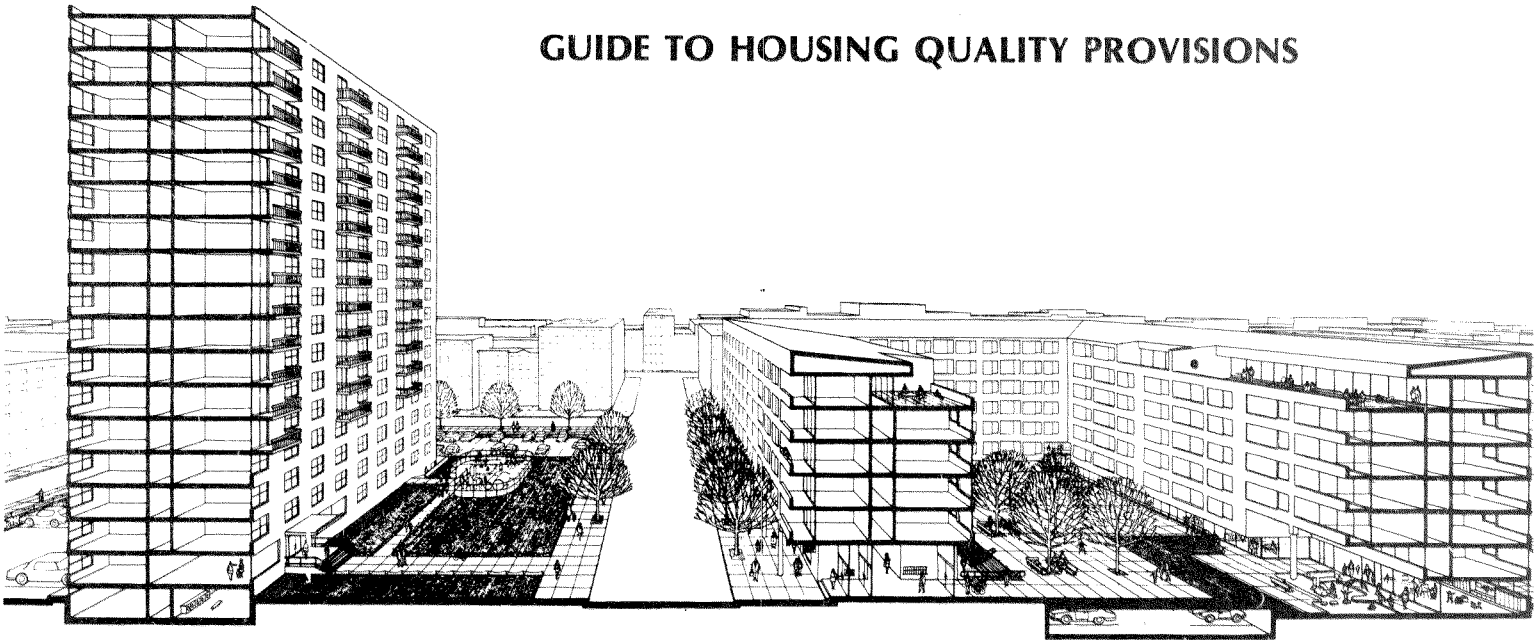


# Guide to Housing Quality Provisions

## GUIDE TO HOUSING QUALITY PROVISIONS



The Same but Different: Both buildings have identical floor space and apartment distribution. Yet the intrusive 17-story tower, typical of present zoning regulations dwarfs its neighbors and has built-in security risks. The lower building, encouraged under the Housing Quality provisions, boasts enclosed parking, varied recreation uses and locations, security through visibility of open spaces, streets and external paths, greater number of entries to promote recognition, and brighter, larger apartments with private, useable balconies.

### INTRODUCTION

#### What is it?

The proposed Special Purpose legislation for Housing Quality Developments (§74-95) grew out of the Mayor's Urban Design Council proposal of July 1973 - "Housing Quality: A Program for Zoning Reform". As a result of consultation with the C.P.D., various professional, civic and community groups and extensive testing and refinement by the Council staff the HQP (Housing Quality Program) has been reduced substantially in size and complexity. The original 37 program elements or goals have been reduced to 26. Whenever possible the mechanics of the HQP have also been simplified. However, this simplification has not reduced one of the original goals of the Housing Quality Program--that is to formulate a set of rules which are fully objective and require a minimum of interpretation.

The Special Purpose legislation for Housing Quality Developments deals specifically with housing and is radically different from any other type of zoning presently employed. Its structure is one of goals which represent community values. As with any major revision, whether it be a zoning resolution or a new automobile engine, it is virtually impossible to guarantee a perfectly functioning mechanism directly from the drawing table no matter how exhausting the technical research or testing has been. Only under actual conditions is it possible to carry out productive debugging and fine tuning. Too often in the past, in haste for reform, this step has been omitted only to lead to a distaste and mistrust for the once popular reform. Consequently the legislation for Housing Quality Developments is to be elective - that is, it is offered as an alternative to the present multi-family provisions of the residential section of the Zoning Resolution.

The criteria imposed in the selection of the element of quality are two: equity and objectivity.

By equity, it is meant that there are common values accepted by all New Yorkers whether from the Bronx or Brooklyn, high or low income - for example, trees on streets are desirable. The problem is limited to searching out these areas and exploring them for equity criteria in face-to-face meetings and research.

Objectivity proves to be another type of problem. The quality elements must necessarily lend themselves to measurement. This mechanical requirement tends to eliminate those elements which primarily involve subjective value judgements. Objectivity leads to fairness, speed and eliminates the vagaries of face-to-face negotiations over matters as traditionally ill-defined as design. For example, there are limitless personal attitudes regarding apartment quality in terms of room layout. Practical necessity as well as personal preference dictates a variety of lifestyles, from loft spaces to houseboats, all of which are viable and should not be precluded by a new zoning formulation. Personal style is better left unregulated.

#### What does it do?

The objective of the Housing Quality Provisions is to promote the highest achievable standard of quality, consistent with economic feasibility, for residential construction in New York City.

Twenty-six specific elements have been established as constituting housing quality. The elements are grouped into the quality programs already mentioned.

**NEIGHBORHOOD IMPACT.** One of the primary aims of the new proposal is to stimulate new housing that will be regarded as beneficial rather than disruptive by the adjacent community. Respect for prevalent scale of the neighborhood is assured by establishing the height of a project in relation to that of surrounding buildings. To extend this good neighbor policy, elements are included which minimize the effect of shadows cast by the project on adjoining public and private properties, whether open space or buildings. Developments which provide continuous street facades and activities are considered more favorably than those which tend to break continuity or have empty spaces on the street. Another element promotes the infusion of greenery into the city through the planting of new trees on the sidewalks.

**RECREATION SPACE.** The recreation program constitutes perhaps the most dramatic departure from prevalent theory and practice. Open space as required by regulations is typically open, but seldom space. The program aims to relate, for the first time, 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 the exclusive use by the tenants and guests - a multi-family backyard; second, to provide semiprivate 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 projectives, specific types of recreation space must be provided for the benefit of the various age groups. The recreation space may not be impinged upon for any other purpose, such as parking. Parking is no longer considered to be part of open space.

A second major departure is embodied in the definition rather than allocation of recreation space. Presently only the space at ground level or on a roof no more than 23 feet above ground level is permitted to count toward an open space requirement. This limitation is too restrictive. It is proposed instead that required recreation space be permitted not only on ground level but also on roofs wherever they are suitably and conveniently developed for the use of the residents. Covered, or weather protected,

The present zoning maps would apply as would the maximum densities presently allowed in each of the Resolution's multi-family residential zones, R3-2 through R10. It will be administered by the City Planning Department under the Special Purpose provisions of the Resolution and require a Special Permit. This will permit the Department to evaluate each specific project as well as, and more importantly, evaluate the performance of the Housing Quality provisions. The feedback provided by architects, developers, community groups and tenants as well as CPD experience will form the basis for a final report with the eventual goal of translating the Housing Quality Provisions into 'as-of-right' zoning - zoning which applies to all housing and is administered within the Building Department - that will supplant the present multi-family provisions. In effect, the Housing Quality Special Permit legislation is a limited test designed to determine whether the structure, the goals and application, of the Housing Quality Provision can, in the future, have larger application.

Why did it come about?

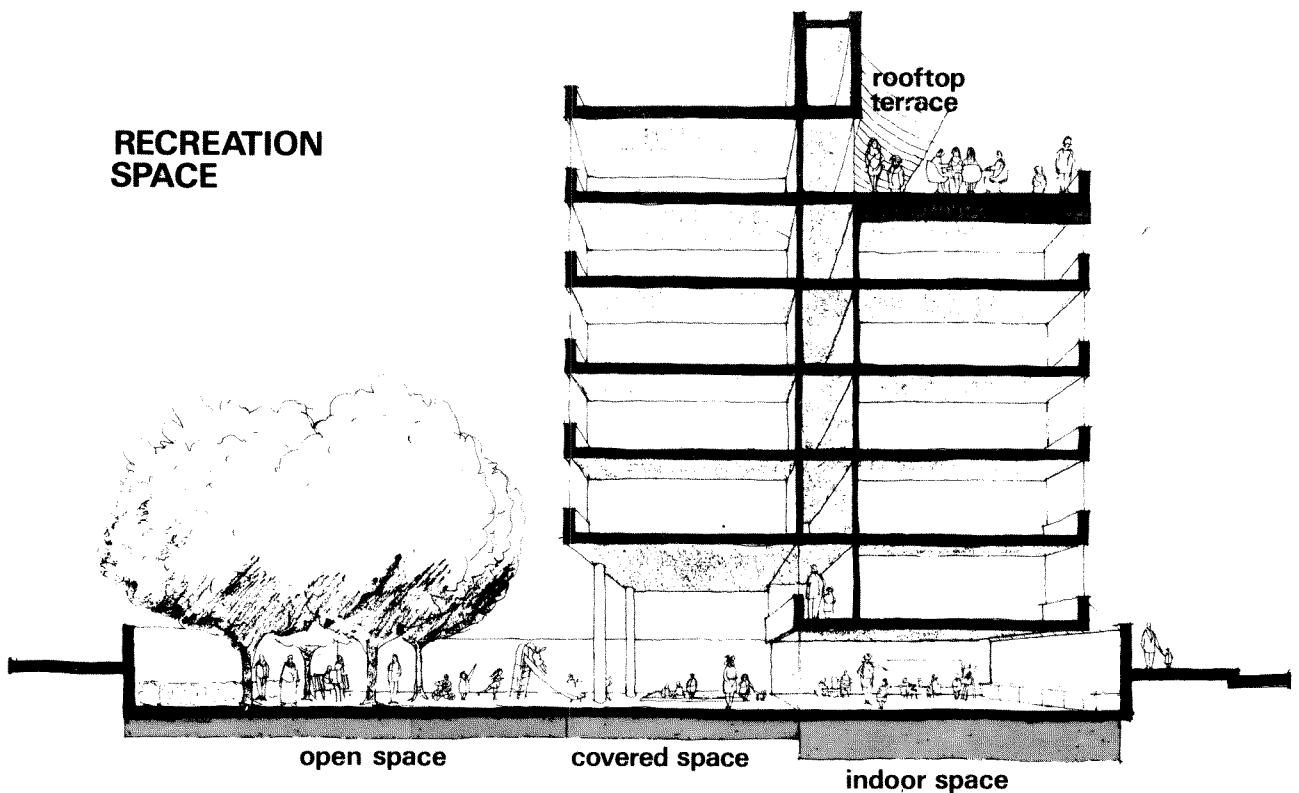
Although the Urban Design Council's initial mandate was to investigate ways to improve the quality of the City's new housing, it was abundantly clear that the assignment had a great deal to do with the City's economic and social well-being. New Yorkers were perceiving the City as a less desirable place to grow up and raise a family than the surrounding communities. While this is a complex issue we can safely say that new housing and its impact on the City's neighborhoods has contributed to this vision. While there was an awareness of the many different implications of the word housing, there was only a vague awareness of the elusive and frail nature of the word 'quality'. The many perceptions of quality, like beauty, have traditionally been violently personal and often conflicting among the various interestes in housing. After a full assessment of all the viewpoints and after long months of deliberation, a humane, rational and workable definition of quality was arrived at: one which accounts for the architects' concern for efficiency, the owners' concern for marketability, the neighborhoods' concern for identity, and the tenants' concern for livability.

The definition was shaped around those forces which have the most immediate, and ultimately most sustaining, vested interest in the quality of housing: the neighborhood and the tenant. Quality in housing may not exist independent of its surroundings. Housing quality must be considered synonymous with neighborhood quality. Solid neighborhoods add luster to unspectacular buildings, while even the most satisfactory apartment house has trouble surviving in a disintegrating neighborhood. This sense of place, of diversity and of distinctiveness is precious to a city as well as to local residents, contributing to morale, self-respect and sense of community. Zoning is designed to protect communities although traditionally the reality has been somewhat different.

The second determinant of quality is the individual tenant. While many theories of user need have been postulated over time, few buildings are truly responsive to the current attitudes or predispositions of tenants.

With these two reliable indices of neighborhood and tenant, quality has been postulated within four basic areas: neighborhood impact; recreation space; security and safety; and the apartment and building interior.

