

A SCHOOL ON THE WATERFRONT IN ALEXANDRIA

by

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Dedicated
to my parents and brother
for their trust and faith in me

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ABSTRACT

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(ABSTRACT)

The task of this thesis is the design of a school as a public place fully integrated in a small city. The concerns of the architect are on the one hand to set the school in a harmonious relationship to the other functions of the town. The inner structure of the building reflects this in being a "hamonious part" to the whole environment. On the other hand, determined by the site at the waterfront, the architecture gets its resources from the threshold of land and water.

ACKNOWLEDGMENTS

It is a pity that _____ could not witness the establishing of the Nobel Prize in the field of business administration. Probably he would have been the first prize winner. _____ opinion was that the budget of a state does not to have to be balanced in every economical cycle. He said it would be of much more importance to be concerned about full employment and economical growth. In the time of a recession, it would be more important to agree on a deficit in the budget to reach that goal. With the borrowed money, it would be possible to give the economy important impulses. After the economy prospers again, the increasing tax rate would make it easy to pay the loans back. So the political situation would be stabilized by the economy. Looking at a longer period we can still talk of a balanced budget. A major recession was prevented.

I would like to say thank you to all my friends in America and Germany who supported me with their help and faithfulness to prevent a slip into a deep personal recession.

Blacksburg, December 1985

DIE ERSTEN LICHTER

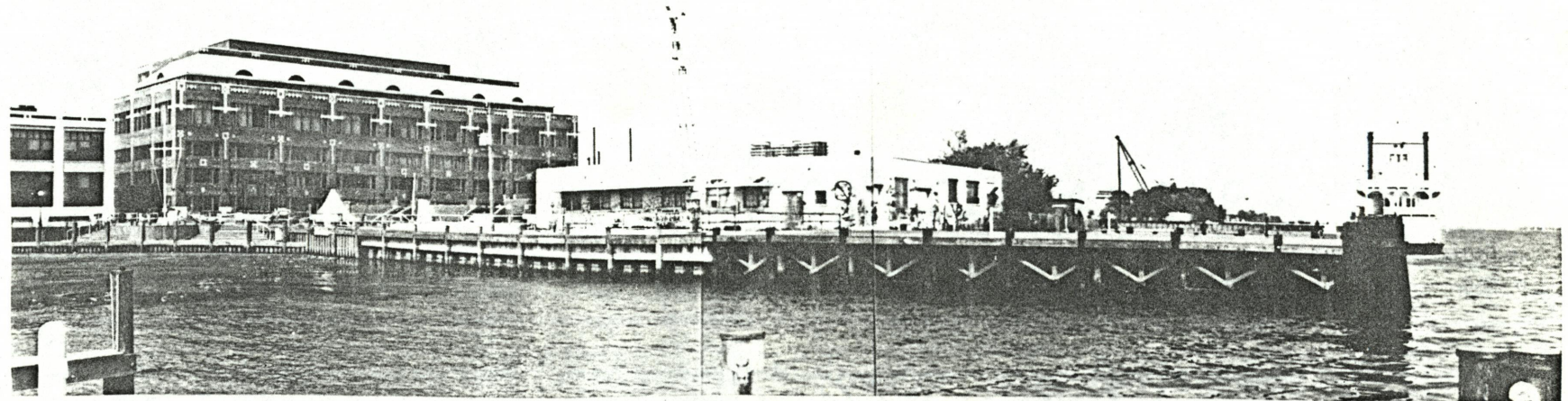
Leicht, sich von einem schlechten Ort weit weg zu wuenschen. Aber die Strasse aus ihm hinaus ist weniger selbstverstaendlich, sie muss erst gelegt werden. Das ebene Feld, das nach allen Seiten geht, ist fuer den rechten Weg ebenso schwierig wie das gebirgige, aeusserlich sperrende. Daher das Verirren, einer der bittersten Zustaende und ein sonderbarer dazu. Er liegt in der Verlaengerung des Wollens, dem das Koennen fehlt oder noch fehlt, des Keims, der sich nie richtig in die Blume wirft. Der Verirrte steht zwischen dem bleibenden Wunsch und dem nicht bleibenden oder sich nicht zeigenden Weg. Aber die Gefahr, in die das Verirren den Wanderer setzt, die Gefahr des Umkommens, ist auch der Zoll fuers Neue. Er wird ueberall bezahlt, wo Neues aus dem Dunkeln herausgeschlagen wird, der Marsch dahin ist entscheidenes Nicht-Bett. Die Sicherung wird desto geringer, je mehr die vertraute Merkwelt nachlaesst. Aber wie bedeutend dann das erste Licht, wie ueber jedes bisherige Mass hinaus beruhigend. Die Oede hat nicht verschlungen; vorher nie Geschehenes, das auf dem falschen Weg erschreckt hatte, wird auf dem richtigen, richtig gemachten schlechthin erfreulich. Die Triebe nach Beute und nach Wundern gingen hierbei erstaunlich oft ineinander oder miteinander. Die Erde in der Ferne wird indisch, hinter dem Gewohnten geht sie phantastisch auf. Das Segel befreit vom Festland, die Hochsee wird dadurch befahrbar. Nicht nur erfunden soll werden, auch entdeckt, ein aeusserst stoffhaltiger Traum schickt man dazu aus.

INTRODUCTION

To work with the theme "school" seemed to me to be necessary after traveling up and down the East Coast learning more about the United States. It came to my attention that the same kind of schools were built between Florida and the State of New York, despite the different geographical locations, climate zones and environmental conditions. I did not even think that these types of buildings were suitable for schools. The general attitude seems to be similar to that of the "sales architecture" of firms like McDonalds, K-mart, Pizza Hut, etc.. An answer to that problem was not immediately obvious so I started to consider what a "good school" would be. My experiences with schools were not the best in Germany. This was another reason for involving myself with this topic.

