

CANADIAN JOURNAL OF **GREEN** BUILDING & DESIGN

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**KELOWNA & VERNON
HOSPITALS PROJECT**

**Greening Canada's
Healthcare Facilities**

Control Buildings, Control Costs • Hospital Sustainability



Outdoor deck area, Abbotsford Hospital



Outdoor Entrance, Vancouver General Hospital

Sustainable Flooring

Pressure is increasing on our healthcare system to control costs while still providing quality service to patients via a highly skilled labour force. Healthcare is a labour-intensive industry and much of that workforce is highly skilled and highly paid. About 60 to 75 per cent of healthcare expenses are labour costs (according to the CIHI), so utilizing an architectural design that increases operational productivity and efficiency while reducing staffing needs can have a major impact on the bottom line. To keep within this framework, designers are finding innovative ways to limit both construction costs and the costs of their design services, while compressing construction schedules and still meeting the highest quality standards. This issue is further complicated by the mandate to consider the long-term ecological footprint of the building, as these large public buildings have a significant impact on the environment.

Hospitals are not only significant public investments but these facilities also stand as symbols of community caring. These are places where stress is relieved, refuge is provided, respect is reciprocated, and competence is benchmark. This is the key reason for developing an aesthetically pleasing facility. A harmonious physical environment also influences employee service attitudes and behaviours, increases staff morale, and leads to better patient care. Thoughtful design and the use of proper materials, like recycled rubber flooring, can help ensure this model is achieved.

In creating a healthcare facility, the focus must be on:

- developing a superior acoustic environment that subdues the noises of equipment and shuffling feet while providing a comfortable surface that is slip resistant—qualities that can be found in recycled rubber flooring;
- controlling or eliminating glare by using speckled flooring such as that found in recycled rubber surfaces, and thus providing an environment that can be considered less harmful to both patients and employees.
- creating a high-quality visual environment that utilizes a balance of scale, colours, texture and patterns. Available in

pallets of neutrals, warm subdued colours, and bright, vivid cool tones, recycled rubber flooring can help to create a place of healing, and in another area, an energetic place that engages employees;

- consideration of the electrical equipment including computers, server rooms and medical apparatus that could create static electricity. The physical properties of recycled rubber surfaces make them a natural choice to combat this issue;
- way-finding and making sense of the zones of the facility: public (entries, lobbies, spiritual centres, conference and registration areas), patient (departmental entries, waiting areas, consults, exam and treatment spaces, and patient wards), staff zones (offices, work rooms, copy spaces, nurse stations, physician spaces, locker rooms, lounges, conference and all research areas), and service zone (building support spaces, communication, electrical rooms, stairwells, housekeeping, and food preparation). Creating patterns, logos, and directional signage within the floor is easy and cost effective with recycled rubber surfaces;
- providing access to the outdoor environment for all occupants. Imagine creating a quiet, secluded rooftop sitting area or a walking path that takes advantage of the surrounding nature, that is safe, acoustically sound, slip resistant, impact absorbent, stain resistant, and most importantly durable;
- ease of maintenance. Recycled rubber surfaces do not require any stripping, waxing or special cleaners. This is a benefit for both the time spent and the cost of maintaining the floor;
- adapting to emerging issues in such preventative care through a more holistic, patient-centred environment.

In the process of designing a building that meets all of these criteria, long-term operational costs must be considered. What is the point of installing a beautiful, creative floor that is low ... 26

