



Yale University, School of Architecture

Remarks

Author(s): Louis I. Kahn

Source: *Perspecta*, Vol. 9/10 (1965), pp. 303-335

Published by: [The MIT Press](#) on behalf of *Perspecta*.

Stable URL: <http://www.jstor.org/stable/1566926>

Accessed: 28/06/2014 08:04

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <http://www.jstor.org/page/info/about/policies/terms.jsp>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.



Yale University, School of Architecture and The MIT Press are collaborating with JSTOR to digitize, preserve and extend access to *Perspecta*.

<http://www.jstor.org>

I'm scared stiff of people who look at things from the money angle. I had to meet some of them the other day at Fort Wayne in connection with an art center I'm doing there – a small Lincoln Center. The project is to locate the separate organizations. It contains a full-fledged philharmonic orchestra, (that's really remarkable for a population of 180,000), a civic theatre and, distinguished from it, a theatre in the round, an art school, school of music, school of dance, dormitory, an art museum, and a historical exhibit. All this is to be in one bundle on one piece of land, and I had to say what it would cost. This is a very ticklish situation for me because I wanted them to want the project first, and then to talk about cost.

I was armed with just one fact: that the square foot areas which they required (which, of course, had nothing to do with cubage) were equal to what areas I developed in the design. This was nothing short of a miracle: most architects, not excluding me, exceed their square foot areas and have various reasons for justifying it. In this case, however, all the member organizations had written their programs individually, and they had a reasonable cushion in there for contingent areas. Such realism to begin with made it possible for me, in the composing, to equal the required area. And I was armed then with accepted area, though not the cost. Except, yes, I had the costs: I knew they exceeded very much the costs that this committee had in mind.

I presented the plans to them in as inviting a way as I possibly could, described the new philharmonic especially so that they could never refuse its existence, and did the same with the other buildings. Then, when they asked me how much it would cost, I said, "Well, gentlemen, I must first introduce the fact that the area which you have asked me to have is the same as the area on my plans." They said, "Well, all right, but

how much does it cost?" I said, "Well, it will cost twenty million dollars."

They had in mind something like two and a half million dollars as the initial expenditure, but the way the buildings became interdependent made it seem quite impossible to begin meaningful choice with such a low amount. I waited for a reaction. I felt the quiet shock the new figure caused and one man did venture to say, "Well, Mr. Kahn, we only expected to spend two and a half million dollars. What can we get for two and a half million?" I said, "Nothing. If you had asked me six months ago what you could get for two and a half million, I'd have said you'd have gotten two and a half million dollars worth; but as you see it presented now, there is an entity present: the philharmonic is dependent upon the art school, the art school on the civic theatre, the civic theatre on the ballet, and so forth." And it is so: the plan is so made that you feel one building is dependent on the other. I said, "After all, what was the purpose of coming here? Was it to make a convenient arrangement, or was it to make something with an extra quality? I've found the extra quality," I said, "which makes the coming together more than what they are when the buildings are separated from each other. Therefore, for two and a half million dollars you would probably get the hind leg of a donkey and a tail, but you wouldn't get the donkey."

After a little bit of a wait one man asked me, "Well, suppose we simply said to you we want an art school built; it's part of other buildings which we're going to build, but now we want to build only the art school. Could you have done it without an elaborate program including all the buildings?" I said, "Yes, I could have done that, but you would have a mosquito and not a donkey." Well, they had a donkey in their minds – half a donkey, not even half a donkey – and a mosquito (a whole thing which they didn't want, of course), and that was it. Finally, one said (because they did like the entity, and they realized that there was something about the entity which was not the same as having each organization represented in its own way), "Well, I can see, Mr. Kahn, I can see spending ten million dollars, but I can't see spending twenty million." Of course, at that point I realized that I was having an easier time than I had anticipated. Then it was the time to be generous, and I said,

"Well, I will try everything possible to pare down expenses and pare down costs, but you realize that you have to give up something in order to do this; and, for the moment I can't promise anything because I, myself, think that this entity is now hard to destroy."

For if you sense something which is a coming of a now-accepted thing in man's way of life, which is expressed in a realm of spaces or in a form which is different from any other form, once that happens you cannot take parts away because every part is answerable to the other. Form is of that nature. Form is that which deals with inseparable parts. If you take one thing away, you don't have the whole thing, and nothing is ever really fully answerable to that which man wants to accept as part of his way of life unless all its parts are together.

I was really happy to have realized why I was so ready to give up the whole commission if they wouldn't build it all; or rather to feel that all could be built even if it had to be done in steps (as it was done in many wonderful enterprises of man, where the belief was so strong and it was understood so clearly that if you took one part away you didn't have – and everybody understood that you did not have – the entire thing). And I said, "At this moment, I realize something I've never realized before: that there are actually two realities that an architect deals with: he deals with the reality of belief and the reality of means." For example, I now read Goethe (which I had a very hard time reading before), and I find there is wonder in it. He calls his autobiography truth and poetry. This is a wonderful realization of life and the course of living. Though he reported what happened to him, he always avoided confining it to the circumstantial, or what happened, but reflected on its meaning, which transcended his own life. And this I think was marvelous. When you read it, you feel the objectivity and you feel the restraint that he gives you in regard to that which you may get too sentimental about, because he knows it only affects him and shouldn't be imposed on you. If you're reading it, you shouldn't listen to him; you should listen to that which belongs to eternity.

That was wonderful, I thought, and that is really art. It isn't you that you're making. It isn't just a

which you are the custodian of something which you discovered as being true, or you will never discover it. I met a person the other day who had never had an education, and that person, without question, has a remarkable mind – one that needs but a single, tiny fragment of knowledge in order to piece together the most fantastic sense of order. And why should that be so very, very peculiar? After all, the Greeks didn't have the knowledge that we have now, and look what marvelous things they did, only because the mind was highly respected. Somehow or other, because of frugality, because you haven't got so many things to choose from, you begin to think of how gloriously you can express, with the little you have, the nature of man's strivings to express his will to live.

I really felt very religiously attached to this idea of belief because I realized that many things are done with only the reality of the means employed, with no belief behind it. The whole reality isn't there without the reality of belief. When men do large redevelopment projects, there's no belief behind them. The means are available, even the design devices that make them look beautiful, but there's nothing that you feel is somehow a light which shines on the emergence of a new institution of man, which makes him feel a refreshed will to live. This comes from meaning being answerable to a belief. Such a feeling must be in back of it, not just to make something which is pleasant instead of something which is dull: that is no great achievement. Everything that an architect does is first of all answerable to an institution of man before it becomes a building. You don't know what the building is, really, unless you have a belief behind the building, a belief in its identity in the way of life of man. Every architect's first act is that of either revitalizing a prevailing belief or finding a new belief which is just in the air somehow. Why must we assume that there cannot be other things so marvelous as the emergence of the first monastery, for which there was no precedence whatsoever? It was just simply that some man realized that a certain realm of spaces represents a deep desire on the part of man to

question of believing something yourself, because the reality you believe isn't your belief, it's the belief of everyone: you are simply the radar of this belief. You are the custodian of a belief that comes to you because, as an architect, you are in possession of those powers that sense the psychological entity of something. You're making something that belongs to all of us, otherwise you are really producing very little or almost nothing – if not really nothing. Of course that tells you that almost everybody fails, and it's quite true.

But I don't think that Mozart was a failure, do you? And don't you think Mozart makes a society? Did society make Mozart? No. It's the man, the man only, not a committee, not a mob – nothing makes anything but a man, a single, single, man. This is so true again of Goethe. (I'm only reading Goethe now because I have a great reverence for a person who loved Goethe, and because I love this person I had to read it.) Before this I struggled to read *Faust* page by page. I met Faust for the first time and discovered a wonderful thing: that Gretchen was more soul than body, that Faust was a balance between body and soul, and that Mephistopholes was really all body, the body of man. He had no soul. Two people can't have the same sense of soul. The singularity is a soul and a body, though I believe that soul is a prevalence and that soul is the same in all, no different in anyone. The only difference is the instrument, our body, through which we express desire, love, hate, integrity, all the unmeasurable qualities of soul. Isn't it really true that only a singularity discovers the essence of the nature of man, and, in turn, an institute of man, not several people? So don't think that by research you'll discover anything – let's say, by collaborating with somebody. Either you will be able to reach only the kind of understanding in

express the inexpressable in a certain activity of man called a monastery. It's really nothing short of remarkable that a time comes in the history of man when something is established which everybody supports as though it were always eternally so.

And at this point it would be well to speak about the difference between the eternal and the universal. That which is universal is really just what deals with the physical. But that which is eternal is a kind of completely new essence that nonconscious nature does not understand or know about, whereas man is the conscious desire that exists in nature. And I believe that because of this dichotomy, nature will change because of the presence of man, because man is of dream, and what nature gives him as instrument is not enough. He wants much more.

Architecture is what nature cannot make. Nature cannot make anything that man makes. Man takes nature – the means of making a thing – and isolates its laws. Nature does not do this because nature works in harmony of laws, which we call order. It never works in isolation. But man works with this isolation, so whatever he makes is really quite minor, you might say, compared to what is really wanting to be expressed by the desire and the spirit of man. Man is always greater than his works. He could never, with his instrumentation, bring out that which is completely full.

And another thing I feel very strongly: that if a belief always carries with it a great deal of sophistication, I'm afraid it's the limited interpretation of it: one does not know so much about the belief as to make it always fully aware and beautiful. One has to sort of sense it must exist first, and at best it must be called at later times archaic – something which didn't quite express itself in all its beauty, but had such power of existence that others did not change its spirit but worked toward its emergence in beauty. And I believe that beauty somehow sits in that light of being something we work toward. It's a selectivity. It's something which has to do with a completeness of the harmony of a presence.

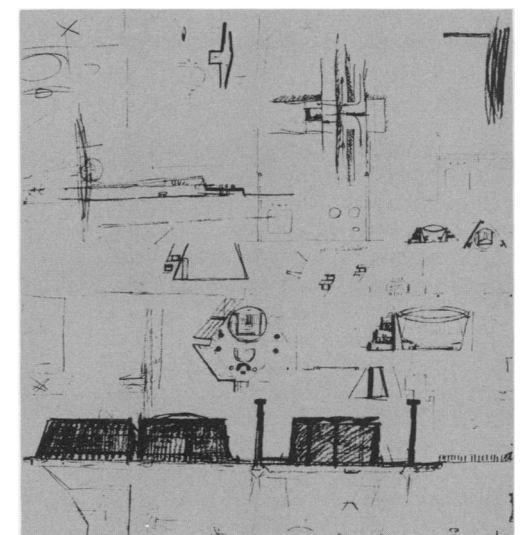
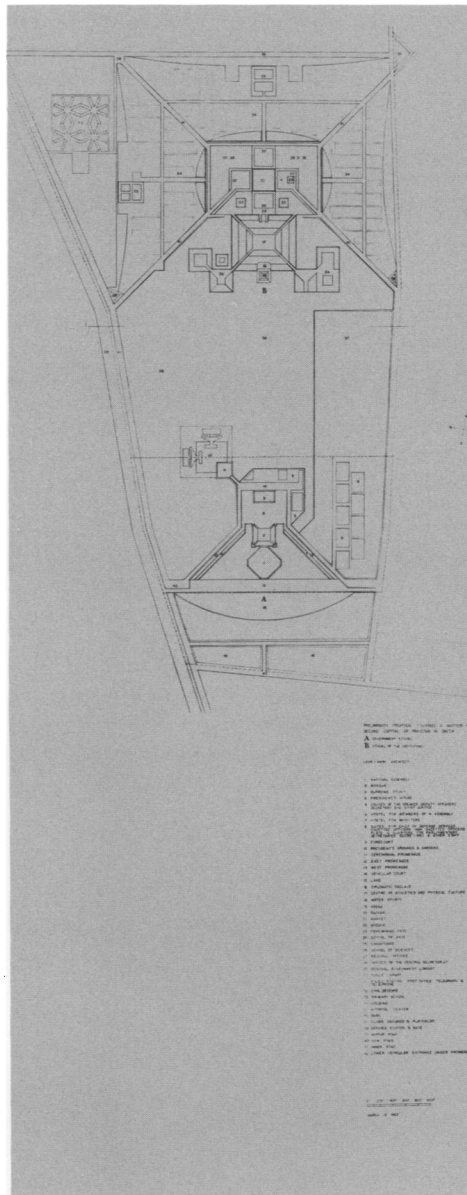
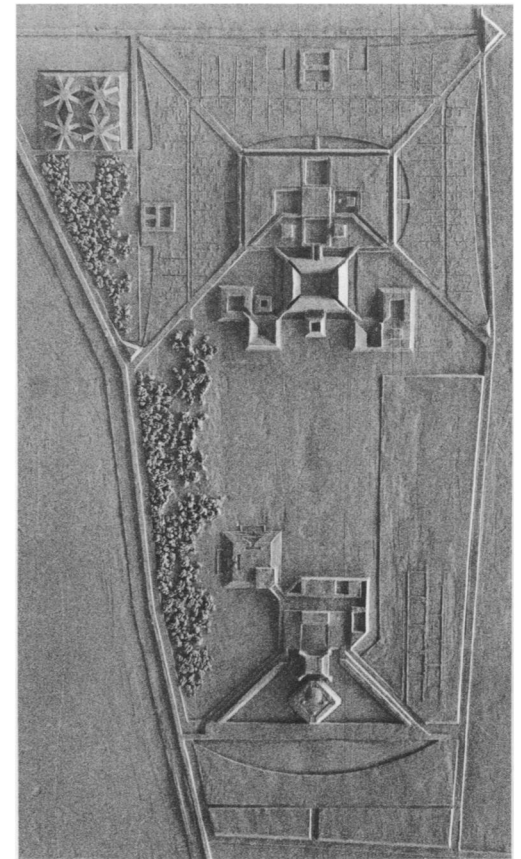
SECOND (LEGISLATIVE) CAPITAL
Dacca, Pakistan

I was given an extensive program of buildings: the assembly; the supreme court; hostels; schools; a stadium; the diplomatic enclave; the living sector; market; all to be placed on a thousand acres of flat land subject to flood. I kept thinking of how these buildings may be grouped and what would cause them to take their place on the land. On the night of the third day, I fell out of bed with a thought which is still the prevailing idea of the plan. This came simply from the realization that assembly is of a transcendent nature. Men came to assemble to touch the spirit of community, and I felt that this must be expressible. Observing the way of religion in the life of the Pakistani, I thought that a mosque woven into the space fabric of the assembly would reflect this feeling. It was presumptuous to assume this right. How did I know that it would fit their way of life. But this assumption took possession.

Also, the program required the design of a hotel for ministers, their secretaries, and the members of the assembly. But this requirement became in my mind a corollary to the assembly and I thought immediately that it should be transformed from the connotations of a hotel to that of studies in a garden on a lake. In my mind the Supreme Court was the test of the acts of legislation against the philosophic view of the nature of man. The three became inseparable in the thinking of the transcendent nature of assembly.

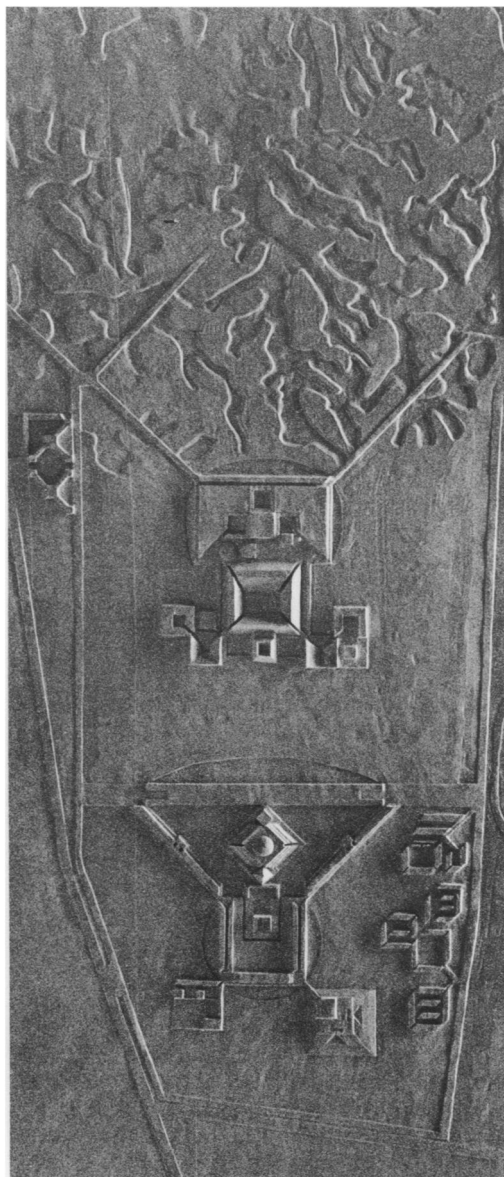
I couldn't wait until morning in my anxiety to relate these thoughts to Kafiluddin Ahmad who is in charge of this project. In the morning I was there at 9 o'clock sharp and told him about the symbolic importance of the mosque; I got no immediate response, no reaction. But he got on the phone and talked to several ministers. After he had spoken for some while, he turned to me and said, "Professor Kahn, I think you have something there." I felt enormous confidence that the plan could have form. "But," he said, "you will have a problem with the Chief Justice of the Supreme Court because he doesn't want the court next to the assembly."

