

# BACK TO THE CROSSROADS OF FLATBUSH - THE JUNCTION:

Student Housing for Brooklyn College,  
Brooklyn, New York.

by

Keith A. Campbell

Bachelor of Arts  
Brooklyn College, City University of New York  
1984

Submitted to the Department of Architecture in partial  
fulfillment of the requirements of the degree  
Master of Architecture  
at the Massachusetts Institute of Technology  
June 1988

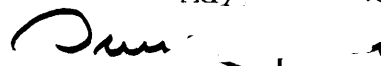
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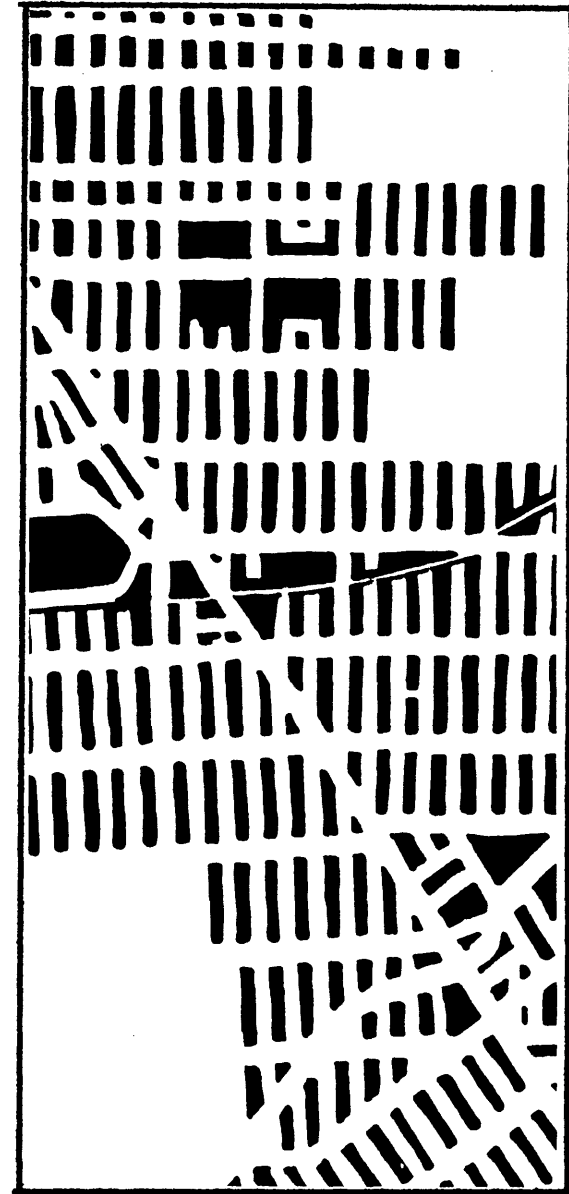
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May 6, 1988

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Departmental Committee for Graduate Students





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The crossroads of Flatbush (often called The Junction) is a five point intersection of vehicular and pedestrian traffic. A crossroad where ethnic groups step beyond subtle neighborhood boundaries and merge to use public services and shops. Steel gates roll up at the beginning of each day and pushcarts slip onto the sidewalk. Pedestrians jostle vendors and vendors strike bargains. Senior citizens seek sunlit corners after tracing the sun's path. Night shift workers yawn while gradually adjusting to the morning rush. High school and college students dart in and out of donut shops as they make their way to classes.

The electricity emitted from such an urban environment has a lasting effect. It is this energy that I wish to capture in my design exploration for student housing. The development of a physical form that would reflect the vibrancy of the Junction.

## ABSTRACT





The intense need for housing is the plight of growing urban areas. The flux of students annually result in increased rents and stiffer competition. A proposition of student housing will certainly reduce the demand, but by no means be a sure solution to this problem. It is not my intention in this thesis to examine all facets of student housing but rather I am proposing an attitude towards housing graduate students.

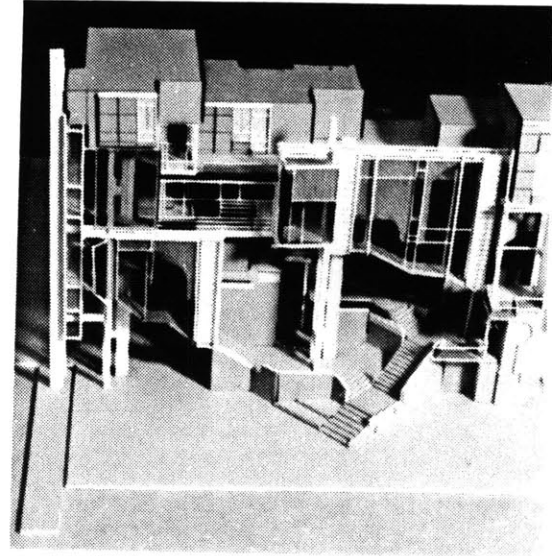
The design presented is prototypical and was developed without dealing with site specifics. It has evolved through a process of manipulating elements (i.e. primary and secondary structural componets) to provide warmth, vitality and variety in housing. A desire for certain spatial qualities has led

to the elimination of unnecessary architectural barriers. Therefore casual as well as planned encounters among residents are possible.

Though I have not made a comprehensive study of the site, I have tried to resolve some urban issues. Parking and other amenities are considered. Incorporated in the proposal is an outdoor marketplace. This is only one kind of activity that might take place in an urban space. I see a marketplace as part of the life of Flatbush. Such a place is cheerful, bright and filled with ingredients that appeal to all our senses. It might act as the link between old and new communities.

## INTRODUCTION





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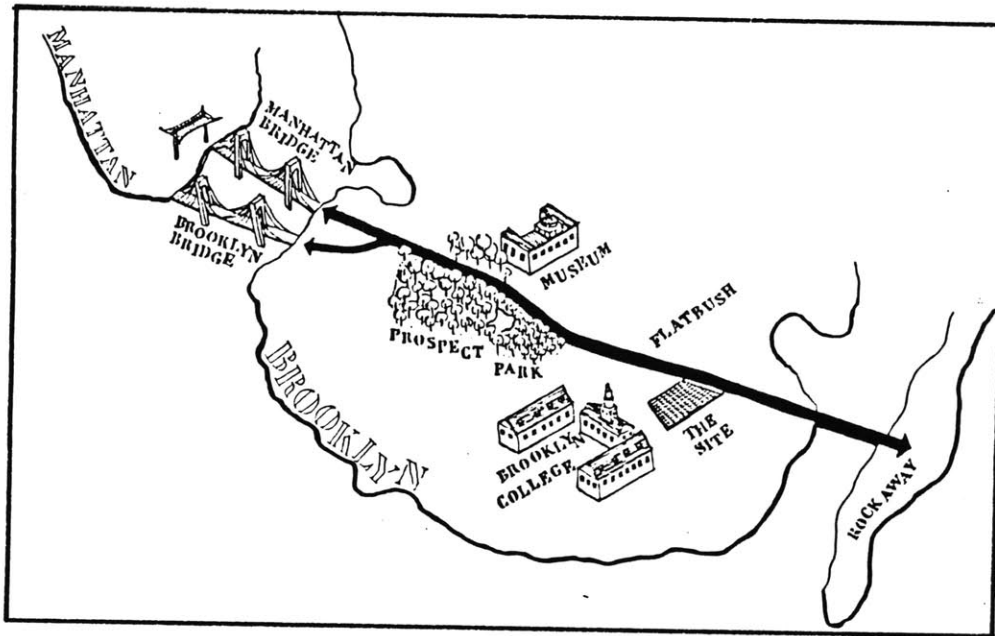
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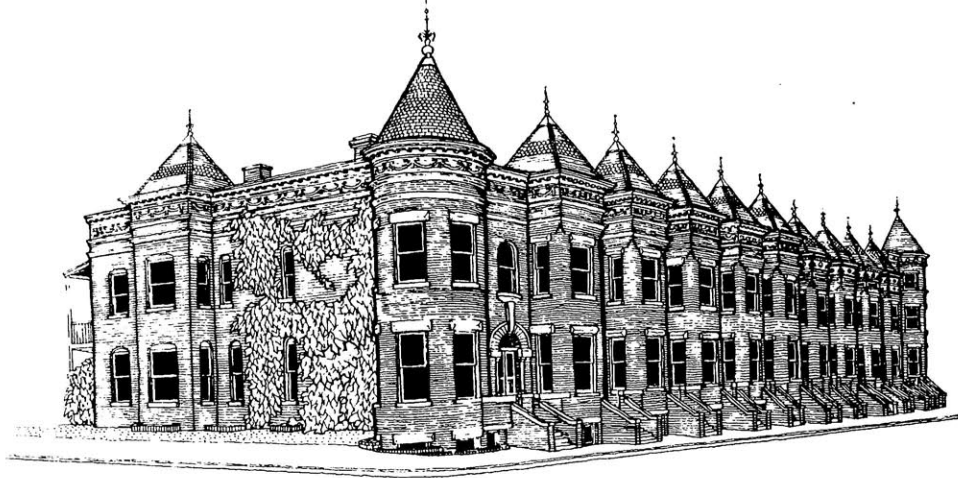
Flatbush possesses a number of recreational and cultural institutions that make it an attractive urban area. As part of Olmstead and Vaux's 1886 plan, the location of Prospect Park offers delight to many communities. It provides several acres of woods and urban gardens.

Today a main feature, among other amenities, is a famous Japanese garden. Within a few blocks of the park is the Brooklyn Museum and Art Institute known for its collection of ancient and modern art. The museum has special events including concerts, lectures, and films. Adjacent to the museum is the main branch of the Public Library. It is situated on Grand Army Plaza, which was the center of Olmstead and Vaux's plan of radiating boulevards.

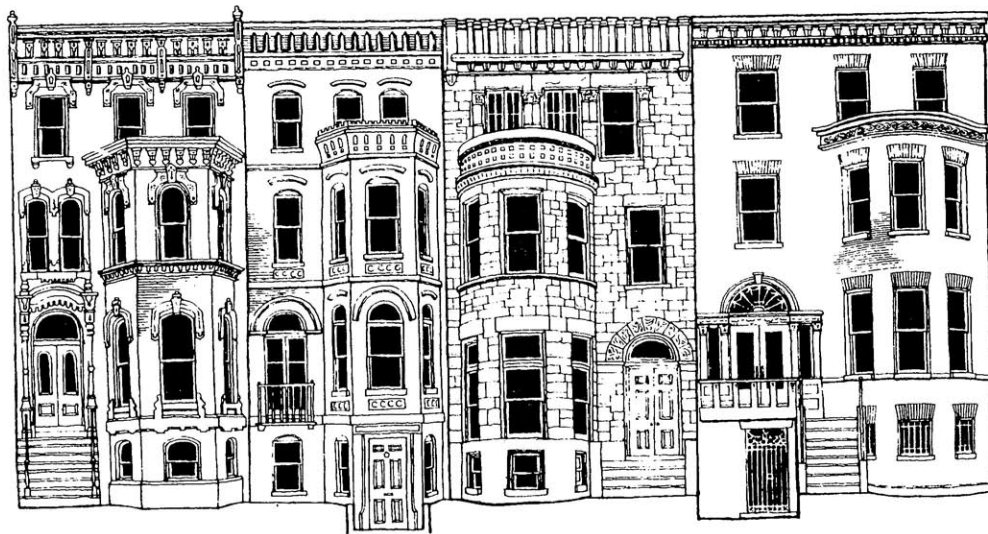
Other important factors have influenced the shape



## BROOKLYN



GEORGIAN REVIVAL ROMANESQUE:  
Row Houses



THE STANDARDIZED ROW HOUSE:  
Romanesque Variants

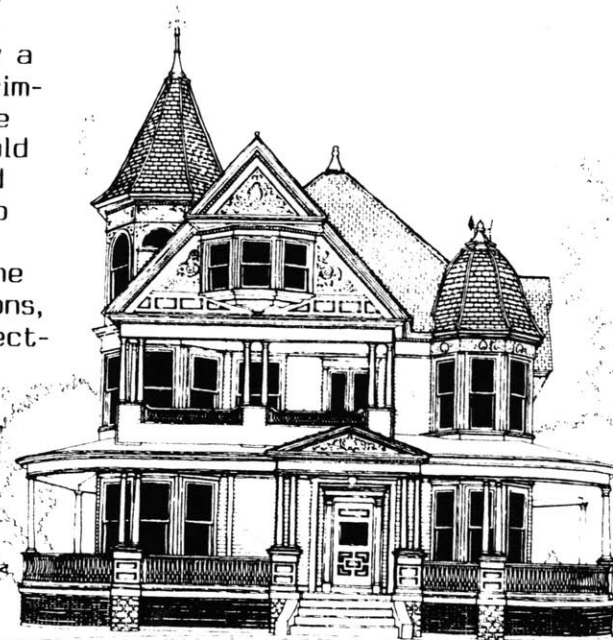
and reputation of Flatbush. The once popular baseball team 'The Brooklyn Dodgers' at Ebbets Field produced a succession of positive events. A spread of night-clubs and restaurants along Flatbush Avenue boosted the commercial vitality of the streets.

The quality of design and construction of homes in Flatbush continue to have significant symbolic and economic value. Built between 1890 and 1920 by prominent architects resulted in a mixed range of semi-attached and detached homes, brownstones and limestone structures. The eclectic look of Tudor style row houses, Queen Anne Revival brownstones, Revival Georgetown brick and limestone, and Victorian wood-frame houses add to the animation of Flatbush. It is best described as what it is not by Edith Wharton in her

autobiography,  
A Little Girl's New York:

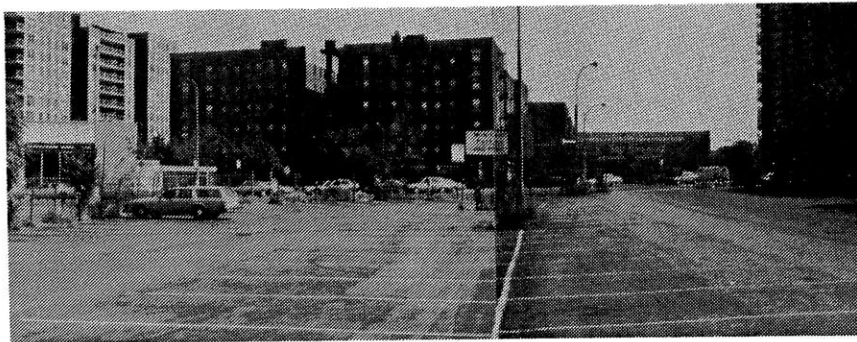
In those days the little "brownstone houses" (I never knew the technical name of the geological horror) marched up Fifth Avenue... in an almost unbroken procession from Washington Square to the Central Park... all with Dutch "stoops" (the five or six steps leading to the front door), and all not more than three stories high, marched Parkward in an orderly procession, like a young ladies boarding school taking its daily exercise. The facades varied in width from twenty to thirty feet, and here and there, but rarely, the line was broken by a brick home with brownstone trimmings; but otherwise they were all so much alike that one could be for a dinner guest to go to the wrong house ... The lives behind the brownstone fronts were, with few exceptions, as monotonous as their architecture. (1960: 74-78)

Wharton's sense of the interaction between physical structures and the people who use them is clearly evident.





The Site  
an 80,000 square foot municipal  
parking lot with a capacity of  
about 250 cars.  
View looking north



Looking East





Northern view along Flatbush Avenue



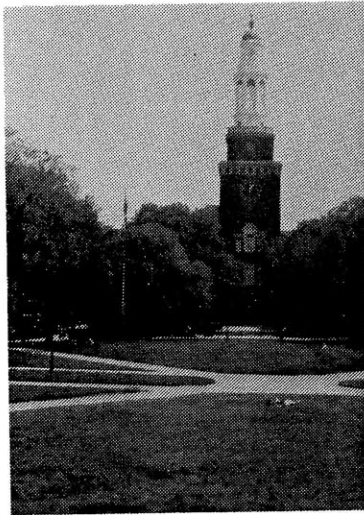
Cluster of apartment towers southeast



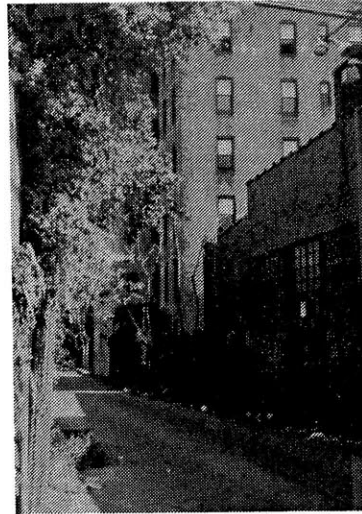
Northern view along Nostrand Avenue



Northeastern Produce on Nostrand - adjacent to site



Brooklyn College  
a 27 acre campus of red-brick  
Georgian Colonial buildings



Alley to tenement buildings on  
other other side of L.I.R.R.  
tracks



View of Hillel Place  
student services, shops and  
restaurants

Subway station at the Junction



View of the intersection of  
Nostrand and Flatbush Avenues



View of retail shops with  
apartments above

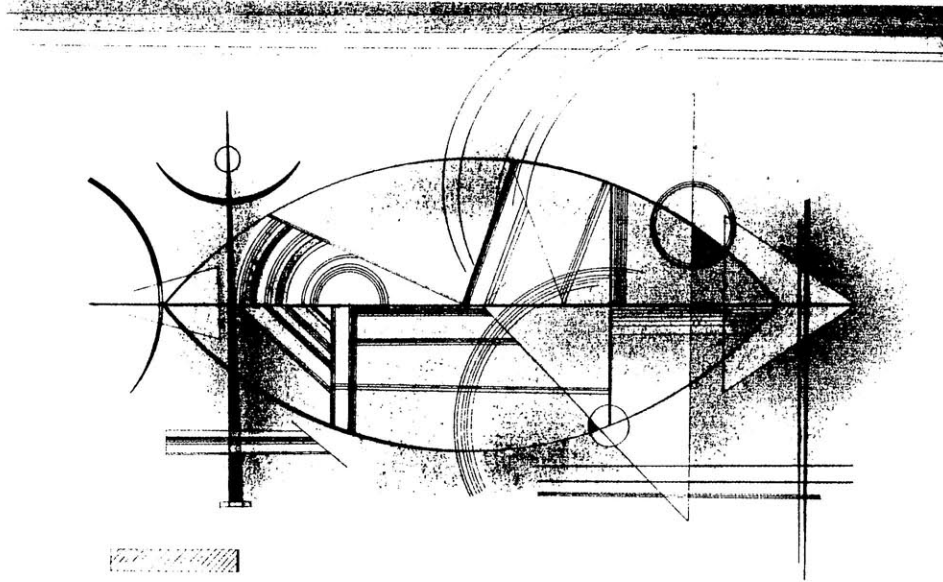




The design of a lowrise walk-up building is by far less limiting than a high-rise building. My concentration on walk-up units had a direct relationship to the intimate scale and the levels of activity that I wished to maintain. However, a schematic design showing the possible growth of an eight storey elevator building was attempted.



