

AN ARTISTIC EXPERIENCE IN DWELLING:  
Shell Building and Personal Inhabitation

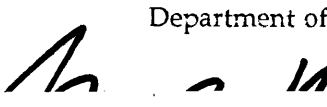
by  
Ann M. Walters  
B.S.A.D., Massachusetts Institute of Technology 1982

SUBMITTED TO THE DEPARTMENT OF ARCHITECTURE IN  
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JUNE, 1990


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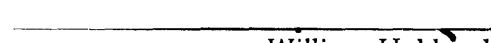
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# An Artistic Experience in Dwelling: Shell Building and Personal Inhabitation

by Ann M. Walters

Submitted to the Department of Architecture on May 11, 1990,  
in partial fulfillment of the requirements of the Degree of  
Master of Architecture

## Abstract


The shell is inherited from the city, not literally but psychically. It is an urban design response that relates to my sense of the neighborhood: its history, its growth, and its ability to provide opportunity in so many different forms within its overall continuity.

The inhabitation is personal artistic expression: nest, home, and place within the neighborhood. It needs to satisfy body and mind, physical and aesthetic senses.

The juxtaposition of these two elements is every person's journey to find their place in the world, between self and society.

This design project is part of my journey toward finding a place between a peice of the city and a personal set of notions about physical space.

Thesis Advisor: John R. Myer, Professor of Architecture



An Artistic Experience in Dwelling:  
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Ann M. Walters  
June 1990

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1

The Search

How can I put the spark of the wonderful, that certain sensuous satisfaction back into my physical environment?

The truly creative artist is working on the edge of change, advancing the professional tradition. The artist as myth maker is bringing outside experiences back to the the group, providing new models for coping with life.

The artist looks to the future and to the past. The decision of which historical, cultural or spatial notions to draw upon and how to recognize and realize them in a new work is an extremely creative process. Context and pretext exist not to be imitated but to be transformed.

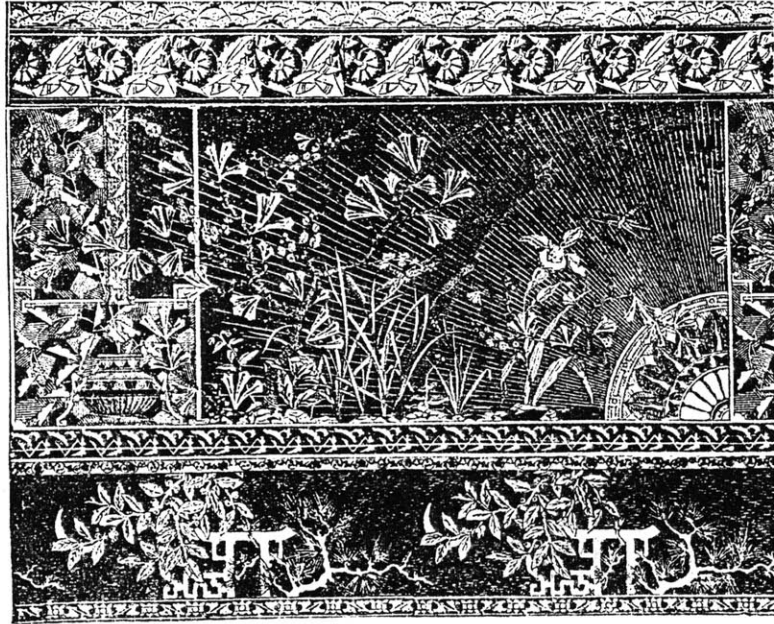
These thoughts, notions, goals, are always in my mind. How can I put the spark of the wonderful, that certain sensuous satisfaction back into my physical environment?

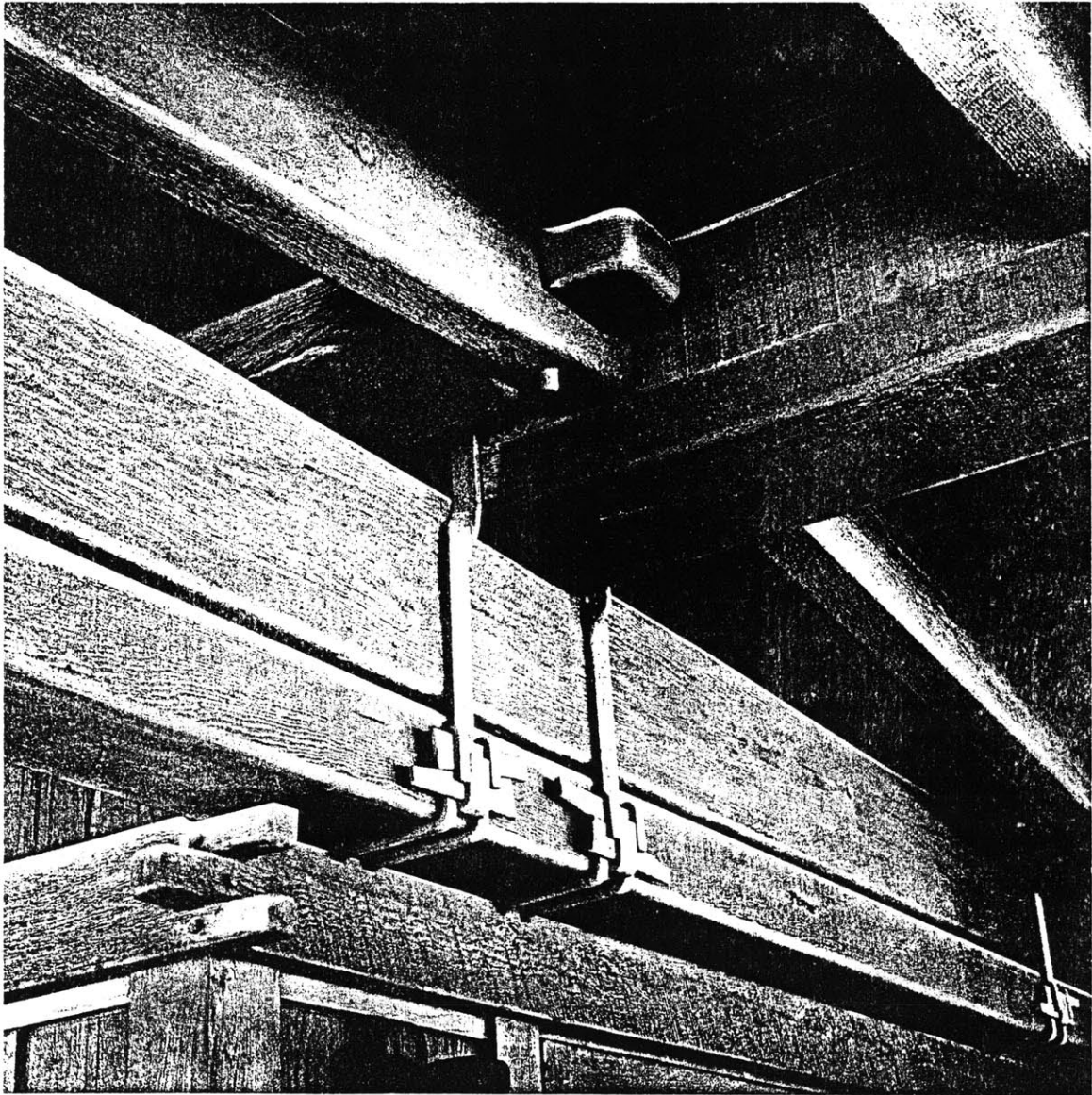


I sometimes find places and artifacts that have these qualities for me. I try to see and feel to get to an understanding of them, to find some key to help me achieve such qualities in my work.

I find a particularly strong concentration of the sort of physical/material sensibility that I seek in the work of a number of artists and designers associated with the Aesthetic Movement in England and America in the late 19th century. For William Morris, Norman Shaw, W. L. Liberty, James McNeill Whistler, E. W. Godwin, L. C. Tiffany, H. H. Richardson, McKim, Mead & White, Charles and Henry Greene and others the exotic, the Oriental, the medieval, were a way in to particularly expressive ways of working with the nature of materials, to creating something delightful, beautiful and new within the formal realms of their arts. The Aesthetic Movement's "claims for the primacy of the aesthetic as a universal ordering of social and domestic space liberated the artist from revivalist and historicist solutions to creative tasks, encouraging freer play with artistic forms." <sup>1</sup>







In another way I am guided toward a satisfying physical environment by children and cats, in the ways that they find comfortable and unusual spaces to occupy within a world generally conventionalized to accommodate adult humans. The softest spot on top of the pile of spare blankets becomes a nest. The dining room chair pushed back under the table is a protected vantage point to watch the activity in the rest of the room. The table and chair with the blanket draped over them become a fabulous cave. I would like to find for myself alternative spaces and forms that could enhance the satisfaction of the performance of everyday activities.

My intention in this thesis project is to attempt the realization of some notions like these about an aesthetically determined and sensuously satisfying physical environment through the design of a place for living.





2.0

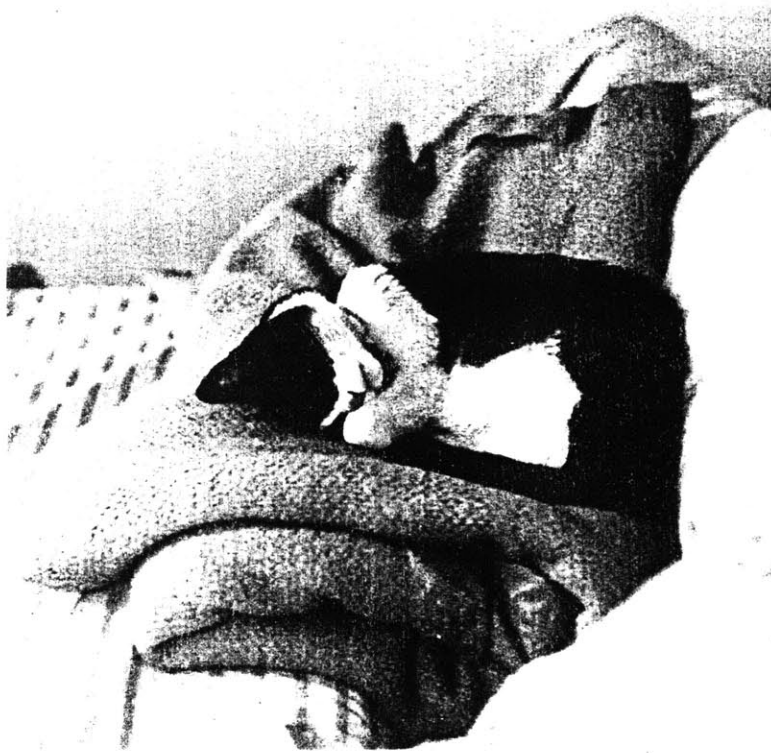
Image Collection

The following are images that I have carried with me for some time. They speak to me about body, space, light and texture.



2.1

hollow place  
fleece surface of a blanket  
exactly accommodates the body







## 2.2

suspended  
(a hammock of steel)

battered strip of honeycomb mesh  
holds him above the plane of the neighborhood  
solitary contemplation at the edge of the game





## 2.3

branches

mesh

branches

birds in the dappled light

iridescent color

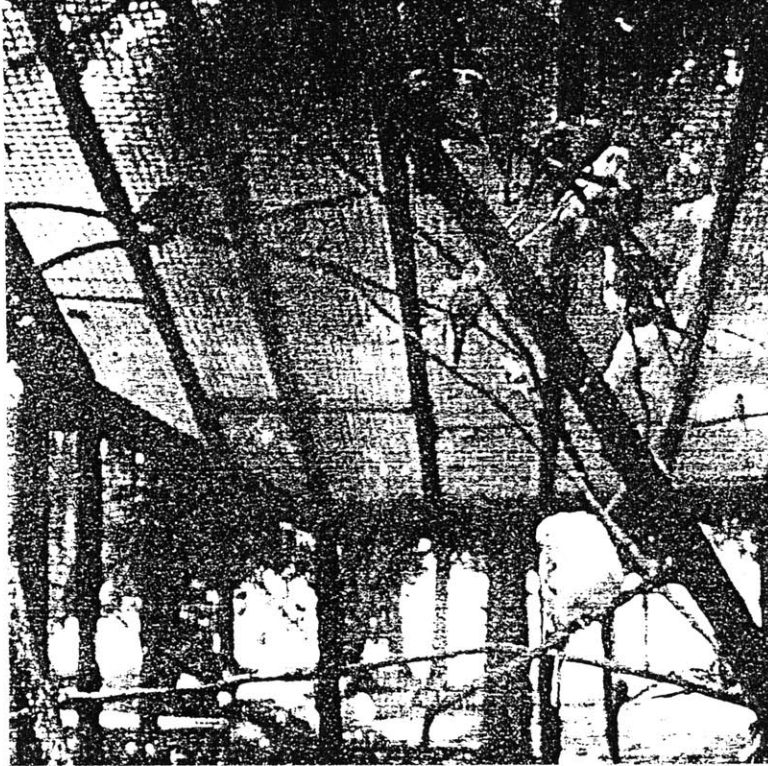
the sounds they make in the open air

climb

perch in the warm air

the sunlight and soothing

green shadow



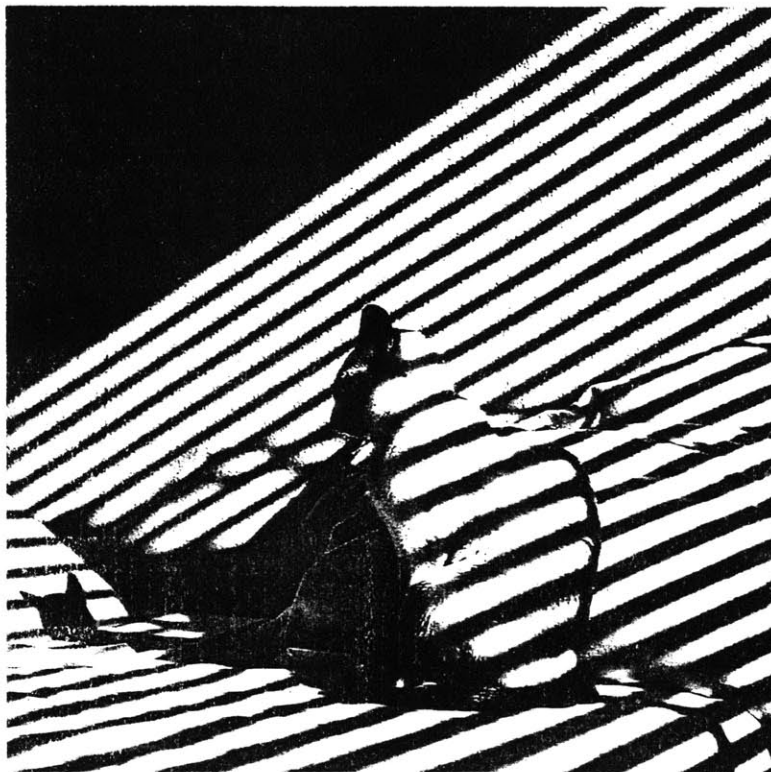


## 2.4

light into shadow  
this is not empty space

shadow is thick and enclosing  
cut through by sunlight's blades  
directed carefully by the screen

the bright geometric shafts are strong as  
the volumes of pillow, cat, pyramid  
that they temporarily mark