I, a stranger and afraid
In a world I never made. (1)

Waterfront Plaza



I began working with the element "classroom" in regard to its proportion and to the size of the children who would be taught there. Also, I thought that the concept of "circulation" would be an important one to make a school proper for children. I analyzed staircases and ramps to find out how to make them easier for children. In doing so, I was looking at the development and growth of the children. I could not find a reference point to gather children in harmonious groups, suitable to a certain concept of "circulation". The children's physical development could not be a design criterion in the first place.

I realized that the nature of a "good school" is not found in the right measurements. It is more the spirit of the building. I hoped to learn more about the topic by looking at existing schools and studying the pedagogic concepts of Montessori and Steiner. I learned that a strong school can work without the right environment, but that architecture will play an important supporting role when it is used in the right way. It is the question of one's state of mind which allows us to interpret our thinking and feeling about education and society in a proper way. Montessori wrote:

"It is the task of a school to give children the opportunity of a cultural environment and to widen their cultural horizon that there is not only the possibility of intellectual development but also a mental one." (2)

I feel Louis Kahn's thoughts about the nature of a school are important:

"I think of a school as an environment of spaces where it is good to learn. Schools began with the man under the tree who did not know he was a teacher discussing his realization with a few who did not know they were students. The students reflected on what was exchanged and how good it was to be in the presence of the man. They aspired that their sons also listen to such a man. Soon spaces were erected and the first schools became. The establishment of school was inevitable because it was part of the desire of man. Our vast systems of education, now vested in Institutions, stem from these little schools but the spirit of their beginning is now forgotten. The rooms now required by our institutions of learning are stereotyped and uninspiring. The Institute's required uniform classrooms, the locker-lined corridors and other so-called functional areas and devices, are certainly arranged in neat packages by the architect who

follows closely the areas and budgetary limits as required by the school authorities. The schools are good to look at but are shallow in architecture because they do not reflect the spirit of the man under the tree. The entire system of schools that followed from the beginning were not in harmony with the nature of man. It can also be said that the existence will of school was there even before the circumstances of the man under the tree." (3)

The formulation of the goals for my design was determined by the kind of role the school plays in our society. Clearly, our society is run by the group of working people between 25 and 60 years old. Everybody else belongs to the fringes. Grandmother and grandfather lost their place at the hearth, forced into retirement homes. Mentally ill people have been removed from society like the victims of leprosy for centuries. Our children were sent every morning in exile out of town to learn in a sterile but safe environment. The integrated life and society does not exist anymore.

My first goal is to bring the school back into town and to give it an adequate place. It should be set in relation to the other public functions in a town, a harmonious relation of the parts to the whole.

My second goal is to make the public character of the school really public, open to the general public.

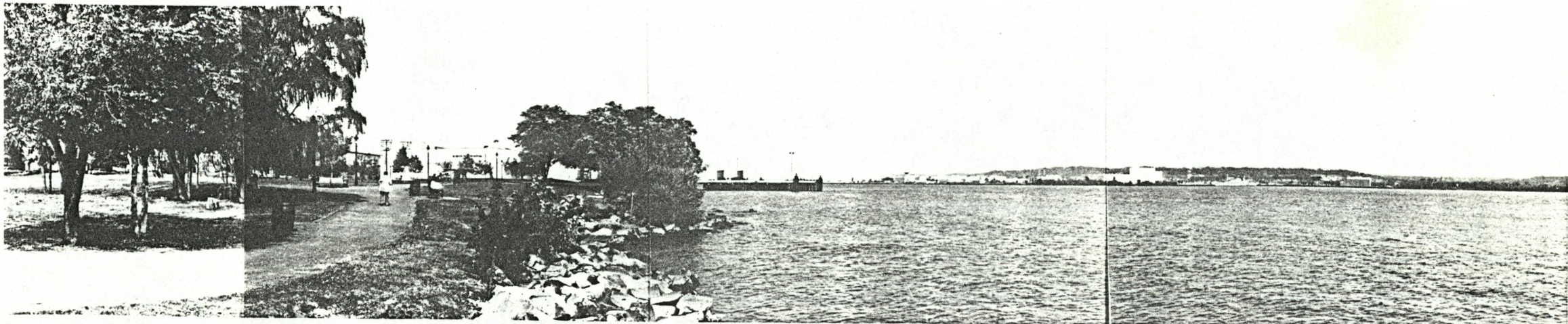
The third one is to have an easily understandable inner structure of the building, which should be an example of a healthy society in a smaller scale.

Louis Kahn claims "the plan as a society of rooms. The rooms relate to each other to strengthen their own unique nature. The auditorium wants to be a violin. Its lobby is the violin case. The society of rooms is the place where it is good to learn, good to live, good to work." (4)

APPENDIX

- (1) A. E. Housman, Last Poems, Chester Springs, Pa.: Dufour, 1922
- (2) M. M. Montessori, Education for Human Development - Understanding Montessori, P. 67 (german edition)
- (3) Louis I. Kahn, Form and Design
- (4) Louis I. Kahn, Credo, AD 5/74 P. 280

Looking North: Founders Park, Robinson Terminal, Potomac River



THE SITE

As my site I chose a lot in "Old Town" Alexandria, Va., directly on the waterfront to the Potomac River, at the end of the Founders Park, north of Oronoco Street. At the moment the site is used by the Robinson Terminal, a huge warehouse, which would be torn down. It is also an area which will see many changes in the next few years. Industry and trade were once the main economic activities of Alexandria. In our time it is the character of the "Old Town" and its close location to Washington that makes it a favorite place to live and a tourist attraction.

The lots at the waterfront were getting more and more valuable and unprofitable for the industry, which now is slowly moving out of that area. The City of Alexandria issued a master plan to control the future development in that area, determined by the economic interest of the

city. Working with a site in that area is for me also a critique of the existing master plan. To me, it is not worth pursuing, if the waterfront turns into an amusement park. Definitely I think it is wrong to establish administration buildings in the openings. They do not respond to the public character of the area. I show an alternative using this valuable site for my design.

With the design of the school in that location I would like to define an adequate ending to the existing Founders Park. Also I think that the public function will create a new tendency for the people living in the town to use the park as a recreation area. The gymnasium, in combination with outdoor basketball and volleyball courts, will also support it.

