

DESIGNING IN CONTEXT:
A NEW BUILDING FOR BOSTON'S BEACON HILL

by

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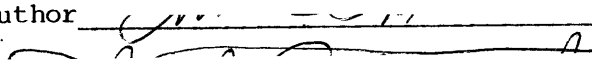
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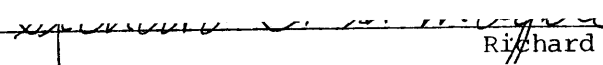
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DONNA L. HARRIS

Submitted to the Department of Architecture
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ABSTRACT

The importance of contextually sensitive design is once again becoming recognized by the architectural profession. A contextual design is based upon an understanding of historical and social factors as well as the physical context of the project.

This thesis is an exploration of the relationship between an existing environment and the design for a contemporary building. The design will be set on Boston's Beacon Hill, an architecturally rich area that has been designated as a National Historical Landmark by the National Parks Service. The site itself is a relatively large parcel of land located on the Hill's North Slope, an area of somewhat dilapidated houses, now undergoing considerable rehabilitation. The program chosen, that of a residential community for the area's older residents, will take advantage of the site's relatively large size to develop collective facilities as well as approximately 70-80 apartments. While the overall size and collective nature of this project distinguish it from the prevailing pattern of house size and organization on Beacon Hill, they serve to emphasize the need for traditional patterns to be modified and adapted to serve contemporary needs and lifestyles.

The design exploration will be preceded by an examination of the historical, social, and physical features of Beacon Hill. Ways in which these aspects of the environment have been used to create contextually successful buildings will be briefly explored. Then the programmatic principles of congregate living environments for older people will be considered. Contextual decisions will be traced from site planning to building organization, focussing on the development of a formal vocabulary for the building exterior. The goal will be to create a new building, modern in execution, but compatible with the traditional forms of Beacon Hill.

Thesis Supervisor: Richard C. Tremaglio
Title: Adjunct Professor of Architecture

Acknowledgements

I would like to express my thanks to Richard Tremaglio, my advisor. His insights, patience, and support have made my thesis semester one of the most positive experiences of my M.I.T. education.

Appreciation is also due to Professor Sandra Howell who shared some of her great experience in the evaluation of living environments for the elderly and who helped me to realize the importance of social research to the design process.

Much of my interest in the issues of contextual design dates from my experience in the office of James McNeely on Beacon Hill. Thanks go to Jim and to his associate Steve Judge for inspiring me to undertake this study.

Other people contributed to the preparation of this thesis. Carla McCabe of Rogerson House and Roberta Campbell of 116 Norfolk Street generously shared their time to help me understand some of the actual workings of congregate living situations. Pamela Howland was extremely helpful in preparing the text, adapting her schedule to my sporadic fits of writing. Mark Crosley, Pablo Molestina, Don Livingston, and Diane Georgopoulos shared the vicissitudes of thesis life, helping me to keep my troubles in perspective. George Pastore was always available to remind me that better days are coming.

Most of all I'd like to thank Paul for his support during five seemingly endless months of single-minded work when most of the attributes of normal life slowly ground to a halt. He kept my body and soul together, offered advice and remained understanding through it all.

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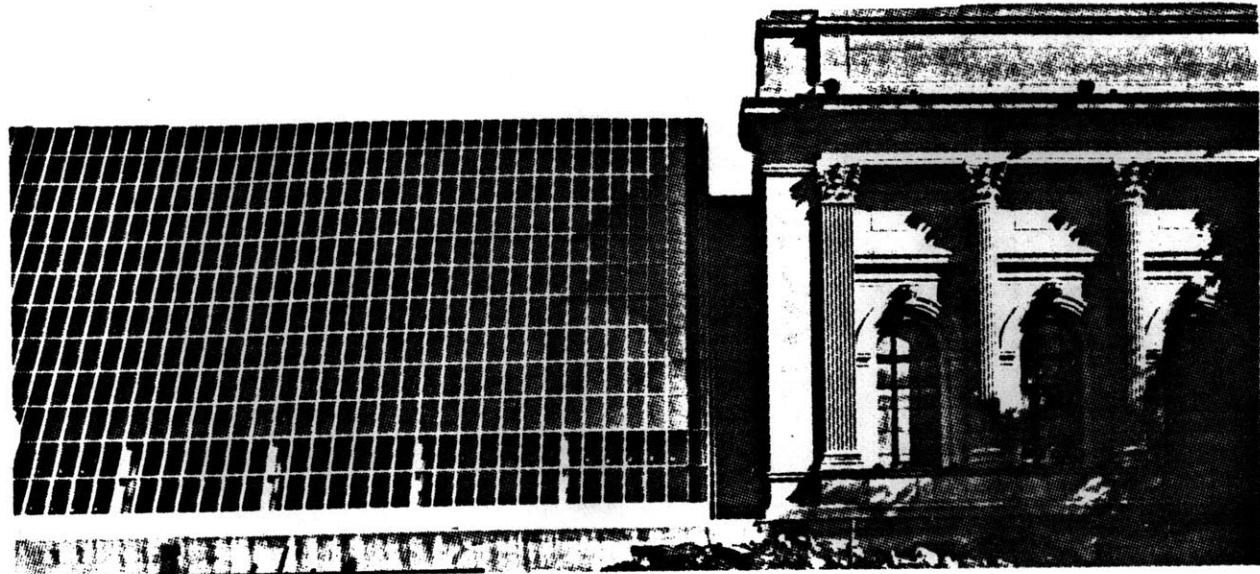
PART I

**ASPECTS OF
THE PROBLEM**

"History's mark on a city should never be erased. The visibility of time is one of a city's most vital aspects. Change is not only a process but a product, and time's layers should be felt by those walking down a city street... Imitation is an easy way out, a way that denies the potential to offer something that gives the present to our meaning. What is needed is not the easy route of imitation, nor the unforgivable arrogance of must-be-new modernism, but the difficult achievement of the in-between."¹

Paul Goldberger

*Addition to Metropolitan Museum
of Art, New York by Roche,
Dinkeloo, & Assoc.*



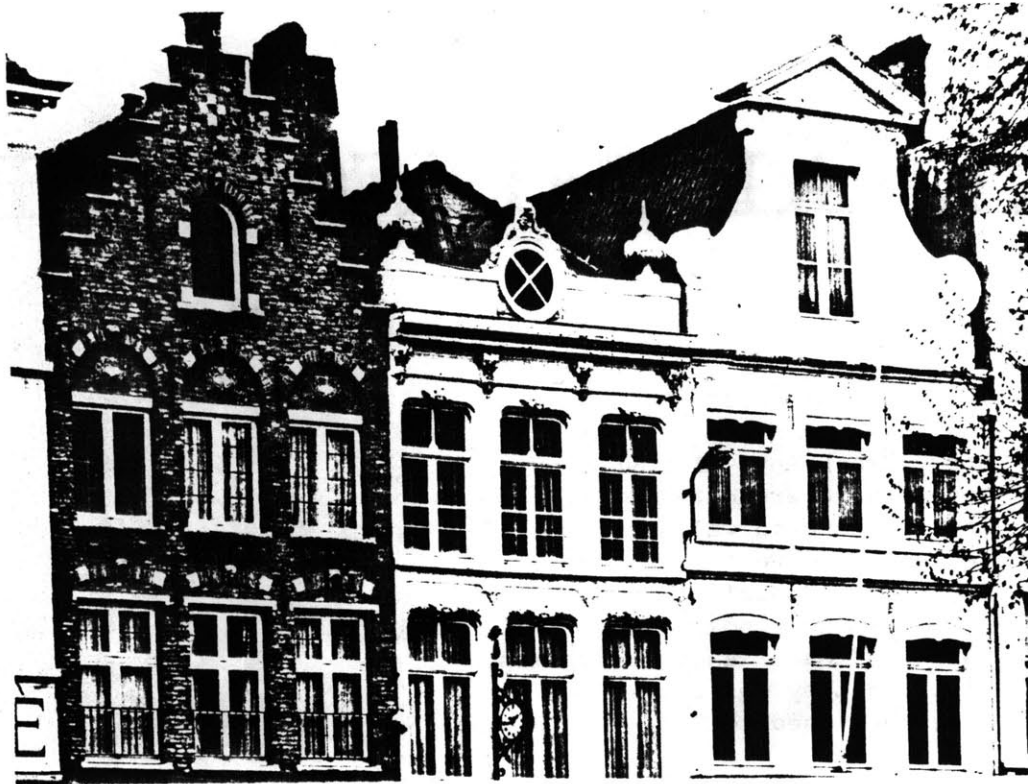
Introduction: CONTEXTUAL ARCHITECTURE

It happens all the time in our cities today.

A small group of business men present their plans for a new office building in a historic district. The site of the planned enterprise is presently a parking lot, formerly occupied by an elegant Greek Revival bank building. The project is the cornerstone of a scheme to revitalize the entire area by bringing new business to an historic but decaying part of the city. Community support is gradually building. Finally the architect's drawing of the proposed structure is unveiled at a community meeting. It is a modern vision of sleek steel and glass, ten stories high. The community group leaves the meeting confused and upset. Surely this vision does not fit

in to the district they know and love - a place of four story Greek Revival rowhouses with ornate wrought-iron fences and ivy covered walls. Some residents leave the meeting resigned. "That's just the way buildings look today," one signs. "Yeah," another replies. "Too bad they don't make 'em like they used to."

How many of us have similar reactions when told that a new building is planned for a particular locale? How many of us, including architects, have secretly harbored a fear that the proposed edifice will, alas, be little more than an eyesore? Why does it seem to be only the rare modern building that can evoke awe and wonder from its



*Three houses in Bruges, Belgium
built in very different styles
but visually compatible.*

inhabitants?

The fact is that today we are becoming aware that our architecture is seriously out of step with our cities and our selves; that our cities today are full of modern buildings each screaming for attention, each trying to be as completely different from the others as possible;

and that the 'arty' ideas of our designers are understandable and appreciated only by themselves while the public taste for traditional forms is considered a thing to be scorned.

How ever did we get in such a mess?

For the answer to this question, we have to go back in time. Before the twentieth century, generations of designer-builders in Europe created cities whose visual harmony astonishes us today. They built the common building types using traditional construction techniques and conventions of detailing. Specific building types had evolved characteristic forms which, despite changes in architectural style over the years, remained easily recognizable to many generations of inhabitants. This resulted in buildings which, although built hundreds of years apart, can coexist perfectly happily.

Then, in the late eighteenth and nineteenth centuries, a new idea took hold in the world of art which was eventually to change all that. The romantics of the age argued that sheer technical virtuosity was no longer enough to make a painting great. Startling originality of concept or style were the new goals. Thus, time-tested themes such as the Madonna and Child, realistically portrayed, were discarded and artists looked for new subject matter. New representational techniques were developed which led to abstractionism, surrealism, and ultimately to non-objective art, in which the painterly technique itself was the subject matter.

This attitude eventually carried over to the field of architecture. However, it was not until the early years of the twentieth century, with the development of new building technologies that the emphasis on

originality was to emerge full-blown as the Modern Movement. The Modernists viewed the past and the traditional architectural forms associated with it as socially and artistically regressive. Derivative forms were derided. Abandoning traditional forms of composition, detailing, and ornament and seeking new 'purity', the Modernists sought to create a completely new architecture. The use of steel and concrete, the availability of large sheet glass and later, of plastics, produced some dazzling new forms such as curtain walled skyscrapers, monolithic yet sinuous concrete buildings and membrane structures. However, the need to be original at all costs became a compulsion. Architecture that responded to the existing environment, that made some concessions to its older neighbors in terms of materials, form, size, or detailing, was often suspiciously regarded as "unimagin-

ative" or "weak". The implication, of course, is that each building must be a bold, personal statement by the architect. This has resulted in a great many modern buildings which, by trying to be different at all costs, are totally at odds with their context.

In reaction to this state of affairs, we have witnessed in recent years a great re-awakening of interest in renovation and adaptive re-use of buildings that only a few years ago were considered ugly and obsolete. Clearly, with today's construction costs, there are financial benefits to be reaped from re-use, but we are also finding new delight in old fashioned ornament, fine craftsmanship, human-scale buildings, and in the associations carried by traditional forms. At the same time, we cannot depend on a redevelopment of existing resources to solve all our problems in our expanding cities. New

buildings will continue to be needed. The time has come, however, for a new attitude toward the design of new buildings within an existing architectural and social environment. This attitude is beginning to produce buildings which we have designated as "contextual architecture".

Contextual design rejects the notion that history is bankrupt or irrelevant. Declaring that history is irrelevant is like robbing ourselves, personally and culturally, of much that we are. The culture of the 1980's is dependent upon all that has occurred before it. This fact has two implications. First, we have inherited the traditions of ancient Greece and Rome as well as the 1880's and the 1950's. Our culture is a mix of all these influences. Second, while we cannot ignore our link to the past, we are also confronted with technological, economic, and social changes which are themselves historical facts. For the 'contextual'

architect to ignore the existence ^{of} new functions and technologies with their attendant forms in order to simply re-create the forms of the past is as foolish as for the modernist to ignore the way in which our houses and cities have been shaped and re-shaped over time.

Based upon the notion that new buildings should be sensitive to their built (and social) environments, as well as faithful to contemporary needs, forms, and technologies, we can begin to search for a model of a contemporary architecture. Curiously, however, while this notion has been enthusiastically discussed by all sorts of architects in the years since the Modern Movement was pronounced officially dead by certain eminent critics, it has produced a diversity of approaches, all hailed as 'contextual'!

The most conservative position is taken by the preservation-oriented whose primary concern is

maintaining a historic district as an historical artifact. To this end, new buildings of modern construction are camouflaged with the prevailing architectural style of the area. The Friends Meeting House in Philadelphia, ~~for example,~~ is a beautifully detailed Georgian building which captures much of the serene dignity of Philadelphia's eighteenth century Quaker meeting-houses. Built in 1956, in an old section of the city, it is a perfect re-creation of a building type common two centuries earlier. Sometimes the results are not so felicitous. Bad imitative design often seeks to endow a modern building with the qualities associated with a certain kind of architectural detailing. According to this view, Georgian architecture is thought to be especially patriotic or all-American. Pasting architectural details originally meant for much smaller structures

onto "colonial" supermarkets or "Georgian" warehouses robs them of much of their meaning. In addition, almost no one is fooled by such phony symbolism.

At the other end of the spectrum is the approach of the architect who tries to create a dialogue between the contrasting elements of old and new. Contrast can be an effective tool in the hands of contextual designers, particularly when buildings, by nature of their special use or size must stand alone as isolated monuments. Certainly the Pompidou Center in Paris and Pei's Hancock Tower in Boston do well not to imitate their much smaller neighbors. (Imagine the Hancock as a 60 story Richardsonian Tower!) The Hancock, in fact, has drawn praise from various cities for its ability, despite its huge size, to provide a sort of neutral background for Richardson's Trinity Church.

This evidently was the intent of Michael Graves in his project for the Benacerraf House, Princeton, N.J. In 1969, Graves designed an addition to this rather nondescript house. Graves sees the addition in terms of the reciprocity of opposites - the existing conditions as "foils or entities to be commented on."² The closed form of the original house contrasted to the openness of the addition, the relationship to the natural world implied by the tan-colored stucco of the existing structure contrasted to the artificiality of the stark white stucco of the addition, the ornamentation of the existing house contrasted to the clean surfaces and geometric shapes of the addition. Graves writes:

"On a general level, the question of the relationship between old and new is simply the question of the reciprocity between any new structure and its existing surroundings, built or natural.

This is a significant issue for all architecture, whether it deals with historic buildings or not. The establishment of dependencies among existing buildings, the landscape, and new structures allows one to understand all of these elements as part of a greater continuous organization. Interpreting each part of this larger context as a fragment, dependent on other pieces and on our expectations of each existing element, we cannot consider any one piece in isolation. Rather, each part, old or new is understood and perceived only through the dependencies established among the other elements. The existing building may thus be re-interpreted by new construction, just as the new structure finds its meaning in relation to that which exists."³

This is a statement full of meaning for the contextually sensitive architect. However, for all Graves' discussion of dependencies and continuities, there is surprisingly little sense of similarity between the original house and its addition. Without a common connection to give the entire project coherence and



The Bennacerraf addition by Michael Graves with original house in background.

continuity, the interplay of opposites becomes a negative comment, a bizarre juxtaposition of forms.



*Society Hill, Philadelphia
townhouses by Louis Sauer.
Above: Lombard Street.
Below: Penn's Landing.*



The most successful examples of contextual architecture are those which take a contextual frame of reference based on similarities to certain existing patterns as the starting point for a contextual design. Differences in materials and detailing then, are perceived as variants of the basic pattern rather than as anomalies.

The work of Louis Sauer in many projects in the Society Hill district of Philadelphia is typical of this approach. While preserving certain qualities of the existing Georgian and Federal houses, Sauer has built distinctly modern buildings. In his Lombard Street and Penn's Landing townhouses, Sauer relates the new dwelling to the old through his use of common elements - materials, scale, the articulation of the individual house within the block, and the rhythmic repetition of solids and voids. At the urban scale, Sauer is concerned with such issues as creat-

ing the interface between the low rise townhouses in Penn's Landing, for example, with the vastness of the Delaware River which they abut. As an acknowledgement of the ending of the city in the river, Sauer gives the buildings a little extra height and solid edge at the top of the facade to give it visual weight.

Similarly Boston's Ausonia Housing for the Elderly, designed in 1977 by Garufo-Roberts, preserves many of the characteristics of its original neighborhood: the concrete posts and lintels at the street level replacing their granite counterparts, the varying heights of the brick-faced upper stories which create a sense of the incremental with the existing houses.

Breaking up the facade of a larger building into smaller rowhouse width was also used with some success in the Oppenbar Library in Amsterdam which separates each section of the building above the street level with a glass link. The library repeats the brick materials and varying roof



Above: Ausonia Housing for the Elderly, Boston (Garufo-Roberts).
Below: Oppenbar Library, Amsterdam (DeKlerk).



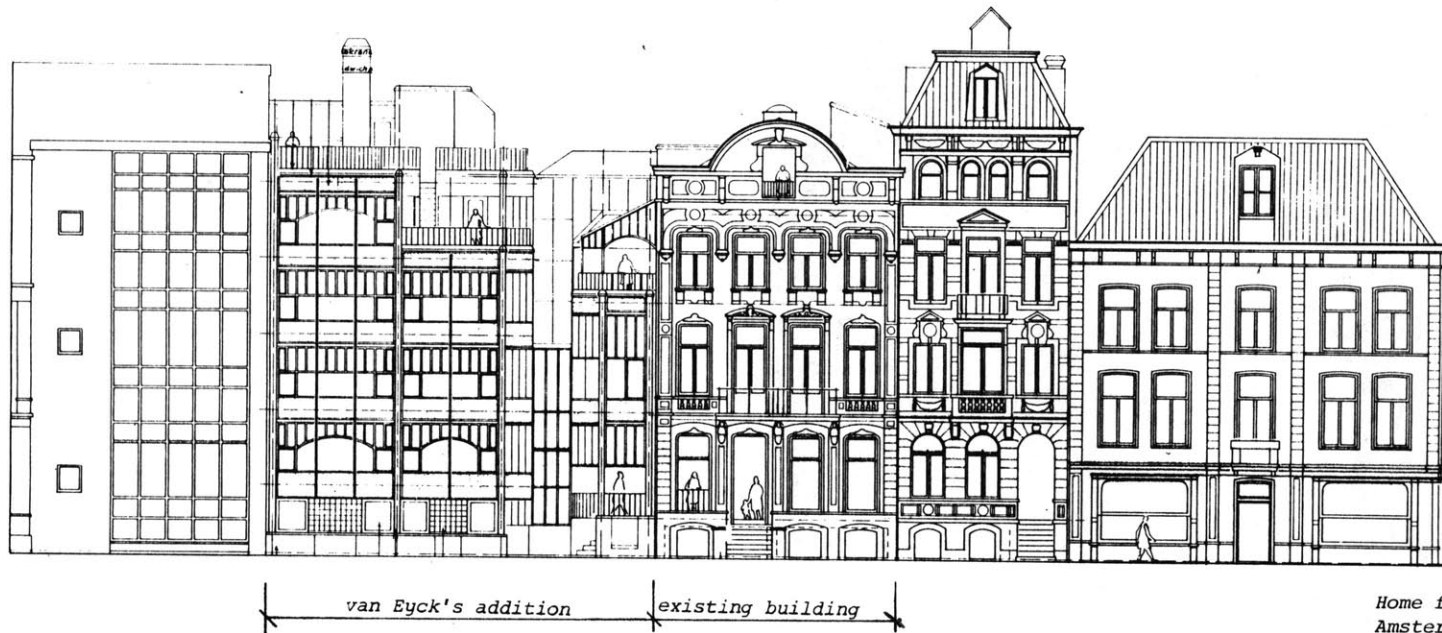


*Apartment project in Amsterdam
by Aldo van Eyck.*

heights of the surrounding buildings. At the same time, window treatment varies between the more traditional form of punctures in the brick wall (here very unsymmetrically arranged) and the tubular steel and glass curtain wall construction of the 'links'.

