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Housing Quality Program Puts Human Scale Into Residential Zoning

New York City Develops
Guidelines for Builders

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EDITOR'S NOTE: *New York City is a predominantly middle class city. Its approximately 7 million citizens have traditionally viewed it as a series of clearly identifiable neighborhoods. Most modern residential development has been in the form of relatively monotonous buildings, both low and high rise. Since 1961, this development has been heavily influenced by a New York zoning ordinance which encourages open space surrounding taller buildings. However, as a result of the work of the Urban Design Council, it was discovered that the normal types of requirements in such zoning ordinances may actually detract from the humanity of blocks and neighborhoods. The open plazas are not used because they become ambiguous space; parking requirements often give priority to cars rather than recreation space; certain theoretically aesthetic considerations create greater insecurity about safety in public space both inside and outside of buildings; and many other factors. The council's work, centered around its Housing Quality Program, has attempted to develop attractive alternatives for builders of medium rise buildings. In New York this is up to 25 stories. The alternatives may be used in conjunction with the 1961 zoning ordinance. The alternatives are designed to make new residential development more liveable, more humane and more in keeping with the city's neighborhood tradition. This work is now in the form of legislation and is expected to be in effect during 1975.*

While certain aspects of the Housing Quality Program are emphasized or unique due to conditions in New York, the methodology and theory has wide potential application to medium and large sized cities throughout the country.

Briefly, the Housing Quality Program is a set of 26 guidelines or program elements divided into four categories. The categories, or programs, are neighborhood

impact, security and safety, recreation space and building interior. Each program element contains a goal and a set of statistical standards for determining the degree of compliance with that goal. Partial compliance, measured as a percentage, receives a point score somewhat less than the maximum. The system is based on permitting maximum flexibility and insuring a high level of minimum quality. This framework is a system which quickly and objectively establishes the degree of compliance a building has with clear and stated planning and design objectives. It permits the architect and developer to choose which components of quality—the program elements—they choose to emphasize over others. Such choice is often dictated by unique conditions such as marketing, neighborhoods or sites. At the same time, the Housing Quality Program is designed to force the developer and architect to consider and comply with as full a range of quality as possible as expressed in the program elements.

Covered here is the story of the lessons learned over the past few years as the Housing Quality Program has been developed. It provides the rationale for the program and an outline explanation of its program elements.

Each of New York's five boroughs has different characteristics in terms of housing type and condition and age, income and educational levels of its citizens. When averaged out they form a composite similar to that of any other old American city which has an inner city poor area with deteriorated housing, gray areas and much one and two family middle class housing.

By far the great majority of New York City's citizens live in the boroughs outside of Manhattan, and the Housing Quality Program is aimed primarily at them.

Inflated construction and financing costs have made rental or purchase in new buildings, even subsidized ones, very expensive. Middle income families who live in the same neighborhood in which a new building may be located often cannot afford its prices.

This situation has forced many families capable of exercising economic choice to consider relocation outside the city. The need for New York to compete with surrounding suburbs and towns is, therefore, vital.

In 1972, former New York Mayor John Lindsay asked the Urban Design Council to study the New York City housing situation with an eye to the quality of life considerations. By July, 1973, we had come to some interesting conclusions which were published along with recommendations in a 93 page book titled *Housing Quality: A Program for Zoning Reform*.

Of major importance was the conclusion that the 1961 zoning ordinance appeared to be counterproductive. That ordinance is well known for its open space requirements and incentive bonuses for plazas, off street parking and other "public amenities." It has encouraged tall buildings surrounded by space, or "the city in a park concept." The Urban Design Council found, however, that the newly created open space was not being used by residents. It was not perceived as useable space nor as public space. In fact, parking requirements and economy usually resulted in a situation where one half of all open space was used for parking.

We also found that the buildings encouraged by the ordinance tended to offer a sense of insecurity regarding crime and personal safety, that a sense of psychological breaking up of neighborhoods was encouraged rather than a sense of community.

Our study had not started out as a criticism of the zoning ordinance; that just became a major part of it after the Urban Design Council staff surveyed New York City residents and began to seek reasons for the complaints of the citizens. Many of the complaints were related to physical inconveniences, safety and recreational factors. The reasons were directly traceable in many instances to the rules governing development in the city. The council noted also that there is a correlation between age of neighborhood and the positive feeling of residents, which again was typified in physical form, scale and amenities.

The Study

The council board included architects, lawyers, builders and laymen representing both community and business interests. Since they were not part of a city bureaucracy, it was felt they could be more objective. Since the council is an arm of the mayor's office, it was felt that it could be more effective.