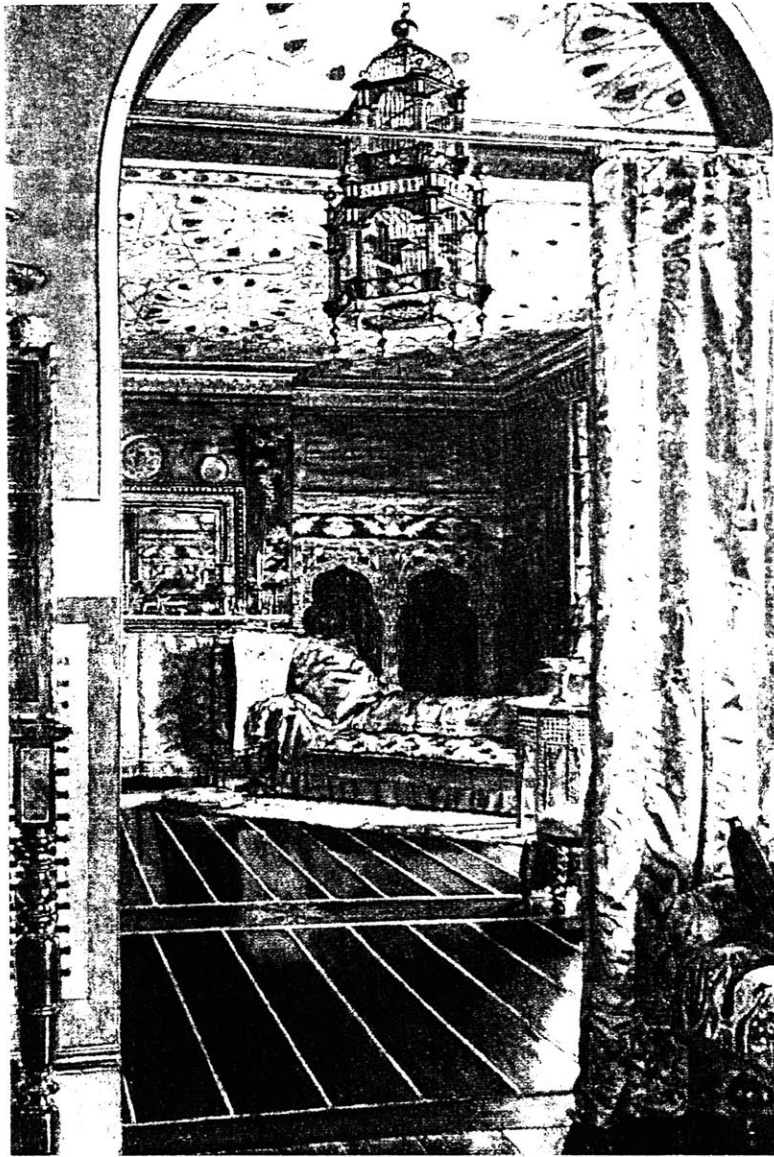




## 2.5

in the drawing room

even pale English light  
seems richer here  
soft illumination of surface and substance  
the cheerful antiques  
fabrics, metals, wood, polished all to satin  
their flowing patterns  
take the eye and mind  
on a hundred daily journeys





## 2.6

white lilies on a green field  
between them is enough space for the field  
to breathe gently and  
become three dimensional  
enough space for the velvet richness to be  
sure of itself  
to lend its texture to the whole scheme

the lilies grow even richer in such a field

privileged to cooperate  
to sustain this peaceful place  
we respond as graciously as the children





3

The Shell

I want a place to collect and build, to express the things that I feel make a satisfying physical and aesthetic environment. In terms of physical form, what is the place of such personal expression in a community context?

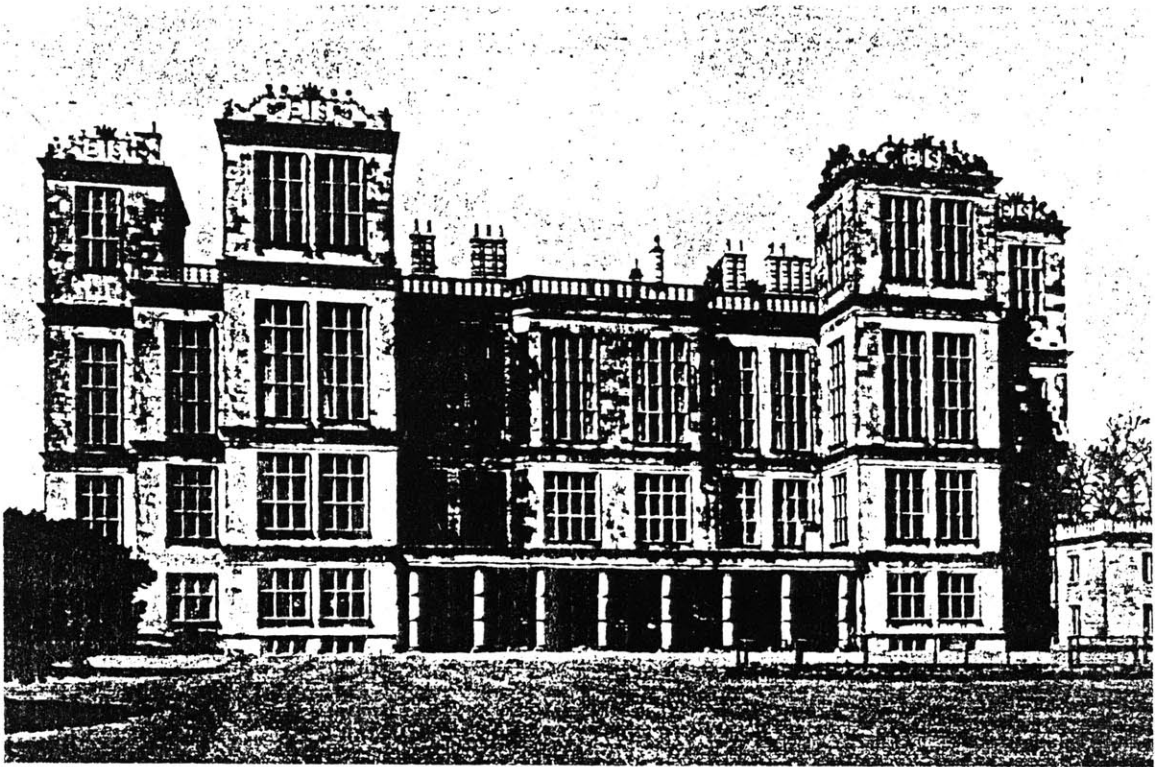
I am proposing building a shell and inhabiting with artistic freedom inside. The shell does the major work of relating to the neighborhood and provides an enabling framework for the inhabitation. The inhabitation is the means for personal expression of life and sometimes it breaks through the shell to show something of itself to the neighbors.

For some people this has meant filling a conventional house with their choice of manufactured furniture and accessories and choosing which color to paint the exterior. It should go much further.

In Elizabethan England, in 1590, Bess of Hardwick went much further. At the age of 71, with sufficient wealth and finally the freedom to use it as she wanted, she began a new Hall at Hardwick. She moved in seven years later and occupied it until her death at 87.

Her 'neighborhood' was more a social one than a physical one, so her manor house could be very much a physical expression of her personal intentions. In the grey British climate, getting light to the interior must have been a major concern for her. The Hall became well known by the rhyme "Hardwick Hall, more window than wall." Nicholas Pevsner wrote in his series *The Buildings of England* that

it is indeed the size and the rythm of the windows that distinguishes Hardwick from all other Late Elizabethan houses. The close grid of the mullions and transoms sets the pace, and no obstacle gets in its way. It is of a consistency and hardness which must have suited the old woman entirely. And as the house is set on the flattened top of a hill, there is nothing that could compete with its uncompromising unnatural, graceless and indomitable self-assertiveness. It is an



admirable peice of design and architectural expression : no fussing, no fumbling, nor indeed any flights of fancy.

That is different inside. Here a show of luxury was aimed at, and at once the style becomes coarse, as it does so often in the art of decoration in Elizabethan England.

[He footnotes that] it must be remembered that *The Buildings of England* do not discuss moveable furnishings in houses. Hence neither the magnificent old oak nor even the needlework and tapestries will here be mentioned.

In his discussion of the interiors he states that “ the great sensation of the Gallery is its three bay windows, each the size of a C20 council house. On a sunny day the Gallery is as light as a factory in the modern style.” This influence of the shell on the interior must be very powerful, and though the style of the original interior inhabitation may have long since passed out of fashion, the shell has a certain timeless quality that commands respect and inspires the imagination.

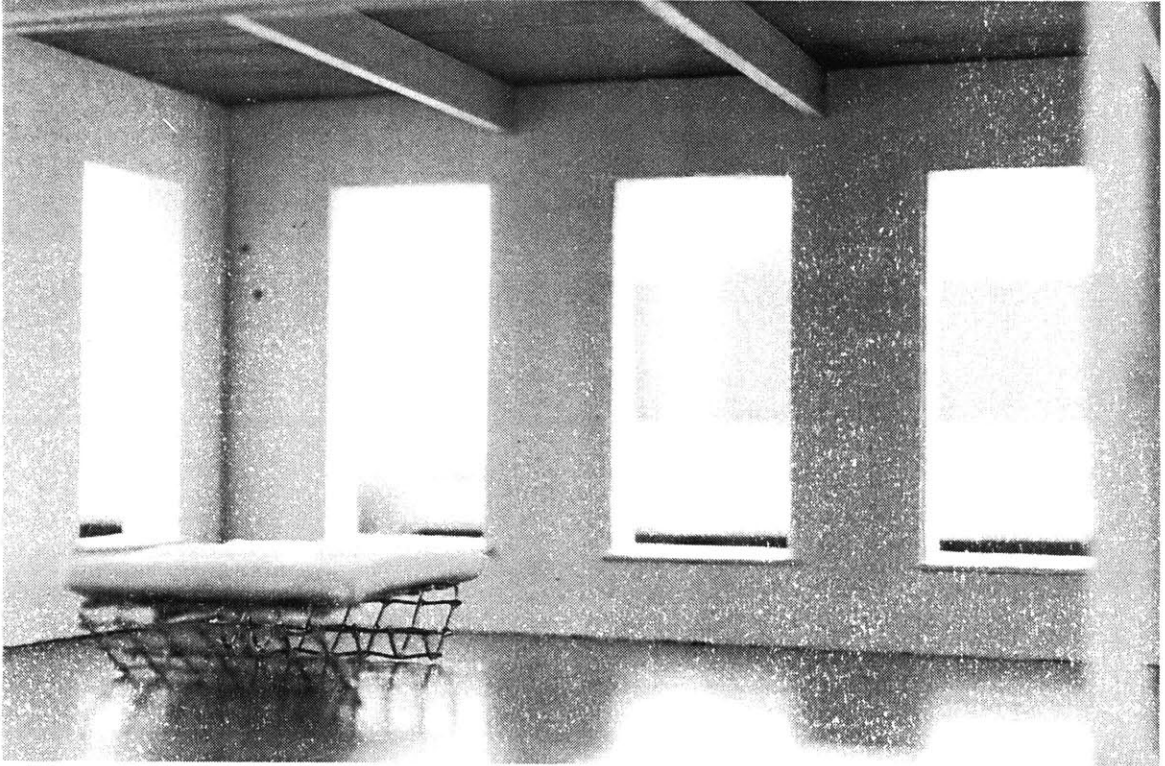
In a city, a shell can be designed largely from the outside in, establishing positive urban moves and identity out of physical and social contextual factors.

The London Georgian townhouse is a dignified shell that has accommodated many generations of inhabitation. The street facades and party walls remain largely unchanged, giving a sense of continuity with the historical and physical neighborhood. The interiors have undergone changes in technological directions - plumbing, heating, etc. - and lifestyle directions - division into flats, open plan units, etc. - that can create something very different from the building's original state.

Commercial and warehousing space is often generated with emphasis on practicality and efficiency rather than aesthetics, yet the results can be quite pleasing. The large spaces required for goods storage, machinery and movement, and the regular structure and ordinary materials used to build them create very strong shells. They are of a scale significantly larger than the typical purpose-built residential space and that gives such buildings a certain feeling of autonomy from their human users.

This kind of shell building has the feeling of unintentionality or the positive emptiness of the large building that "doesn't know you exist," the loft or



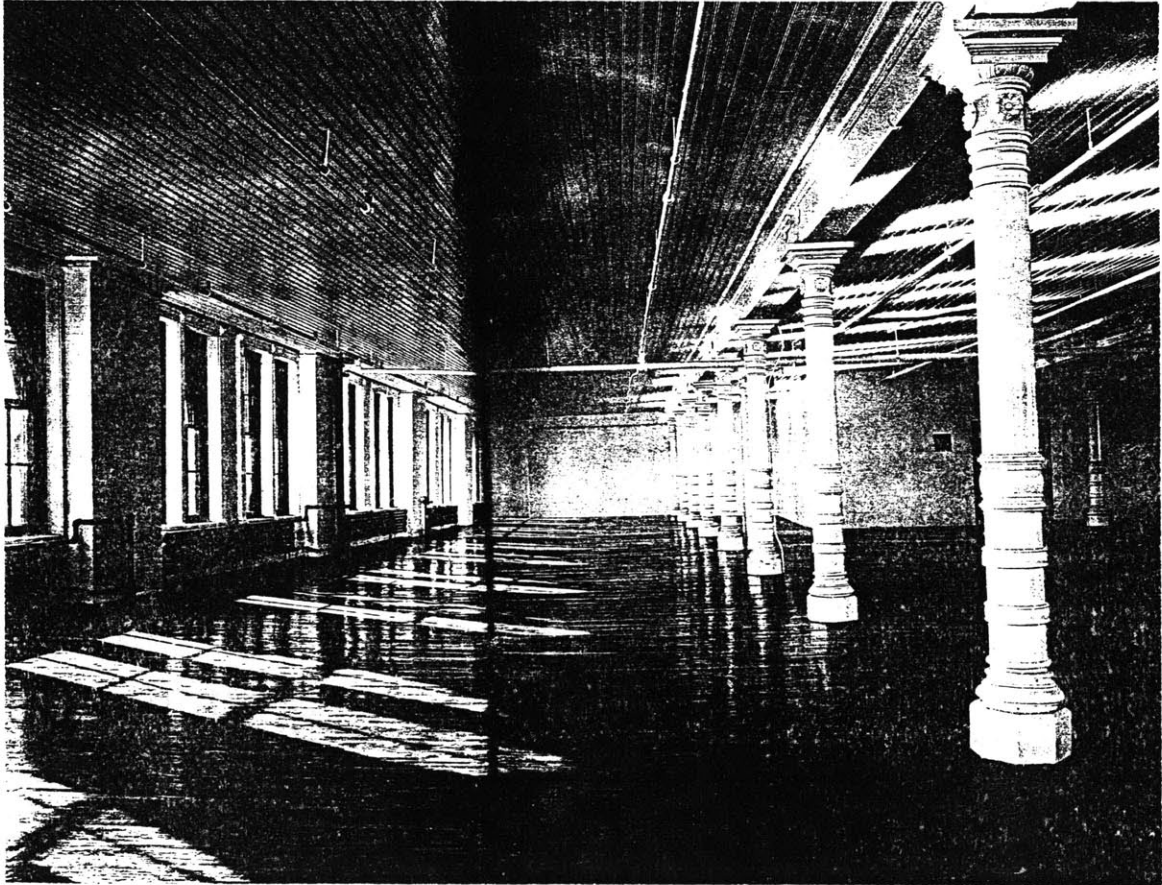


spacious empty room that challenges and inspires the occupant to inhabit in a very personal way.

The structural system of such a building is more apparent to us than those of other buildings more specialized for residential use because of the building's openness, because the structure is not covered up with sheets of finish material or concealed within a maze of partitions. Structural elements can be beautiful and dramatic in their large, functional rationality.

