refuse any design submissions and requires an acceptable design for any given circumstance.

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16 Noise Attenuation Measures

16.1 Definitions

Noise Attenuation Measures are required in site specific situations to mitigate existing or anticipated noise levels which exceed the MECP Criteria for acceptable noise levels for specific land uses. Typical locations where Noise Attenuation Measures may be required occur where residential land uses are adjacent to Rapid Transit Boulevard, Urban Thoroughfare, Civic Boulevard, Urban Thoroughfare/Civic Boulevard in Primary Transit Area, Main Streets, industrial lands, and railway lines. Noise Attenuation Measures can be setbacks, building orientation, earthen berms, noise walls, or any combination necessary to achieve an acceptable noise level, based on MECP Criteria.

16.2 New Developments (Draft Plans, Community Plans)

Where new applications for residential development are being proposed along Rapid Transit Boulevard, Urban Thoroughfare, Civic Boulevard, Urban Thoroughfare/Civic Boulevard in Primary Transit Area, Main Streets, Rural Thoroughfare or Rural Connectors refer to the related Official Plan/London Plan Policies which can be found on the [City of London's webpage](#) for the criteria to be applied.

16.3 Capital Works

16.3.1 Application & Methodology

For municipal projects, detailed fabrication and layout drawings of the proposed barrier, sealed by a Professional Engineer, shall be submitted to the Transportation Division for approval prior to manufacture or construction.

16.3.2 Dimensions and Location

- a) The minimum height of the barrier shall be 2.44m above the finished centreline elevation on the road allowance side of the wall. The minimum height of the barrier on the private property side should be 1.8m. In rolling terrain, the barrier height may reduce to a minimum of 1.1m, in which case the combined height of the noise barrier and retaining wall shall not be less than 2.44 m. A concrete curb and gutter shall be erected along the base of the wall to a height of 0.15m or the bottom panel shall be a material resistant to damage from mowers or trimmers. There shall be no gaps or holes from the finished grade to the top of

the barrier, except along the base of the barrier where they can be demonstrated as necessary for drainage.

- b) Masonry or concrete noise walls are to be constructed on the road allowance within the 0.3m reserve, and maintained by the City. If no 0.3m reserve exists, the masonry or concrete noise barrier shall be placed adjacent to the property line, located entirely within the right of way.
- c) Wooden noise walls are to be located entirely on private property, and maintained by the owner.

16.3.3 Materials

- a) Panel materials shall be durable and impervious to ultraviolet light, with a predicted maintenance-free lifespan of 20 years. The barrier system and its components shall be designed in accordance with the requirements of the *Ontario Highway Bridge Design Code*. The barrier shall be constructed to meet a reference wind pressure of 0.36kPa for a 10-year return period, and the wall surfaces are to be “sound absorptive.” For a barrier, the material shall have a surface density not less than 20kg/m², and a demonstrated Effective Sound Transmission Class (E.S.T.C.) of 32 or greater.
- b) Concrete for the post footings shall be 20MPa, in conformance with OPSS 1350
- c) Wooden Noise Walls shall have steel posts.

16.4 Noise Attenuation Measures Where Residential Lands Abut Provincial Highways or Railway Lines

16.4.1 Noise Assessment Study

A Noise study or report is required when a proposed development is situated within certain design setbacks from a provincial highways or a railway line. The noise study is to comply with Ministry of the Environment “Noise Assessment Criteria in Land Use Planning”. All recommendations and details from the Noise Assessment Study are to be met or exceeded and reflected on the servicing drawings.

16.4.2 Dimensions & Location

Are to comply with the Noise Assessment Study, the Railway Line Setbacks, and the Draft Plan Conditions.



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16.4.3 Materials

Are to comply with the Noise Assessment Study, Railway Line Requirements, Draft Plan Conditions, and Section 16.3.3 (above).