Maintaining the brick construction and approximate size of their older neighbors as well as the shape of the

characteristic Dutch facade at the roof, Aldo van Eyck is able to treat the composition of the facade itself very freely in his apartment projects in Zwolle and Amsterdam. In van Eyck's Home for Single Parents in Amsterdam, he uses the principle of reciprocity to establish a link with an existing building as well as the general context. Van Eyck, however, unlike Graves, is more explicit about the continuities as well as the differences in the qualities of the old and new buildings. The addition serves as the entrance to both old and new structures but winds from one to the other, binding the two entities together functionally. Van Eyck is careful in making separations - as in window mullions - to also set up the framework for continuity and actual overlaps of zones. Although Van Eyck is less literal about his use of materials or forms than many other architects, the scale and visual interest of his building make it quite successful within its context.



Home for Single Parents in Amsterdam by Aldo van Eyck.

Another infill building in a historic context, Abel Cahan's apartment/office building in Amsterdam, seems to have succeeded in preserving both its contextual and modern qualities within the bounds of a three bay rowhouse. Similar in height to its neighbors, the thoroughly modern facade is composed of interlocking concrete structural pieces. These pieces recall the

traditional forms of lintels and columns as well as revealing the precast T floor construction and can be used as the basis of a subtly three dimensional window treatment. The decorative patterns of the concrete elements give a scale and texture to this building unusual in modern buildings but quite compatible with its older neighbors.



Detail view of precast concrete structural pieces, apartment/office building in Amsterdam by Abel Cahan.

In the preceding examples, certain connections to the existing physical environment were established again and again. These included height, alignment with the street edge, mass, materials, and texture. Methods of breaking up the mass of a larger building into smaller increments were also important. Composition of the facade, including window placement

and repetition of typically contextual elements played a subservient role to these major moves. Echoing materials, height, mass, and even building organization can fail to convincingly tie a building to its context if it seems out of scale. An example of this is Philip Johnson's addition to the Boston Public Library. While obviously referring to the original McKim, Meade and White building in many ways, the absence of the human-scale details which give richness, and texture to the original, reinforces a sense of inflated monumentality in the addition—even though the overall mass and height is the same. This level of detail, while it cannot replace the other factors at the site or building scale may be the key to truly successful contextual design.

The ways in which contextually related elements work in the design of contemporary buildings is the focus of this thesis. This exploration will take the form of a design project set in an historic area. Boston's Beacon Hill, an architecturally rich but coherent district, is the area of the project. The site is a relatively large parcel of land on the North Slope, cleared by the projected demolition of an abandoned school building. The program chosen, that of a residential community for the area's older residents, will take advantage of the parcel's size to develop some large collective facilities as well as approximately seventy-five apartments. While both the parcel size and the collective nature of the program are slightly unusual for Beacon Hill, they symbolize the need for traditional patterns to be modified and transformed by current needs and processes. The design work will be preceded by an examina-



*Boston Public Library and
addition by Philip Johnson*

tion of the historical, social, and physical features of Beacon Hill. Next the programmatic assumptions and principles will be considered. Contextual decisions will be traced through site planning to building organization, focusing ultimately on the massing and development of a formal vocabulary for the building exterior.

THE CONTEXT

The basis of any contextually sensitive design must, of course, be an understanding of what that context is. While, to the architect, the most obvious aspect of the environment is the physical context - the street patterns and building forms of a particular area, the designer must also take into account its historical and social features. The social context, in its most general sense, may be the basis of the project's program - a local need for more housing, retail, or office space - however, unless the designer knows the sort of people he will be serving the project may be out of step with the community. Factors such as family size, income, education level, or other social patterns may significantly influence the design. At the same time, an understanding of an area's past may be able to explain some aspects of the form of its buildings and may give the architect some criteria upon which to judge the relevance of existing contextual patterns to modern needs. Sifting through the information available about these aspects of the project may provide important clues about the shape, organization, and form of the project.

THE HISTORICAL CONTEXT

Boston's earliest settlers found a landscape quite different from the one familiar to modern Bostonians. In the early seventeenth century (and, indeed, for nearly 150 years), the settlement occupied a hilly peninsula almost completely surrounded by water, connected to the mainland only by a narrow neck of land. This topography, seen as particularly advantageous to the first settlers because the peninsula could be easily fenced against the depredations of wolves, was described in a pamphlet of 1634 designed to lure settlers into the region as

"very pleasant, hem'd in on the South-side with the Bay of Roxberry, on the North-side with Charles-river, the Marshes on the back-side, being not half a quarter of a mile over... having the South-side at one corner, a great broad hill, whereon is planted a Fort, which can command any ship as she sayles into any Harbour within the still bay! On the North side is another hill equal in bignesse, whereon stands a Winde-mill. To the North-west is a high mountain with three little rising hills on the top of it, wherefore it is called the Tramount. From the top of this Mountaine a man may over-looke all the ilands which lie before the Bay, and discry such ships as are upon the Sea-coast."⁴

The modern Bostonian will, perhaps, be pardoned if he does not immediately recognize the marshes as the Back Bay, the hills as being Fort Hill and Copp's Hill respectively, and the Tramount or Trimountain as present-day Beacon Hill.

The Trimountain was the principal topographical feature of the seventeenth century Boston. Its three peaks towered above their present-day elevations. Pemberton Hill, the easternmost peak, rose more than eighty feet above the present day height of Pemberton Square. Originally known as Sentry Hill, the central peak, with an elevation of 138 feet above sea level, received its permanent name from an order of the General Court of 1634-5 that "there shalbe forthwith a beacon sett on the sentry

hill at Boston to give notice to the country of any danger."⁵ To the west of Beacon Hill was Mount Vernon, located roughly in the area of present day Louisburg Square. The western ridge of the Trimountain terminated in a high bluff above the river.

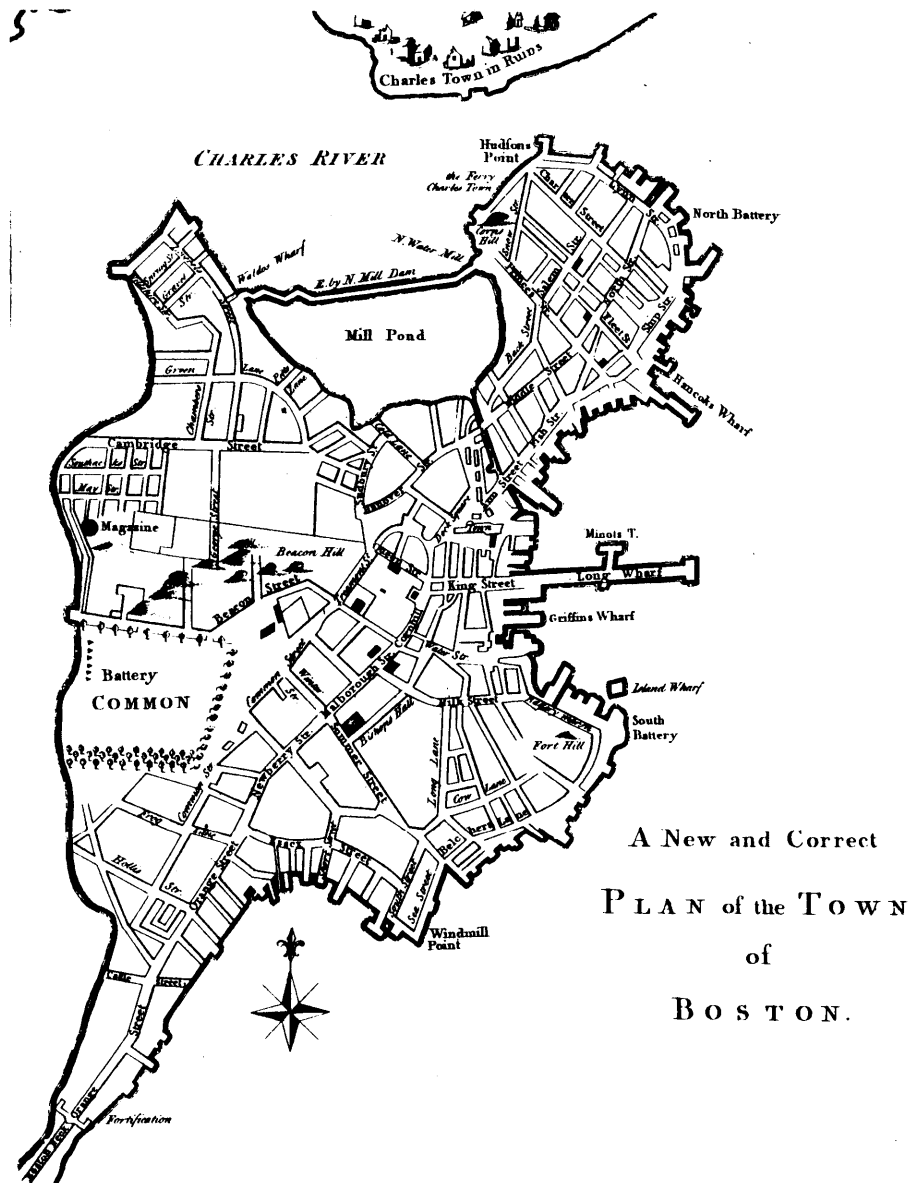
The steep terrain of the Trimountain discouraged settlement there for many years. Gradually, however, the area on the western slope was settled. Cambridge, Phillips and Revere streets, as well as portions of present-day Joy and Hancock streets were laid out in 1733. Unfortunately, this area soon developed such an unsavory reputation that the westernmost peak of the Trimountain became known as Mount Whoredom.

By the end of the eighteenth century, in addition to the rowdy area near Phillips and Revere Streets, a sizable community of blacks had formed in the area of Joy and Phillips Street.

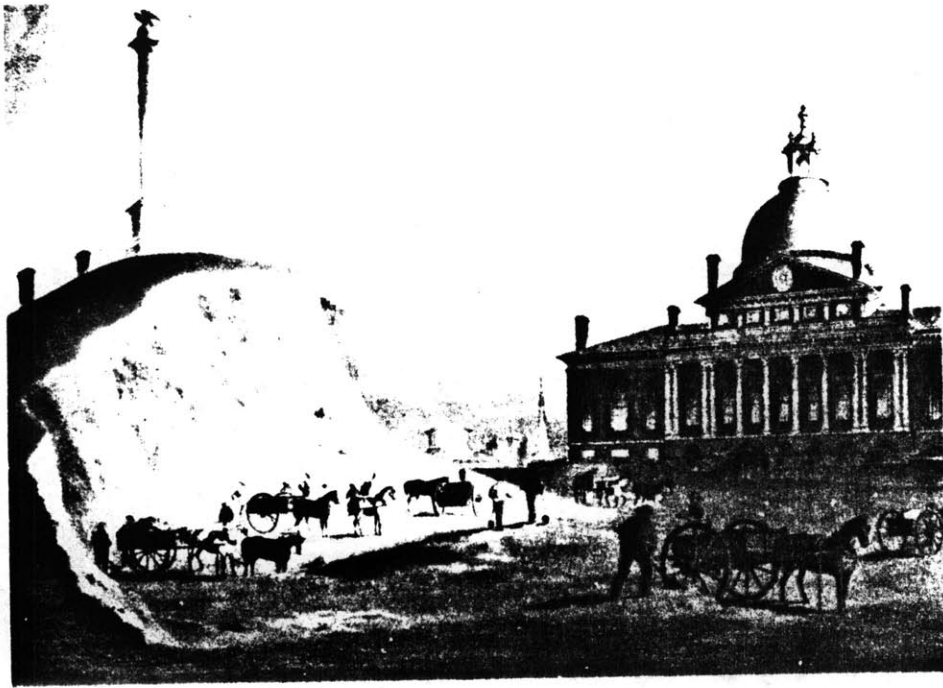


The Trimountain

Meanwhile, Boston was growing in population and increasing building activity began to occur on the outskirts of the settlement. The slopes of the Trimountain began to seem increasingly attractive to would-be developers. In 1793, the opening of a bridge from Cambridge Street over the Charles brought a movement of well-to-do merchants into the West End. Bowdoin Square became a fashionable residential district. Just two years later, the purchase from John Hancock's heirs, of a large pasture on the slopes of Beacon Hill for the construction of the new State House prompted a group of five men known as the Mount Vernon Proprietors to buy a large parcel of land which today comprises the South Slope. The Proprietors conceived of a plan to double their original investment by removing a large amount of the Mount Vernon hill for use as fill in the Charles River, thereby creating more land for future development. In 1799, the western-most



Map of Boston in 1775



Cutting down Beacon Hill, 1811

peak was cut down by fifty or sixty feet. Early plans for this area called for the construction of free standing mansion houses on large parcels of land. Some were built but most were eventually built in blocks. Many of these mansions were designed by Charles Bulfinch in the early years of the nineteenth century.

The Beacon Hill had a similar

fate. After the no-longer-used beacon finally blew down in 1789, Charles Bulfinch replaced it with a commemorative doric column sixty feet tall. In 1810, however, after a protracted legal battle with the town, those people who owned land at the summit of Beacon Hill dismantled Bulfinch's column and began to dig and cart away their land for use in filling the Mill Pond to the north. Over the next fourteen years the hill was shorn by sixty feet of its height. In 1824, the streets were laid out and development began.

As for the area known as Mount Whoredom, as other nearby sections of the Trimountain were developed as homes for the well-to do, the city could no longer tolerate the presence of such a disreputable element in the area. In 1823, Mayor Josiah Quincy cleaned up the district. Following this, the wooden houses of this district, already fairly

densely built up, began to be replaced by more solid brick construction.

Pemberton Hill, which had been an area of large houses set in spacious gardens, survived intact until the 1830's when a speculator shaved sixty-five feet of the top of the hill and replaced the mansions with a new district similar in character to Louisburg Square.

With the cutting down of the three peaks of the Trimountain, the area became known simply as Beacon Hill.

Beacon Hill remained the center of fashionable Boston for only about thirty or forty years. By the last half of the nineteenth century, due to the development of the Back Bay and the South End, many well-to-do people began to leave, although conservative families comfortably settled on Beacon Hill tended to remain there. The South Slope remained the enclave of the wealthy.

The North Slope, however, which had never quite outlived the 'Mount Whoredom' stigma, began to deteriorate. More and more tenement houses replaced the earlier houses giving rise to the mix of house types which characterize it today.

There have been few new buildings on Beacon Hill since the early years of the century. Renewed interest in Beacon Hill as a residential community has, today, resulted in a great deal of building activity centering around renovation of the North Slope's many deteriorated houses. This trend began in the 1970's when young professional families found affordable old houses in the heart of the city. Real estate developers soon rediscovered Beacon Hill and prices have sky-rocketed, of course, since then. Beacon Hill seems on its way to becoming truly fashionable once again.

THE SOCIAL CONTEXT

Although today the social distinctions of the North and South Slopes are being gradually broken down as young professionals are buying land in the north side of the Hill, traditionally the South Slope has been the home of old established families (Boston's 'Brahmins'), well paid managers, merchants, financiers, and professionals. The North Slope, on the other hand, seems to have had a larger share of service workers, craftsmen, and students.

As Beacon Hill again becomes increasingly desirable as a residential district, its real estate values have risen accordingly. This has had a number of effects on the dis-

trict, many of them positive, but for many of the Hill's elderly citizens, the economic redevelopment of the area has spelled disaster.

Like retirement age people everywhere, Boston's elderly have to make do on a sharply reduced income. In Boston, in 1979, it was estimated that the average elderly person, living alone, had an annual income of \$5,000. (This is in comparison to a citywide average of \$13,200 and a Beacon Hill average around \$40,000.)⁶ Not only have rents become unaffordable for many people, but the conversion of apartment houses into condominiums has decreased the number of rental apartments available

at any price. In addition, the North Slope has had, in the past, at least forty rooming houses clustered primarily around the Bowdoin and Hancock Street area. These facilities have proved satisfactory low-cost housing for many unmarried older men who appreciate the collective aspects of the rooming house. Many of these facilities are also being converted to condominiums - at present only sixteen are known to be operating. Similar accommodations were provided at the Beacon Chambers, a residential hotel for men located at Joy and Myrtle Street, until it was damaged by fire in October 1980. Although some local residents were alienated by the actions of some of its tenants, the Beacon Chambers provided a home for 200-300 elderly men.

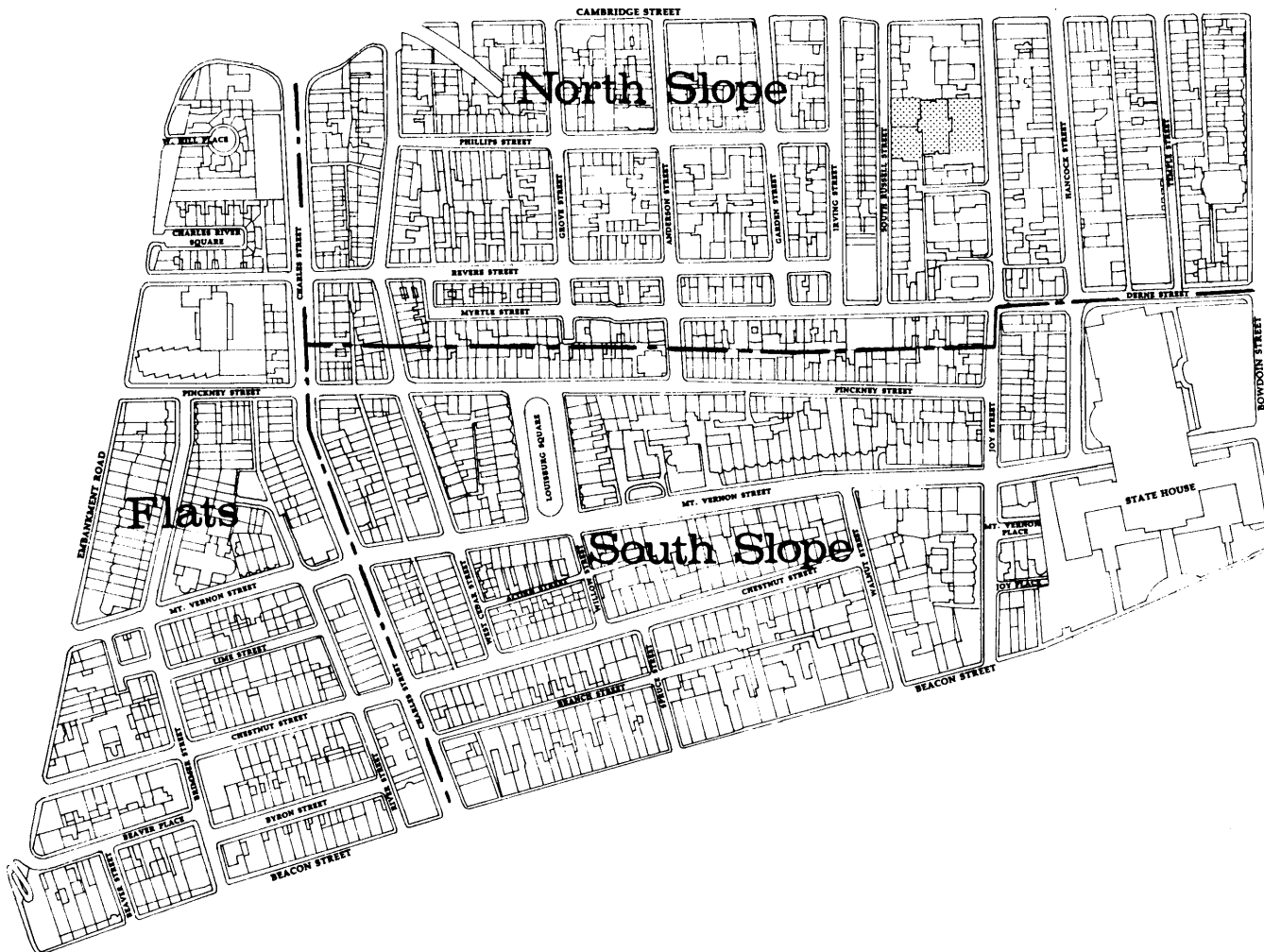
The past ten to fifteen years have witnessed the development of a number of rental apartments either specifically designated for elderly

persons or, by virtue of subsidized or rent-controlled fees, especially attractive to them. Low-cost apartments in general, however, are being removed from the market at a far faster rate than they are being replaced.

