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THE DEGREE OF MASTER OF ARCHITECTURE

TITLE: **The Currency of Growth**

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The Currency Of Growth

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Thesis Abstract

This thesis is an investigation whose purpose is to create a threshold between the natural and built environments and to discover to what extent that architecture at this juncture can invoke a phenomenological response, where phenomenology at it's simplest is that as we encounter an object either at rest or in motion the interpretation of the object is delayed allowing our conscious and subconscious mind to merge thereby accessing both personal memory and an inherent knowledge which all humanity shares. That which is considered to be inherent within this thesis is an innate connection to the natural environment, all that which both sustains and delights us the sun, the earth, the wind, the water. This thesis is based on the premise that architecture need not be limited to being placed among the landscape but that it can become of the landscape. This premise continues by realizing that this is accomplished only if from it's conception to it's realization that the architecture seeks not only to lessen it's impact on the natural environment but seeks to improve that which our evolution threatens therefore creating the threshold between the natural and built environments where neither that which is natural nor that which is constructed is more evident or of greater importance than the other but that which is pronounced and where phenomenology can reside is where the two intersect as it is this juncture which allows an infinite number of variables to occur.

Project Summary

From its conception this thesis project was meant to be an investigation based on a design principal which is phenomenological in nature. The project sought to invoke a response of this type in the recipient by creating a threshold between that of which we are constantly aware and that which we encounter only when circumstances warrant that we recall an inherent knowledge which is no longer easily accessible to some as we become more and more immersed in technology.

This project does not seek high tech solutions to that which simplicity has through out human existence provided solutions. This is most evident in this thesis project as it concerns thermal comfort, which is based on the necessity of energy consuming equipment, which threatens our environment in multiple ways. It is not the intent of this thesis to cast aspersions on our reliance but to seek alternative methods which based on the premise of this thesis can become thermal delight.

The project seeks to integrate the architecture with the natural environment in order to reestablish a connection to that which has sustained humanity from the beginning and in so doing create a more enjoyable and healthy atmosphere within the spaces that we inhabit.

This thesis project has no interest in a false or arbitrary aesthetic and from its conception throughout the investigation it will seek only those solutions, which guide us toward environmental sustainability. This project does not contain answers but it does seek to form questions and that which is questioned is to be provided with the means to seek solutions.

This thesis accepts that the creation of place needs be a collaborative effort as the complexities suggested within the thesis are beyond a single designer or profession and as such this project is meant to provide a means by which the thesis goals can be accomplished not to dictate a systematic set of solutions.

Acceptance of our limitations and frailties is a preamble to creating a lasting entity, which is capable of achieving more than an intended function and therefore create a threshold between interior and exterior spaces as well as one between an individual work of architecture and humanities struggle towards creating a sustainable future.

Thesis Paper

The Currency of Growth

This thesis investigation begins where ecological exploitation is most evident, as it is here that a community can acknowledge that our evolution has enacted a price and that intervention and perseverance are the currency necessary to restore that to which we are guardians, not owners. From the ruined soil and tectonic remnants this project will seek ways in which we can become willing participants in growth and what role architecture can play within the scope of this purposed revitalization. The intent of this project is not the co modification of resources nor is it to create an arbitrary aesthetic, the true intent of this thesis project is to discover if within the role of architecture there truly does exist the potential to form a symbiotic relationships both with the natural environment and among ourselves based on the premise that the greatest gift resulting from urbanization is diversity.

Building upon that premise can we create a threshold where absolutism is suspended and pluralism flourishes, a volume of place not seeking conformance, where the only asset is expression, where subjugation to forgiveness is debt, the only form of commerce is that of human potential?

This thesis project is of a cultural nature and architecture is to be its vessel, the cities fabric it's buoyant. The only predication, that by action alone can we endeavor to transcend all outside perception, which binds our city to mediocrity

although, we live among so much that is unique. Every component of structure and enclosure manifests a two-fold purpose each conceived to protect and expose simultaneously the frailties of both our existence and our impact on the natural environment. The very essence of this project is to discover if the creation of architecture can become a performance and if the city itself can become a global theater presenting affirmation that the existing urban condition is a palette from which we can create a sustainable vision of the future.

Many of these countries' urban areas are facing some seemingly insurmountable problems, which directly and adversely affect the natural environment. Among the issues causing these problems are urban sprawl, a loss of natural vegetation and reduction of both air and water quality. No single project can address all of these problems let alone completely alleviate their adverse effects on the environment so this thesis project was conceived keeping in mind that certain aspects of the natural environment remain unchanged and that our dependence and even infatuation, with the sun, the earth, the wind and the water are still very much apart of urban life. Within the construct of this thesis project the natural elements will serve a two-fold purpose. They are to be considered as both materials of construction and necessities of subsistence. This thesis project will continually fold and refold these elements through out the composition and entertain their ability to delight and sustain as the unifying elements of the projects individual components. Qualities surround there, palettes from which to render for their shares wind and sun, sight and smell purpose and presence, aspirations bound in faith seeking reinstatement, soliciting growth.

Although this project as proposed contains a variety of elements and therefore spatial requirements the thesis is interested in the connection and therefore ability to bring together that which appears to be dissimilar, so where it may appear that a series of separate entities may serve the program more efficiently the thesis project will attempt to integrate and therefore represent a single definitive performance of volumes organized through the integration of natural strategies and the architecture itself.

There are many precedents and examples within the built environment which incorporate natural strategies as both a way to decrease energy consumption and enhance the thermal qualities of a building by increasing the occupants awareness of the natural environment while creating a sense of harmony and well being as Lisa Heschong states so eloquently in her book Thermal Delight in Architecture, "...the thermal function of a building could be used as an effective element. Thermal qualities-warm, cool, humid, airy, radiant, cozy-are an important part of our experience of a space; they not only influence what we choose to do but also how we feel about the space".(Heschong 1) This thesis project will investigate not only how this can be accomplished within the compensation of the thesis project but allow the architecture to become a tool of experimentation in order that these strategies can be employed successfully into other projects regardless of their typology. This creates a threshold between the thesis project and our struggle to create architecture that is environmental responsible. But this is only the minimum potential of what has become known as "green design". As with all works of architecture regardless of the designers intent green buildings must stem

from place. Amory B. Lovins of the Rocky Mountain Institute uses this quote in his article Sustainable Design Guide "Green design first asks the place, as

Wendell Berry adjures us to ask, "What does this place require us to do? What will it allow us to do? What will it help us to do?" For Berry-sensei-the poet and farmer who also said, "What I stand for is what I stand on"-the architect is the servant of the place, doing what its spirits want, not the reverse. Green design is sacred architecture: it honors and enriches the Buddha-nature of all beings."

(Lovins 3). This project seeks not only to embrace this philosophy but also to become an example of what can be achieved when the designer allows a project to become a collaborative effort rather than a work of individualistic expression. The projects involvement does not satisfies itself with becoming only a display of a few strategies but seeks to become a device by which other projects through research and experimentation can collaboratively from their conception to their realization be fully tested thereby increasing the potential for individual projects to successfully create thresholds between the natural and built environments.

The main intention of this thesis project is to become a vehicle of investigation through a series of innovative practices and as such is to be located in a city that to many epitomizes innovation, Detroit. The site as aforementioned is to be were ecological exploitation is most evident and Detroit's Riverfront suits that intention perfectly.

The Detroit River is an American Heritage River not because of size but because it played an integral part in not only the growth of Detroit but because of the role it played in the transformation of our nation from one based on

agriculture to one of unprecedented industrial might. The Detroit River is a small but important part of a much larger system the Great Lakes-St. Lawrence Seaway. Since the settlement of Detroit in 1701 the River has made a significant contribution to transportation, trade and industrial growth of not only Detroit but of the entire nations economy as well. Unfortunately like many of the nations river communities this growth has enacted a terrible price on the river and the many ecosystems that depend on its well-being. Such is this price that only 410 acres of natural shoreline remain untainted on the American side of the River. That small portion of the rivers nine miles of shoreline is now known as Humbug Marsh. Located ten miles south of Detroit, Humbug Marsh was saved from developers who had plans to turn it into a high-end residential community and a golf course only through the perseverance of environmentally conscious community involvement. According to the Detroit Free Press this Marsh has now become part of an International Wildlife Refuge that was dedicated in 2003 and “will give urban folks a great opportunity to relate to nature”. So it is that this project seeks definition from not only a River that reflects our national heritage but also a community, which seeks to promote improved water quality, brown field remediation, and improved public access. This entire project is based on the sustainable attitude, which is so evident, by these actions and the program was conceived in order to provide all that is necessary to accomplish these goals.

When considering the sustainable aspects of materials used to construct a composition we must consider that this is a function of time. This thesis project not only assumes but elicits the continuation of the city as a viable aspect of not

only the human condition but as the vehicle, which promotes the continuation of human evolution and potential. More simply stated, permanence, and this is a simple matter of tectonics. Energy and natural resources expended, to create that which is meant to remain expressive well beyond a single epoch, is under the conditions of this thesis not only well spent but a condition of responsibility. From the present it responds to the responsibility of growing environmental and social concerns and makes use of renewable resources for the purpose of enclosure, thereby accepting the tenuous frailty of our environments present condition while allowing for that, which exemplifies the strength of human resolve.

Within the research and consulting portion of the project sustainable and ecological strategies will be explored and practiced both in a general manner and one that is geared towards individual projects. The goal of this is that as projects are conceived within an urban environment, developers and designers can seek out advice specific to an individual project. The convention center will be a means to educate the general public on the availability of these sustainable practices in order to generate a sense of community responsibility through the practice of responsible design. The essence of the thesis is that contributions that solve problems and promote growth need not be limited to a few trained professionals but can be both shared and demonstrated on a global scale.

The overall construct of the Research Center will be aimed towards but not limited too, research in sustainable strategies. This will enable an example of commitment to manifest itself physically. The center will examine all aspects of

renewable and cutting edge technology, in hope that improvement in the overall quality of life can be realized by the way we construct the built environment. The center will also explore ways to improve farming techniques in an urban environment there by decreasing dependency on products that come to the city from great distances in keeping with the struggle towards sustainability.

The research center will provide interior and exterior volumes to promote sustainable strategies. The center will provide areas for highly controlled research and areas for interested citizens to utilize and initiate a more intimate typology of research. This project is meant to discover and share information that can make an urban environment more than just a collection of buildings and businesses seeking their own interests

An extension of the research center will include constructed wetlands and public gardens. These areas will serve a two-fold purpose, one of aesthetics and one of an ecological function, where run off water will be collected and filtered for use to sustain all organic undertakings and to serve as a construction material that will be used throughout the composition.

Louis Kahn stated that the nature of assembly is “transcendent”, a place where human beings gather to share a “commonness”. The spirit of this thesis is based on collaboration and corporation. The City of Detroit is unique and has a great deal to offer, although there are spatial deficiencies one of which is a prominent gathering space for large groups of people that share a common interest and seek to share both knowledge and vision, to discuss the present and plan for the future. This is precisely the type of activity that this thesis project seeks to elicit, as a

function of this kind could conceivably become the catalyst to form a model of dynamic growth.

As with all aspects of this project this element of the composition will encompass a two-fold purpose. In the case of the convention center this purpose is scale. This element of the project will contain both large scale and intimate volumes, which should be placed within the composition to look out onto the City. These volumes are positioned to become witness to the process of revitalization. This thesis project does not end with creating a dialogue between that which is investigated and those who share a common vision but seeks to reach well beyond its foundations and to create a means through which that which is learned can be taught in a tactile manner.

An exhibition of any kind is an opportunity for people to gather and share a common interest and or to develop a new interest through active participation. In keeping with the thesis there must be a variety of exhibition spaces and these volumes must incorporate both interior and exterior environments. These volumes should present an opportunity to interact with the research center as it is in keeping with the thesis that it is through interaction that which is revealed becomes learned.

Within an urban environment such as Detroit there exists remnants of the past, which due to circumstances lie dormant. Regardless of the circumstances which lead to it's demise these remnants are inexorably linked to that urban environment and offer an opportunity to negotiate a reconciliation between past and present and represent by example a vision of the future which fulfills the logical

conclusion to humankind's journey through time and space; to reach our maximum potential. This journey has no chronological schedule nor can it ever follow a predetermined course. It is the divergence of common goals that delineate the ephemeral fabric of cooperation and collaboration for which based on this thesis investigation defines a sustainable community.

Scorched it lies, once site now property, a blight from above, an opportunity waiting. Beneath its surface, layers interrupted, a portion of history alludes to the future, ephemeral in memory, to those it possessed for a time through service. From all that was, does there remain, an instance of chronology, a perseverance of spatiality, a topical remnant, its essence waiting to be unfolded, from which to bring forth, that which is tangible, infinite in origin and signally deduced, delineated through proximity, definitive in purpose.

From the reference beneath, entities that remain, hardened by time, left by convenience, become again, intrinsic stanchions, through which property becomes site. . Qualities surround there, palettes from which to render, for their shares wind and sun, sound, sight and smell, purpose and presences, aspirations bound in faith, seeking reinstatement, soliciting growth.

No one paradigm can fully articulate both intention and perception if as this thesis suggests there is a chance to reconcile circumstance with growth within the built and natural environments and the process of human evolution. So this thesis seeks to determine whether phenomenological observation can presume to conceive of a tectonic expression that of its own accord finds a place within the iconographical language of our society there by creating a threshold from which

we can insure the continuation of that which for a time was taken for granted and exploited.

Space is unfolded enclosed it sustains, borrowed lightly a frugal endeavor meant not to resist but to rest for a time then again serve, not to conquer nor squander but share. Not to pervade, it does not insinuate but manifests itself fruitfully, it's anatomy is calculated and it's fabric assembled, shared is it in conception to be corroboratively constructed to assume presence by accepting from place, all suggestion of disposition, essence to detail, threshold to element, a performance of volume inviting habitation, purposively submissive though innocently expressive to become the culmination of that which defines while attending definition through human intention.

Such under the terms set forth to guide this thesis investigation is
the currency of growth.

Precedent Analysis

The following precedent studies were an important part in the development of this thesis investigation as it is through these studies that the basis for the thesis was conceived. As the project developed these well known works of architecture became a referent from which the thesis ideas could be tested and evolve.

The first two studies were undertaken early in the thesis development and became a means from which the conceptual aspects of the thesis could evolve.

J.M. Tjibaou Center, by Renzo Piano.

As this thesis investigation was of a cultural nature it was important early on in its development to investigate how architecture can address cultural diversity.

Sher-E-Bangladesh National Capital, by Louis Kahn.

This project was chosen as it is also of a cultural nature and has the added benefit of providing an excellent example of how a master of light creates and defines space through this medium.

The next two precedents studies assisted in the creation of a programmatic discourse between the conceptual ideas and the intent of the thesis project.

Institute For Forestry And Nature Research, by Behnisch, Behnisch & Partner.

This project became an example of not only programmatic issues but was also a crucial starting point from which this thesis could begin an investigation into ecological design.

Okinawa Convention Center, by Sachio Otani and Otani Kenkyushitsu / Kuniken LTD.

This project reflects not only the programmatic issues involved with a convention center but upholds the Japanese tradition of creating harmonious spaces.

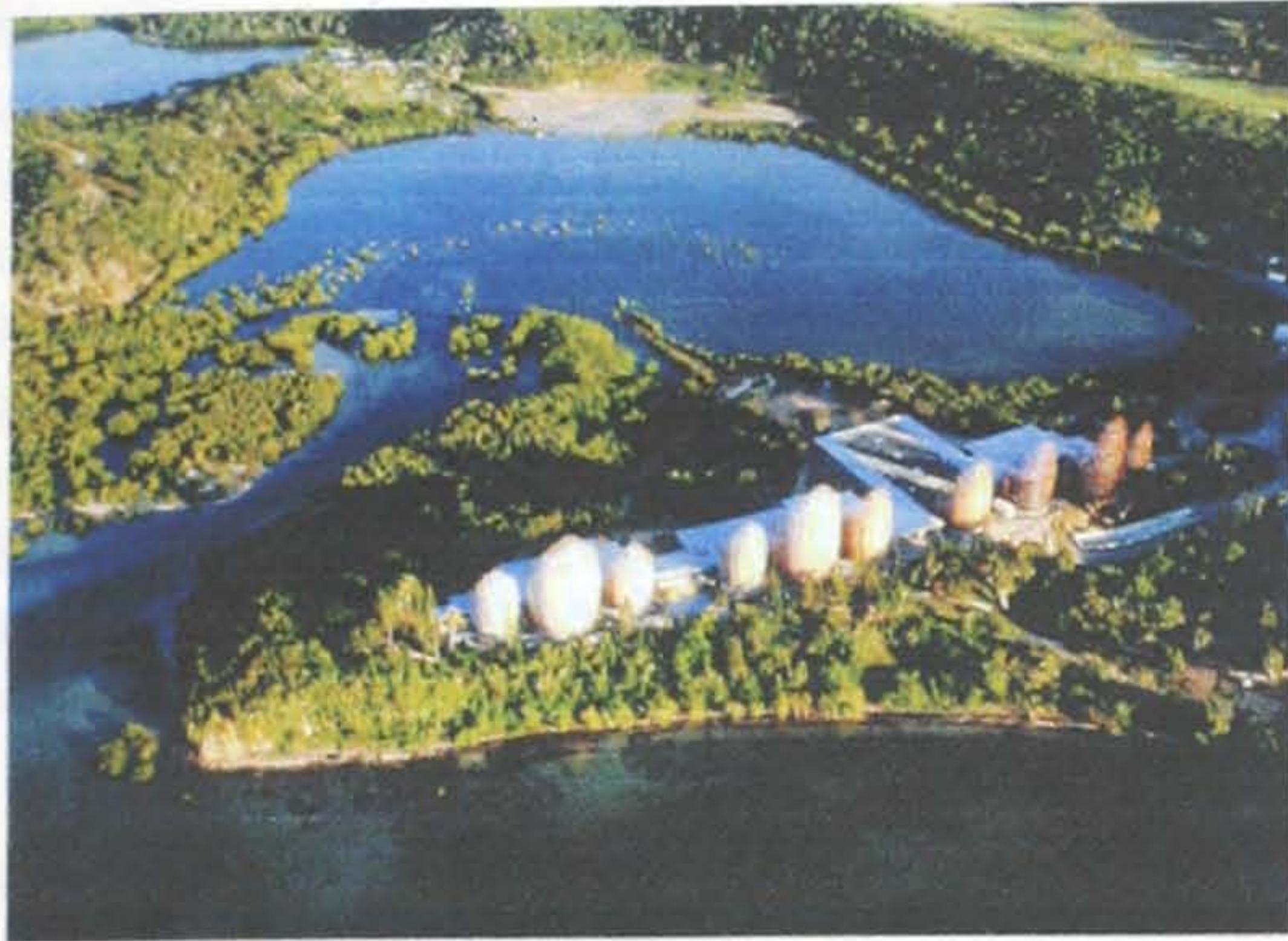
The final precedent study is one which provided an example for the tectonic development of this thesis project.

Gregory Bateson Building, by Sim Van der Ryn.

This project was selected not only for its tectonic qualities but also for the way this expression was integrated in both democratic design principles and the use of natural strategies.

These studies were carefully chosen from a myriad of other projects and the culmination of this thesis project is due in part to the contribution, which these studies made toward that end.

J.M. Tjibaou Center



Completed 1998



Noumea New Caledonia

Renzo Piano



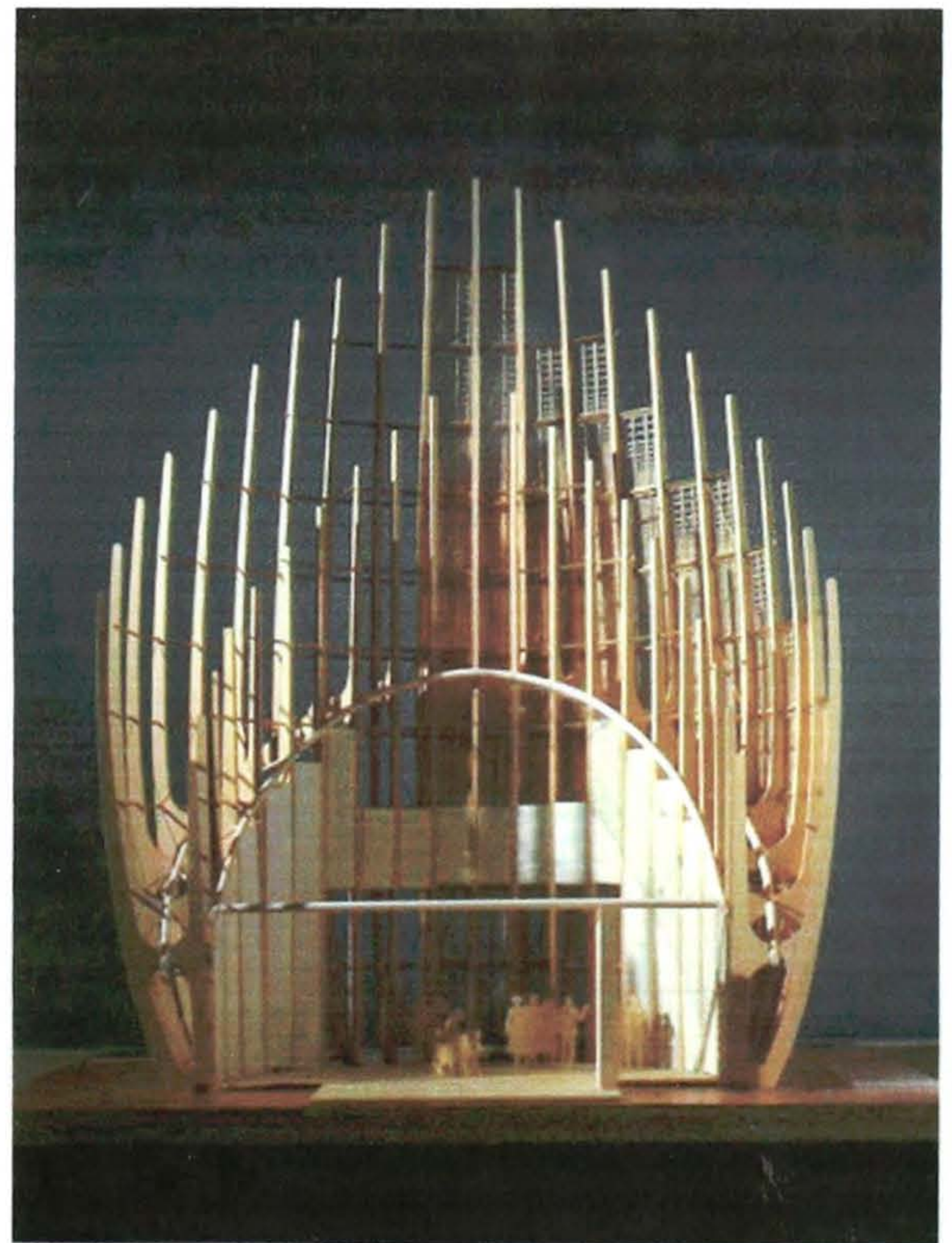
Project Objects

To promote and preserve the Kanak archaeological, anthropological and linguistic heritage:

To encourage contemporary modes of expression within the Kanaka culture, particularly in the fields of crafts, audiovisual presentations and creativity:

To promote cultural exchanges, particularly within the South Pacific region

To identify and carry out reaserch programmes.



1990-1991: Establishment of the Agency for the Development of Kanan Culture (A.D.C.K.)

1991: Renzo Piano Building Workshop wins international competition for the J.M. Tjibaou Center

1994-1997: Construction of the cultural centre

1998: Opening of the J.M. Tjibaou Center

The J.M. Tjibaou center in Noumea New Caledonia designed by Renzo Piano is a prime example of architecture that is meant to represent a culture without precisely mimicking vernacular architecture. That it is representative of a single culture and not one of a more diverse nature presents an opportunity to expand on the projects similarities without assimilating tectonic form or promote social agendas.

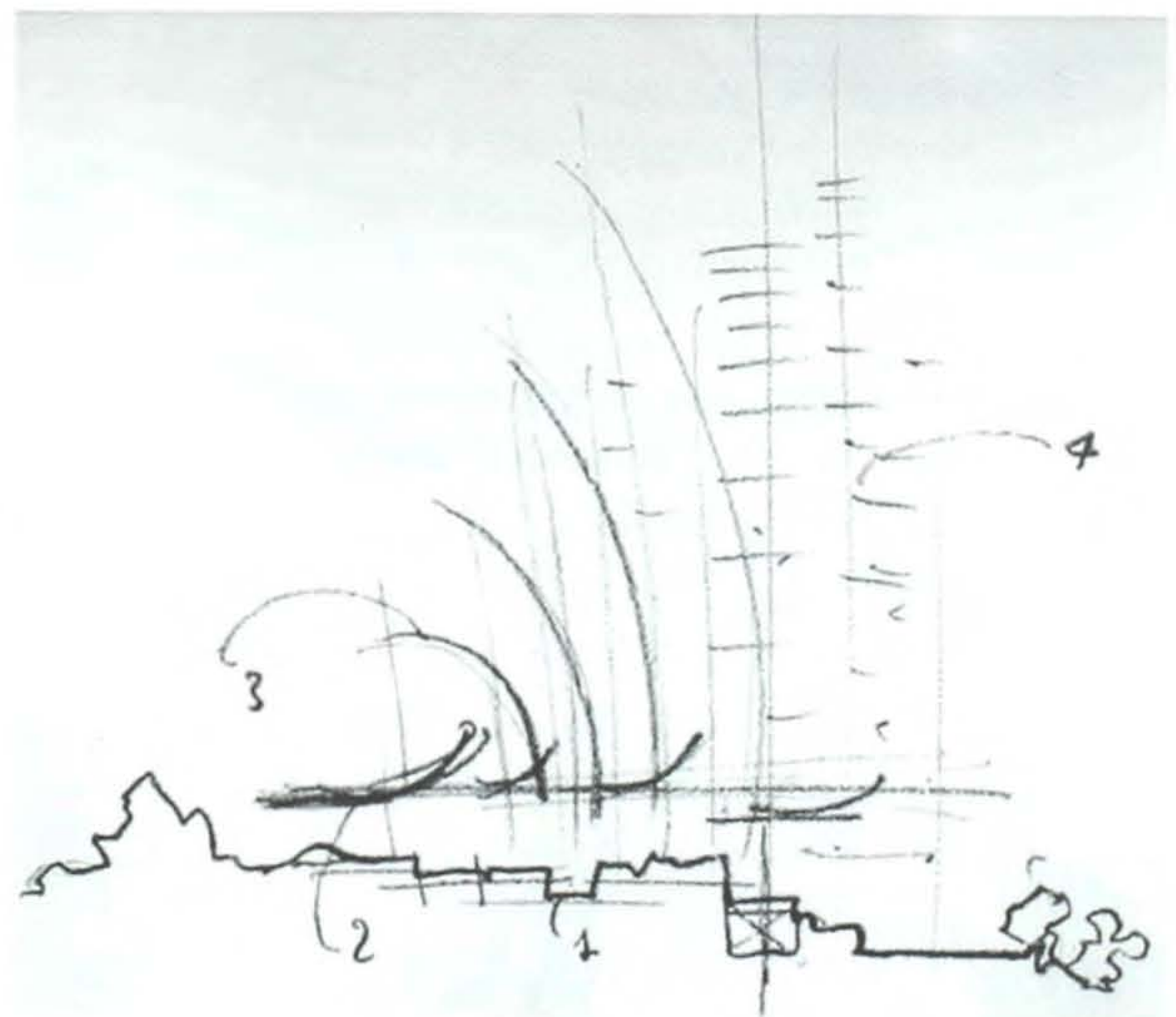
Perhaps it is simpler to depict aspects of a cultural diverse place and avoid unnecessary appropriation of existing architecture while maintaining a quality of political indifference through out the design process than one of a simpler nature. There are aspects of the project that seem to assimilate more than Piano himself had hoped to but these minute failings present a comparative model for projects that have similar objectives.



The program for J.M. Tjibaou center offers both an example of diversity and a stimulant for creative expansion of that program for similar projects of a more complex nature. Most importantly this project proves that intensive research is critical for a successful design solution. Through his extensive research Piano deciphered the essence of the Kanaka culture and its relationship to the environment. By so doing Piano avoided sentimentality and historicism and created an architectural language that subtly allows visitors to experience through movement, an affinity to village life without creating a flimatic simulation. Piano avoids direct association with Kanaka huts by exploiting a reciprocal relationship between the buildings structure and it's skin.

This allows the rhetorical form of the huts to remain inconspicuous, as the externalized structure is as suggestive of the surrounding forest as it is to vernacular tectonics. Piano has stated "It was not feasible to offer a standard product of western architecture with a layer of camouflage over the top." And even though in most respects this project is immeasurably successful the emphasis placed on transitional connections between wooden members and those of metal seem to depict a technological sophistication that is somewhat excessive

This suggests that there is an inherent risk when avoiding a conflict with preliminary objectives that can possibly undermine the importance of relaying the cultural importance that the Kanaka had with the environment. That the exterior configuration of glass, wood and galvanized steel create a magnificent exterior vista is undeniable even if they do create a certain level of ambiguity.



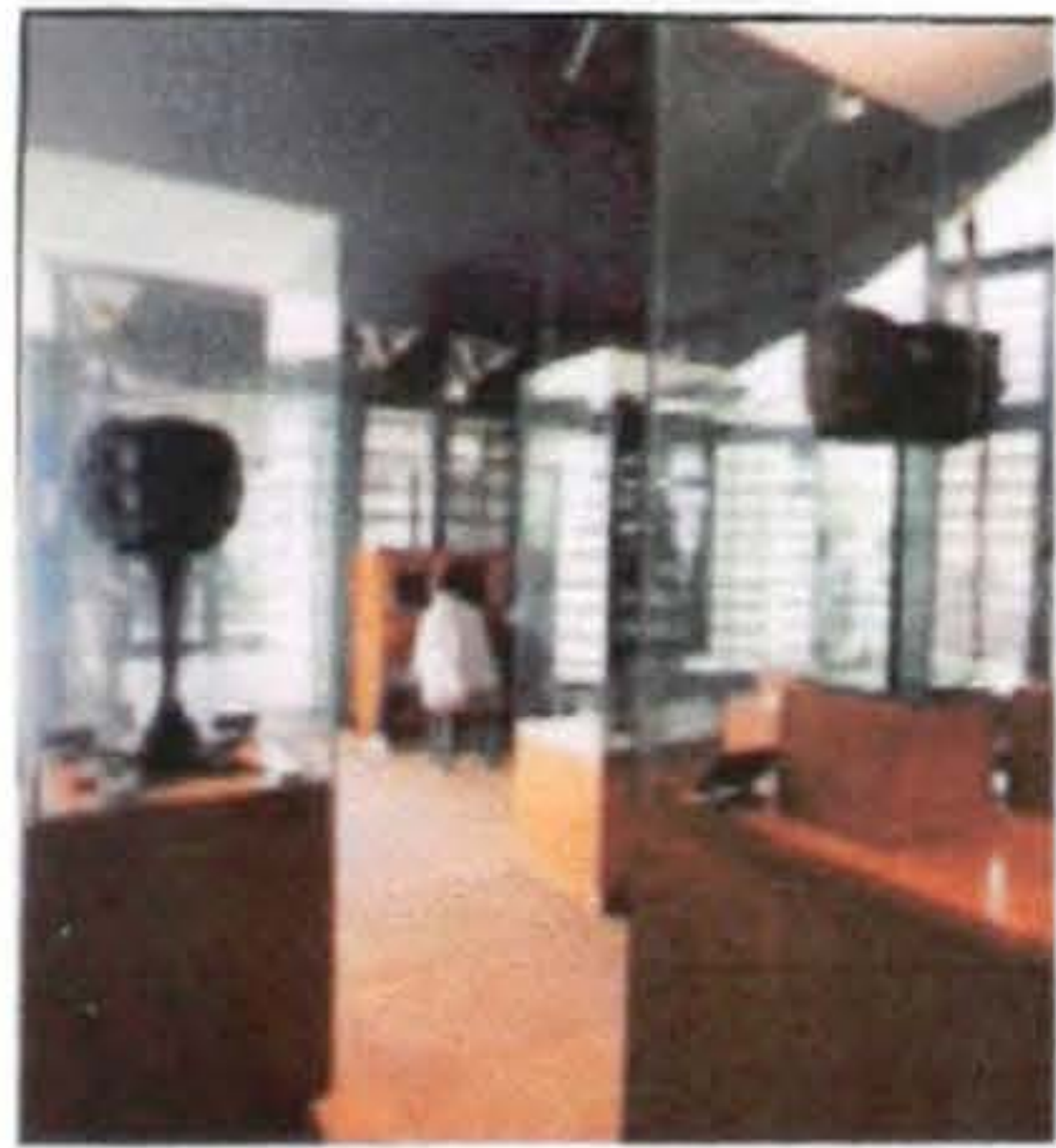


The interior spaces provide precisely the right atmosphere to display stationary objects and gain appreciation for a vibrant community that was constantly in motion.

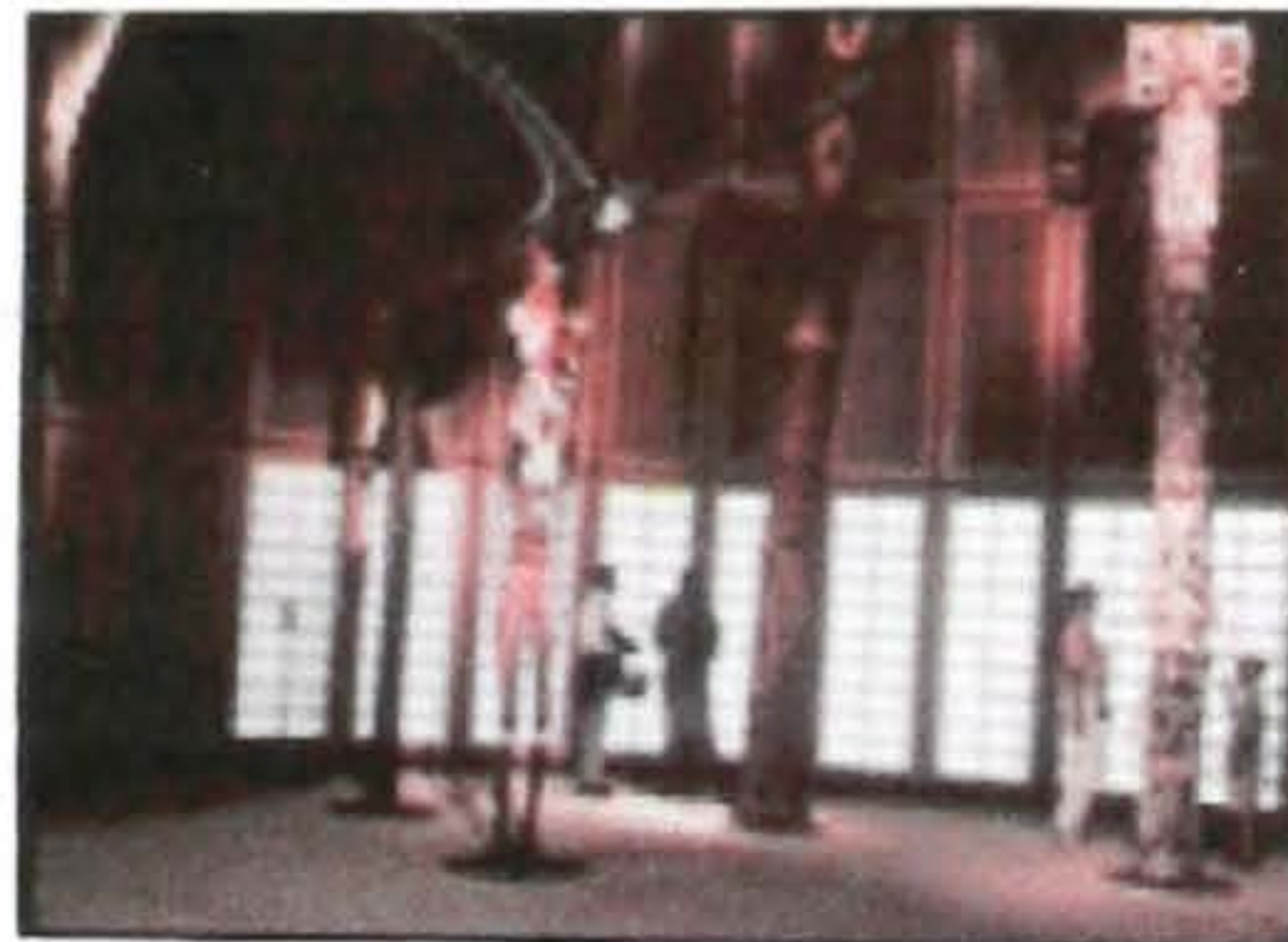


Programed Spaces

The First Village



1: Bwenaado House; "gathering of the clans" Works of art depicting Kanaka Heritage

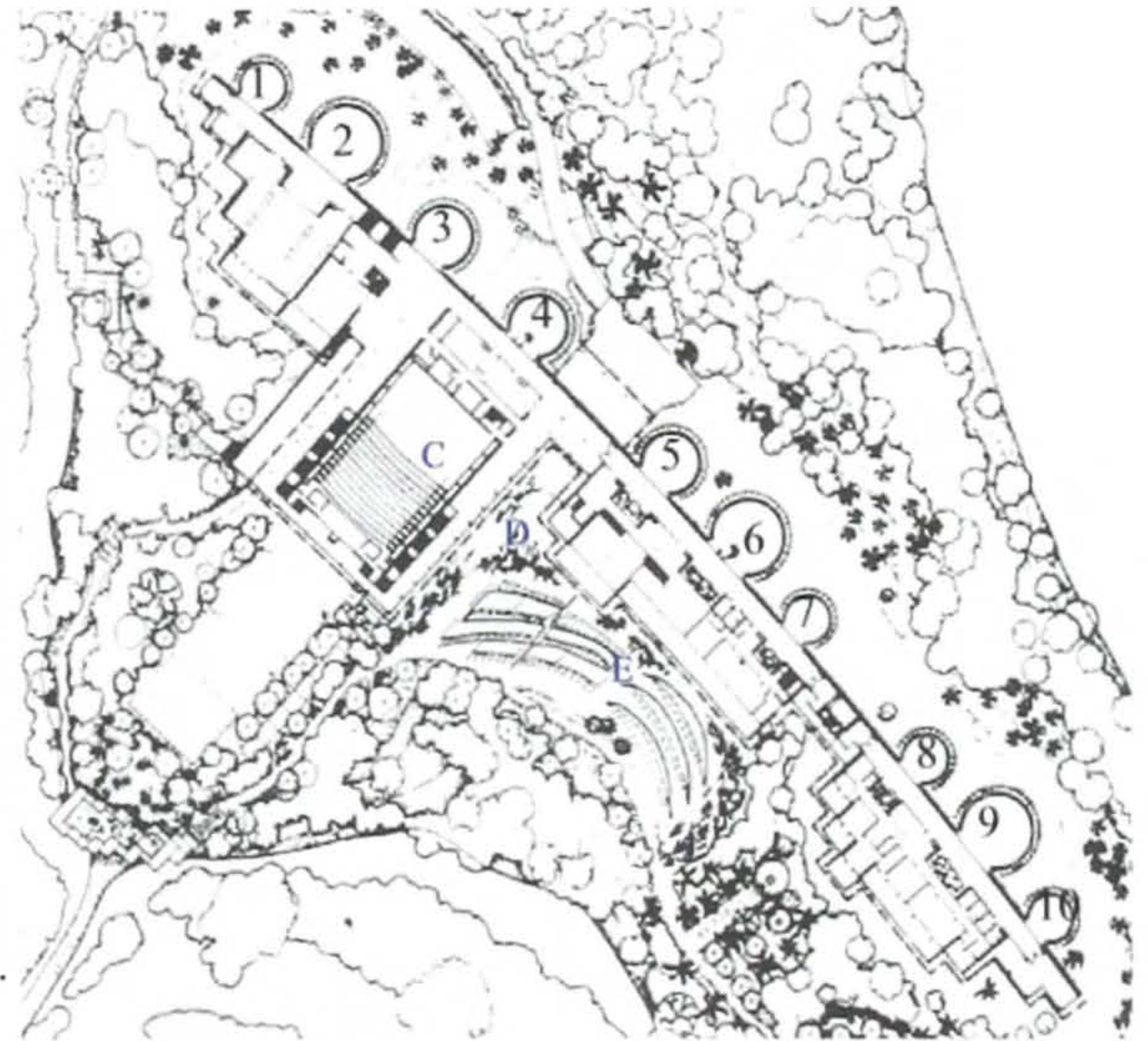


2: Jinu House; "the spirit" Large sculptures symbolising a rebirth of traditional values

3: Kanake House; "cultural man" This space offers an audio visual presentation celebrates all aspects of the Kanaka culture.



4: Perui House; "the meeting house" A cafeteria overlooks the gardens and lagoon.



Each group of huts represents a village which are connected by a covered walk way. Each village also include larger halls, which accommodate related functions

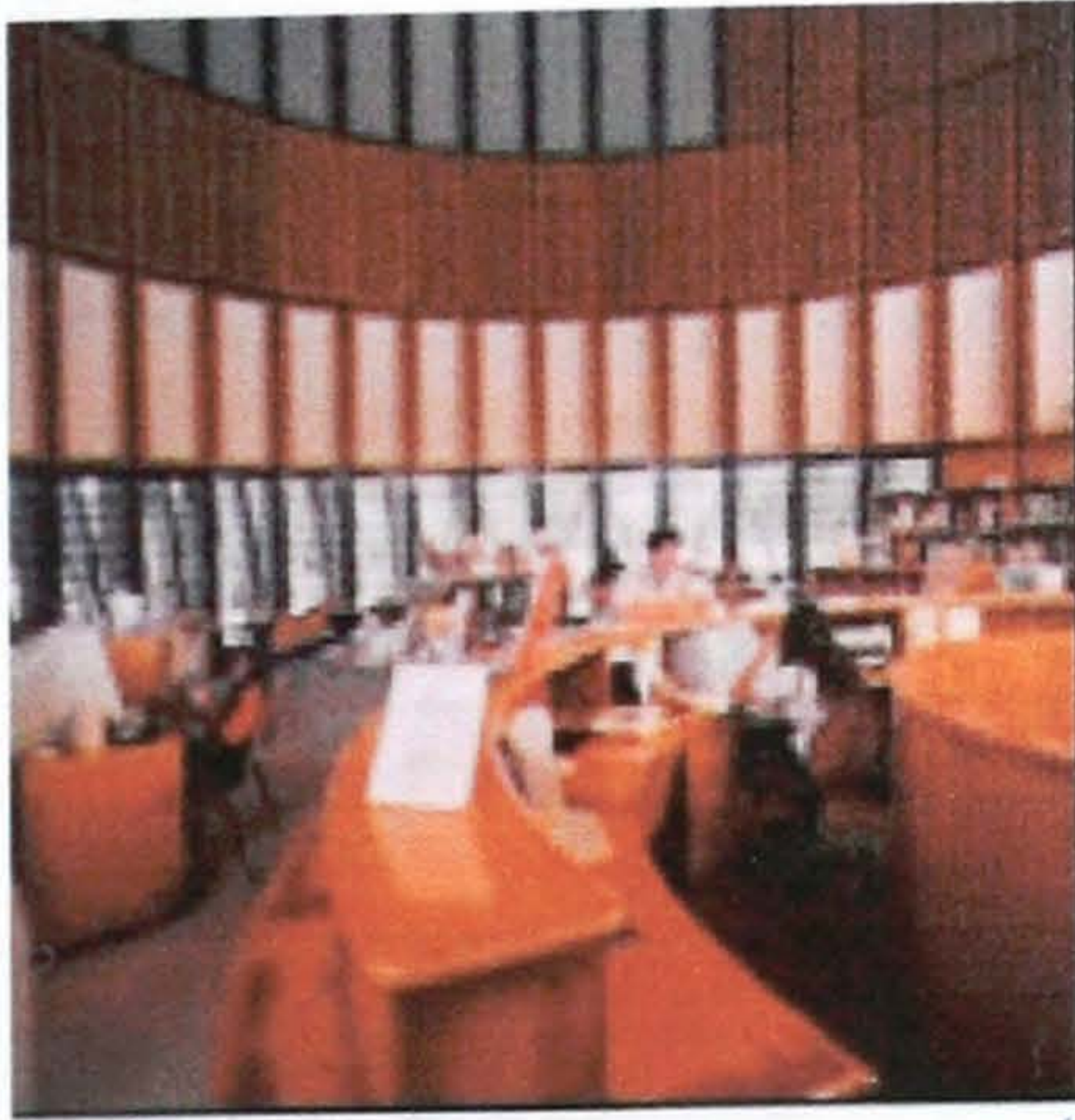
A: Beretara Hall; "the spirit" houses a permanent collection of contemporary art

B: Kavitarra Hall; " the carving at the threshold of the house" Is a space which houses temporary exhibitions of contemporary art.



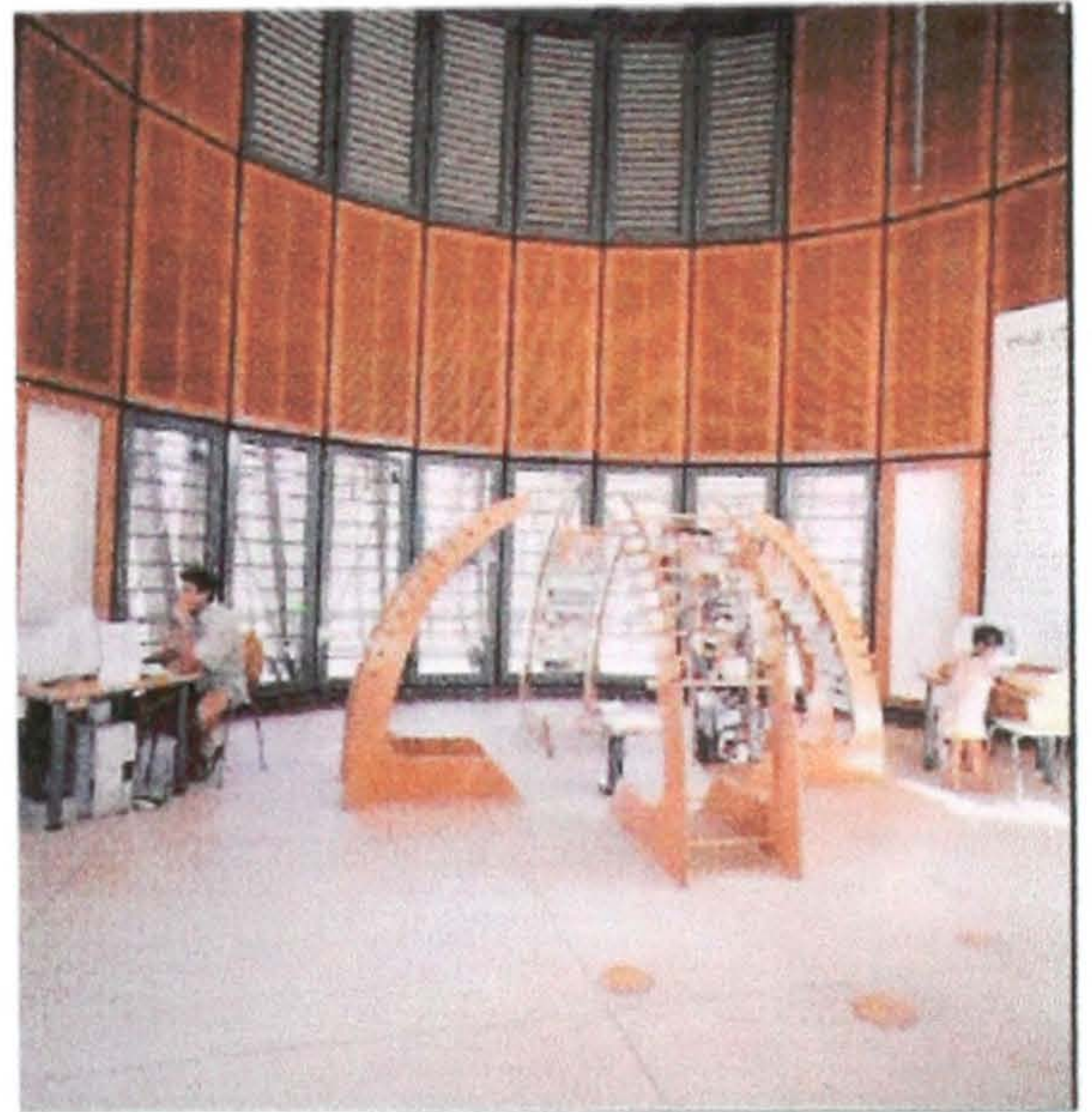
The Second Village:

5: Nagan Vhalik House; "the house of word"
This house is used for audiovisual presentations
not specific to Kanaka culture



6: Mwa Vee House; "the house of word" This house is home to
the collection of books on the Kanaka culture.

7: Umate House; "the yam storhouse" This space is used for a
variety of temporary exhibitions.



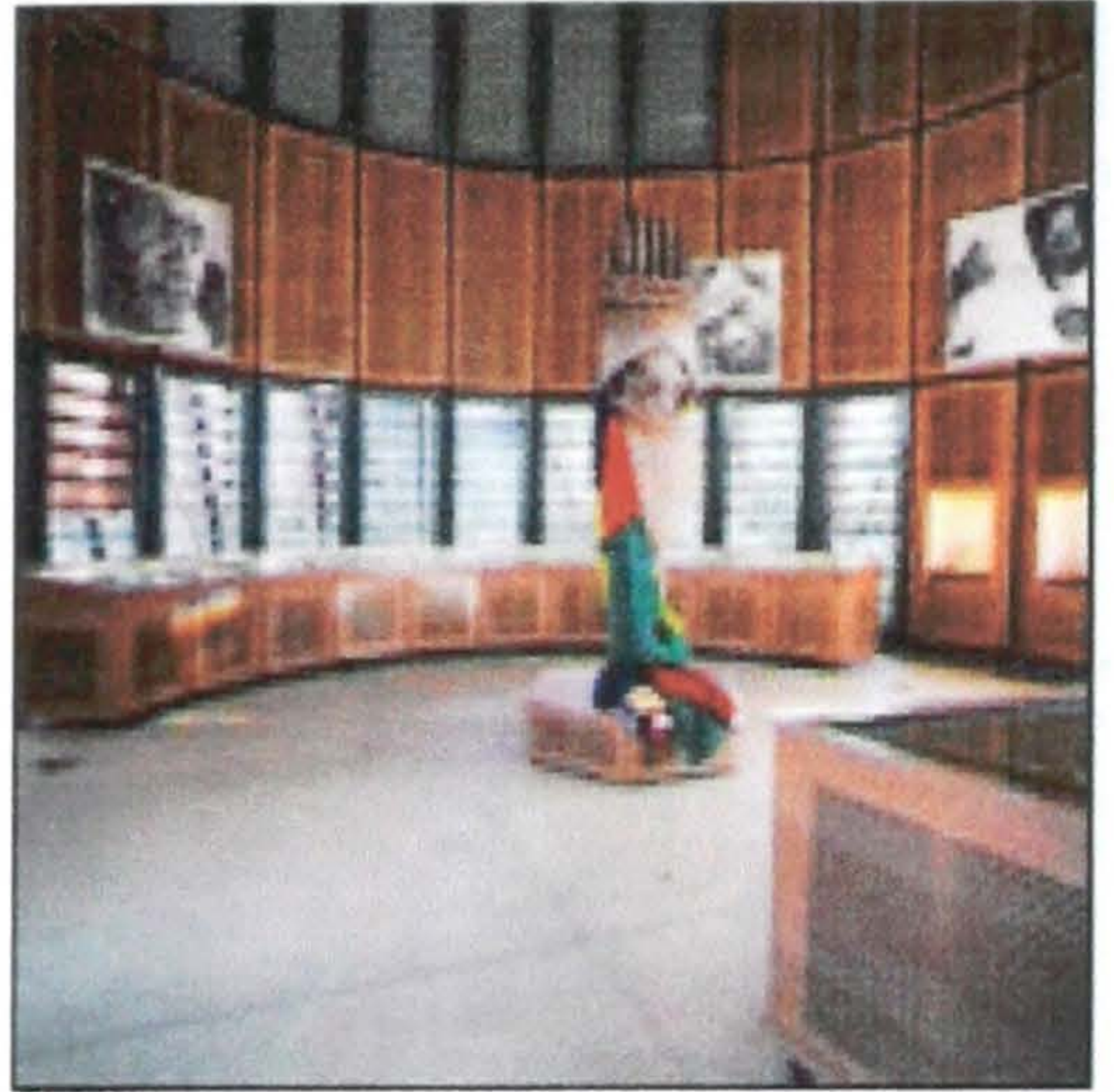
D: Komwi Hall; "to exhibit" A two storey exhibition hall.



The Third Village



8: Malep House; "to live" This house is dedicated to Jean-Marie Tjibaou whom the center is named after

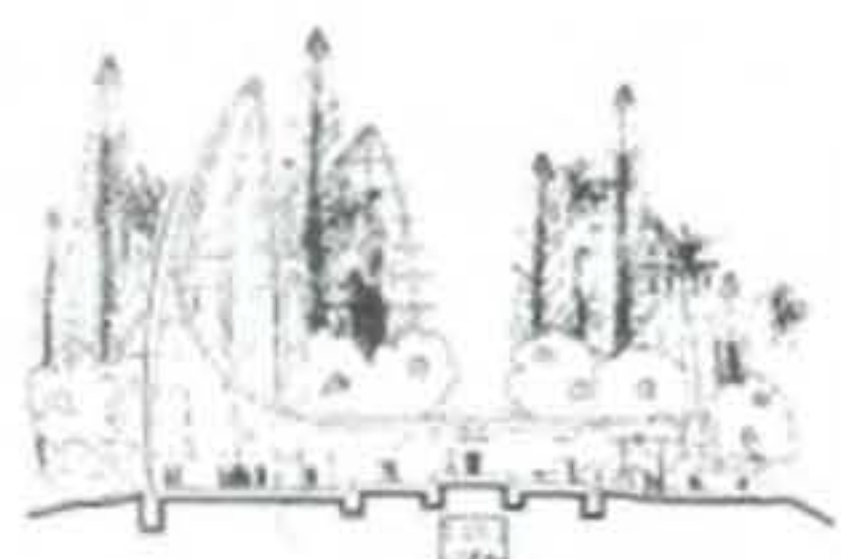


- 9: Eman House; "palaver" This space is for conferences and lectures
- 10: Vinimoi House; "telling stories to the children" This house exhibits the project from its conception to its conclusion.
- E: Administration Hall.



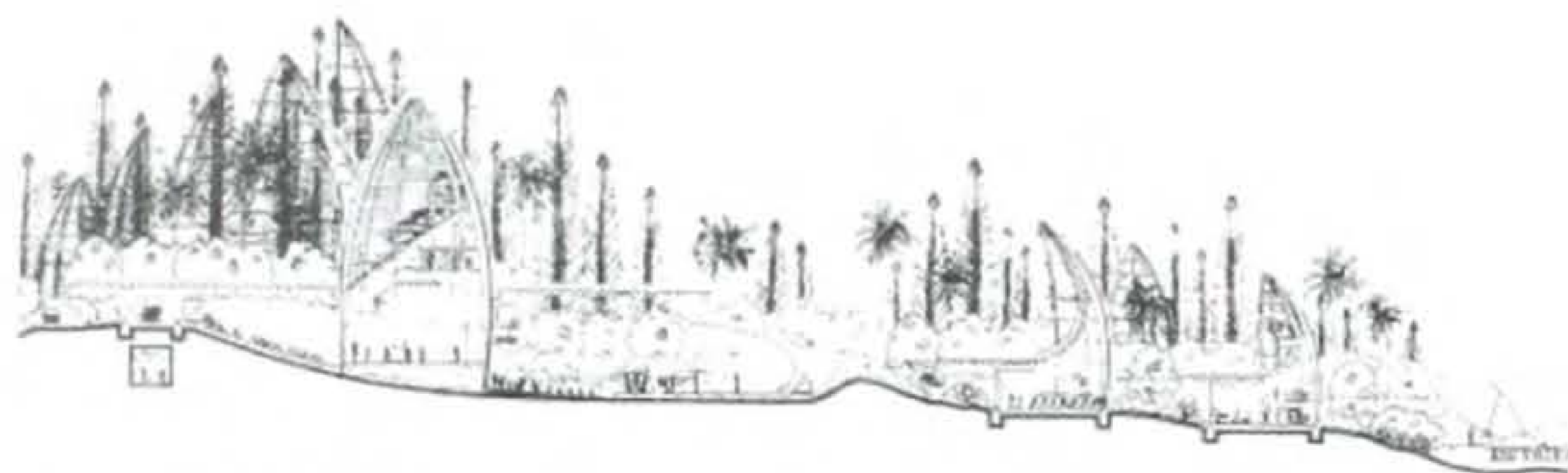


Plano general



Exhibición zona Sección zona de exhibiciones

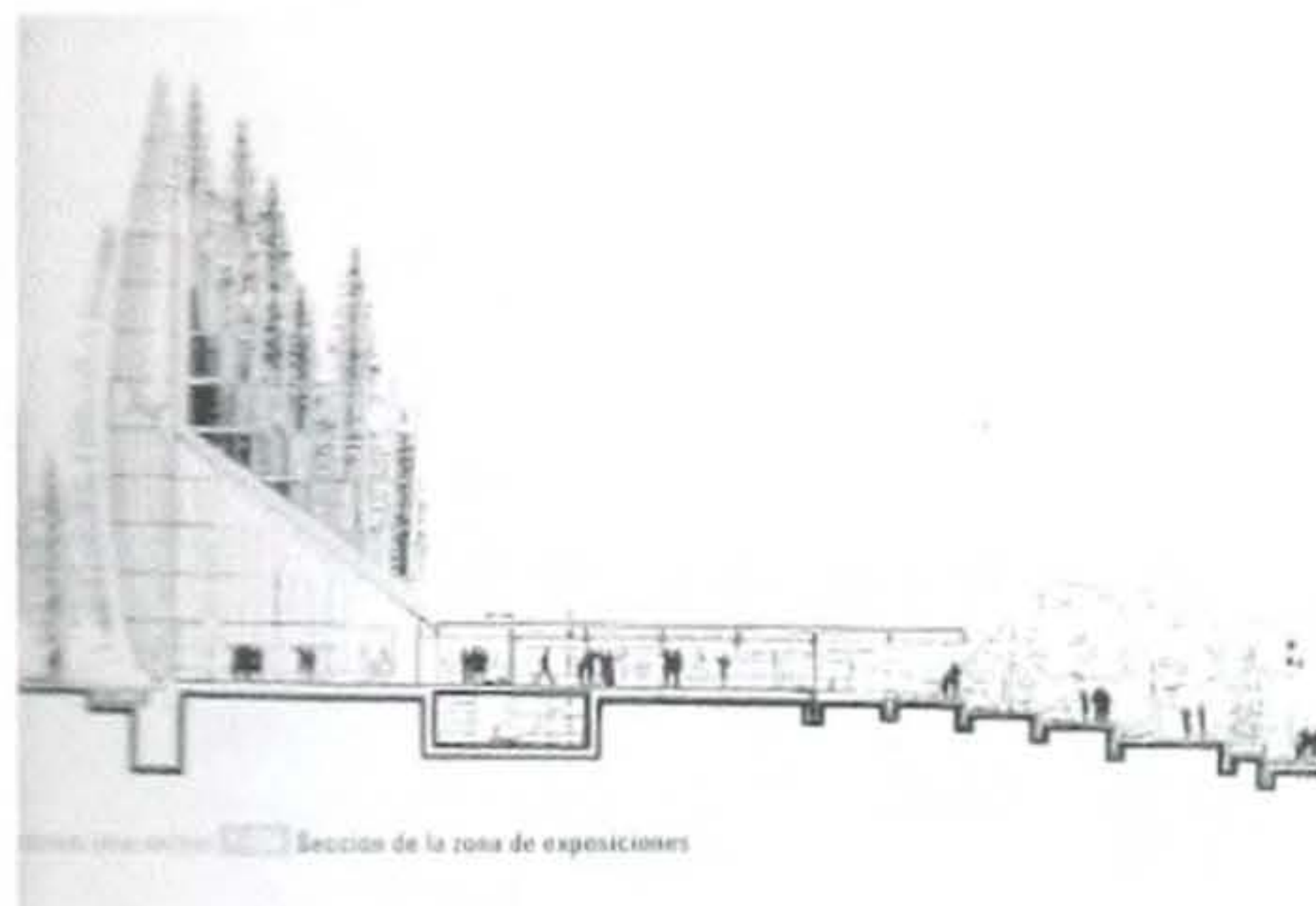
Como los propios árboles, cada cabina tiene una parte invisible y firme y otra más visible y leve.



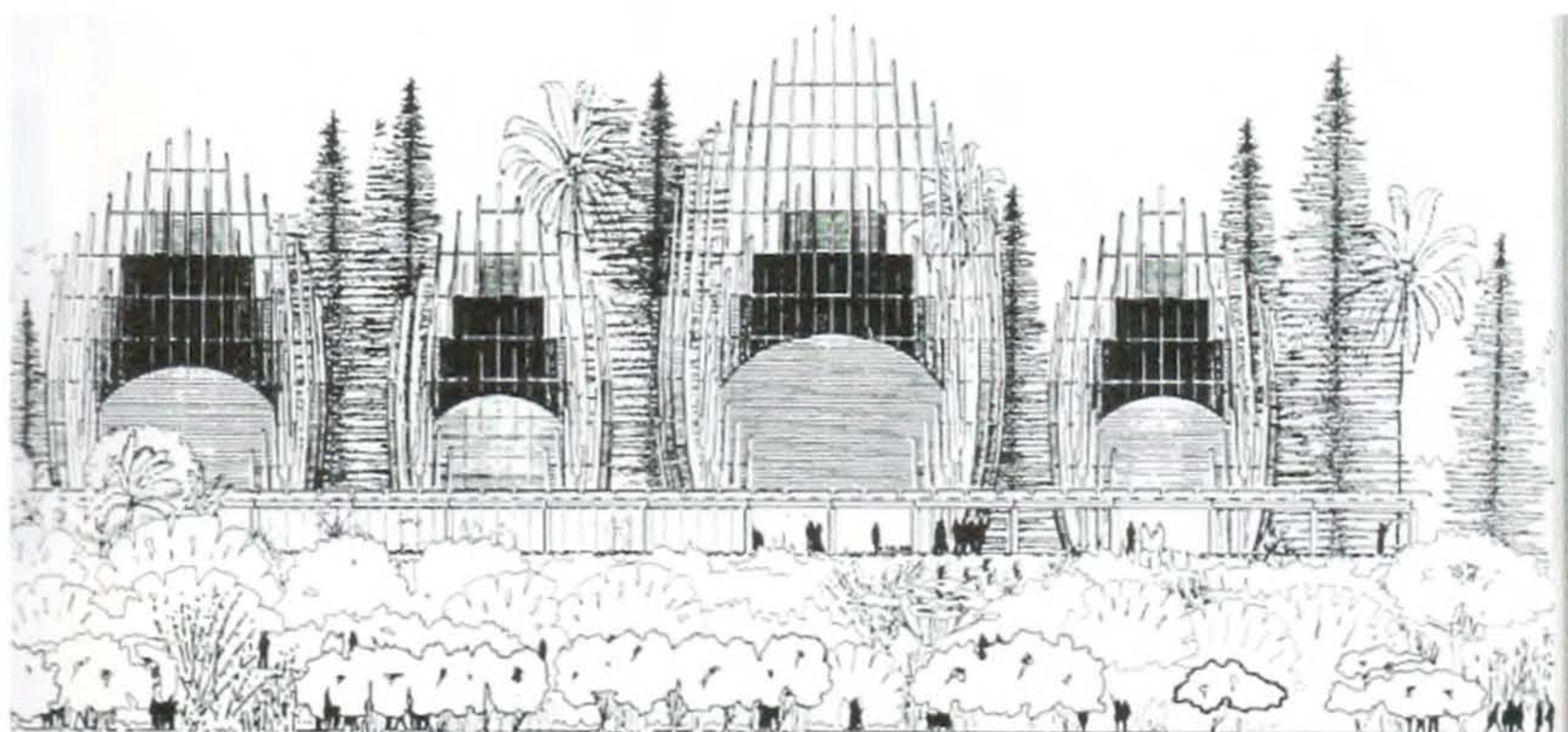
Teatro Sección del teatro



Alzado noroeste



Sección de la zona de exposiciones



Sher-E-Bangladesh National Capital

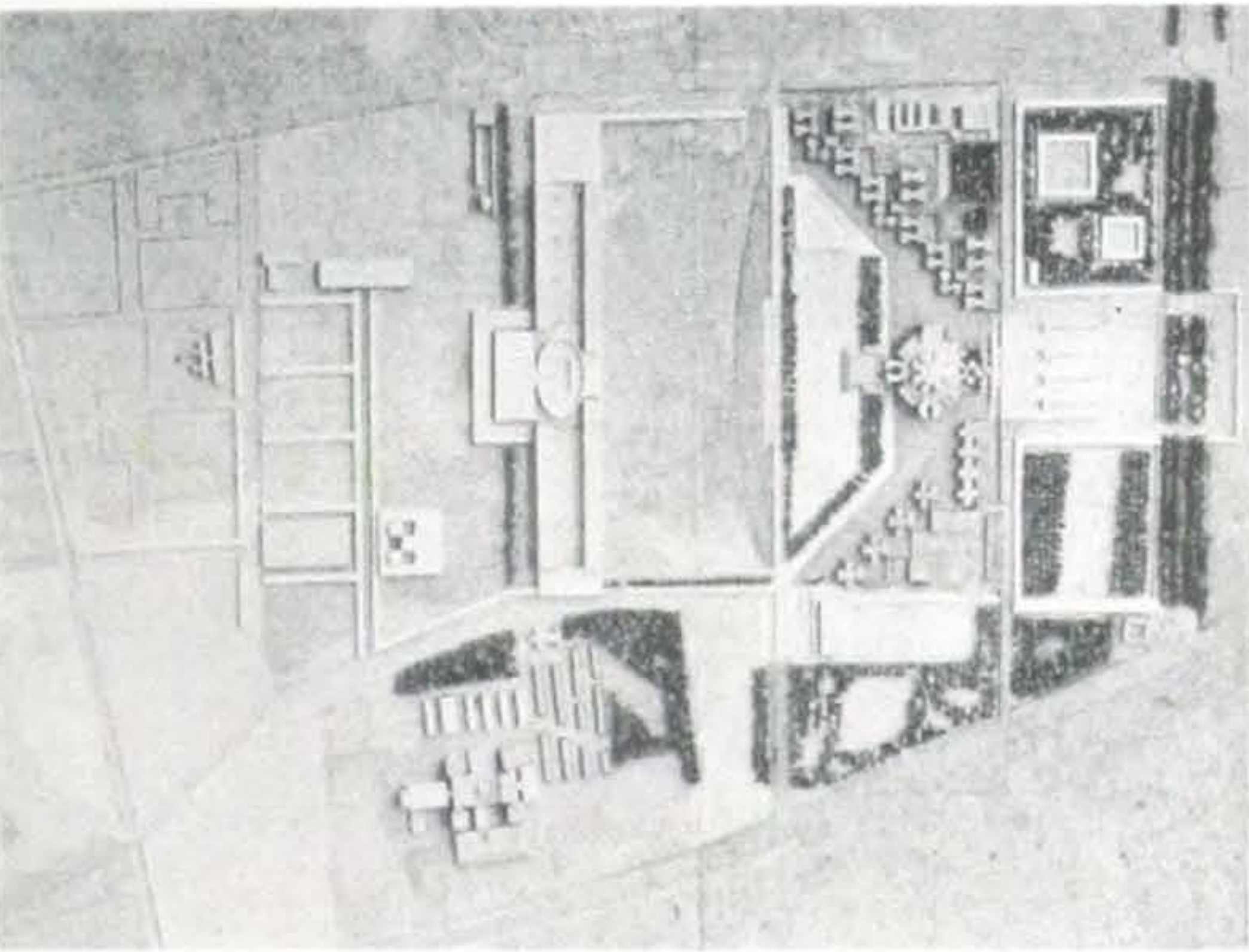
Louis Kahn



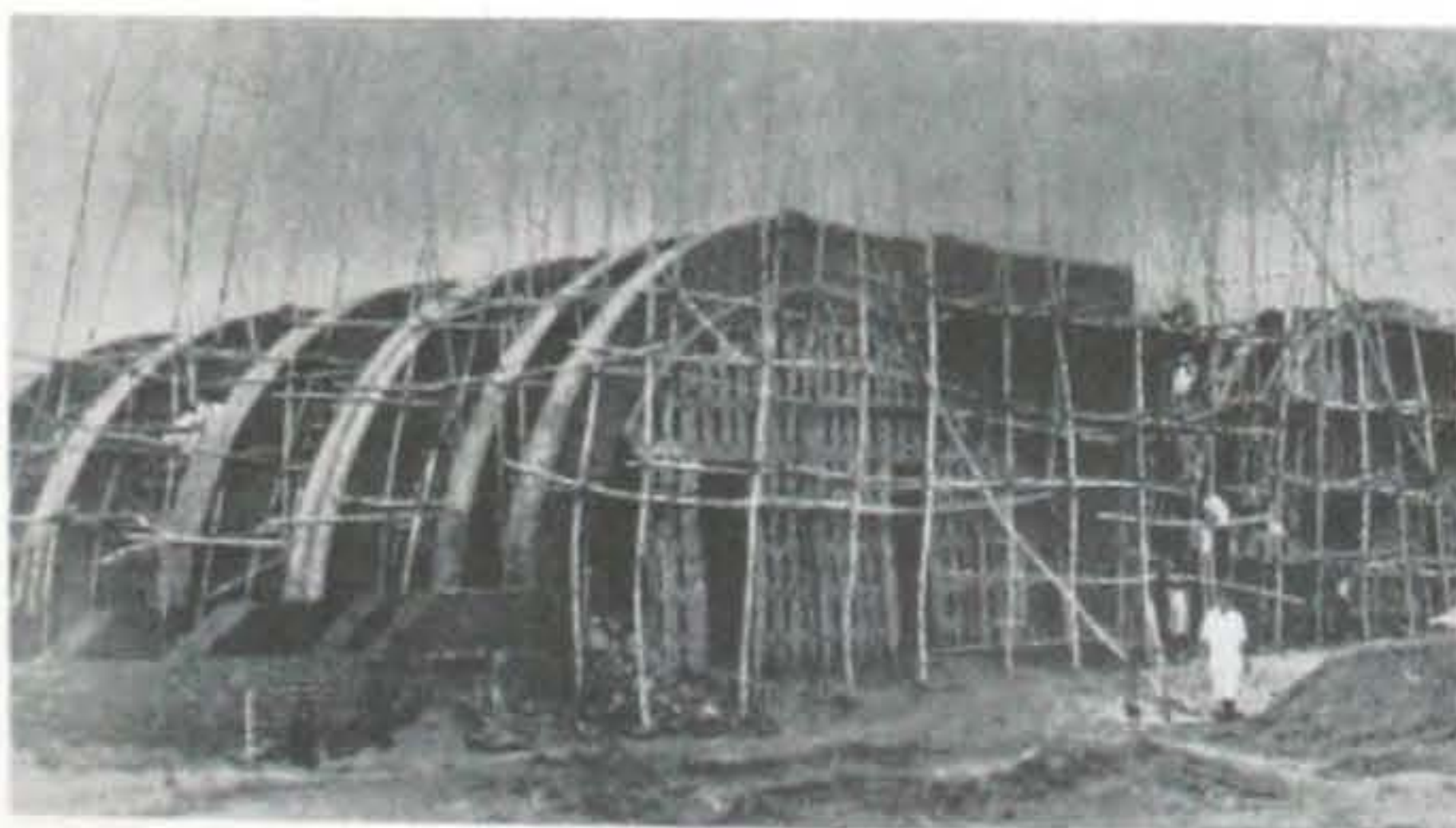
Dacca, Bangladesh



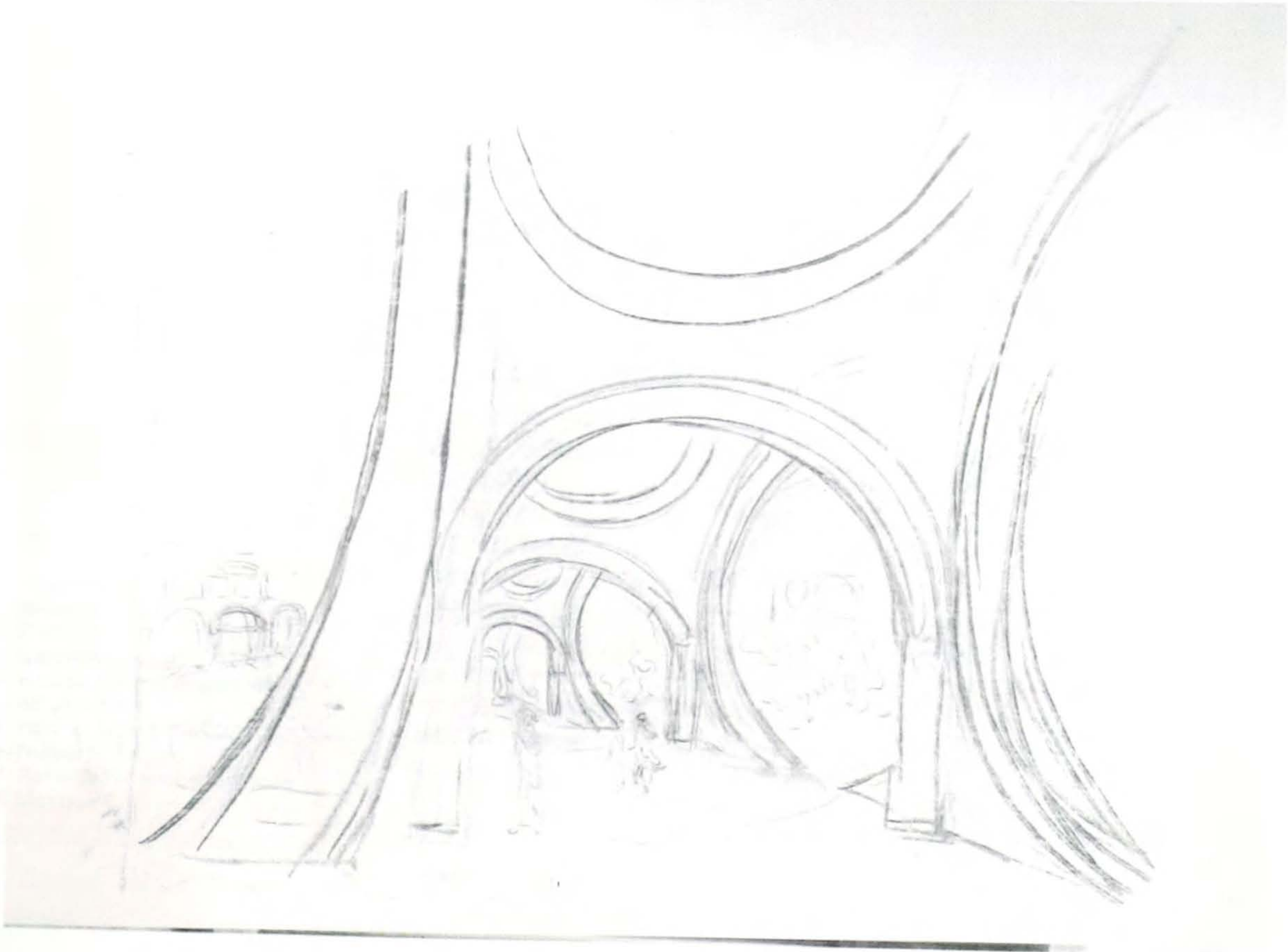
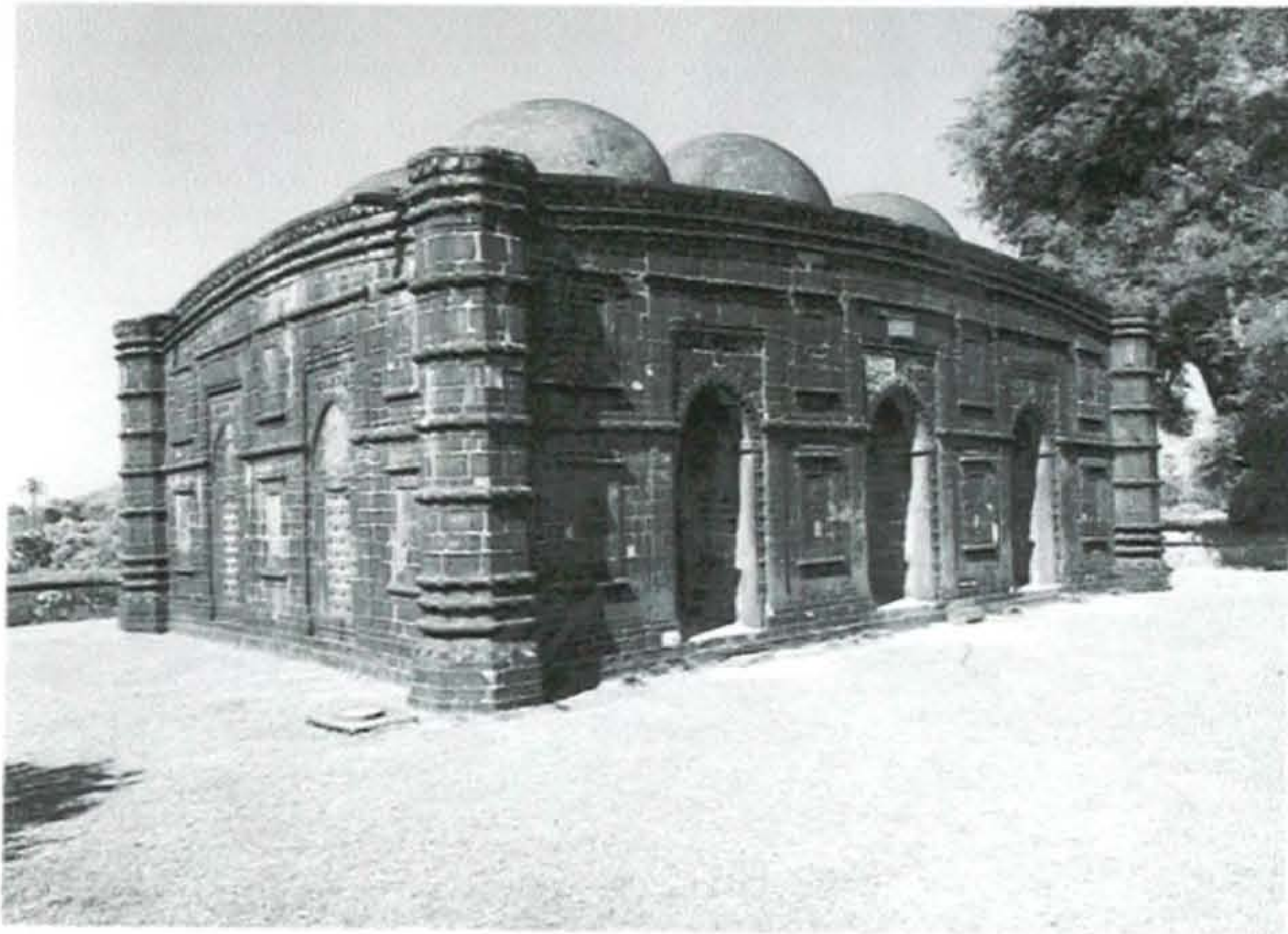
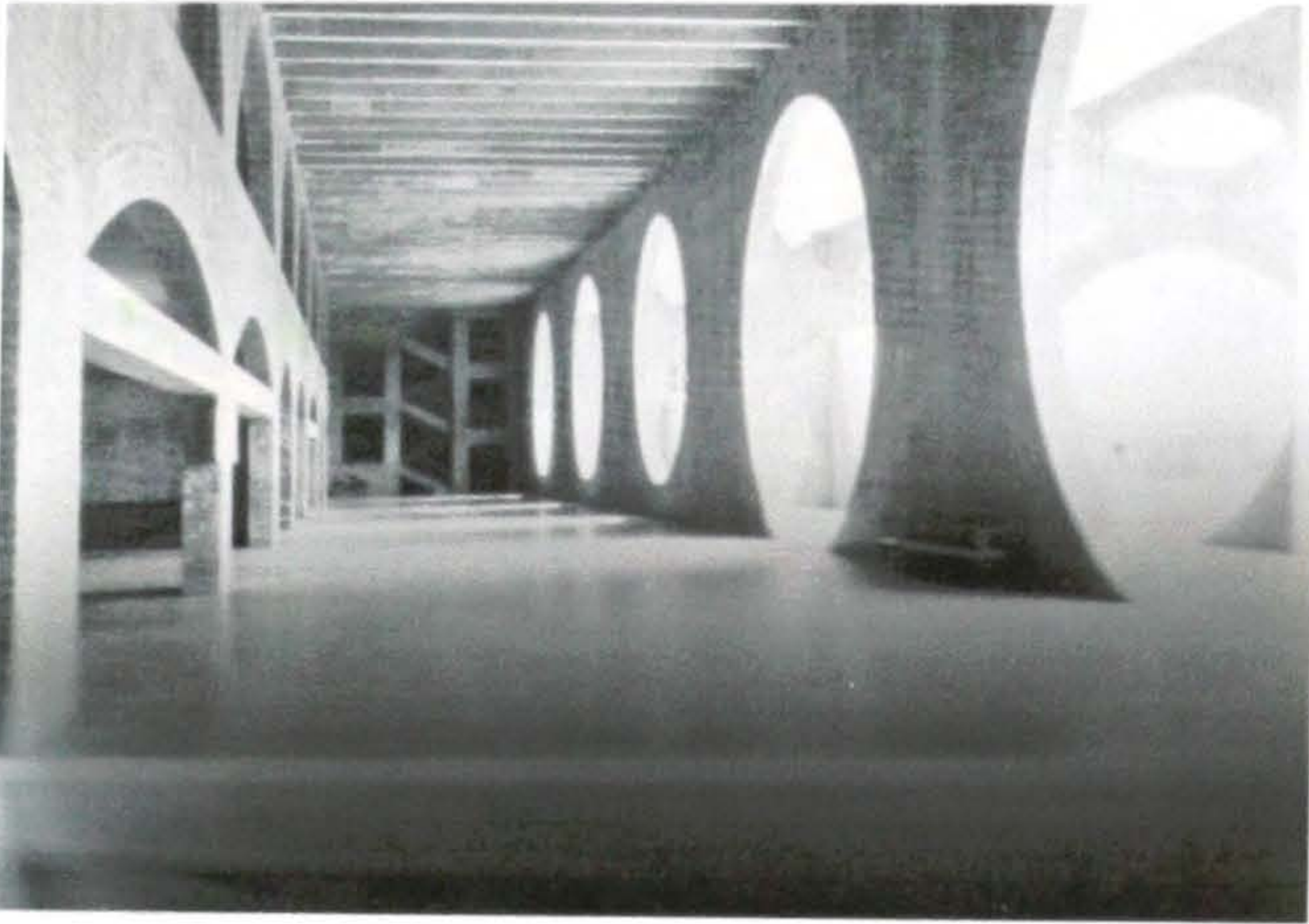
The key design philosophy employed by Kahn for this project was the optimum use of space while still representing the heritage of Bangladeshi and its cultural through architectural expression. The architecture according to Kahn evolved from the basic human requirement of protection from the glare and heat fury of nature. So it is that that which sustains and delights us is also that from which we must at times seek shelter. This project provided a real challenge for the master of light in so much that the entrance of light was both a necessity and a deterrent to the design process.



- 1959: Project conception
- 1961: Construction begins
- 1974: Death of Louis Kahn
- 1982: Inauguration of Citadel of Assembly

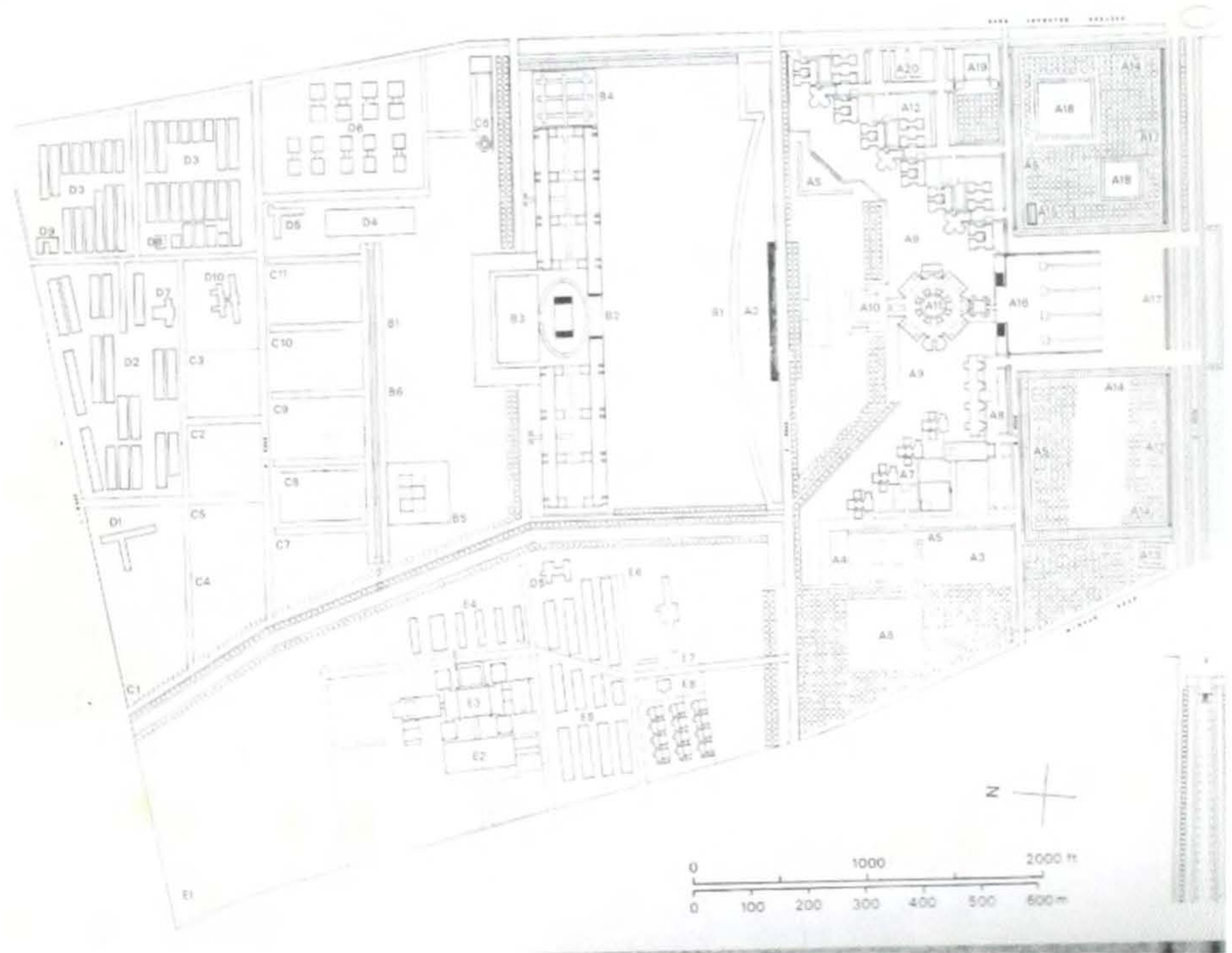


In order to achieve his design philosophy Kahn looked to both architecture of renown and the simplest forms of vernacular buildings. From these he created a unique geometry which he then refolded into the projects many requirements. Throughout the design process, which lasted, several years Kahn struggled to both achieve his vision of the project and to satisfy the myriad of officials who seemed to be interested in only their own requirements and not the project as a united composition.