The council set a challenge for itself which was beyond what the mayor intended. One of the first decisions made was to be open and objective. Conclusions would result only from a clear statement of the problems. Quality also had to be defined in a workable way, especially as government has rarely dealt with the subject.

The quality crisis and the production-cost crisis could not be separated. Community and tenant acceptance of new housing, particularly subsidized housing, was an issue itself, affecting the production and cost of new housing.

But, who is the client? Market forces tend to encourage treatment of the builders and developers as the client. This seems to happen naturally in a seller's market. Al-

though housing was obviously being built for its eventual users, policies were used to ease the pains of those who built the buildings. The client could not appropriately be the occupant alone either. Community opposition to new housing showed that the entire neighborhood was the client as well. Thus, we recognized a joint client—occupants, neighborhood and housing producers.

We then attempted to define the constraints on achieving quality. These could include building code regulation, financial practices, agency standards or any of a long series of checkpoints which a housing proposal must pass on the way to construction. Once checkpoints were clear, we identified those over which we could have some influence. For example, the federal and state agencies or lawmaking processes were thought to be too far removed. The private market is complex, and change would be a long and difficult process. But, since the council is in the mayor's office and its members are experienced with city government, we felt that city agencies themselves would be appropriate starting points. The Department of City Planning was known to be the agency most receptive to change and imaginative thinking, even to self criticism. It was constantly receptive to suggestions to improve the zoning ordinance, and it had pioneered in making urban design a real part of planning. Working through the department's urban design group, an informal partnership was born.

Once such major decisions were made, the council began to survey existing housing. The staff visited, photographed and analyzed more than 500 residential buildings constructed within the last ten years. On and off site interviews were part of the analysis. In as many cases as possible, we tried to determine what the level of quality was and to what it was attributable. We developed four categories: apartment, building organization, site planning and management. Under each, we had subcategories.

It quickly became obvious that "quality" seemed to be a scarce commodity.

Tenants were dissatisfied with the size and accommodations of their units. They felt unsafe and insecure, which led to a fortress mentality, which then fed back on itself by socially isolating new residents from the neighborhood. The result was a mutual dislike between tenants and building developers. Vandalism and abuse were common. Two year old buildings seemed to be 20 years old.

Further investigation quickly confirmed that in New York, where vacancy is very low, various municipal, state and federal codes were designing buildings rather than market forces, aesthetics and proper programming. Judging by our analysis, these standards were deficient. New York seemed unable to compete with the region on the basis of housing quality. People with choice often seemed to face no other rational decision than to look elsewhere. The issue of housing quality took on much wider and more serious ramifications with this viewpoint.

Perceptive members of the council recognized another important problem. All the federal, city and state regulations had created our present state. The reason seemed to be related to a view of good housing as a single prototype. While acceptable for the abstract situation, such a prototype could not be acceptable for the thousands of potential combinations of different neighborhoods, sites and tenancies. Nor could it be acceptable for the span of years covered by any regulation. The council realized it must not trap itself into designing the "ideal" new housing prototype. We decided to avoid the pitfall of proposing a design solution which of necessity would reflect the fashion of the times, just as the earlier zoning ordinance

reflected the architectural prototype fashionable in the earlier part of this century. The ideal of rational form and motorized transportation as the technological solution to urban problems failed to take into account human urban values. The tall buildings cast shadows on older urban structures.

We decided to try instead to develop a method which could enforce neighborhood values and accommodate them into various architectural forms. Even though a photo accompanies this case study, it is but one of many possible ways in which the alternative building may have been designed or placed on the site.

We realized that our new approach had to capture our multi faceted clients' perceptions of quality and do so fairly and objectively. Administration had to be quick and possible within the existing bureaucracy.

A Value System

A total of 81 specific problems were defined. Of these, 35 fell into a category we called neighborhood impact. In retrospect, this was an important discovery which led to a breakthrough in thinking. It showed how greatly a new building impacts on the total neighborhood and made us understand how important it is to properly evaluate that impact. This consideration included such usual things as circulation, community services and social activities; but it also introduced the concept of the perceptual impact the development would have in terms of a physical and social community identity.

We knew that housing quality was really a subjective idea. Yet, objective standards, or community values, had to be developed that could apply throughout the city. We recognized that the subjective aspects were really a "vision" of what good housing is. In a neighborhood framework, it is a vision of what a good neighborhood is. A new development, therefore, would be judged by its neighbors on the basis of what impact it had upon the commonly held vision. Where the vision was positive, new housing would have to reinforce it. Where negative, it would have to change it.