These four basic areas generated initially over 70 discrete items which at the time of publication of the book "Housing Quality: A Program for Zoning Reform" had been reduced to 37. By refinement the number has been reduced further to 26 basic, sharply differentiated and numerically weighted elements. This refinement results from a protracted in-house testing period during which time a variety of existing buildings in neighborhoods of varying densities and scale were reviewed according to the developing criteria of the HQP. More importantly, perhaps, it also results from an exhaustive series of rolled-sleeves meetings with community, professional and civic groups at which early HQP drafts served as bases of discussion and enabled these individuals and groups to articulate their needs and offer sound support or criticism.



space is also suitable for recreation purposes, and in certain instances even appropriate indoor space can be counted toward the required program. This more intensive use of site for recreational purposes is both a psychic necessity and a design opportunity to create new forms of urban amenity. Beyond type, size and location, standards are proposed to assure the adequate provision of sunlight, planted areas and sufficient on-site trees. Another element is the visual shielding of required off-street parking spaces when in garages or lots from pedestrian oriented spaces.

**SECURITY AND SAFETY.** In that security and safety represent mutual concerns of both tenants and management, this aspect is crucial to any concept of housing quality. To date these concerns have been satisfied by the often belated application of human, canine or mechanical hardware. The proposed quality elements incorporate the principle of maximum visual surveillance as a deterrent to potential personal or 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: high visibility of elevator lobbies, circulation stairs, parking lots and outdoor recreation spaces.

The concept, simply stated, 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 will tend to inhibit crime and vandalism. This premise regarding security and safety is an essential ingredient to housing quality.

**THE APARTMENT AND BUILDING INTERIOR.** The program for living space contains no surprises. From caves to space capsules there are few surprises left. There are instead only common, ordinary and elemental qualities which by now are conceived as basic rights.

The program intends no breakthroughs but rather a simple, self-evident catalog of reasonable considerations for programming and housing. Large size in an apartment is noncontroversial and desirable. The element which calls for sunlight and airy windows 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, and between apartments and the street, cross ventilation, daylight in corridors, pram, bicycle and bulk storage and an adequate garbage storage and removal system.

How will it work?

The Housing Quality Provisions are a completely new approach to zoning for residential construction--an approach that would set the same standards for subsidized as well as for private housing and that would transcend the traditional boundaries of the individual zoning lot to recognize the primacy and integrity of the neighborhood. Unlike the present zoning regulations--which abound with abstract controls which tend to create rigid formulas, and standardized buildings--the proposed legislation does not mandate all requirements nor offer voluntary bonuses for specified amenities. Instead, within given limits, the entire process would be elective, setting goals rather than minimum standards that effectively become maximum achievements.

	Built-up	Non Built-up	
A. Neighborhood Impact			In order to put up a new residential building, a developer would have to earn a sufficient number of points in the four identified programs of quality: neighborhood impact, recreation space, security and safety, and building interior. The point system is delicately calibrated expressing community values: Different points are given for different elements and for varying degrees of compliance with each specific goal.
1. Offsite Sunlight	8.0	10.0	
2. Street Wall Length	4.0	6.0	
3. Ground Floor Activity	4.0	5.0	
4. Street Wall Height	3.1	0.0	
5. Building Height	2.8	0.0	
6. Street Trees	2.2	4.0	
Total	25.0	25.0	
B. Recreation Space			By its flexibility, the proposed zoning would offer a free-choice system that for the first time accurately mirrors the selective process of design.
1. Type and Size	9.4		
2. Sunlight Onsite	5.5		
3. Parking	4.1		
4. Planting	3.1		
5. Trees	2.9		
Total	25.0		
C. Security and Safety			All design professionals exercise choice, either consciously or subconsciously, among the range of variables available. This exercise of choice constitutes the basic mystery, and sometimes poetry, of the profession. A primary objective of the proposal is to codify those variables for the purpose of demystifying aspects of the design process and by so doing increase public understanding and involvement.
1. Density of Public Corridor	5.0		
2. Visibility of Public Space to Elevator Doors	5.0		
3. Visibility of Private Outdoor Space from the Lobby	5.0		
4. Surveillance from Apartments	4.4		
5. Entry of Building from Parking Garage or Lot	3.1		
6. Visibility from Elevator Door to Apartment Door	2.5		
Total	25.0		
D. Building Interior			A system of trade-offs among real world choices has, therefore, been institutionalized. The scoring mechanism is a rating system which, for any new housing proposal, develops a numerical value up to a theoretical maximum of 25 points for each program.
1. Size of Apartment	4.5		
2. Sunlight in Apartments	3.9		
3. Window Size	3.8		
4. Visual Privacy--Onsite	2.7		
5. Visual Privacy--Offsite	2.7		
6. Cross Ventilation	2.6		
7. Daylight in Public Corridors	1.8		
8. Pram, Bicycle, Bulk Storage	1.6		
9. Waste Storage	1.4		
Total	25.0		Each of the four quality programs contains a number of quality elements. Each of these is assigned a weighted value so that the score adds up to a total of 25 points per program, as shown in the summary table. In this manner, each of the four programs is considered to be of equal importance.

The various elements within a program are stated as goals rather than as minimum standards. Maximum points are obtained by full compliance with the proposed goal. Each goal implies the possibility of achieving 100 percent compliance, and hence the full point score for that element. Less than full compliance is rewarded with fewer points, and noncompliance is permitted as well although this is not practicable in order to achieve the passing score. Because many of the goals are contradictory and it is natural that that be, e.g. whether to throw more shadow on your site or on adjoining sites. It is virtually impossible to receive a final score of 100 points. Consequently, the passing score of 85 represents an extremely

good building when all the design tradeoffs have been considered and balanced against each other.

In summary, the advantages of the proposed Housing Quality Provisions are many:

- It insures respect for the scale of the City's neighborhoods, thus facilitating community acceptance of proposals for new residential developments, rather than cleaving to abstractions that cover all neighborhoods uniformly.
- It sets out criteria that recognize the real tenant concerns of a secure and safe home - one with good apartments and good recreation for all members of the family. The recommended criteria are at the opposite pole from the miscellaneous collection of manuals, memos and bulletins that define publicly assisted housing in terms of linear feet, square feet and cubic feet...a collection more expressive of a compulsion toward measurement than of any desire to consider human needs.
- It provides developers and architects with a flexible set of elective goals that would enable them to sponsor residential developments of perceptively higher quality at no additional cost. These goals were designed to echo and facilitate the actual design process.
- Its goal is quality housing rather than minimal housing.
- It provides a structure which expresses community values through goals and the numerical points given those goals.



## GUIDE TO APPLICATION OF THE HOUSING QUALITY PROVISIONS

### A. Introduction

The Housing Quality Provisions represent an approach to zoning which has few direct parallels. To aid laymen and professionals in understanding this approach, a hypothetical site has been analyzed and a building has been prepared under the HQP regulations. HQP is 26 separate 'program elements'. Each 'program element' is worth a different number of 'program points'. The program elements are grouped into four 'programs' or categories with each category worth 25 points. The full number of points is, of course, 100. The four programs are Neighborhood Impact, Recreation Space, Security and Safety and Building Interior.

Each program element has a set of criteria which establish a numerical objective. (For instance, a preferred number of trees.) Any building which is designed to comply with this numerical objective receives 'full compliance'.

Full compliance means the total number of 'program points' allocated for a program element is accredited to the building's final score. If full compliance were achieved for all of the 26 'program elements' the final score would be 100. Partial compliance can be evaluated on a percentage basis. (50% of the total trees preferred.) The number of points accredited for a particular 'program element' is related to the percentage of total compliance. Of course, a building may provide amenities which exceed the program requirements of the HQP. However, no extra points are given when this occurs.

To qualify for HQP only a score of 85 is required. Qualification means that the height, setback and coverage restrictions of the 'as-of-right' ordinance are waived in exchange for a building which has superior internal and external planning as well as a sensitive scale relationship to the surrounding neighborhood.

HQP has been organized so that anyone using it will undertake the architectural and zoning design processes simultaneously. The design process has been compared to a tailor fitting a garment. First, critical measurements are taken and then, in its rough form, the garment is replaced on the manikin for finer measurements. This happens repeatedly until a perfect 'fit' occurs. For building design this 'fit' is the fulfillment of programmatic, financial and aesthetic requirements--resolving their conflicts and adjusting their differences until a perfect fit and balance are reached.

HQP replicates the design process with primary 'program elements'--those that are used to make the first 'fit'--and secondary program elements--those that are used when the 'adjustments' are made.

The design of a building is a complex process and, as in any complex process, it involves conflicts between competing goals. The resolution of these conflicts--and some are represented in HQP by the primary 'program elements'--is the essence of preliminary site planning. Satisfactory solutions are vital to the success of residential building design. This success is apart from any pure aesthetic expression which depends on elements such as facade modulation, material selection or window placement. These are issues best left to style, fashion and the architectural profession to judge. Their value is essential but not the proper role of government. Instead, HQP concerns itself with factors which are commonly agreed upon as long standing and commonly agreed upon quality items.

HQP determines a building program in the public interest. It may be supplemented by other elements which a developer or sponsor sees necessary to satisfy the needs of the tenants. The 'program elements' also permit modifications and adjustments to suit these same, variable requirements.



B. Determining the Program

1. General Guidelines

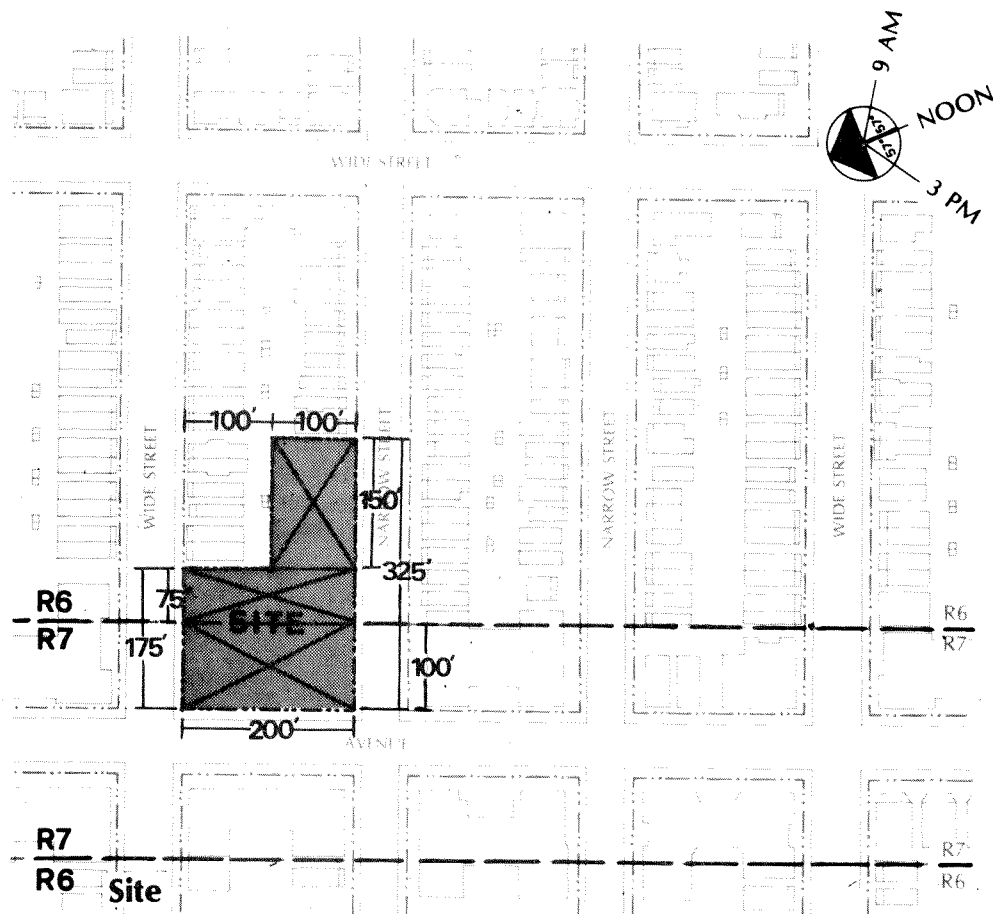
The following explains the requirements HQP makes upon the designer of a residential building. The procedure for determining these requirements is specified in the 'as-of-right' and HQP sections of the zoning ordinance. In order, the designer must first compute the 'as-of-right' requirements, then the primary HQP program elements and--after a 'fit' is made--adjust the preliminary design with the secondary HQP program elements.

2. Computations for As-of-Right and HQP Zoning

To begin the 'maximum allowable floor area' (bulk or physical density - it is what you see) and the maximum allowable number of rooms (this is the population density) are determined. Both are functions of site size. As maximum densities differ for each zone, the amount of site area attributable to each zone (when a site is in 2 or more zones) must be computed.

This guide will utilize a single, hypothetical site to illustrate how 'HQP' is applied. Though hypothetical, the site is fairly typical, and is especially representative of the problems associated with new development in older neighborhoods.

The hypothetical site is located in a neighborhood characterized by 5 and 6 story apartment houses on the wide avenue, 2 and 3 story multiple dwellings on the wide streets and 2 story single family homes on the narrow or side streets. From the zoning maps it is determined that the portion of the site closest to the avenue is zoned R7, while the remainder of the site is zoned R6. This type of 'split lot' arrangement permits a maximum density--expressed by the number of rooms--between the limits for the two zones.