## SOME DESIGN THOUGHTS FROM KANDINSKY



KANDINSKY, FISHFORM

3

Kandinsky emphasized that the artist must also be helped to understand that "spirit in painting" stood "in direct organic connection with the rebuilding of the new spiritual realm". He warned that the character of the age could not more be interpreted with direct representationalism than it could be reflected in precise geometric forms or ornamental design. He advised artists to strengthen their spirit "through exercise" so that their experiments would not lead merely to "the beauty of colour and form". He insisted that the artist "have something to say" and that forms serve an end beyond themselves.

...Kandinsky uses semitransparent rectangular planes, partly foreshortened, which overlap and form a frame for the white plane in the center of the painting, with the foreshortened color bands at the top and the bottom. As the blue color band leads into depth, the white planes seem to recede behind the dark brown and green planes. The near symmetrical arrangement of these

The main problem in the design exploration was to arrive at a system with adequate variety to fulfill the energetic aspects of the situation. A spatial structural system lends to an articulated form. Repetition of elements allow for changes in scale and density. The result is a structural system that would act as an armature for the growth of dwelling units.

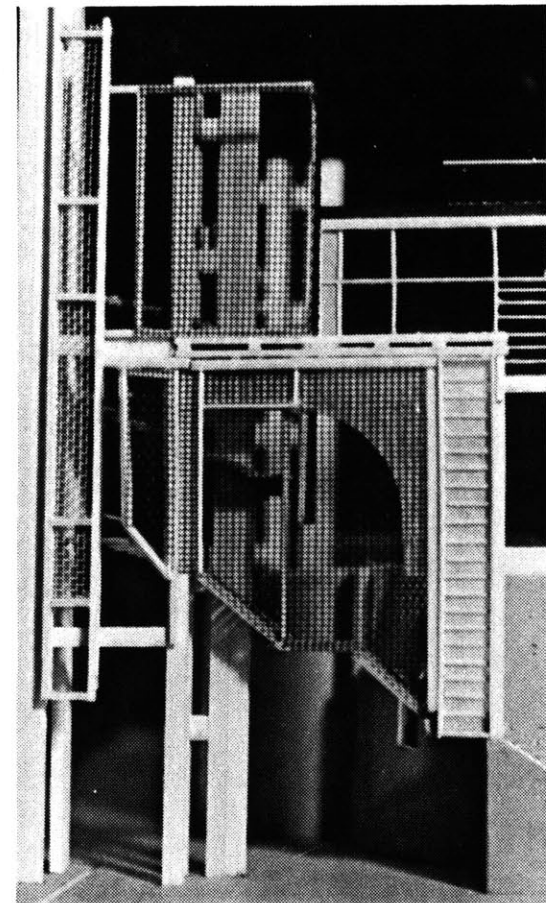
It became apparent that the primary system need not be too flexible because the more variables present, the more difficult it is to make a decision. Flexibility is evident in the infill of apartments.

To accentuate movement through the physical form, an external circulation system of stairs was introduced. A reflection of life on and beyond the facade emerges as people move through columns via stairs. Glimpses of activity both externally and internally are lasting as students ascend to their apartments.

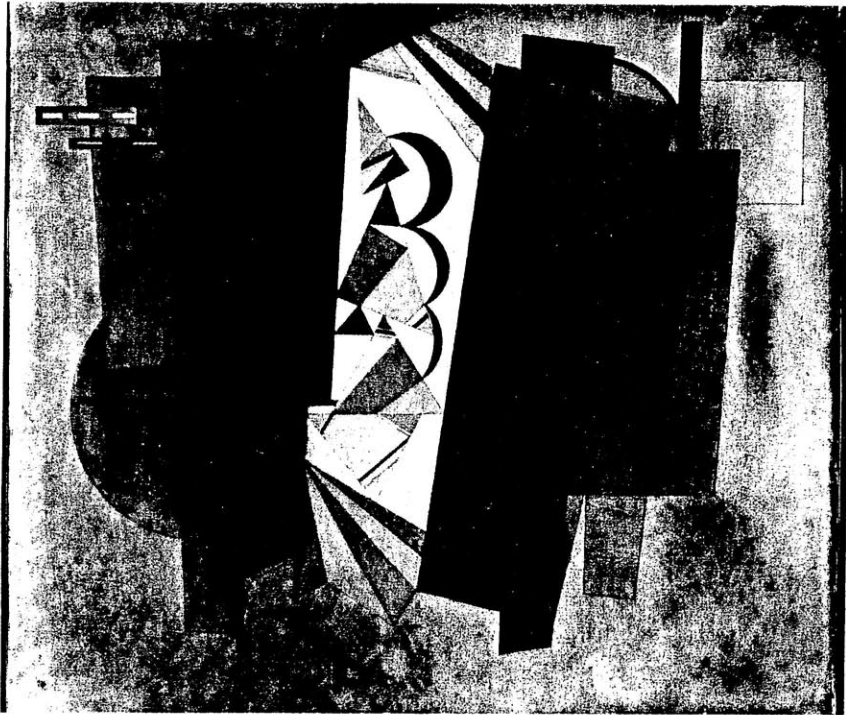
Apartments are aggregated vertically to maintain economy of material and secondary structure. The units are constructed of metal studs and gypsum boards. Variety is achieved as units overlap or twist over each other. A two storey living space offers better spatial accommodations along with privacy, light and ventilation. A contributing factor to such configurations was due to the vertical alignment of plumbing cores. Variety also occurs in the facade treatment of apartments. Windows are within given dimensions and styles. Foam core panels and windows are arranged with respect to the function of the spaces. Several combinations in the assembly result in a rhythmic pattern of units.

The reduction in the amount of primary components and the introduction of larger volumes for infilling led to the use of interior metal walkways. They link apartments when structural

floors are absent. They become interior balconies and gathering places for students. The units are light in construction and can bear down two or three storeys on structural double tee floors.







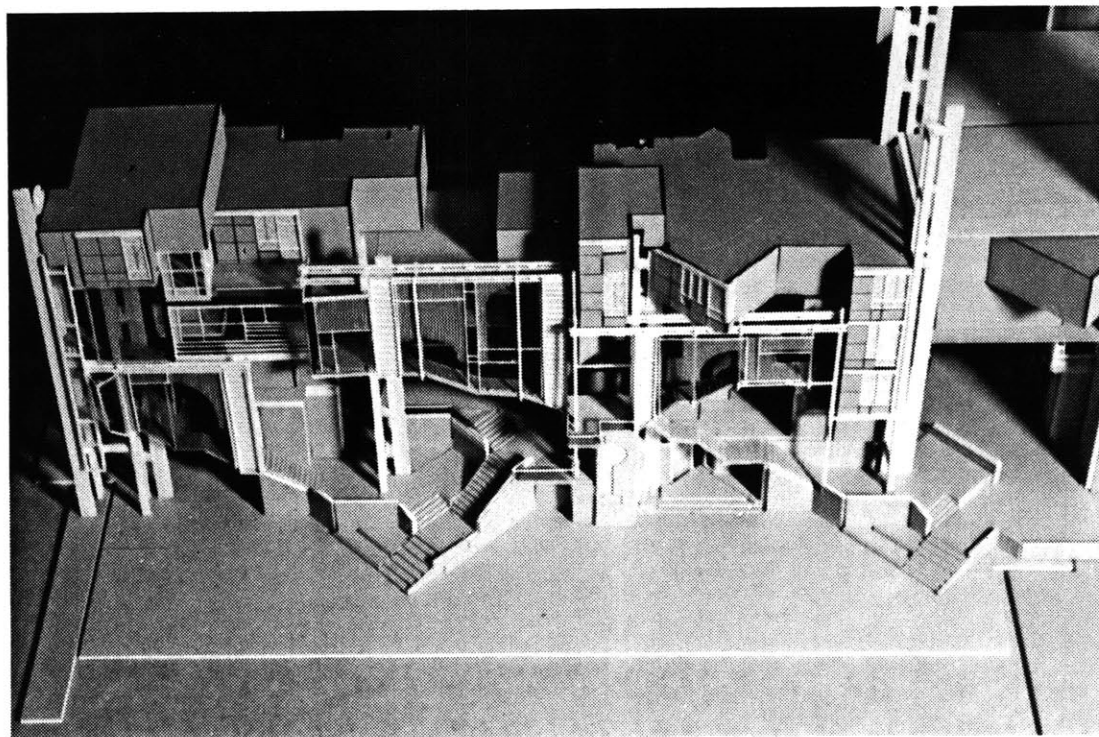
KANDINSKY, DEVELOPMENT IN BROWN

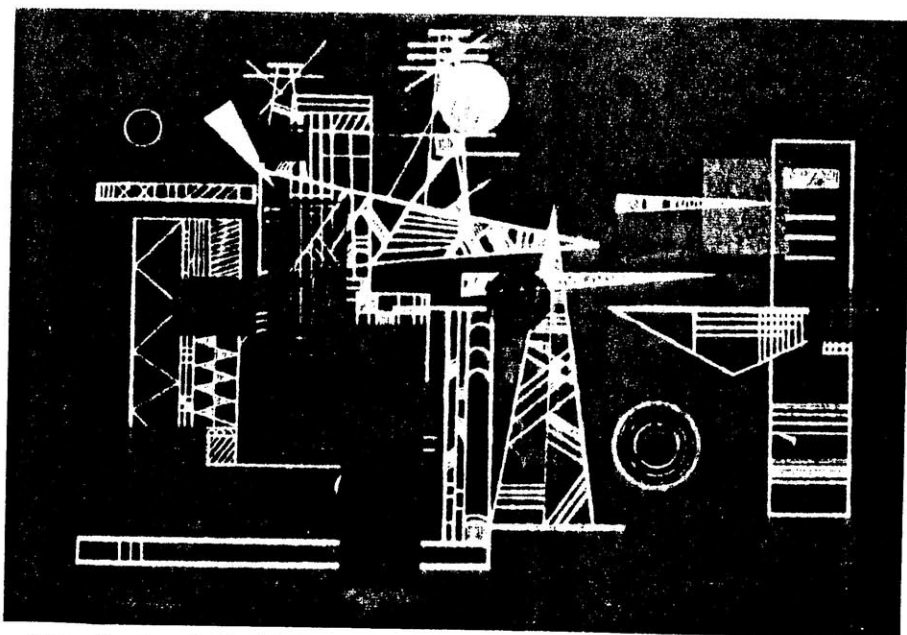
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two sets of rectangular shapes and the overlapping of shapes—suggestive of a spatial arrangement without establishing any clear spatial order—can be read as some kind of architectural structure, a gateway of sorts, supported by rather wobbly pillars. However, such a reading is valid only in the wildest possible sense, as all the formal details produce a visual ambivalence which defies all definitive interpretations. The dark overlapping planes have no firm foundation; they hover weightlessly, neither solid nor quite transparent. The spatial effect is counteracted by planar forms, like the red horizontal line, cutting across the overlapping planes. Although the composition is basically ordered in terms of horizontal and vertical axes, the individual shapes are slanted so that a rather restless quality of up and down and back and forth movement prevails in the picture...



THE MODEL - EXPRESSING DESIGN INTENTIONS:



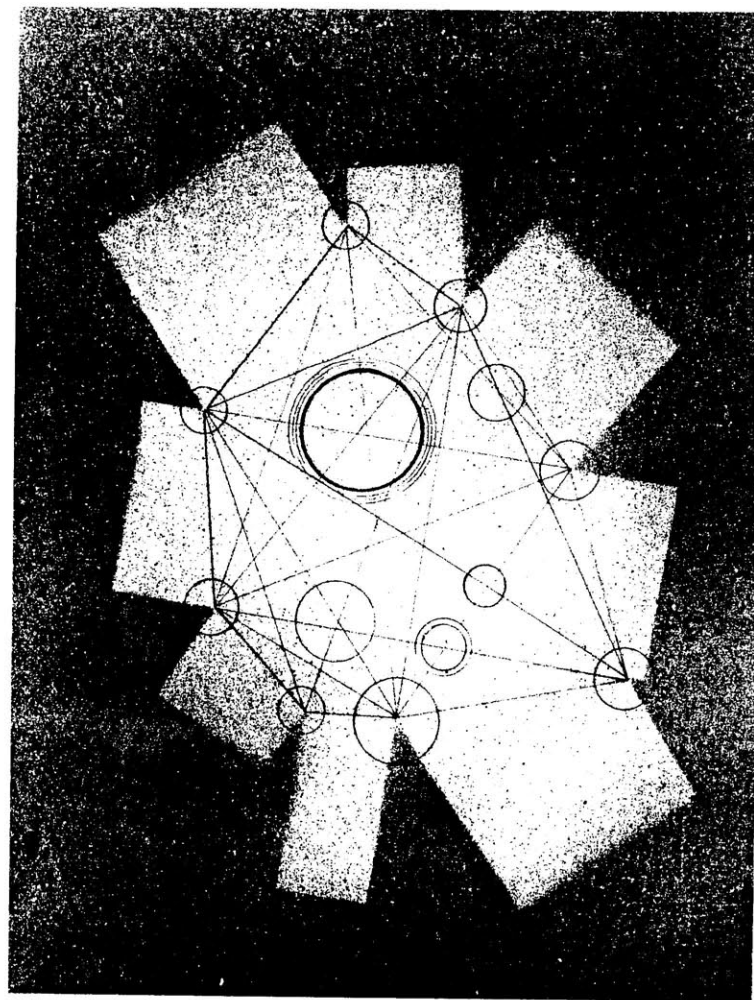


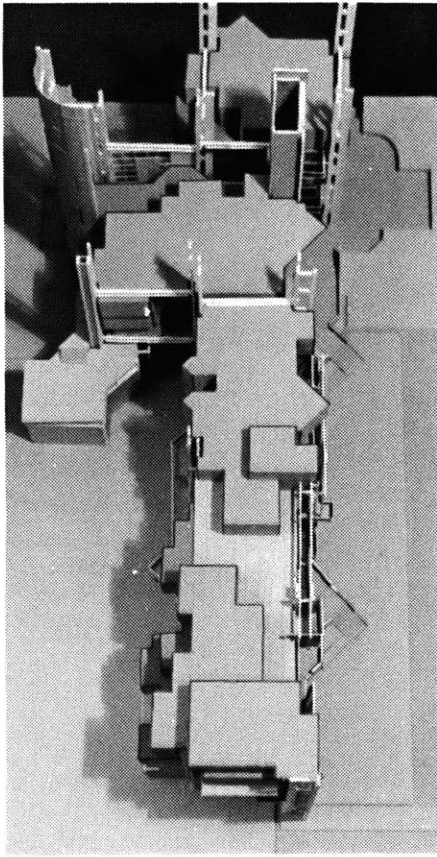
KANDINSKY, POINTED STRUCTURE

...Kandinsky felt hidden images would lead the spectator to take part in the creation of the work almost as if he were taking part in a mystic ritual. By forcing the spectator to decipher mysterious ambiguous images, he would involve him in the process of replacing confusion with understanding. Kandinsky equated such participation in the creation of art with the creation of the world. If both content and form were too readable, and if the painting did not reflect the confusions of the present with which people identified, the work would not be meaningful.