We saw Chief Justice the next day, and we were greeted with the usual tea and biscuits. He said: "I know why you're here – the grapevine is very



well developed in Pakistan. You're barking up the wrong tree, because I will not be a part of this assembly group. I will go to the provincial capital site near the provincial high court where the lawyers are, and I think I will feel much more at home there." I turned to him and said, "Mr. Chief Justice, is this your decision alone or is it also the decision of the judges who will follow you? Let me explain to you what I intend to compose." And I made my first sketch on paper of the assembly with the mosque on the lake. I added the hostels framing this lake. I told him how I felt about the transcendent meaning of assembly. After a moment's thought he took the pencil out of my hand and placed a mark representing the supreme court in a position where I would have placed it myself, on the other side of the mosque, and he said: "The mosque is sufficient insulation from the men of the assembly."

4
5

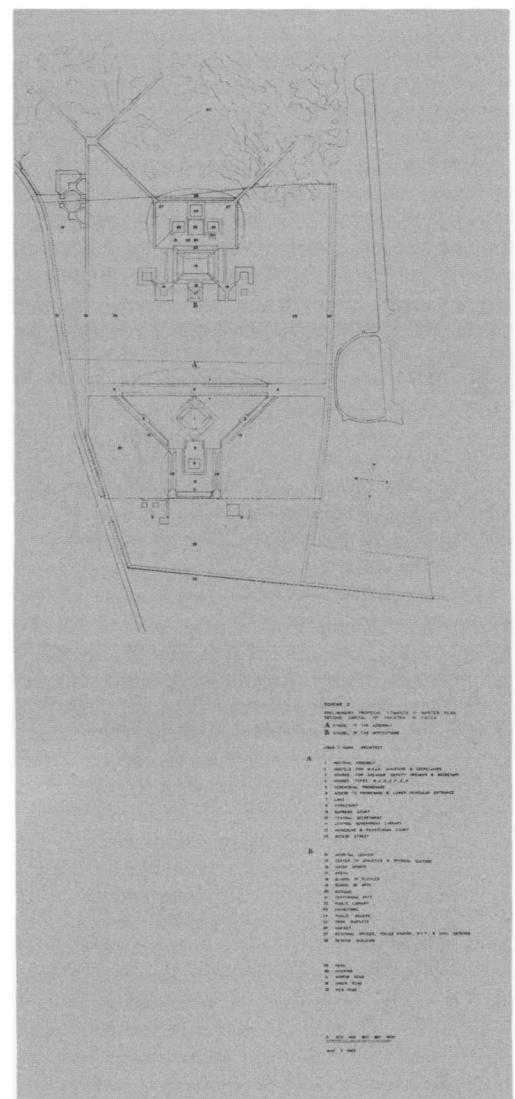
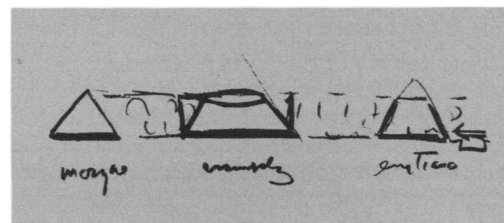


I was very happy that the motivations of religious thought were communicable. It was not belief, not design, not pattern, but the essence from which an institution could emerge which revealed the true receptivity of his mind.

The relationship of the assembly, mosque, supreme court and hostels in their interplay psychologically is what expresses a nature. The Institution of Assembly could lose its strength if the sympathetic parts were dispersed. The inspirations of each would also be left incompletely expressed.

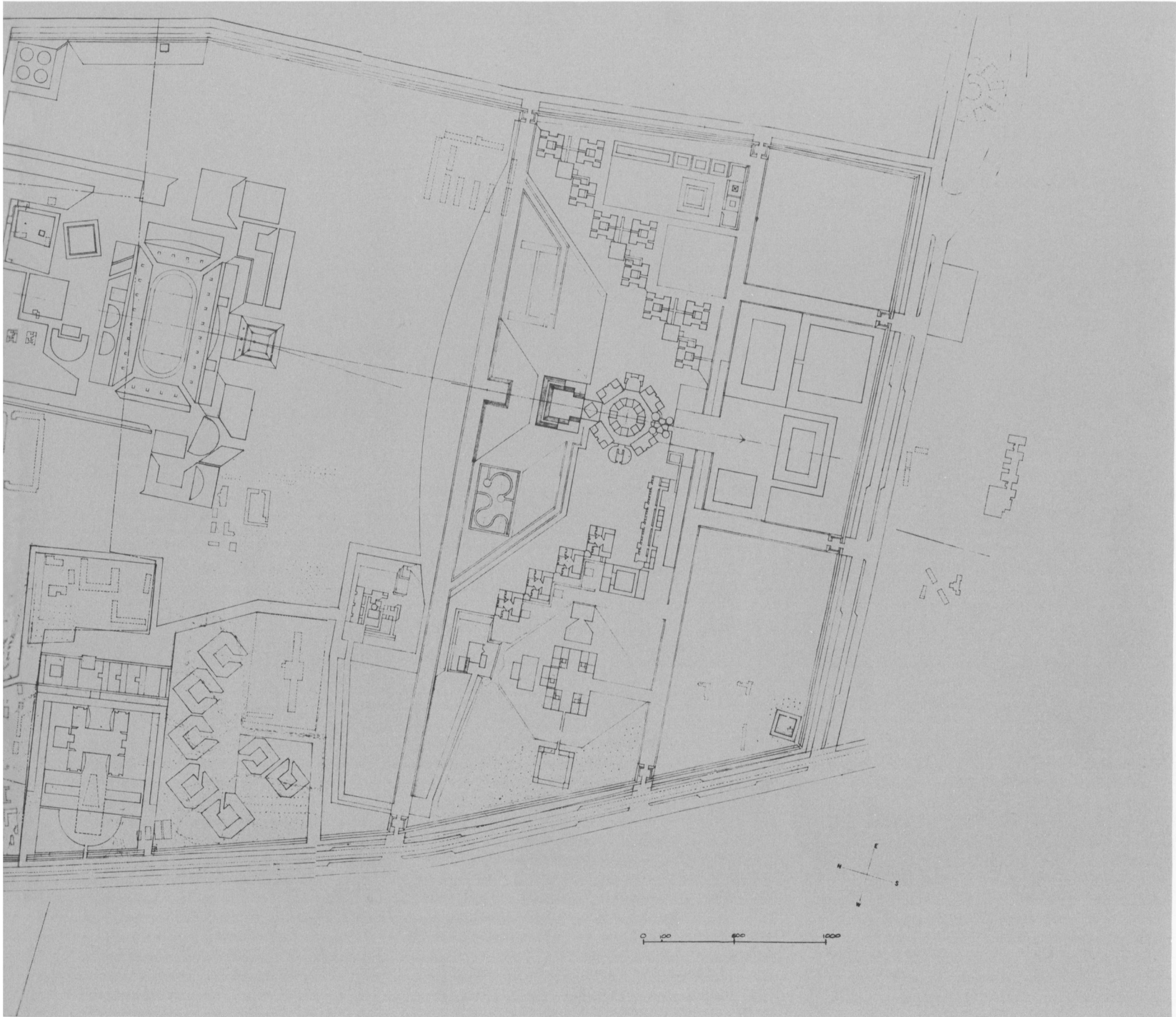
In the first sketch of the mosque I indicated four minarets. (1-3) The meaning of mosque with assembly was then inseparable and a necessary image; and I used the most obvious and borrowed terms. Now the question of the nature 'Mosque' related to 'Assembly' has questioned the need for minarets. At one time in design the mosque was a pyramid, the peak of which was a minaret. (4-6) Now it is the Mosque Entrance to the Assembly, but the question of its form for a long time remained.

Because this is delta country buildings are placed on mounds to protect them from flood. The ground for the mounds comes from the digging of lakes and ponds. I employed the shape of the lake, too, as a discipline of location and boundary. The triangular lake was meant to encompass the hostels and the assembly and to act as a dimensional control.



6 307





The assembly, hostels, and supreme court belong to the Citadel of the Assembly and their interrelated nature suggest a completeness causing other buildings to take their distance. Whether I've even arrived at the proper expression of assembly or not I don't know, but I've also said this: the acts of assembly are the makings of the intellectual institutions of man. That made me realize that the buildings of the program other than those related to the Assembly belong to the Citadel of the Institutions which I place on axis and facing the Citadel of the Assembly.

*In us
Inspiration to express
Inspiration to question
Inspiration to learn
Inspiration to live
These bring to man his institutions.*

The architect is the maker of their spaces.

The mind, the body, the arts bring to light these inspirations.

The mind, brain and psyche, sensor of the universe and of eternity in joy of wonder with question "why anything?"

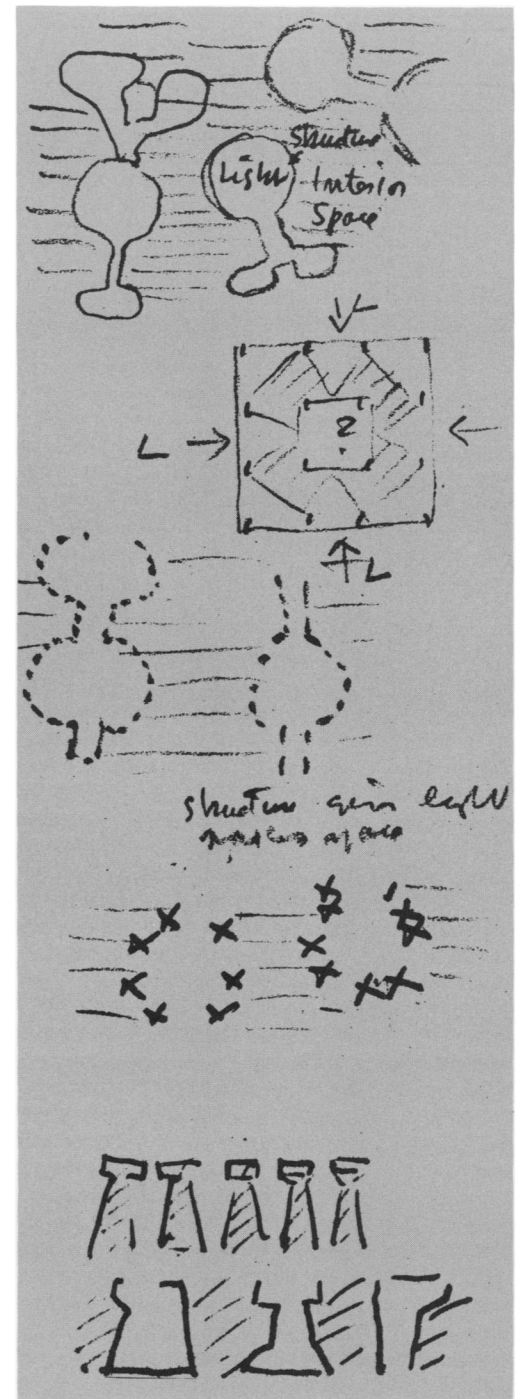
310

The body is life; none without the psyche. Its beauty, grace and strength should be coveted and honored by the man and by society. Art is the language of the spirit. To create is the sense realization of the psyche and obedience to the laws of nature.

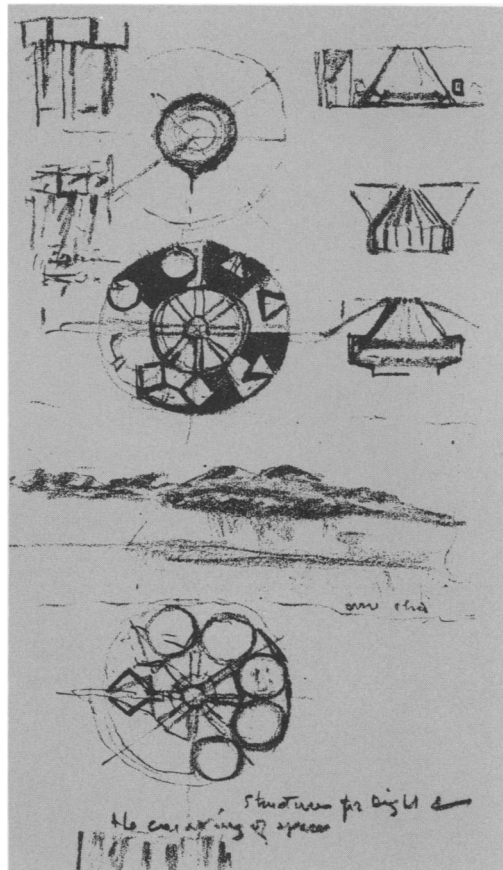
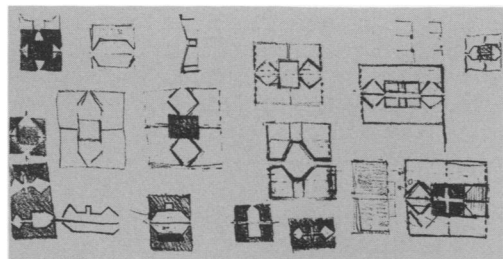
The institutions are the houses of the inspirations. Schools, libraries, laboratories, gymnasia. The architect considers the inspiration before he can accept the dictates of a space desired. He asks himself what is the nature of one that distinguishes itself from another. When he senses the difference, he is in touch with its form. Form inspires design.

It occurred to me in thinking about the meaning of institutions that the prime institution stems from the inspiration to live which has remained meekly expressed in the institutions of man. It is an inspiration for building I hope to sense, the form of which could lead to new explosions of programs and designs expressing the beauty of physical well-being. It would be a place of baths, exercise and meeting. It is the place where the athlete is honored and a man strives for physical perfection. I have in mind an environment of spaces far reaching in richness and delight. The responsibility of a country to its people in regard to their physical well being is certainly as important as the culture of the mind and the regulation of commerce. This institution of physical well-being is suggested as a building position harboring a stadium, the body of which will contain the rooms of meeting, baths, exercise and their gardens, and flanked by a school of science and a school of art. Also composed with these buildings is a block of satellite institutions and commercial services. This block is the anchor of the dwelling places which is being recomposed out of an old village with its mounds and depressions already established. I spoke to Mr. Steen Eiler Rasmussen about the deliberate separation of the two citadels and he has inspired me to look into this decision and sense whether the two can be brought together and have a greater meaning than the meaning of looking across the separating park at each other. I felt that their being separate was good, living on different planes of inspiration. But Mr. Rasmussen knows the beginnings of towns in their essence so beautifully that I feel that this plan needs a thorough review before I can feel confident about the belief which is in back of it.

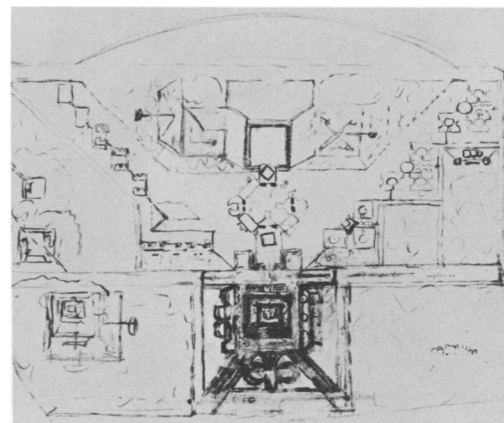
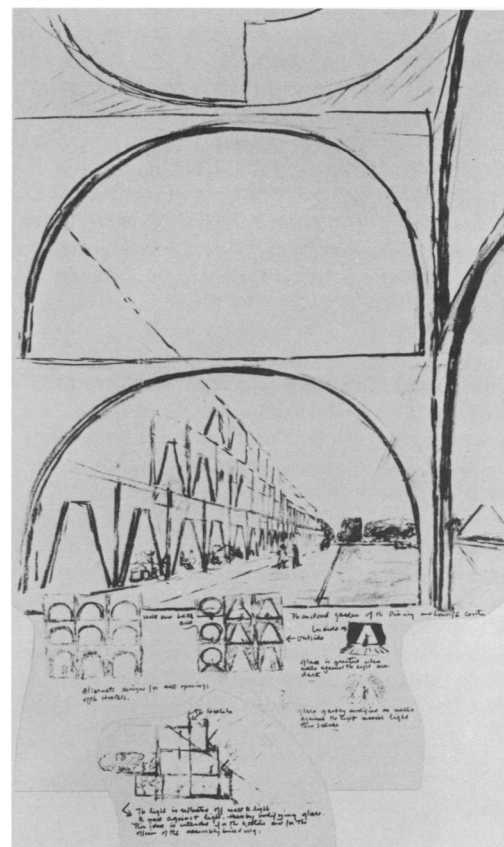
What I'm trying to do is establish a belief out of a philosophy I can turn over to Pakistan, so that whatever they do is always answerable to it. I feel as though this plan which was made weeks after I saw the program has strength. Does it have all the ingredients? If only one is lacking it will disintegrate. This is my problem. Mr. Rasmussen described it to me with little sketches conveying the life and the beauty of the bazaar; which limited by dimensions, expresses so beautifully the power of architecture which could give self-containment to an inspired way of life: it becomes the making of a world within a world. In the same way, in this thousand acre reservation, one should feel its particular character in all the parts.