Our concern became to find common goals which different neighborhoods and social groups could use. These appeared to include security, stability, maintenance, privacy, scale, variety on a city scale with homogeneity on a neighborhood scale, vitality, convenience and identity. At the same time, values had to be dealt with which relate to how a potential tenant views a neighborhood as a possible home. In this area we included schools, recreation, health, facilities, crime, fire, cleanliness, job opportunities, air and water quality, utility availability and background noise. Objectivity required quantification for all these issues.

Clearly, we were dealing with a value system. We called it that and established clear cut goals with which to work. Future changes could be made without losing sight of these basic goals.

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John R. Joyner, AIP, Executive Director

Housing Quality—Maximum Values

NEIGHBORHOOD IMPACT	Built Up	Non Built Up
	Neighborhood	Neighborhood
Offsite Sunlight	8.0	10.0
Street Wall Length	4.0	6.0
Ground Floor Activity	4.0	5.0
Street Wall Height	3.1	0.0
Building Height	3.1	0.0
Street Trees	2.8	4.0
	25.0	25.0
RECREATION SPACE		
Type and Size		9.4
Sunlight Onsite		5.5
Parking		4.1
Landscaping		3.1
Trees		2.9
		25.0
SECURITY AND SAFETY		
Density of Public Corridor		5.0
Visibility of Elevator Doors from Public Space		5.0
Visibility of Private Outdoor Space from Lobby		5.0
Surveillance from Apartments		4.4
Entry of Building from Parking Garage or Lot		3.1
Visibility of Elevator Door to Apartment Door		2.5
		25.0
BUILDING INTERIOR		
Size of Apartment		4.5
Sunlight in Apartments		3.9
Window Size		3.8
Visual Privacy Onsite		2.7
Visual Privacy Offsite		2.7
Cross Ventilation		2.6
Daylight in Public Corridors		1.8
Pram, Bicycle & Bulk Storage		1.6
Waste Storage		1.4
		25.0

To get as far as possible away from prototypical design we devised a system whereby each goal or value was worth a certain number of points expressing relative importance. Each goal would interact with the others in an iterative way until the building development "fit" the situation.

In a sense we were devising a program for a comprehensive client which would adapt easily to specific conditions, thus fulfilling a need which was becoming increasingly apparent. We recognized that full across the board goal compliance was impractical. We set up for each goal an optimum compliance measure and evaluated that against an actual compliance measure.

We further realized that any genuine value system would have either direct or implied conflicts and contradictions. In the past these conflicts were rationalized beforehand, thus producing a standardized response. The meat and potatoes of a design problem are these conflicts, so they were intentionally built into the program to allow resolution on a site by site, community by community basis. What would seem rational in one community might be less than desirable in another. No two buildings had to emphasize the same areas to achieve a similar score. Those involved in the design of the building could instead pick and choose emphasis. The system gives us the flexibility we were looking for.

We made some assumptions as a result of our survey; and opted for urbanity, rather than a suburban concept, as the basic value. Street patterns were recognized as key features in urban neighborhood living. The predominant public space in New York City is the sidewalks, not the parks. Thus, we felt the public nature of this space should be maximized and its private use discouraged. Streets should be thread that sews a neighborhood together. To

hold it together they must be convenient, pleasant and safe linkages to neighborhood shopping and activity centers. Safe walkways require ample surveillance from adjacent buildings.

Building location should be sensitive to sunlight and daylight. Shadows from new buildings should stay away from adjacent recreational space and residential windows.

Urbanity was recognized as having its most apparent and important expression on the ground floor plane as well as in the spaces defined by that plane on the street. Public oriented uses, activities, continuity and security should be provided on the ground floor plane.

Urbanity also meant to us that a new building must have a visual and social connection with its neighbors. It should not stand apart. This did not mean a specific type of facade or architectural style or a building arrangement which emphasized one life style over another. In fact, our assumptions specified that we were not functioning as architects. Instead, we believed we were fulfilling the roles of programmers, and that we were providing the basis for genuine and original architectural expression growing out of valid needs and aspirations.

If we realized that any value system would be subjective, how could we quantify enough elements to come up with workable guidelines? Often, what appeared at first to be simple and measureable elements turned out to be only partly adaptable to measurement. We had a continuous evaluation program which included testing of actual buildings, research and council debates. Our work emphasized a search for measurement of values which as yet had only vague expression. The challenge was to define and then quantify quality. Our program was extremely dependent on data assemblage. In many instances, we were unaware just what data were required. It became necessary to set standards for data we would have to assemble as well as for data we would produce.

