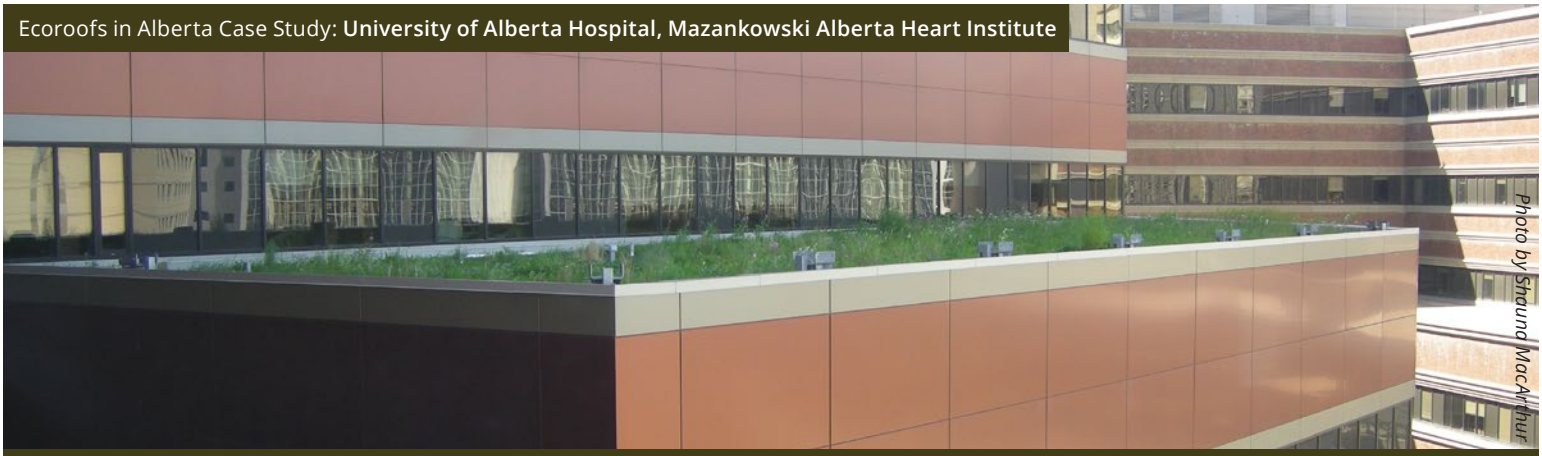


Photo by Shauna MacArthur

The heart of the hospital

PROJECT:	**University of Alberta Hospital, Mazankowski Alberta Heart Institute**
LOCATION:	**11304 - 83 Avenue**
BUILDING TYPE:	**University of Alberta Hospital – Four separate ecoroofs**
TOTAL ROOF AREA:	**Not provided**

Ecoroof details

ECOROOF AREA: 463 m^2

DIRECTION: Three south facing, one north facing

STOREY: Four different ecoroofs over 3 levels: entrance canopy roof, rotunda roof, and fourth floor roof; fifth floor roofs

YEAR INSTALLED: 2007

NEW BUILD OR RETROFIT: New build

TYPE OF ECOROOF: Extensive ecoroofs

ECOROOF SYSTEM: Soprema Sopraflor built up system

SUBSTRATE DEPTH: 20 cm

PLANTS: Variety of native species of wildflowers and grasses as well as trusted ecoroof species, sedums.

ACCESS: Not accessible to the public

Description

The University of Alberta Hospital's Mazankowski Alberta Heart Institute was constructed in 2007. An interesting feature is the installation of four unique ecoroofs at the site, varying in storey and exposure (both south and north exposures).

These ecoroofs were designed to provide both building benefits (ex. insulation, roof life extension), as well as public benefits. Although the roof is not physically accessible to the public, the benefit to the patients, staff and visitors in the hospital is from the visual accessibility to green space, which is atypical of hospitals in North America.

Challenges

At the time of design, ecoroofs were considered a 'new technology' in Alberta and there were few professionals in the field of ecoroof design or construction. The designers wanted to focus on using native Alberta plants in hopes of reducing long term maintenance requirements however, at the time this roof was being constructed, native plant species were not readily available. Another challenge was access, both during construction and for maintenance. The access to the ecoroofs is through windows on different floors.

Benefits

There are several motivations behind the installation of the Mazankowski Alberta Heart Institute's ecoroof which are closely linked to the benefits the ecoroofs provide. From a building perspective, the ecoroof contributed to LEED compliance of the building, reduces heat deflection, and aids in stormwater management of runoff. Studies in the United States have shown from a psychological perspective that visual access of green space and vegetation increases positive attitude and speeds healing of patients. The visual access to green space spills over to staff and visitors in the hospital as well.

