OPEN SPACES IN THE NORTH END, BOSTON
Guidelines for community control over the functional
and formal characteristics of the physical structure

by

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ABSTRACT

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Guidelines for community control over the functional and formal characteristics of the physical structure.

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Submitted to the Department of Architecture on May 19, 1978, in partial fulfillment of the requirements for the degree of Master of Architecture.

This thesis deals with the physical structure of a neighborhood, and is a study of the functional and formal forces that govern it.

The North End of Boston is a changing neighborhood that is going through an intense gentrification process. The Waterfront development, the renewal of the downtown area and the increasing demand for middle and high income housing in the city are creating great pressure in the neighborhood. This produces real estate speculation that is gradually displacing its present residents.

The question posed is whether any significance can be given to the preservation of the North End, and more generally to neighborhoods similar to it around the country.

Besides being a socially cohesive neighborhood it currently provides moderate and low-income population a place of residence within the city core. Its vivid, colorful, and safe environment is a product of a combination of building fabric and the people that live in it.

This study analyzes the building fabric in terms of its form and the function attributed by its residents. It focuses on the open spaces as the primary element of communal realm. Streets and back spaces are identified as most commonly found types of open spaces.

Control guidelines are delineated that prevent critical changes from occurring in the open spaces. Critical changes are defined as those affecting the bond between the formal structure and the existing social structure of the neighborhood.

Two examples illustrate the way in which the community could use these guidelines as an effective tool to control the quality of its environment.

Thesis Supervisor: Anne Vernez-Moudon
Title: Assistant Professor of Architecture
PREFACE

PURPOSE

While preparing this thesis, I have found myself, again and again, fighting between my beliefs and my objectivity. It seems that no matter how hard I try, everytime I want to gain analytical perspective, to rationally understand what is happening to the North End, or what future awaits its community, my belief in social justice and the desperate need to find ways to intervene and help the community to avoid being pushed out of its neighborhood, gets in the way of being objective.

It was difficult to understand and accept that no specific individual, group, or institution can be blamed for the processes that occur in a city, and that the only way to counteract their effects is to radically change their sources, meaning the economic and political system of American society. Obviously, it is beyond me, and very possibly beyond anyone involved in physical planning today, to produce such a change.

I also realized that if I feel the frustration of being an impotent observer while a healthy community is being torn apart, while the poor, once again, are being pushed around at the will of the privileged classes; for the community it is not only a matter of beliefs, like it is for me, but of survival. This is why I have thought about it as a community in a state of panic. Panic because its people have not only been put up to fight for the survival of the community as such, but because it finds itself unprepared, unorganized, with a complete lack of leader-
ship, unable to rapidly understand the situation and do something about it.

It was this understanding that gave direction to the findings of my observations about the neighborhood. Before trying to find solutions and strategies to specific issues, there must exist a conscious awareness of the values that the community has, values not only of the community for the community, but for the city as a whole. It is necessary to point out the physical elements, formal and functional, that gave the area these values. In this way, the community can start to show, to itself and to the rest of the city, the importance of preserving certain formal aspects and the existing social structure of the North End. Only by feeling proud of what the community is and has, will it be able to work for its survival.

This study aims at helping the community become aware of the positive social and formal aspects of its neighborhood. The analysis of the open spaces in the North End focuses on the parts of the structure that belong to the communal realm. Then, the undefinable "environmental quality" of the place, now perceived in an unconscious manner, by the community and by outsiders, will be rationalized, classifying the elements that are essential to the environment. First, it will give the community a tool with which it can raise awareness about these values to residents, to outsiders, and especially to public agencies that affect directly the future of the community with their policies. Second, it will also become a tool to control future changes in the environment of...
the area, regulating the allowable amount of improvement/change that could occur without penalizing the existing functional and formal characteristics of the place.

CONTENTS

The introduction to the thesis states, on one hand, the processes that have been changing the American city, in general, and the urban planning policies that have had an effect on them, and second, it describes my personal involvement with the thesis topic.

The first chapter provides the necessary information about the North End, in order to understand what it is today and what is happening to it. It contains a brief history, a complete description of the problems that the neighborhood faces today and their causes, and a graphic account of its present physical form and its social and economic conditions.

The second chapter contains the analysis made of the open spaces of the North End, describing beforehand the method that was designed for such analysis.

Finally, the third chapter derives conclusions out of the analysis and states the principles for community control over the formal and functional structures of the open spaces in the North End, showing as examples two different proposals in which these principles have been applied to regulate the permissible change in two areas of the neighborhood.
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INTRODUCTION
INTRODUCTION

ADVOCACY: A NEW DIRECTION FOR THE PROFESSIONAL

Architects had been, until not very long ago, satisfied with their professional role. They were expected to create aesthetically pleasant building forms that could be inhabited by the rich and the powerful, or used by the institutions that have set the pace of our society.

With the Industrial Revolution, large masses of people swarmed into the cities, demand for housing and services started to increase more rapidly than they could be provided, and mass housing started to be designed for the worker, not by the worker. All of these have made architects realize the small scope and effect of their work. As pointed out by Dioxiades: "...existing architects do not design more than 5 per cent of all buildings created all over the world. It is much more probably that they really control much less, perhaps no more than 2 per cent" (1).

We have started to acknowledge the most important phenomenon of our century of concern to us, builders and designers; the urbanization process. In other words, we no longer can build monuments only. We have to be able to find a redefinition of our professional role.

This conflict has gone hand in hand with the development of industrialization and building technology. These were believed to be the remedy to all the problems created by a rapidly urbanizing world. Large numbers of mass produced buildings were developed. Very soon, projects of redevelopment and renewal on most European and American cities were thought to be
necessary to "modernize" the urban areas with the just obtained technology. This process, that still goes on, made architects undertake a role for which they were not prepared. While it is possible for an architect to become a technician, to understand the use and the possibilities offered by the industrialization of construction, it is impossible for that same architect, with the same preparation, to, simultaneously, understand the urbanization phenomenon and its process, the planning strategies, the social problems that are involved and the economic and political forces that move our capitalist society. Instead of recognizing the limits of their knowledge, architects took over the responsibility of these renewal projects, endorsing their aims and ideals, approaching them with the only tool they had: the design of physical structures.

What we know today as the urban renewal projects of the 60's, based on bulldozing, destroyed not only the physical aspects of the involved city, such as historically important buildings and the scale and the character of the urban form, but also devastated communities, changed land use structures and destroyed the network of relationships between people, place and function/use carefully developed through history-long periods of time.

This lesson we cannot forget, but are we supposed to return to the obsolete function of serving the few fortunates of our society, its powerful institutions? (2) Not only as architects but as professionals and as individuals, we have the responsibility to act as political activists; to discover our beliefs through a rising
consciousness of the social reality of our communities and cities. It is necessary to delineate new definition and limits to our profession; for it must be able to meet the necessities of the present and the future of our cities.

It is permissible to take up the role of the technician, of the organizer of building activity, of the planner, or of the sociologist. Whatever line of interest we may choose, we must always remember that our knowledge can easily be transformed into a contra-productive tool, if it is not enlightened by:

- The recognition of the complexity of forces acting in any urban process.
- The consequent necessity of professional interaction, to complement the range and limits of work.
- And the necessity to control, limit and understand how, when and how much intervention by the professional can be acceptable in each specific urban problem.

FROM BULLDOZING RENEWAL, TO COMMUNITY REHABILITATION: A CHANGING ATTITUDE

The renewal programs of the 50's and 60's started out with the "1949 Housing Act," with the blessings of all Democrats and Republicans, liberals and conservatives, big labor and big businesses. These programs, that today are criticized as legalized exploitation of the poor for the benefit of the middle classes (3), and as unconstitutional application of the government's prerogative to seize private property for public use (4), were based on the very worthy ideal of providing a decent home and suitable living environment for every American family. The programs
allowed the Local Public Agency (LPA) to take privately owned urban land by right of eminent domain, clear it of structures, and sell it to private developers for construction of new residential buildings (5).

As expressed in the 1949 Housing Act, the program was aimed at providing better housing through the removal of residential slums. This definition brought two main problems:

- Even if these projects called for the construction of low-cost units to replace each demolished structure within a slum, there was never a link between the dwellings torn down and the units that were built. This attitude was based on the theory of the filtering process, that argues that with each new occupied unit an old unit is vacated, thus setting up a residential upgrading process. With this general upward movement within the housing stock, homes built in cleared sites would not necessarily be occupied by former residents of those sites. This upward movement of housing has never worked as expected, resulting in only middle and high income people benefitting from the proposed redevelopment projects.

- The definition of slum, so subjective and subordinated to the officials in charge of the federal and local housing authorities, predominantly reflects values of upper-middle class professionals. As Herbert J. Gans noted: "Existing physical standards so far have failed to make a distinction between low-rent and slum housing, or low-rent and slum districts, community facilities, street patterns, and the like." (6) John Turner also elaborates
on the subject of standards by saying: "They fail to distinguish between what things are, materially speaking, and what they do in people's lives. This blindness, which pervades all institutions of modern society, explains the stupidity of tearing down "substandard" houses or slums when their occupants have no other place to go but the remaining slums, or are forced to create new "slums" from previously "standard" homes (7). Consequently, a more appropriate definition of slum should be developed. Residential structures and districts should be defined as slums only if they have been proven to be physically, socially or emotionally harmful to their residents or to the larger community (7). This misunderstanding of the term has caused several healthy communities in different American cities to suffer intense renewal programs that radically changed their population, and their community structure, destroying them. An example of this was the destruction of the old West End neighborhood in Boston (8).

Amendments were made to the "1949 Housing Act" in 1954, and the program was transformed to one more concerned with conserving and rehabilitating the existing housing stock (Workable Program) (9). "Urban Redevelopment" became "Urban Renewal". Since then, the urban renewal programs have taken two basic directions: programs aimed at revitalizing Downtown, and programs regarding the upgrading of residential districts.

From the basic 1949 Housing Act, to the Workable Program of 1954, to the later General Neighborhood Renewal Plan of 1956 and the Community Renewal Program of 1959,
the trend had been to expand the scope of renewal projects from a plot of land, chosen for its potential appeal to private developers after clearance; to complete neighborhoods in which economic reasons made preservation of the area's physical fabric the basic concern.

The significance of community participation in the planning process has emerged as a direct result of the increasing emphasis on rehabilitation. This citizen participation was contemplated in the 1954 Workable Program, which required a "citizen advisory committee to examine constructively the Workable Program goals" (10). This requirement seems to have served only in a limited way the need of involved people in the decision making process. Unfortunately, as long as bulldozing-the-spot projects were the basis of urban renewal, it seemed that "limited participation and low visibility were necessary to the system's survival." (11) For example, the strategy for successful demolition in Boston and New York neighborhoods included keeping the inhabitants of the proposed clearance areas in the dark as long as possible in order to minimize their opposition to a program that was committed to tear down their neighborhood (12).

Even so, planning strategies have slowly been changing from redevelopment projects based on total demolition, towards a system where Local Planning Agency officials and involved area residents would bargain over the nature of a proposal to be developed for their neighborhood. As long as the emphasis of the proposed programs is towards rehabilitation and not demolition, there will be an increasing
necessity for local community group participation.

The image of the city planner was once described by Jane Jacobs as a middle-class bureaucrat, who wants to sterilize the city by eliminating its diversity and by rooting out any building which fails to meet the code standards (13). This image has evolved into one of the advocate planner whose basic role is to mobilize public opinion. This planner would give advice or information, but would let the negotiations with the neighborhood to be the ones to express the goals and needs of the community, and to delineate the contours of the plan.

The attitude of city officials today is not always positive towards community involvement, but it is becoming increasingly necessary to have the presence of citizen participation in the decision making process.

THE ECONOMIC ROLE OF THE AMERICAN CITY AND THE GENTRIFICATION PHENOMENON

The understanding of the forces that make the population move in and out of most old American cities, like New York, Boston or Philadelphia, is as important as the understanding of the political attitudes towards urban policy making, because in the long run, the destructive effects of this migration could be compared, in social terms, to those of urban renewal.