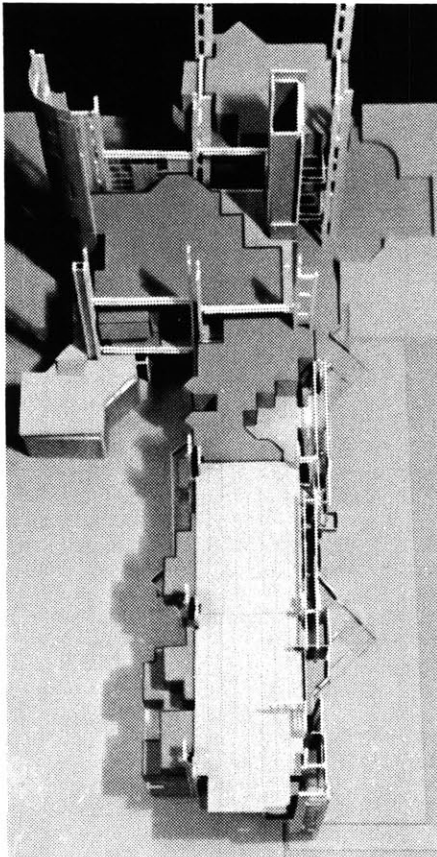
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KANDINSKY, JUNCTION

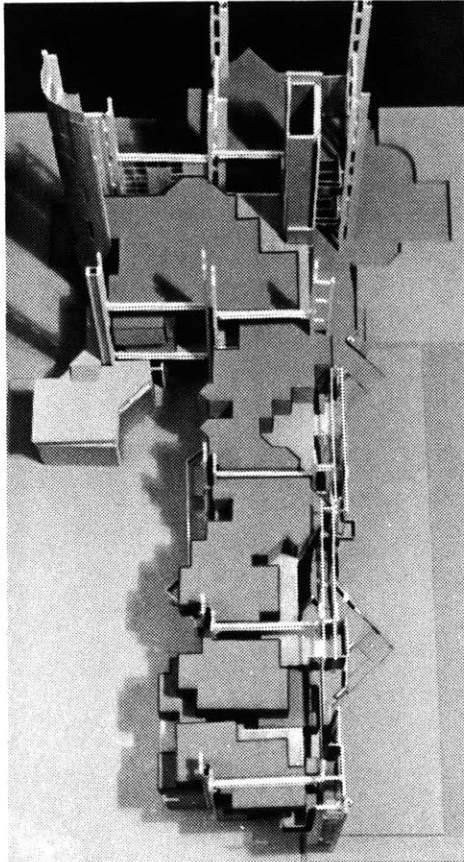




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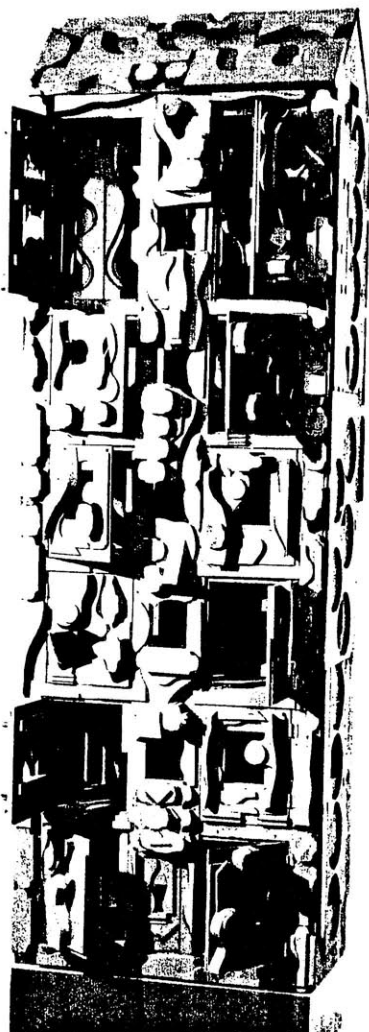
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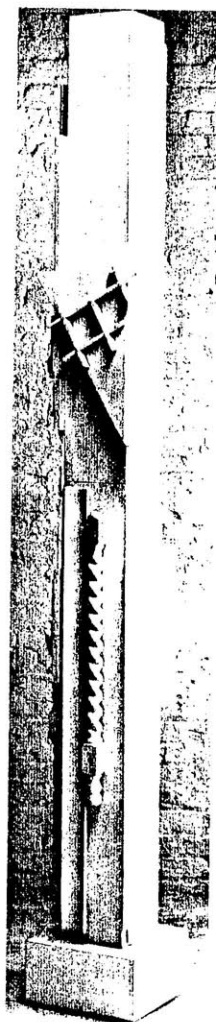
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SEQUENTIAL STUDIES :

SOME DESIGN THOUGHTS  
FROM NEVELSON:



DREAM HOUSE



NEVELSON, DAWN I, 1959

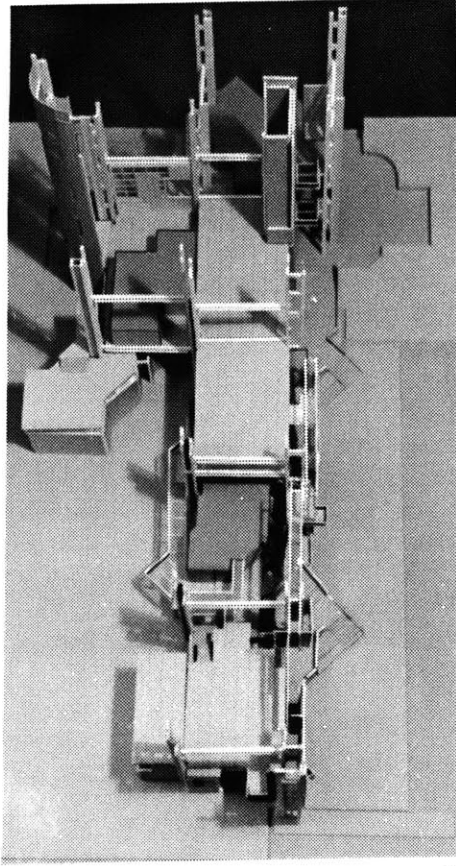


NEVELSON, DAWN II, 1959

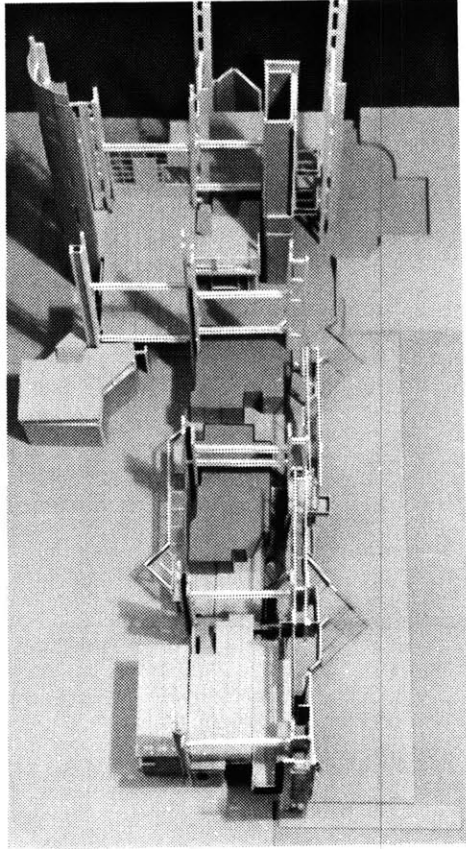
If Nevelson's sculpture evokes the city's forms, it does not suggest its kinetic quality. Within it is a spiritualized geometry prevails; free of urgency, her art is expressive of fragile metamorphosis, not monumentalism. She regards herself as "an architect of shadows" and ponders the city's transformation at night, when solids and voids become interchangeable, and familiar objects lose their contours in shadows and reflections. Derived from such attitudes, her sculpture is wholly atomospheric. Spectral shapes dominate their spaces and under the dim lighting she prefers, her somber black volumes dissolve into complex surfaces. The sculptures are deepened picture planes and box-like, shallow spaces filled with low relief arrangements. Because of their frontality, static quality, apparent weightlessness and Nevelson's obsession with surface, these tenuos shapes can best be considered within the context of illusionistic painting rather than in the terms of conventional sculpture.

Although the grid system, implicit in Nevelson's sculpture, persis-

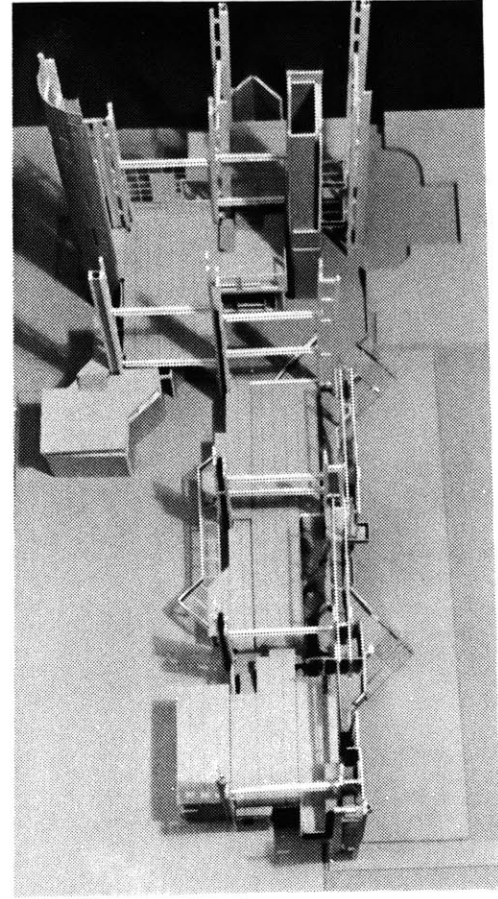




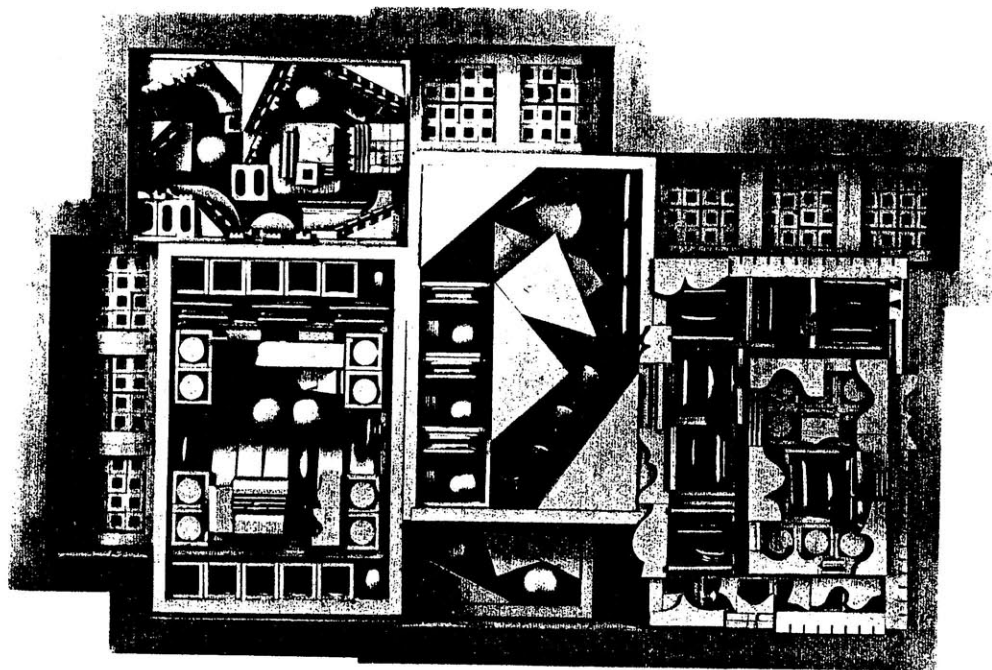
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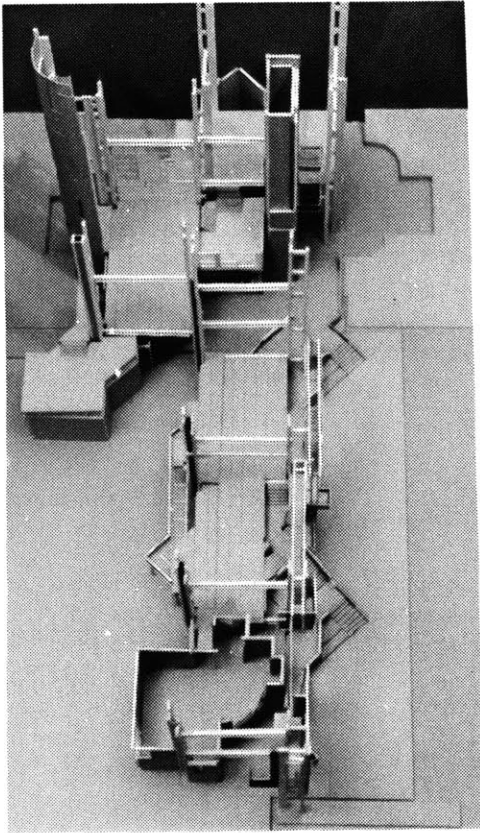


NEVELSON, BLACK LIGHT: ZAG 2, 1970

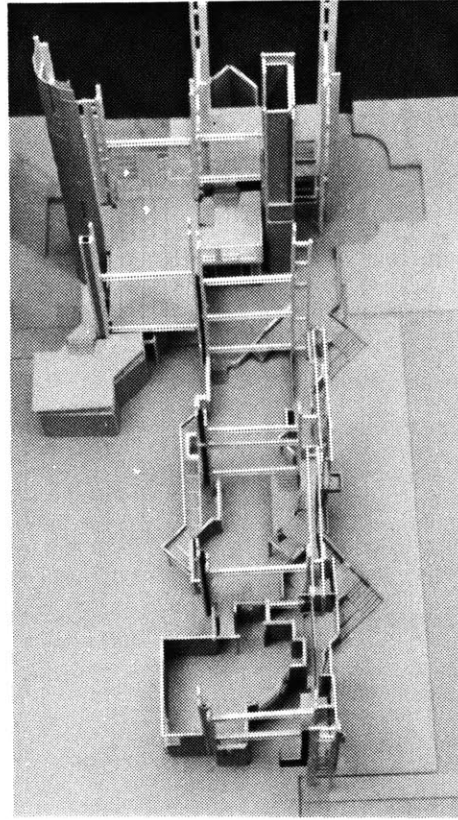
tently suggests cubist affinities- particularly with the constructivist movement it generated- the modular character of the sculpture results more from her intuitive working process than from a reasoned approach. Her art is a species of "instinctive" Cubism, considerably filtered through other experiences.

Nevelson's sculptures are phantom architecture. Installed against the walls of a room or standing free, they allude to no single time or place. They are structures about the idea of architecture and refer to no specific historical period...

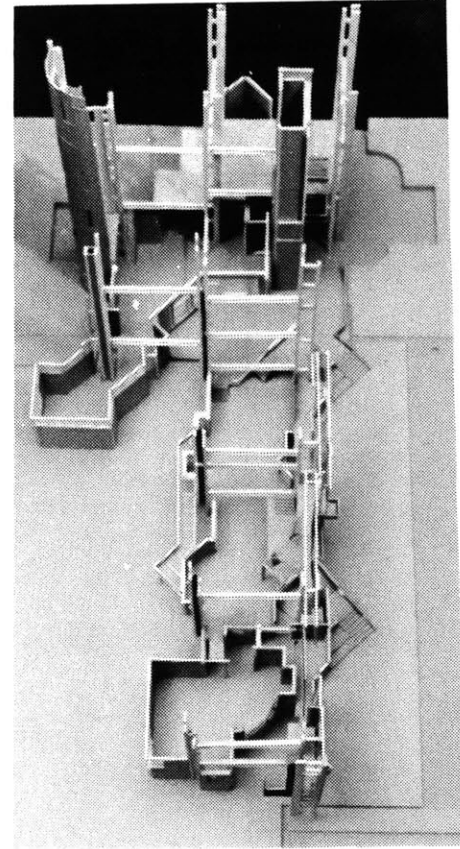
In the early 1950s Nevelson's art reached the point where it became psychologically "closed" and self-contained. She began to repeat certain primal structural motifs- columns, walls, reliefs and boxes. Aside from their allusions to architecture, these forms also referred to the organic processes of growth and decay, and throughout Nevelson's earlier production the temporality of the natural and man-made world was a dominant theme. She was less interested in producing an art of "finish" than in revealing inexorable evolutionary process.



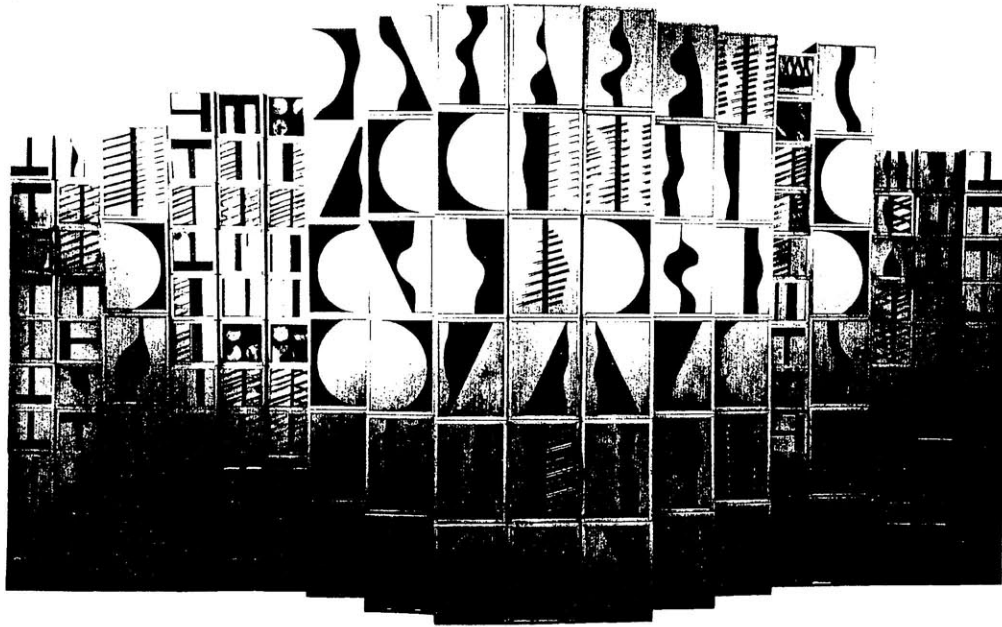
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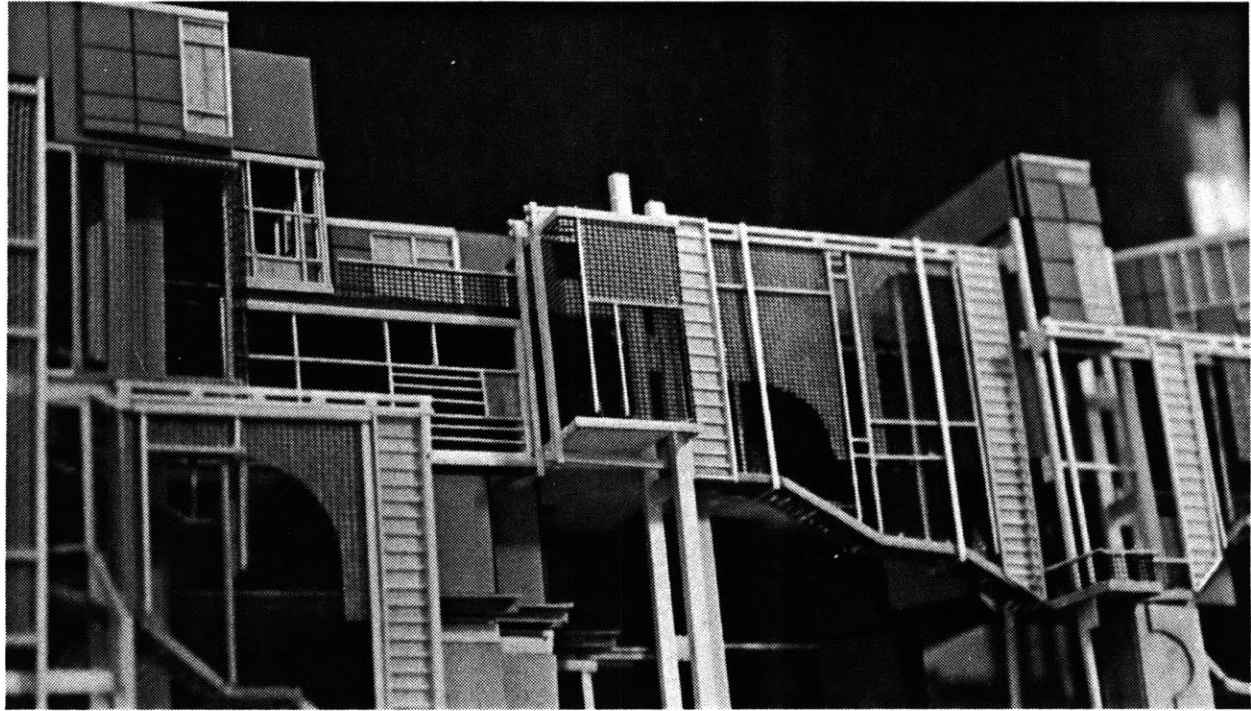


NEVELSON, MIRROR IMAGE I, 1969

Working within the now venerable tradition of assemblage, she divested familiar objects of their original identity, absorbing them as elements within her complex, cellular structures.