Most owners or sponsors will need to maximize return on their investment. To do so the architect will be asked to design for the maximum number of rooms permitted. Depending on the market, he may also have to design for the maximum size in square feet. Often maximum size and number of rooms cannot exist simultaneously. These maximums are already specified in the zoning resolution. The following calculations are made utilizing the site areas obtainable from the site plan.

**R6**

Max. FAR = 2.43 30,000 SF. (Site) X 2.43 = 72,900 SF. of building area  
 Min. Lot Area/Rm = 96 SF. of lot/rm. 30,000 SF. (Site) 96 = 312 rooms

**R7**

Max. FAR = 3.44 20,000 SF. (Site) X 3.44 = 68,800 SF. of building area  
 Min. Lot Area/Rm = 72 SF. of lot/rm. 20,000 SF. (Site) 72 = 278 rooms

Totaling the Floor Areas and number of rooms for each zone gives you the total Floor Area and total number of rooms for the entire building.

R6 + R7  
 72,900 SF. + 68,800 SF. = 141,700 SF. of Building Area  
 312 + 278 = 590 Rooms

The Zoning Resolution specifies a studio apartment as 2.5 rooms, a one bedroom apartment as 3.5, a two bedroom apartment as 4.5, etc. A typical mix of apartments might be: 10% studios, 40% 1 BR., 40% 2 BR, and 10% 3 BR apartments. Then, the number of apartments is as follows:

**Permitted**

Zoning	Rooms	Studio	1 Bedroom	2 Bedroom	3 Bedroom	Total
	590	14	59	59	15	147 apts.

Finally, the minimum number of parking spaces must be computed. Again, ratios vary by zone. The percentage of parking required is specified in the Resolution and the following computation is made.

**R6**

70% of apartments must have parking X 69 apts. = 48 spaces

**R7**

60% of apartments must have parking X 78 apts. = 47 spaces

**Total required spaces = 95 spaces**

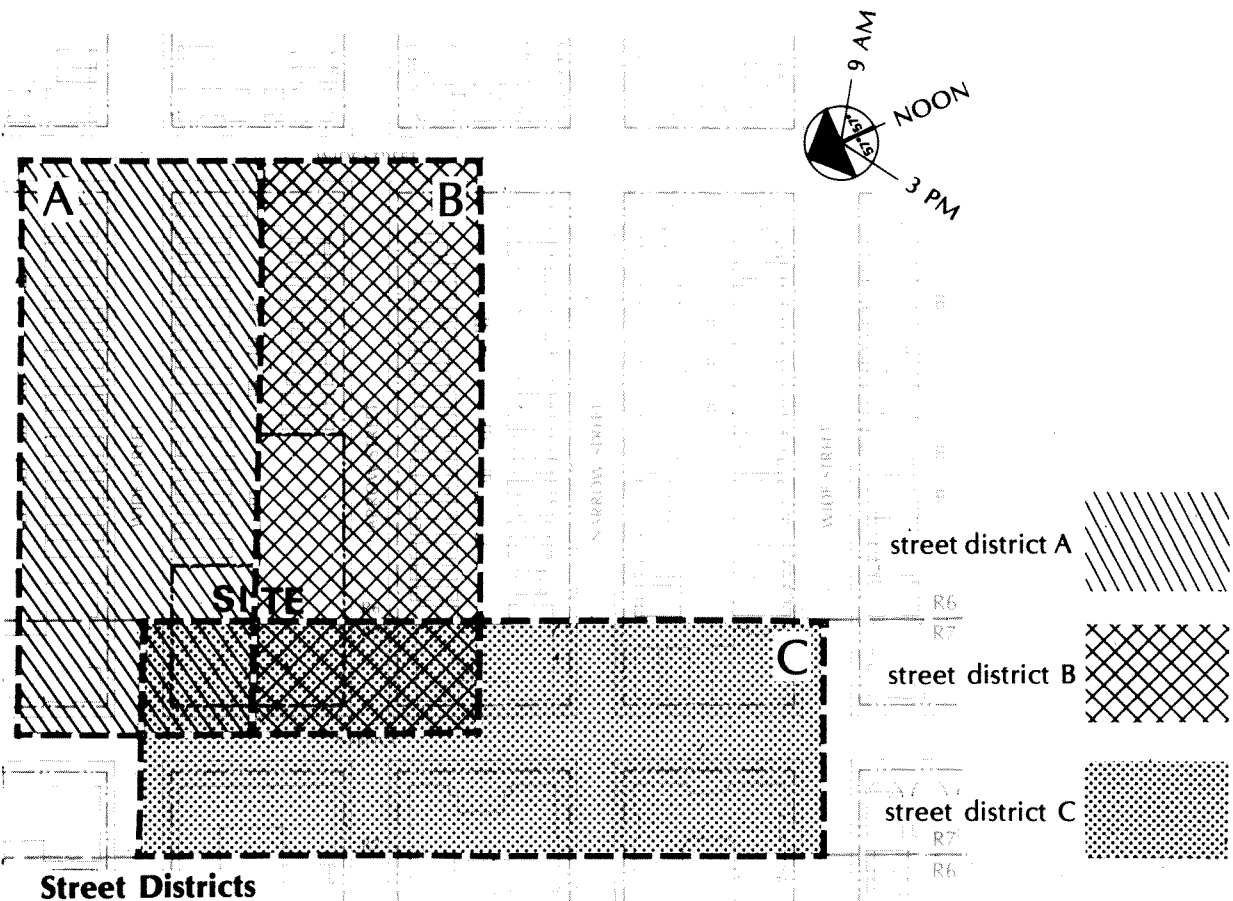
The total amount of sq. ft. required for parking is in the range of 19,000 - 28,000 SF. This range is based on efficiency of layout and type of garage or parking lot.

The calculations for bulk, density and parking are the basic zoning calculations. The next calculations for the Housing Quality Provisions substitute for the present height, setback, coverage, open space and building spacing regulations. Anyone choosing the HQP option must follow the procedure outlined below.

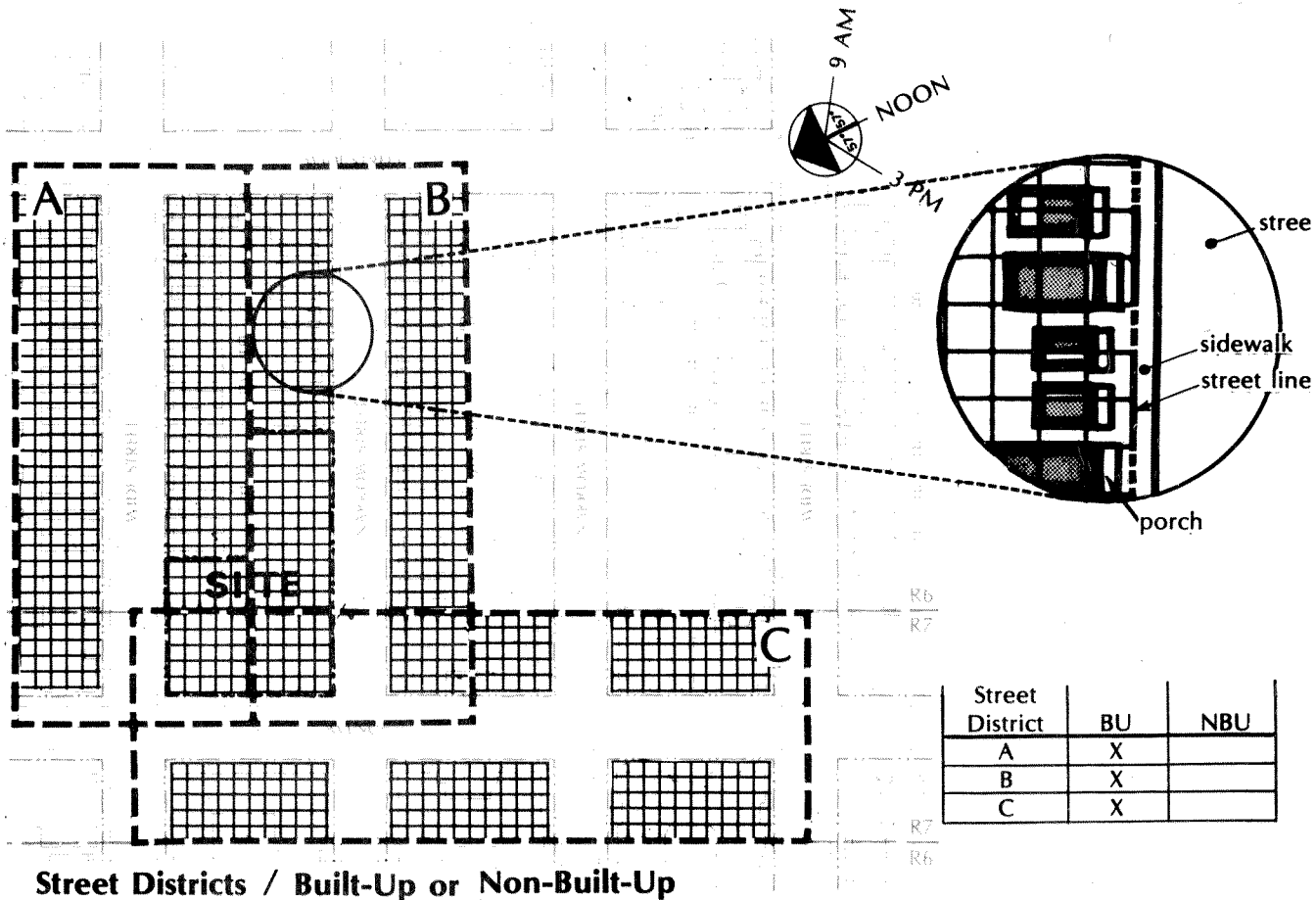
3. Housing Quality Provisions - Primary 'Program Elements'

The following computations reflect the HQP's concern for neighborhood scale, the quality and quantity of recreation space, the security and safety of the site and building, and the quality of the apartments and circulation space. These computations should occur before the design of the building as they determine, along with the 'as-of-right' calculations, the basic residential building program. During the design of the building the architect will try to achieve as close to 100% compliance in each of the elements.

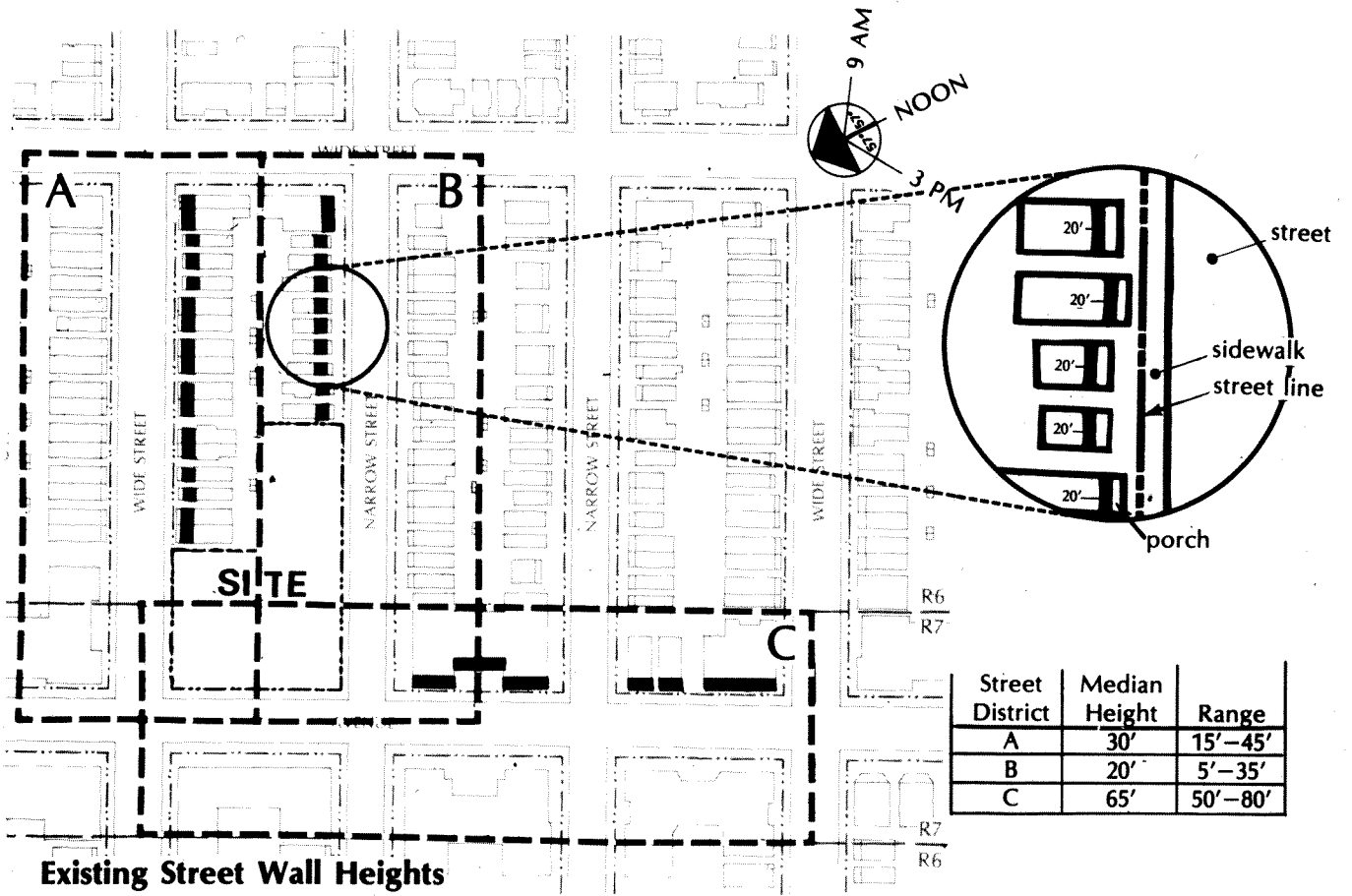
- a. Neighborhood Impact 'Program'. Employing fire insurance atlases or any other current and scaled area maps, locate the site and determine the 'street districts'. The 'street district' is a term HQP utilizes to determine which existing buildings constitute the locus of the neighborhood to which the new building is strongly related in both character and scale. The illustration shows 3 'street districts', as there are 3 streets the site fronts on. Consequently, parts of the new building falling within each 'street district' will be designed to match the character of those streets. The length of the 'street district' depends upon what points a street is intersected by another street of equal or greater width. In this case there are two short 'street districts' - one on the wide street, one on the narrow street, that are one block long. The avenue 'street district' is longer and terminates to the south of the site at a wide street of equal width. 'Street districts' have a depth of 100' and overlap at corners. This overlap is due to the fact that corners of sites are visually apparent in both 'street districts'. In the diagram the street districts are labeled 'A' (wide street 'street district'), 'B' (narrow street 'street district') and 'C' (wide avenue 'street district').