During the last 10 years, neighborhoods of the most populated cities of America have been experiencing radical social, demographic and economic changes, as large numbers of professionals, executives and clerical workers have been moving into the cities attracted by "urban living." The
reason why "urban living" has become more appealing than what it used to be 20 years ago, when suburbs spread around the city, is because the economic role of the American city has changed. With the refinement of transportation systems, the downtown areas, that used to be industrial and trading centers and used for low-income housing, became administrative centers for official agencies as well as private enterprises, where day and night entertainment and recreation facilities are located, becoming a more attractive location for middle and high-income housing.

This "upgrading" movement known as gentrification is rapidly emerging in a great threat to the existence of established communities in these neighborhoods as their long-time residents, usually working-class low-income people, are being displaced from their homes due to intense speculation and increasing rents. The impact that this process, even though not as notorious as the renewal programs, is bound to have significant consequences for the future structure of the central cities in the United States.

In today's period of fiscal crisis of most cities, concerns of the social welfare are subordinated to the concerns of fiscal solvency. The attraction of increased tax revenues from an upgraded section of the city is too great a temptation for the troubled agencies. The convenient argument of the inevitability of the market forces is then used to allow them to run their course and camouflage the underlying processes of change that characterize gentrification (14).

A series of questions concerning
social justice and the effectiveness of the strategies of municipal investment and the existing federal housing programs are then raised. Should the gentrification process be controlled? Is there a way to do so? The displacement of long established community members to locate higher income groups is the basis for an argument for its control. The reason for this argument can only be understood through the study of what these communities have represented to the American city and what would happen if they were to disappear.

The referred kind of low-income neighborhoods are usually the first or second settlement for urban migrants. The type of intricate network of relationships developed in these neighborhoods; a delicate balance between people, place and use, is one of the positive aspects of these "villages" within the city (15). It is something that today's new developments do not have and that is very unusual in exclusive high-income residential areas.

Twenty-four hours a day surveillance on the streets, due to the right proportions of housing, commerce, night entertainment, and recreation facilities in the area, keeps them safe and lively. The most important factor is the human relations that exist in these communities. In today's urbanized world, the places that a person can relate and identify with are scarcer every day, places where the burden of every day's problems can be shared. The human aspect of these communities is the most important reason why they should be preserved.
BOSTON'S NORTH END: THE INVOLVEMENT WITH A PLACE

In order to work within an urban context, it is necessary to extract the elements that, by underlying a number of ordering rules, make the area a recognizable whole. These constant factors of buildings, space and their use are the ones that give a rationale to the area, making it understandable, even if variations are introduced.

The North End of Boston is an area with a distinctive fabric, that is, an interweaved mixture of physical and functional elements. It is not only the buildings and the spaces that have made the North End a rich environment, but the use or the function given to these buildings and spaces as well. The lively streets have been made so, not only by the addition of buildings with certain characteristics, but also by the use given to these buildings. Shops, cafes, bars and restaurants assure a constant movement of people on the streets, while residences in the upper stories provide the necessary surveillance for children to play on the streets or for the elderly to stroll safely through the neighborhood. It is precisely this combination of functions which has made the North End one of the safer areas of Boston (16).

An Italian community since the end of the Nineteenth Century, the North End faces today a series of problems basically produced by the phenomenon of gentrification. The community is being pushed out of the neighborhood due to the pressure created by both the Waterfront and the Business District developments, and the
consequent increase in demand for real estate. In addition, the deteriorated condition of buildings and streets, and the lack of services and facilities make the North End an even more vulnerable area for speculation.

Recently, the North End Neighborhood Task Force was formed within the community as part of the increasing awareness about their problems. Hopefully, the Task Force will provide the community with a united stand to be able to get involved in the planning process, so that its concerns can be heard before irreversible changes are made. It seems that if the community does not work together to recognize the pressures on the North End and address them shortly, there may be a limited future for the Italian community. The chance to either interrupt or revert the already started process of gentrification is very slim. It might very well be that we are witnessing the death of a community and that the proposed depression of the Central Artery and its 10-year construction lapse is the final element that will secure its destruction. In spite of this, should the community and the people involved with it still try to do something about it? Should it at least try to counteract as much as possible the displacement of its present residents?

The situation in the North End brings together two prime concerns about our professional role and professional intervention. These concerns are:

1 - If ideologically a physical planner believes in the need for the existence of working class neighborhoods in the city, like the North End; and if, furthermore,
he/she believes that the gentrification process, being the main cause of their disappearance, is implicitly socially unjust, what are the ways and mechanisms that can be used to counteract such a process? And, if advocacy is one of these ways, when, how and how much intervention by the physical planner is needed?

2 - If it is necessary to deeply understand the context in which a design work is to be placed in order, not only to fit within it, but to disturb as little as possible the structure of the area; how is it that this understanding is produced, and what parts of the context (meaning spatial/formal context and/or social/functional context) are taken into consideration for it.

Both of these concerns are dealt with throughout this study. Even if I still do not have an answer for the first and this thesis hardly defines and shows a way in which to answer the second, I believe that the biggest step towards a healthy professional attitude has been taken just by acknowledging the importance of these issues.

FOOTNOTES:


CHAPTER 1
HISTORY OF THE NORTH END

The North End is the oldest residential district of Boston. The area was originally a hilly pasture located North of the first Boston settlement. It was noticeably different in physical size and shape from its present-day configuration. A large tidal inlet, later known as Mill Pond, was one of the more prominent features of the landscape. With the construction of today's Causeway Street, a large segment of the North End, (extending inland to Salem and North Margin Streets) was covered with shallow water. This actually severed the physical difference between the North End and the rest of Boston during the colonial period.

The first settlers of the area were a group of Puritans that arrived around 1630 and established houses near Spring Lane. Gradually, tradesmen and artisans established their businesses along the Waterfront. Over the years, as additional land area was created by the filling of the harbor, the tradesmen and artisans moved their operations to the new Waterfront and freed an area that became a fashionable residential neighborhood. The first houses were pretty much scattered in an unorganized manner. This haphazard arrangement helped to create the narrow streets, wind-alleys and secluded places that still characterize the North End. In 1645, Hanover Street was already the main artery, and a complete network of streets and alleys had developed with relatively large blocks between streets and with ample backyard spaces.
About the time of the Revolution, the filling of the Pond began, and additional houses and the first tenements were built. By 1800, there were 3 mills for meal, lumber and chocolate located along the canal, which is now Blackstone Street. Another industrial section was created with the filling of an area between Commercial Street and today's Atlantic Avenue. Factories were built along the Waterfront on Fulton and Commercial Streets. By 1883, the canal had been filled to create Blackstone Street so that the North End was completely connected to the city.

By the end of the Revolution, with Boston no longer the center of revolutionary activity, with Beacon Hill and part of the Back Bay sections being developed and with the improvement of transportation, the wealthy inhabitants of the North End moved out and the mansions were emptied. Since then, no one of equal means ever replaced them.

With the advent of industrialism, small artisan businesses and crafts were replaced by large industries. Industrial areas
became increasingly crowded and noisy. This, plus the fact that it was now a center of shipping and merchant activity, made the North End a much less desirable area in which to live, and very rapidly, it sank into deterioration. One of the most dilapidated areas of the North End in the early part of the Nineteenth Century was Webster Avenue. Narrow and dark, the street was inhabited at that time mainly by black families. During the celebration of the end of the War of 1812, this area was burned in a large fire.

The deteriorating mansions remained unoccupied for a while, impossible to rent and too expensive to maintain. These buildings might have been destroyed much earlier in the 19th Century had not a large number of immigrants begun to arrive at this time. For the very poor, the North End was the first and only place they could settle.

A large Irish immigration began sometime after 1824. They settled in the deserted mansions, one family to a room. There were also Germans and English. These
three groups were of sufficient number so that one third of the North End's population was immigrant. In the 1840's, the North End became not only a decaying older, not-so-fashionable section of the city, but also one of Boston's first tenement slums. Mansions were torn down and replaced by 4 to 5-story tenements. Cheaply made, they crowded more and more humans into a restricted area. By 1845, the average density of the North End was 17.79 inhabitants per house, while the city wide average was 10.57. Sickness and unsanitary conditions were common.

The number of Irish peaked around 1880 and then rapidly dropped off in the pace of new immigrant waves. Just as the Irish Potato Famine of 1846 had driven the flood of Irish immigrants, so too conditions in Southern and Eastern Europe unleashed an unprecedented wave of immigrants. The Progroms in Russia, Poland and other Eastern European countries were oppressing Jews because of their religion, while the southern Italians were beset by an oppressive rise in taxes (as much as 54% of the family income), added to a series of natural disasters that led to increasingly poor crops; thus, the destitute, the starving, the persecuted, the uneducated, the unskilled began to immigrate to America looking for a new opportunity.

They supplied Boston with a needed low-skilled labor force. Population figures show how the tide swumg in the North End. In 1855, 14,000 out of 26,000 North Enders were Irish. By 1880, the Irish had increased, and there were little more than 1,000 Italians. By 1895, however, there were 7,700 Italians, 800 Portuguese, 6,200
Jews, 1,200 British and only 6,800 Irish(3). Each ethnic group preferred settling with friends and relatives, partly for protection, partly because of a natural gravitation toward their own kind. The Jewish immigrants settled in a triangular area, extending roughly from Hanover Street to Endicott Street and back to Prince Street. This group was housed in cold water tenement buildings. The Irish remained for a while, settling mostly at the northern part of the neighborhood, roughly from Hull and North Bennet Streets up to Commercial Street. The rest of the North End was settled by southern Italians. By 1895, 26.6% of the North End's population was Italian; by 1920; 90% was Italian. The absolute numbers of the population also rose dramatically. In 1895, it was 23,000; in 1900, 28,000 and by 1920, when the last major tenements were built, around 40,000 people lived in the district.
The conditions of these tenements were very poor; in 1891, 154 families in the North End were living in one room per family. All tenements were 3 to 5 story walk-up apartments, without private baths or central heating. 74.5% of the families shared toilets, 13.6% shared water (2).

Even if conditions improved since then, between 1920 and 1950, the physical and ethnic characteristics of the neighborhood remained relatively unchanged. In 1920, the North End reached its population peak; by 1930, it was already declining. This was because as soon as the economic situation of the family allowed it, the Italians, following the American migration pattern of the time, and looking for status, would move to the suburbs.

By 1946, the early impacts of renewal began to be felt with the widening of Endicott Street and the opening of the Callahan Tunnel. In the early 1950's, the construction of the Central Artery began. More than 100 dwellings were destroyed and 900 businesses uprooted. The highway, built to facilitate the movement of
commuter traffic in and out of the city, has served as a physical barrier separating the North End from the rest of the city. Thus, while according to the map, the North End appears in the heart of the downtown, it is in fact, semi-isolated and therefore very different from the core of the city. Partially as a result of this isolation, the social and physical character of the North End remained relatively constant while the city experienced severe changes brought on by the Urban Renewal Programs of the 60's. Three major urban renewal projects, the West End, the Government Center and the Downtown-Waterfront-Faneuil Hall projects, virtually surrounded the North End and changed the physical character of the Central City.

Today, the change in the economic role of Downtown Boston, the almost finished Waterfront-Renewal Project, and the proposed depression of the Central Artery are beginning to create a spin-off effect in the neighborhood, mainly presenting changes in the real estate patterns and the beginning of a process of gentrification.
The results of these effects cannot be measured at this moment. To clarify the nature of the problems that the community in the North End confronts today, a complete description of the actual situation is presented.

THE NORTH END NEIGHBORHOOD TODAY

The North End today faces a series of problems that are increasingly changing its basic social structure. These problems basically deal with the phenomenon of gentrification.* There are external forces to the North End causing gentrification; they are:

- The Waterfront development
- The Downtown renewal and the reopening of the Quincy Market and the Faneuil Hall
- The pressure brought by an incoming new population.

There are also internal tensions that act as supporting elements to the gentrification process, these elements are:

- The decline of ethnic population in the neighborhood,
- The displacement of the low and moderate income groups that live in it.
- The lack of a cohesive community organization and leadership.