The architectural analogy persists, and while she rarely creates works that suggest complete buildings, her walls and towers seem to have been parts of larger structures. But if such enigmatic shapes inevitably suggest the antique and the dream world, it is the living city's forms that give meaning to her art.





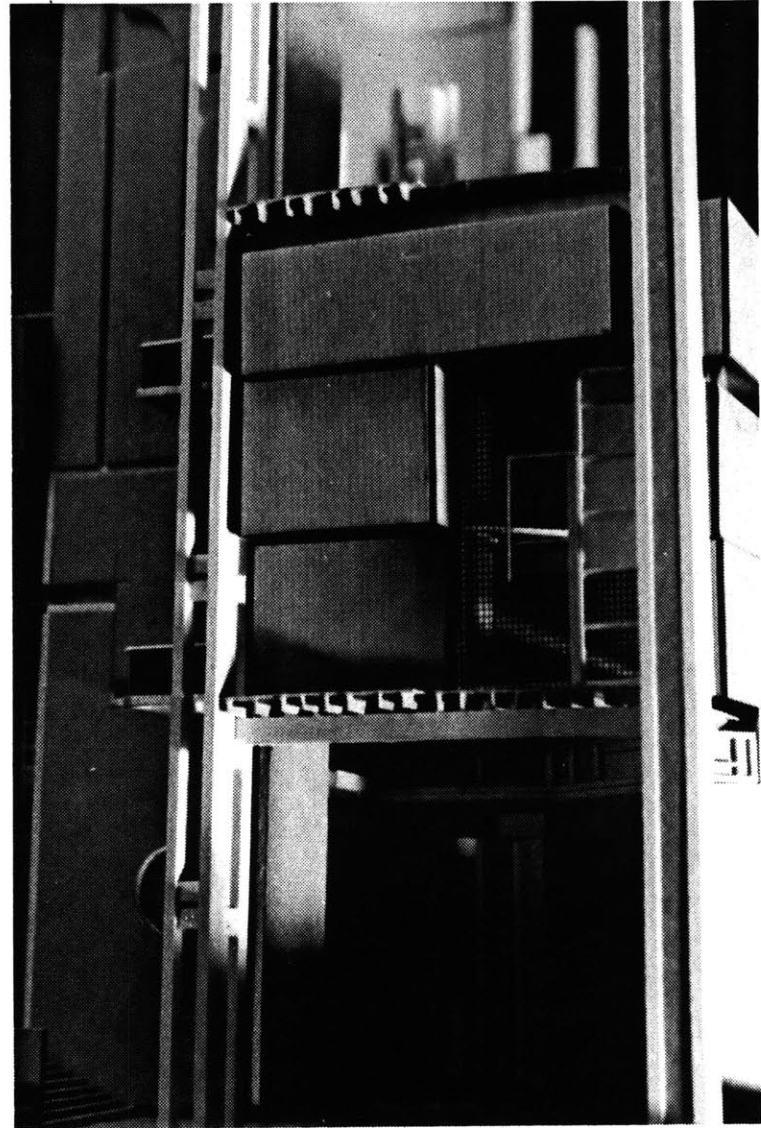
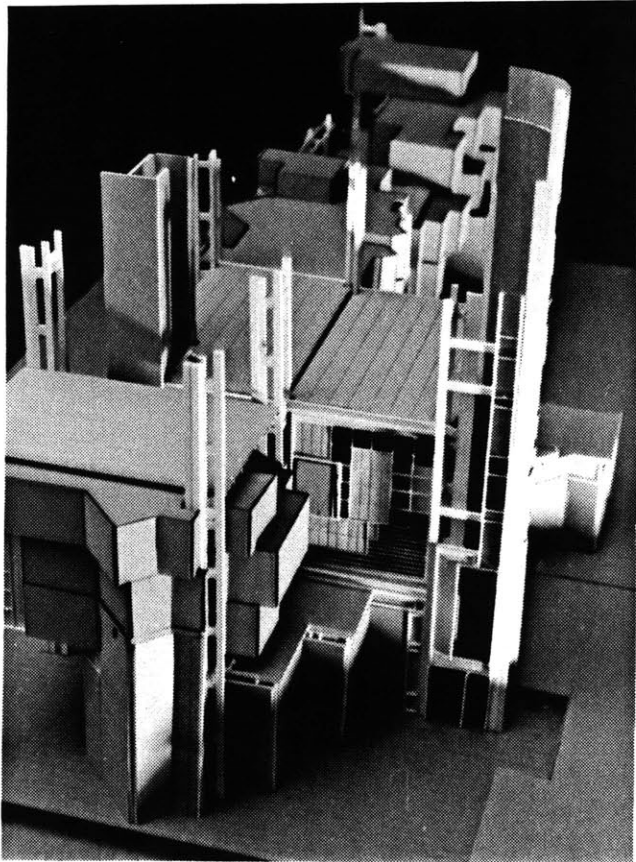


LEGER, CONTRAST OF FORMS, 1913

This is how Fernand Leger constructed his pictorial universe bit by bit: patient work, achieved by obstinate precision, with that conscience and application which are not surprising in a Norman; work remarkable in its continuity which through the diversity of experiences and the richness of material successively intergrated has been able to maintain the essential meaning of an art which rapidly asserted itself in its vigorous originality.

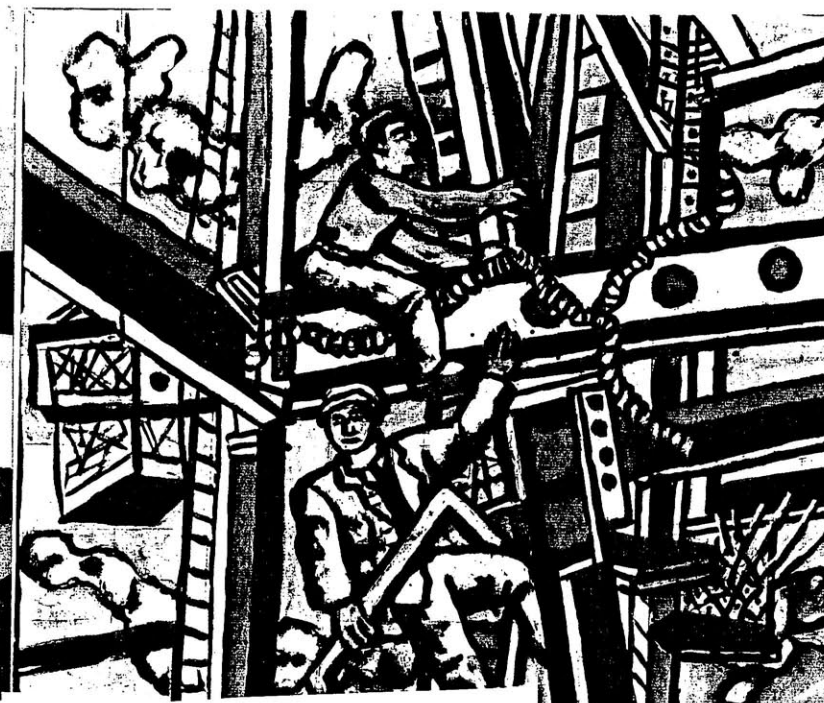
...The signs which make up Fernand Leger's universe assume their graphic functions fully: graphic meaning is only one, in effect, which Leger would recognize in the realities which he has taken into his picture and it is essentially graphic values which he wishes to create by his painting. The problem of space thus assumes fundamental importance for him and he has provid-

1





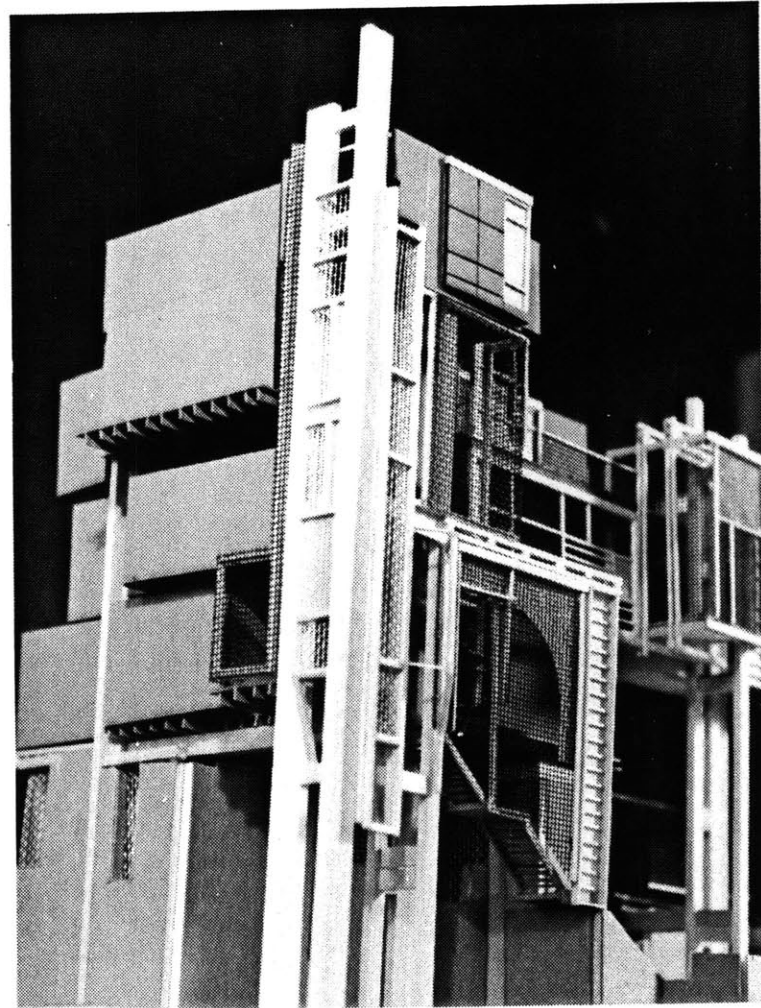
LEGER, MAN WITH PIPE, 1920



LEGER, BUILDING WORKERS, 1950

ed original solutions for it which naturally break with the constructions of the Renaissance: there were first those differentiated passages which translated the movement of plains into modulations of space...

Composition through multiple contrasts, employing all pictorial devices, allows moreover a guarantee of variety and a much greater experience of reality...







DELAUNAY, EIFFEL TOWER, 1910-11

Impressionism is the birth of Light in painting. Light reaches us through our preception. Without visual perception, no light, no movement. Light in Nature creates movement of colors. The movement is provided by the relationships of uneven measures, of color contrasts among themselves and [it] constitutes Reality.

This reality is endowed with Depth (we see as far as the stars), and thus becomes rhythmic Simultaneity.

Simultaneity in light is the harmony, the rhythm of colors which creates Men's Sight.

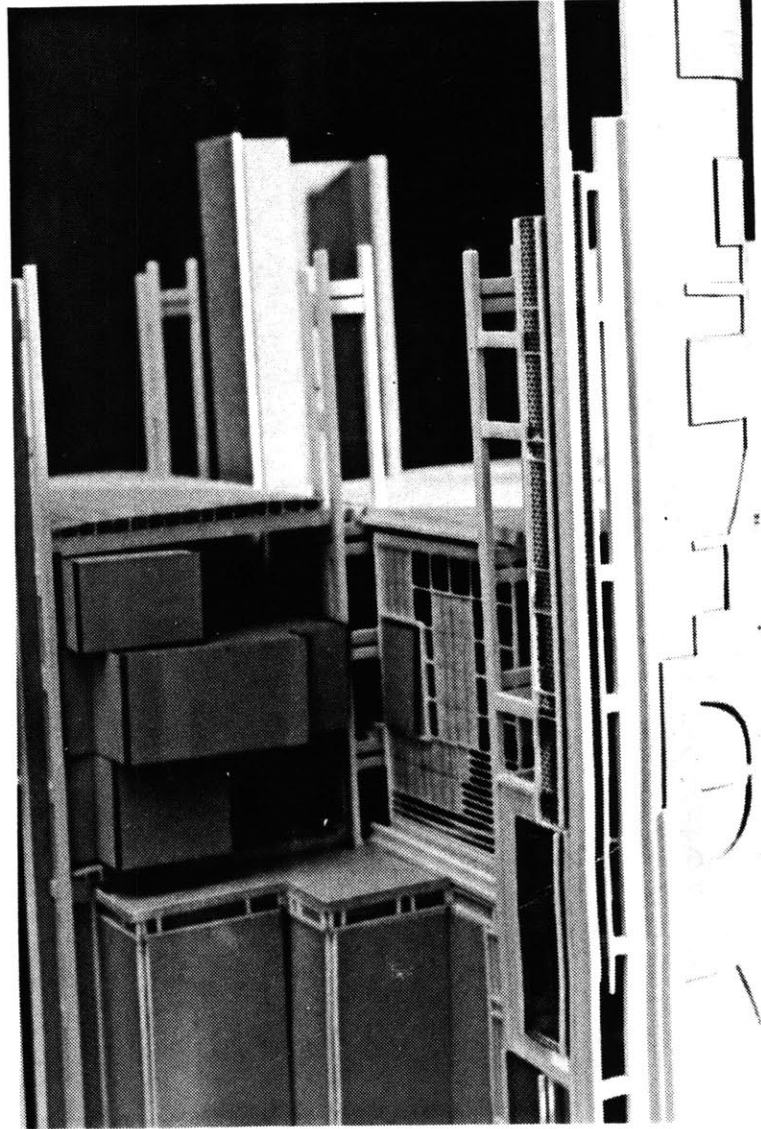
Human sight is endowed with the greatest Reality since it comes to us directly from contemplation of the Universe.

The Eye is our highest sense, the one that communicates most closely with our brain, our consciousness, the idea of the vital movement of the world, and its movement is simultaneity.

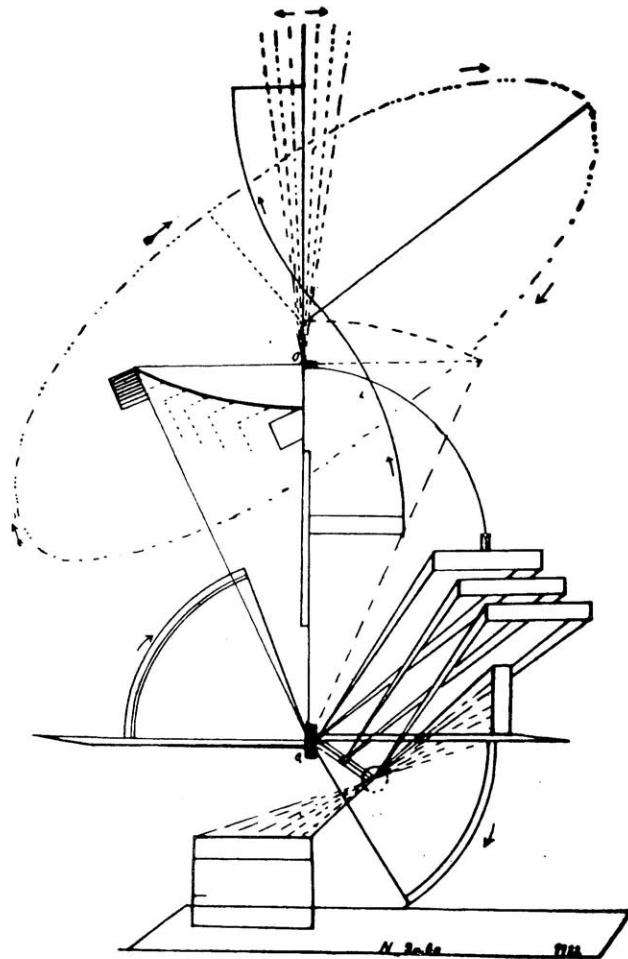
Our comprehension is correlative with our perception. Let us try to see...