Statistical information had to be easily available, updated regularly and accurate. Additionally, it had to mean what it said. This last criterion took on more and more importance as we probed data sources. For example, we could easily obtain information from the parks department on the number and size of facilities within parks. However, we could not know the condition of these facilities or their safety. Ten tennis courts in one park are not the same as ten tennis courts in another park. In one, they may be vandalized and dangerous. In the other, they may be country club quality. Complicating this was the fact that there is no legal, objective way to state the difference.

Data needed to evaluate neighborhood services and conveniences typically was not available. When it was, it begged so many questions it was useless. For example, how can movie theatres be rated? By seats, by year of construction, by the type of films shown? How can schools be evaluated? By reading scores, special programs, racial composition, improvement? Even the Board of Education said it could think of no single evaluative device, because the evaluation changes from the perspective of the user.

So it seemed with all the neighborhood service elements. Were small neighborhood grocery stores better than supermarkets? Was it better to have a nearby supply of private doctors or fewer adequate health clinics? The answers to these and many similar questions were grounded in cultural biases, economic status and life style choices.

As more of these questions turned up, we began to realize clearly the limits of zoning. It must avoid relying

on and regulation of factors involving wide variations in personal choice. It may not, however, avoid factors designed to permit a wide range of life styles to thrive under dense conditions. We saw this as the essence of successful urban living.

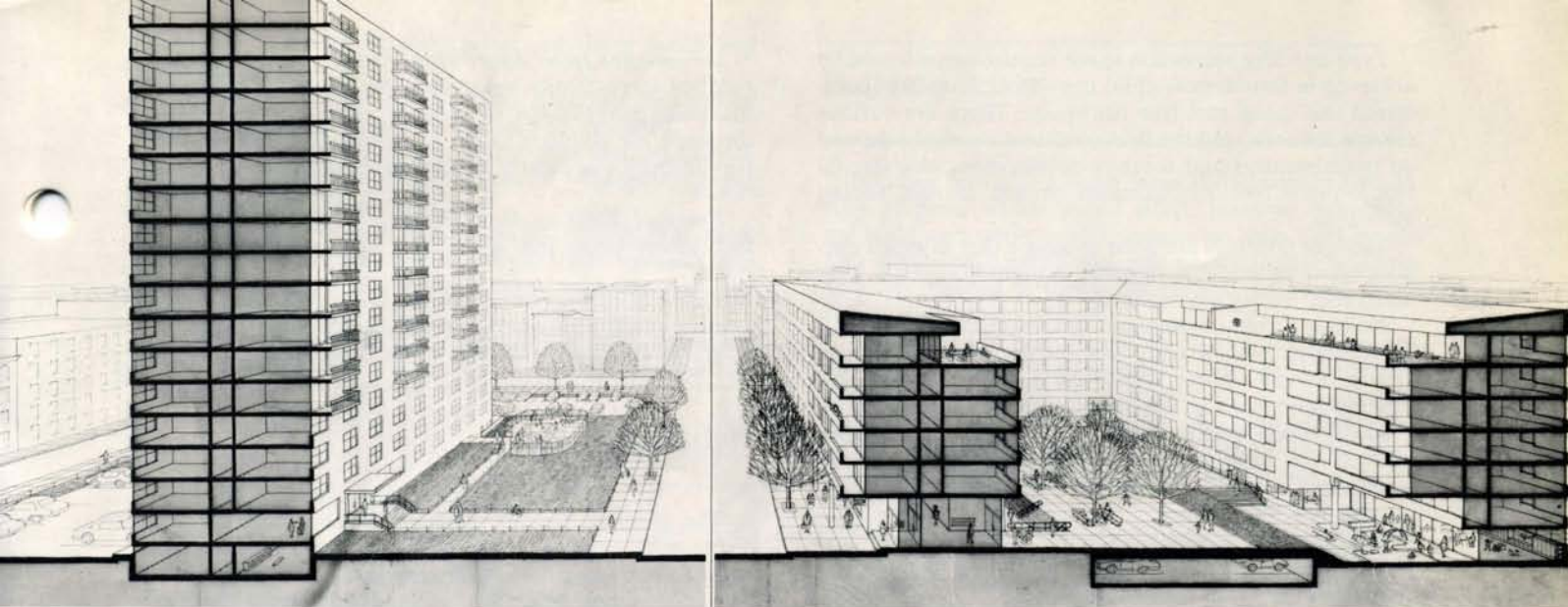
We reluctantly concluded that it would not be fruitful to try to develop further ideas relating to neighborhood convenience and service. Nor could we really rate neighborhoods. The private market would seek its own definition of desirable neighborhoods and would assume the financial risk associated with being wrong. The subsidized market would continue to operate under its own site selection criteria which had to emphasize the availability and present use of a site. The city planning department would maintain its traditional authority to determine, through mapping, where a residential use could exist and where it could not. We were led to an important concept of differentiating between the role of mapping and the role of regulations. We saw mapping as the prime area of discretionary judgment made openly in the political arena. We saw regulations as objective criteria which come into play once the mapping decision is made. The role of regulations is to define physically the decisions inherent in a mapping choice. Eventually, this became the role of the Housing Quality Program.