Program Information

- A ASSEMBLY SECTOR**
- 1 Fountain drive and promenade, leading to Sher-e-Banglanagar gate
 - 2 Crescent lake
 - 3 Recreation garden and court
 - 4 Recreation building
 - 5 Arcades
 - 6 Cricket field
 - 7 Hostels for secretaries
 - 8 Hostels for ministers
 - 9 Lake
 - 10 Presidential plaza
 - 11 National Assembly
 - 12 Hostels for members of National Assembly
 - 13 Memorial Mazar
 - 14 Garden
 - 15 Cooling tower
 - 16 South plaza
 - 17 Fountain and drainage canal
 - 18 Arcaded garden courts
 - 19 Hospitality hall
 - 20 Servant's quarters
- B SECRETARIAL SECTOR**
- 1 Garden
 - 2 Secretariat
 - 3 Auditoriums
 - 4 National library
 - 5 Supreme court
 - 6 Arcades, fountain, and drainage canal
- C CIVIC SECTOR**
- 1 Radio Bangladesh
 - 2 B.A.E.C. regional
 - 3 Post office, telephone and telegraph offices
 - 4 Central museum
 - 5 National Natural History Museum
 - 6 C.M.O.
 - 7 National Museum of Science and Technology
- D HOUSING SECTOR**
- 1 Secondary school
 - 2 Houses type E and F
 - 3 Houses type G and H
 - 4 Playground
 - 5 Primary school
 - 6 Hostels for officers
 - 7 Community center
 - 8 Mosque
 - 9 Enquiry office
 - 10 Agricultural hostel
- E HOSPITAL SECTOR**
- 1 Reserve for health buildings
 - 2 O.P.D.
 - 3 Central hospital
 - 4 Hostels for nurses and medical students
 - 5 Houses type E and D
 - 6 Nursery
 - 7 Reserve for residential area
 - 8 Mosque



Location and basic layout

The enclave, situated in Sher-e-Bangla Nagar, is bound by four major streets:

- Lake Road to the North;
- Rokeya Sarani to the East;
- Manik Mia Avenue to the South; and
- Mirpur Road to the West.

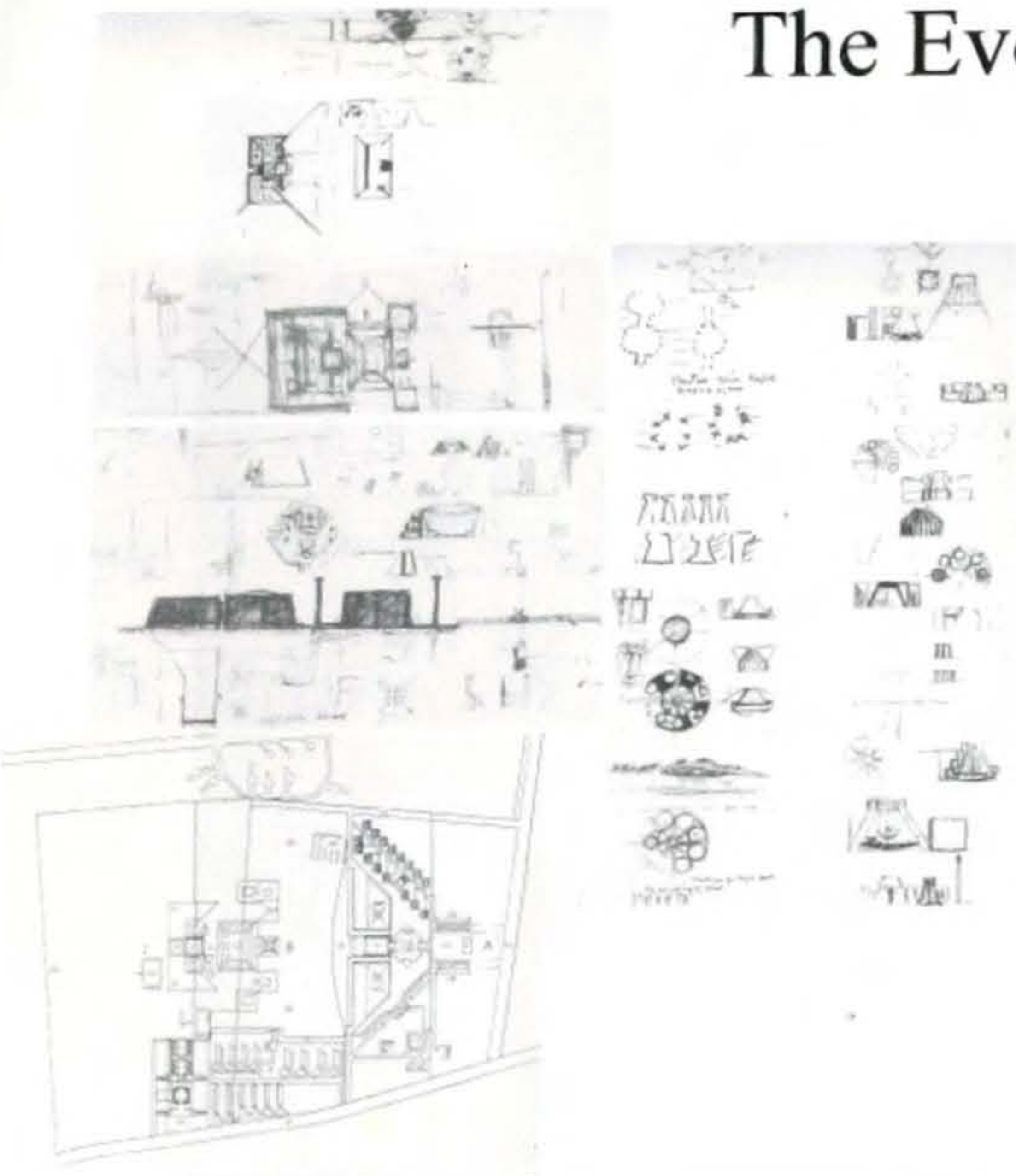
As a result, the complex is well accessible and manageable (during parliamentary sessions).

The main building (the Bhaban) is divided into three parts:

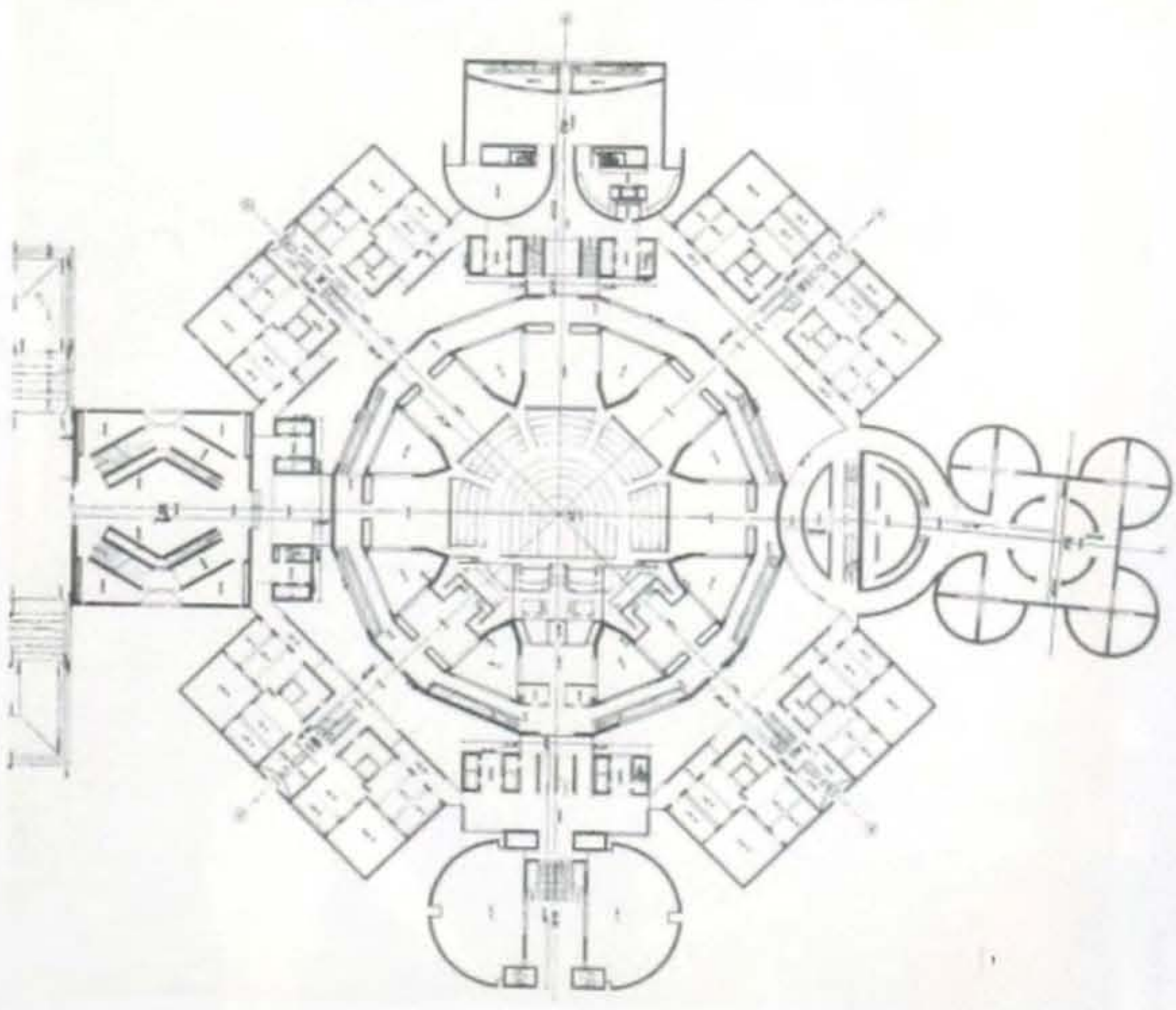
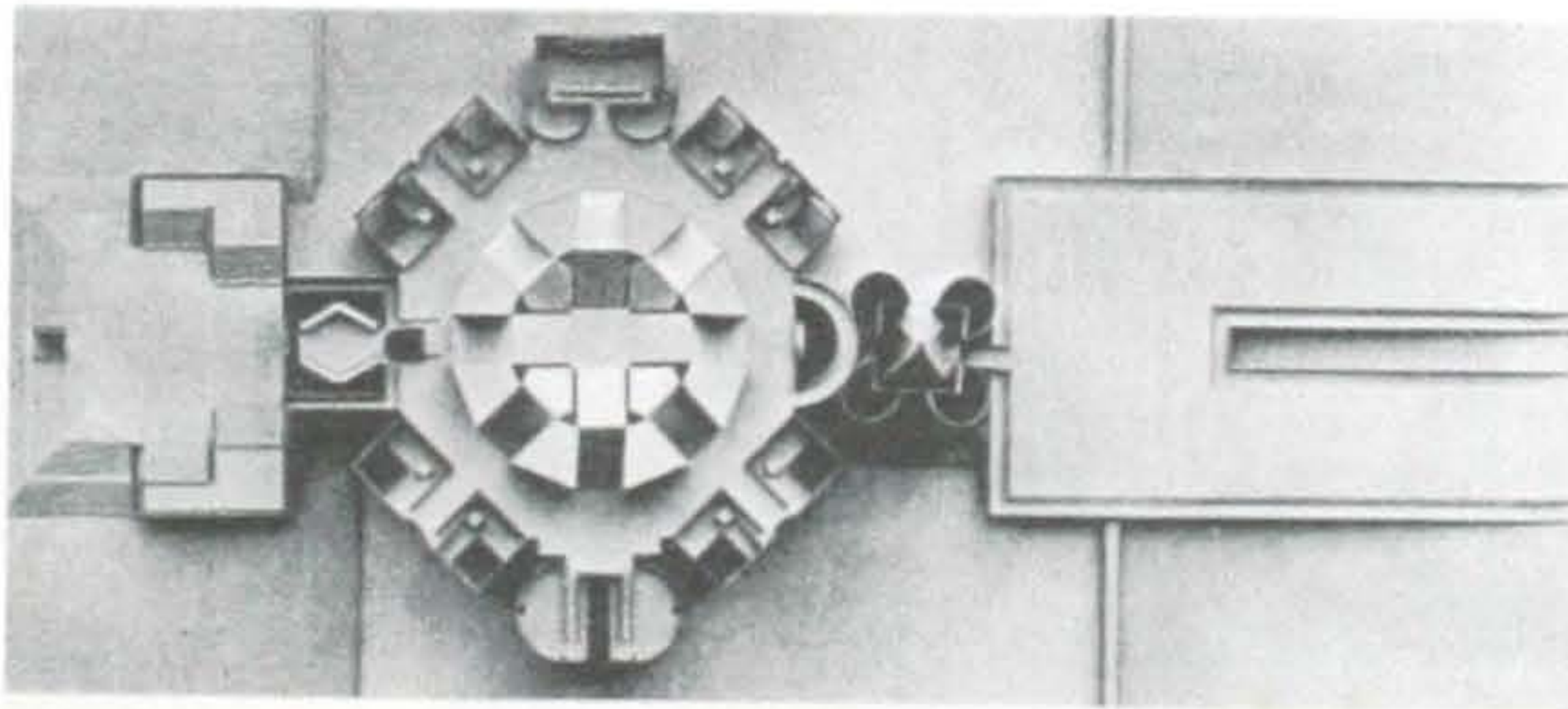
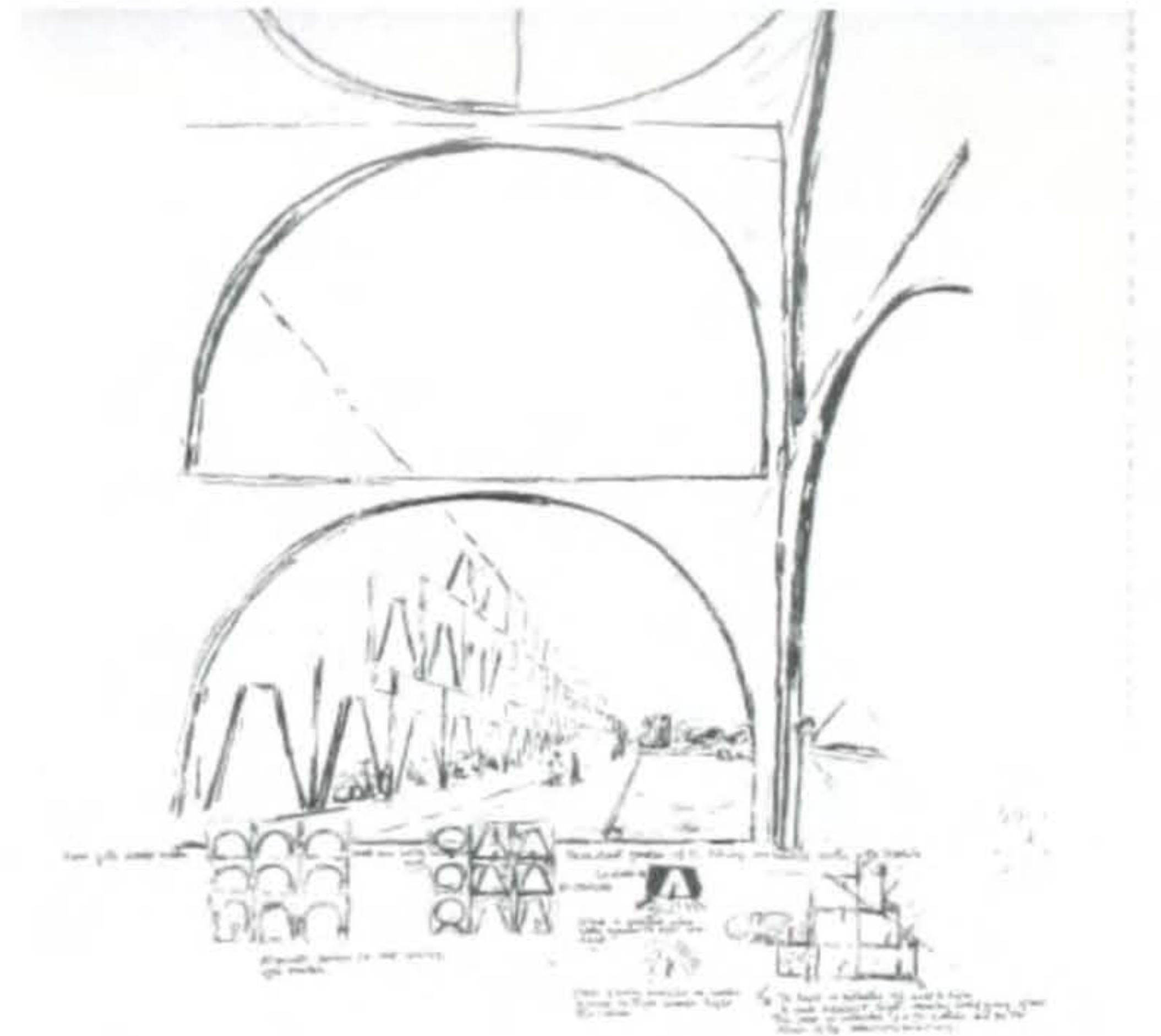
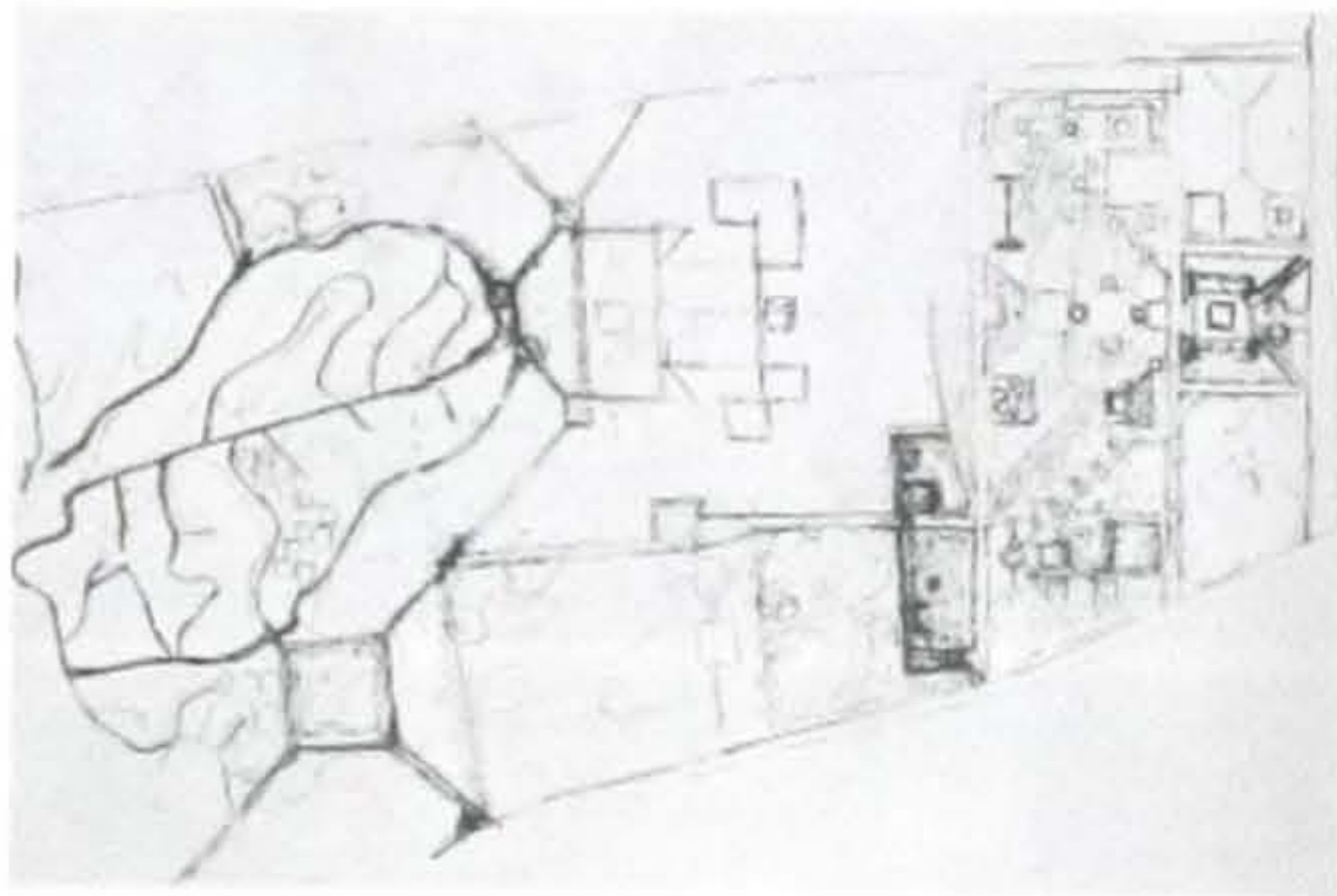
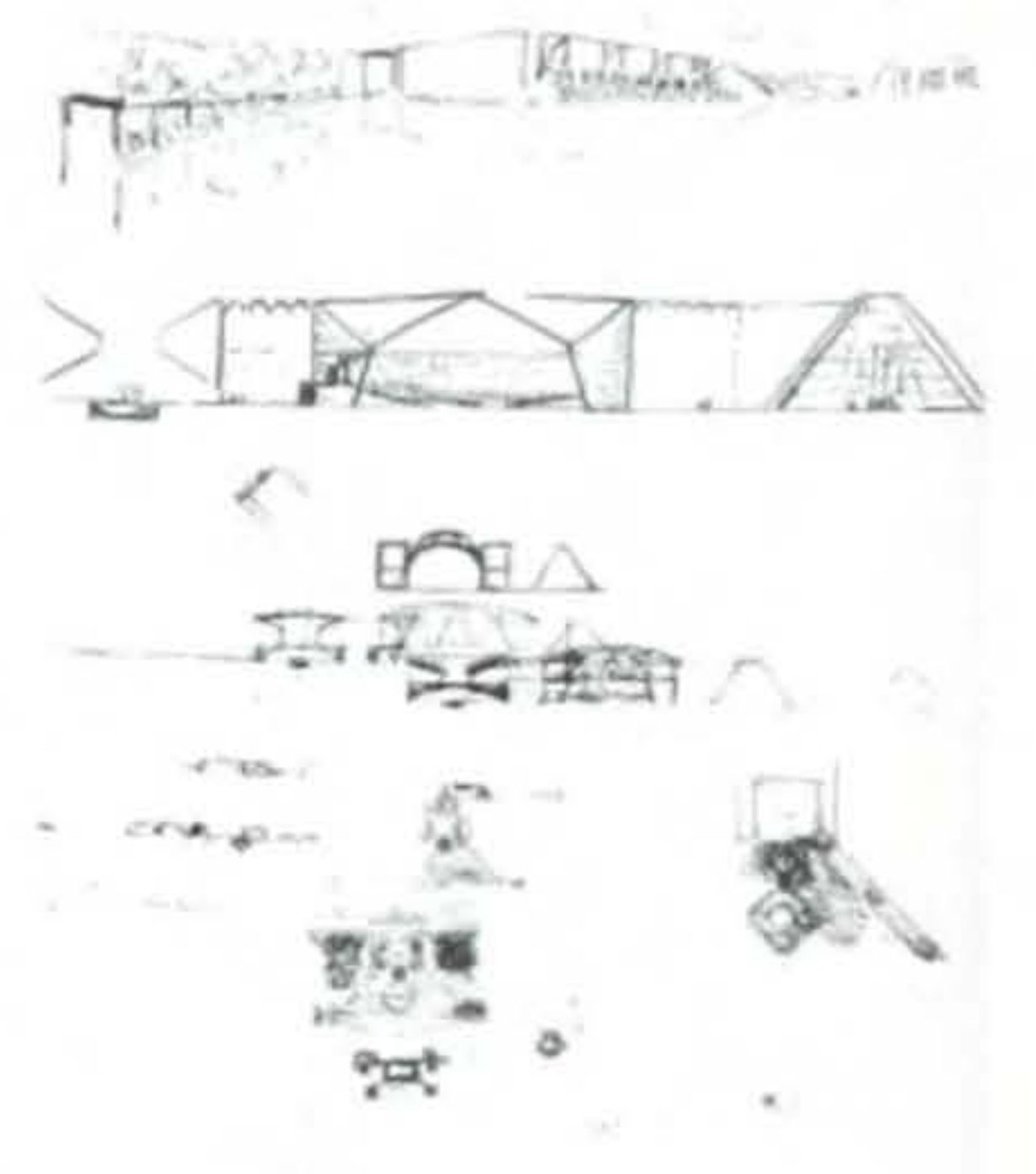
1. The Main Plaza: 823,000 square feet (76,000 m²)
2. South Plaza: 223,000 square feet (21,000 m²)
3. Presidential Plaza: 65,000 square feet (6,000 m²)

The main building is at the centre of the complex. The outer parts of the complex include the MP hostel and buildings for emergency facilities. The gap in between is filled with an intricately designed lake, surrounding the main building, and two lawns.

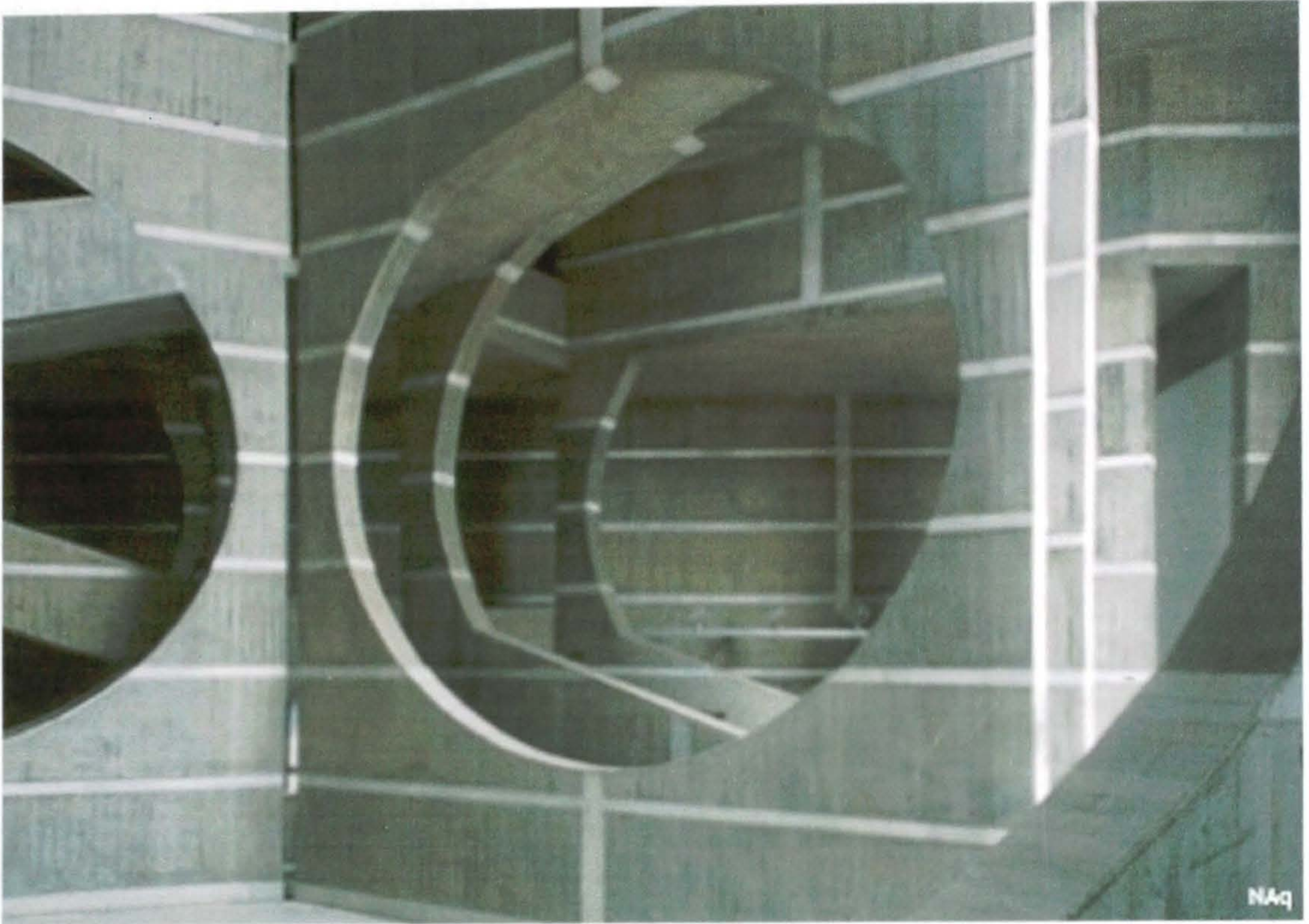
The Evolution of Design



As can be seen in this series of sketches Kahn was constantly trying to organize the entire composition while at the same time create the details which are unique to each of the projects individual components. Kahn believed that in order to achieve a cohesive composition that a designer needs to create plans, sections, elevations and perspectives simultaneously.



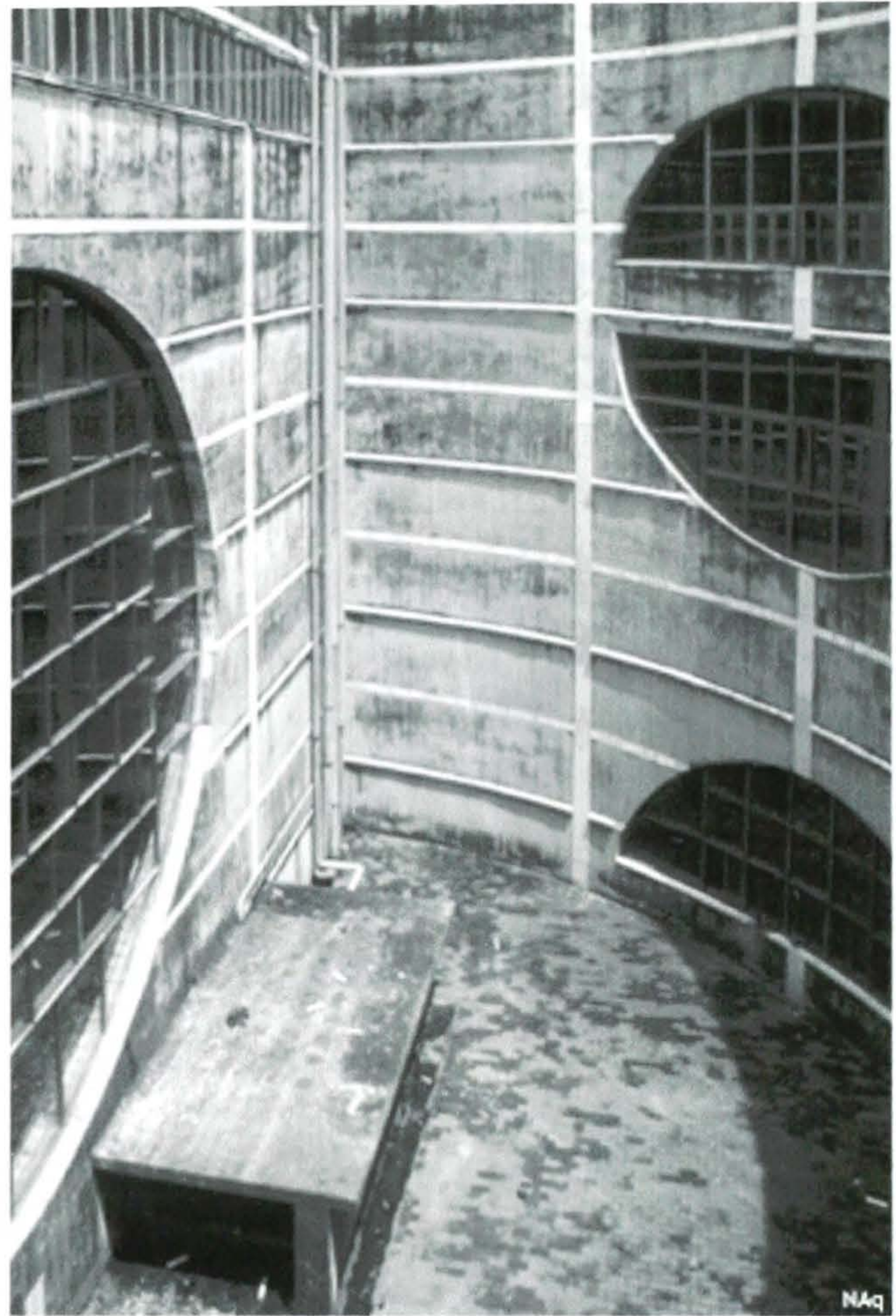
The Geometry of Light

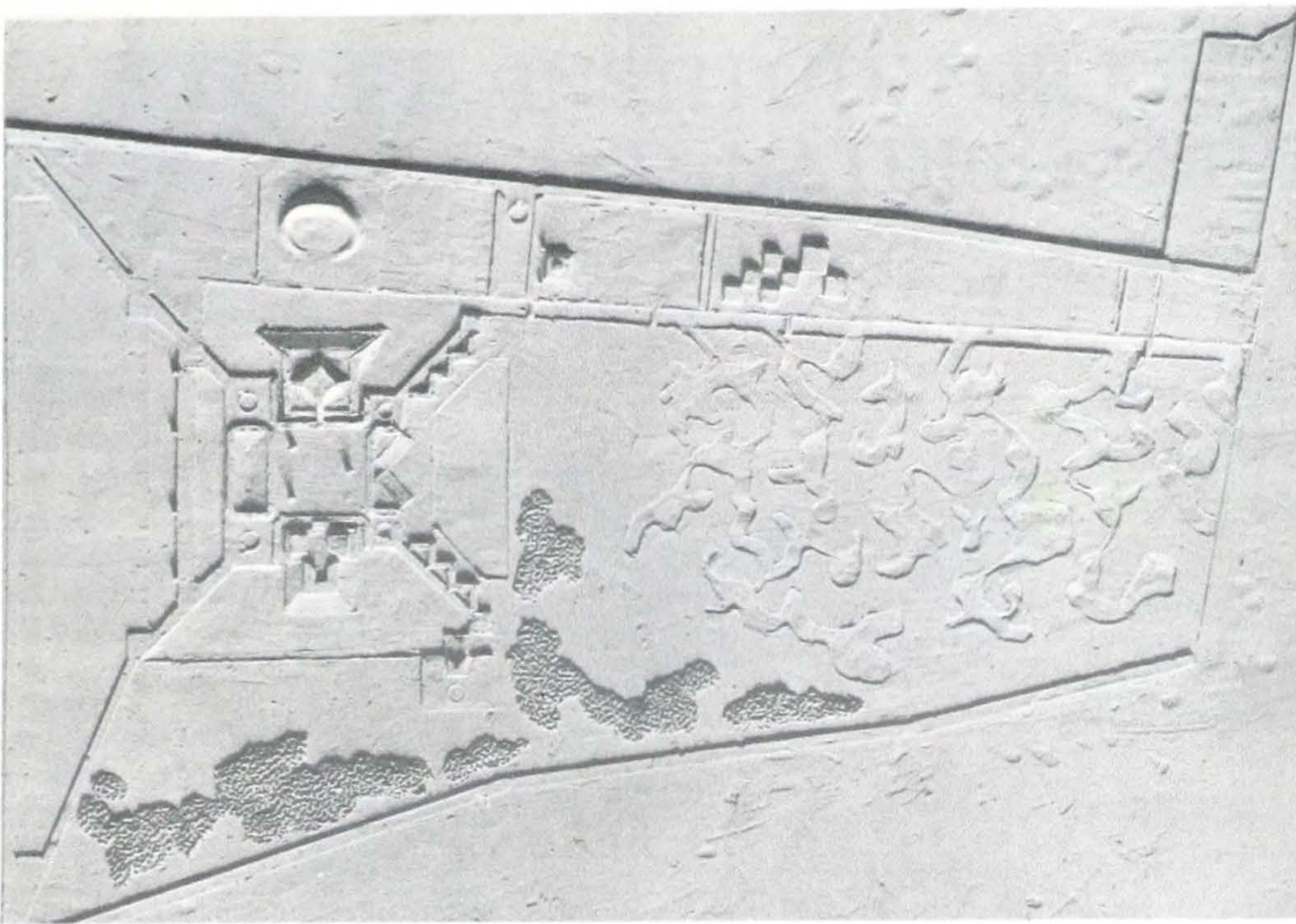


To Kahn this project was an opportunity to use light as an architectural element. In order to accomplish this task given the climate of that area Kahn created columns, which were of such a size that they could be hollowed out allowing for the entrance of light through their center. "I am working to develop the element to such an extent that it becomes a poetic entity which has its own beauty outside of its place in the composition."

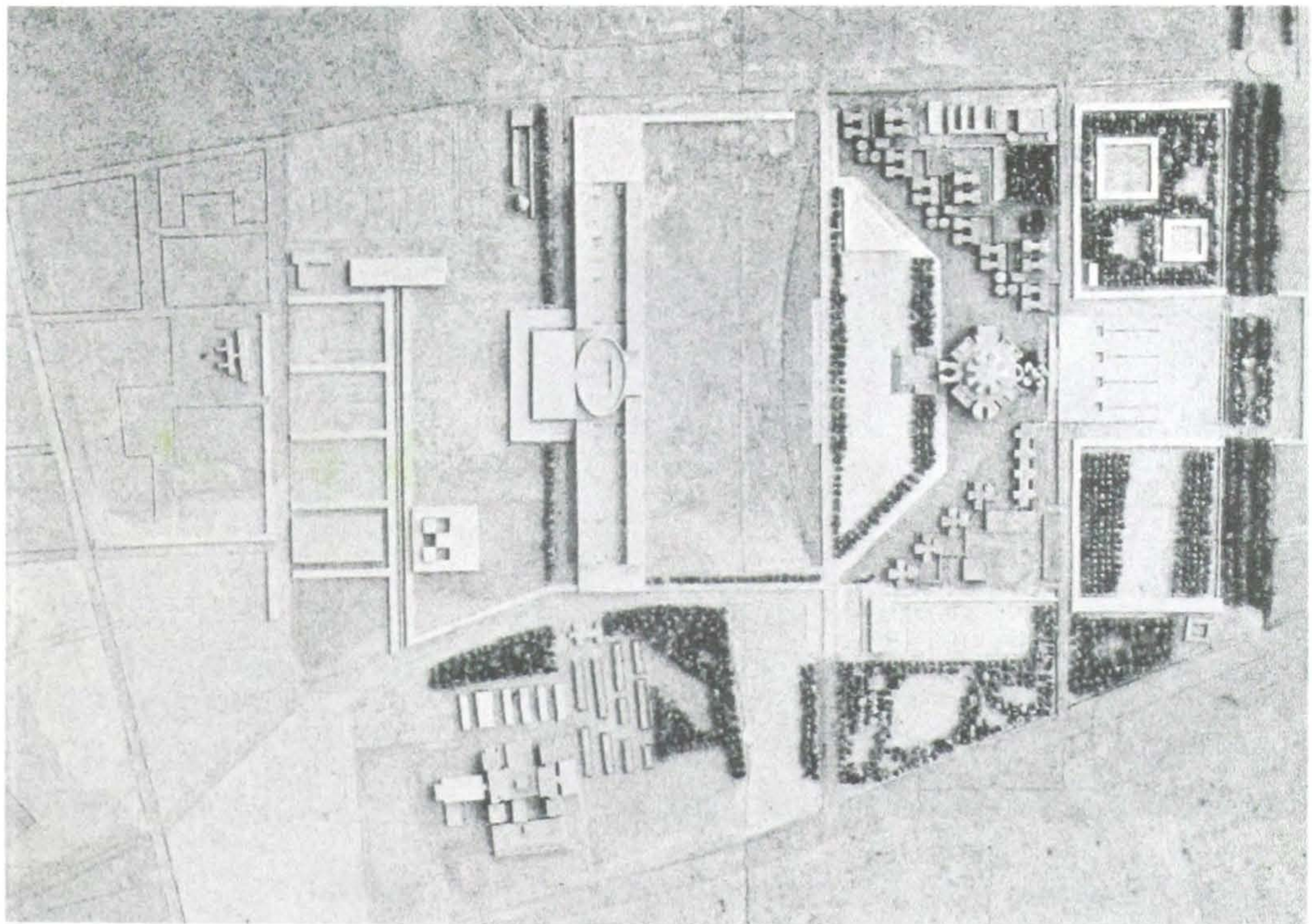
Composition of Elements

Kahn repeatedly reintroduced certain design elements into the entire project and the importance this has to the overall composition.





1962-First site plan; Kahns originally placed both the Citadel of Assembly and the Citadel of Institutions facing each other on the North end of the 840 acre site.



1974- The final site plan was accepted before Kahns' death in March of 1974. The northern portion which ended up being the secretariat has not been built.



INSTITUTE FOR FORESTRY AND NATURE RESEARCH

WAGENINGEN
THE NETHERLANDS

Geographic coordinates:
52 30 N, 5 45 E

Climate:
temperate; marine;
cool summers and
mild winters

Terrain:
mostly coastal lowland
and reclaimed land;
some hills in southeast
Elevation extremes:
lowest point:
Zuidplaspolder -7 m
highest point:
Vaalserberg 322 m



ARCHITECT
BEHNISCH, BEHNISCH &
PARTNER

PROJECT ARCHITECT
STEFAN BEHNISCH,
TON GILISSEN

INTERNAL GARDENS
AND PATHWAYS
MICHAEL SINGER
(artistic work)
COPIJN UTRECHT
(landscape architecture)

COMPETITION: 1993

CONSTRUCTION: 96-1998

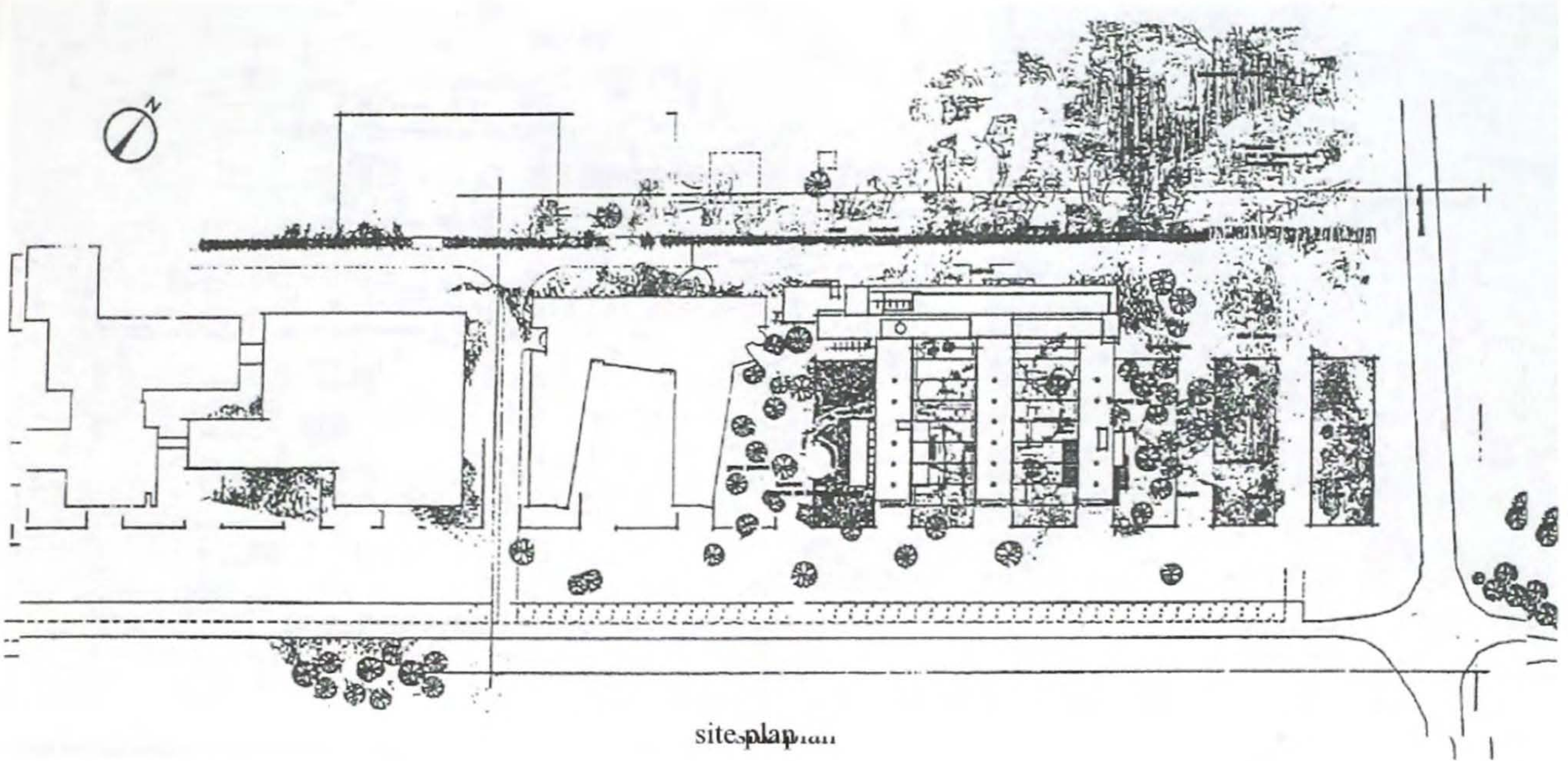


WAGENINGEN



PROGRAM:
OFFICES
RESEARCH LABORATORIES
CONFERENCE FACILITIES
STAFF RESTAURANT
LIBRARY
SOCIAL FACILITIES
TOTAL FLOOR AREA: 127,018

SITE: An agriculturally depleted field just North of the
town of Wageningen

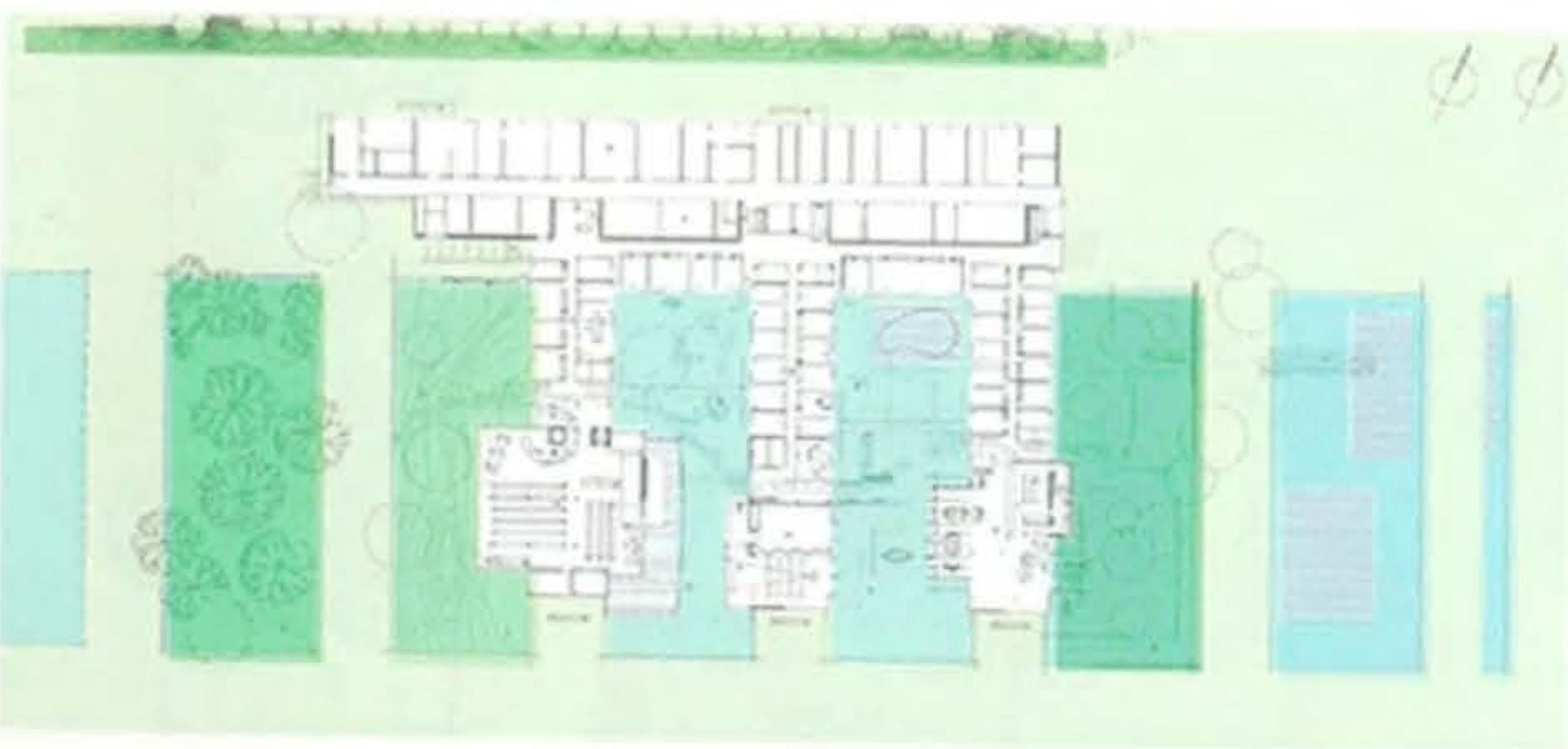


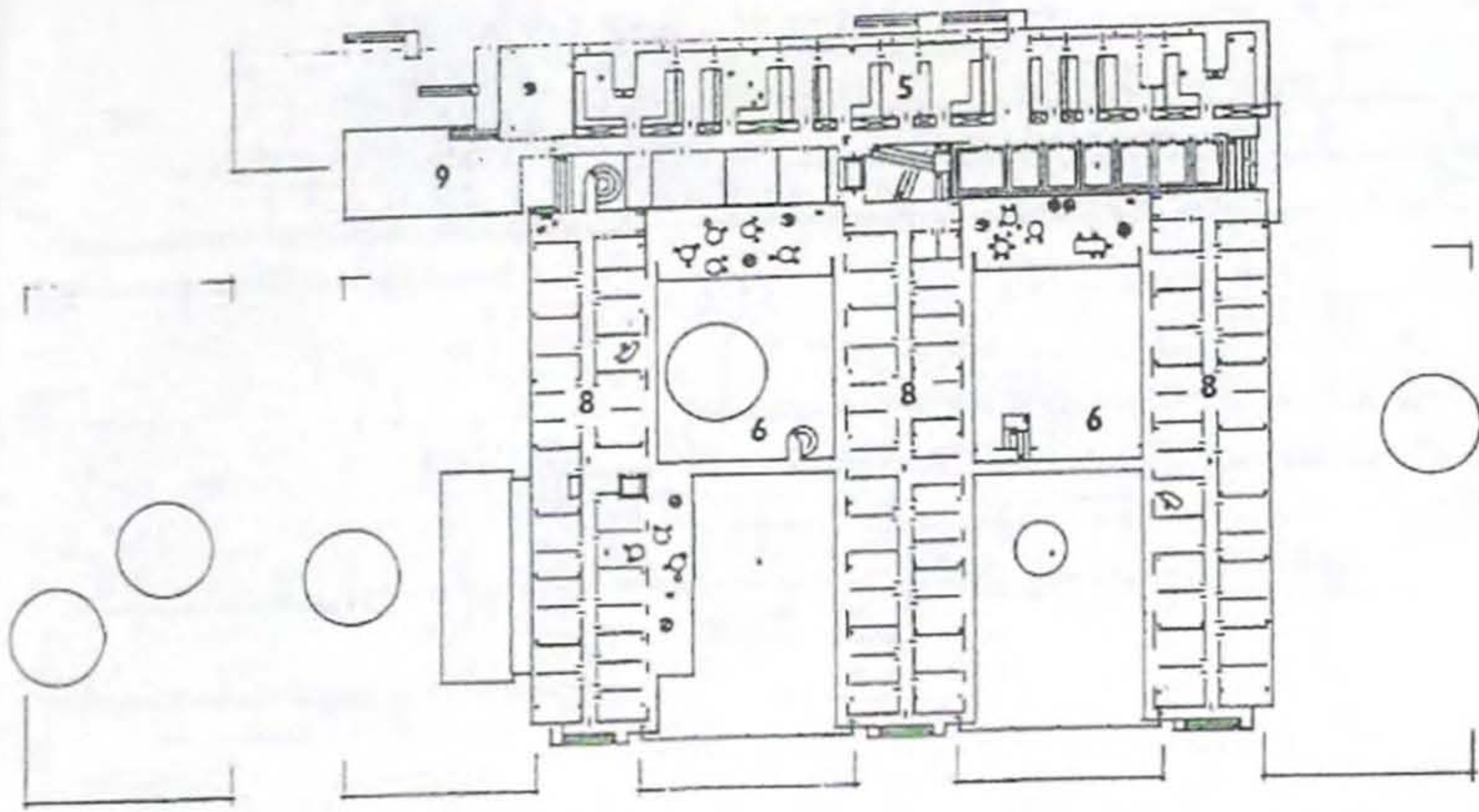
site plan 1:100

The Institute For Forestry And Nature Research combines three separate branches of the State of the Netherlands forestry department into one building. One of the main goals for this project was to incorporate ecological strategies without increasing the overall cost. The building was designed to operate with low energy consumption and to be as environmental friendly as possible. The scientists who work at the facility have a very high amount of control over their working environment as well as being provided with a beautiful garden type setting. Almost every aspect of the facility transcends functional considerations and is also part of the facilities research program. The building is organized around a central spine dividing the two main functions but employees constantly use the two interior courts to move throughout the building even though this area is not climatically controlled. Each office and laboratory opens into the central atrium, which are both cooled and humidified by the abundant plant material within. Only the laboratories are air conditioned and there only because of the need for a high level of climatic control due to the nature of the research undertaken at the facility.

ECOLOGICAL STRATEGIES:

- Depleted site restoration
- Experimental ecological gardens
- Rainwater collection
- Grey water recycling
- Natural ventilation
- Passive solar
- Thermal massing
- Materials using low embodied energy
- Reduced use of toxic products





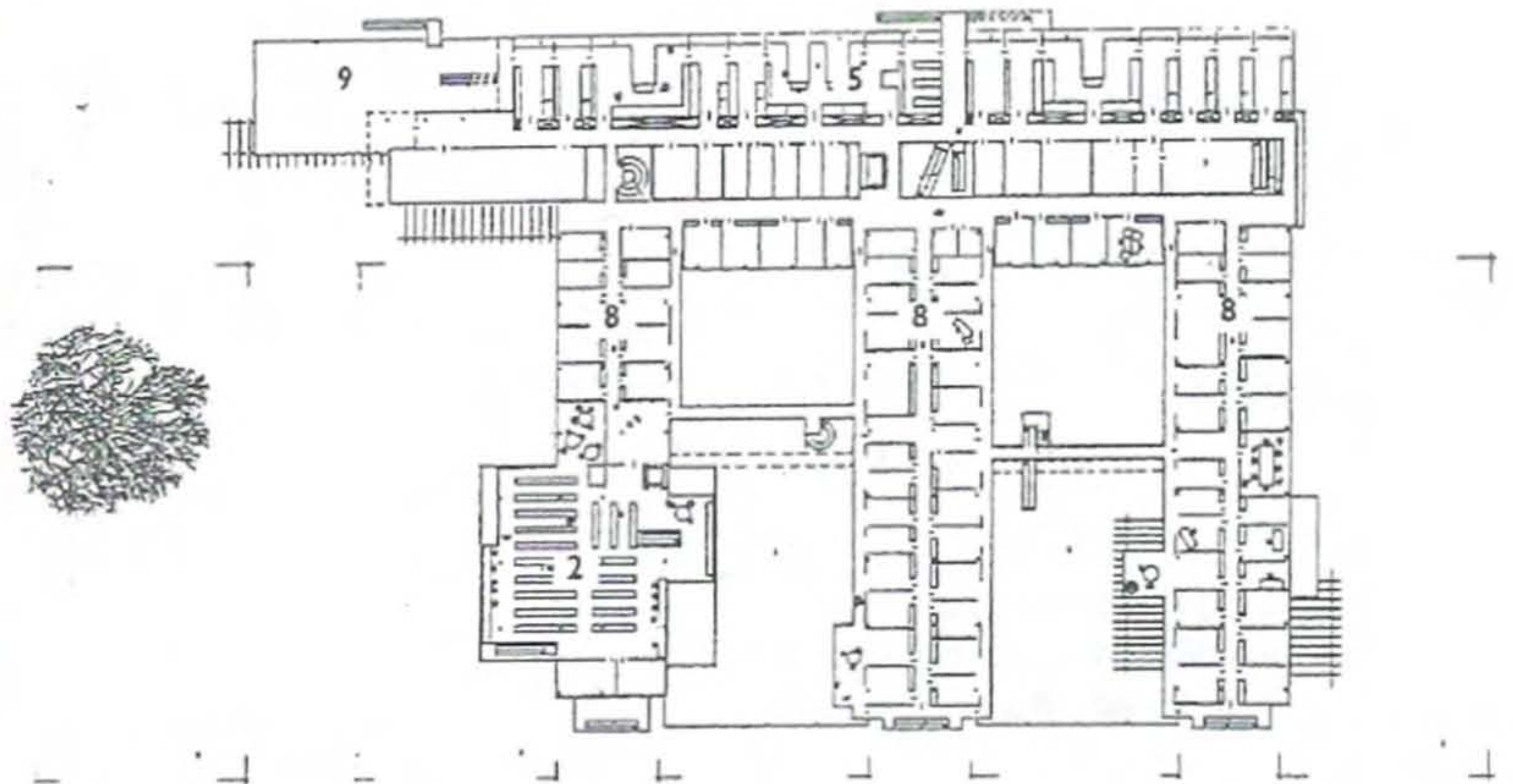
second floor plan



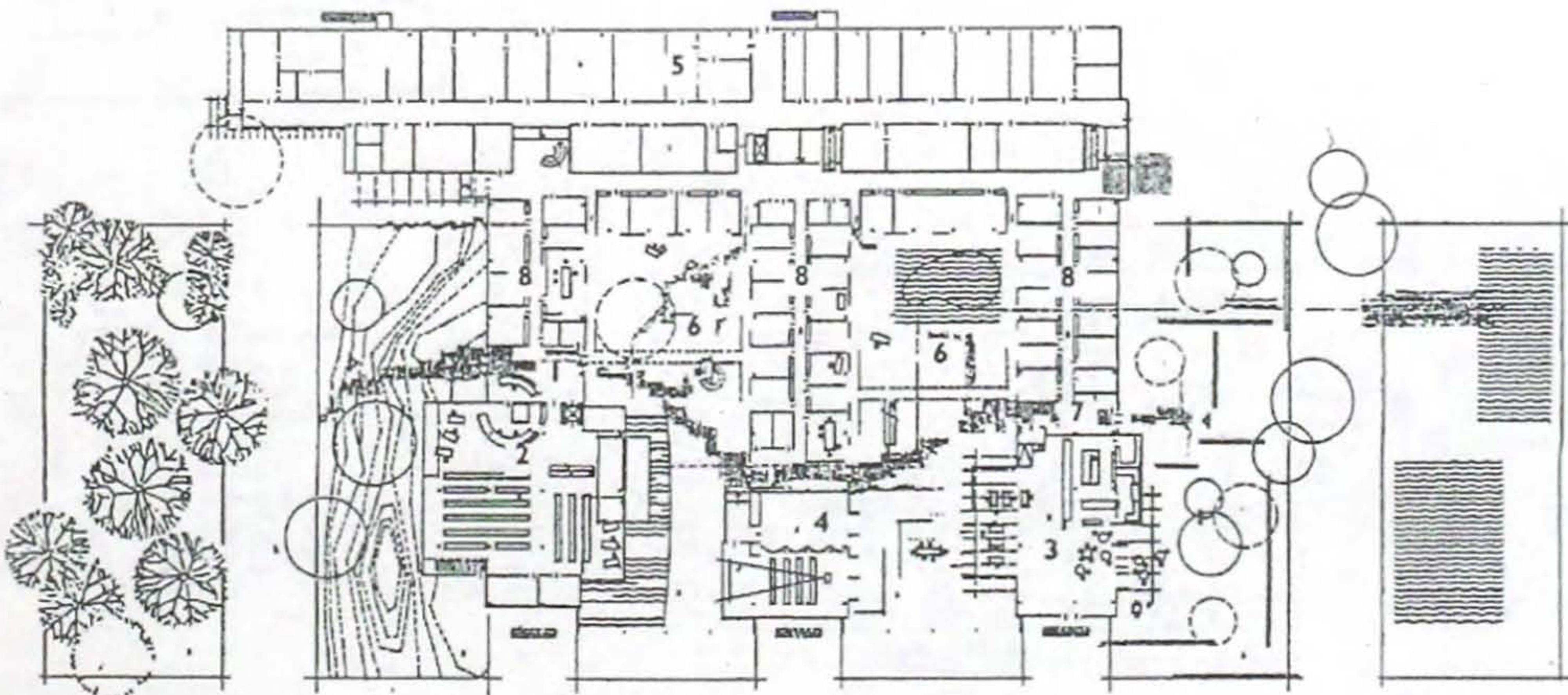
veiw of laboratories



veiw of main entrance

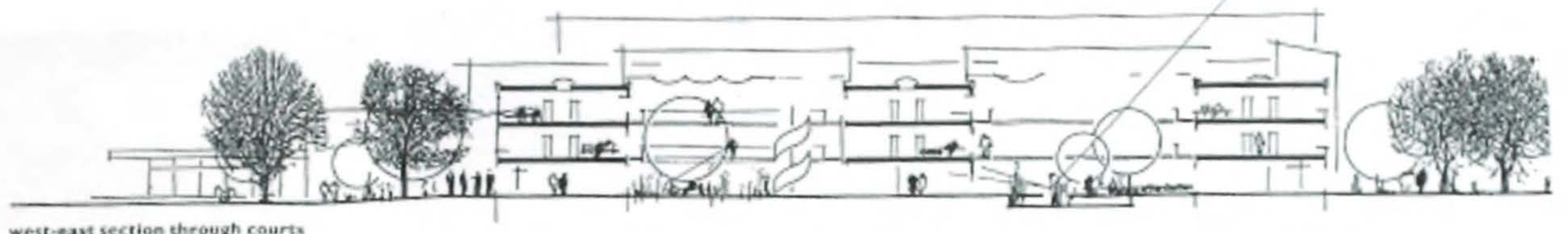


first floor plan

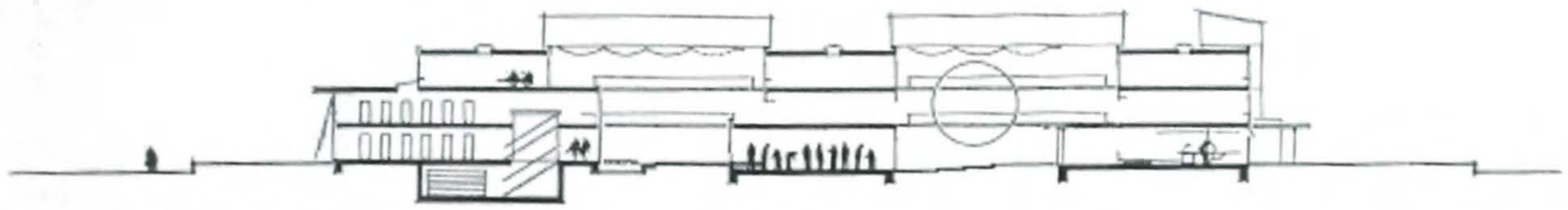


ground floor plan

- 1 main entrance
- 2 library
- 3 cafeteria
- 4 conference suite
- 5 laboratories
- 6 court
- 7 secondary entrance
- 8 offices
- 9 roof terrace



west-east section through courtyards



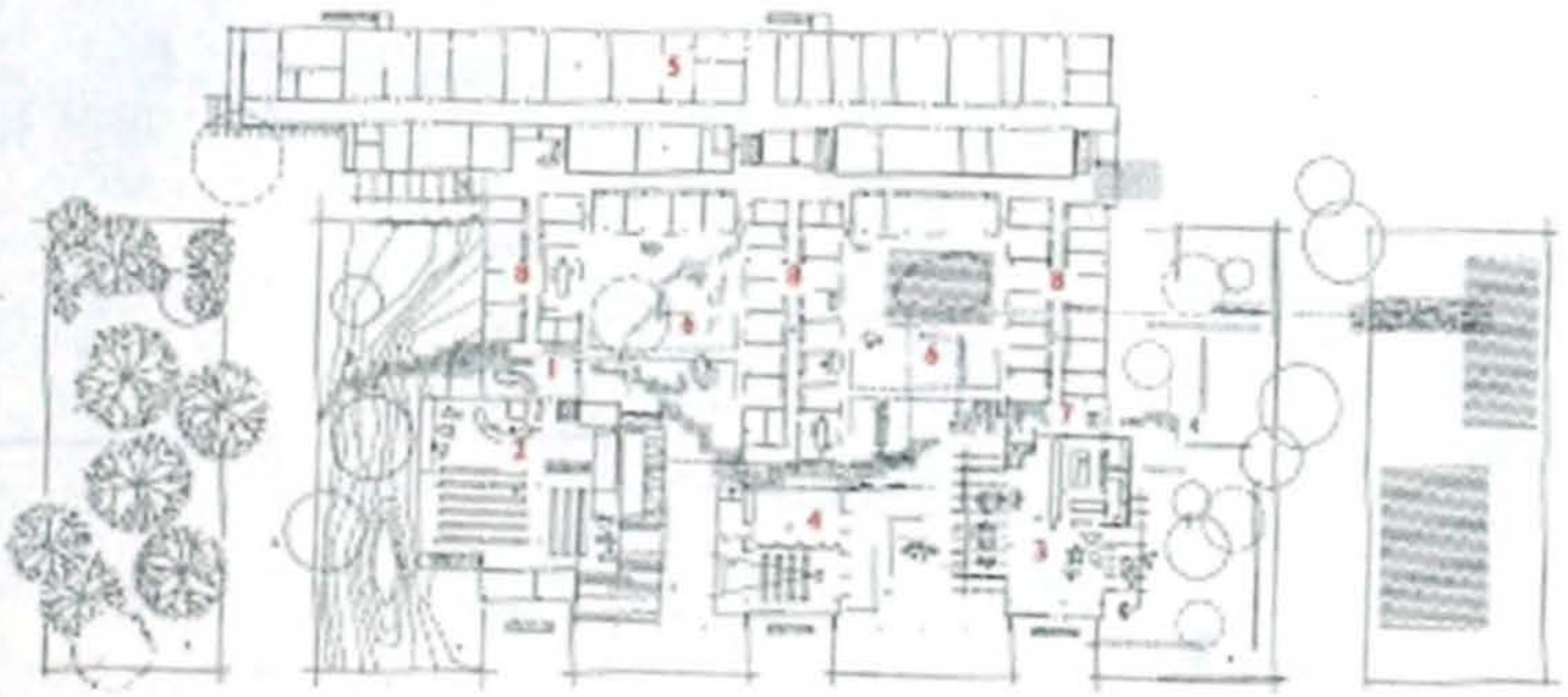
section through library and restaurant



first floor plan



second floor plan

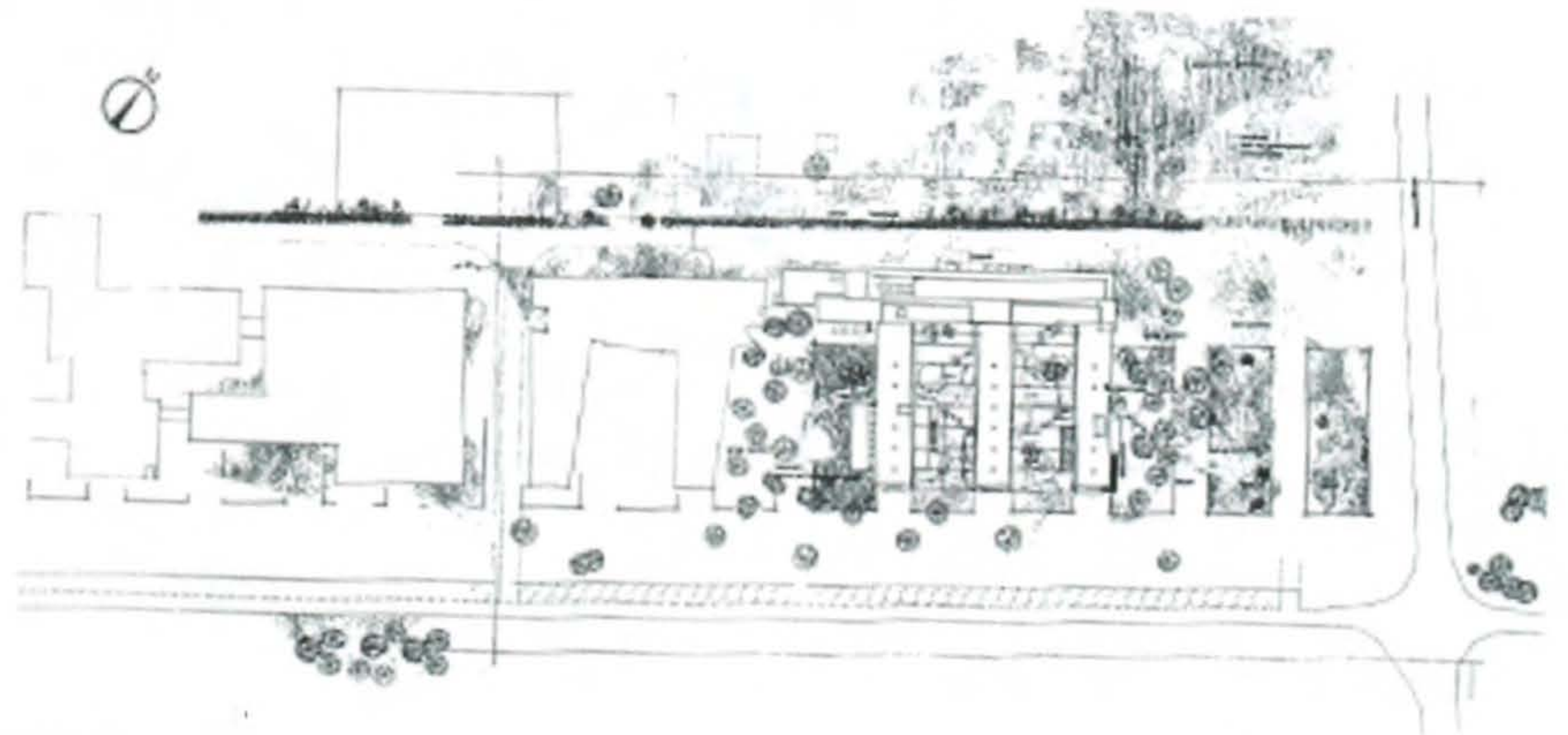


ground floor plan (scale approx 1:2000)

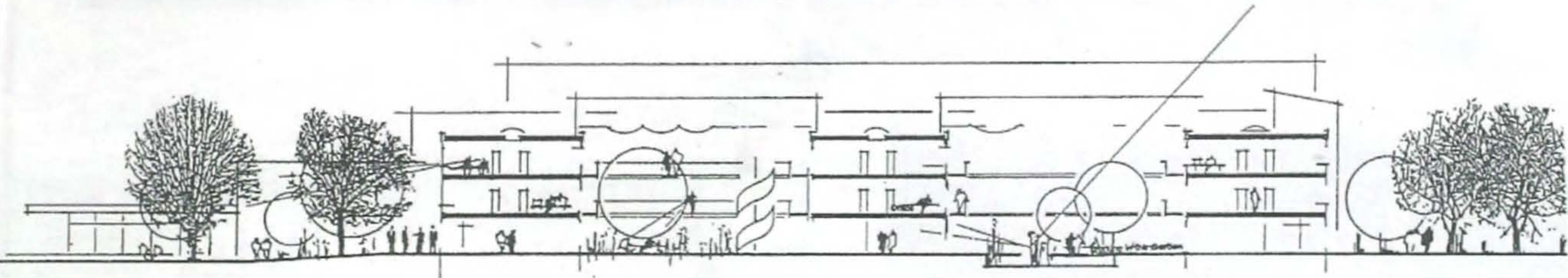
**INSTITUTE FOR FORESTRY AND
NATURE RESEARCH, WAGENINGEN,
THE NETHERLANDS**
ARCHITECT
**STEFAN BEHNISCH
OF BEHNISCH, BEHNISCH & PARTNER**

5,6
Offices and nature are intimately
mixed, with varied planting and
landscaping.

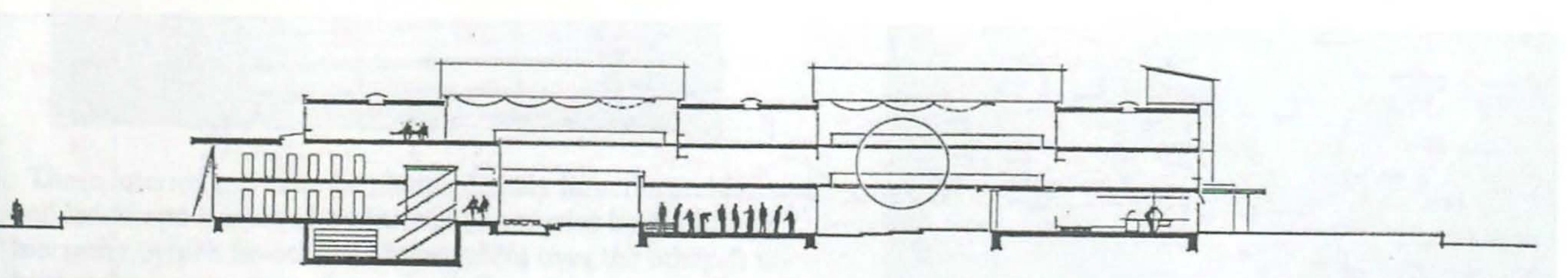
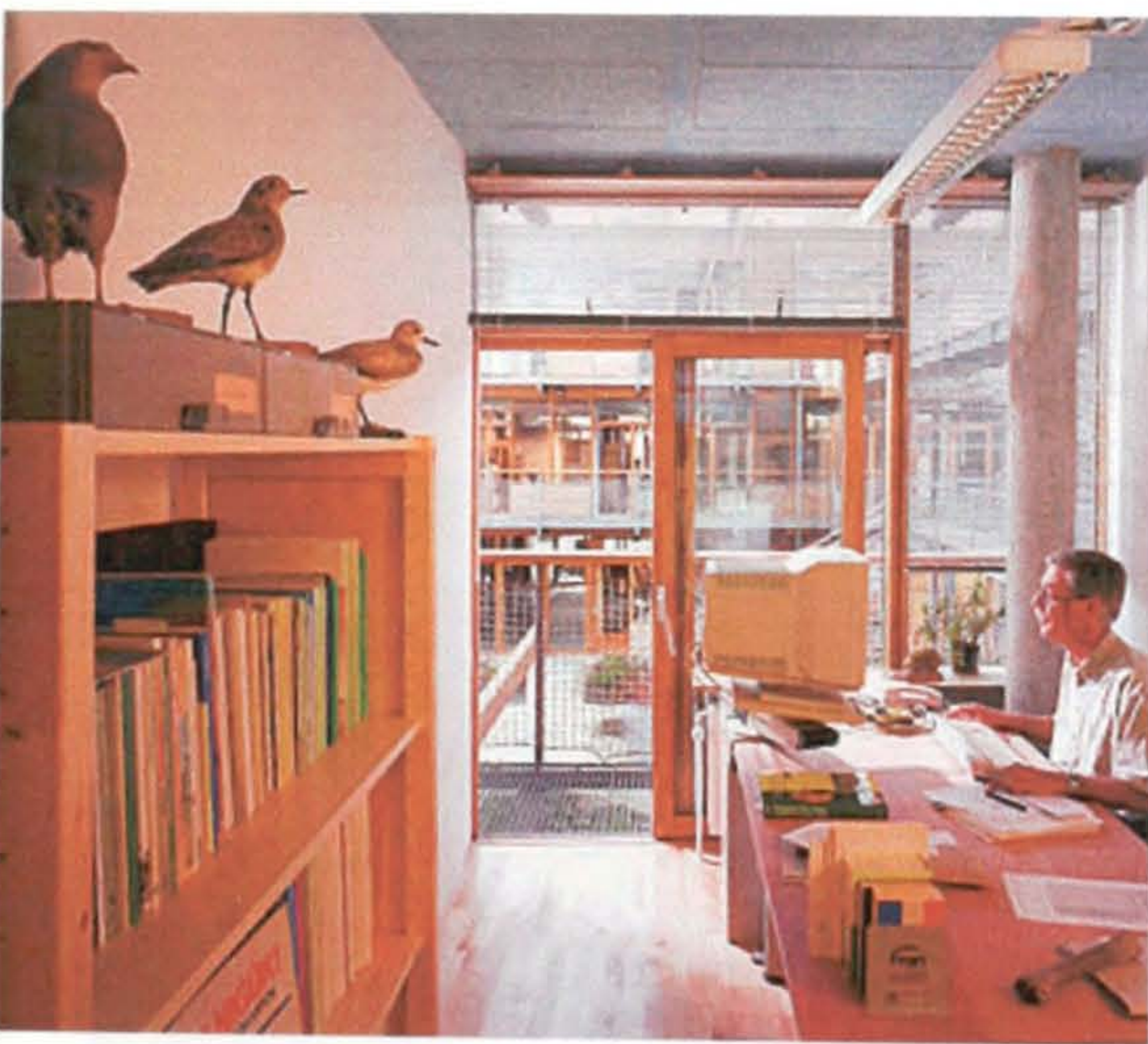
- 1 main entrance
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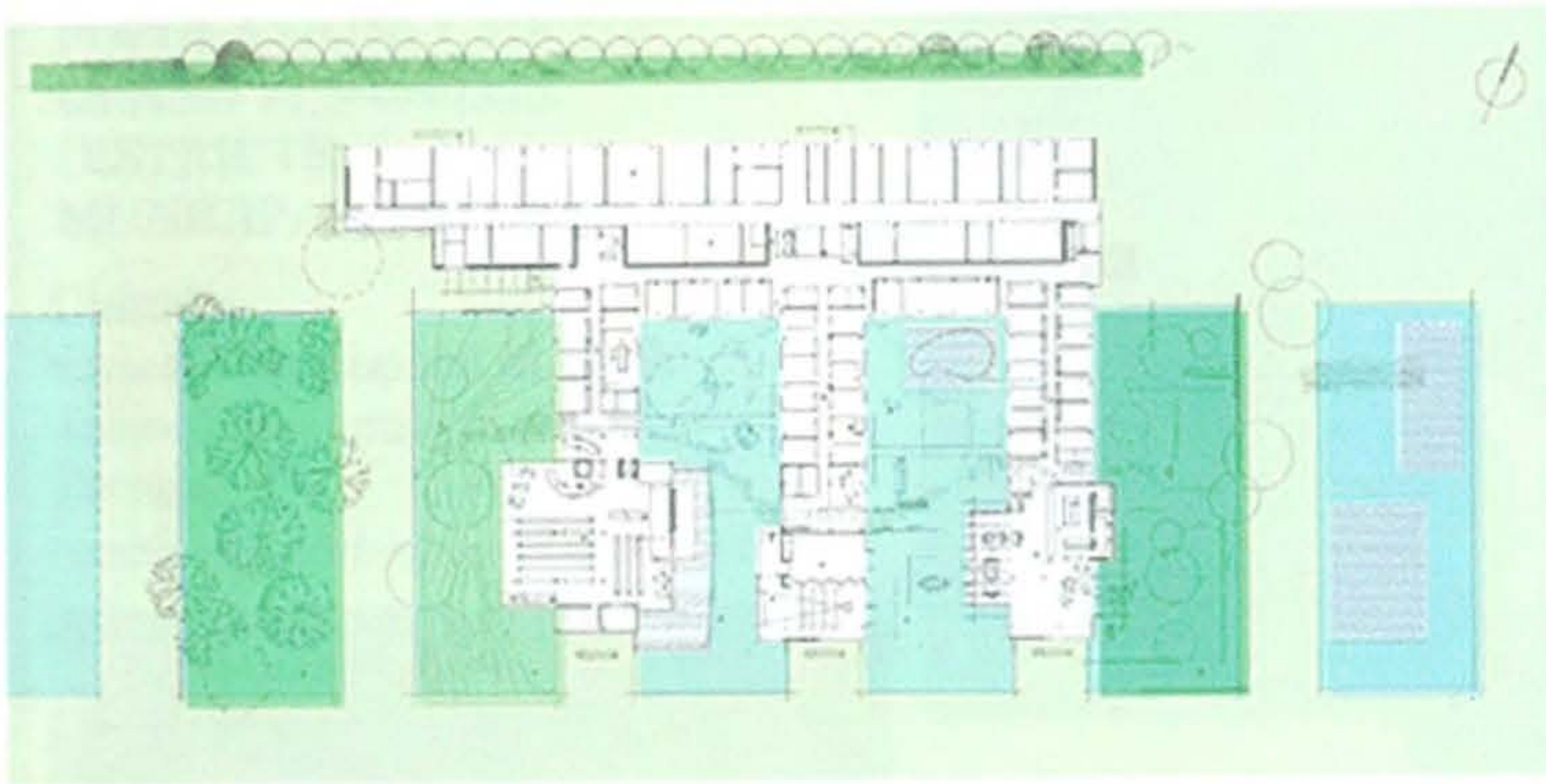
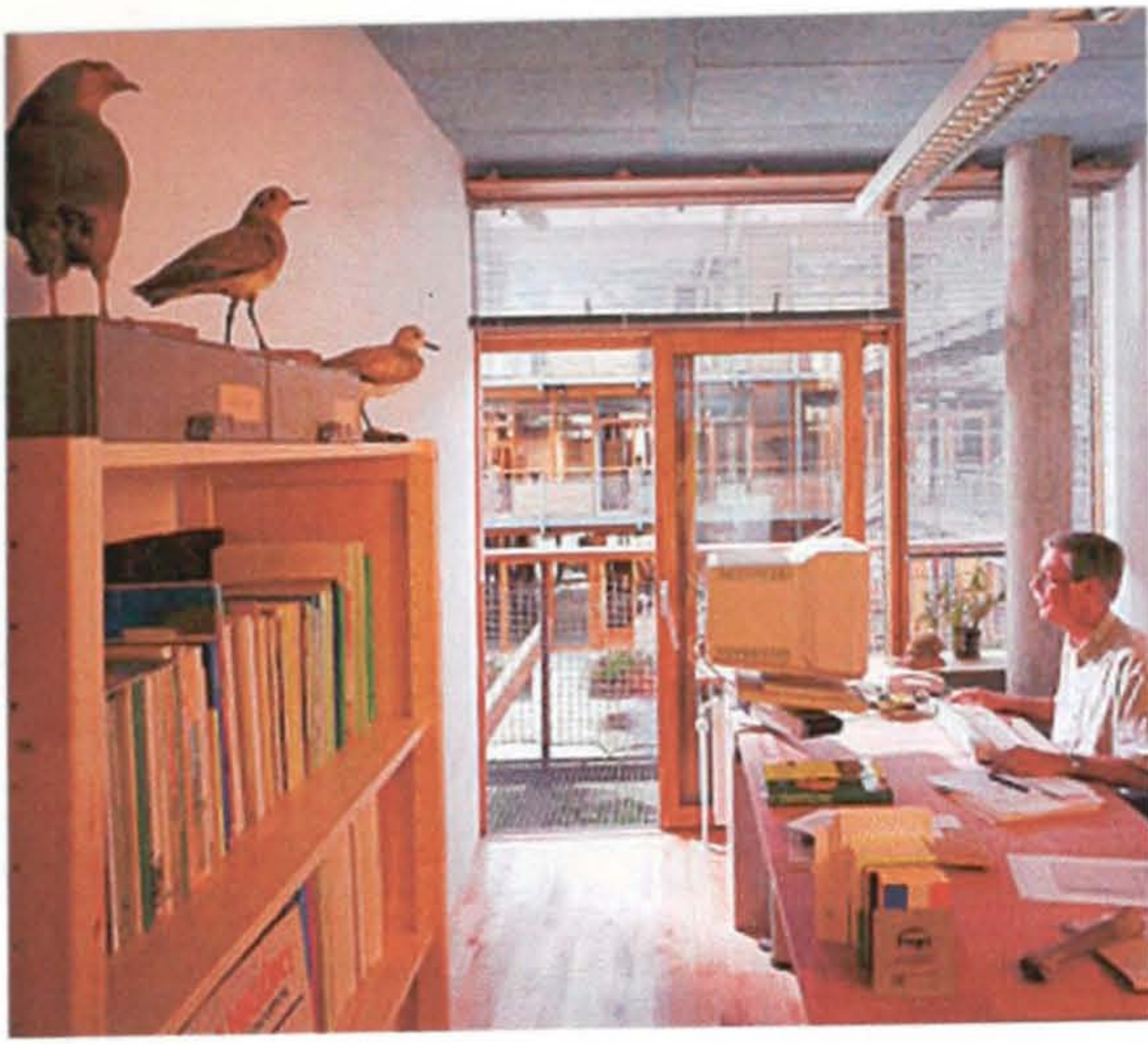
site plan



west-east section through courts



section through library and cafeteria



These interior and exterior photos display how the architecture and landscape transcend traditional boundaries by avoiding a hierarchy, which favors one environment over the other. It is here at the intersection of spaces where as is evident throughout this project that a threshold can exist and comfort becomes delight.

OKINAWA CONVENTION CENTER EXHIBITION HALL / CONFERENCE HALL

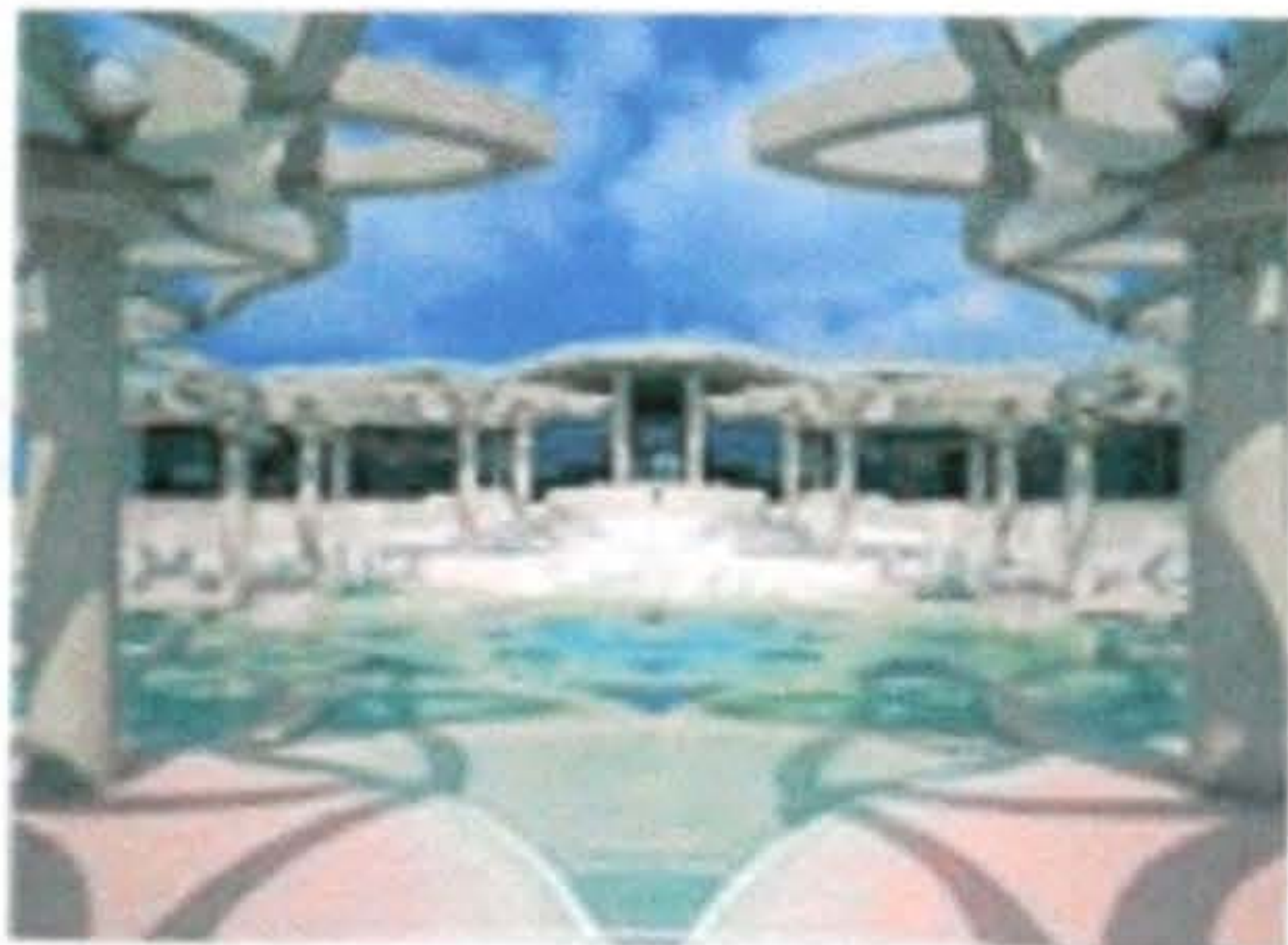
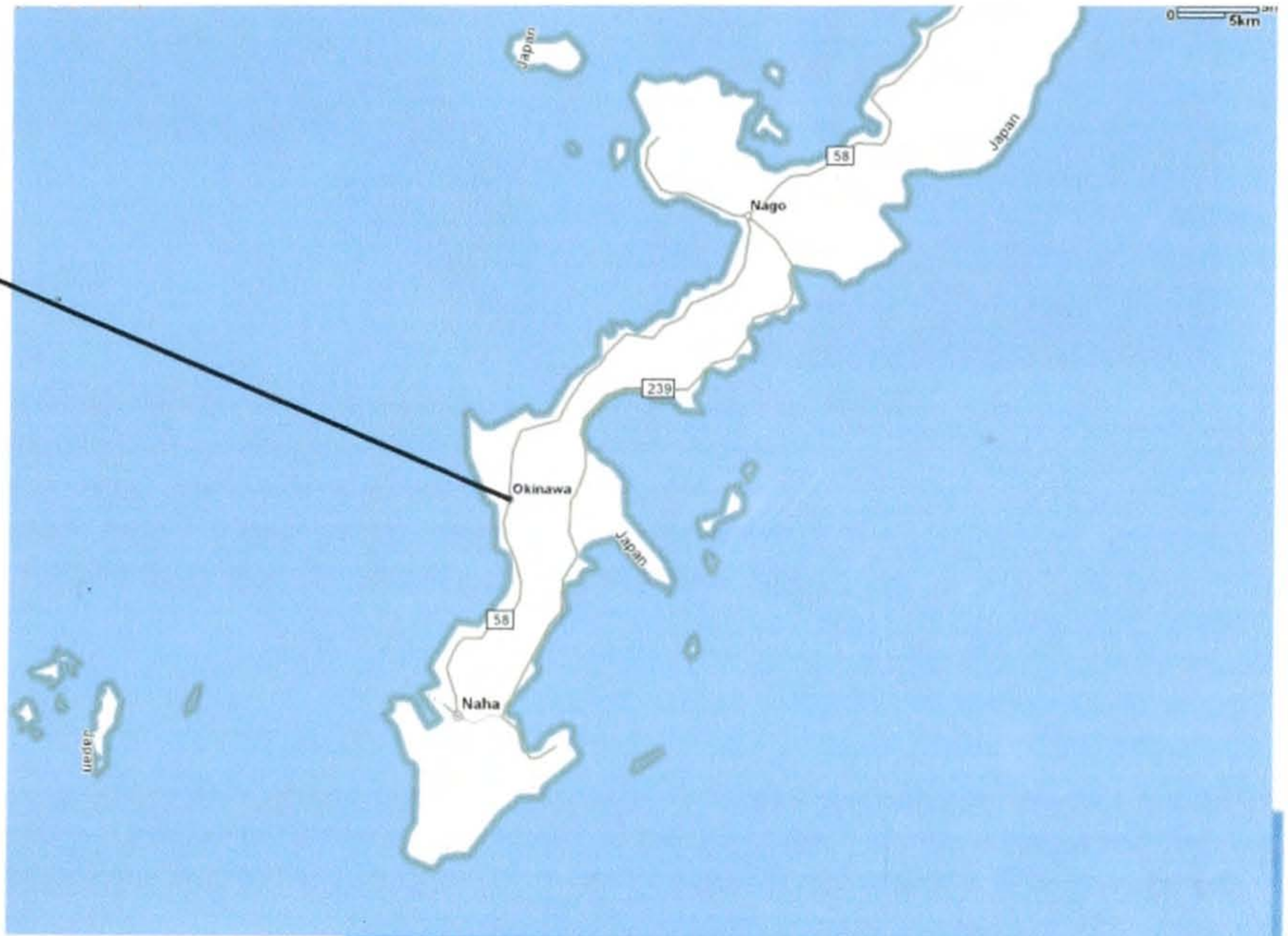
ARCHITECTS:
SACHIO OTANI and OTANI KENKYUSHITSU/
KUNIKEN LTD.



