

International design competition for the “Ford Calumet Environmental Center, Chicago”

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My project follows the steps I took in my research.

1) CHICAGO

The city of Chicago, where the Ford Calumet Environmental Center will be built, was the first step of my research. In my work the city of Chicago is presented in a variety of cards with pictures of its most significant buildings. The order of the pictures follows the districts of Chicago, from the downtown centre to the suburbs.

2) ANNOUNCEMENT OF COMPETITION

The second step was to read carefully the announcement of competition in order to obtain input and the necessary information for the layout and parameters of the project.

3) MEETING WITH COMMISSIONERS, PARTICIPANTS AND WINNERS OF COMPETITION

The third step was to meet the commissioners, the participants and the winners of the competition. These people explained what the competition was about, gave me information on the site and showed me the projects that had already been presented. This gave me a better understanding of what I was supposed to do.

4) SITE SURVEY

The fourth step was to visit the site of the project. There I took many pictures, which show the main characteristics of the area. The pictures were later put on cards with their optic cones, some maps and some airphotogrammetrics supplied by the organizers of the competition.

5 - PROJECT

The fifth and last step was the final drafting of the architectural project and of the energy project. The architectural project is divided in four parts: the energy project addresses the environmental sustainability of the building.

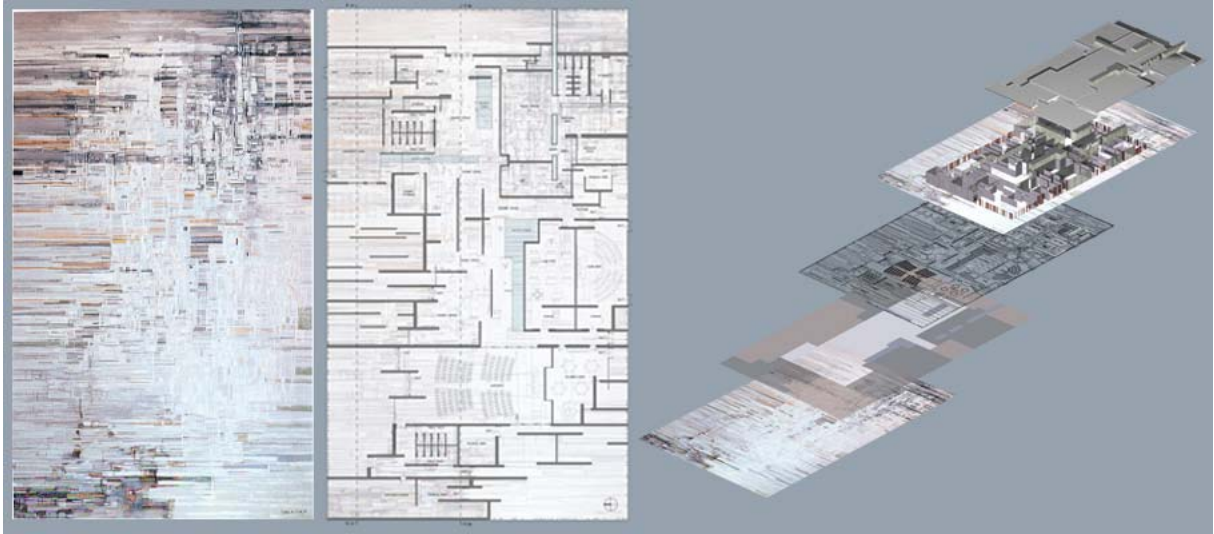


Photo of the abstract painting, drawing of the plant which has been designed over the painting and the four phases of the architectural project

The four phases are explained below.

1 - PICTURE CHOSEN AS COMPOSITION BASE

The reason I have chosen this painting as the base of my composition is because I believe there is a strict relationship between art and architecture. This painting recreates abstractly the patchwork of different shades of green and brown of the site. In fact, this is how this natural site with swamps, open fields, low grass, high weeds, bushes and groves of trees would appear when seen from high above.

2 - STUDY OF CHROMATIC AREAS OF THE PICTURE.

In this part of my work, I have analysed the different chromatic areas of the picture and, since they were too many, I have reduced them to four.

I have also noticed that the rugged texture of the picture was cut horizontally by dark lines while vertically the separation was made only by the combination of different colours.

3 - PLANT DESIGN

The features of the picture I noticed in my analysis in Phase Two have provided me with the architectural elements I needed to design the plant.

The plant is structured on one level with areas of different heights. Each chromatic area corresponds to one of the different functions requested by the plan in the announcement of competition.

The features have also helped to display the structure and to study the facing of outside walls and interior partitions.

