NBC-2019(AE):B:9.11 SOUND TRANSMISSION
For Single Detached House, Semi-Detached House, Row House, any House with a secondary suite, or Duplex

TO: City of Edmonton
Safety Codes Permits and Inspections
3rd Floor, 10111 – 104 AVE NW
Edmonton, AB T5J 0J4

RE: PROJECT ADDRESS (or LEGAL DESCRIPTION or CITY FILE No.)

SELECT ✔ ↓

- Dwelling sound separation from other in-building spaces in which noise may be generated except any contained secondary suite (see below)

  - Engineer-stamped acoustic design and details for minimum ASTC 47 of walls and floors by detailed / simplified calculation per NBC(AE):B:5.8.1.4. / 5.8.1.5 is submitted with this application.

  - Measurements between finished dwelling units (after construction completion) by acoustical engineer in stamped report form will be submitted for review prior to final building inspection for occupancy, demonstrating minimum ASTC47 is achieved.

  - Prescriptive method, using an assembly with minimum STC50 derived through NRC Soundpaths or equivalent sources. Explain clearly the source of the assembly STC value or supplementary information may be needed.

  - Prescriptive method, using the appropriate minimum STC 50 assemblies per NBC(AE):B: Tables 9.10.3.1.-A & 9.10.3.1.-B including applicable Table footnote requirements, together with the requirements of NBC(AE):B:9.11.1.4. to address flanking sound, and considering Note A-9.11.1.4., resulting construction deemed equivalent to ASTC 47.

  IF THIS PRESCRIPTIVE METHOD OF COMPLIANCE IS SELECTED, CHOOSE AN ASSEMBLY FROM THE FOLLOWING LIST OF MOST-COMMONLY USED PARTY WALLS. CONSULT AND COPY FROM NBC(AE):B:Table 9.10.3.1.-A or 9.10.3.1.-B ANY OTHER PREFERRED WALL ASSEMBLY OR ANY DUPLEX FLOOR ASSEMBLY FOR THE PROJECT NOT FOUND IN THIS LIST.

SELECT ↓

Abridged Extract from NBC(AE) Table 9.10.3.1.-A(1)

<table>
<thead>
<tr>
<th>Wall #</th>
<th>Description</th>
<th>Load-bearing</th>
<th>Non-Load-bearing</th>
</tr>
</thead>
<tbody>
<tr>
<td>W13</td>
<td>2 rows 2x4@16oc or 24oc on Separate 2x4 plates set 1&quot; apart 1 layer gypsum board each side</td>
<td><img src="Image" alt="Diagram" /></td>
<td><img src="Image" alt="Diagram" /></td>
</tr>
<tr>
<td>W13a</td>
<td>3½&quot; batts each side(6)(10) / ⅝” Type X gypsum board(7)</td>
<td>1h</td>
<td>1h</td>
</tr>
<tr>
<td>W14</td>
<td>2 rows 2x4@16oc or 24oc on Separate 2x4 plates set 1&quot; apart 2 layers gypsum board one side; 1 layer gypsum bd other</td>
<td><img src="Image" alt="Diagram" /></td>
<td><img src="Image" alt="Diagram" /></td>
</tr>
<tr>
<td>W14a</td>
<td>3½” batts each side(6)(10) / all ⅝” Type X gypsum board(7)</td>
<td>1h</td>
<td>1h</td>
</tr>
</tbody>
</table>

Continued over...
<table>
<thead>
<tr>
<th></th>
<th>W14c</th>
<th>3½” batts one side(6)(10) / all ⅝” Type X gypsum board(7)</th>
<th>1h</th>
<th>1h</th>
<th>57</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>W15</td>
<td>2 rows 2x4@16oc or 24oc on Separate 2x4 plates set 1” apart</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 layers gypsum board each side</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>W15b</td>
<td>3½” batts each side(6)(10) / all ⅝” Type X gypsum board(7)</td>
<td>1 h</td>
<td>1½ h</td>
<td>65</td>
</tr>
<tr>
<td></td>
<td>W15e</td>
<td>3½” batts one side(6)(10) / all ⅝” Type X gypsum board(7)</td>
<td>1 h</td>
<td>1½ h</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>W15h</td>
<td>No batts / all ⅝” Type X gypsum board(7)</td>
<td>1 h</td>
<td>1½ h</td>
<td>55</td>
</tr>
</tbody>
</table>

**Abridged footnotes (See NBC-(AE) for complete footnotes and Table contents)**

(2) FRR and STC ratings for 2x4, or 2x6 with 5½” batts; also to HRA-finger-joined lumber (See A-9.23.10.4.(1).)

(3) For all fire-resistance ratings, the given spacing for framing is a maximum value.

(4) STC per installation details required by gypsum board in CSA A82.31-M. **Assemblies with STC of 50 or more require acoustical sealant around electrical boxes and other openings, and at the junction of intersecting walls and floors. Gasket-flanged boxes may be exempted.**

(5) There can be no visible cracks/voids on surfaces.

(6) Sound absorptive material includes fibre processed from rock, slag, glass or cellulose fibre **filling at least 90% of the cavity** thickness but NOT overfilling to point of causing outward pressure on the finishes.

(7) ⅝” regular , ⅞” Type X, ⅜” Type X gypsum board must conform to 9.29.5.2.; fastener type-spacing per 9.29.5. or CSA A82.31-M. Surface gypsum board layer on both sides of the wall must have its **joints taped and finished**.

(8) Absorptive material required for the higher fire-resistance rating is rockwool; mass of at least 4.8 kg/m² for 5½” thickness or 2.8 kg/m² for 3½” thickness in the stud cavities on both sides and completely filling the wall cavity.

**SELECT **

**Secondary suite sound separation** from House space in which noise may be generated

- Prescriptive method: sound absorbing material(batts) and resilient channel installation to walls and floor-ceiling assemblies as required. Min 6” in ceiling; do not block return air runs; fill wall cavities.

- Prescriptive method, using the appropriate minimum STC 43 assemblies per NBC(AE):B: Tables 9.10.3.1.-A & 9.10.3.1.B including applicable Table footnote requirements.

- Prescriptive method, using the applicable minimum STC 43 value per NBC(AE):B: Tables 9.10.3.1.-A & 9.10.3.1.B including applicable Table footnote requirements, together with the requirements of NBC(AE):B:9.11.1.4. to address flanking sound, for construction deemed equivalent to ASTC 40.

- Stamped acoustic design for minimum ASTC 40 of walls and floors by detailed or simplified calculation per NBC(AE):B:5.8.1.4. or 5.8.1.5 is submitted with this permit application.

- Measurements between finished dwelling units by acoustical engineer, with stamped report will be submitted for review prior to final building inspection for occupancy, proving ASTC 40 achieved.

I will notify the Building Permit issuer if the construction intention is modified during the project.