6

SOME DESIGN THOUGHTS FROM DELAUNAY:



SOME DESIGN THOUGHTS FROM GABO:

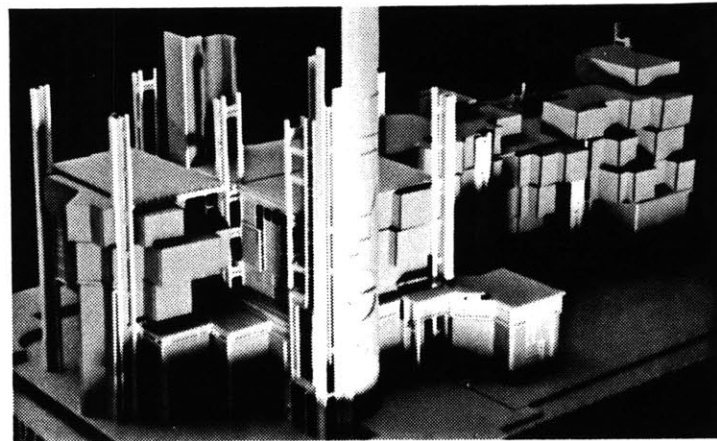
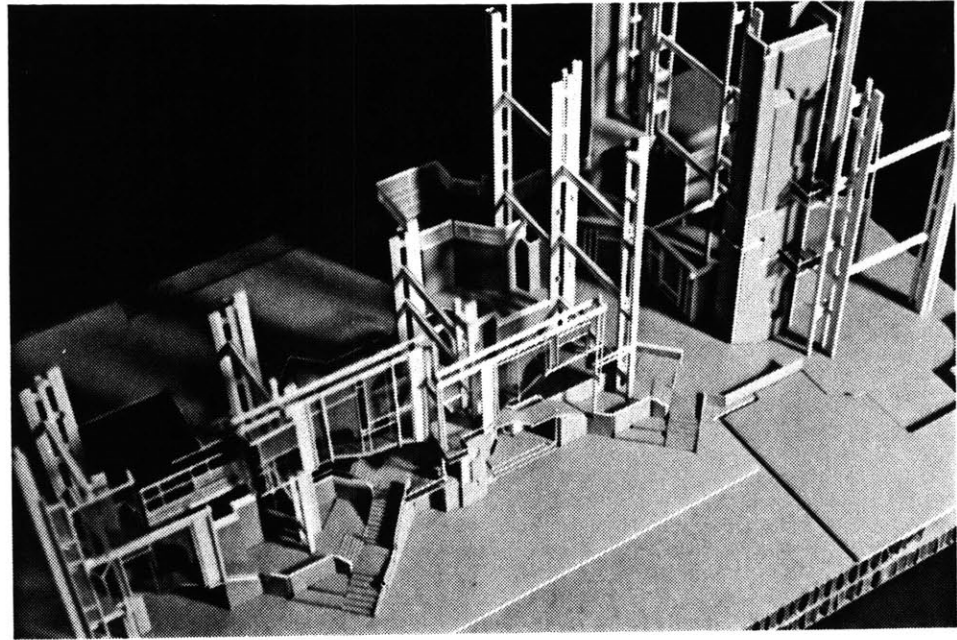


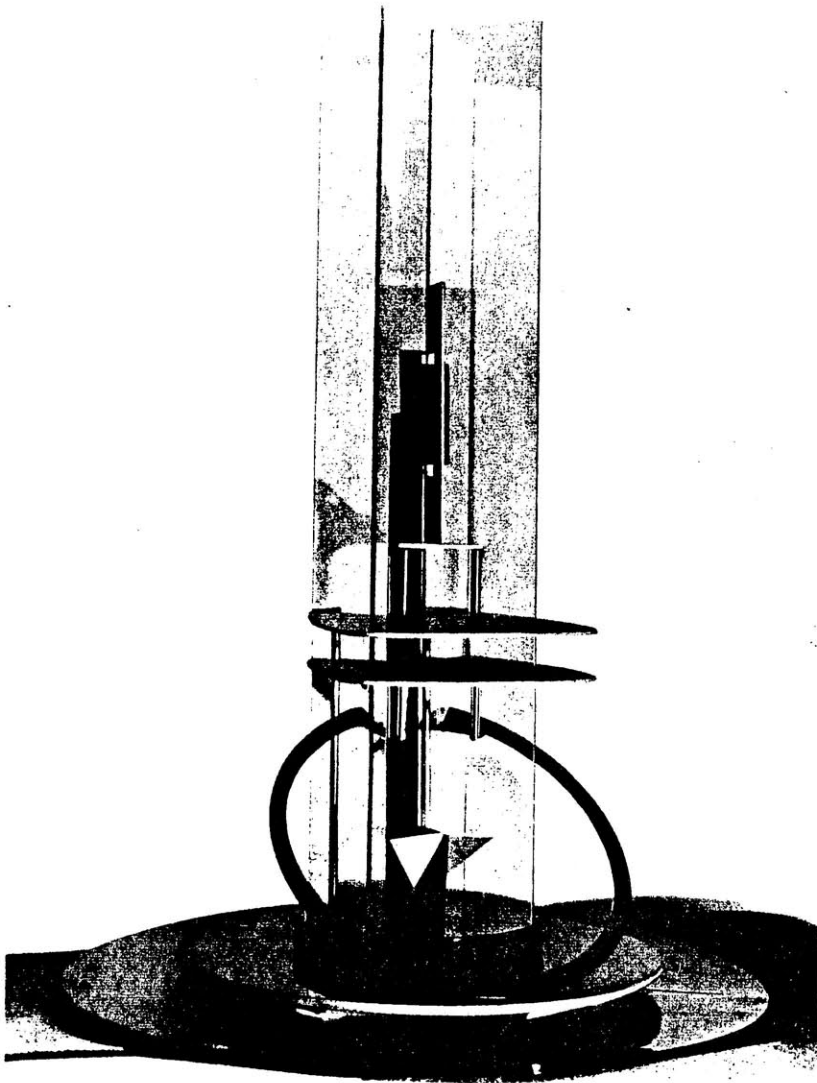
...This construction is an oscillating rod which in movement forms a volume...

5

GABO, DESIGN FOR KENETIC CONSTRUCTION, 1922



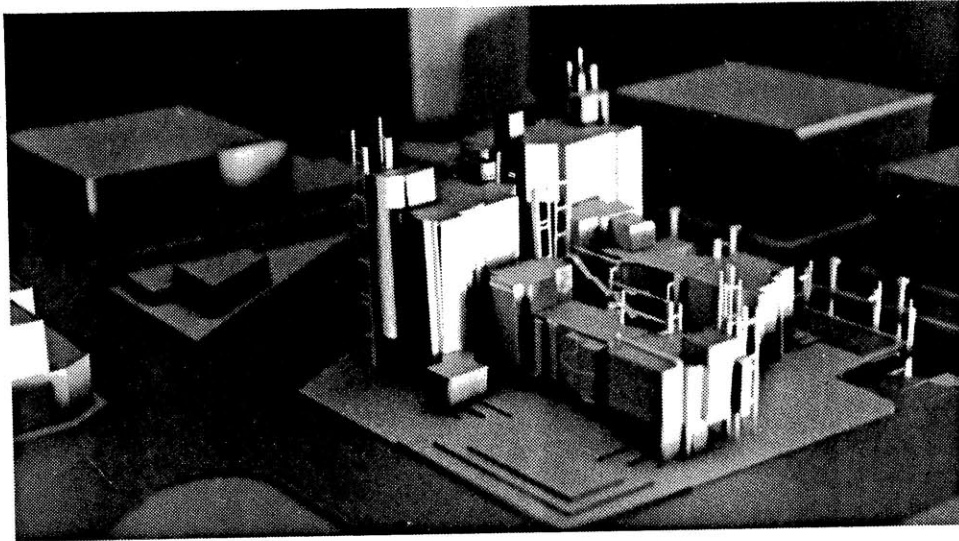




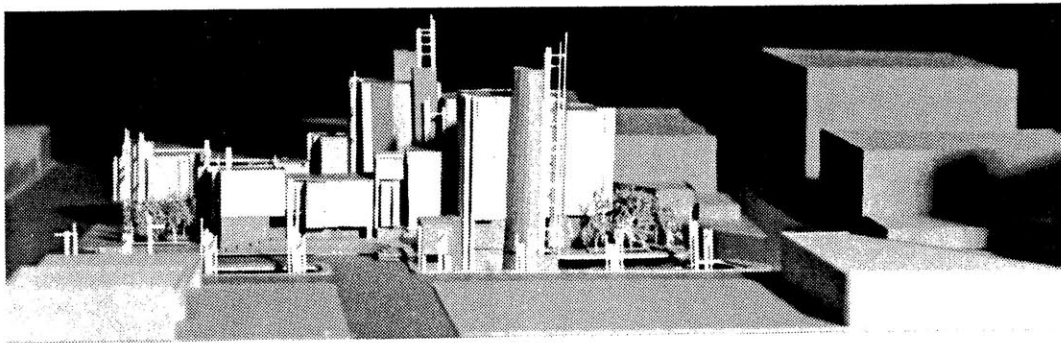
COLUMN, 1923

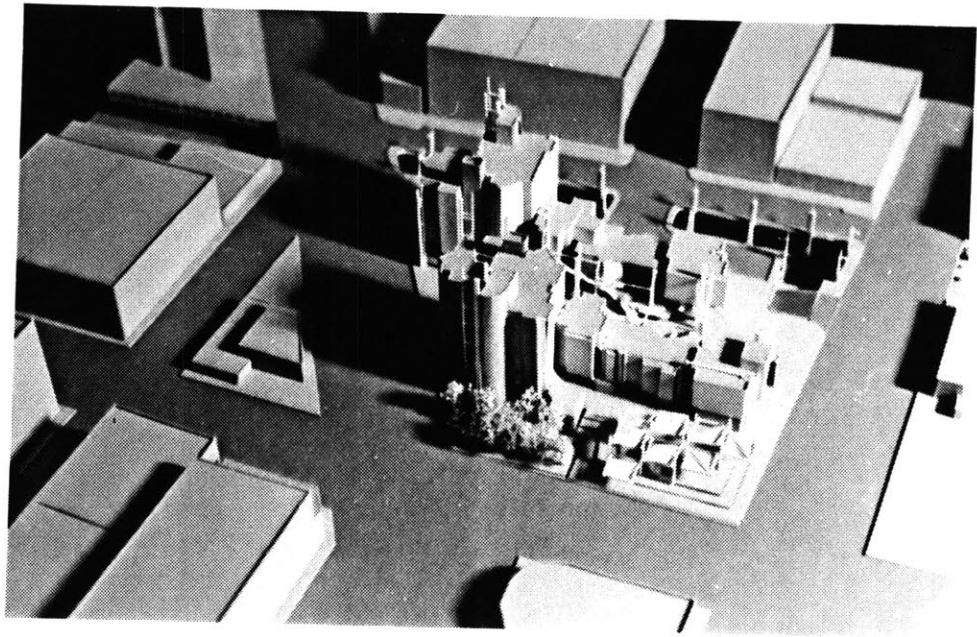
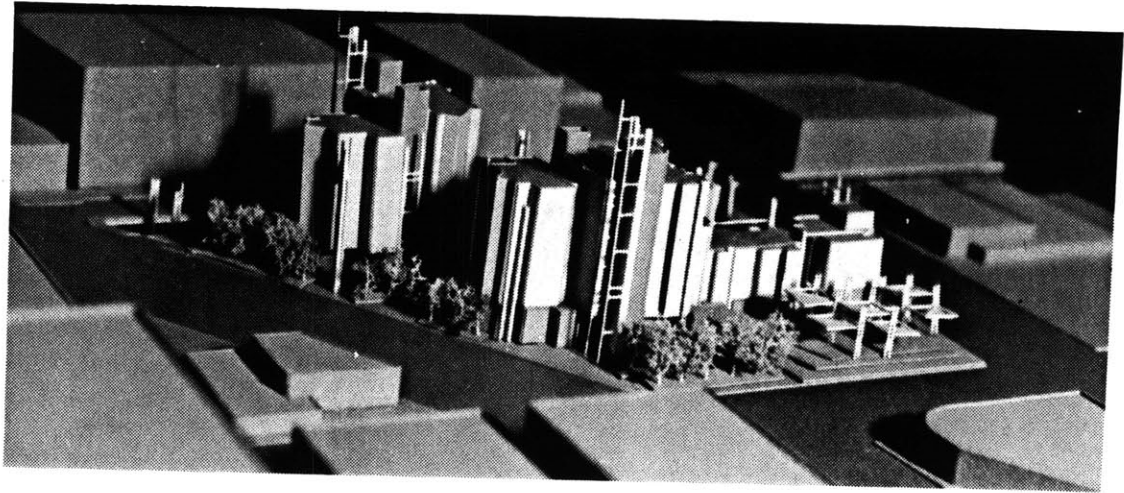
...From the very beginning of the Constructive Movement it was clear to me that constructed sculpture, by its very method and technique, brings sculpture very near to architecture. The 'Project for a Radio Station' which I did in the winter of 1919-20, and Tatlin's model for the 3rd International done a year earlier, indicate the trend of our thoughts at the time. My works of this time, up to 1924 (Nos. 21,22,23), are all in the search for an image which would fuse the sculpture element with the architectural element into one unit. I consider this Column the culmination of that search. GABO...



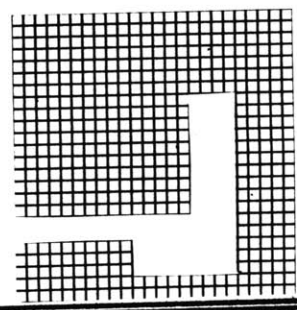
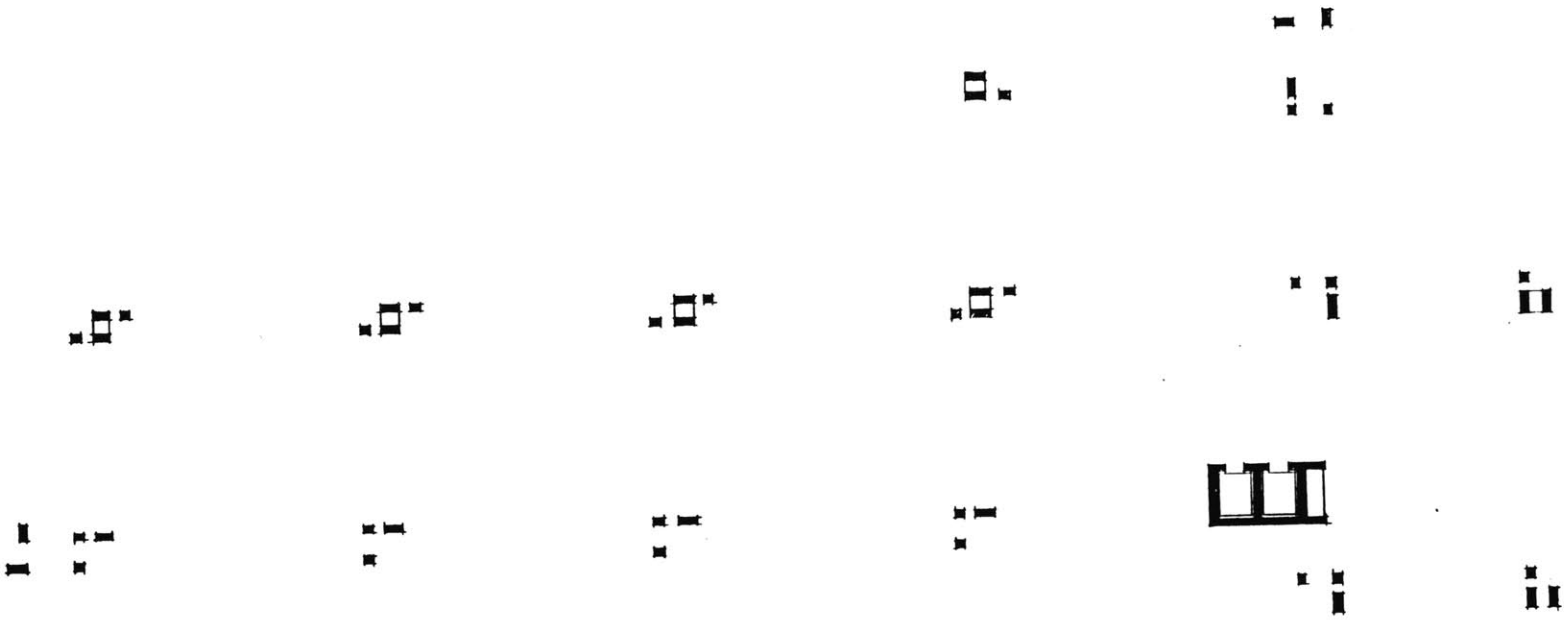


SITE MODEL:



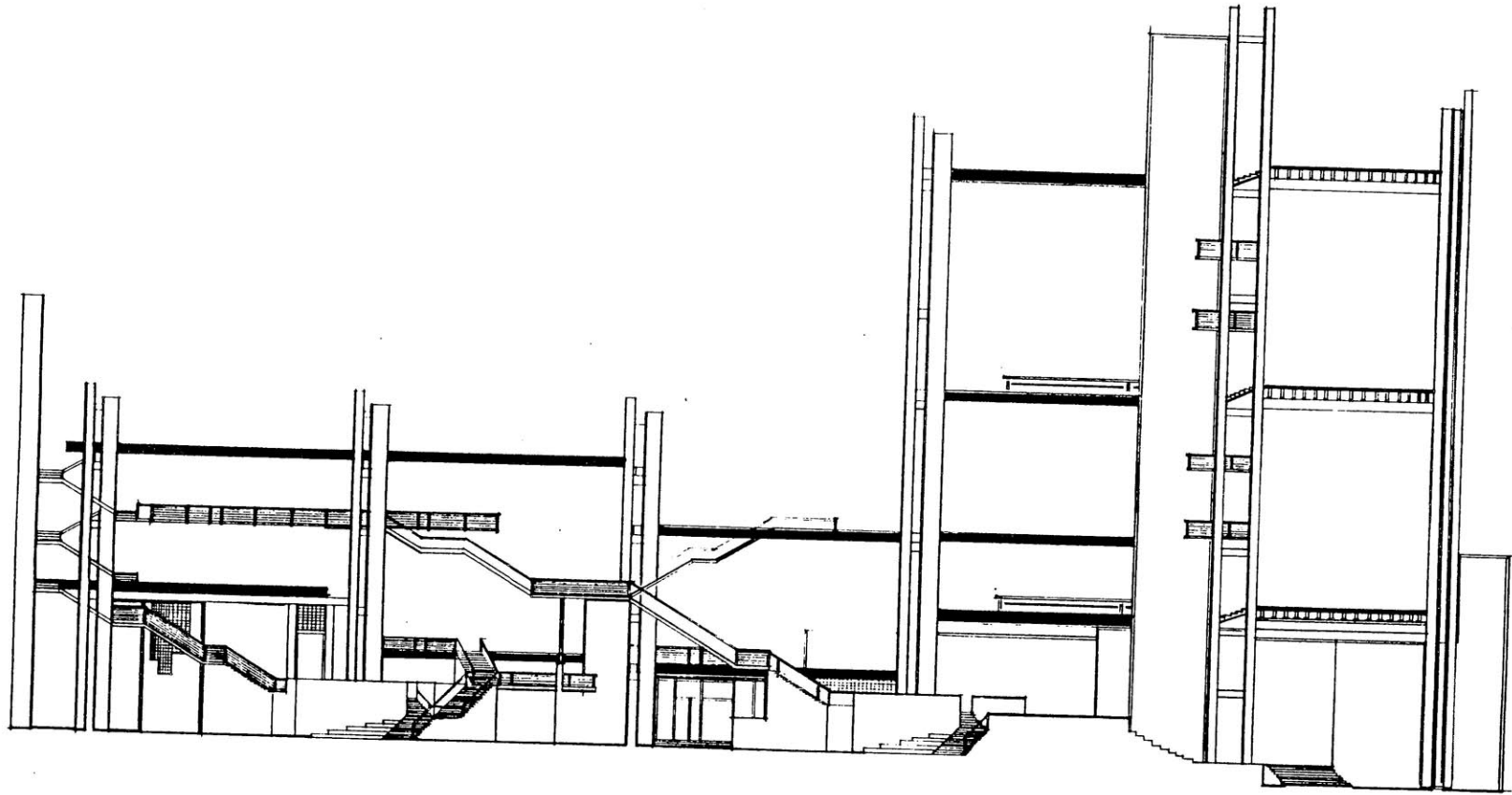




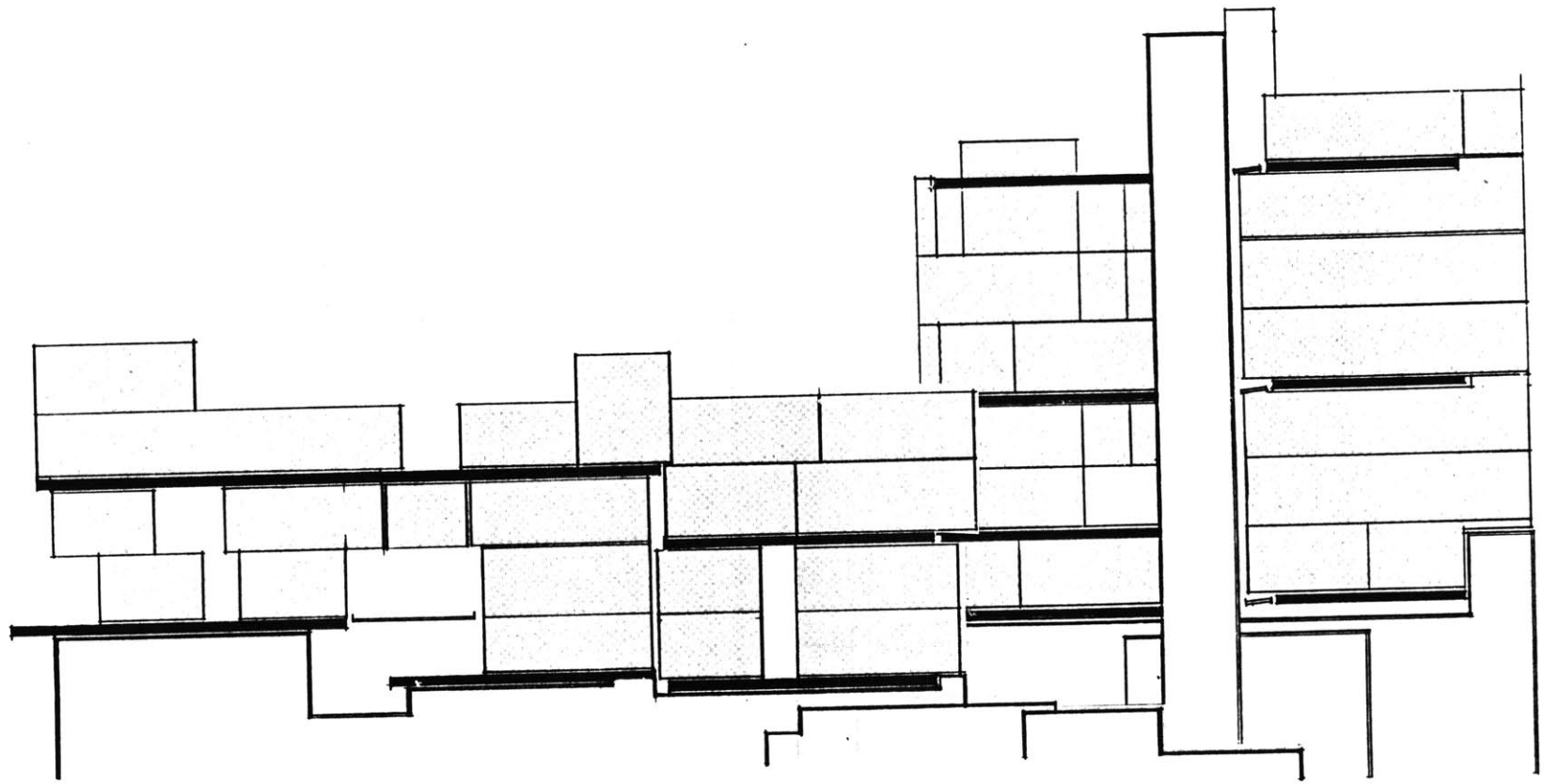


**DRAWINGS**

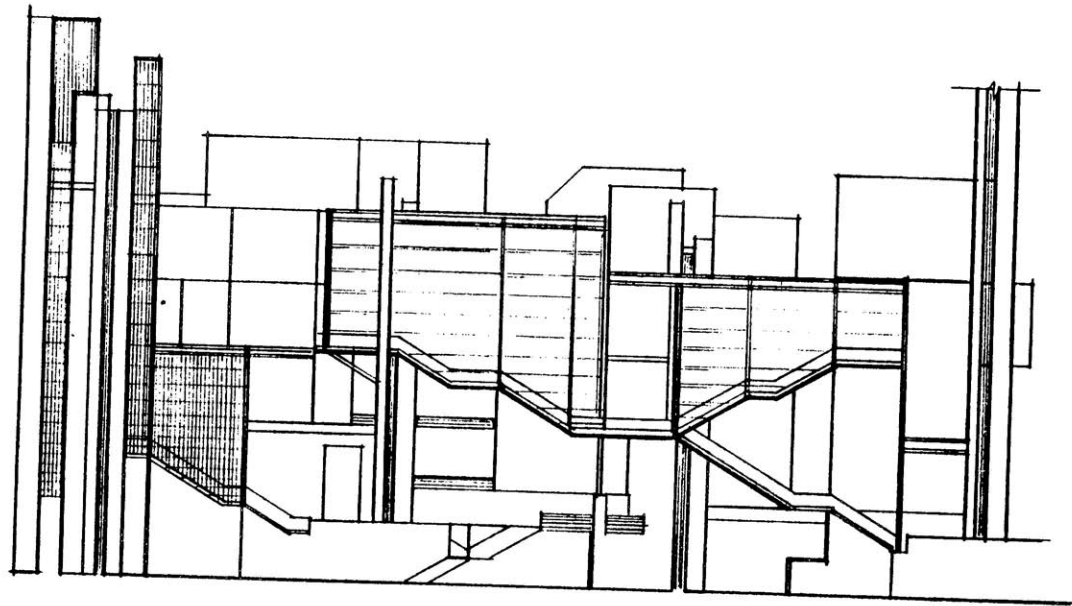


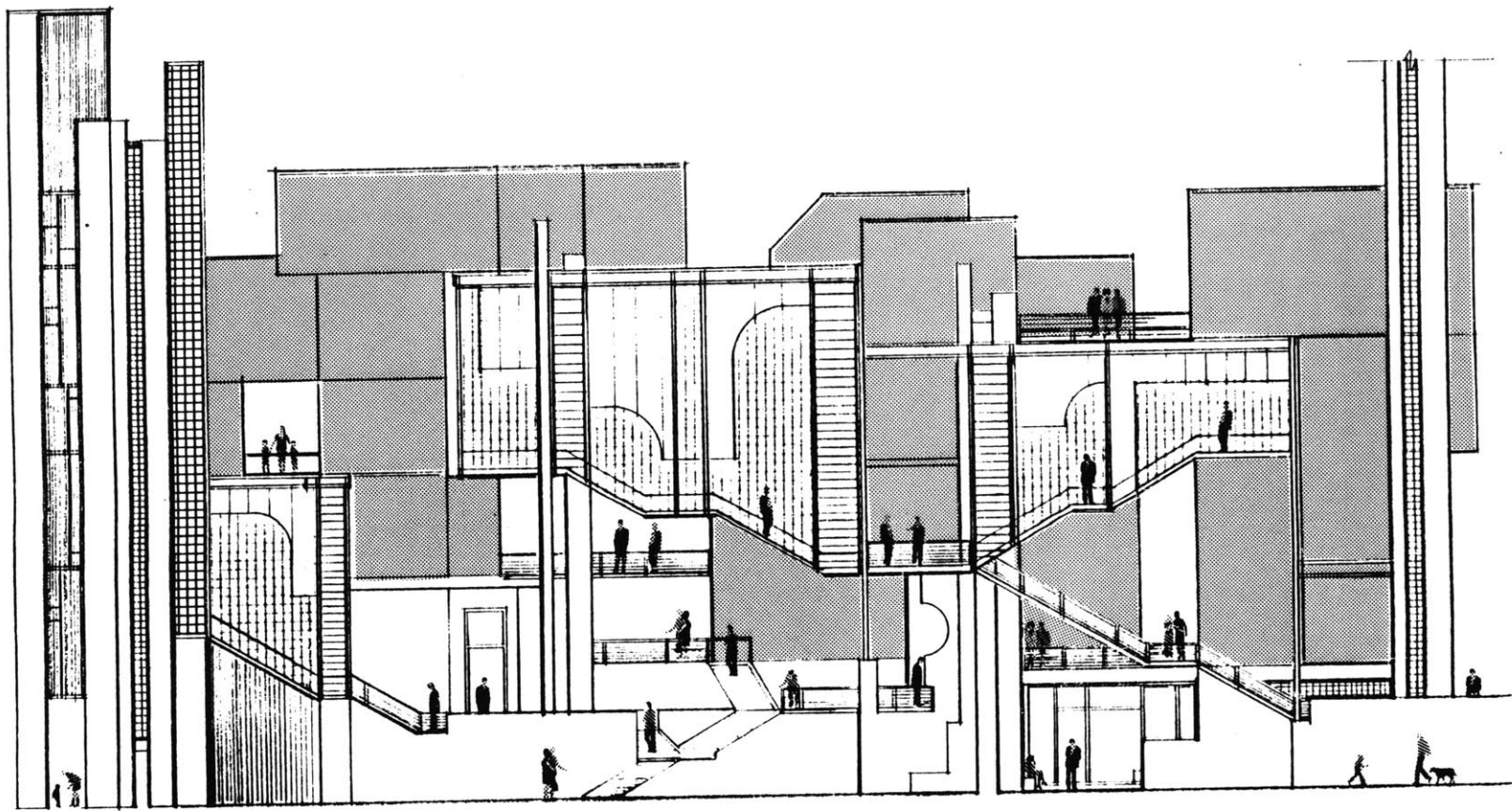


ELEVATION OF STRUCTURAL FRAME  
WITH SECONDARY FLOORS

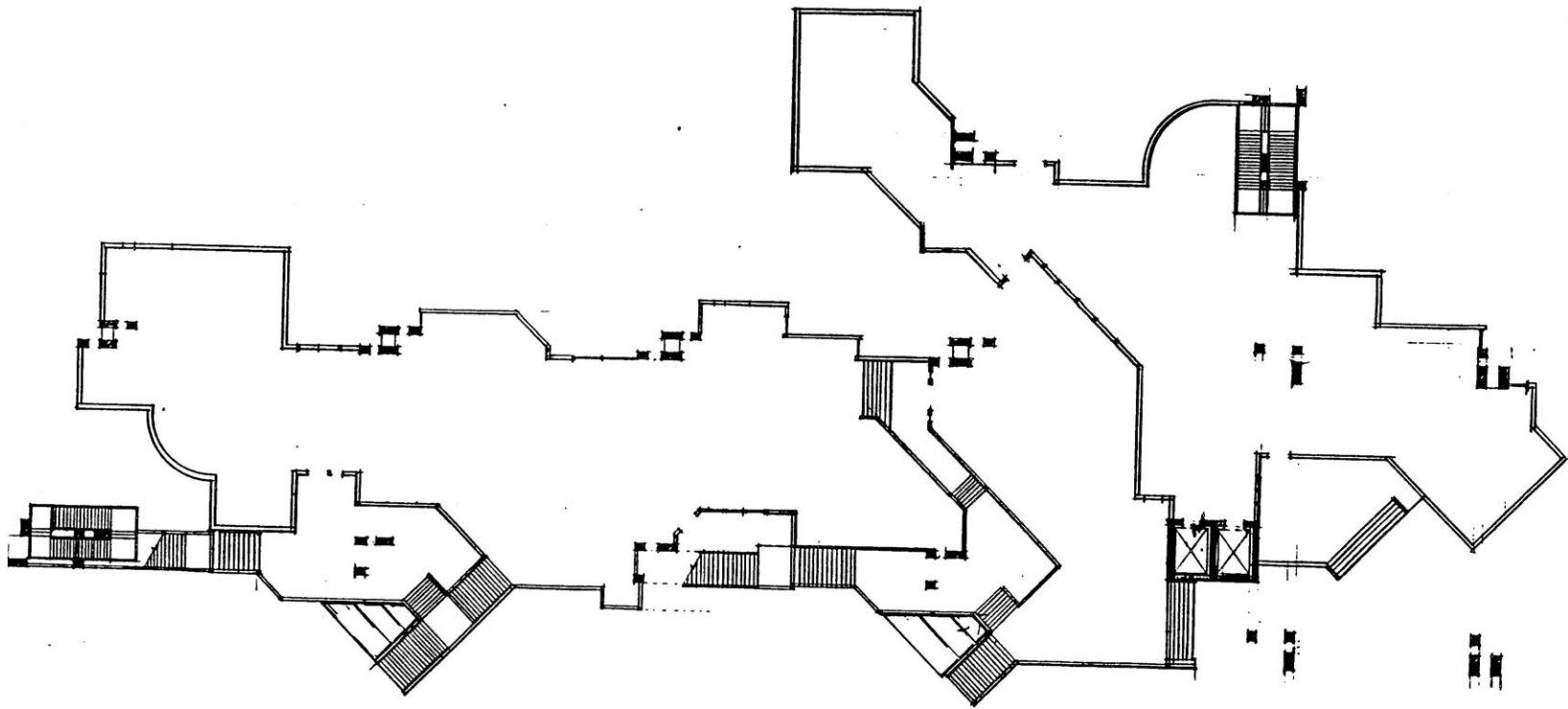


DIAGRAMATIC ELEVATION SHOWING  
APARTMENTS AND STRUCTURAL FLOORS

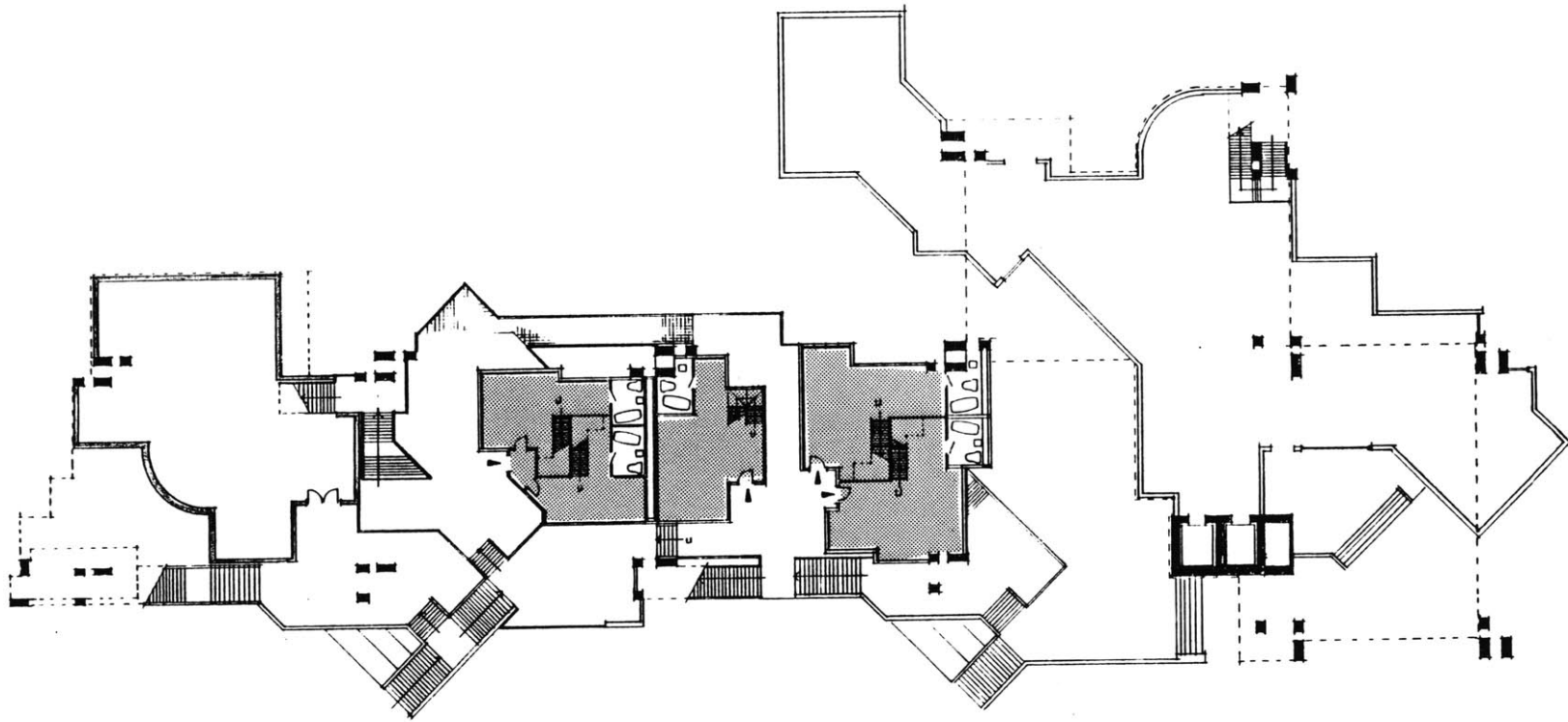




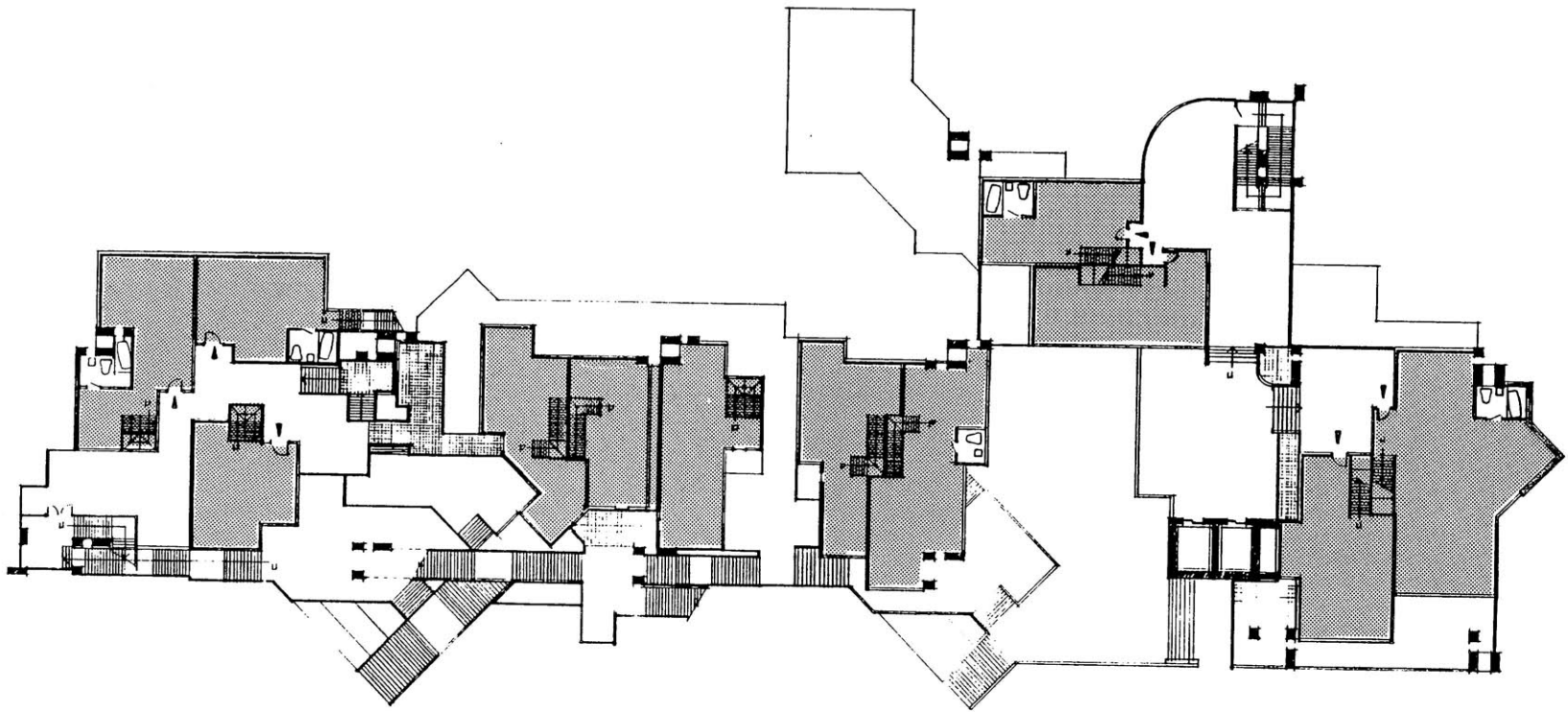
ELEVATION STUDY OF WALK-UP



GROUND FLOOR PLAN

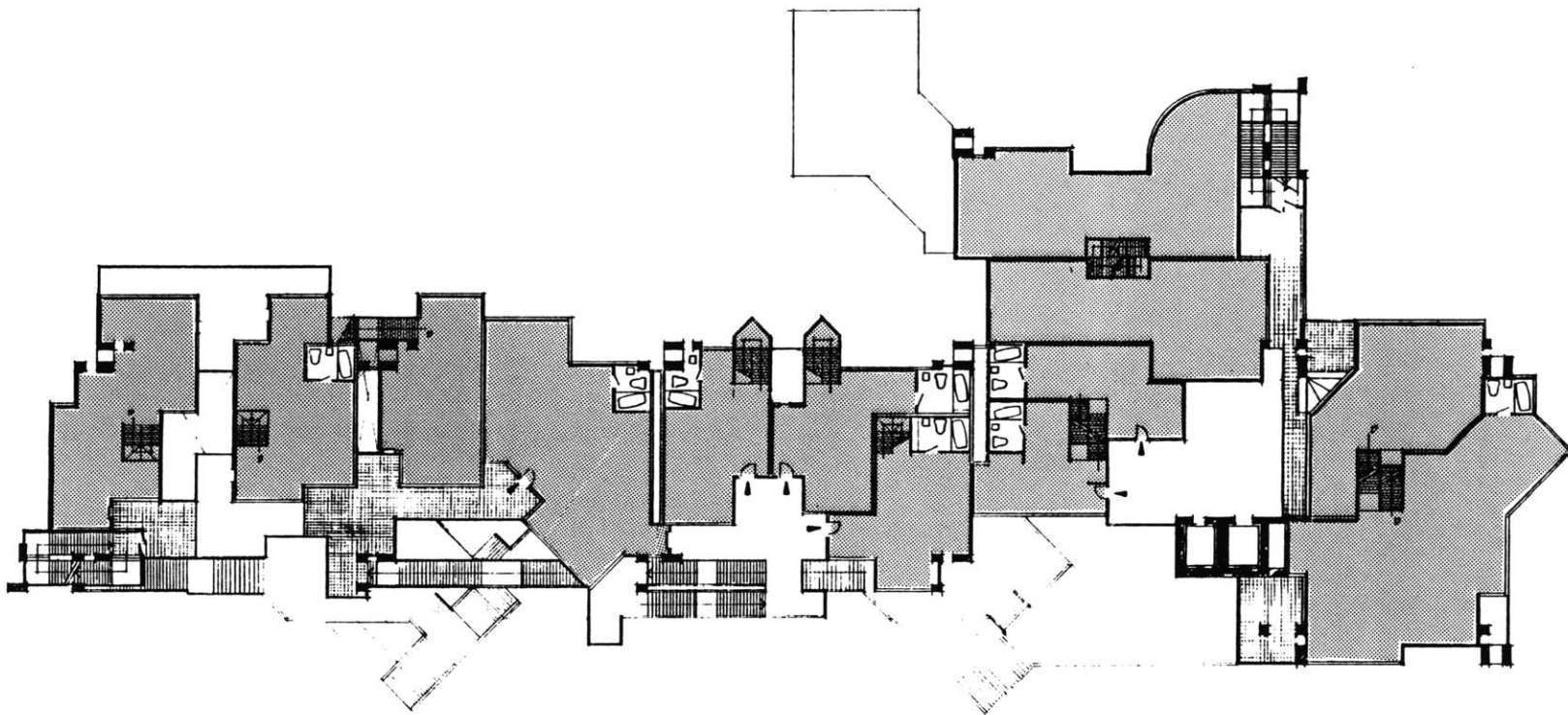


FIRST FLOOR PLAN

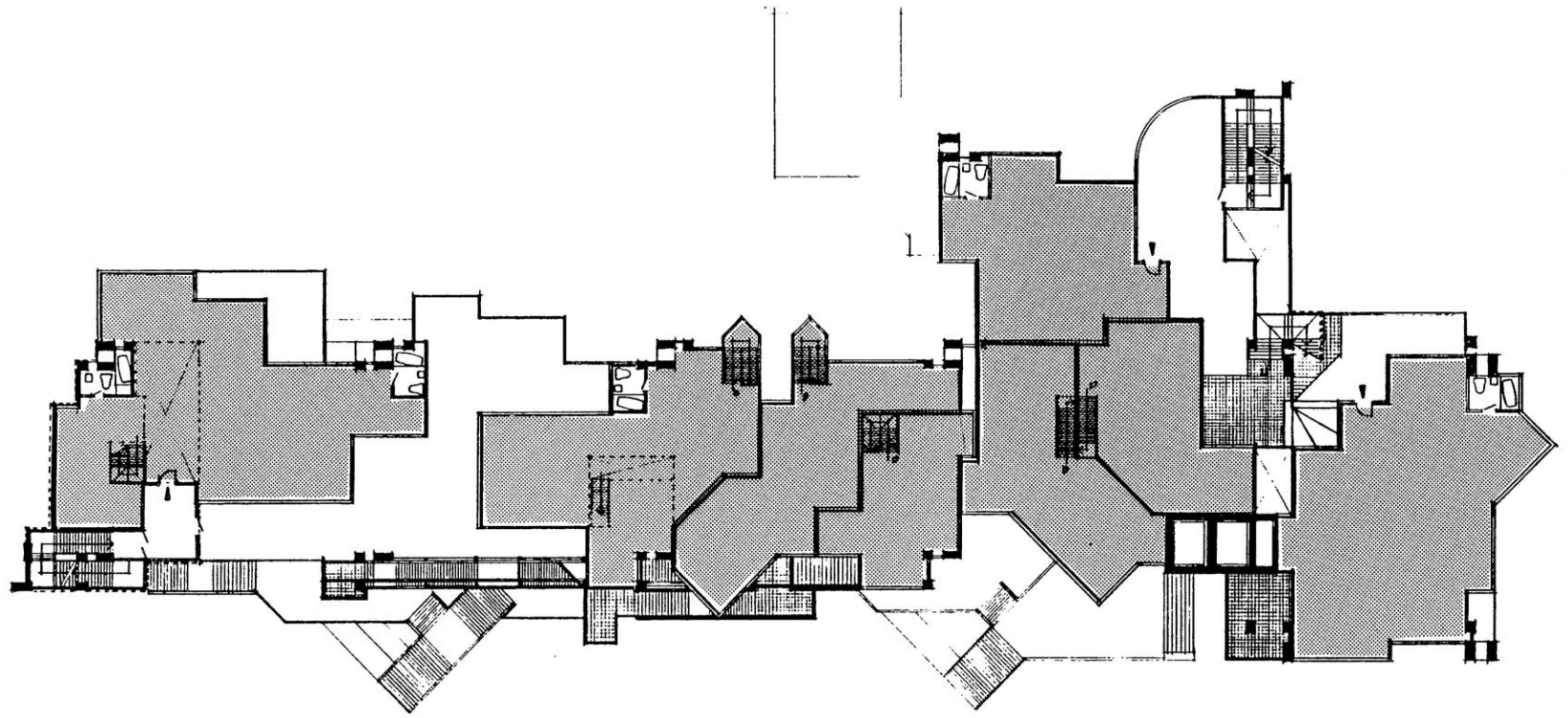


SECOND FLOOR PLAN





THIRD FLOOR PLAN



FOURTH FLOOR PLAN