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*Gentrification: Process by which middle and high income population re-settles in central cities by displacing their present low income residents.
EXTERNAL FORCES
Waterfront Development

Geographically a part of the North End, the Waterfront has been separated from it by the Waterfront Urban Renewal Boundary. The development of this urban renewal project was started in 1970, and has created until now around 1,000 luxury and market rental apartment units, while another 80 are actually under construction and approximately 400 more units are planned. Some 260 units will be available for the elderly as subsidized, low-cost units when the renewal project will be completed.

Some of the buildings are new construction, but mostly they are rehabilitated old warehouses. Fine commercial and restaurant uses occupy the ground floor of most of the converted buildings, while office space is provided on the second and third levels with residential uses above(1). The population attracted to the Waterfront development is very different from the one of the North End and cannot be considered as an extension of the Italian community.
While the Waterfront population is not of Italian origin, mostly composed of middle and high income professionals, skilled technicians and clerical workers, the North End still is an overwhelmingly Italian community with the majority of its residents being low and moderate income, blue collar workers.

As a result, the new population of the Waterfront has raised the income level of the area. While the 1970 Census, previous to the advent of Urban Renewal, shows that from the recorded population in the Waterfront of 422, the medium income was $11,000. By the summer of 1973, the survey conducted by the B.R.A. showed that there were 775 households, of which 38% had incomes over $25,000 and only 16% earned less than $15,000 (2). The same survey showed that approximately 25% of the population of the North End is below the $5,000 income bracket, and less than 3% earn over $25,000. This data shows that North End residents' are not only below the income level of the Waterfront, but below the city's median income of $9,100 also.

The social and family structure of both communities is quite different. The Italian community has an extended family structure, where a nuclear family and related individuals from several generations act together as a virtual unit (3), and base their social activity on peer groups (extensions of family groups). In contrast, the Waterfront has mostly small households (40% contained 1 person and 48% contained 2 people) (4); the majority of the new residents are either childless or have older children who no longer reside at home, and until now, no community sense
has been developed.

Nevertheless, being different is not the reason why the Waterfront development affects the community in the North End. Two main causes can be given to explain this impact, and both deal directly with the phenomenon of gentrification.

1. Even if the new residents of the Waterfront seem to be occupying the new housing stock provided within the boundaries of the renewal area, they are actually setting a "spin-off" effect along the edges of its boundaries with the North End. This effect encourages real estate speculation and consequent displacement of the original population.

   The strong demand for rental units in the North End has already severely increased the price of buildings in the area. Even an average 4 unit building with deficient services, is over $50,000 (5). When the cost of related improvements is added to the purchase price, the building becomes too expensive for prospective resident ownership. This is a significant factor since such ownership is viewed as a positive force in protecting neighborhood stability.

2. The Waterfront development has pulled and will be pulling out most of the elderly population of the North End. By the time the urban renewal program of the Waterfront will be completed, there will be approximately 260 units for the elderly provided in it. 80% of these are expected to be occupied by senior citizens already residing in the North End (6). The many units that will be vacated by these people, mostly units that, at the moment, do not meet code regulations, will be renovated and rented at higher prices to people who
will be able to pay the inflated rates.

In summary, the Waterfront is creating a double effect on the North End. One of pressure, due to an increasing demand for residential space in the area, and consequent speculation; and the other of a vacuum effect, which leaves vacant units in the North End vulnerable to speculation. Both effects combined and added to other external forces acting on the community, emphasizes the gentrification problem in the area.

Downtown Renewal - The Reopening of the Quincy Market

In Boston, the renewal programs of the 60's changed the aspect of the Downtown area and destroyed communities like the West End (7), but did not directly affect the North End. This can be partially attributed to the presence of the Central Artery. So heavily criticized when under construction, the Central Artery became a physical barrier that sliced the North End neighborhood from the main city. This physical separation stopped the development of urban renewal and left it outside the North End.

Since then, the just described Waterfront development, the change of the economic activities that take place in the city core, and the new commercial vitality added to Boston by the renewal of the Quincy Market, have started to affect and threaten the community in the North End.

Boston, like many other American cities, has changed its role as a production center, into that of an administrative one. This change has affected the North End in two different ways:
1. With Boston's Downtown becoming less of a production area and more of a managerial or administrative center, the demand for unskilled, operative labor or blue collar workers is decreasing while the demand for professionals, managerial and clerical workers is rising. Most Italian residents of the North End held blue collar jobs, and have had an increasingly difficult time finding employment in an economy that is primarily professionally oriented. This leaves three trends to follow: unemployment and its resulting social dysfunctions, a longer commute to work for those North End residents previously employed within the city, or most likely, a migration out of the North End to other communities closer to production center where their skills would be more in demand (8).

2. A population of professionals, wanting to live near the center of the city, are attracted to the North End because of its proximity to the Downtown business area and its reputation as a safe, low-rent district. This new population raises the demand for residential space, pushing building owners to speculate with their property and displace their long-term tenants.

The re-opening of Quincy Market has also affected the North End. A very important part of the North End resident's economy depends on the commercial activity that takes place in the neighborhood. Bakeries, fruit and produce stores, meat markets and Italian restaurants cater to the general needs of the local population as well as to large numbers of people in the metropolitan area. They are also a
tourist attraction with many visitors coming to walk the narrow streets and taste some of the typical Italian products. This economic activity has been diminished by as much as 20% with the re-opening of the Quincy Market and the creation of new retail facilities along the Waterfront duplicating the ones in the commercial core of the North End (9).

All these factors combined are forcing a number of long-term residents to leave the North End, their vacant units are then renovated, subdivided into smaller apartments, and finally handed to new residents. In other words, a gentrification process is taking place in the neighborhood. The pressure that the Downtown area is putting on the North End, translated into the facts discussed here, is constantly rising and it cannot be measured how much it is going to increase once the depression of the Central Artery will take place. Then, the physical barrier that separated and protected the North End from the main city will be gone. Real estate speculation and unemployment will be then, as they are now, serious threats to the North End residents.

INTERNAL FORCES
Decline of Ethnic Population

The North End has been an Italian community since the early 1900's. Both the 1970 U. S. Census data and the B.R.A. telephone survey of 1975 suggest that over 60% of today's population still is of Italian origin (10). However, the residents of the North End are concerned and feel that the area is currently losing its ethnic character. Even if the "Italian character" of a neighborhood cannot be quantified,
there are three main factors that tell us that the ethnic population of the North End is declining: As it has been mentioned, a new non-ethnic population has been attracted to the North End; at the same time, the level of immigration to the North End from Italy has decreased, and finally, it appears that many aspects of the traditional ethnic lifestyle are giving way to gradual assimilation of American cultural behavior and values, especially on the younger generations.

There is a significant decrease in the proportions of new North End residents arriving from Italy. The Boston Police listings for 1970-74 showed that 109 residents came from Italy in 1970, representing 29% of the total new population in the North End; by 1974, only 76 new Italian residents moved into the North End, making up only 14% of the new population. The B.R.A. telephone survey of 1975 confirms the trend suggested by the Boston Police listings, revealing that from the residents who had lived in the North End three years or less, only 13% were born in Italy. In contrast, the residents who had lived in the North End over ten years, 29% were born in Italy (11). A loss of the "ethnic character" of the neighborhood can be expected since there is no longer the reinforcement brought by new Italian immigrants.

A perhaps more important phenomenon is occurring, a process of acculturation is taking place diminishing the traditional Italian culture. Although the North End is a somewhat insulated, protected community, it is not immune to the technology of modern society. The mass media, newspapers, radio, movies and especially television
has increasingly brought the outside world into the homes of the North End.

For some members of the younger generation, this introduction to the outside world has made them look beyond the North End for work, school and friends. Some of them leave the North End, but others remain and suffer strained relationships with the more traditional members of the community. This strain weakens the dominance of Italian tradition.

Professional observers working in the North End have recorded a loss of the Italian character and cultural values:

"The young population shows signs of unrest, boredom and low educational motivation. The adult population faces pressure to adopt American values in order to advance economically, conflicting with the desire of living in an ethnic community; and the elderly, the most resistant to social change, are becoming increasingly dependent on the community for physical, social and emotional support." (12)

The really threatening factor about the loss of ethnic population is that it means a displacement of the low and moderate income people in order to accommodate higher income groups. This displacement of population is the real issue of the problem.

Community Organization and Leadership

From the outside, the North End presents itself as a highly socially-organized community. What really happens is that people support each other, creating mutual dependence. This is very typical of Italian communities and is based on the extended family-peer group relations
The interactions of these extended family groups create a network of social relations all through the community that makes it appear as a very close and organized one. The North End is also a "street corner society," where much of the socialization takes place on the streets, where men, especially, meet in the streets, socialize in cafes and gather in "The Prado" (Paul Revere's Mall). This is, then, the kind of social activity that is revealed to the outsider.

However, the community has been highly fragmented and unable to formulate an understanding on future direction and control over the neighborhood's development. In the past, the attempts made to deal with specific issues that emerged as problems were frustrating experiences, ending up in failure and discouraging individuals from further involvement.

The first crisis that caused enormous upheaval, and moved the North Enders into organizing themselves to protest, occurred when the Central Artery was proposed in 1950. Only after 900 businesses were uprooted, the North End wholesalers organized a "Save Boston Businesses" committee to protest the imminent skyway. In April of the same year, a "Committee to Save the North End of Boston" was formed, and it held mass meetings to protest what was believed to be the beginning of an increasing deterioration of the neighborhood (14). All efforts were in vain, protests came too late and were never sufficiently organized.

Today, the community is experiencing the beginning of a new crisis whose effects are already being felt. There is an in-
creasing awareness of the community's problems among the residents. As the editorial of the North End's local paper noted in April 1977: "It is only through broad and active participation of the neighborhood residents in the process of generating a strategy for controlling the future development of the neighborhood, that a new balance can be achieved between the old and the new, so that the neighborhood can retain its present social, economic and cultural diversity" (15).

The main obstacle for such participation is the lack of leaders and organizations representative enough of the neighborhood residents. Until now, fragmented groups, highly politicized, each one with particular interests, have controlled the community.

The North End Neighborhood Task Force is a community based group, formed in April 1977, after a series of community meetings. It intends to confront the problems threatening the neighborhood, and to investigate and analyze the alternative strategies open to the North End long-term residents that would allow them to remain in their neighborhood.

The Task Force is been acting with the technical assistance of the School of Architecture and Planning of M.I.T., and the direct participation of the residents of the neighborhood, who are getting mobilized on the issues that are affecting their everyday lives. The membership of the Task Force has a majority of low and moderate income people, and a substantial number of elderly. Consequently, the majority of the decision-making body of the Task Force has a direct personal
interest in seeing that the interests of the poor are well served.

The main goal of the Neighborhood Task Force is to establish institutional mechanisms that would allow the low and moderate income residents to remain in their present homes, changing the trends of increasing rents in the neighborhood and the consequent real estate speculation.

The main barriers encountered by the Task Force are: First - a difficulty in dealing with the official agencies, especially the State. The Task Force has tried to convince them that they are a community group that really represents the residents of the North End, and that it defends the interests of the local population and not the ones of any particular group.

In the "Waterfront - North End District Profile and Proposed 1978-1980 Neighborhood Improvement Program" of the B.R.A., city officials acknowledge the existence of the Task Force and offer technical assistance and information for the formulation of strategies (16). This offer has not yet crystallized into reality. The B.R.A. might be waiting to see the trends that the Task Force takes. Past experiences with other North End groups have left some bitterness, and the B.R.A. is still acting cautiously with a neighborhood that, they say, has been very difficult to deal with.

The second problem is financing. Until now, technical assistance and support has come from the staff of the North End Union (a non-profit neighborhood settlement house), and graduate students at M.I.T. Funding has been requested from a variety of community services such as local societies, local banks, fraternities, the
Knights of Columbus, the National Chapter of the Campaign for Human Development and the Haymarket Foundation.

It is very important that the Task Force produces a unified community stand. Only in this way can it get involved in the planning process, analyzing the issues and generating strategies before irrevocable changes are made in the North End.

Description of the Physical Structures

The Housing Stock

The North End housing stock was, for the most part, built at the beginning of the century. Very dense occupation of land, built to take maximum advantage of the Building Code by meeting the minimum requirements, is the typical development in the area.