In the assembly I have introduced a light giving element to the interior of the plan (7-9). If you see a series of columns you can say that the choice of columns is a choice in light. The columns as solids frame the spaces of light. Now think of it just in reverse and think that the columns are hollow and much bigger and that their walls can themselves give light, then the voids are rooms, and the column is the maker of light and can take on complex shapes and be the supporter of spaces and give light to spaces. 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. In this way it becomes analogous to the solid column I mentioned above as a giver of light. The problem of an element in a composition appears again in the making of the anti-glare porches for the hostels (10). In this element it is recognized that the light be on the inside of the porch as well as the outside. If you have light (not necessarily sunlight) on the interior, the contrast between the darkness of the solids and the brightness of the openings is not great and, therefore, you do not feel the glare. The staggering of porches as the building rises offers the chance to get light into the porch, but a sliver of light is needed to give the presence of light to the interior. The sun is unwelcome. So far I have only half solved the problem. I am stating it, but I have not solved it. The various explorations I have made of possible openings, some reminiscent of the past, are not really concrete forms although I think some of them are much more so than others.



Since the first program was given to me, and since these remarks were first spoken, addenda have arrived which changed the proportions of the accommodations on either side of the lake. Study given to the breeze and the sun has reoriented buildings on the lake causing new groupings though the direction of the original lines are retained. The esplanade has grown into an entrance garden reducing the lake (11). Many of the sketches are intended to answer the order of geometry which will become a dimensioning system. The transformation from its rule to a freer play will be a constant course of study. Balance not symmetry. (June, 1964.)



8
9

10
11

THE DECISION

The uniqueness of a country united in spirit and culture separated geographically, found an inspiring solution. The determination to close the physical gap between the East and West wing of Pakistan created the unprecedented idea of a Capital in two locations, each vested with inter-related responsibilities. The Government of Field Marshal Ayub Khan took this historic decision to establish the Second Capital of Pakistan at Dacca during the Governor's conference at Nathiagali on the 12th and 13th June 1959.

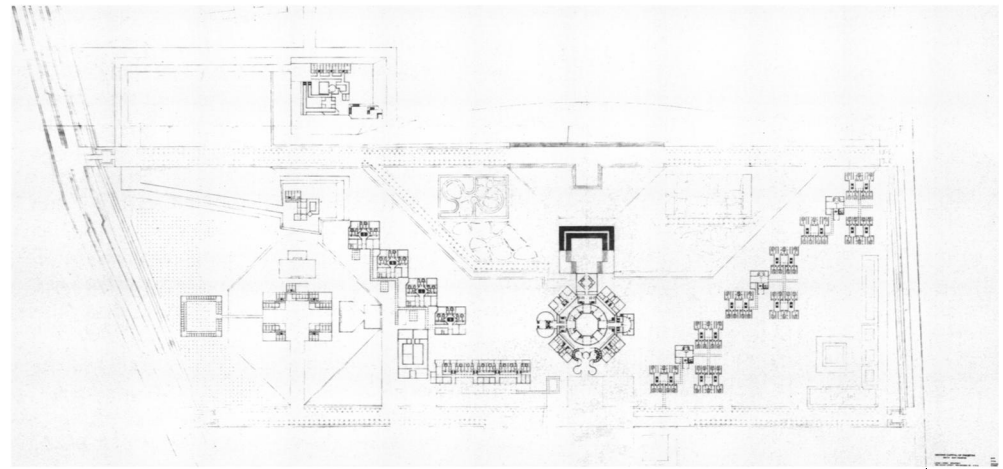
THE SITE

The site for the Second Capital at Dacca was decided by a Committee headed by the Governor of East Pakistan. This Committee selected Tejgaon Farm area for the Second Capital and recommended 200 acres of land for its site. During development of the programming of land for the various functions appropriate to the Capital, it was found that the 200 acres were grossly insufficient to express its nature. Land requirement for these uses as approximated by the Pakistan Public Works Department, proved to be in sympathy with the vision and knowledge of the Architect which indicated 1,000 acres as the minimum requirement to meet the present and future needs. After more than 2 years of efforts by the Central Ministry of Works, the Provincial Government agreed to allot 840 acres as the site for construction of the Second Capital. The original conception can now have the space to express itself. The minor condition of delay in acquisition of the 90 acres to be occupied for another 2 years by the Agriculture Department should not affect the planning stages and the constant demand for sites by interested parties.

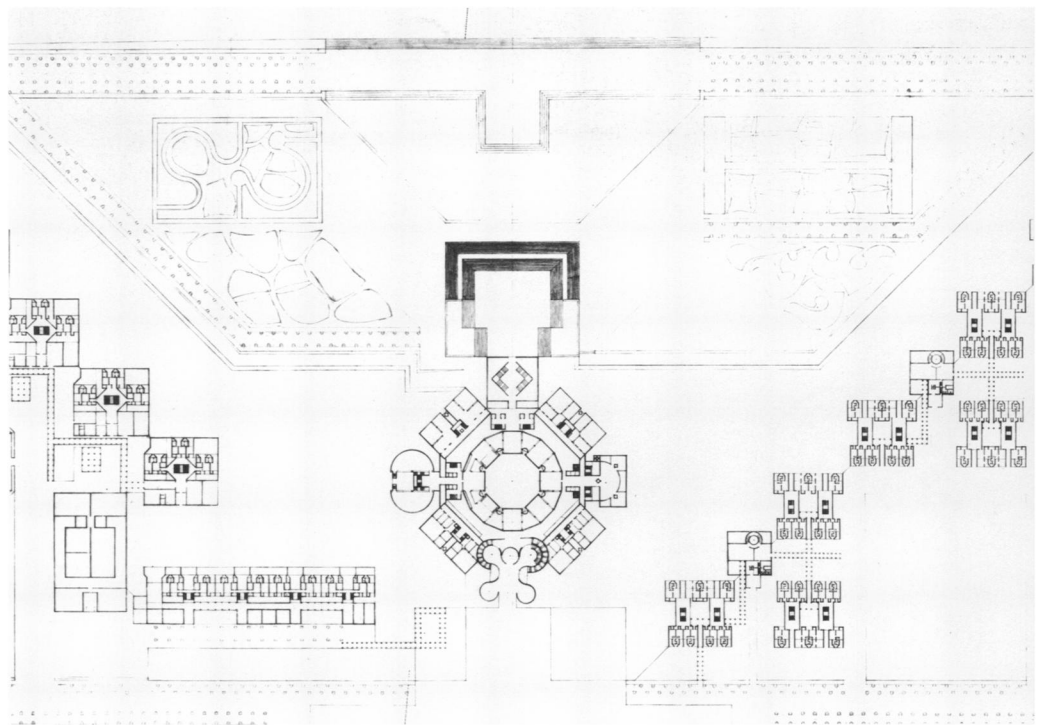
312

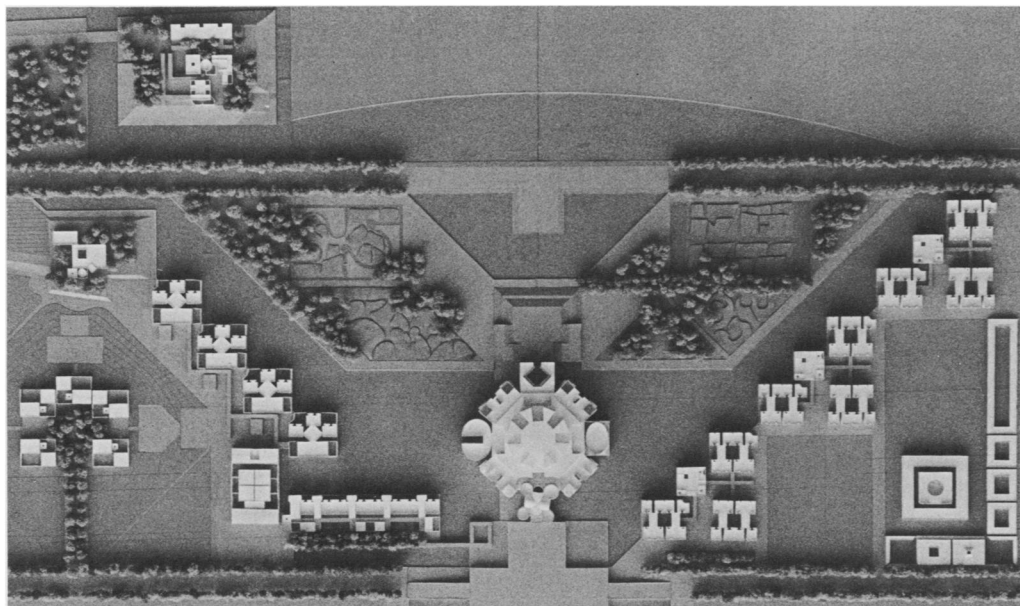
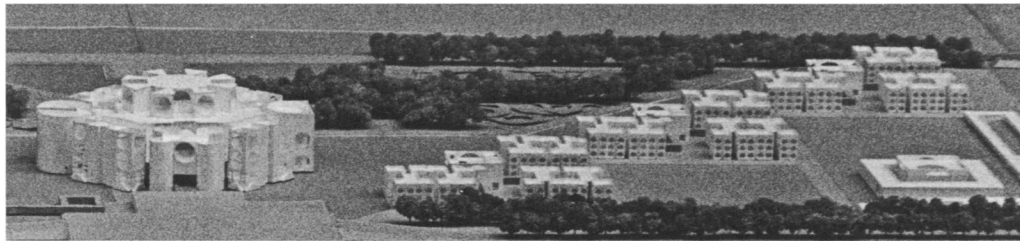
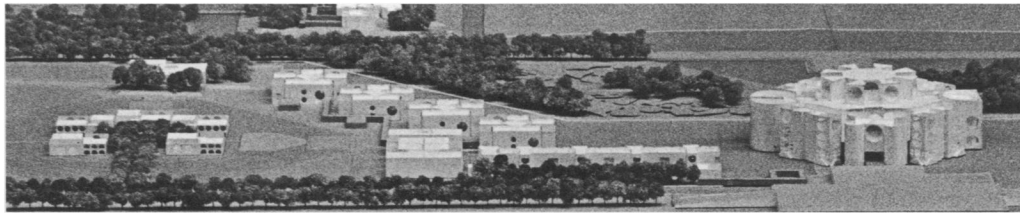
MASTER PLAN

The Master Plan (12-16) is conceived as clearly defined Reservation within the city of Dacca encompassing the Government buildings and its related buildings in the setting of gardens, water-ways and fountains, inter-connected with roads and walks. The plan is anchored by the conception of a major north and south axis. On one end is the Citadel of the Assembly and on the other end is the Citadel of Institutions, which are separated by an area of land designated as the Public Park. Other land uses are devoted to houses, their gardens, social needs for men and their families. A portion of land will be developed for



12
13





14
15
16

higher residential buildings, including residences and offices for Consularies. Physical conditions of this region, particularly of the site, demand that a positive design attitude must be developed for the conditions of sun, wind, weather, rains and floods. The tradition is the making of lakes to obtain fill to make mounds for roads, directing the drainage and raising the building locations above water problems. Land allocations are greatly influenced by the above and other development requirements.

ARCHITECTURE OF THE CAPITAL

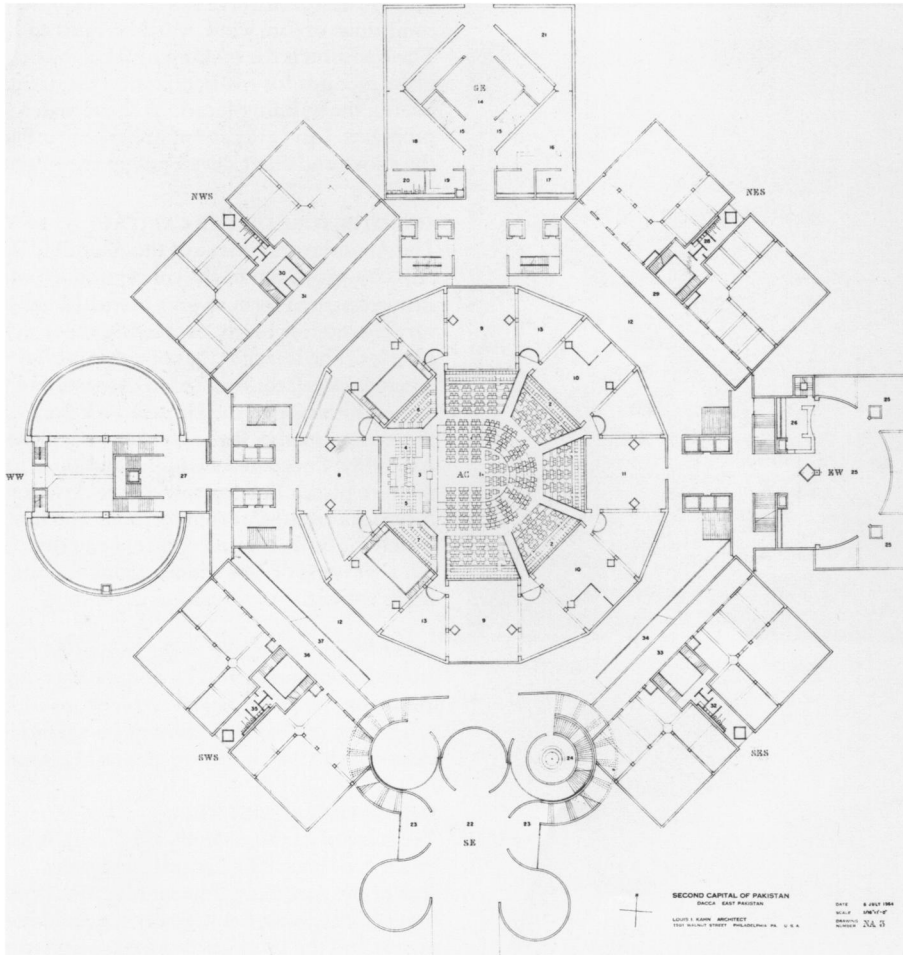
The Architectural image of the Assembly Building (17-20) grows out of the conception to hold a strong essential form to give particular shape to the varying interior needs, expressing them on the exterior. The image is that of a many-faceted precious stone, constructed in concrete and marble. The architecture of the Hostels with deep protecting porches is the same as that of the Assembly. Conceived as studies and their gardens they are placed looking toward the Assembly, forming a triangular composition. The lake in which the buildings are reflected and the inter-weaving of lesser lakes, fountains and gardens, holds the entire composition in balance.

Other buildings related to the lake or on the grounds contiguous will be of masonry construction following the principles of architecture which respect the influence of indigenous conditions and from which all architecture gets its beginnings.

THE NATIONAL ASSEMBLY

The interior of the Assembly Building is divided into three zones. The Central zone is the area of the Assembly. The middle zone provides inner circulations, ties together the galleries of the people and the press, gives access to Committee rooms and the Library. The outer zone is the area of the offices, Party Rooms, Lounges, Tea Rooms and Restaurant, the Garden Entrance and the Entrance of the Mosque.

The levels of the floors of the offices have been arranged to give privacy of movement to the Speaker and the Members of the Assembly, Ministers and Secretaries. The Assembly Chamber, 100' high, is an amphitheatre of 300 individual seats arranged in pairs. Each of the present members will occupy a double seat which in the future will be assigned to two members. A ring of seats on the periphery is provided to accommodate a Joint Session of the three Legislative Assemblies. To the



right of the Speaker is the President's box, to the left the Speaker's box, and flanking them, the Distinguished Visitors Gallery and the Gallery for High officials.

From the entrance Lobbies of the Members of the Assembly radiate the aisles leading to their seats. Two of these aisles enter the Division Lobbies.

Five balconies in the Middle Zone above the Assembly level are the Public Galleries. The Press Galleries are nearest the Speaker.

Deep beams and light modifying vaults form the ceiling of the Assembly Chamber. Wall Tapestries inspired by the Spectrum and the Crescent and Star will, together with the ceiling elements, give acoustical quality. The Assembly Chamber will be carpeted. The desks, tables, platforms, canopies and galleries will be of the finest cabinet construction. All public and other areas of hard use will have marble skirting and marble floors designed to suit the geometry of the space. Non-structural partitions are of panelled teak.

The Middle Zone of the Assembly Building is composed of 8 Light and Air Courts to light all interior spaces, except the Assembly Chamber, with shielded natural light and ventilation and is the source of fresh air for the air conditioning system. The Outer Zone is protected from glare, rain and sun by deep garden porches harboring the windows of the outer zone are also designed with this idea of physical protection.

AC

1. Assembly Chamber for 300 Members, 2. 200 additional seats for joint sessions, 3. Speaker's Dias, 4. Speaker's Box, 5. President's Box, 6. Official Gallery, 7. Distinguished Visitors, 8. Distinguished Visitors & Official Gallery Lobby, 9. Division Lobbies, 10. MNA's Antechambers w/ cloak rooms & toilets, 11. MNA's Entrance Lounge, 12. Ambulatory, 13. Light and ventilation courts.