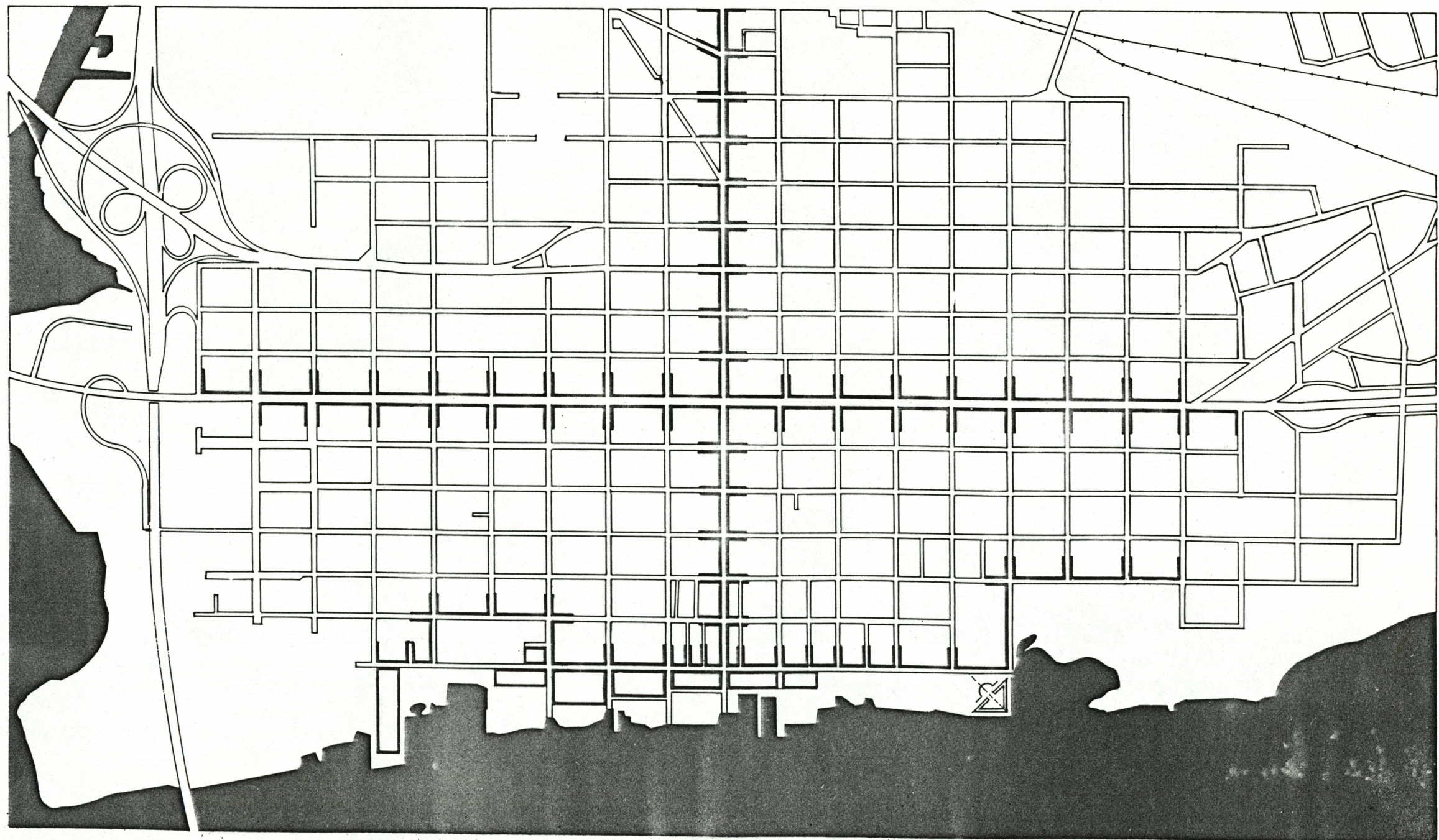


Housing on Union Street, in the Foreground Founders Park



Oronoco Street looking West,
Robinson Terminal on the right

TOWN PLAN OF ALEXANDRIA

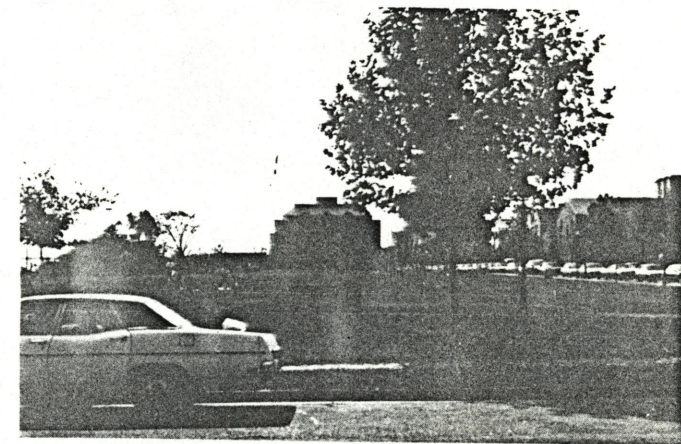


THE PROGRAM

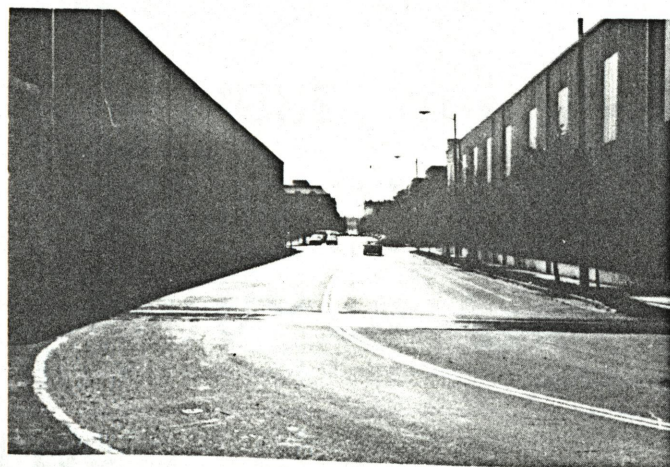
I limited the program, so as not to lose the true issue of the design problem. It consists of:

- ten classrooms
- entrance hall, which can also be used as a theater or concert hall in a casual manner

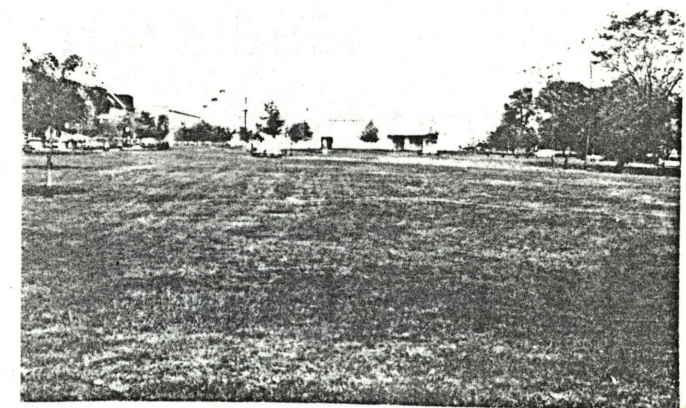
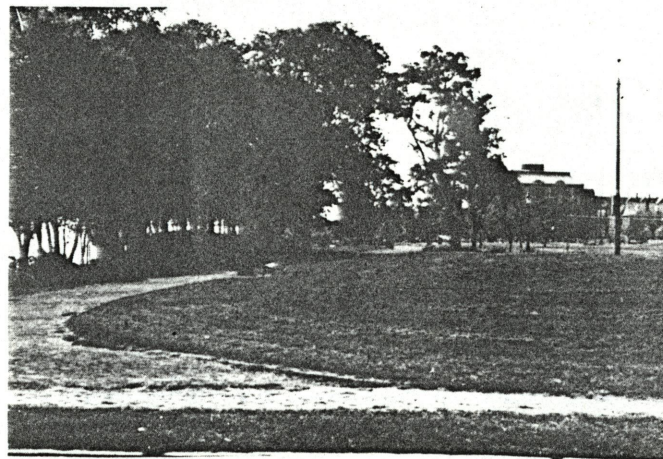
- science studio, for biology, physics and chemistry, connected to side rooms for storage and preparation of experiments
- art studio, for painting, drawing, printing and sculpturing
- music studio
- small library
- computer terminals
- combined room for teacher and conferences
- administration office
- cafeteria, with kitchen, storage and social room for the employer
- small greenhouse on the roof
- necessary utility facilities
- gymnasium with locker and storage rooms
- caretaker house