Geographic coordinates:
36 00 N, 138 00 E

CAPITAL: NAHA
REGION: KYUSHU
AREA: 2,271.3 sq. km.
POPULATION: 1,318,218
DENSITY: 580/sq.km.
DISTRICTS: 5
MUNICIPALITIES: 53

Climate:
varies from tropical in south
to cool temperate in north
Terrain:
mostly rugged and mountainous



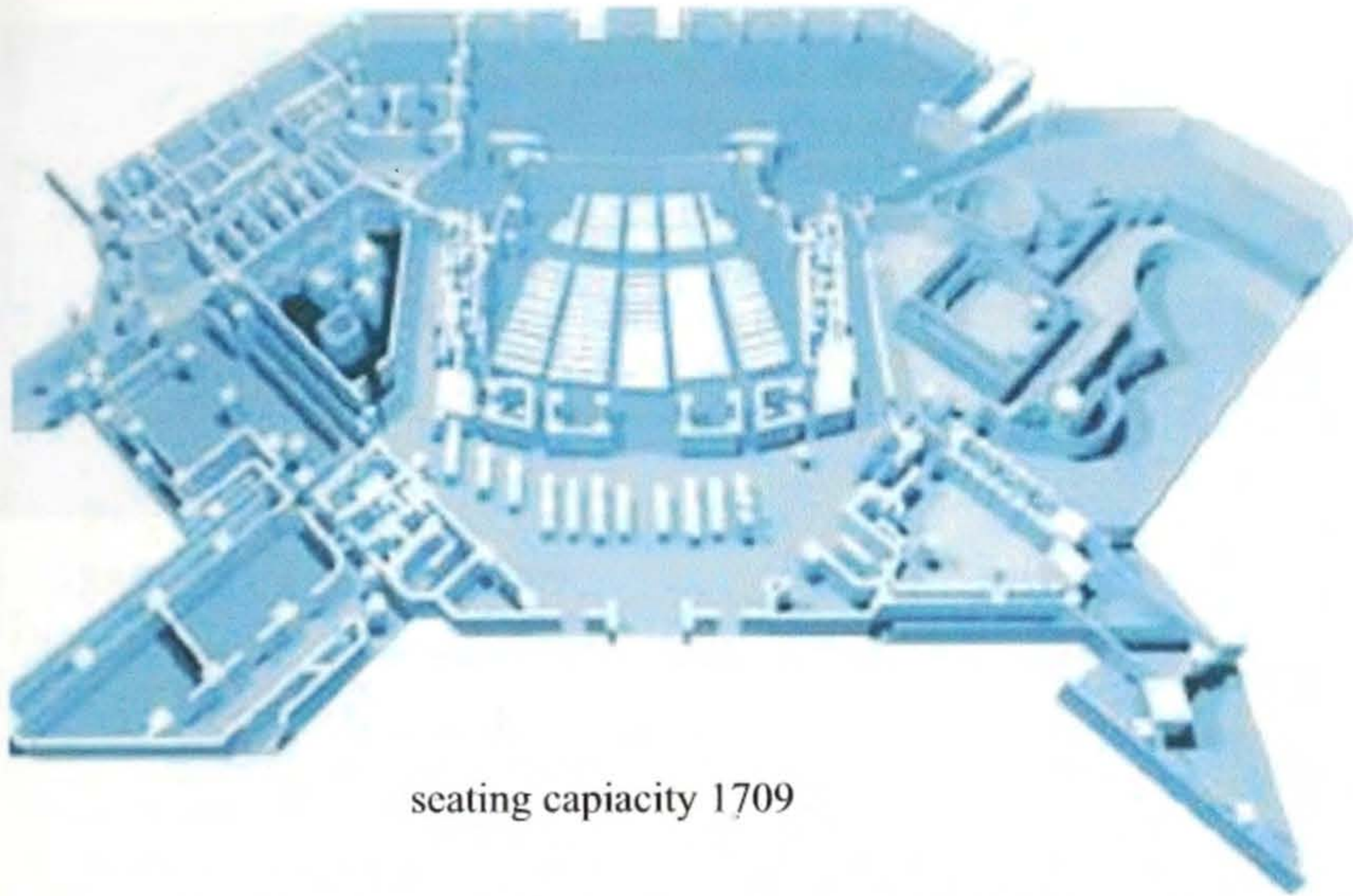
PROGRAM

Conference Rooms

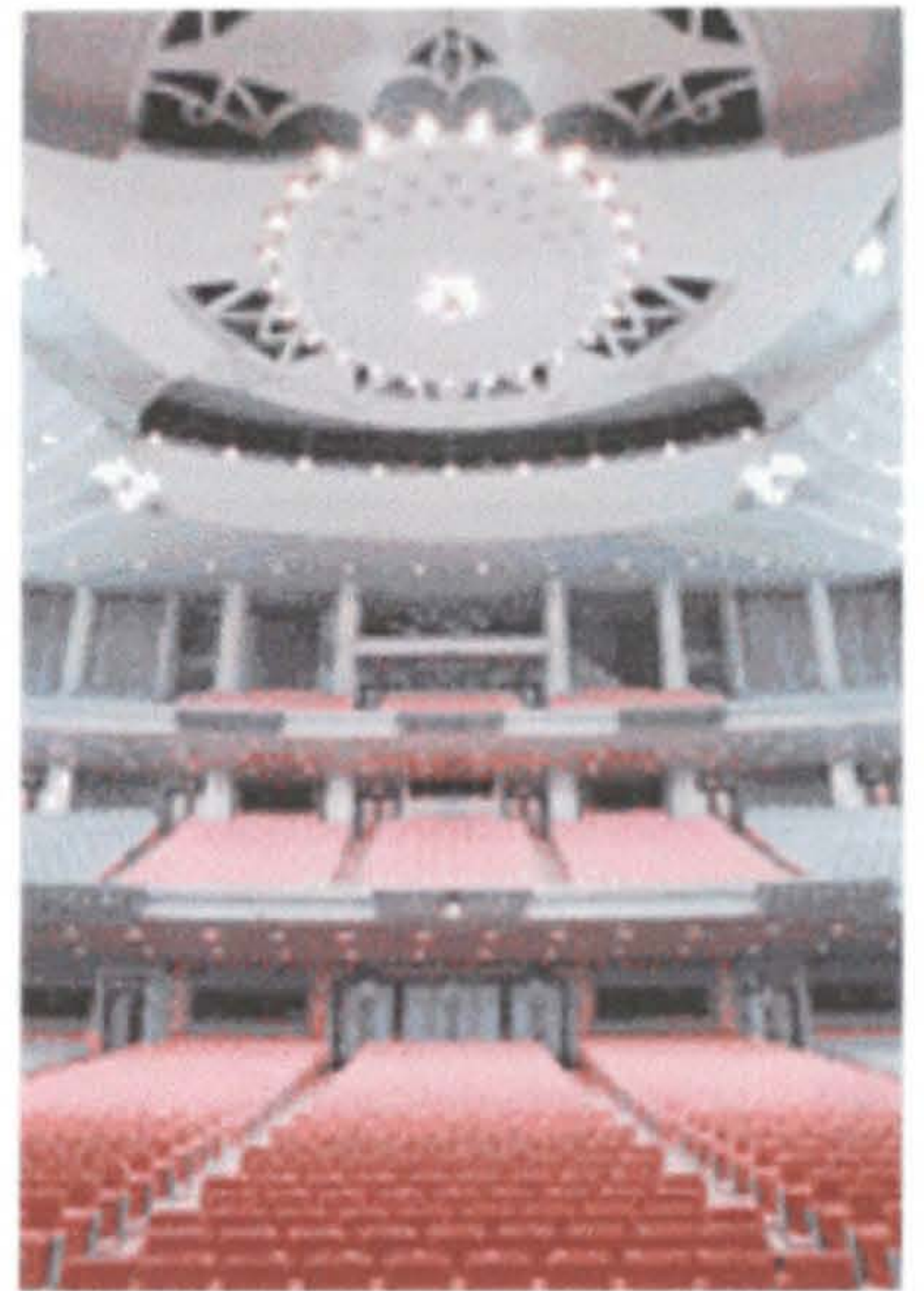


EVENT HALL
CONFERENCE RMS. 1987
THEATER 1990
ADDITIONAL CONF.RMS. 2000





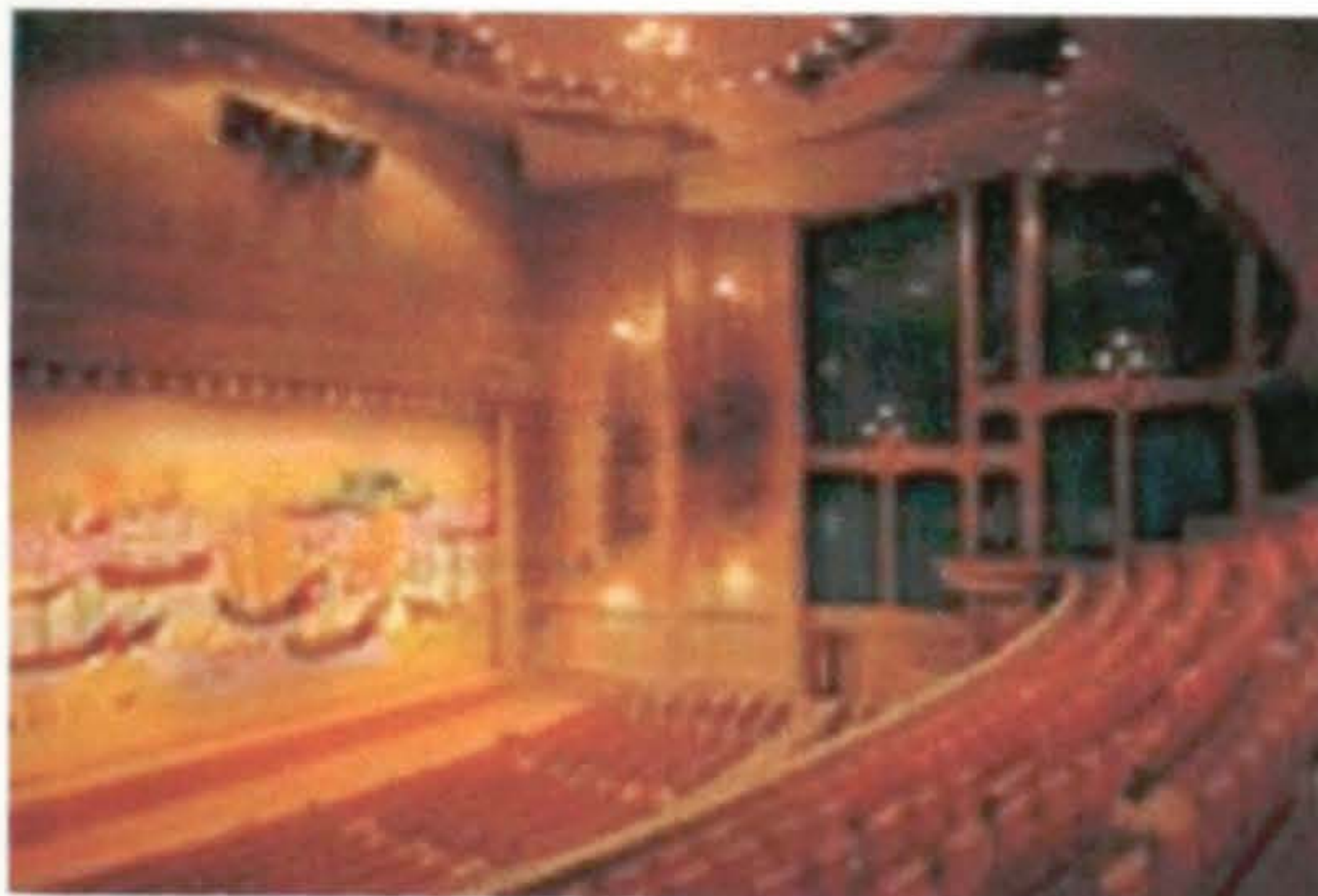
seating capacity 1709



The theater is equipped with full scale facilities which meet the requirements for a wide variety of theatrical arts such as plays, Kabuki, musicals, ballets, operas and classic concerts. A glass screen was installed around the seating and stage, and can be opened, to cool breezes and a spectacular view of the East China sea. A main aspect of the design was to incorporate a performance of nature, the setting of the sun the deep blue sky and the awesome power and beauty of the sea itself.



The theater meets the requirements for both conferences and performance of great operas which the Japanese believe to be the "completeness of theatrical arts". Excellent sound and lighting equipment were installed to insure that each performance is one which will be remembered.

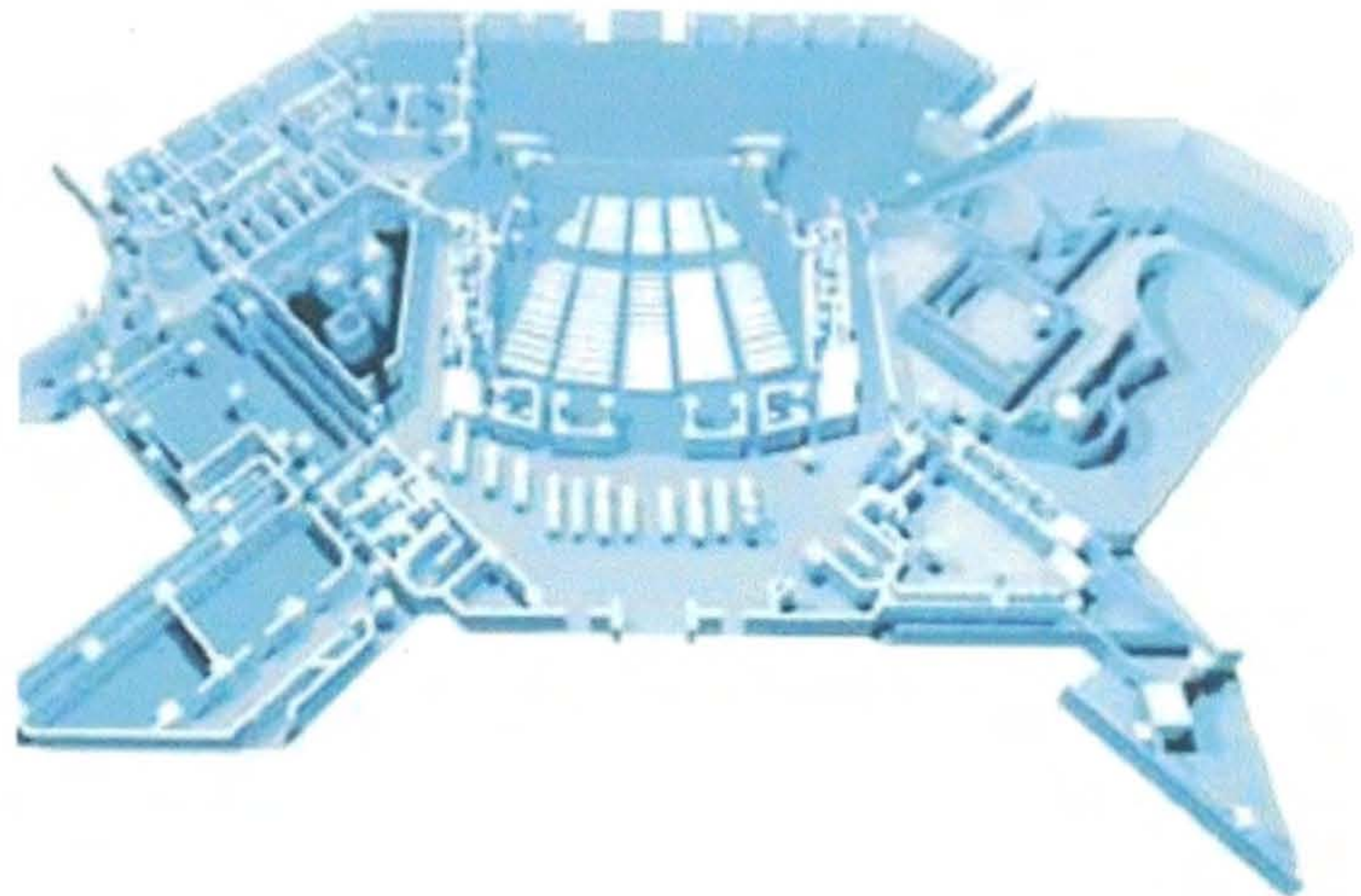
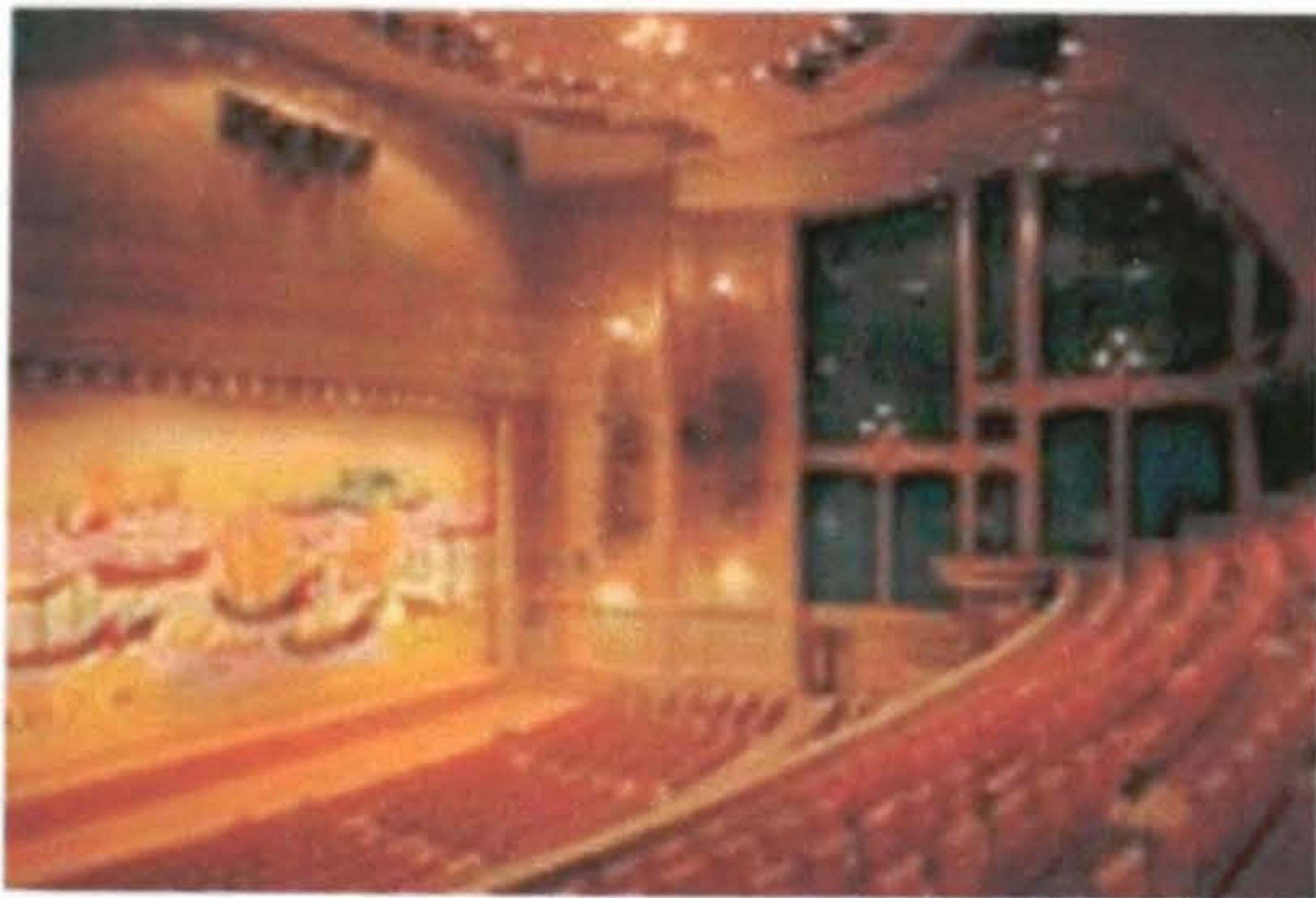
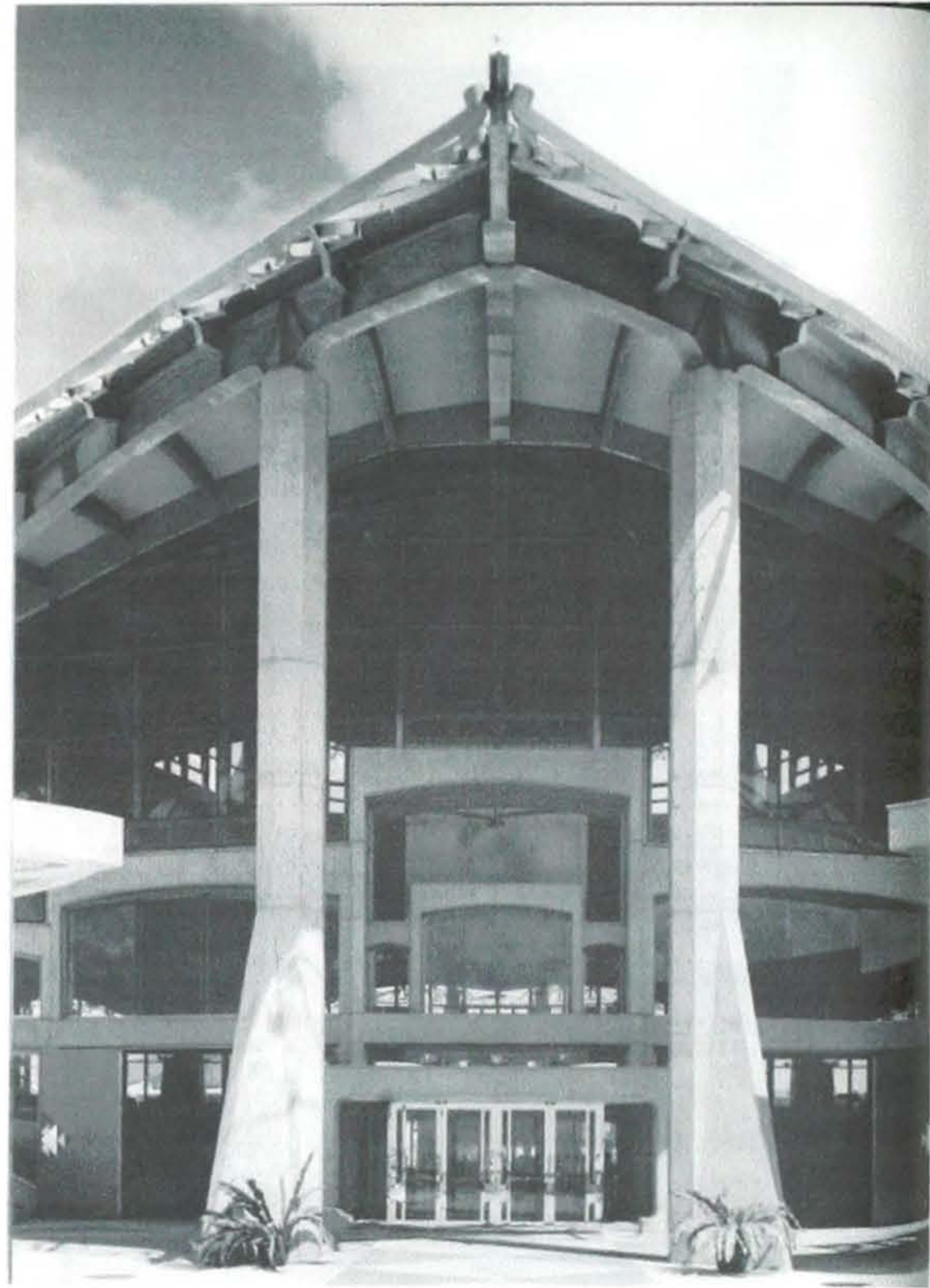


"One can brace up his feeling with the atmosphere coming from the stage as one goes through the entrance hall. The lobby is filled with splendid atmosphere until the curtain is lifted for opening. Even when the performance is over, hall is still filled with excitement. People will talk about today's performance at the party which will be held at the lounge at night".



The Theater is equipped for all the theatrical arts such as plays, Kabuki, musicals, ballets, operas and classic concerts and can also be used as a large conference hall, A glass screen was installed around both the seating area and the stage, so that when appropriate views of the East China sea and the setting sun can be enjoyed providing performance by nature that changes every hour and every season.

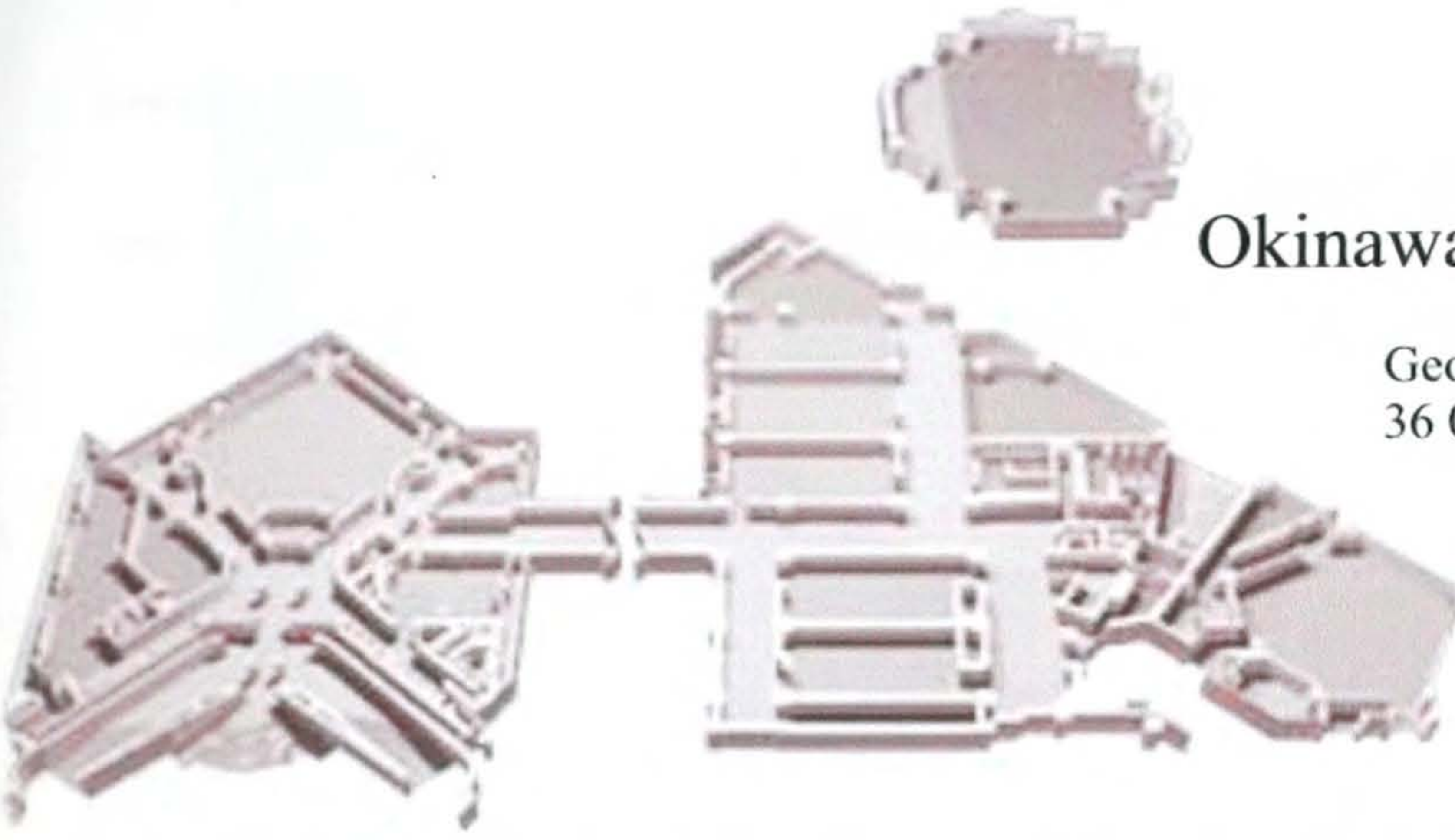
SEATING CAPACITY 1709



The theater was opened in May of 2000 and since that time has been widely utilized for a variety of events. Since its completion due to its flexible nature the Center has been recognized as one of Japan's leading destinations for both tourists and businesses alike.

Okinawa Convention Center

Geographic coordinates:
36 00 N, 138 00 E



Two convention halls, two medium-sized and six small spaces are available for use as conference rooms. These rooms can adapt to any type and size of function and are suitable for academic meetings and business and cultural exchange conferences.



convention hall

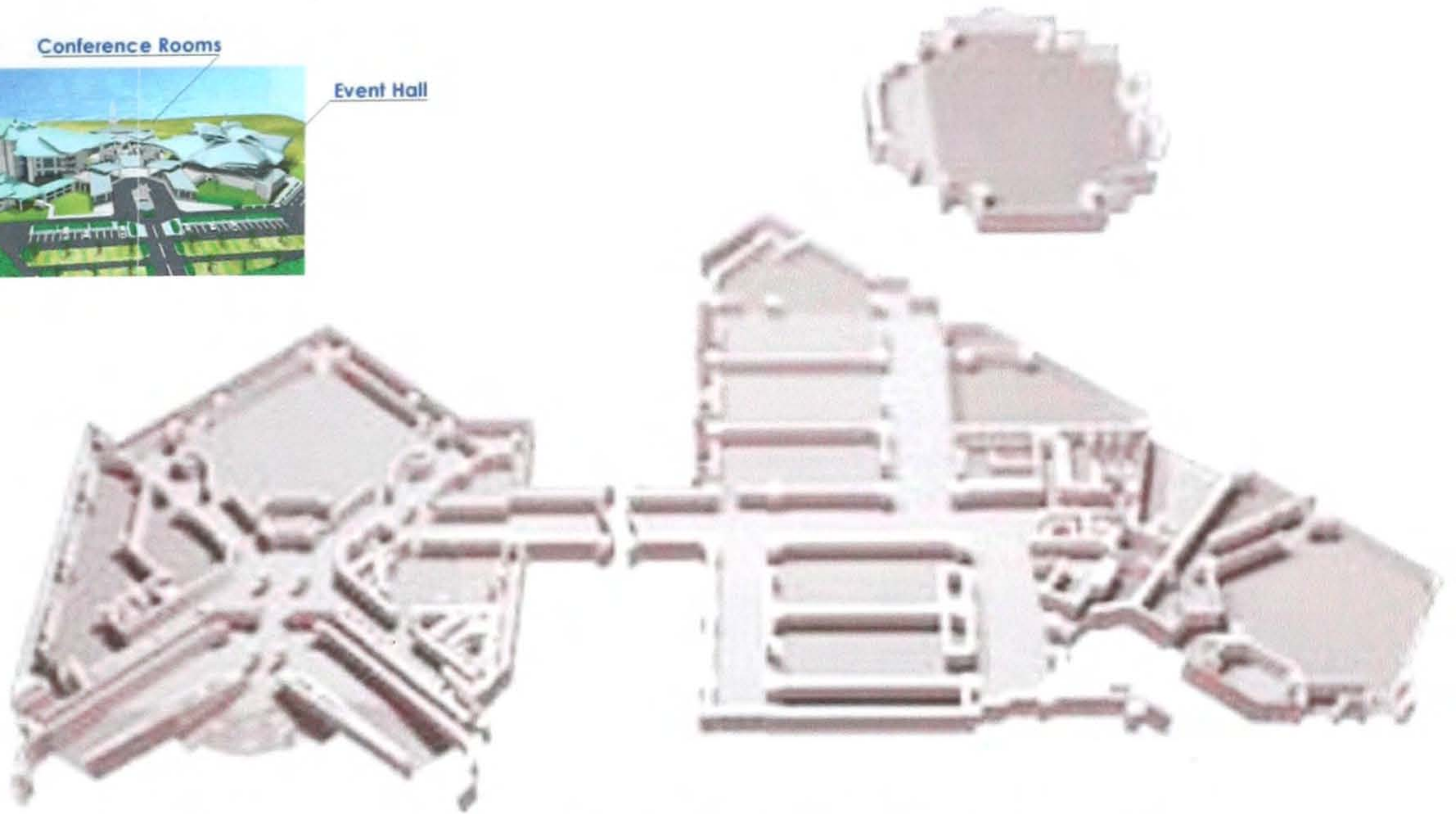


medium size conference rm.

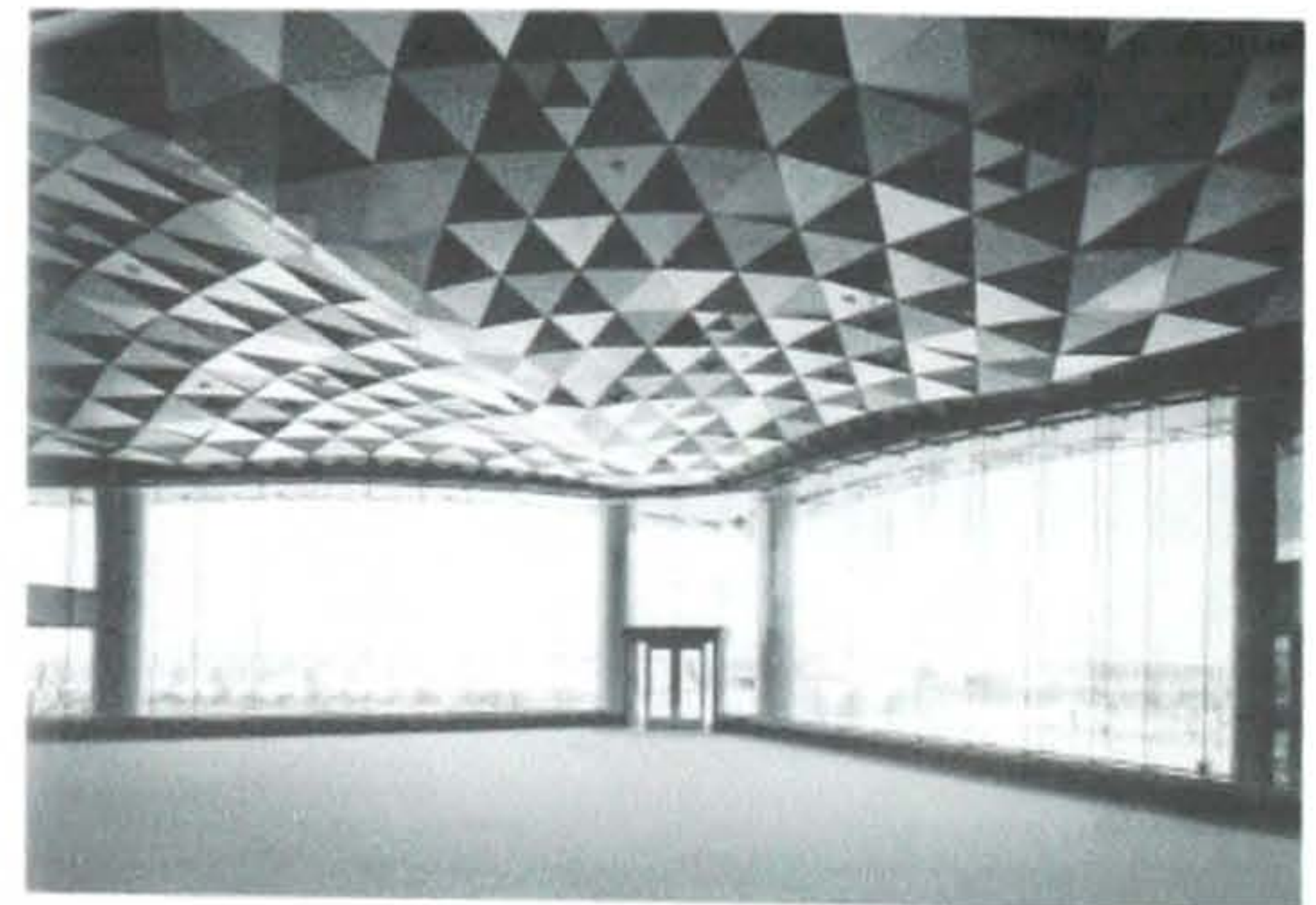
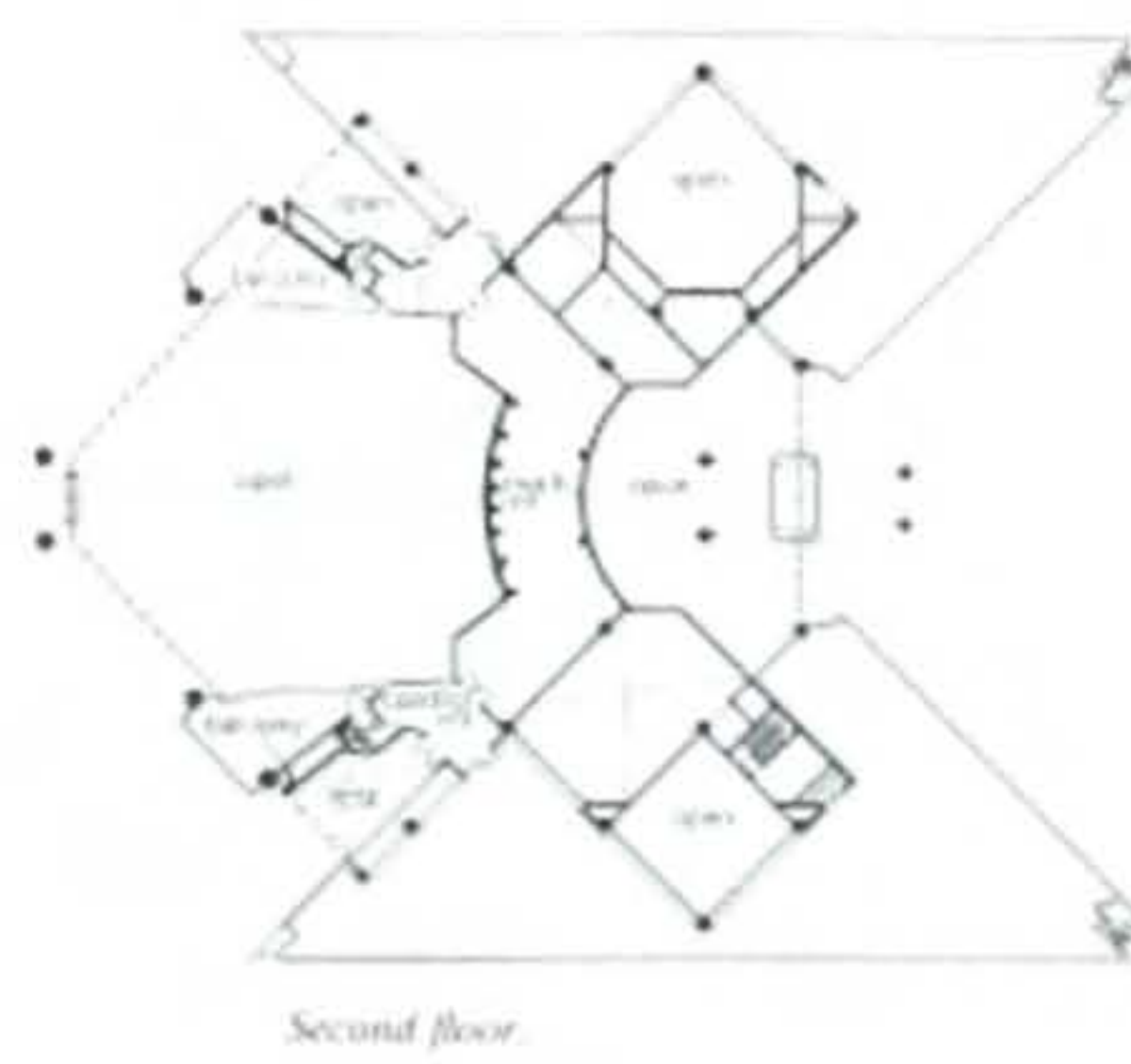
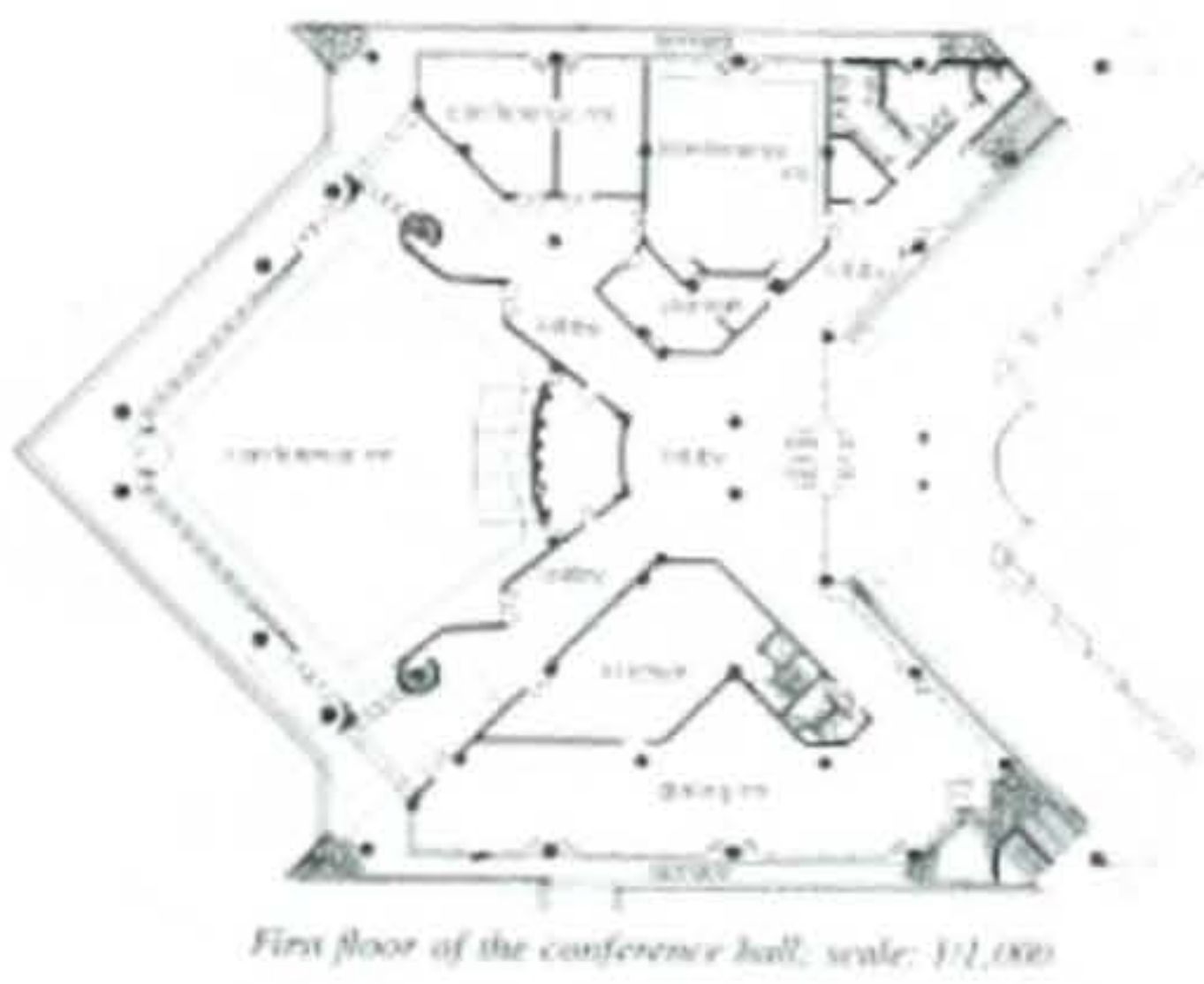


small conference rm.





The CONVENTION HALL like the rest of the facility was designed to meet a variety of needs and to take advantage of the facilities beautiful surroundings. Along with the main hall there are two medium sized conference rooms and six smaller conference rooms all of which are adaptable to a wide variety of uses. These rooms can adapt to any type and size of function and are suitable for academic meetings and business and cultural exchange conferences.



small conference rm.



medium size conference rm.



convention hall

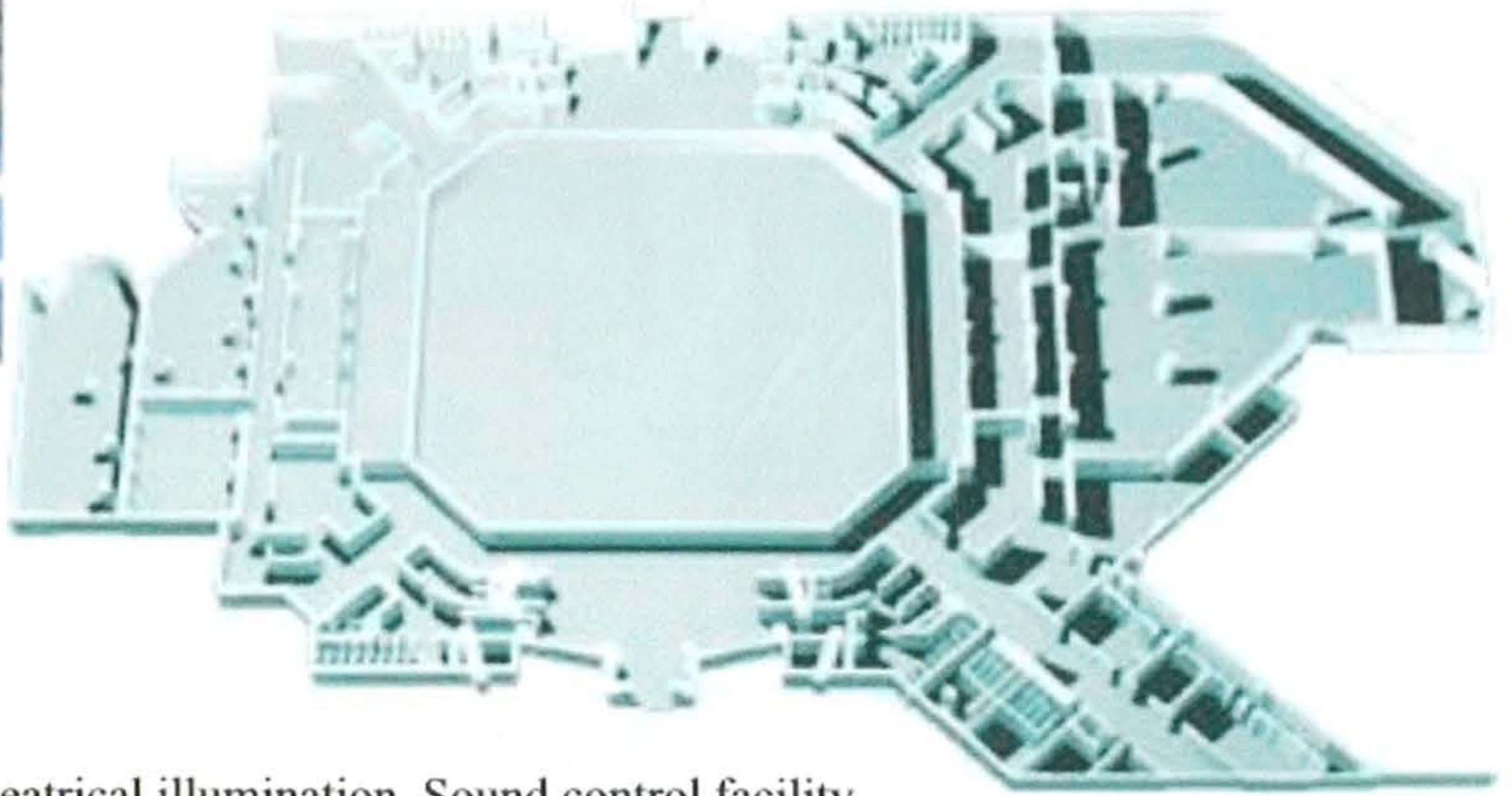


The EVENT HALL is suitable for various types of events such as trade fairs, industrial exhibitions, festivals and concerts. Glass walls, lined with draperies, allow natural lighting during the daytime to enhance a pleasant atmosphere. Whenever necessary, dark drapes and electrically-controlled rolling blinds can be used to control daylighting levels.



Louver Light

The use of latest equipment such as Japan's first Louver Light and computer-controlled system will enhance the stage effects



Exhibitions Floor Space : 2,500m² (26,910.SF)

Floor : Asphalt

Ceiling Height (center) : 69 ft

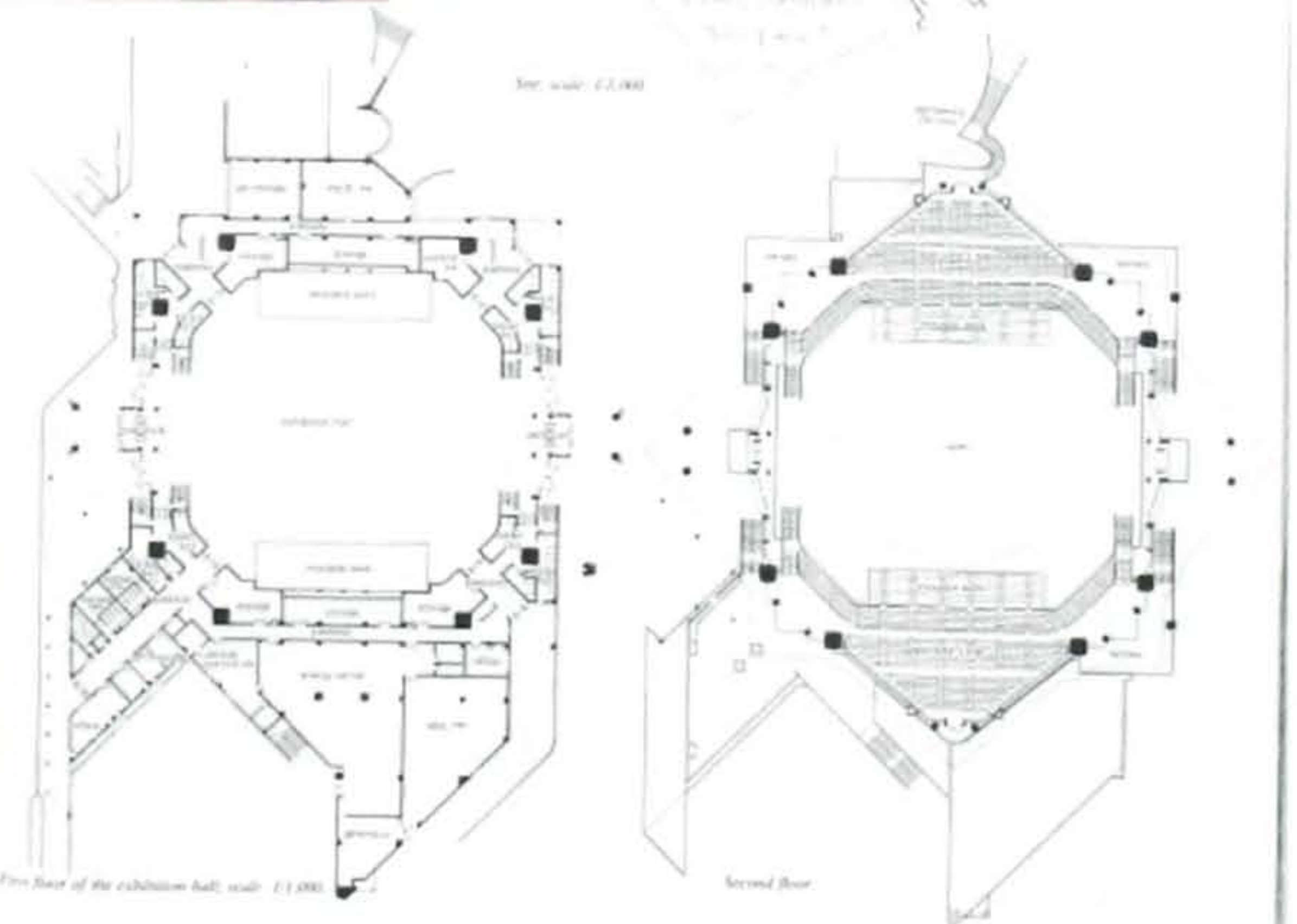
Truck Loading Facilities Available

Air Conditioned

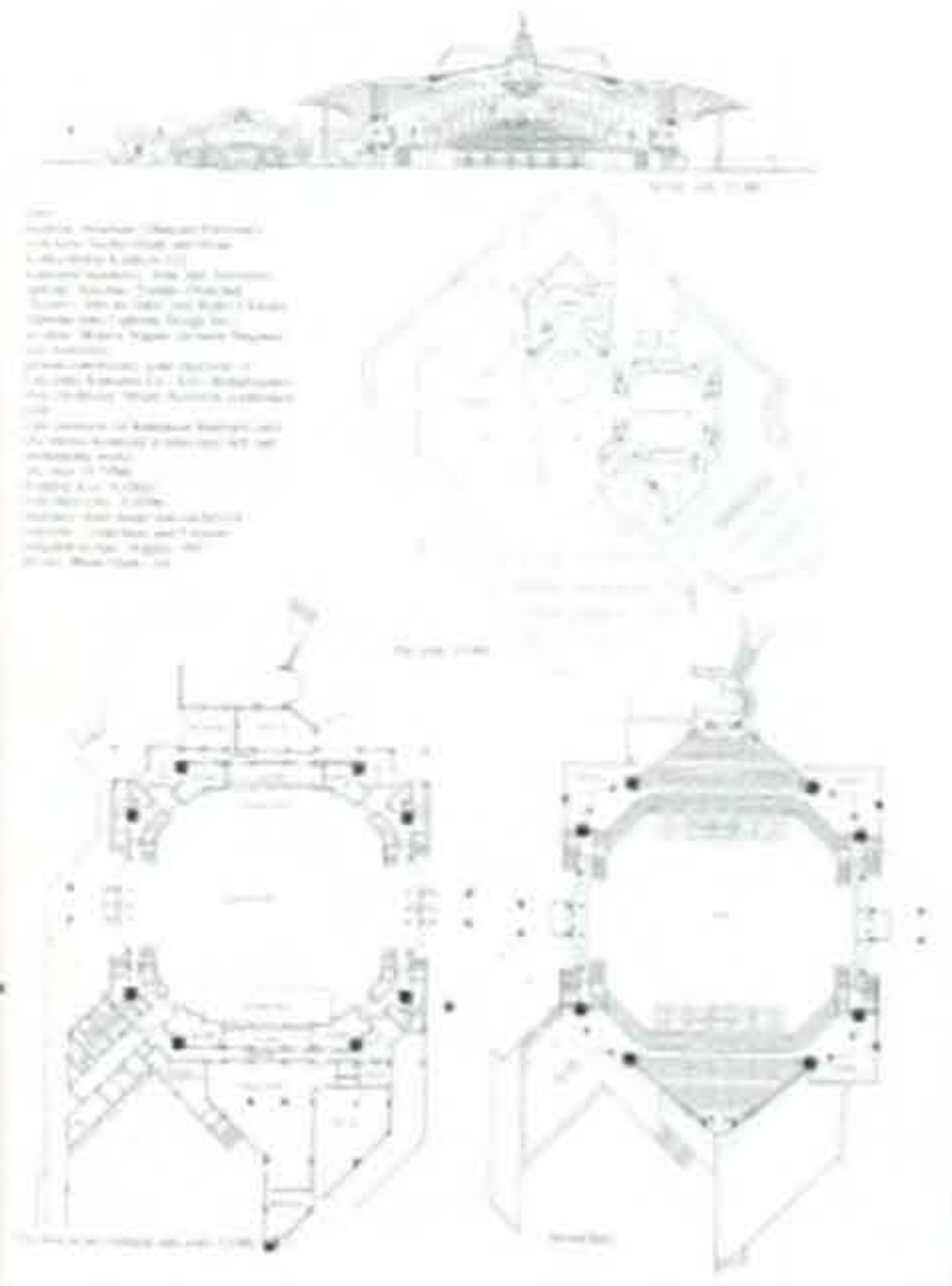
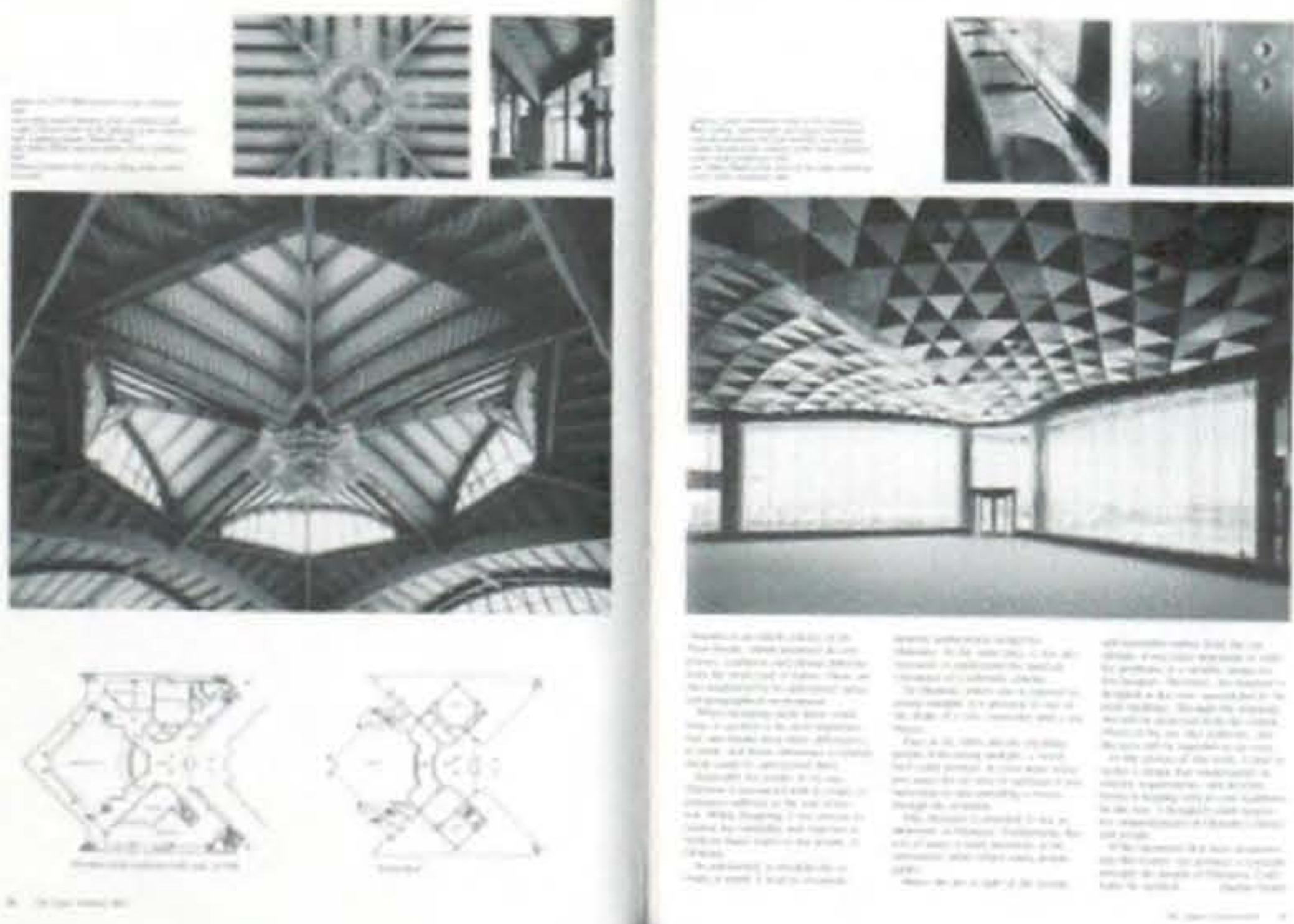
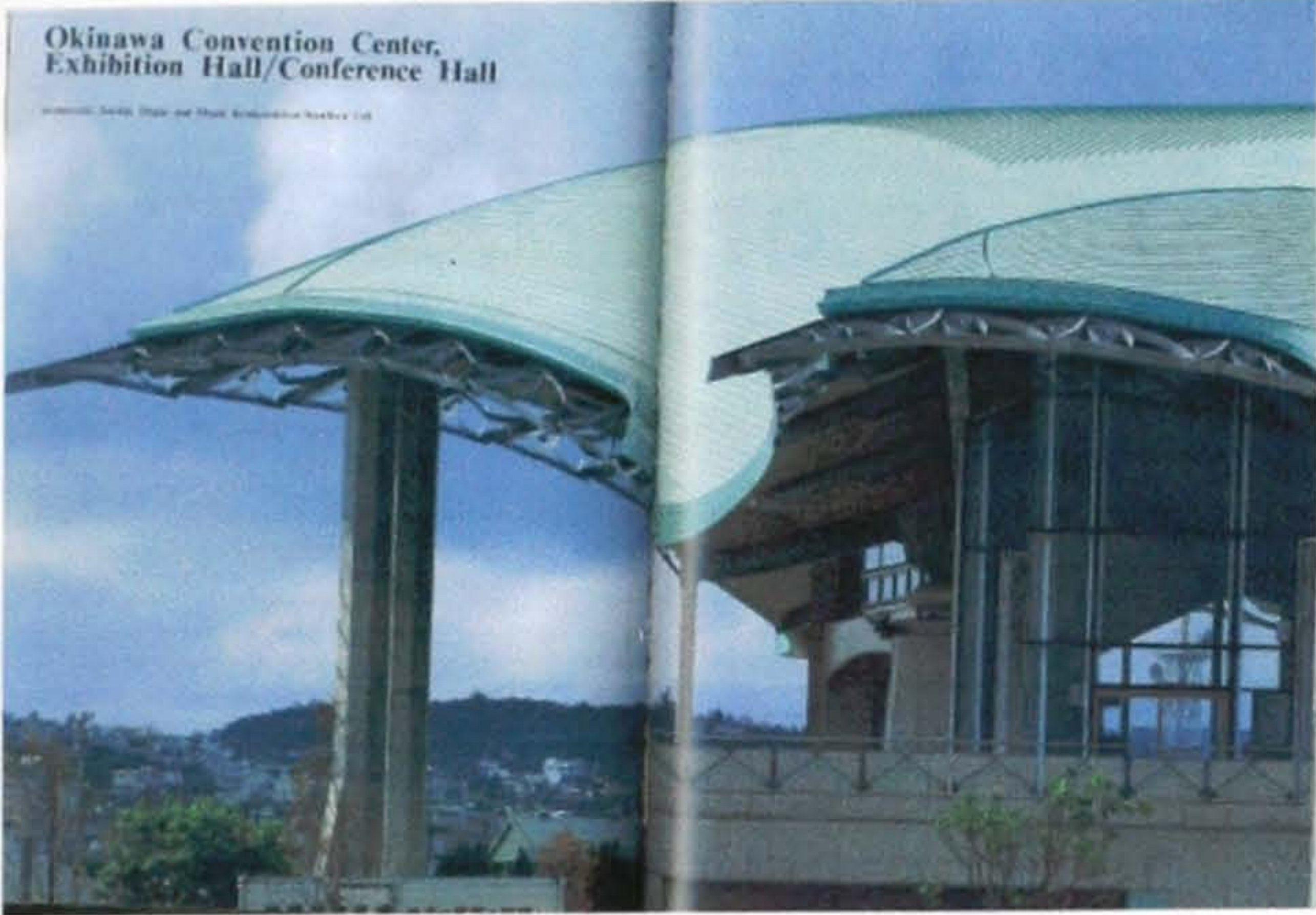
Conventions, Meetings And

Other Events Mobile stage, Hoist equipment, Theatrical illumination, Sound control facility

Events Facilities are available to meet requirements for various sporting events.



It is among the first halls in Japan utilizing the latest developments in technology such as computer controlled acoustics and lighting systems.



GREGORY BATESON BUILDING

SACRAMENTO, CALIFORNIA



ARCHITECT:
SIM VAN der RYN
ARCHITECT for CALIFORNIA
OFFICE of the STATE
AREA: 267,000
BUILT: 1981



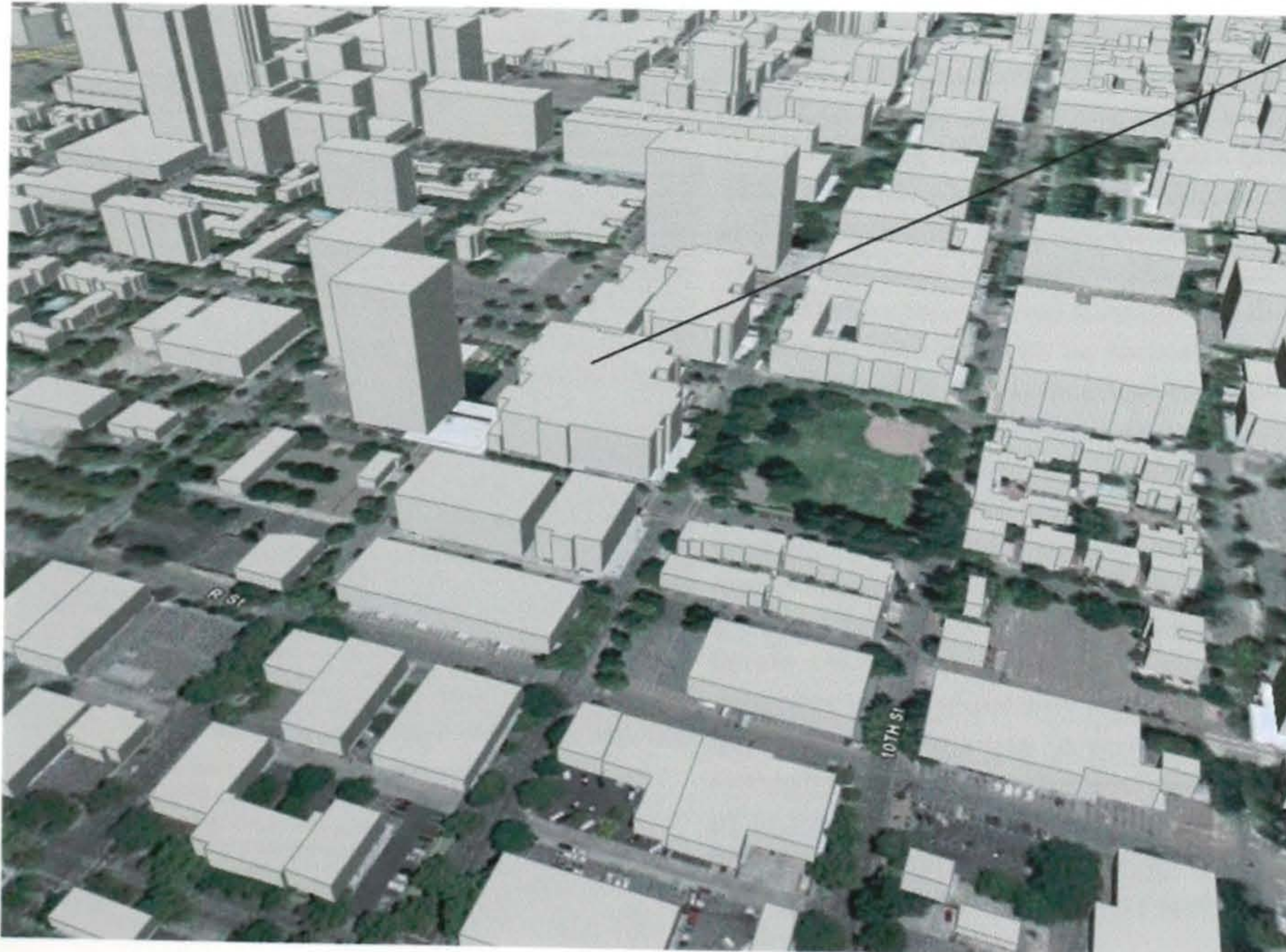
Elevation: 20 feet

County: Sacramento

Land area: 97.2 square miles

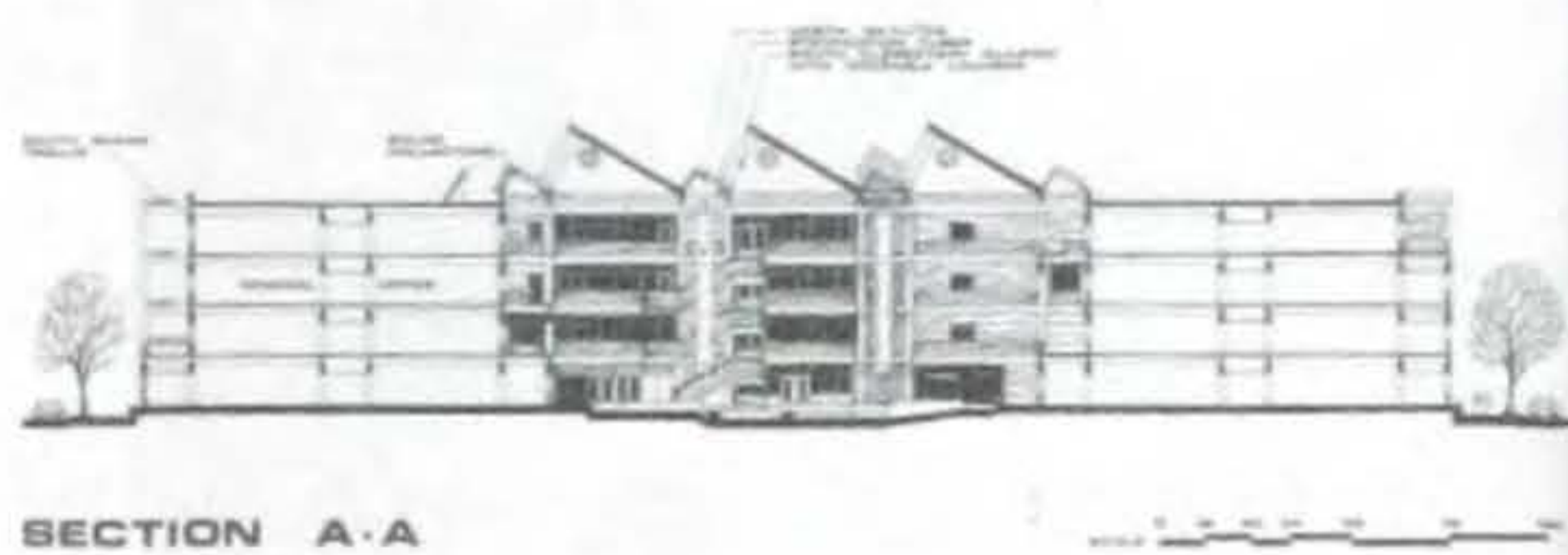
Latitude 38°31'

Longitude -121°30'



Gregory Bateson Building Sacramento, California

The Gregory Bateson Building in Sacramento was the first in a series of energy-efficient State office buildings designed during Sim Van der Ryn's tenure as California State Architect. This 250,000 square foot building includes innovative heating, cooling, and daylighting features and served to initiate the construction of seven new office buildings demonstrating the potential of renewable energy alternatives and conservation. Using passive solar storage, a night air flushing system, adjustable exterior shading, and day lighting, 70% of the building's heating and cooling needs are met without fossil fuel.



Architect Sim van der Ryn
 Location Sacramento, California
 Building Type government offices
 Construction System precast concrete
 Climate warm temperate
 Context urban
 Style Environmental Modern
 Energy conservation through a mass storage, night flushing, passive cooling strategy.



During Sim Van der Ryn's tenure as California State Architect the State of California decided to set a precedent for energy conscious architectural design and the Gregory Bateson Building became the first in a series of state buildings to achieve this goal. Not only was this building to become a proto-type for ecological design but it was also designed to exemplify "humane" architectural values in a society with an ever-increasing apathy towards segregation through the practice of architecture.

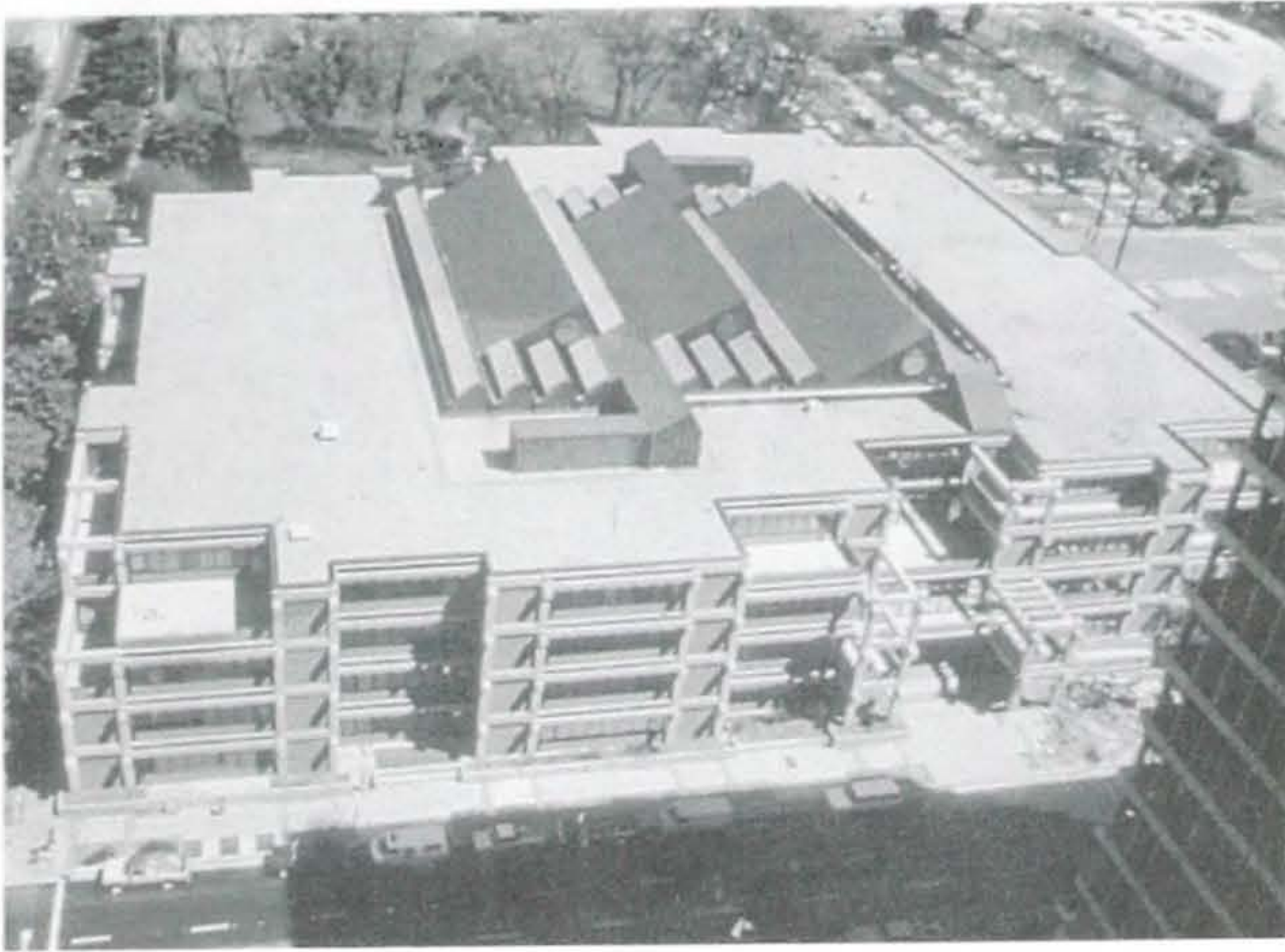
This 250,000 square foot building achieves an inviting composition by breaking it's large exterior surfaces into a series of solids and voids with out compromising it's main objective to reduce cooling loads by replacing energy consuming lights with natural day light. Each façade of the building responds to it's solar orientation through out the day using external shading devices that are made of brightly colored fabric and controlled by a sophisticated computer program which like much of this buildings innovative design was the first of it's kind. The high level of integration used through out the composition is a prime example of how architecture can be responsive both to the environment and the public, which it was conceived to serve.

The central atrium creates a clear circulation core and provides daylight to the buildings interior, as no space within the building is more than forty feet from a source of natural light. The atrium facilitates year round day lighting by using both steeply angled south facing clerestories windows and north facing skylights all of which are provided with external vertical louvers. The atrium also acts as a thermal buffer to adjacent spaces as below it's floor are two seven hundred-ton rock beds which act as two way heat sinks, absorbing excess heat during the summer and storing heat for night time use during the winter. Night flushing which is achieved through the buildings minimalized air circulation system takes full advantage of Sacramento's 30 degree diurnal temperature swing fully recharging the buildings capacity to absorb heat through out the day. The buildings pre cast concrete structure aids the rock beds in accomplishing the passive cooling strategy.



The light and plant filled atrium is the social center of the building as well as a reservoir for coolnight air which circulates through the building keeping temperatures pleasant even on the hottest summer days.

Daylighting & Shading



Steeply sloped clerestories face south (on the right side of this photo) and the sloped skylights face north. Both are equipped with exterior shading devices in order to provide a high level of solar control.



This photo displays the high level of integration employed to both create an inviting appearance and provide shading by emphasizing the concrete structural system.



The brightly colored external shades provide protection without creating a formidable appearance



The automated fabric roller shades for the east and west windows are placed on the exterior to minimize solar heat gains

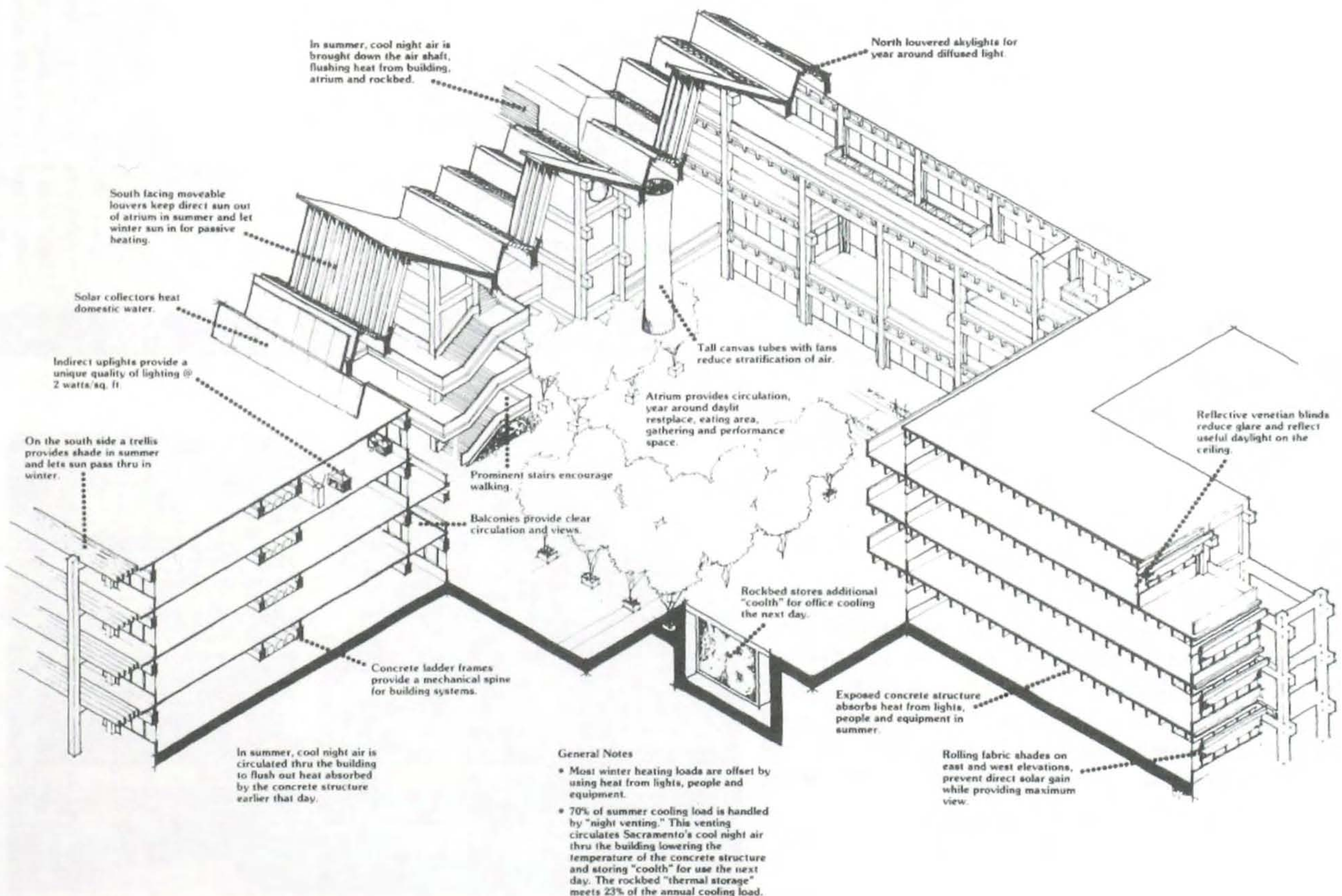


Within the field of tectonic expression the designer makes a conscious decision as to the extent that an architectural composition becomes inclusive or selective and in the instance of the Gregory Bateson Building the public was to be included. As mentioned previously this large building, in order to achieve day lighting requirements, has glazing in areas that are not necessarily conducive to controlling internal cooling loads, posing quite a challenge to the designer in order to fulfill both an inviting posture towards the public and blocking undesirable solar gains from the east and west sun. To accomplish this external fabric shades are employed providing the necessary shading without presenting a feeling of permanent enclosure. During the day these computer controlled fabric shades respond to the sun's path thereby depicting both the building's response to energy efficiency and maintaining an inviting quality. The building's south facing glazing is shaded by a series of trellises integrated into the concrete structure and constitutes one of the building's most innovative qualities. Once again the atrium plays a major part in both day lighting strategies and openness as it contains both south facing clerestorie windows and north facing skylights. During the summer when solar gain through the south glazing would be detrimental to the process of cooling external vertical louvers are used and day lighting is provided through the north facing glazing.

CONCRETE STRUCTURE & THERMAL MASS



The Gregory Basten Building includes a number of passive heating and cooling features which had never before been employed at so large of a scale. Post-occupancy evaluations show that the combination of these features has reduced the energy consumption associated with heating, cooling and lighting by more than 75% compared to typical office buildings of a similar scale with out greatly increasing the cost of construction.

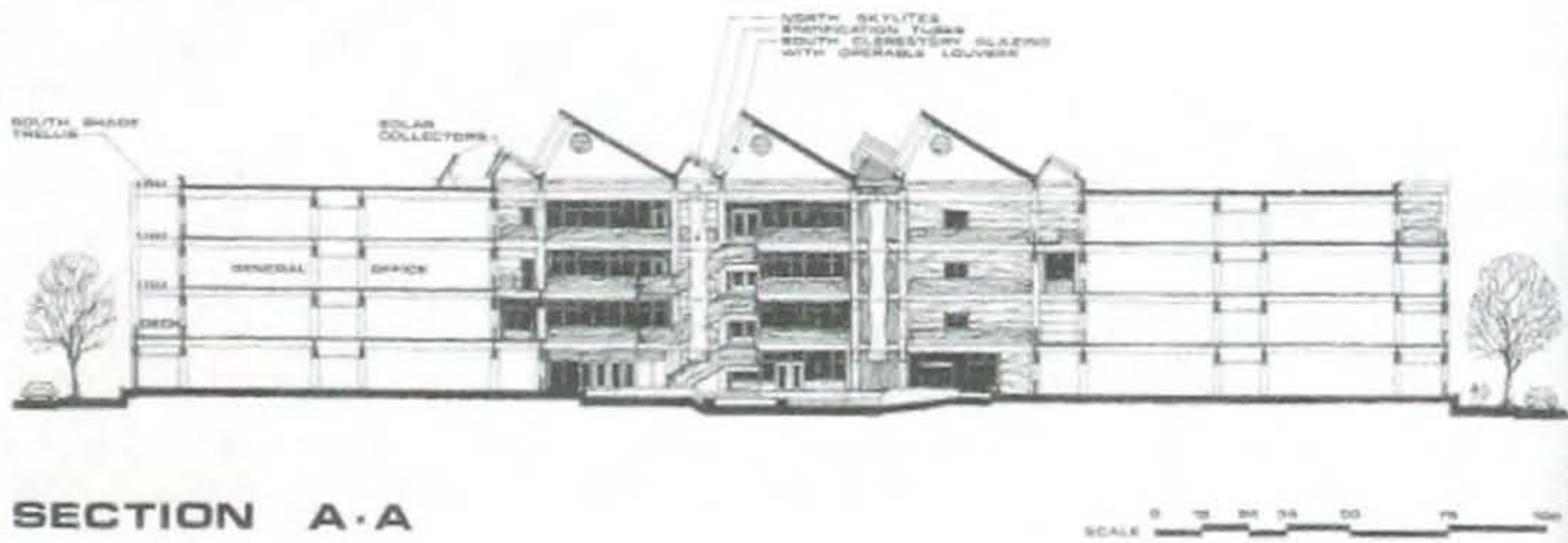
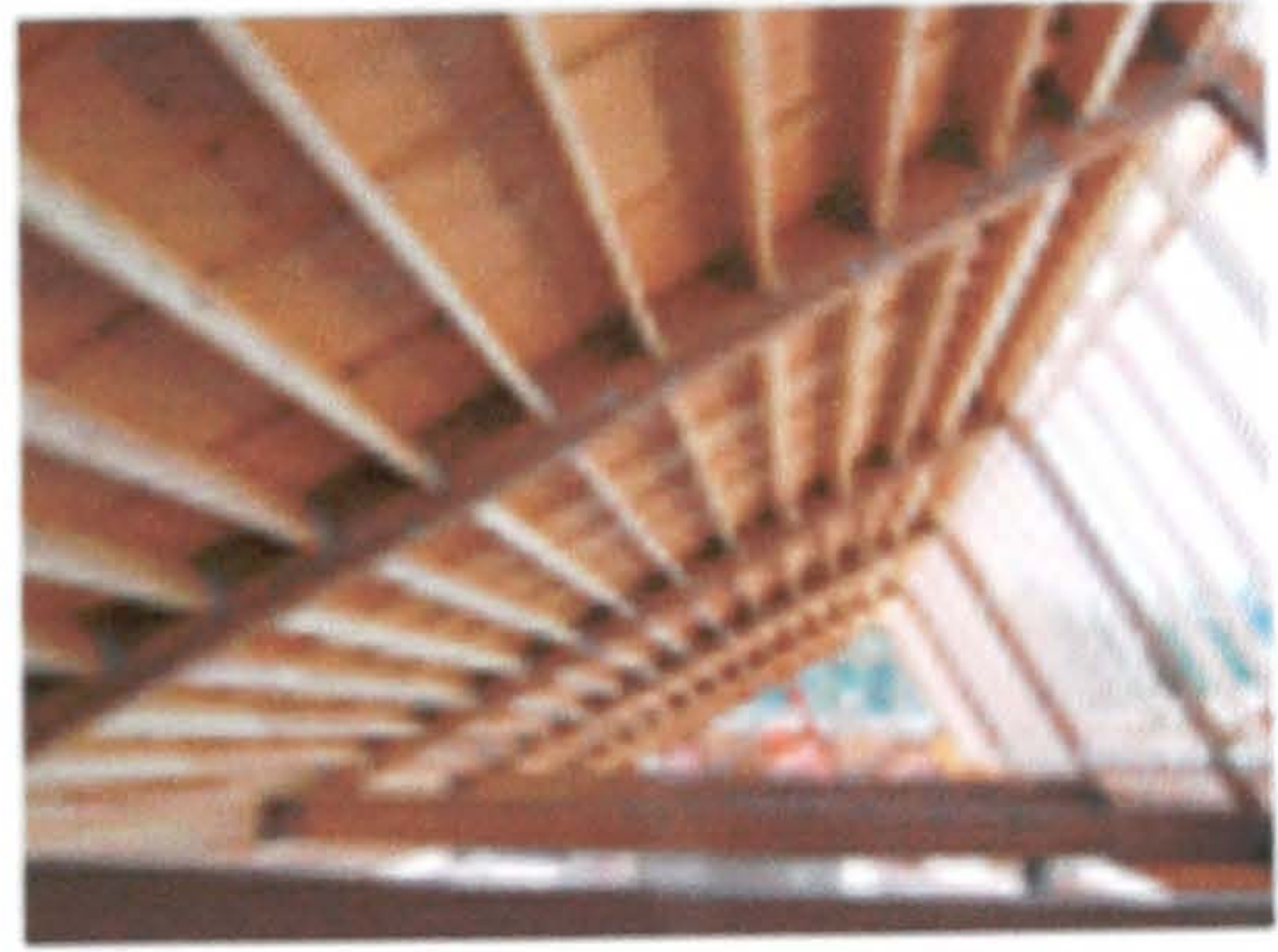


EXTERIOR PHOTOS



Although this 250,000 square foot government office building takes up an entire city block it does so without adapting an intuitional presence and is as inviting to the public as it is to the state employees who work there. In large this is accomplished by integrating the tectonic expression of the building with its need to be responsive to the sun's path through the sky.