HQP also requires a 'street district' to be classified as 'built-up' or 'non built-up'. A 'non built-up street district' is an area characterized by a vacant or to be vacant conditions. It occurs when 80% or more of its area has no permanent structures on it. Buildings scheduled for clearance under a government sponsored program are considered temporary. When a 'street district' is 'non built-up' the program elements dealing with neighborhood scale are waived. To simplify this and other area calculations involving large areas and complex shapes the architect may use a grid of squares no bigger than 20'-0" in the scale of the drawings.

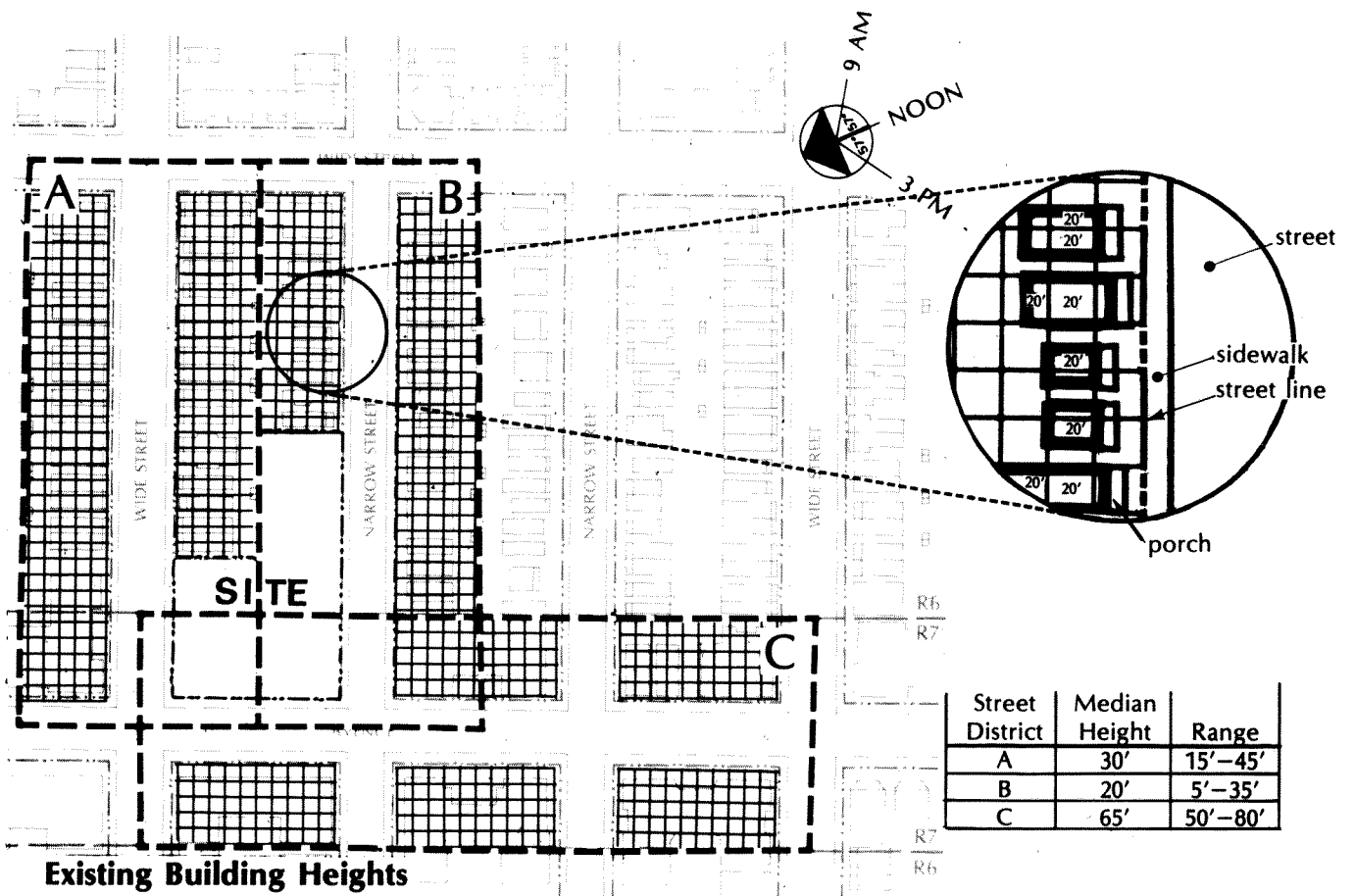


It is now possible to determine the existing street wall height (program element 4). This is done by computing the median height of the 'street walls'--the front wall of buildings--of the buildings within the 'street district' and on the same side of the street as the site. A median is used because it statistically determines the visually predominant building height. In order to allow for design flexibility, up to 15'-0" may be added to or subtracted from this height. Separate computations must be done for all 'street districts'.



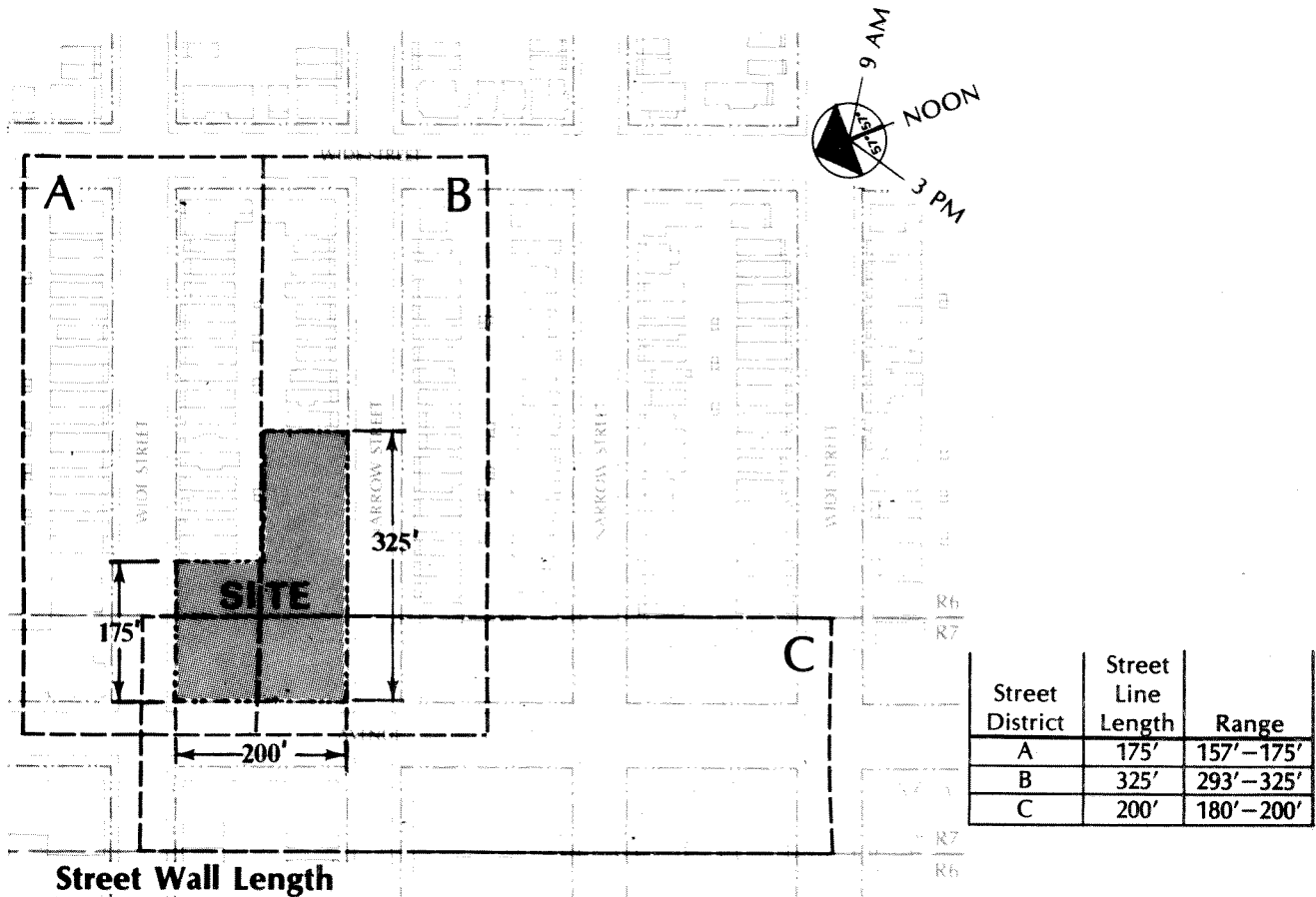
Existing Street Wall Heights

The existing median building height (program element 5) is the median height of all roof surfaces within the 'street district'. While the 'street wall height' was concerned with one side of the street the building height (which differs from street wall height when there are setbacks) reflects an overall scale image of the 'street district'. It, therefore, includes buildings on both sides of the street. Often the overall building height will be the same as the street wall height when no setbacks exist. Again, there is an allowance for variation of 15' ±. Also, computations are separate for street districts.



Existing Building Heights

The 'preferred street wall lengths' are the same as the length of 'street line' (street property line). It is used to maintain a continuity of building wall along the sidewalk. For corner sites such as this, the preferred street wall length may be reduced by 10% of the street line. This allows for greater flexibility in handling the corners. However, in mapped zones below R6 the preferred length of street wall is reduced to reflect the side yard character of the neighborhood. In this manner, the proposed building will visually connect with adjoining buildings. As with all the elements in Neighborhood Impact other than Offsite Sunlight these lengths are recorded by 'street district'.



**Street Wall Length**

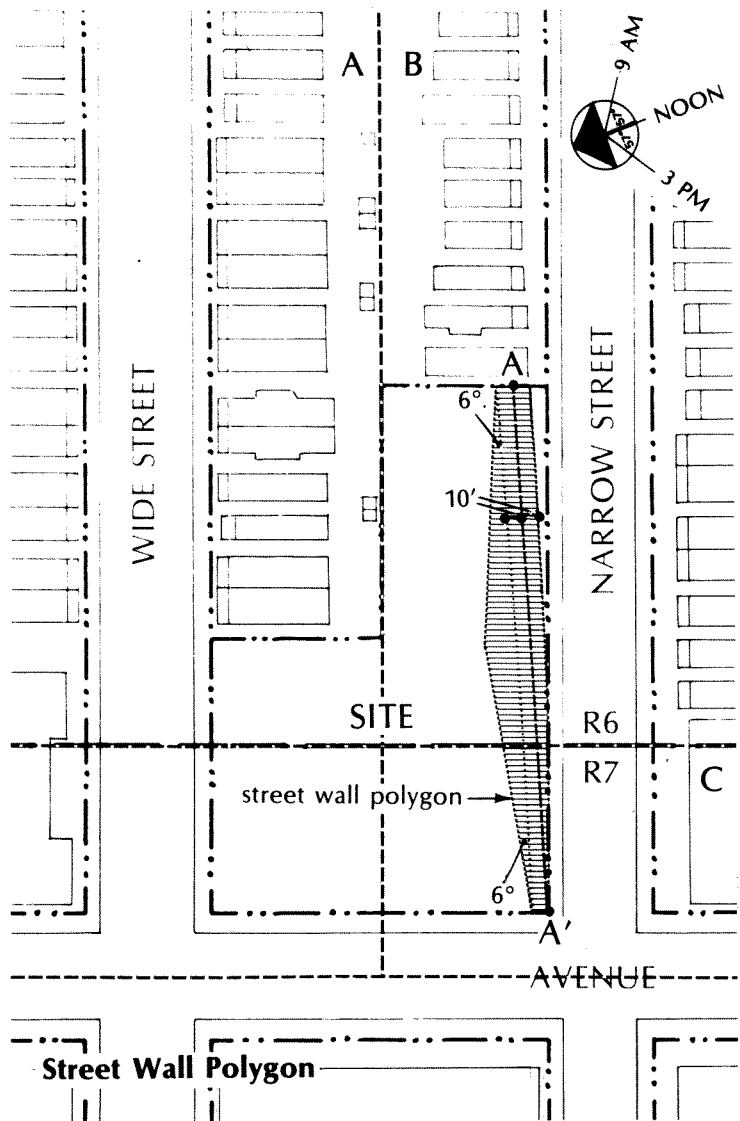
Ground Floor Activity is related to the particular design of the proposed building. Employing the many tools available in the element, the design should express a sociable presence on the street. This element should be employed when evaluating building types, entries and circulation systems. It requires no preliminary calculation.