Each of the four program categories and the 26 elements explained here and shown in the accompanying chart have specific standards for achieving full compliance as well as formulas for determining how many points are achieved with partial compliance. The full number of points available is different for each program element, thus weighting them by their relative levels of importance. This system encourages variations in the relative importance of the program elements to suit local priorities as expressed by the community planning boards. Such a system maximizes community input and helps determine an accurate system of weighting.

The formulas, compliance factors and the like were first published in July, 1973, as a 93 page book titled *Housing Quality: A Program for Zoning Reform*. Since then this book has served as the basis for intense discussion with community, professional and academic groups. With their input it has become possible to crystallize the book into a 28 page illustrated zoning text. This text is available to planners seriously interested in implementing a similar program or in evaluating aspects of it that might be applicable in their cities. Here, however, we will summarize the program elements only to make clear the goals and approach of the text and how it differs from traditional zoning.

Neighborhood Impact

This section concentrates on the impact a new building will have on the surrounding neighborhood. Its primary aim is to assure that new housing will be perceived as beneficial rather than disruptive by the surrounding community. Respect for prevalent scale of the neighborhood is assured by establishing the height of a project in relation to that of surrounding buildings. This program is contextual in that it recognizes that change must take place within a context. That change in apparent or real density of new buildings must be gradual, occurring over a period of years. This occurs as each new building's scale is based on the buildings which went before. Thus, a neighborhood over a period of years might have its height changed but not in the cataclysmic and destructive manner as is typical today.



THE SAME BUT DIFFERENT. The two buildings shown above have the same floor area and the same number of apartments. But, the intrusive 17 story tower at left dwarfs its neighbors and sits in a sea of useless open space. It is typical of much of the new development in medium density districts. The six story building to the right shows an alternative which could be developed under the Housing Quality Program. The building

is more in scale with the surrounding neighborhood; has enclosed parking; has varied recreation spaces, including roof terraces and an indoor playroom; has many more trees and better security conditions. The apartments are brighter with larger windows and with recessed balconies that afford greater privacy and thus encourage more use.

In some way, all of the program elements which make up the neighborhood impact program require that an area be defined which is visually inseparable from the proposed building in terms of scale and character. This is a perceptual definition and cannot rely on drawing a mere radius around the site. Instead, it must respond to New York's strong street tradition where the visual, psychological and social perception of the immediate neighborhood is the block itself. This concept of the block is defined in the program as the rows of buildings facing each other across a street. It terminates when that street is intersected by a wider, more inhibiting one which tends to contain the block. Children growing up in the city understand this concept. Yet, it differs from the legal definition of a block. The legal definition calls a block that area enclosed by streets, and it is at odds with perceptual reality. It ignores the role of public space in linking the occupants of the block.

Offsite Sunlight maximizes sunlight on nearby buildings and open space.

Street Wall Length establishes a procedure for determining a generalized area in which the front portion of the building should be located. This preserves neighborhood scale by visually joining the front of the building with the fronts of nearby buildings.

Street Wall Height extends this visual connection to the crucial area of building height. With the use of setbacks, it determines a procedure to solve the visual problems inherent in adjacent buildings of different sizes.

Building Height regulates the average entire height of the development requiring it to closely conform to the median height of all nearby buildings.

Ground Floor Activity encourages visual activity facing the street and at its level to enliven it and establish a connection between the private building and the public street.

Street Trees assures that there will be enough healthy trees to guarantee shaded and attractive sidewalks.

Recreation Space

This program constitutes a dramatic departure from prevalent theory and practice. It relates the nature and extent of facilities provided to the occupancy characteristics of the intended residents. The intent is twofold: first, to provide private recreation space for exclusive use by the tenants; and, second, to provide semi private space for use by tenants and the community.

Any new housing development will accommodate, within predictable limits, a fixed number of children and adults. Based upon these projections, specific types of recreation space must be provided for the benefit of the various age groups. The required recreation space is based upon a reasonable minimum need, and unlike the existing regulations, it may not be impinged upon for any other purpose, such as parking.