The elderly people who are likely to seek new housing have probably been local residents for much of their lives. Prior to retirement many worked as sales clerks, clerical, or factory workers. Some of the area's elderly men, residents of the Chambers or rooming-houses, have had a more transient background. Most of the Hill's elderly depend principally upon social security as their only income. Over half of them (54%) live alone while approximately one quarter live with another person. Although the elderly population in general tends to have a higher percentage of women, the trend is reversed on Beacon Hill due to the large number of men living in rooming

houses and the Beacon Chambers.

With Beacon Hill's older citizens facing greater difficulties in remaining in their homes due to high costs and condominium conversions, it is clear that in any plans for the future development of the Hill, provisions must be made for low-cost housing for older people.



Beacon Hill today

THE PHYSICAL CONTEXT

Present-day Beacon Hill is bounded by Beacon Street and the Boston Common on the south and Cambridge Street on the north. The district stretches westward to the Charles River while its eastern-most limits are the Massachusetts State House and Bowdoin Street. Beacon Hill is subdivided into three distinct areas, the North and South Slopes of the hill and the Flats, built on the Charles River land fill of the Mount Vernon Properties. The Flats are similar in character to the South Slope, although by virtue of their different topographical character and separation from the Hill proper by Charles Street, they seem rather

cut off from the Hill. For this reason, we shall concentrate primarily on the differences between the North and South slopes of the Hill.

In general, the street organization reinforces the social hierarchy of Beacon Hill. The obstacles presented to moving north-south across the Hill tend to isolate areas from one another. The South Slope features long blocks running east-west from Charles Street to the State House (Mount Vernon, Chestnut, and Pinckney Streets). At the top of the Hill, the block between Pinckney and Myrtle Streets forms the effective dividing line

between areas. This block is broken only once by a cross street which, however, dead ends on Pinckney Street. This effectively baffles through movement across the Hill. Joy Street, in fact, at the eastern side of the South Slope, is the only street to run unbroken from Beacon Street to Cambridge Street. Because of this, access to the front and back sides of the Hill tend to be from opposite directions, further reinforcing the separation of neighborhoods.

The street organization of the North Slope is more haphazard but primarily consists of a series of streets running north from Myrtle Street to Cambridge Street. The eastern-most blocks (Bowdoin, Temple, Joy, and South Russell Streets) are unbroken for that distance. West of this, however, the north-south running streets are interrupted by a series of cross streets running from Charles Street to

Irving Street, breaking up the long blocks into smaller units.

The development patterns of the South Slope tended to produce larger houselots (25'-32' wide as compared to 18'-22' wide on the North Slope), featuring single family houses and spacious back gardens. Mount Vernon Street has a long row of houses with small front gardens as well, although houses on both sides of the Hill tend to be built right up against the street edge. North slope houses are generally narrower with tiny back gardens. The inner-block area, rather than containing large gardens, feature small enclaves of houses built on narrow alleys running perpendicular to the street (Smith Court, Rollins Place, for example). The greater density of buildings on the North Slope, as well as its orientation tend to make its streets darker than those of its neighbors to the south. The

back side of the hill, while originally composed of private houses, today has many large apartment houses dating from the late nineteenth century. These structures are generally higher than their counterparts and create a considerable variation of building height on some streets. The presence of these larger structures tends to give the streets of the North Slope a more canyon-like spatial proportion than that experienced on the South Slope.

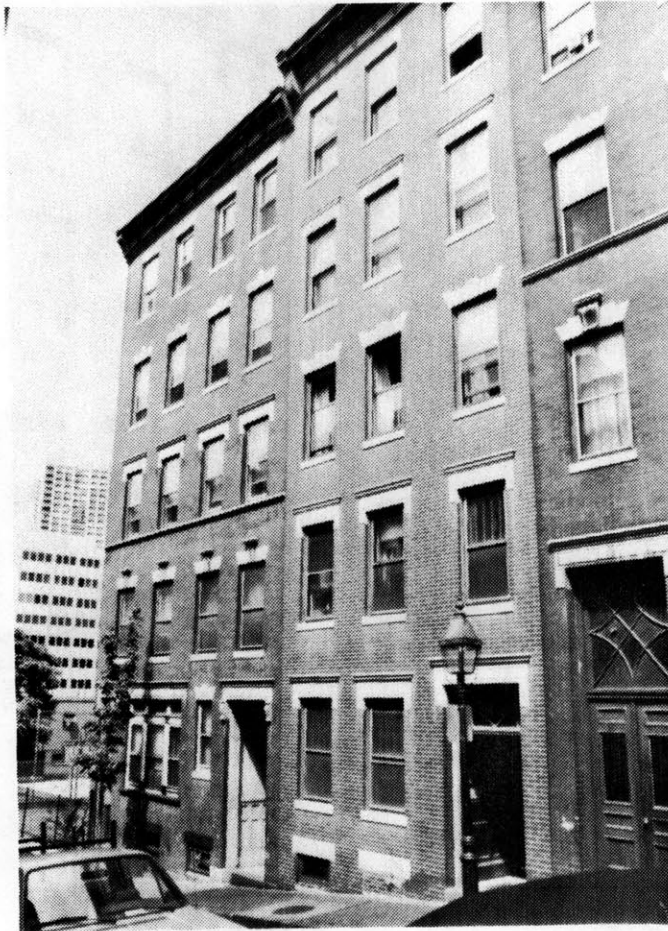
Even so, on both sides of the Hill, the relation of building height to street width remains acceptable, at times producing a distinctly roomlike quality. This derives, in part, from the sense of enclosure one experiences on Beacon Hill. The continuity of building surfaces contain the street space on two sides while the discontinuous street layout provides visual closure on a third. Even through-streets generally have a visual blockage to them - in some



View of Joy Street.

cases this is provided by the rise of the hill, in others, by a slight shift in street direction.

Open space on Beacon Hill is generally claimed by private users in the form of back yards and roof decks. Even Louisburg Square, while creating a manicured green oasis and landmark mid-block on Mt. Vernon Street, is emphatically



Tenement houses on South Russell Street.

for the private use of its very upper-crust inhabitants. Parks and playgrounds have emerged from the rubble of demolished buildings in some places and these seem to

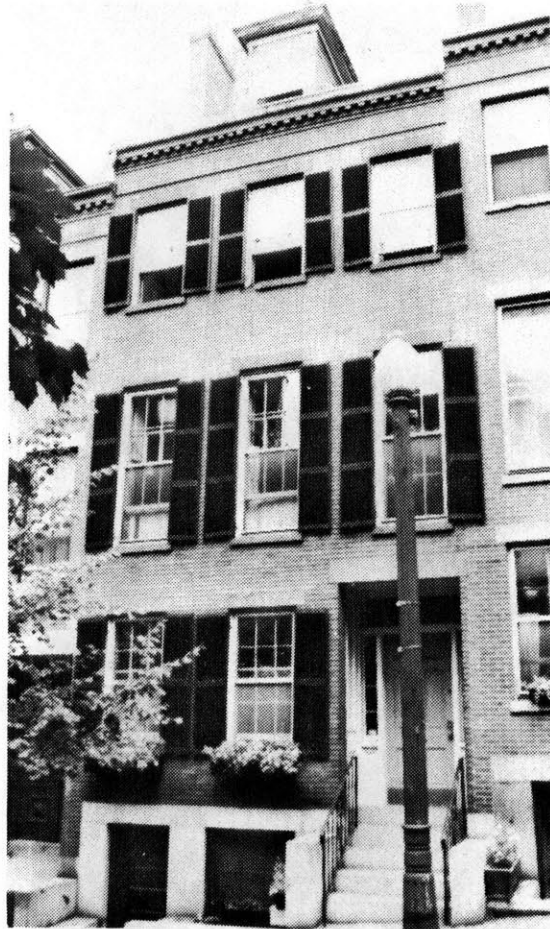
be well used, particularly on the North Slope where private outdoor space is at a minimum. Some streets in this area have a well developed street life with neighbors chatting on front stoops and activities such as annual block parties and flower box contests sponsored by the local garden club. While traditionally, the South Slope has had brick sidewalks and more street trees, recently the community has repaved the entire Hill with brick and planting young trees on many streets on both sides of the Hill.

Houses themselves tend to reflect the social status of their inhabitants. South slope residences generally feature more ornate detailing as well as greater use of decorative elements such as shutters, ironwork, and flower boxes. These homes are usually impeccably maintained. North Slope homes and apartments are simpler and more severe in detailing, although apartments from later in the

nineteenth century make use of more decorative patterns applied to elements such as lintels and bay windows. Since the North Slope has been economically depressed for some time, many buildings have deteriorated.

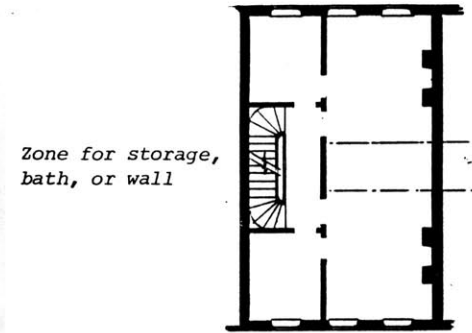
Despite these differences in articulation, these does seem to exist a clearly recognizable Beacon Hill house type.

The narrow and deep rowhouses of Beacon Hill are typical of rowhouse organization elsewhere. Major rooms are located at opposite ends of the building while an internal zone between the two can be used for storage, stair halls, and baths. Main stairways are the principal feature of the entry hall. They may be narrow and modest or, in the wealthier houses, they may consist of elaborate circular stairs crowned by a cupola. In the garden Federal and Greek Revival houses, the second floor was often built as the 'piano nobile'. The more elegant rooms of

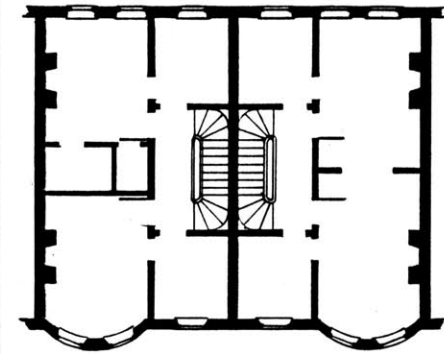


House on Pinckney Street.
Note the tall windows of the second story 'piano nobile' and the basement entry.

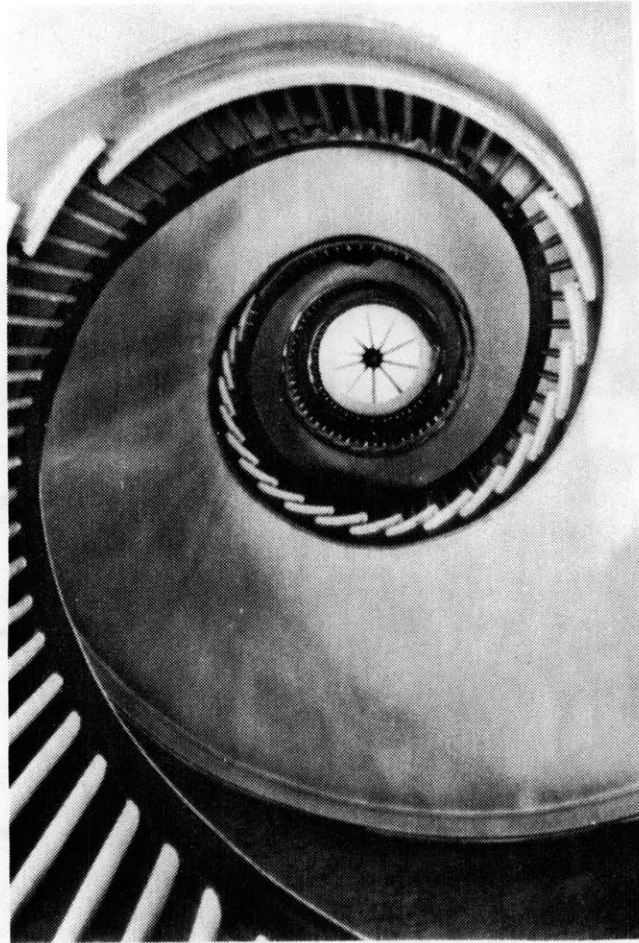
Plan of typical Single House



Zone for storage, bath, or wall



Plan of "double" house.
Double houses were actually a pair of singles symmetrical in design.



*Circular stairway at 59 Mt.
Vernon Street.*

the house where the family could greet and entertain its guests were found here. Often these rooms had more elaborate architectural detail-

ing and higher ceilings than other rooms. Sometimes this floor was principally taken up by a double parlor running the length of the house. Upper floors of the house were given to bedrooms for the family and, in days gone by, to attic rooms for the servants. The kitchen and pantries were often found on the first floor at the rear of the house or in an ell addition.

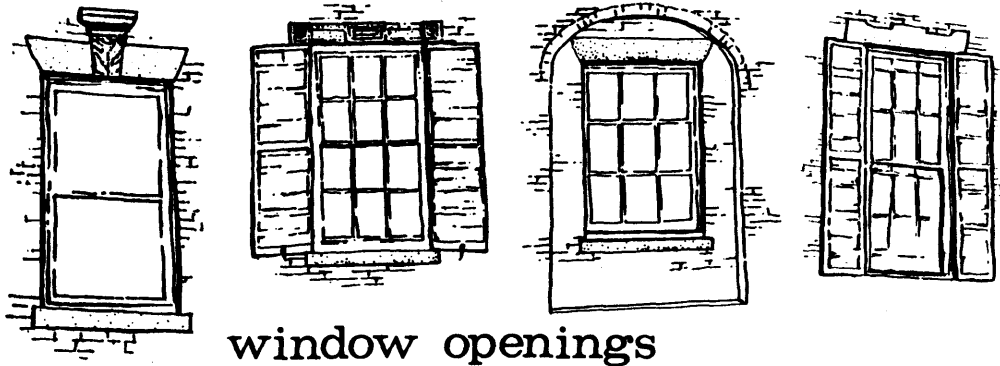
Typically, the first floors of houses are set about a half level above the street for greater privacy as well as direct accessibility to the basement storage and coal bins. This lower level now often has small entrances to basement apartments, or store fronts. The ground level of some buildings may also feature a narrow passageway leading to the back garden. Sometimes known as 'horse walks', these passageways were the service entrances of the nineteenth century.

Houses are built of brick party walls with an intermediate bearing wall for the support of the wood floor and roof framing. The materials used in the facade construction reflect the different zones of the interior as well as the classical 3-part composition. The basement level of the house is, in buildings of the early nineteenth century, typically faced with granite. (Later buildings seem less fastidious about this detail.) A non-load-bearing brick skin with regular window openings covers the living areas of the house. The roof of earlier buildings was gabled with dormers clad in slate or, today, asphalt shingles. Buildings from the end of the nineteenth century often feature flat roofs with elaborate pressed metal cornices painted to match the wood trim. Mansard roofs also occur here; sometimes as additions to originally flat roofed buildings. Like their gable-

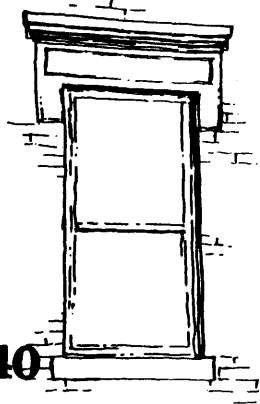
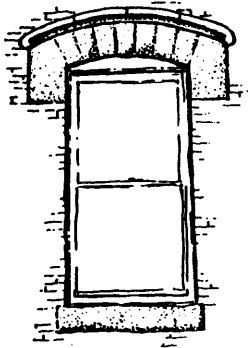


House on South Russell Street. Note the 3-part articulation of the facade, piano nobile, and basement entry.

roofed counterparts, they are shingled.



window openings



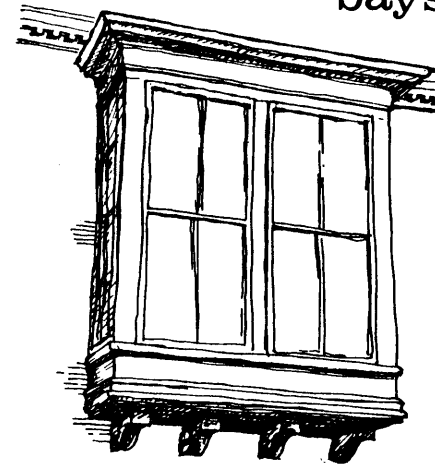
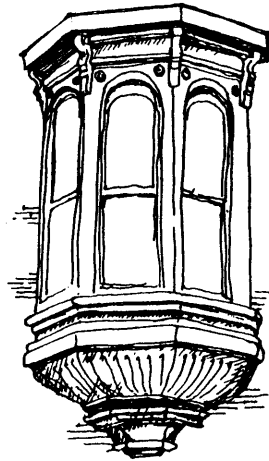
One of the most important characteristics of the Beacon Hill streetscape and the row houses of which it is composed is its continuous surface. Although certain architectural features such as wrought iron balconies, cornices and even bay windows may be superimposed against their continuous wall of brick, they serve more to add texture and variation than to disturb the basic theme. Even the windows are set only a few inches back from the exterior wall surface, despite the relative thickness of these walls

owing to the practice of furring out interior walls to accommodate shutter pockets. This practice preserved the sense of continuity of the wall plane. Most buildings on the Hill are rowhouses, but in those instances where there is some separation between buildings, garden walls and gates are used to preserve the sense of continuity at the street level.

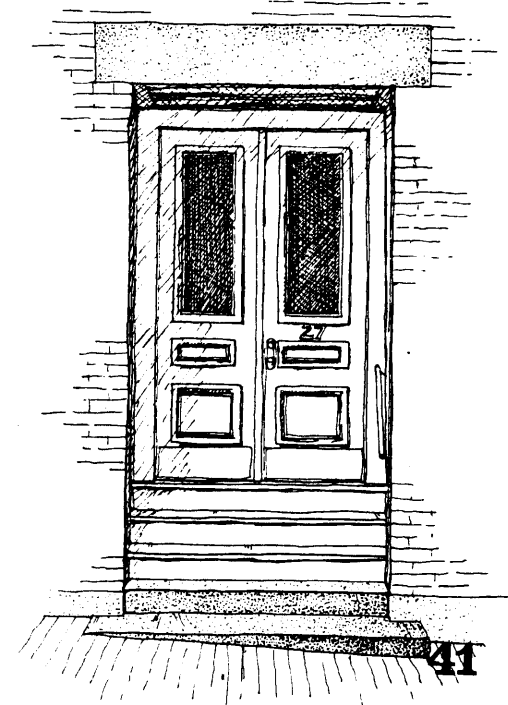
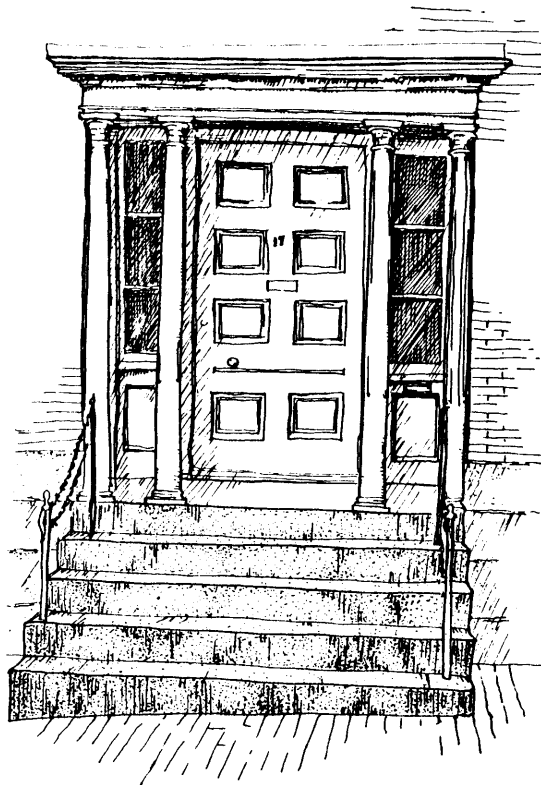
Openings in the brick wall were made by using stone lintels, and round or flat brick arches. These frequently became an important design element. Although earlier lintels were plain, later ones were sometimes elaborately carved or ornamented with keystones. The length of these lintels was a limiting factor in window size. Thus, doors and windows occur as individual punctures in the brick skin. Clusters of windows generally occur only in bays which are of light weight wood construction,

either painted or clad in metal. In the earlier houses, these bays are often small (about 8' max. in width), one story high structures. In apartment houses dating from later in the century, bays are multi-story elements as wide as a room. These are more likely to be clad in copper. On the South Slope and the Hancock Street area of the North Slope, are found full height rounded bays of brick. The window treatment on these is the same as that on flat brick walls.

Entries are generally treated more three-dimensionally than windows. As many of the houses on Beacon Hill are set right on the property line, the entry stair must be recessed within the building. On those locations where a set back does exist, the stair begins to emerge from the building. The grander houses of the South Slope feature elaborate moldings or a portico at the entrance.



