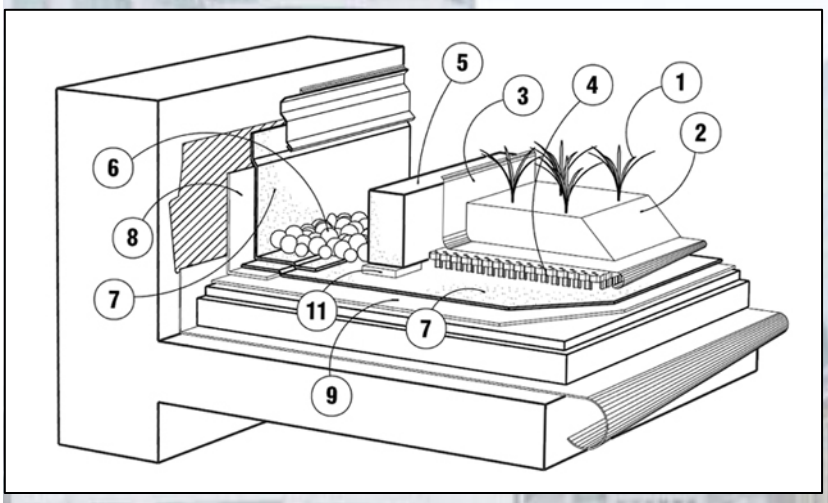


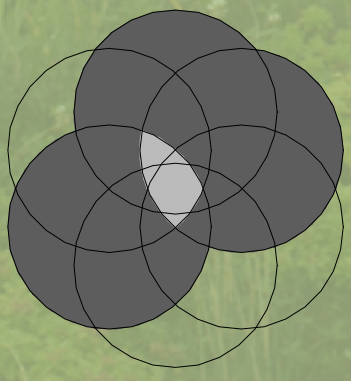
The Sopranature System:
1) Vegetation
2) Sopraflor growing medium
3) Soprafiltre
4) Sopradrain
5) Cement curb
6) Gravel (omitted at MEC)
7) Sopralene Flam Jardin
8) Sopralene Flam 180
9) Base sheet with primer
11) Rubber spacer (Sopramat)
(Soprema, 1998)

The installed system shown below:
Vegetation
Lightweight growing medium
Root barrier
Expanded polystyrene drain board
Modified bitumen roofing

Location
Toronto, Ontario
Architect
Stone Kohn McQuire Vogt Architects
Year Completed
1998
System Type
Extensive
Project Area
10,000 sf (900 m^2)

A. Storm Water

The Toronto MEC store is equipped with a sophisticated multi-layer green roof system called SopraNature, manufactured by Soprema. The layers both reduce and slow storm water, though no monitoring equipment is in place to quantify this benefit. The system provides a delicate balance between retaining too much water (which would lead to ponding and drowning of plant roots) and too little water (which would require excessive irrigation and compromise the storm water retention benefits of the roof). Occasional irrigation with sprinklers is necessary to maintain the roof during dry weather.



A. Storm Water
B. Energy
C. Acoustics
D. Structure
E. Compliance
F. Cost

Soprema. (1998). Perimeter protection detail. http://download.soprema.ca/fichier/sna02-e.pdf (6 Sept. 2004).

TORONTO MOUNTAIN EQUIPMENT COOPERATIVE

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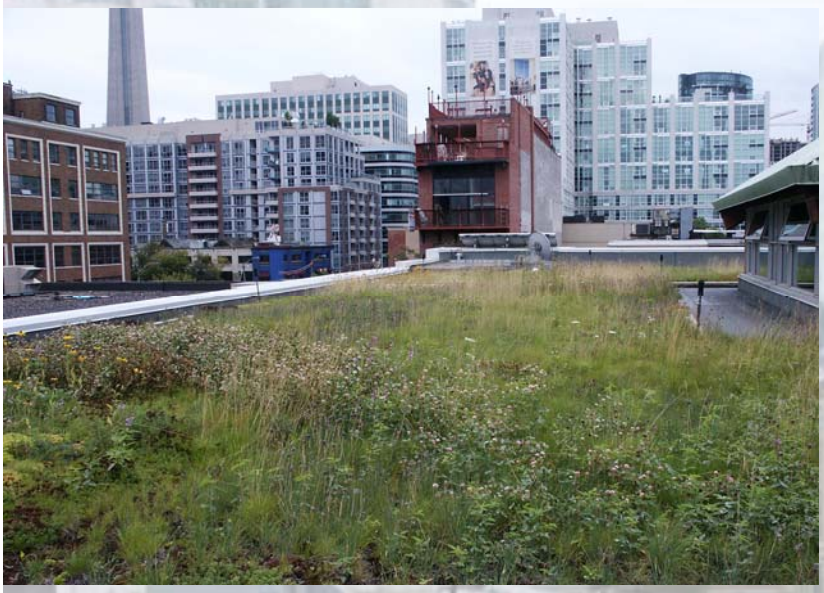


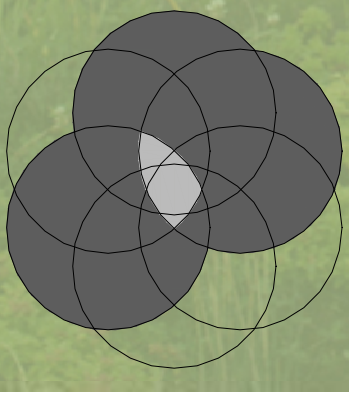
The green roof reduces temperatures at the roof surface.

The green roof surrounds the roof monitor.

Location
Toronto, Ontario
Architect
Stone Kohn McQuire Vogt Architects
Year Completed
1998
System Type
Extensive
Project Area
10,000 sf (900 m^2)

B. Energy

The green roof at MEC surrounds a central roof monitor that provides natural light to the retail floor below. Windows linked to a temperature sensor open automatically to vent hot air from the space using the stack effect. The green roof's main energy benefit is the reduction of air temperature at the roof surface, which translates to reduced temperatures at the roof membrane. Unfortunately, no instrumentation is presently installed to record these reduced temperatures.



A. Storm Water
B. Energy
C. Acoustics
D. Structure
E. Compliance
F. Cost

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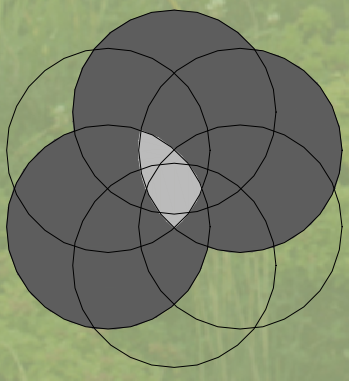
Façade and naturally illuminated interior of the store

A roof meadow in downtown Toronto's theater district

Location
Toronto, Ontario
Architect
Stone Kohn McQuire Vogt Architects
Year Completed
1998
System Type
Extensive
Project Area
10,000 sf (900 m^2)

E. Compliance

In accordance with MEC's philosophy, the design of the Toronto store endeavored to "Reduce, Reuse, Recycle and Rethink" the ways in which a building is built. The façade was constructed from logs recovered from the bottom of the Ottawa River, while the supports of the roof monitor were salvaged from the demolished Marconi Radio Building in Montreal. Where possible, interior finishes were eliminated or made of recycled materials. The green roof was envisioned as an urban meadow to host migratory birds, butterflies and other insects (MEC, 2004).



A. Storm Water
B. Energy
C. Acoustics
D. Structure
E. Compliance
F. Cost

Mountain Equipment Co-op. (2004). Green facilities, Toronto store. *Social and environmental responsibility.* http://www.mec.ca/ (6 Sept. 2004).

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