GE

14. Garden entrance, 15. Stairs to Public Galleries, 16. Post Office and Bank, 17. Chamber to Post Office and Bank, 18. Ward and Ward Officer & Staff, 19. Pantry, 20. Toilets, 21. Porch

SE

22. Main entrance, 23. Entrance & stairs to Public Galleries, 24. Stair to Prayer Hall

EW

25. Lounge for MNA's, 26. Pantry

WW

27. Distinguished Visitors & Official Gallery Entrance Lobby to Assembly Chamber

NES

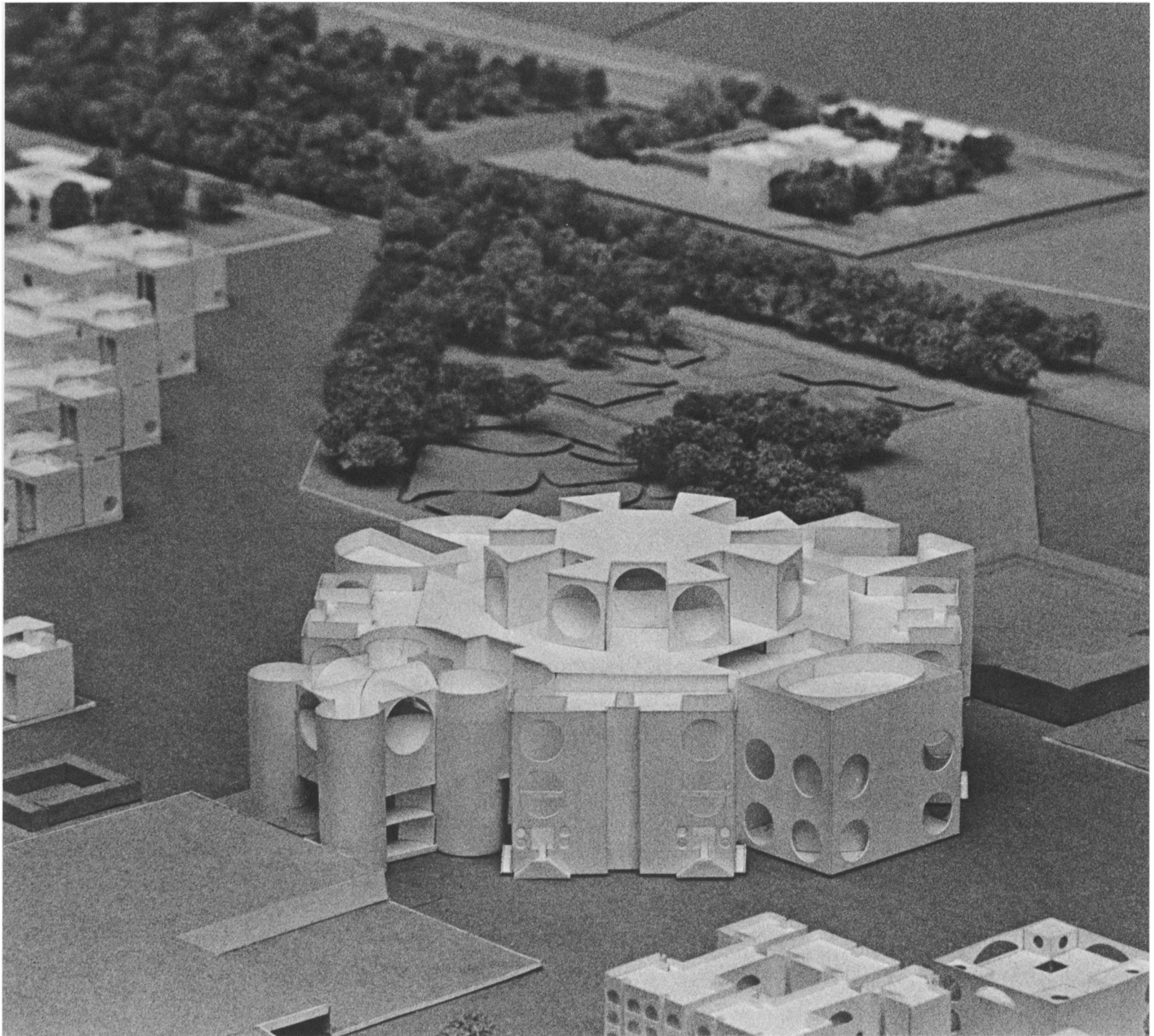
28. Toilets, 29. Air plenum

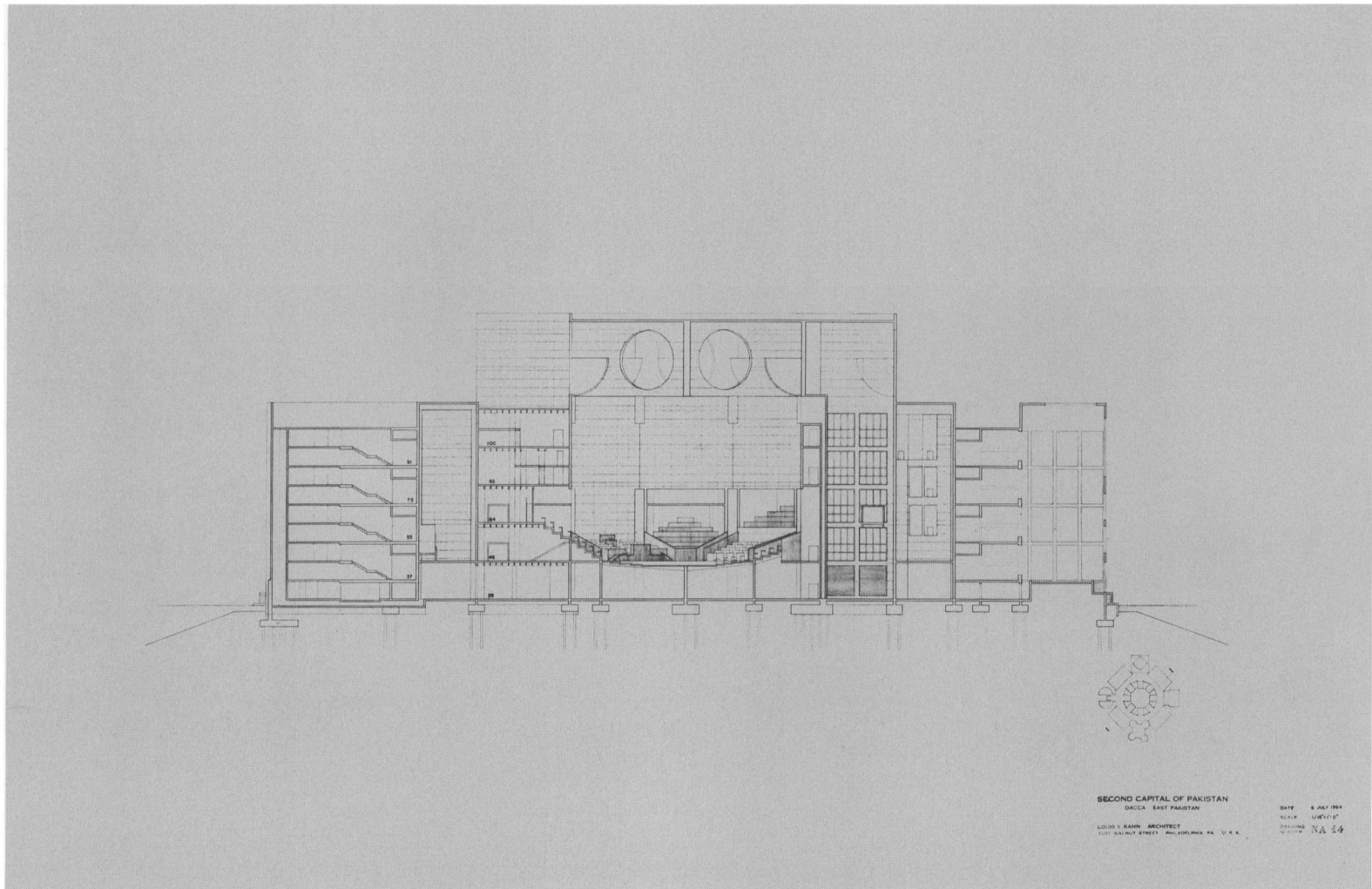
NWS

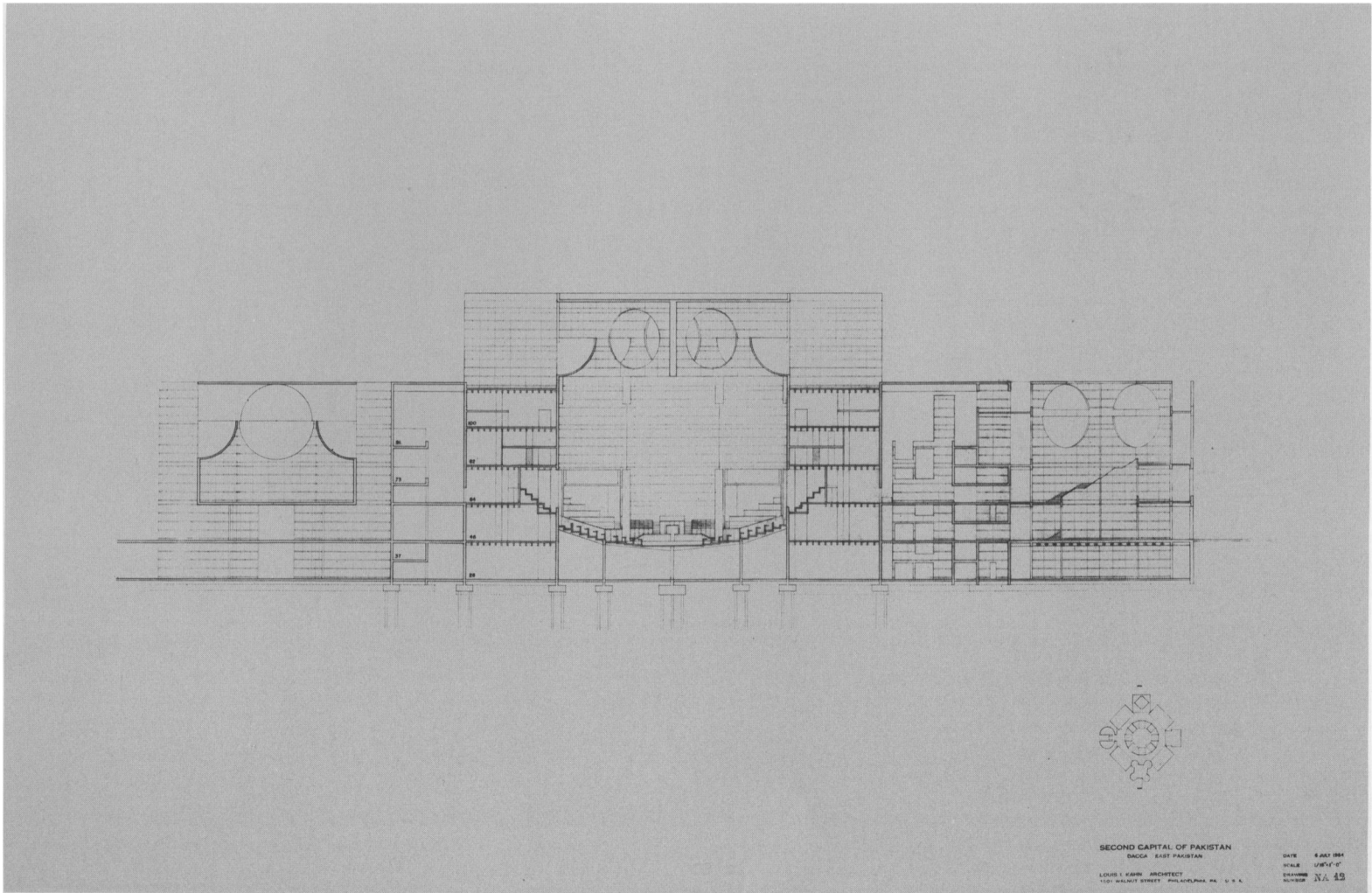
30. Toilets, 31. Air plenum

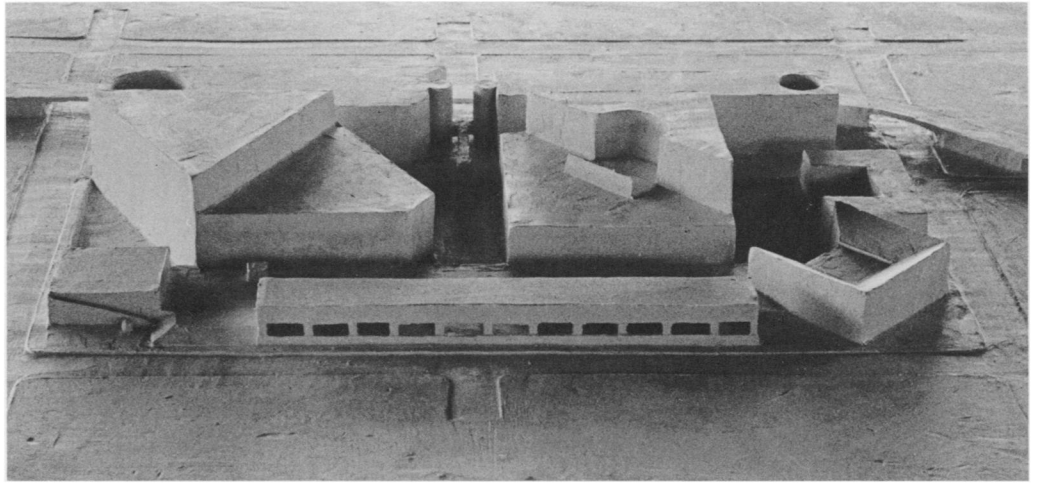
SES

32. Toilets, 33. Air plenum, 34. Ramp to level 55.0, 35. Toilets, 36. Air plenum, 37. Ramp to level 55.0





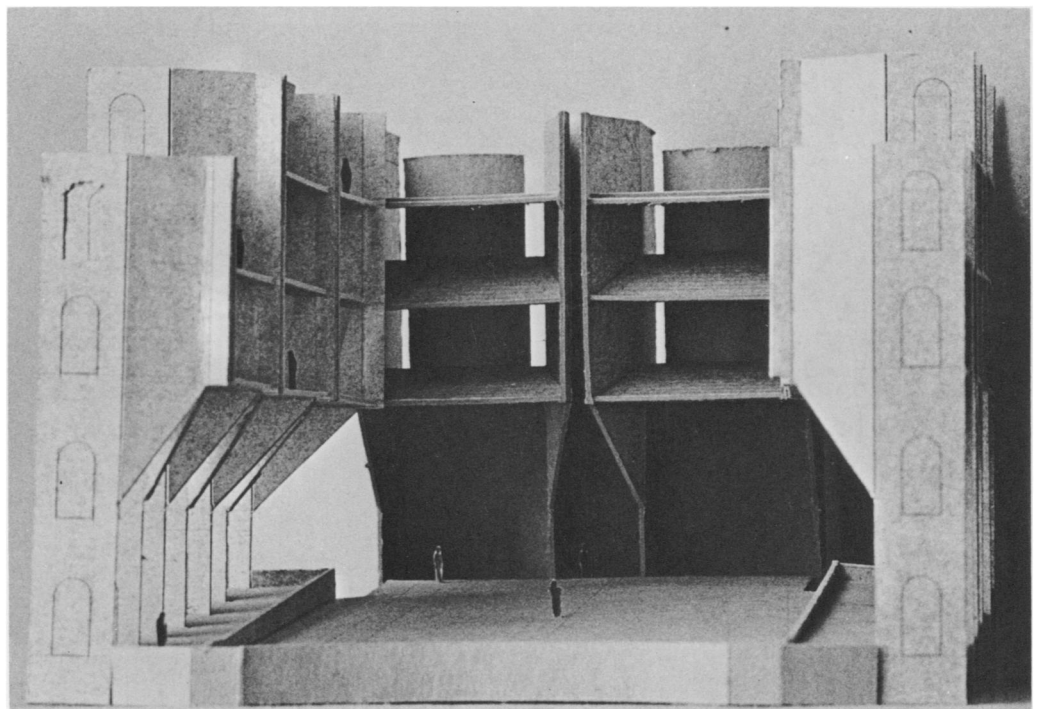




FINE ARTS CENTER
Fort Wayne, Indiana

I think I won't speak much about individual things, but you may sense in a general way, what I'm striving to do. The main purpose is to try to get a single entrance for all the activities – the philharmonic; the civic theater; the art school; art gallery; dormitories – and to produce, if possible, an entrance which is not the accepted entrance but one which sees a door as greeting a car. In the first scheme (21) there is an entrance doorway which is a garage. I thought of a covered street on one side of which were the art center buildings and on the other a car building. But I had to give up the idea. If you consider what it should cost to park a car, you've got to first begin by saying it's worth 10¢, and then when you say you can't get it for 10¢, clients say, well, maybe we can spend 11¢, and from 11¢ you must go to \$1,500 which it does cost. Then it's not worth it any more. It's not worth any more than 10¢ because a parked car is a dead thing, and so to glorify it is, for me, like glorifying nothing. How do we do it? Well, I don't really know how to do it, but I believe that 10¢ should be about as much glory as you should see in it. So, that's why I gave up, because I really couldn't believe in it.