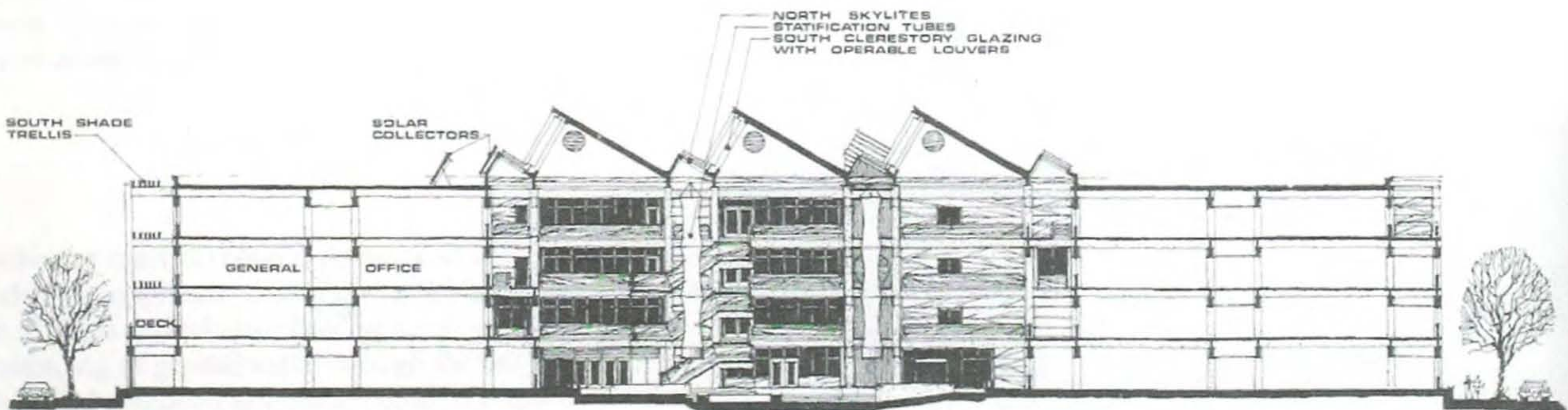
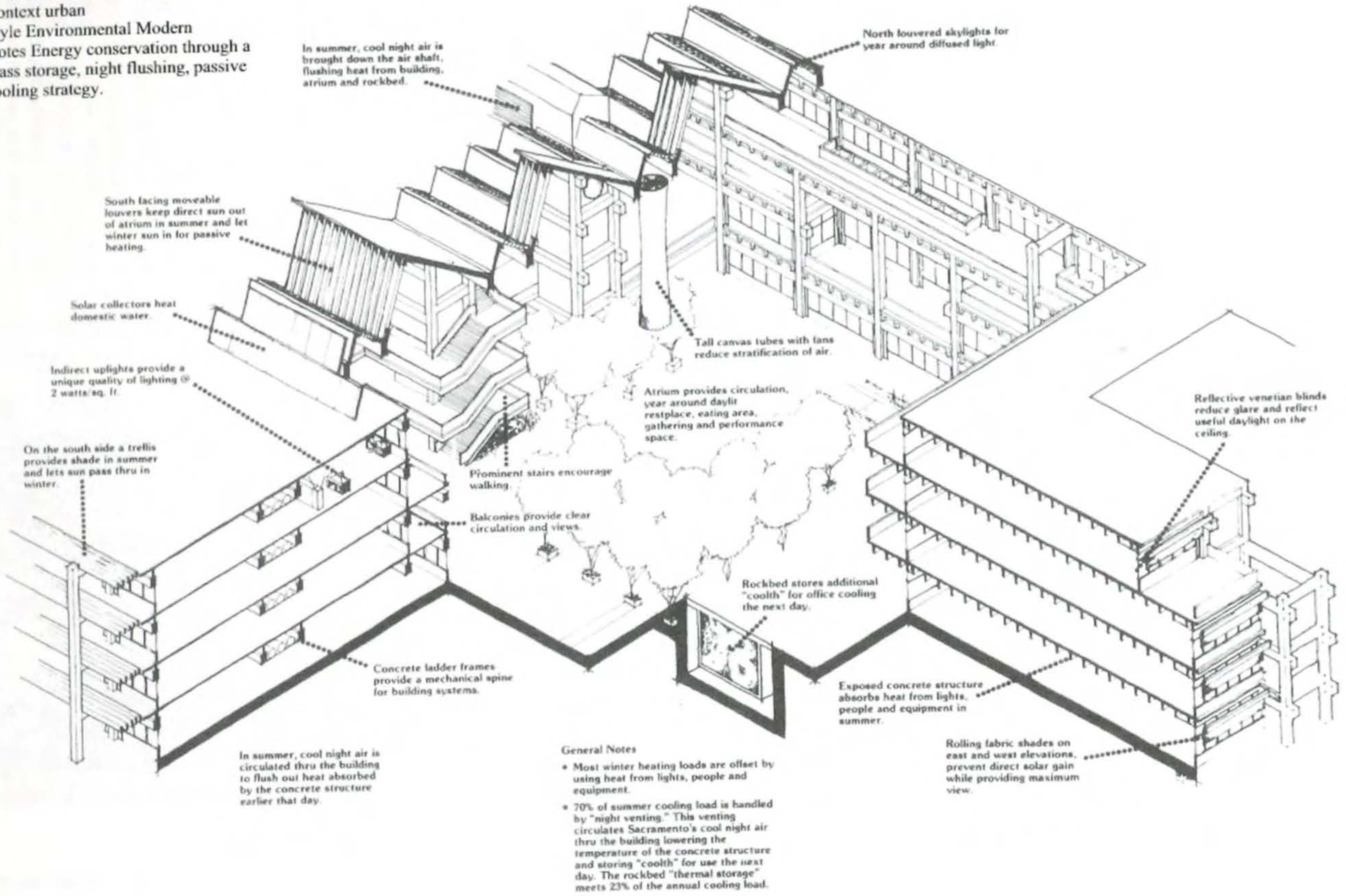
THE ATRIUM



The large central atrium is the buildings main organizational element both in composition and in order to achieve the State of California's desire to exhibit how architecture can manifest itself as humane. This large atrium with south-facing clerestories and north-facing skylights is filled with both vegetation and light. The prominent stairs invite people to walk rather than to use the elevators. The large colorful antistratification tubes seen hanging from the atrium roof are equipped with fans, which pull down heat from the upper portion of the atrium during the winter taking full advantage of solar heat to reduce the buildings dependency on fossil fuel.

This building includes a number of passive heating and cooling features which had never before been employed at the institutional scale. Post-occupancy evaluations show that the combination of these features has reduced the energy use associated with heating, cooling and lighting by more than 75% compared to typical office buildings of similar scale. The light and plant filled atrium is the social center of the building as well as a reservoir for cool night air which circulates through the building keeping temperatures pleasant even on the hottest summer days.

Architect Sim van der Ryn
 Location Sacramento, California
 Building Type government offices
 Construction System precast concrete
 Climate warm temperate
 Context urban
 Style Environmental Modern
 Notes Energy conservation through a mass storage, night flushing, passive cooling strategy.

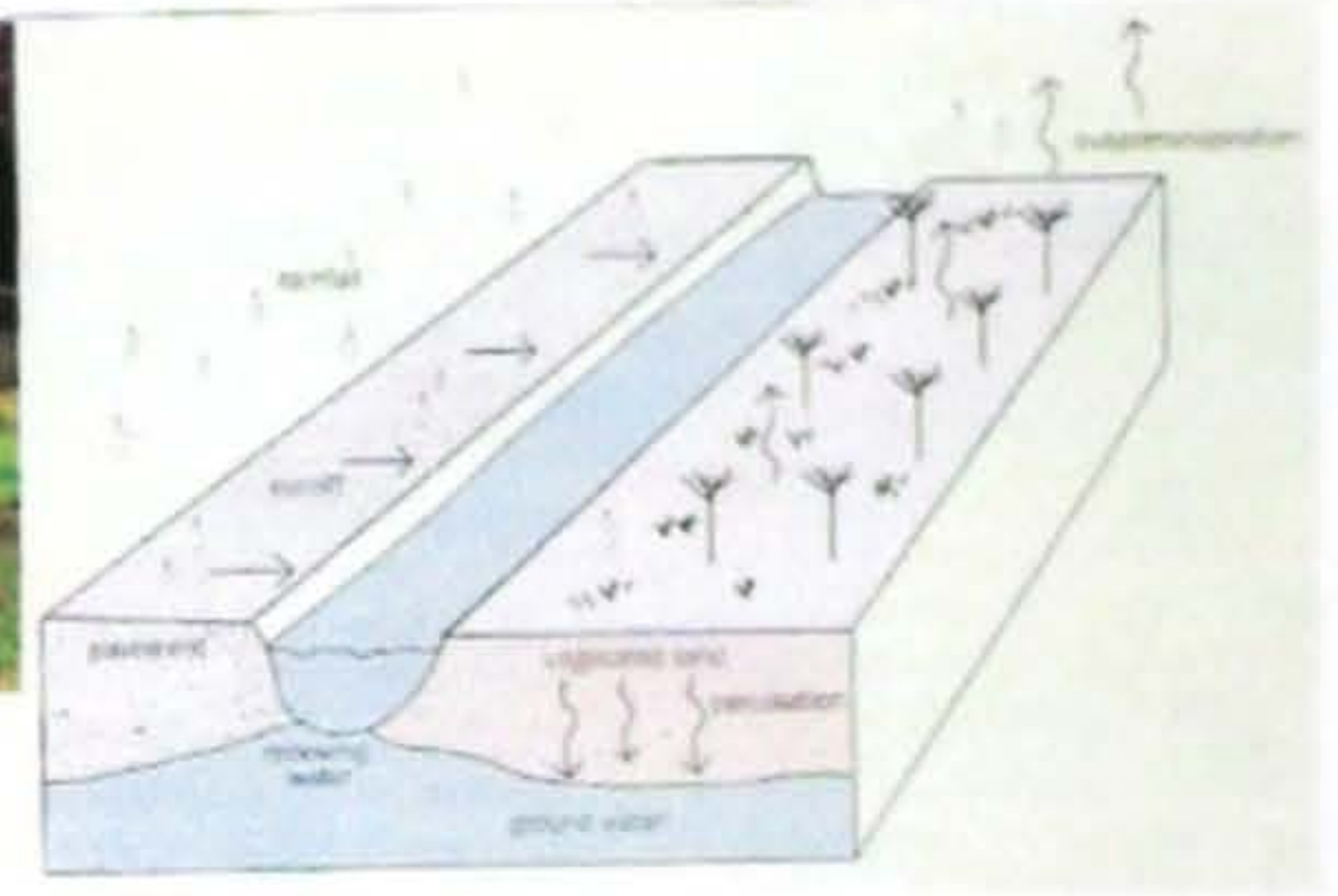


SECTION A-A

SCALE 0 12 24 34 50 75 100

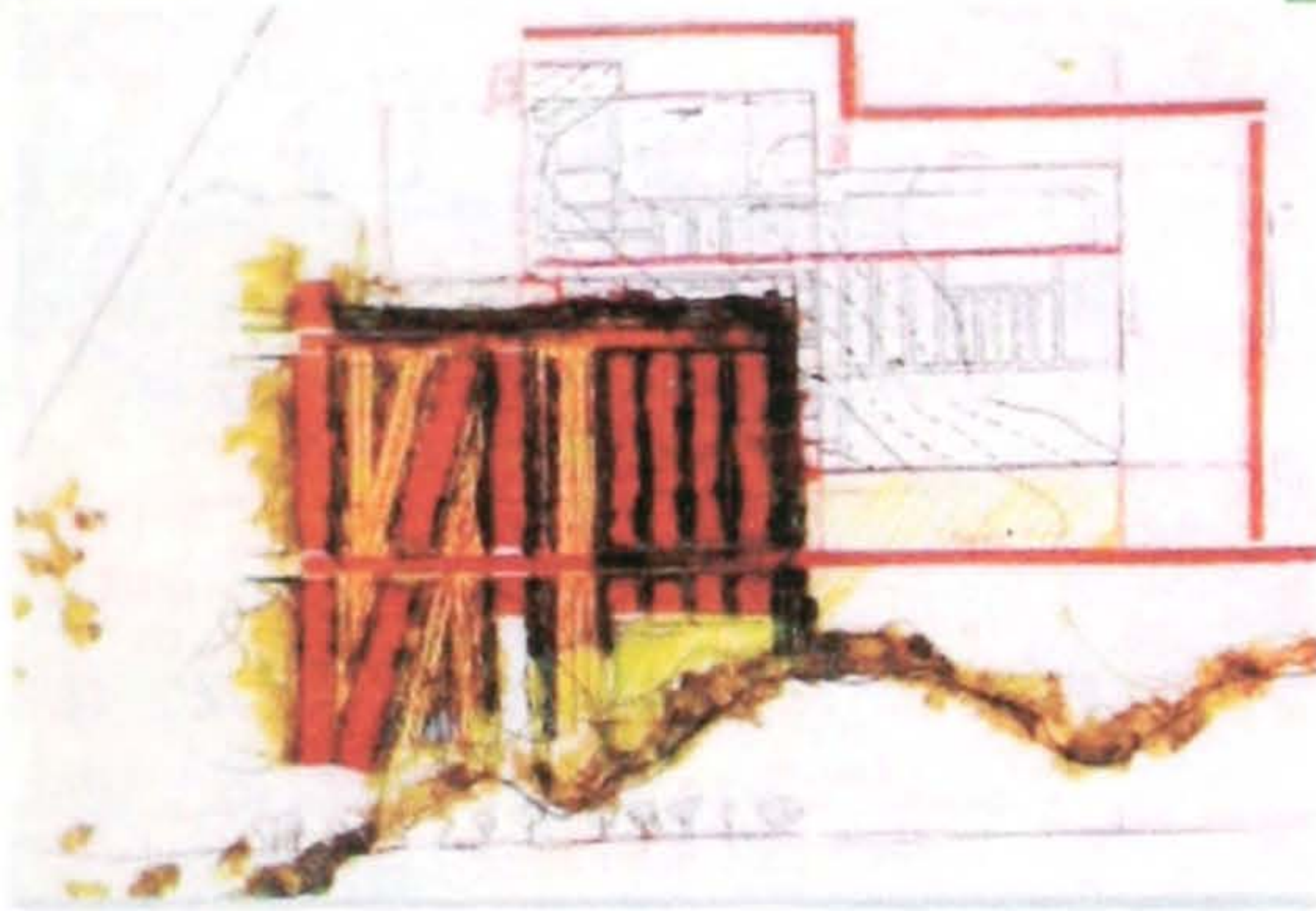
CONSTRUCTED WETLANDS

"Managing stormwater runoff with detention ponds is like trying to lose weight by taking diet pills. Long-term consequences outweigh short-term benefits. Natural systems such as wetlands do the job better, more beautifully, and more responsibly."
Deborah Snoonian, P.E.

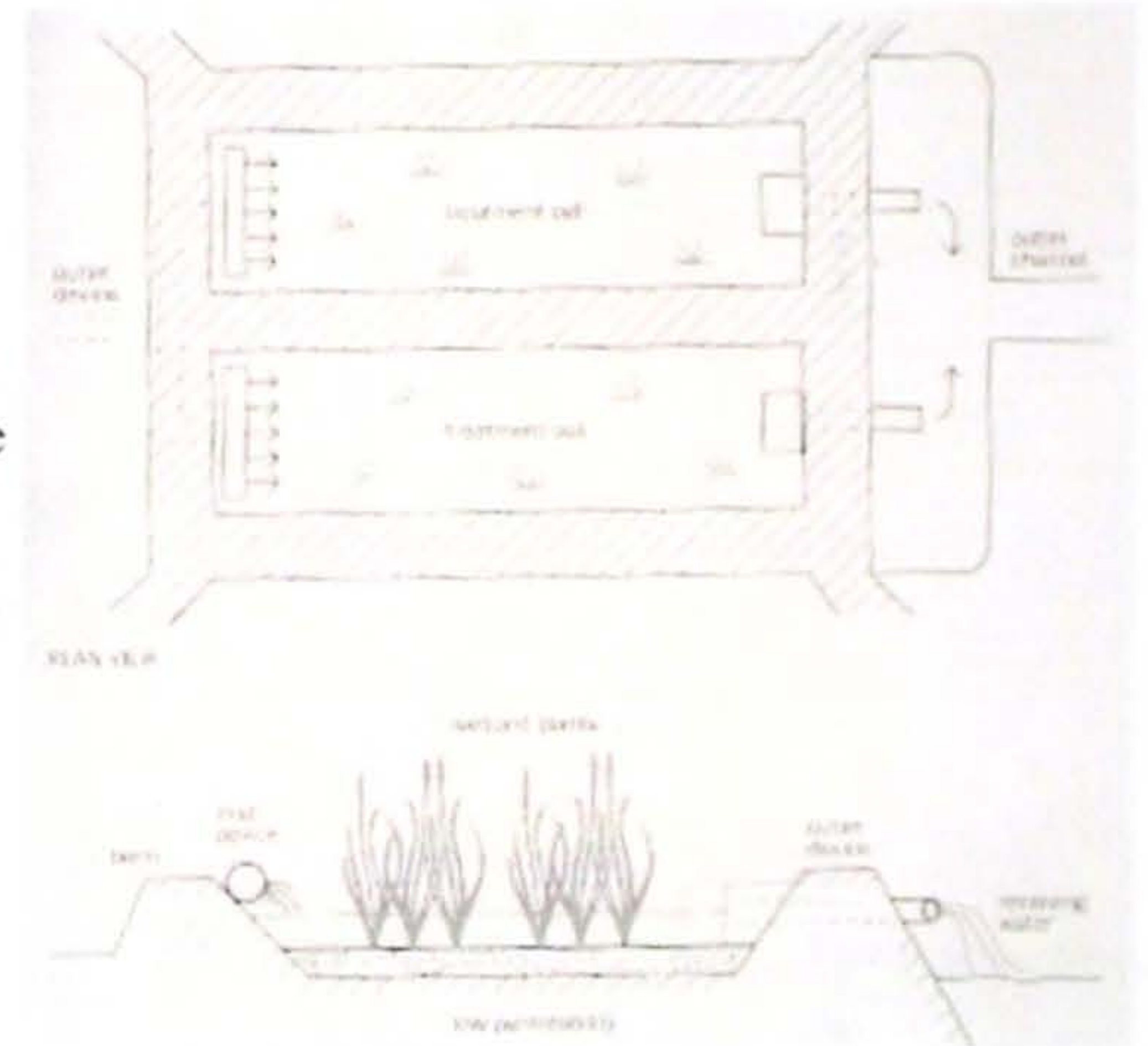


Rain that falls on hard surfaces, runs off into waterways

"Wetlands, in which plants and aquatic life clean water naturally, are a form of living infrastructure."
Deborah Snoonian, P.E.

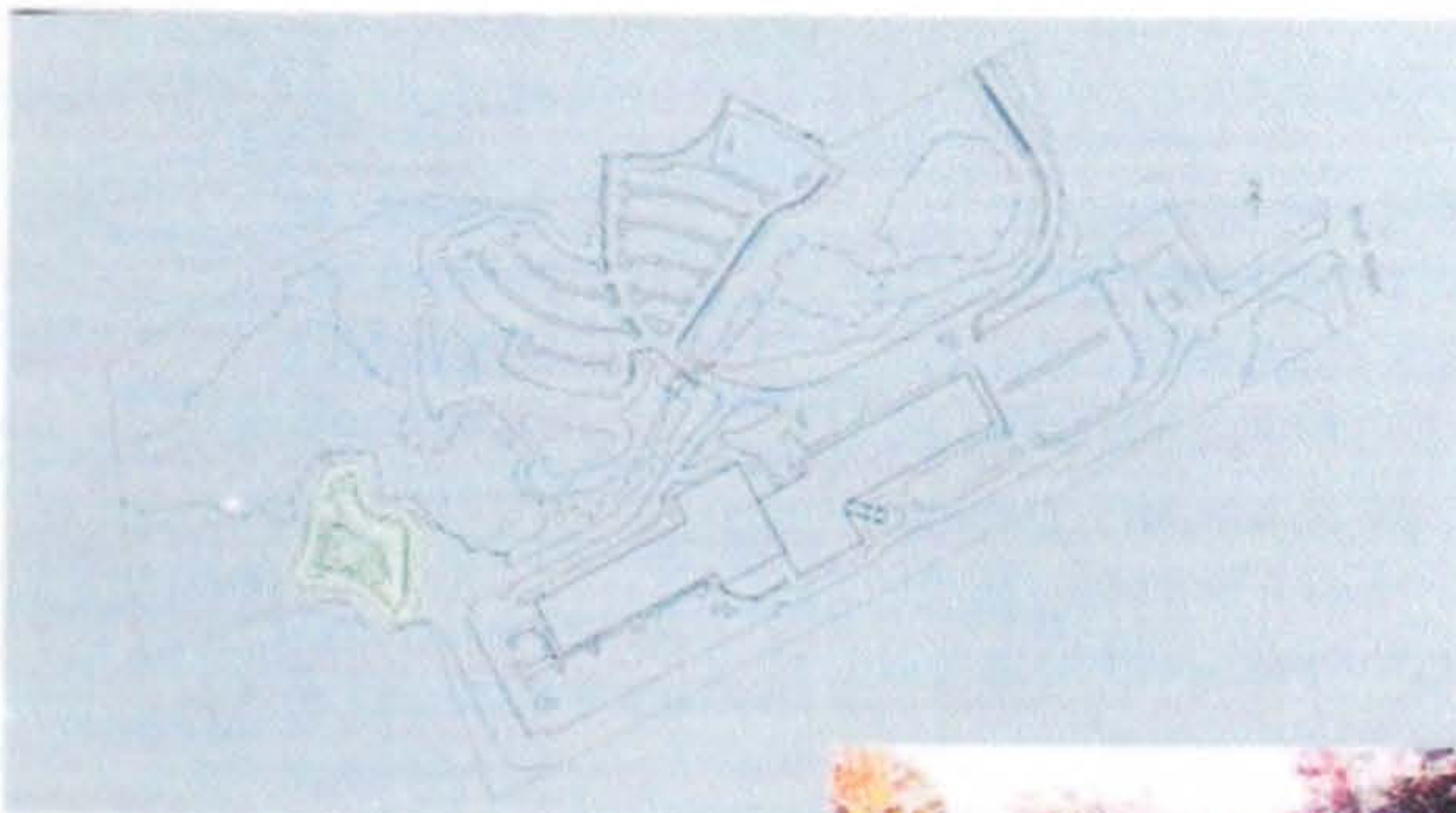


At the Herman Miller furniture plant Cherokee County, Ga. landscape architect Michael Van Valkenburgh designed the large parking lot in small sections divided by wetlands which allow water to seep into the soil rather than to run into storm sewers.



Typical plan and section for a constructed wetland

Constructed wetlands at Fort Devens Federal Medical Center in Devens Mass. treat storm water and control erosion.



EMC Corporation
Hopkington, Mass.

On this project by Beals and Thomas, Inc. the water from seven and one half acres of paved surface is controlled and treated by the use of a catch basin and wetlands.



Cotton Creek Relocation, San Marcos, Tx. On this project a creek bed was relocated and with the use of wetlands now manages the runoff from a large shopping complex, a major freeway and a sand and gravel plant. The water quality is closely monitored and reports indicate that the wetlands are performing within required standards

WATER MANAGEMENT



Stream bank protection/restoration project on Catt Creek at Savage Road, near Buffalo, New York.



Watersheds are areas of land that drain to a common point. Water resource issues all begin at the watershed – from flooding due to runoff to drought due to lack of precipitation. Solutions to water resources problems affect all aspects of the water cycle throughout the watershed. CHL is actively involved at improving the way watersheds are modeled.

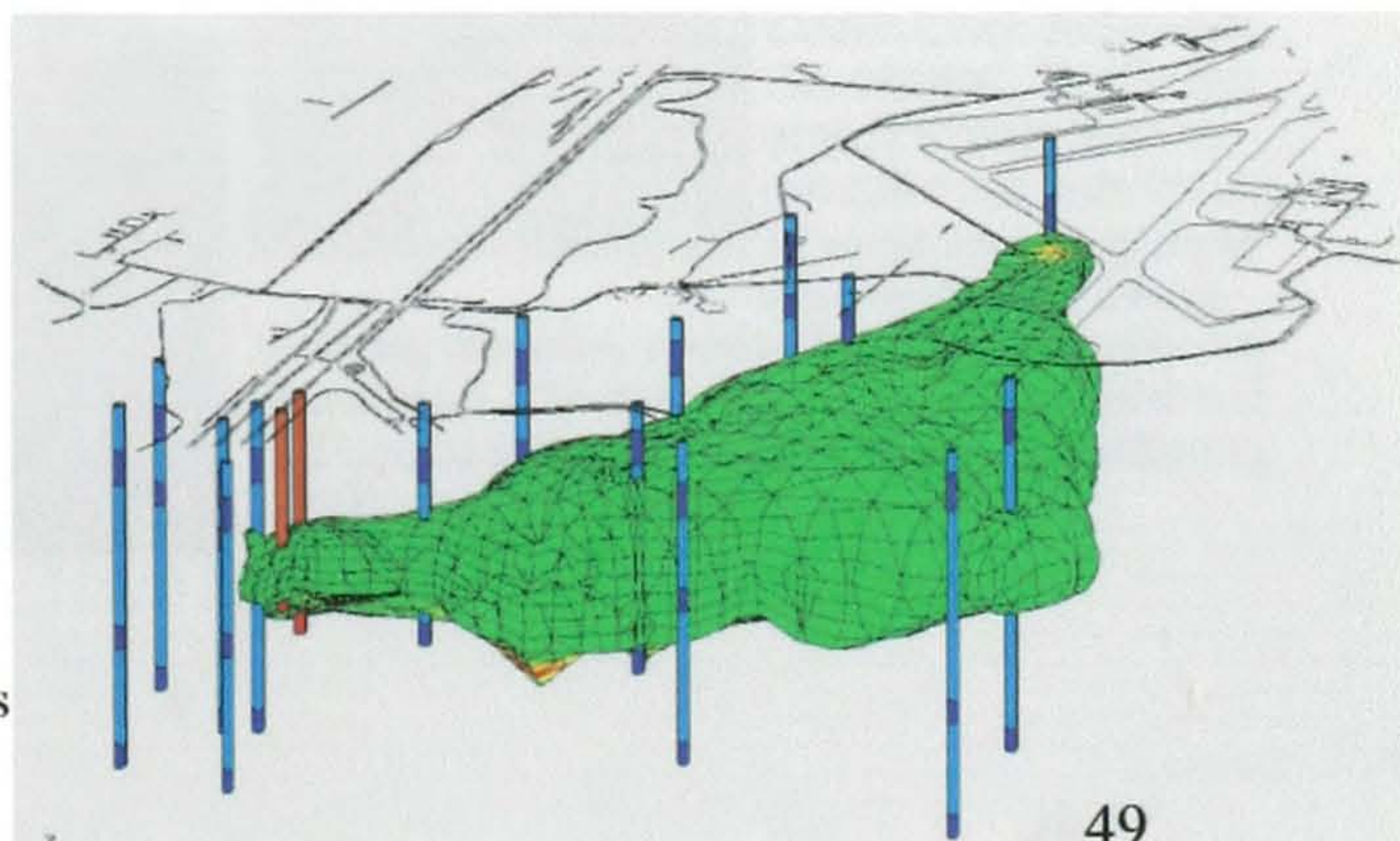
Groundwater is a vital natural resource. It is estimated that groundwater supplies over half of the drinking water for our nation. CHL is actively involved in developing a better understanding of groundwater through the use of sophisticated computer simulation models and world-class computing facilities. Being able to better model groundwater helps to improve the cleanup of contaminated groundwater (including superfund sites), improves our understanding of the role groundwater plays in supplying streams and wetlands with water, and aids in learning about how groundwater supplies are affected by developing groundwater resources.

Potomology — the science of rivers.

Potomology applies knowledge from many areas of the physical and biological sciences and mathematics. The potomologist need not qualify as a specialist in each of these areas, but he must be able to integrate knowledge from all of them as he pursues his own specialty. The definition is extended to also include knowledge in areas of the social sciences and engineering, essential elements in effective pollution control and wise use of water resources. Furthermore, in application potomology becomes as much an art as a science, tempered by experience and professional judgement. (Velz, 1984)



Wetlands are a vital resource of our Nation. They play key roles in providing habitat, cycling nutrients, and flood reduction. Wetlands areas are also often targets for conversion to agricultural uses due to their close proximity to water and rich soil substrates. At CHL we are actively involved in modeling wetlands in order to better understand their function in the surrounding environment. There are two main research areas at CHL for wetlands -- inland and coastal. Inland wetlands include riparian wetlands and isolated wetlands in watersheds. These wetlands play key roles in reducing watershed runoff of water and sediments, cycling nutrients from watersheds, and providing waterfowl and other types of habitat.



J.M. Tjibaou Center

Renzo Piano Building Workshop Official Site - Renzo Piano

<http://194.185.232.3/renzopiano/main/biographv.asp>

<http://encyclopedia.thefreedictionary.com/>

Encarta 2004 Encyclopedia Standard

Architectural Record

Sher-E-Bangladesh National Capital

<http://encyclopedia.thefreedictionary.com/>

Encarta 2004 Encyclopedia Standard

INSTITUTE FOR FORESTRY AND NATURE REASERCH

<http://www.foresters.org/netherlands.htm>

<http://encyclopedia.thefreedictionary.com/>

Encarta 2004 Encyclopedia Standard

<http://www.cia.gov/cia/publications/factbook/geos/nl.html#Intro>

Architectural Record

Okinawa Convention Center

<http://www.cia.gov/cia/publications/factbook/geos/ia.html>

http://www.oki-conven.jp/index_e.html

<http://encyclopedia.thefreedictionary.com/>

Encarta 2004 Encyclopedia Standard

Architectural Record

Gregory Bateson Building

<http://www.ecodesign.org/edi/projects/design/bateson.html>

<http://www.documents.dgs.ca.gov/resd/bateson/gregory07092002.pdf>

Constructed Wetlands

<http://ag.arizona.edu/AZWATER/arroyo/094wet.html>

<http://ohioline.osu.edu/a-fact/0005.html>

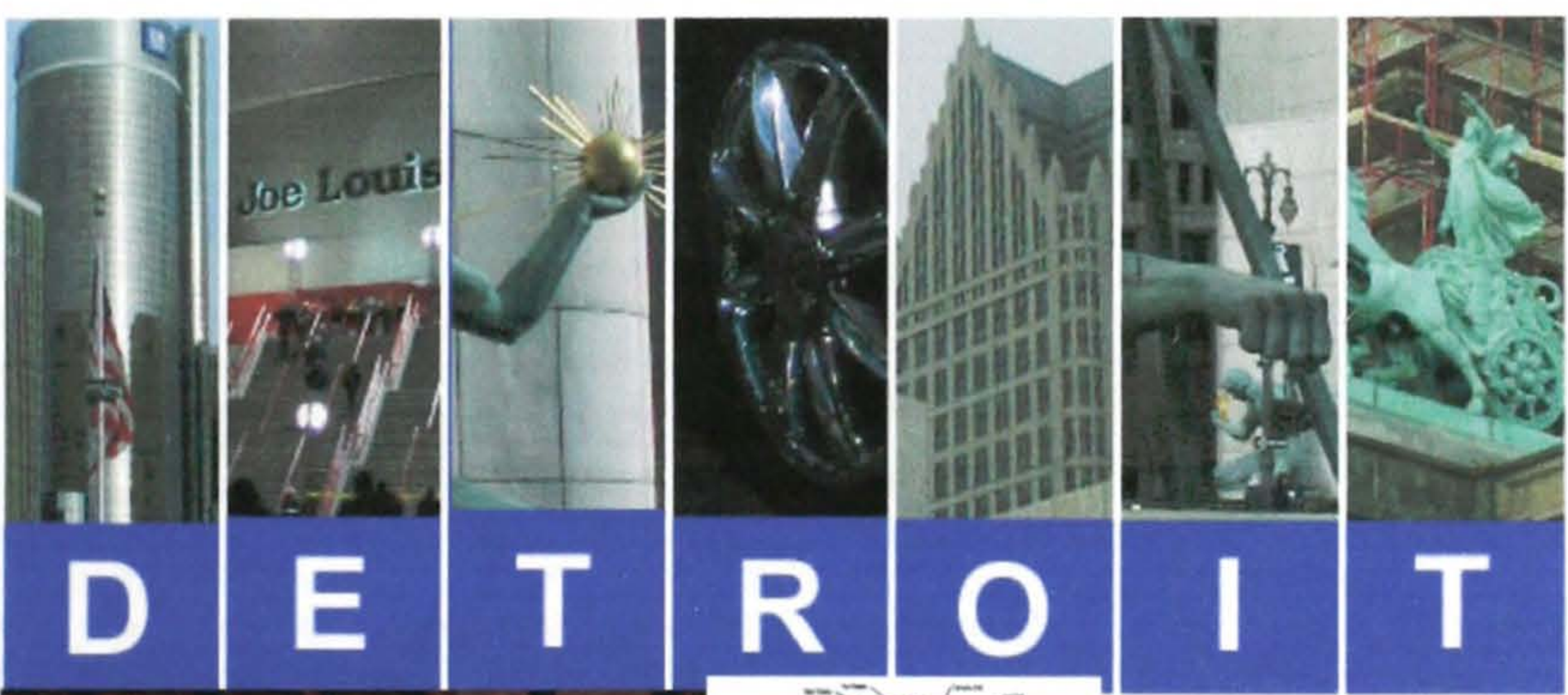
Wetland Plants

Wetland Mitigation

Potomology, Michigan Geology and Climate and St. Lawrence Seaway sited on pages



DETROIT MICHIGAN RIVER OF THE STRAIT
WAYNE COUNTY
 PONTIAC AND OTTAWA NATIVE AMERICANS
 FORT PONTCHARTRAIN EST. BY FRENCH, 1701
 BRITISH CAPTURE DETROIT 1761
 BRITISH LEAVE DETROIT, 1783
 DETROIT INCORPORATED AS U.S. CITY, 1802

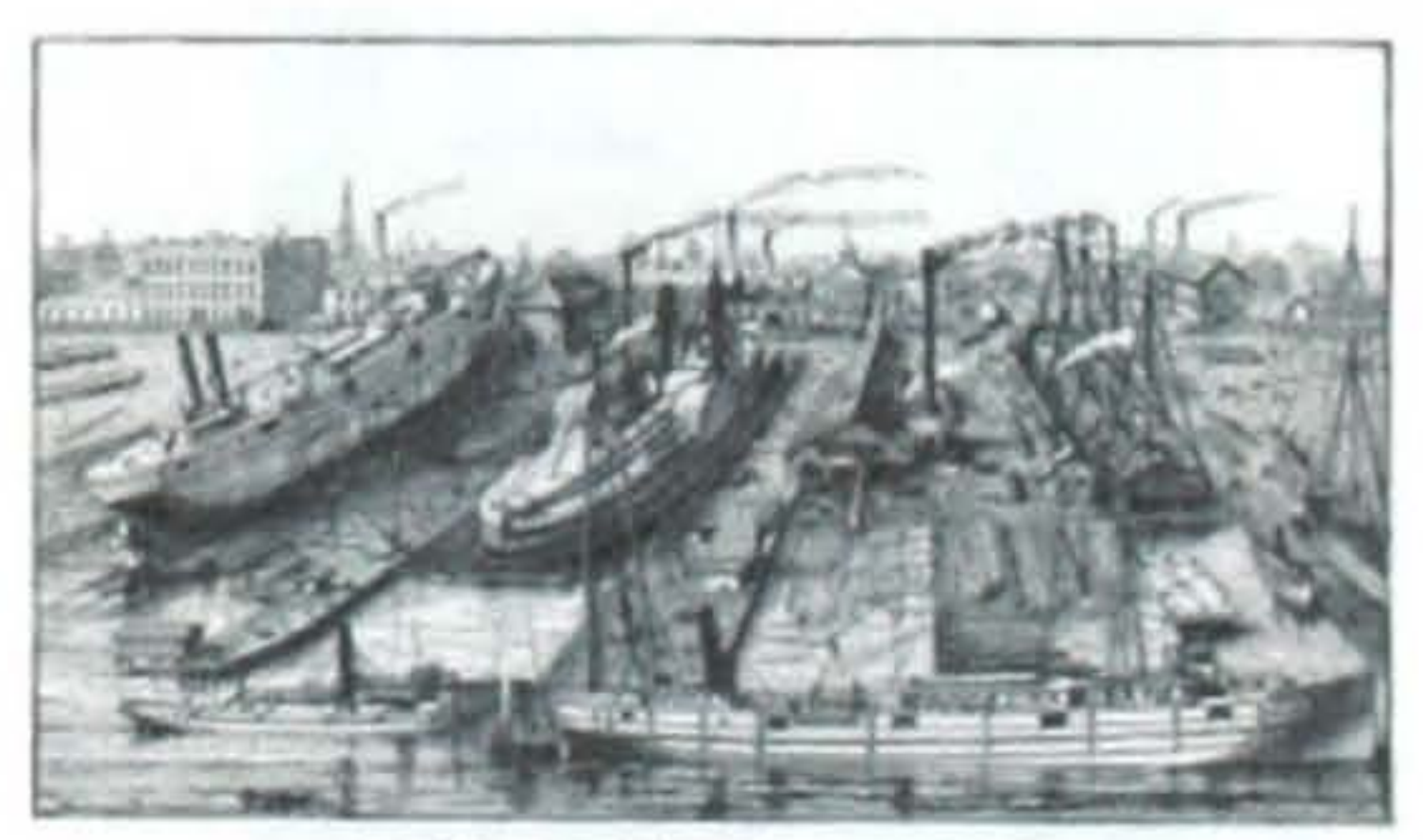
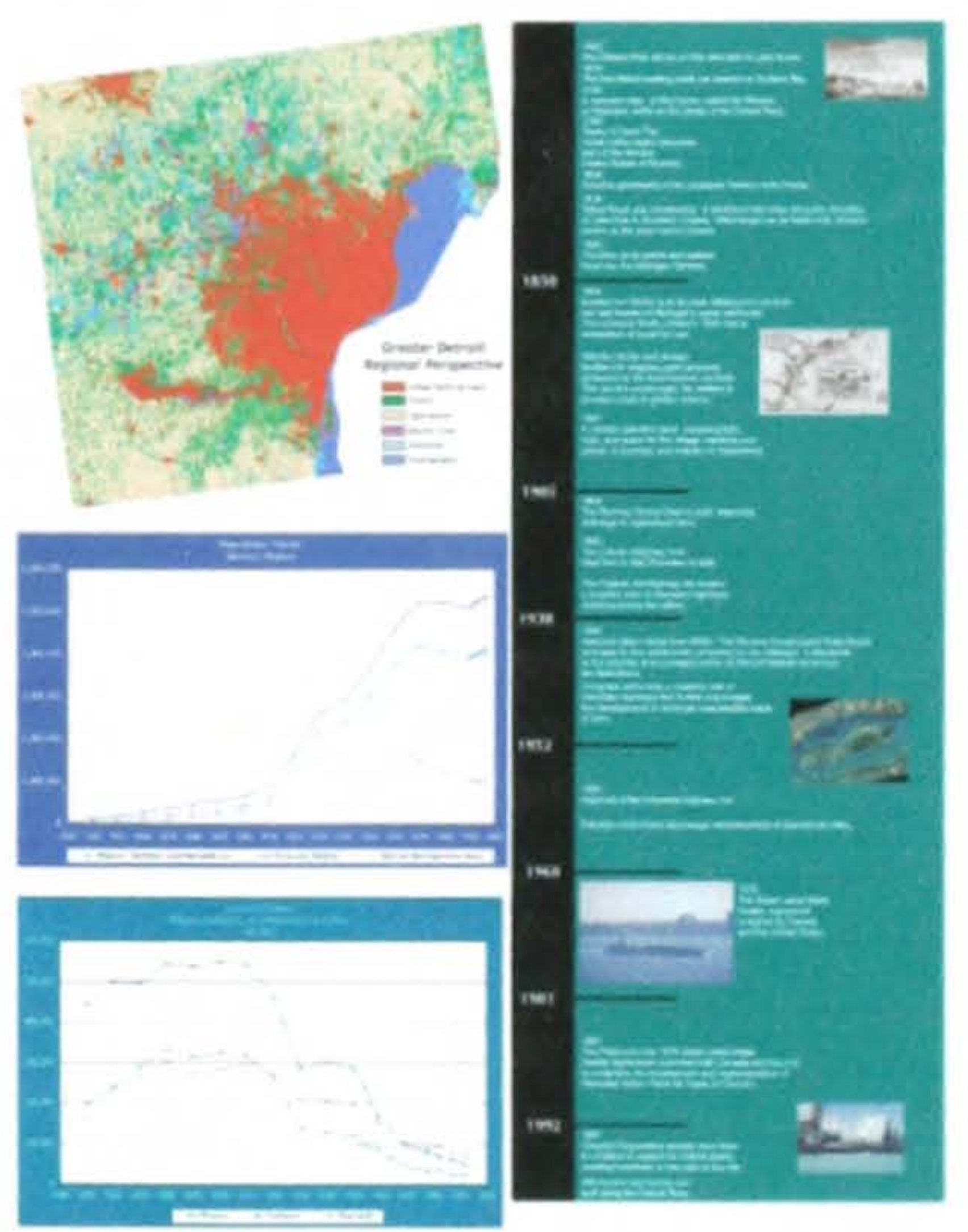


D E T R O I T



Motto: *Speramus Meliora, Resurgit Cineres*
 ("We Hope For Better Things, It Shall Rise From the Ashes")
 This motto was adopted after the disastrous 1805 fire that devastated the city.
 Nicknames: "The Motor City" and "Motor"

Location in Wayne County, Michigan
 Incorporated July 24, 1701
 1815
 County Wayne County
 Mayor Kwame Kilpatrick (Dem)
 Area
 - Total
 - Water
 178.2 km² (68.8 sq mi)
 10.8 km² (4.2 sq mi) 6.05%
 Population
 - City (2000)
 - Density
 - Metropolitan
 912,270
 6,805/km² or 17,643/sq mi
 4,441,551
 Time zone Eastern (UTC -5)
 Coordinates
 WGS-84 (EPSG: 4326) 42.3314° N 83.0475° W
 Official Website
www.ci.detroit.mi.us

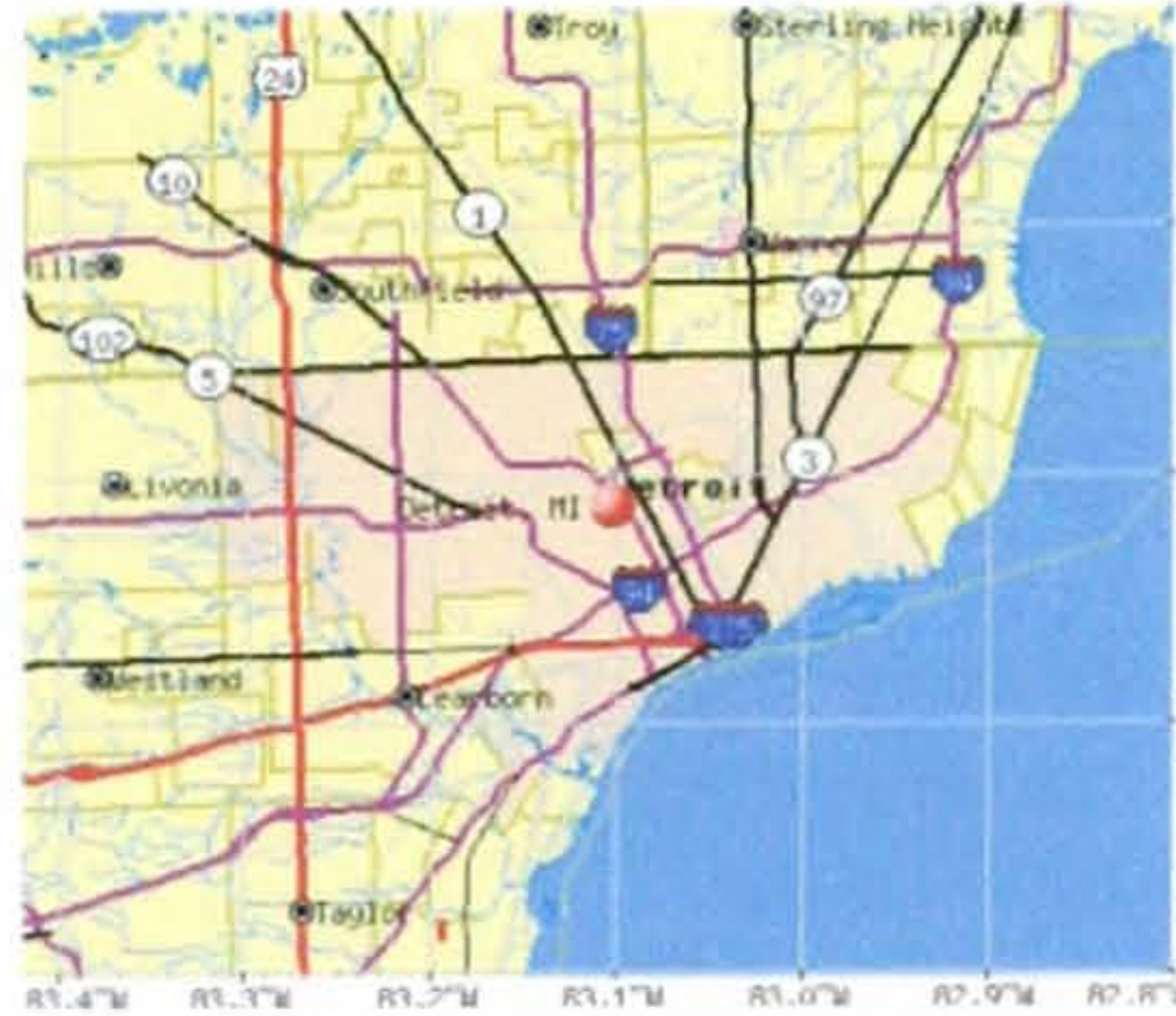




Latitude: 42.39 N, Longitude: 83.10 W

Crime in Detroit by Year

Type	1999	2000	2001	2002	2003
Murders	415	396	395	402	366
per 100,000	43.6	41.6	41.5	42.3	38.5
Rapes	790	811	652	708	814
per 100,000	83.0	85.3	68.5	74.4	85.6
Robberies	7,823	7,868	7,096	6,288	5,817
per 100,000	822.4	827.1	746.0	661.0	611.5
Assaults	12,948	13,037	12,804	12,542	11,727
per 100,000	1361.1	1370.5	1346.0	1318.4	1232.8
Burglaries	18,278	15,828	15,096	14,399	14,100
per 100,000	1921.4	1663.9	1586.9	1513.7	1482.2
Larceny counts	34,537	31,929	29,613	26,839	25,353
per 100,000	3630.6	3356.5	3113.0	2821.4	2665.2
Auto thefts	26,770	25,892	24,537	23,857	25,356
per 100,000	2814.1	2721.8	2579.4	2507.9	2665.5
City-data.com crime index (higher means more crime, U.S. average = 329.7)	1100.6	1066.4	1003.9		



Motto: Speramus Meliora; Resurget Cineribus ("We Hope For Better Things; It Shall Rise From the Ashes" - Nickname: "The Motor City" and "Motown"

Location in Wayne County, Michigan
Founded

Incorporated July 24, 1701
1815

County Wayne County
Mayor Kwame Kilpatrick (Dem)
Area

- Total 142 sq. mi.
- Water 4.2 sq. mi.

Population
- City (2000) 951,270
- Density 6,885, 1/sq.mi.
- Metropolitan 4,441,551

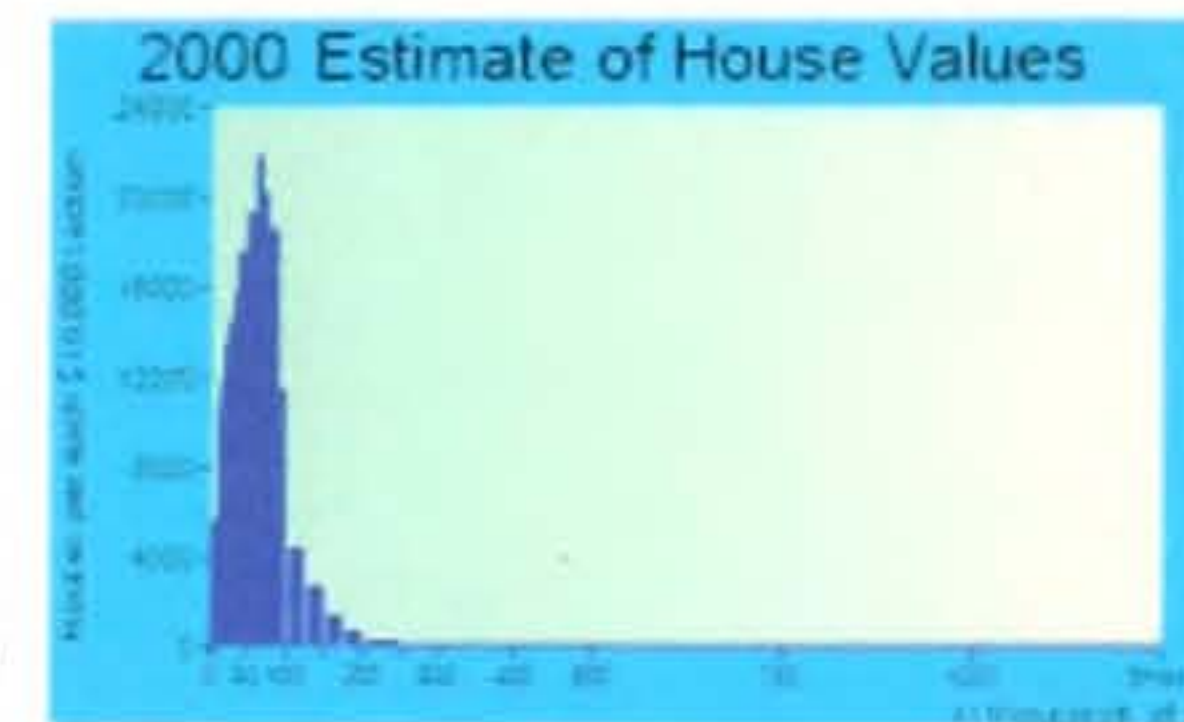
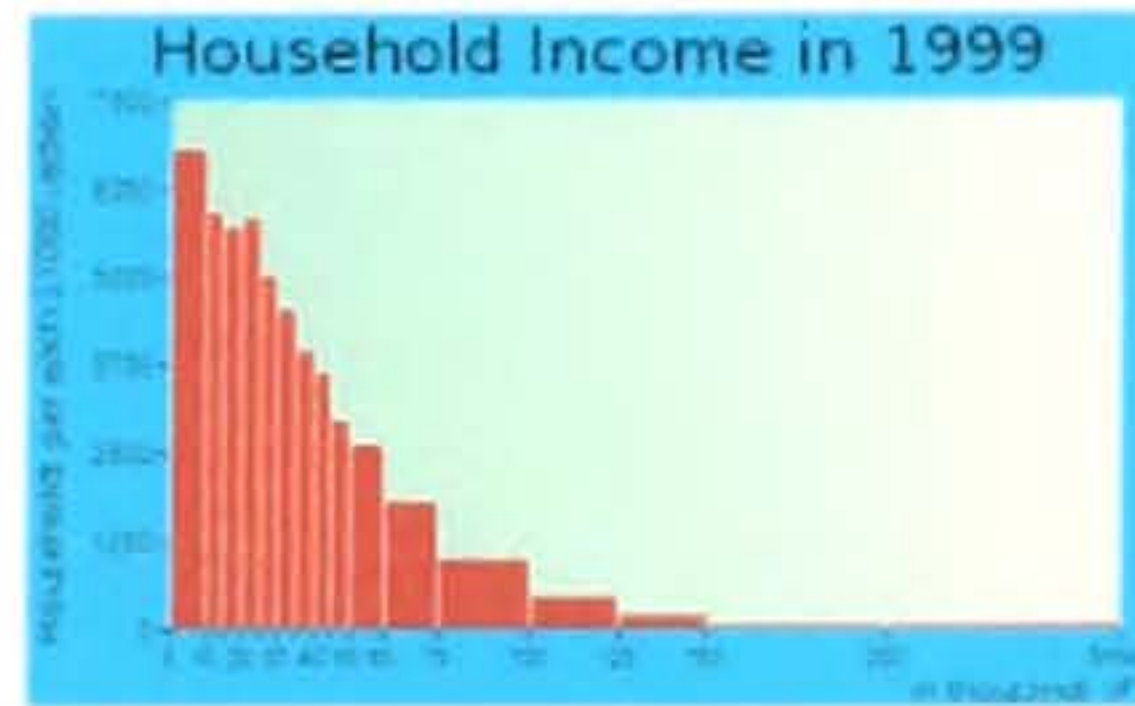
Time zone Eastern (UTC -5)

Coordinates
WGS-84 (GPS) 42.3316° N 83.0475° W

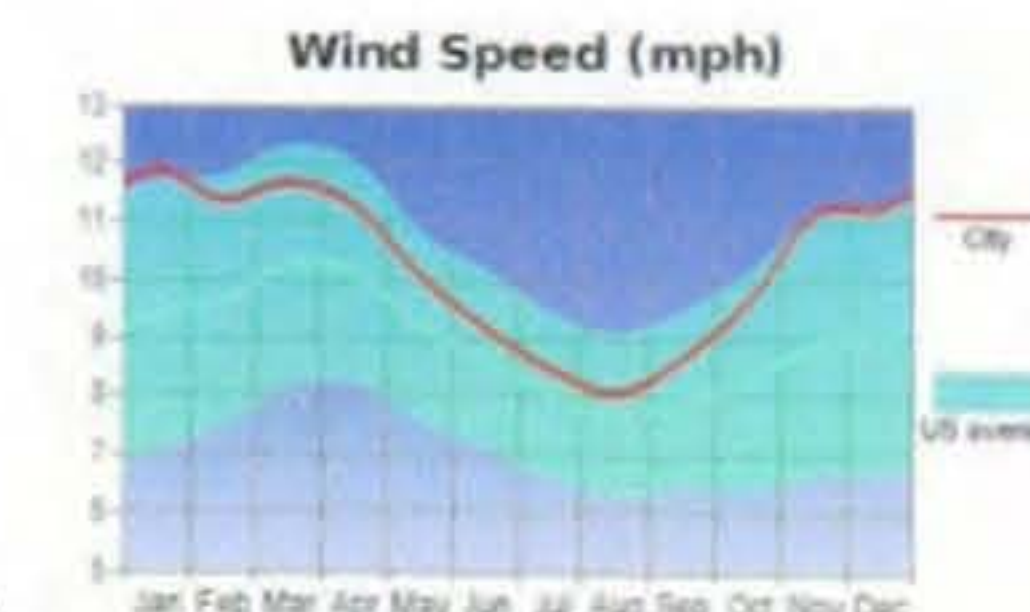
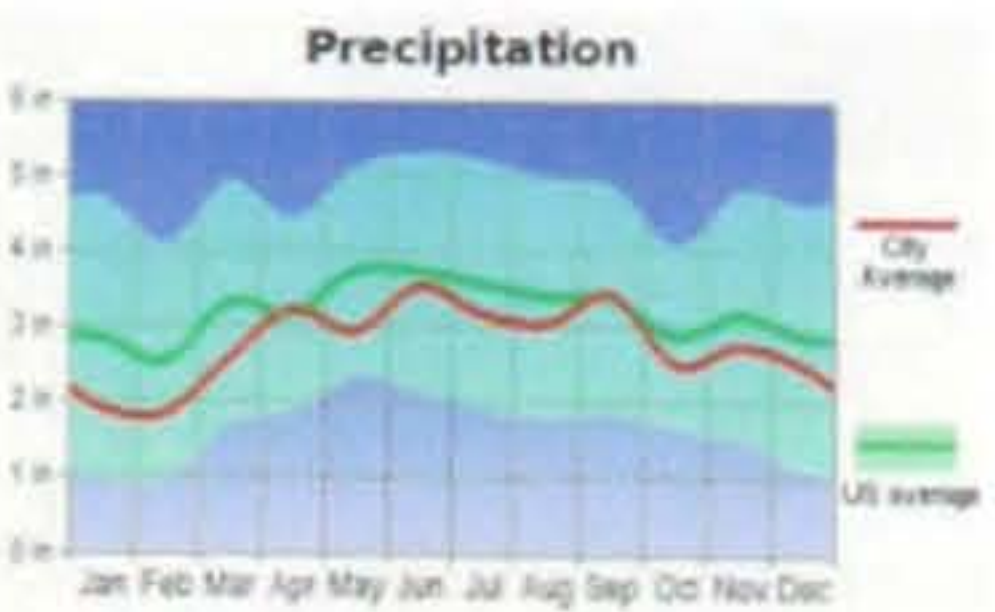
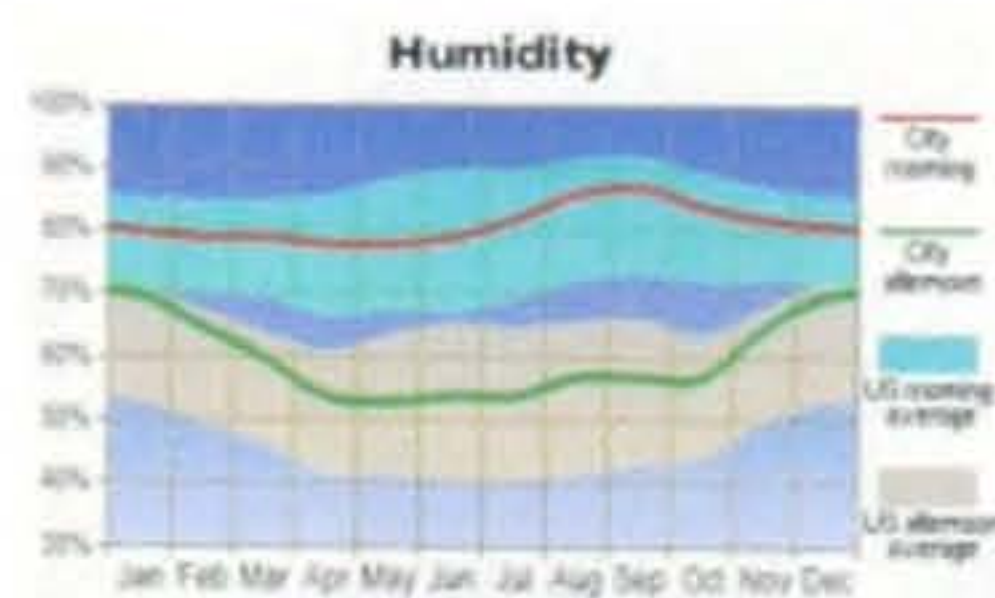
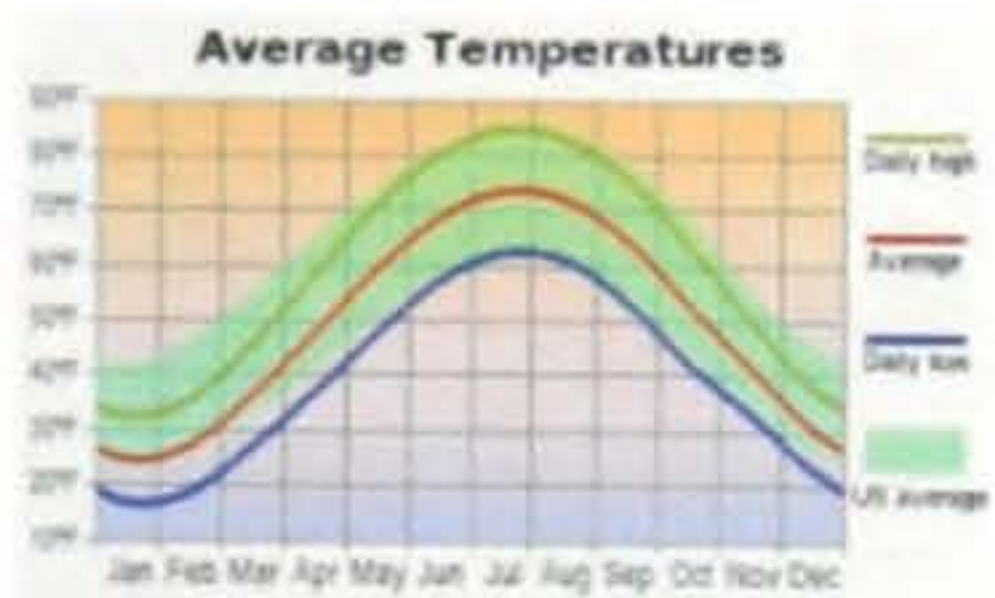
Official Website
www.ci.detroit.mi.us

Local government employment and payroll (March 2004)

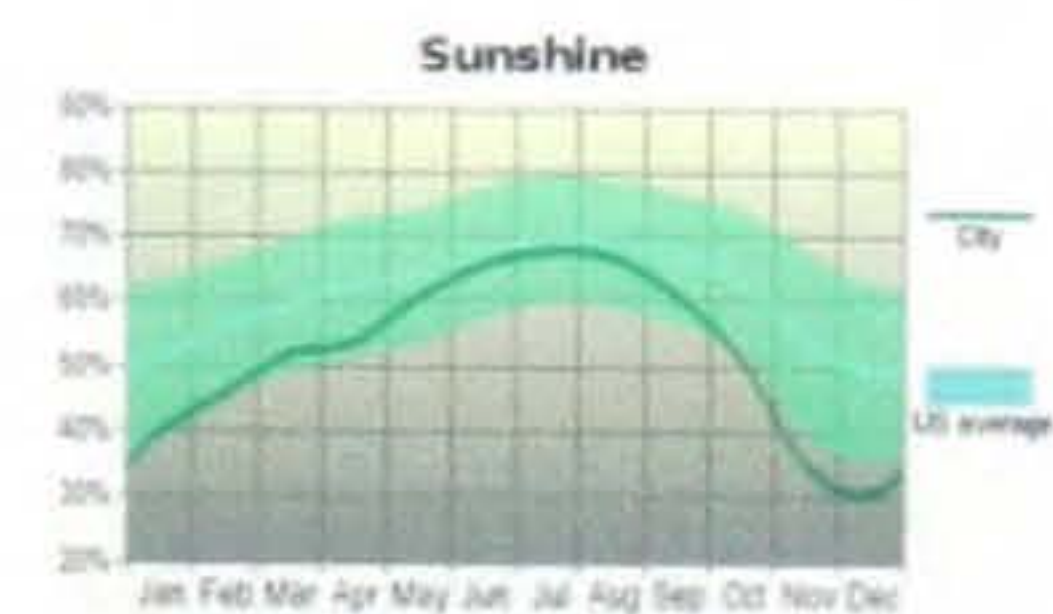
Function	Full-time employees	Monthly full-time payroll	Average yearly full-time wage	Part-time employees	Monthly part-time payroll
Firefighters	1309	\$6,258,329	\$57,372	0	\$0
Fire - Other	433	\$1,778,796	\$49,296	0	\$0
Streets and Highways	389	\$1,062,472	\$32,775	0	\$0
Airports	20	\$68,548	\$41,128	0	\$0
Welfare	235	\$881,657	\$45,020	0	\$0
Health	569	\$1,781,894	\$37,579	0	\$0
Solid Waste Management	552	\$1,504,459	\$32,705	0	\$0
Sewerage	1062	\$4,921,363	\$55,608	0	\$0
Parks and Recreation	682	\$2,165,398	\$38,100	490	\$154,222
Water Supply	1649	\$4,436,834	\$32,287	0	\$0
Electric Power	265	\$1,093,800	\$49,530	0	\$0
Transit	1699	\$6,038,957	\$42,653	0	\$0
Elementary and Secondary - Instruction	7311	\$41,807,077	\$68,620	3904	\$3,218,813
Elementary and Secondary - Other Total	8843	\$26,103,743	\$35,422	690	\$286,458
Local Libraries	373	\$995,680	\$32,032	99	\$113,781
Other and Unallocable	905	\$3,652,584	\$48,432	4	\$13,872
Housing and Community Development(Local)	470	\$1,424,275	\$36,364	0	\$0
Financial Administration	552	\$2,013,916	\$43,780	0	\$0
Other Government Administration	854	\$3,602,807	\$50,624	7	\$6,856
Judicial and Legal	710	\$2,659,162	\$44,943	0	\$0
Police Protection - Officers	3817	\$19,994,351	\$62,858	0	\$0
Police - Other	553	\$1,868,344	\$40,542	0	\$0
Totals for Government	33252	\$136,114,445	\$49,121	5194	\$3,794,002



- LEGEND**
- Discharges to water
 - Superfund sites
 - Hazardous waste
 - Toxic releases
 - Air releases
 - Others
 - Multiple
 - Streets
 - Water Bodies
 - Counties

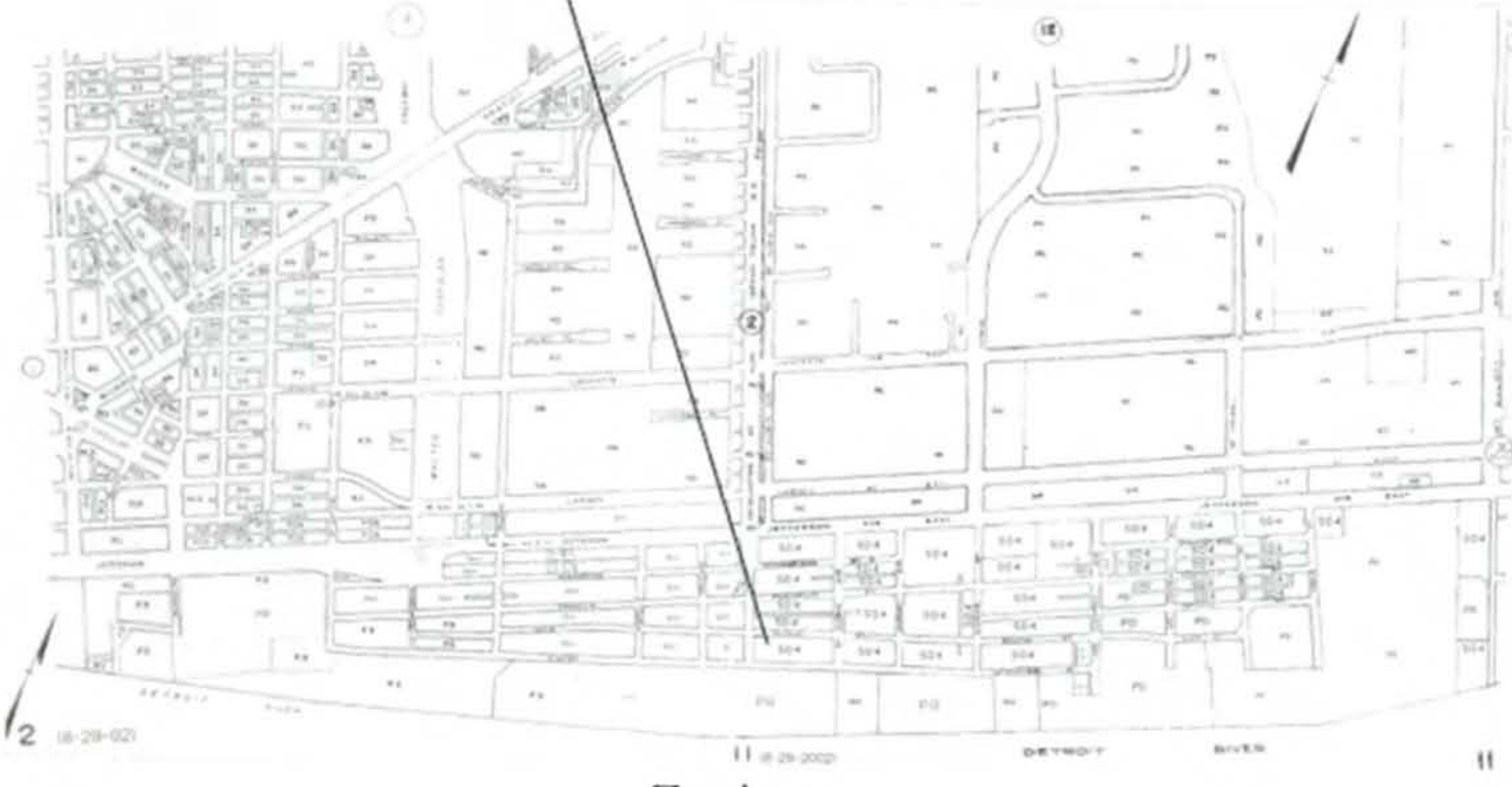
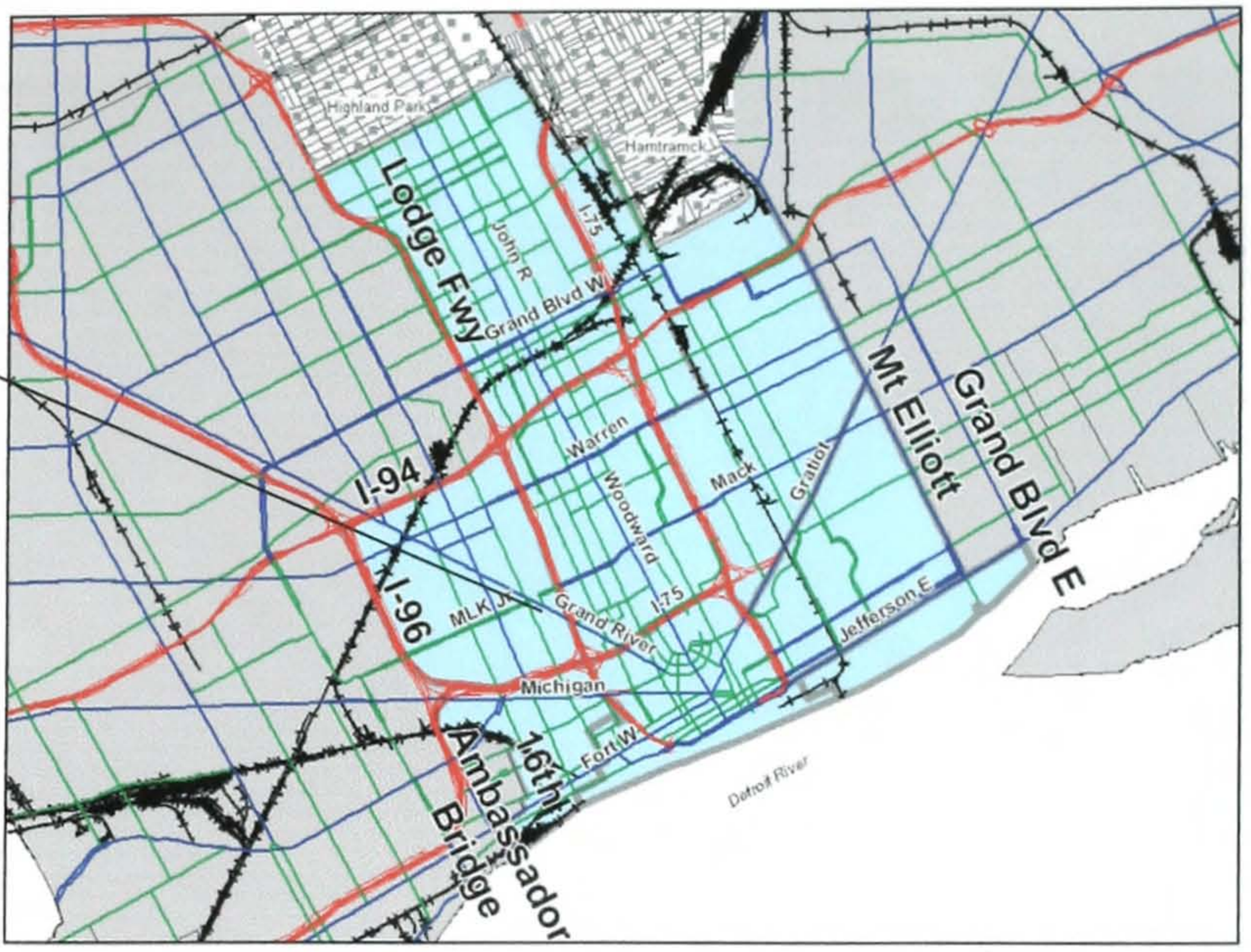
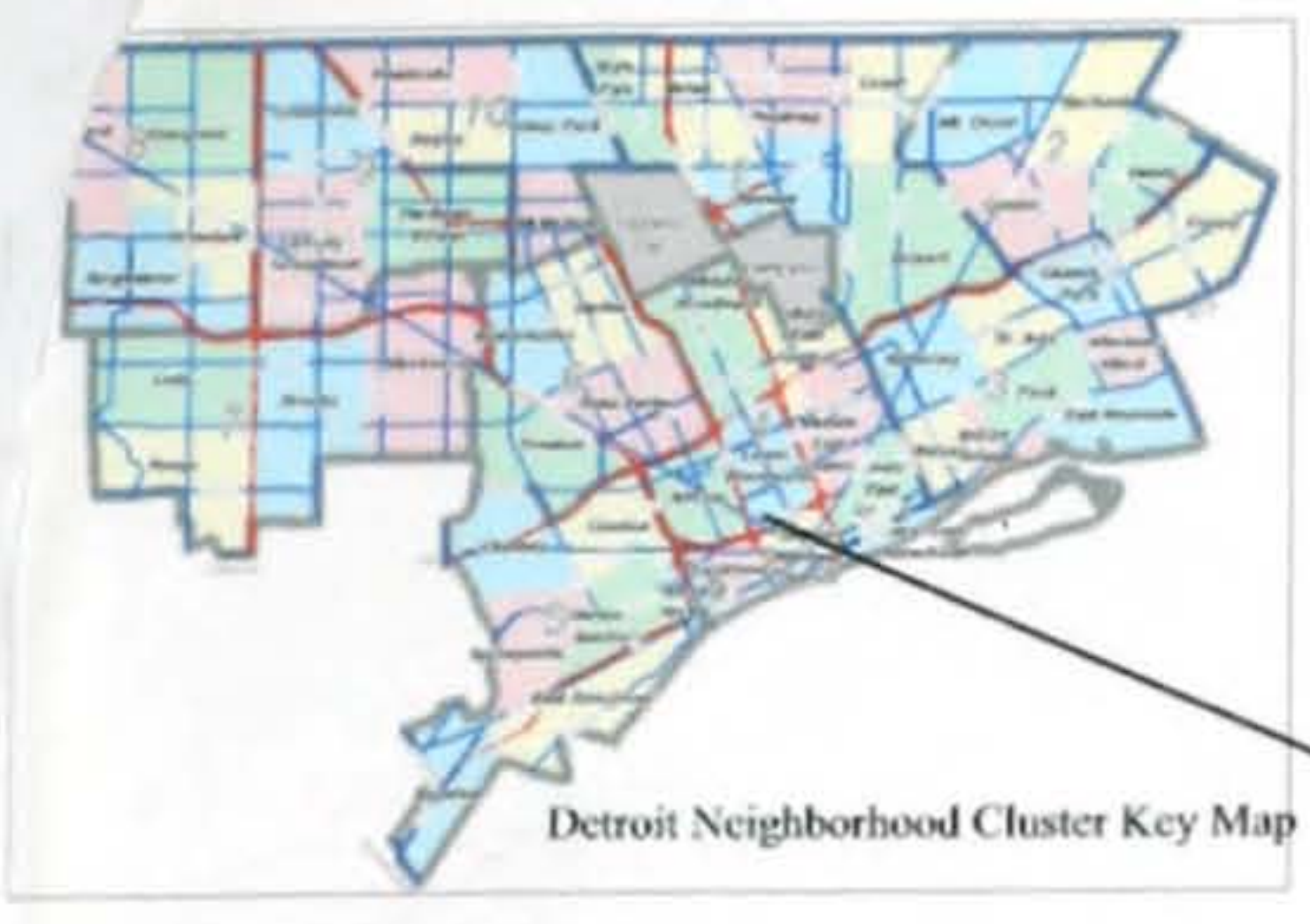


Average climate in Detroit, Michigan

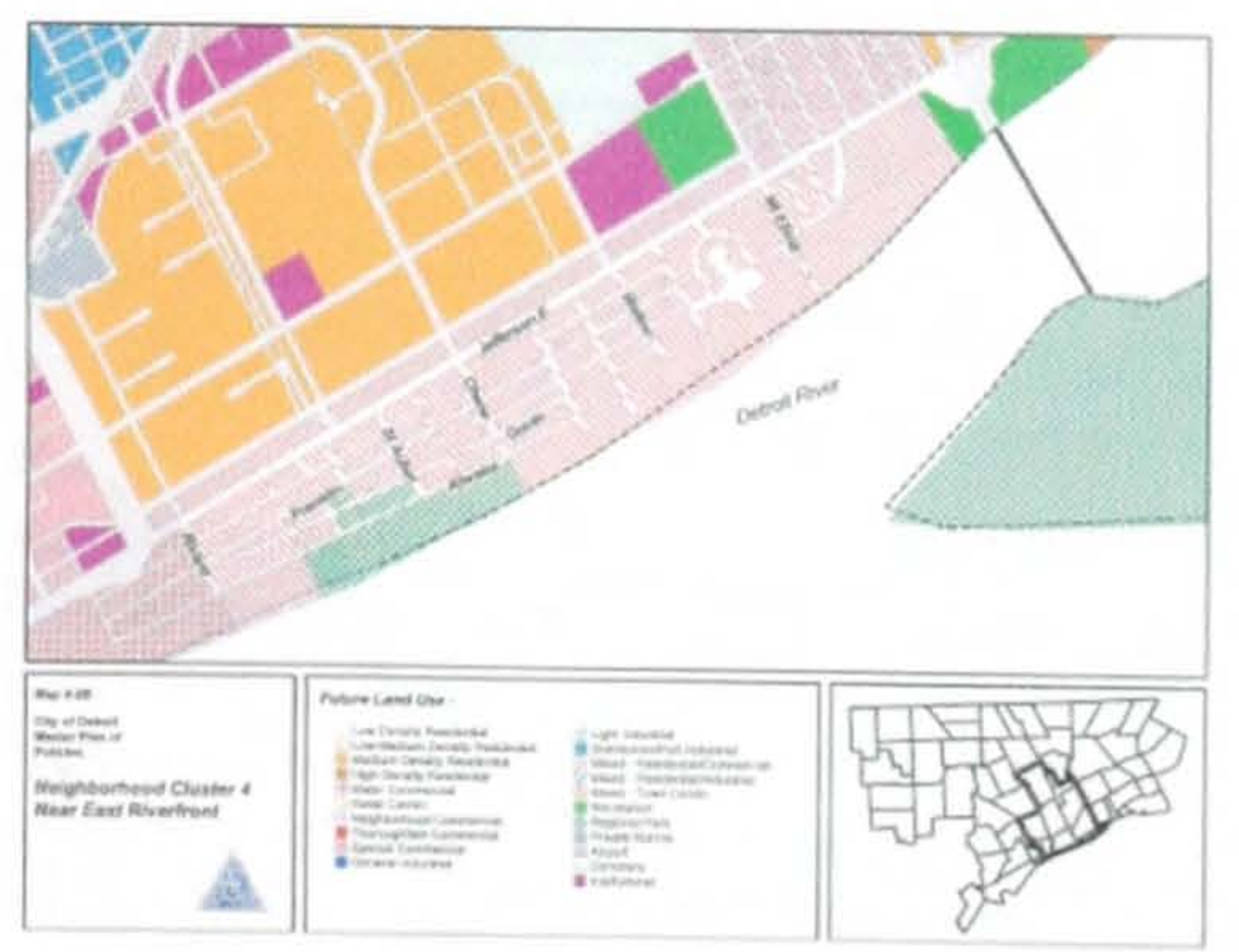
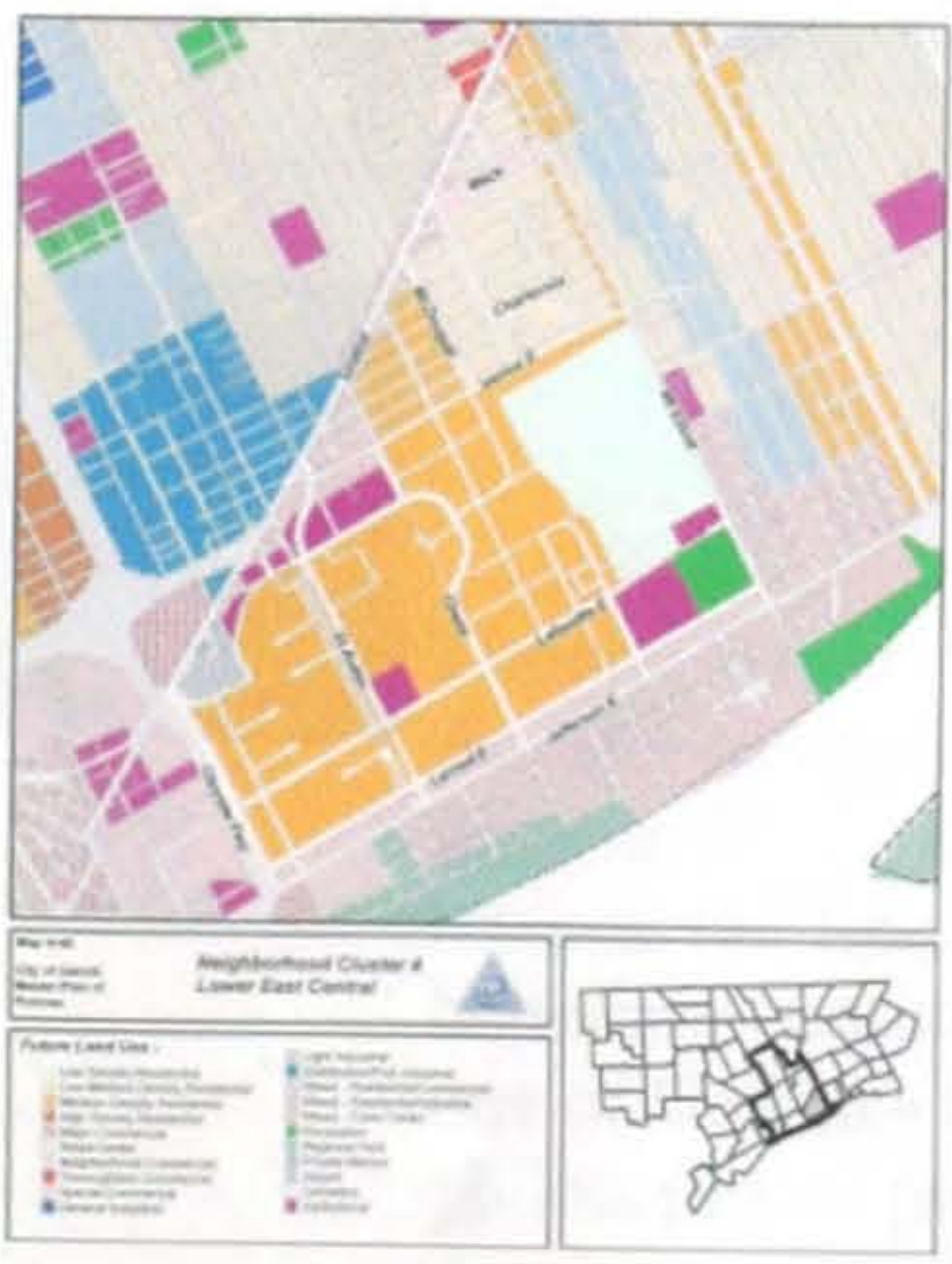


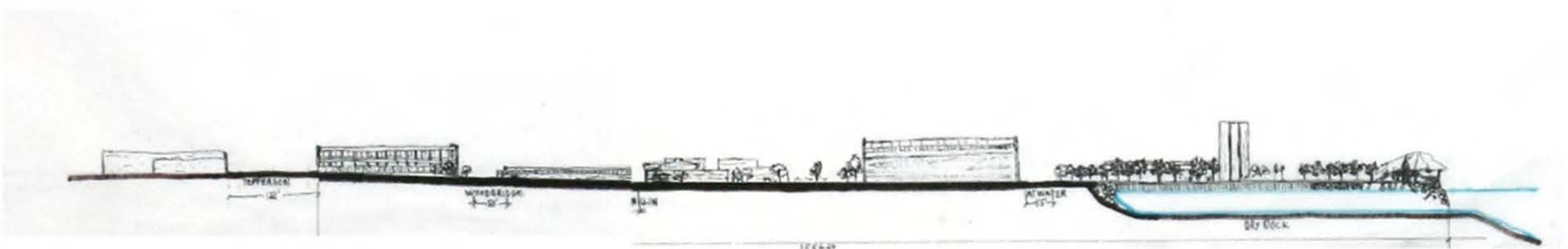
All the information on this page was provided by :

<http://www.city-data.com/city/Detroit-Michigan.html>



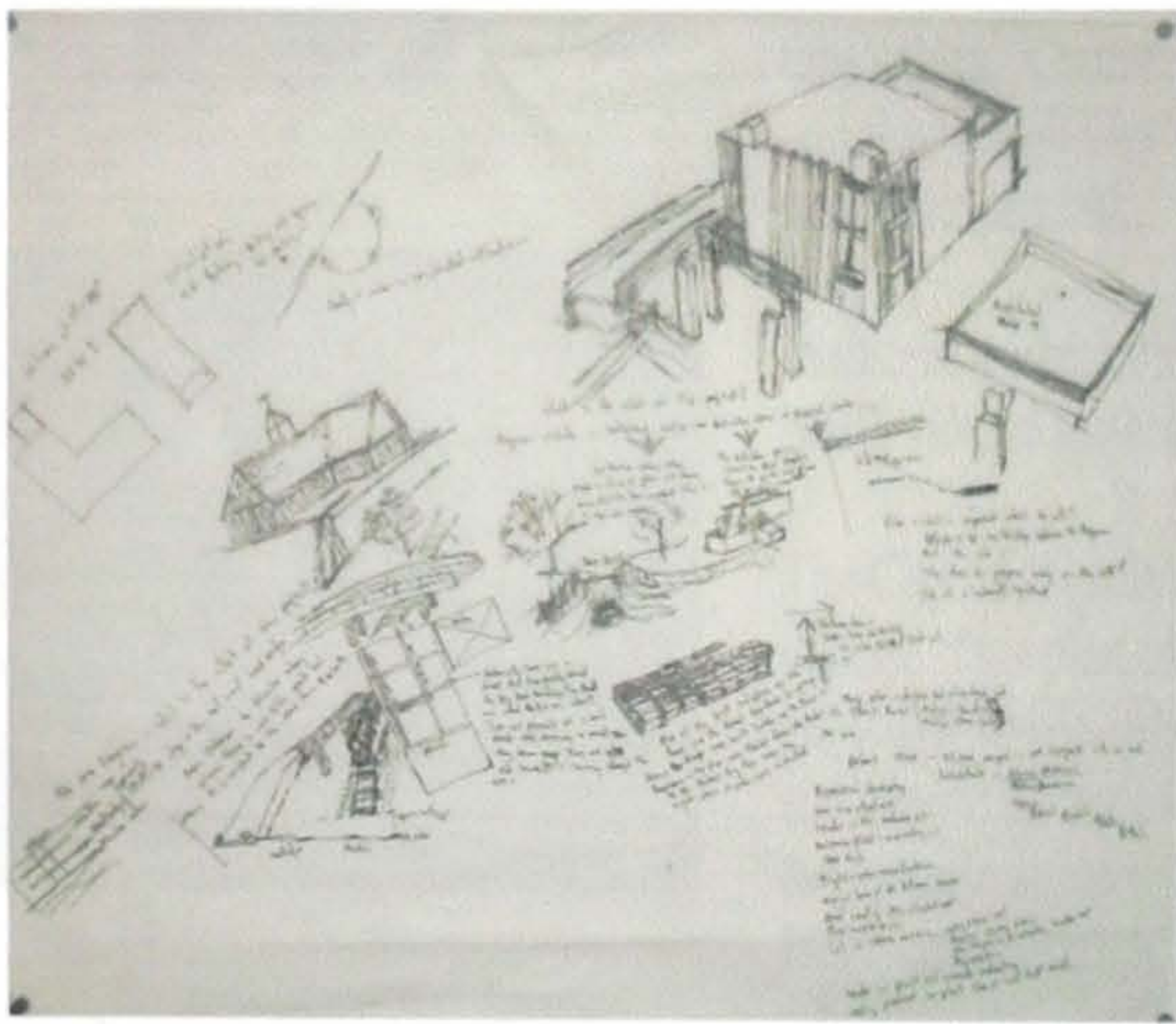
Zoning



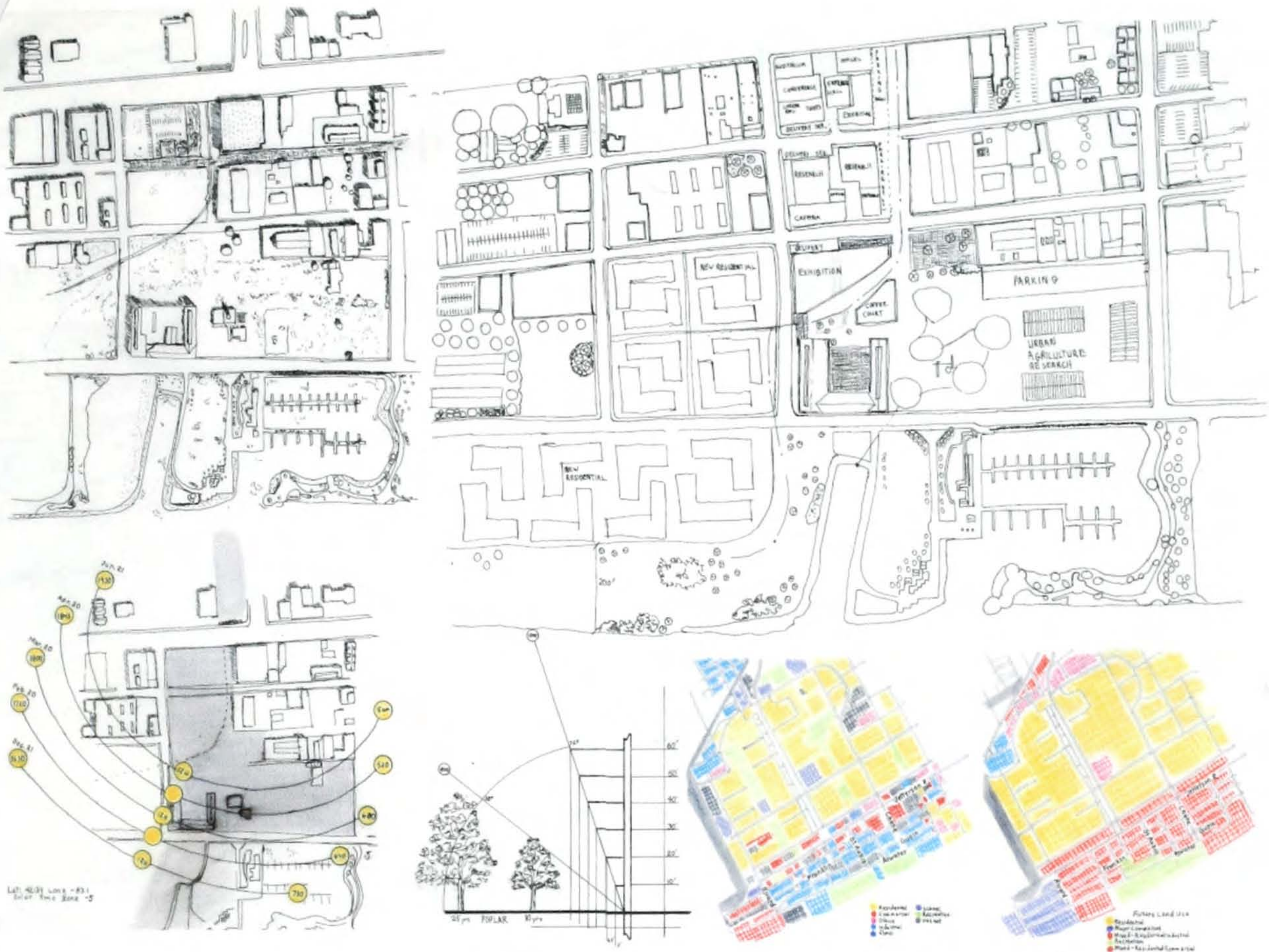


Section from Jefferson to the river looking east

The site for this thesis project is bounded by Jefferson Avenue to the north, Orleans Street to the west, Atwater to the South, St Aubin Street on the east from Atwater to the alley behind the buildings which front on Franklin Street at which point the site boundary travels back to the west to the point where the historic rail lines crossed under Jefferson which is known as the Dequindre Cut, at this point the site boundary continues north back to Jefferson. The site consists of approximately 9.5 acres and contains one of Detroit's many landmarks the Detroit Dry Dock Building. As this thesis project is based on a philosophy of preservation this majestic entity will remain although it will not be the focus of this project.



