

Crossbow Point Condominium Flooring Modification Policy

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1.0 Overview:

In order to promote an enjoyable ownership experience by all, this Flooring Modification Policy and Guidelines has been created and is available for reference by all owners and tenants. All flooring modifications require the approval of the Board, and may be subject to inspection by the Board/PEKA while in progress and/or upon completion.

Crossbow Point is of wood frame construction. This type of construction supports the transmission of a certain degree of noise between adjacent units, whether up, down or to either side. Due to this characteristic, there are certain requirements concerning permitted flooring and sound absorption standards.

It is the Condo Board's duty to ensure that any modifications to one Unit complies with standards intended to prevent adverse impact on adjacent neighbors. Any proposed flooring change must provide similar, if not more, sound buffering than the existing flooring.

IMPORTANT: All flooring modifications require the approval of the Board. Owners must complete and submit the 'Renovation Request Form'.

2.0 Background:

When Crossbow Point condominium units were built, the developer established certain standards to minimize the impact of noise transmission between units. These included:

- ceilings: double drywall, resilient sound bar;
- flooring: 1-1/2 inch gypcrete flooring on top of plywood underlay, engineered floor systems, blown insulation; and
- walls: 5/8 inch drywall to both sides of common and hallway walls, 1/2 inch of fiber board within the wall space, R-12 batt insulation on both sides of the fiber board.

The standard finished flooring consisted of:

- cushioned vinyl: entry way, laundry room, kitchen, bathrooms, may include the dining room; and
- carpet: living room, bedrooms, may include the dining room; foam underlay

Various upgrades to the standard were available, such as:

- cork: flooring in cork in some locations or throughout;
- ceramic: flooring on a sound absorbing underlay (cork), may be used instead of vinyl in limited locations as previously described under 'cushioned vinyl'

Hard surface flooring (e.g., ceramic or hardwood) was NOT available nor permitted for the bedroom areas on the 2nd and 3rd floors. This was intended to minimize noise transmission to resident bedrooms located directly below.

Suites on the main floor were not required to install any sound proofing material beneath the flooring in any room as there are no suites located below them that could be affected by downward noise transmission.

3.0 What you need to know:

3.1 Flooring modifications

Modifications are permitted provided they are consistent with the original construction standards. Hard surface flooring is permitted, only with Board approval and only in described areas - refer to Table 1 'Summary of Permitted Flooring' within this document. Flooring modifications must be completed in compliance with this Policy. If you are planning any sort of flooring changes, ensure that you allow adequate time for your proposal to be reviewed and approved by the Condo Board, which will treat the matter as a priority.

3.2 Impact Insulation Class (IIC) - what you need to know

The choice of floor covering has a significant effect on the amount of impact sound transmitted from a room above to a room below. The floor surfacing material can help cushion the impact and therefore reduce its effect on the sound transmitted to not only the rooms below, but also through the structural floor to adjacent rooms on the same floor. For example, carpet with a high quality underpad is considered one of the most effective impact sound transmission reducers. Other resilient floors such as vinyl, cork, and rubber have slight give which cushions impacts and also helps to reduce sound transmission. The impact sound insulation properties of a floor/ceiling structure (including the finished flooring material) are usually tested by measuring the transmitted sound in a room below while a standard "hammer machine" bangs on the floor above. The results of the test are rated in terms of the Impact Insulation Class (IIC). The higher the IIC number, the better the impact insulation.

Following are IIC ratings for some typical floor materials on a basic joist floor. The absolute ratings for specific floor types vary from test to test but the relative ratings between floor types are generally consistent.

<u>FLOORING</u>	<u>IIC Rating</u>
Ceramic or marble tile	40
Vinyl flooring	47
9mm Hardwood on 5mm resilient layer	47
Carpet with underlay	75-85 (best)

Data demonstrates the necessity for retaining carpet with underlay as the only acceptable option for bedrooms on the 2nd and 3rd floors.

We recommend that owners install only materials having a high IIC rating, and one of equal or greater than the current installation.

3.3 Gypcrete Subsurface

Our building is a wood frame construction with a thin concrete layer on top of the standard wood frame floor for floors above the first floor. The type of concrete used for this sort of insulation is often known as Gypcrete, a lightweight pourable concrete product containing gypsum, also sometimes called acoustic concrete. This surface provides both an improved fire rating as well as noise reduction. A caution with

Gypcrete is that it is brittle and no nailing, screwing, or stapling should be done into the surface. Because it is porous, no adhesive should be applied to the Gypcrete.

3.4 Details per your floor location:

3.4.1 1st Floor - Rigid Flooring Renovations on the 1st floor:

The first floor is on top of the concrete slab immediately over the parkade. Rigid flooring is permitted in bedrooms on the first floor as noise transfer to below is not a significant issue. Although no insulating material is required below a rigid floor installation on the main floor, there must be an adequate and insulated (cork or foam) filler in the gap between the flooring and the walls in all rooms to avoid transferring noise to adjacent units, whether up, down or to either side. Where glue is required, only water-soluble glue is to be used (do not use glue with a solvent / petroleum base).

3.4.2 2nd and 3rd Floors - Rigid Flooring Renovations on the 2nd and 3rd floors (not permitted in bedrooms):

Ceramic tile: Requires a minimum 4mm layer of cork underlay, or equivalent resilient layer. Cork provides an excellent sound buffer which reduces the impact of a rigid flooring installation. Tile can be installed directly onto the cork sub-floor. Where glue is required, only water-soluble glue is to be used (do not use glue with a solvent / petroleum base). Also see 'Area Rugs' below.

Engineered Hardwood: For a floating engineered hardwood (laminated wood) installation, the floating floor should have directly under it the underpad; then below this a layer of cork. Where glue is required, only water-soluble glue is to be used (do not use glue with a solvent / petroleum base). It is important that any rigid flooring does not rigidly touch walls, columns, or any pipes penetrating the floor to prevent direct contact with the building structure. Therefore, a strip of foam or cork should surround the entire floor area (refer to diagram 1) -- a ½ inch thick resilient material such as foam or cork must be vertically attached to the base of the wall or column before installing the new flooring. Pipes must be wrapped with the same material. Also see 'Area Rugs' below.

Area Rugs: We recommend that you also consider using area rugs in higher traffic areas where hardwood and/or ceramic is installed. The addition of area rugs has been shown to substantially improve the IIC rating where hardwood and ceramic have been installed.

3.4.3 4th Floor (loft) - Rigid Flooring Renovations on the 4th (loft) floors:

Ceramic tile and Engineered Hardwood are permitted in all areas of the loft floors, provided the installation is done as per 2nd and 3rd floor requirements.

Table 1: SUMMARY OF PERMITTED FLOORING

	Main floor suite	Second floor suite	Third floor suite	Loft (above 3rd fl)
Hallway entrance, Laundry room, Bathroom(s), Kitchen, Living room, Dining room, Den	All flooring as stated	All flooring as stated	All flooring as stated	All flooring as stated
Common room (loft)	N/A	N/A	N/A	All flooring as stated
Bedrooms	All flooring as stated	Carpet	Carpet	All flooring as stated
Closet areas	Per adjacent flooring	Per adjacent flooring	Per adjacent flooring	Per adjacent flooring

All flooring types include: carpet, ceramic; cork; engineered hardwood; vinyl

DIAGRAM 1