Sometimes they may not be all that dramatic but almost mundane as objects yet set up a rhythm or field that is very important for the strength of the shell's presence. This is especially important in interior parts of a building that are not feeling the presence of the building's outer walls.

A regularly punctuated rhythm of daylight is also necessary to the positive emptiness of the shell building - large regular openings, not specific to any particular light direction, opening up as much as the wall can take, reaching for all available light. The changing qualities of the light in different parts of the shell building at different times of the day are another part of the strength of presence of the shell building,



giving the occupants variety - the patterns of constantly changing light through a stationary screen-to respond to.

The light that gets in, especially sunlight is essential in animating materials. The materials of which the shell is constructed may be commonplace, almost generically serviceable, not linked to a particular construction method for a specific use-type building. They are much more aesthetically pleasing for being straight-forward given the world of fake and faux that we move in everyday.

The tongue and groove boards and cast iron columns of a New York loft building interior have the additional quality of a knowledge of process and the human hand and maker, a quality that connects with my love of the well crafted artifact.

It is the light in combination with this object-maker resonance, that brings the shell building from a position of autonomy from the occupant to a joining with the occupant, the inspiration and challenge to inhabit personally, to combine and contrast with the shell. Henry Plummer describes this phenomenon of light wonderfully in his book *The Poetics of Light*.

Beyond its immediate optical tonic and kinetic interplay with the eye, luminous matter evidently has a general capacity to turn the physical world into beings for us, giving our surroundings a pulse and a soul. Leaves and trees, walls and pavements, buildings and cities become more possessed of a life when radiant, and thus enfold us in a world of the living, a "home" of vibrant things we feel part of. ....A person can be more "together with" such a world rather than alone and isolated, brought into a state of sympathetic belonging rather than petrified alienation. One's very incarnate embodiment is recognized and reflected-back by surroundings that are equally animate, real and vital. We know in such places what it is like to have our own lifeblood validated and confirmed.

Whether new or old, the shell building can be an enabling framework for personal artistic inhabitation. It can be supportive, sheltering, constraining or inspiring in relation to a given occupant's desires. If the shell is stronger in some direction or aspect than in another it will suggest or

The enabling shell building needs to be of adequate unit size to give room for the inhabitation to be physically easily altered, and room for it to be imagined, and it needs aesthetic light and material qualities to inspire the personal artistic response of the inhabitant.



4

## The Inherited Shell

Literal to Virtual

An important aspect of the shell is that it is inherited by the inhabitant from many sources.

With sometime buildings this is true of the actual physical artifact, as in the family home being handed down from generation to generation. It becomes a personal link with the family of the past and the future family, as well as to the artifact. Historic buildings can make a similar link for larger groups of people in a less personal, more civic, mode.

In cities we inherit the whole physical urban context, whether we want it or not, with all its associated historical and social context. How comfortable we are with that and how well we understand what it really is are important when we act to change or add to it.

There is a natural tension between the responsibilities of inheritance and the possibilities of personal expression. Some kinds of personal expression may be quite comfortable within a given framework or shell, or may even grow from a



particular shell. Others may need to breakout of or dismantle the shell.

We often remodel or redecorate the family home, looking for the balance we need between the things we've grown up with and the new things that we want to try. When our views and attitudes change over time we may no longer be comfortable with the physical artifacts of our own past personal expression and will change them for the new things that satisfy us. In rebuilding, we can range from adding or subtracting small peices, like a porch or a bathroom, that hardly disturb the presence of the original shell, to rebuilding the whole thing in such a way that you no longer have any clue as to what the original was. We strike a personal balance between the inherited shell and our desired personal expression. In Frank Ghery's own house, for example, we can tell what is part of the original house shell and what is part of the new physical form of his personal expression. The interplay and tension between the parts binds them together in a whole far more exciting than either part would be on it's own.

The shell building itself, whether old or new, may feel comfortable or constrained within its inherited

context. In building a new shell in a given neighborhood the designer takes a stand between the existing and the desired. A strong positive tension between the two can enliven the city, as with Richard Rogers' Lloyds of London Building. But a strong tension requires a strong context, and much more often our responsibility to our inheritance of the city is to strengthen its particular physical and social character. The enabling shell that I propose can do this and at the same time encourage essential artistic personal expression at the individual scale.



5

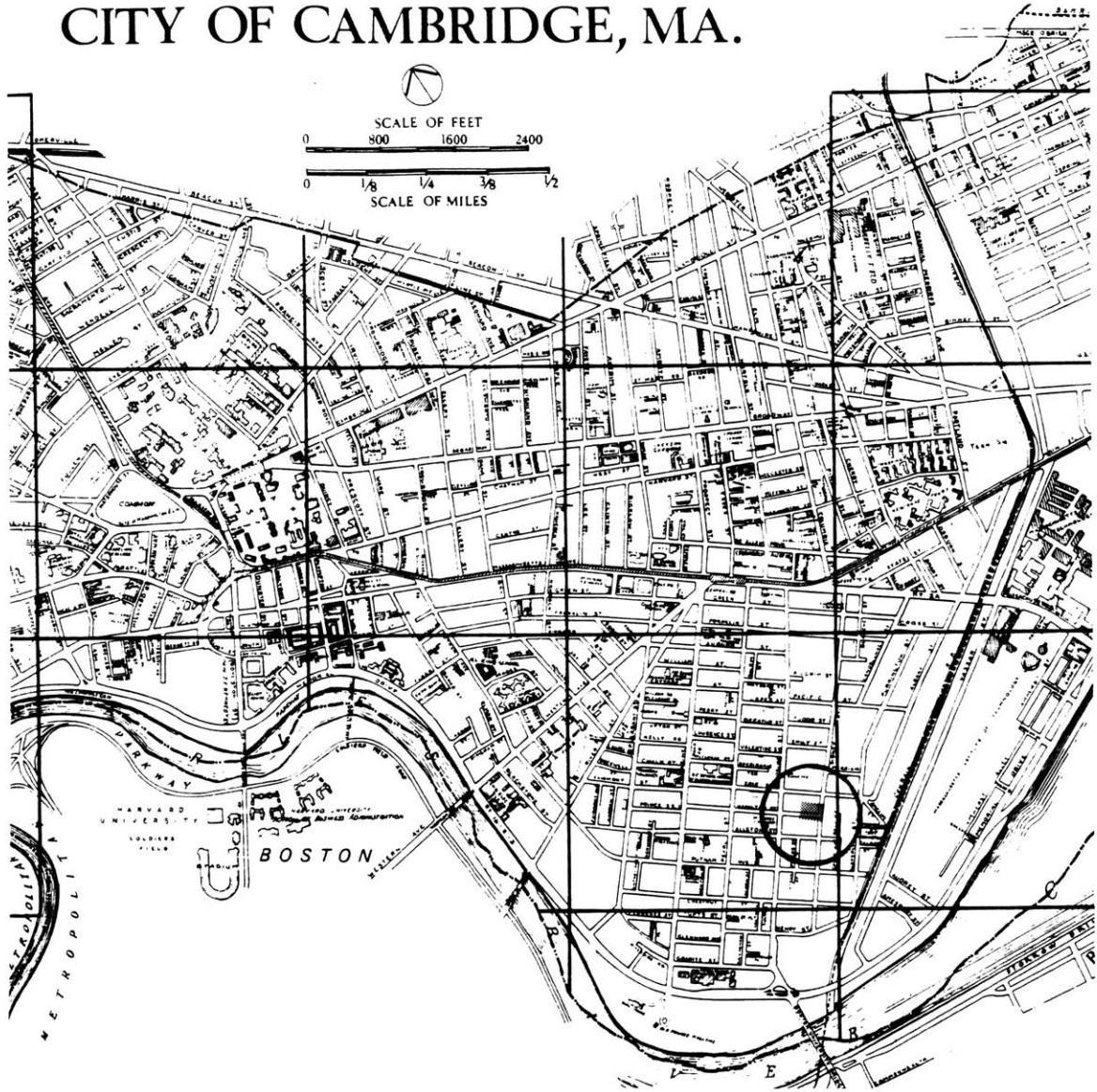
## A Shell for the Cambridgeport Site

The design for the shell building for my site in Cambridge, near MIT, is derived from context, my interpretation of neighborhood and historical inheritance, and generated out of my desire to explore the notion of the enabling shell.

The site is in what has historically been an industrial area, built on land fill after the railroad came across the marshland in the 19th century. But it is also only one block away from the equally Cambridgeport residential area, which leads to my proposal for residential space within a shell more related to the character of the industrial neighborhood.

The construction system proposed for the shell building consists of: cast in place concrete basement and first floor plinth; reinforced concrete block cavity walls, insulated, with plaster interior finish; and laminated timber internal structure with 3" wood decking roof and floors, with masonite sound deadening board as shell floor finish.

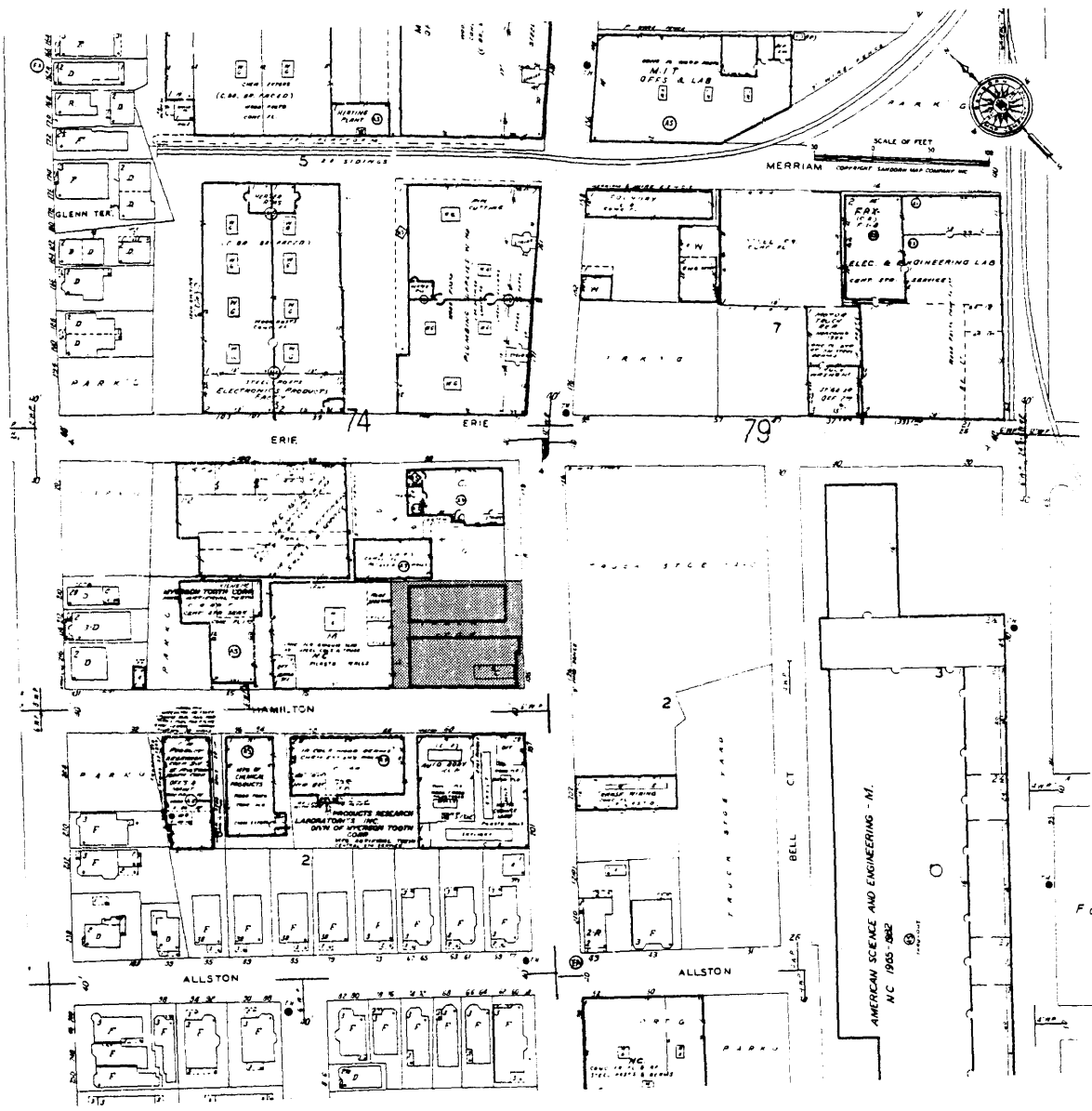
# CITY OF CAMBRIDGE, MA.



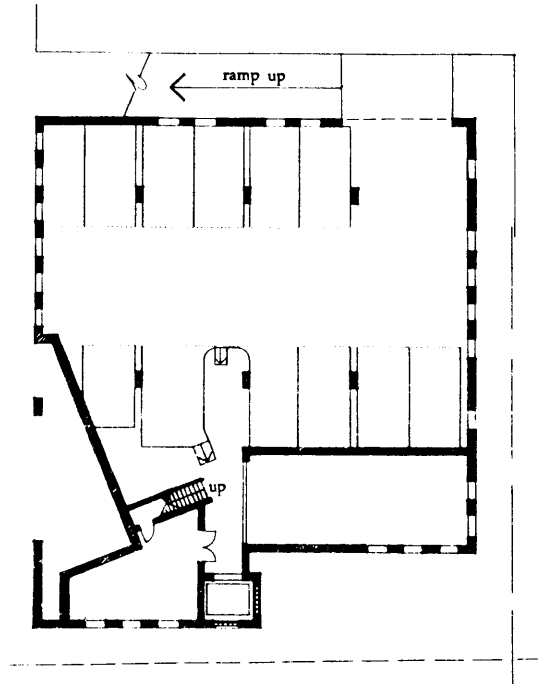
Two mechanical cores in each block provide gas, electricity, water and sewer connections. HVAC is unit specific.

The raw shell space can be divided up in several ways - by floors, bays, etc. - as people want the space, leased or sold as condominiums.