Then I thought further of the meaning of a place of assembly like a philharmonic hall. If you were to realize a philharmonic hall, you would say that the music is only partly important; décolleté is important; seeing a person and becoming entranced is also important. And, you know the man who is going to speak about music very profusely is the man who was asleep through the entire concert. But it's all part, is it not, of the nature of going to a concert? So is seeing the entire hall – not to be forced by its shape to look at it from under a balcony, not just to hear music, but to feel the entire chamber – because being in the chamber is like living in the violin. The chamber itself is an instrument. If you think a great deal about such a place, you can come to the realization that you are making a musical instrument containing people (22), one which I'd



21
22

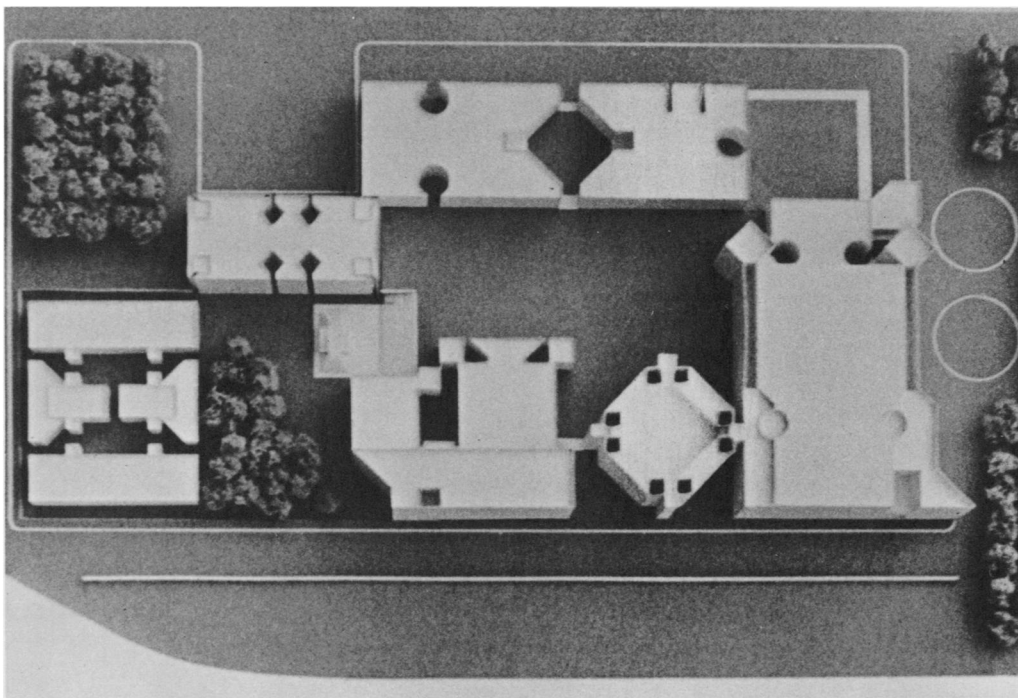
describe as a place of gold and red that had to have a baldachino coming down over the players, and made with a kind of orange peel construction responsible to the conductor of the orchestra. (All this, I know, is not easily obtainable, but even sober minded men of the community will support what is good)

When I thought of the theater, I said, "It's one thing being an actor. Then shouldn't there be a room in the theater where the actor is on his own, learning to act not by reason of a play (which is one thing) but just doing a soliloquy, or even an exchange between two, or a passage from a play out of context, to get simply the essence of acting itself?" The play itself is an exercise of that essence. The rehearsal or performance area is a chalked out place which one discovered as better to put order into the play. So "you stand here, you stand there." But where is the place to purify one's self in the light of that institution of man called the theater? Shouldn't there be a place, a religious one, one might say, which is truly given over to the essence "play," a room 50' x 50' which contains no props, contains no stage. Perhaps it might have around it some arcades from which one could look down onto this room . . . an actor's chapel, where the play becomes himself before belonging to performance, a place of justification that one would expect in Delphi. The religious center of every activity of man must be formed to give new life to spaces it inspires.

Now, is it good to feel that the art school is close to the philharmonic and to the civic theater? I think when all these activities come together, there is a kind of thing that is created. They surely function in themselves but when they come together there is something new. I sensed that maybe there is good in the recognition of a common place of entrance.

This sketch (23) confirmed one belief in a place of entrance which all activities are answerable to. It would be well to differentiate such a place from a square created for buildings. A square preceding the buildings can have life independent of the buildings which gravitate to it. But a place which depends on each building for its completion is one which gives no life until its parts are assembled. There is a different desire, a different will, a different way of making such a place (24).

23
24



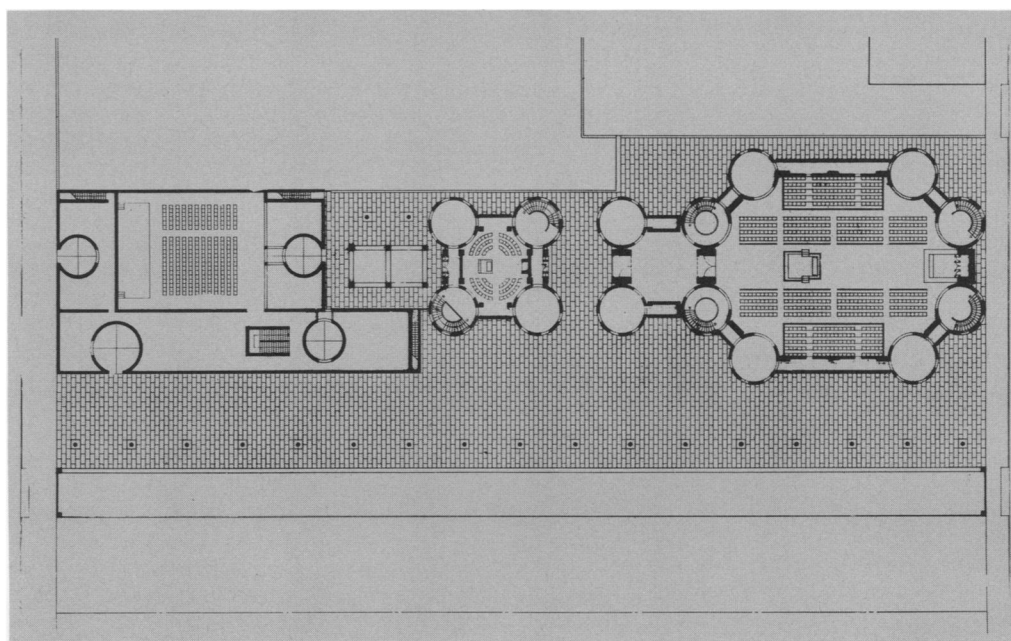
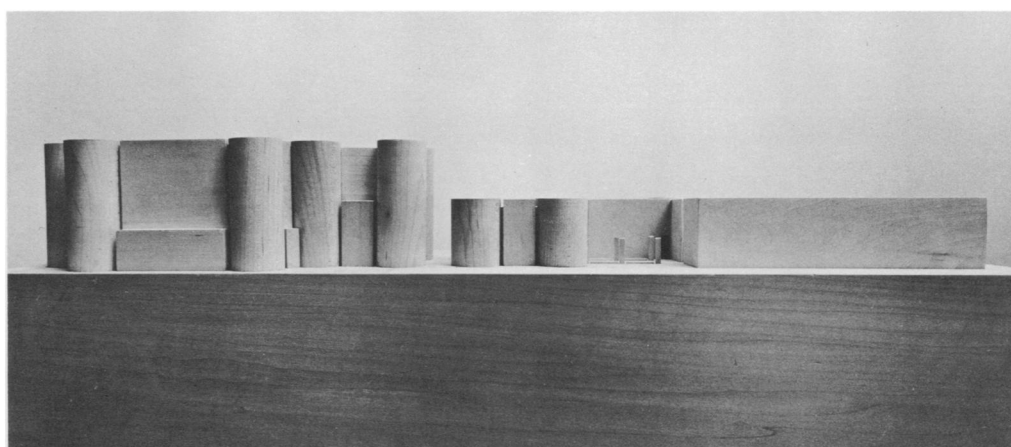
319

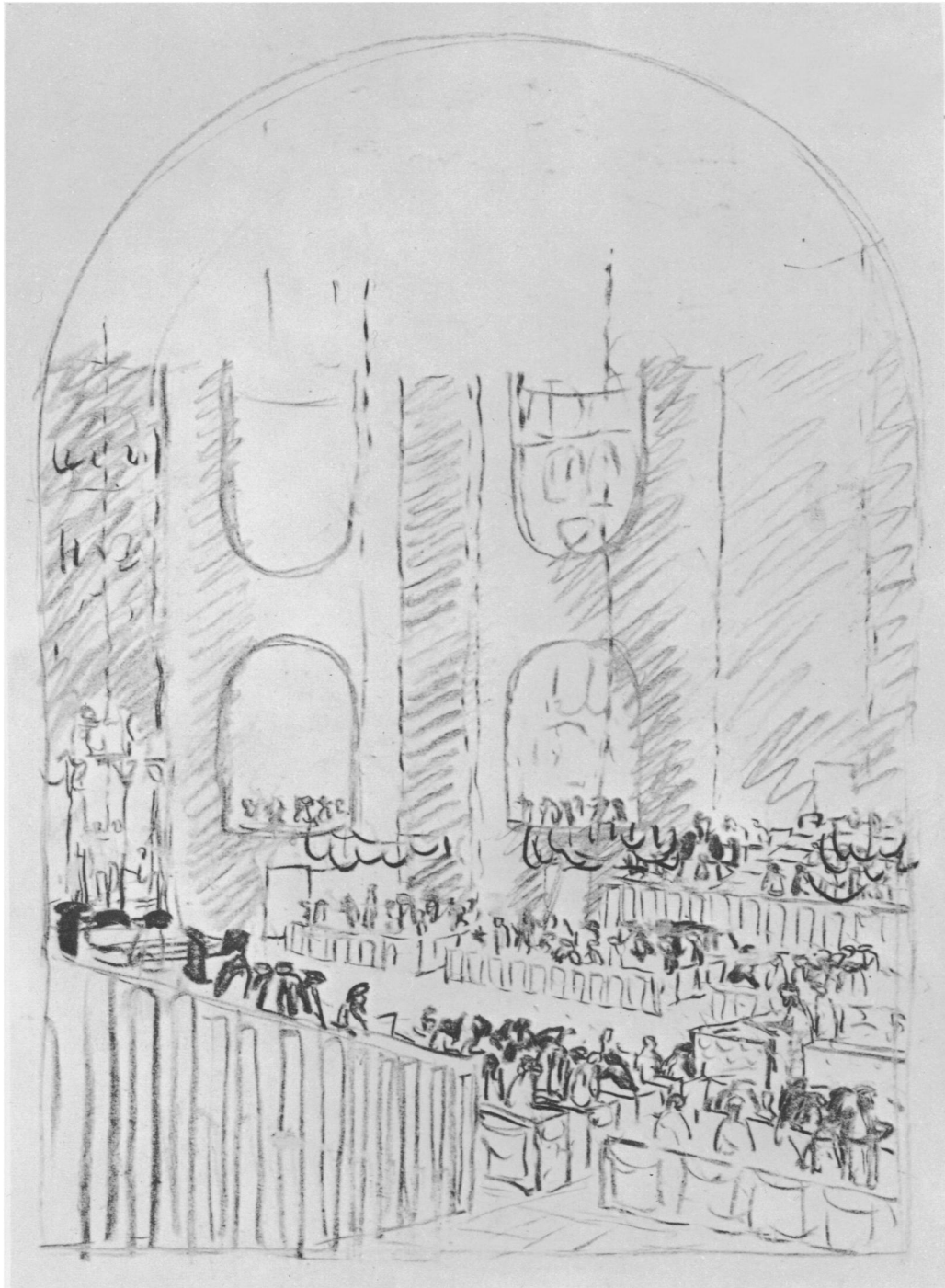
MIKVEH ISRAEL SYNAGOGUE
Philadelphia

The spaces are enclosed by window rooms 20 feet in diameter connected by walled passages. These window room elements have glazed openings on one exterior side and larger unglazed arched openings facing the interior. These rooms of light surrounding the synagogue chamber serve as an ambulatory and are the high places for women. These window rooms prevail in the composition of the entrance chamber and the chapel across the way. In the community building, light is given to the interior by exterior roofless rooms born out of the same idea which, incidentally, gave rise to the plans at Dacca.

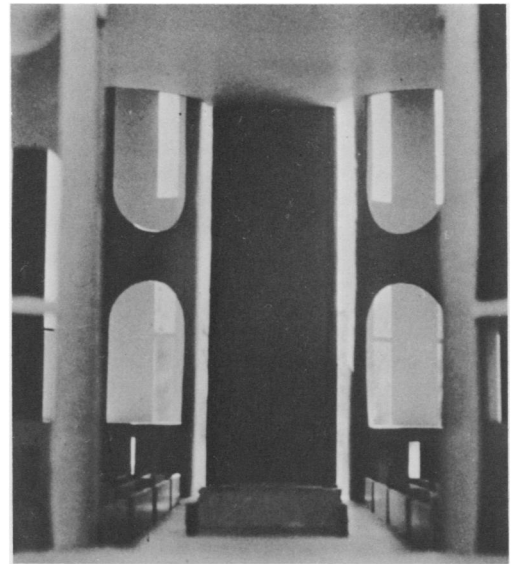
The windows on the outside do not support the building; what supports the building, as you can see on the plan, are the spaces between the windows. The windows could never be a support because of their shape. I chose to support the roof between the windows where a clear definition can be made between a column, a beam and a wall. A column means a beam; a wall says a multitude of beams or a slab. They're different things.

In the model, the open spaces which make the window rooms independent of the structure are made too wide; but they are important to give light to the round shapes. The light from the exterior captured in the interior room of the window is seen from the synagogue chamber as free of glare. The whole idea comes from realizing that contrast of walls in darkness against openings in light renders interiors shapes illegible and turns the eyes away.



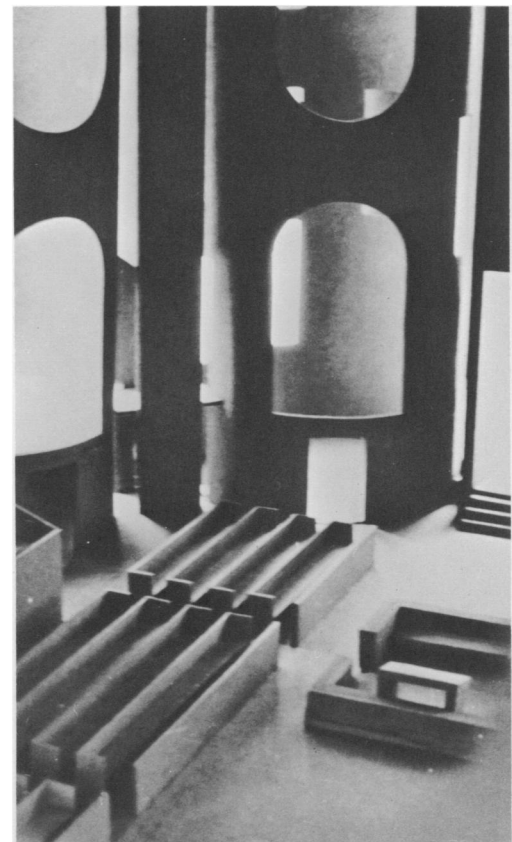


27



28
29

321

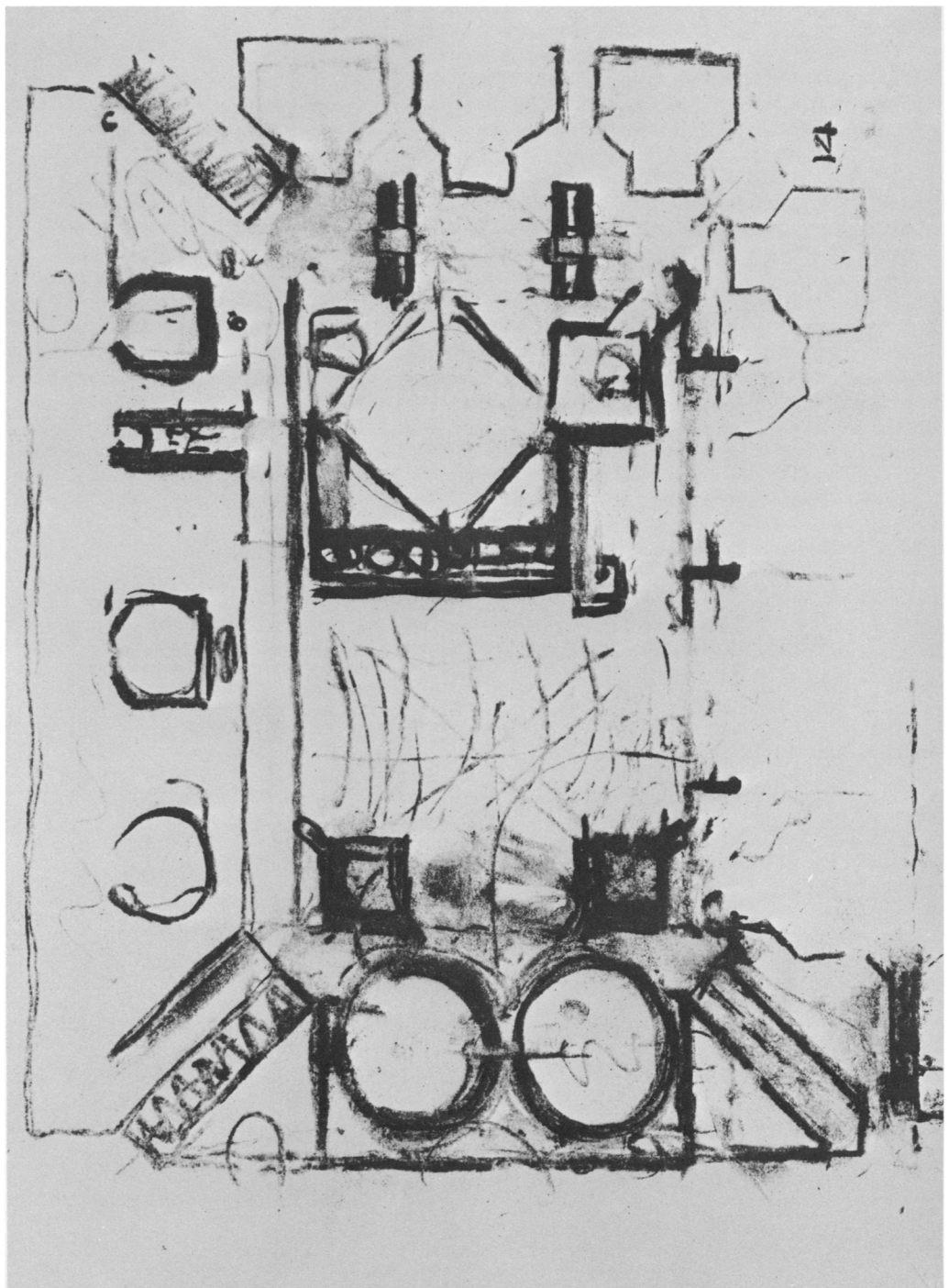


The plan (30-38) comes from my feelings of monastery. The idea of the seminar classroom and its meaning of "to learn" extended to the dormitories comes from the Harvard Business School. The unity of the teaching building, dormitories and teachers' houses – each its own nature, yet each near the other – was the problem I gave myself. The lake between student and teacher is one way of distance with little dimension. When I found this way, the dormitories tended, psychologically, to break away from the school, though it has no appreciable distance from it.