Offsite Sunlight and street trees also require no preliminary calculations.

Offsite Sunlight is handled intuitively by locating building bulk so that it limits the shadow cast on nearby residential property. Conflicts may occur with a program element limiting shadow on site. The siting and bulk arrangement therefore becomes a sensitive balance between the two sunlight elements, the street pattern and surrounding land use.

For the purposes of preliminary design it can be assumed that all the street trees can be provided as they do not affect the overall site plan.

The street wall polygon is a plane in which the 'street wall' of the proposed building should be located. Any portion of the 'street wall' falling outside this plane is not credited. The 'street wall polygon' is determined by the location of adjoining building setbacks and the 'street line'. By maintaining the 'street wall' of the proposed building within the area of the polygon the continuity and character of the street is assured. Each 'street line; will have a 'street wall polygon'.



For example, construct the polygon for the street line on the narrow street falling within "street districts" B and C. The adjoining setback is 20', (A) for the building on the east lot line. The preferred setback at the corner is determined by the building across the street (A') (dashed line on the drawing). Then draw a line parallel to it, which is in front of it and separated from it by a distance equal to the difference. In the illustration it is 10'. Another line in back of the first line is also drawn which is 10' distant from it (dotted line). Construct two 6° angles drawn from the rear line and extend them until they intersect, The area hatched in the drawing is the "street wall polygon". It is similarly constructed for the other street lines. A building wall falling within the polygon is considered to be street wall for the elements dealing with street wall length, ground floor activity and street wall height.

b. Recreation Program.

The purpose of this program is to insure that sufficient recreation space is provided for the tenants which meets high quality standards, is pleasantly landscaped and avoids unpleasant visual on-site proximity to parking facilities.

Type and Size (element number 1) is the most important 'program element'. It is the equivalent of the open space regulations existing in the 'as-of-right' zoning ordinance. The difference is more in terms of quality than quantity. Four categories of recreation space are specified: Adult Use Space, Child Use Space, Mixed Use Space for both children and adults and undesignated Free Use Space for passive activities. Detailed rules make clear what activities may be used to fill the square foot requirements for such space and to what standards facilities for such activities must be constructed.

To decide how much space is required certain assumptions about tenancy must be made. This is done so recreation space can meet real, not abstract, tenant needs. It is done by counting extra bedrooms. Apartments which have two or more bedrooms will most likely have children living in them. The computation is quite simple: Studio apartments have one adult, one bedroom apartments have 2 adults, 2 bedroom apartments have 2 adults and a child and each additional bedroom means another child.

No. of Bedrooms	0	1	2	3	Total
No. of Apartments	14	59	59	15	147
No. of Adults	14	118	118	30	280
No. of Children	0	0	59	30	89
Children & Adults (Mixed)	14	118	177	60	369



By multiplying the total numbers in the three categories a required SF. per person as specified in the HQP the preferred amount of SF. in each category is determined.

No of Persons X SF./Person = Preferred SF.  
280 Adults X 10 SF. = 2,800 SF.  
89 Children X 20 SF. = 1,780 SF.  
369 Mixed X 20 SF. = 7,380  
Total = 11,960 SF.

To compute 'Free Use Space' the total amount of preferred recreation space is found. This is done by multiplying the size of the site by a 'recreation factor'. This factor is derived from the amount of recreation space the population of a zone will generate plus an amount of 'free use space' per person which is determined from common life style implications where the undesignated (free use) space between active recreation areas is greater in lower zones and less in higher zones. In the case of the split lot example, the site area attributable to the R7 is multiplied by its 'recreation factor' and the site area attributable to the R6 portion of the site by its 'recreation factor'.

R6  
30,000 SF. (Site) X .63 (Recreation Factor) = 18,900 SF.

R7  
20,000 SF. (Site) X .57 (Recreation Factor) = 11,400 SF.  
Total Preferred Recreation Space for Site = 30,300 SF.

'Free Use Space' is found by subtracting the total of adult, child and mixed use space from the total found above.

30,300 SF. (Total Preferred Recreation Space) - 11,960 SF. (Adult + Child + Mixed) = 18,340 SF. of Free Use Space

Of this total preferred amount of 'free use space' no more than 25% may be in 'semi-private outdoor space'. This insures that the ambiguous and useless open space in which typical residential buildings are presently sited is avoided. Instead, these 'semi-private' spaces or outdoor spaces fronting on the street are reduced to a size that is both unambiguous, manageable and useful to the neighborhood. It can take the form of front yards, mini-parks or plazas.

All active recreation spaces are to be in 'private space'. Depending upon tenancy, density and location, the percentage of this 'private space' which is indoors would vary. When outdoors 'private space' because it is freely accessible only to tenants and their guests functions as a multi-family backyard--a concept sorely needed in New York.

18,340 SF. (Preferred Free Use) X .25 = 4,585 SF. maximum in  
semi-private outdoor space  
13,755 SF. in private  
outdoor space

It is convenient to add the preferred Child and Mixed Use, and Free Use which shall be in 'private outdoor space'. This sum will indicate the total 'preferred private outdoor space'.

1,780 SF. (Child) + 7,380 SF. (Mixed) + 13,755 SF. (Free Use) =  
22,912 SF. (Total Preferred Private Outdoor Space)

Some uses may be located indoors and would thus reduce the total 'private outdoor space'. Indoor recreation space when it meets the criteria (see HQP regulations) is not calculated as part of the floor area of the building. By doing so a building's

rentable floor area is not reduced when this option is followed. In the illustration, all adult space is located indoors, although up to half of it could have been outdoors.

The remaining elements in the Recreation Program can be handled in a manner similar to that described in Neighborhood Impact. Quick calculations of shadows cast by building walls at various heights given are useful in roughly determining the location and extent of shadows. Shadow measurements for off-site buildings should also be done.

In zones R6 through R10 no points are given for unenclosed parking. The HQP regulations suggest a design where cars are out of sight. The remaining two elements in the Neighborhood Impact 'program', Planting and Trees, can be assumed achievable during preliminary design.

c. Security and Safety.

The elements within the Security and Safety Program are designed to promote tenant recognition and personalization of building spaces. Public areas are to be made as visible as possible to promote casual surveillance. In no way are these elements intended to supplant electronic or human surveillance such as guards or doormen. Instead they are meant to complement them by making it clear who is responsible for and belongs in certain spaces. The definition of spaces as 'semi-public', and free accessible by pedestrians, and 'private' and not freely accessible except to tenants and their guests, are the key terms. The 'program elements' in this program are integral to the choices made in preliminary building design.

d. Building Interior.

This program is concerned with the amenity of the apartment - regulations pertain to the apartment, (size, sunlight, privacy and cross ventilation) and the circulation and functional spaces (daylight in corridors, storage and waste disposal). It is first necessary to decide on the apartment sizes in terms of gross SF. as the total building bulk results from this decision. In the illustration, the apartment sizes utilize the full Floor Area. The other elements, as was true with the Security and Safety elements, interplay with the possibilities inherent in the building types developed during the design and do not lend themselves to prior calculation.

e. Summary

All of these preliminary calculations have been aggregated on a single data page (see following). Once these are recorded they do not require additional work and thus become the building program when coupled with the other elements. How they are employed in the design of the building follows.

4. Designing with the Housing Quality Provisions

The criteria developed in Part I becomes the design program for the proposed building. A number of designs may generate from these criteria. Most will be high scoring and equivalent in terms of overall quality--though their emphasis will vary. However, a preconceived design, ill suited to the requirements of the site as specified in the criteria, will score poorly and fail to achieve the minimum number of points. The passing schemes illustrated are only representative of the variety of solutions which are possible under the Housing Quality Program.

The design procedure begins with the disposition of building bulk or floor area on the site to meet the criteria developed in the Neighborhood

Impact 'program'. Then the amount and quality of recreation space will be checked against this bulk arrangement. Orientation is an important aspect of this check. Finally, the schematic design will be reviewed for compliance with the Security and Safety and Building Interior programs. This is the first 'cut' in our tailor analogy and utilizes preliminary scoring rather than a manakin. Of course, there are additional criteria to evaluate the scheme and they include construction cost, management, developers program, etc. which, although not explicit in the Provisions, have been part of their development.

## 5. The Design Example

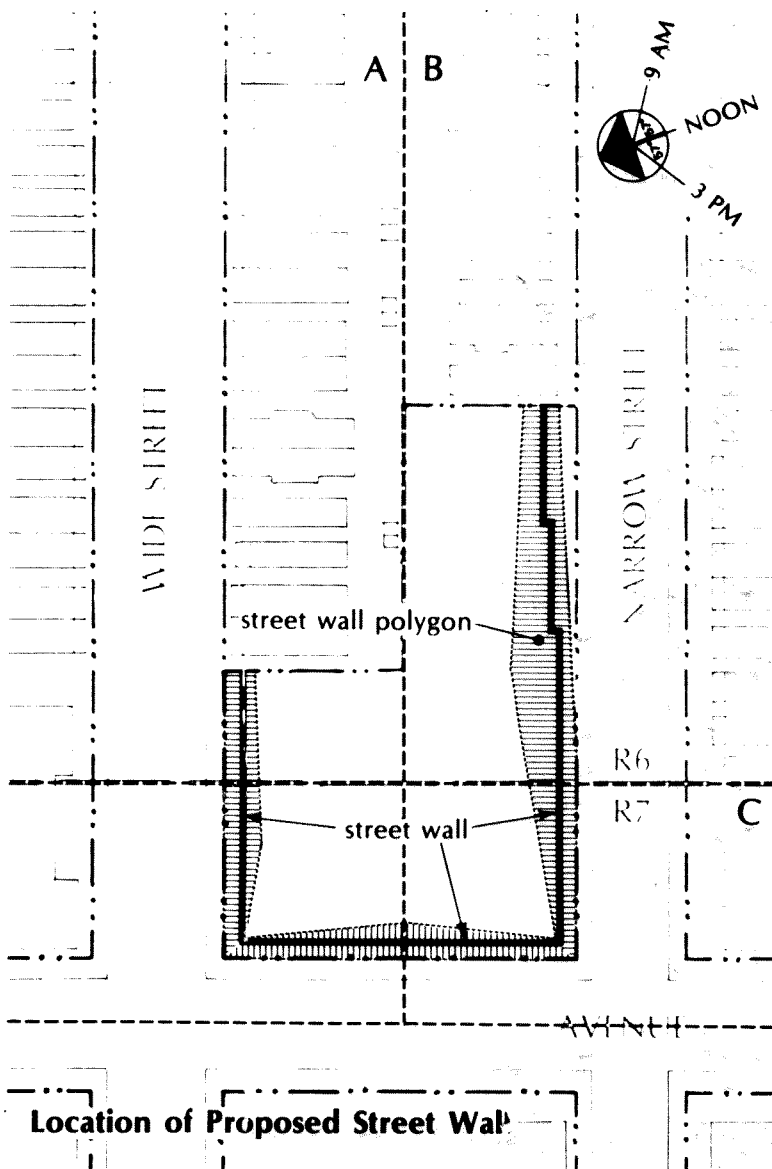
By taking one of the seven building schemes (see appendix) designed for this hypothetical site through HQP, it will become clear how the elements work and interlock with the design process.