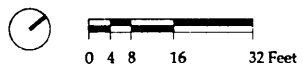


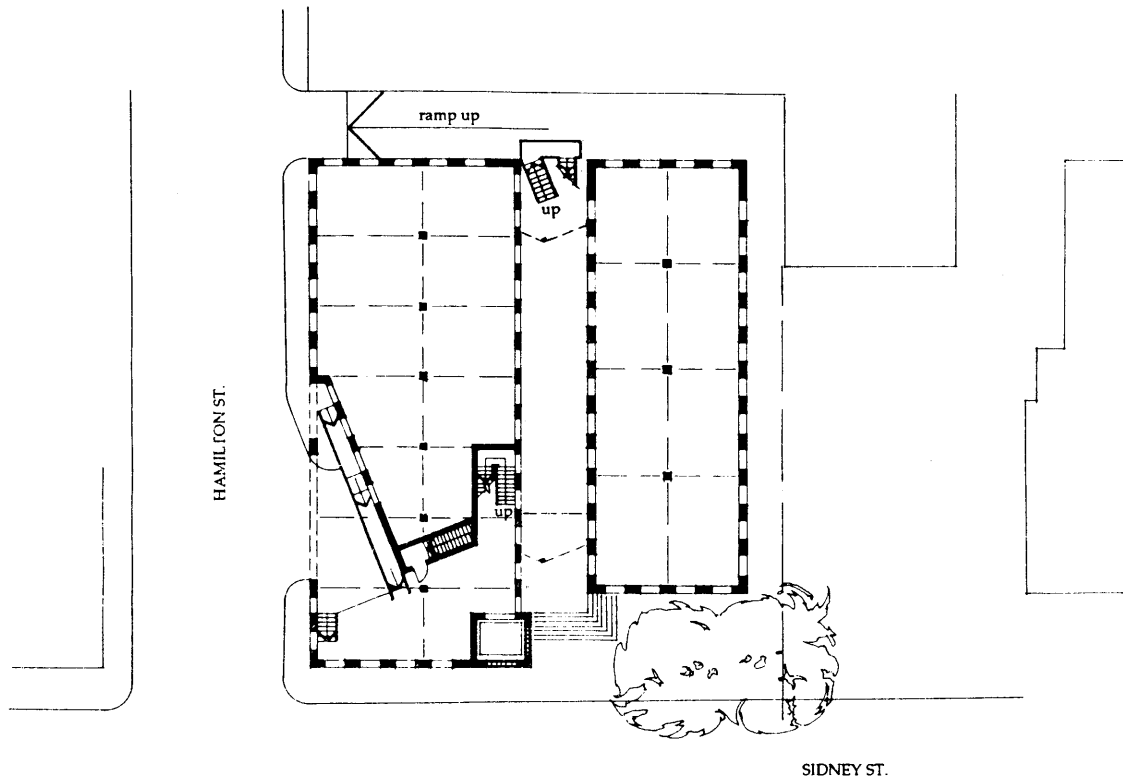




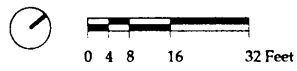


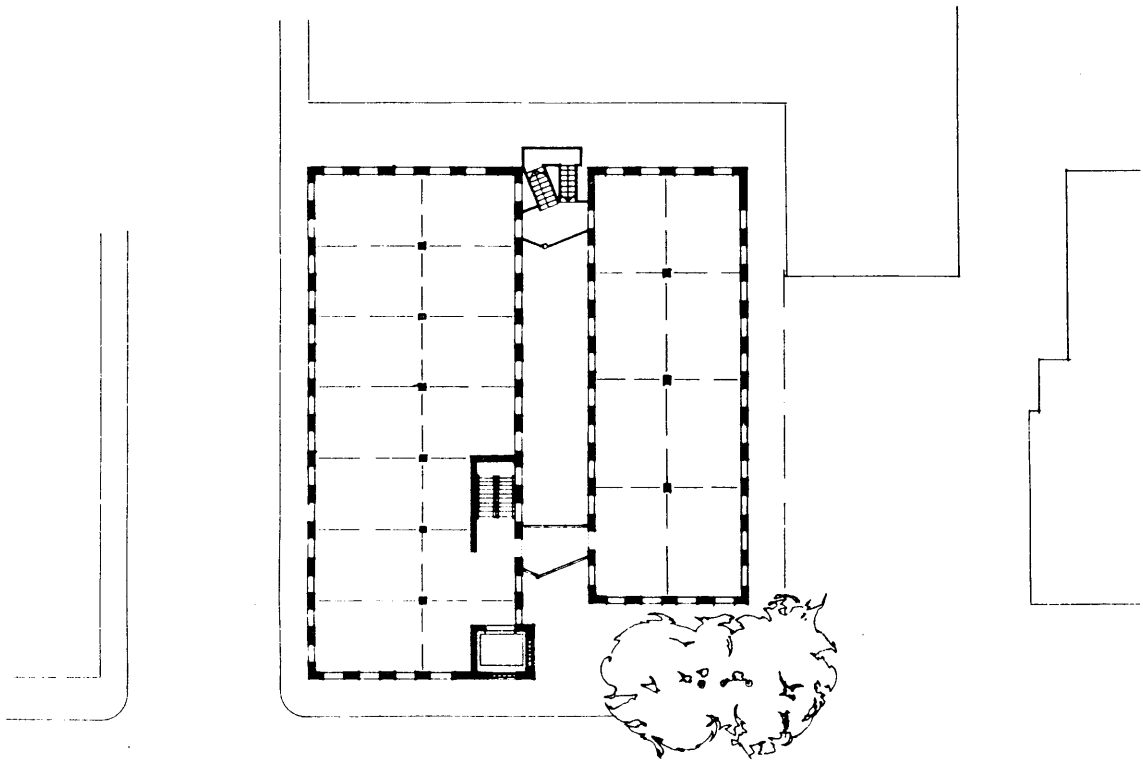
BASEMENT PLAN





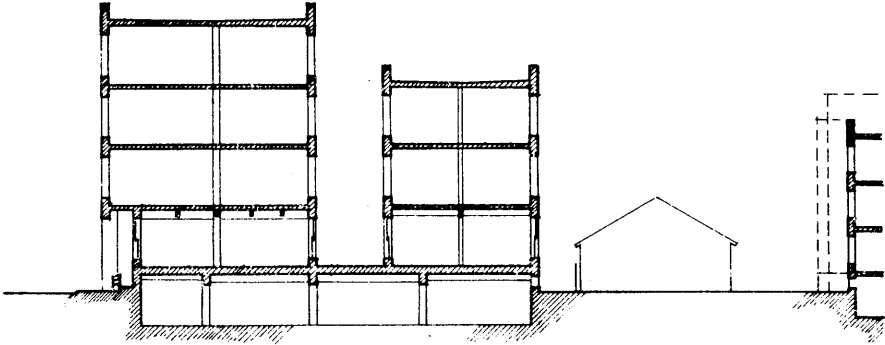
GROUND LEVEL PLAN



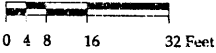


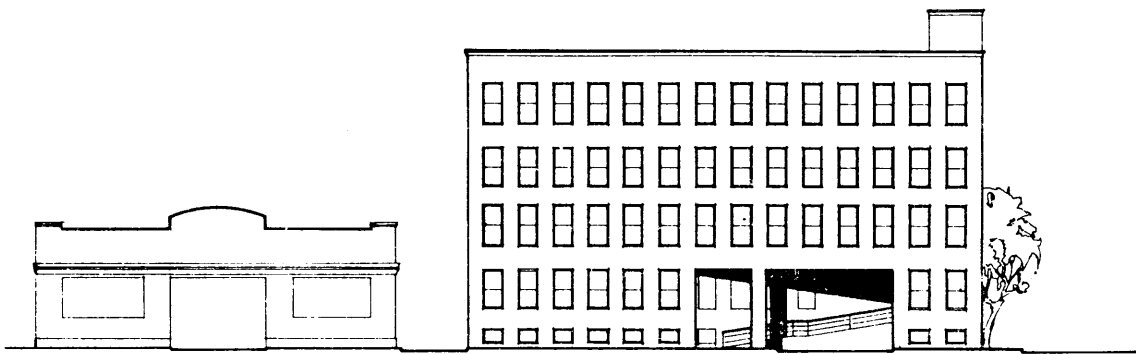
SECOND AND THIRD  
LEVEL PLAN



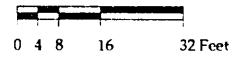


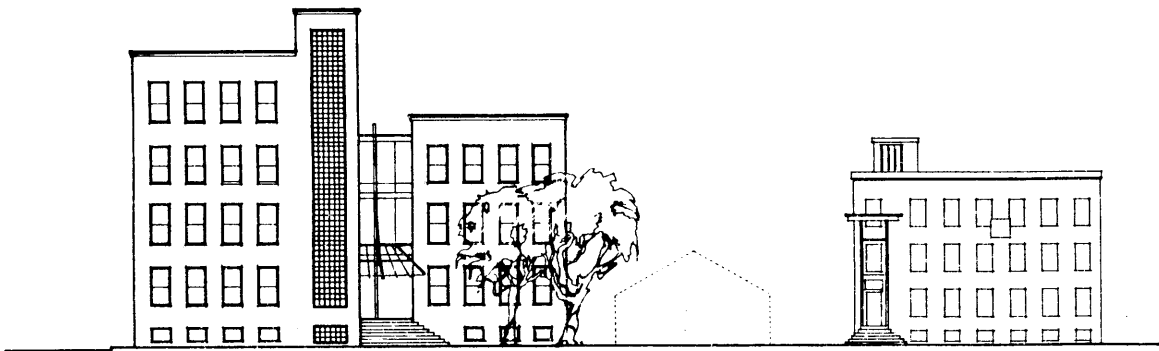
SECTION



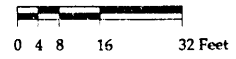


HAMILTON STREET ELEVATION





SIDNEY STREET ELEVATION





6

## Exploring Inhabitation of the Shell

After arriving at the plan of the shell building , I began a series of explorations about inhabiting a piece of it. I worked in model at 1"= 8'-0" scale.

I wanted to work with the morning sun and to get natural light in from above as well as the side so I chose the third floor, east end, of the northern block as a beginning place.

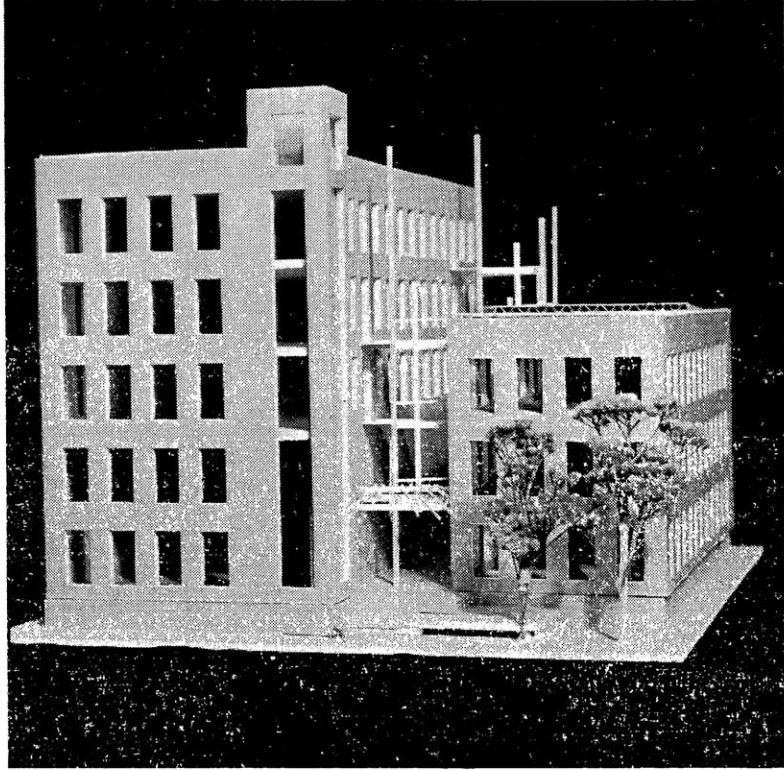
I looked at the horizontal character of the shell floors and tried a series of episodic pieces stretched along a path, each dealing with a different daily activity. The translucent layered, curved wall was my most successful of these.

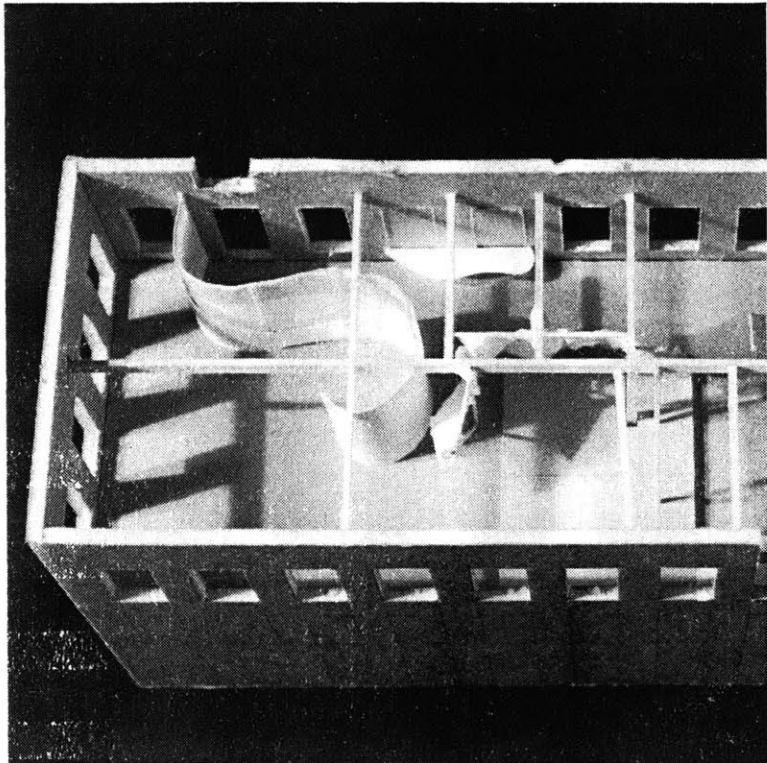
Soon feeling pressed between the two layers of shell floor and roof I began to investigate vertical movement and double height space linking up to the roof or down to the second floor.

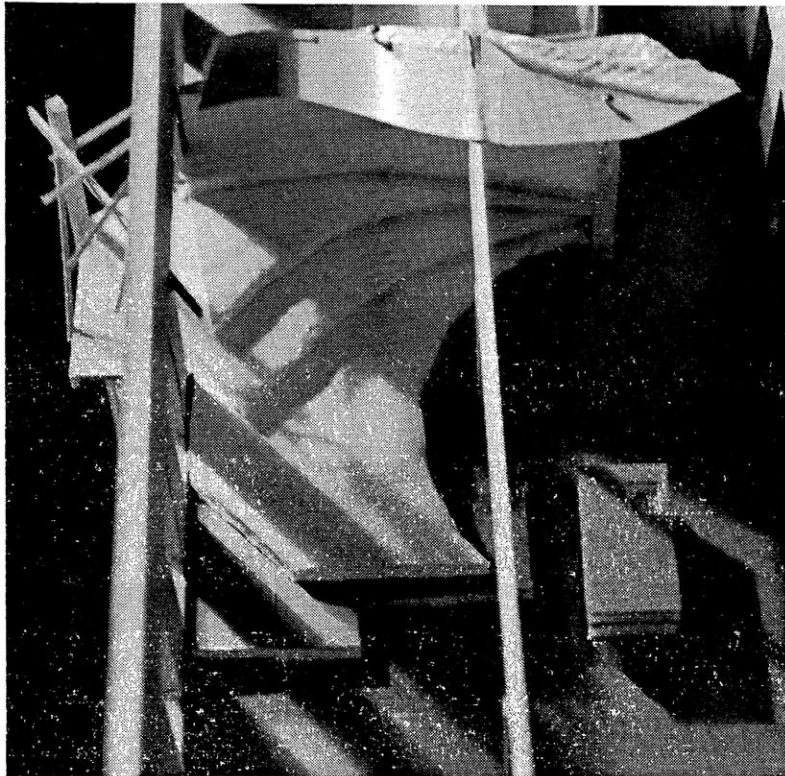
The walls are strong, and I am quite taken with their screen-like quality in the changing light, while the roof and floors are thin, made only of wood and finishes. After several experiments, I decided that the walls cannot be broken through in any way that removes any of their mass - no cutting back or breaking holes. Extensions beyond would have to depend on the shell building openings for access. Roof and floor were quite easy to break through and I could then focus on issues of form and balancing the tension with the remaining shell elements.

To deal with level changes and vertical circulation I began to push a notion about platforms and steps that









began in a scooped amphitheater form in one of the more horizontal models. It grew a landscape of platforms for being on and moving through, a cascade of polished maple terraces.

As I moved to a larger rough model at 3"=8'-0" scale I developed the second layer of platform and circulation, the steel system, to overlay the wood landscape and do the bridging and steeper climbing. I found the 3"=8'-0" model to be large enough that I could start to get a body sense of what it would feel like to be in the spaces that I was creating.

My last model was a 3"=8'-0" scale model using finish materials in an attempt to portray some of the material and light qualities that the actual physical place would have.