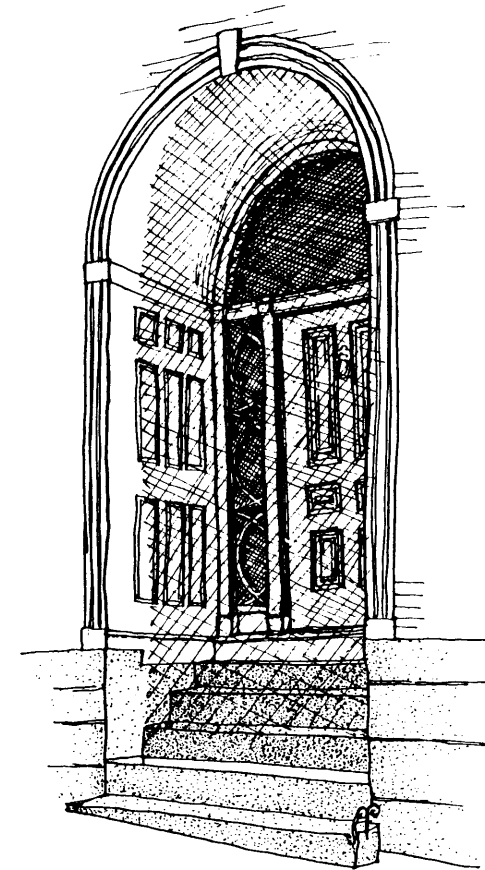
bays



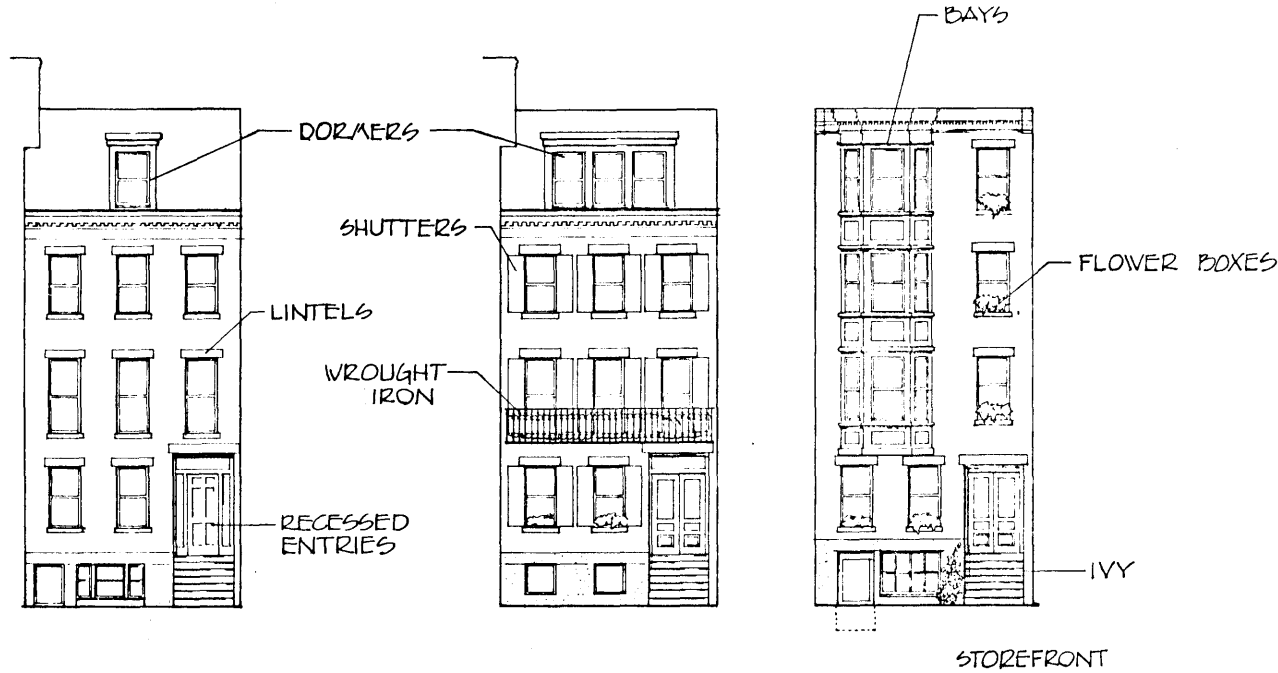
entries



Basic building features of these buildings are relatively simple and unadorned. Lintels, cornice detailing, and entry panelling may comprise the most elaborate exterior detailing. Other decorative elements may be added to the building surface.



Wooden shutters and flower boxes intensify window openings. Elaborately detailed wrought iron railings are found on wealthier residences although simpler iron balconies may function as effectively as fire escapes on humbler homes. On both



ARCHITECTURAL DETAILS

sides of the Hill, well-crafted bays and sills extend the interior space out over the sidewalk. The layering of these elements gives a combined effect of considerable richness of texture deriving from juxtapositions of different materials, slight variations in the plane of the building, and the fine scale of

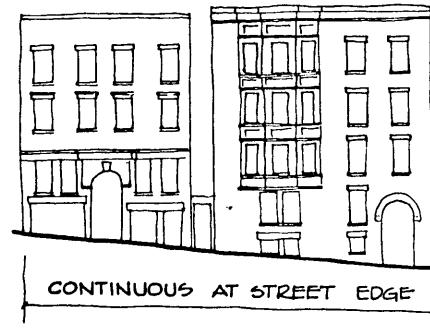
component elements. This sense of fine scale is due as much to the size of the individual bricks of the facade as to the slats of the shutters and the moldings of the front door panelling.

Other features of Beacon Hill rowhouses combine to produce a generally harmonious effect. The

MATERIALS



CONTINUOUS SURFACE



facades of buildings are composed of elements such as windows, entries, and bays set against a facade of roughly similar proportions. At the same time, the even spacing of window openings and the regular placement of entries on the uphill

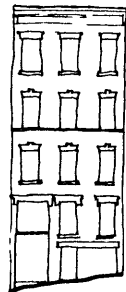
side of each building creates rhythms in the streetscape which give it a dimension of continuity and regularity in addition to that created by similarities in materials, size, proportion, and style.

BUILDING
size & proportion



width: height = approx. 3:5

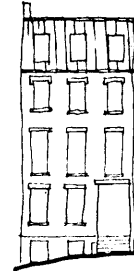
ROOF SHAPES



FLAT

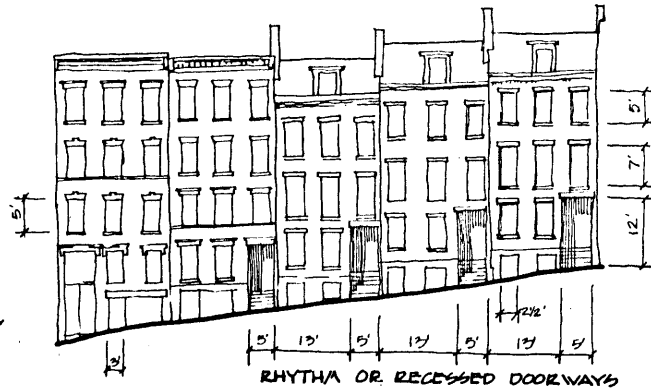


GABLE

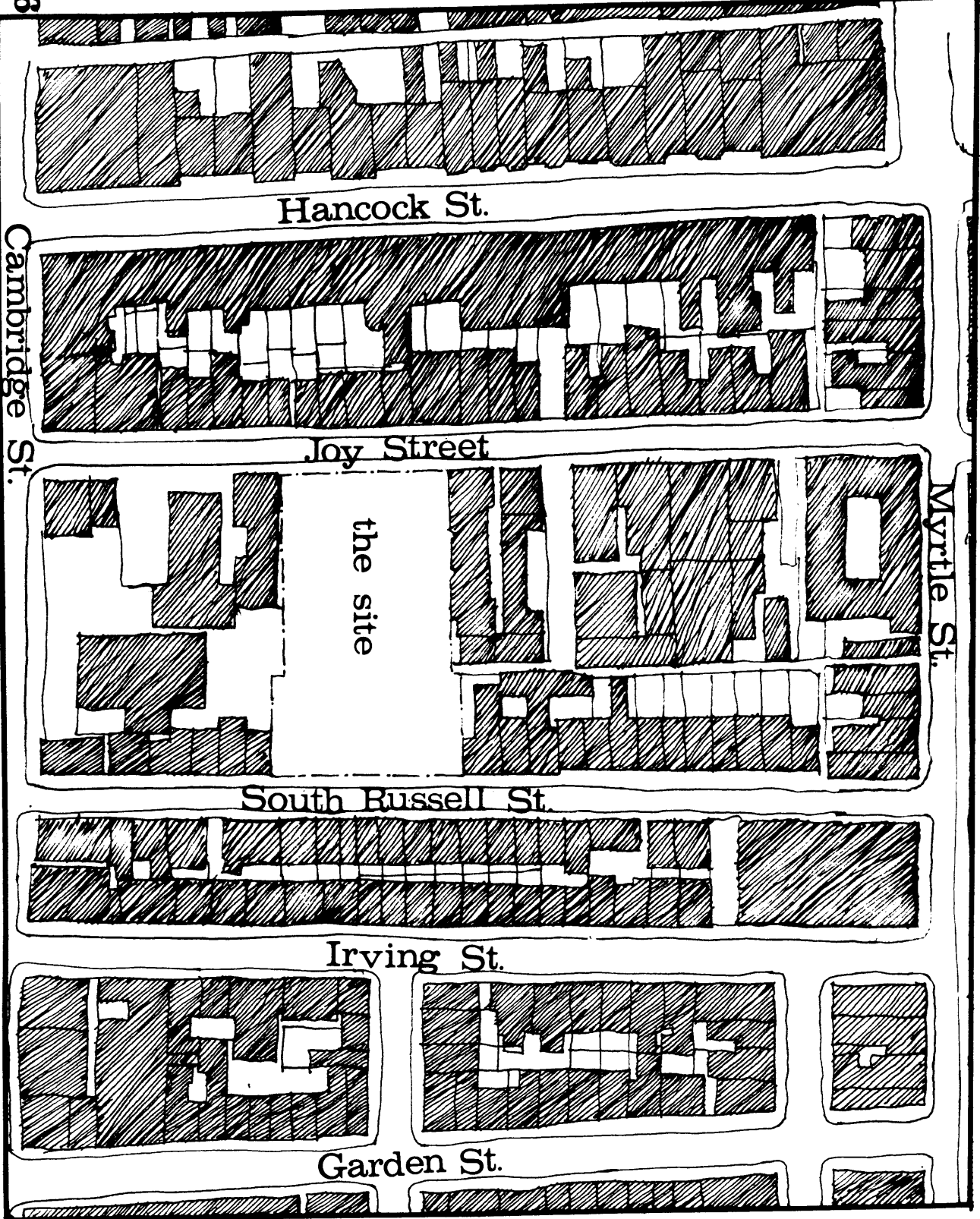


MANSARD
(LESS COMMON;
MAY BE AN ADDITION)

OPENINGS
size, proportion, & spacing



typical window size = 3'x5'
'piano nobile' window size = 3'x7'
entry = 5'x12'



Hancock St.

Joy Street

South Russel St.

Irving St.

Garden St.

Cambridge St.

Myrtle St.

the site

THE SITE

Within this setting, a large parcel of land on the North Slope has recently become available for development. This is the site of the Peter Faneuil School, which is slated to be closed by the city at the end of the 1981-82 school year. The site is located about midway between Myrtle Street on the south and Cambridge Street on the north, extending through the block between Joy and South Russell Streets. One half block to the north runs Cambridge Street, a major thoroughfare with heavy vehicular traffic and connections to other parts of the city and Cambridge. A great deal of commercial activity occurs

on Cambridge Street. Restaurants and bars, a large grocery store, convenience stores, hardware store, bank, church, as well as access to public transportation are all within several blocks. Medical services are available at nearby Massachusetts General Hospital. The side streets leading up the Hill are entirely residential in character. Both Joy and South Russell are relatively quiet thoroughfares - although Joy Street, by virtue of being the only north-south street to run unimpeded to Beacon Street, does carry somewhat more traffic, both pedestrian and vehicular. Two doors to the north of the site on Joy Street is

the old police station, now converted to use by the Beacon Hill Civic Association which runs a nursery school and senior citizens center in addition to regular community meetings. Approximately one block to the south, up the hill, is Myrtle Street, which also has a small commercial development: barber shop, locksmith, convenience store, pizza shop, and a small park/playground where a number of the area's elderly residents enjoy spending sunny afternoons.

The block organization and building types of this area follow many of the patterns described earlier. The block containing our site, for example, is particularly deep, creating a considerable zone in back of the rowhouses which has been utilized for various purposes. Opening off the Joy Street side are Smith Court and Joy Court which lead to clusters of federal houses within the block. A narrow passage-

way (Holme's Alley) running parallel to Joy Street, connects these courts at the rear and leads to the south side of our site. Similar courts were built lower down the Hill (Belknap Court and Hoyt's Place) but these were obliterated by the construction of the Faneuil School and the Joy Street Police Station. To the north of our site, is a sizable open space in the middle of the block, presently used as a playground by the Beacon Hill Nursery School. Just beyond this is the large three-story fire station which faces Cambridge Street.

Houses in this immediate area are typical of many North slope buildings: 3-5 story brick rowhouses, approximately 18'-24' wide. Housing stock is a mixture of Federal, Greek Revival, Italianate and eclectic styles. Even so, South Russell and Joy Streets each have a slightly different character.

South Russell Street is predom-

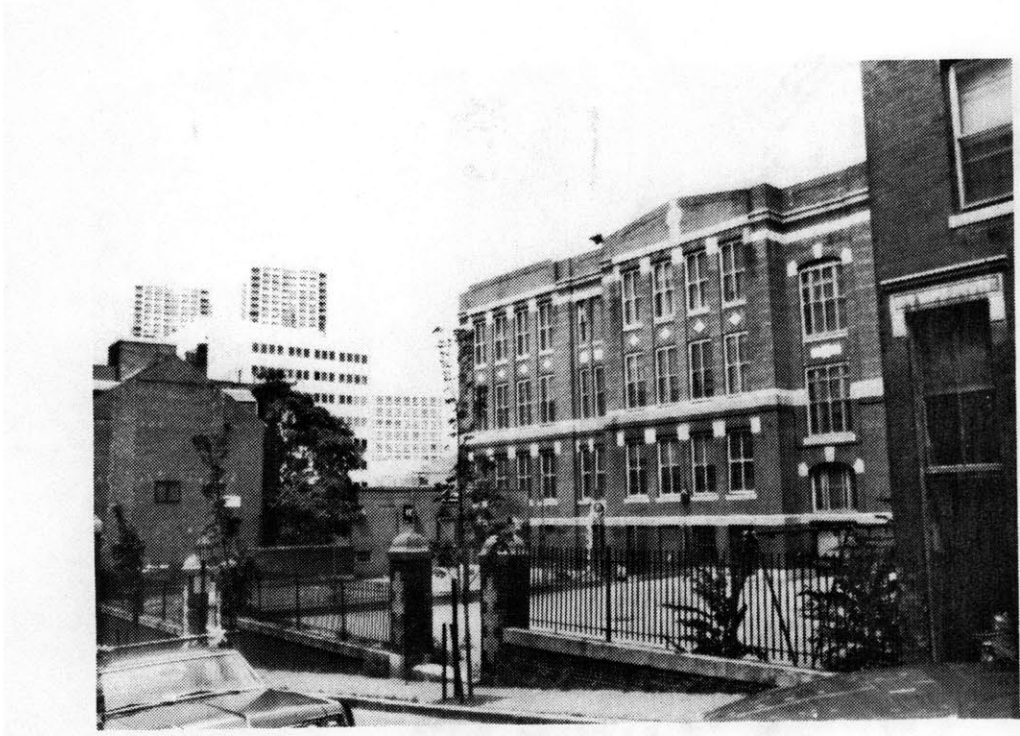
inantly of Greek Revival construction although some buildings had Italianate details or extra stories added later. Being the same size, style, and materials there is a coherent sense of the character of the streetscape.

Joy Street, in contrast, has a greater variety of buildings. There is a larger percentage of late nineteenth century tenements. Many of these were built as infill row-houses, but on the west side of the street, these buildings tend to be larger than their neighbors and to be free-standing although usually separated from adjoining buildings by a narrow alley. These spaces between buildings, coupled with the courts opening off of Joy Street, create a series of small repeated discontinuities in the streetscape. In addition there are greater stylistic differences between the older, starkly simple Greek Revival row-houses and the more ornate tenements



Tenement houses on Joy Street.

than were present on South Russell Street. The contrast between building size and architectural treatment creates a sort of active dialogue between buildings on Joy



The Peter Faneuil School

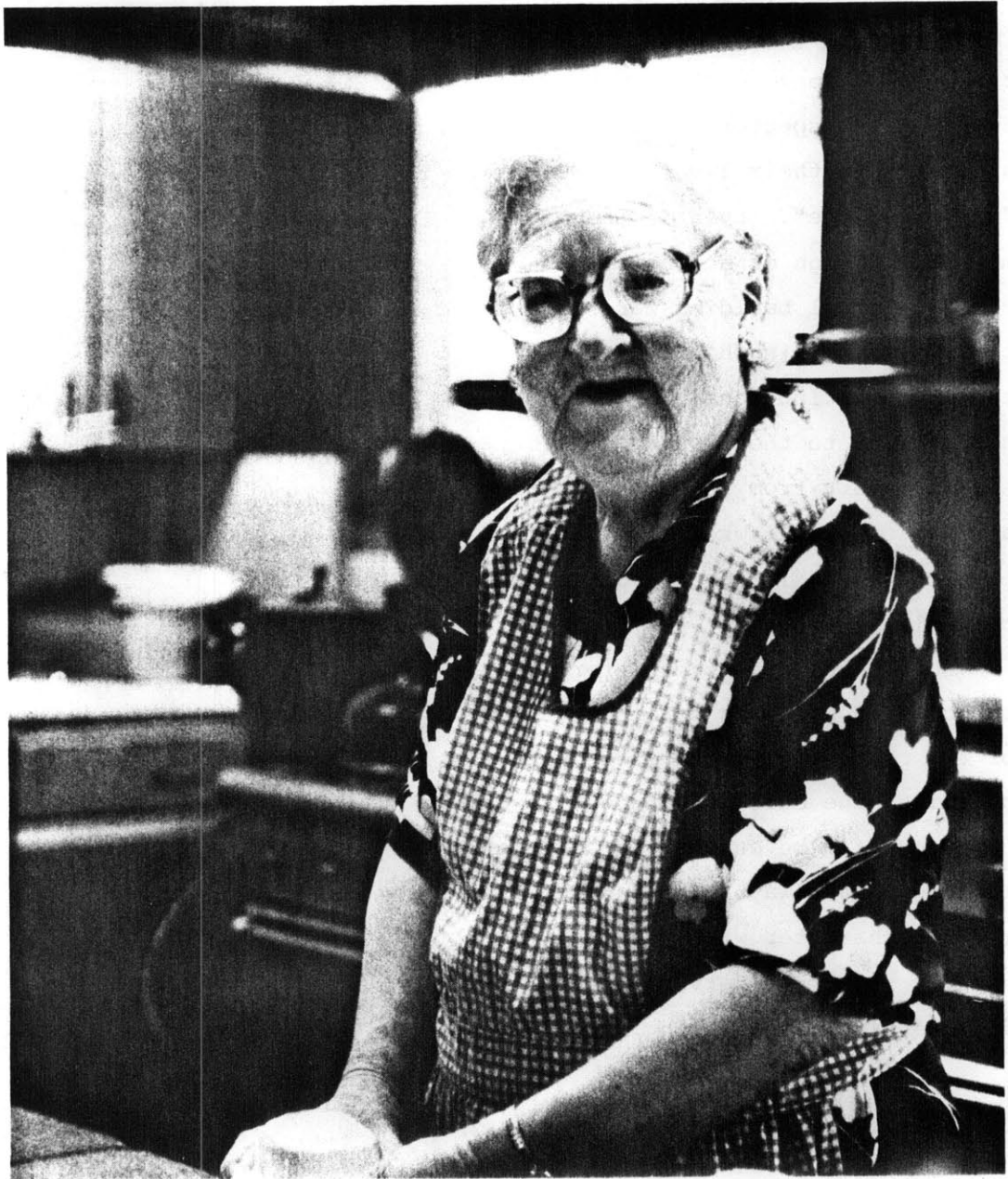
Street unlike the relative harmony of South Russell Street.

