DRAFT

Part 2:
ENVIRONMENTAL NOISE CONTROL
GUIDELINES FOR SURFACE TRANSPORTATION PROJECTS

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This revised guideline is a partial review of Section 2 of the May 10, 2006 City of Ottawa Environmental Noise Control Guidelines. This review was undertaken to address adjustments made by regulatory bodies (such as the Province of Ontario). This document has not been fully reviewed and edited to ensure full compliance with the City’s Standard Tender Documents and renewal policies. This review will take place at a later time.
1.0 Introduction

It is the policy of the City that new surface transportation projects will require study of environmental noise. These guidelines provide criteria and direction to the City for the protection of the public from adverse effects due to environmental noise from new surface transportation projects undertaken by the City.

Accompanying the guidelines is the companion document Technical Requirements: Environmental Noise Control Studies for Surface Transportation Projects. When preparing a noise study for new surface transportation projects both the guidelines and technical requirements documents should be used.

2.0 Area of Study

The City requires noise studies within the areas of influence containing noise-sensitive receptors measured from the corridor right-of-way:

- 100 metres for an arterial road or a major collector
- 100 metres for a bus Transitway corridor
- 100 metres for a Light Rail Transit system corridor noise

A larger influence area may be necessary depending on the various corridor and traffic parameters and the significance of the ambient sound levels.

3.0 Sound Level Criteria for Surface Transportation Projects

Based on Provincial guidelines, the City has adopted specific sound level criteria for outdoor levels in outdoor living areas. These criteria are used when considering new construction, reconstruction and widening of City roads and rapid transit corridors in the City. Consistent with City practise studies prepared to demonstrate compliance with the criteria will be prepared in accordance with the MOE procedures and generally accepted acoustic and traffic engineering principles. The table below summarizes the criteria.
### Table 3.0: Summary of Sound Level Criteria For Surface Transportation Projects

<table>
<thead>
<tr>
<th>Future Sound Level, ( \text{Leq}_{16hr} ) (07:00 - 23:00)</th>
<th>Change Above Ambient, dBA</th>
<th>Impact Rating</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greater than 55 dBA and less than or equal to 60 dBA</td>
<td>0-3</td>
<td>Not generally noticeable</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>3-5</td>
<td>Generally noticeable</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>5-10</td>
<td>Significant</td>
<td>Investigate noise control measures and mitigate to achieve retrofit criteria (minimum attenuation is 6 dBA)</td>
</tr>
<tr>
<td></td>
<td>10+</td>
<td>Very Significant</td>
<td></td>
</tr>
<tr>
<td>Greater than 60 dBA</td>
<td>0-3</td>
<td>Not generally noticeable</td>
<td>Investigate noise control measures and mitigate to achieve retrofit criteria (minimum attenuation is 6 dBA)</td>
</tr>
<tr>
<td></td>
<td>3-5</td>
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<td></td>
</tr>
</tbody>
</table>

**Additional Notes:**

- The objective for outdoor sound levels is the higher of the \( \text{Leq}_{16hr} \) 55 dBA or the \( \text{Leq}_{16hr} \) ambient sound level that may prevail at the start of project construction (referred to as the "established ambient").
- If the future sound level is greater than \( \text{Leq}_{16hr} \) 60 dBA and the excess or change in sound level above the established ambient is less than 5 dBA, the feasibility of noise control measures within the right-of-way will be investigated under the City's Local Improvements policy and guidelines.
- Noise control measures will be maintained within the City’s ROW wherever possible.
- The City prefers retrofit sound barrier walls at the flanking ends to be on City owned lands, however if required, property owners at the termination points of the noise abatement wall will be asked to register an easement to the City for the construction and maintenance of a noise wall along a side lot line. The side lot line noise wall will provide protection for the rear yard area of the adjacent property. If the landowner refuses to transfer the easement, the City will not attempt to purchase or expropriate the easement but will delete this section of wall from the noise abatement construction project.
- Where the dominant noise source is due to transit activities within an LRT or a Transitway terminal, a rail yard facility to accommodate the LRT service yard, or a terminal building containing mechanical systems then the City will use the "Stationary Sources" criteria.
4.0 Noise Control Measures for Surface Transportation Projects

For new construction, reconstruction and widening of facilities within a City right-of-way, there are a number of potential geometric and physical noise control alternatives available. Measures that may be considered by the City include:

- selection or alternation of a horizontal alignment;
- depressed or elevated corridor profiles;
- earth berms;
- a combination of earth berms plus acoustic walls,
- traffic management,
- reduction or establishment of suitable vehicle speed limits
- noise walls.

Consistent with Official Plan policy use of noise walls is to be avoided if at all feasible.

Where construction or expansion of a City roadway or a Transitway is planned, and where future noise-sensitive development is likely to materialize, non-structural noise controls will be investigated, e.g. with control of vertical and horizontal alignments, to minimize noise impacts provided that significant increases in project costs or subsequent maintenance costs will not be incurred. Notwithstanding the above, it will still be the responsibility of the developer to meet the City requirements for new noise sensitive developments.

For light rail, there are a number of improvements that may include the use of all welded rail sections, construction details related to future concrete rail structures that accommodate noise control parapet walls, vibration isolation of certain track sections and the choice of low sound emission LRT vehicles,