7.0

The Design For an Artistic  
Inhabitation

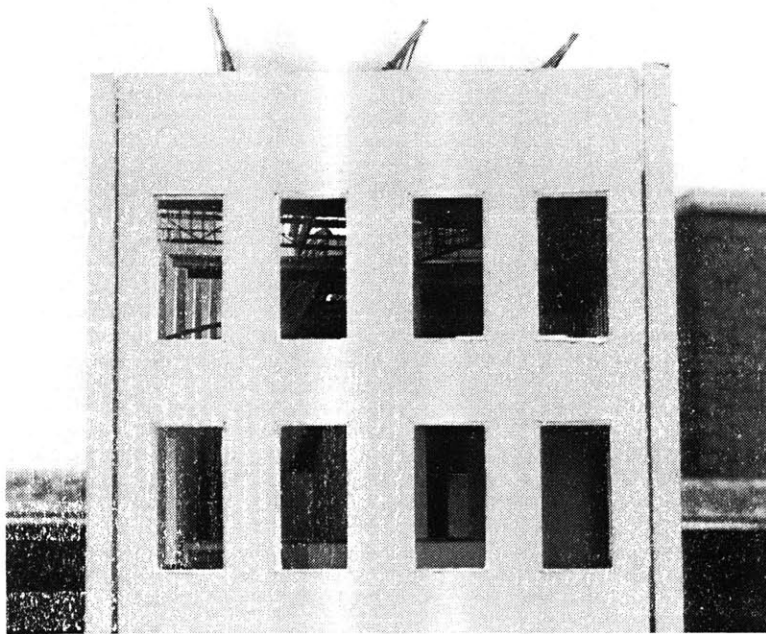
The following are images are photographs of my last model at 3"=8'-0" scale that attempt to document some of the qualities of space, light and texture intended in my design.



## 7.1

from out in the street there is little hint of what  
might be inside  
only the roof peeking over  
a thin skin of metal across three spiky truss ends  
some birdlike nesting thing on top of the building

the walls are solid  
guarding whatever  
might be inside



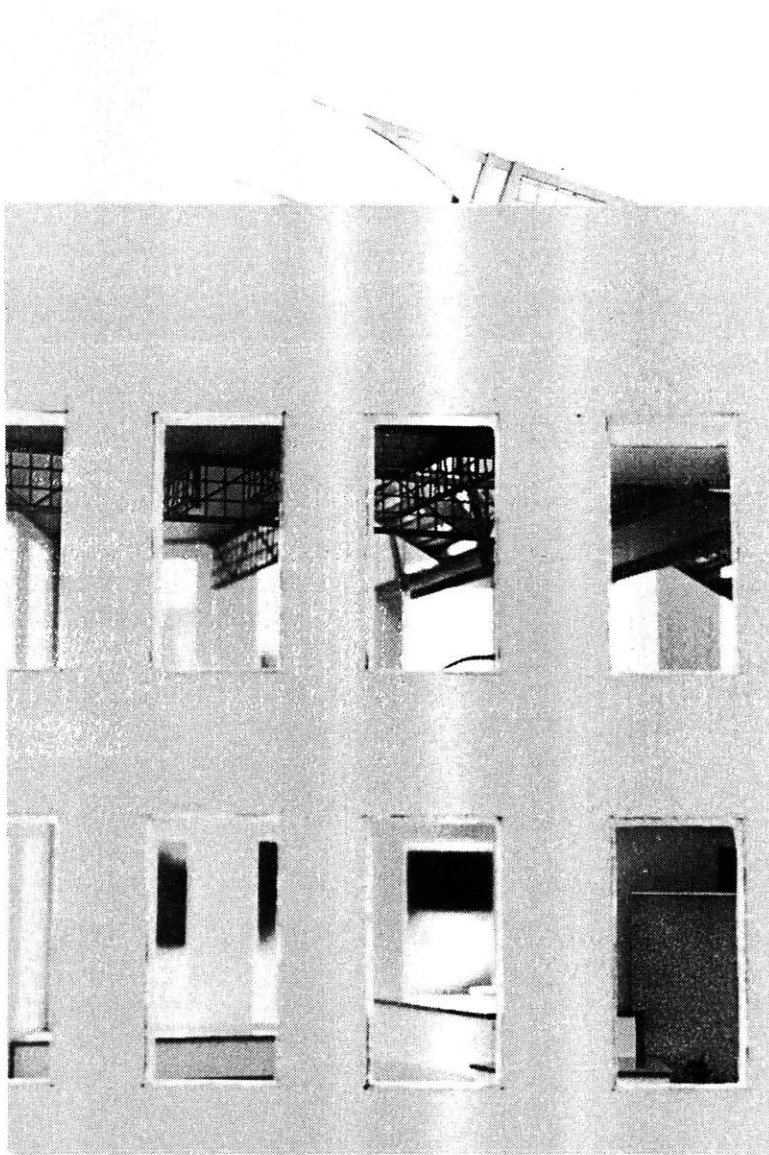




## 7.2

walking closer we can see inside-  
little views of the ceilings  
flicker and change as we move by  
as we gaze up through the tall windows  
fascinating ceilings  
covered in layers between  
and over  
even hanging from  
the metal bones  
layers, metal, fabric, color

fascinating ceilings



## 7.3

view from the north

we see the 2-story space of the living room  
at the east end

openness

in contrast to the small sleeping alcove

just one window big

hidden on the lower level

behind the Japanese screen

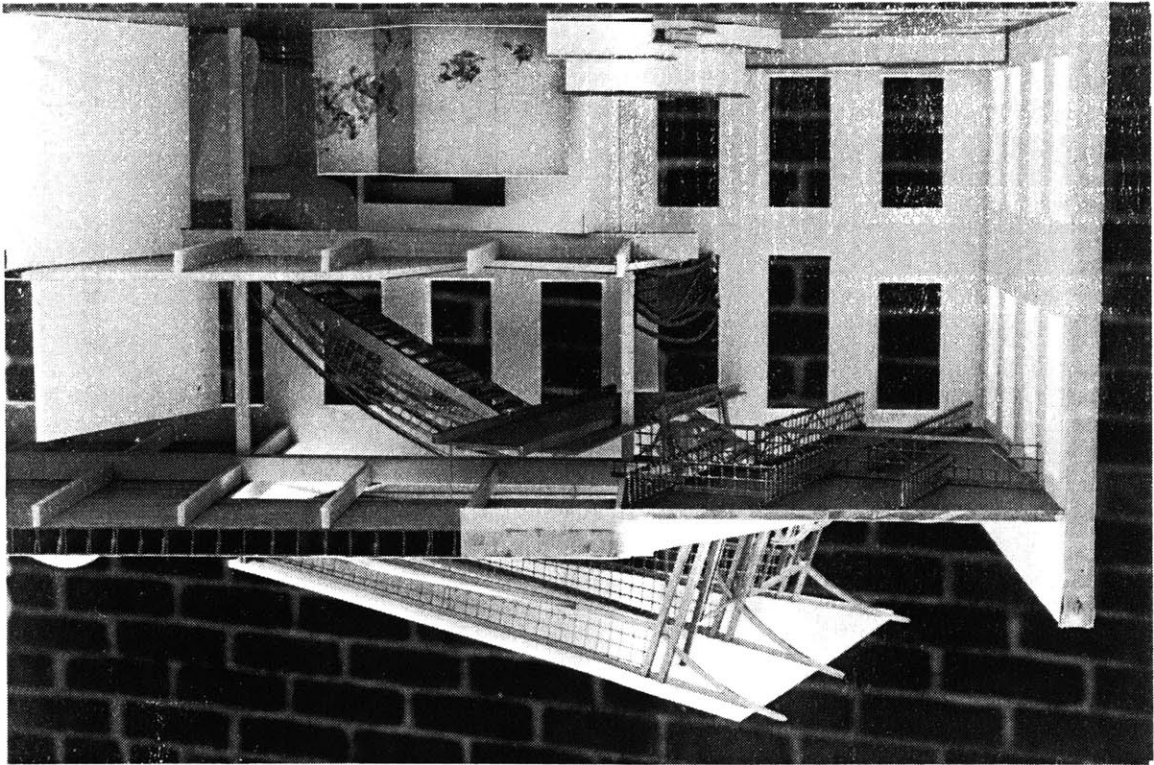
beyond the workroom

timber and steel

shell and insertion

two systems are showing and we

try to sort them out



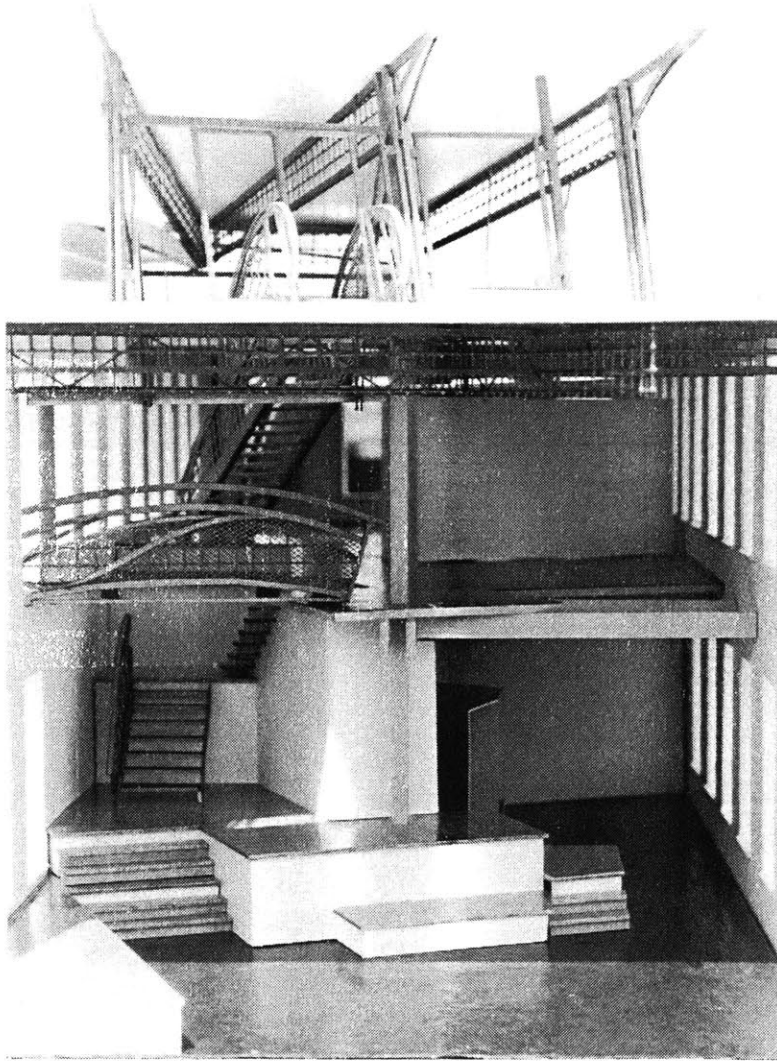


## 7.4

looking in from the east end

two directions

the system of the inhabitation- core and platforms  
bridges, bridge-like stairways, ways of moving up-  
move on an angle against  
the geometry of the shell

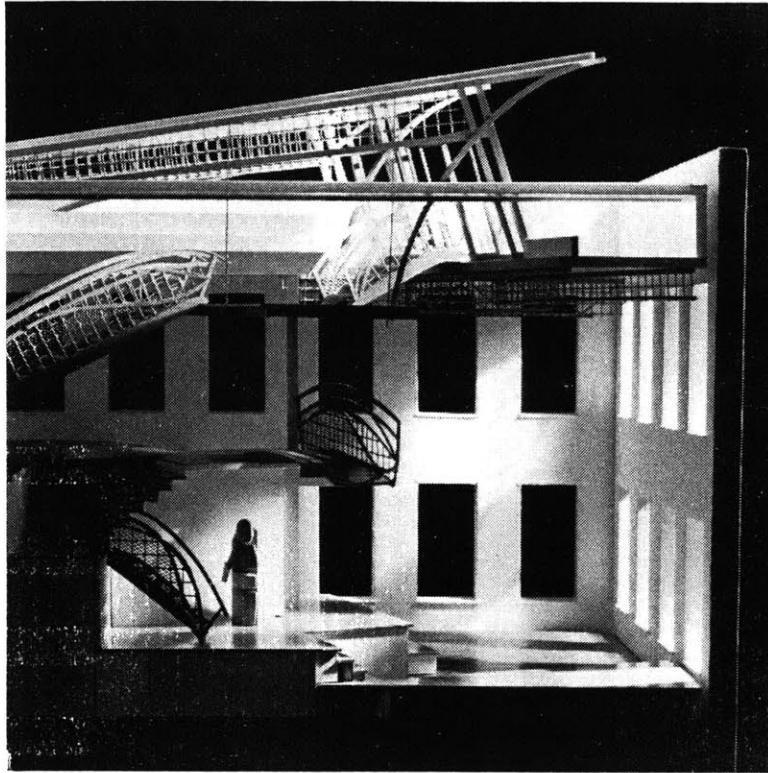




7.5

view from the south

volume of living room  
contained and illuminated  
overlook it from the shadow  
or slip into it  
from the coastline of platforms

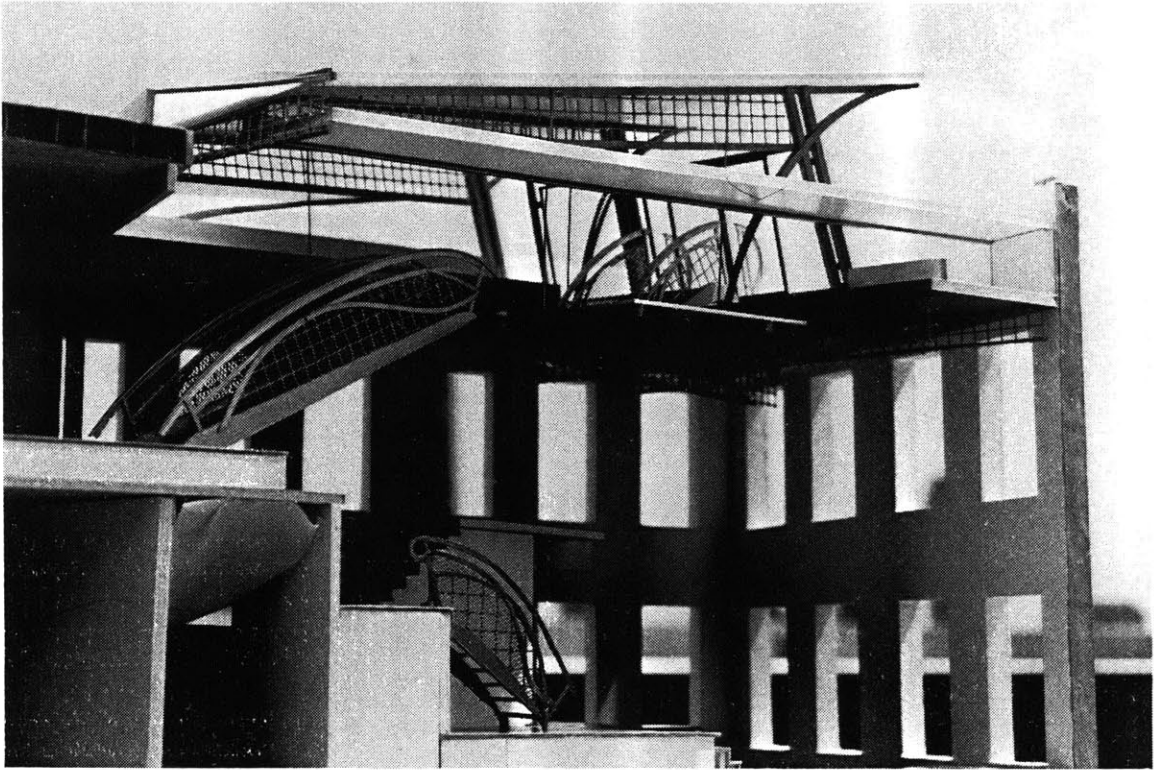




## 7.6

getting up  
climbing up on top of the living room volume  
getting through and out of the shell  
the light is from above now, the sky  
inhabitation has broken through the roof  
made its own cover

the roof patio has  
both a sense of the open-work steel filtering the sky  
and the security of the shell wall  
touching back to earth

