WATER GAMER

surface / tense / bending

Porte du Rivage // 1000 BRUSSELS

50°51’20.1”N / 4°20’49.9”E

CONCRETE DESIGN COMPETITION 2021/2022
LB212


/ spider’s web


/ water


/ fabric in the wind


/ sand dune

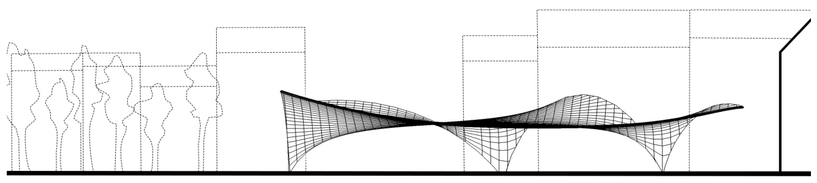

/ mountain


/ tree trunck

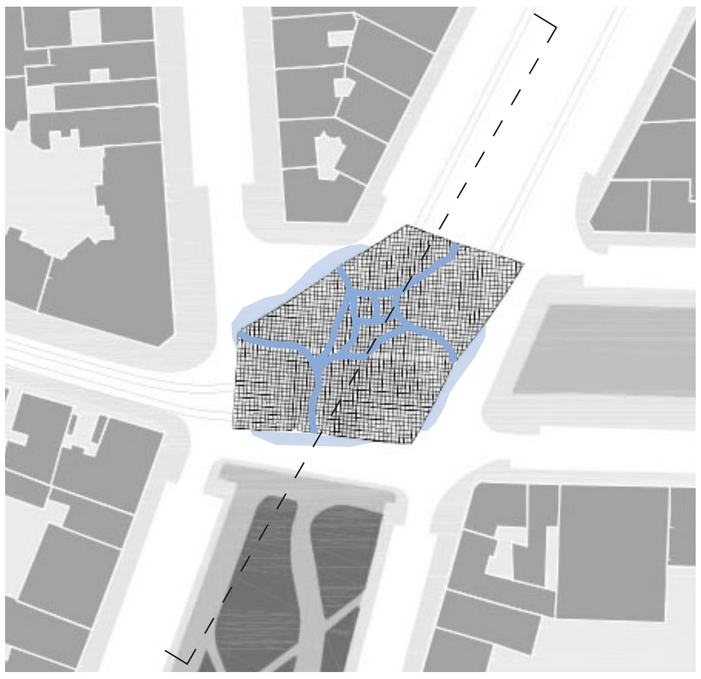
// PROJECT

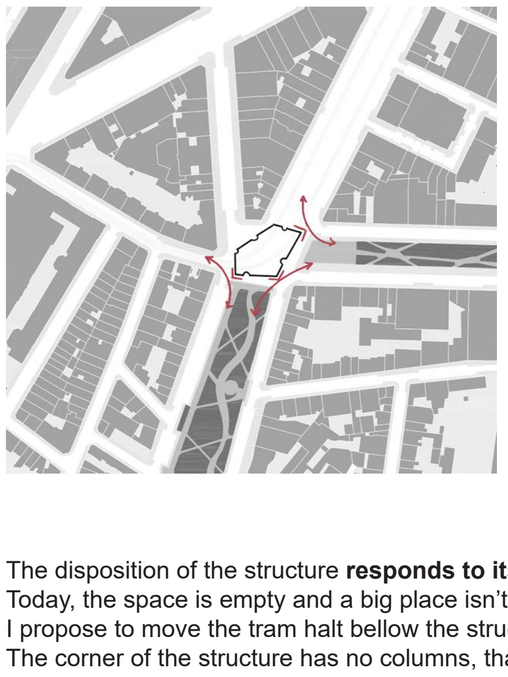
Re-imagine concrete in its **appearance**, **feel**, **expression**.
This material very often perceived as rigid, solid and straight could evolve toward a thinner, flexible yet tense, bending surface.
A poetic insight that meets a need for imagination, of escape in a city in perpetual movement.
This vision brings us back to the present and we stop to contemplate this surface visible in the nature that surrounds us.
Perhaps it reminds us of the fabric huts built being small?