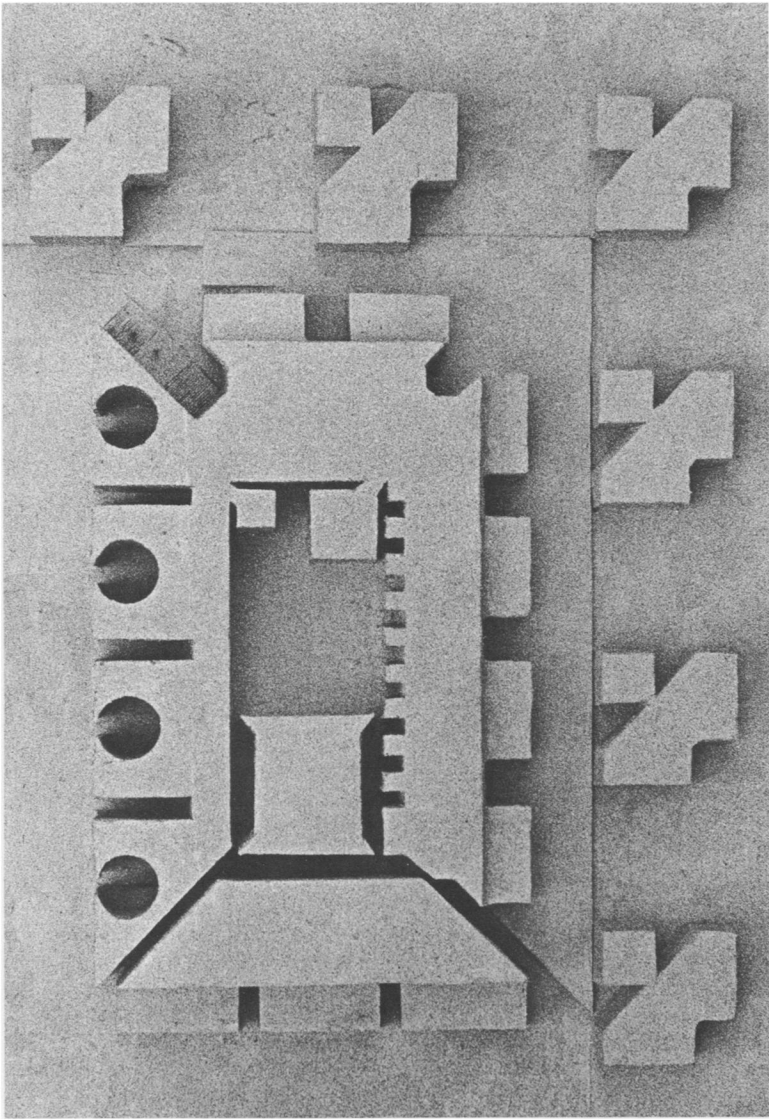
A work of art is the making of a life. The architect chooses and arranges to express in spaces environment and relationships man's institutions. There is art if the desire for and the beauty of the institution is filled.

Orientation to wind and shade from sun has given architectural elements to the composition. My arrangements with the Indian school is to design one project employing the staff of architects and engineers of the National Institute of Design in Ahmedabad. Mr. Doshi, wonderful architect of India, sees to the architectural interpretations in India when I am not there. I am still not clear about the orientation problems, but Doshi is coming from India and will explain. *When Doshi came, he found it was best to flip the whole complex over in the opposite orientation.* (June, 1964)

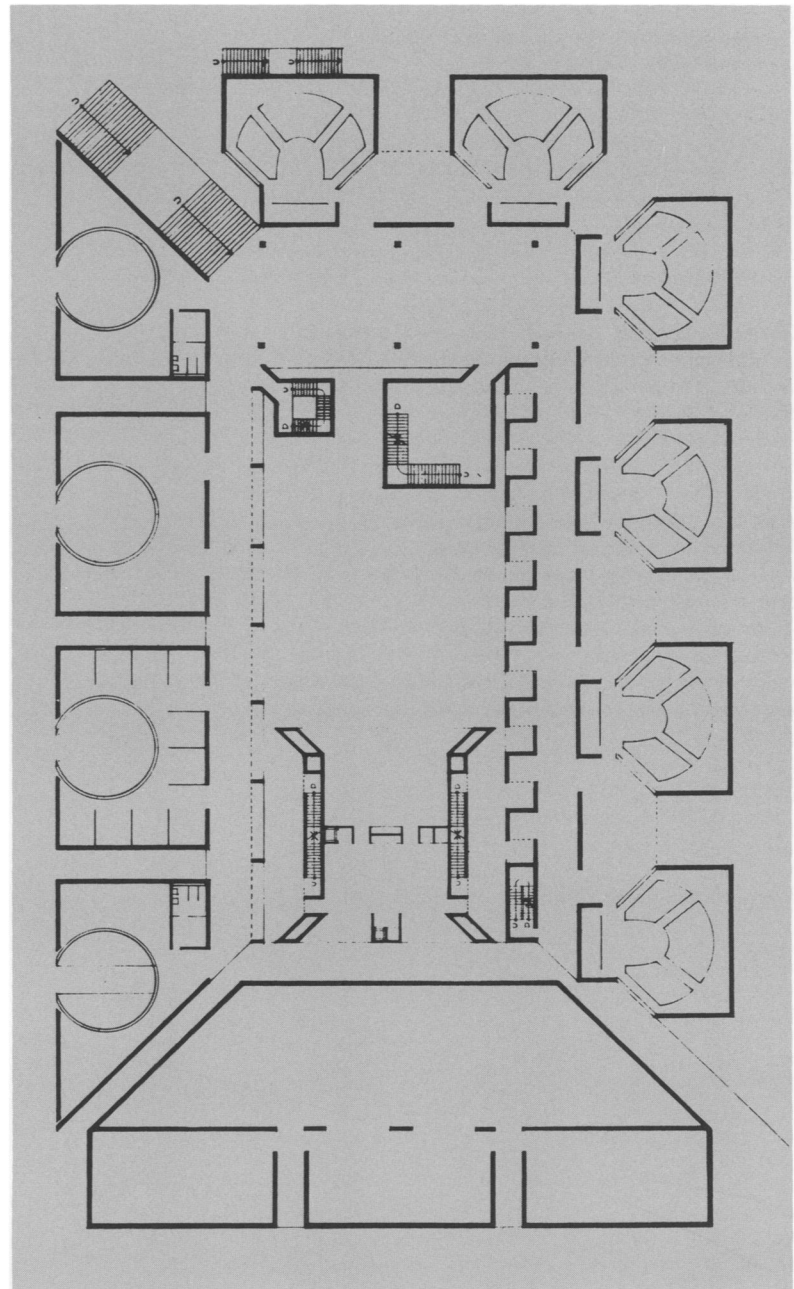
322 The first designs of the dormitories were composed as houses for sixty students each with two stories of rooms above open connecting porches on the ground. The end bays of each house toward the lake step ten feet to a level four feet above the water, giving a two-story house-clubroom facing the lake. This became the space of invitation vested in each house and adding to the inter-hospitality in spirit embodied in the seminar idea of exchange among students and teachers. The dormitory rooms, in groups of ten, are arranged around a stairway and tea-room hall. In this way, corridors are avoided, favoring the making of rooms which contribute to the central idea, calling for plan and residual spaces for casual and seminar



30



31
32



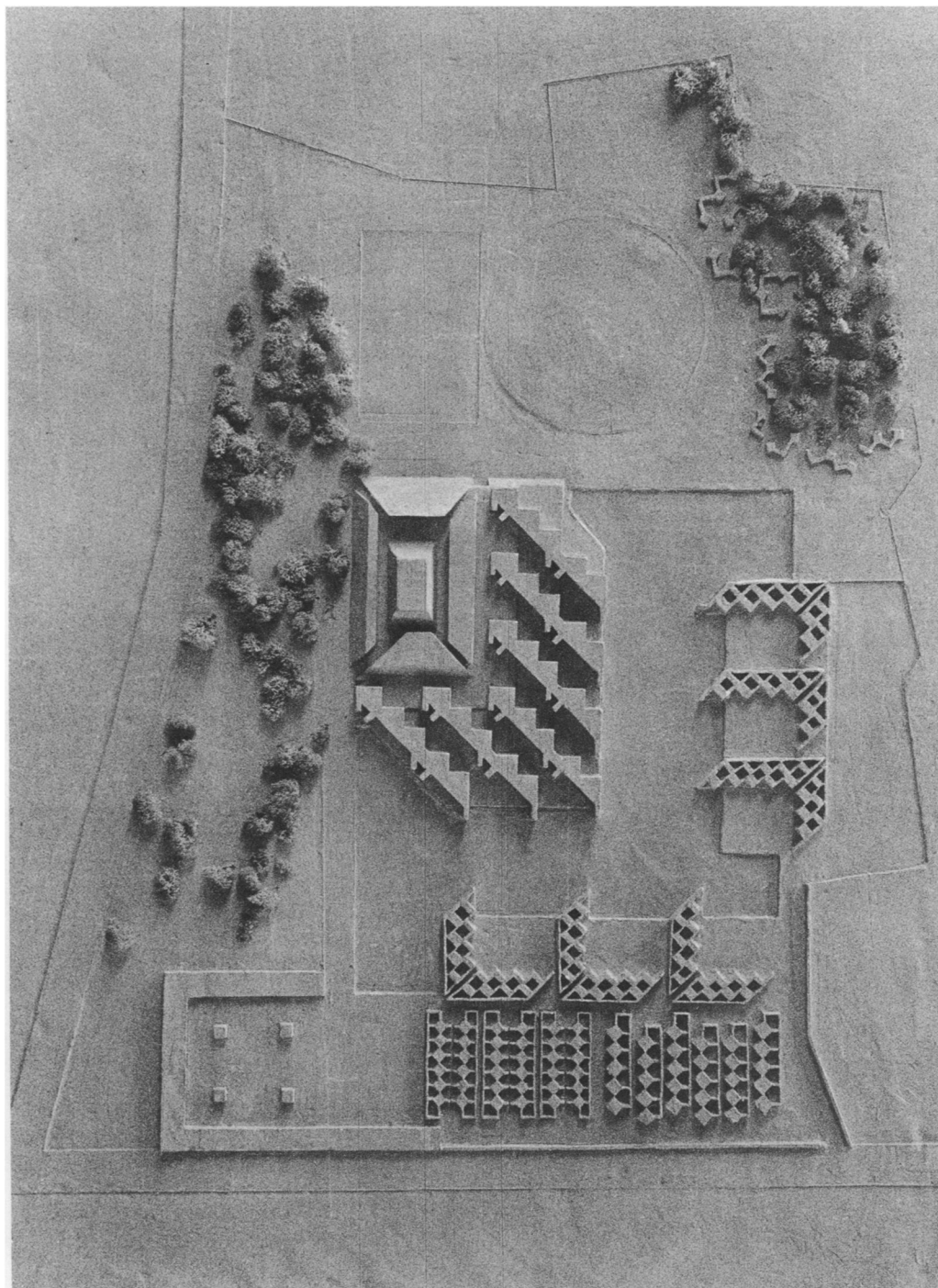
323

study. The tea-room entrance and positioning of the stair and washroom serve to protect the rooms from sun and glare without obstructing the essential through breeze.

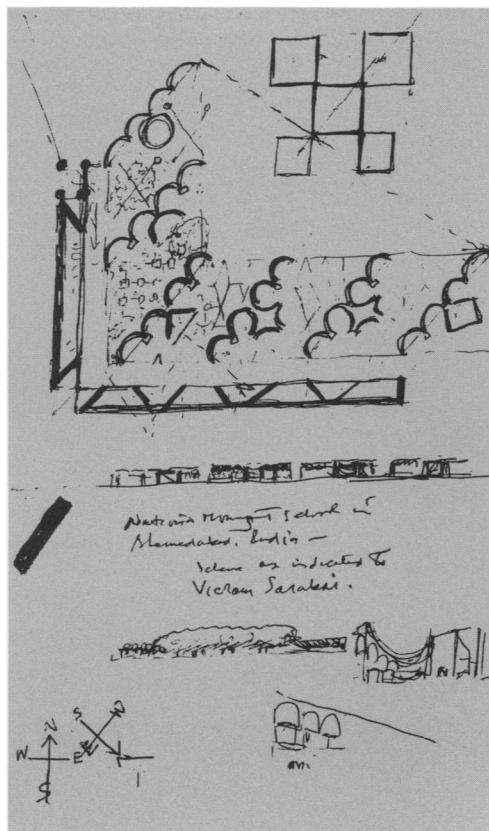
The houses are oriented to the wind, all walls parallel with its direction. They are placed diagonally around a court to enclose the court and retain the strictness demanded by the orientation. If you have a square in which everything is normally answerable to a square, you find that two sides are oriented improperly. By taking the diagonal you form odd conditions, but you do answer, you can conquer this geometry if you want to. And you must relentlessly look at orientation as something that you give to people because it is desperately needed. That's the basis of these diagonal shapes.

In the school building, you notice I introduced a light well. I think it is somewhat superior to the device I invented for Luanda, because there I put a wall up to shade the sun and modify glare, and here the solution is an integral part. The construction of the building is better as well because you have less span to deal with and the windows are not on the exterior where you don't want them. This is a reverse bay window, you might say.

The inner court will be shielded during certain ceremonies by a large canopy spanning eighty feet. What gave me the courage to do this was the architectural provisions made in the courtyards of the Akbar Palace at Lahore for the same purpose.