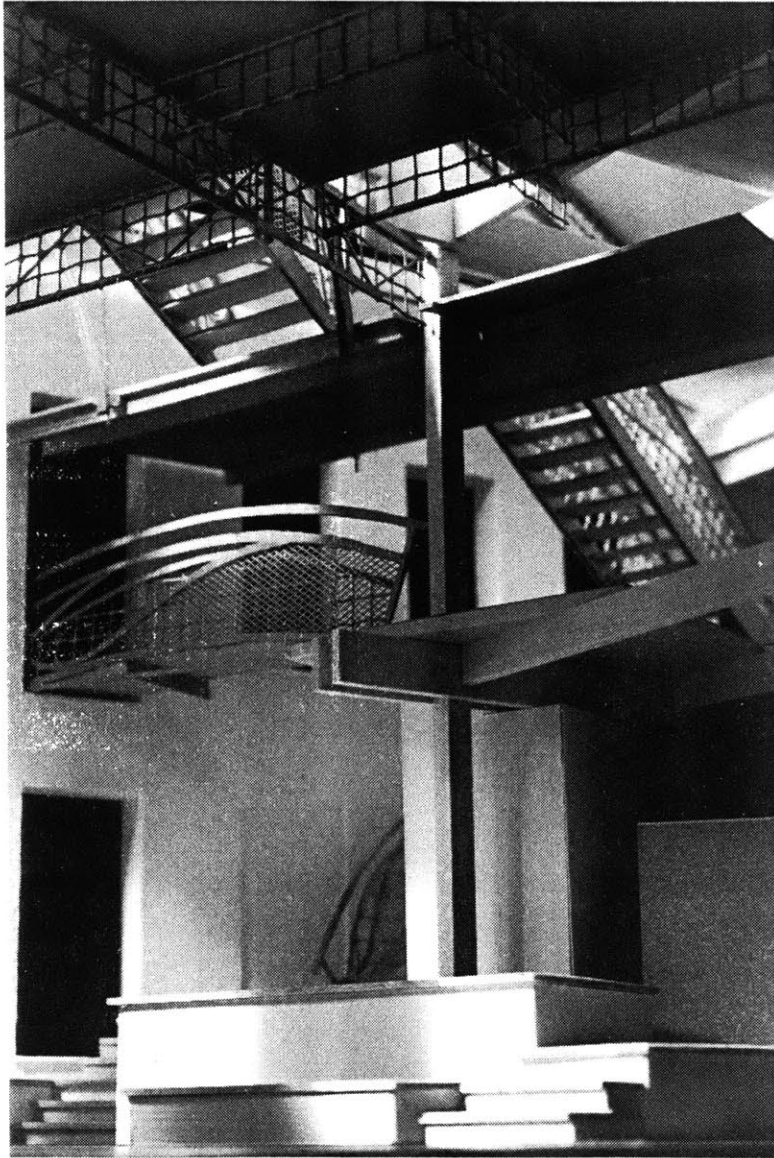




## 7.7

from the living room floor  
we see light above and a way to climb up to it  
we see the timber structure of the shell  
we see a way back into the deepening shadows  
toward the private cave of the sleeping alcove

we can get to any of these  
and many places in between

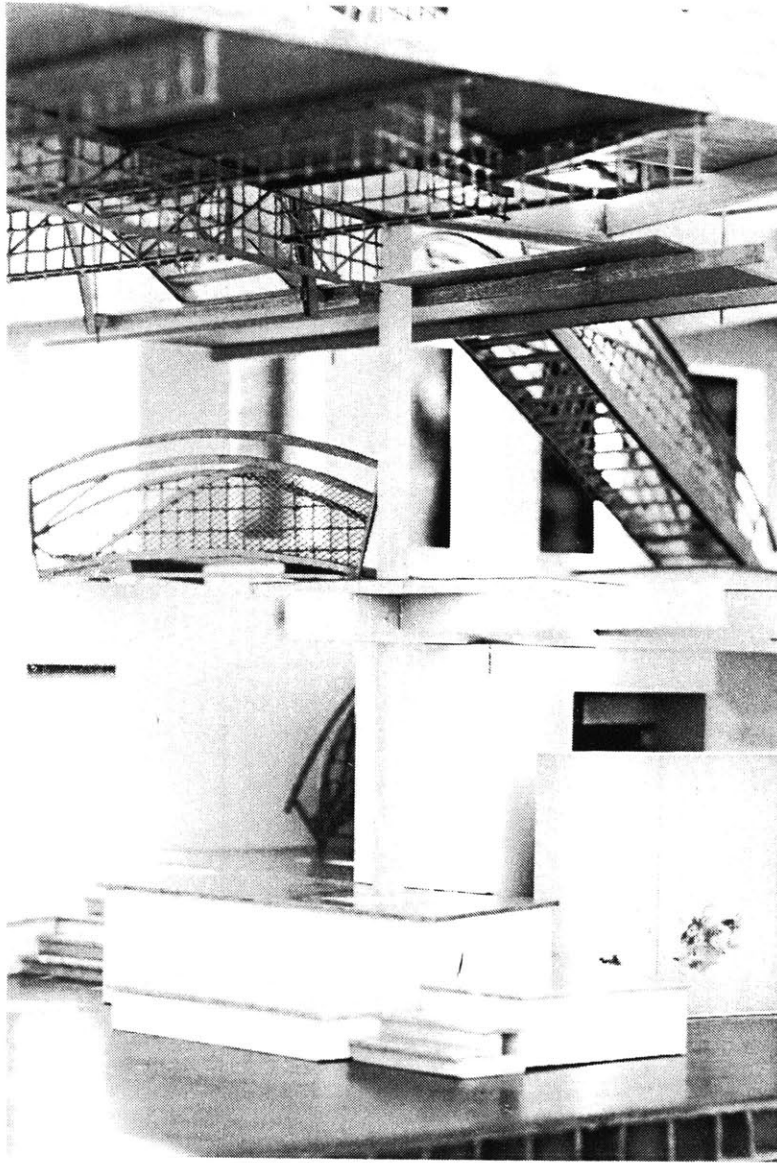


## 7.8

the core and peninsula of platforms  
gleaming slabs of maple  
a stage to be looked to or  
a hillside to look from

(in a later plan the peninsula stretches even further,  
introducing a desk height piece giving another use  
surface and additional separation between the living  
room and work area )

diffuse light  
mid afternoon  
or an overcast day






## 7.9

getting up, climbing alongside the core  
the metal bridge stair  
allows us to scale easily  
up a small cliff in the platform landscape



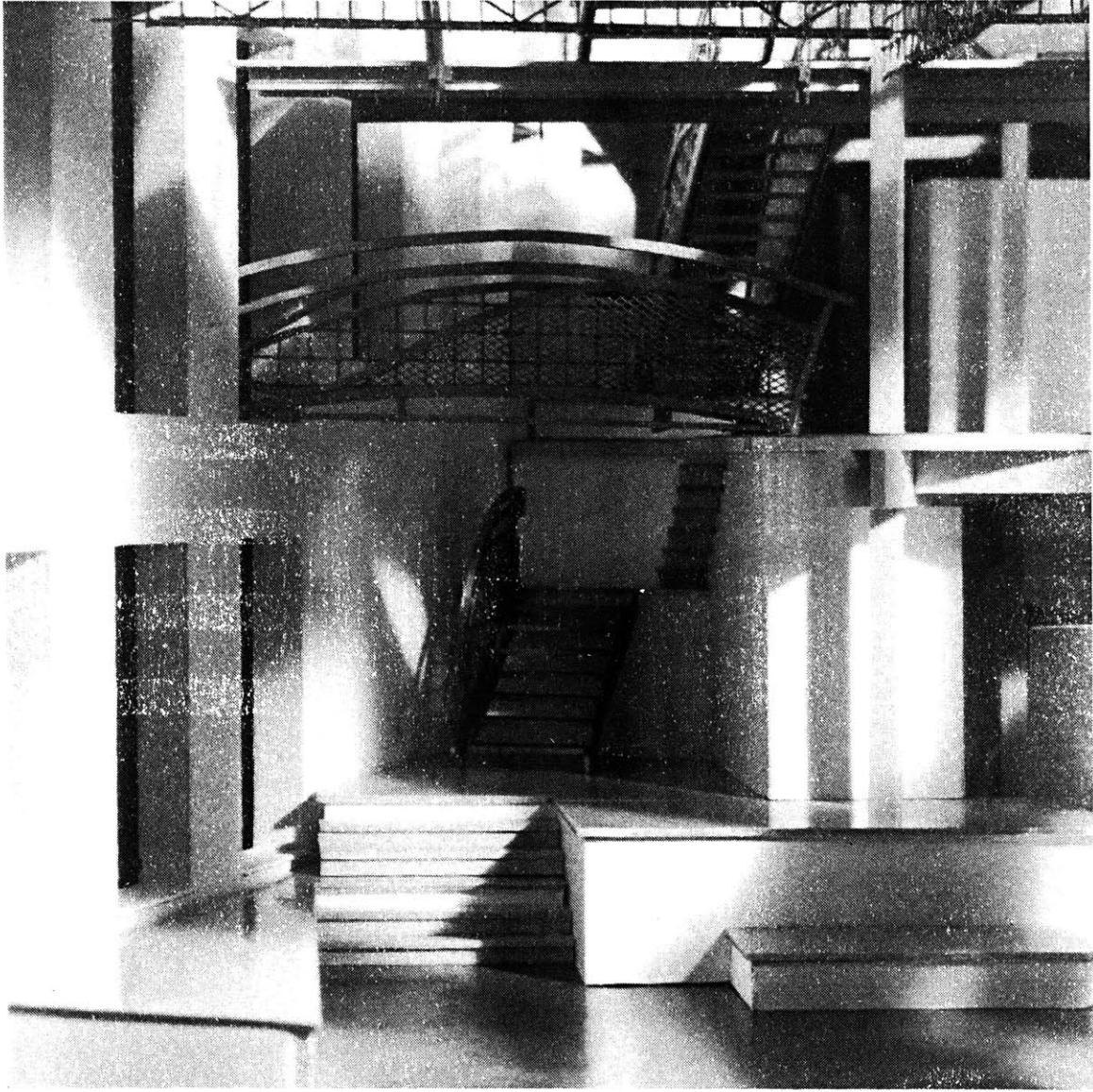





## 7.10

we climb up through a little ravine  
a pocket between wall and core  
screened from the big room  
by the span of the entry bridge

the platform landscape meets the wall of the shell  
quietly, not disturbing it  
but cuts right into the core in order to  
climb on top of it






## 7.11

view from the balcony (see plan) next to  
the entrance bridge

look all the way along the wall to the west end  
the whole length  
a powerful expanse and rhythm

a layering  
each part remains clear  
yet combines in a complex screen when we try to see  
them all at once






## 7.12

and having climbed to the third level  
we want to continue toward the sky

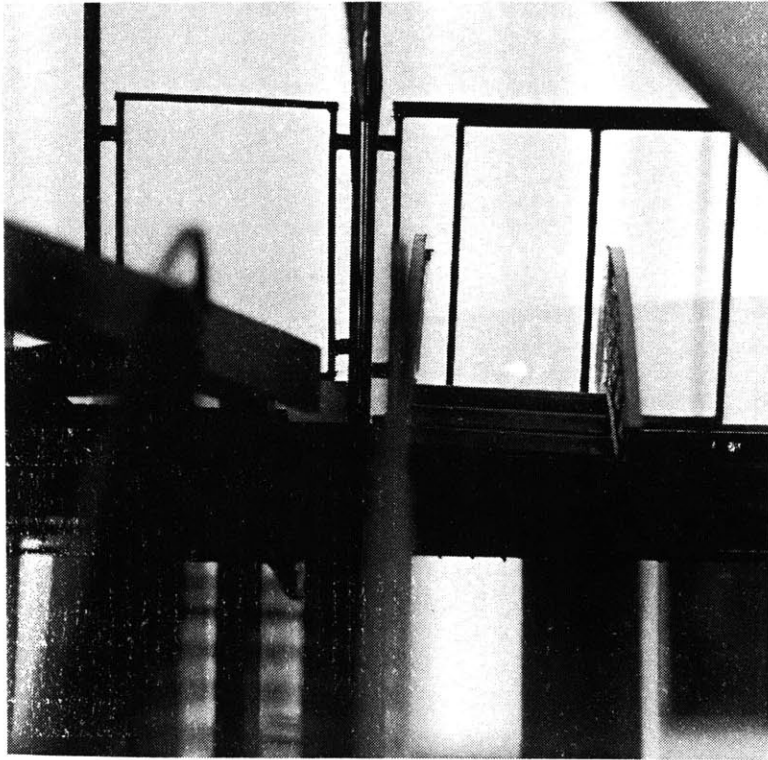
we take off from  
a platform that gathers quietly against the shell wall  
and launch ourselves into  
the suspended steel world up  
close under the personal roof  
up we fly  
to the mezzanine  
where we can be half in, half out  
of the hole  
where the shell roof has been cut away






## 7.13

to get all the way outside  
one last bridge stair through  
a screen of aluminum and glass  
to finally arrive on the patio  
to find your drink still on the table  
and the charcoal exactly ready  
for grilling the shishkabob