Large numbers of units are in need of major improvements to the electrical and plumbing systems. The B.R.A. telephone survey of 1975 showed that 32% of the dwelling units lacked some or all plumbing facilities (17). A survey conducted by the Housing Inspection Department in 1973 found that about 1200 of the 4100 dwelling units in the North End needed repairs in excess of $1000 per unit (18).

The deteriorated condition of most buildings is one of the reasons why the rent level of the North End is far below the market rents for the city as a whole. The 1975 B.R.A. survey revealed that 40% paid less than $100 per month, 80% of the respondents paid less than $150 per month and only 2% paid over $200 per month (19). The strong demand for housing in the North End has raised the price of buildings. If the cost of rehabilitation, that is primar-
ily privately financed, is added, the result is inflated rents. Even if the new rents could be compared with the others in the city, the existing tenants in the North End are, very possibly, unable to afford them since the income level of the North End is also lower than the city level in general.

In addition, building owners that invest in improvements in their buildings, in order to capitalize on the demand, are making smaller apartments that could not accommodate the usually large families of the old residents. Because of this, not only long-term residents are being displaced, but for incoming families with children, it is difficult to find adequate housing in the North End. Therefore, the incoming population is mostly single or childless people. As a result, the new population hardly relates to the rest of the community because of its family structure, and the great mobility that characterizes the young professional group to which it belongs.

Most of the units of the North End are not occupied by their owners. The 1970 Census showed that only 14% of the units are owner-occupied in the North End, compared to 26% city wide (20). The increasing cost of the property makes it even more difficult for residents to become owners. This is a distressing fact since such ownership is generally a positive force in protecting and controlling neighborhood stability, and because the physical condition of buildings is more susceptible to improvement in resident-owned structures, without speculation or tenant displacement, than it would be otherwise.
Urban Layout and Public Services

The street pattern of the residential area of the North End is that of an almost medieval town, an irregular and approximately rectangular pattern within the semi-circular perimeter of the Coops Hill. The blocks are relatively small and they have been classified as "badly cut up with wasteful streets" (21).

With few exceptions, streets are narrow, consequently, poor services such as snow and garbage removal are provided. Aggravated by the lack of enough off-street parking, the traffic is congested. There are counted open spaces in the area, but intensive use is made of these and of the market streets.

Public transportation routes are limited to the periphery, only one bus line enters the neighborhood, and the rapid transit stations (North Station and Haymarket) are near but outside the North End. Most streets are open to vehicular and pedestrian use, but because they are narrow and mostly one-way, they are inconvenient for car circulation. There are many pedestrian passageways, and the area is easier to negotiate on foot.

Traffic circulation and parking have been serious problems in the North End for years. The parking problem results primarily from a lack of residential parking both on and off the streets. The North End also suffers from a lack of commercial parking, especially in the Hanover/Salem Streets area, and the North Washington commercial area. Hanover street is the North End's "main street," it is used as a local street, as a focal point for residents and visitors, and as a commercial
center. Every on-street space on Hanover Street and adjacent streets is filled, and there are repeated instances of double parking which affects traffic circulation. Streets are almost always clogged by illegally parked cars, impeding circulation, discouraging shoppers and making it difficult for emergency vehicles to reach their destination.

Traffic circulation and parking are, in effect, serious problems in the North End and Waterfront areas; nevertheless, the city seems more interested in dealing with these sorts of problems than in trying to control the speculation that has taken over the housing stock, or the provision of services in the residential area, issues that at this moment are of a more urgent nature than traffic or parking.

**CENTRAL ARTERY DEPRESSION**

Today, the Central Artery has again become a controversial issue for the North End. Because of the Artery's limited life expectancy, its inadequate capacity, its effects on adjacent land uses and the increased value of the land that it covers (22), the city is planning to alter it. To this effect, several proposals have been submitted. The latest proposal to be considered is the reconstruction of the Artery from Charlestown to South Station. This would be done in three segments:

- The northern or Charlestown segment,
- The southern or Dewey Square segment, and
- The central or North End segment from North Station to South Station.

Four different alternatives were presented for the project, including one that in-
volves no change from the present scheme. The proposal that seems to have more possibilities of being implemented is the one that considers the depression of the Central Artery. This project, if put into effect, could have a significant impact on the social and physical environment of the North End, both during the years of construction (preliminary studies consider this lapse from 8 to 11 years), and after its completion.

The kind and the scale of the development that will take place over the depressed Artery should be one of the prime concerns of the North End. The community should start to prepare alternative strategies that would minimize the impact of this project on the North End.

STRATEGIES

The following summarizing chart deals with the issues that had been raised by the Task Force and that were described here, the attitude that the community has toward these issues, and a series of possible
<table>
<thead>
<tr>
<th>ISSUES</th>
<th>ATTITUDE OF THE COMMUNITY/TASK FORCE</th>
<th>GENERAL STRATEGIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>INCOMING POPULATION</td>
<td>The influx of new people is viewed by the community as a positive factor because it would bring new life to the area. However, negative aspects were observed by the community: - Displacement of long-term residents. - Incoming population's family structure incompatible with the existing community.</td>
<td>To provide better public facilities such as public schools, parks, day care centers, recreational facilities, etc., that would make the community more attractive to a broader market. (Large families with children. The housing stock that is being renovated and put into the market should include large apartments that would be a desirable living arrangement for large families.</td>
</tr>
<tr>
<td>FUTURE OF THE COMMUNITY RESIDENTS</td>
<td>Less importance is given by the community to the loss of ethnic character, than to the loss of a safe, low-income, working class neighborhood. It concludes that the residents that want to remain in the neighborhood should be able to do so. The Task Force is apprehensive about the neighborhood becoming a fake &quot;Little Italy,&quot; without a real Italian community in it.</td>
<td>The Task Force must work with residents to increase community awareness, involving also the new segments of the population. -To promote housing policies that enable and encourage the existing residents, of all income groups, to remain in the neighborhood. -To promote services and programs to meet needs of the Italian residents, programs aimed to enhance their heritage, and facilities that would encourage them to stay.</td>
</tr>
<tr>
<td>REAL ESTATE SPECULATION</td>
<td>The community is aware that the demand of residential space cannot be avoided, but argues that the speculation of property has to be controlled. This is maybe the most important problem that the community faces today. The aim of the Task Force is to find institutional mechanisms to stop the displacement of residents by speculation of land.</td>
<td>To discourage speculation by strict enforcement of zoning and occupancy laws.*</td>
</tr>
<tr>
<td>CONDITION OF THE HOUSING STOCK AND QUALITY OF SERVICES</td>
<td>The community agrees that the housing stock, in general, is in a very poor condition, and that it should be repaired/renovated. Nevertheless, consideration must be given to: - The issue of displacement of residents. - The provision of large apartments within the renovated stock.</td>
<td>The community is aware that the demand of residential space cannot be avoided, but argues that the speculation of property has to be controlled. This is maybe the most important problem that the community faces today. The aim of the Task Force is to find institutional mechanisms to stop the displacement of residents by speculation of land.</td>
</tr>
<tr>
<td>DECLINE OF COMMERCIAL ACTIVITY</td>
<td>Commercial activity is of vital importance to the North End. It represents its principal source of income and employment, therefore it must be maintained and improved as much as possible.</td>
<td>The community is aware that the demand of residential space cannot be avoided, but argues that the speculation of property has to be controlled. This is maybe the most important problem that the community faces today. The aim of the Task Force is to find institutional mechanisms to stop the displacement of residents by speculation of land.</td>
</tr>
<tr>
<td>TRAFFIC AND PARKING</td>
<td>The Task Force feels very strongly, that the concerns of the community should be focused on issues of vital importance, such as the control of speculation, and - at this point problems of parking or traffic should be resolved. The B.R.A., while the Task Force concentrates its efforts on getting organized and dealing with those vital problems.</td>
<td>The community is aware that the demand of residential space cannot be avoided, but argues that the speculation of property has to be controlled. This is maybe the most important problem that the community faces today. The aim of the Task Force is to find institutional mechanisms to stop the displacement of residents by speculation of land.</td>
</tr>
<tr>
<td>DEPRESSION OF THE CENTRAL ARTERY</td>
<td>This is one of the important issues that require the immediate Task Force attention. It must study the different proposals for the depression, and develop strategies about them, so it will be ready to participate in the decision making process with the B.R.A. and the other involved public agencies.</td>
<td>The community is aware that the demand of residential space cannot be avoided, but argues that the speculation of property has to be controlled. This is maybe the most important problem that the community faces today. The aim of the Task Force is to find institutional mechanisms to stop the displacement of residents by speculation of land.</td>
</tr>
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*This strategy is complemented by the financing program listed in the Appendix A.*
alternative strategies, most of which have already been presented for study either by the B.R.A. or by the Task Force. The method of implementation for these strategies will be left out, since such recommendations would demand a deeper study of each issue than the one offered here.

Since the issue of restoration or renovation without disturbing the present population seems to be the prime concern of the community at present, I also include, in Appendix A, a list of possible financing programs for this purpose. Some of these programs are already being applied in the North End, but others would have to be adapted or modified in order to fit the specific needs of the area.

FOOTNOTES


(2) Ibid., p. 5.


(5) Ibid., p. 20.

(6) Ibid., p. 19.


The expressway was not planned for the amount of traffic that it carries today. The corrosion and over-stressing of the materials has caused a shortening of its life expectancy.
DESCRIPTION OF THE NORTH END

Economic and Social Aspects

The North End today is still a low-to-moderate income, working class neighborhood and it is still overwhelmingly Italian. The population declined by 23% from 1950-1960 and by 14% from 1960-1970. The bulk of the latter decline occurred before 1965 and since then the population has stabilized and, in fact, increased. About 450 people have moved into the North End each year. Nevertheless, the majority of the householder in the neighborhood have resided in the area for more than 10 years.

The income distribution of the North End, shown by the analysis of the U. S. Census of 1970 and confirmed by the B.R.A. telephone survey of 1975, is relatively homogeneous: 42% of the families were in the moderate to low-income range between $6,000 and $10,000, 33% earned over $10,000 and 23% of the population fell in the "below $5,000" bracket (1).

The average income of the neighborhood is below the city's median income of $9,100. In fact, the reason for the low median income of the North End is the larger than average number of retired people residing in the neighborhood.

The median age of the North End has increased steadily since 1950. In 1970, 54% of the population was over 35, and the 0-14 years group declined from 23% in 1950 to only 18%. Other significant population trends are decreasing family size, a tendency for later marriage and fewer children per family.

NORTH END - BOSTON
BUILT AND OPEN SPACES

KEY
■ BUILT
□ OPEN

Compass rose and scale bar are also provided.
NORTH END - BOSTON
LAND USE

AREAS
- RESIDENTIAL
- COMMERCIAL
- INDUSTRIAL
- OPEN SPACE

KEY
- ch CHURCH
- R RECREATION
- S SCHOOL
- F FIRE STATION
- SS SOCIAL SERVICES
- PO POST OFFICE
- PK PARKING
- P POLICE
NORTH END - BOSTON CIRCULATION PATTERN

KEY

- VEHICULAR
- PEDESTRIAN

[Diagram of circulation pattern with key]
CHAPTER 2
OPEN SPACE ANALYSIS
CHAPTER 2
THE OPEN SPACE ANALYSIS

PURPOSE

The purpose of this section is to analyze the physical (formal and functional) structure of the open spaces in the North End. To find the elements that are essential to the area at both, the formal and the functional, levels and the interrelations between them. Once these elements and their network of relationships have been rationalized, guidelines for the control and preservation of these basic elements will be stated. Proposals to change, modify or improve the NON-ESSENTIAL parts of the fabric will be subordinated to preserve the ESSENTIAL elements. Then, the architect/designer should be able to work within these controls and produce a physical design that would correspond to the context of the area.