These sketches and photos represent aspects of the site of the from which details became compositional elements



This sketch of the site and its surrounding context contains information on solar orientation and land uses for the surrounding area and became a useful tool early in the design process. It also contains some initial ideas of how the elements of the thesis project would be situated on the site.

Objectives: Create a visual connection from Jefferson to the Detroit River through the site and the Detroit Dry Dock Building, which has stood on the corner of Atwater and Orleans streets since 1892.

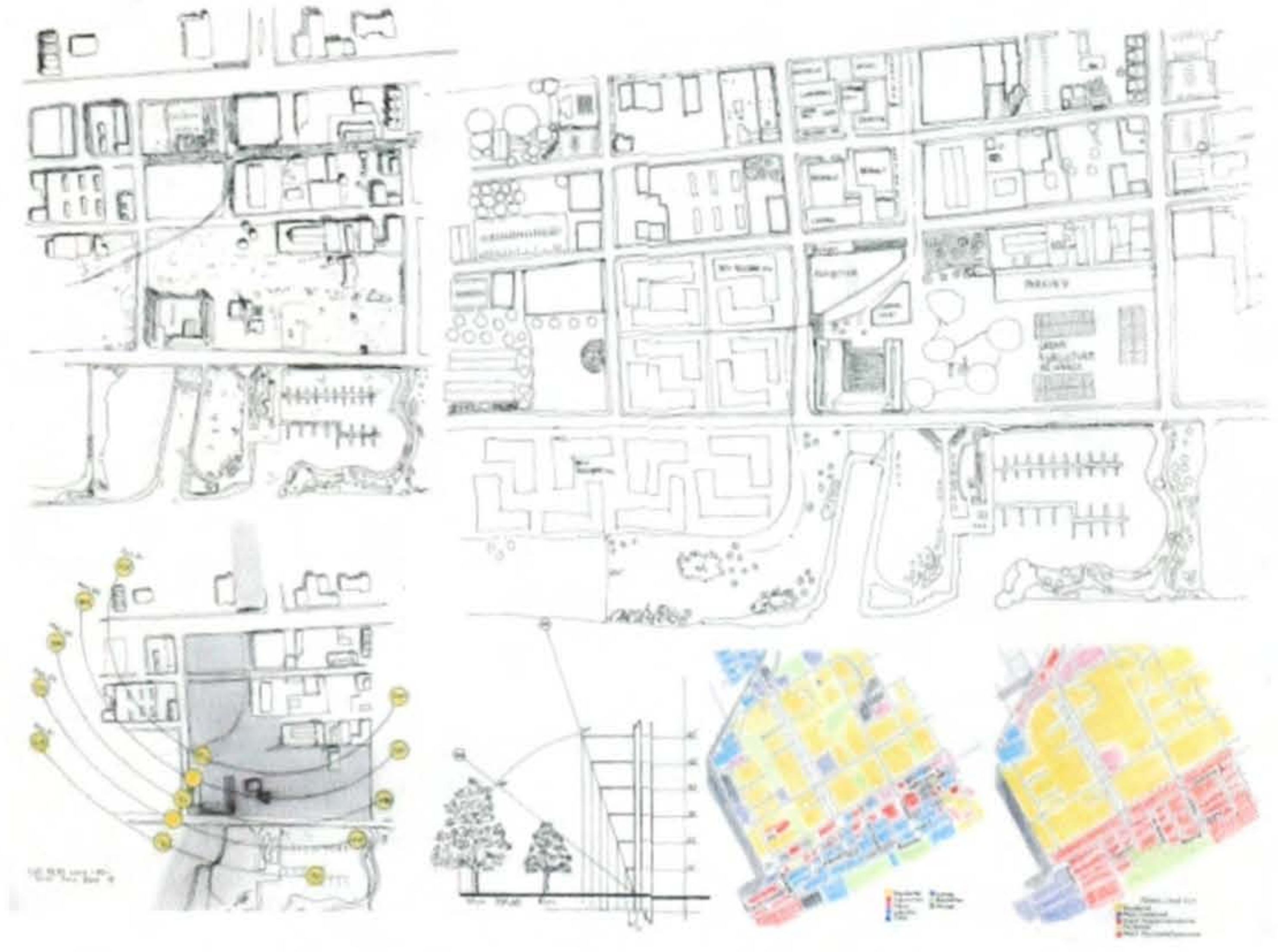
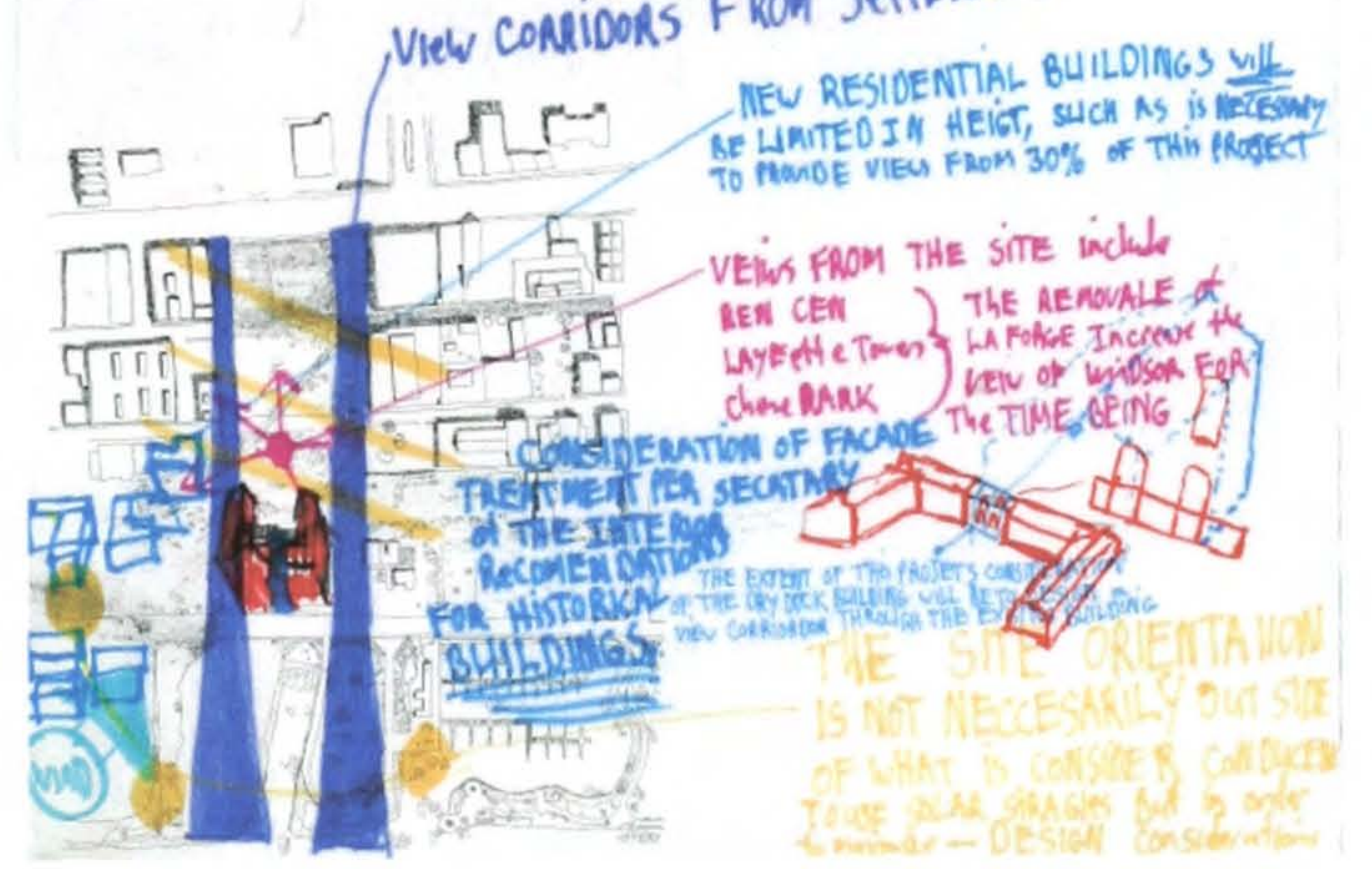
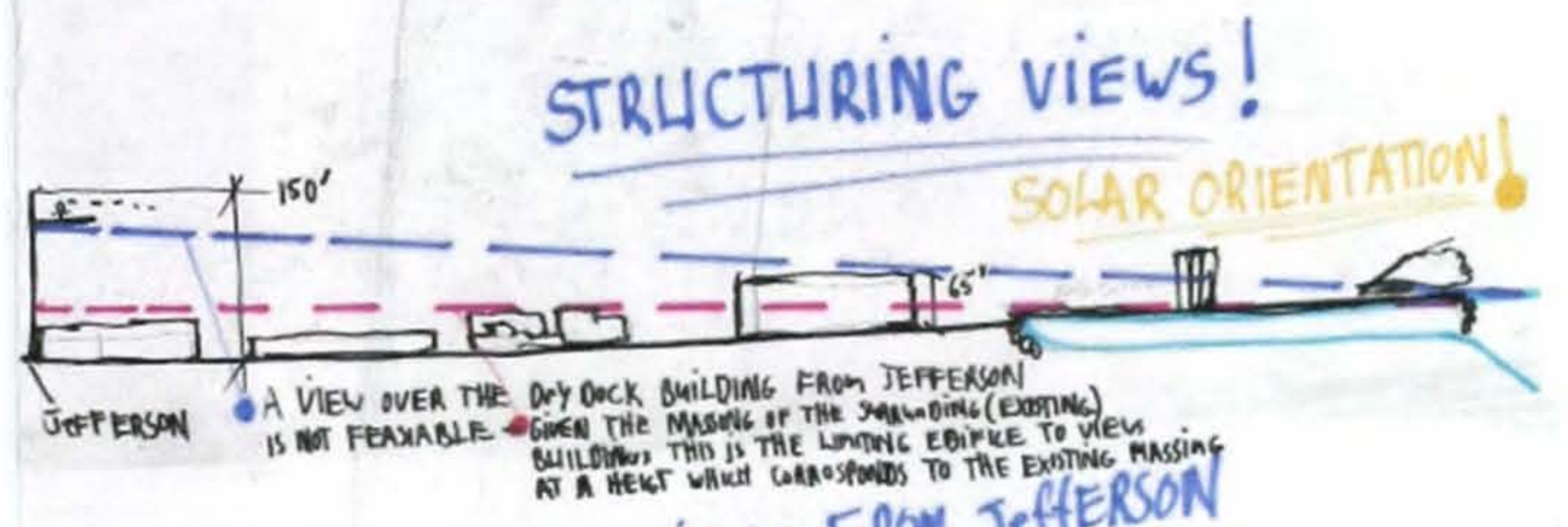
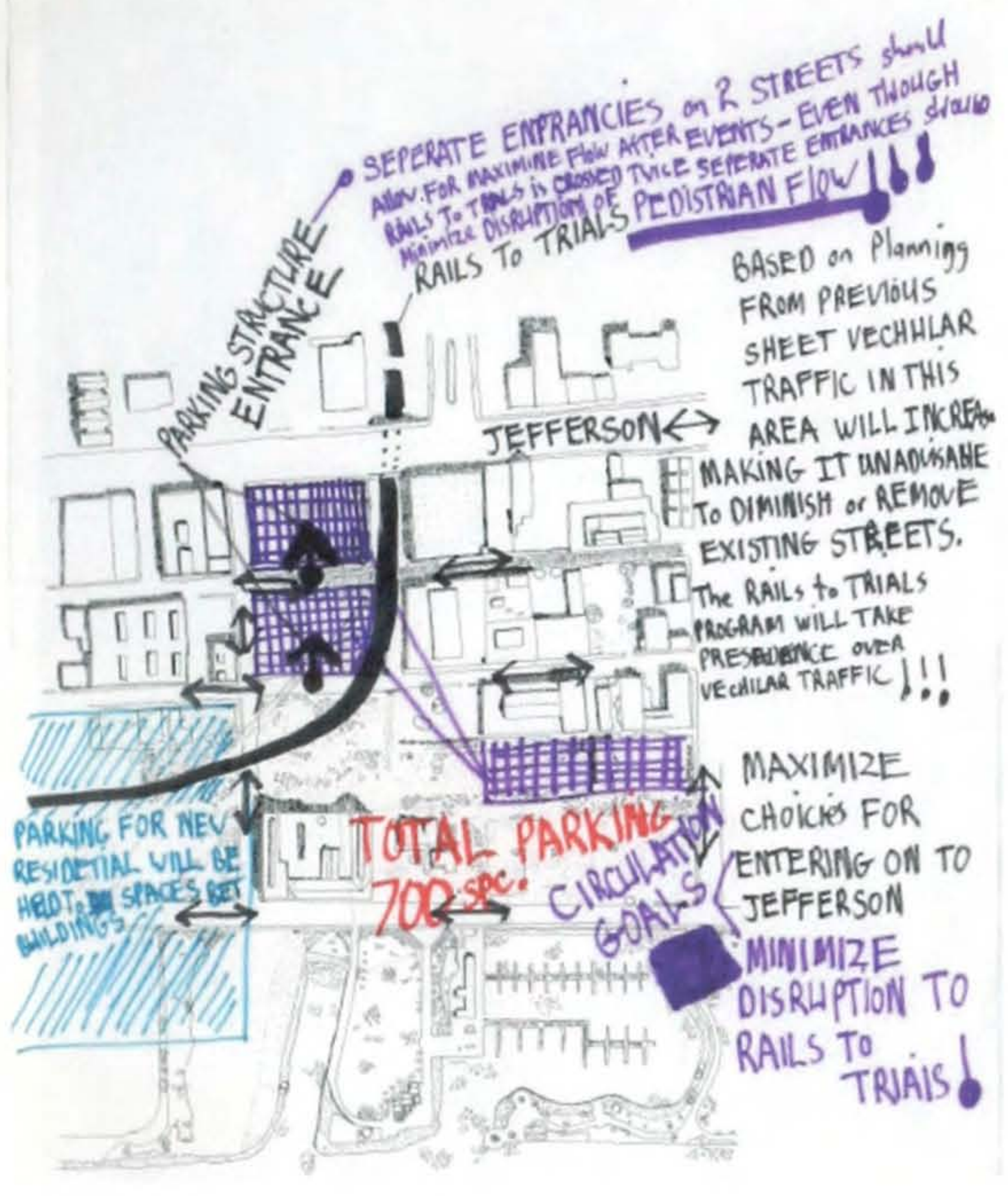
Maintain the historic corridor known as the Dequinder Cut as a pedestrian connection from the North side of Jefferson through the site all the way to the Detroit River.

The City of Detroit has developed a comprehensive plan to revitalize the entire area around the site. This plan outlines a mixed use of residential and retail. This plan will increase vehicular traffic in the area so at least one of the streets running east to west through the site should be maintained, (Woodbridge or Franklin) or another option might be to reintroduce the historic street which was called Quoin that ran east to west directly behind the Dry Dock Building.

Maintain all North to South streets in order to provide access to Jefferson.

Create a street wall along the North to South street of Orleans.

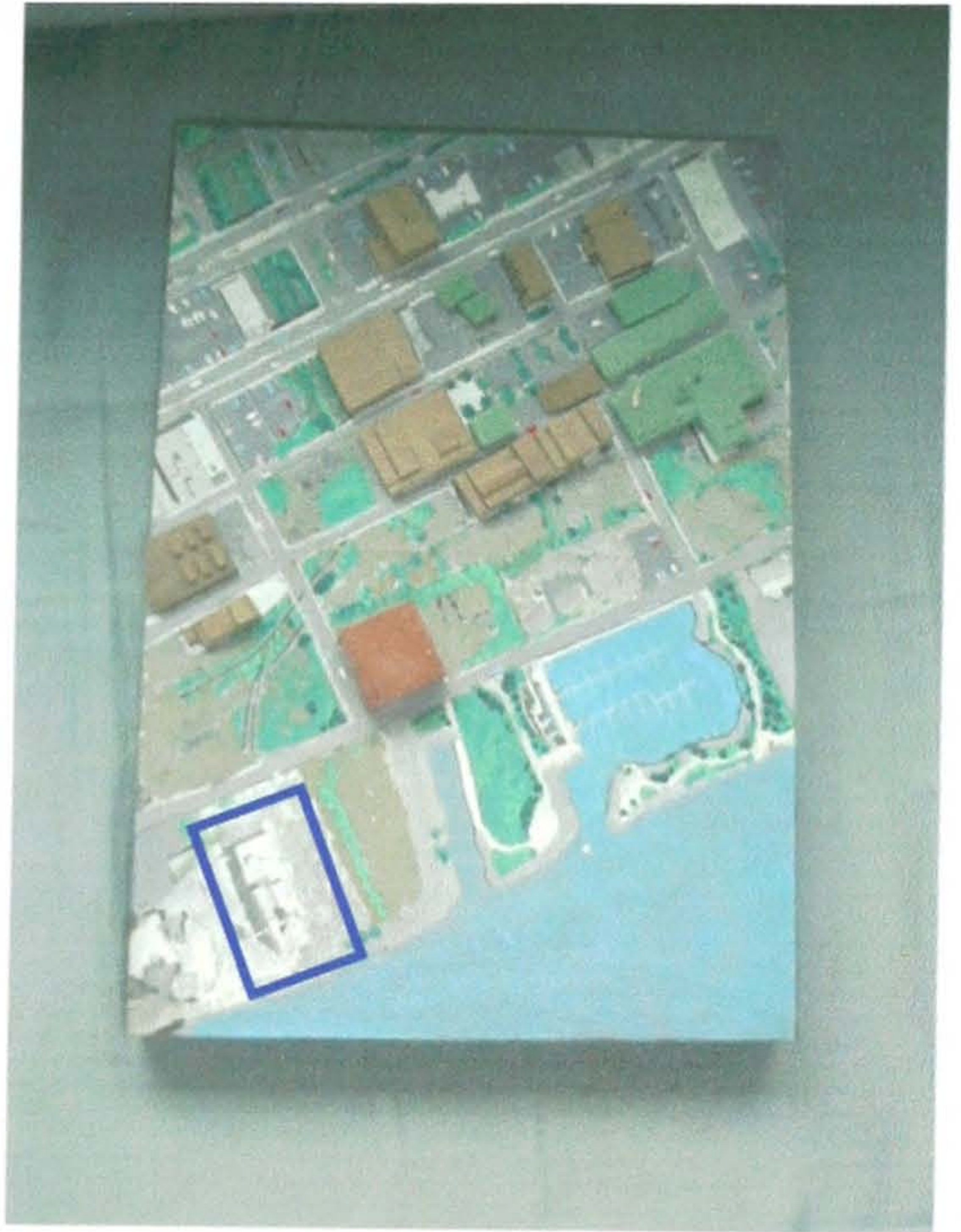




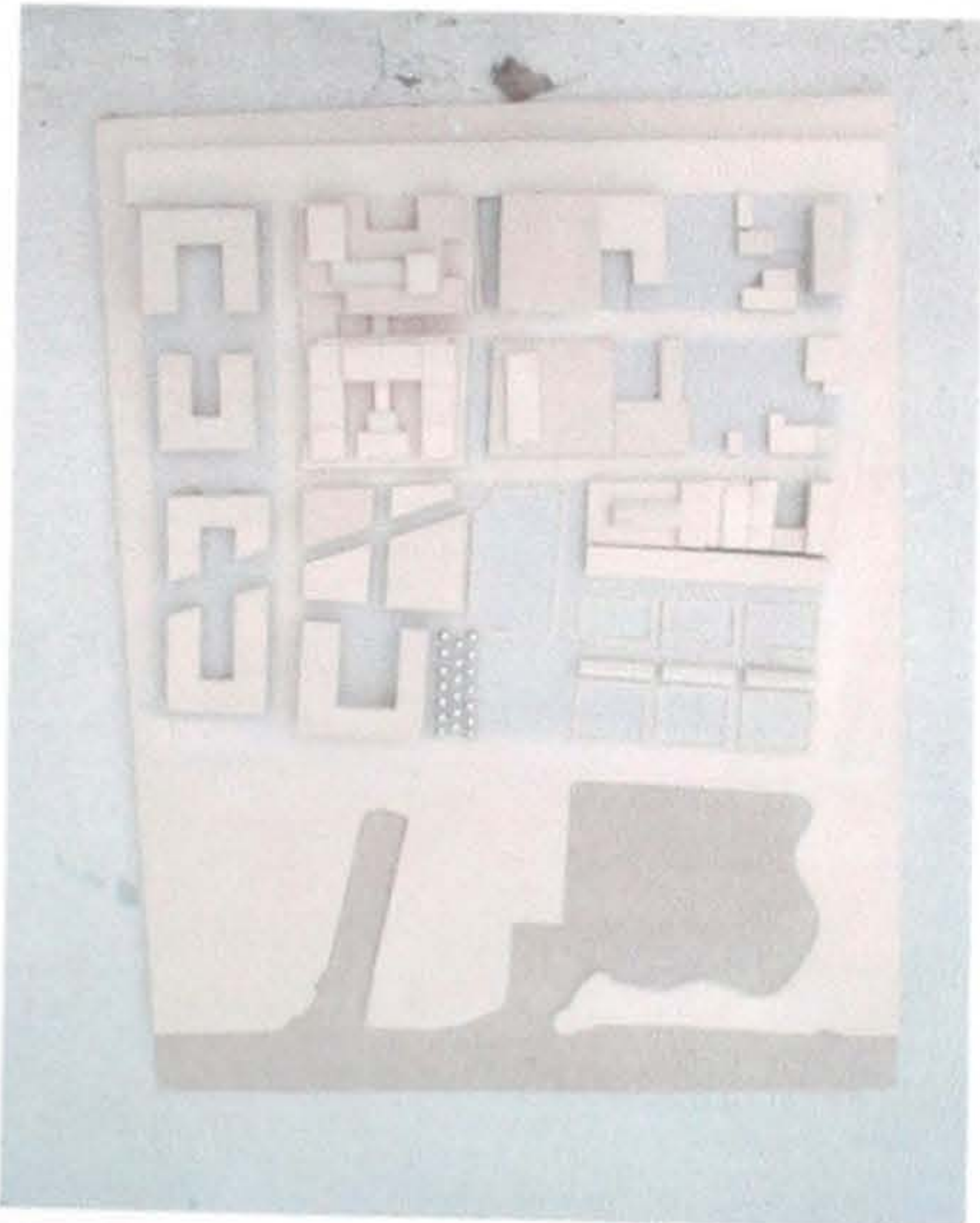
The site analysis extended towards making some early decisions on how the composition might take advantage of the sites many assets both those which have always existed and those which have developed through the course of the cities development.



The site at the beginning of the project



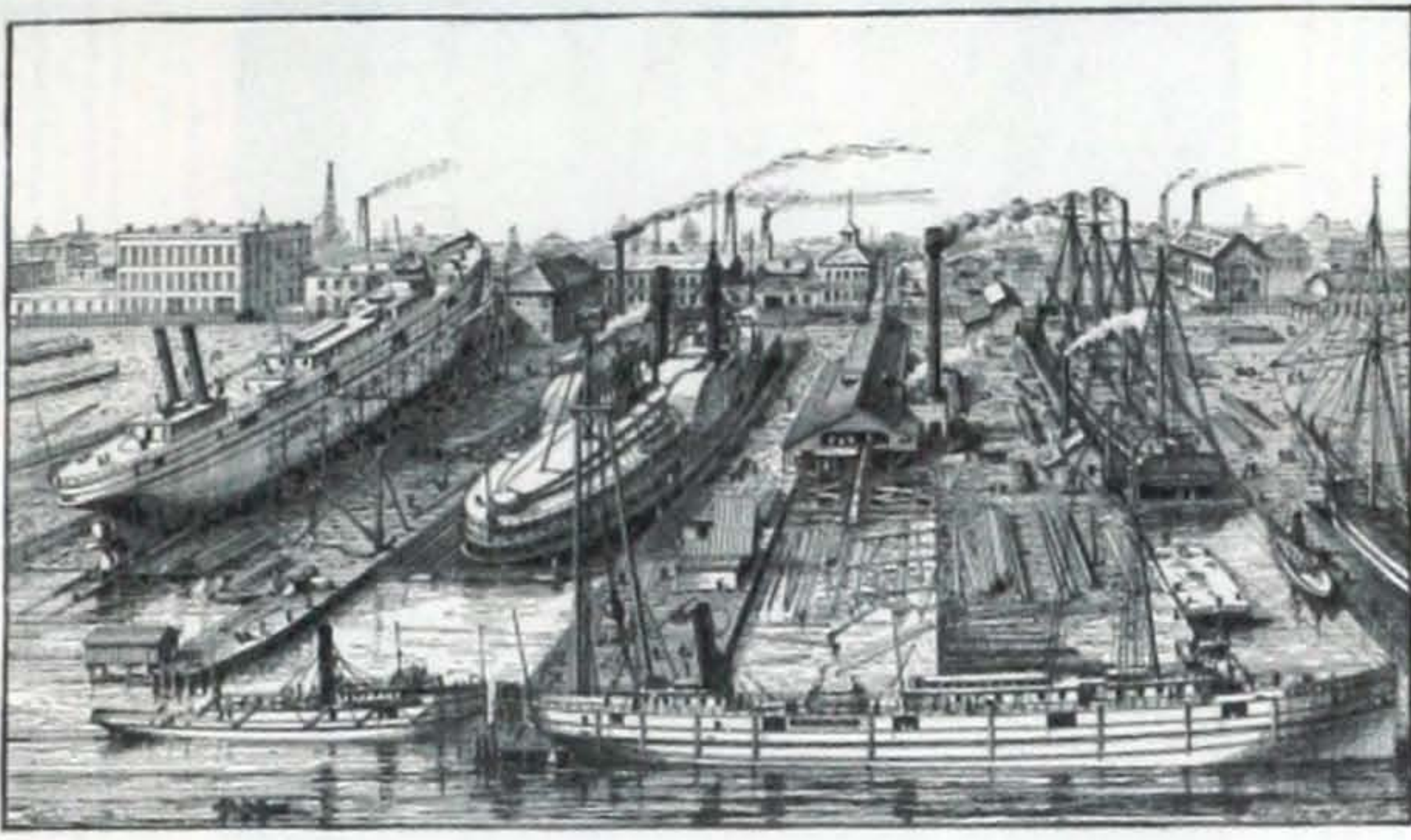
La Farge Concrete Company was removed during the winter of 2006



One of the conditions set forth early in the development of this thesis project was the acceptance of the proposed changes to this area and every effort was made to consider the future vision of others for this area as a contextual referent.



By the spring of 2006 nothing remained along Orleans from Jefferson to Atwater as these sites were prepared to accept a mix of residential and commercial insertions

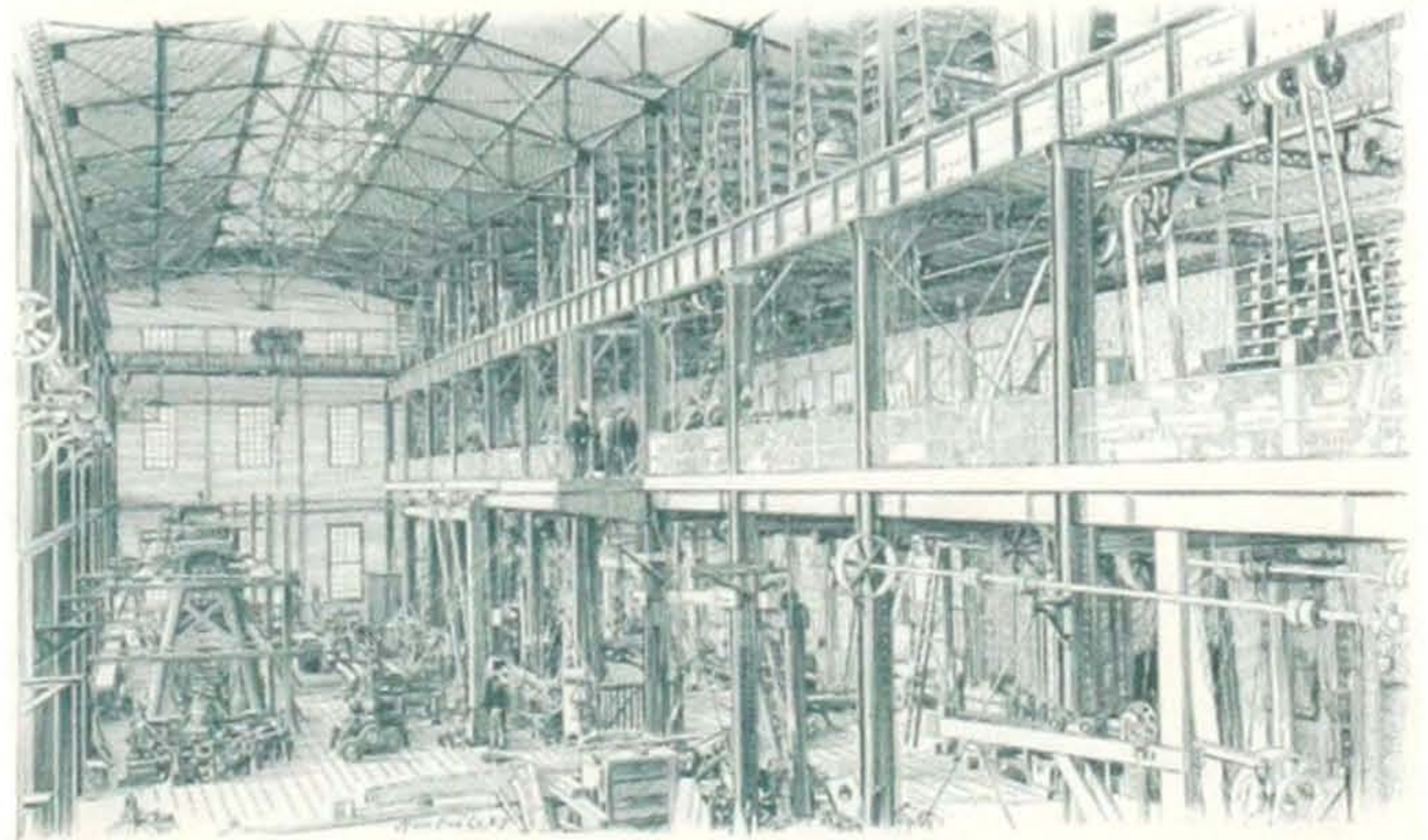
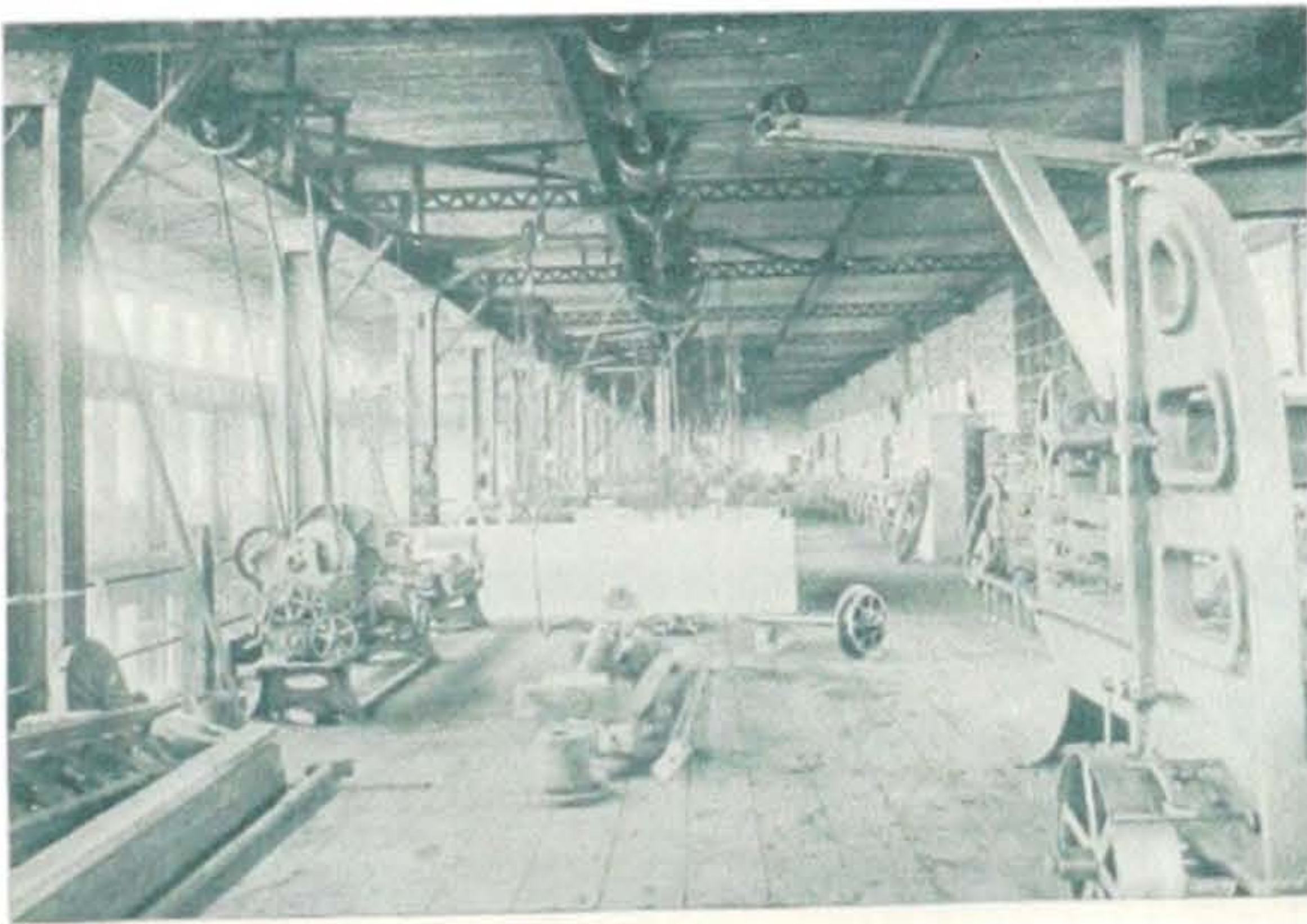
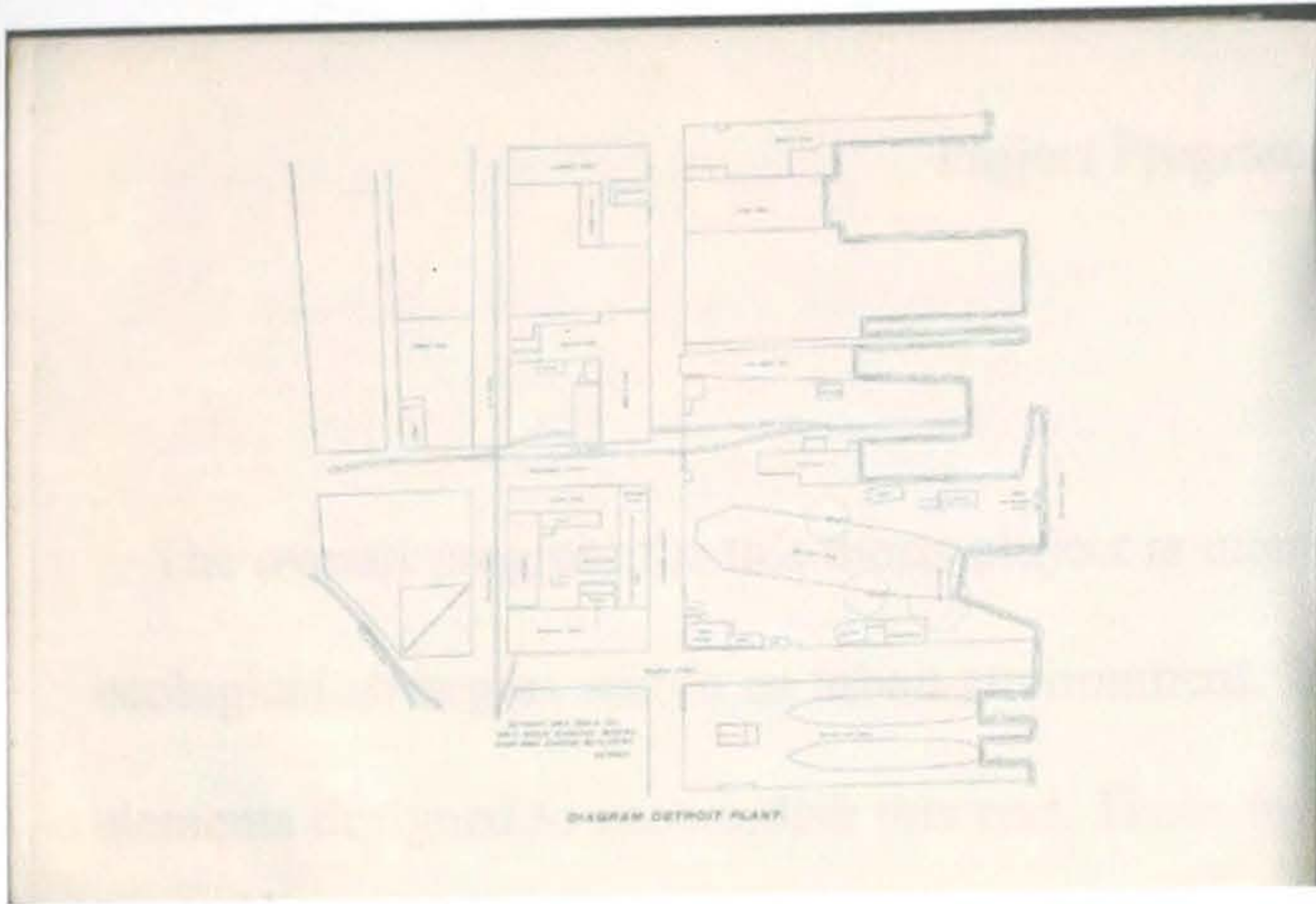


DRY DOCKS AND REPAIR YARD OF THE DETROIT DRY DOCK COMPANY, DETROIT, MICHIGAN.
Part of O'Connell Street



The Detroit Dry Dock Building is an important part of both the cities history and development and under the conditions set forth by the thesis a major consideration for the development so as part of the site analysis an in depth study of both the buildings history and tectonics was conducted.





The Dry Dock Building provided more than adequate natural light and ventilation to the interior work spaces. These qualities have not diminished in the last 150 years and provide an excellent opportunity to appreciate modern works of art in a truly remarkable historic setting as well as provide a wonderful view of the river and the parks which now grace the rivers edge although it would enhance the experience if the river was more approachable.

Project Program

The overall program for this thesis project is intended to promote both sustainable and ecological strategies within an urban environment. The project will be comprised of four elements designed to accomplish this end. These four elements are a Conference Center, a Research Center, an Exhibition Center and an Urban Agricultural Center.

Within the research and consulting portion of the project sustainable and ecological strategies will be explored and practiced both in a general manner and one that is geared towards individual projects. The goal of this is that as projects are conceived within an urban environment that developers and designers can seek out advice specific to an individual project. The convention center will be a means to educate the general public on the availability of these sustainable practices in order to generate a sense of community responsibility and also to help educate developers and designers. The center will be a place that a dialogue can begin between those whose make the city their home and those who are responsible for designing the built environment. The connection between these two facilities will become an area of exhibition meant to promote interest and share ideas in a more tactile manner. A major concern in any building project is the impact that the building makes on both the site and surrounding area so the research center will extend to the creation and maintenance of environmentally friendly exteriors. This extension will also create an urban space in hopes that the general public will become active participants in all that this project offers. A portion of the project will be designed to explore ways in which ecological strategies can be extended to existing

residences and will also explore small-scale urban farming by the means of thirty thousand square feet of green houses.

This project is meant to discover and share information that can make an urban environment more than just a collection of buildings and businesses seeking their own interests. In order to accomplish the goals set forth for this project it should be located as near to the city center as possible, it would also be beneficial for this project to be close to a river in hopes that environmental responsibility can extend to a larger scale. This project is meant to be a cultural event so the surrounding environment should offer a variety of activities which include but is not limited to, business, commercial, entertainment and residential. This project could conceivable be of a large scale but a central location within an urban setting is of greater importance as it is a project that promotes interaction so the size of the project will be determined after the other site criteria have been meet.

As our cities transform from areas of production to areas of service the number of abandoned buildings grow. As adaptive reuse is one of the most sustainable strategies that can be under taken given this set of circumstances this project will explore ways in which these buildings can not only be reused but can incorporate ecological strategies thereby increasing there sustainable qualities. The project will also explore ways to improve ecological strategies for new buildings and seek to find economically feasible ways to achieve these goals.

Within the construct of this thesis project the elements must be serve a two-fold purpose. They are to be considered as both materials of construction and necessities of subsistence. This thesis project will continually fold and refold these elements through

out the composition and entertain their presence as the unifying element of the composition.

Although this project as proposed contains a variety of elements and therefore spatial requirements the thesis is interested in the connection and therefore ability to bring together that which appears to be dissimilar, so where it may appear that a series of separate entities may serve the program more efficiently the thesis project will attempt to become a single definitive performance of volumes.

When considering the sustainable aspects of materials used to construct a composition we must consider that this is a function of time. This thesis project not only assumes but elicits the continuation of the city as a viable aspect of not only the human condition but as the vehicle, which promotes the continuation of human evolution and potential. More simply stated, permanence, and this is a simple matter of tectonics. Energy and natural resources expended, to create that which is meant to remain expressive well beyond a single epoch, is under the conditions of this thesis not only well spent but a condition of responsibility.

This thesis demands response to the realities of what exists but seeks to elicit a future that might with forethought solicit growth. This considered, the important part the automobile has played in Detroit demands that PARKING become a main consideration and that it becomes a very prominent element within the composition of this project. Our dependency on the automobile is a cause for concern on many levels; socially- alienation from the street and each other. Environmentally- air quality, cost of infrastructure, materials used in production.

This element of the thesis project realizes the immediate need for parking but a future that replaces this dependency and therefore this structure is conceived as a transitional element that will maintain its usefulness in a future that is not dependant on the automobile. Can it transform into a garden space or even become a green house? Considering the tectonic requirements of each it would seem that this is possible. Louis Kahn stated that the nature of assembly is “transcendent”, a place where human beings gather to share a “commonness”. The spirit of this thesis is based on collaboration and corporation.

The City of Detroit is unique and has a great deal to offer, although there are spatial deficiencies one of which is a prominent gathering space for large groups of people that share a common interest and seek to share both knowledge and vision, to discuss the present and plan for the future. This is precisely the type of activity that this thesis project seeks to elicit, as a function of this kind could conceivably become the catalyst to form a model of dynamic growth.

As with all aspects of this project this element of the composition will seek to encompass a two-fold purpose. In the case of the convention this purpose is scale. This element of the project will contain both large scale and intimate volumes, which should be placed within the composition to look out onto the City. These volumes are positioned to become witness to the process of revitalization

The essence of the thesis is that contributions that solve problems and promote growth need not be limited to a few trained professionals. Those who use and visit the city know the strengths and defiance's that the city possesses on an intimate level and are a potential and vital source of ideas.

The overall construct of the Research Center will be aimed towards but not limited too, research in sustainable strategies. This will enable an example of environmental responsiveness to manifest itself physically. The center will examine all aspects of renewable and cutting edge technology, in hope that improvements in both the, quality of life, and the quality of the natural environment can be realized by the way we construct the built environment. The research center will provide interior and exterior volumes to promote sustainable strategies. The center will provide areas for highly controlled research and areas for interested citizens to utilize and initiate a more intimate typology of research. The center will also explore ways to improve farming techniques in an urban environment there by decreasing dependency on products that come to the city from great distances in keeping with the struggle towards sustainability

An extension of the research center will include constructed wetlands and public gardens centered around thirty thousand square feet of green houses. These areas will serve a two-fold purpose, one of aesthetics and one of an ecological function, where run off water will be collected and filtered for use to sustain all organic under takings and to serve as a construction material that will be used throughout the composition.

An exhibition of any kind is an opportunity for people to gather and share a common interest and to develop new interests through active participation. In keeping with the thesis there must be a variety of exhibition spaces and these volumes must incorporate both interior and exterior environments. These volumes should present an opportunity to interact with the research center as it is in keeping with the thesis that it is through interaction that a sense of place is reveled. Research is to be shared and seeks to improve both the human condition and our environment.

This thesis project assumes that investigative research can become an exhibition of human endeavor and furthermore given the spirit of this thesis that it is possible to investigate not only what is predetermined but to elicit both ideas and respond to others ideas as to what direction that research should take?

Not to pervade it does not insinuate shared is it in conception corroboratively constructed to assume presence accepting from place all suggestion of disposition.

RESEARCH CENTER

Description	Quantity	Area (sq. ft.)
Entrance Lobby	1	3000
Laboratories	6 @ 3000 apc.	18,000
Computer Rm.	1 20 Stations	1800
Archive / Library	1	4000
Offices	5	
Head of Staff	1	200
Manger	1	200
General	1	450
Reception Area	1	400
Conference Rm.	3 @250	750
Class Rm.	4 @ 500	2000
Lounge	1	800
Toilets		
Women	1	1000
Men	1	900
Staff Locker Rms.		
Women	1-12 Lockers 4 Showers	700
Men	1-12 Lockers 4 Showers	700
Storage	2 @ 2000	4000
Service / Delivers	1	1200
Janitor Closet	2	100
Mechanical Rm.	1	4300

47,400
x .6= 28,440

TOTAL: 76,000 sq.ft.

Conference Center

Description	Quantity	Area (sq. ft.)
Entrance vestibule	1	500
Entrance Hall	1	4500
Auditorium; Fixed Seating	1-500 seat	6000
Conference; Movable Seating	2-250 seat @ 3750	7000
Conference Rms.	4-25 seat @500	2000
RoofTop Cafe Bar	1 @250 seat	6000
Kitchen'	1	1000
Office Supplies / Gift Shop	1	1200
Snack Bar	1	1400
Storage	2 @1200	2400
Reception Area	1	500
Offices	5	300
Mangers	1	200
Assistant Manger General	1	450
Offices (general)	3 @ 150	200
Copy Rm.	1	250
Employee lounge	1	600
Archive	1	
Toilets		2000
Women	2 @ 1000	1800
Men	2 @ 900	
Locker Rm.		3000
Women	1-150 lockers 6 showers	3000
Men	1-150 lockers 6 showers	200
Janitors Closets	4 @ 50	4500
Mechanical Rm.	1	1600
Coat Rm.	2 @ 800	2000
Service Area / Delivers	1	3000
Storage	1	200
Office	1	400
Toilet / Shower	1	

55,600

x .2=12,000

TOTAL: 67,600

Exhibition Center

Description	Quantity	Area (sq. ft.)
Entrance Lobby	1	4500
Main Exhibition	1	20,000
Exhibition	4 @ 2500	10,000
Workshop	4 @ 1500 ape.	6000
Offices		
Manger	1	200
General	3	300
Reception	1	800
Copy Rm.	1	200
Lounge	1	200
Project supplies / Gift Shop.	1	1600
Coffee Court	1	1200
Cafeteria	1	7000
Kitchen	1	1000
Storage (materials & equipment)	4 @ 1000 ape.	4000
Toilets		
Women	1	1000
Men	1	900
Janitor Closet	1	100
Mechanical Rm.	1	4000
Delivers	1	2000
Office	1	100
Staff Toilets		150
Women	1	100
Men	1	100
		64,975
		x .2= 13,000
		TOTAL: 78,000

PROGRAM Space Detail Summaries

	CAPACITY	NO. OF UNITS	NSF UNIT	NSF TOTAL
Entrance Hall	200	1	1500	1500

Purpose | Functions

This space is intended to create a welcoming atmosphere to both guests and employees.

Activities

Discuss, Conceive, Implement

Spatial Relationships

These spaces are placed within the composition in such a manner that privacy is ensured and day lighting and access to the exterior available.

Special Considerations

Equipment | Furnishings

These spaces are to be extremely flexible and will have the potential to fulfill a wide variety of needs as it pertains to the individual conference sessions. Tables, Chairs, Movable Panels, Audio Visual Equipment, Display Cases, (not complete)

Behavioral Considerations

Structural System

This structural system should be fully integrated and exhibit the potential for the use of renewable materials

Mechanical | Electrical Systems

This area will demonstrate the extent to which passive systems and day lighting can be used to reduce reliance on conventional mechanical systems.

Site | Exterior Environment Considerations

This space will represent the potential for fully integrated design and to exhibit how a symbiotic relationship can be formed between the built and natural environment.

PROGRAM Space Detail Summaries

LIBRARY/ARCHIVE	CAPACITY	NO. OF UNITS	NSF UNIT	NSF TOTAL
	300	1	8400	8400

Purpose | Functions

This space will provide the opportunity for staff members, students and the general public to take advantage of existing programs, create new programs and develop designs solutions for both hypothetical scenarios and real consultations.

Activities

Investigate, Create solutions, Teach

Spatial Relationships

This space will require a certain level of security but should provide accesses to physical models of investigations.

Special Considerations

Lighting in this space will be of great importance as it pertains to both function and a model for investigation. This area will also require a high level of climatic control.

Equipment | Furnishings

This area will require computers, desks, chairs and a means to create physical models.

Behavioral Considerations

This space should include an area for exhibiting work being undertaken and storage for equipment not in use.

Structural System

This structural system should be fully integrated and exhibit the potential for the use of renewable materials

Mechanical | Electrical Systems

Perimeter hydronics and VAV systems. This area is to be included in day lighting strategies but will also contain high efficiency lighting fixtures, which will become a source of experimentation.

Site | Exterior Environment Considerations

This space will have access to the facilities north balcony, which wraps around to the east where an enclosed stairway allows access to the ground level as well as a 1 to 20 ramp for ADA accessibility.

PROGRAM Space Detail Summaries

	CAPACITY	NO. OF UNITS	NSF UNIT	NSF TOTAL
COMPUTER LAB	30	1	3000	3000

Purpose | Functions

This space will provide the opportunity for staff members and students to take advantage of existing programs, create new programs and develop designs solutions for both hypothetical scenarios and real consultations.

Activities

Investigate, Create solutions, Teach

Spatial Relationships

This space will require a certain level of security but should provide accesses to physical models of investigations.

Special Considerations

Lighting in this space will be of great importance as it pertains to both function and a model for investigation. This area will also require a high level of climatic control.

Equipment | Furnishings

This area will require computers, desks, chairs and a means to create physical models.

Behavioral Considerations

This space should include an area for exhibiting work being undertaken and storage for equipment not in use.

Structural System

This structural system should be fully integrated and exhibit the potential for the use of renewable materials

Mechanical | Electrical Systems

This area will contain a specialized air conditioning system and an adequate electrical system complete with surge protected service.

Site | Exterior Environment Considerations

This space will have access to the facilities north balcony but will be accessible only through the library for security reasons.

PROGRAM Space Detail Summaries

LABORATORIES	CAPACITY	NO. OF UNITS	NSF UNIT	NSF TOTAL
	12	6	3600	21,600

Purpose | Functions

These highly specialized spaces provide the means for a variety of investigations to take place.

Activities

Investigate, Integrate, Learn

Spatial Relationships

These spaces combine to form an integral portion of the composition; they will at times function individually and at other times in conjunction with one or more others. All these spaces will be organized around the library; computer lab and conference rooms while maintain a relationship with one another.

Special Considerations

Soft daylight and gentle breezes provide an atmosphere where one cannot help but to enjoy their surroundings and cast off seemingly mundane concerns no matter how briefly.

Equipment | Furnishings

This space will require chairs, tables, booths and other equipment, which is necessary for the operation of a cafeteria.

Behavioral Considerations

This area of the project is highly specialized in both the investigations that take place there and the way that it interacts with other interested parties. It is here that science and technology seek to include rather than to act independently in the spirit of shared knowledge.

Structural System

This structural system should be fully integrated and exhibit the potential for the use of renewable materials

Mechanical | Electrical Systems

This portion of the facility may need to include a somewhat more conventional mechanical system than other segments of the project due to certain levels of control necessary to insure some aspects of the investigations.

Site | Exterior Environment Considerations

This project is intended to investigate ways in which the built and natural environments can become as one and as the research facility is it's vehicle of investigation special thought must be given to the transcendence of ideals into a functioning reality.

PROGRAM Space Detail Summaries

OFFICE SPACE	CAPACITY	NO. OF UNITS	NSF UNIT	NSF TOTAL
	20	1	3000	3000

Purpose | Functions

This highly special space not only provides the spatial requirements necessary to run the research center but is designed as an experimental space where almost any office configuration can be tested as part of the center's continuing effort to promote harmonious work environments.

Activities

Scheduling, Planning, Organizing

Spatial Relationships

The offices are to be located near the main entrance to insure easy access to guests and clients.

Special Considerations

This space is located in a convenient location accessible to all conference areas as well as to the general public.

Equipment | Furnishings

The offices will be equipped with general office furnishings including a Desk, Computer, Chair, and Filing cabinet.

Behavioral Considerations

This area will demonstrate the extent to which passive systems and day lighting can be used to reduce reliance on conventional mechanical systems. To a certain extent these offices will provide an opportunity to exhibit different strategies for creating office spaces, which are designed to enhance the working environment.

Structural System

This structural system should be fully integrated and exhibit the potential for the use of renewable materials

Mechanical | Electrical Systems

This area will demonstrate the extent to which passive systems and day lighting can be used to reduce reliance on conventional mechanical systems. The

Site | Exterior Environment Considerations

This space will represent the potential for fully integrated design and to exhibit how a symbiotic relationship can be formed between the built and natural environment.

PROGRAM Space Detail Summaries

	CAPACITY	NO. OF UNITS	NSF UNIT	NSF TOTAL
Reception Area	20	1	400	400

Purpose | Functions

The reception area is actually completely integrated into the office area as the center promotes the use of democratic design practices but it does offer seating to anyone waiting to be received or waiting to take part in a conference or consultation

Activities

Scheduling, Planning, Organizing

Spatial Relationships

The reception area is located near the main entrance to insure easy accesses to guests and clients.

Special Considerations

This space is located in a convenient location assessable to all conference areas as well as to the general public.

Equipment | Furnishings

The reception area will be equipped with comfortable seating and tables..

Behavioral Considerations

This area will demonstrate the extent to which passive systems and day lighting can be used to reduce reliance on conventional mechanical systems. To a certain extent these offices will provide an opportunity to exhibit different strategies for creating office spaces, which are designed to enhance the working environment.

Structural System

This structural system should be fully integrated and exhibit the potential for the use of renewable materials

Mechanical | Electrical Systems

This area will demonstrate the extent to which passive systems and day lighting can be used to reduce reliance on conventional mechanical systems. The

Site | Exterior Environment Considerations

This space will represent the potential for fully integrated design and to exhibit how a symbiotic relationship can be formed between the built and natural environment.

PROGRAM Space Detail Summaries

CONFERENCE RM.	CAPACITY	NO. OF UNITS	NSF UNIT	NSF TOTAL
	10	3	250	750

Purpose | Functions

These spaces are designed to provide an intimate setting for small conferences and consultations with clients.

Activities

Discuss, Conceive, Implement

Spatial Relationships

These conference spaces are for consultations and a special effort should be made to exhibit the potential for thermal delight and the poetic relationship that can be created when interior and exterior space is shared.

Special Considerations

Equipment | Furnishings

These spaces are to be extremely flexible and will have the potential to fulfill a wide variety of needs as it pertains to the individual conference sessions. Tables, Chairs, Movable Panels, Audio Visual Equipment, Display Cases, (not complete)

Behavioral Considerations

Structural System

This structural system should be fully integrated and exhibit the potential for the use of renewable materials

Mechanical | Electrical Systems

This area will demonstrate the extent to which passive systems and day lighting can be used to reduce reliance on conventional mechanical systems.

Site | Exterior Environment Considerations

This space will represent the potential for fully integrated design and to exhibit how a symbiotic relationship can be formed between the built and natural environment.

PROGRAM Space Detail Summaries

Your text here

SERVICE and DELIVERIES

CAPACITY	NO. OF UNITS	NSF UNIT	NSF TOTAL
10	1	4000	4000

Purpose | Functions

This space is intended to handle all deliveries to the center as well as to provide a staging area for the individual components of the center.

Activities

Handle deliveries, handle recycling, and coordinate deliveries to individual components of the center.

Spatial Relationships

This space is located along Orleans Street at the level of the centers ground floor.

Special Considerations

Truck access to this space is provided by a ramp, which continues to the service area of the conference center.

Equipment | Furnishings

This area is equipped to handle loading and unloading by way of a ramp it also provides storage for both refrigerated and dry goods.

Behavioral Considerations

Unlike many areas of service this area presents the opportunity to exemplify environmentally friendly behavior as well as to demonstrate the capacity of a building to successfully involve its inhabitants in a recycling program.

Structural System

The roof of this area is designed to store a large quantity of water so special consideration must be given to the structural system. This secondary function also provides an opportunity to emphasize the integration of the structure towards achieving the centers goal of water management.

Mechanical | Electrical Systems

Perimeter hydronics and VAV systems. This area is to be included in day lighting strategies but will also contain high efficiency lighting fixtures, which will become a source of experimentation.

Site | Exterior Environment Considerations

Like all areas of the center this area provides an opportunity to set an example of our responsibility to the environment.

PROGRAM Space Detail Summaries

	CAPACITY	NO. OF UNITS	NSF UNIT	NSF TOTAL
CLASS ROOMS	25	4	500	2000

Purpose | Functions

These spaces are intended to provide a vehicle for the sharing of knowledge as well as being spaces in which investigations dealing with thermal comfort and lighting requirements can be investigated.

Activities

The classrooms are intended to provide access to information to anyone interested in environmentally friendly design or any other aspect of learning that the center participates in.

Spatial Relationships

These spaces will be located near the laboratories so that that which is under investigation and the methods being used in those investigations can become a means of teaching

Special Considerations

The spatial qualities and the means to achieve those qualities should be a means of teaching.

Equipment | Furnishings

These classrooms will contain the normal equipment associated with classrooms as well as other more specialized teaching aids.

Behavioral Considerations

This area will demonstrate the extent to which passive systems and day lighting can be used to reduce reliance on conventional mechanical systems. To a certain extent these offices will provide an opportunity to exhibit different strategies for creating office spaces, which are designed to enhance the working environment.

Structural System

This structural system should be fully integrated and exhibit the potential for the use of renewable materials

Mechanical | Electrical Systems

This area will demonstrate the extent to which passive systems and day lighting can be used to reduce reliance on conventional mechanical systems. The

Site | Exterior Environment Considerations

This space will represent the potential for fully integrated design and to exhibit how a symbiotic relationship can be formed between the built and natural environment.

PROGRAM Space Detail Summaries

	CAPACITY	NO. OF UNITS	NSF UNIT	NSF TOTAL
LOCKER ROOMS	20	2	1100	2200

Purpose | Functions

These locker rooms are meant to be available to anyone who works at the research center or participates in the centers employment and training program.

Activities

Shower, Change, Preparation

Spatial Relationships

The showers are to be located near the main entrance to insure easy accesses to both employees and trainees.

Special Considerations

This space is located in a convenient location assessable to all conference areas as well as to the general public.

Equipment | Furnishings

The showers toilets and sinks are to be of the low volume variety. As with all aspects of the center new equipment will be tested as it becomes available.

Behavioral Considerations

The lockers rooms should provide a welcoming atmosphere and be easily accessible.

Structural System

This structural system should be fully integrated and exhibit the potential for the use of renewable materials

Mechanical | Electrical Systems

This area will demonstrate the extent to which passive systems and day lighting can be used to reduce reliance on conventional mechanical systems. The

Site | Exterior Environment Considerations

The locker rooms enter out onto the east balcony, which also provides access to the ground level by way of an enclosed stairway.

PROGRAM Space Detail Summaries

	CAPACITY	NO. OF UNITS	NSF UNIT	NSF TOTAL
Toilets	16	2	900	1800

Purpose | Functions

The toilet rooms are available for all visitors and employees.

Activities

Shower, Change, Preparation

Spatial Relationships

The toilet rooms are to be located near the main entrance to insure easy accesses to both employees and trainees.

Special Considerations

This space is located in a convenient location assessable to all conference areas as well as to the general public.

Equipment | Furnishings

The showers toilets and sinks are to be of the low volume variety. As with all aspects of the center new equipment will be tested as it becomes available.

Behavioral Considerations

The lockers rooms should provide a welcoming atmosphere and be easily accessible.

Structural System

This structural system should be fully integrated and exhibit the potential for the use of renewable materials

Mechanical | Electrical Systems

This area will demonstrate the extent to which passive systems and day lighting can be used to reduce reliance on conventional mechanical systems. The

Site | Exterior Environment Considerations

The locker rooms enter out onto the east balcony, which also provides access to the ground level by way of an enclosed stairway.

PROGRAM Space Detail Summaries

Your text here

Mechanical Space	CAPACITY	NO. OF UNITS	NSF UNIT	NSF TOTAL
	10	2	2600	5200

Purpose | Functions

Both the east and west mechanical rooms house the climatic systems as well as the pumping equipment.

Activities

Provide the necessary air exchange and climatic requirements for the project.

Spatial Relationships

These spaces are housed within the parking structure directly below the service area to the west and the locker rooms and toilets on the east side of the project.

Special Considerations

Truck access to this space is provided by a ramp, which continues to the service area of the conference center.

Equipment | Furnishings

These spaces house the necessary mech. Equipment.

Behavioral Considerations

Unlike many areas of service this area presents the opportunity to exemplify environmentally friendly behavior as well as to demonstrate the capacity of a building to successfully involve its inhabitants in a recycling program.

Structural System

The roof of this area is designed to store a large quantity of water so special consideration must be given to the structural system. This secondary function also provides an opportunity to emphasize the integration of the structure towards achieving the centers goal of water management.

Mechanical | Electrical Systems

Perimeter hydronics and VAV systems. This area is to be included in day lighting strategies but will also contain high efficiency lighting fixtures, which will become a source of experimentation.

Site | Exterior Environment Considerations

Like all areas of the center this area provides an opportunity to set an example of our responsibility to the environment.

PROGRAM Space Detail Summaries

Your text here

Employee LOUNGE

CAPACITY	NO. OF UNITS	NSF UNIT	NSF TOTAL
10	1	600	600

Purpose | Functions

This space provides the centers employees a chance to relax during lunch and breaks as well as an area for employees to have a private locker.

Activities

This space provides employees personal storage and a place to relax during breaks.

Spatial Relationships

This space is adjacent to the office area.

Special Considerations

Although small this space provides employees a view of the courtyard garden.

Equipment | Furnishings

This space is equipped with individual employee lockers and a variety of small appliances for preparing basic meals as well as a table and chairs.

Behavioral Considerations

This space is an intersection between the office space and the winter garden.

Structural System

Mechanical | Electrical Systems

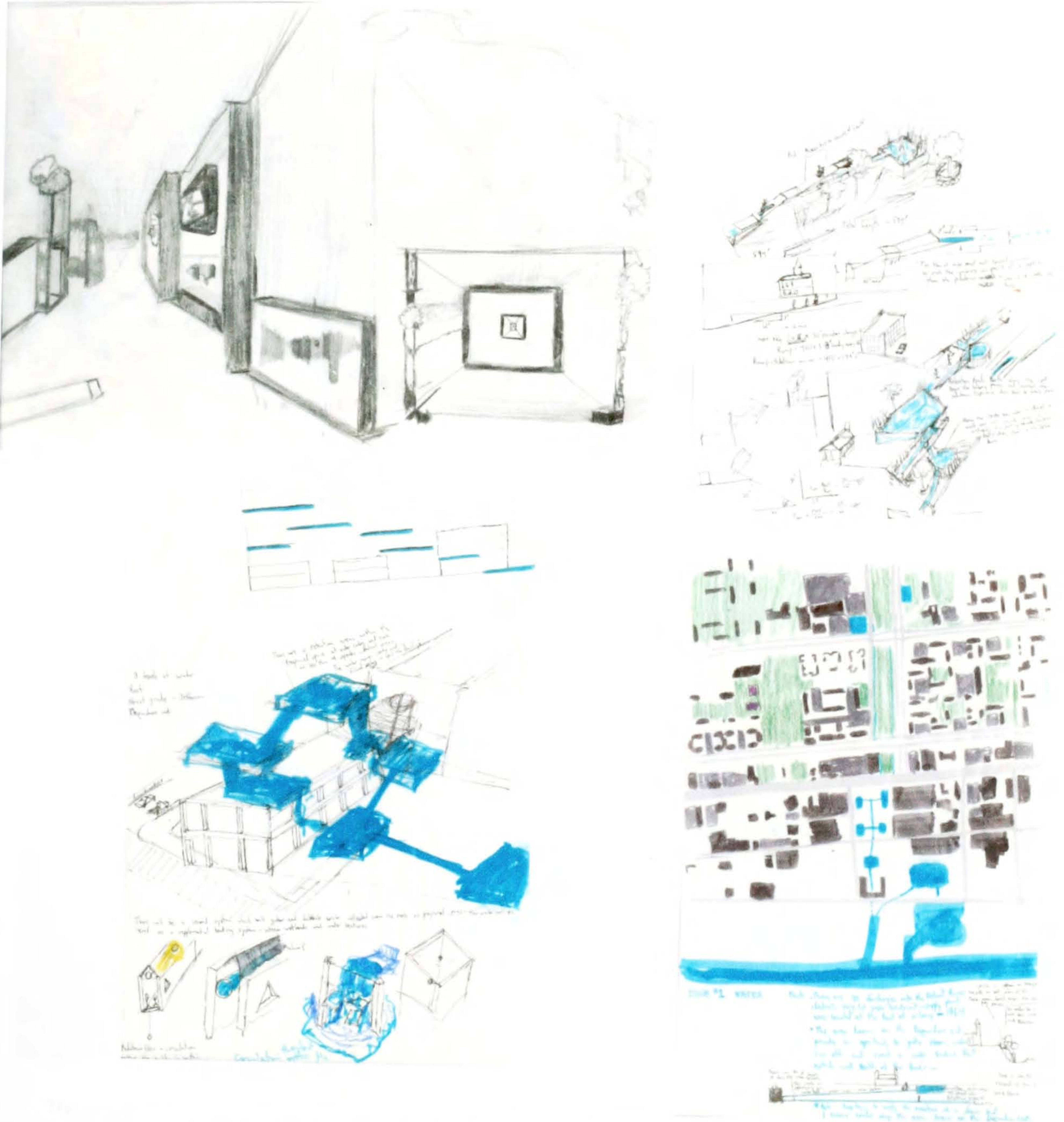
This area should provide electrical service appropriate to its function and an individual exhaust system over the cook top.

Site | Exterior Environment Considerations

This space will provide access to the office courtyard.

Spring Board

This phase of the design process represents the opportunity to test initial ideas within the context of the thesis investigation and provides a background from which to test those ideas as the design evolves and early compositional elements are explored.



These early sketches were a starting point in order to establish a sense of context between the developing program and the chosen site.

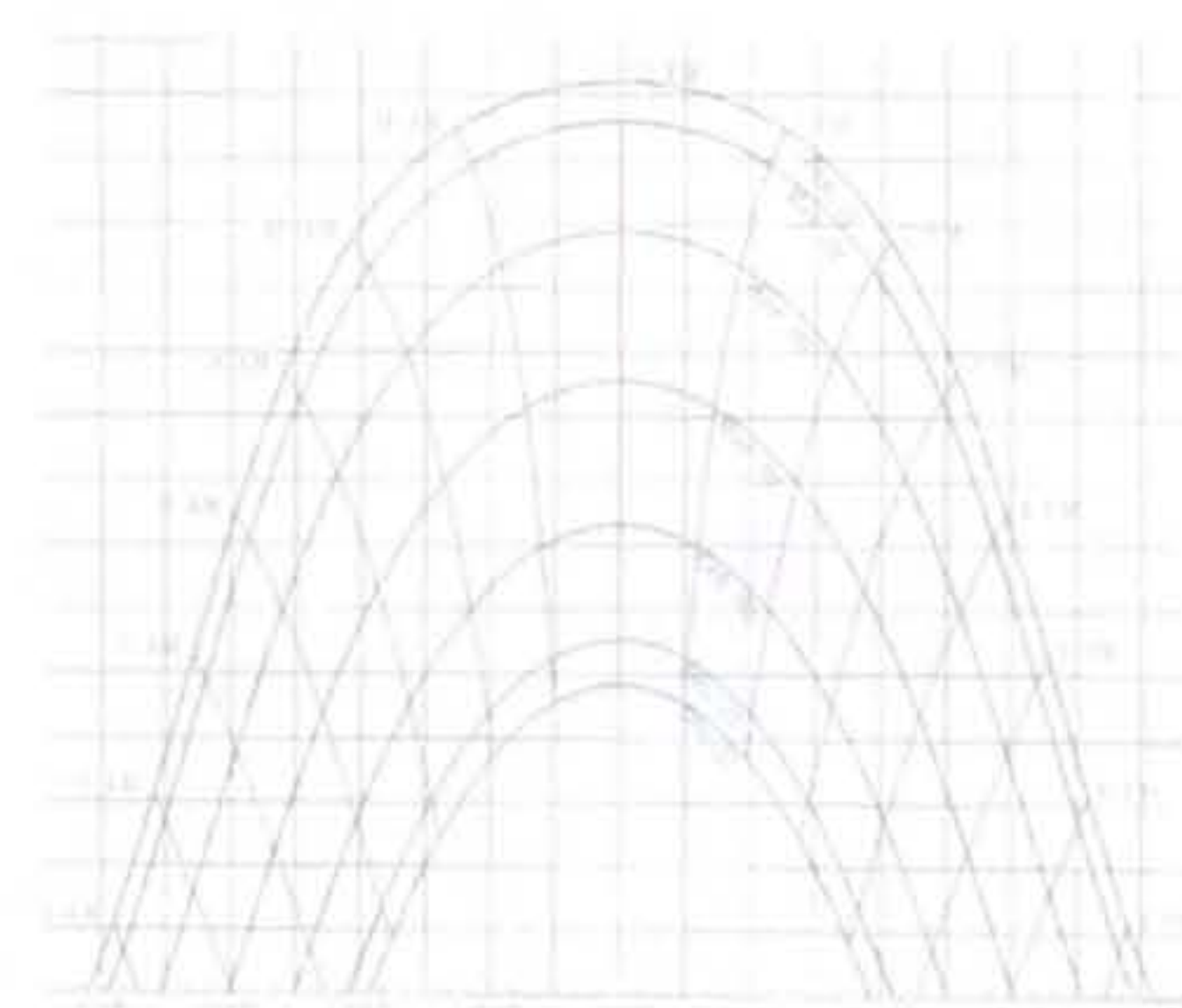
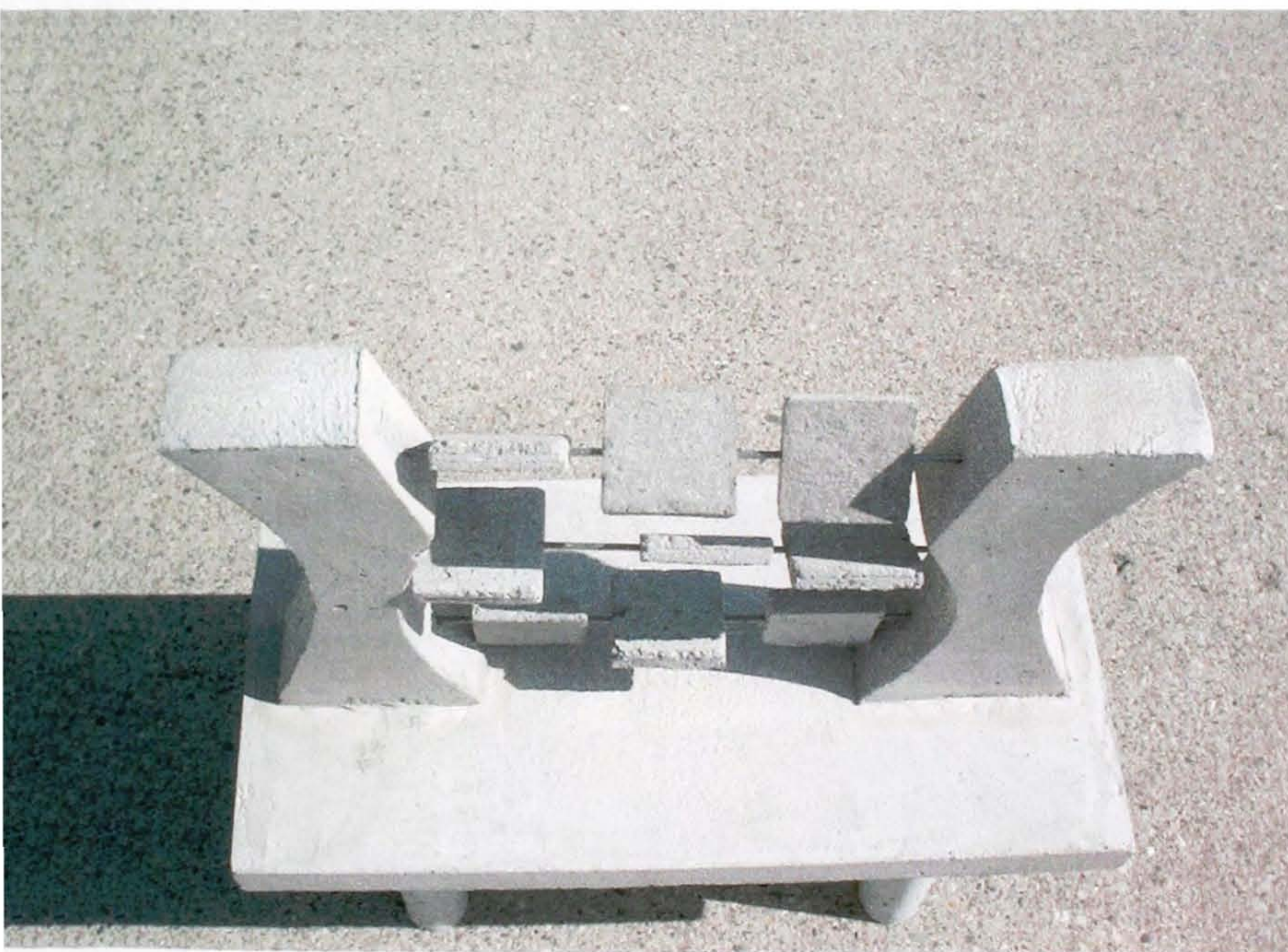


The beginning of an investigation, which was an effort to develop a threshold, which could extend beyond the boundaries of the site.

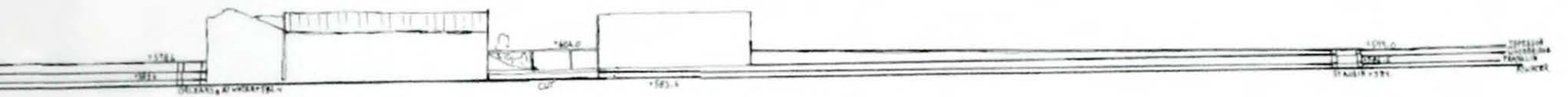


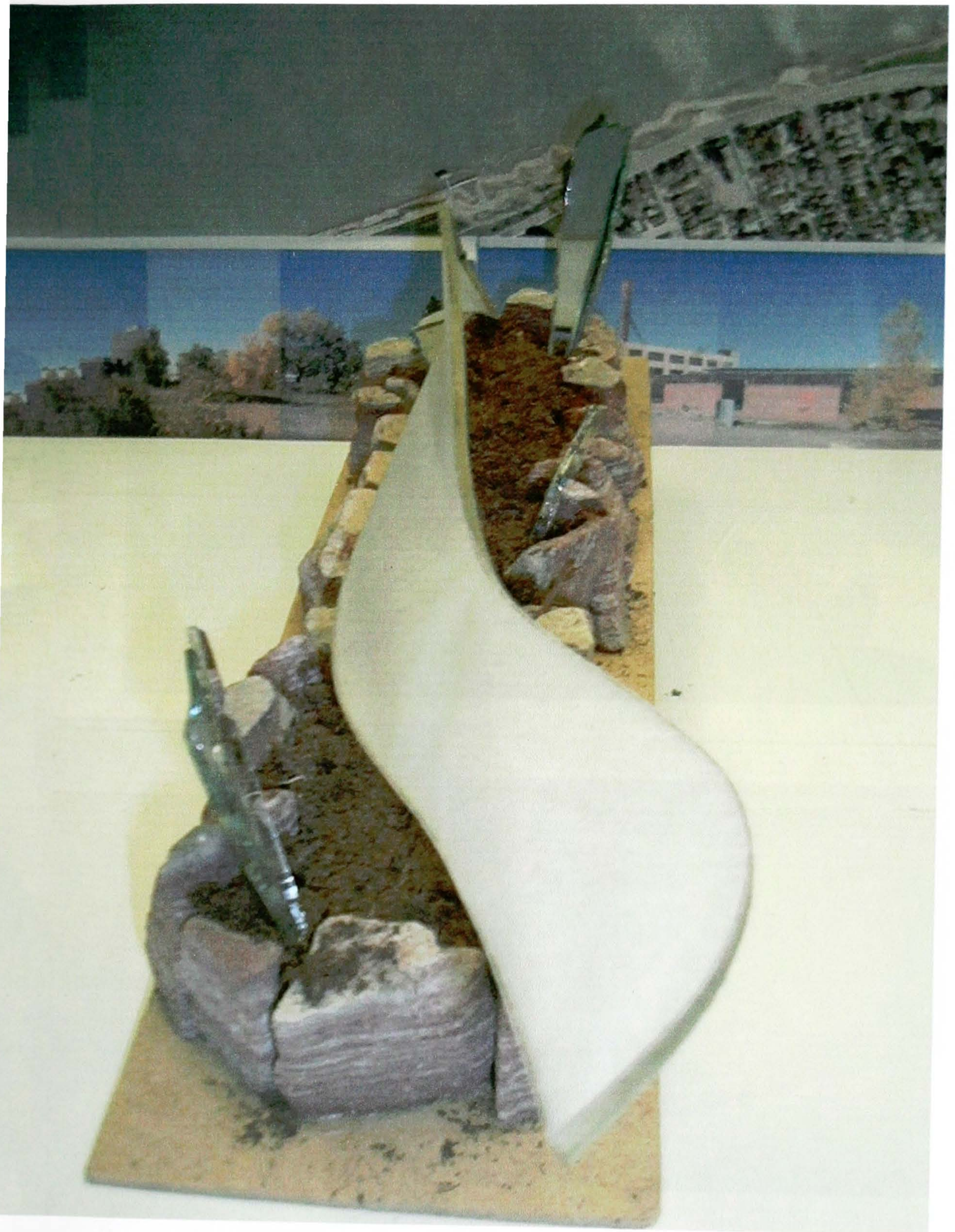
Continuing to explore the relationships between that which is natural and that which is built as a matter of convenience.