On the thick lines, which divide the painting horizontally, I have placed stone structural partitions that have been connected with large glass windows. Their frame is irregular because they are the vertical transposition of the horizontal divisions of the painting.

4 - VOLUMES

In the same way, the four chromatic areas have been used for the extrusion of volumes. The different heights of the volumes correspond to their different uses.



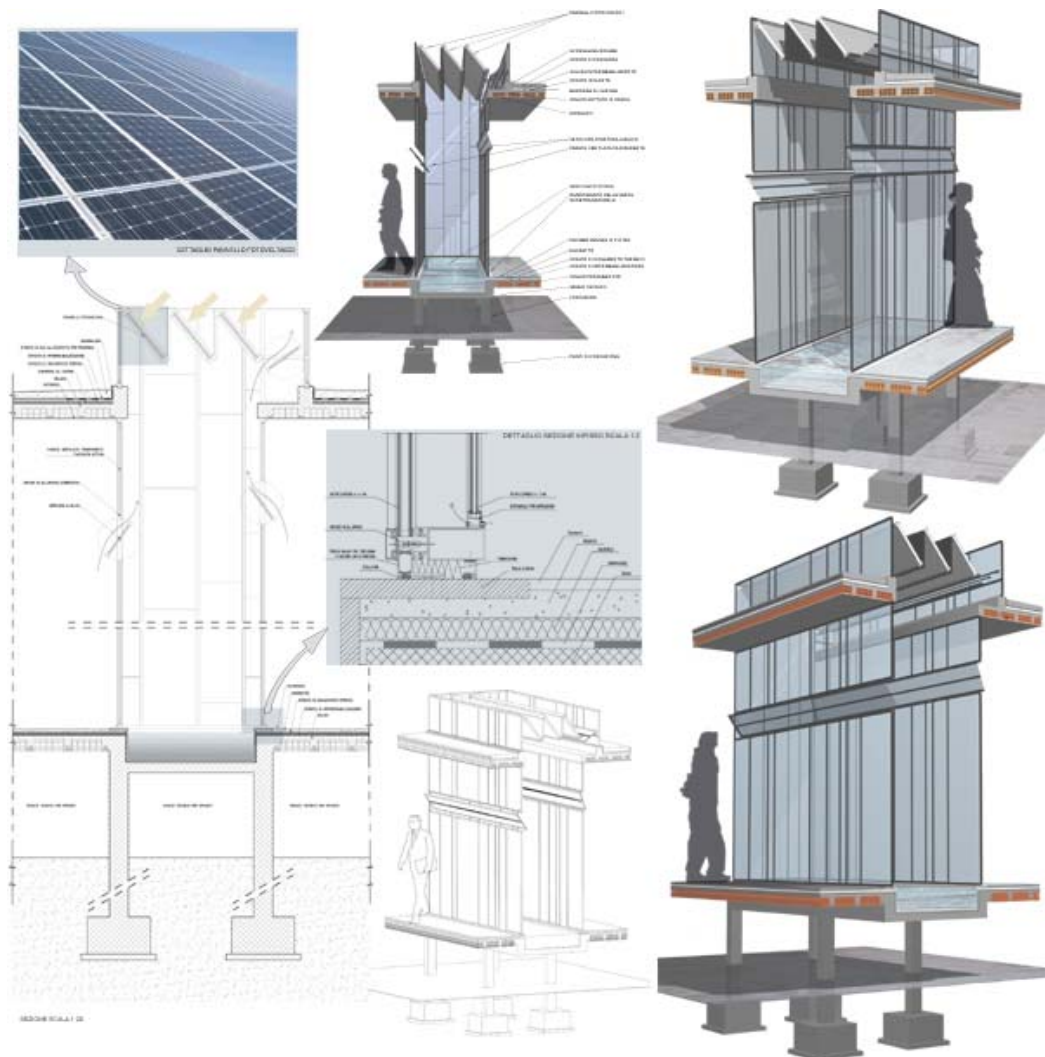
The picture represents the volumetric solution of the building in four prospects and two renderings

5 - ENERGY PROJECT

In planning the complex I have always taken into consideration respect for the environment. Thus my objectives were:

- minimum consumption of non renewable energy sources
- minimum discharging of pollutants into the atmosphere
- minimum impact on local ecosystem
- maximum quality of interior habitability

These objectives were achieved by using architectural strategies such as the insertion of technological volumes. They have been architecturally represented as glass volumes that develop in height and they have been equipped with technological devices for the saving of energy and renewable energy sources planned for the building such as sun panels on roofs, windows that open to air parts of the glass structure and the water ponds at its base, which are used as reservoirs for the water of the heating system.



Graphic summary of the energy project in which the technological devices for the saving of energy and the sustainable features of the building that have been put in the glass volumes can be seen

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