The Founders Park seen from the Robinson Terminal



Union Street looking South,
Robinson Terminal on the left



The Robinson Terminal seen from the Founders Park

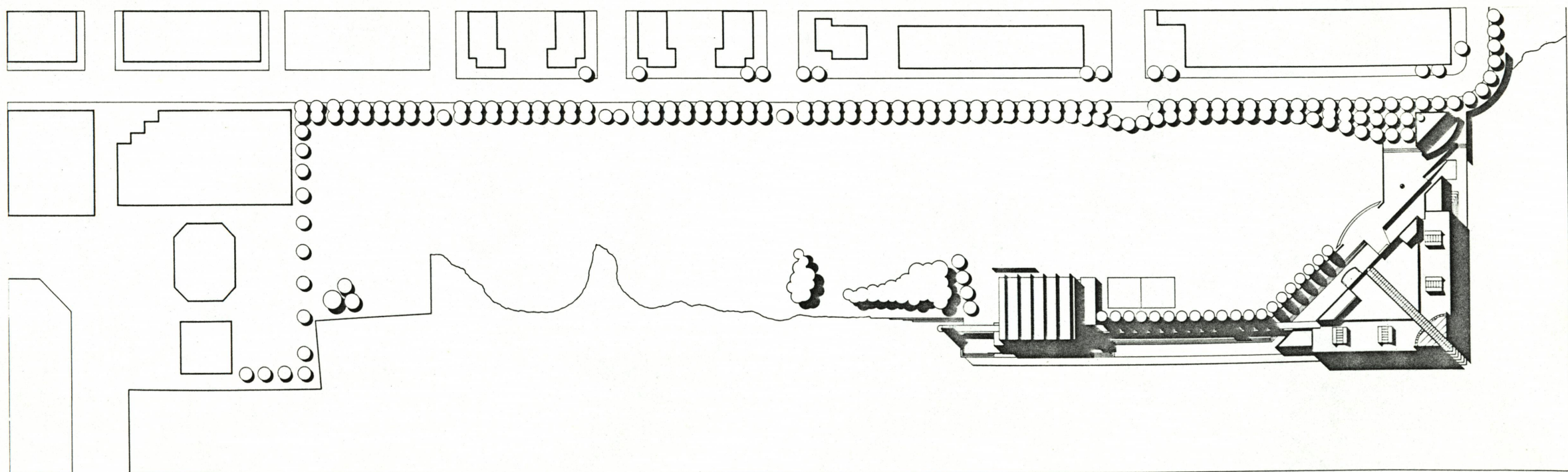
THE DESIGN

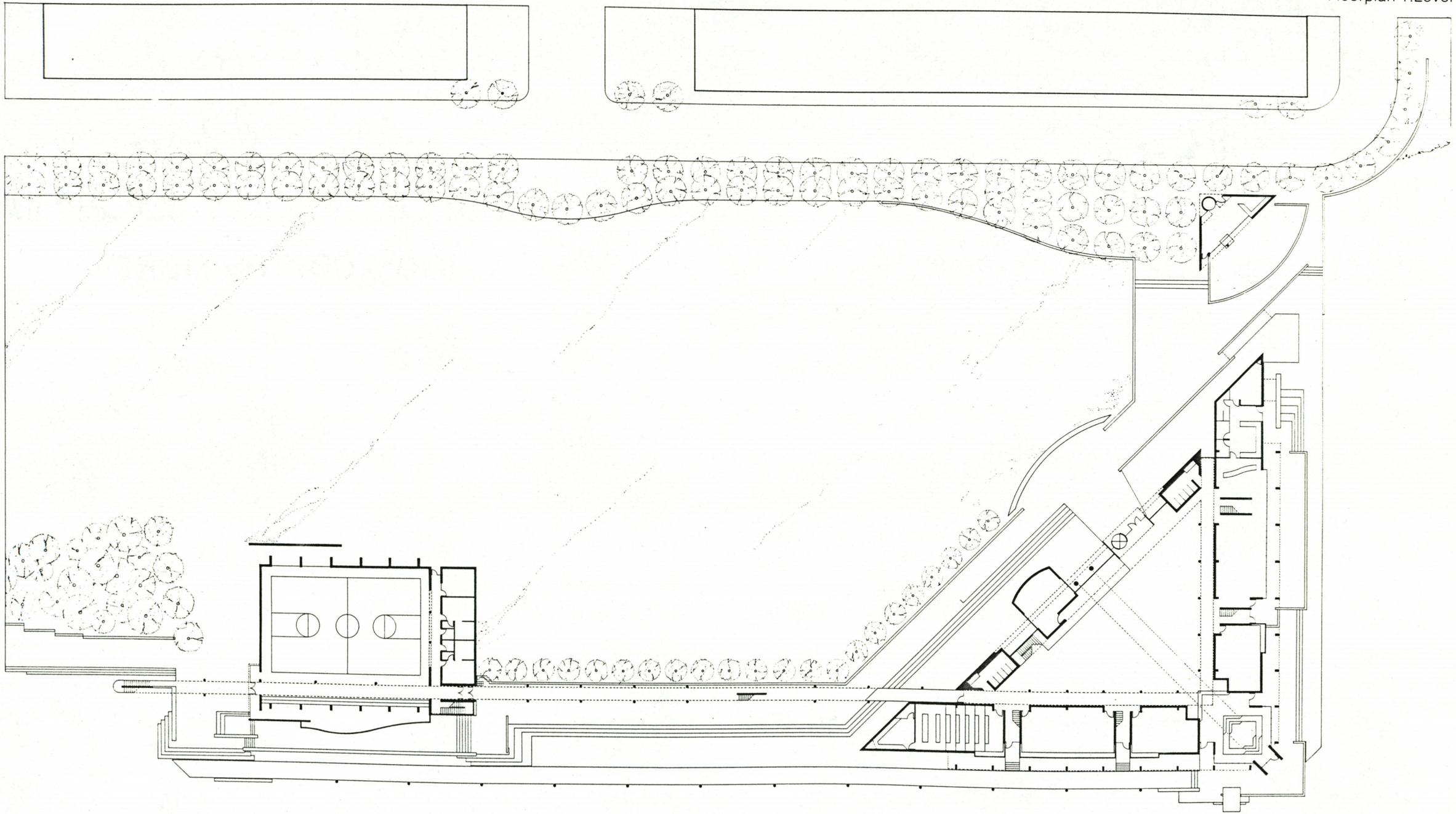
My design is concerned with two major issues. The first one is the inner structure of the building. With that, I refer to the relation of the individual person to his classmates, the small group to the whole student body and then the relation of the school to the town. The second issue is how the building relates to its site. The threshold between the water and the building has to be designed very carefully. I have to admit that I am using a very popular and valuable site. I am taking away the very enjoyable walkway at the shore. My design must come up with something better to add to the total environment. Only then is it justified.

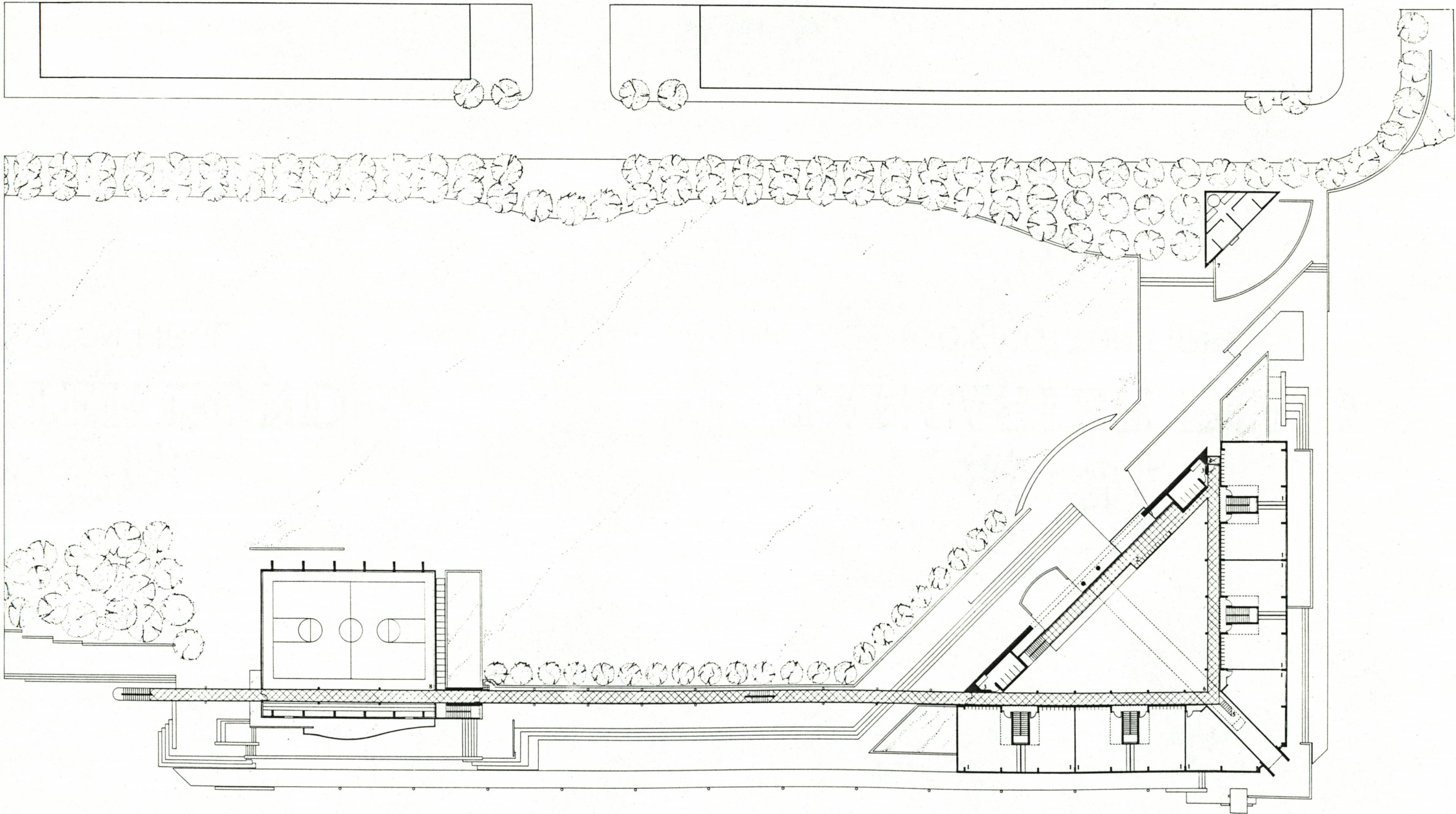
The main form of the design is a right triangle with two short sides marking the wateredge and the long one facing towards downtown Alexandria. Shaped and aligned in the same way is the center of the building, a two story open