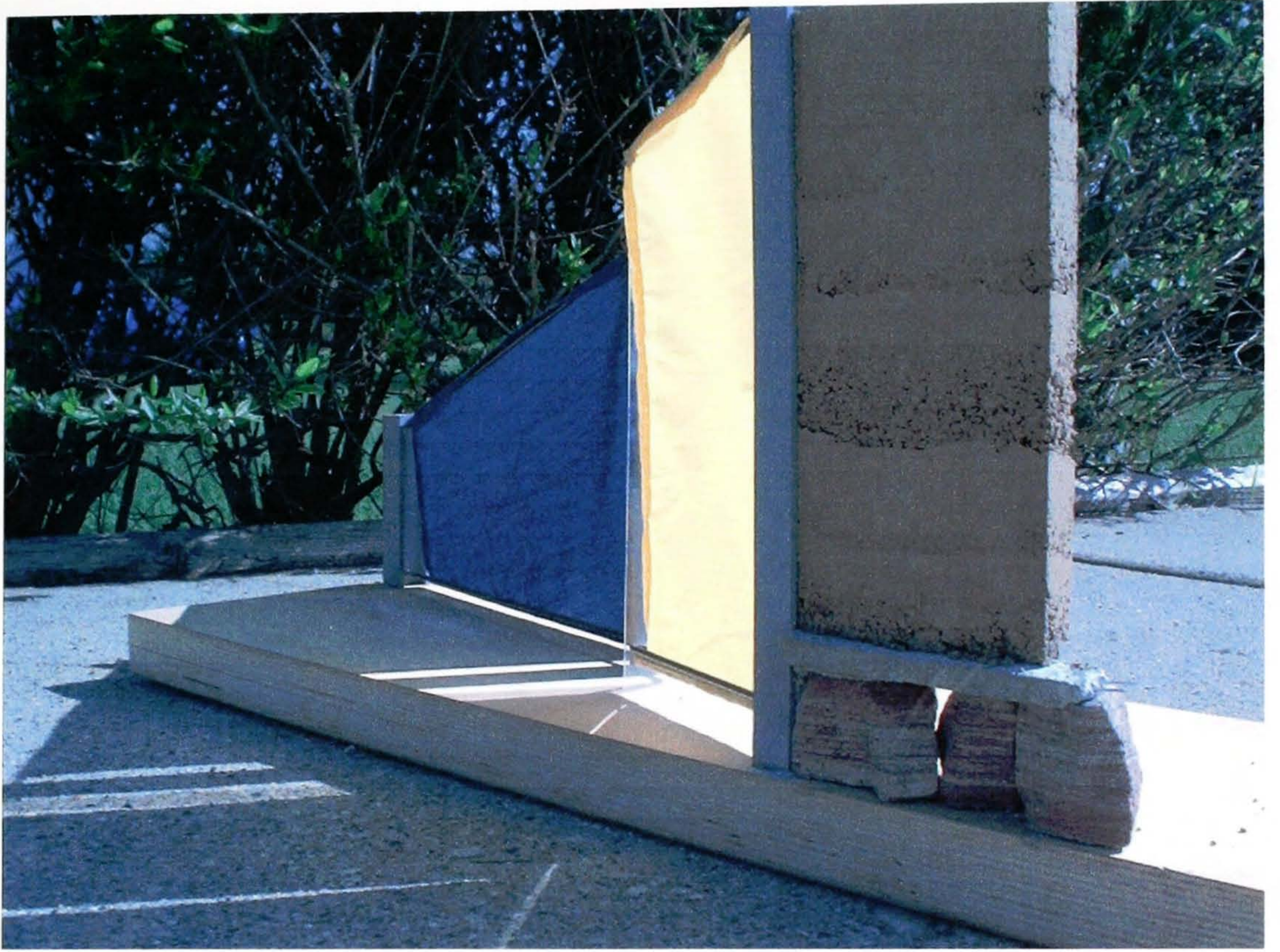


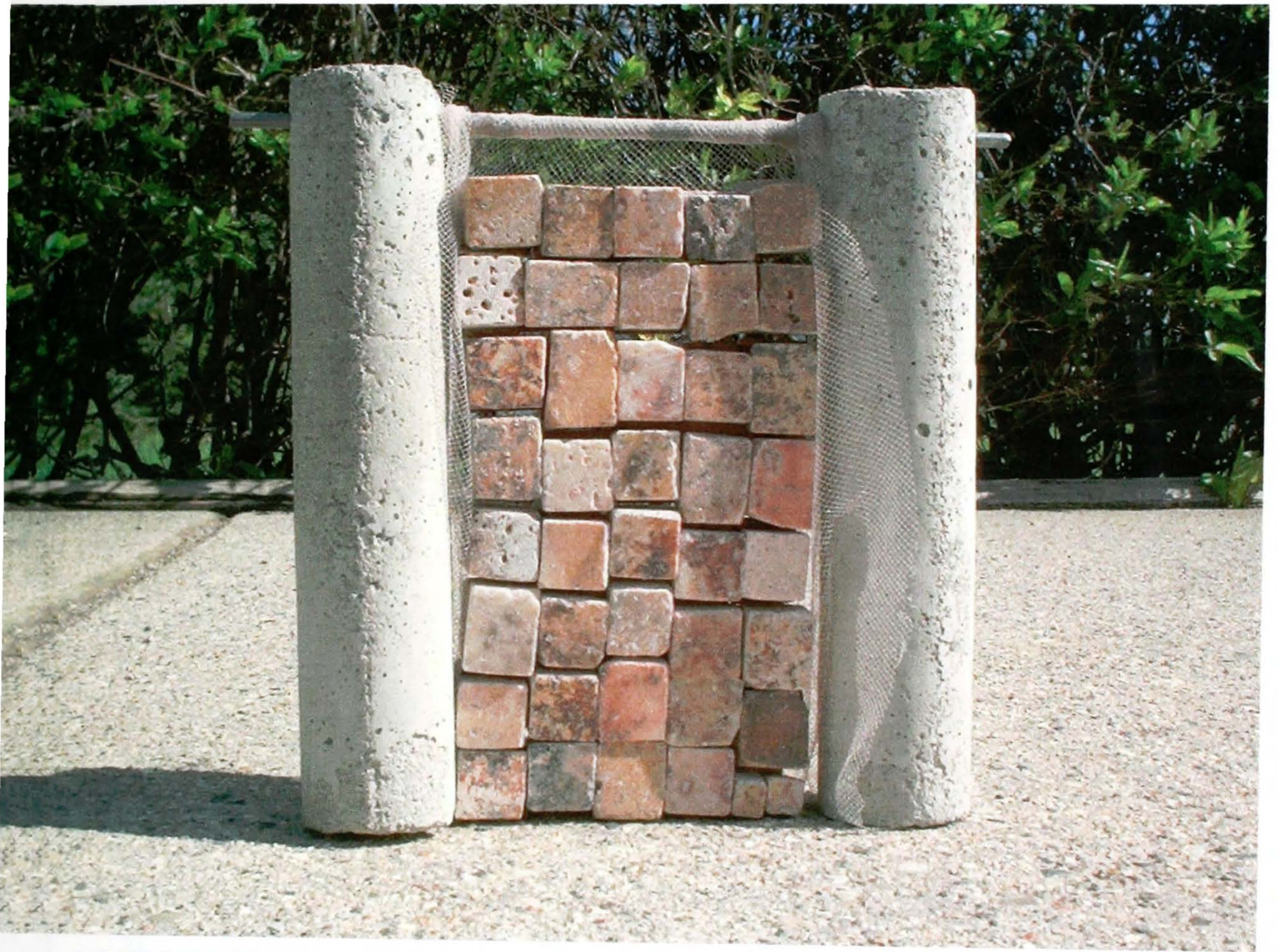
As the thesis became more focused so did the investigation of the site, which began to offer glimpses of a tectonic expression waiting to be discovered.





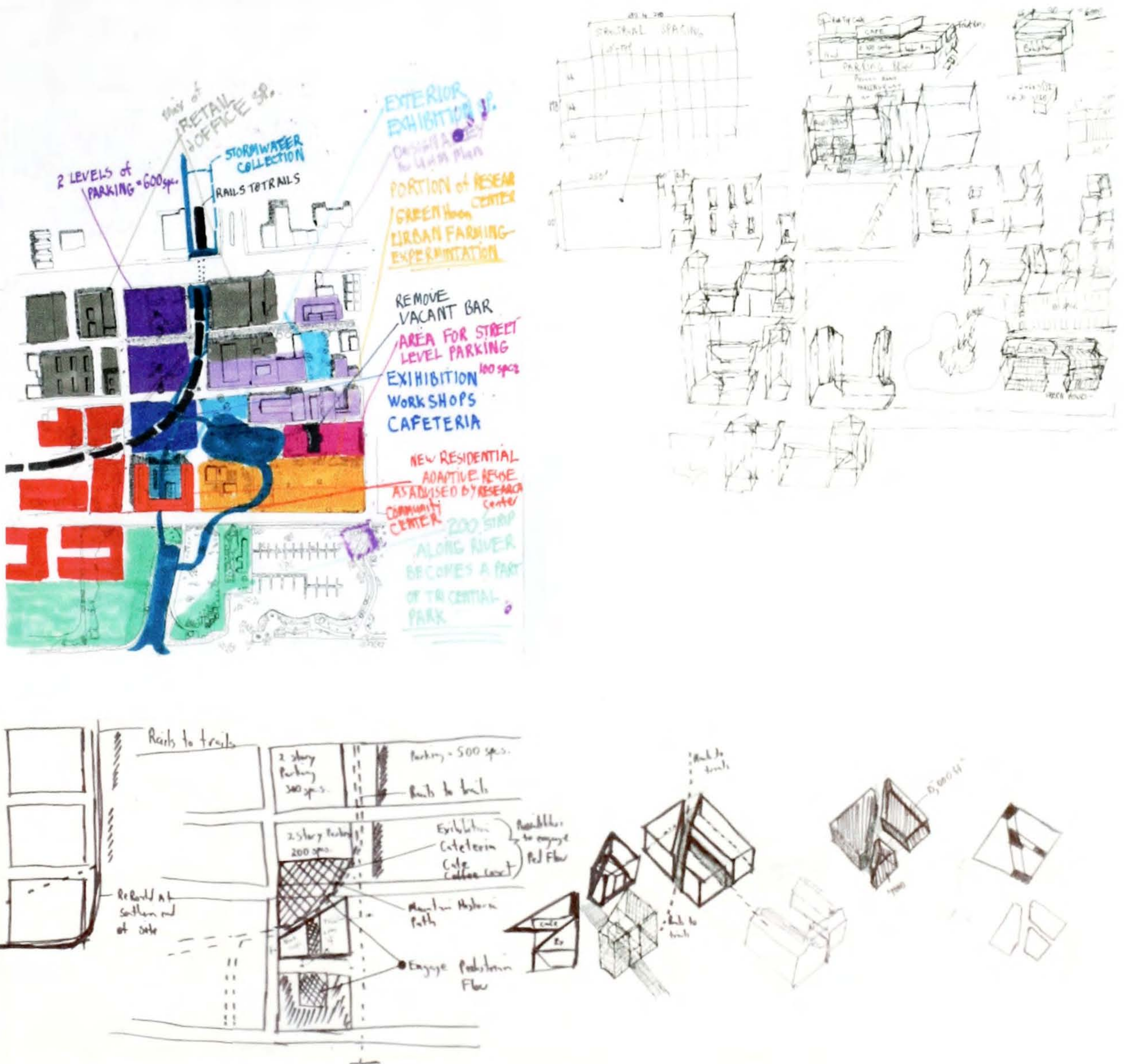
The thesis offered an opportunity to consider a conceptual flow both towards the river and from the river.





one investigation sought simple solutions to complex circumstances created as the enclosing fabric is removed in order to expose that which is but inches from our perception.

Schematic Design



The next phase of the thesis investigation was built on the development of a well-defined program and it is at this point in the design process that all of the previous conceptual explorations begin to guide the development of a recognizable manifestation of that which the site provides.

The intention of this project is to explore how an architectural insertion can reach well beyond the boundaries of its foundation and make a positive impact on both the natural environment and the surrounding community. This sketch is an exploration of ideas meant to achieve this goal as well as to begin organizing the project on its immediate site.

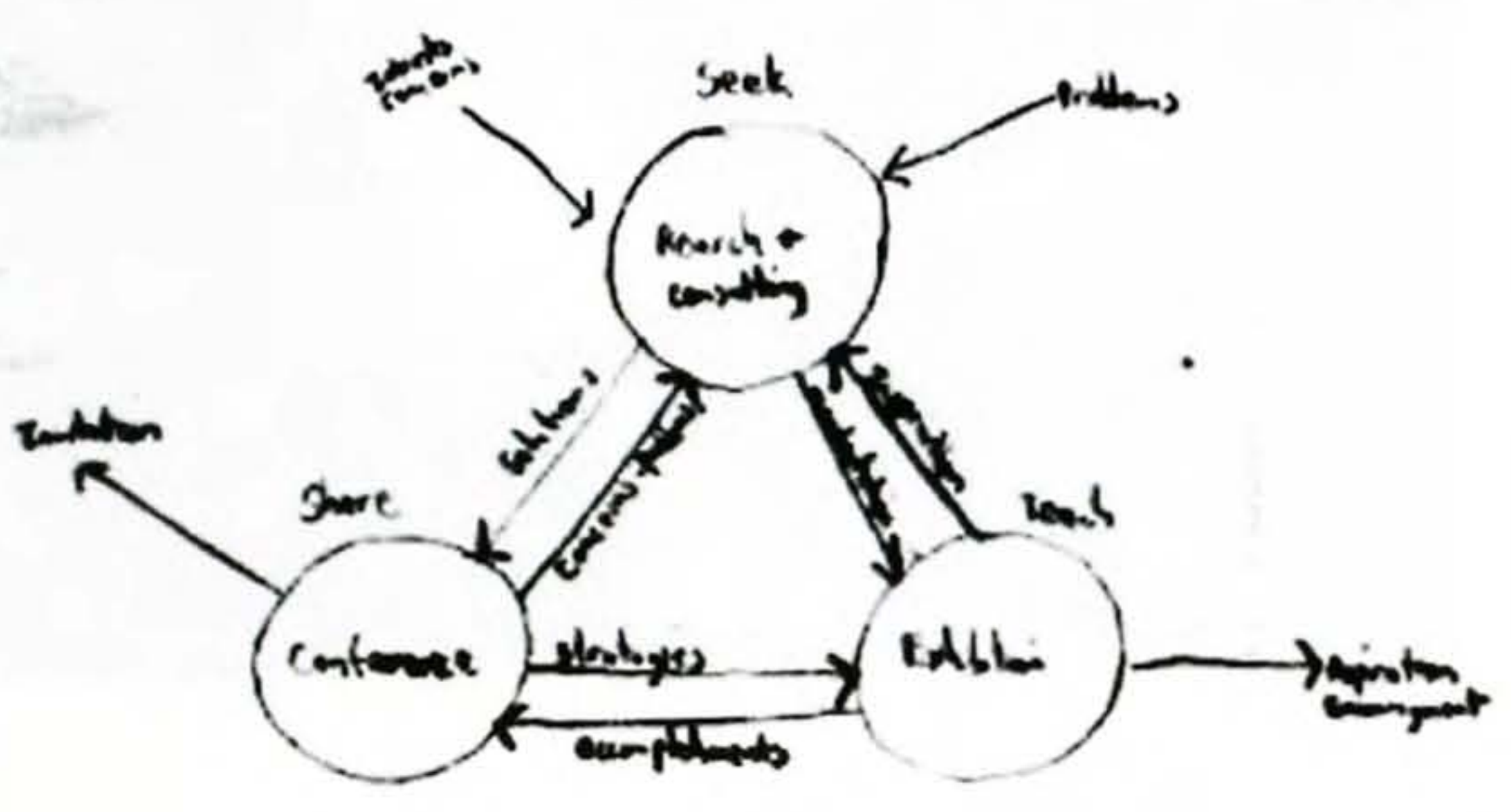
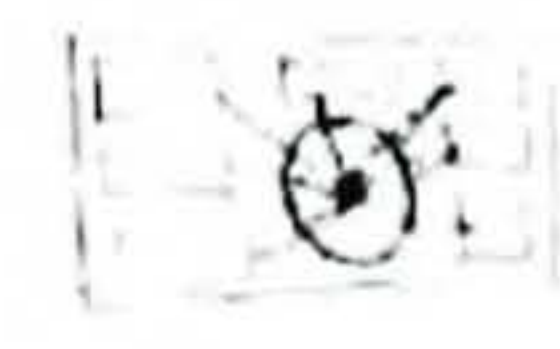


When I began this project it was to be non-didactic, still to urban farming but as I worked on it I was really aware (and aware) of the inclusion of smaller space and how many people it could hold. I want to believe that urban farms can or (at least) help communities there is not the case? I want to see the way that it can be used to improve the quality of life of young people and -relating to urban farming - improving the environmental quality of urban areas

Each one added to urban farm, it is not only well like but pairs but I am convinced that due to (the fact of reality) all other empty urban sites are to be used to truly impact the livability of a large urban area

Is an urban Area really a group of related communities held by by (Constraints) said David

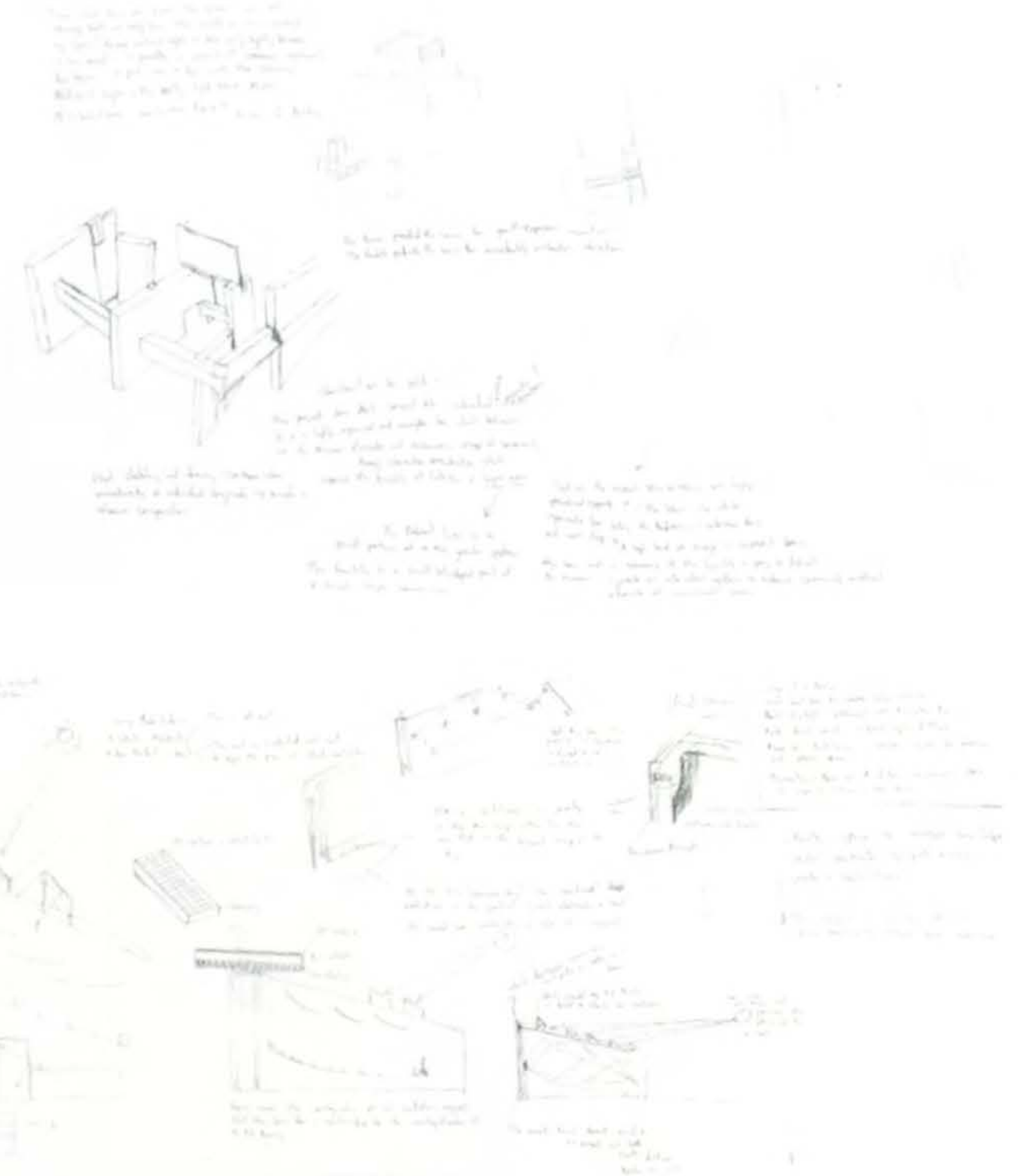
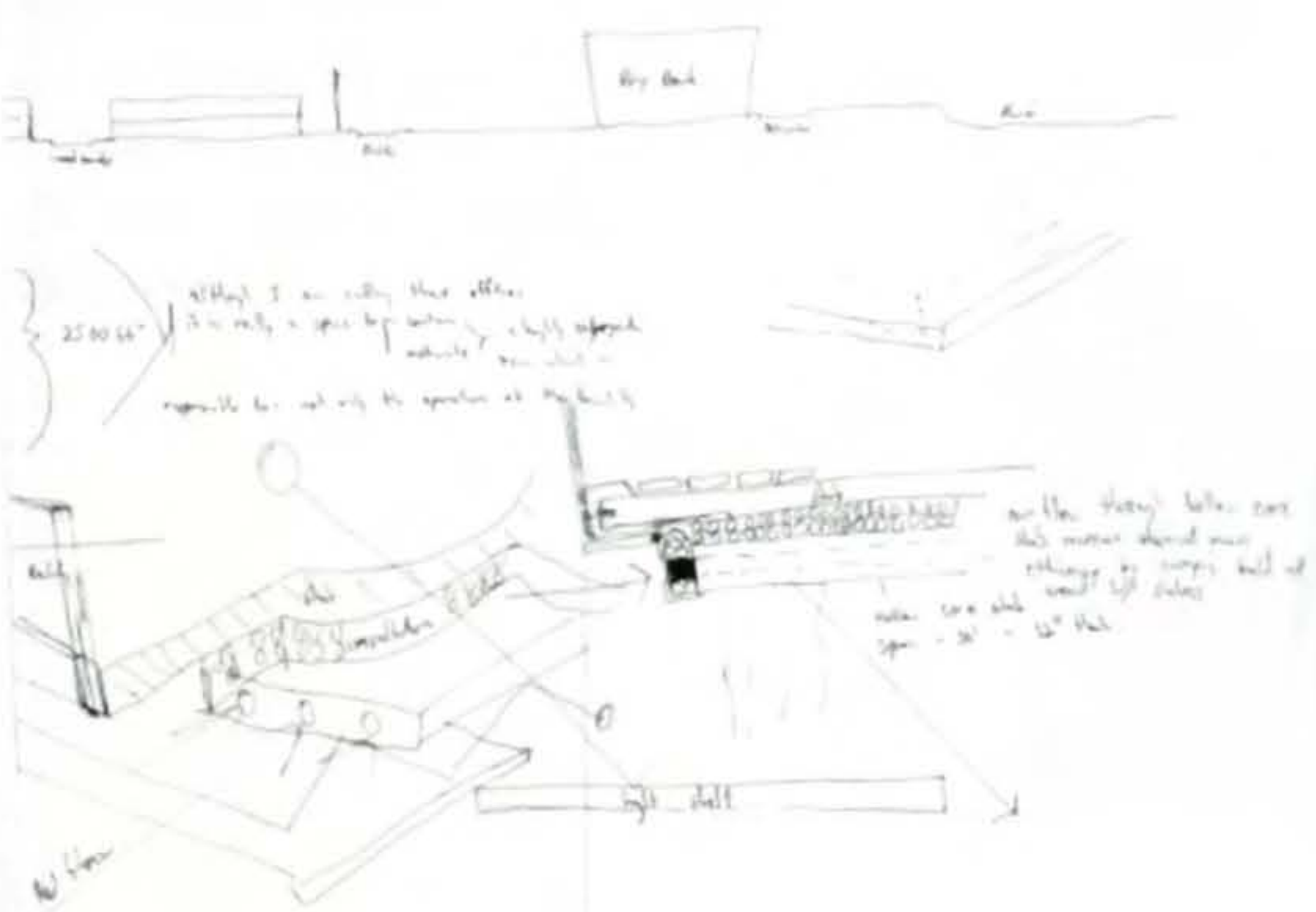
The goal is overall to establish a base of operations from which to develop - jobs - activities - urban - built - community To which - related communities gather to share - explore - learn Bray → when a gardeners get together the conversation can extend around the project the most the best



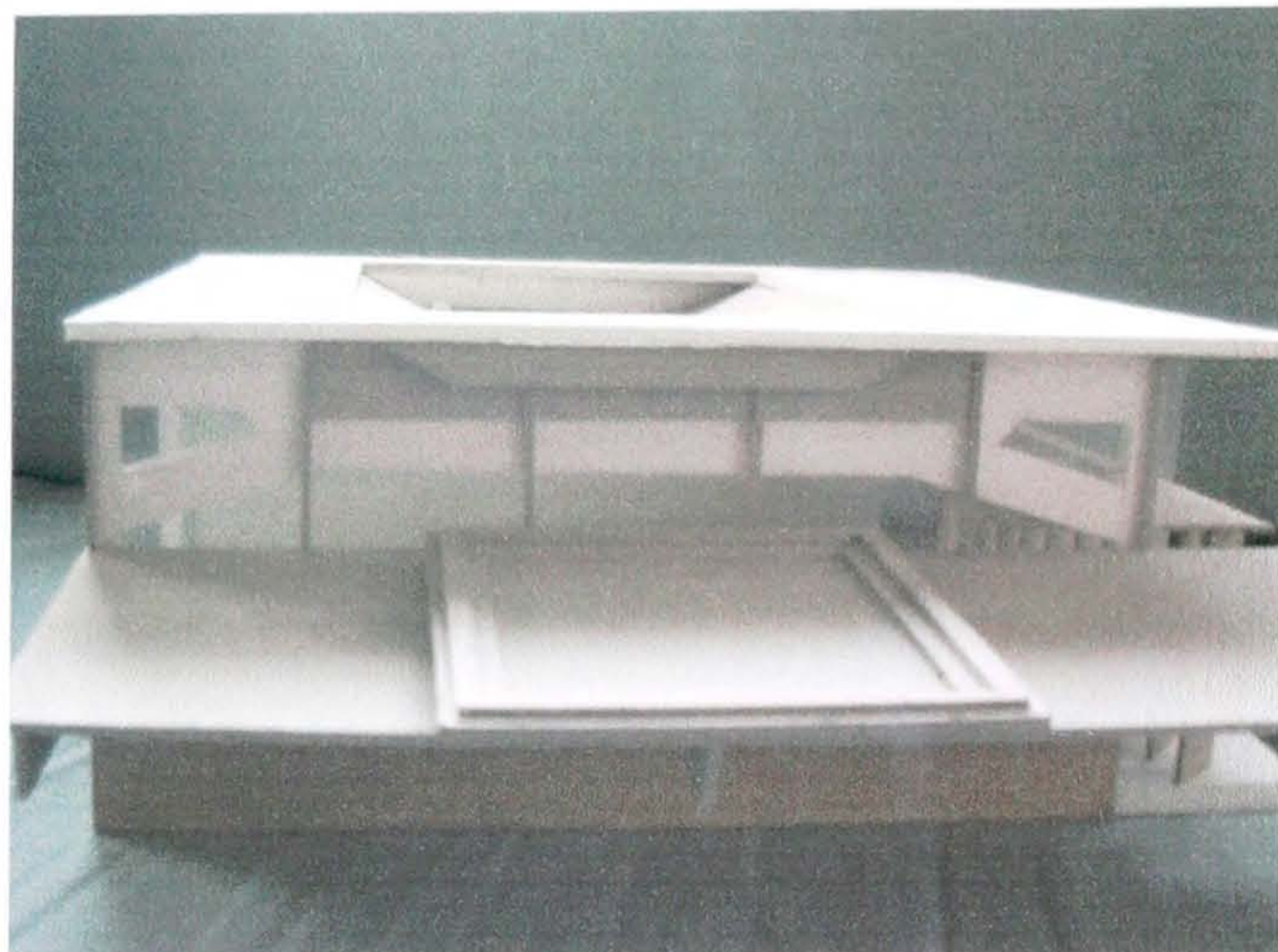
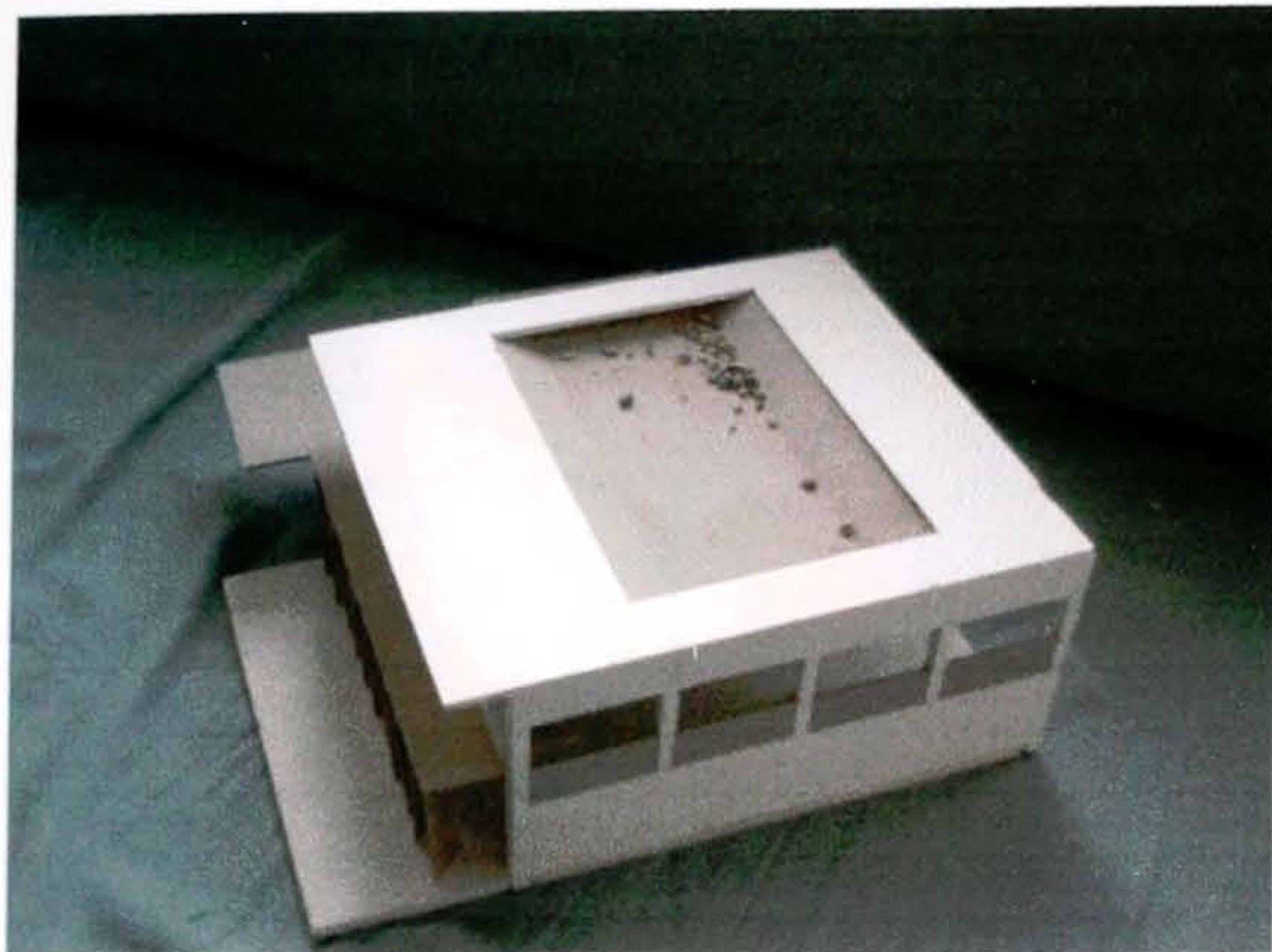
Am I correct in assuming hundreds of individual gardens spread throughout the city will have a greater impact and the potential to inspire than a single or several large gardens? → If the goal for this project is community, not just the production of community → If the goal for this project is sustainable communities

Base of operations
 - Grants Interest
 - In order to initiate progress
 - Exhibit Purpose
 taught
 is what is learned to be build by conversations?

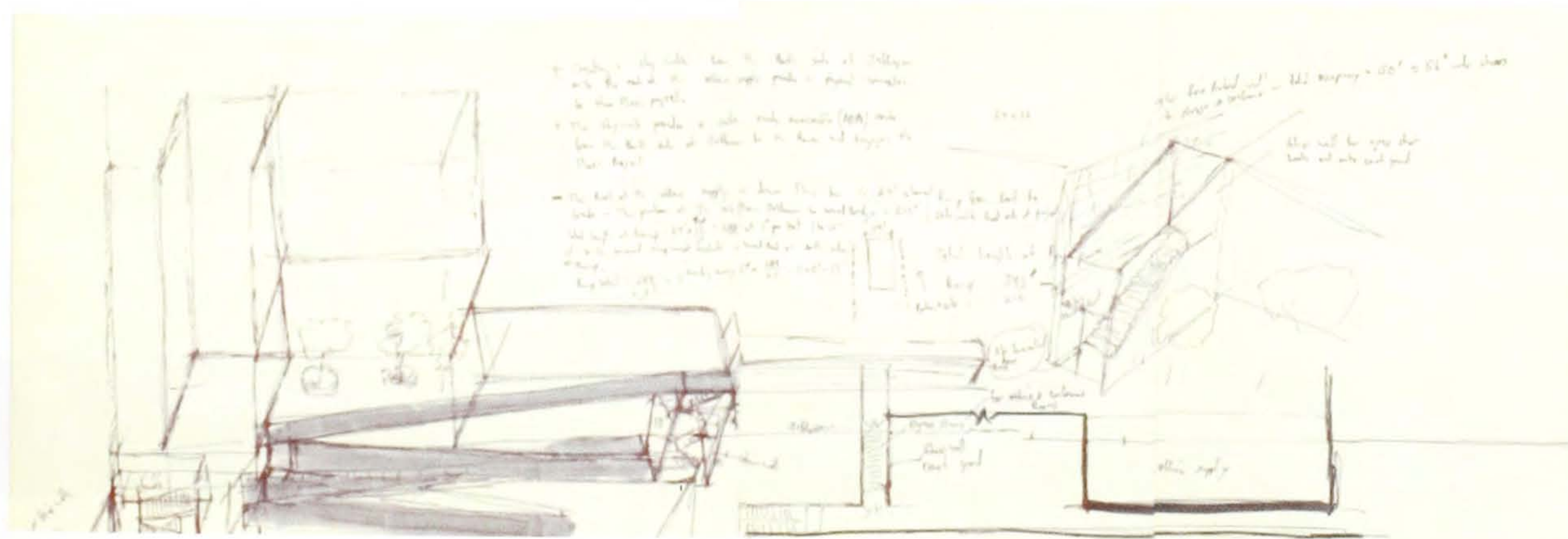
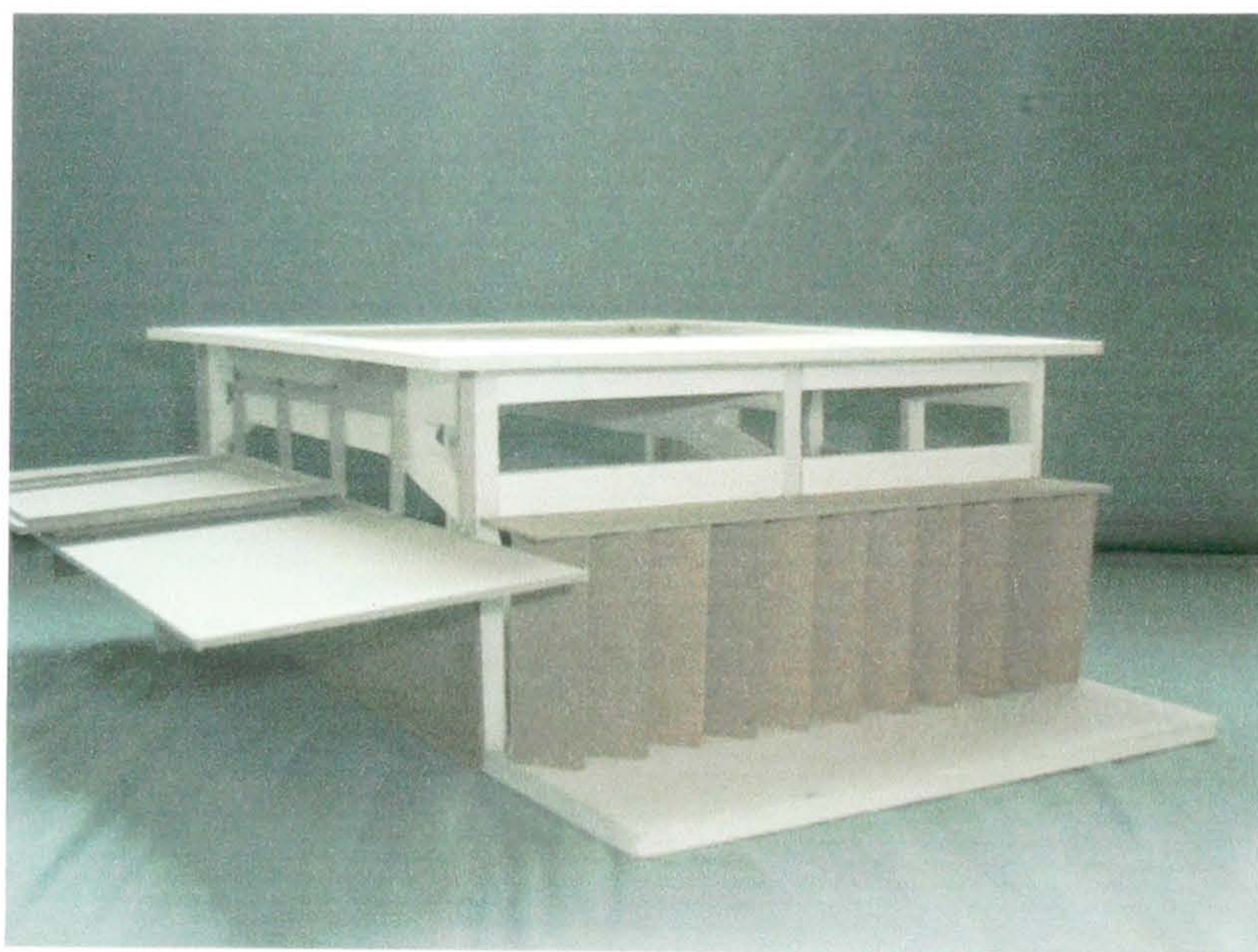
Note; I am not suggesting that this facility will be the potential to urban farming alone but structure along the line I have but sight of the impact contributions that are to be vibrant in urbanism

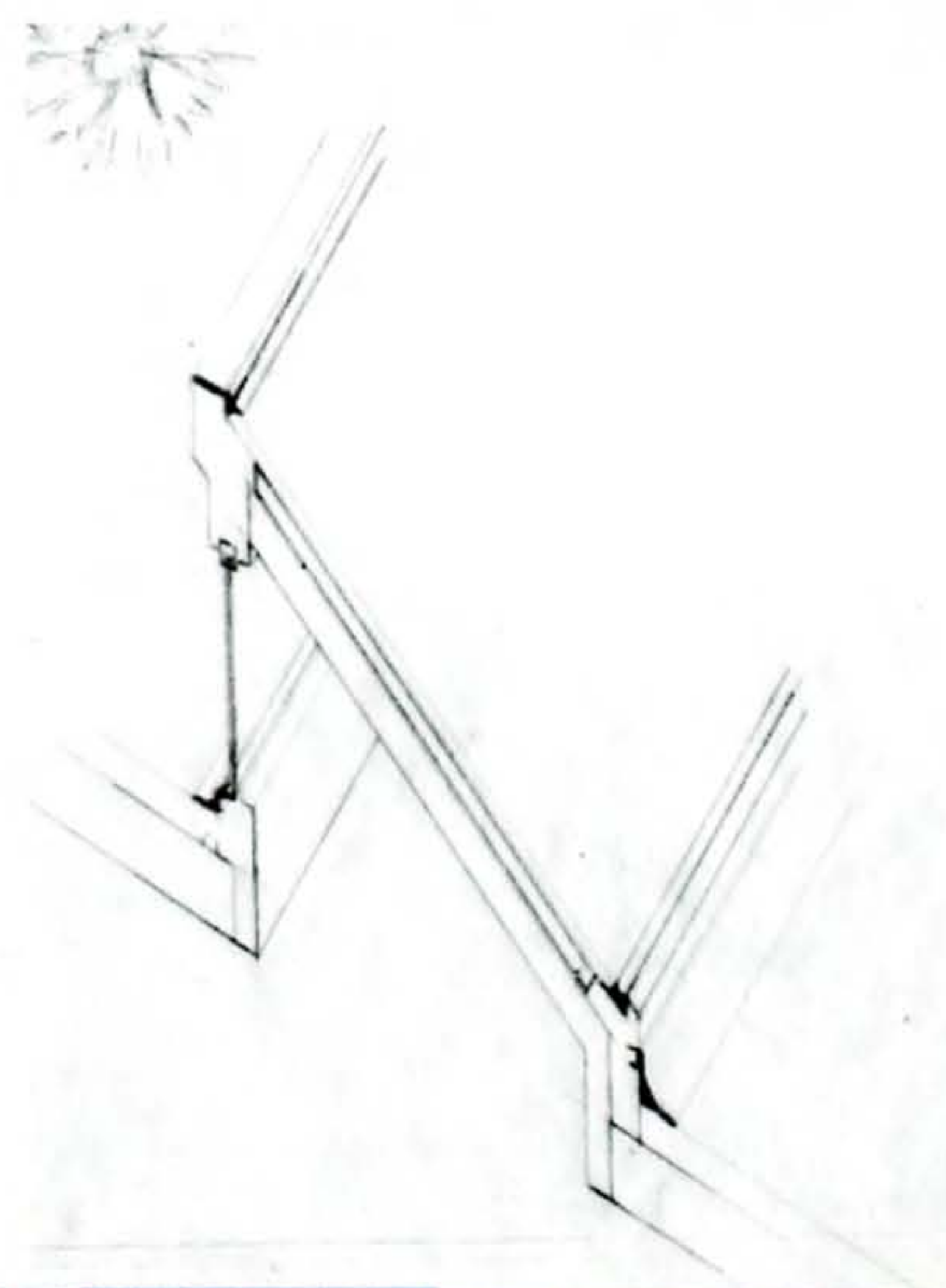
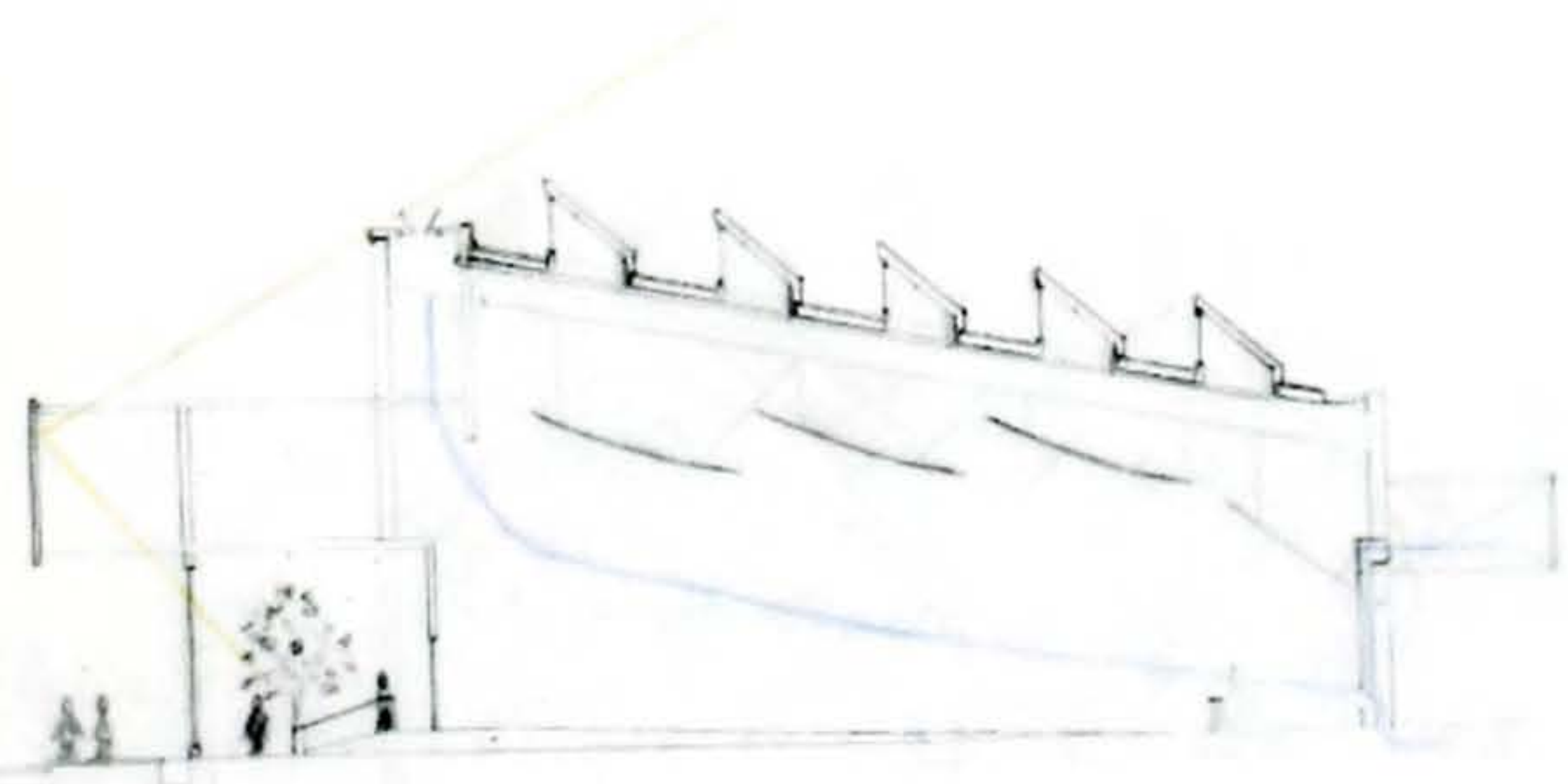
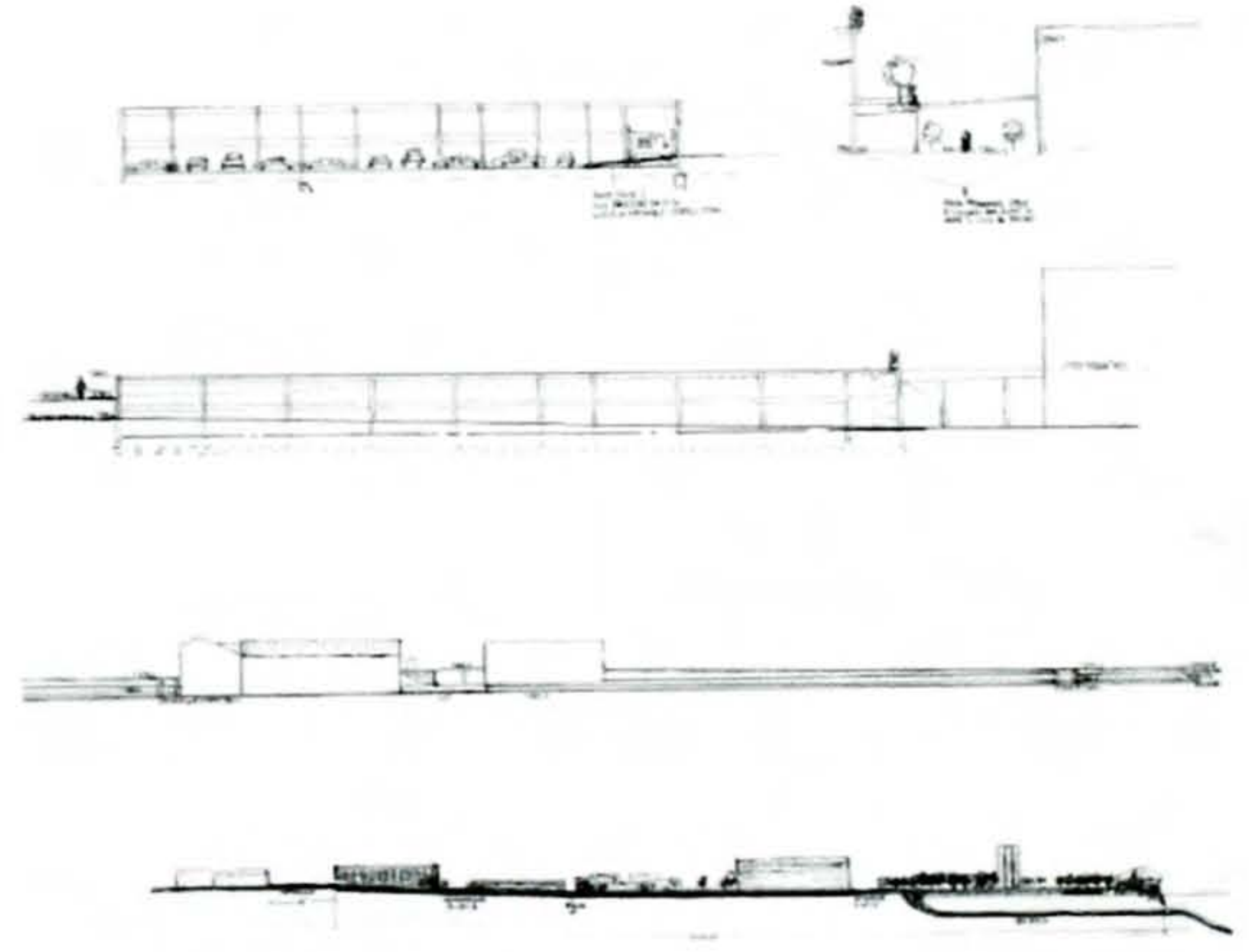
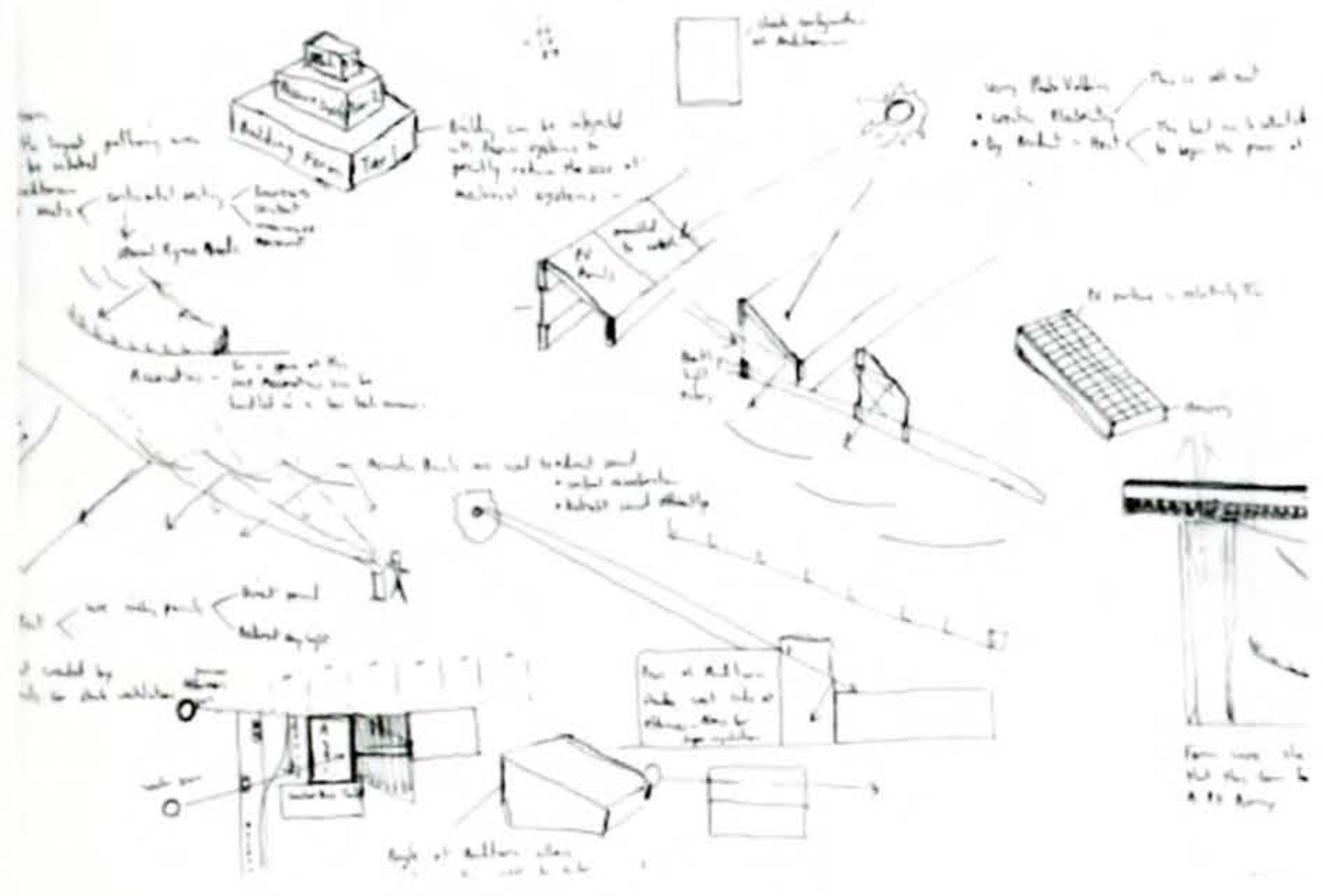
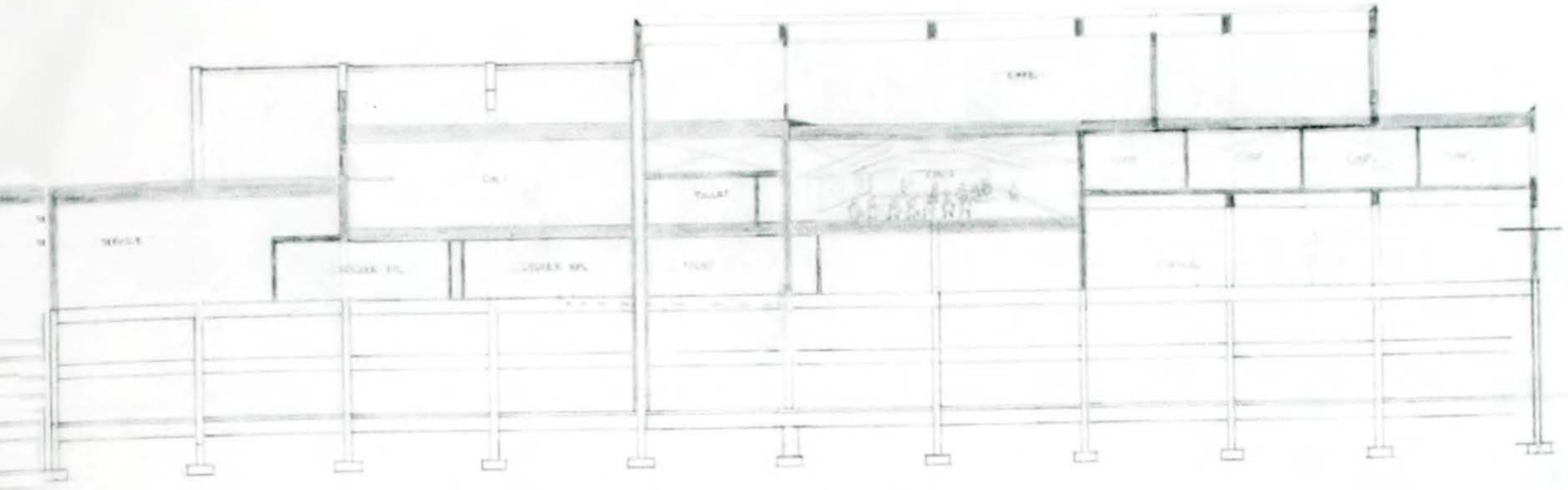


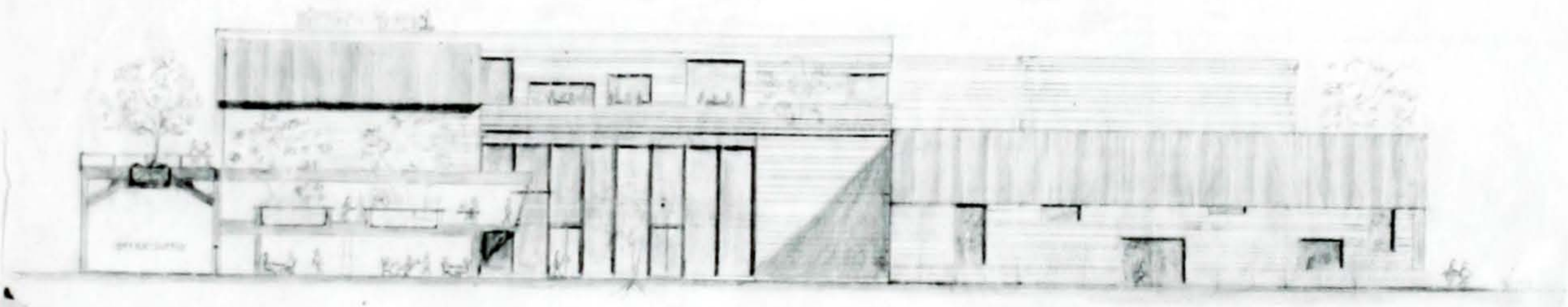
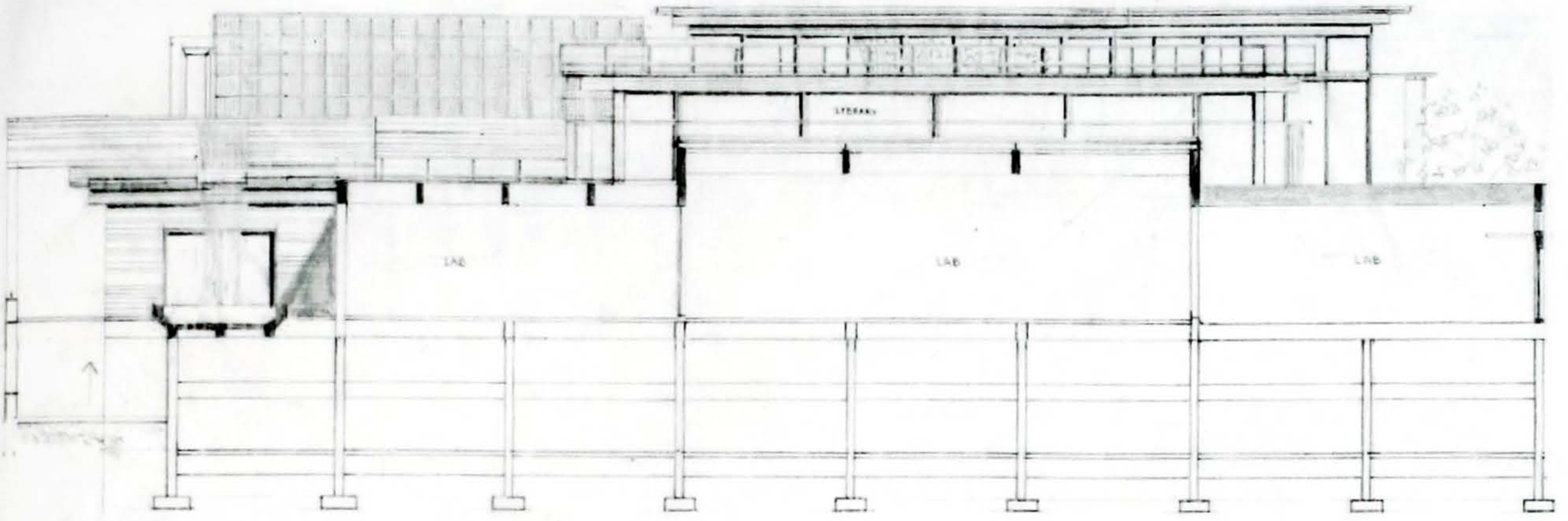
At this point in the design process individual elements inspired by the surrounding context offered possibilities for an organizing the program and a compositional strategy began to develop.



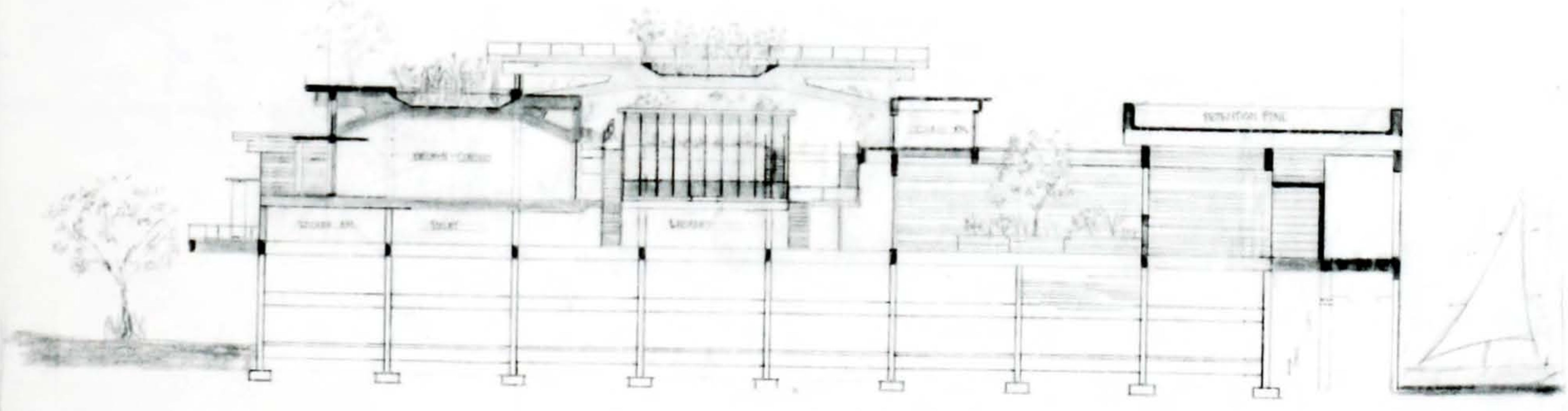
In order to fully test the validity of the thesis a series of sketches began to provide the means to create an early model, which demonstrated that it would be possible to allow the architecture to become a means by which environmental concerns could be addressed.



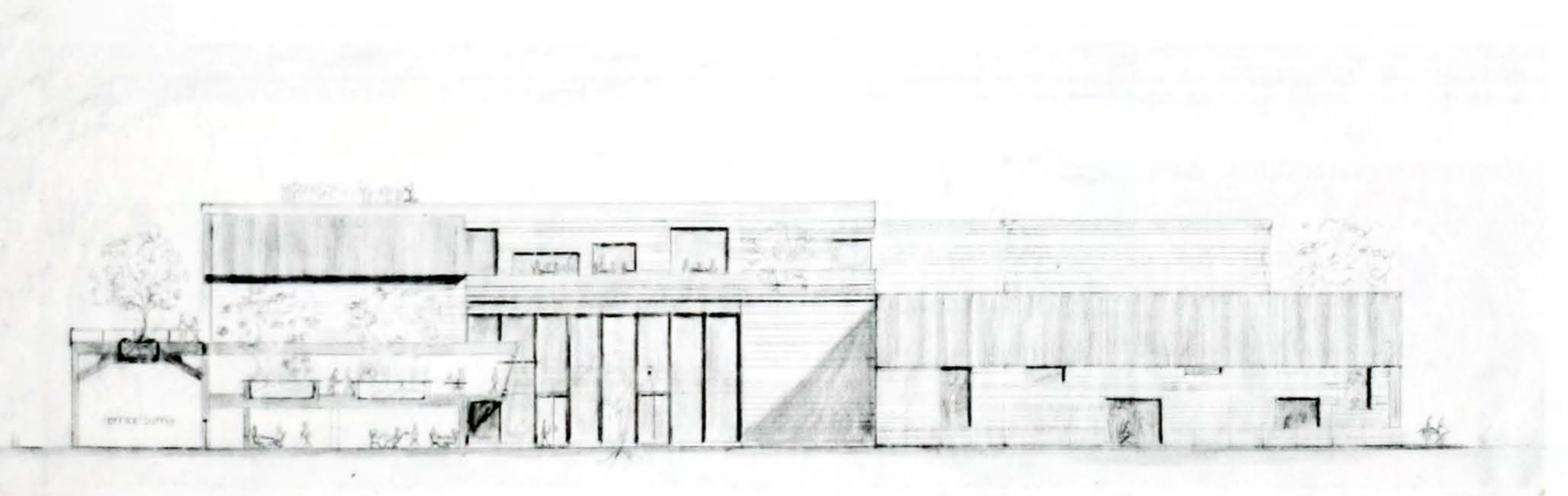
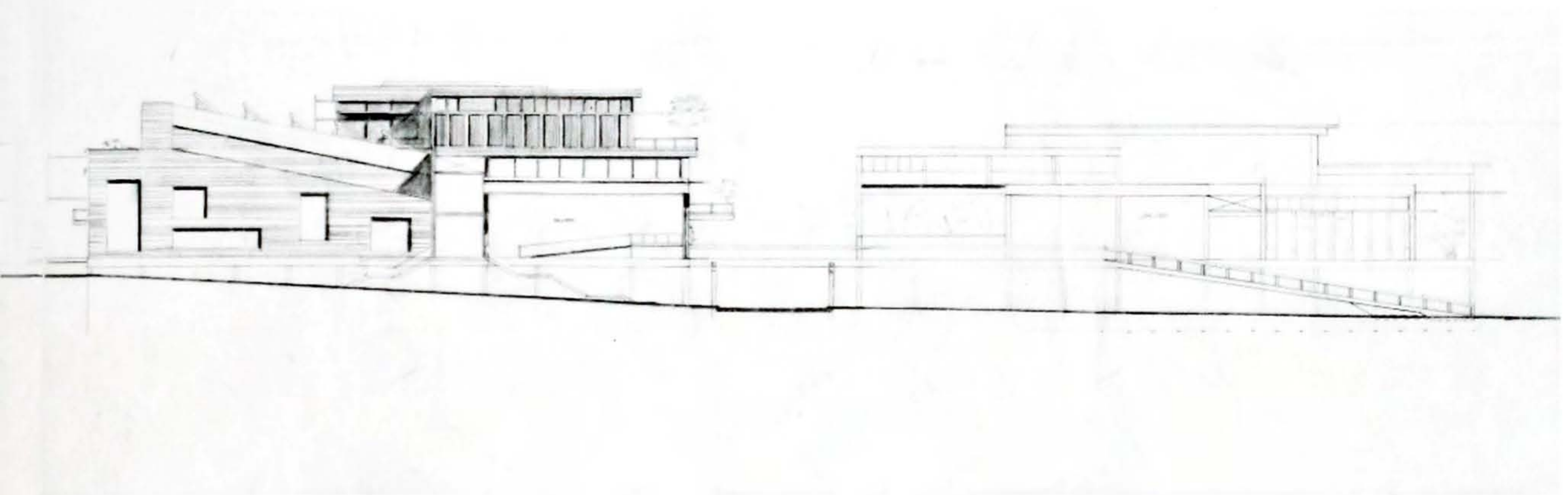
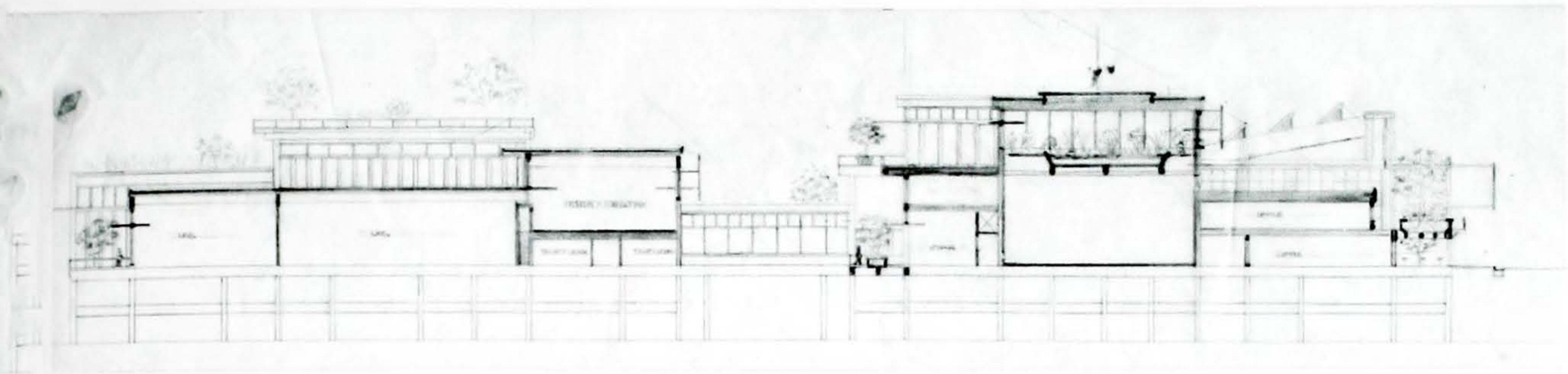




SECTION A-A'

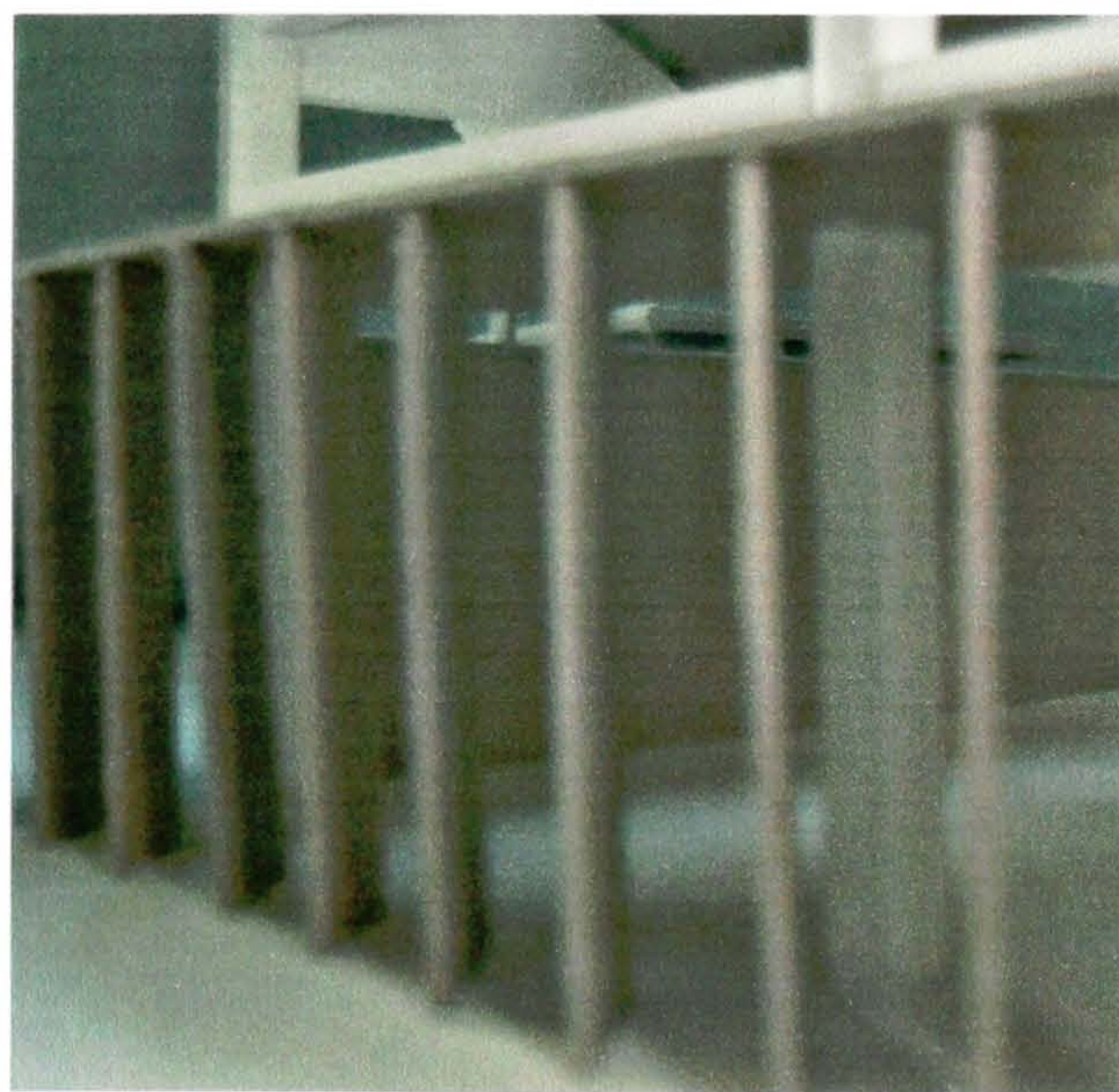
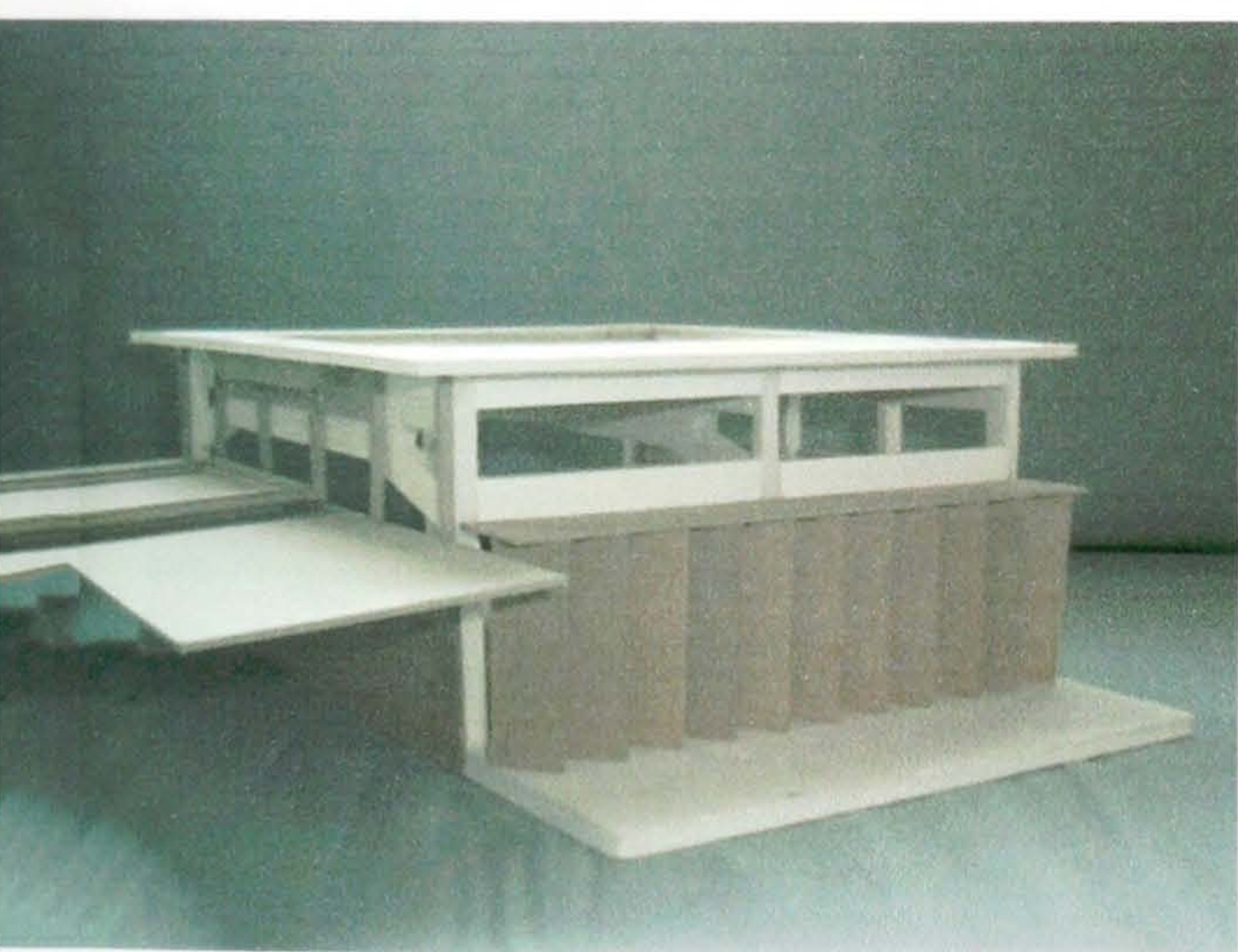


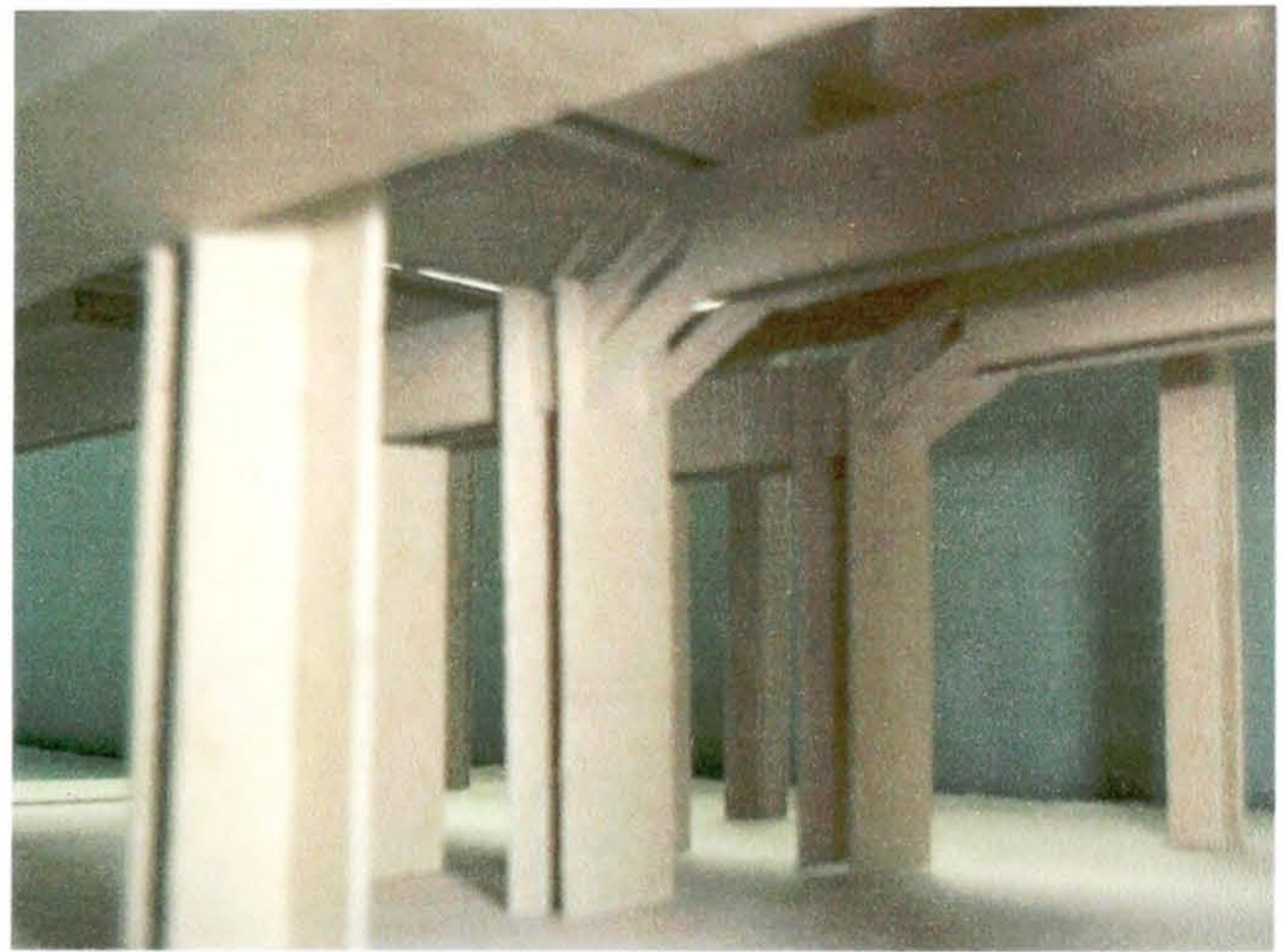
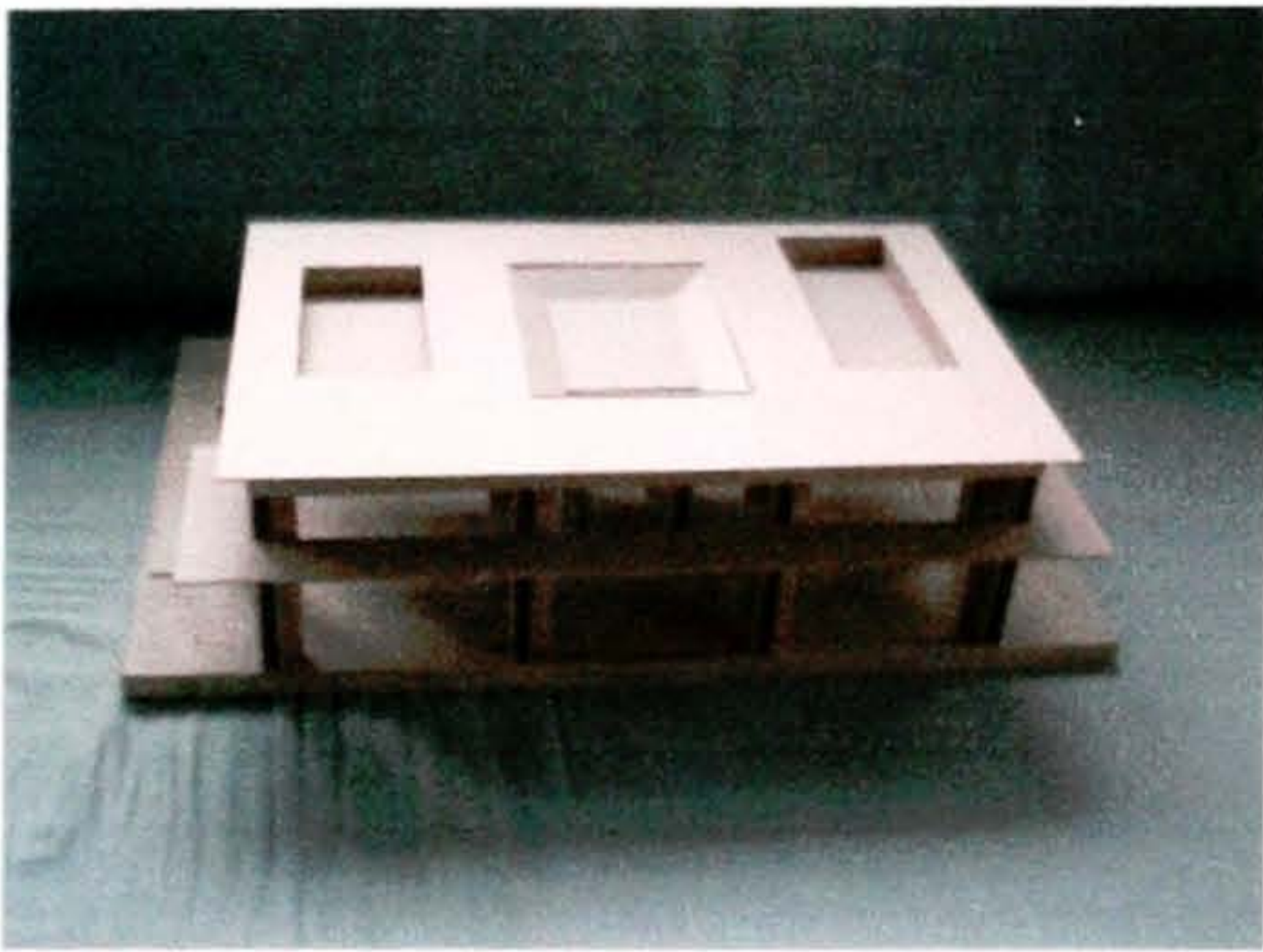
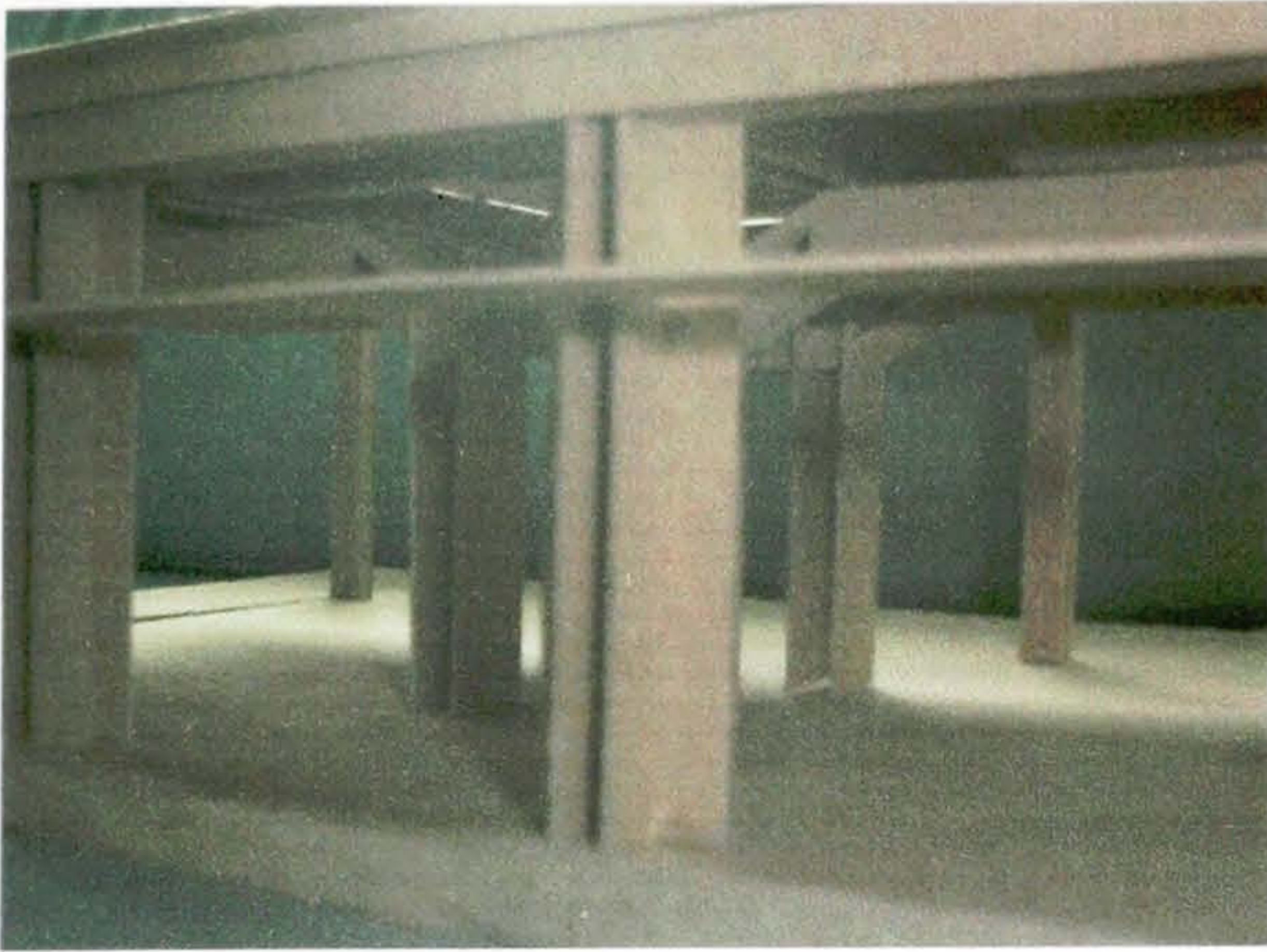
SECTION B-B'



Jefferson Elevation

One of this projects greatest challenges will be to create a suitable elevation along Jefferson Ave. This elevation must not only exemplify the projects intent to create a harmonious communion with nature but it must also seek to find acceptance among the streets existing fabric.