METHOD OF ANALYSIS

The analysis deals basically with the communal realm of the North End. The areas in which agreements have been made at the communal level, implicitly or explicitly, in order to organize the use and function of these spaces. The communal realm in the North End is represented by institutional buildings and open spaces. This analysis is being focused on the open spaces. Since the spatial or formal structures of the North End existed before there was an Italian community living in it, the formal elements have been adapted, changed or maintained in order to fit the social and functional characteristics of its present community, and to observe the mechanisms that have been developed to create such a
The tools used for the analysis were: historical research through maps and books, and research of the actual situation through the study of:

- The planning policies that have been taken by official agencies in the last 10 years affecting the neighborhood,
- The patterns of population, income and age level change in the area,
- Programs, projects or developments that in some way relate or affect the neighborhood,
- Similar situations and different responses that have been given to solve these problems in other places (the Bologna and the Baltimore cases).

Nevertheless, the core of the analysis is based on observation. The observations made of the neighborhood falls in one of three categories:

- **Observations of the spatial and formal structure:** Formal aspects that are relevant to the nature and character of the open spaces, such as building height and bulk, space dimensions (in plan and section), relationship between spaces, continuity or discontinuity of the fabric, etc. Photographs, maps, sections and especially field recognition were used.

- **Observation of the social network:** Social context, community relations, social behavior and perception, by residents and outsiders, of the environment. Field work based on spontaneous interviews with residents and visitors and in a more formal way, contact with residents through the Task Force meetings were used.
Observations of the functional structure: Activities and use patterns of each open space at different times of day and night. Mainly field work was used.

The method of observation served my purposes in the sense that it allowed me to describe and understand the formal, functional and social aspects of the neighborhood in a rational way. Nevertheless, the main limitation of this approach are that the intangible data produced by observation is of questionable veracity, because the observer, in this case myself, is incapable of total objectivity due to past experiences and mainly to the personal position towards the observed subject.

DEFINITION OF TERMS

Before going any further, it is necessary to clarify the definition of some key terms for the understanding of the analysis, the conclusions and the proposed control guidelines. These terms have been used by other authors in different ways from the ones presented here; nevertheless, their definitions have been adapted for the purpose of the study and analysis of open spaces.

Fabric and Tissue

Fabric is the recognizable pattern according to which buildings and the space around them is ordered. The reoccurrence of certain patterns, ordered by underlying rules that relate the built and non-built spaces is the Tissue of a built environment.

Thematic and Non-Thematic Physical Elements

Thematic Physical Elements are elements that, even though they are not exactly alike, are of the same kind, can be found
in all parts of a tissue, and strongly represent its characteristics.

Non-Thematic Physical Elements are elements that can only be found incidentally in the tissue or can only be found in different ways in the tissue and that most of the time only give incidental accent to it.

A thematic or a non-thematic element can be both a building or an open space.

Institutional Open Space Institutional is a concept applied to buildings belonging to an institution such as a church, a government agency or a public school. I have broadened its meaning to include the open spaces adjacent to institutional buildings and that are extensions of their function (for example, a church's front space or the yard of a school) and the open spaces that are institutions by themselves (for example, a park or a mall).

Terms for Open Space Classification

- **Land Use**: A classification of open spaces in relation to the use that the buildings around them have:
  - residential
  - commercial
  - industrial
  - institutional

- **Land Utilization or User Domain**: A classification of open spaces in relation to their users, the physical controls that regulate and coordinate their use, and the agents responsible for their operation and maintenance.
  - Public: Is the area devoted to circulation of vehicles and pedestrian use by an unlimited number of people, that is the responsibility of the pub-
lic sector, and that the user has minimum control over.

- Semipublic: Is the area of residential and community use, that is the responsibility of the public sector, but that the users have extended their territoriality over them.

- Semiprivate: Is the area of shared utilization held in agreement by a group, used by a limited number of people and which is the responsibility of the co-users who have, partial or complete, social, physical and sometimes legal control over it (1).

Function
Functional Elements: A classification of open spaces in relation to the activities that take place on them.

Pedestrian Strolling, walking, Shopping
Recreation, playing (children)
Socializing, gathering
Surveillance, etc.
Vehicular Through traffic
Traffic
Parking

CLASSIFICATION OF THE OPEN SPACES

The first differentiation made between open spaces was to separate thematic and non-thematic open spaces. The church and school yards, the burial ground, the parks and the mall were determined as non-thematic open spaces.* Streets, alleys and back interior spaces were defined as thematic spaces of the area. The analysis really concentrates from now on in the study of the thematic spaces. Nevertheless, the institutional open spaces*, all

*See definition of terms at the end of Method of Analysis.
of which are non-thematic spaces of the area, create a network of spaces throughout the neighborhood that should be studied since it is one of the strongest features on the perception of the area.

The thematic open spaces were then subdivided in streets and back interior spaces, each one was defined as follows:

- **Street:** Thematic open space, used for vehicular and/or pedestrian circulation of public, semipublic or semiprivate utilization, of linear character and located between blocks.

- **Back Space:** Thematic open space, primarily used as a service area, of semiprivate utilization, of undefinable size and shape, located in the interior of the block. Its main characteristic is that of being extremely fragmented, meaning that there is no continuity from one defined back space to another within the same block.

**SAMPLE AREA**

Instead of taking the entire North End for study, it was decided to select a specific area that could be seen as a representative sample of the whole neighborhood. The criteria followed for such selection are:

- It had to have a representative sample of building and space uses that can be found in the North End.

- It had to be big enough so that types of streets, intersection of streets and institutional open spaces* that occur in the North End would be present in it.

- It had to have all types of block configuration and back interior spaces.

- It had to have areas of very public use.
NORTH END- BOSTON
SELECTED SAMPLE AREA
as well as areas of semiprivate utilization (areas where outsiders are allowed, and areas of exclusive use of the residents).

- The Waterfront, for the purpose of the analysis, has been separated from the North End, therefore, the sample area should not be part of it.

Description

The area that was selected is the Northwest corner of the neighborhood. Its boundaries are: to the North, Commercial Street, to the South, Prince Street, to the East, Hanover Street and to the West, Snowhill Street. Some of the surroundings have been included to either show the continuity of the fabric, or the description of it along the edges of the neighborhood.

The sample area is approximately 110' by 110' (340 m by 340 m). It is very densely built, but there is a considerable amount of institutional open spaces, all of which are interconnected. The block layout is irregular, but systematic. Streets run either parallel with or perpendicular to the contours. The blocks are penetrated by many alleys and courts, some of which subdivide the already small blocks, creating a great number of public, semipublic and semiprivate open spaces.

At the South and West section of the sample area, there are tenement buildings that were built at the beginning of the century; at the Northwest, there is a less dense residential development, and running along the main streets, there are buildings with commercial use on their ground level.

The main vehicular circulations run along Hanover and Commercial Streets, and
SAMPLE AREA
BUILT AND OPEN SPACES

KEY

- BUILT
- OPEN
in a reduced scale along Salem, Charter, Prince and Snowhill Streets. Most streets in the neighborhood have vehicular traffic running only in one direction with, at the most, half the amount of traffic of Hanover or Commercial Streets. The area is mainly pedestrian-oriented, and, with very few exceptions, pedestrians control the circulation flow in the streets.

The buildings along Hanover, Salem, Prince and Commercial Streets are used for commercial space on the ground floor. The typical commercial activities that take place in the area are: produce stores, small markets and grocery stores, butcher shops, bakeries, variety and gift shops, laundromats and dry-cleaning places, some tailor and fashion shops, ice-cream parlors, cafes, restaurants and some doctor, dentist and lawyer offices. Some of the buildings along Hull and Sheafe Streets used to have stores on the ground floor, but now they are either vacant or have been converted into residential units. Thus, the area is predominantly of residential use. Even the buildings that have commercial space on the ground level, have residential space in the rest.
SAMPLE AREA LAND UTILIZATION

KEY

- PUBLIC
- SEMIPUBLIC
- SEMIPRIVATE
- PRIVATE UNITS

\[ 0' - 100' - 200' - 400' \]
SAMPLE AREA
CIRCULATION PATTERN

KEY

--- VEHICULAR
•••• PEDESTRIAN

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STREET ANALYSIS

The analysis of streets studies their physical structure, meaning by this the functional and spatial elements that conform the streets and the interrelations between them. The analyzed functional elements are: The use of the space (given by either the use of buildings around it or by itself), the character of its user (user domain or utilization*) and the activities that take place in the space or its function (pedestrian, vehicular and the character of each one).

The spatial and formal elements that were taken into consideration are the ones that have a direct relation to the general perception and use of the streets, such as: Basic configuration of the space (linear, concentric, etc.) dimensions in section and plan, area, building height and bulk, continuity of the open or the built space, etc. Some physical relations between buildings and open spaces were also considered (window and entrance points).

Classification

The classification of the streets was defined by the way in which the spatial and the functional elements are mixed in the streets of the neighborhood, creating recognizable patterns. Those patterns then become street types. Each type has been noted with a code number. Each street that belongs to a defined type is noted with the same code. In this way, not only is it clear which streets occur in the area, but also their mutual relationships (see map). The recognized types are:

*See definition of terms at the end of Method of Analysis.
SAMPLE AREA
STREET ANALYSIS
STREET TYPES
TYPE 1: (Pedestrian and Vehicles) Streets delineate the neighborhood and provide access to the area. Vehicles dominate but do not control circulation. Of public utilization and mainly of commercial and industrial use.

TYPE 2: (Pedestrian Dominates Vehicles) Neighborhood internal connector streets; they provide access to commercial and residential areas. Pedestrian controls the circulation of the streets regulating the vehicular flow. Two kinds of TYPE 2 streets can be distinguished:

Type 2A: Streets of more public utilization that tend to be of commercial use but are also residential, and have substantial vehicular traffic on them.

Type 2B: Streets that tend to be semi-public, or mainly for residential space and have less vehicular traffic than the 2A type streets.

TYPE 3: More than streets, they are alleys and pedestrian paths. They provide access to interior courts and to residential property. Of semi-private to private domain, they have almost exclusive pedestrian circulation (only emergency vehicles and occasional parking).

For more detailed information about each type, see the following summary chart.
<table>
<thead>
<tr>
<th>STREET CLASSIFICATION</th>
<th>VEHICLES only</th>
<th>PEDESTRIAN and VEHICLES</th>
<th>PEDESTRIAN dominate VEHICLES</th>
<th>PEDESTRIAN only</th>
</tr>
</thead>
<tbody>
<tr>
<td>CODE</td>
<td>Non-thematic</td>
<td>Collector streets</td>
<td>Neighborhood streets</td>
<td>Alleys</td>
</tr>
<tr>
<td>TYPES</td>
<td>Major Arteries Expressways Highways</td>
<td>Major Arteries</td>
<td>Expressways Highways</td>
<td>Major Arteries</td>
</tr>
<tr>
<td>USER DO MAIN</td>
<td>PUBLIC</td>
<td>Semi-public</td>
<td>Semi-public</td>
<td>Semi-public</td>
</tr>
<tr>
<td>USER CHARACTER</td>
<td>PEDESTRIAN</td>
<td>PEDESTRIAN</td>
<td>PEDESTRIAN</td>
<td>PEDESTRIAN</td>
</tr>
<tr>
<td>CONTROL</td>
<td>Pedestrians are not allowed.</td>
<td>Controls are established to protect pedestrians: crosswalks, traffic lights, signs, etc.</td>
<td>Controls over vehicular traffic are established: traffic lights, signs, etc.</td>
<td>The vehicular control is limited to signs.</td>
</tr>
<tr>
<td>SECTION DIMENSIONS</td>
<td>MAXIMUM</td>
<td>AVERAGE</td>
<td>MINIMUM</td>
<td></td>
</tr>
<tr>
<td>IMAGE</td>
<td>80' (24.4m)</td>
<td>60' (18.3m)</td>
<td>30' (9.15m)</td>
<td>15' (4.57m)</td>
</tr>
<tr>
<td></td>
<td>30' (9.15m)</td>
<td>25' (7.67m)</td>
<td>8' - 10' (2.4m - 3.0m)</td>
<td></td>
</tr>
<tr>
<td>IMAGE</td>
<td>Commercial Street</td>
<td>Hanover Street</td>
<td>Hull Street</td>
<td>Snelling Place off Hull Street</td>
</tr>
</tbody>
</table>
**TYPE 1**

The only type 1 street found in the area is Commercial Street. It is a wide, busy street, with 4 lanes or double-way traffic, and on-street parking on both sides. Commercial Street is the boundary that separates the North End from the Waterfront.

