

Dfb

Warm-summer humid continental climate

Location Examples:

- Hamilton, Canada
- Taiki, Japan

study
By Yanan Qian

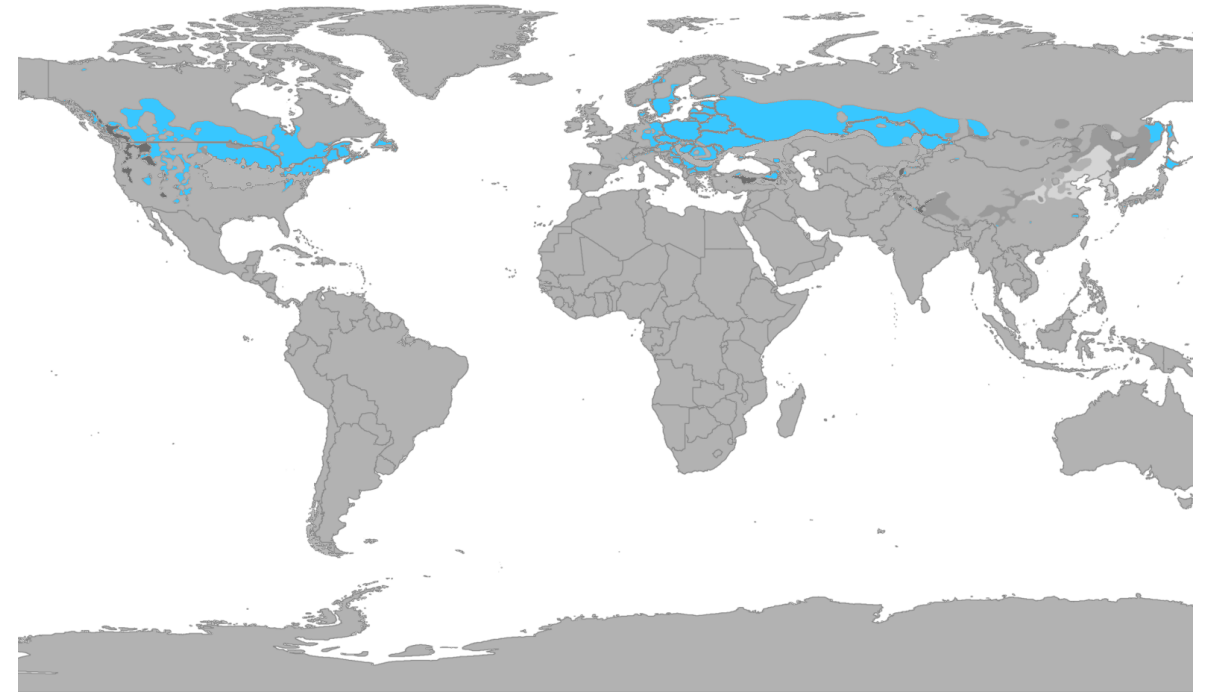
The Warm-summer humid continental climate exists in the central and northeastern portions of North America, Europe, and Asia.

Dfb is typified by large seasonal temperature differences, with warm to hot (and often humid) summers and cold (sometimes severely cold in the northern areas) winters. Precipitation is usually distributed throughout the year.

Building in Dfb climate zone is required insulation to resist the cold winter and vapor barrier to protect the building from humid summer.

Sources:

https://en.wikipedia.org/wiki/Humid_continental_climate



18.36.54 House

case study
By Hua Yinghua

New Milford, Connecticut



Architect: Studio Libeskind

Owner: N/A

Year of completion: 2010

Climate: Warm Summer Continental Climate

Material of interest: Metal

Application: exterior

Properties of material: 18.36.54 is clad in bronze interference-coated stainless steel. Light Interference Coatings (LIC) on stainless steel provide a broad range of color which changes in various lights. The fine coating adds an aesthetic layer to the metal without sacrificing the innate high-performance qualities of stainless steel.