The Faneuil School, now the only remaining local school on Beacon Hill since the conversion of the Bowdoin School on Myrtle Street during the seventies, is a part of many local residents' past. Its potential conversion into housing is somewhat problematic. On one hand, preserving a familiar landmark seems attractive

to many in the community. On the other hand, conversion of the school building, planted squarely in the middle of the site with large asphalt-topped yards along the street edges, presents certain problems. First, from the developers point of view, it seems that conversion of the present building could produce a fairly small number of units relative to the size of the lot. Some new construction would surely be necessary to make this development financially worthwhile. Yet, given the unusual configuration of the existing building, this could be done only by adding a number of wings. While this could be done, it seems that the resulting pieced together building not be worth the effort and expense necessary for the conversion. At the same time the Faneuil School is clearly an institutional building, set apart from its context by its size and its siting. It seems possibly rather ill-considered to house a group of people

in an institutional building when those people may be all too keenly aware of the specter of institutionalization in their lives - of being "put in a home". Even if the management and design of a renovated Faneuil School building were not those of a nursing home, it seems that the institutional image might still cling to the project, thereby setting apart from the neighborhood a group of people who only want to participate in it for as long as possible.

For these reasons, and for the purposes of allowing an exploration of the contextual features of a new building, the existing Faneuil School building will be assumed to be demolished to make way for a new building more in character with the existing housing stock yet serving a somewhat different form of housing.



THE PROGRAM:

Design Guidelines for Elderly Housing

In proposing to build housing for elderly people in any setting, we must at the outset disabuse ourselves of the notion that in dealing with the aging we are dealing with a static and easily quantifiable group. On the contrary, older people have spent a lifetime developing their individual identities and they can be very different in terms of abilities, interests, lifestyles, and needs. At the same time they are continuing to change. The aging process brings about many gradual changes which affect their ability to maintain old habits and interests. This process affects different individuals at different

times and in different ways. It very often affects peoples' ability to continue to remain in their homes. While most older people remain in their homes for as long as possible, they many seek new living situations for economic, physical and social reasons. Their reduced income is no longer able to meet rising rents or home maintenance costs. They can no longer physically negotiate stairways or snow shovelling. The death of a spouse or close friengs may make these aspects of life more difficult as well as depriving them of needed companionship.

For whatever the reason, a move to a new living environment can

spell a big environmental and social change. Of primary concern to the individual is his desire to maintain the important features of his self-identity and lifestyle for as long as possible. Continued contact with one's life-long community and friends are important. Thus, a new living environment for such an individual must not only be compat-

ible with his lifestyle but must be able to respond to the individual's changing needs.

There are a variety of living situations available to the older person in our society, ranging from independent apartments to nursing homes which feature constant care for the sick and debilitated. Too often, however, these extremes are perceived as the only available alternatives. There are many individuals who find maintaining their own home too difficult yet need only minimal help to continue a semi-independent lifestyle. For these people a nursing home can destroy not only their independence but sometimes, prematurely, their health. For these, some degree of support services such as meals, housecleaning or social activity may be necessary.



Older people need housing alternatives to the nursing home.

While, ideally, a community of older people might be able to accommodate the full spectrum of needs, the relatively small size of this project and the apparent needs of the Beacon Hill elderly rule out the more health care intensive options. At the same time, there exist already a number of independent apartments for older people. While these do not fully meet the area's need for such apartments, there are few alternatives to apartment living on Beacon Hill. It may be that providing housing with a greater range of services than presently available is the wisest use of resources.

The goal of this project will be to develop a living situation which will allow older people to be independent for as long as possible, while at the same time to provide support services for individuals who can no longer function quite independently. It can do this in two ways:

first, by providing the individual with the privacy and autonomy of his own apartment within a setting which makes allowances for the physical problems of aging; and second, by providing optional services including housecleaning, transportation, and meals. These services could be de-institutionalized by allowing the resident to choose between cooking his own meals - either in his own apartment or in conjunction with neighbors, participating in the community hot lunch program operating in the project's community facilities, or buying his meals at a small on-site restaurant. Personal counseling and social activities could be generally available, the cost being included in the rental fee.

Meanwhile, the building can accommodate some consequences of the physical aging process. With the onset of physical ailments, accessibility becomes increasingly important.

Daily activities like climbing stairs or bathing can become difficult.

While the building need not be a maze of wheelchair ramps, removing obstacles and providing aids such as grab bars can improve an individual's ability to negotiate his environment. In addition, diminished sensory acuity may result in a person's becoming disoriented within the building. The ability to see some major point of reference in the building or outside it as well as clearly identified floor levels can help solve this problem. Differences in color, texture, graphics, or ceiling heights can also reveal the identity of a place. As they become less vigorous, older people may become more vulnerable to crime.

The living environment should provide security from unwanted strangers. This can happen by means of securable entry-ways, presence of a concierge or receptionist to screen strangers, and a well-developed social network

which can recognize suspicious behavior.

With lessened mobility, the individual's contacts with old friends and family members may decrease. A built-in social network can provide companionship as this occurs. It is important, then, that the building encourage social interactions to the extent desired by the resident. For some people, moving to a new environment full of strangers may be a difficult experience. Others are accustomed, through army life or rooming-house experience, to collective living. The individual should feel he or she has sufficient privacy while at the same time being able to gradually build a network of new social contacts.

Traditional apartment buildings for the elderly can make this transition difficult, thereby contributing to the isolation of the individual. Floor after floor of narrow corridors lined with identi-

cal apartment doors make no allowances for informal interactions between neighbors. A person's recognition of his fellow tenants may be minimal. The "community rooms" provided at the ground level are often not used by residents who prefer the relative isolation of their own apartments to exposure to a roomful of strangers.

By reducing the numbers of residents (to say, 40-60) who share certain facilities, individuals can begin to recognize their neighbors and to feel comfortable in collective territories. In addition, the building design can recognize and facilitate the kinds of interactions normally experienced in neighborhoods. A person's most frequent contact is generally with his immediate neighbors although he may recognize and speak to most of the people on his block. He may join a block associations to carry out certain projects. At the same time he will have some



familiarity with still other individuals in the larger area.

The spatial organization of a large building can encourage neighboring if it creates smaller social units in which people have the opportunity to get to know and feel comfortable with each other.

Development of social interactions at this level can encourage participation in the social life of the building as a whole.

An organization based on this principle would feature a hierarchy of social units. Thus, a cluster of 3-5 apartments might comprise the smallest and most intimate grouping. Several clusters of apartments on the same floor might constitute the next level of organization in which people would be known to each other and might share a common space or activities. The aggregation of these 'neighborhoods' into a building comprises the broadest social structure. People may recognize each other at this level.

At each level space can be provided for people to meet and interact. A widening of a hallway, might be adequate for interchanges between next-door neighbors. A centrally located sitting room near the elevator might be the social center for the 8-12 individuals on a floor, while larger community living or dining rooms could bring people together from all over the

building. Most important, people would be able to choose the size gathering in which they felt comfortable.

In this way, the building and its sub-units can be perceived by the individual as a series of places which belong to him: "my building," "my floor," "my neighbors." At each level or organization, residents should have the opportunity to leave a personal imprint. This means that residents must have the ability to collectively decide how to use available space. Neighbors might collaborate on decorating a shared sitting room. They might decide that collectively prepared meals are an important institution and that their space should have some dining facilities. Building management should facilitate these decisions by providing as many resources as possible including materials and labor (within economic limits). Since needs change

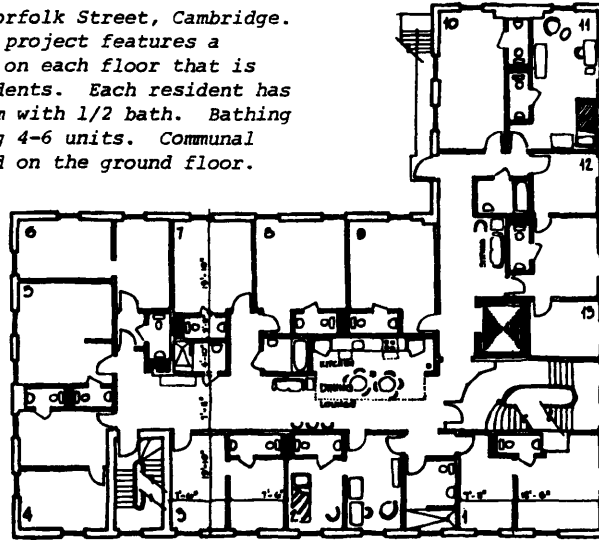
over time, these spaces should be able to be adapted to new circumstances. The addition or subtraction of infill materials could allow considerable change in use. A social space could be made more private in order to reduce distractions to its users. It might even be annexed to an adjacent apartment. A slight excess of well placed shared space would add to the ability of the building to adjust to changing needs.

Implicit in this kind of organization is a privacy gradient - as one moves into spaces shared by smaller and smaller groups the relative privacy of these spaces increases. The identity of places at each level of privacy can be reinforced by architectural clues that emphasize the relations of spaces. Their size and location with respect to circulation paths will give some clue about use but a system of different

materials, colors, textures, ceiling heights or lighting conditions will reinforce the identity of the place. Transitions or 'gateways' between more or less private spaces should also be clearly marked by a change in one or more of these qualities.

While they must have their own identities, neighborhood places should also possess a sense of connection to the whole building. The core of the neighborhood might consist of the circulation path with elevator and stairs, a sitting area with a view of the outside world, and an overlook of other spaces and activities in the building. Visual connections to more public parts of the building will help the individual to orient himself to certain landmarks. It will also help him to determine what activities are in progress elsewhere, and who he may expect to meet. The ability to survey a social situation without committing oneself to it is impor-

Upper floor plan, 116 Norfolk Street, Cambridge. This congregate housing project features a kitchen and dining area on each floor that is shared by thirteen residents. Each resident has his own bed/sitting room with 1/2 bath. Bathing facilities are shared by 4-6 units. Communal living rooms are located on the ground floor.



tant.

Paths through the public parts of the building should be designed to give the resident the option of choosing the amount of social contact he will have. Paths which run by (not through) social spaces can create opportunities for the individual to pre-view activities in progress and to decide whether or not to join them. Waiting for an elevator can also provide an excuse

to be peripherally part of a social situation as well as a handy escape route if needed. Residents may also choose to by-pass social spaces entirely. Alternate paths through the building should enable them to do so.

Because older people vary in their spatial needs as much as they may differ in personalities, a variety of apartment types should be provided. Efficiency or small one-bedroom units may be sufficient for older men accustomed to hotel or roominghouse life while larger one bedroom units may better suit people coming from more spacious apartments or homes. Two bedroom units will accommodate couples or families.

Residents need to be able to personalize their apartments. The ability to display favorite objects - pictures, furnishings, or trinkets - is important. Space should be made both inside and just outside

the apartment door for the person to declare something about his personality and interests to his neighbors and guests. The continuation of the privacy gradient established elsewhere in the project within the unit itself is also important. More private spaces such as bathrooms or bedrooms should not be visually exposed to more public activities, although the bath should be accessible without walking through the bedroom. Meanwhile, room layouts should be able to accommodate different furniture arrangements. This is particularly true of bedrooms where a variety of bed arrangements might be used. Maximizing usable wall area of the apartment will give greater flexibility since residents most often place their furnishings against a wall. Residents should be able to easily see out their windows from a seated or lying position. Window glare can be minimized through the

use of overhangs, awnings, or shades.



View of hallway, De Drie Hoven, Amsterdam. Architect Herman Hertzberger created alcoves outside apartment entries. Residents use these "front porch" areas for display and for sitting.

Returning to the scale of the community, this project could benefit the elderly people of the entire Beacon Hill area by establishing a new senior center. This center could serve to consolidate in one central location the sparsely attended senior programs presently scattered over the Hill. In conjunction with nearby Hill House, home of the Beacon Hill Civil Association, this project could become the focal point of many programs serving the community at large as well as the area's older residents. Meeting rooms and offices for senior programs could be provided to augment the presently limited facilities of Hill House. These new facilities could be used by the daily hot lunch program and monthly senior dinners as well as community meetings. In addition, new programs for older people could be inaugurated. One proposal has been for a fitness center to provide exercise equipment

and classes. A crafts cooperative of older people is seeking both workshop space and a retail outlet for the crafts made by its members. Other programs which provide retired people the opportunity to supplement their incomes through occasional jobs such as box assembly or envelope stuffing require workspace. A small restaurant, which might optionally be run by the senior center, could serve as an alternative to institutionally prepared meals for the project's residents as well as a link to the larger community.

While benefitting the project's residents, the senior center must clearly be separated from the housing component for both privacy and security reasons.

Although it is beyond the scope of this thesis to develop detailed solutions for many of the problems of elderly housing, it will try to set up a frame work for neighboring based upon the organizational principles elucidated here.

The abbreviated program summary which follows indicates the types of spaces which must be provided in a building of this kind.



Program Summary

70-80 Apartments to include:

- 25% efficiency (400-500 sq. ft.)
- 65% one bedroom (460-500 sq. ft.)
- 10% two bedroom (500+ sq. ft.)

Shared facilities to include:

- a) Hallways sufficiently wide and pleasant for interactions with neighbors.
- b) Sitting areas for each floor, to be shared by 6-10 residents.
- c) Communal facilities to be shared by all residents of the building:

social spaces such as sitting, dining, and activity rooms

outdoor spaces such as terraces and roof decks

waiting rooms near main entrance
elevator lobby with mail facilities
laundry rooms
receptionist or concierge office

d) Community facilities open to both project residents and community members:

meeting rooms
offices for project director and staff
offices for community groups
crafts cooperative store
restaurant
fitness center
workshops
support facilities such as restrooms, storage, food preparation, janitorial

e) Miscellaneous support facilities

boiler room
janitorial closets
storage for residents belongings

PART II

THE DESIGN



The Design process is the process of synthesizing and transforming all the available information in light of ones own experience, knowledge, and artistic conceptions. In this case, the information has included ways of working with context, the various aspects of the Beacon Hill context, and a set of ideas about the social structure and functioning of a residential community for older persons.

Like many projects by inexperienced designers, this design went through a number of early stages of confusion and disorganization. What follows does not attempt to chronicle the stages of the process but rather to indicate some of the considerations that went into the final product.

The analysis of the existing physical context of the area noted five conditions. First the interior of blocks on the North slope are generally densely built along narrow alleys. Second, because of this density and the sites' orientation, a sunny southern exposure is a condition rarely found on this part of the Hill. Third, street edges are very strong - generally continuous. Fourth, Beacon Hill is fairly steeply pitched in the vicinity of the site. Last, it was noted that there are small but perceptible differences in character between Joy and South Russell streets.

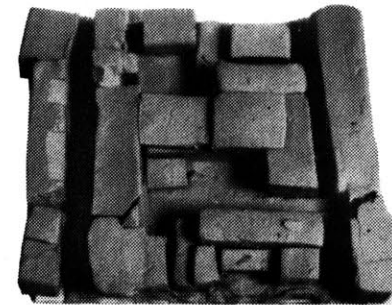
In addition to this information, the program outlined the necessity of a collective organization of a large number of people.

Taken together, these conditions have produced the following principles of site development:

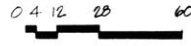
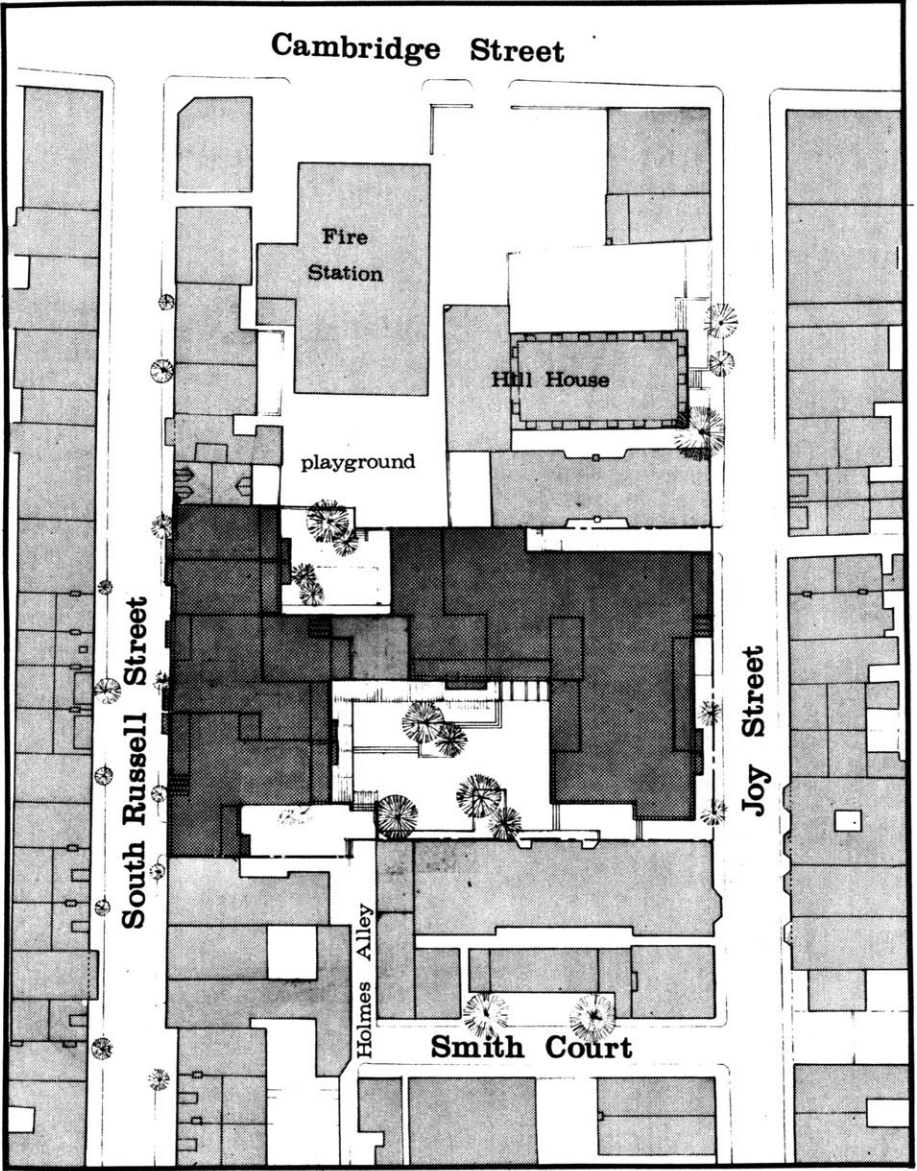
- a) Maintain the strong street edge;
- b) Maximize the ability of sunlight to penetrate the site;
- c) Create large outdoor spaces for collective uses.

Based upon these principles, it was clear that the typical pattern of narrow alleys built within the block would have to be abandoned in the interests of sun and collective space. This decision produced a courtyard plan, its U-shape opening toward the south. The building is set back against its northern edge as far as possible to allow maximum penetration of sunlight. This allows the courtyard to be relatively sunny much of the year and, even in winter, it allows the building to get direct sun. The east and west arms of the U continue the line of buildings along the street.

SITE PLANNING



Study model of site plan.



SITE PLAN

The overall project, in its final configuration, is broken down into two independent buildings. These two buildings are connected at ground level by those spaces which are, in fact, shared by both houses - the community facilities. These areas are meant to be directly accessible both from Joy Street and from the courtyard. The topography of the hill reinforces the courtyard entry by sloping down toward the community center doors, forming a sort of shallow natural amphitheatre. The community center "link" between these buildings is sufficiently low that it allows the penetration of sunlight into the playground beyond. The roof of this section becomes a trellised deck for use by residents from both buildings. An open walkway connects the houses at an upper floor.

While the primary feature of the project is its large courtyard, the final configuration of the building also creates smaller subsidiary

View toward site from Holmes Alley.



courts which reinforce certain existing qualities of the site.

First, while limiting in depth the southernmost section of the South Russell building, an entry

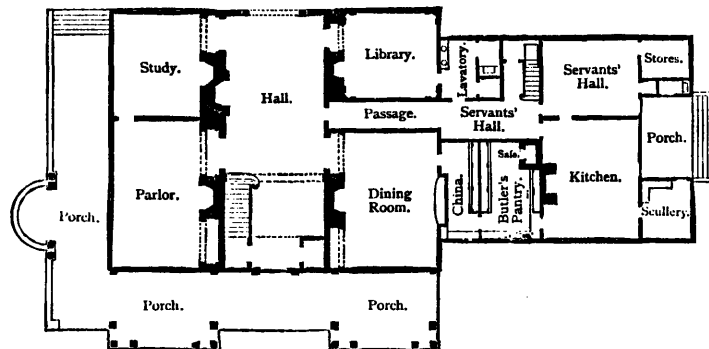
court was created that serves #34 South Russell, two tiny wooden houses hitherto tucked away on Holmes Alley, and a secondary entrance for this project. Large enough to accommodate emergency vehicles, this court becomes the northern outlet for the alley. Creating a courtyard out of this cluster of house entries essentially recreates at a larger scale the type of neighboring spaces that occur within this building. It also underscores the relationship of this project to the life of the surrounding community.