**Use:** This street was, mainly, of residential and industrial use, but with the development of the Waterfront area, it is increasingly becoming of commercial use. It has been possible for the street to change its use because its spatial dimensions allowed it. Whatever is left of the industries and wharves is located along the Waterfront, the old residential area that still remains is on the North End's side, the new commercial and residential area belongs to the Waterfront development.

Nevertheless, some commercial space continues along Commercial Street up to, more or less, its intersection with Hanover.

**Utilization:** This street type is of very public utilization. Due to its dimensions, both in section and in length, and to the differences in the uses that are given to both sides, it is not possible for the residents of the area to extend any territoriality over the street or develop any sense of relation across it. The people who use the street, both pedestrians and vehicles, are mostly through traffic, and this makes it even more public.

**Function:** The vehicular traffic controls the way activities happen along this type of street. Occasional crossing points allow pedestrians to go from one side to the other safely. Apart from that, there is little connection between both sides.
Commercial Street is a changing entity in the neighborhood. With the development of the Waterfront it is becoming more and more of commercial use, changing its original residential use.
Almost all pedestrian activity takes place on the North End side of the street, people strolling, buying, etc. The vehicular traffic is very heavy, and parking spaces seem to be always occupied.

**TYPE 2A**

The main characteristic of this type of street is the great amount of activity that happens on them. Lots of cars - parked, parking, double-parked, moving slow - and lots of people - walking, strolling, talking, buying, selling, gathering, recreating. This activity, sometimes more, sometimes less, extends all day and most of the night, all through the week, and especially on weekends. The type 2A street is the North End market street, and it is mainly represented in the sample area by Hanover and Salem Streets.

**Use:** It is mainly of commercial use, but also provides access to residential space located most of the time above ground level. All sort of produce stores, restaurants and cafes are strung along the streets.

**Utilization:** The 2B type street is very PUBLIC. It attracts the outside visitors into the area. Hanover Street is probably more intensely used than Salem Street. They are the gates of the North End to the rest of the city. Because of the amount of outside users, the residents of the buildings along the streets have very little control over them, and feel very uptight about keeping the definition between the public realm and their private space. For example, locked gates at the entrances of alleys are not common anywhere else but along the 2A streets. This only
STREET ANALYSIS
STREET TYPE 2a

MAXIMUM (HANOVER STREET ONLY)

TYPICAL

MINIMUM

BUILDING HEIGHT
40'-55'

BASEMENT
8'

FLOOR HEIGHT
GROUND
10'-15'

OTHERS
8'-13'

SIDEWALK
5'-7.5'

STREET
25'-30'

TRAFFIC LINE DIMENSIONS

PARKING

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happens because intrusion becomes a threat at these intersection points.

Function: The 2A type streets are the heart of the commercial activity in the North End. Most of the institutional buildings and spaces, such as for example, the Old North Church and the Paul Revere Mall, are located along these streets. This provides for space in which people can gather and recreate. The primary activity is shopping, but all the things related to it also occur: strolling, walking, selling, buying, etc. Residents of the floors above ground level are constantly watching over the street, they even talk to the people on the street, to say hello or give directions, providing a certain amount of surveillance over the street, making it safe.

Cars are everywhere, and it seems impossible to find a place to park. Because of the street's section and the amount of people on it, cars move at the pedestrian's pace and when they allow it.

TYPE 2B

The type 2B street is a more quiet street, less people, less noise. The buildings remain very much the same as they were at the beginning of the century, and so does the street. The people in the street seem to know each other, hellos and goodbyes fly from one side to the other of the street, from one window on the 3rd floor to a group of youngsters standing on the sidewalk. There is a sense of belonging to which the outsider does not belong. The street is open to public use, but the feeling of being an intruder cannot be avoided.
STREET ANALYSIS
STREET TYPE 2b

MAXIMUM (MINIMUM 2a STREET)

TYPICAL

MINIMUM

BUILDING HEIGHT

40' - 55'

BASEMENT

8'

FLOOR HEIGHT

GROUND

10' - 15'

OTHERS

8' - 13'

SIDEWALK

35' - 25'

STREET

20' - 18'

TRAFFIC LINE DIMENSIONS

Minimum 2b type streets
Use: It is mainly used as access to residential units.

Utilization: The street is legally open to public use, nevertheless, the residents of the buildings along it extend their territoriality over it, and, even if there is no physical demonstration of it, the streets are clearly perceived as semi-public areas, where public use is still tolerated, but the residents have established some sort of control over them.

Function: It serves as a neighborhood street, Due to street dimensions, the traffic is slow, the parking spaces are always filled, unfortunately, only partially by residents' cars. It provides access to dwellings, and residents use them as extensions of the interior spaces as socializing space. People talk and gather, and children play in these streets.

In this type of street the surveillance network really works because residents know more or less everybody in the area and can detect a stranger right away. The fame of the North End's safety was originated on this type of street.

TYPE 3

The type 3 streets are probably the most common throughout the North End. They are the alleys or paths that connect the front of the block with the interior. Narrow, long and mysterious, they are the important link between public and private domains. Because they are so narrow and sometimes dark, it might be suspected that they could be dangerous; in fact, they are not. Very good care is given to the alleys, they are kept well maintained, clean and lighted during the night.
STREET ANALYSIS
STREET TYPE 3 (ALLEYS)

<table>
<thead>
<tr>
<th></th>
<th>MAXIMUM</th>
<th>TYPICAL</th>
<th>MINIMUM</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUILDING HEIGHT</td>
<td>40'-55'</td>
<td>40'-55'</td>
<td>40'-55'</td>
</tr>
<tr>
<td>BASEMENT</td>
<td>8'</td>
<td>8'</td>
<td>8'</td>
</tr>
<tr>
<td>FLOOR HEIGHT GROUND</td>
<td>10'-15'</td>
<td>10'-15'</td>
<td>10'-15'</td>
</tr>
<tr>
<td>OTHERS</td>
<td>8'-13'</td>
<td>8'-13'</td>
<td>8'-13'</td>
</tr>
<tr>
<td>SIDEWALK</td>
<td>NOT APPLICABLE</td>
<td>NOT APPLICABLE</td>
<td>NOT APPLICABLE</td>
</tr>
<tr>
<td>STREET OR ALLEY</td>
<td>10'-8'</td>
<td>10'-8'</td>
<td>10'-8'</td>
</tr>
</tbody>
</table>

(left) Cover alley
(right) Open alley
Use: The alleys provide access to residential units and to the back spaces in the interior of the block.

Utilization: The type 3 streets are of semiprivate utilization, where the domain and responsibility over the space belongs to a limited number of residents that become co-users of such access.

Function: The type 3 street is an exclusively pedestrian way with occasional parking and access for emergency vehicles (if the dimensions allow it). It is used by the co-users as access to either their dwellings or a common back space. It is also used as an extension of the back spaces becoming service areas (for example, to put out the garbage for collection). Because of the lack of space, there is not a lot of activity taking place in these alleys, but they are heavily surveilled. Their main function is to maintain the separation between the public and the private domains.

INTERSECTION ANALYSIS

The intersection between streets is the place where the use of each street involved gets intensified. It is an important part of the street because the intersection is where the conflicts that appear when two different territories, or when two or more kinds of users meet, are solved. The way the North End has solved these conflicts, in most intersections, is very successful due to the physical or formal elements of control that it uses.

Some of these controls were given by the physical structure that existed before the Italian community was established in the North End; others have been added by
the residents in order to fit the physical structure to their special needs, and finally, some have been imposed by city agencies in order to regulate and control mainly circulation flow. Thus, the function of these physical control elements is to establish the relationships between the uses, the users and the activities that take place in the involved streets. The intersection types that were chosen for study are the ones that affect these relationships the most. These types are:

1 + 2A: Intersection between two major streets, both of public utilization, and of vehicular and pedestrian use.

1 + 2B: Intersection between one major commercial street and one small residential street, both with vehicular and pedestrian circulations.


1 + 3, 2A + 3, 2B + 3: Intersections between any public or semi-public street and a semi-private pedestrian alley.
FUNCTION

It intersects two main streets regulating the way in which vehicular and pedestrian flows meet. The intersection is dominated by vehicular circulation.

The uses that buildings take on this type of intersection respond to its vehicular character. They either need easy vehicular access, (wharfs, wholesale stores, factories, large restaurants), or they are vehicular oriented, (gas stations, car repair shops).

PHYSICAL ELEMENTS OF CONTROL

Controls over vehicular traffic:
- Warning signs (STOP).
- Traffic lights.

Controls over pedestrian:
- Pedestrian lights.
- Pedestrian crossing lines.

COMMENTS

This type of intersection is not common in the area. It only occurs along the edges of the neighborhood, not inside of it. Because the vehicular flow on both streets is heavy, the control elements are basically vehicular, but pedestrian regulating elements are also established.
STREET INTERSECTION ANALYSIS
INTERSECTION TYPE 1+2b

FUNCTION
It mixes a small street into a much larger one. The large street (type 1) is not affected by the intersection. All the regulating controls are for the small street, and these controls are only for vehicular traffic. Most of the times the corner buildings have stores in their first floor with front entrances over the large street.

PHYSICAL ELEMENTS OF CONTROL
Controls over vehicular traffic:
- Warning signs on the 2b type street, (STOP, No left, right, turn, etc.)
- Intermittent traffic lights, (unusual).
- Indicative signs on both streets, (one, double, way, dead end, etc.)

Controls over pedestrian:
This type of intersection does not specify any control over pedestrian circulation.

COMMENTS
Since 1 type streets delineate the boundaries of the area, and the 2b type streets are of a very different scale than the one of 1 type streets; their intersection is perceived as the beginning of the North End's fabric, becoming access points to the neighborhood. One basic problem with the North End layout is its frequent number of 2b type streets intersecting a 1 type street. Sometimes only 50' apart, it creates a large number of penetrations, most of which are seldom used, representing a heavy maintenance cost.

The vehicular controls are mainly for the smaller street, while the traffic on the 1 type street is not interrupted at the intersection.
STREET INTERSECTION ANALYSIS
INTERSECTION TYPE 2a+2a, 2a+2b

FUNCTION

It mixes two internal streets of almost or equivalent intensity of use and traffic. The corner buildings usually have shops in the first floor.

PHYSICAL ELEMENTS OF CONTROL

Controls over vehicular traffic:
- Only warning signs, (STOP)

Controls over pedestrian:
- None.

COMMENTS

Usually very congested by vehicular and pedestrian circulations, this type of intersection establishes the minimum amount of control and it is mainly on the vehicular traffic. The pedestrian circulation cannot be controlled due to the way in which the streets involved are perceived given the small dimensions of their sections and the low speed of vehicles.

(top) Intersection of Charter and Salem Streets
(center top and right) Intersection of Salem and Prince Streets
(center bottom) Intersection of Hanover and Tileston Streets
STREET INTERSECTION ANALYSIS
INTERSECTION TYPE 1,2A,2B+3

FUNCTION

Its primary function is to separate the very public and the semi-private domains. Most 3 type streets are only pedestrian, therefore physical elements of control are established to avoid vehicular access and outsiders intrusion. The success of the intersection depends on how clear and easy to read are these elements of control.

In the intersection between a 2b type street and a 3 type street, the controls appear to be more relaxed and less drastic than in the other two types of intersection. This is due to the fact that the 2b type street is of a calm residential character, with less traffic going through it, and tends to become part of the territory of the street residents. As a consequence the limits between public and private spaces are soften, because the users of both are the same.

PHYSICAL ELEMENTS OF CONTROL

Controls over vehicular access:
- A change of levels between streets avoids vehicular access.
- Gates, doors, and fences regulate and control vehicular access.
- Raised posts in the middle of either street avoid vehicular access to it.

Controls to limit public and private domains:
- Gates, doors, fences, warning signs to stop outsiders intrusion.
- Changes in the materials of the streets. It states the different character of each street without a physical barrier or separation.
- The difference of scale. The 3 type street because of its small section is perceived as a private space.