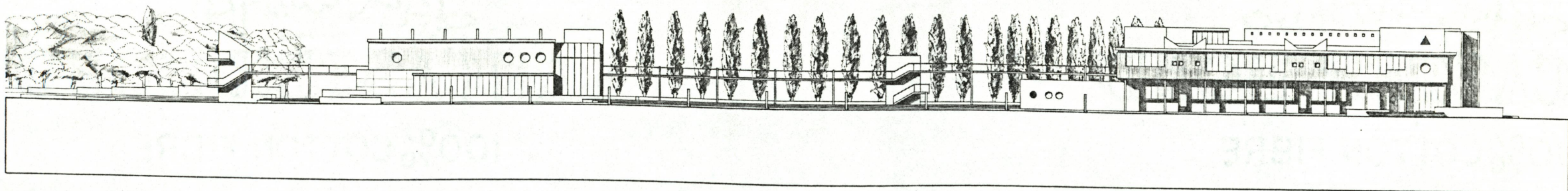
space used as entrance hall as well as for casual concerts and theater performances. All the functions of the school are ordered at the two short sides leaving the third one for a visual connection to the City of Alexandria. All the members of this "small society" are sharing this common space. The second floor is occupied by the ten classrooms to avoid disturbance by other activities. Also it allows the possibility of having light on two sides when the classrooms are on the second level.

The huge arch towards town is a gesture to invite the general public to enter. Its scale is related to the scale of the town. People entering the building to explore it are torn out again by a huge skylight which cuts the school in two halves ending at the most interesting point at the water, with a view of Washington, the nation's capital.

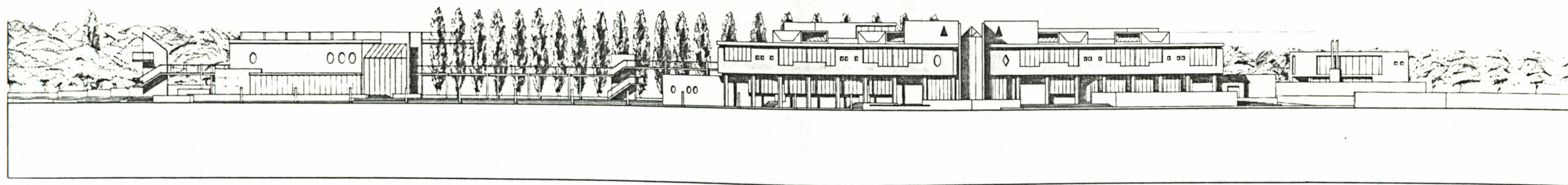




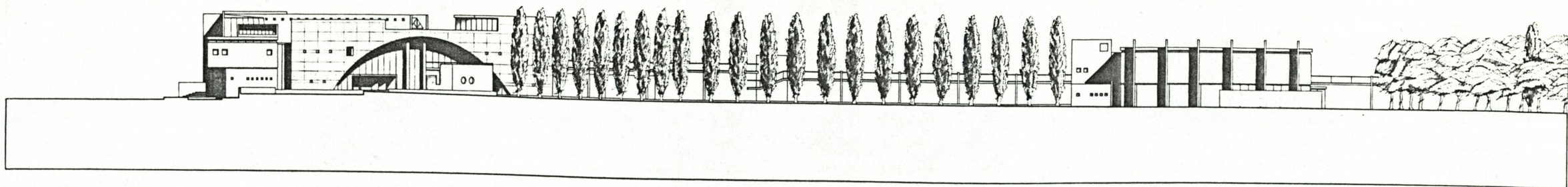




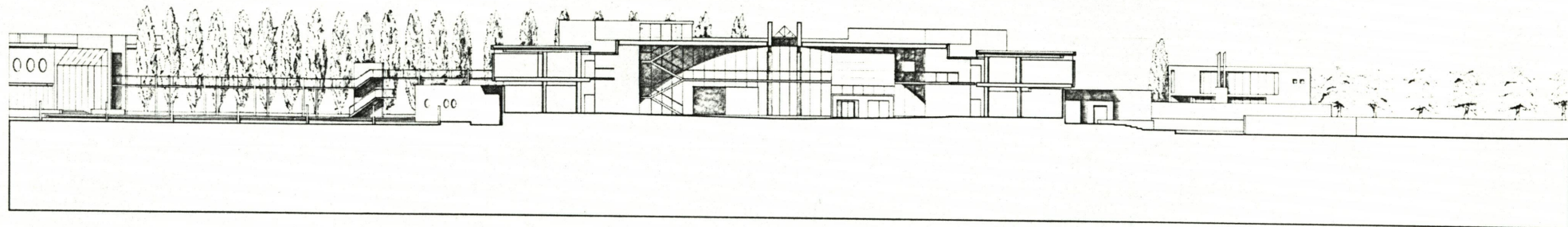
East Elevation
View from the Potomac River