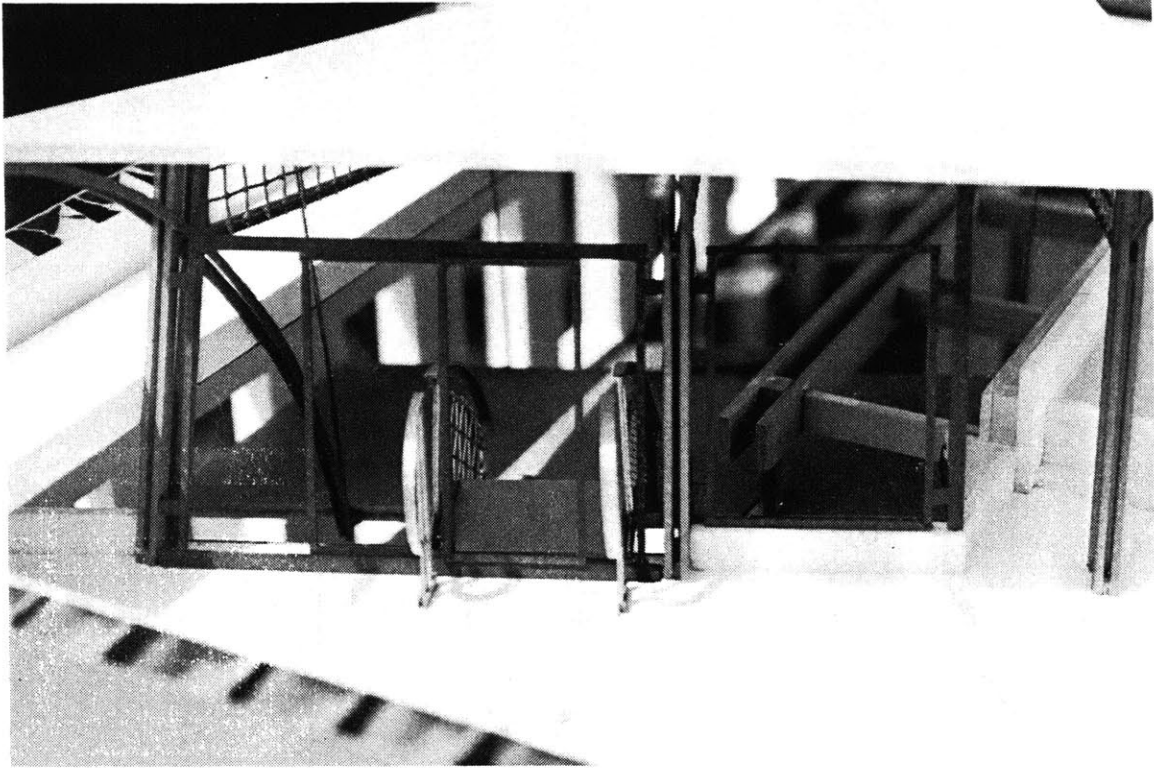





7.14

look back in

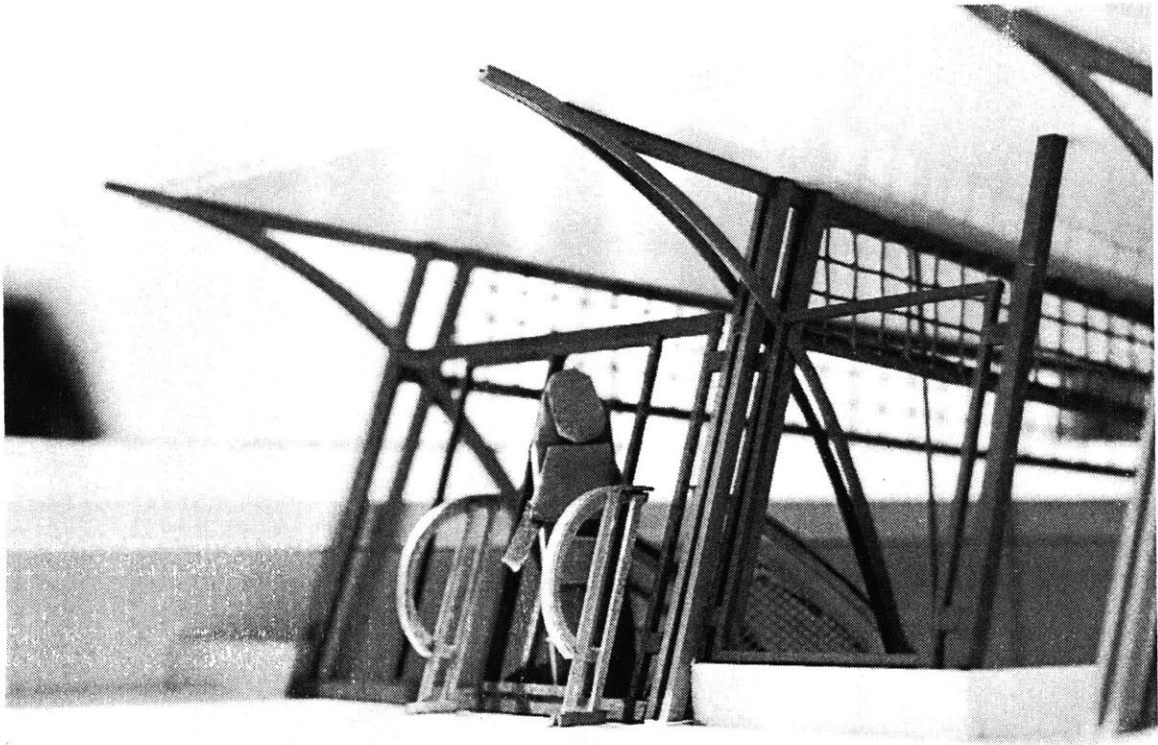
you forgot the lemon-butter marinade

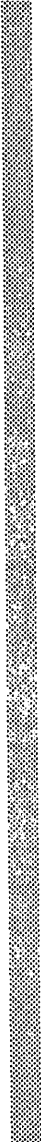




## 7.15

Cardboard Bob gives a quick understanding of the size of the roof. It is a personal roof, the sizes of the pieces are ones that I can imagine with my hands and body. The span of the roof is not huge, but it is large enough to be strong, to reflect my confidence, and to illustrate the balance I seek between the shell and personal artistic expression.



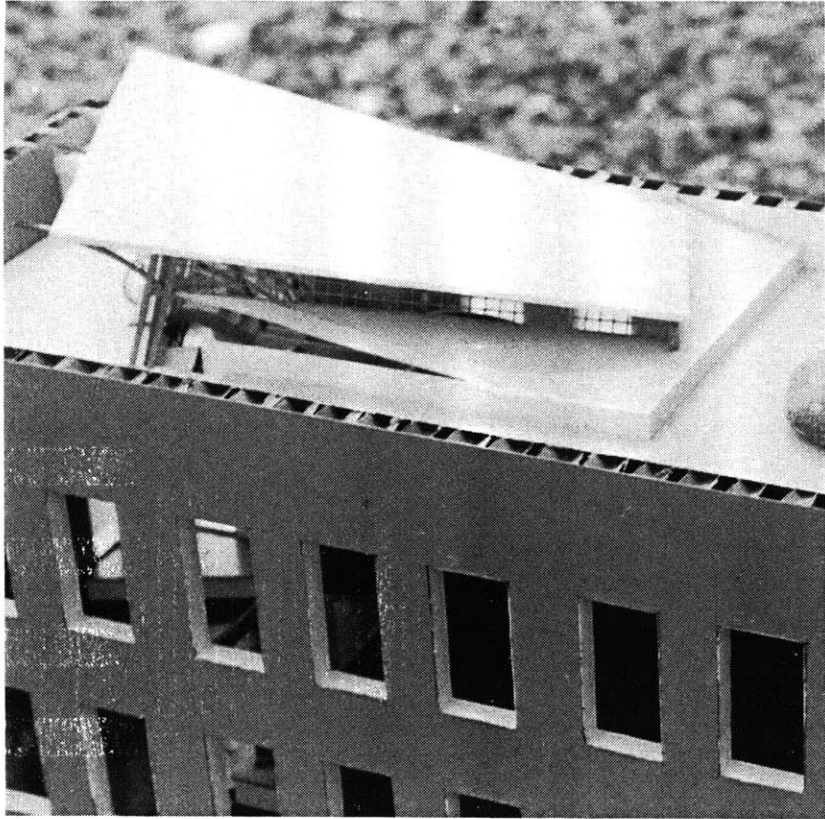



## 7.16

view from the northern sky

the zone between  
the curb of the cut-back shell roof  
and the edge trusses of the steel roof  
is covered  
with a translucent membrane

on the inside  
it glows warmly  
in afternoon or evening light





7.17

view from the west end of the roof, the shell side,  
looking back along the sweep of the steel roof and its  
translucent skirt

the city, the neighborhood, the home

from the roof I look out  
from the city I look in  
I am always part of both





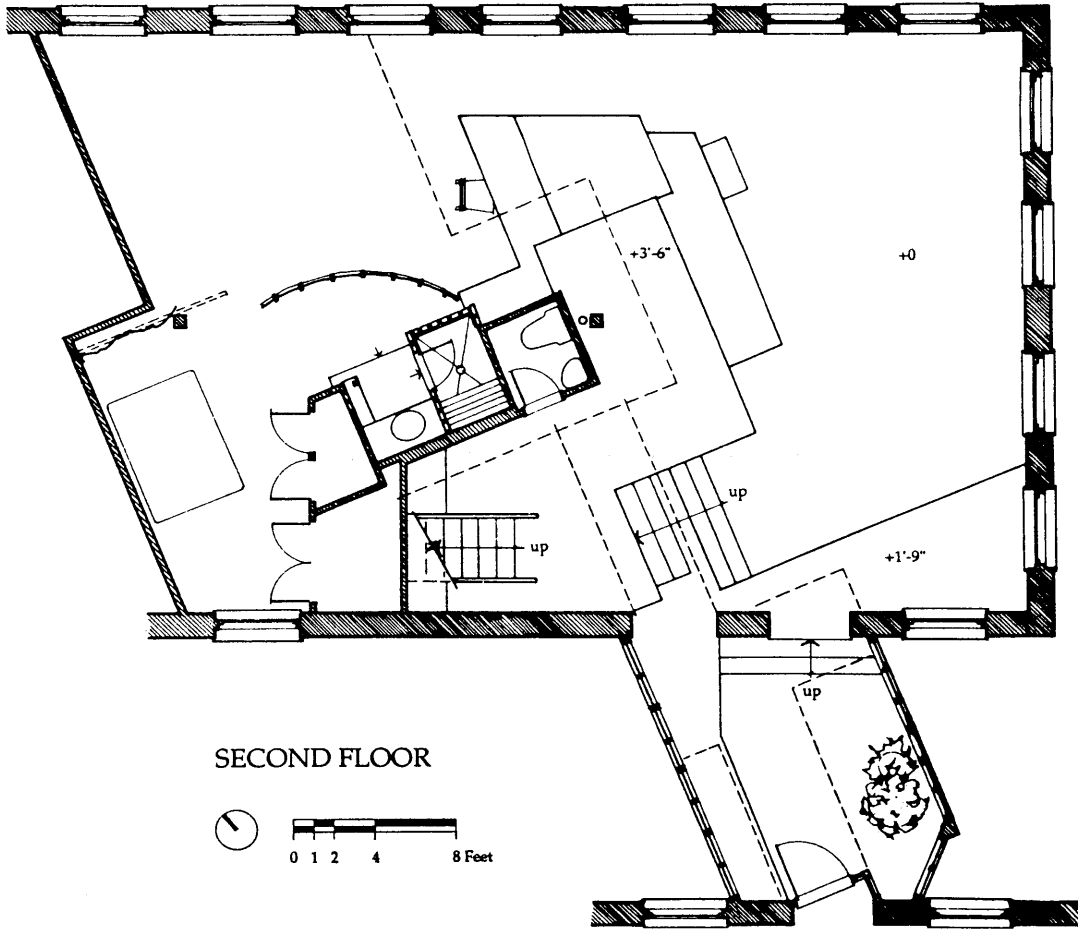


8

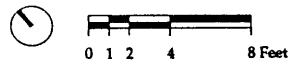
Drawings

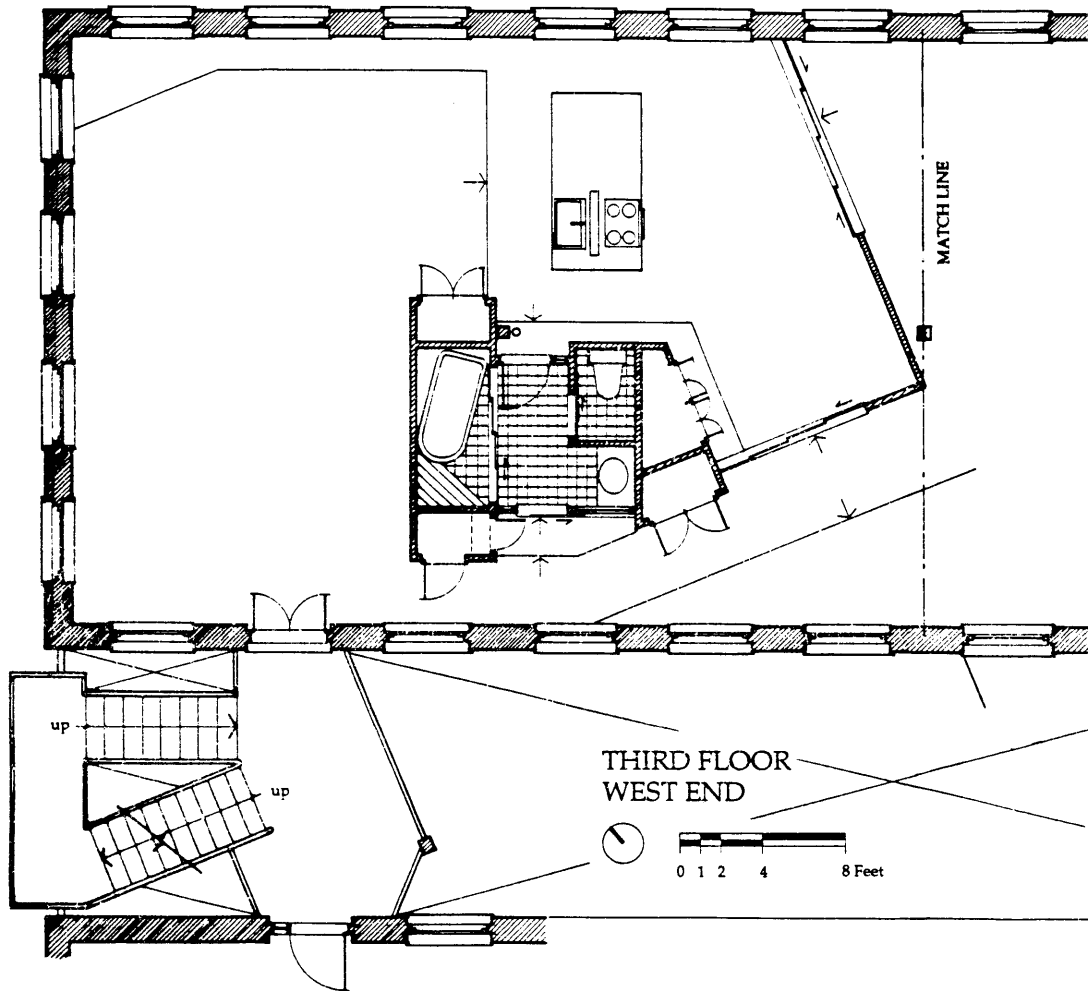
Though most of the design work was done in model, I drew as a record and to explore some ideas that I didn't get the chance to build.