## 6. Schematic Site Planning

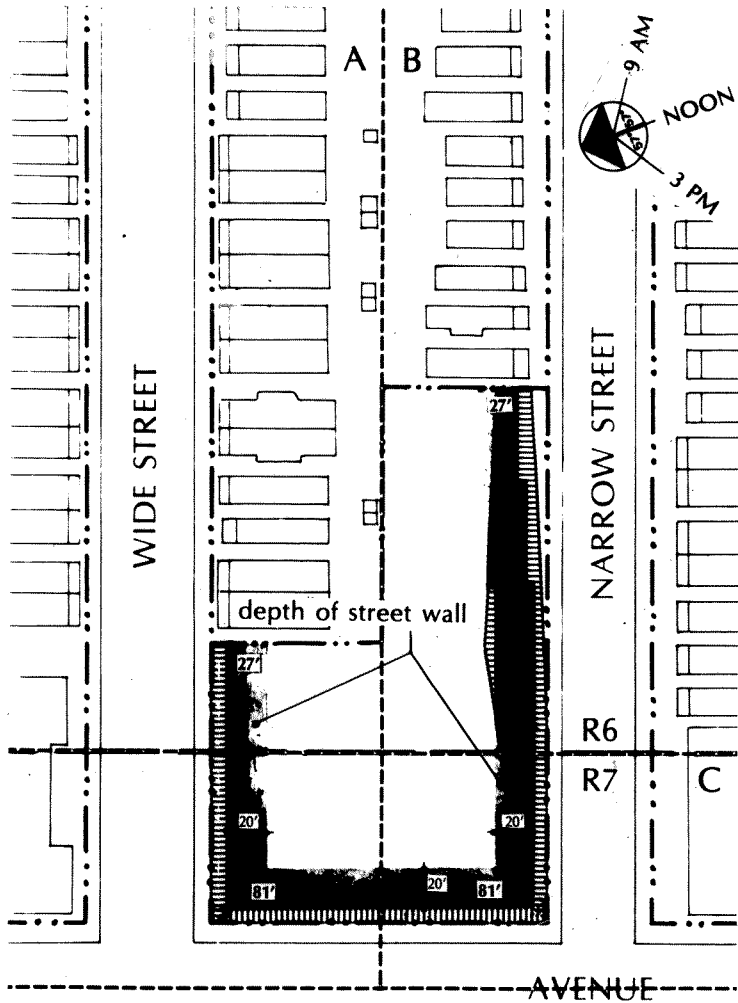
The initial step is to locate the street walls of the building. This is aided by utilizing the site plan developed previously on which the 'street wall polygons' have been drawn. Two elements of the Neighborhood Impact Program then become important: "Street Wall Length" and "Street Wall Height". Both are conditioned on there being a 'street wall', the building face closest to the 'street line'. Consequently, the initial effort shall be to have the 'street wall' of the proposed building totally within the 'street wall polygon'. Then, the 'street wall length' will match the length of the 'street line'. Finally, the heights of the 'street wall' should come as close as possible to the preferred 'street wall heights' for all three street districts. We will begin with the Neighborhood Impact 'program' and follow with the other three Programs.

By way of one of the example schemes, the procedure is as follows.

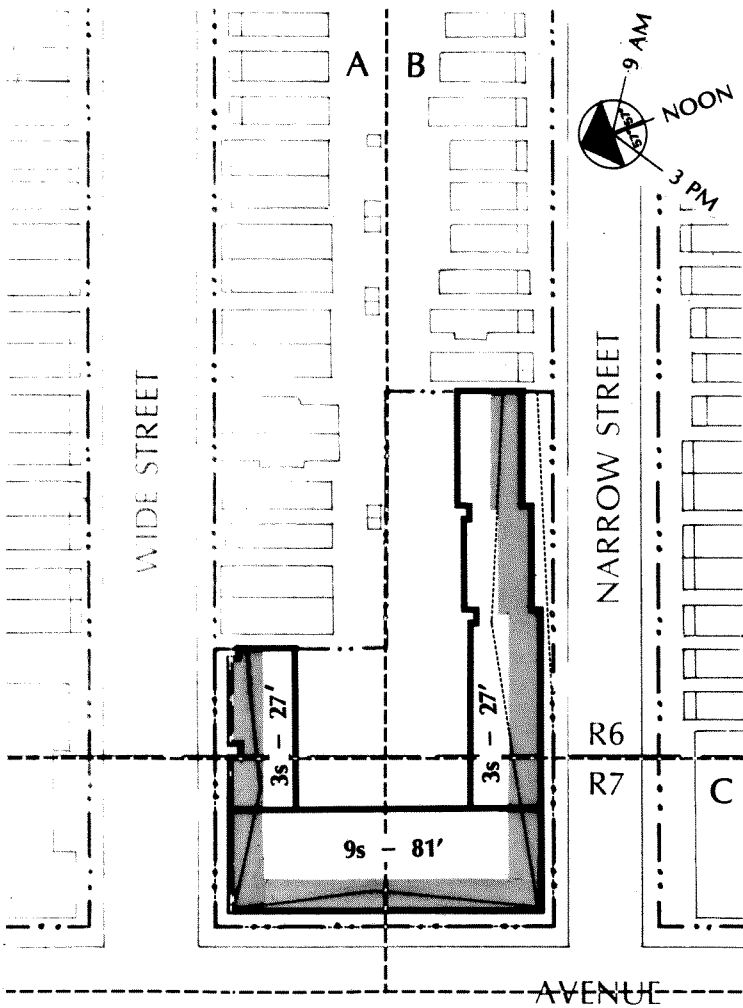
### a. Neighborhood Impact Program



- i. Locate the "street wall" for all three street districts in the street wall polygons. In this example we decided to maintain the character of the streets by continuing the front yards typical of those streets.
- ii. The resulting "street wall length" closely matches the preferred length (the length of the "street line") achieving the maximum score for the program element. If possible, during schematic design, it is desirable to achieve as close to maximum scoring in the major elements as possible.
- iii. The next step is to decide on the height of the street wall. By referring to the summary sheet the range of preferred street wall heights for the three "street districts" is 15' - 45' in (A), 5' - 35' in (B), and 50' - 80' in (C). The average height of a proposed street wall fronting on its respective "street line" which falls within the ranges described above will achieve the maximum score. Because the "street districts" overlap at the corner, portions of the proposed street wall are computed twice.



Height of Proposed Street Wall



Proposed Building Height

iv. Sometimes scoring an exact match of the overall building height may not be achievable or even fully desirable. The ranges indicated above account for this. In this scheme a decision was made to keep the "street wall" elements on the streets close to the existing median heights and exceed them on the avenue (C). The reasons were multi-faceted and included a desire to maximize sunlight, building economy and marketability. The building types chosen are 3 storey low-rise town house walk-ups (40' wide) and a 9 storey mid-rise elevator building (60' wide). Another reason involved in this decision was the desire for a "multi-family backyard".

v. In the HQP the street wall is the first 20' of the roof the building. The illustration shows the height of this area to be 27' (street district A and B) and 81' (street district C).

vi. Maintaining a "street wall height" of 27' in street districts (A) and (B) creates a conflict with the street wall height of 81' in street district (C). It is an old urban design problem of the need to change scale when turning a corner which is represented here. Many solutions exist. The one shown here and recommended for the first "cut" is to allow the intrusion of the taller "street wall" in street districts (A) and (B) and accept the lower point score. Refinements in building shape as it affects the "street wall height" score can be more easily accomplished after a preliminary total score is computed. Such refinements will also be in the nature of architectural treatment.

vii. The building widths and types chosen and located behind the street wall becomes the premise for the "tradeoff".

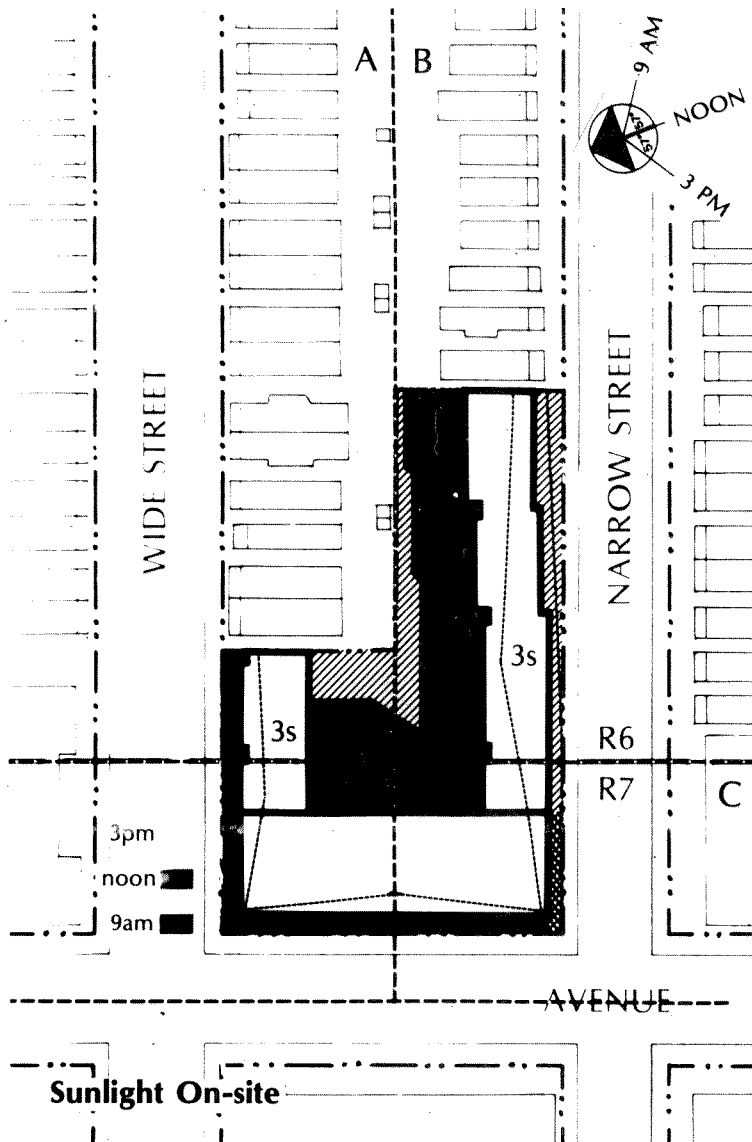
viii. The next program element is Building Height. In this example the preferred building heights are the same as the "street wall heights". Building height is a function of both its height and its coverage - thus becoming an index of physical and visual mass. The result is that the taller building will bring down the score in districts (A) and (B). Again, for a first cut the designer should accept the loss, assuming it will not bring the scheme below a passing score. Again, refinement is to be done later.

ix. As with a number of the elements both in Neighborhood Impact and the other programs, assumptions can be made concerning compliance. Ground floor activity is very much a function of how the ground floor is designed: windows, openings, entries and circulation are assumed to be manageable. The same is true with street trees.

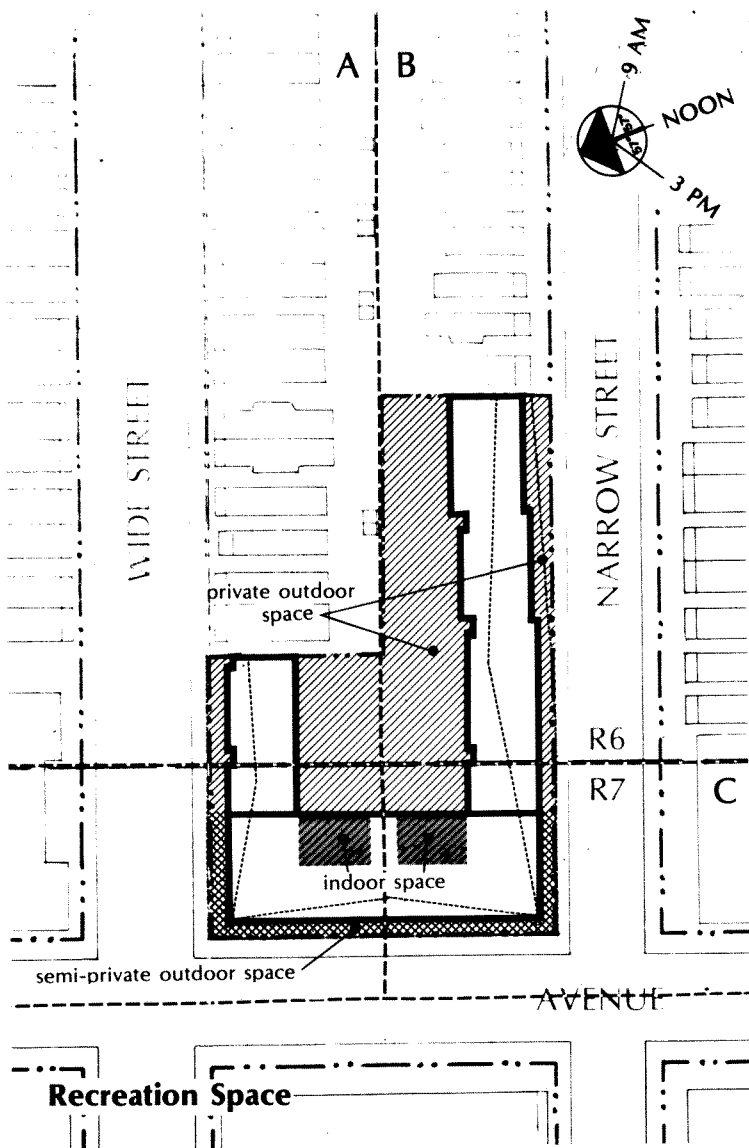
x. Off-site shadow can be analyzed intuitively. Because the low building elements are immediately adjacent the existing buildings a minimal shadow at 3 P.M. will be thrown on those properties. (The appendix illustrates the accurate shadow computation.)

b. Recreation Space

i. There are two basic decisions in this program before the element dealing with Type and Size can be approached. The first is parking. In zones R6 and up HQP gives points only to designs with enclosed parking where there is minimal visual impact upon recreation and pedestrian areas. Additionally, unenclosed parking is always in competition with recreation space, located primarily outdoors and at grade. Unenclosed parking would become the predominant use at grade requiring practically all the recreation space (which is substantial) to be located indoors on rooftops - a solution that is neither practical in terms of function or cost. The example assumes all parking to be enclosed and to be under all or part of the 'private outdoor space'. This allows for a full compliance in the program element for 'parking'.