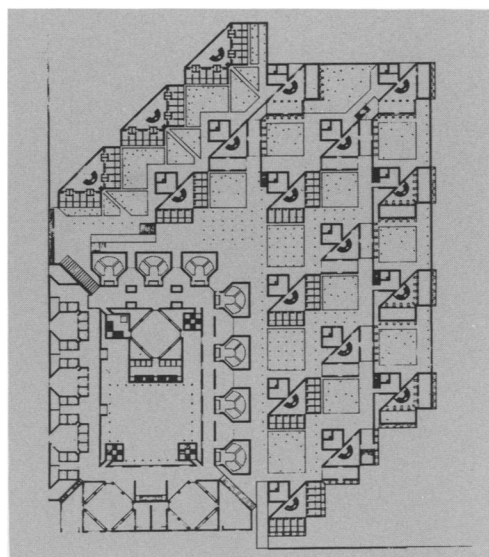


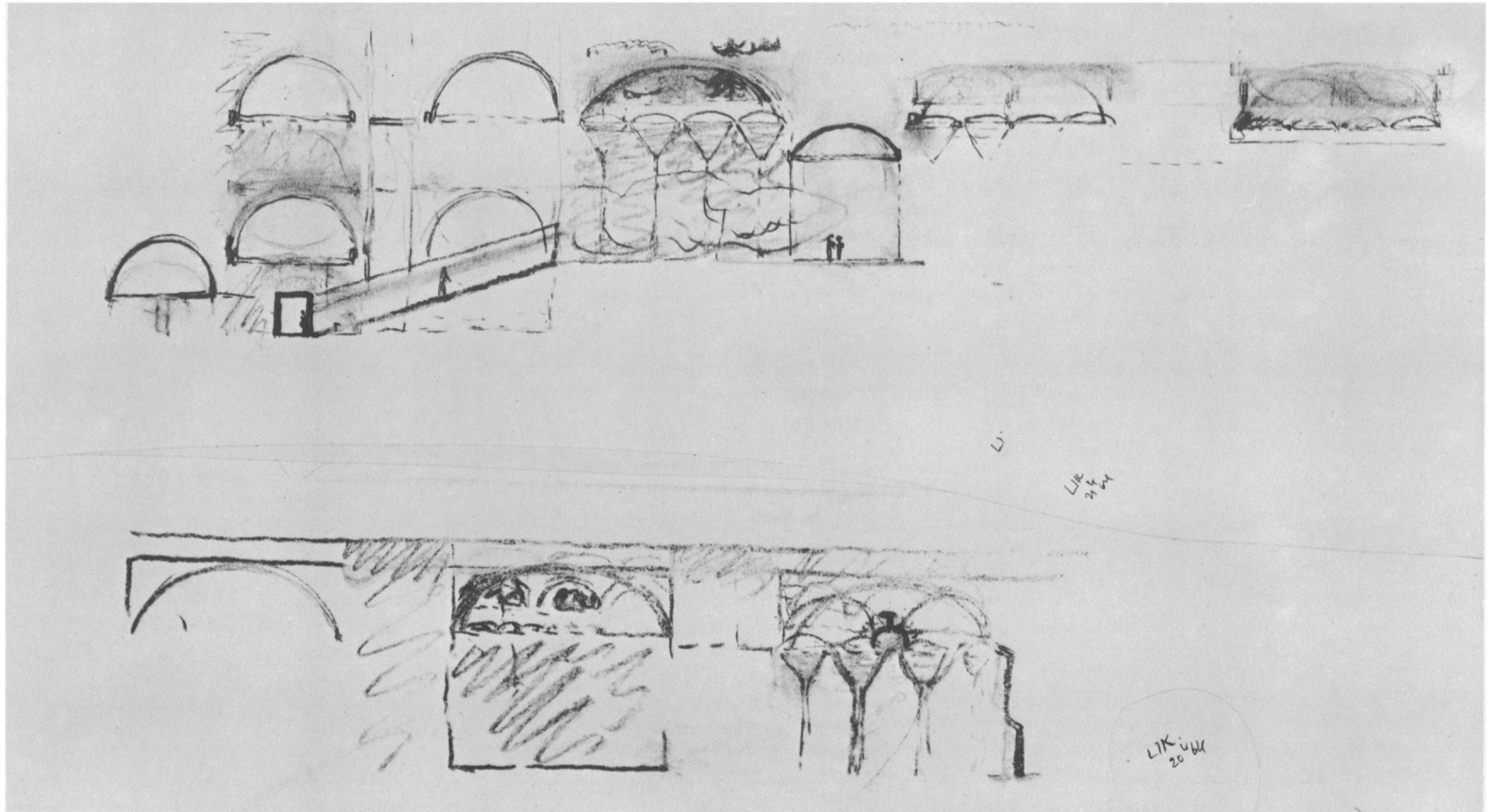
34
35



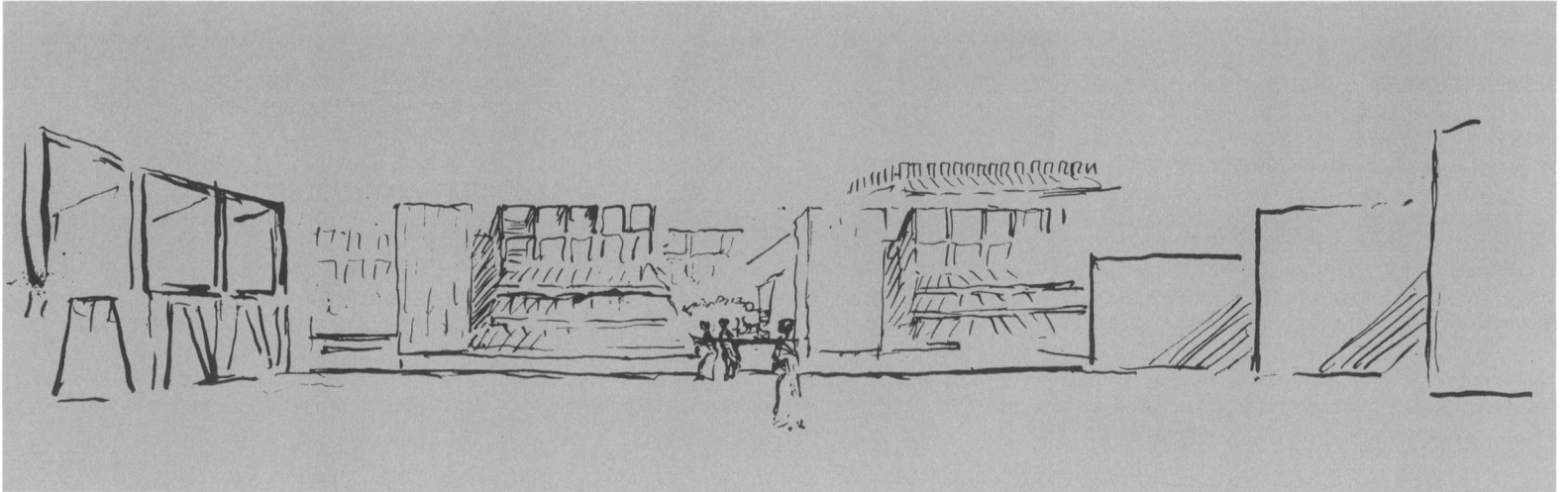
36

325





326



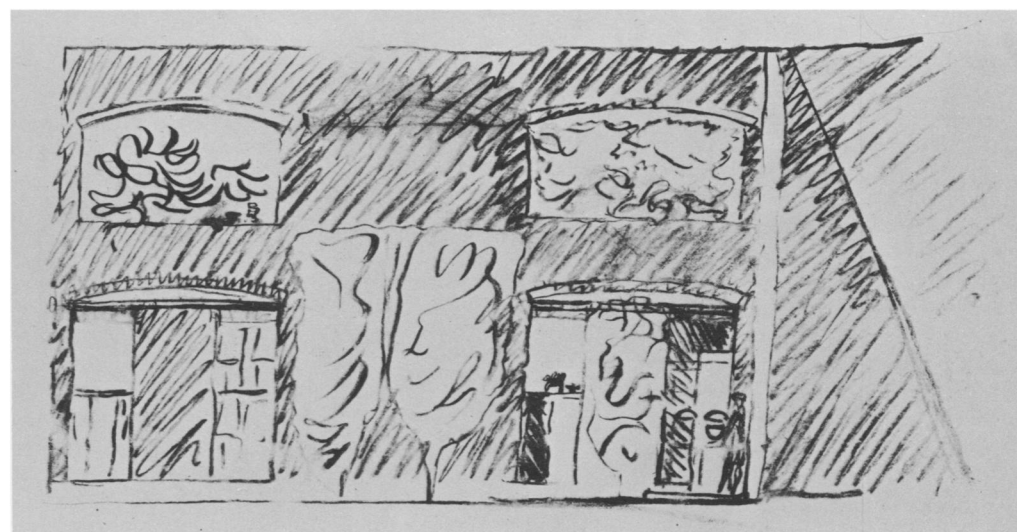
37
38

You know the people in India make wonderful cloth and they have stretched even greater distances with it. This court is different from things I have conceived before. It gives such joy to be the one to discover a beautiful way of life that belonged to another civilization.



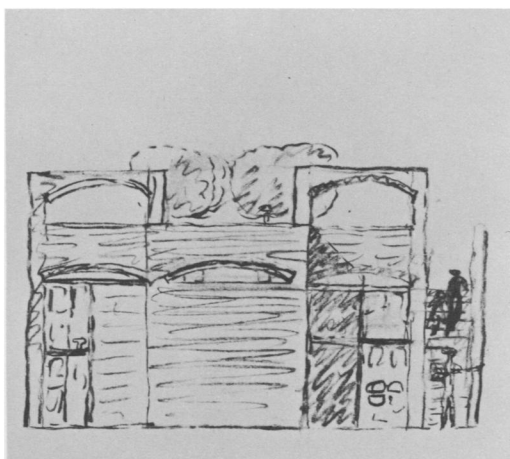
You notice I made all these buildings answerable to each other even though the scale of the house and the dormitory and the school is so different. The material of brick bearing walls and piers with concrete floors is retained throughout the larger spans giving rise to arches and buttresses, the more modest spaces simple slabs on walls (39-41). Consistent with the order of brick construction and the introduction of concrete, the concrete combines with the characteristics of brick in the making of the flat arches. In the houses, where there is not sufficient dimensional expanse to use a full arch, concrete restraining tension beams are introduced to counter the thrust of the flat arches.

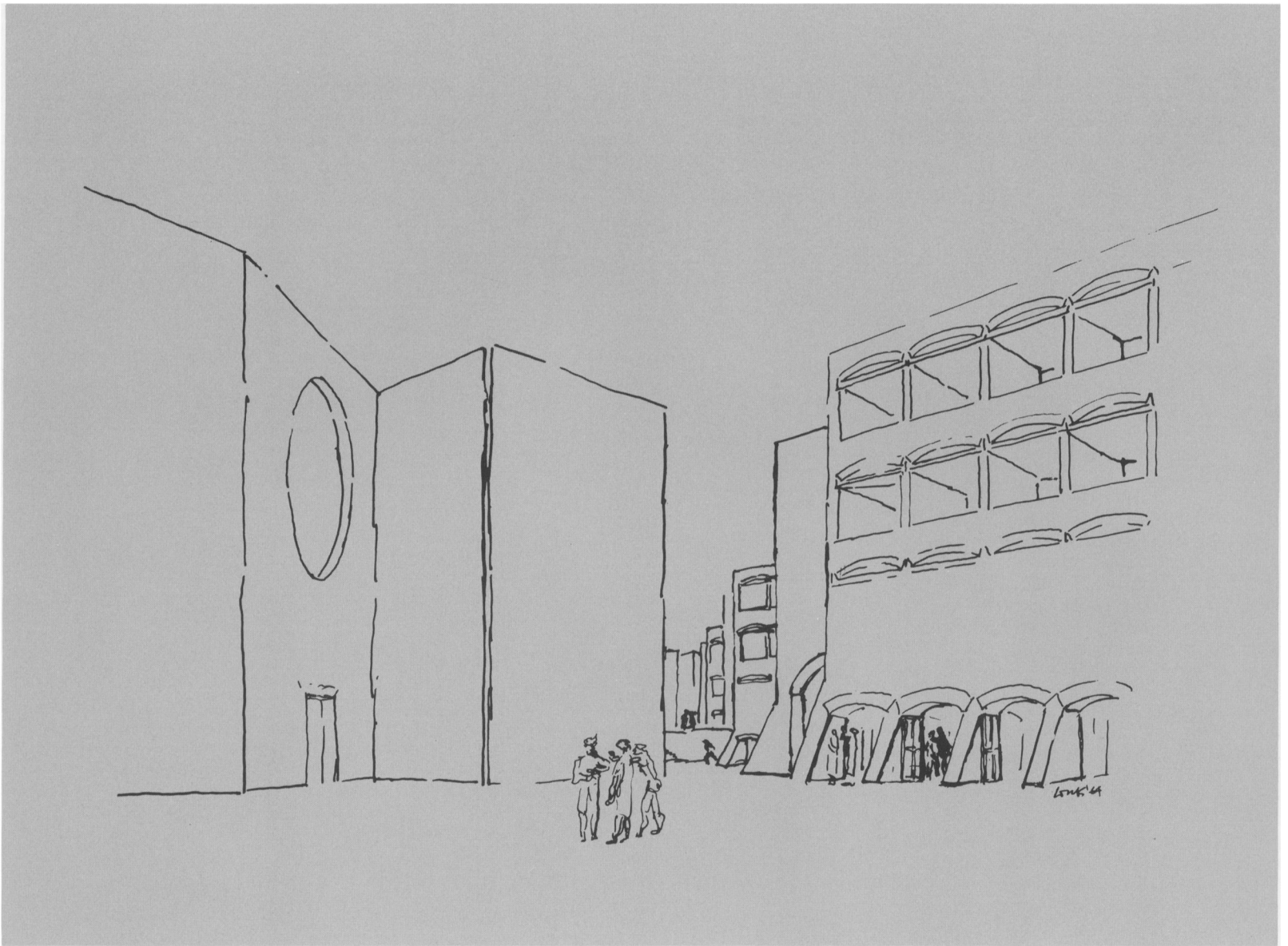
40
41
39

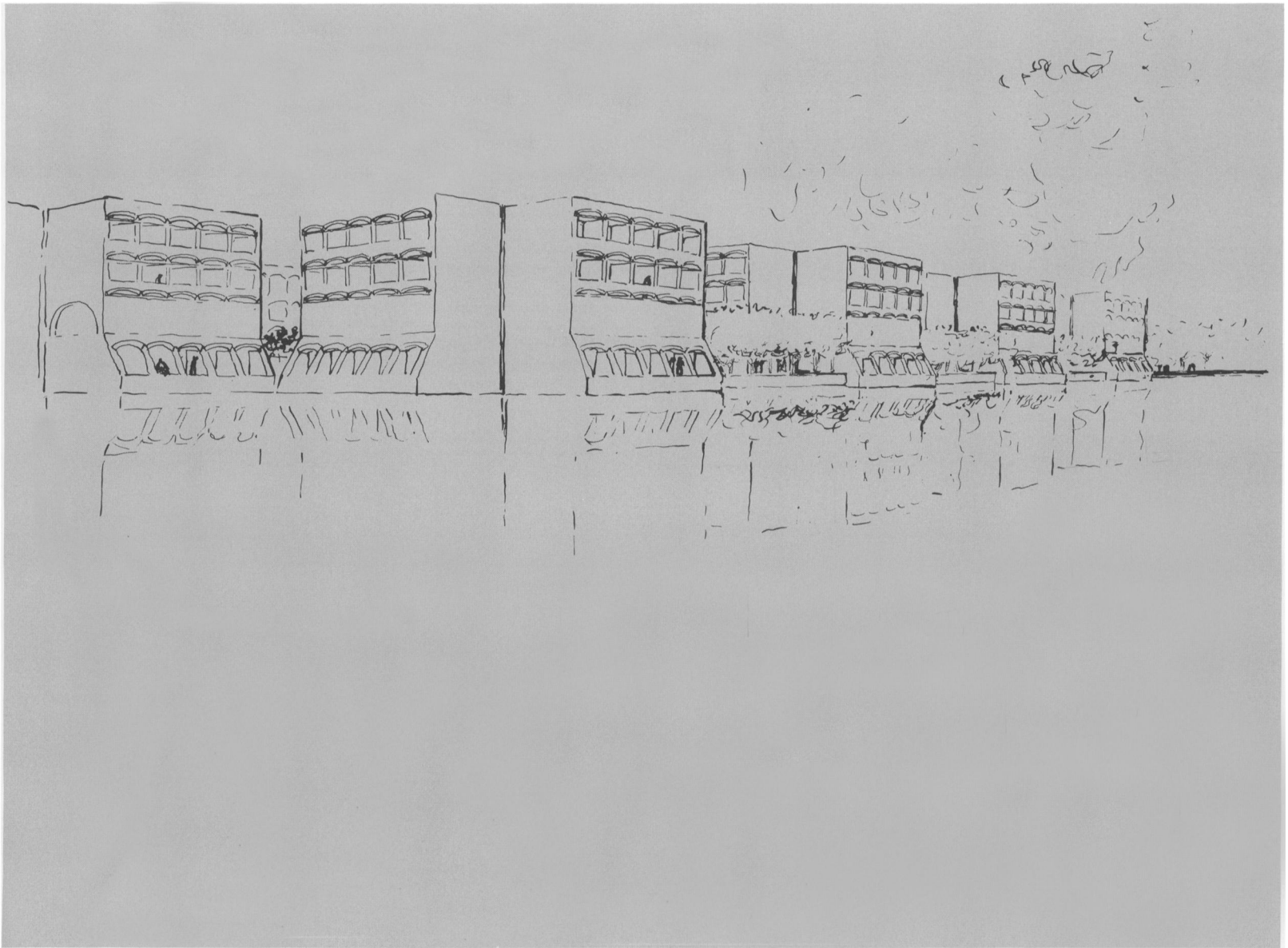


327

The fullness of light, protected, the fullness of air, so welcome, are always present as the basis for architectural shapes. I was impressed with the need for air when I happened, with twenty other people, in the palace in Lahore, where the guide showed us the ingenuity of craftsmen who had covered an entire room with multi-colored mirrored mosaics. To demonstrate the mystery of the reflections, he closed all the doors and lit a match. The light of the single match gave multiple and unpredictable effects but two people fainted for lack of air in the short moment that the room was shut off from the breeze. In that time, in that room, you felt that nothing is more interesting than air.