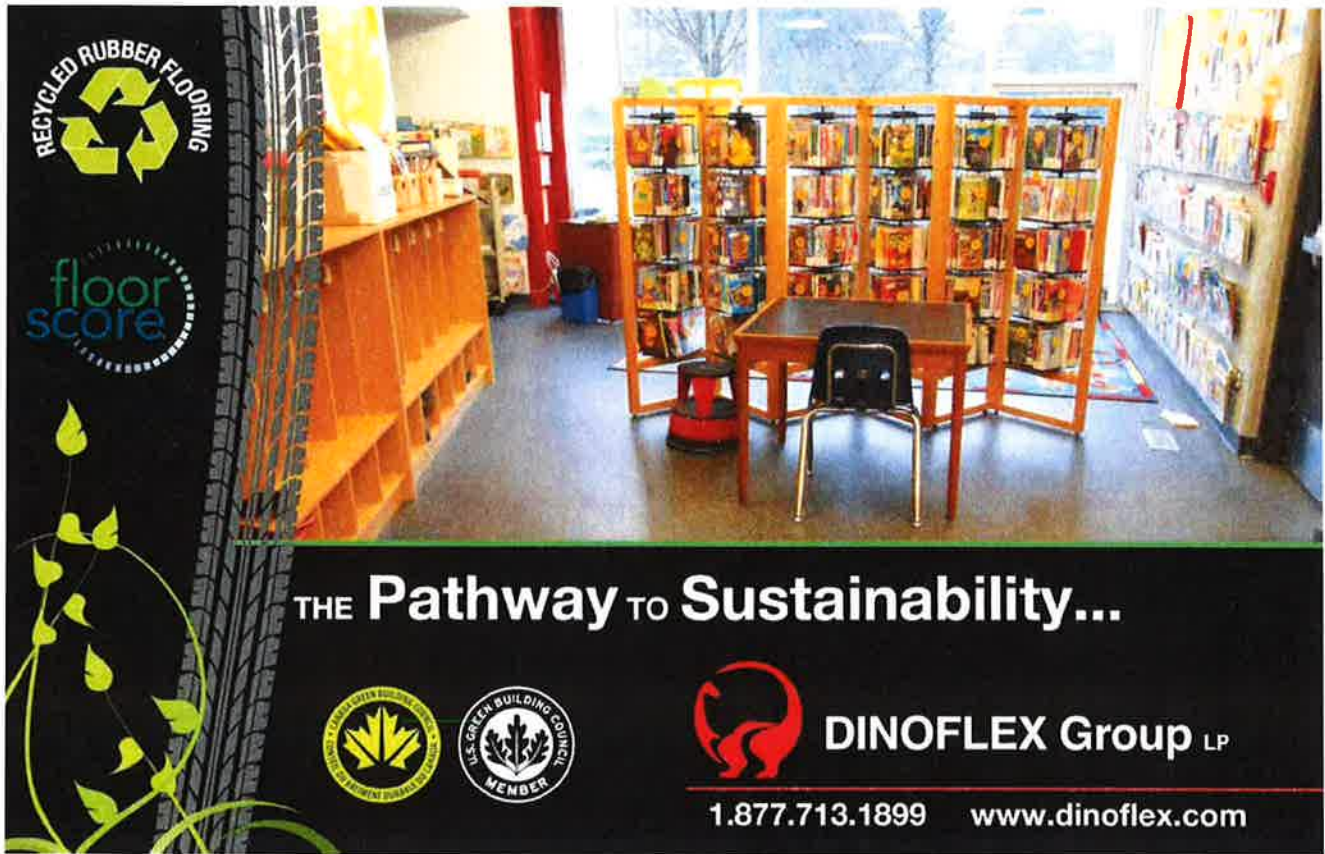
❖••24 in initial cost, but is prohibitive to maintain? This is often the crux of the design process: finding a product that meets the stringent demands of these facilities while still offering a low life-cycle cost and an environmentally friendly footprint.

In this whole-building approach, many architects and designers are using LEED® as a guideline. Recycled rubber products contribute toward LEED credits for construction projects in a number of categories. The most prominent is “Recycled Content”. Manufacturers create indoor and outdoor surfaces by repurposing post-consumer ground rubber that would otherwise remain as tires piling up in landfills. Another key component is “Indoor Air Quality”.

Most manufacturers submit their products through rigorous indoor quality emissions requirements to earn FloorScore® and CHPS certification. This means that the recycled rubber floor is a low VOC-emitting material that requires minimal maintenance. It is this minimal maintenance that translates into a very low life-cycle cost in comparison to other flooring products. Recycled rubber surfaces are not only environmentally friendly but also durable, shock absorbent, slip resistant, and noise reducing.

The natural antifatigue properties associated with recycled rubber flooring eliminate the need for underlayments as well as additional surface mat products. Recycled rubber flooring is manufactured in roll format or tiles, offering designers the choice of installation means. While both are easy to work with, tile flooring offers ease in pattern making, and reduces waste at the installation site. These certified products are used in schools, community centres, healthcare facilities, and many other markets.



The use of recycled rubber surfaces can best be summed up by this quote, which is used in the American Veterans Association Designer’s Manual 2008: “Rubber floors, which do not require stripping and waxing and have cushioning comfort qualities plus acoustical properties, are good for healthcare facilities. The resulting reduction in noise leads to higher patient stratification, underfoot comfort qualities, higher staff satisfaction levels, and potential lower staff injury rates. Life-cycle maintenance costs and long warranties strongly support the consideration of using this type of product.” **GBD**



RECYCLED RUBBER FLOORING

floor score

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