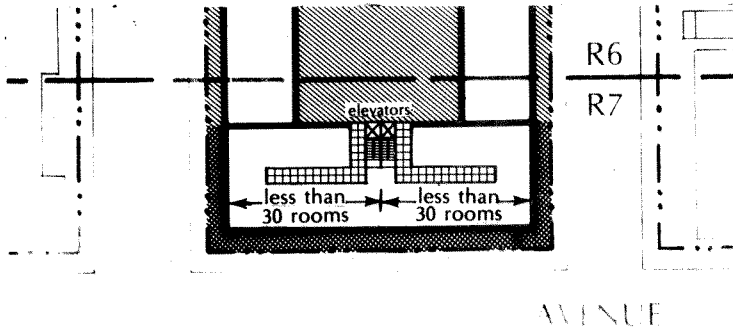
ii. The second program element is the availability of continuous sunlight on the outdoor space. This was intuitively approached by locating a low building along the southern side of the site. Utilizing schematic shadow charts suggested earlier the extent of the shadows can be easily predicted.



- iii. The type of building used in the illustration creates "private outdoor space", an area of outdoor space enclosed within the buildings perimeter. Under HQP a large percentage of the recreation space is viewed valuable only if it is located in such multi-family backyards. A scheme which ignores this basic consideration of useable and secure recreation space will score poorly. Other types of "private outdoor space" are private terraces on grade or roofs, balconies and rooftop terraces.
- iv. In allocating the recreation space it is advisable to first consider the "child use space" and the "mixed use space". The summary sheet shows 9,160 SF is required for such space, The "child use space", typically a playground, requires full sunlight for three continuous hours. The "mixed use space" is planned for active recreation uses such as badminton or basketball. The latter requires large areas to accommodate the court dimensions. (The HQP regulations specify minimum sizes for these functions.) A quick computation of the potential "private outdoor space" indicates a total of 16,850SF.-- more than enough to accommodate these facilities. It is not yet necessary to select specific facilities. Instead, however, dimensions may be checked to make sure a variety of them do fit.
- v. In the illustration, 'adult recreation space' is all indoors and exempt from floor area calculation. The designer could have located up to 50% of such space outdoors.
- vi. In the illustration, 'free use space' has been distributed in the following manner; 8,600 SF. in 'private outdoor space' as passive areas between the more active child and 'mixed use' recreation facilities, 7,700 SF. would be located between the 'street wall' and the 'street line' or in the front yard as a combination of private patios for the ground floor apartments in the low-rise buildings and landscaped front yard space or plaza/sidewalk widening adjacent to the taller building on the avenue.
- vii. In this example, as with all the Alternative Schemes, the recreation space required has been accommodated without resorting to the development of rooftops, balconies or large indoor facilities. Both options are possible with HQP and are the architect's choice.
- viii. At this early stage of design we can assume that the 'program element' for planting and onsite trees can be complied with.
- ix. With the possible exception of the points attributable for the program element governing on site sunlight, full compliance is achievable with this building configuration and site plan. The evaluation of 'on site sunlight' is initially intuitive.

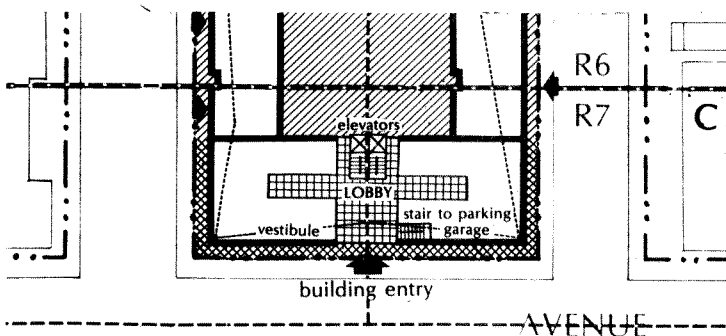
c. Security and Safety

- i. A given site plan and building type has implicit advantages and disadvantages. The site plan illustrated does well when matched against the criteria of Security and Safety because it relies upon a strong definition between private and semi-private space. In the Security and Safety program all 'program elements' are planning criteria.



Density of Public Corridor

- ii. The illustration uses low rise buildings directly accessible from grade. All such units automatically meet the criteria for the program element regulating the number of rooms (density) of a public corridor. The goal of this program element is to increase tenant recognition so intruders become more identifiable. The taller building element (9 stories), however, does not receive automatic compliance. This is an elevator building with a central lobby. A building designed under "as-of-right" zoning would usually have 40 to 50 zoning rooms on a floor serviced by a single elevator "core". In the illustration this high level of density is reduced to half without any increase in the number of elevators by making a discontinuous corridors and locating the elevators "back to back".



Lobby Plan

- iii. This diagram illustrates that the elevators in the example are visible from the sidewalk. In a building serviced by 24-hour doorman protection the program element specifying the requirement for visibility is waived.
- iv. Again, the diagram illustrates that all the "private outdoor space" is visible from the lobby. Additionally, the front yard patios of the low rise buildings automatically comply with the program requirements.

- v. Another 'program element', Surveillance from Apartments, makes sure there are eyes on the 'private outdoor space' as well as on the street by requiring the location of apartments where residents are likely to be home during the day to be on the lower four floors. Such apartments are multi-bedroom apartments and those for the elderly and handicapped. The illustration assumes that the low rise buildings will have the majority of large apartments. It also assumes that a portion of the remaining large apartments and those for the elderly and handicapped cannot be accommodated on the lower floors of the taller building.
- vi. The 'program element', Entry of Building from Parking Garage is designed to create a discontinuity in circulation between the garage and the interior of the building. Many malicious entries into the building occur through the garage. By having the garage exit in the vestibule this type of illegal entry is precluded. The plan in the illustration indicates a garage exit next to the entry vestibule. Mechanical devices such as a key-operated elevator doors are an optional means to achieve full compliance. (See Illus. "Lobby Plan")



- vii. The program element 'Visibility of Elevator Door to Apartment' makes sure a high percentage of apartment doors are visible from the elevator. The taller building in the example has a single bend in each corridor. A single mirror in conformance with specifications in the HQP may be used to see around this bend. The low rise buildings are considered to fully comply as there are no corridors in which someone might hide. (See Illus. "Density of Bldg. Corridor")

d. Building Interior

- i. Most of the elements comprising this Program are directed toward aspects of the building design which occur after the basic site planning has been resolved. Those elements are Window Size, Visual Privacy - On Site, Daylight in Building Corridors, Pram, Bicycle and Bulk Storage and Waste Storage. We can assume in this example that the full compliance can be achieved. Indeed, the Daylight in Building Corridors has already been incorporated into the design when the Density of Building Corridor element was resolved.
- ii. The remaining elements require in varying degrees incorporation into the site planning. Size of Apartment is the most obvious as the sizes are reflected in the total Floor Area which translates in building bulk. Larger apartments mean a larger building up to the maximum floor area allowed in the zone. The implications on the scale of the building vis a vis its neighbors is obvious. In this example we have chosen to utilize all the allowable floor area and thus have apartment sizes which are coincident with the preferred sizes in the element.
- iii. On large sites it is easier to orient the building to maximize sunlight in the apartment. Smaller sites make the provision of sunlight more difficult. When building orientation and height conflict with the scale criteria in neighborhood impact, trade-offs can be made. This can, for example, be done by using bay windows. In the example, all the low rise apartments can achieve full compliance (they are floor-through apartments). The taller building presents a problem because the apartments on the east side (fronting the avenue) have less than three continuous hours of sunlight. This can be solved by refining the shape of the building--using bay windows--at a later design stage.
- iv. The 'program element' designed to obtain visual privacy between apartments and the street or other off-site apartments is in complete compliance because of the 10' front yard setback. Alternate means of securing privacy involve the use of level changes and walls.
- v. The nature of the low rise building type encourages through ventilated apartments. The 'double loaded' (apartments on both sides of the corridor) taller building allows for cross ventilation only at the corners. The score reflects this difficulty.

6. Summary

At this point a rough score should be computed in order to analyze this and other schemes. Each has certain advantages and disadvantages. Positive aspects of various schemes might be incorporated into the final design. Additionally, we are interested in seeing whether the schemes individually passed and if not what adjustments may be required. How much will they cost and will they have a relationship to the needs of the projected tenancy. Other factors such as marketability, cost and management considerations will also be used to evaluate the passing schemes to determine the best design which fits the situation.

The reader has been 'taken through' a design to demonstrate the way program elements interact and complement as well as contradict each other. It is very much a balancing of considered options in the direction of a design that solves as many of the goals of the Provision as possible. Full compliance is not necessary and only rarely attainable. A score of 85 represents a well considered residential building design.

It should be pointed out that at no time are the provisions concerned with traditional aesthetic considerations such as building materials, landscape design, etc. To do so would mitigate against variety - the kind of variety of texture and detail which makes New York's neighborhoods visually stimulating. This is not aesthetic zoning and should not be confused with those arbiters of architectural style.

The schemes illustrated and roughly scored in the appendix represent the variety of basic design possible under the Provisions. Also included are designs which do not 'pass' (less than 85 'quality points'). These schemes illustrate a lack of sensitivity and disregard for fundamental problems which must be solved for housing to be more than a place where one goes when it rains or gets dark.

## 7. Alternative Design Schemes

Zoning is a key factor in deciding building location, height and use decisions. The Housing Quality Program alters these factors in many ways. To illustrate the changes seven designs have been prepared for the site analyzed in this guide. One (Scheme 2) follows the 'as-of-right' rules presently in existence. The other 6 schemes respond in various ways to the Housing Quality concepts. Despite its attention to community scale, however, Scheme 6 makes so little an effort in the remaining areas of housing quality that it fails to achieve the required score of 85 points. Scheme 1 is used throughout the guide and achieves the highest score.

All the schemes illustrate only what zoning asks an architect to do. They represent and compare the minimum level of concern of both the present 'as-of-right' zoning and the HQP amendments.

Each responds to existing market preferences. Each avoids extensive use of indoor, rooftop or terraced open space. The low rise schemes use a 'maisonette' concept on lower floors.

Scheme One is treated in detail in the text. It received the highest score of all the designs. It contains the most open space and, while taller than most of the other schemes, has its bulk located so as to not violate the existing scale.

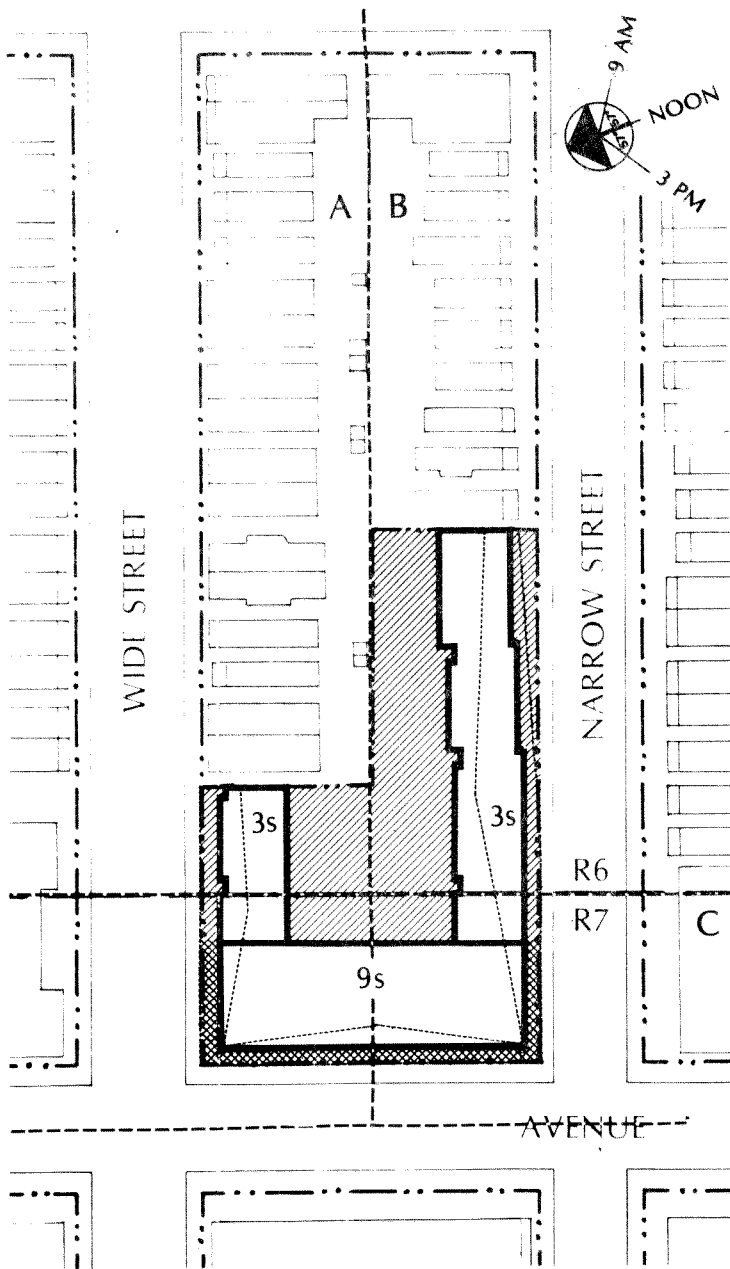
Scheme Two is typical of the buildings required by zoning under the present 'as-of-right' requirements. Community scale is violated in exchange for open space. However, open space is left untreated or devoted to automobile uses. While active and private open space might be obtainable through the use of a developed parking deck, the extent of the lack of recognition of community scale would still make it impossible to obtain a score of 85 points.

Schemes 3, 4, 5 are all variations of the basic scheme except they progressively trade increased coverage for lower building heights. This trade is on an equal basis and all of the buildings receive a minimum score.