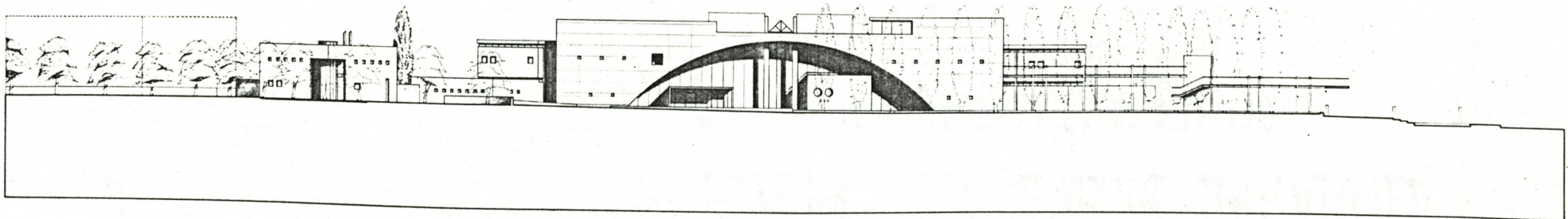
Northeast Elevation



West Elevation
View from the Union Street

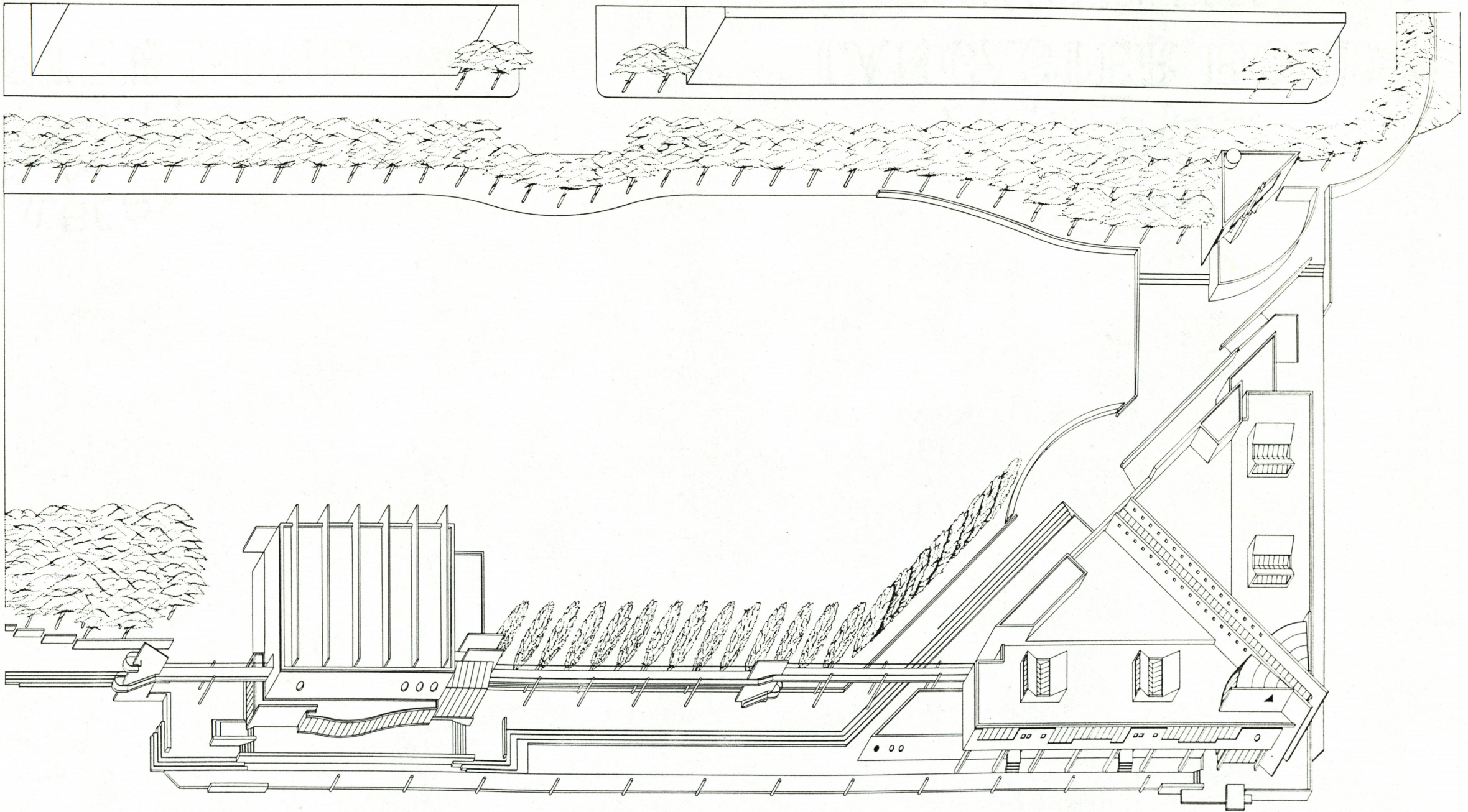


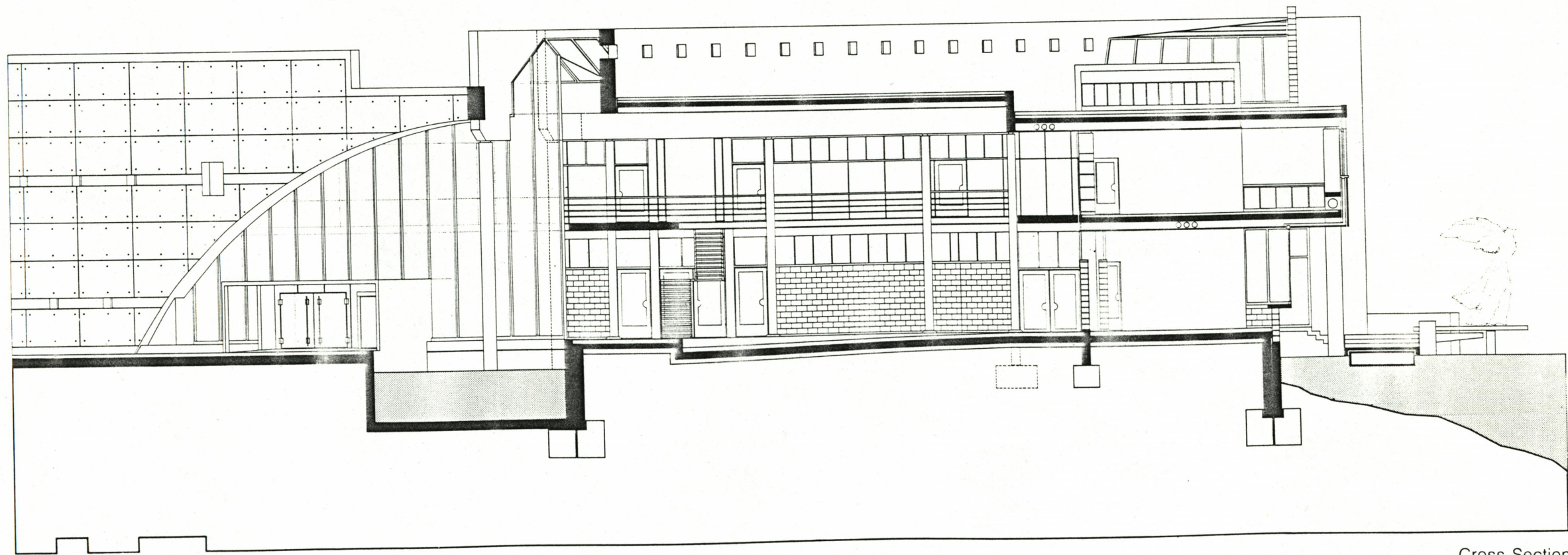
Southwest Elevation



