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QUALIFICATION DU DEGRÉ DE CONFORT ACOUSTIQUE PROCURÉ PAR LES IMMEUBLES MULTILOGEMENTS – PHASE I

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Executive Summary

Although all residents in multi-dwelling buildings demand the right to live in peace in their units without being concerned about bothering their neighbours or being disturbed by them, very few of these same residents can actually describe, in objective terms, the degree of acoustic comfort that they experience in their units. In most people's minds, acoustic comfort is a vague notion which becomes meaningful solely in terms of dissatisfaction. The vocabulary used by builders to describe the acoustic comfort to be enjoyed by future occupants of units which are being built is equally inadequate. More often than not mention is made of "superior" soundproofing which is rather difficult to define in a legal context where the occupants become dissatisfied and go to court to have their rights recognized.

Numerous CMHC-subsidized research projects in the eighties and nineties make it possible to substantially broaden the building industry's knowledge of the principles of sound transmission by human activity, plumbing, and equipment inside multi-dwelling structures, as well as the techniques available to reduce this transmission. CMCH, in addition, subsidized a Canada-wide research project to establish a correlation between people's subjective perception of the degree of soundproofing in their units and an objective measurement of this soundproofing using a recognized standard.

In Canada and in other countries, building regulations and standards exist to ensure the acoustic comfort of residents in multi-dwelling structures. In addition, there are standards for measuring the attenuation of airborne and impact sound transmission (ASTM and ISO). The measures taken in full compliance with these standards may prove expensive, however, and are not within everyone's reach.

Moreover, they may not represent the best tool to be used in terms of controlling and evaluating global building quality.

This report is the first phase in the development of a procedure for evaluating the degree of acoustic comfort provided in units in multi-dwelling structures. This is a synthesis of all the knowledge available which we have attempted to express in terms of soundproofing objectives to be attained in residential multi-dwelling structures while respecting the numerous constraints associated with this structure type and we are proposing a protocol for evaluating the acoustic comfort provided in housing units in multi-dwelling structures. This protocol will be validated during the second phase of the research project.