COMMENTS

This is a very difficult type of intersection because its function is not only to differentiate between pedestrian and vehicular circulations, but also between public and semi-private domains. The successful way in which the North end has solved the physical elements that control these intersections, allows the area to operate at the public and the private levels simultaneously on independent networks.

Both, the intersections and the 3 type streets (alleys) are very well kept because besides being main accesses to dwelling units and back spaces; they become semiprivate spaces, where the co-users perceive them as their responsibility even if legally they are not.
BACK SPACE ANALYSIS
THE IMAGE

Typical back space used as storage for materials and to dry clothes.
BACK SPACE ANALYSIS

The denominated back spaces are the second kind of thematic open spaces that were recognized in the North End. The back space is located in the interior of the block and its connection to the street is through a TYPE 3 STREET (alley).

The main formal characteristic of the space in the interior of the block is that it is extremely fragmented in a number of these spaces, which are very seldom interconnected. Their use is exclusively residential, their utilization semiprivate and their function is basically that of a service area (drying laundry, storage space, garbage collection, etc.) and access to the residential units in the interior of the block. The back space is the result of the type of tenement built at the beginning of the century, and that is typical of the area. This type of building has very high land coverage, the only spaces that were left open are narrow back yards. Very frequently, mirror images of this type of buildings were put together to allow for the maximum open space between buildings. It is also common that as time passed by, several of these back yards would get unified, creating some kind of cluster space, that is used by several buildings.

It was observed that there is no relationship between the amount of space, and its use, its utilization or its function. Furthermore, while the latter three were maintained throughout the study area, the dimensions varied in a range of 2000 sq. ft. of area. This observation determined the irrelevance of applying for the analysis of the back spaces, a classification
in terms of the formal plus functional elements, like the one used for the streets, where the connection between form and function exists. Instead, a description of the constant elements: function, use and utilization was necessary. It would determine a basis in which to set controls over any change of these constant elements without worrying about the general formal aspects of the space, but only about the physical elements that help control and maintain the function, the use and the utilization of the back spaces.
### BACK SPACE ANALYSIS

#### LAND USE

There are some back spaces that are used either as auxiliary entrances to institutional buildings, or service entrances to commercial spaces such as restaurants. Nevertheless the spaces that are dealt with in this analysis are of exclusive residential use.

#### LAND UTILIZATION

The interior court is a semi-private space. This means that its users (tenants of surrounding buildings) act as co-users and become responsible for it, sometimes legally, but mostly socially or by an extension of their territoriality into it, establishing control over the space.

#### FUNCTION

- **It serves as pedestrian ACCESS to the dwelling units in the interior of the block.**
- **It serves as an extension of the interior spaces, providing STORAGE space for the co-users.**
- **It serves as a SERVICE AREA mostly used to dry laundry and to put the garbage for its collection.**
- **It serves as PLAY AREA for small children providing constant surveillance by co-users.**
- **It provides LIGHT and VENTILATION for the dwelling units around it. (poor in most cases)**
- **Occasional socialising, gatherings, private parties.**

**NOTE:**

The back spaces are a result of the type of tenement development typical of the area. With very high land coverage, the only spaces left open are narrow back yards. Very frequently mirror images of this type of building were put together to allow for the maximum open space between buildings.

#### ELEMENTS DESCRIPTION

<table>
<thead>
<tr>
<th>ELEMENTS</th>
<th>DESCRIPTION</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NOTE:</strong></td>
<td>Almost each back space is different in terms of its physical form and its dimensions, nevertheless some common physical elements can be found. It does not mean that all of these elements are present in each or every back space.</td>
<td>The elements that appear in each back space are attempts to maintain its function and the character of its utilization.</td>
</tr>
<tr>
<td><strong>DIMENSIONS</strong></td>
<td><strong>AREA</strong></td>
<td><strong>Average:</strong> 870 sqf. <strong>Typical:</strong> 300 to 400 sqf. <strong>Maximum:</strong> 1200 sqf. <strong>Minimum:</strong> 200 sqf. <strong>Aproximated information</strong></td>
</tr>
<tr>
<td><strong>BUILDING HEIGHT</strong></td>
<td><strong>around space</strong></td>
<td>1 to 5 stories <strong>40' - 55'</strong></td>
</tr>
<tr>
<td><strong>BUILDING UTILIZATION</strong></td>
<td><strong>TO THE SPACE</strong></td>
<td>Visual control (surveillance) Direct access at least for the ground level unit</td>
</tr>
<tr>
<td><strong>ACCESS</strong></td>
<td><strong>NODE</strong></td>
<td>Type 3 streets</td>
</tr>
<tr>
<td><strong>DIMENSIONS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CONTROLS</strong></td>
<td>Gates, doors, fences</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Different on levels</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Different materials</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Small section of the access</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Signs</td>
<td></td>
</tr>
<tr>
<td><strong>MATERIALS</strong></td>
<td>Floor surface; Hard *Brick Cement Asphalt Soft Ground Grass</td>
<td>The state of repair or abandonment of materials and furniture of these spaces was observed to be in direct relation to the effectiveness of the controlling elements and the semi-private character of the space. Wherever these spaces become of public use, the original co-users stop feeling responsible for its maintenance. To illustrate this, examples of both conditions are shown.</td>
</tr>
<tr>
<td></td>
<td>Wall surface; Buildings Masonry of brick with double hung windows Walls Half or story high, brick or concrete block walls</td>
<td></td>
</tr>
<tr>
<td><strong>FURNITURE</strong></td>
<td>Light posts.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Trees</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Storage sheds</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Garbage cans</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Laundry lines</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fire escape stairs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Flower pots</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Scrap materials (for repairs or construction), etc.</td>
<td></td>
</tr>
</tbody>
</table>
This example shows how when the elements that control intrusion into the back spaces are successful, the space maintains its semi-private utilization and it is very well maintained.

This space, located off North Bennett Street, between Salem and Hanover Streets, is accessible through an underpass (non-existent, but perceived gate).

It does not seem that the space is used for many activities, but maybe it only seemed so because it was still very cold outside when the observations were made. Nevertheless, the space provides access to a small number of dwellings located in the interior of the block. It is very well maintained, it has good lighting and it is safe. The co-users perceive it as an extension of their interior spaces and because the outsiders do not intrude in their domain, they feel responsible for this space.
This example shows how the function and the utilization of a back space has been changed and, because of this situation, the space is not being maintained, it is not safe and it is being constantly vandalized.

Around 1920, a proposal was made to create a mall between Charter and Commercial Streets, through this block. The city never finished the project, but instead opened up a small playground (Charter Street Playground). Before the creation of this playground, the alley and the back space that provided access to the dwellings in the interior of the block was a semiprivate space and the responsibility for its maintenance was given to the people living in the buildings around it. Thus, when the public intervention came along, and the alley became a public way that crosses from one side of the block to the other, the tenants of the buildings that have access from it started to perceive it as a public street and stopped feeling responsible for its maintenance. Now, in spite of the quality that the space has in terms of its form, it is abandoned and vandalized.

(top left) Direct access to dwellings
(top right) Separation between public and semiprivate spaces is very weak and can be very easily violated
(bottom) At the end connection with Charter Street
Deteriorated condition of the playground.
Total open visual connection from the public space into the back space preventing any sort of privacy.
CHAPTER 3
CONTROL GUIDELINES
CHAPTER 3
CONTROL GUIDELINES

General Conclusions

We know now that the North End is a changing neighborhood, and that this change mostly affects the social structure of the area. The spatial structure has a better chance of remaining as it is now, because the days in which tearing down the whole neighborhood would have been an acceptable policy are long gone since the 60's.

Nevertheless, even if the planning attitude is towards restoration, there has to be an understanding of the functional structure of the area in order to be able to propose improvements that would fit the existing social context.

There are areas in the neighborhood that are more vulnerable to change than others. While Hanover or Salem Streets, because of their value to the rest of the city and the permanent character of their commercial activity, will be maintained as market streets, and it is very possible that their spatial and formal characteristics will remain as they are now for a long time. The small residential streets, alleys and back spaces, where the present residents exercise control the most, are becoming "soft" areas, vulnerable to be changed. This change might not be the destruction of the spatial or formal aspects of the spaces, but may be a disturbance in their function, breaking up the bond between form and function.

It is especially for these "soft" areas that the controls are necessary. They are not so much to prevent things from being changed, but to understand the key elements
that must be preserved in order to maintain the harmony between social and spatial contexts, and the allowable and desirable changes. It is important to know that the controls are based on desire performance rather than on fixed parts or elements to be preserved of the environment. This gives freedom to the community and the professional, allowing them to find creative mechanisms to achieve the required performances.

A. The Streets

In the streets, the formal/spatial structure is, in terms of the way the space is perceived, much more important and essential than the functional structure. The North End's fabric* was there before the Italian community moved in and it is so overpowering that it has caused not only this community but also the communities before it to accommodate within it, as much as possible, their lifestyles. Nevertheless, the fitting of the social context within the spatial structure is so perfect that today it is hard to differentiate them and to know, by observation, which one came first. This almost perfect adjustment, this bond between form/space and function, is also very important in the way the street environment is perceived. Thus, the control that could be applied to streets, in general, would prevent changes at the formal/spatial level by understanding the elements that are essential for the North End's fabric, this one being basically the actual bulk and height of buildings and the section of the streets, preventing them from being changed. (Note that facade elements, ornaments and materials, even if important, are not the focus
of the controls since through them the perception of the space can be improved but not changed.) Consequently, a street must maintain its form/spatial characteristics even if some of its functions have to change.

The question is then which functions can be allowed to change without penalizing the social context. As it was said before, the social context of the North End has fitted its fabric like glove and hand, and this fitting is the one to be preserved. Therefore, the use, the utilization and the functions that must be kept are the ones that the existing community cannot do without and still maintain the bond between space and function. Following is a list of the essential functional elements, found in the analysis, for each street type. More elements can be added depending on how restrictive the controls have to be, but elements must not be taken out of this list since it has only the essential ones for each street type for it to maintain its basic function.

<table>
<thead>
<tr>
<th>TYPE 1</th>
<th>Use: Commercial</th>
<th>Utilization: Public</th>
</tr>
</thead>
</table>
TYPE 2A

Use: Commercial
Utilization: Public
Function: Vehicular: Public traffic
          Public parking
          Pedestrian: Walk/stroll
          Buy/sell
          (shopping)
          Recreate/gather

TYPE 2B

Use: Residential ONLY
Utilization: Semipublic
Function: Vehicular: Resident's parking
          Pedestrian: Walk/stroll
          residential access
          Socializing
          playing

TYPE 3:

Use: Residential ONLY
Utilization: SEMI-PRIVATE
Function: ONLY PEDESTRIAN:RESIDENTIAL ACCESS
          If possible, emergency vehicles.

A street may also change types and, therefore, functions, but this change must be the result of an effort to keep its formal and spatial elements. In this way, a type 1 street could be reclassified as a 2A, a 2A type as a 2B and a 2B as a type 3 street. When a street, let's say a 2B type street, that has been classified as such
because it is open to vehicular traffic and pedestrian circulation, and it is in a residential area, but the dimensions of its section are the minimum or below the minimum of the 2B type section, and consequently cannot meet the requirements, then its classification could be changed to a TYPE 3 street. In this way, it's formal and spatial characteristics are maintained and by becoming a pedestrian access to residential spaces, its basic function of residential access way is preserved. This change of types could also be applied to parts of the streets, without need to change its whole extension.

The other option is to leave this street classified as a 2B type, but because it is not required by the controls that this type should have through traffic, it could be closed for public traffic, only allowing resident parking on it.

The chart shows more specific elements that could be put into the controls. It is left to the community to decide how specific the controls ought to be in the case of each street in the neighborhood. In fact, the controls have to be discussed at the level of each street. The general controls can only give an orientation to the definition of specific controls for each space, by adding elements to the essential ones that have already been defined. In this way, the decision-making process can deal with exceptions and special cases on an individual basis.

A way to control the use, the utilization and the function of a street is to control
its intersection with others. The intersection chart shows the elements that are essential for the successful control of the streets involved in the different intersection types.