A second major departure is embodied in the definition of recreation space. Presently only the space at ground level or on a roof no more than 23 feet above ground level may count toward an open space requirement. This limitation is too restrictive. The recreation program instead permits recreation space to be located not only on ground level but also on roofs wherever they are suitable and conveniently developed for the use of the residents. Covered or weather protected space is also suitable for recreation purposes; and in certain instances indoor space can be counted toward the required program.

This more intensive use of site for recreational purposes is both a psychic necessity and design opportunity to create new forms of urban amenity. Type, size, access, facility and sunlight standards have also been written into the text to insure that this freedom will not be abused. The formulas used in this section are based on variables of the particular development site. While complex, it is because they must be fair and hard to violate.

Type and Size recreation space requirements would be achieved in four areas—child use space, adult use space, mixed use space and free use space. There are various criteria for each, and the final combination would depend on neighborhood and tenancy development characteristics. Square foot requirements exceed current zoning standards.

Sunlight Onsite is designed to assure that as much outdoor space as possible receives sunlight between 9 a.m. and 3 p.m. during the equinox.

Parking Criteria minimizes the visual impact of parked automobiles, both visually and as psychological barriers to use of open space. It also encourages enclosed and underground parking. A parking structure entirely below grade or totally under a building will receive 100% compliance, for example. Another structure with half its perimeter contiguous to the rest of the building would receive 50% compliance.

Landscaping provides attractive outdoor space and buffers between recreation areas. A sliding formula was developed for use in different densities.

Trees goes a step further and specifies the amount and sizes of trees to be used in landscaping outdoor space.

Security and Safety

Security and Safety represents the mutual concerns of both tenants and management, and this aspect is crucial to any concept of housing quality. To date these concerns often have been satisfied by the belated application of human, canine or mechanical hardware. The proposed elements incorporate the principle of maximum visual surveillance as a deterrent to potential personal property damage. The program is not offered as an alternative to sophisticated crime prevention technology. It is postulated rather that a considered design approach to the problem may achieve significant benefits for the residents with a minimum of effort. Consequently, those areas of documented high crime activity within a housing development are identified and programmed for visual exposure—elevator lobbies, circulation stairs, parking lots and outdoor recreation spaces.

The concept is that organizational decisions regarding public, semiprivate and private spaces can be made which tend to foster recognition of neighbors and outsiders. The resulting sense of intimacy and identification inhibits crime and vandalism. This premise regarding security and safety is an essential ingredient to housing quality.

Density of Public Corridor encourages increased recognition among neighbors on each floor and less chance for an outsider to go unnoticed. The basic number of zoning rooms for each separate corridor has been set at 35, with small increases permitted for certain building types. Regulating rooms is a truer measure of density than dwelling units.

Visibility of Elevator Doors from Public Space encourages easy surveillance of the main lobby or courtyard entrance from the street. It should be possible to see the elevator waiting area from the sidewalk, or there should be a 24 hour doorman.

Visibility of Private Outdoor Space from the Lobby insures the safe use of all private outdoor space by tenants. All private outdoor space should be visible from within a ground floor or upper floor lobby. Apartments which open directly onto private outdoor space are considered in full compliance.

Surveillance from Apartments concentrates the placement of large family apartments on the lower floors to maximize surveillance of outdoor space and minimize the need for children to use elevators. Housing for the handicapped and elderly also serves this purpose on lower floors.

Entry of Building from Parking Garage or Lot forbids direct access into a building from an uncontrolled point.

Visibility of Elevator Door to Apartment Door is related to corridor density. It regulates the visibility of an apartment door from the elevator waiting areas.

Building Interior

The program for living space contains no surprises. From rock caves to space capsules, there are few surprises. There are instead only common, ordinary and elemental qualities which by now are conceived almost as basic rights.

The program, therefore, intends a simple, self evident catalog of reasonable considerations for programming sound dwelling unit design. Large size in an apartment is noncontroversial and desirable. The element which calls for sunlight in the apartment is more directed to the orientation of a building on a site than to preventing windowless apartments. Further provisions assure visual privacy between apartments, daylight in kitchens and an adequate garbage storage and removal system. There are performance guidelines regarding balconies and daylight in hallways.

Size of Apartment encourages gross square footage conforming to the following schedule: Studio, 605 square feet; one bedroom 785 square feet, two bedroom 1,035 square feet, three bedroom 1,285 square feet; four bedroom 1,500 square feet, five bedroom 1,705 square feet.

Sunlight in Apartments states that sunlight shall fall on the living room windows, which may be bay windows, for any consecutive three hours between 9 a.m. and 3 p.m. during the equinox.