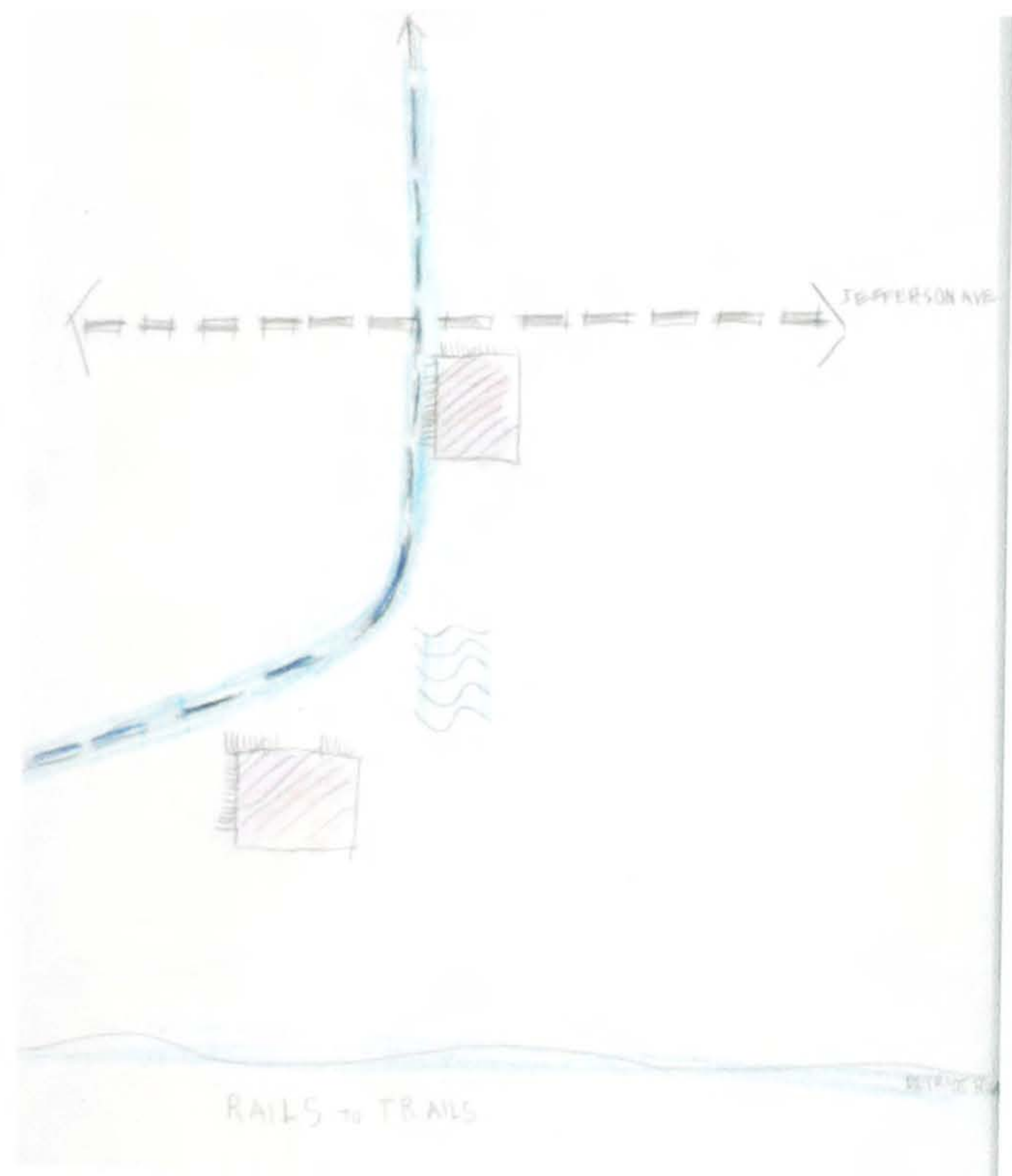
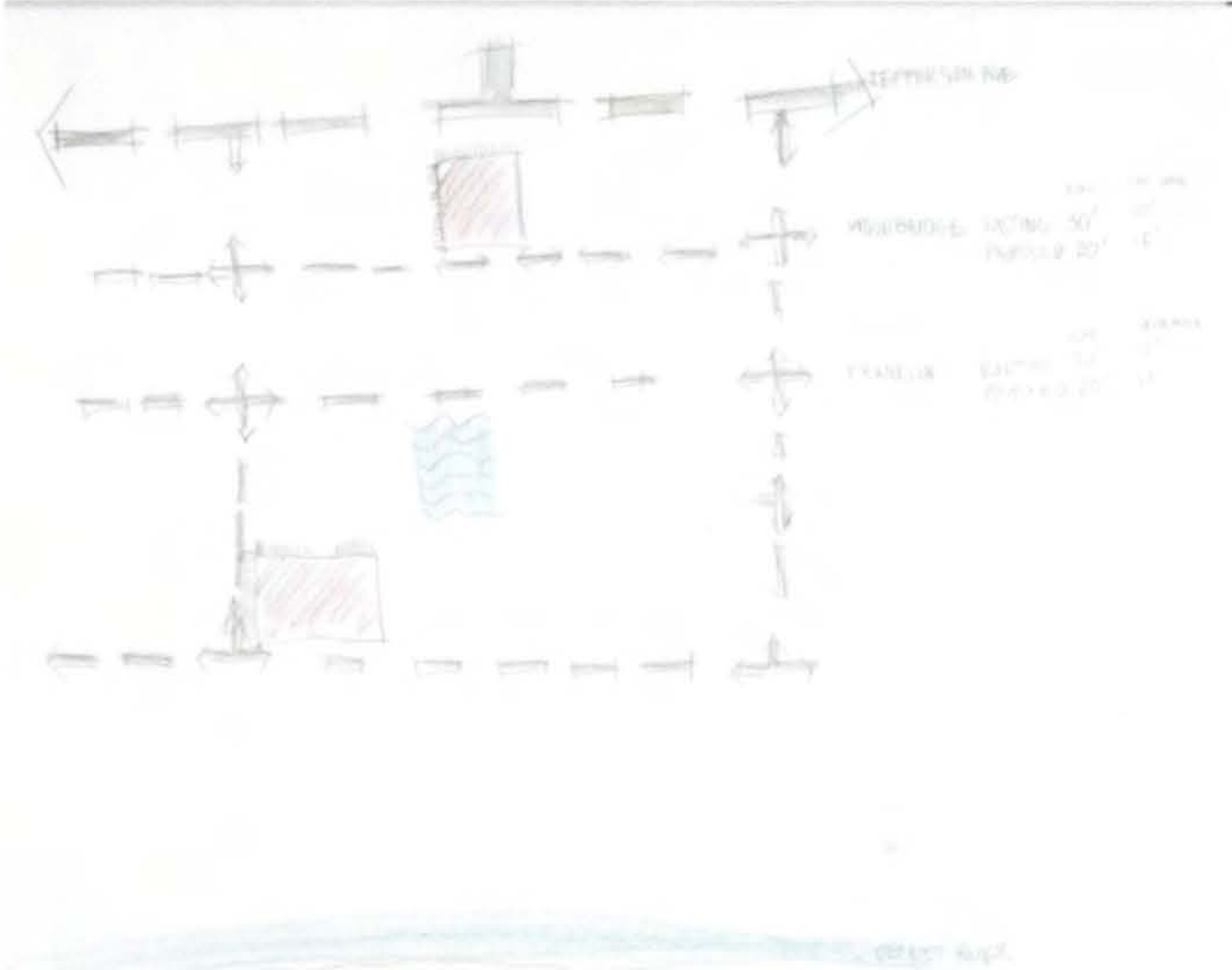
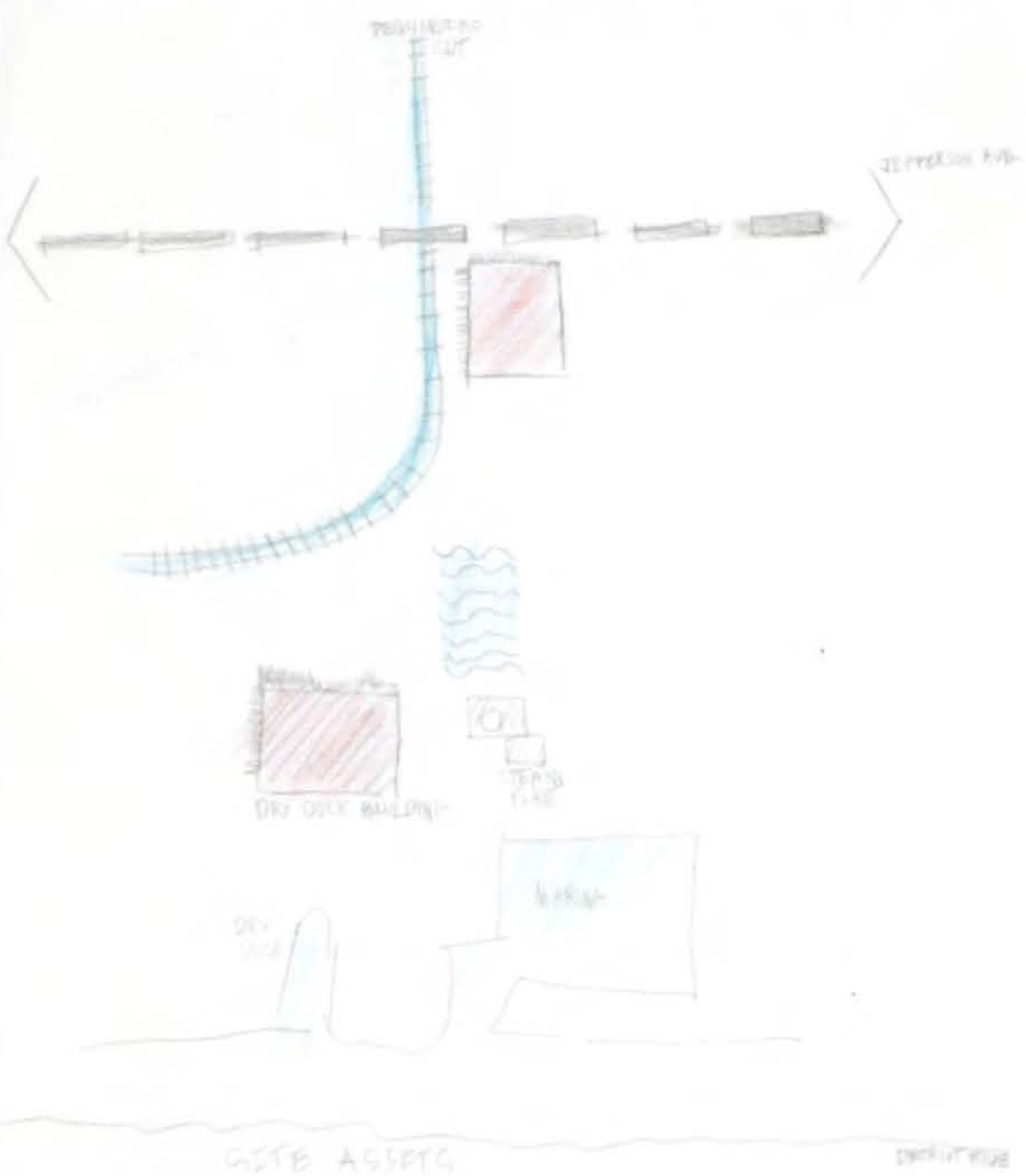


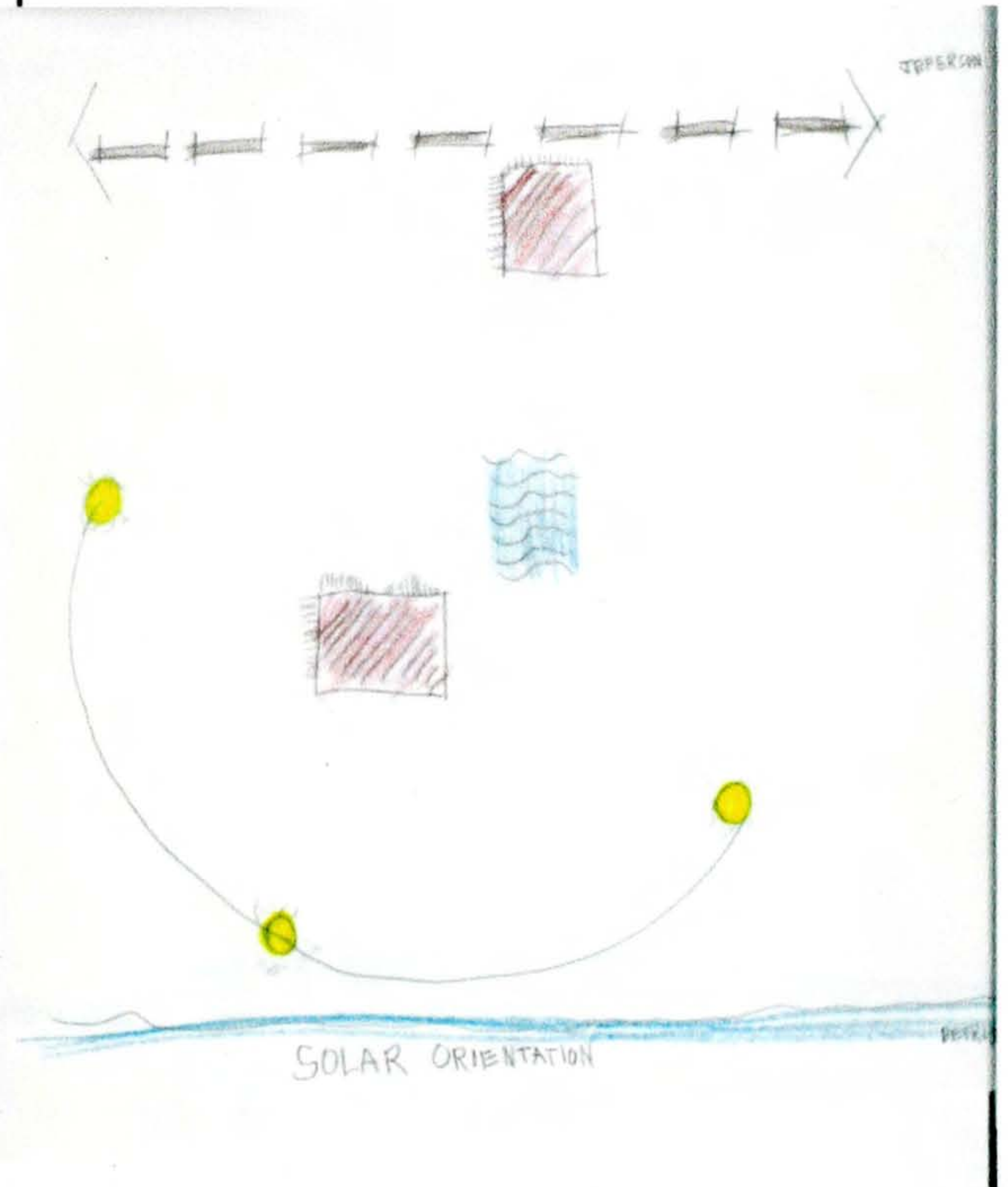
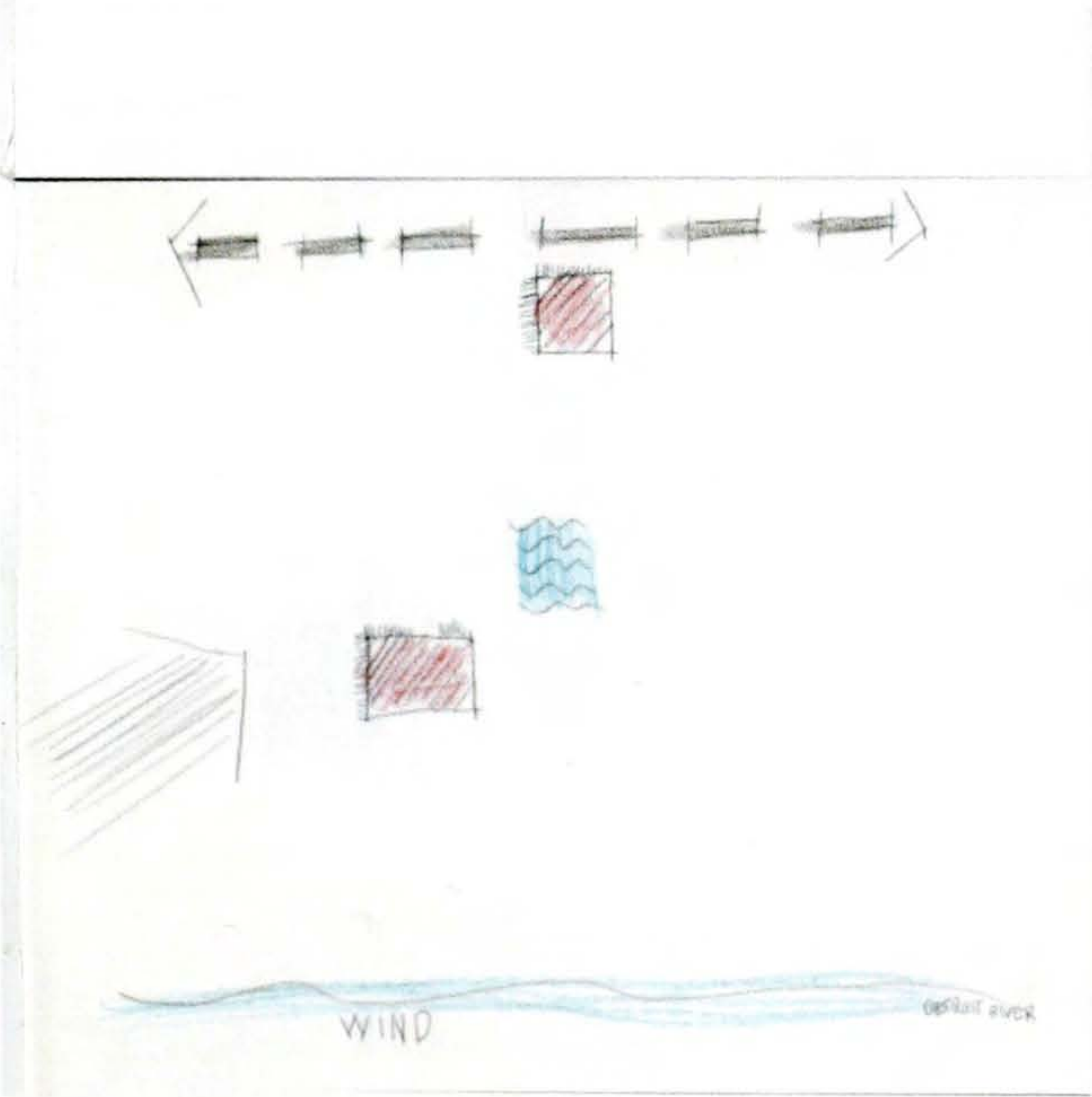
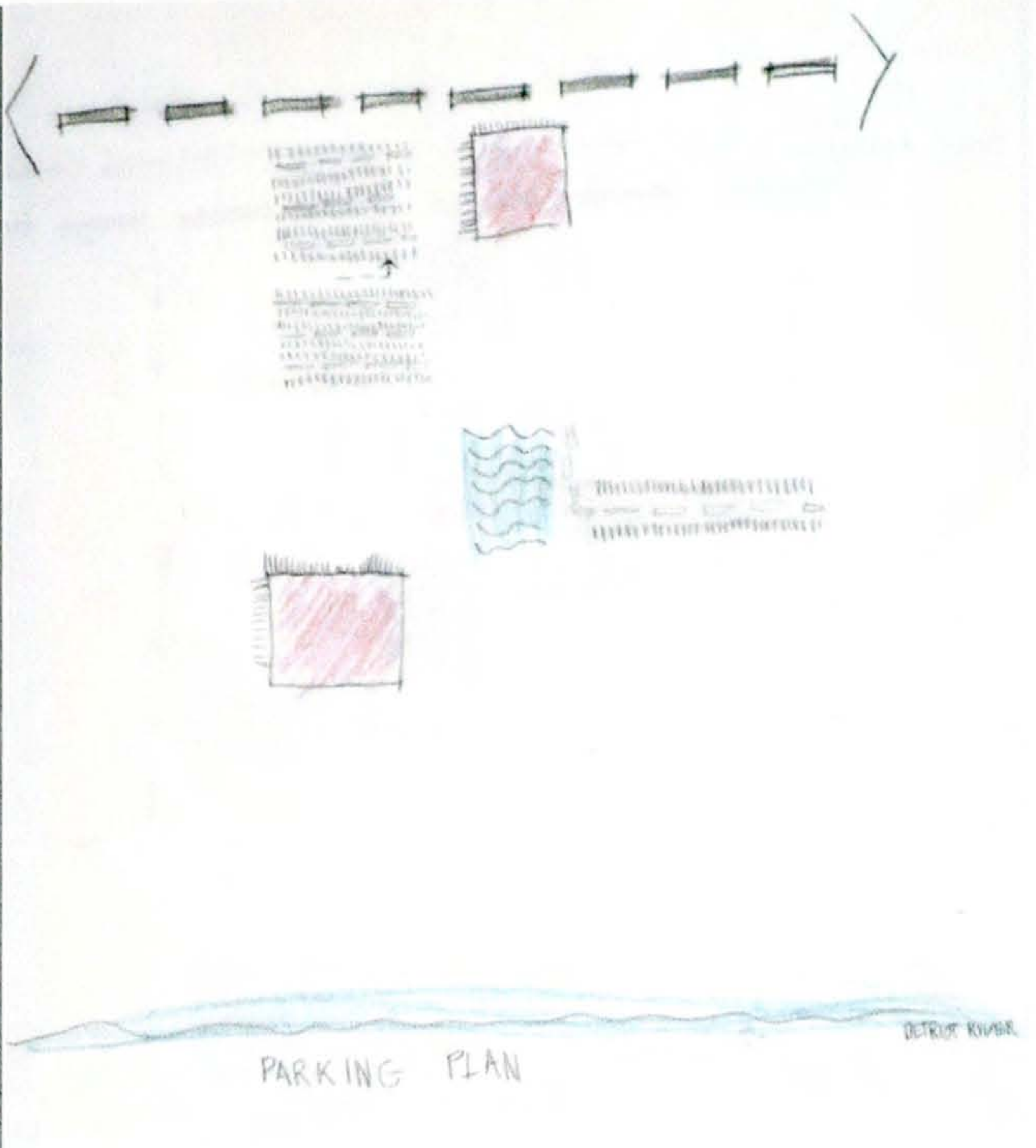
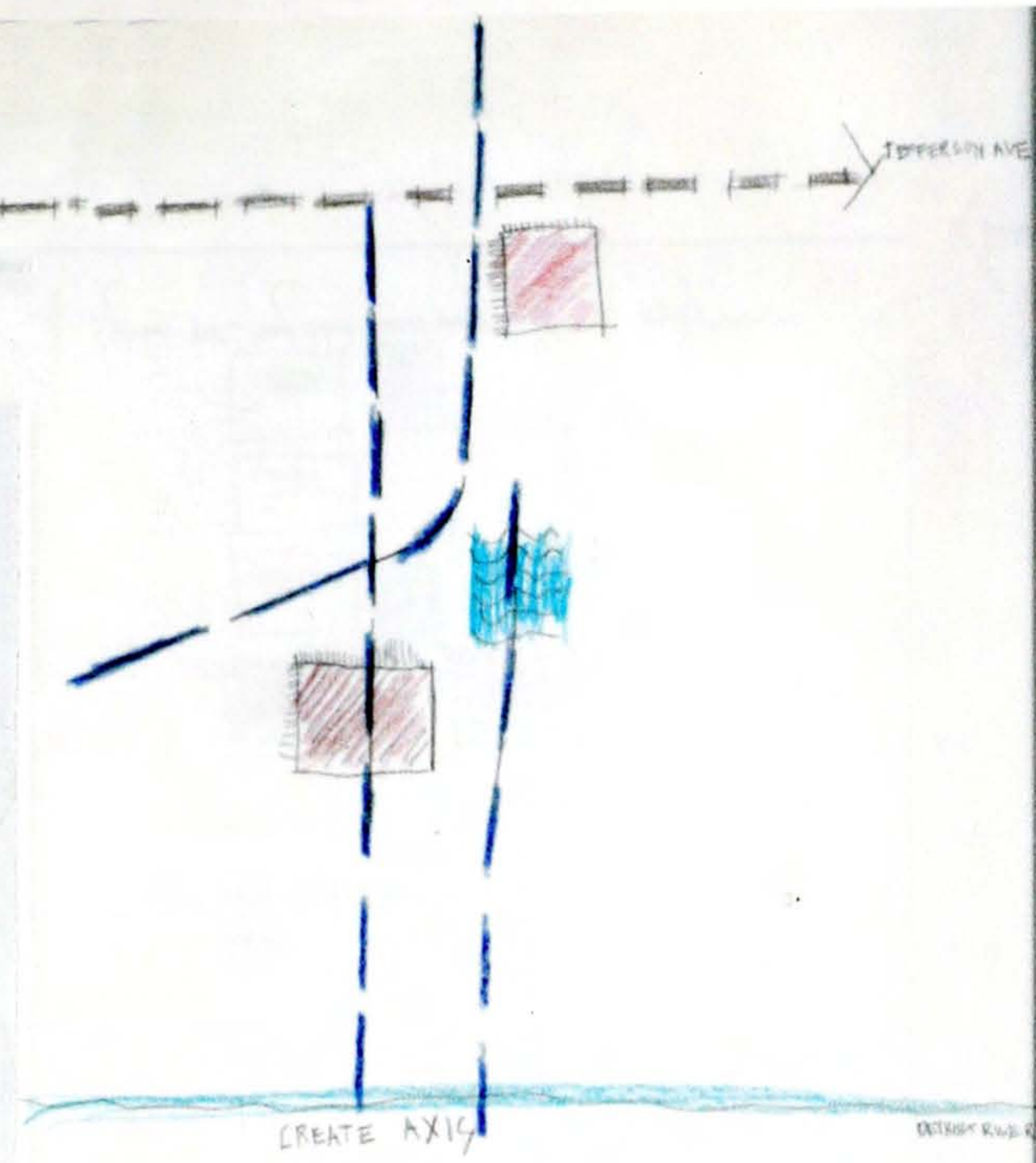


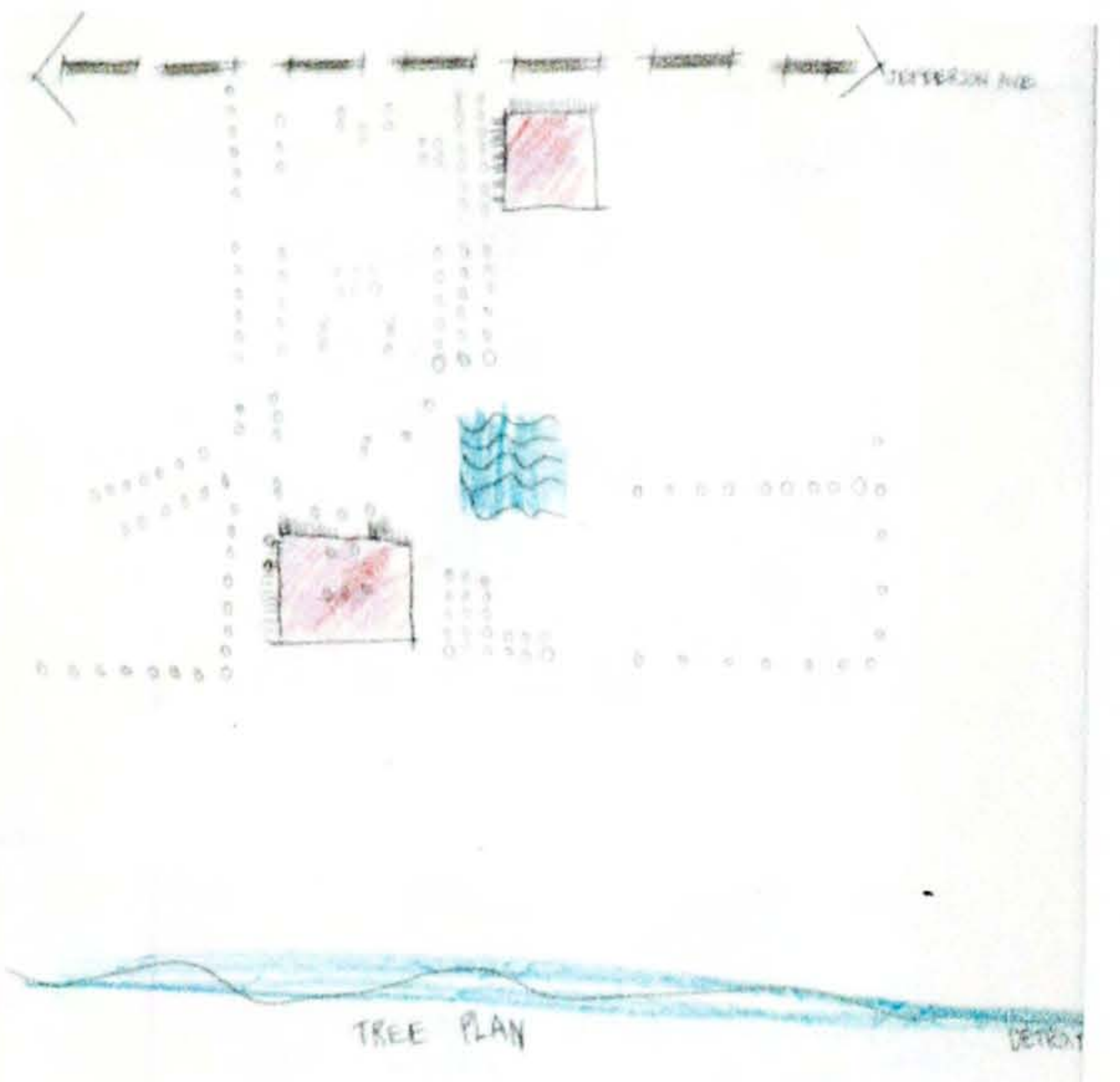
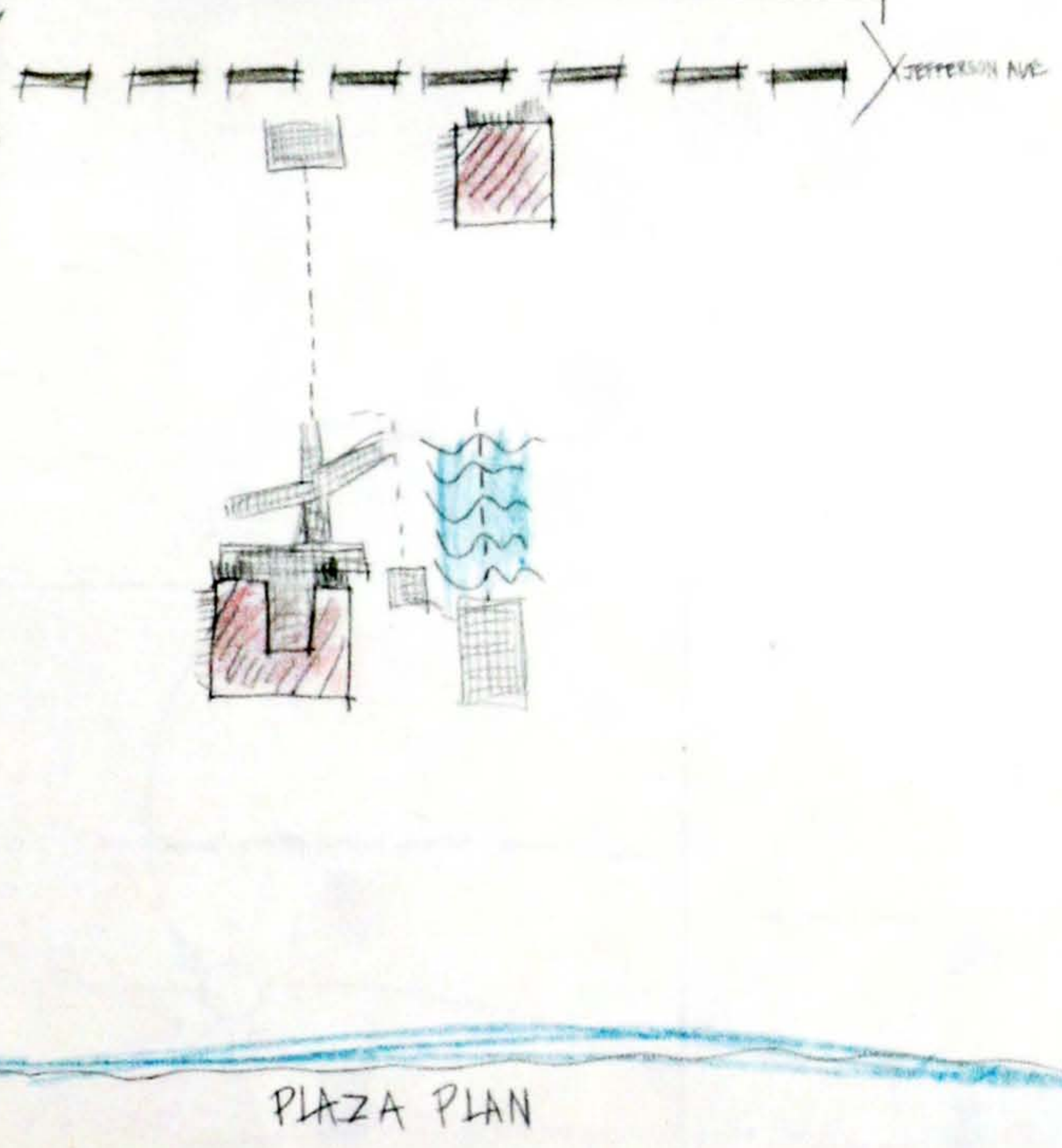
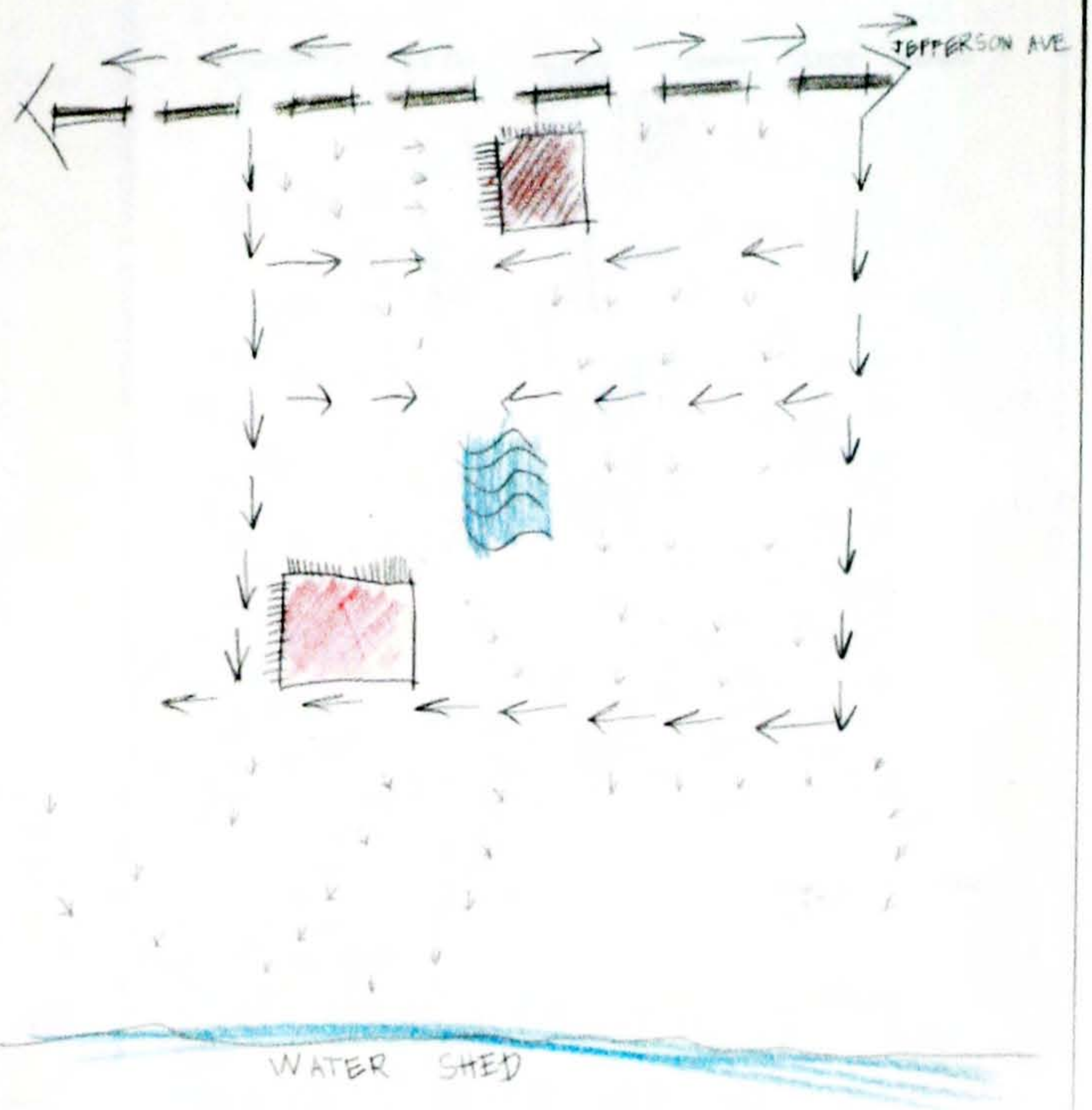
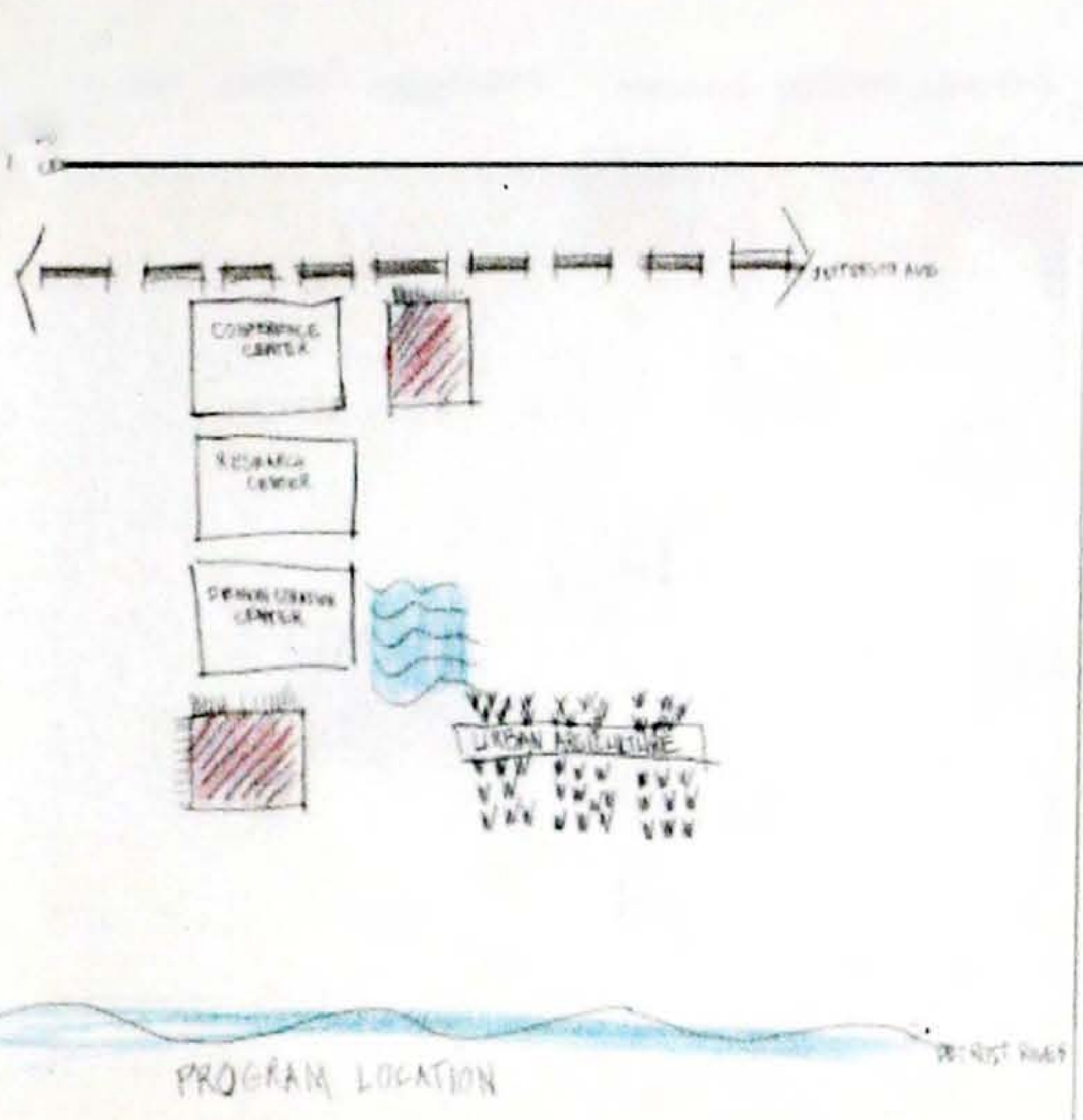
As the project moved into the design development it was useful to construct models as well as to continue working on drawings. At this time an overall composition had not been fully developed so the models are but smaller segments of the overall project,

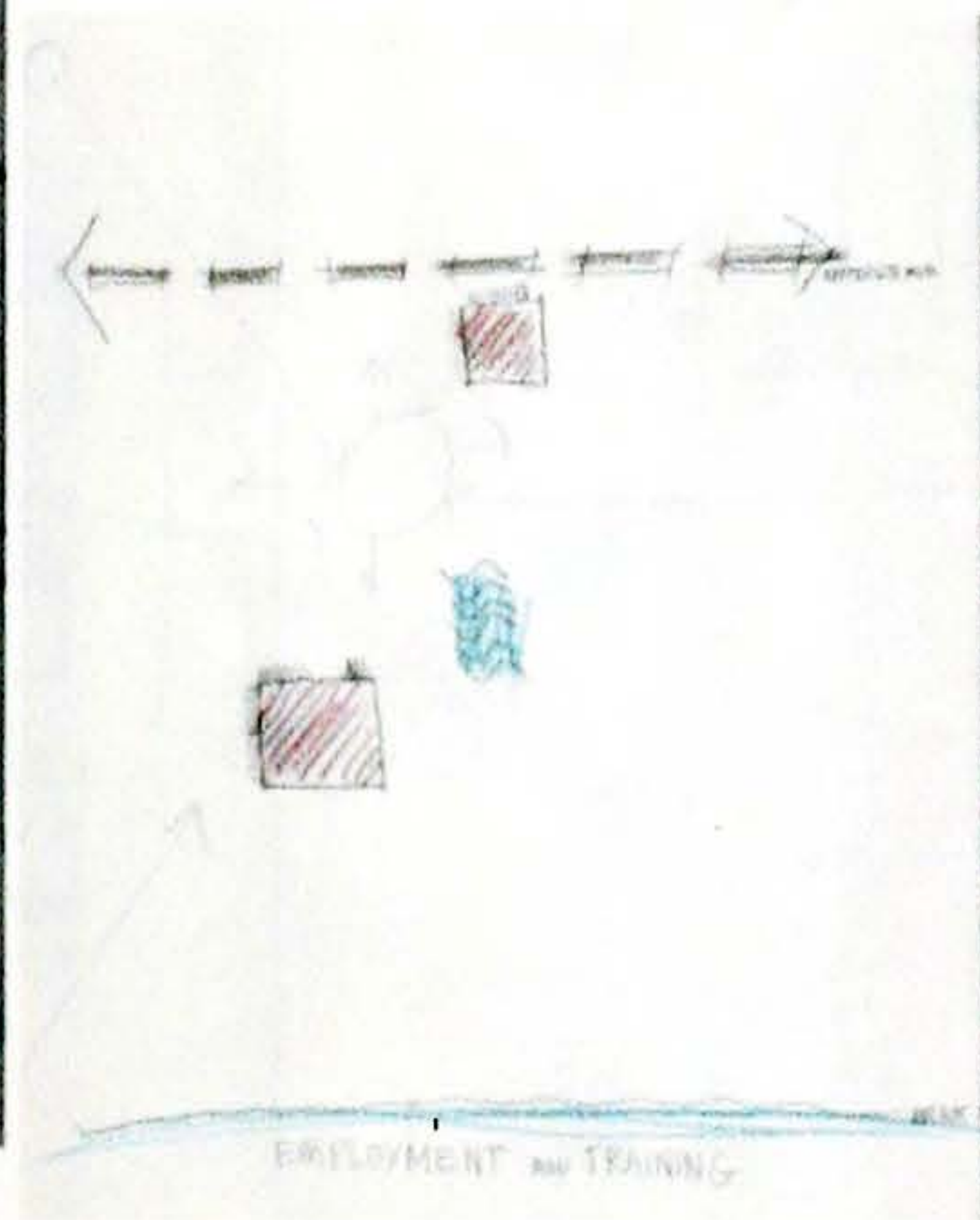
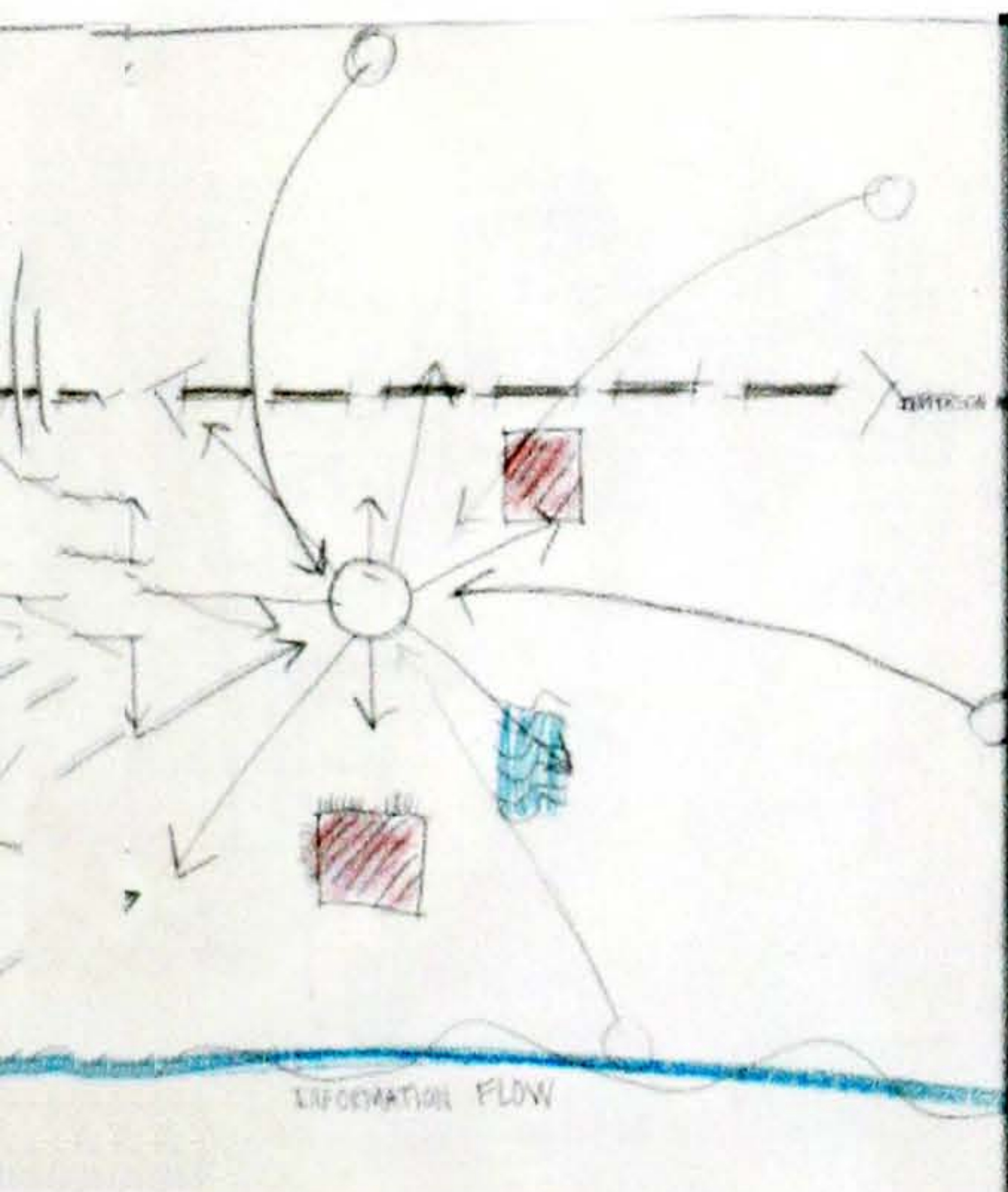
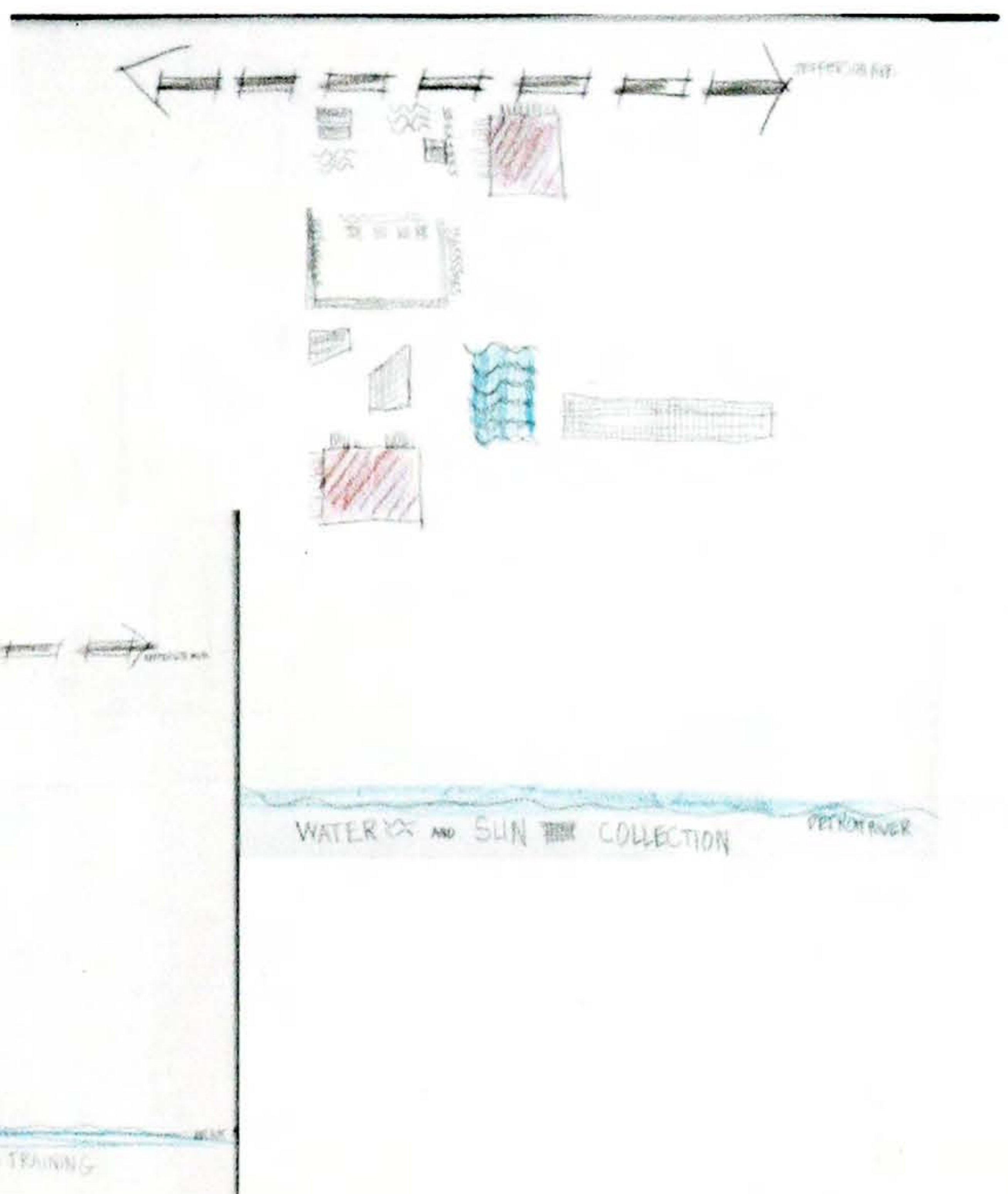
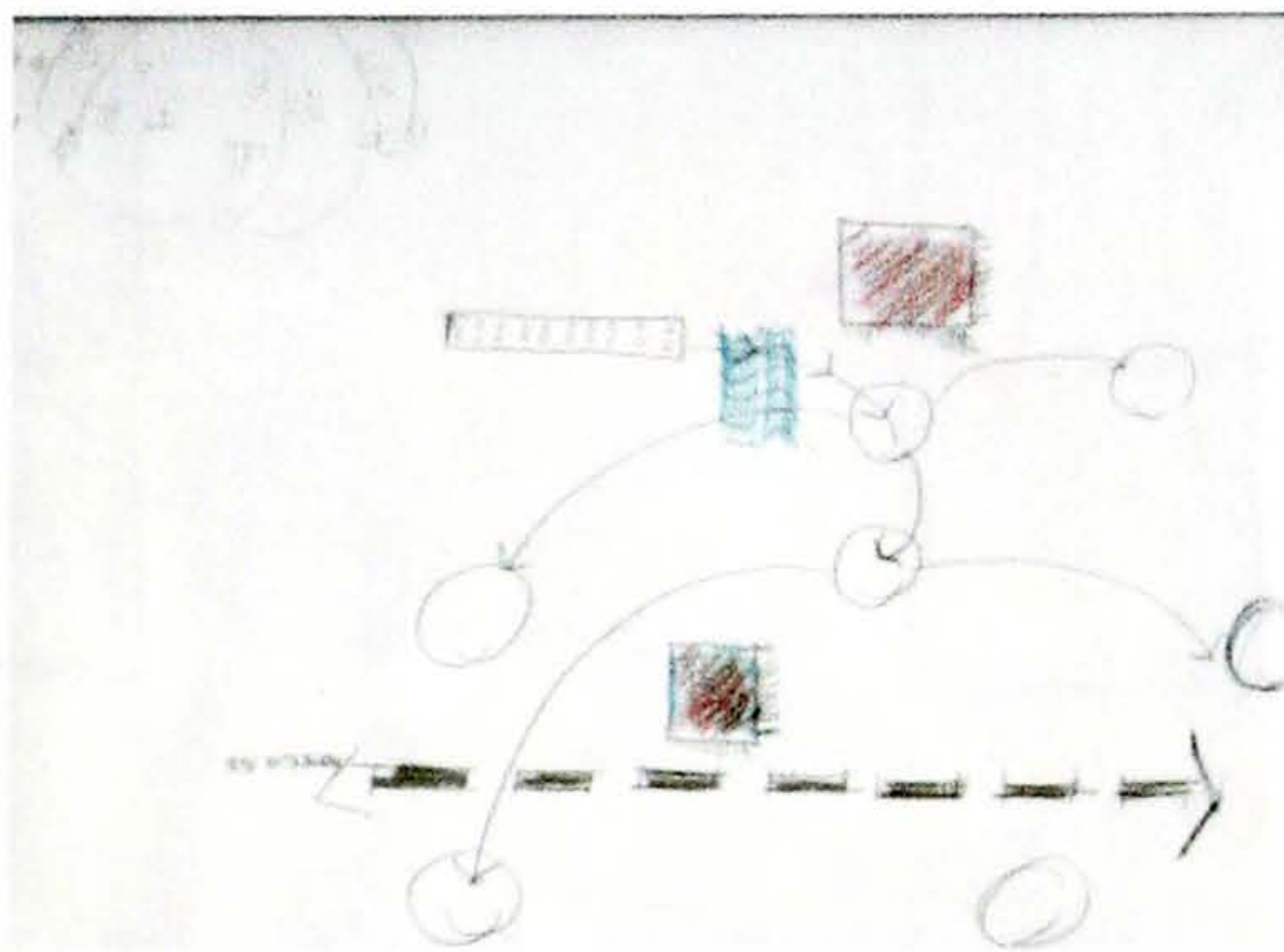
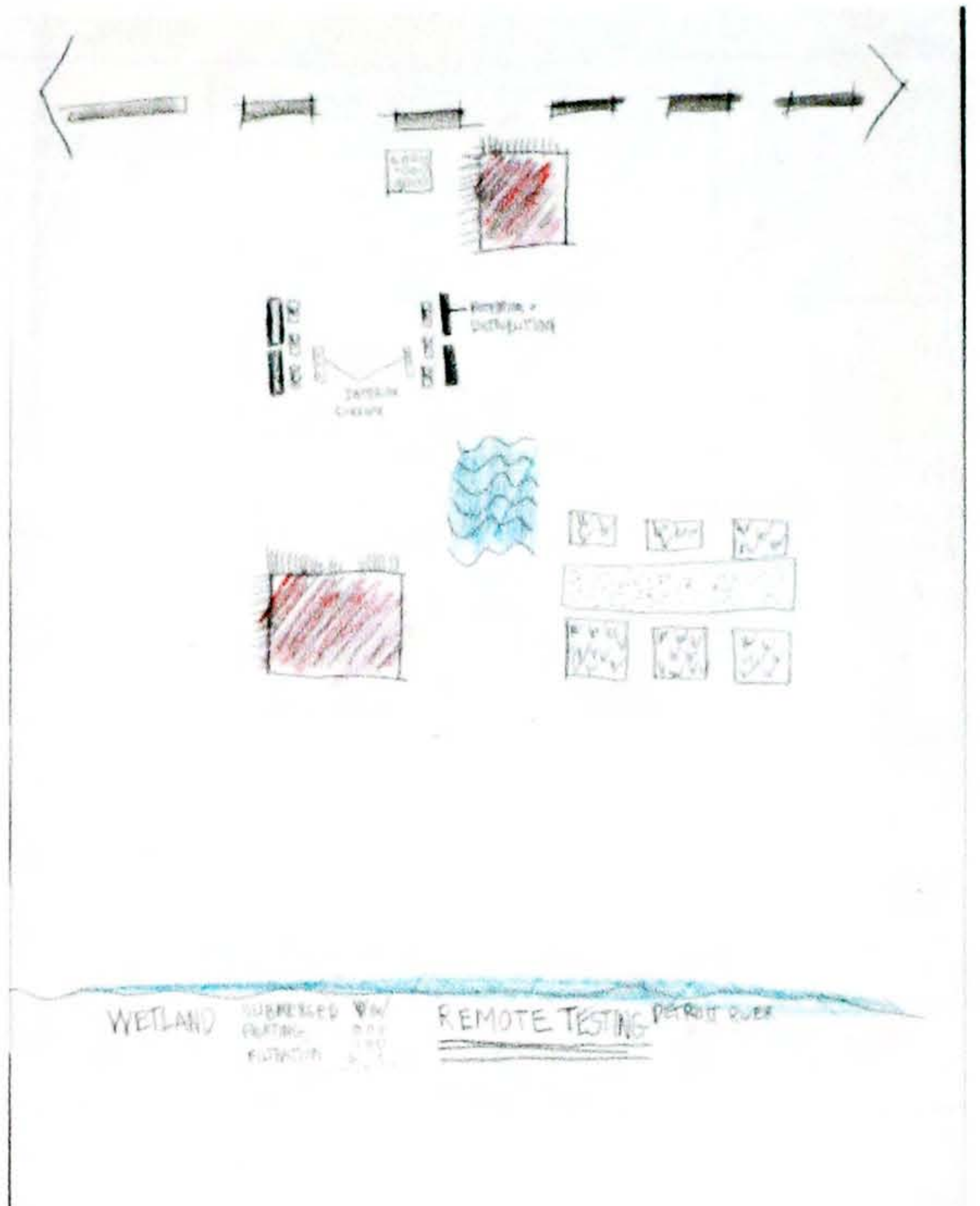
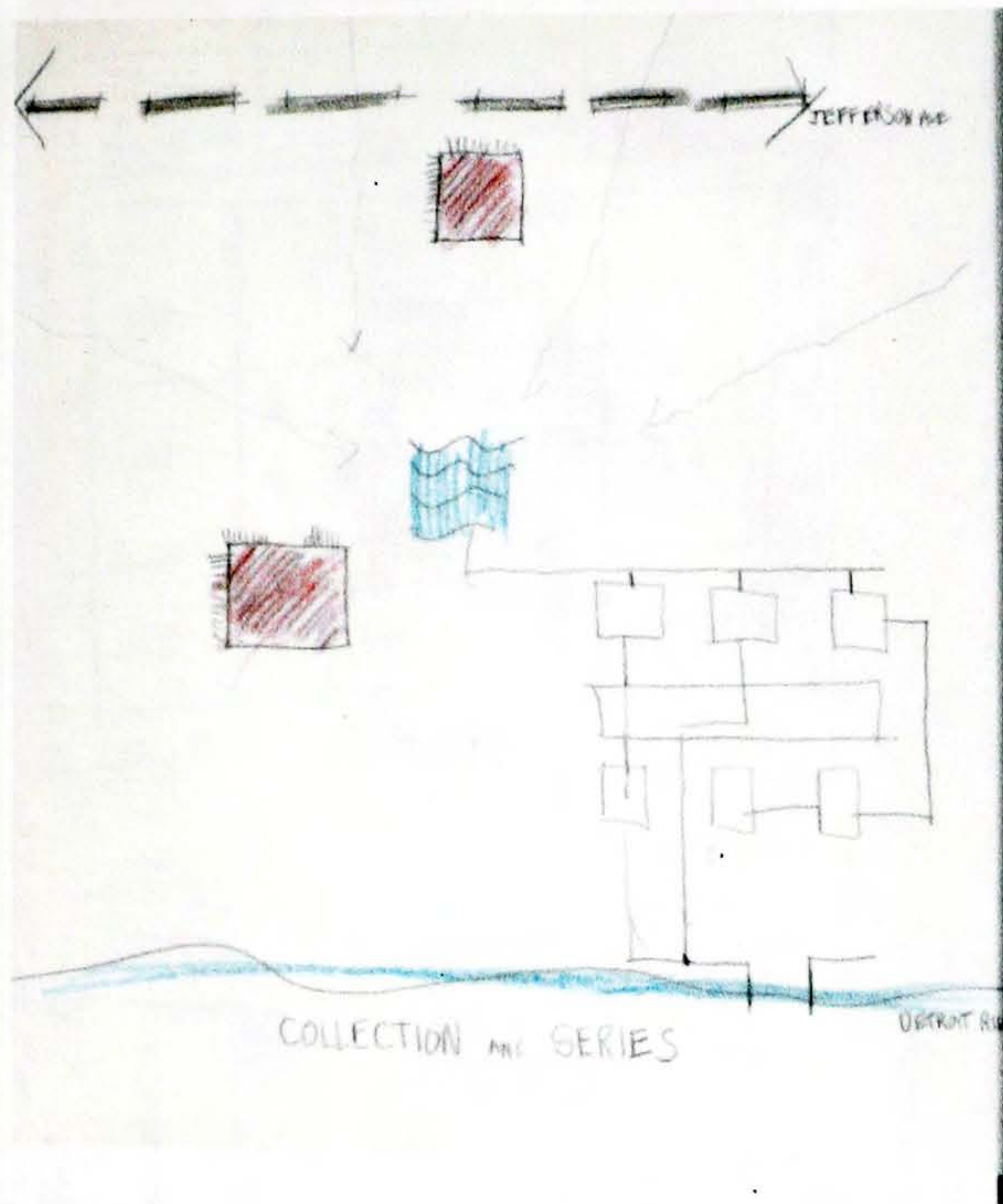


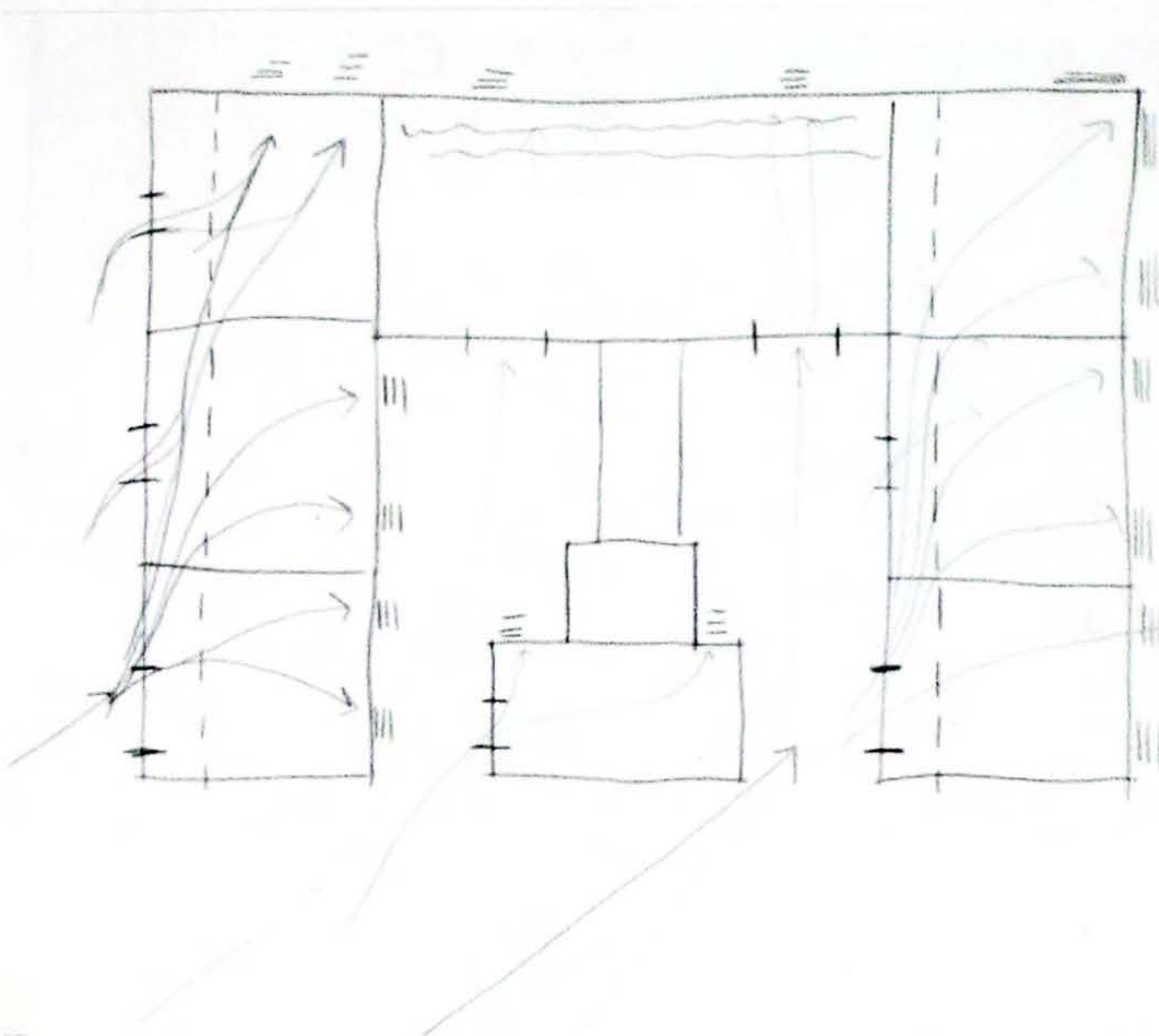
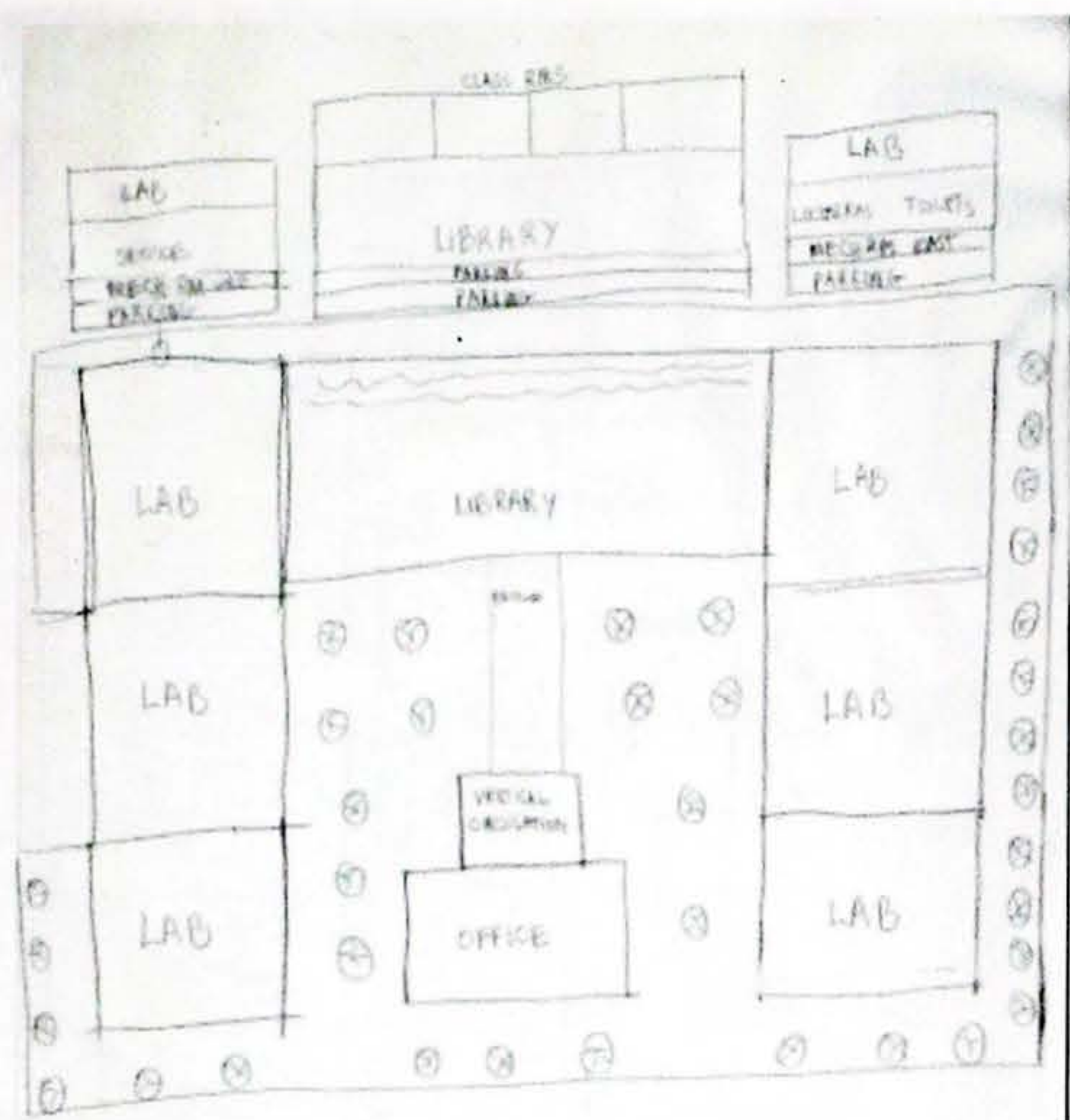
As the final stages of the design process drew near it was useful to create a series of diagrams based on that, which had unfolded during the thesis investigation. The following several pages contain these diagrams which depict the most relevant aspects of the project.



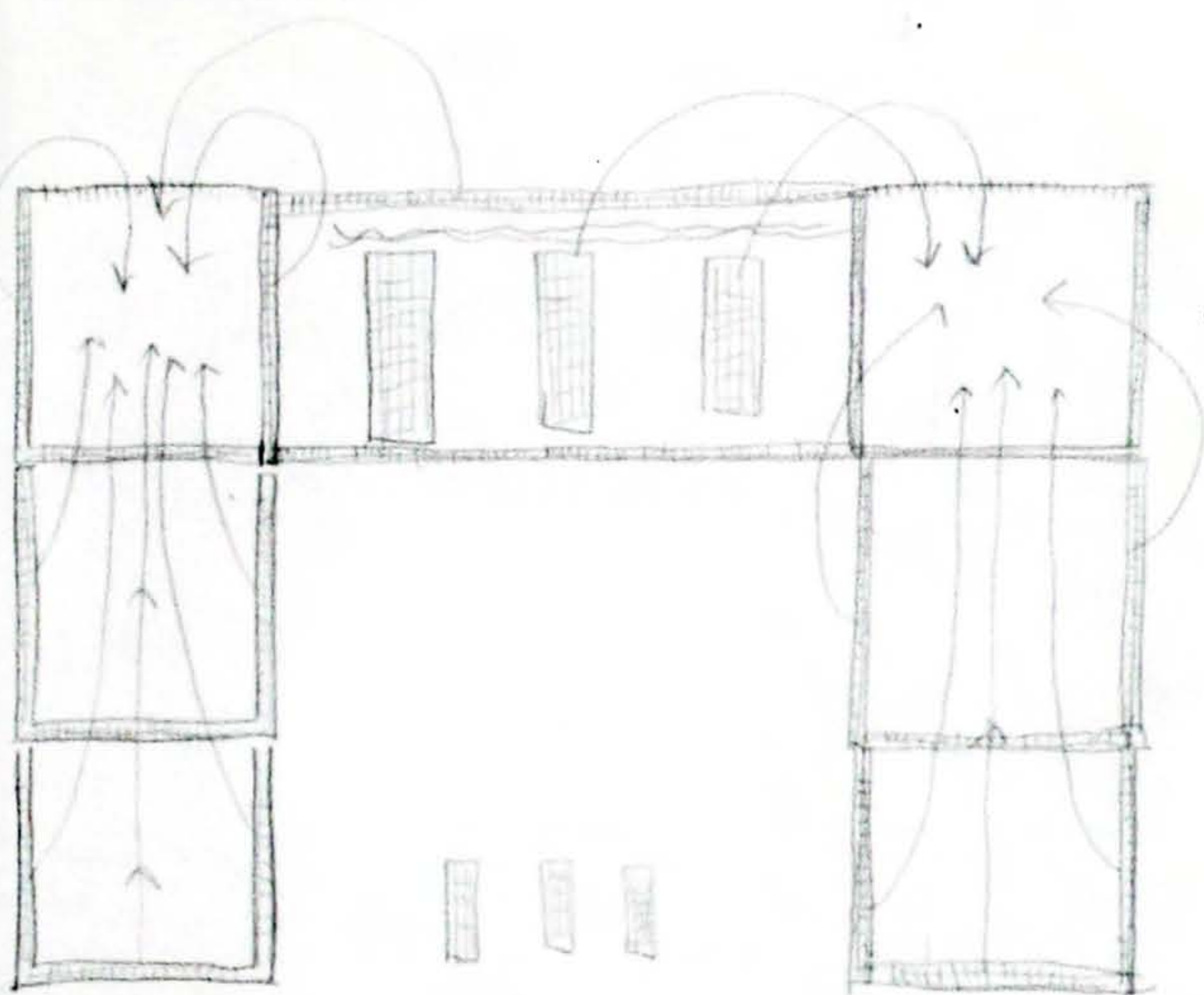




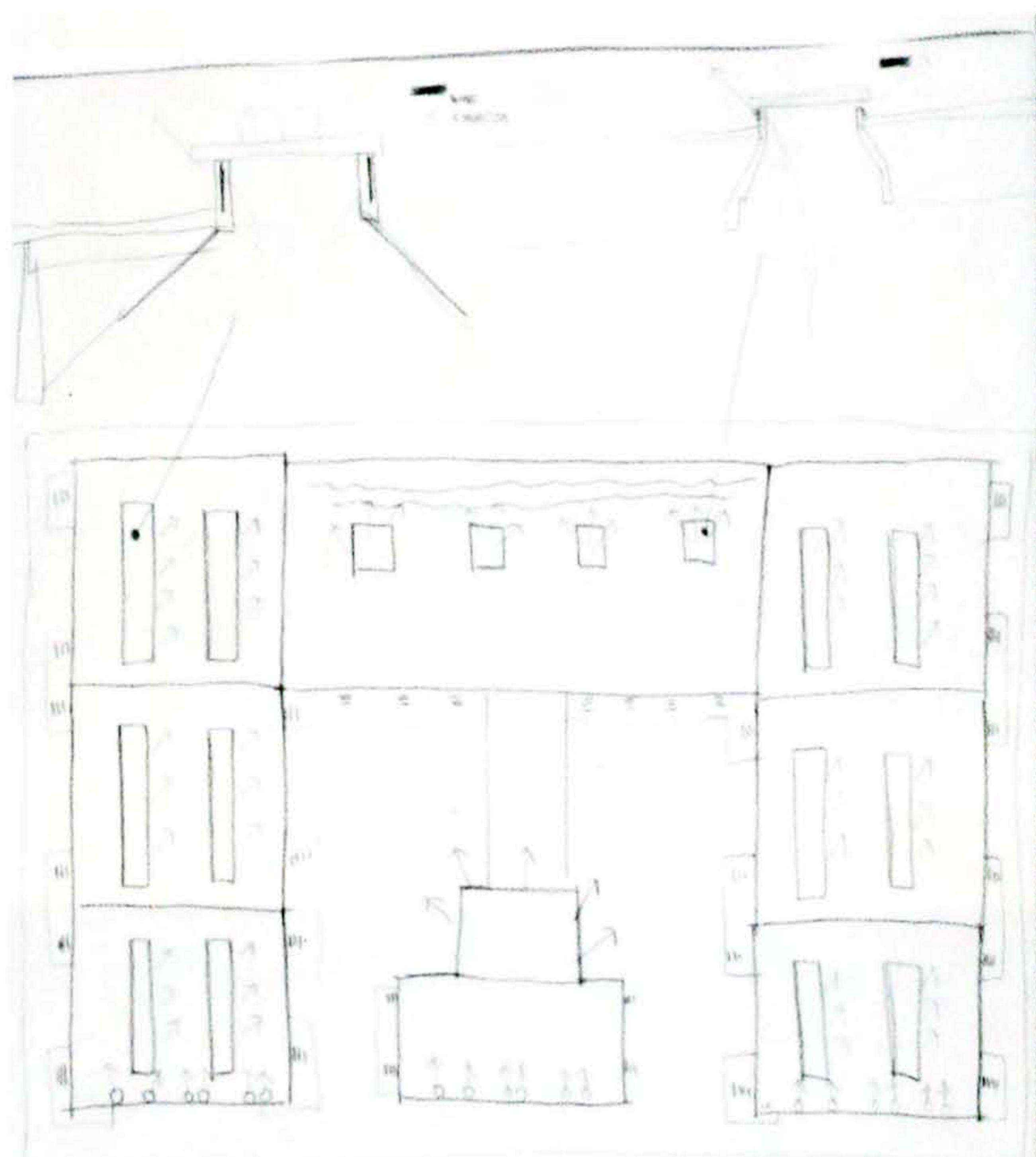




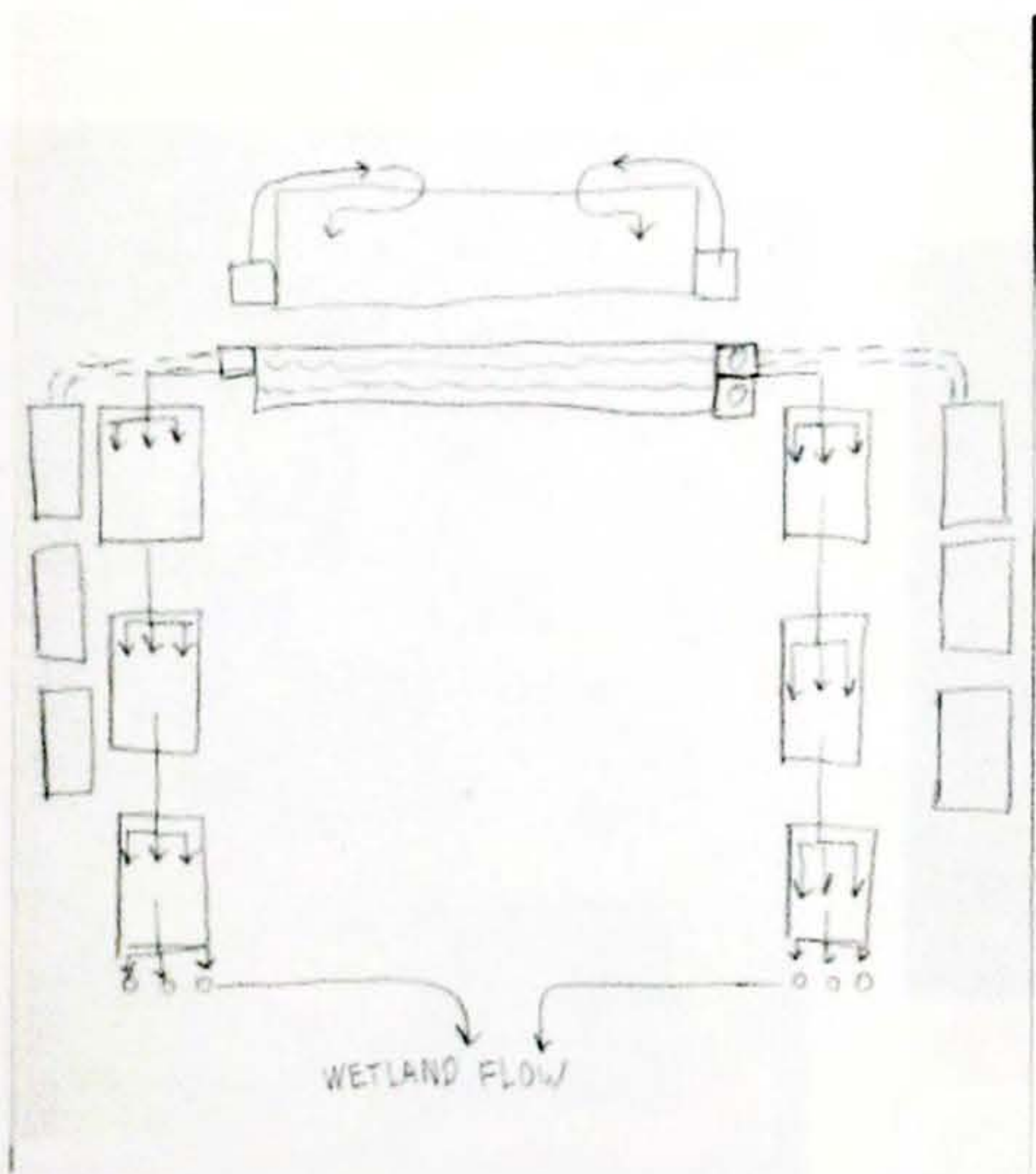
NATURAL VENTILATION



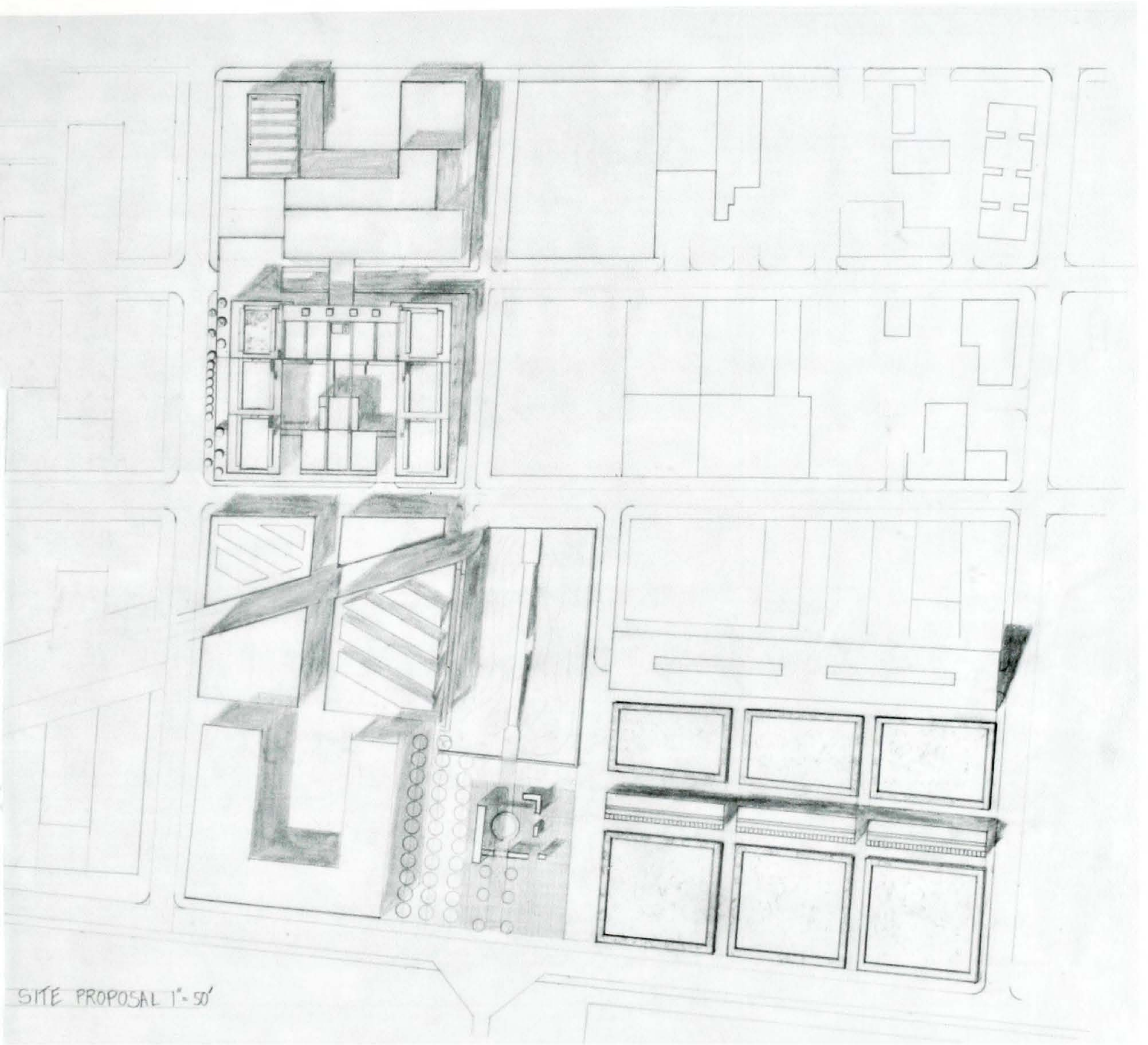
SOLAR COLLECTION



STACK VENTILATION

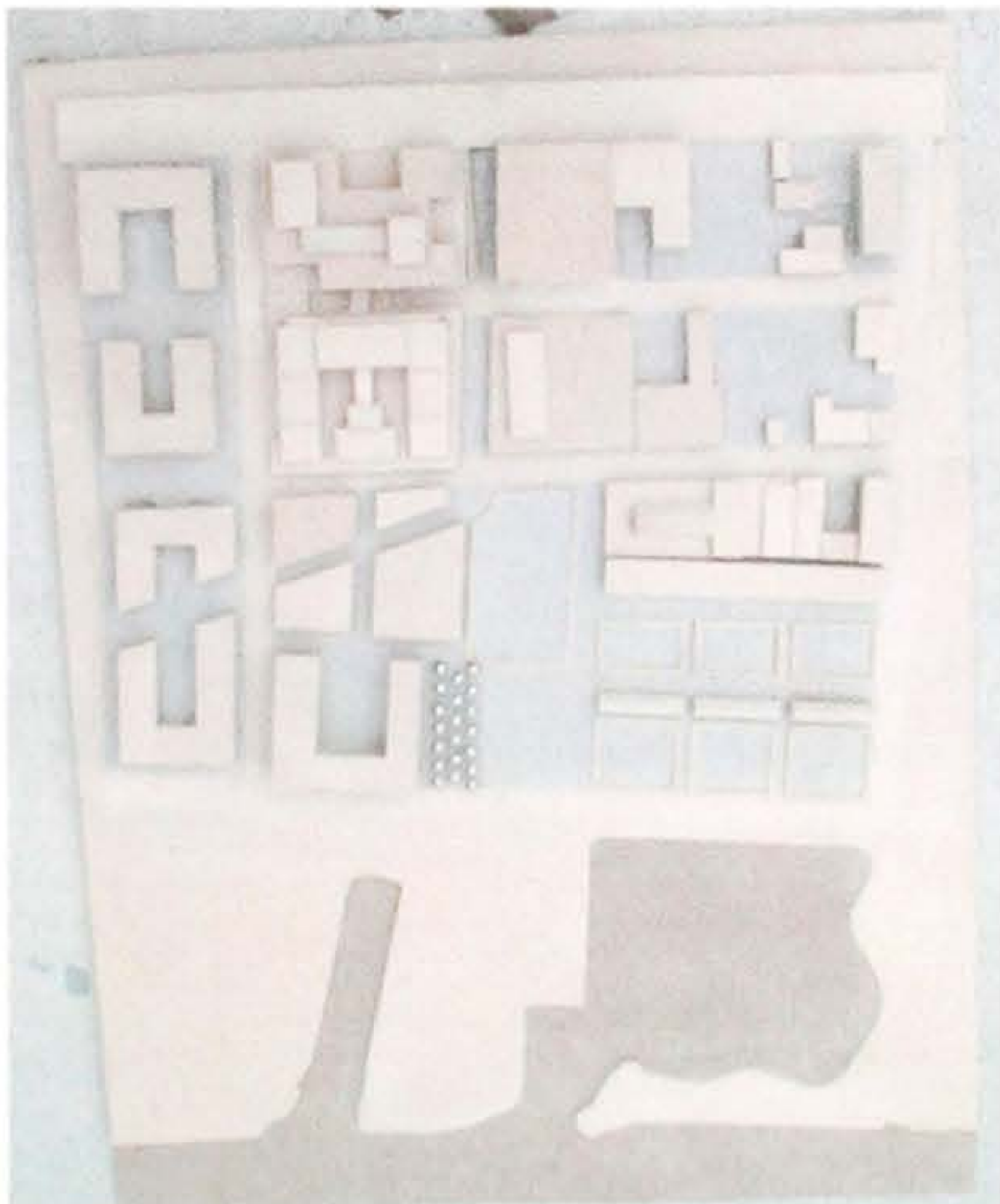


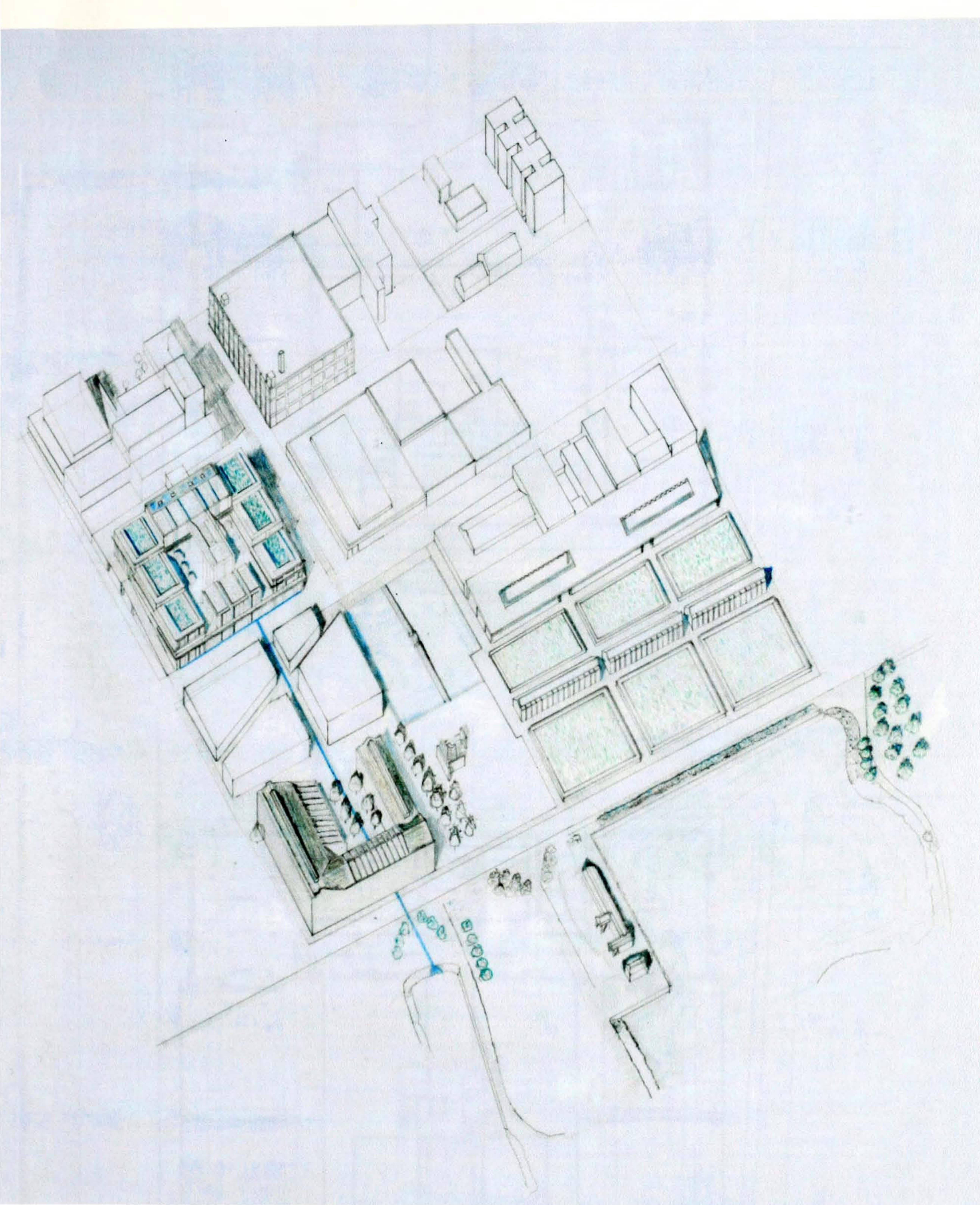
WETLAND FLOW



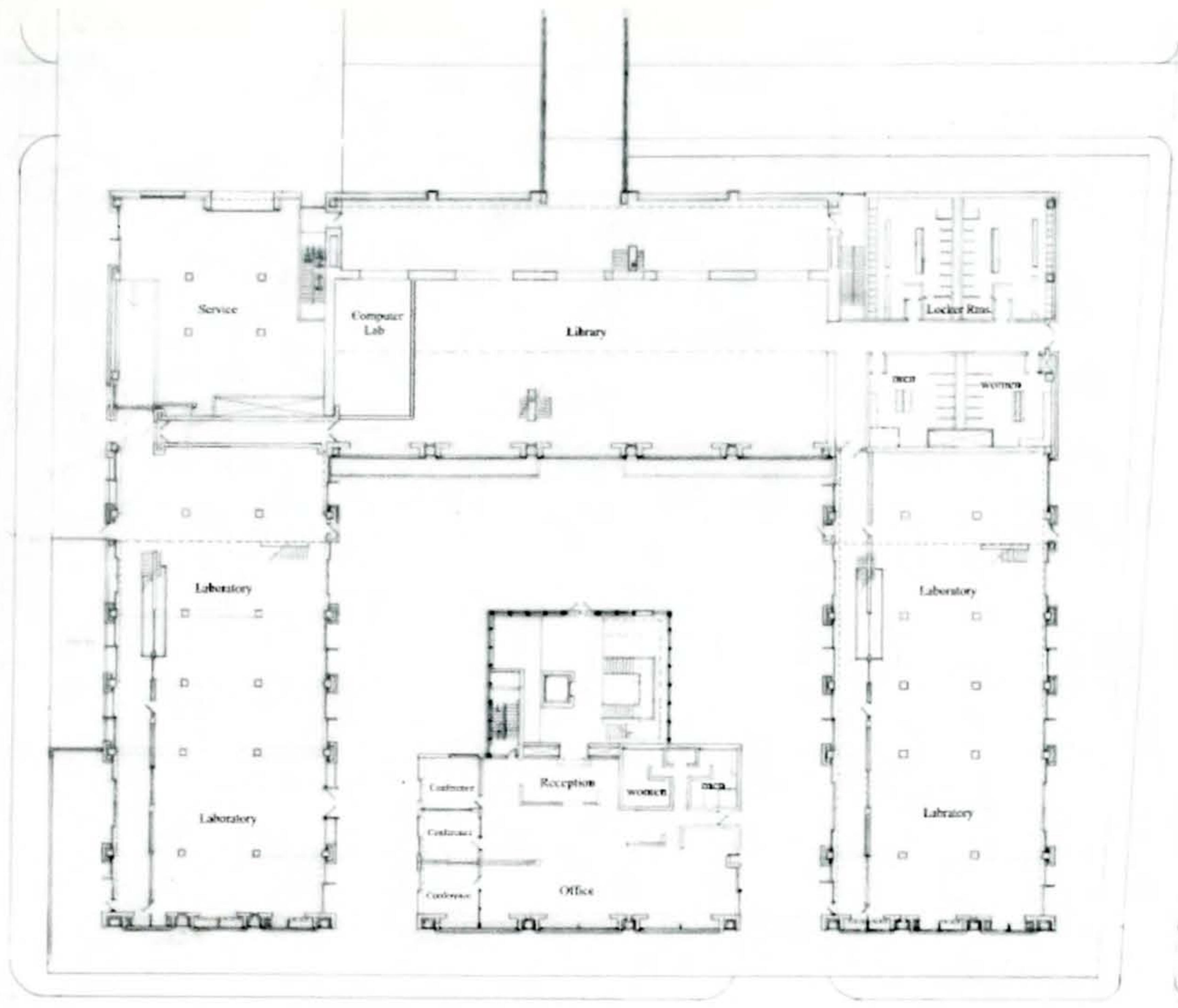
SITE PROPOSAL 1" = 50'