Section + Interior Elevation

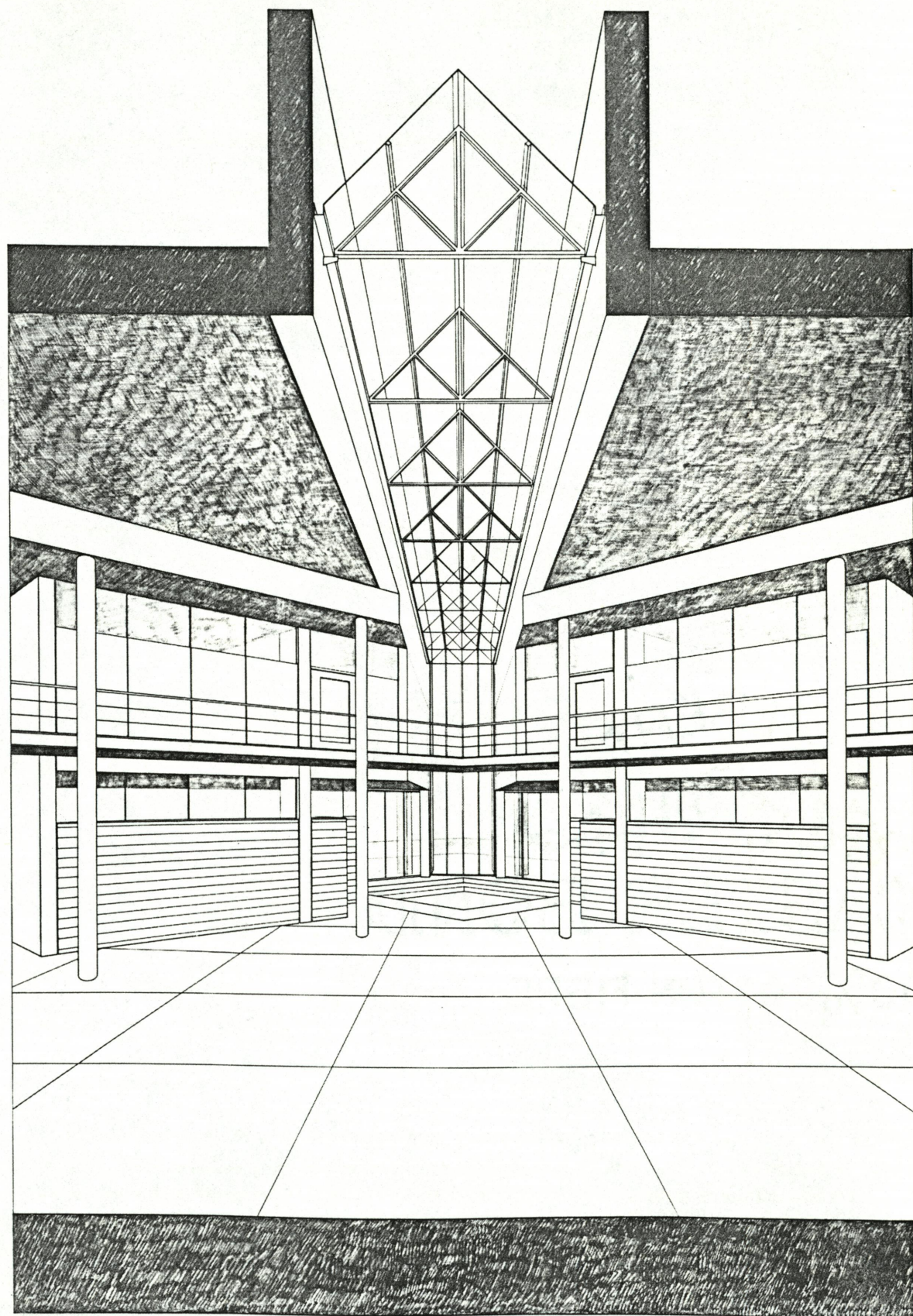
Isometric





0' 4' 10' 18'

Cross-Section



Interior Perspective
View from the Entrance Hall
to the Potomac River

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