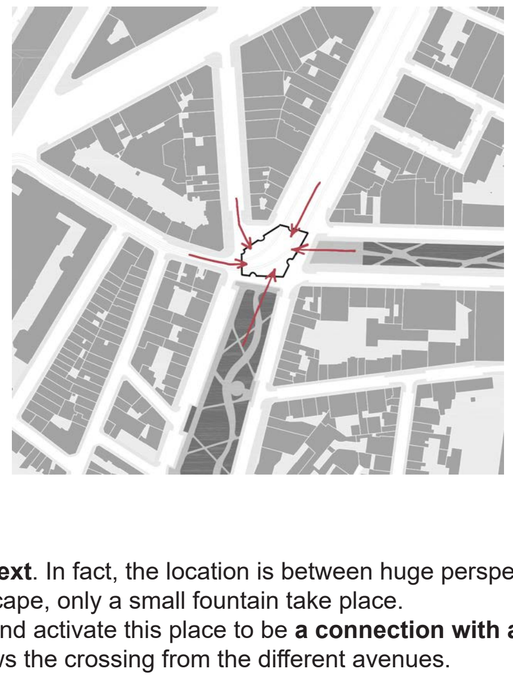
A sunbeam highlights a change of color on the material, this is a trace of time passing.
The heavy rain present in this country marks its passage on this structure of a rolling look. It is pleasant to contemplate it in all circumstances.



// SITUATION

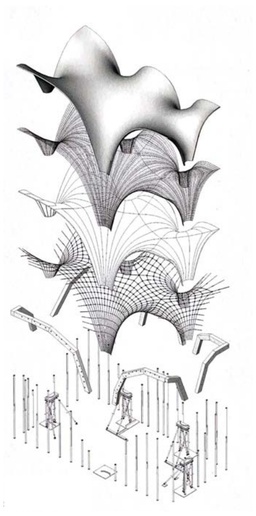




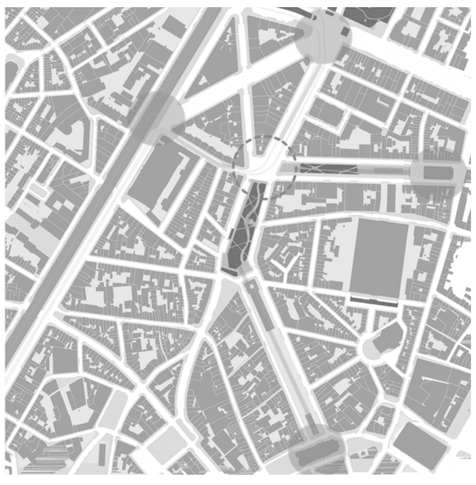


The disposition of the structure **responds to its context**. In fact, the location is between huge perspectives, where a lot of avenues **meet each other**.
Today, the space is empty and a big place isn’t landscape, only a small fountain take place.
I propose to move the tram halt bellow the structure and activate this place to be **a connection with all those avenues**.
The corner of the structure has no columns, that allows the crossing from the different avenues.

// STRUCTURE



(1) supports
(2) formwork
(3) reinforced concrete shell



Situation of the concrete structure at «Porte du Rivage» in Brussels between the canal, the Place Sainte-Catherine, Boulevard d’Anvers, Royal Flemich Theatre.

Hilo is a research carried out at the robotic manufacturing lab of the technology in architecture at ETH Zurich in 2018.

This innovation makes it possible to construct complicated forms by **reducing** the construction **waste** and **minimized** the resource **consumption**.
This new method of formwork allows the creation of a very **thin double curved roof** of carbon fibre reinforced concrete.

«There are no limits to the shape of concrete. Enormous freedom lies before the designer, an astonishingly vast field. It is astonishing that in fact very little use is made of this freedom. It is astonishing that the great majority of concrete buildings follow the typical shapes of wood and steel, namely the straight beam, the flat slab and the plane wall.
[...]
The problem of building technique is another impediment. Curved formwork is complicated and expensive, at least in the traditional sense».

— Heinz Isler, 1981