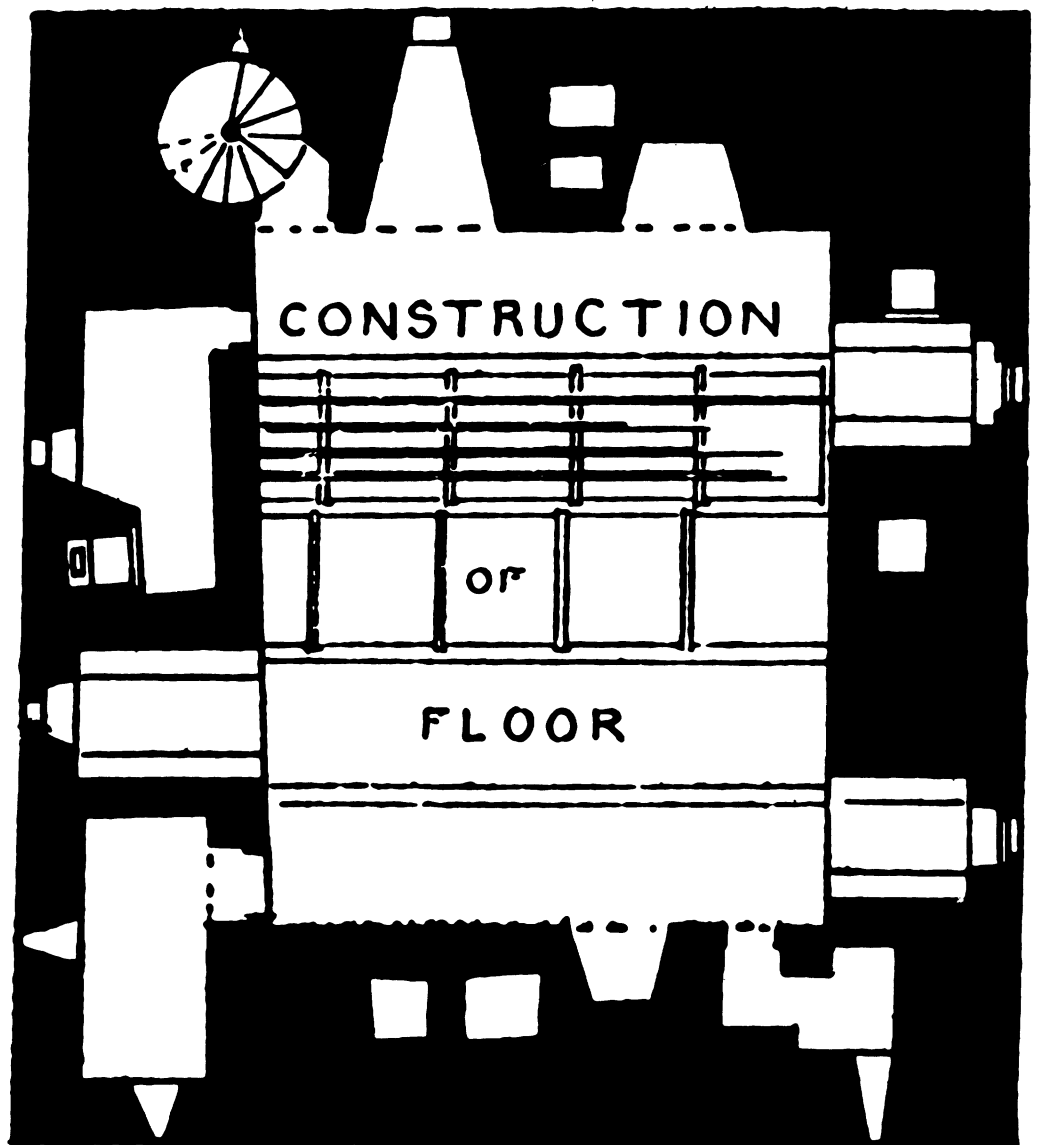


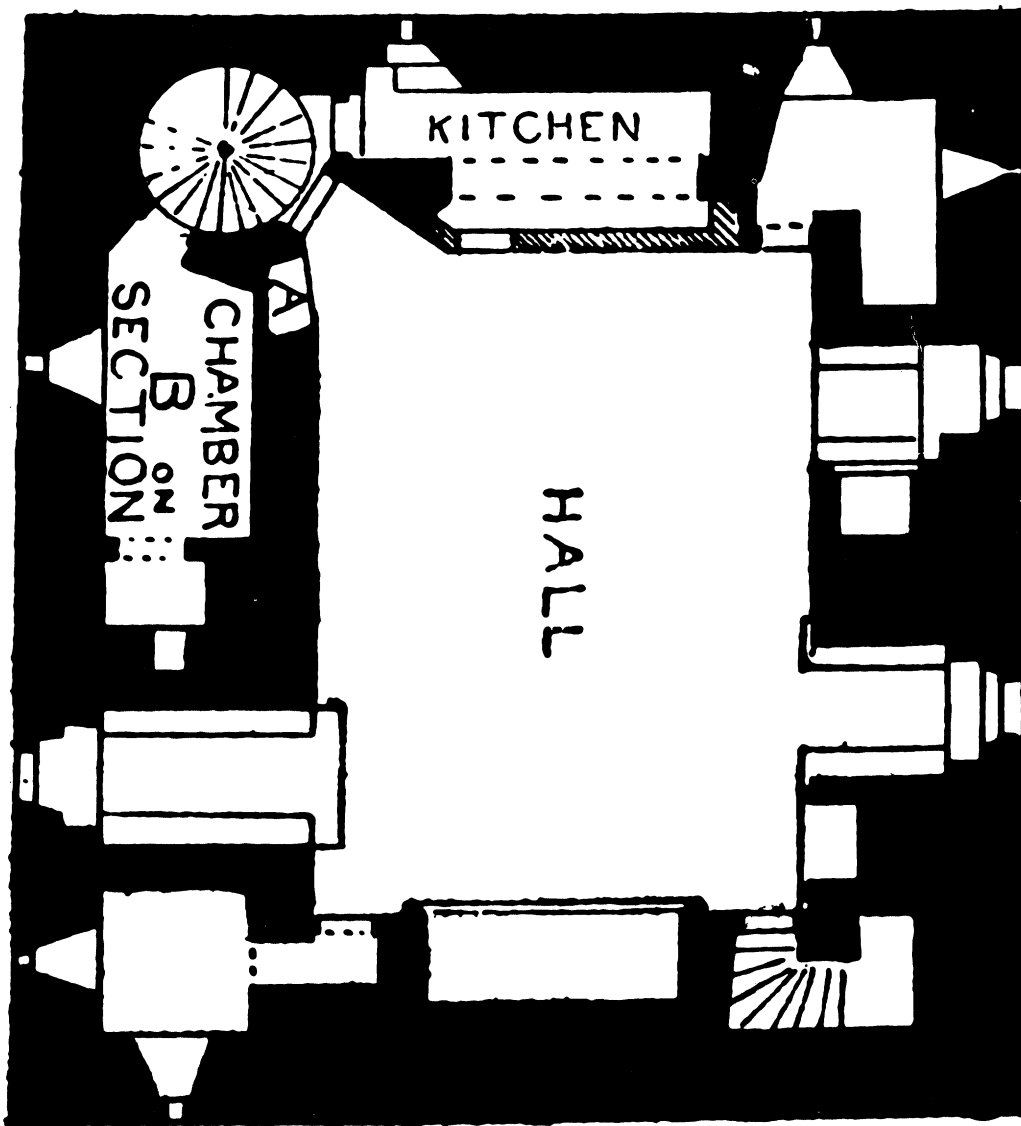
I did not speak in terms of architecture. He did not speak in terms of sculpture. Both of us felt the building as a contour; not one contour but an interplay of contours so folding and so harboring as to make, by such a desire, no claim to architecture, no claim to sculpture.

The shapes are Noguchi's. How to make them, from my point of view, would have to answer to an order of construction. Noguchi has the same sense of order, except that he has no bondage to it. The playground has to satisfy the realm in which I work and has to satisfy the realm of his work.

We agree that a playground building in a park must give itself to the park and its natural characteristics. A building in the familiar sense would assert itself; an interruption of the park. A window, apparent, would give away the needs of a building. This is the reason why light courts are introduced; placed and dimensioned to assure full light to the interior yet not presenting a window to be broken on the outside. Play must be free and uninhibited, spaces to be discovered with shapes not imitative of nature yet unrestrained in their making.

The walls of the castle cannot be thick enough to satisfy the seriousness of defense. The hall—the space within—has faith in the eventual freedom from such security. The needs of light to the interior, the needs of a service room, of a kitchen, of a place away from the central hall, act with courage to justify the making of spaces within the walls, logically placed to feel that security is not lost. This is the pragmatism and also the humanity of the castle. Its life in architecture is inspiring because its statement is clear in spirit and in the bondage of use. A building rising from its foundations is eager to exist. It still doesn't have to serve its intended use. Its spirit of wanting to be is impatient and high, allowing no grass under it. A building built is a building in bondage of use. Its spirit then must call out and remind its user of its will to have been. Isn't it true that sometimes a building being built is of more interest than one that is finished? A building that has become a ruin is again free of the bondage of use. But it is



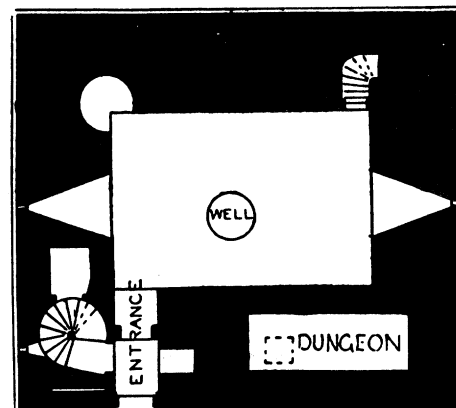
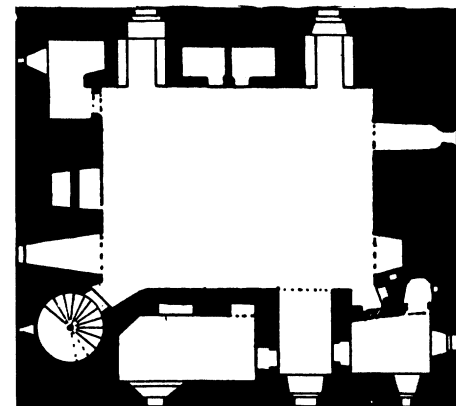


different from when it was being built because it now allows foliage to grow over it, as loving as a father permitting the child to pull at his carefully chosen clothes.

The stark architectural directness of the castle and the musically rhythmic image of the Greek temple combines in my mind a thought about Le Corbusier. I believe Le Corbusier, even in the light of his marvelous revelations in architecture, is just beginning to create his greatest work. I dare to think of a building that he might make, a great block of building, which is cut into from top to bottom in varied places of varied shapes neither forgetting the castle, nor the order of temple, giving light to spaces and passages on the immediate interior and leading to a glorious central and single space, the walls and their light left in faceted planes, the shapes of the record of their making, intermingled with the serenity of light from above.

43
44
45

331



SALK INSTITUTE OF BIOLOGICAL STUDIES
La Jolla, California

The original concept (46, 47) of the three parts which expresses the form of the Salk Institute – the laboratory, the meeting place, the living place – has remained. The acceptance of the separation has made Dr. Salk my most trusted critic.

Two major changes from our collaboration: the two laboratory gardens and four laboratory buildings have become a single garden flanked by two laboratory buildings (48); the distinction in the construction of the spaces of the laboratories from the spaces for the pipes has become greatly clarified to the point where a far more interesting construction, intended in the beginning to serve this distinction (49), has given way to a system of construction far less exciting but one that serves more characteristically the intended use (50).

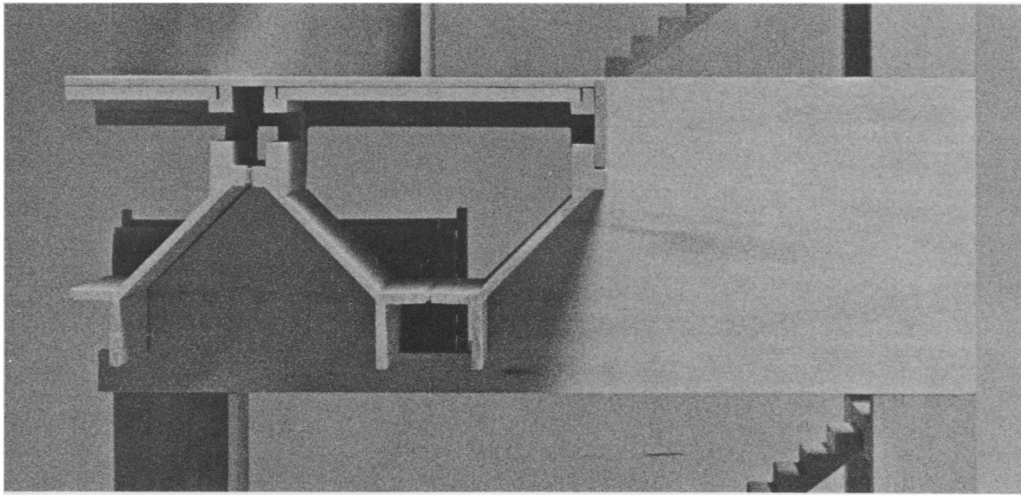
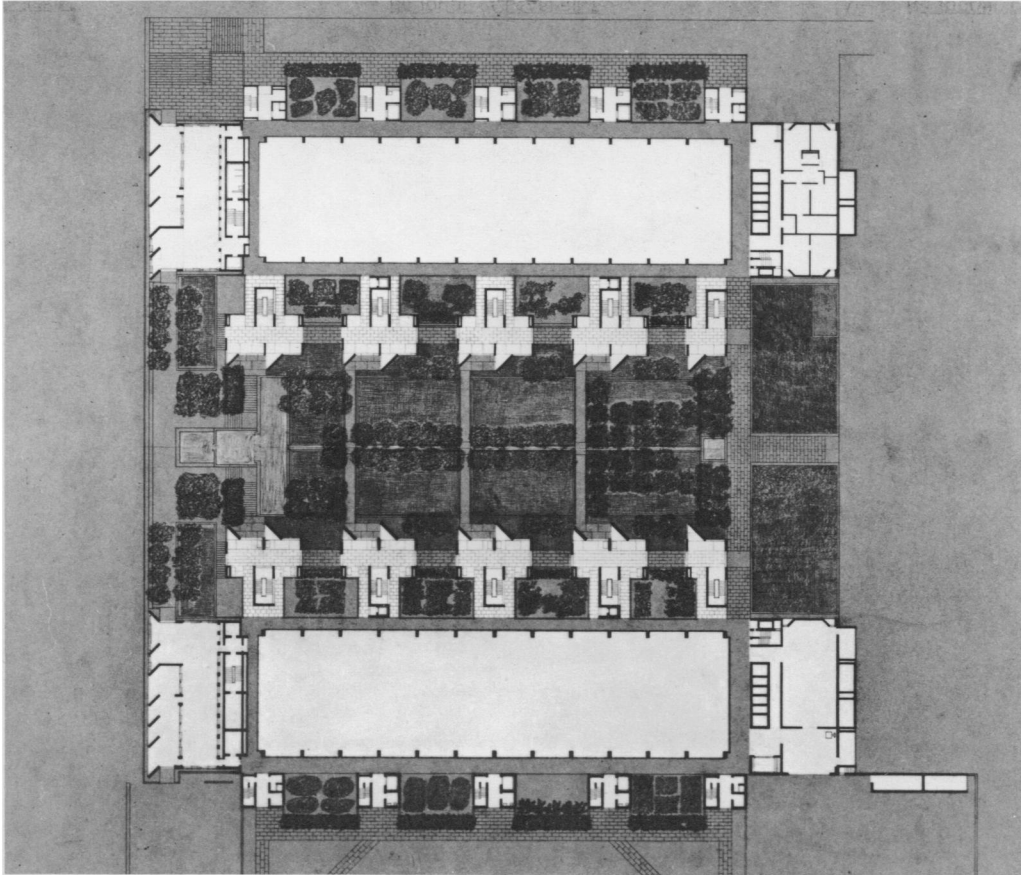
I realized that two gardens did not combine in the intended meaning. One garden is greater than two because it becomes a place in relation to the laboratories and their studies (51). Two gardens were just a convenience. But one is really a place; you put meaning into it; you feel loyalty to it.

The laboratories, now under construction, are conceived of as work levels and service levels. Each of the three work levels is related to a garden or to a view of a garden. The space above each laboratory is, in reality, a pipe laboratory, nine feet clear, where service men can install equipment relative to experiments and make changes to ducts and piping. This dismisses the apprehension of needing the room to satisfy the mechanical means for experimentation. In the laboratories at Pennsylvania, the vertical services and the expulsion of all unwanted air had its undeniably



332

46
47



right position. The horizontal services were in the spaces of the Vierendeel truss and exposed. This answered in one way only: the pipes are visible and accessible but they do gather dust and, in biological studies, this could be a disadvantage. So, in the first scheme for the Salk laboratory, crawl space was provided in a generously deep folded plate construction. This gave an awkward but possible accessibility as well as integral enclosure. Dr. Salk, when his belief in what must constitute the nature of a laboratory space was fully realized, could not turn back to something that was less than what we finally accepted, even though it meant drastic change. I felt the loss of the folded plate construction. My structural engineer was not for change. The mechanical engineer still believes that the folded plate could work. Yet study and new architectural potentialities finally gave rise to everyone's belief in the validity of the last choice.

48
49
50
51

333