Window Size maximizes sunlight, views and a feeling of spaciousness, by relating window size to the layout and gross size of the apartment.

Visual Privacy Onsite insures visual privacy from other tenants, including nonresidential ones. It states that it should not be possible to see into a nearby apartment more than a given distance, which shall increase as the exterior distance and obliqueness of the angle between the apartments increases.

Visual Privacy Offsite attempts to insure that eye contact between an occupant of a ground floor apartment and a pedestrian standing on the sidewalk is not possible. There are many ways to achieve this, such as elevation

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I certify that the statements made by me above are correct and complete.
Gail O'Gorman, Editor.

changes, setbacks, stoops, gates and other traditional devices.

Cross Ventilation is an obvious goal, and the present energy problem has added emphasis to this need.

Daylight in Public Corridors specifies that public hallways should have one square foot of window for every 10 square feet of floor area.

Pram, Bicycle and Bulk Storage requires that there should be five square feet of storage space for each bedroom in the building. When shared, this space must be accessible and secure.

Waste Storage states that each public corridor should have its own garbage disposal room containing a garbage chute.

Other Considerations

Two important areas of concern do not appear in the legislative text of the Housing Quality Ordinance; they are management and environmental factors.

Our studies found that building management was an extremely important part of housing quality. We began by trying to handle this aspect, as we attempted to define neighborhoods. For similar reasons, we finally had to drop attempts to regulate management capacity. There were two major reasons. One was that a proposed building's management cannot be judged in advance. The second reason, closely related to the first, is that building management often was dependent upon the personality of the building manager. There was no such thing as a uniformly good or bad building management company; it always boiled down to the personality of a particular manager and his willingness to look after tenant needs and requests. Often, a good manager was one who fought for his tenant's needs in dealings with his own employer, the management company.

Even though many of the goals of the Housing Quality Program could be subverted or rendered ineffective by unconcerned or inept management, we have not yet found a way to know in advance, and in such a way as to satisfy the requirements of zoning, how successful and responsive a housing management operation will be. Thus management is not now part of the proposed ordinance. We can only assume that some of the educational benefits which will accrue to neighborhood groups as a result of the new program will encourage pressures on management.

Environmental issues became a similar problem. They also were set aside until a workable system might be proposed. Environmental issues tend to lend themselves more to minimum-maximum requirements than to our sliding scale of compliance. In this case, we saw that many environmental standards can be incorporated instead into the city's building code. Many issues lack clear federal, state or regional criteria. Some of these are energy conservation, air and water quality, noise. Without firm legal criteria and measurement ability it would be almost impossible to write enforceable regulations for individual buildings.

We could, however, pinpoint pollution sources and specify that key recreation facilities must be located specific distances from such sources. These details are incorporated into our recreational standards.

Service costs to the city for development of any new neighborhood was left to the responsibility of mapping and density decisions, the foundation we had agreed we would build upon.

Building Costs

Building cost was a lively issue throughout the study. Any proposal which would affect, however minimally, the building prototype so common in New York would also affect the construction cost of residential building. In a city plagued by low vacancies and high costs, this is a sensitive and critical issue.

Yet, costing of housing construction is far from a science among builders and architects. They work with rules of thumb which, only upon completion of a given project can be adequately evaluated. A litany of cost wise defense of high rise solutions has evolved over the years. It is based on fewer service cores and less linear feet of building foundations.

Analysis turned up an interesting series of points. The first was simply that construction cost was not the major element of housing, or project, cost. Financing, land cost and construction costs together make up the total cost. More important, the least flexible item in this trilogy is construction cost. There will always be a basic square foot unit cost which can be affected, at best, perhaps 10% either way by the most efficient building procedure or the most elaborate treatment. This might transcribe itself into a 3 to 4% difference in housing cost, a difference in rent from \$100 to \$103 for a superior facility. Federal and state construction cost controls still make even this small amount prohibitive for certain types of housing.

Construction cost soon began to unravel as a complex set of interlocking factors. While foundation costs might be saved by a high rise, low coverage building, these costs were offset by lower superstructure costs and lower bearing capacity of the foundations associated with low rise buildings. While high rise buildings require fewer vertical circulation cores, these costs are offset by cheaper, low speed elevators. While more roof surface exists in low rise buildings, a cheaper form of fire regulation compliance makes up for it. While there are more corners, there also is a less sophisticated means of construction required.

The list goes on and on. For each factor where Urban Design Council goals might cause an increase in construction cost, a counteracting one exists which causes an offsetting decrease. While it was not possible to draw final conclusions from abstract analysis, it began to seem that we were dealing with a construction cost variation of about 8% either way. More often than not, this variation meant a slightly cheaper, and not more expensive, building.