At the bottom of the site, the placement of the narrow community room "link" has two effects. On one side, it reinforces the enclosed quality of the main courtyard at ground level while on the other side it produces a spatial extension of the existing playground to the north. This small area can be used in conjunction with the recreation center in the basement of

the community building or for more private personal use. A connecting stair to the playground allows visitors' children to take advantage of those facilities while remaining under adult supervision.

The pattern along the Joy Street edge of the site is somewhat different than that along South Russell Street. Along Joy Street, the building recedes slightly from adjacent buildings, maintaining the narrow separations of the block's large apartment houses. At the south edge, this allows pedestrian access to the courtyard, while on the north edge of the site, access to the service entrance and trash receptacles is located. In general all access to the interior of the site can be secured by means of lockable gates.

Because the goal of the project's organization is to promote social interactions between residents, the overall project of 70-80 apartments has been broken down into two smaller buildings. Smaller groups of 30-40 residents allow an individual to be acquainted with many of his neighbors, thus enhancing the chances that a resident will feel comfortable participating in social situations within the building. At this scale, it is possible to consider each building as a large house shared by a group of people rather than the more impersonal terms as an apartment building or elderly "project." Many facilities can be shared by the house's inhabitants including large social spaces such as living and dining rooms, a community kitchen where meals or snacks can be prepared (or where, alternatively, a snack bar could be operated by building residents), small club rooms for billiards, or crafts, and laundry facilities.



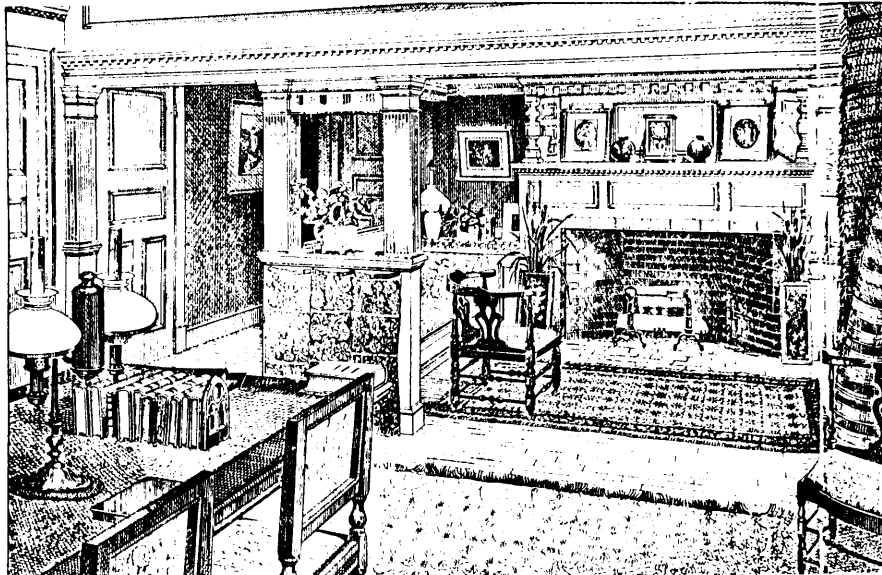
Plan of H.A.C. Taylor House, Newport, R.I. by McKim, Mead, and White, showing relation of living hall to formal rooms of house.

A clue to the organization of these spaces can be provided by Victorian mansion houses. These elaborate homes often featured a room designated as a 'living hall' a central area which functioned both as a hallway and as a living room. The living hall was often the distribution point for circulation within the house, acting as a connecting room for the formal living spaces on the first floor - parlor, dining, library, and billiard rooms. At the same time, a grand stairway often descended into this space. These stairs, overlooked by balconies at the upper floors, were a kind of

BUILDING ORGANIZATION



The living hall in "Shingleside," Swampscott, Mass. by Arthur Little features an inglenook, the home's main stair, and overlooks from above.



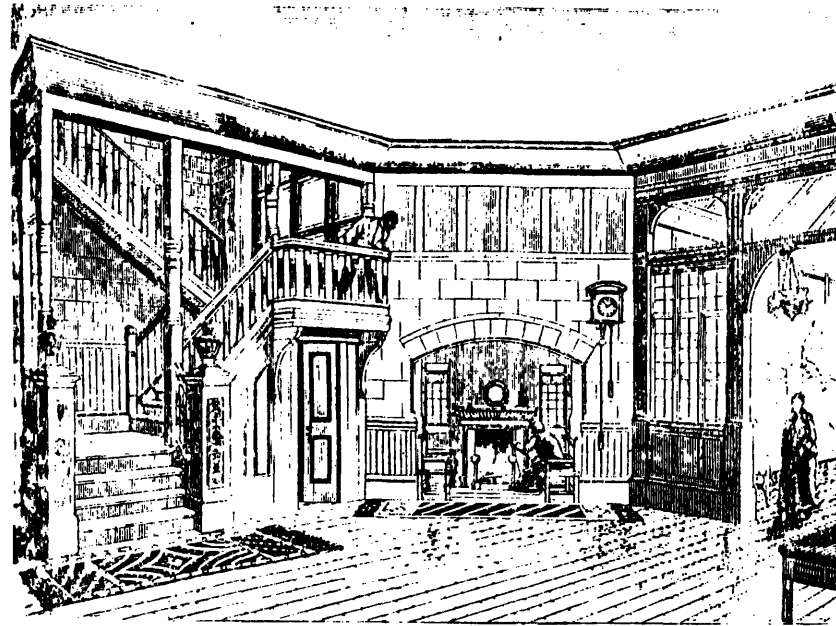
celebration of the connections between the public and private realms of the house. In addition the living hall was well-appointed and spacious, a place to linger as well as to traverse. Cosy inglenooks, elaborately carved fireplaces, and bay windows overlooking an expanse of usually meticulously groomed lawn, proclaim that this is a room meant to be used.

The living hall is a concept which can be explored in this setting as both a center of activity and as the reference point for the more private spaces on the building's upper floors. While this notion has as yet been only diagrammatically developed, it remains the organizing element for the building's uses.

Here the living hall corresponds to a central zone of the house around which are clustered the house's social spaces. It is directly accessible to outside setting areas - either at ground level or on decks. It contains the primary circulation path, the

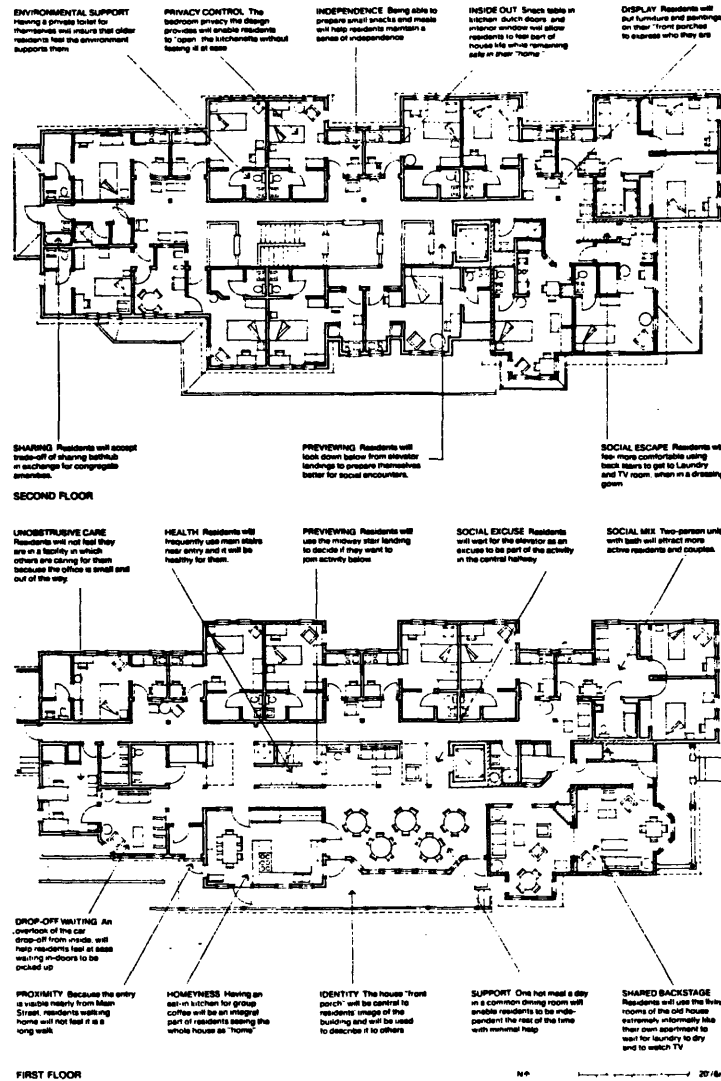
elevator, stairs, and a visual connection with the upper floors. On upper floors, it serves as a vantage point for residents to survey the social situation below. Adjacent to this vertical core at each level is a sitting space shared by the six to ten residents of that floor. This "neighborhood", in turn, is composed of two to three clusters of apartments. Two to four units are grouped together along a short corridor. This area, where an individual's closest contacts with his immediate neighbors may occur, takes its shape in part from the recessed entries of units where an individual may display favorite objects or place small pieces at the heart of the cluster. By being both a distribution point and a potential socializing space, this area resembles a small version of the living hall.

Primary access to each house, and its living hall, is directly from the street upon which it fronts. Secondary entries open onto the main court-



Grand staircase and living hall with inglenook.

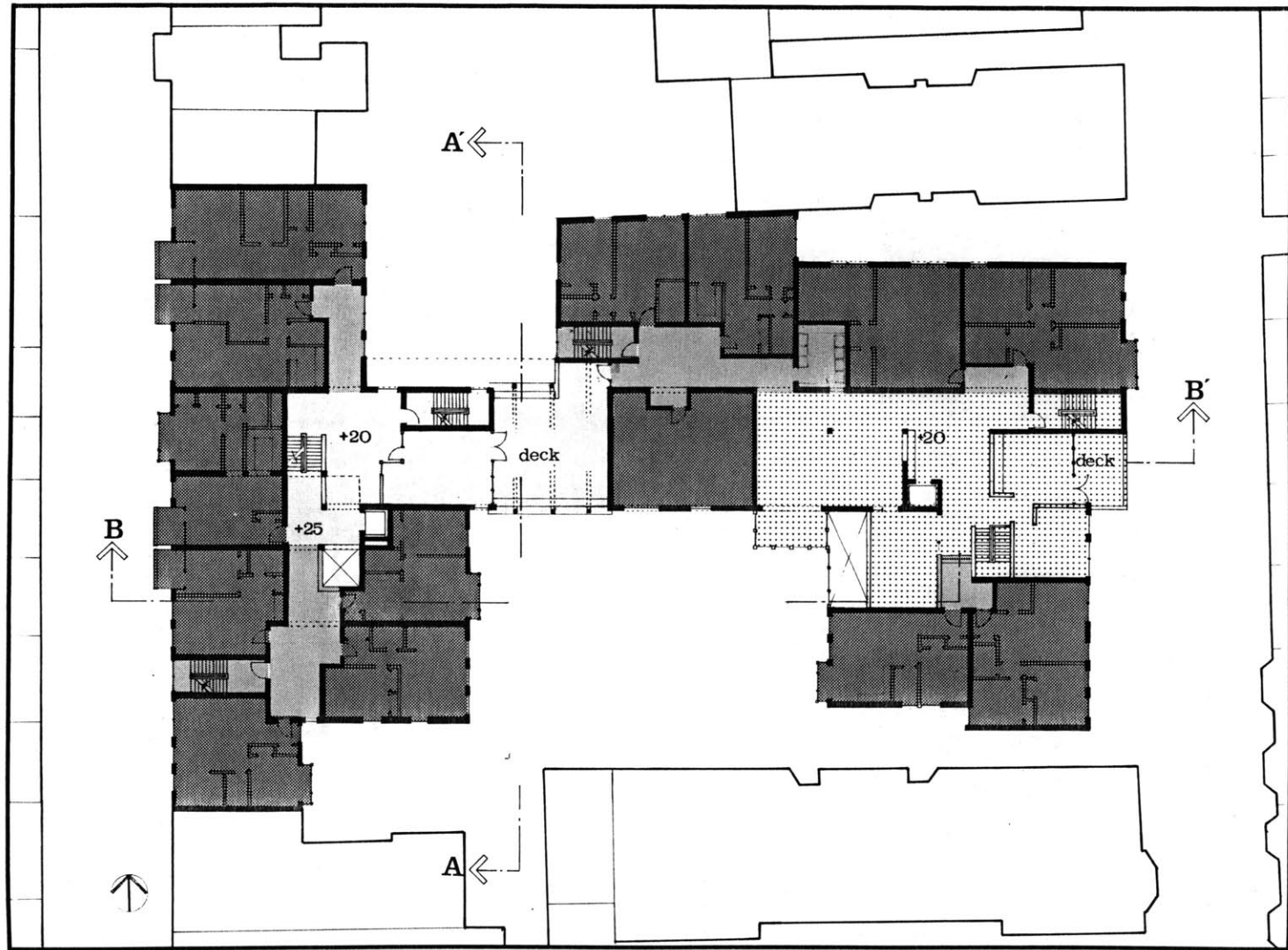
yard where more private activities may occur. Access to the South Russell House is also possible through the small entry court it shares with neighboring houses. Near this entry a small office has been provided for a resident concierge who can monitor the access of strangers to the building as well as distribute mail, and generally act as a liaison with the project's coordinators.



Plan of Captain Clarence Eldridge House, Hyannis, Mass.
A congregative house for 20 older people showing design hypotheses.

The Joy Street House shares its entry with the senior community center, although the activities of these two organizations may be more or less independent. A receptionist is available just inside the door to provide information and assistance to the building's users. While the social spaces for the Joy Street house are located at the second level, at ground level, a waiting room near the entrance and a small sitting room with porch facing the courtyard are provided.

The basement and first floors of this building are primarily given over to community functions. A restaurant and senior crafts cooperative occupy space along the street edge. The community meeting rooms occupy the low wing linking the two houses and opens onto the main courtyard. Exercise programs, community offices, and workshops are located on the lower level, with access to the small courtyard at the north side of the site.



HOUSE SOCIAL SPACES
 PRIVATE
 SEMI-PRIVATE
 NEIGHBORHOOD CTR.

LEVELS +20
 +25



PRIVATE
 SEMI-PRIVATE
 NEIGHBORHOOD CTR.

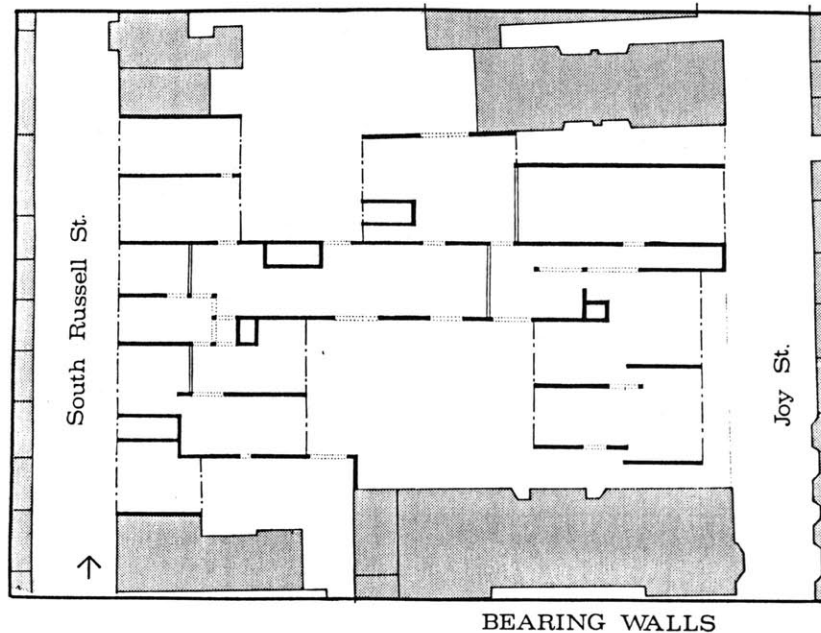
LEVELS +30
+35

The structural system of the project is a modern adaptation of the properties of the typical bearing wall system of the area. In this case, masonry bearing walls support

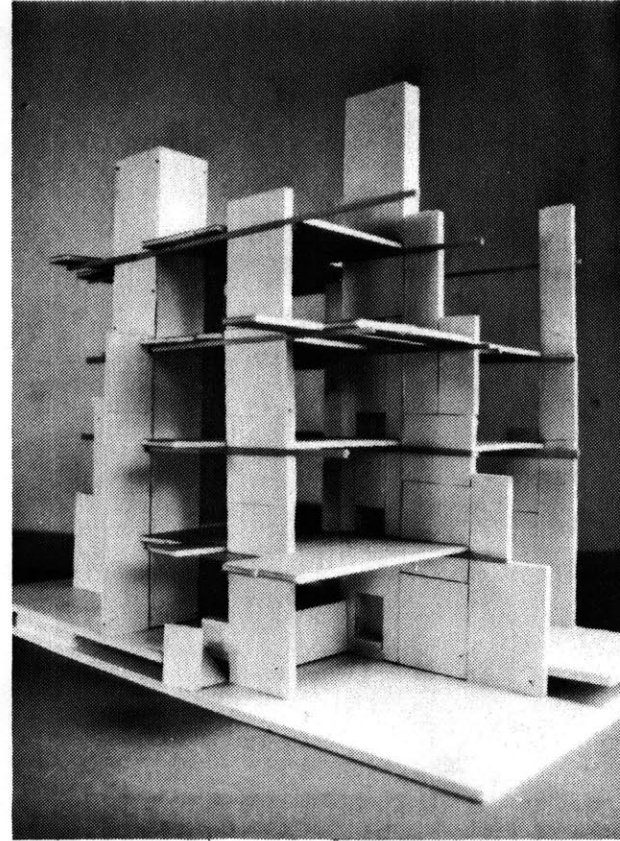
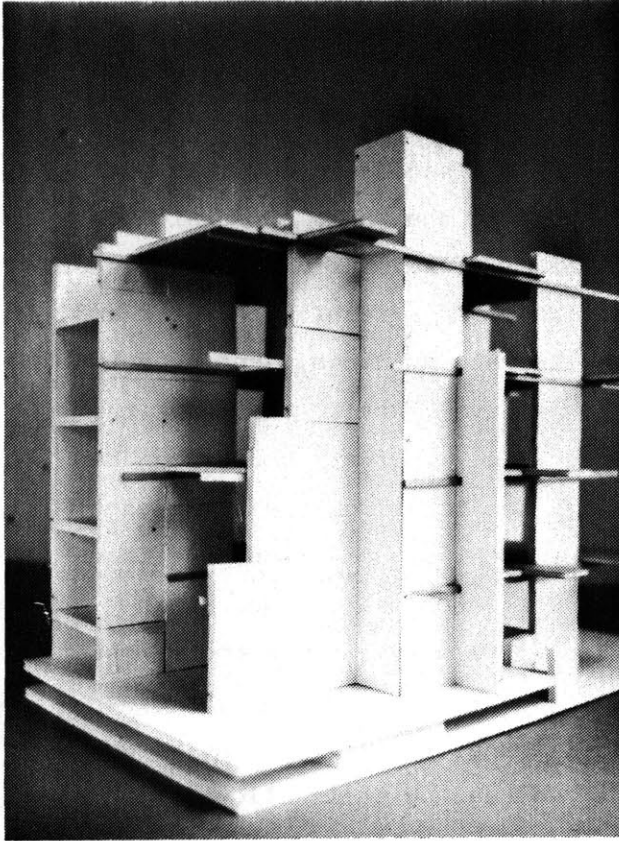
STRUCTURAL SYSTEM

pre-stressed cored floor and roof slabs with concrete topping. The structural walls are broken and, in places, offset from one another to allow movement through the building. In such cases, precast reinforced concrete lintels, beams and columns span the openings. The structural spans are approximately analogous to the 16'-24' wide increments of the existing party walls.

Deployment of bearing walls across the site, plan at ground level.