Each axonometric view shows a different configuration. The objective is to obtain varied and interesting living spaces - always considering maximum exposure to natural light and ventilation.

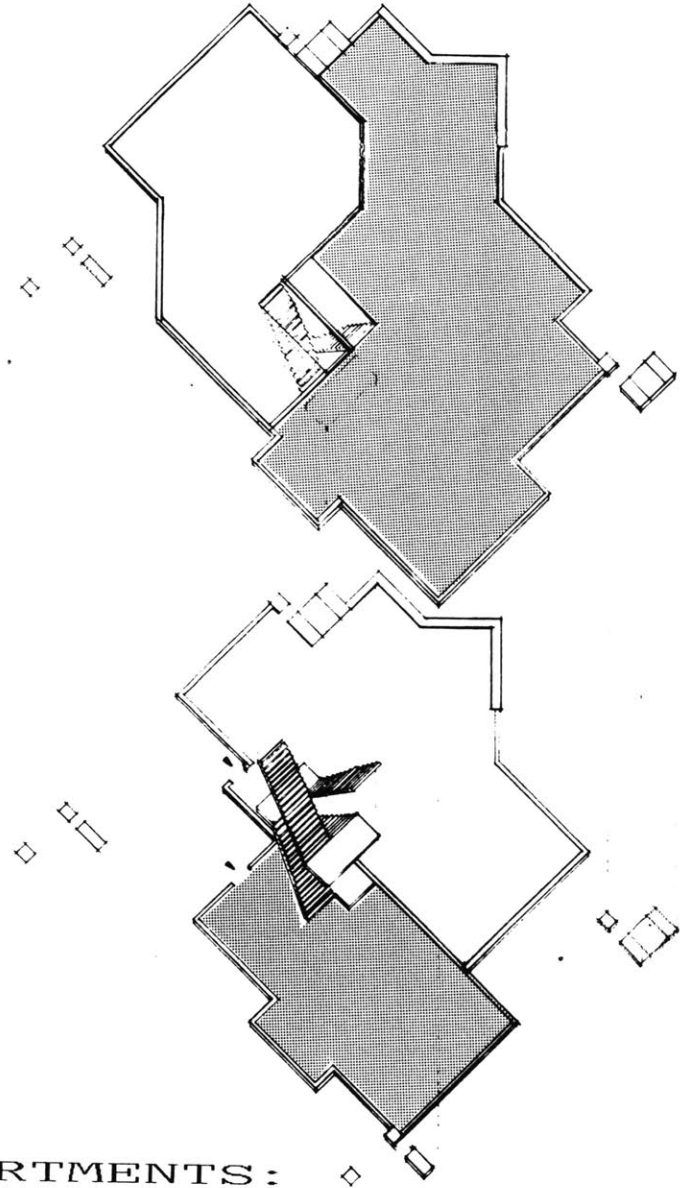
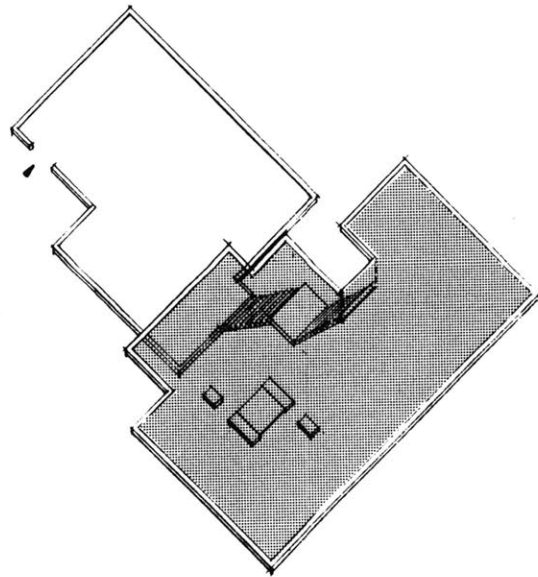
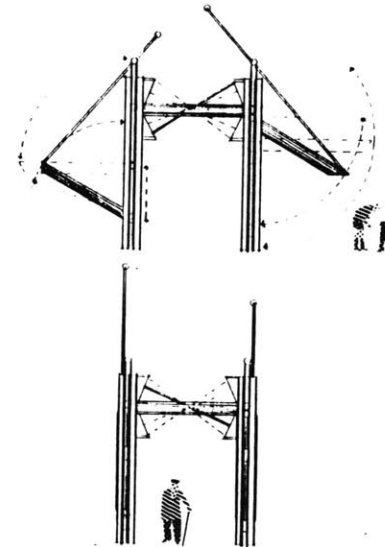
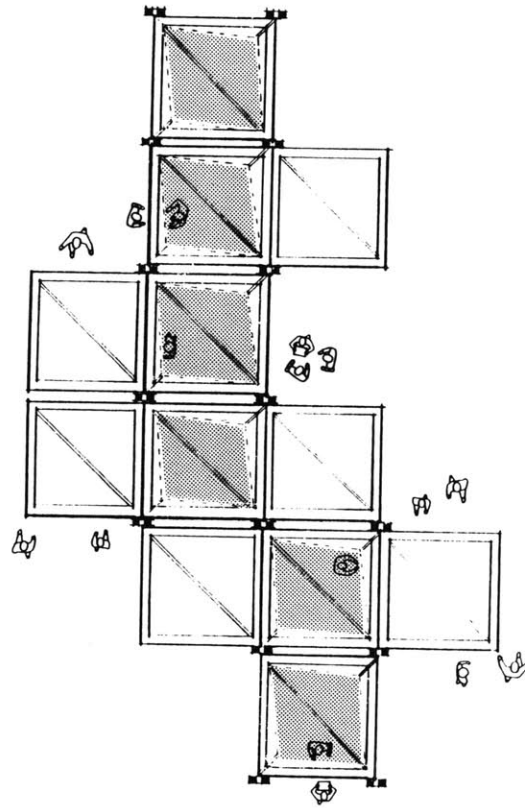


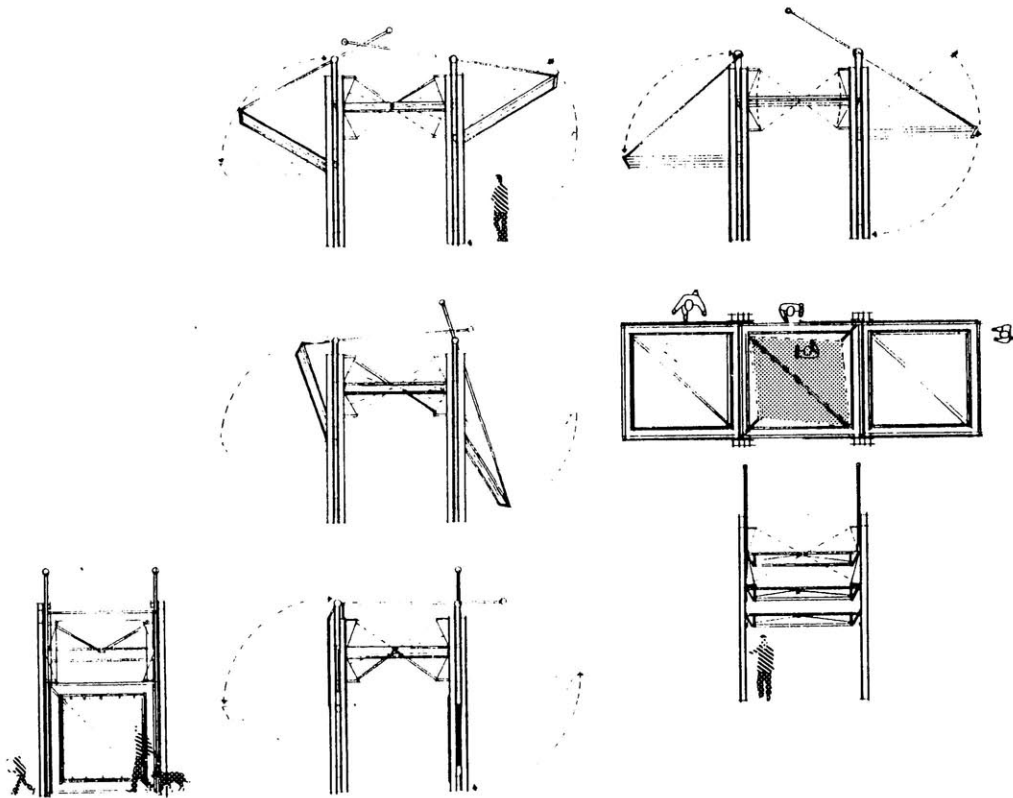
DIAGRAM OF TWO STOREY APARTMENTS:



These steel framed structures can be erected to suit different events. The central frame supports two pivoting canopies that may open or close to provide complete and partial closure. The center canopy works like a parasol. It is possible to tilt it up and down for ventilation and changing light qualities. The system might all work on cables and pulleys.