Sources:

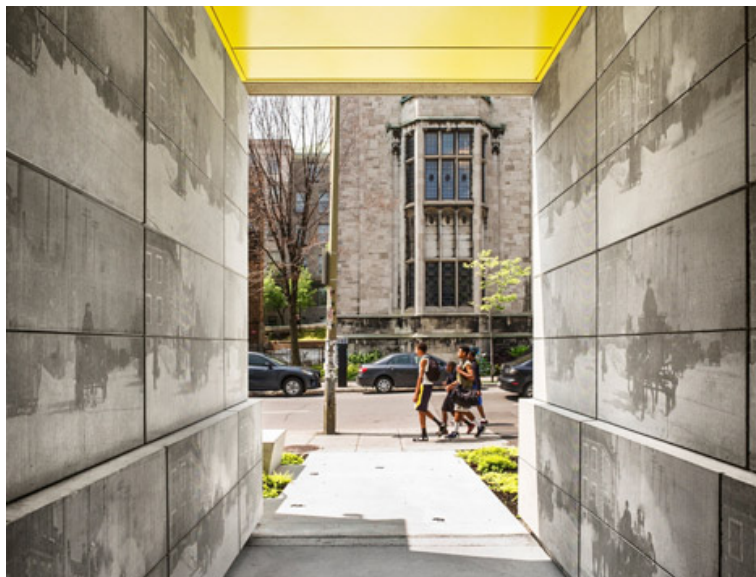
<https://libeskind.com/work/18-36-54/>

<https://www.azahner.com/works/libeskind-residence>

Edison Residence

case study
By Ruizhu Han

Location: Montréal, QC



Architect: KANVA

Owner: N/A

Year of completion: 2014

Climate: Humid Continental Climate

Material of interest: Engraved Concrete Masonry

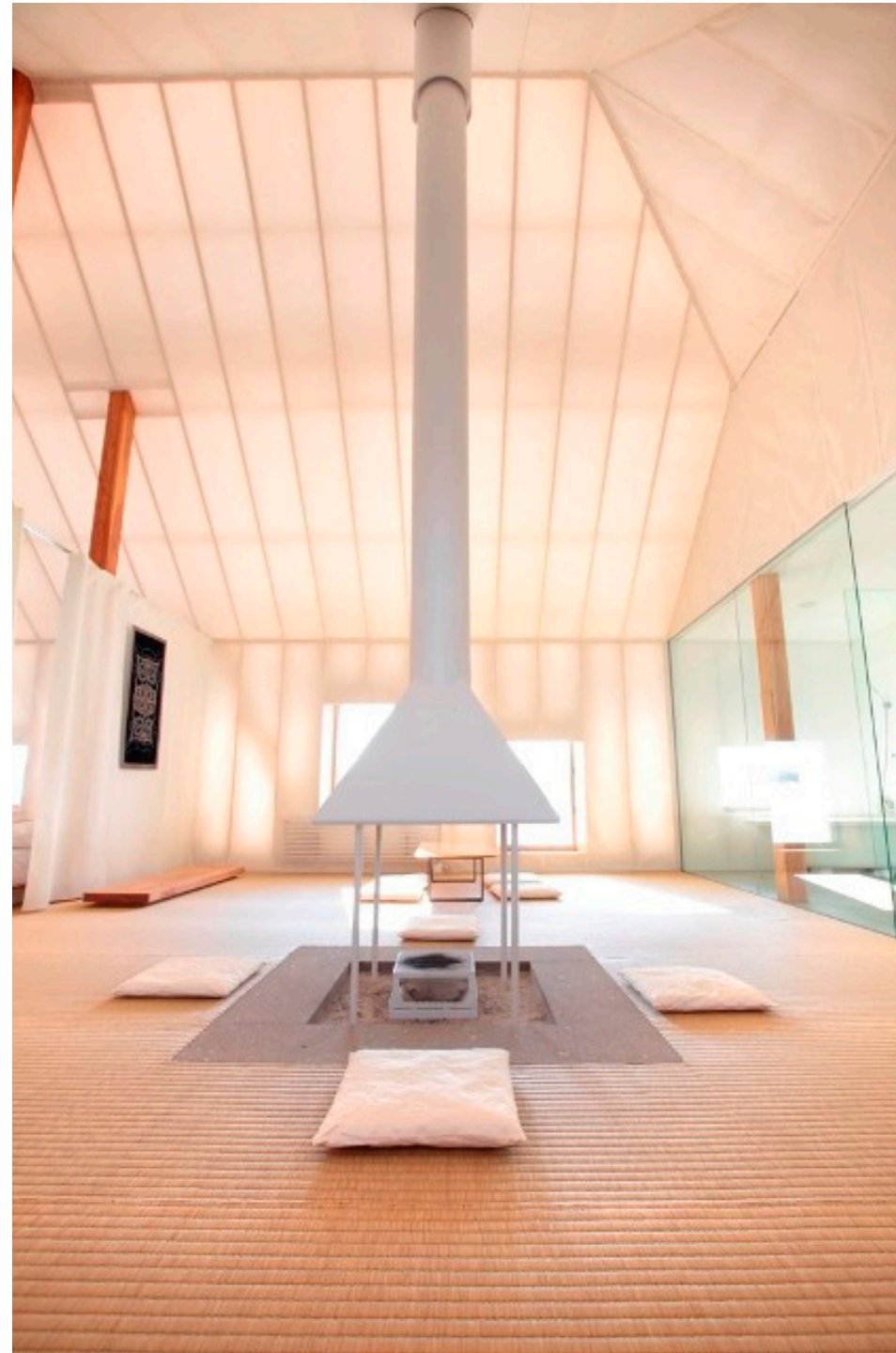
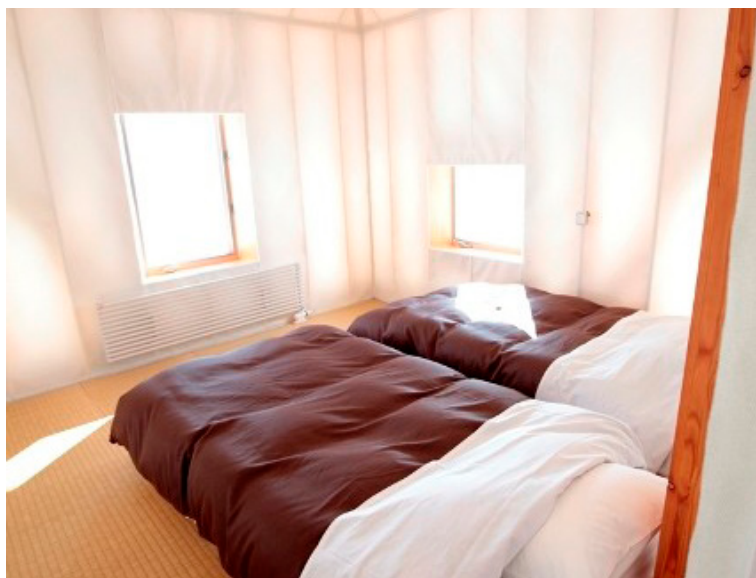
Application: Exterior