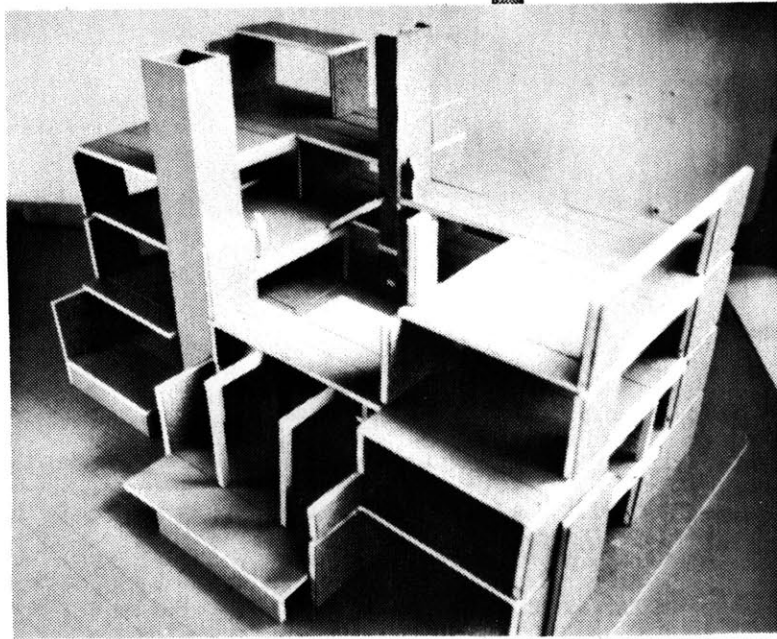
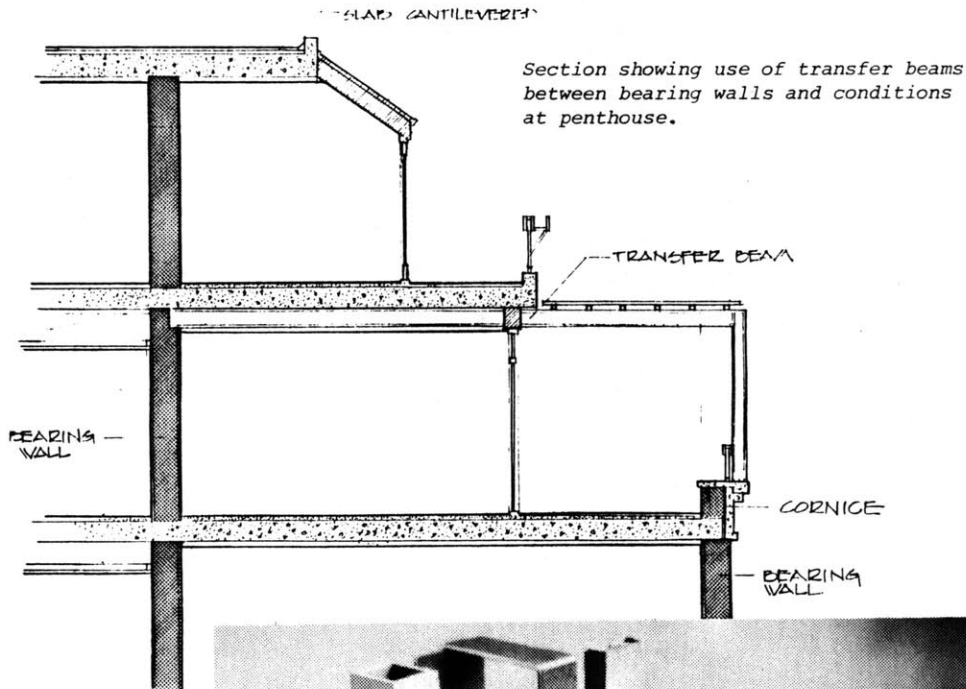
The directionality of the structural system is generally derived from that of the context in which bearing walls are typically perpendicular to the street edge with a non-structural facade. This pattern is largely true of this design. The directionality of structure is continued across the site with the result that in the central portion of the U-shaped building, which has its orientation perpendicular to that of the two arms, the bearing walls actually become the exterior walls of the building.



Study models of bearing wall structural system.

These different conditions have very different implications with regard to the potential articulation of the built edge. Where the facade is non-structural, it can be manipu-

lated more or less independently of the structural system, thus creating the possibility of a very spatial edge. When the structure and the exterior walls of the building are



the same, clearly the options are more limited. Concrete planks can be cantilevered beyond the wall, if needed, and secondary material can be attached to the wall, but basically the bearing wall must maintain its solidity. This results in fewer and smaller wall openings, supported by more massive lintels. While at the street edge, roof structures can be easily set back from the built edge, in the interior condition, cutting back the cored slabs requires an alternative structural support system. At the penthouse level a system of steel transfer beams running between the two bearing walls allows the setback of penthouse roofs. These steel beams, in addition to supporting the roof structure, can also provide a sort of unfinished element which could serve as the basis for infill elements to create trellises, greenhouses or other structures.

Study model of central core of building.

One of the challenges of developing a large building in the Beacon Hill area lies in the need to find a compromise between the project's relatively large scale and the small individually formed components of the fabric. Massing is one way to achieve this goal.

The building height has been limited to that of the adjacent houses to preserve the spatial qualities of the street itself as well as the range of existing house sizes. Further, the apparent height of the building can be minimized by setting penthouse apartments and roof elements back from the cornice line. Echoing their neighbors, the roof lines of sections of the building step up to follow the grade of the hill.

At the same time, the impact of the considerably greater bulk of the building has been softened by allowing certain building sections to

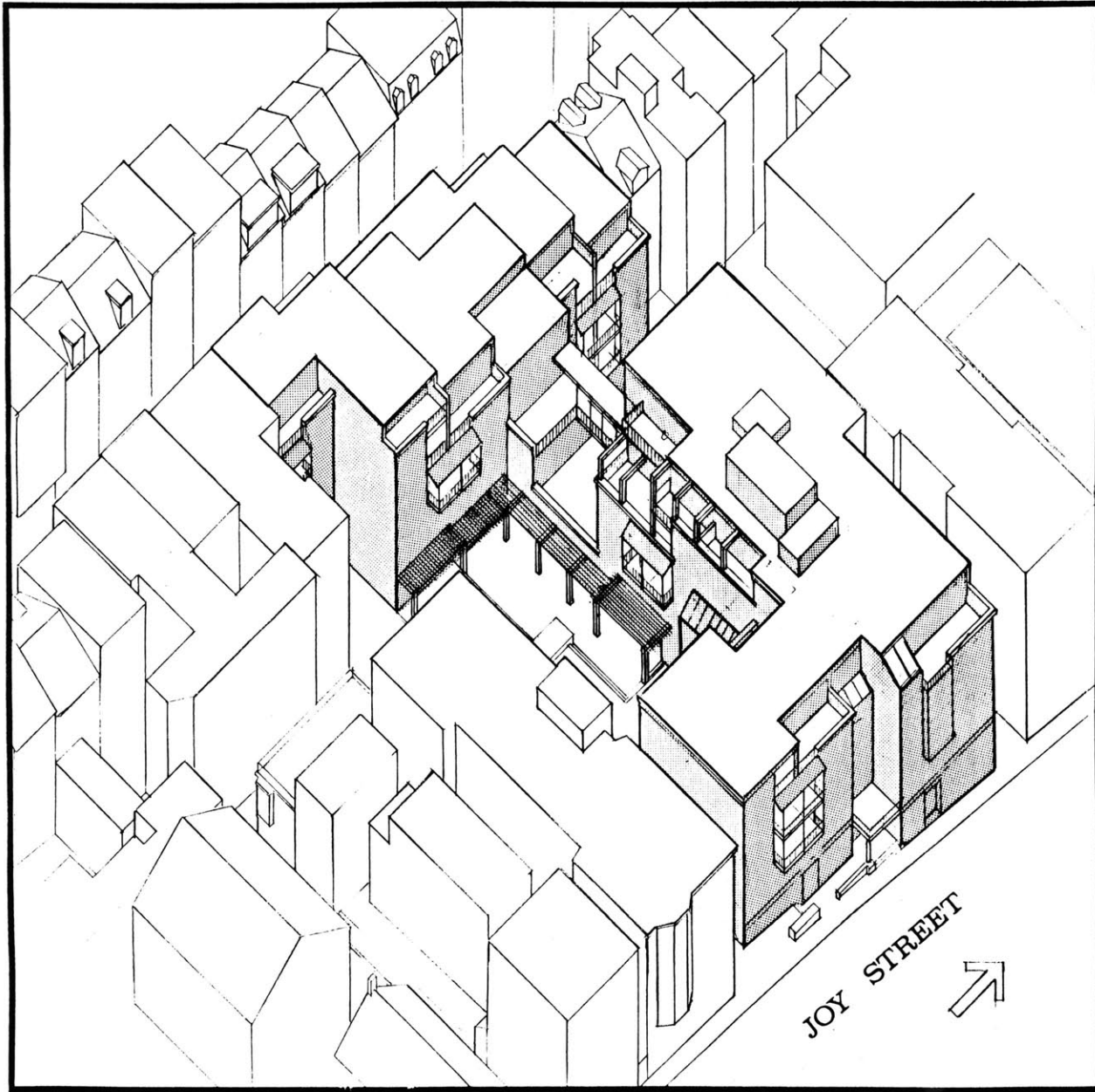
act as transitional elements, bridging the gap between the shallow single family houses which abut the site and the much deeper, more massive project proposed here. The north and south ends of the South Russell building, for example, are stepped back to match the depth of their neighbors. As noted earlier, this creates coherent spaces which can be shared by abutting buildings while at the same time it allows the new building to be perceived as growing out of the existing context. It also creates the possibility of some shallow floor-through apartments similar to those of the existing context.

The bulk of the building can be minimized still further by breaking up the surface of the building into smaller regions more compatible with the relatively small size of the individual rowhouses. As noted earlier, one of the principal features of

MASSING

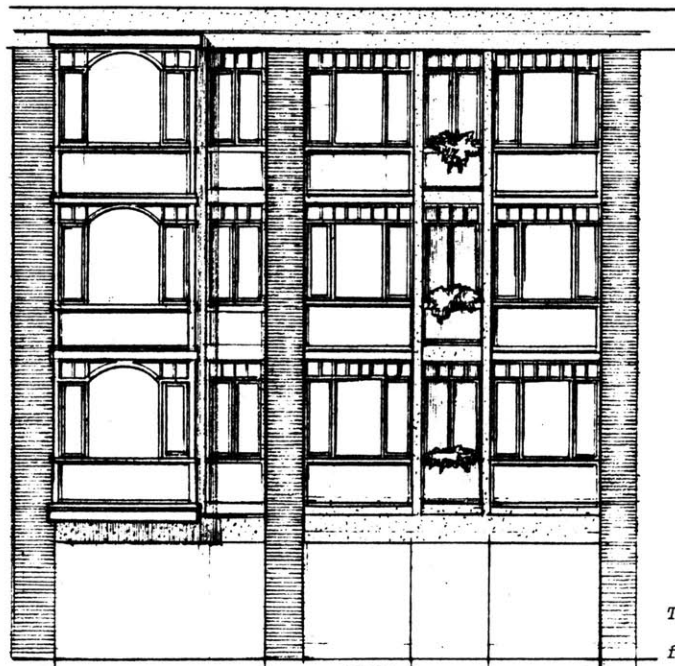


the area is the unbroken plane of the house fronts. This very strong pattern is one which seems important to be retained along the street edge. This condition implies that the creation of the smaller zones of the facade will derive more from surface articulation than from the larger scale spatial manipulations of the edge. Within the courtyard area, of course, away from the constraints of the street, the built edge can be treated considerably more freely and spatially. Here it is possible to explore more fully the three-dimensional possibilities of the building system. In general, however, the contextual function of the project's massing will be confined to the manipulation of the general shape of the building, particularly in its interfaces with the existing environment; the limitation of roof height, and the use of a stepped roof system to respond to the site's grade changes.



Within the context, subtle differences of facade composition are able to assert the identity of individual houses despite the continuity of surface. Slight shifts in interior floor height, with resultant differences in roof heights, and stylistic differences in trim suffice to identify the individual components of the streetscape. Since we shall continue the planar facade along the street edges, small differences of these kinds may allow us to define smaller regions within the overall mass of the building.

As noted earlier, differences in roof height due to the grade change can begin to suggest these regions in the upper portions of the building, however some additional elements are clearly required. It seems logical to assume that these regions will correspond to the articulation of individual apartments which in turn will roughly coincide with the deployment of the structural bays. Since

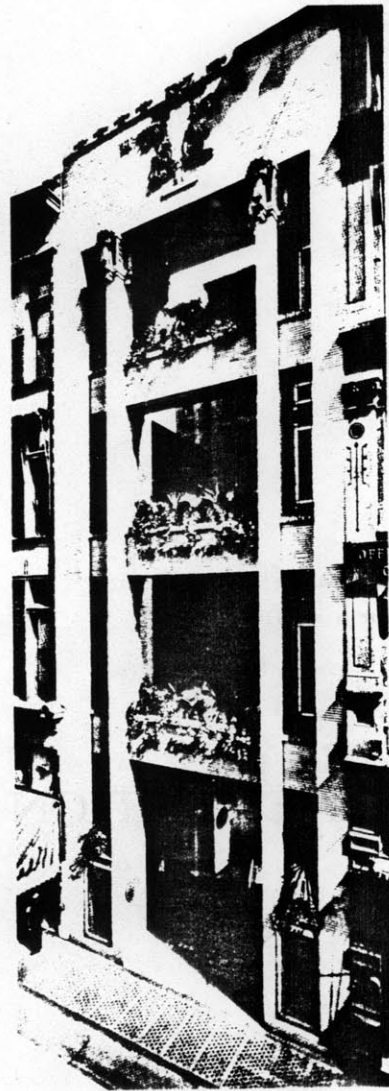


*The facade as a framework
for a metal skin.*

these bays are of the order of size of the existing houses, it is reasonable to attempt an articulation of the structural divisions as a way to subdivide the building surface.

An early attempt at this process viewed the structural condition at the street as a sort of framework for the facade. The bearing walls, faced with brick, were exposed while a system of lightweight metal window

SURFACE ARTICULATION



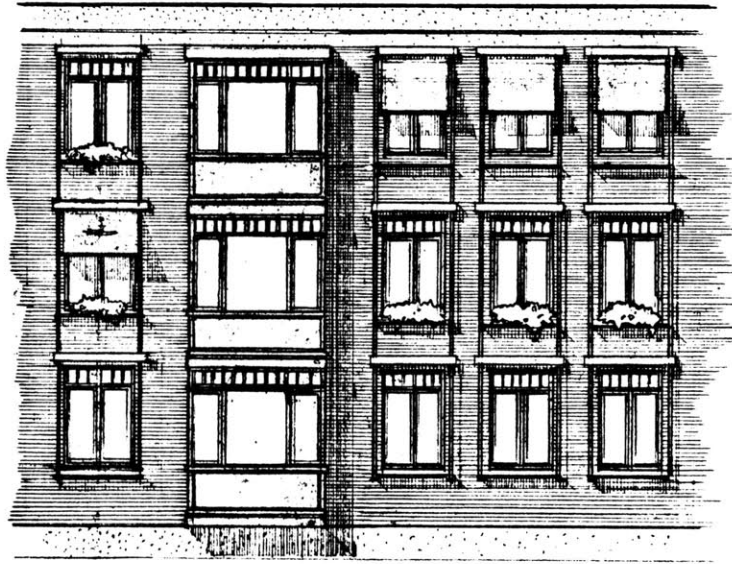
frames and spandrel panels served as infill. Precast concrete elements could be added to the system for stability and to allow a more three-dimensional articulation of part of the actual window plane. Multi-story metal bays could be also used as facade elements. It was concluded that while this type of system emphasized the subdivisions of the bearing walls and could potentially produce a highly patterned surface, it also produces an array of horizontal window bands which are rather at odds with the dominant verticality of the existing rowhouses. This approach to materials reduces to a minimum the use of the traditional

The Edison Block, Chicago, by Purcell & Elmslie.

This building establishes the wall plane of the block by using heavy brick piers. The deeply recessed entry and windows create a very three-dimensional facade. Recessing brick balcony spandrels from the surface of the piers maintains the vertical proportions of the building.

brick and, by introducing a whole new material to the context, could conceivably emphasize the difference of this building from the context. Thus, while an individual bay of this system might have considerable visual interest, taken as a whole the effect might be overwhelming. It was concluded from this exploration that the traditional window forms and surface materials should play a greater role in the development of the facade.

The final form of the facade more nearly approaches that of the Beacon Hill context. A brick-veneered cavity wall with individual window openings maintains the patterns of the adjacent buildings while providing a kind of neutral field for other special conditions such as bay windows or balconies. The traditional means of clustering window openings in bay windows generally carries these openings away from the wall plane and is usually executed in a secondary



The facade showing use of framework around window openings and bay window.

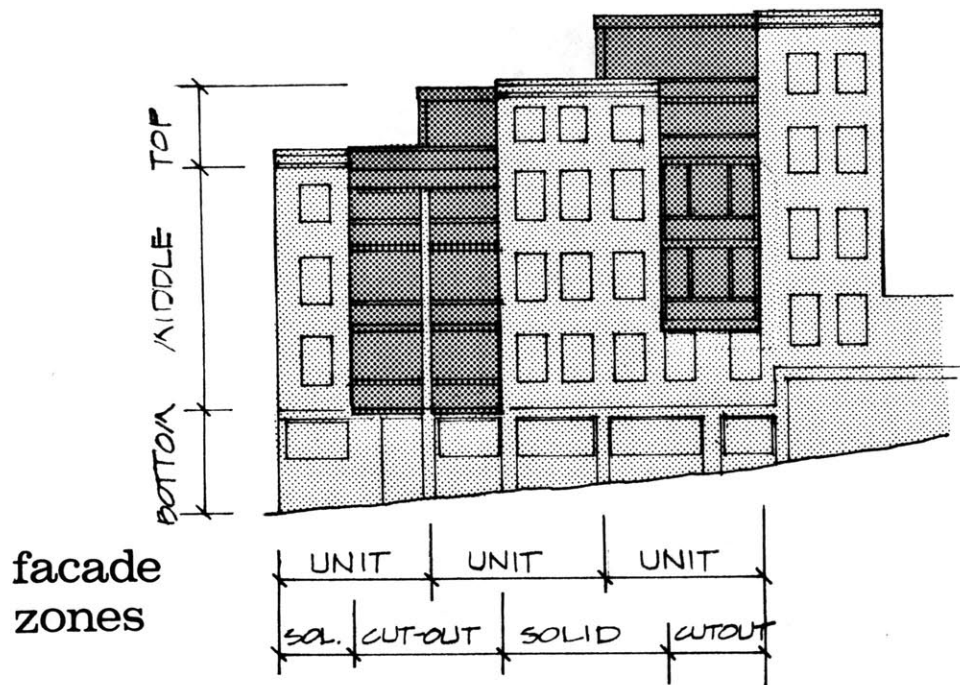
material. This approach is repeated in the tubular steel glazing systems with metal spandrel panels that are featured as recessed elements in stairwells and balconies, and in the metal-clad bay windows.

In order to maintain the dominant verticality of the facade, bays, balconies and other special elements can be arranged as multi-story elements. Beyond this, how-



Aggregation of windows in Pinckney Street house occurs in a secondary material and different plane than brick wall surface.

ever, these elements can be used to create a visual overlapping of zones. By aggregating these vertical breaks in the brick surface, a rhythmic alternation of solid and

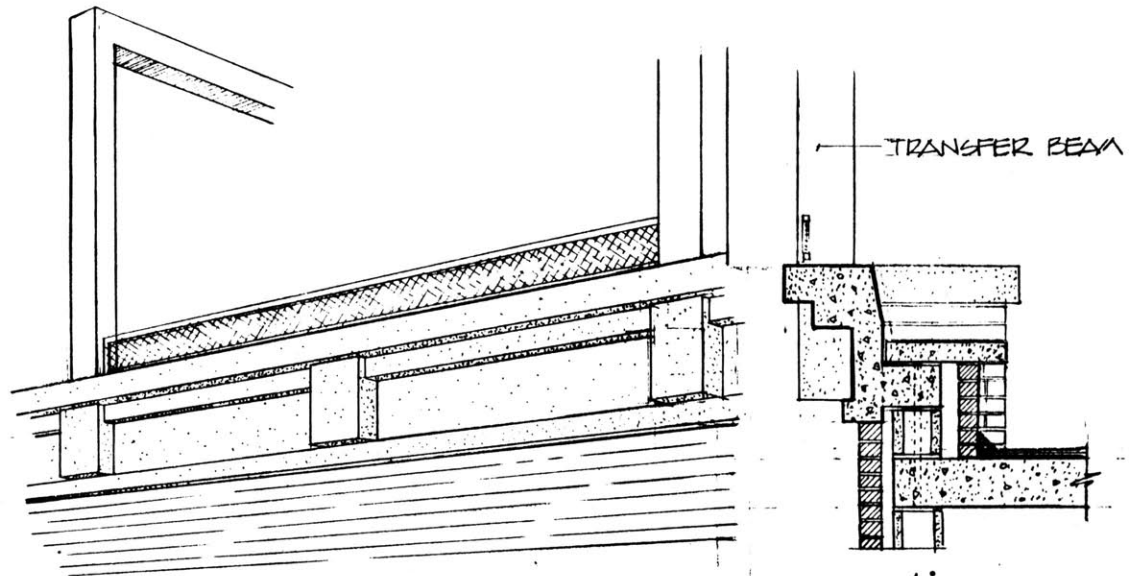


cutaway zones is achieved. Since individual apartments are likely to extend between party walls, when balconies are placed on either side of the wall, the resulting solid/void zones become independent of the actual apartment division, although a closer scrutiny will reveal the boundary wall itself. Since these zones can be more or less regularly deployed, they will roughly corres-

pond to the residential width. The kind of ambiguity resulting from this kind of manipulation of the facade is, of course, not possible in a single row house, but it seems to be a way to emphasize the modular subdivisions of the building while indicating a more complex organization than that of the standard row-house.