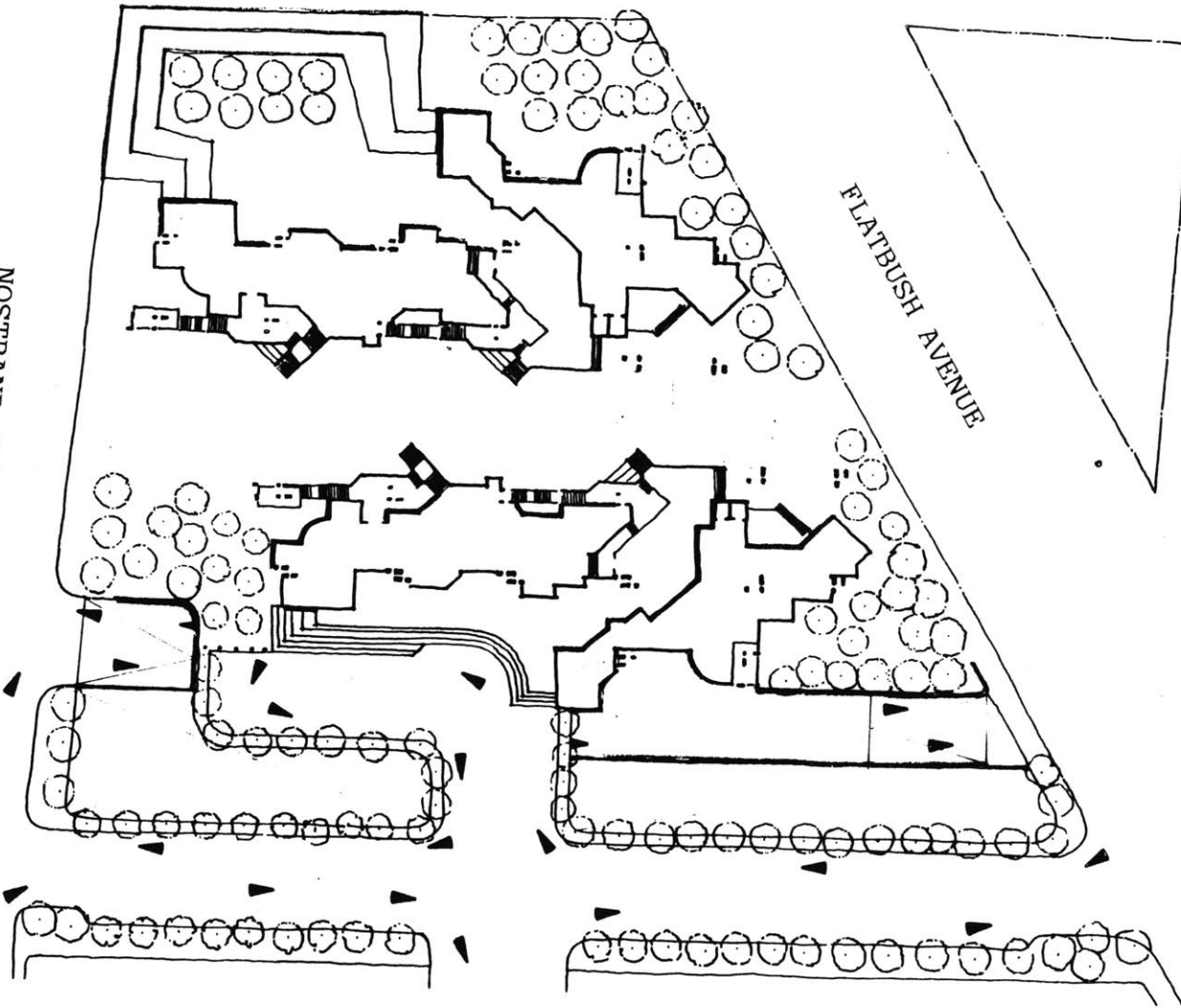
## MODULAR STALLS



AVENUE H

NOSTRAND AVENUE

FLATBUSH AVENUE



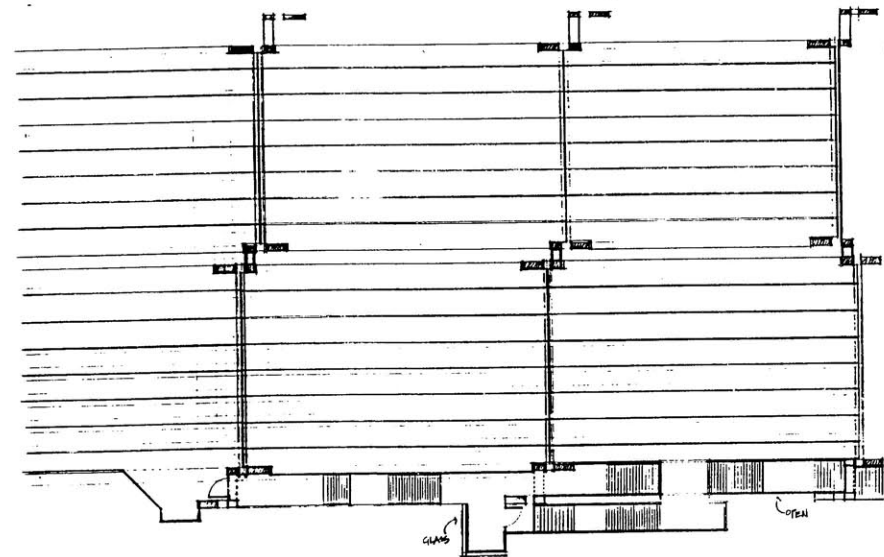
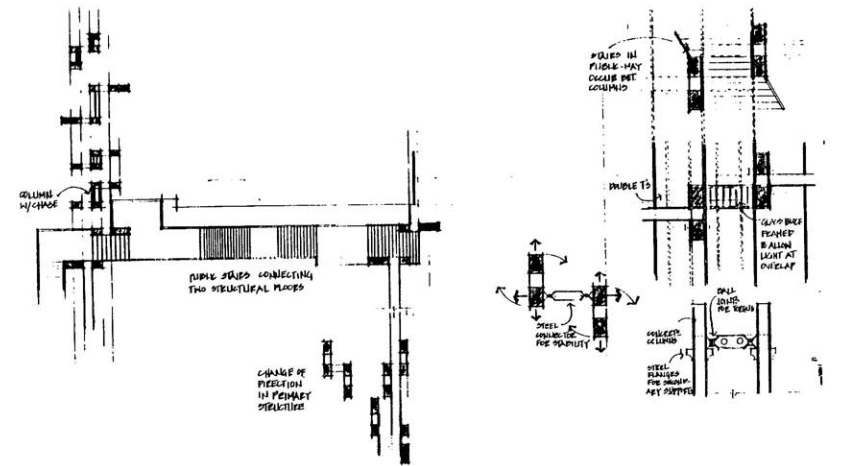


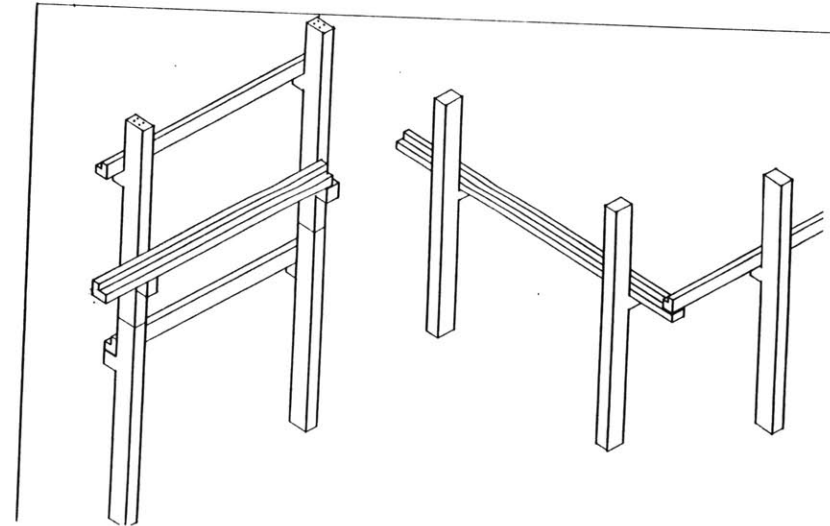
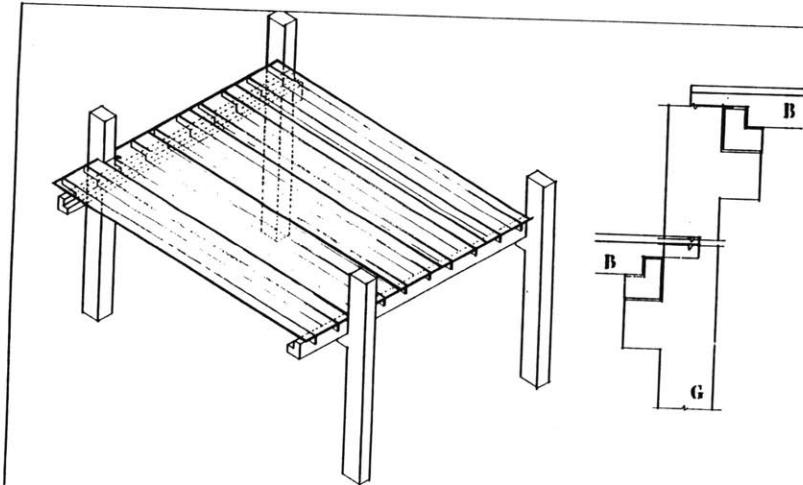
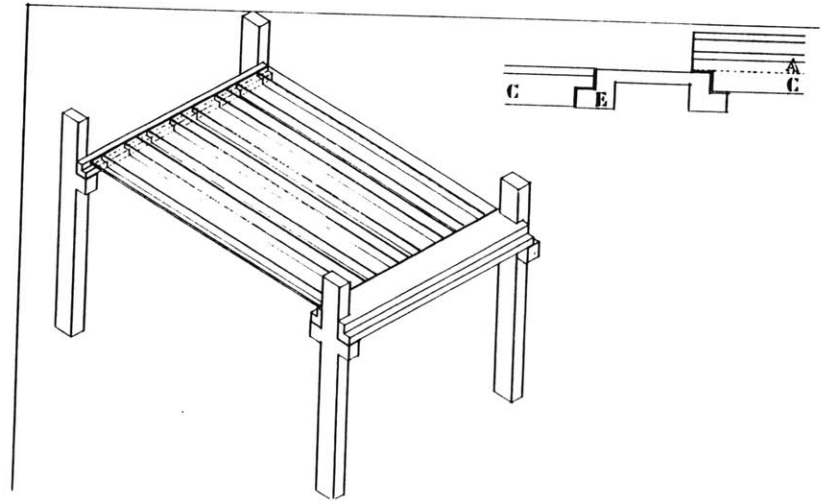
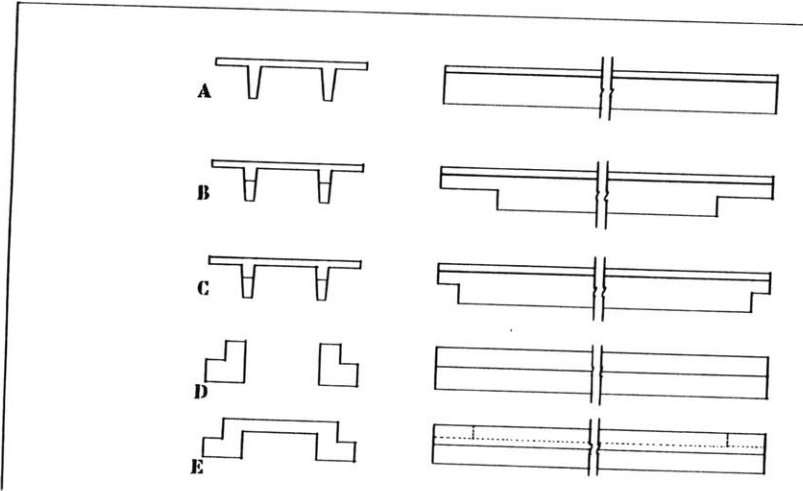


# APPENDIX

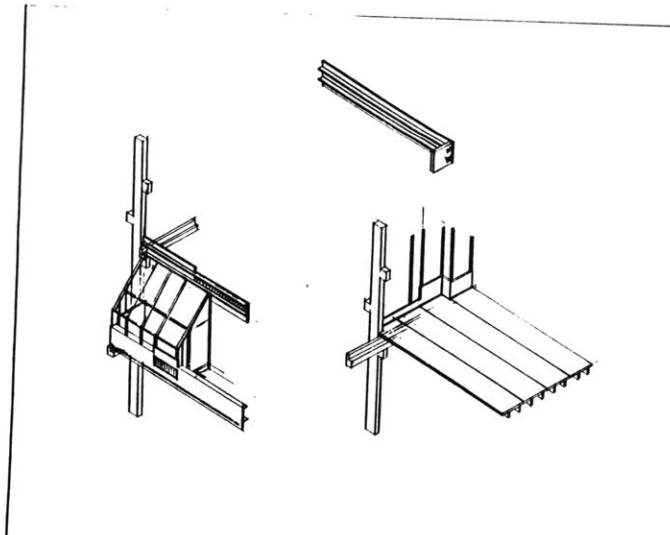
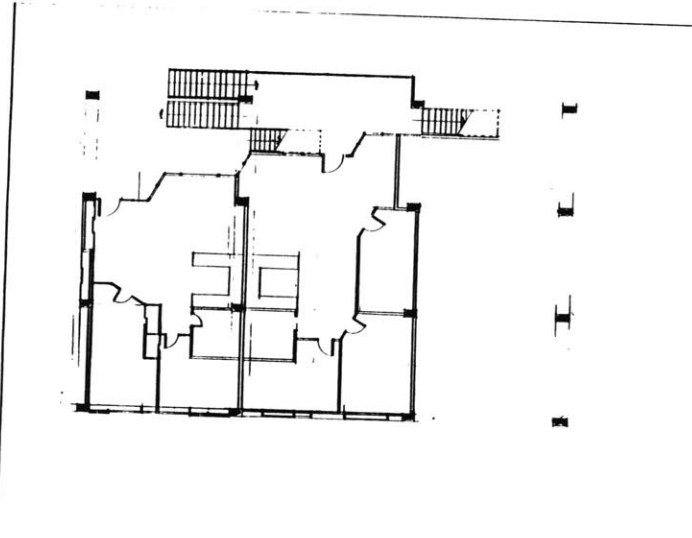
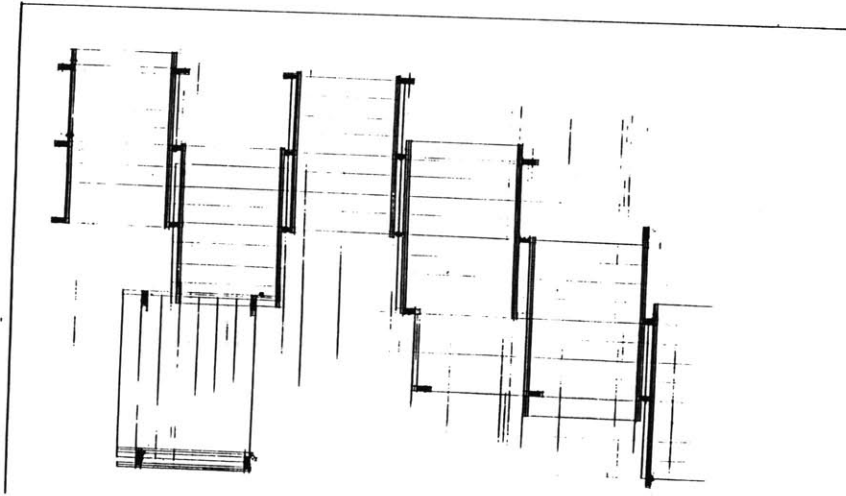
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# SOME EARLY STRUCTURAL EXPLORATIONS:













Beyeler Basle  
F. Leger

Bland, John and Schoenauer, Norbert  
Housing in Canada  
McGill University Press  
Monteral, 1966

Buckberrough, Sherry A.  
Robert Delaunay The Discovery of Simultaneity  
UMI Research Press  
Ann Arbor, Mi., 1982

Friedman, Martin  
Nevelson Wood Sculptures  
E.P. Dutton & Co.,  
New York, 1973

Friedman, Yona  
Toward a Scientific Architecture  
The MIT Press  
Cambridge, Ma., 1975

Humphries, Lund  
GABO  
Harvard University Press  
Cambridge, Ma., 1957

Jencks, Charles  
LeCorbusier and the Tragic View of Architecture  
Harvard University Press  
Cambridge, Ma., 1973

## BIBLIOGRAPHY

Krase, Jerome  
Self and Community in the City  
University Press of America  
Washington, D.C., 1982

Long, Rose-Carol Waston  
Kandinsky The Development of an Abstract Style  
Oxford University Press  
New York, 1980

Macasai, John  
Housing  
John Wiley & Sons  
New York, 1982

Mullins, William and Allen, Phyllis  
Student Housing  
Praeger Publishers  
New York - Washington, 1971

Phillips, William R. and Sheppard, David A.  
Plant Cast Precast and Prestressed Concrete  
A Design Guide  
PCMAC  
California, 1977

Tower, Beeke Sell  
Klee and Kandinsky in Munich and  
at the Bauhaus  
UMI Research Press  
Ann Arbor, Mi., 1981

- 1 Beyeler Basle  
F. Leger
- Friedman, Martin  
Nevelson Wood Sculptures  
2 E.P. Dutton & Co.,  
New York, 1973
- Long, Rose-Carol Waston  
Kandinsky the Development of an Abstract Style  
3 Oxford University Press  
New York, 1980
- Tower, Beeke Sell  
Klee and Kandinsky in Munich and  
at the Bauhaus  
4 UMI Research Press  
Ann Arbor, Mi., 1981
- Humphries, Lund  
GABO  
5 Harvard University Press  
Cambridge, Ma., 1957
- Goldwater, Robert  
What is Modern Sculpture?  
6 Museum of Modern Art  
New York, 1969
- Gedo, Mary Mathews  
Picasso Art as Autobiography  
7 University of Chicago Press  
Chicago, 1980

## REFERENCES