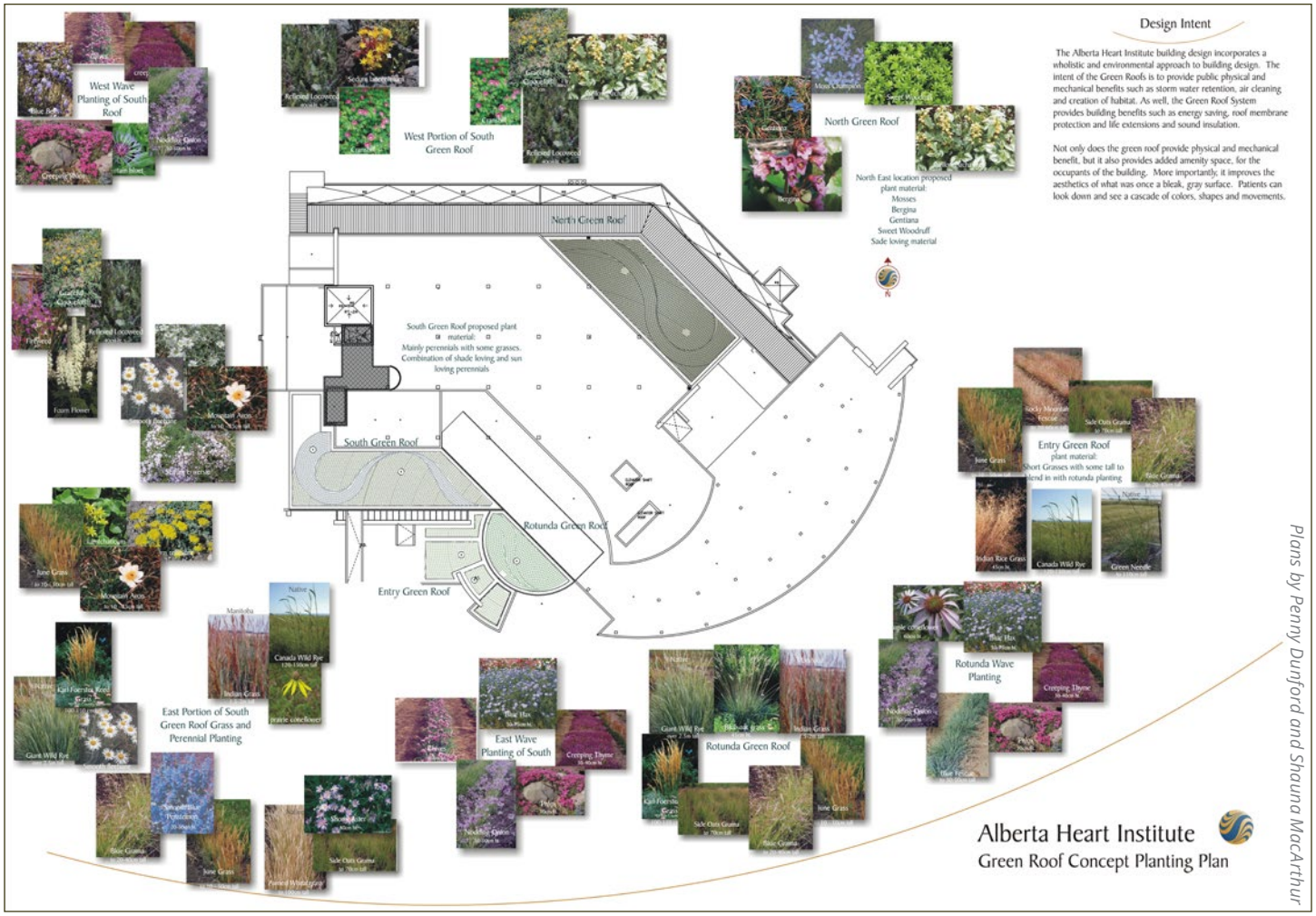
Not only does the green roof provide physical and mechanical benefit, but it also provides added amenity space, for the occupants of the building. More importantly, it improves the aesthetics of what was once a bleak, gray surface. Patients can look down and see a cascade of colors, shapes and movements.

Lessons Learned

Plan well, ensure proper installation and have a planned maintenance program.

Specifically for this roof, access was not well planned and this made construction challenging. Also consider access for maintenance personal.

A benefit of designing a roof on a new build is not only the structural loading ability, but also the opportunity to work with other disciplines responsible for the design and construction of the building. If you involve all parties in the design phase, special considerations for ecoroofs (i.e. access and structural loading) is more easily facilitated.



Thanks to our project funder

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