This deployment of large scale elements produces an articulation of zones over the length of the building. As noted earlier, however, typical houses also are vertically zoned into basement, living area, and roof elements. This three-part composition has been continued in this project. The ground-associated zone containing entries, community and commercial spaces echoes the traditional granite facing of this area by its use of a precast concrete column, lintel, and panel system. A metal infill system can be combined with glass blocks to complete this

zone. This lower zone is reinforced within the courtyard by a tubular metal trellis structure. As we have already seen, the middle zone is brick with secondary elements such as balconies or bays. The roof zone consists of both the heavy cornice line of the area's flat-roofed buildings and the habitable roof zone of the gable or mansard roofs. The cornice is of precast concrete sections which can act as the support for the steel transfer beams found at the roof level, when the bearing wall must function as exterior wall. The cornice piece forms the roof parapet as well as a bench. The construction of the roof zone's penthouse apartments consists of a metal curtain wall system set back from the cornice edge. This system recalls the infill used in the ground-associated zone. In fact, roof decks at various levels of the building act as a sort of virtual ground and receive similar treatment, in some cases, the trellis-like enclosure.



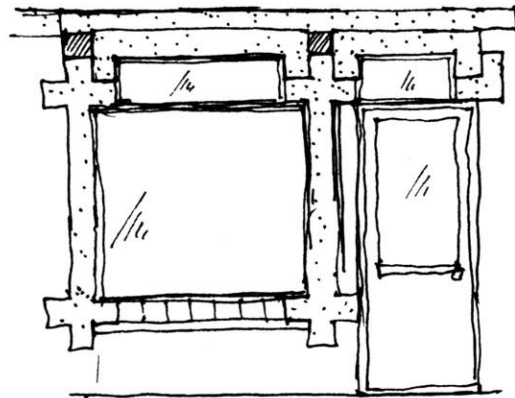
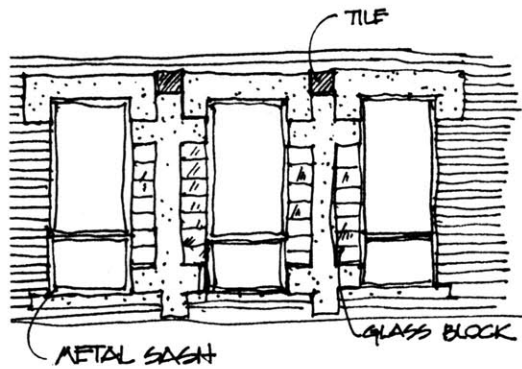
cornice

section



Cornice of building on Charles Street.

Early design studies on the use of precast window elements at window openings.



BASE - STOREFRONT

90



Window articulations in three-bay house in Amsterdam.

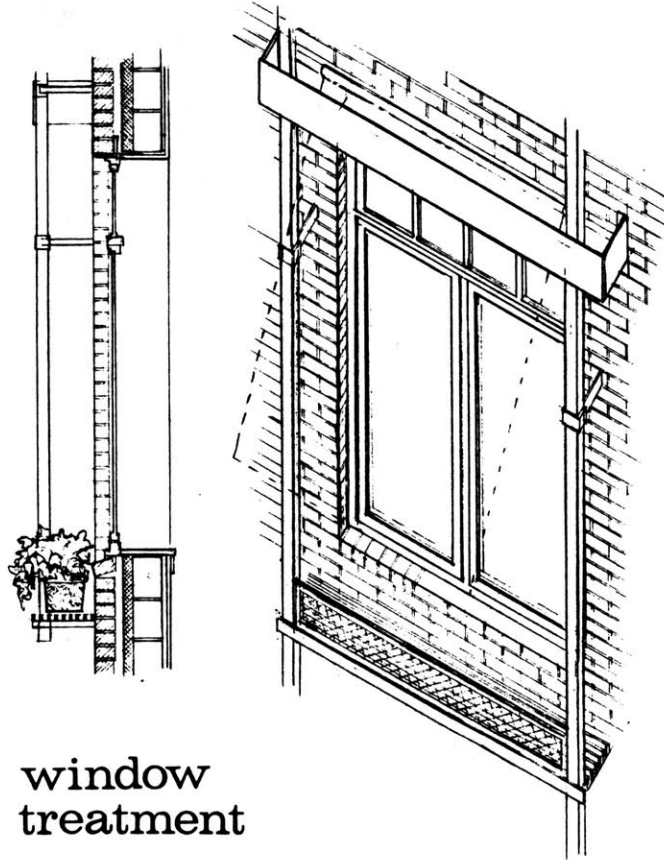
Having achieved the desired sense of subregions of the building through the deployment of relatively large scale elements, we must turn our attention to questions of detail. In general, the buildings of Beacon Hill achieve a sense of texture and fine-grained scale despite their relatively severe massing. This consists, in part, of the layering of various materials - wrought iron railings, wooden shutters, window boxes, stone lintels, and even ivy - against the planar surface which produces a subtle modulation of planes.

This textural quality seems an important one to recapture - one that is all too often lacking even in relatively contextually successful buildings which respond to the larger features of massing or continuous surface while ignoring smaller details.

Many of the original elements which comprised the Beacon Hill facade are no longer part of the modern building vocabulary. Thus it seems that a



Metal framework around window holds flowers and awning. Project in Germany Gerd Eicher, Lothar Hetzig, and Franz-Jurgen Langer.

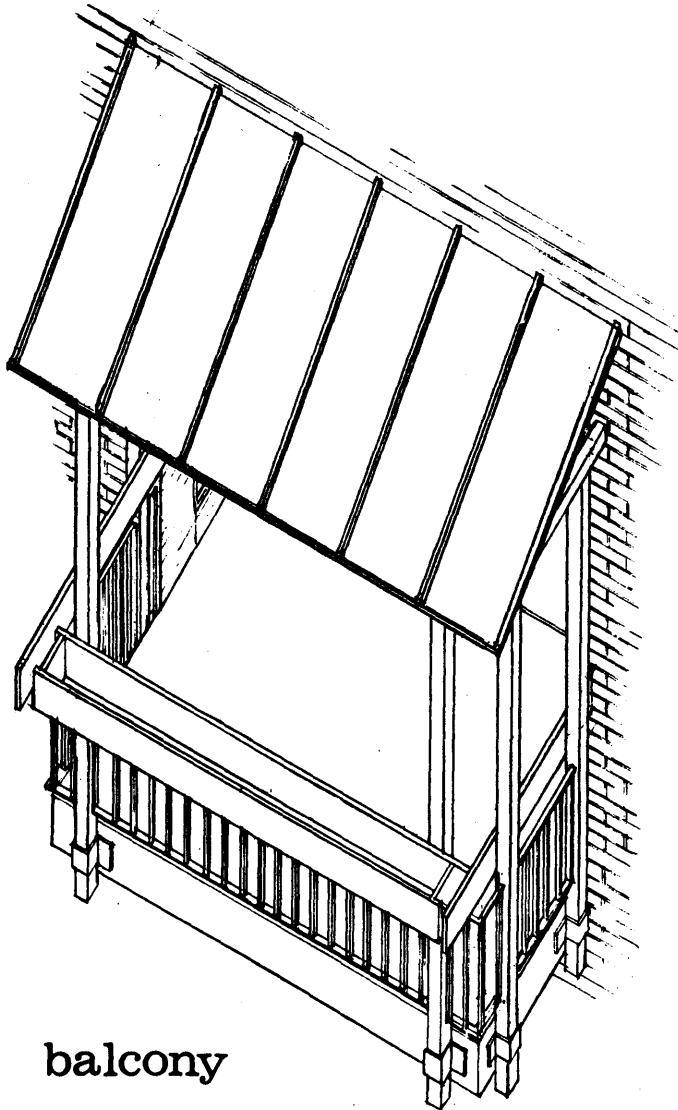


window treatment

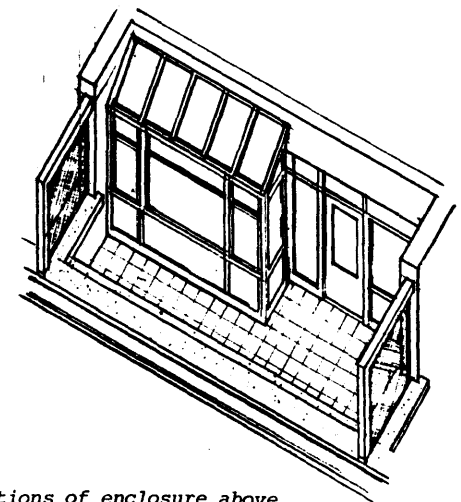
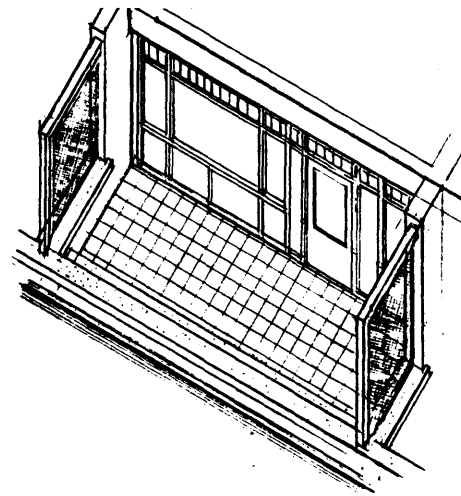
modern vocabulary must be developed instead.

One part of this vocabulary was the creation of a tubular steel framework around window openings to support awnings and flower boxes as well as to provide this visual

texture. This sort of construction could be expanded to form the supports for balconies, their metal rails and wooden flower boxes. It might be the basis for the trellis structures which shade portions of the courtyard. In addition the



balcony



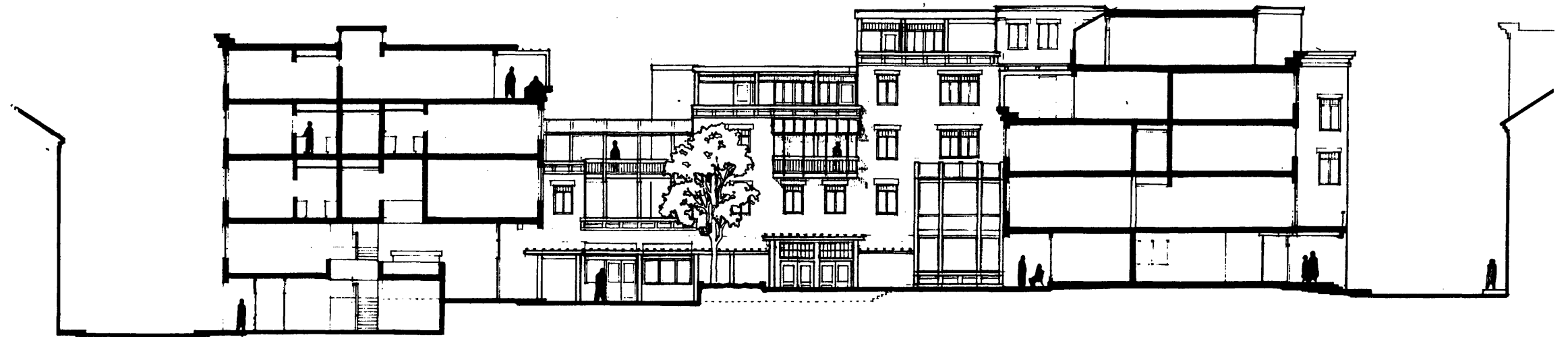
Conditions of enclosure above the cornice line, penthouse apartments.

tubular steel construction is also the basis of the bay windows and metal window frames. The proliferation of this type of structure can provide a visual continuity between the various regions of the building.

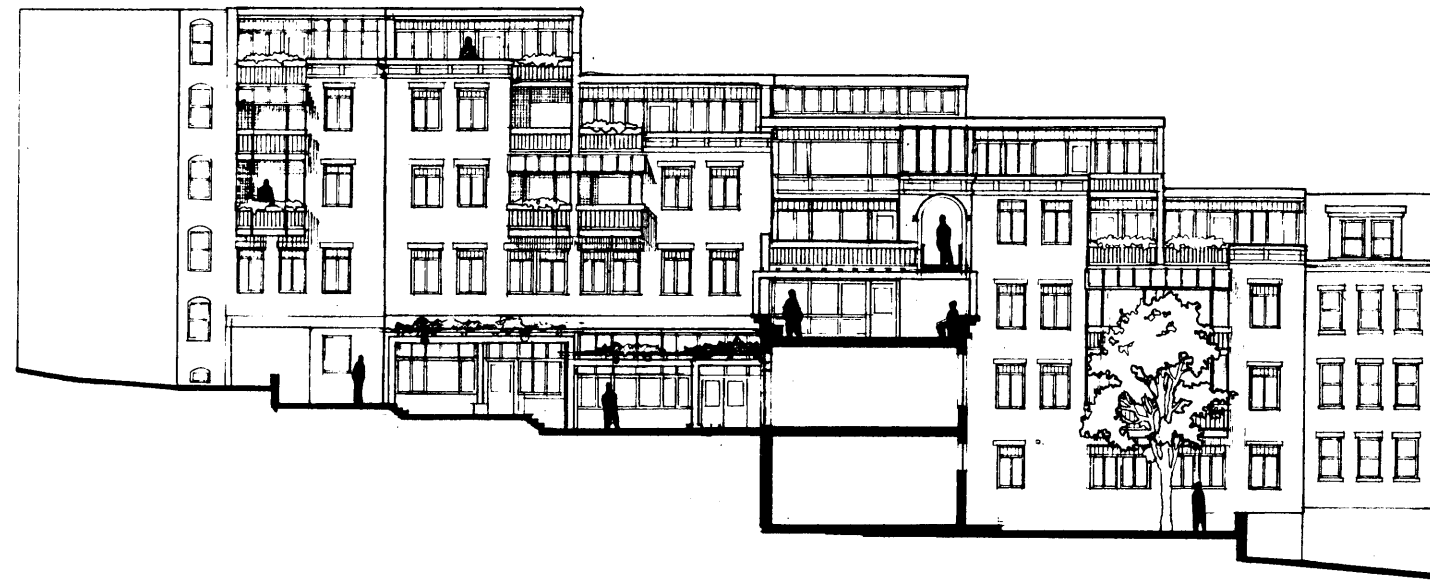
Additional elements which enhance the building's textural richness are the precast concrete lintels and beams, glass block in the basement zone, and the large number of plantings possible in various locations around the building.



South Russell Street Elevation



Section A-A'



Section B-B'



Joy Street Elevation

CONCLUSIONS

This project has been an attempt to insert relatively large-scale development in an historical area without losing that area's fine-grained architectural character. It has tried to reconcile modern building methods with that character without losing the recognition of its own modernity. Last, it has tried to develop the organizational basis for a living community of older persons. During the course of the thesis semester, work has progressed to the point where the project could be presented for design review to the local commission charged with maintaining the architectural character of Beacon Hill. More work, of course,

needs to be done, particularly in developing the broad outlines of building organization begun here. The notion of the central living hall especially merits further exploration as it could have a variety of design applications.

Most attention has been focussed on the design of the building exterior. This aspect of the design is particularly interesting for the architect because it is the interface between two worlds - the outer public and contextual realm and the inner private realm. There is a tension between these two worlds - the context suggesting certain patterns of surface articulation

which may be at odds with interior use. It raises questions about which elements and how many of them should be articulated on the building surface. In this project, the streetscape suggests certain modular subdivisions, a bottom-middle-top zoning, use of particular materials, and a pattern of wall openings. The building organization and use, on the other hand, suggests that large scale organization, differences in public/private zones, apartment subdivisions, and circulation paths might all be articulated on the building surface. While this project has managed to indicate many of these elements, there clearly was a point at which certain elements had to be ignored in the interests of coherence of the facade. The approach to the building surface as a field with certain basic conditions upon which a number of special elements or interventions could occur prevented the surface from becoming simply a collection of special events. The

necessity for this approach, was suggested by the very simple and strong patterns of the context itself. A less well-defined context, of course, might produce a much freer manipulation of these elements.

I believe that the exterior design of the building is fairly successful in contextual terms. It followed fairly closely the patterns prevalent in Beacon Hill - materials-height, continuous surface, surface subdivision into modular elements, distribution of wall openings, and three-part facade composition. At the same time, it seems to have been fairly successful in establishing its own identity through the use of modern materials and the introduction of a more spatial component in the building's flat surface. One question which arises is whether by using fewer of these contextual criteria, a building equally satisfying in contextual terms can be created. How would very different notions of massing, materials, height, or surface

articulation have affected the ability of the building to blend in with its neighbors? An interesting exercise would be to work separately with each of these variables to determine what design factors are sufficient to create a contextual building in this locale.

In general, however, this thesis serves as a confirmation that it is possible to tread the fine line between contextual imitation and an uncontextual modern - to achieve a building which belongs both to its context and to its own time.

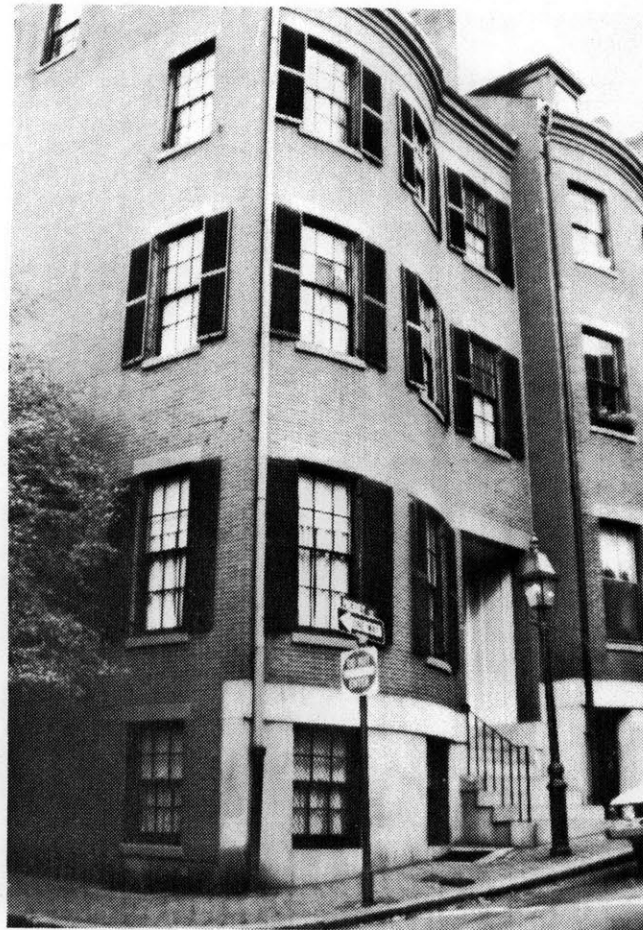


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- page 18: Deutsche Bauzeitung, March 1980, p. 20.
- page 19: Lotus #28, p. 21.
- page 21: National Trust for Historic Preservation, p. 65.
- page 24: Whitehill, p. 7.
- page 25: Weinhardt.
- page 26: Whitehill, p. 83.
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- page 60: Mass. Dept. of Public Affairs, p. 93.
- page 61: Goldenberg, p. 123.
- page 63: A.B.C.D., p. 50.
- page 71: Scully, fig. 150-
- page 72: Scully, fig. 73 (Building News, 1882).
- page 73: Holly, p. 177.
- page 74: Progressive Architecture, August 1981, p. 66.
- page 86: The Architecture of Purcell & Elmslie, fig. 58.
- page 91: Deutsche Bauzeitung, March 1980, p. 43.

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FOOTNOTES

1. Paul Goldberger. "Preserving the Visibility of Time," in Old & New Architecture: Design Relationship, National Trust for Historic Preservation (Washington, D.C.: The Presevation Press, 1980), p. 262-263.
2. Michael Graves and Gary Wolf. "Beyond Mere Manners and Cosmetic Compatibility," in Old & New Architecture: Design Relationship, p. 74.
3. Graves, p. 70.
4. William Wood, New England Prospects, Boynton ed., pp. 39-40. As quoted in Walter Muir Whitehill, Boston: A Topographic History, Cambridge, Mass.: Harvard University Press, 1968), p. 3.
5. Whitehill, p. 7.
6. These Figures are taken from an unpublished report on the plight of older citizens looking for housing on Beacon Hill, prepared by Rogerson House, House, Inc. of Jamaica Plain, Mass.