Properties of material: This Montreal student housing block by Kanva is clad with concrete panels that are engraved with historic pictures of the site (+ slideshow).

Sources:

<https://www.dezeen.com/2014/08/11/edison-residence-by-kanva-concrete-panel/>

Location: Taiki, Japan



Architect: Kengo Kuma & Associates

Owner: LXIL JS Foundation

Year of completion: 2011

Climate: Cool summer humid continental climate (Dfb)

Material of interest: For cold climate, dynamic insulation system

Application: Exterior, interior

Properties of material: A membrane with polyester fluorocarbon coating wrapped the exterior of the building, and a removable membrane for the inside. Between the two layers of membrane is polyester insulator recycled from plastic bottles. This translucent system provides panoramic daylight and dynamic thermal quality which is created by convecting the air between the two membrane layers. Thus, radiant heating is only required once in several days.

Sources:

<https://www.archdaily.com/322830/meme-experimental-house-kengo-kuma-associates>

Munson-Williams-Proctor Arts Institute

case study
By Shijing Zhu

Location: Utica, New York, United States



Architect: Philip Johnson Associates, Bice & Baird

Owner: N/A

Year of completion: 1960

Climate: Warm-summer humid continental climate

Material of interest: Canadian granite

Application: Exterior

Properties of material: The Museum of Art stands as a three-story symmetrical structure, embedded into a site that slopes down towards its rear. The exterior is visually striking. A monolithic cubic mass wrapped in dark grey Canadian granite floats above a continuous curtain wall.

Sources:

<https://www.archdaily.com/492133/ad-classics-munson-williams-proctor-arts-institute-philip-johnson>

Waterdown Library and Civic Center

case study
By Sarah Fahey

Location: Waterdown, Ontario



Architect: RDHA

Owner:

Year of completion: 2015

Climate: Warm-summer humid continental climate

Material of interest: Glass

Application: Exterior Glazing

Properties of material: Transparent, reflective, easy to clean, weather resistant

Sources:

<http://www.rdharch.com/waterdown-public-library-1/>

<https://www.dezeen.com/2017/03/28/rdha-embeds-stone-glass-waterdown-library-civic-centre-library-grassy-hillside-hamilton-ontario/>