Site plan

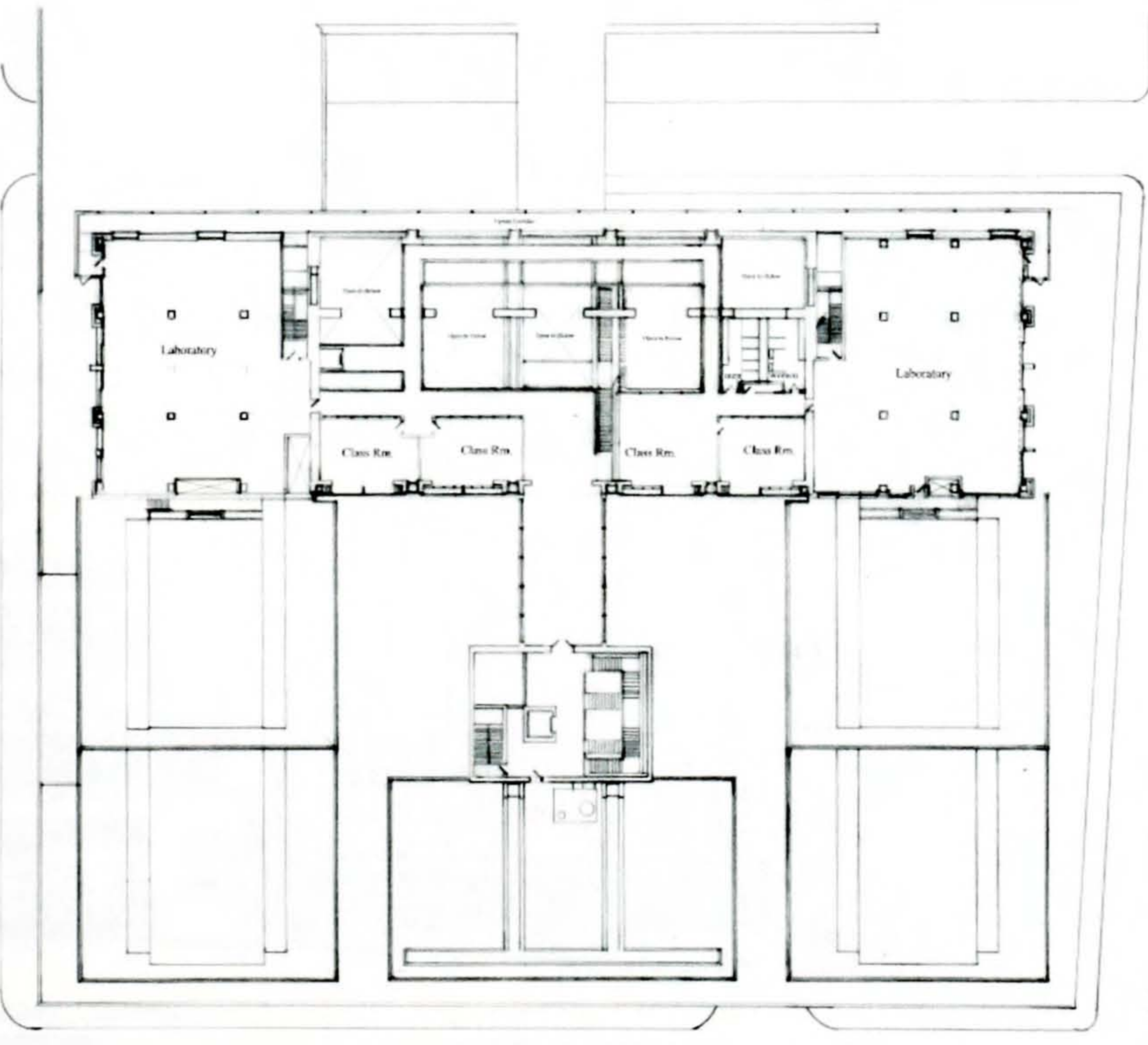




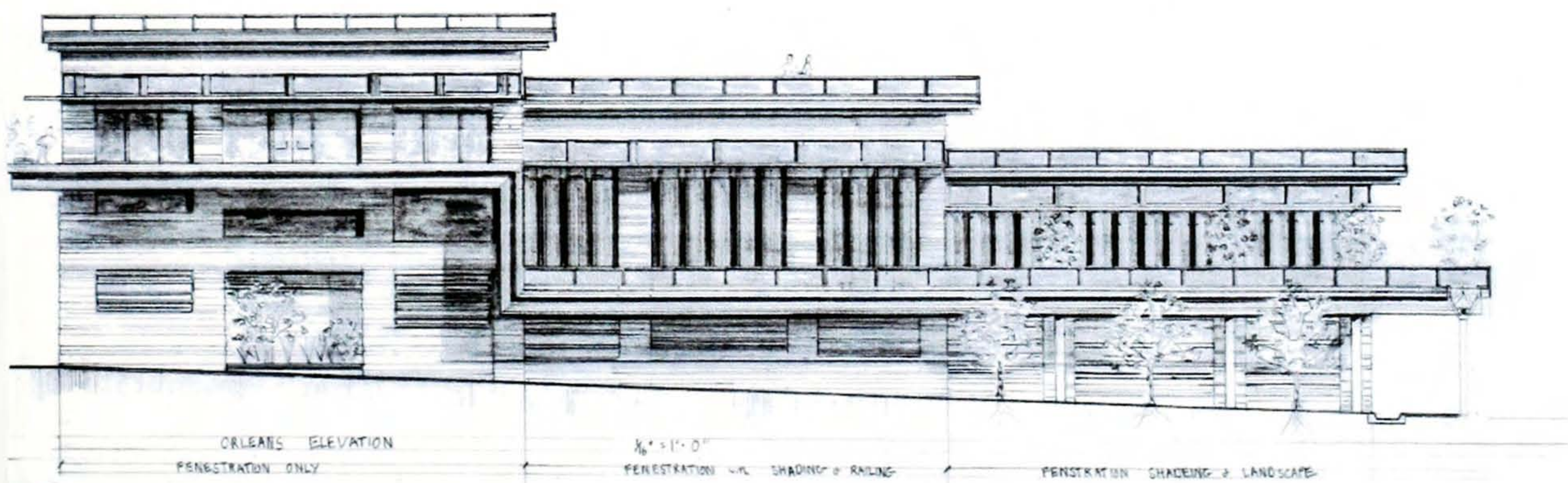
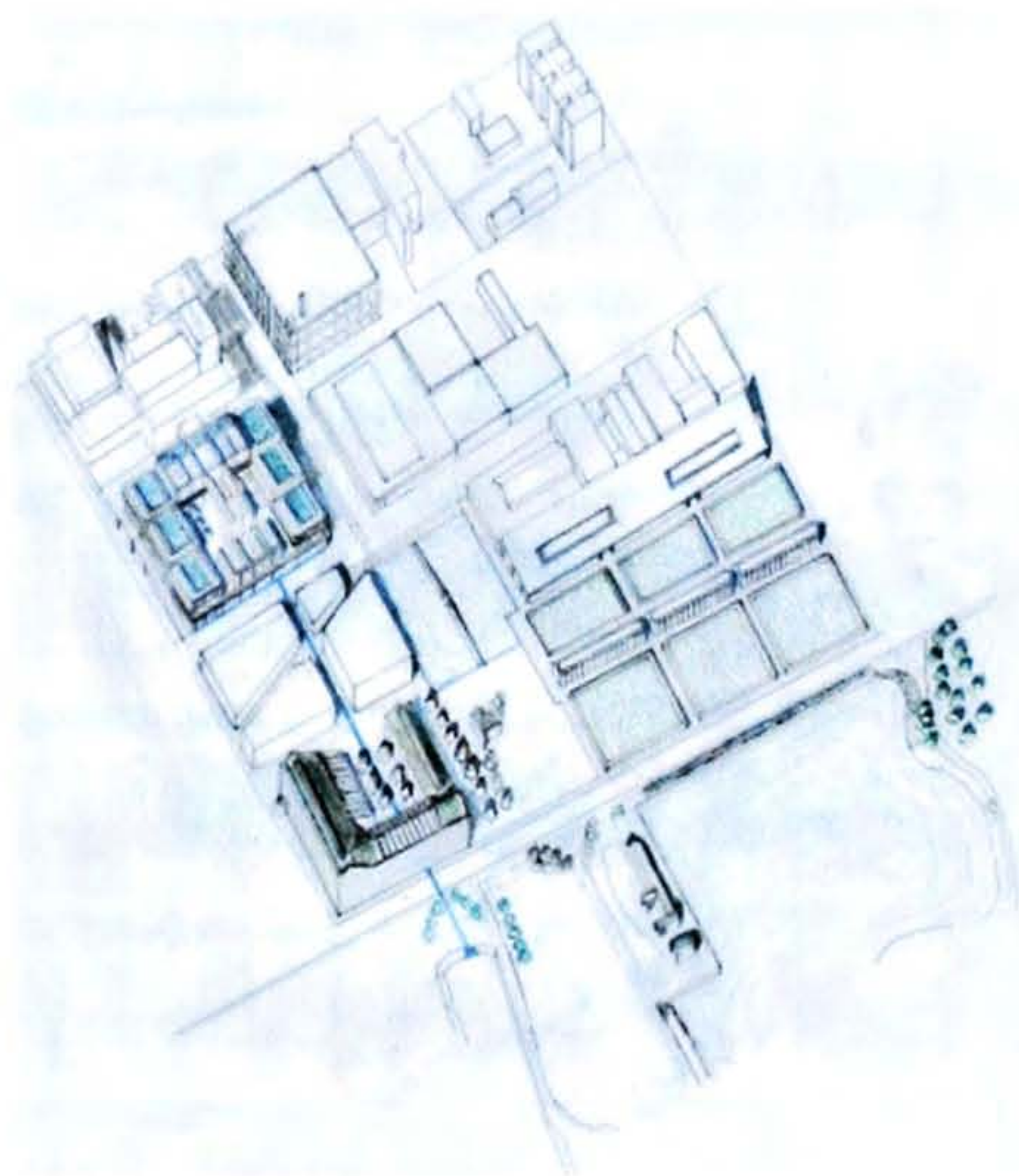
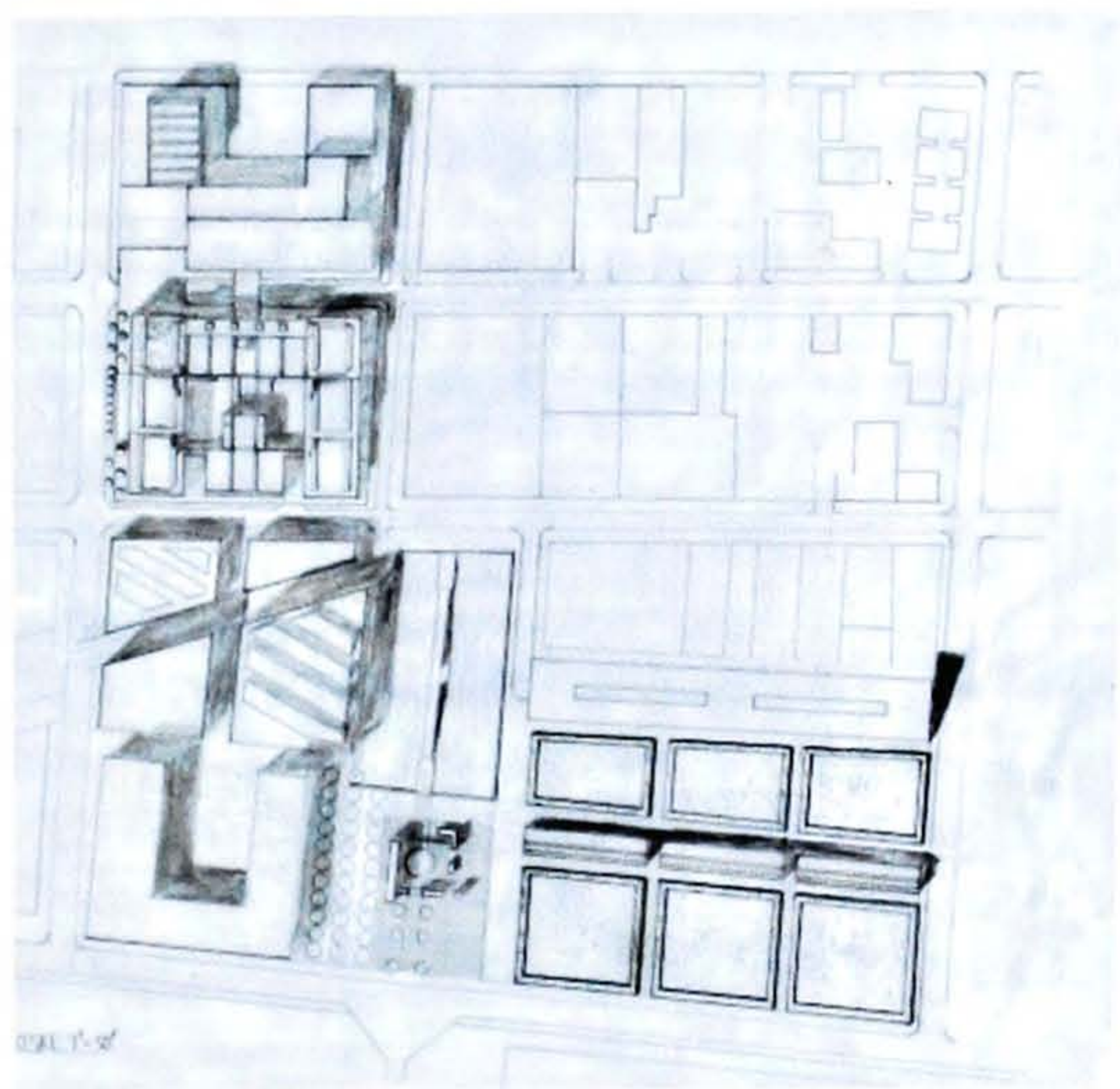
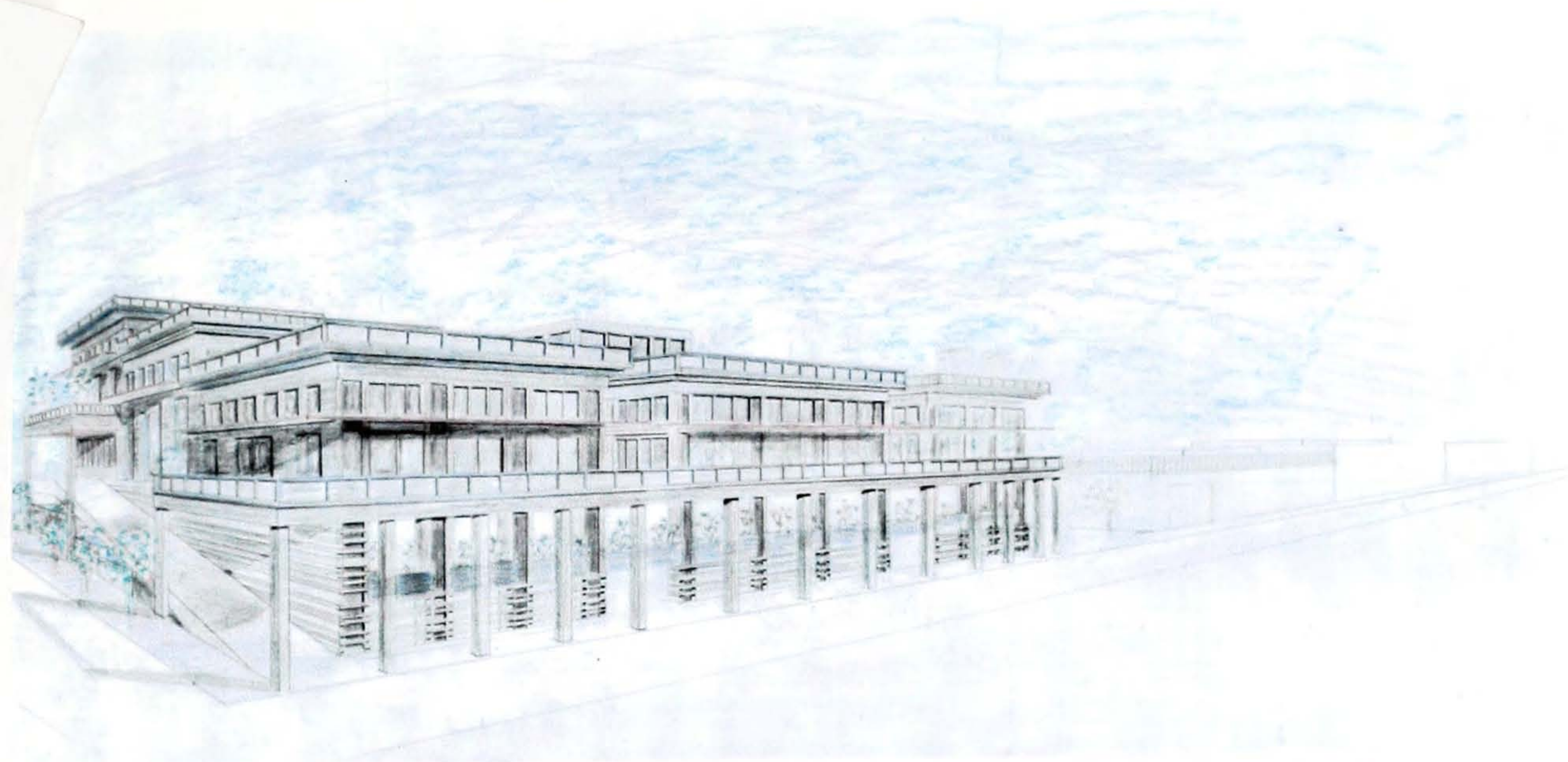
Final Site Proposal

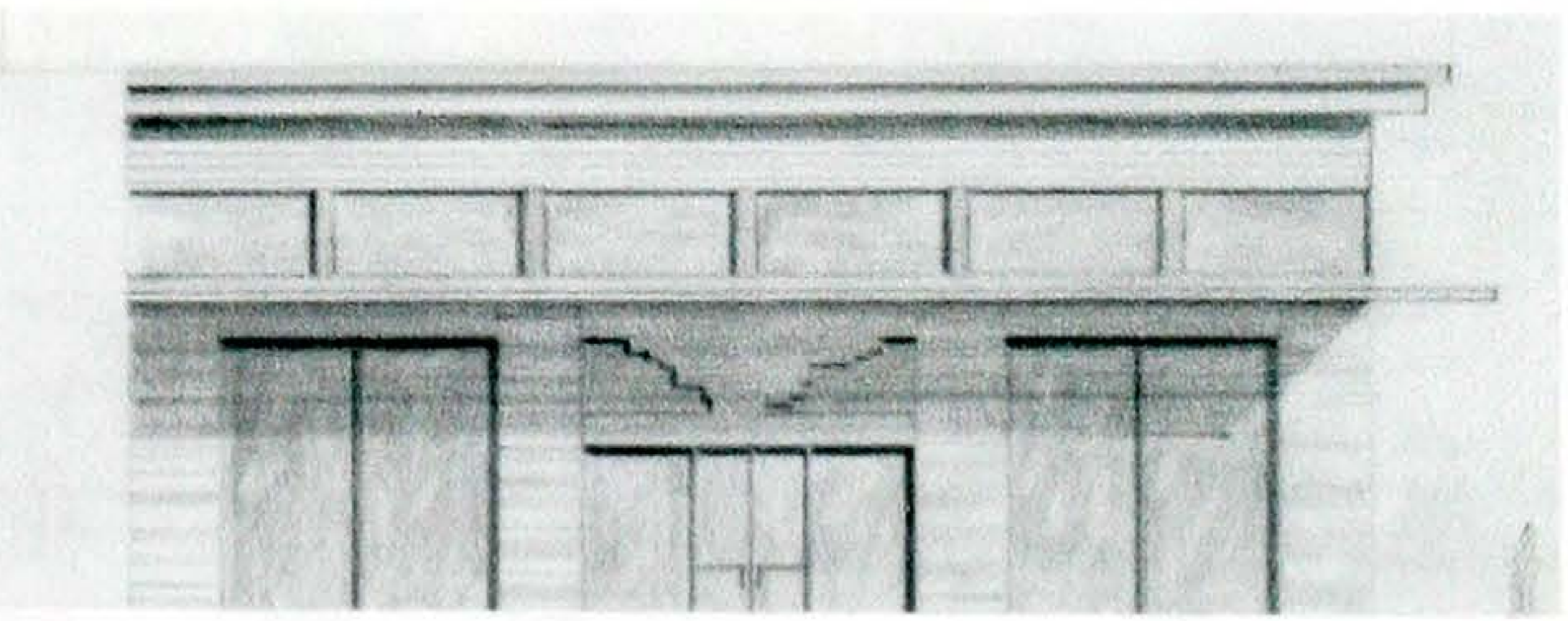
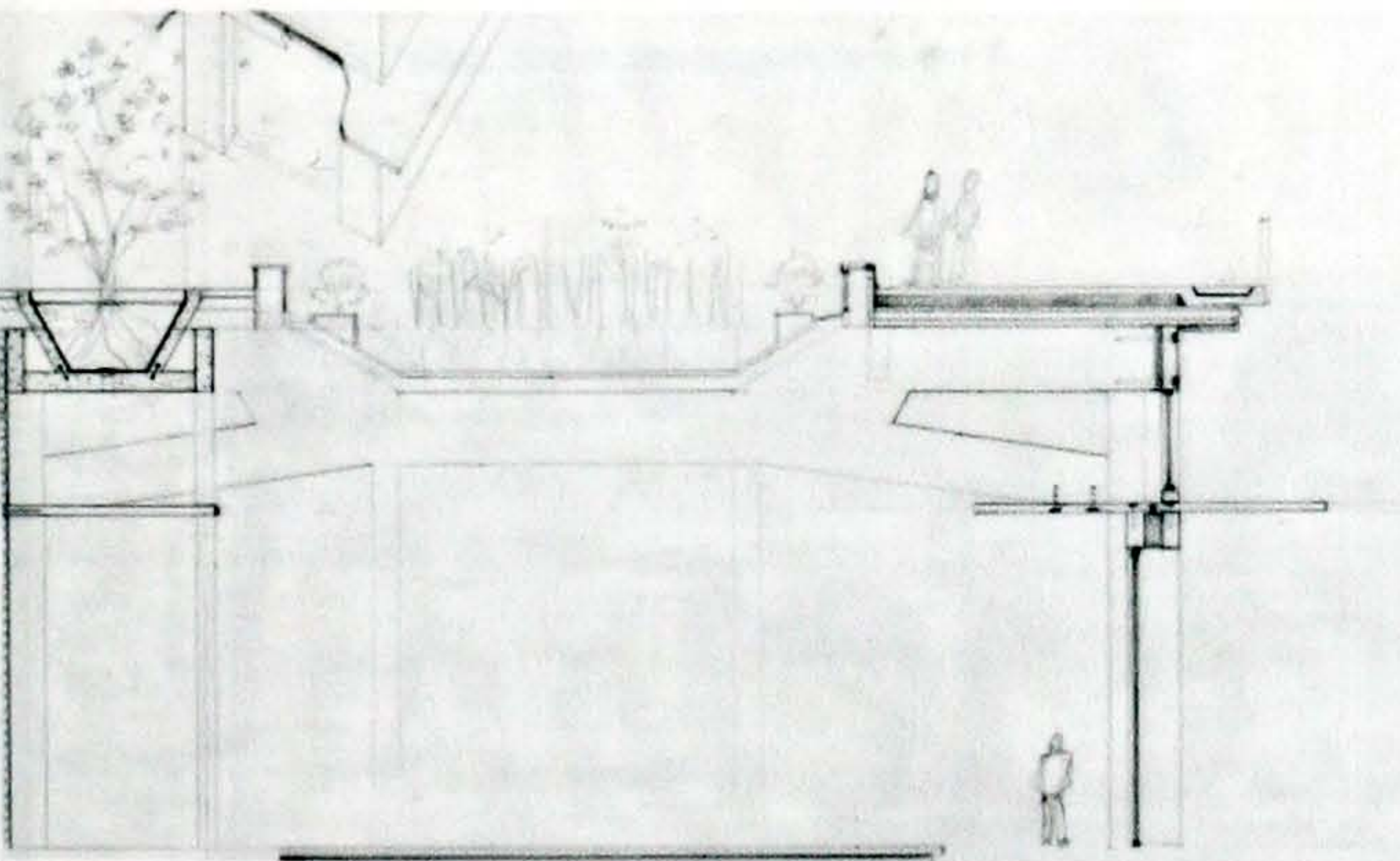
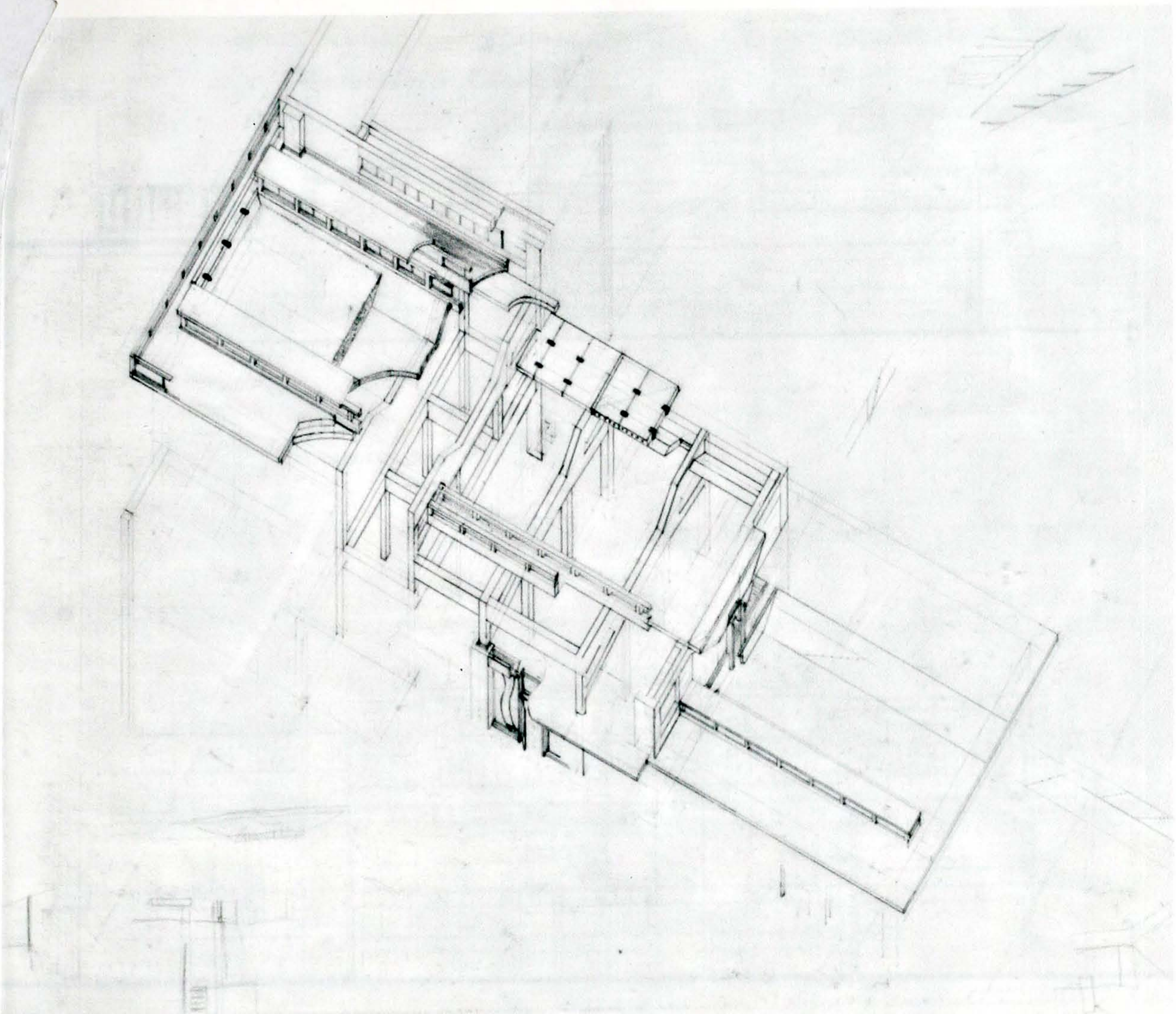


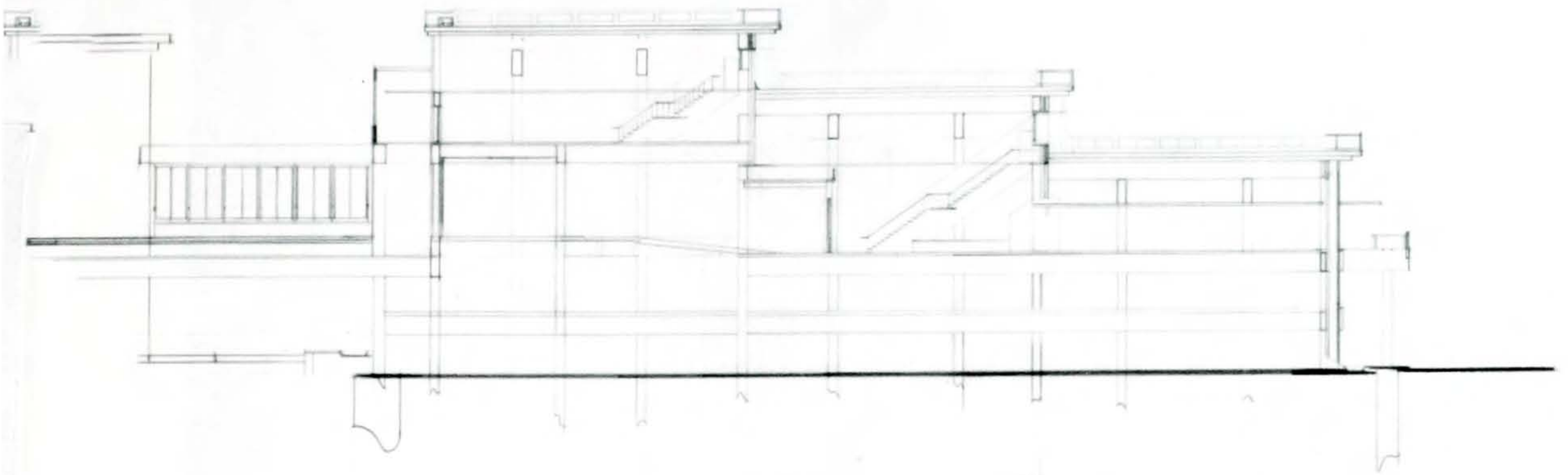
Lower Level



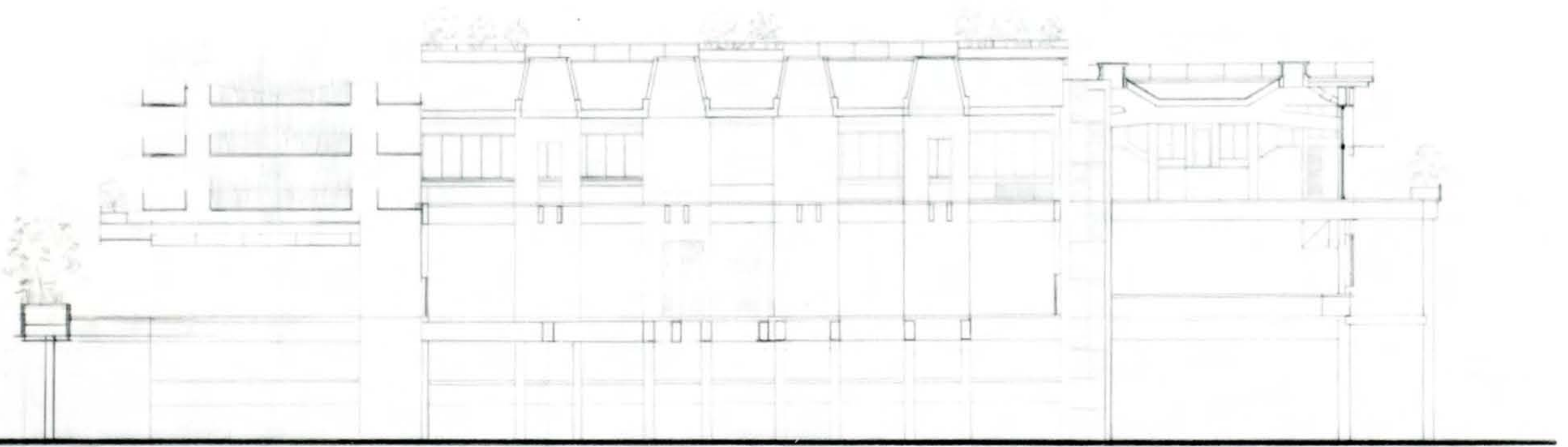
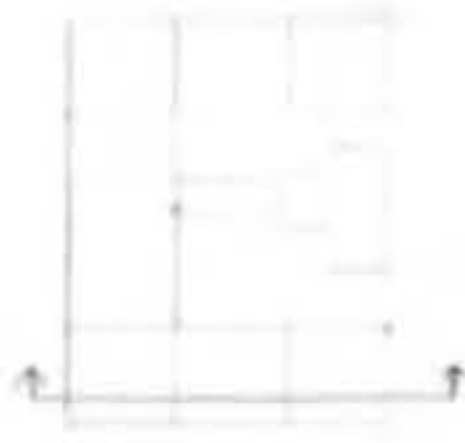
Upper Level



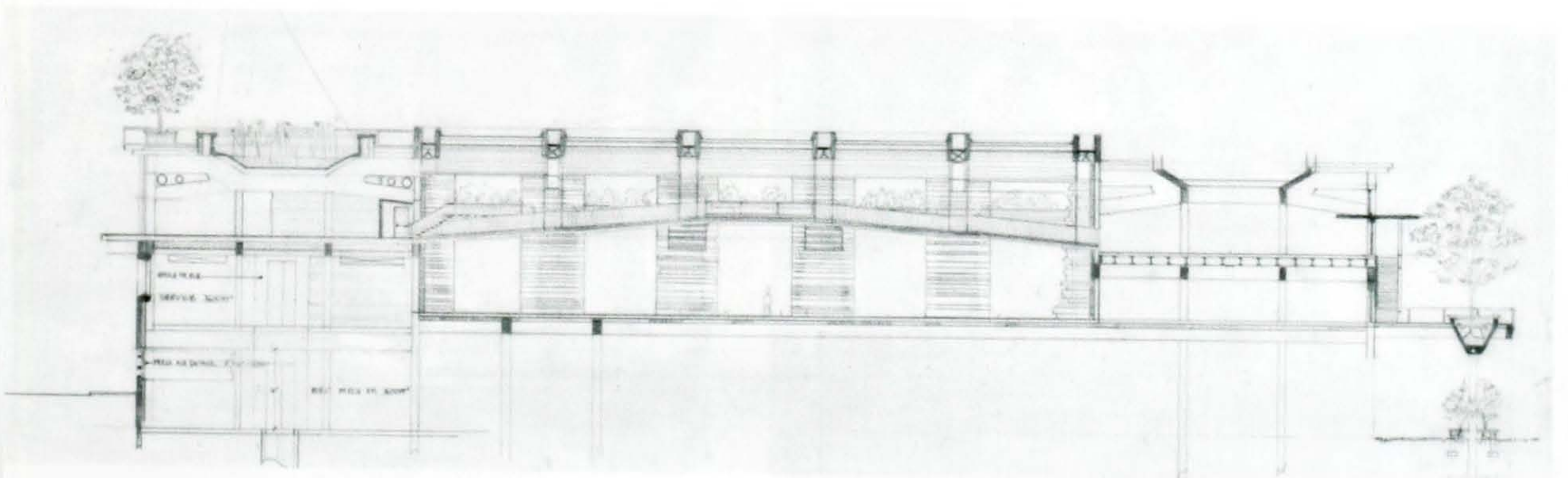


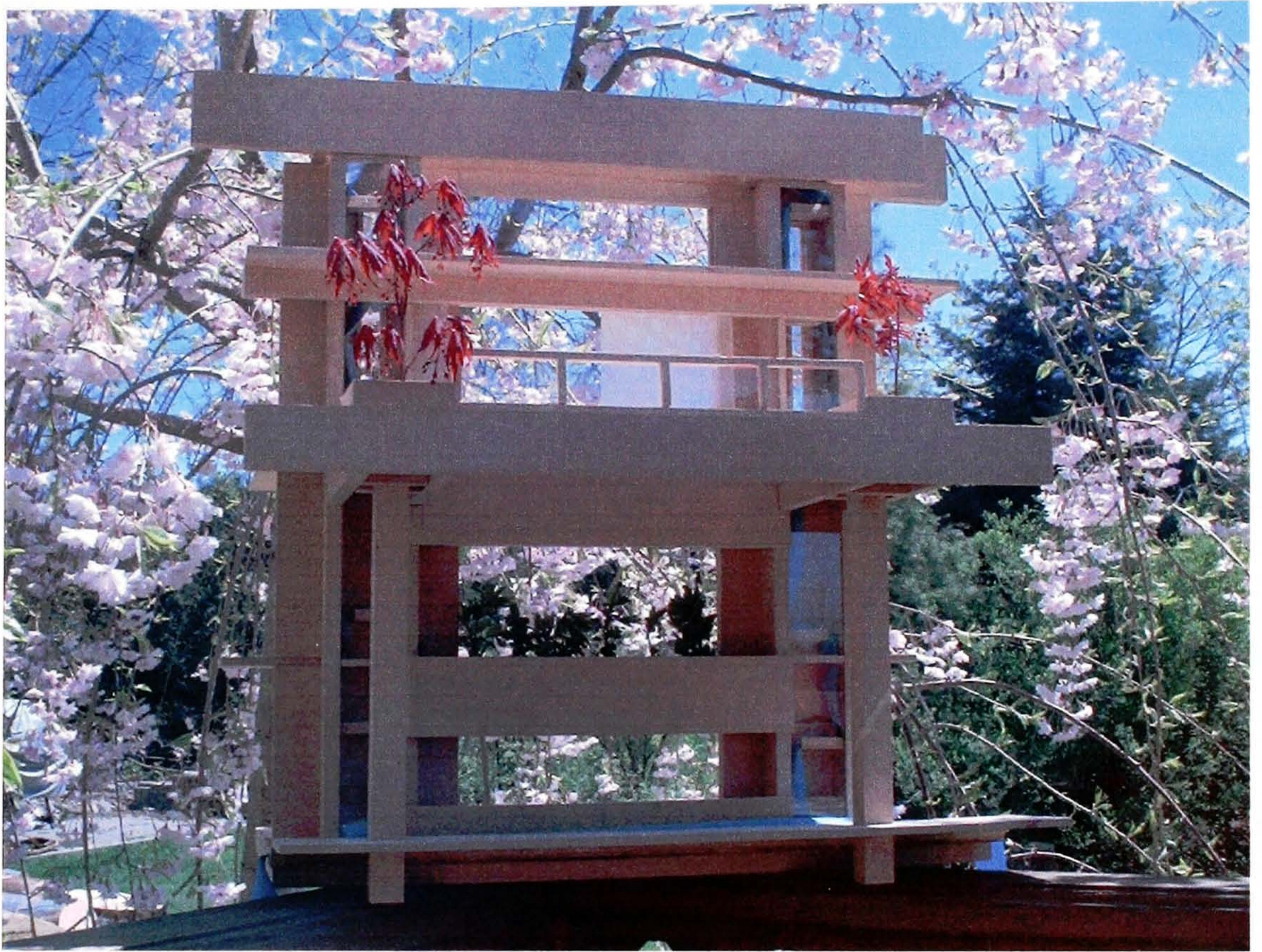


SECTION WEST LAB 2-10'

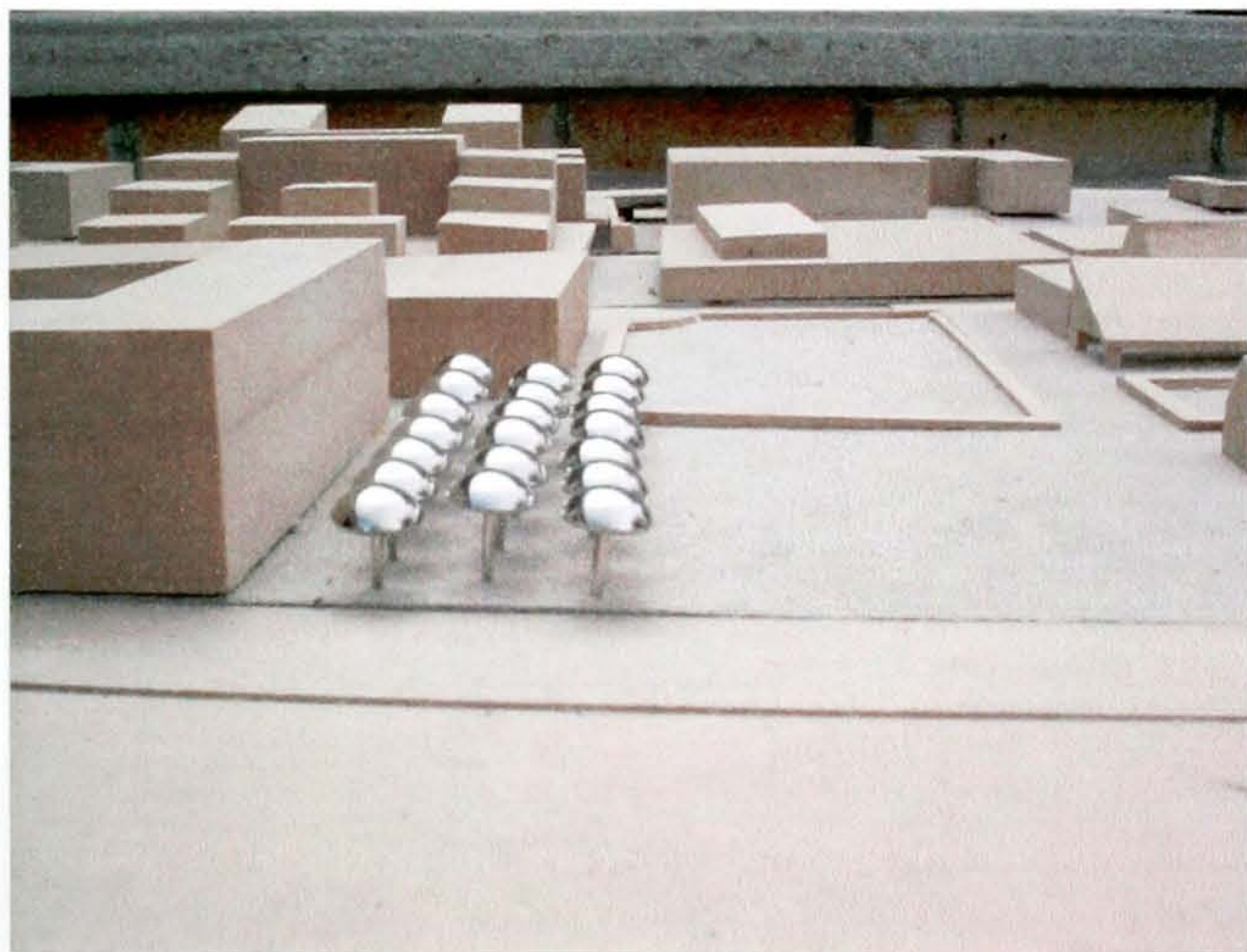
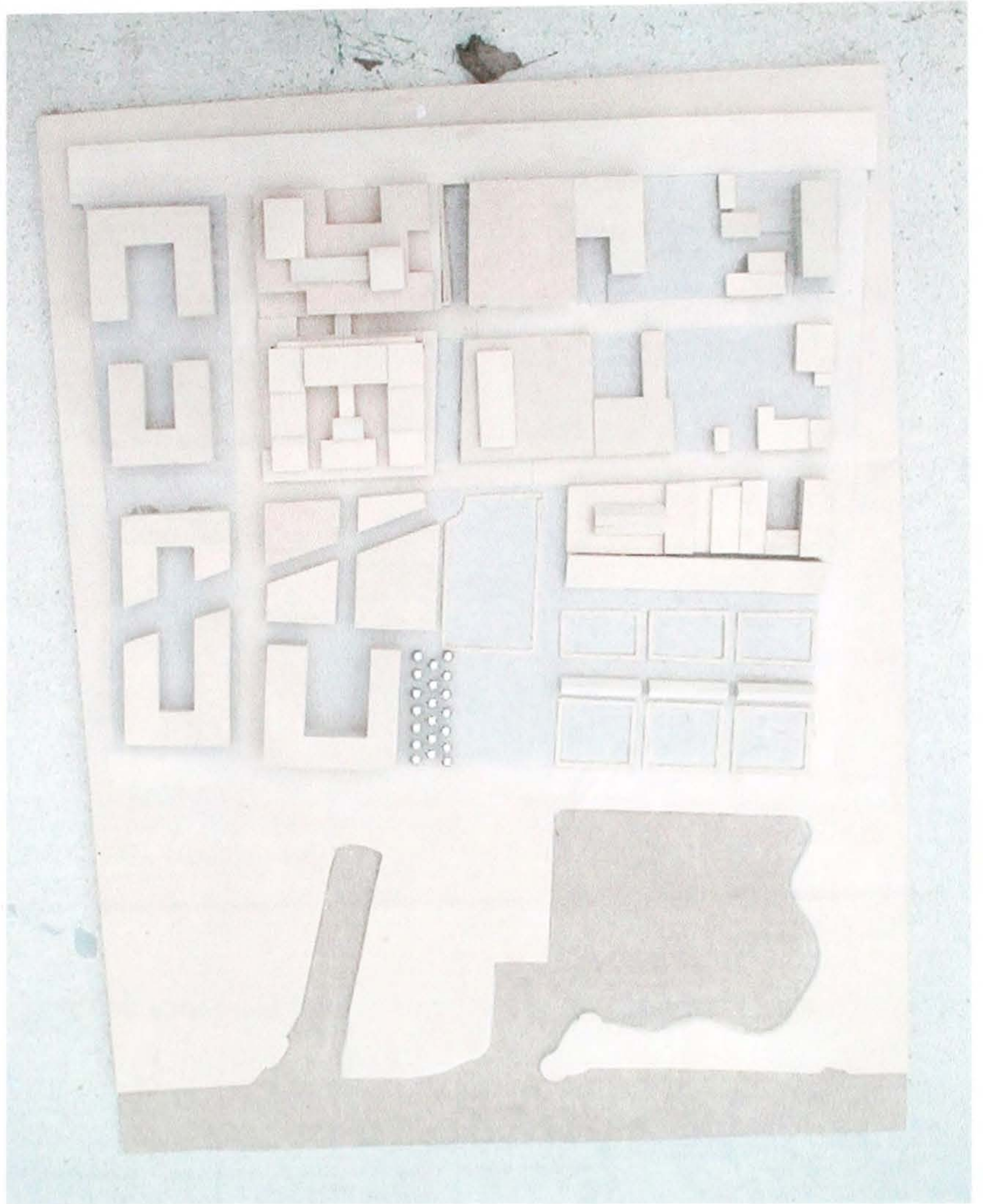
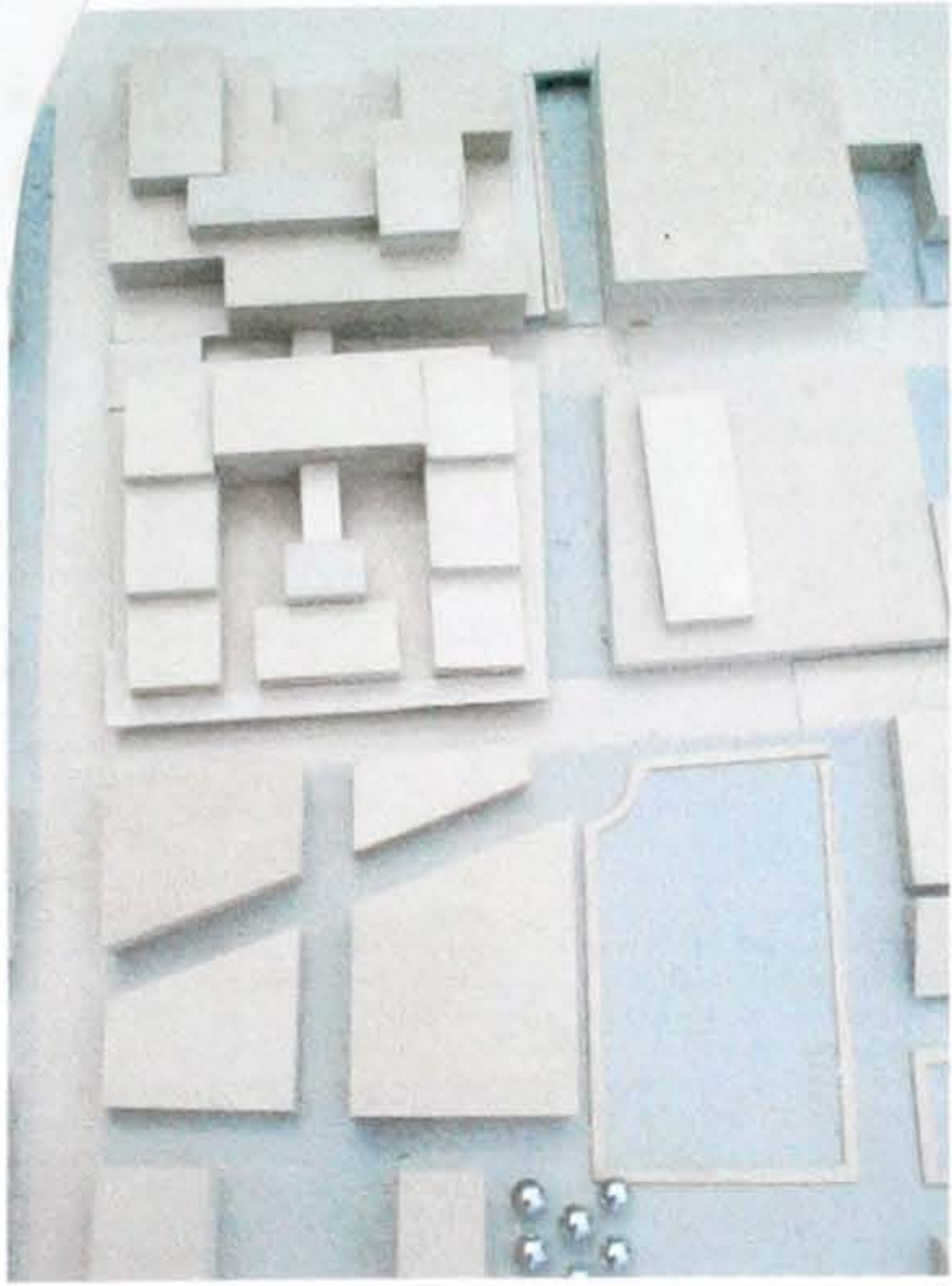


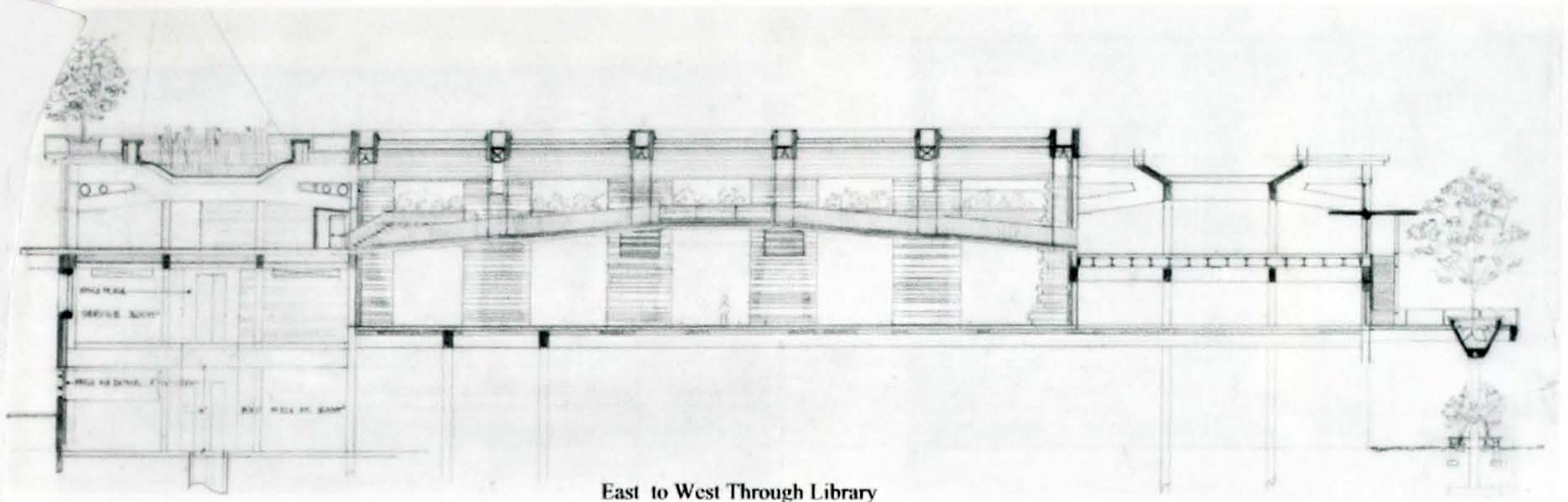
SECTION THROUGH LIBRARY LOOKING SOUTH 2-1-0'



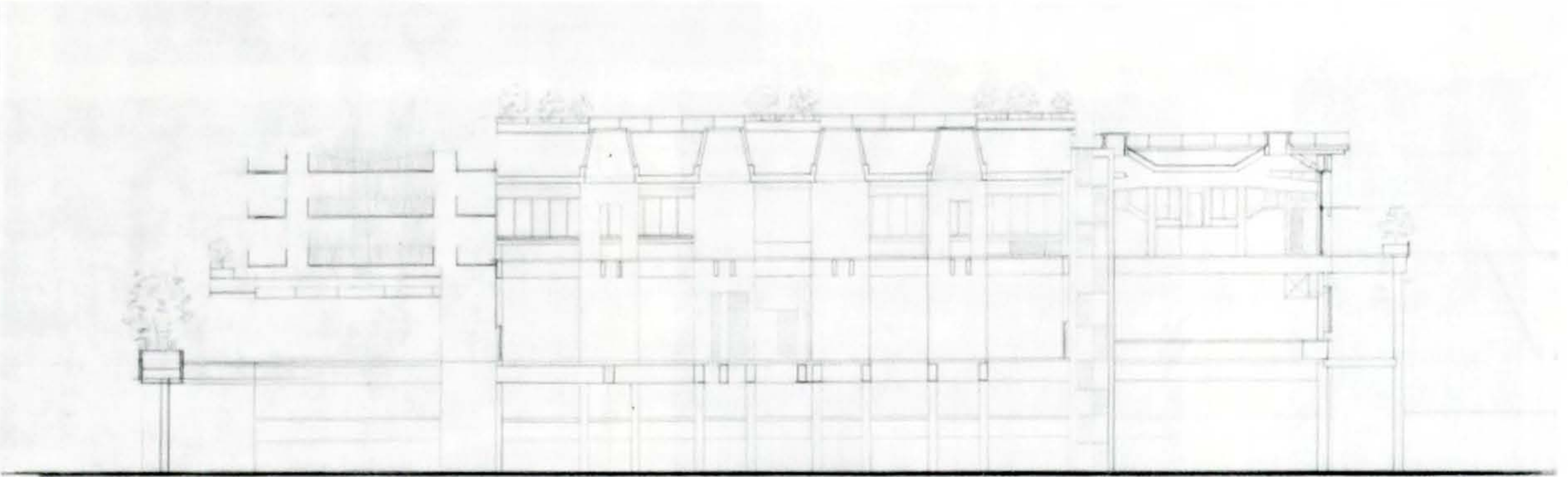




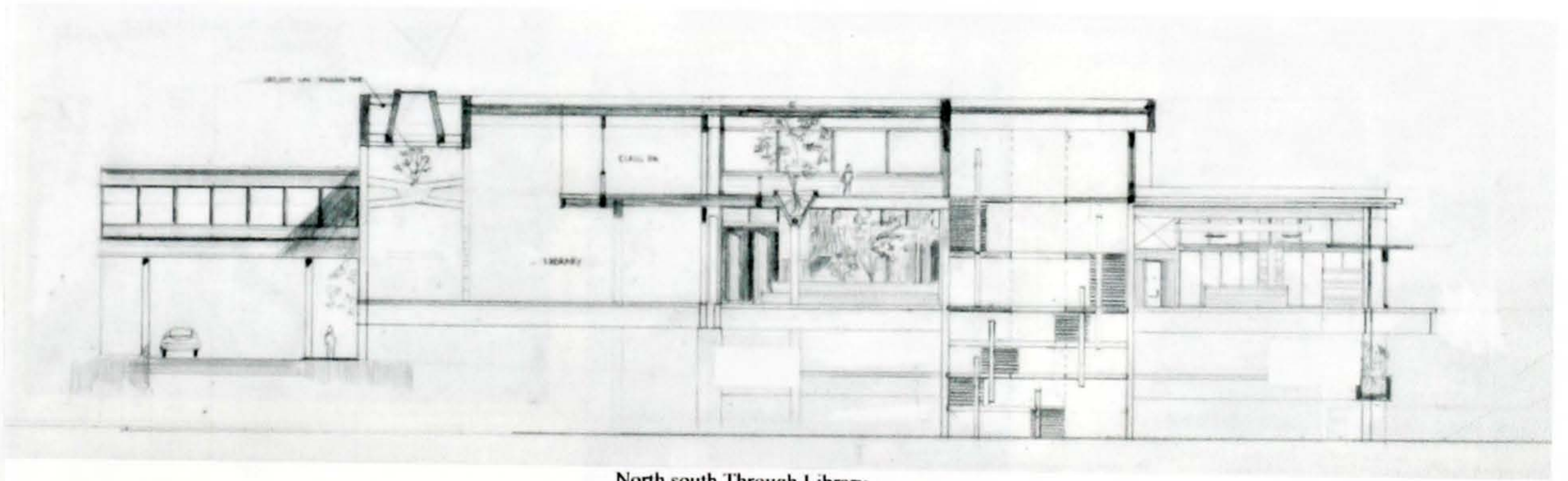




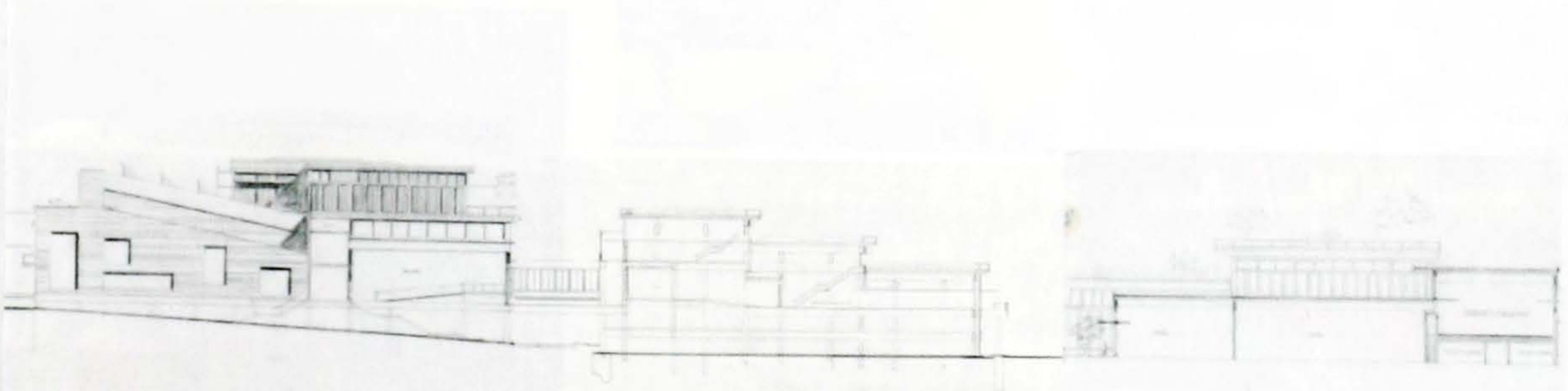
East to West Through Library



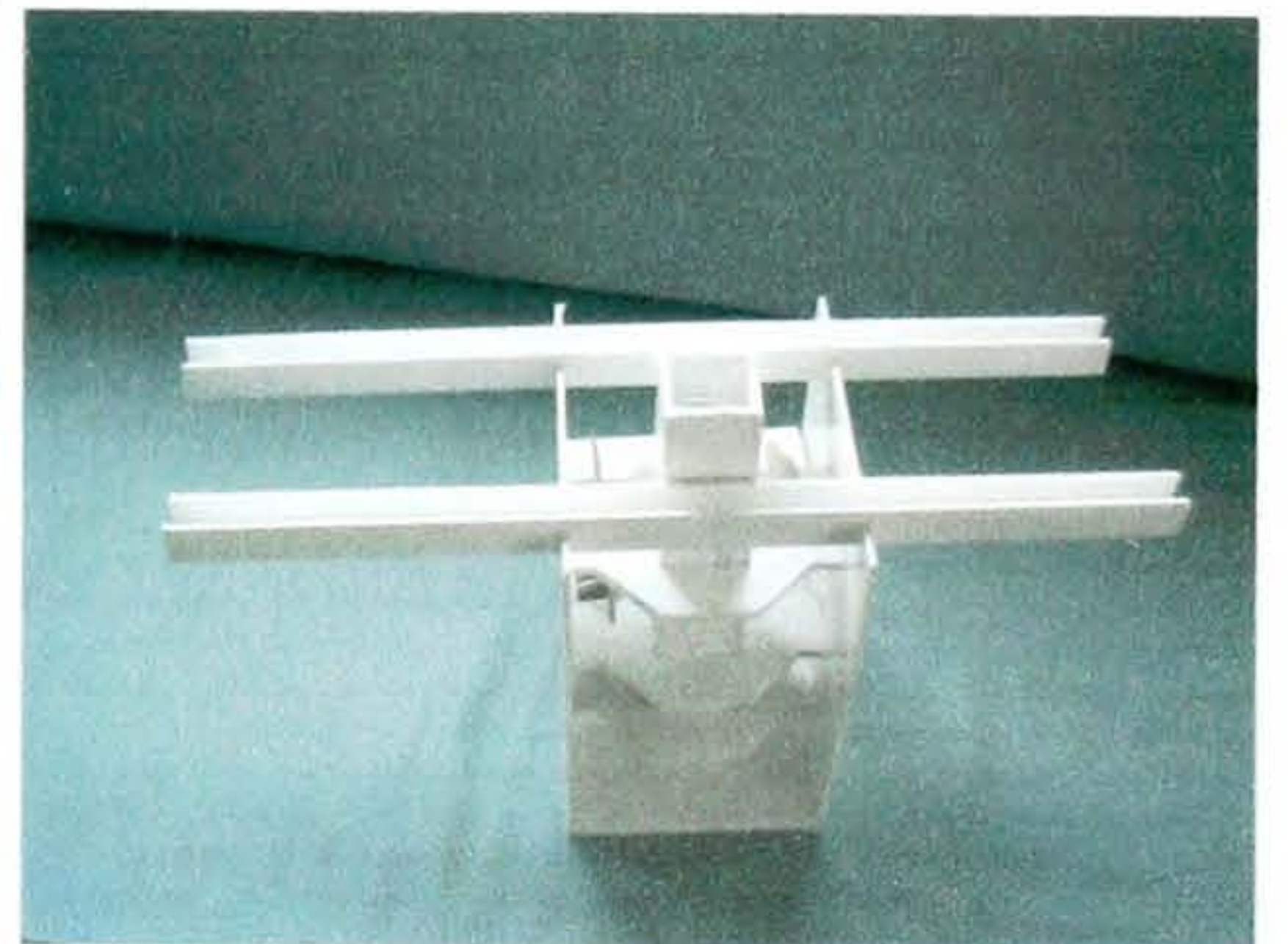
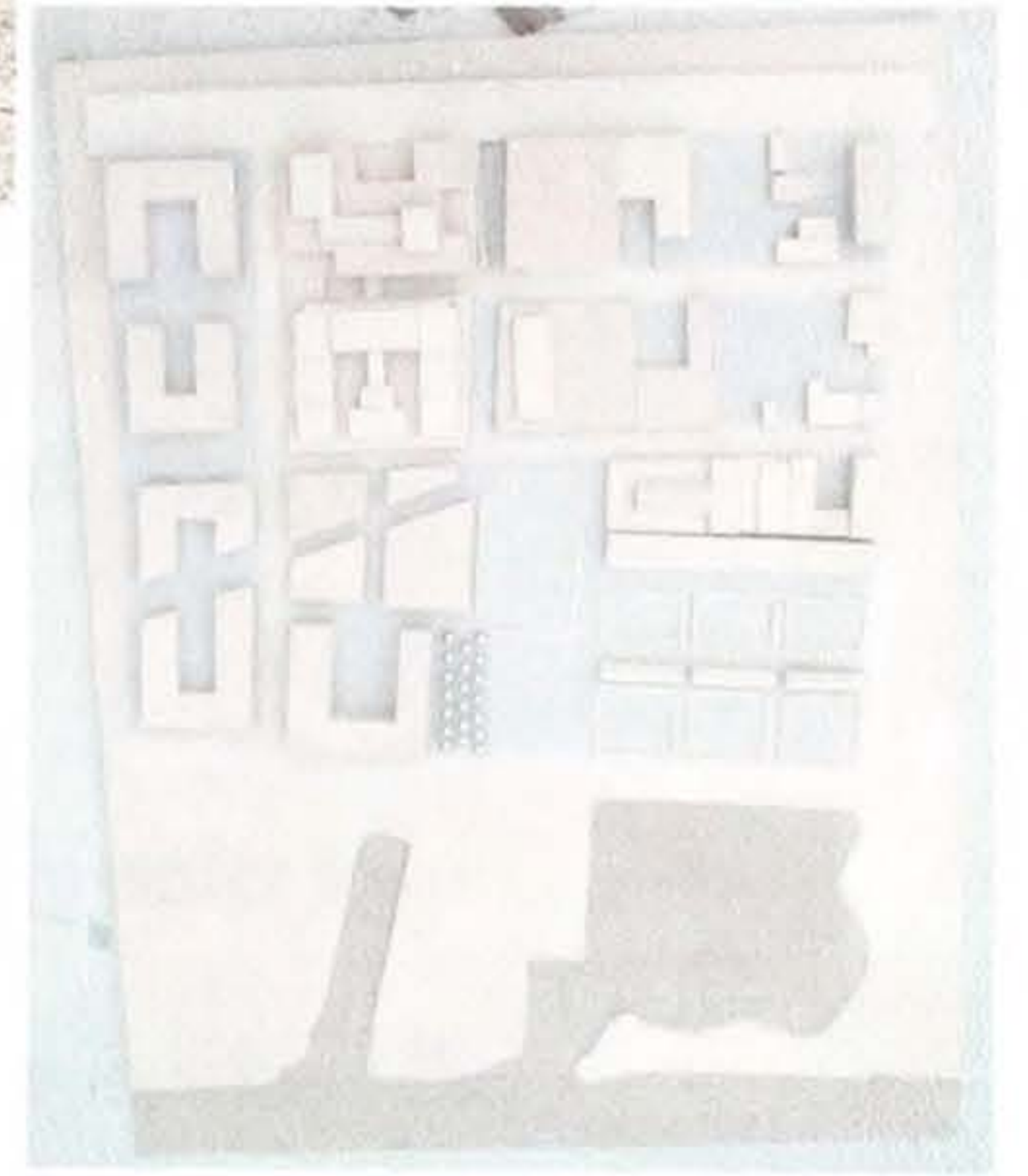
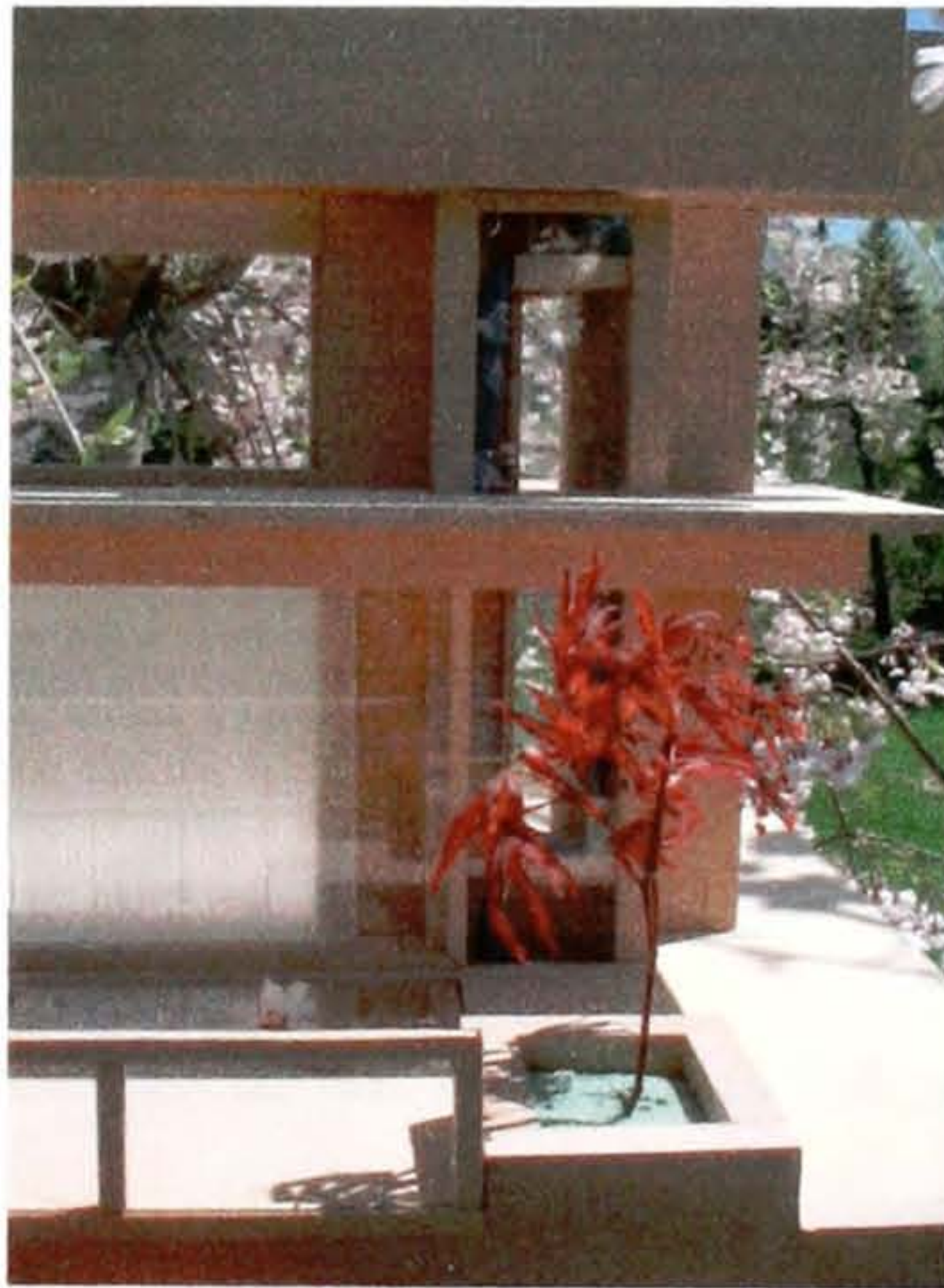
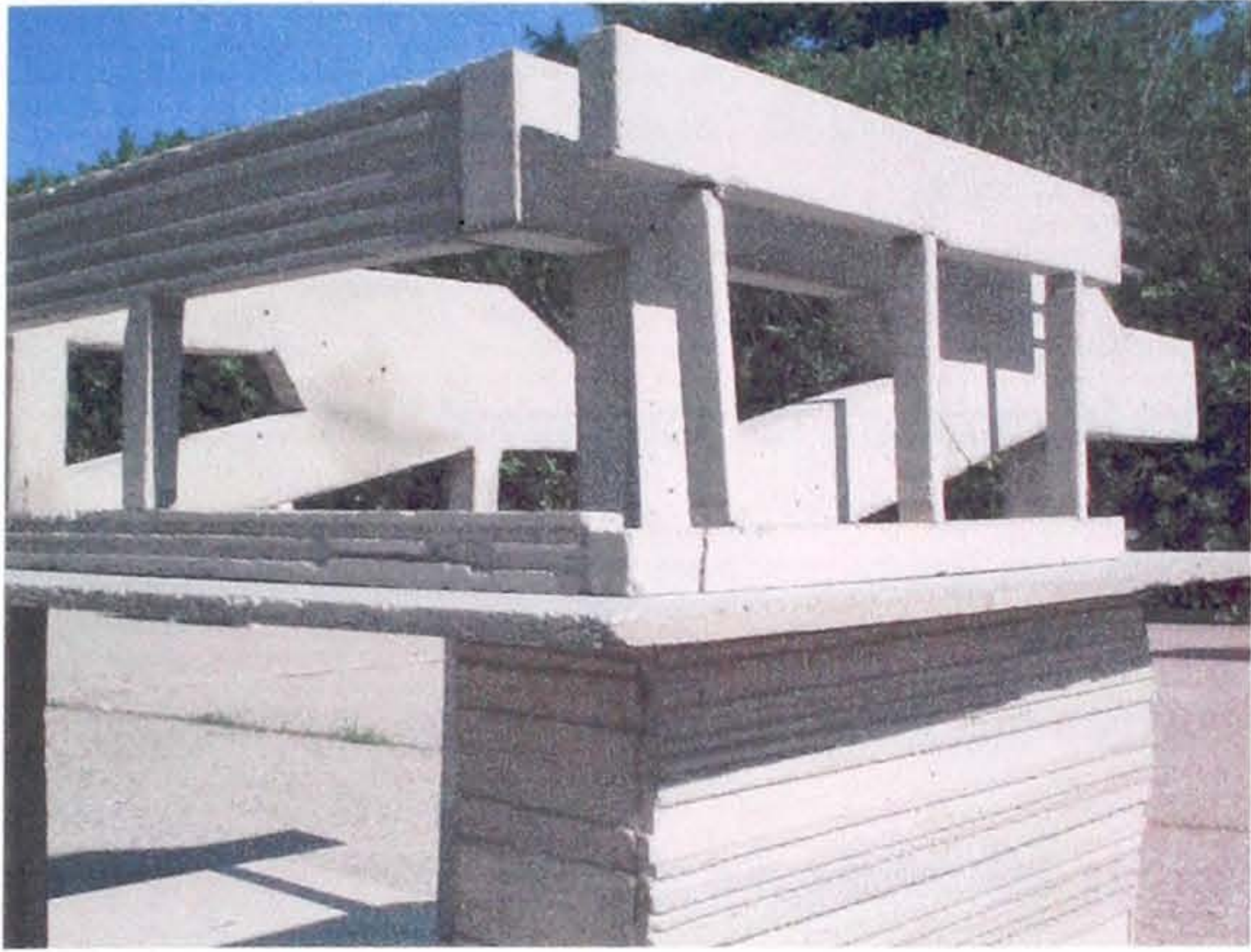
SECTION THROUGH LIBRARY LOOKING NORTH East to West Through Library



North south Through Library



Jefferson to Franklin



Thesis Conclusion

This thesis began where environmental exploitation was most evident based on the premise that the built environment can make a positive impact on the natural environment and further more that in so doing the users of a work of architecture can enjoy come to enjoy the spaces which for a time due to necessity hold them captive. This thesis project never sought to completely alleviate either of these issues but it did seek through responsible design practices to set an example of what we can accomplish when we are truly prepared to set aside convenience in order to achieve a more sustainable attitude towards that which has sustained humanity throughout history.

This thesis is based on the premise that a work of architecture can become a part of the landscape rather than to just be placed on it. The thesis challenged itself to accomplish this while providing adequate parking to accommodate its program there by increasing the difficulty of achieving that which the thesis sought. As of this time an honest assessment is that the project falls short of accomplishing this goal although steps were taken on which a foundation of possibility has been established.

Tectonically the project sought to integrate itself with natural strategies in order to create a threshold between the built and natural environments and it is here in which the thesis was most successful. The structure was conceived not by reliance on known technology but evolved from the context of the site and its surroundings. Further more as the structure carried the loads it bears to the earth it invited a duality of flow to occur carrying water downward on its path to the river while allowing for the wind to stir within spaces far removed from the enclosure. Much of the loads that the structure carry

are out side of the normal requirements of any structure as the thesis tried to both create the means to enhance the environment and to educate its users of how this might be accomplished.

Other than this the most successful part of the thesis project is that its program was conceived in order to create a sense of both collaboration and cooperation. From the shortcomings of the thesis's success is the realization that human achievement is very nearly ever an individual accomplishment but a matter of the sprit which arises when we join together to achieve what individual most probably we can not.

This thesis project never intended to create a false aesthetic although for a time it was considered but in the end responsiveness over came desire and in that the thesis investigation was truly successful.

If the success of a project such as this is that at the end there is no predetermined conclusion or a perfect construct than this thesis did succeed, as a desire to further its essence burns brightly within

Endnotes

"In theory, this "post-modern" blend of styles and materials represents precisely what you are looking for, yet here you confront an incoherence suggesting pragmatics rather than vision, cobbled-together comprise rather than eclecticism.

Soltan, Margaret. "Architecture as a Kind of Writing."
American Literary History, Vol. 3, No. 2 (Summer, 1991), 405-419

"The other thing is the idea of the city as a referent for architecture, a point where we can practice architecture". By "practicing architecture" Gandelsonas means persisting in individual expression even while acknowledging civic as well as contextual constraints. (Of course "contextual" may mean only an ironic nod in the direction of a buildings surroundings.

Soltan, Margaret. "Architecture as a Kind of Writing."
American Literary History, Vol. 3, No. 2 (Summer, 1991), 405-419

"The role of the architect is to make tangible what is intangible. In the present state of architectural production, too many anomalies in the relationship of theory and practice have obscured this fundamental role.

Frasconi, Marco. "A Heroic and Admirable Machine: The Theater of the Architecture of Carlo Scarpa, Architetto Veneto."
Poetics Today, Vol 10, No. 1, Art and Literature I (spring, 1989), 103-126.

"Architecture is not an art but an understanding of arts that produce tangible expressions. Consequently, the architect deals with and produces the physical and perhaps metaphysical frameworks of any interart relationship."

Frasconi, Marco. "A Heroic and Admirable Machine: The Theater of the Architecture of Carlo Scarpa, Architetto Veneto."
Poetics Today, Vol 10, No. 1, Art and Literature I (spring, 1989), 103-126.

"How can we live without our lives? How will we know it's us without our past?
From John Steinbeck's "the Grapes of Wrath

"The study of material culture is about the way people live their lives through, by, around, in spite of, in denial of, and because of the material world. The venture is premised on the proposition that artifacts are integral to cultural behavior. Humans use them to create, learn, and mediate social interaction and relations. Human-made things are far more than mere tools; they are complex bundles of individual, social, and cultural meanings grafted onto something that can be seen, touched, and owned.

Martain, Ann S. "Material Things and Cultural Meanings: notes on the Study of Early American Material Culture."
The William and Mary Quarterly, 3rd Ser. , Vol.53, No. 1 Material Culture in Early America (Jan. , 1996), 5-12

"Buildings are immovable, but the site changes, according to both the season and the time of day. A recreational vehicle in the rain is just a wet box; a screened porch with wide, sheltering eaves is a place to experience the rain. A building is a part of the landscape, but in a winter storm it also stands protectively against the natural elements.

Rybczynski, Witold. *The Most Beautiful House in the World*.
New York: Penguin Group, 1989.

Annotated Bibliography

Gartman, David. "Bourdieu's Theory of Cultural Change: Explication, Application, Critique." *Sociological Theory*, Vol.20, No. 2 (Jul. 2002), 255-277.

Gartman does not seek to either refute or undermine Bourdieu's Theory but to expand upon it. Gartman uses two seemingly dissimilar phenomena in order to accomplish this goal: the automobile, architecture. Social conditions create cultural hierarchies intended and therefore class distinction (class stratification) but as such conditions break down (increased sub-field of cultural consumers) cultural suppliers look to sub-cultures for new cultural products. The less socio-economic stratification that exists in a given society the shorter the cycle of innovation.

Caffyn, Lucy. "Housing in an Industrial Landscape: A Study of Workers' Housing in West Yorkshire." *World Archaeology*, Vol. 15, No. 2, *Industrial Archaeology* (Oct., 1983), 173-183.

Caffyn discusses housing that became typical for individual trades and points out that these styles developed independently from one another regardless of socio-economic similarities. Given similar tools, resources, and materials housing develops from the vernacular suited to lifestyle.

Soltan, Margaret. "Architecture as a Kind of Writing." *American Literary History*, Vol. 3, No.2 (Summer, 1991), 405-419.

Soltan argues that post-modern architecture fails in its' attempts to place the user in a state of special dislocation and creates confusion rather than experience due to the fact that they fail to recognize architectural language as a communicator. (needs revision)

Martin, Ann. "Material Things and Cultural Meanings: Notes on the Study of Early American Material Cultural." *The William and Mary Quarterly*, 3rd Ser., Vol. 53, Material Cultural in Early America (Jan., 1996), 5-12.

Martin discusses the fact that long before the automobile humans regard certain possessions as extensions of themselves. (not that helpful, not in content but in context)

Sandrisser, Barbara. "Cultivating Commonplaces: Sophisticated Vernacularism in Japan." *The Journal of Aesthetics and Art Criticism*, Vol. 56, No. 2, Environmental Aesthetics (Spring, 1998), 201-210.

This is thus far the most valuable article that I have found and as such annotation can wait until I am satisfied that I have developed a complete understanding of the text. (very exciting as this article transcends research requirements and closely resembles what I hope my thesis can evolve into.)

Farscari, Marco. "A Heroic and Admirable Machine: The Theater of the Architecture of Carlo Scarpa, Architetto Veneto." *Poetics Today*, Vol. 10, No. 1. Art and Literature I (Spring, 1989), 103-126.

To Farscari architecture as that which makes "tangible what is intangible" has become obscured by the (dis) relationship of theory and practice. He turns to the architecture of

Scarpa for an example of what the true relationship between the observer and architecture can aspire to. Scarpa's work will be part of my precedent study so this is another article that I will return to often. (I get it I buy into it)

Zucker, Paul. "The Role of Architecture in Future Civilizations." *The Journal of Aesthetics and Art Criticism*, Vol. 3 No. 9/10 *Art in a Post War World* (1944), 30-38. Zucker states that the function of architecture built within a given time period will be determined by those who use the buildings rather than those who design them, that it is the consumer rather than the producer who determines the values that architecture should seek to promote. Zucker concedes that these consumers will at times be tolerant of architectural expression but that ultimately as consumers their own expectations of what architecture should be takes precedent over tolerance.

Seeburger, Francis, F. "Heidegger and the Phenomenological Reduction." *Philosophy and Phenomenological Research*, Vol. 36, No. 2 (Dec., 1975), 212-221.

As with most literary works that deal with phenomenology this essay is difficult to decipher but I believe that its main concept deals with the premise that the essence of phenomenology is actuality but believing that above actuality lays possibility.

Pena, William M., and Steven A. Parshall. *Problem Seeking : An Architectural Programming Primer*. New York : John Wiley & Sons, Inc. , 2001.