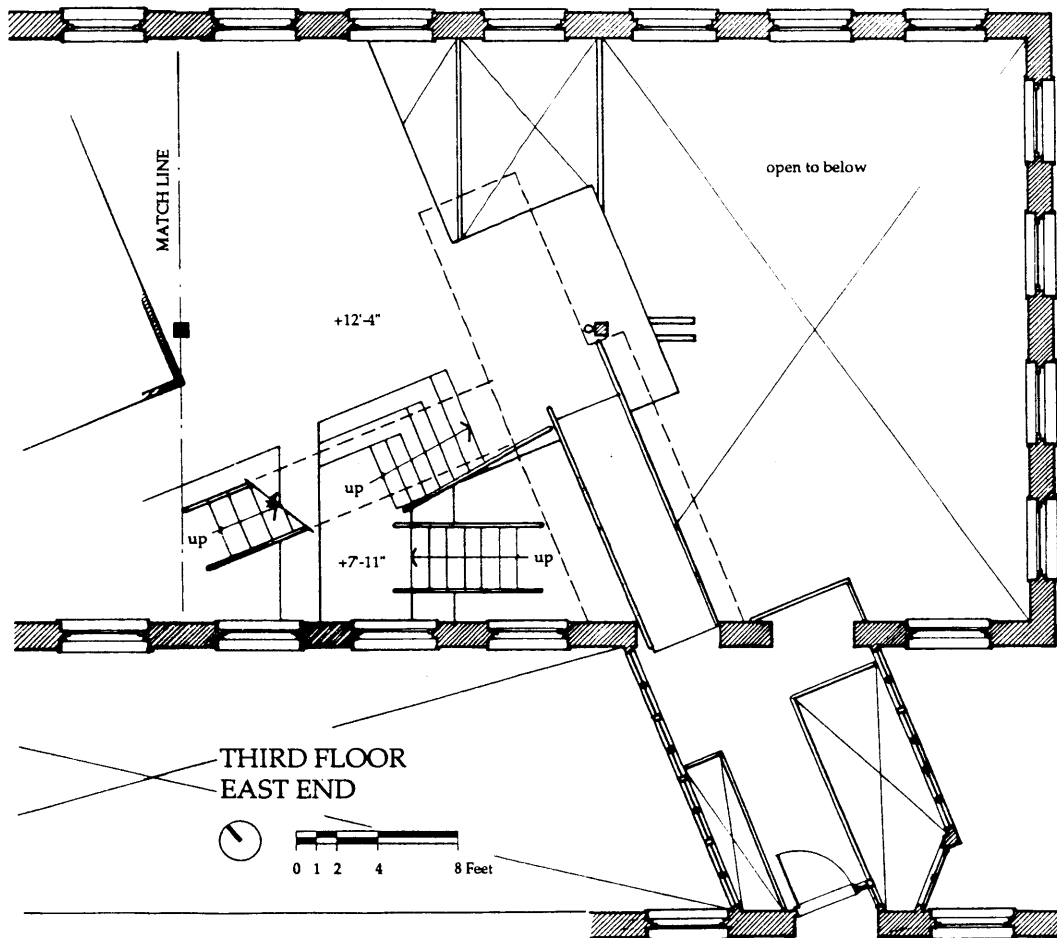




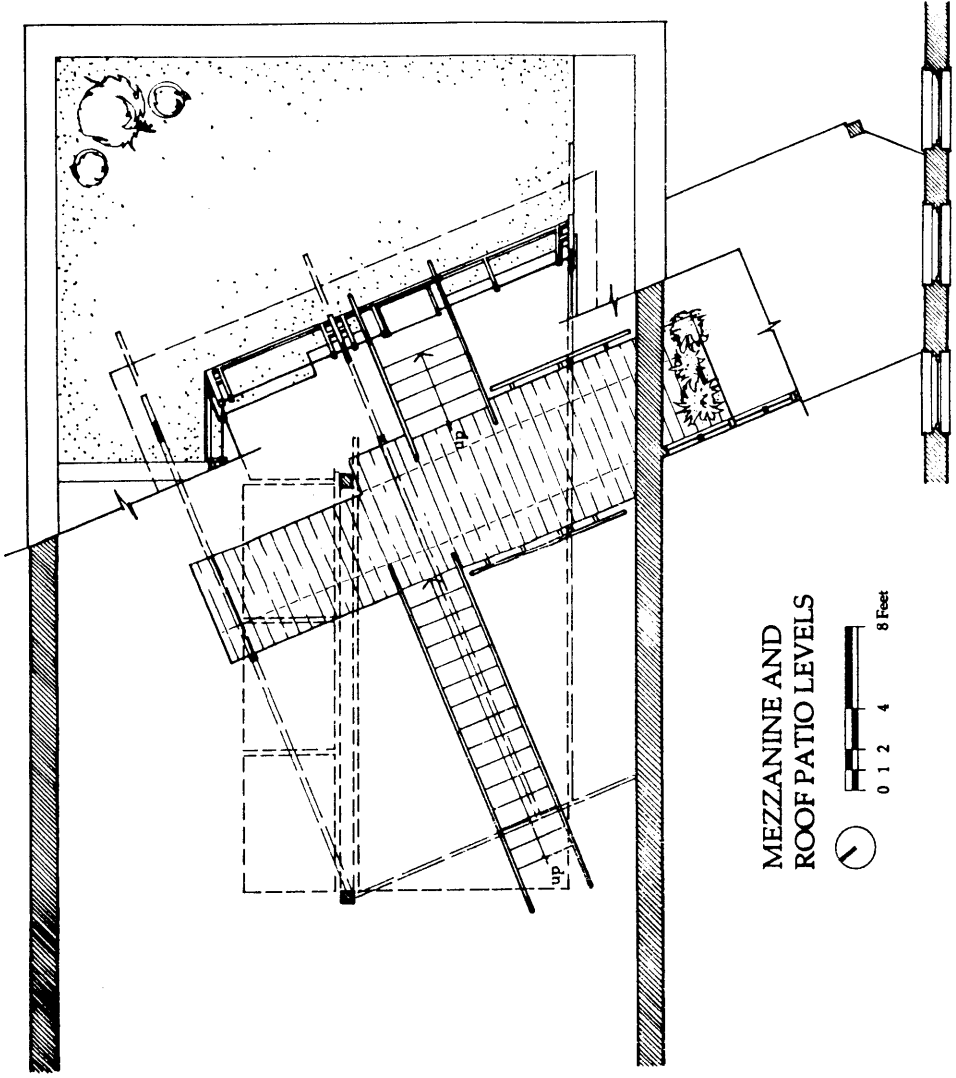
SECOND FLOOR







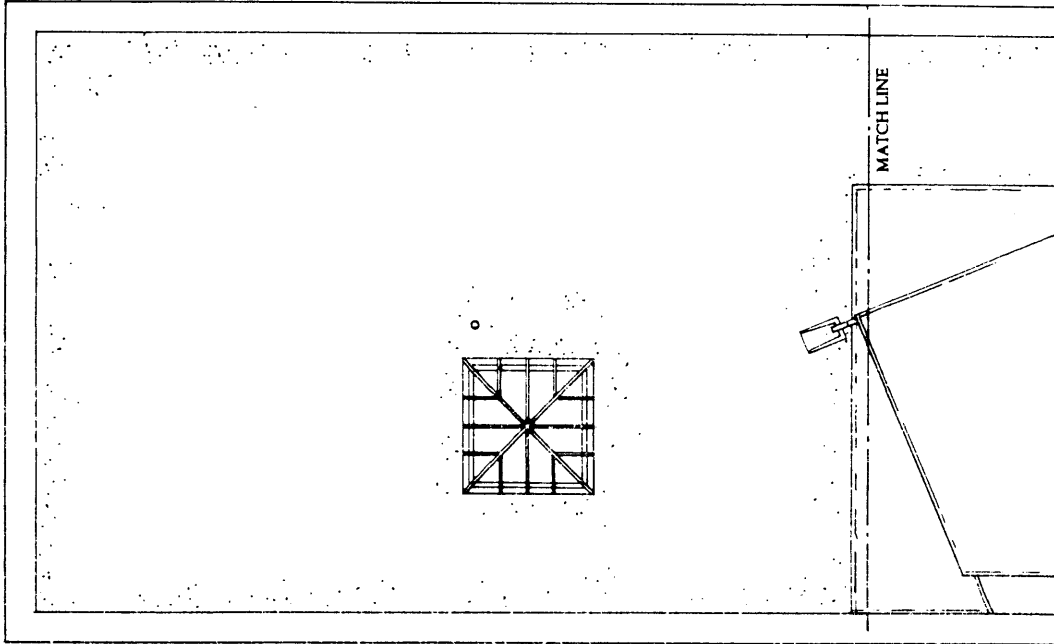




MEZZANINE AND  
ROOF PATIO LEVELS

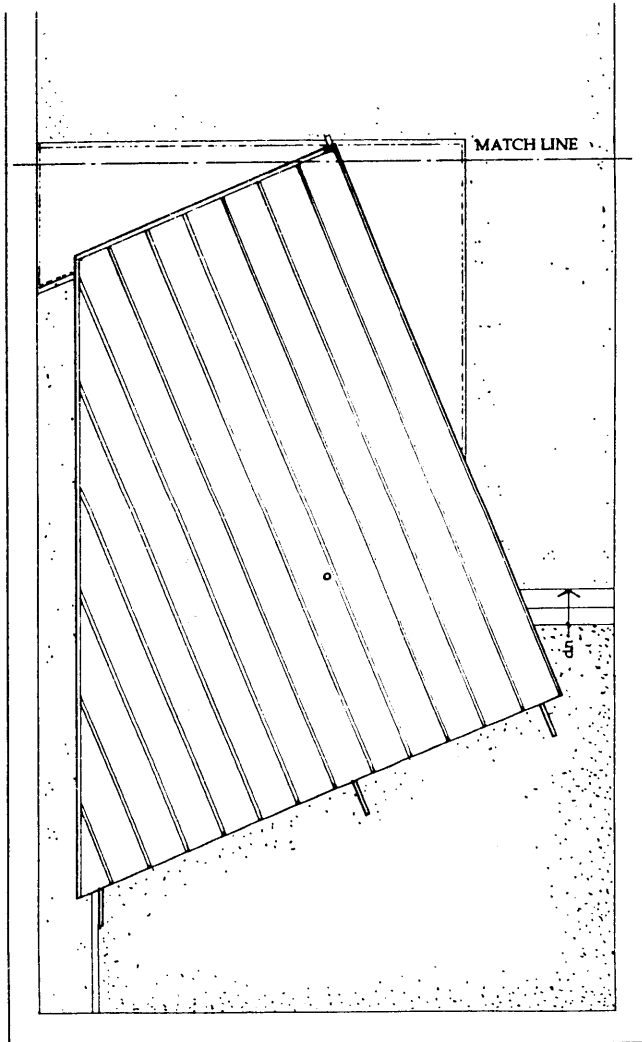






ROOF PLAN  
WEST END

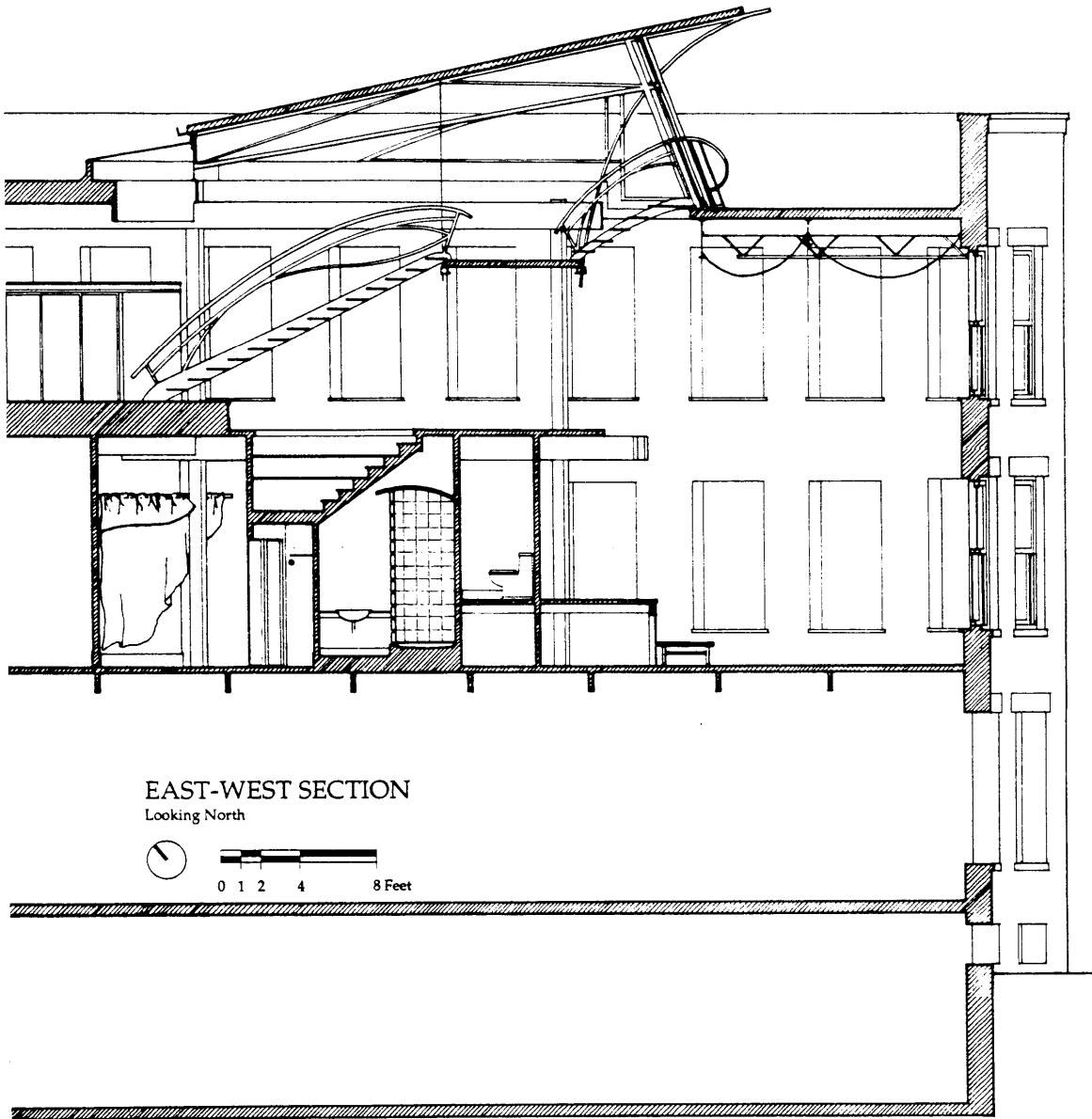




ROOF PLAN  
EAST END









9

Afterward

There is, of course, much more that I wanted to explore in this project. My design is a new house, still smelling of sawdust and plaster, and I want to move in and live with it, dream about it, add to it and change it. But there is a deadline and the sun is rising. The trees have nearly full leaves now so the light in the big room is softly dappled and constantly moving, except in that calm at dawn as the first spots of gold flash high up on the wall...

The full depth and breadth of the shell and inhabitation notion are only gradually coming to me, and will require a lifetime of further consideration. It has helped me understand some new things about my own past work and some of my favorite places, and should be useful to me in the future.

And as for the Artistic Experience in Dwelling ... As I live, I keep trying every day to find that spark and go with it.

## Notes

- page 6. Vase. Ott and Brewer, Trenton, N.J., ca. 1883. Gilding and enamel on porcelain. Photo, p. 206, *In Pursuit of Beauty, Americans and the Aesthetic Movement*, Metropolitan Museum of Art/Rizzoli, New York, 1986.
- page 7. Quote from *In Pursuit of Beauty*, p. 48
- page 8. "A Dado Designed by Mr. C. L. Tiffany". Illustration, *In Pursuit of Beauty*, p. 76
- page 9. Detail of porch construction, Gamble house, Pasadena, 1908. Photo, *Greene & Green : Architects in the Residential Style, Current*, Karen and William R. Amon Carter Museum of Western Art, Fort Worth, 1974
- page 11. Photo: Eppo Notenboom, Imagination postcards
- page 17. Photo: Arthur Leipzig, *The Family of Children*, Ridge Press, Grosset & Dunlap, New York, 1977
- page 21. Photo: Gijs Woldhek, 1982, Art Unlimited postcards, Amsterdam
- page 23. Watercolor, Anna Alma-Tadema, *The Drawing Room, Townsend House, Regents Park*, Royal Academy of Art, London
- page 25. John Singer Sargent, *Garden Study of the Vickers Children*, oil on canvas, 1884

- page 29. Photo, Hardwick Hall, 1590-7, *The Buildings of England, Derbyshire*, v. BE8, Pevsner, Nicholas, Penguin Books, London, 1953
- page 30. Quote from *The Buildings of England, Derbyshire*, v. BE8, p. 151,155
- page 34. Puck Building, Manhattan, 1885, arch. Albert Wagner. Photo, *The International Book of Lofts*, Slesin, Suzanne, C. N. Potter, New York, 1986
- page 36. Quote from *The Poetics of Light*, Plummer, Henry, A+U Publishing Co. Ltd., Tokyo, December 1987

all other photos by Ann M. Walters