Still other factors balance any possible increase in cost which might occur. These factors affect the overall project cost. One of the most important is the simple, crucial element of time. Saving time in construction means saving money. This is not only because of spiraling costs, but even more important because of the financing costs incurred during the construction phase. High interest rates and the lack of income make this a difficult and tricky time. Uncontrolled events can force bankruptcy. Minimizing this time and quickly renting units is a significant advantage. Low rise or mixed height construction has a better record in this regard than its alternative. In addition, by making neighborhood values known beforehand to the developer, we could reduce substantially the negative neighborhood reaction which can tie up a project for years, dramatically increasing its holding charges.

Maintenance is another cost issue. The ambiguity be-

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tween public and private space which results from current theories and regulation has created neighborhood friction and subsequent vandalism and management headaches. The recreation space goals in the Housing Quality Program were confirmed by housing managers as something they would welcome. While the program requires a much more elaborate provision of facilities, the managers felt that their maintenance costs would not increase significantly due to the better ability to control and maintain such facilities.

Recently we have had the opportunity to work with a cooperative architect and developer to design two buildings on actual sites. One building was designed in conformance with the guidelines of the Housing Quality Program. The other as a conventional or "as of right" building following the rules in the existing ordinance. These two designs were costed by three cost estimators. One was chosen by the planning department, one by the developer and one mutually agreed upon. All three agreed that the costs for the Housing Quality building were significantly less than the "as of right" tower. All agreed project costs would represent an even larger spread.

How it Works

The question of exactly how the Housing Quality Program might be used was the subject of much discussion within the council. The choices were a mandatory substitution for many existing controls or an optional alternative for these same controls.

In practice, the Urban Design Council and the planning department have worked out the following proposed implementation of the ordinance.

A Housing Quality Special Permit shall be issued whenever a design receives at least 85 points under the program scoring system. It may be applied in any zone above R3-1, upon request of the party responsible for the development of the building. Once such a score is obtained, the Department of City Planning may waive whatever present height, setback and coverage restrictions an architect requests.

There are guidelines, as previously mentioned, that state in detail how full compliance may be obtained and measured. The planning department will aid an applicant at any point in the design process with technical advice or interpretation. As always, with regulations such as these, such assistance is necessary if practitioners are to learn to use them properly.

Under Planning Commission Chairman John Zuccotti, whose interest in the program was motivated by his strong identification with better housing and retention of neighborhood identity, the efforts of the Urban Design Council and the planning department have been coordi-

nated. Jointly, we began conducting public workshops late in 1974. At this time, we are holding many workshops with civic and professional groups and interested citizens organizations. We have developed a 45 minute slide presentation and commentary which illustrates the housing choices of New Yorkers. It is a considerable educational effort in many ways. New Yorkers have been surprised to see that so much choice does exist.

This year and a half process, which is still continuing, has led to further analysis and many revisions. At the point where we felt confident that a concise, practical and workable document could be produced which responded to the many valid suggestions for improvement, we began to prepare draft legislation. It is now completed. This legislation creates an alternative set of zoning regulations. Hopefully, it soon will be possible to analyze real buildings rather than theories, however well researched. This analysis will extend to items such as cost, administration, user satisfaction and political acceptability. Such an approach will avoid the mistakes of the past which could only assume an outcome and missed the mark in many crucial areas. Under controlled and actual conditions, it would become possible to decide when, if at all, the housing quality approach could move from optional to mandatory.

It should be understood that the Housing Quality Program is not a device which will generate great architecture, but rather it is a client oriented program which can define the problem of urban housing in a way which will structure the solution. In terms of great design, the program should be viewed as a device which offers a firm foundation for genuine architectural innovation.

Paralleling this work has been the application of computer techniques to many of the program elements. These techniques have been applied in a desire both to simplify program application and to explore new levels of analysis which, without rapid thinking and working machines, might perhaps prove too difficult to apply to conventional zoning techniques or building department application and approval. Such techniques involve ratings for sound, daylight and air purity systems as applied to a development's entire site plan, taking into account that a given area, a tot lot for example, may have a more intense series of requirements than another area. After legal implementation we hope to investigate the incorporation of such procedures into the program.

Already, even without official sanction in law, we have been gratified to see many architects, planners and community groups apply the principles contained in the Housing Quality Program.

Formal public hearings soon will begin. No matter what the legal fate of these regulations, the spreading of the consciousness of the ideas and theories contained within them is a significant occurrence which will have an impact upon both architecture and zoning in the years to come.