<table>
<thead>
<tr>
<th>STREET TYPES</th>
<th>USE</th>
<th>FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYPE 1</td>
<td>TYPICAL 40°</td>
<td>VEHICLES</td>
</tr>
<tr>
<td>TYPE 1</td>
<td>TYPICAL 45°</td>
<td>PEDESTRIAN</td>
</tr>
<tr>
<td>TYPE 2A</td>
<td>MAXIMUM 35°</td>
<td></td>
</tr>
<tr>
<td>TYPE 2B</td>
<td>MINIMUM 20°</td>
<td></td>
</tr>
<tr>
<td>TYPE 2C</td>
<td>ABOVE MAXIMUM 40°</td>
<td></td>
</tr>
<tr>
<td>TYPE 2D</td>
<td>BELOW MINIMUM 25°</td>
<td></td>
</tr>
<tr>
<td>TYPE 3</td>
<td>ABOVE MAXIMUM 45°</td>
<td></td>
</tr>
<tr>
<td>TYPE 3</td>
<td>BELOW MINIMUM 35°</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PHYSICAL ELEMENTS OF CONTROL</th>
</tr>
</thead>
<tbody>
<tr>
<td>OVER VEHICLES</td>
</tr>
</tbody>
</table>

Types are usually open and they only define domains without actually enclosing them.
B. The Back Spaces

The formal structure of the back spaces is non-existent. There is not a definable typical area size or section. It is not possible to even determine what would be the optimum spatial qualities of such spaces. The reason for this is that regardless of size, the activities and the use that are given to these spaces is constant, and that the fulfillment of their function depends very little on the formal aspects and more on the physical elements that allow the control of their utilization.

There is, of course, a lot to be said about the spatial quality of the back spaces and the ways in which they could be improved (for example, to bring more light into them). But what is really important to maintain is the functions of these spaces as residential access and service areas.

There are certain spatial characteristics that allow the back spaces to be used by only a limited number of people, such as it is with fragmentation, meaning that each one of these spaces is connected only through one point (maximum two) to the street, usually also accessed from the interior of buildings around it, but very unlikely connected to other spaces in the interior of the block.

Thus, the first control that is given for the back spaces is that they must be kept as fragmented, semiprivate spaces used as service and access areas for the buildings that cluster around them. Once again, it depends on each specific case how much control one wants to establish over the space. Formal elements that
allow the back spaces to be maintained as semiprivate service and access areas are:
- The fragmentation of the back spaces in the interior of each block.
- The physical elements of control that guard against intruders at the access points to the back spaces.

The mechanisms most frequently used in the North End to accomplish these two things are listed in the corresponding chart, and even if they are not the only ones, they have been used successfully, as it is shown in the analysis, for the same purposes. New and different methods can be used as long as their performance meets the control performance requirements.
ILLUSTRATIVE DESIGN PROPOSALS

The examples that are presented here show two completely different ways in which the controls have pre-established the limits and range of the allowable changes. They also show that by setting the desired performance for each open space, it is possible to locate the areas that do not meet this performance and propose mechanisms to restore its required use, utilization and/or function.

PROPOSAL 1
(The Street Controls)

This proposal involves four blocks located within the sample area limited by Hull, Salem, Prince and Snowhill Streets. Between these four blocks, there are 3 streets (Sheafe, Margaret and Cleveland) all of which in the general classification were described as 2B type streets.

It was observed that there is a discrepancy between the legal or official utilization of the streets and the actual use given to them. All three of them are supposed to be public through traffic streets. Nevertheless, Cleveland Street has been closed by residents at its intersection with Snowhill Street by changing levels and putting a couple of raised posts in the middle, in this way, it does not allow vehicular traffic, and it is being used mainly as a pedestrian access to dwellings and as an area for children to play. Margaret Street is usually closed on purpose by residents that park one or more cars in the middle of the street and at its intersection with Sheafe Street, preventing through vehicular traffic, making the whole street a pedestrian access to dwellings.
and a play area for children. Sheafe Street is a through traffic street, but it is hardly used for anything other than parking since most of the traffic goes through either Charter, Hull or Prince Streets (see photographs).

Proposal: It is proposed to officially give the residents the control over the streets, control that they have already established in an unformal way. The goals of the proposal are:

- To maintain the area's use as residential, emphasizing its semipublic utilization in order to give more control and responsibility over the space to its residents.

- To increase the number of exclusive residential parking spaces in order that residents not have to compete with visitors for a space to park.

- To increase the amount of safe open space in which children can play.

- To provide open space in which residents can gather and socialize in front of their dwellings.

- To facilitate vehicular traffic by discouraging through circulation in Sheafe and Margaret Streets. By doing this, the 4 blocks will be perceived as a cluster or large block simplifying the circulation of vehicles around it.

The first diagram of the proposal shows the least number of elements that should be given, with a minimum of investment, in order to achieve the desired performance.

The second diagram shows a vision of what could happen with time, some investment and care from the residents once these basic elements have been provided.
PROPOSAL 1

VIEWS

(top) Cleveland Place. Children playing hockey.
(bottom) Hull Street, Margaret Street, Snowhill Street and entrance to Cleveland Place from Margaret Street.
PROPOSAL 1
(THE STREET CONTROLS)

1. Wider sidewalks at strategic points will encourage residents to gather and socialize.
2. A change of traffic lanes is established in order to slow down vehicles and discourage through traffic.
3. Gate. The gate in the North End is an element that does not necessarily enclose an area, but it is perceived as the separating element between domains.
4. Warning signs announcing that only resident parking is allowed on the related street.
5. Only resident parking is allowed. The parking spaces provided amount to the same quantity as before, the advantage is that now, by only allowing resident parking, the community is being benefitted.
6. Playing areas for children are provided.
7. The speedbump is another mechanism to control vehicle speed and discourage through traffic.
8. Improved floor surface.
9. Sidewalk and street are leveled at certain points so while it still allows vehicles, the points are now perceived as larger gathering spaces.

Furniture
10. Light posts
11. Sitting areas provided in the wider spaces to encourage more informal socializing.
12. Trees to provide shade and pleasant environment for the people in the streets.
PROPOSAL 2
(The Back Space Controls)

This proposal involves the space described in example B of the back space analysis (see p.85), where due to public intervention, the back space has lost its basic utilization and has become a public space that nobody maintains and that is rapidly deteriorating.

Proposal: It is proposed to re-establish the utilization and the function of the back spaces around the playground. The goals of the proposal are:

- To restore the semiprivate character of the back spaces, so the residents would start to take care of them and perceive them as extensions of their units.

- To emphasize the limits between public and semiprivate domains.

- To improve the Charter Playground and make it more useful to the residents of the area.

To achieve this desired performance, two different schemes were considered. The first one required little investment from the residents, it can be community organized and does not call for public intervention. The second one requires a large investment and the agreement of the city to donate or sell the piece of land for the playground to the residents of the block. Therefore, even if both schemes fulfill the required performance for the space, the first one is preferred, because it can be implemented without a lot of bureaucracy involved and it does not require major changes.

Both schemes are presented, the first one with two diagrams, one of the essential
elements to be added or changed, the second showing the desired development of the space once the elements have been provided. The last scheme only shows the essential elements that are needed for its implementation.
PROPOSAL 2 FIRST OPTION
( THE BACK SPACE CONTROLS )

PROPOSAL: MINIMUM INVESTMENT/LEAST ELEMENTS

(SEE NEXT PAGE FOR KEY NUMBERS)
PROPOSAL – FIRST OPTION
(THE BACK SPACE CONTROLS)

1. The nature of the wall around the park has to be changed to one that would not allow visual intrusion from the park users to the semi-private back spaces. It should be of an opaque material (blocks, brick, stone, etc.) up to the vision level on the park side. Above this level, it can become transparent with, for example, iron fences to prevent people from climbing over it.

2. Gates. The gate in the North End is an element that does not necessarily enclose an area, but it is perceived as a separating element between domains. They are usually not closed nor obstructed, but open passageways that frame the entrance to a space.

3. The edge between domains can be made more significant by adding to it with a landscape element.

4. Light posts.

5. Sitting areas at the entrance of the park make it a desirable place for adults to sit and be able to observe both the street movement and the children playing.

6. Trees to provide shadow and pleasant environment to the people in the park and also to help delineate the entrance to the back space.

7. Improved floor surface.

8. Renovated playground equipment.

PROPOSAL: EXPECTED DEVELOPMENT
PROPOSAL 2: SECOND OPTION
(THE BACK SPACE CONTROLS)

1. This piece of land is given for development for a 4 to 5-story apartment building.
2. It is then required to leave a covered underpass at least 10' wide for car entrance to the interior space.
3. The interior space is designated for resident car parking during the night and as a children's play area during the day. This option provides a considerable amount of needed resident parking spaces.
4. Not very high walls separate, more perception wise than physically, the parking space and the space used to access the dwelling units.
5. The original back spaces retain their function as service and access areas.
APPENDIX A
PROGRAMS—FINANCING REHABILITATION
CITY PROGRAMS

Housing Improvement Program (H.I.P.)

Under this program, homeowners of one to six unit structures are eligible for up to a 20% rebate on code-related housing improvements made to their property. This program is open to the North End. In 1977, $60,000 was allocated for improvements to approximately 35 buildings. A special program has been open for the elderly owner-occupants, making them eligible for up to 50% rebate on rehabilitation costs. The effect of this program on the North End can only be minimal, since over 85% of the units are not eligible, either because of absentee ownership or an excessive number of units. A modification of the HIP program or a new program should be designed specifically to provide absentee owners with incentives to rehabilitate their property providing safeguards for existing residents.

H.U.D. Section 8 Substantial Rehabilitation Program

Under this program, through contracts with developers for the rehabilitation of a number of units, HUD guarantees the approved market rate of these units while the lower income tenant is required to pay 25% of his income as rent*, and HUD subsidizes the difference. It has not been applied to the North End mainly because it requires the applications to be submitted by developers that can demonstrate total control of the site.

*These percentages of investment are arbitrarily made and very seldom are realistic in terms of the population for whom they are made.
Concentrated Code Enforcement

This is a program conducted by the Housing Inspection Department and it is designed to bring substandard* buildings into compliance with city health and sanitary codes. Essentially, the program inspected all property within specific geographic boundaries for code violations and offered rehabilitation assistance in the form of low interest loans and grants to homeowners. This program should be adapted and made available to property owners in the North End, and provisions to prevent excessive increases in rents after rehabilitation should be built into these programs.

Zoning Board

It is logical to think that zoning should be done at a local level, not at the municipal level (the whole city), but at the neighborhood level through officials elected in the area. Zoning hearings would then be held in the neighborhood that is going to be affected, and it would be above all political decisions. In this way, residents in the area can argue their case, before the zoning board and make clear how the community feels about any proposed change with respect to the welfare and public interest of the community.

Rent Control

Under this program, rents are stabilized, making it difficult for property owners to move through the refinancing procedure or to move a different class of people into the area's structures. However, if not handled properly, it can set up still another bureaucratic agency,

*See discussion about validity of standards in the Introduction, p.5
unresponsive to citizen's needs, controlled by the city's real estate interests; and if not written properly, rent control laws can lead to deteriorating buildings. To counteract these two things, a rent control program should have: A base period for rent control of a year or two before the bill becomes law, preventing the landlords from raising their rents quickly before the bill takes effect. An agency, at the neighborhood level, which can help citizens that want to complain about a landlord but are afraid of retaliation. Penalties for deterioration of services - maybe by lowering the rents, and finally, strict mechanisms for allowing landlords to raise rents because of rehabilitation of the structure. This program has not been implemented in the North End.

Note: Other programs such as RETORE (program for rehabilitation of commercial space) and changes in property tax rates are some other programs that could also be adapted to meet the North End resident's needs.

COMMUNITY PROGRAMS

Resident Cooperatives - Tenant's Unions

The aim of this program is to encourage tenants to become owners of the apartments in which they live by creating cooperatives with other tenants and buying the buildings. The cooperative ownership of apartment buildings would be financed with local subsidies from the city under a single mortgage. In this way, residents would be protected from rising housing-market prices because the cooperative would have a perpetual mortgage that would never be refinanced or increased.*

*Morris, David/Hess, Karl, Neighborhood Power, Beacon Press, Boston, Ma., 1975, pp. 92, 94, 95.
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