Scheme 6 has the lowest building heights and--as a result--the highest coverage. However, there is too little recreation space to pass despite the low building heights. In fact, the building element on the avenue is judged too low for full compliance and a loss of points results.

Scheme 7 amends Scheme 6 to achieve a passing score.

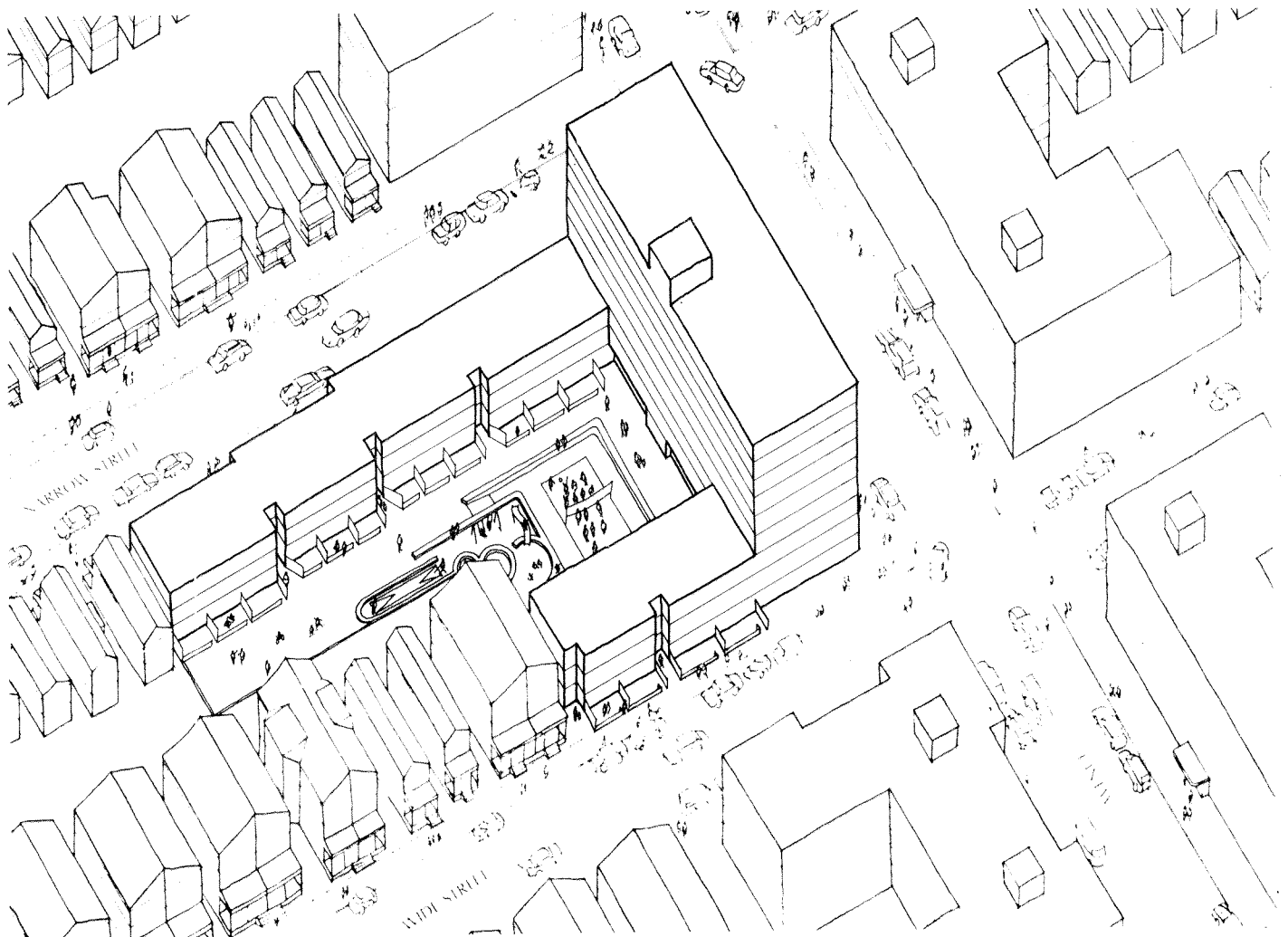
Summary and score sheets for Scheme One follow Scheme 7.

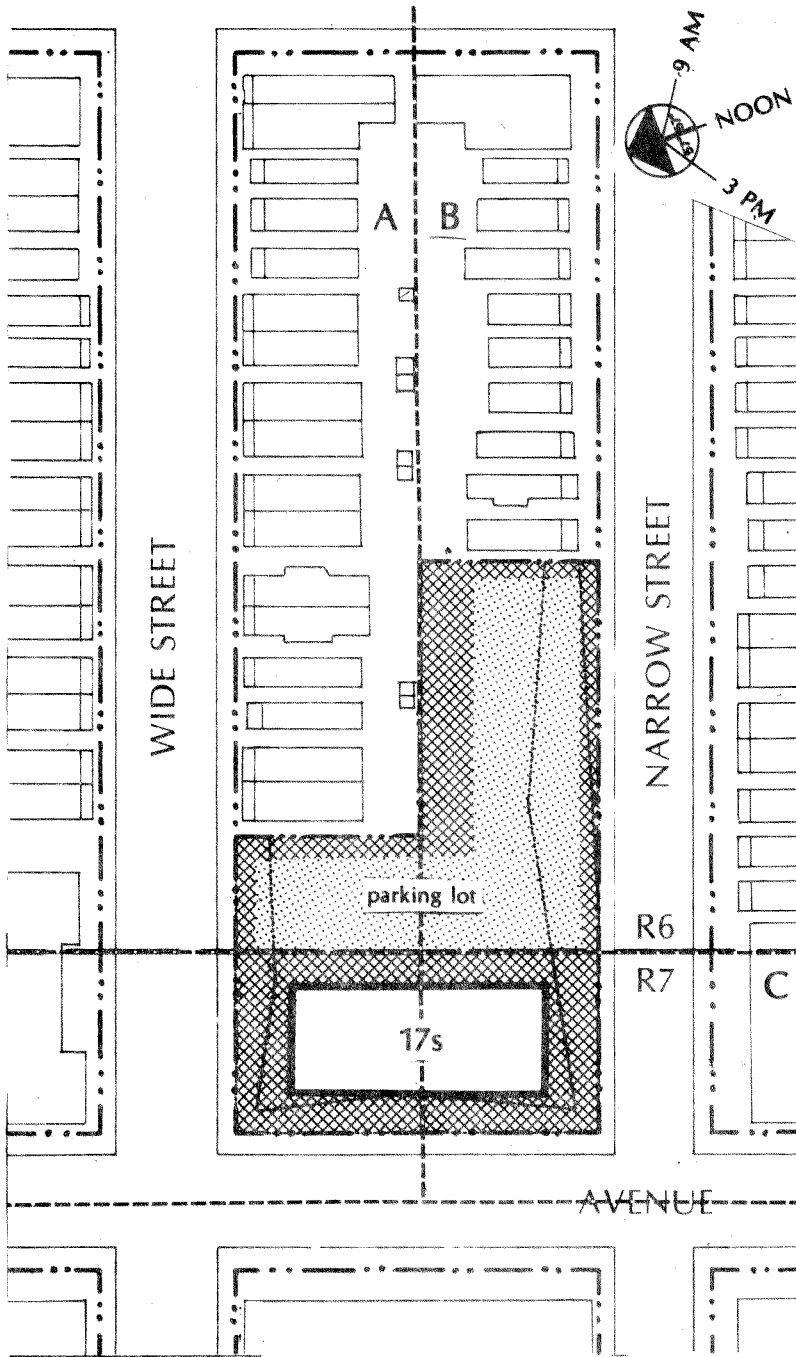


**SCHEME 1**

**Total 91.3**

	max. pts.	points
<b>A. Neighborhood Impact</b>		
1. Offsite Sunlight	8.0	6.6
2. Street Wall Length	4.0	4.0
3. Ground Floor Activity	4.0	3.6
4. Street Wall Height	3.1	3.0
5. Building Height	2.8	2.6
6. Street Trees	2.2	2.8
<b>Total</b>	<b>25.0</b>	<b>22.6</b>
<b>B. Recreation Space</b>		
1. Type and Size	9.4	8.9
2. Sunlight Onsite	5.5	3.5
3. Parking	4.1	4.1
4. Planting	3.1	2.8
5. Trees	2.9	2.4
<b>Total</b>	<b>25.0</b>	<b>21.7</b>
<b>C. Security and Safety</b>		
1. Density of Public Corridor	5.0	5.0
2. Visibility of Public Space to Elevator Doors	5.0	5.0
3. Visibility of Private Outdoor Space from the Lobby	5.0	5.0
4. Surveillance from Apartments	4.4	3.7
5. Entry of Building from Parking Garage or Lot	3.1	3.1
6. Visibility from Elevator Door to Apartment Door	2.5	2.5
<b>Total</b>	<b>25.0</b>	<b>24.3</b>
<b>D. Building Interior</b>		
1. Size of Apartment	4.5	4.5
2. Sunlight in Apartments	3.9	2.5
3. Window Size	3.8	3.8
4. Visual Privacy—Onsite	2.7	2.7
5. Visual Privacy—Offsite	2.7	2.7
6. Cross Ventilation	2.6	1.7
7. Daylight in Public Corridors	1.8	1.8
8. Pram, Bicycle, Bulk Storage	1.6	1.6
9. Waste Storage	1.4	1.4
<b>Total</b>	<b>25.0</b>	<b>22.7</b>

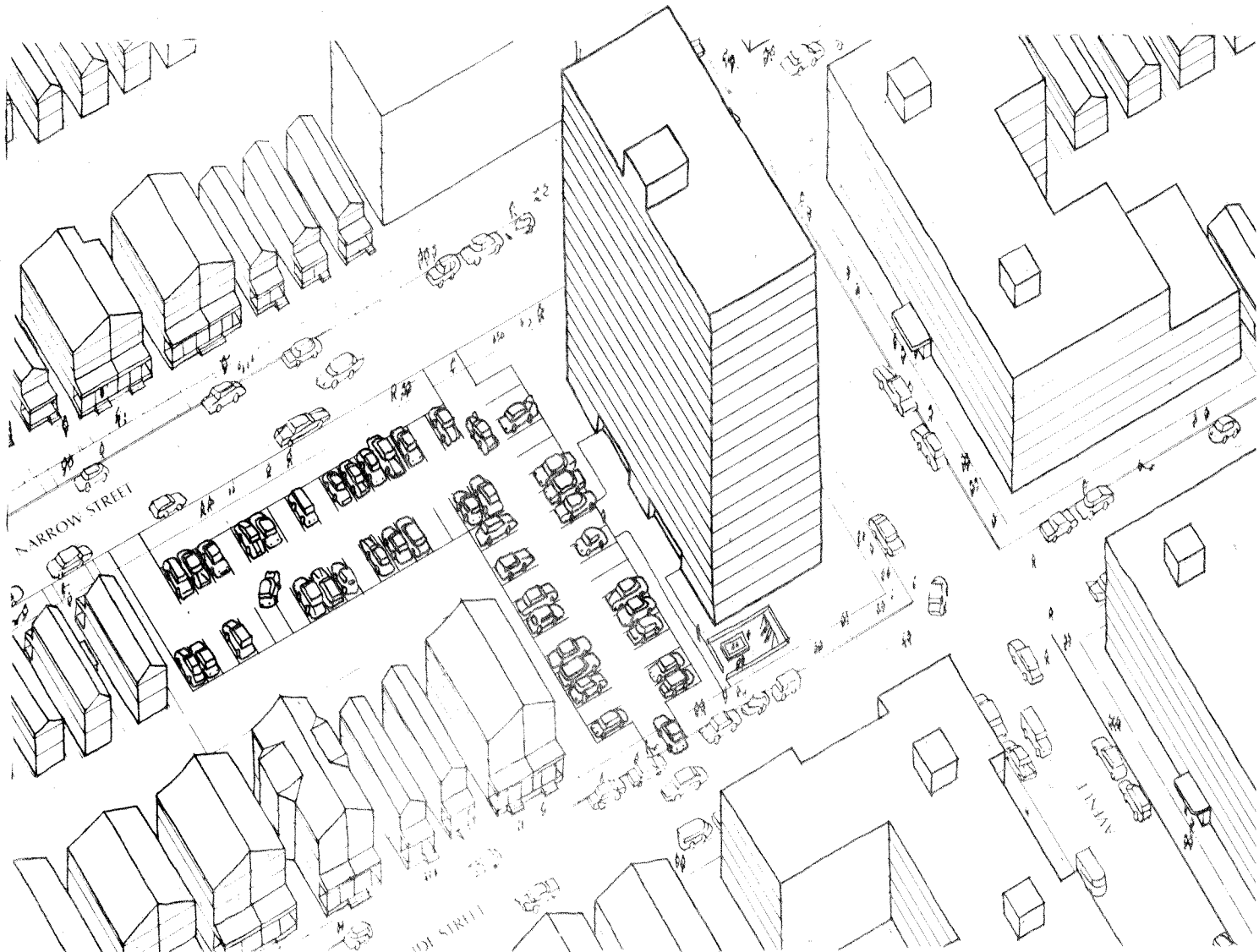


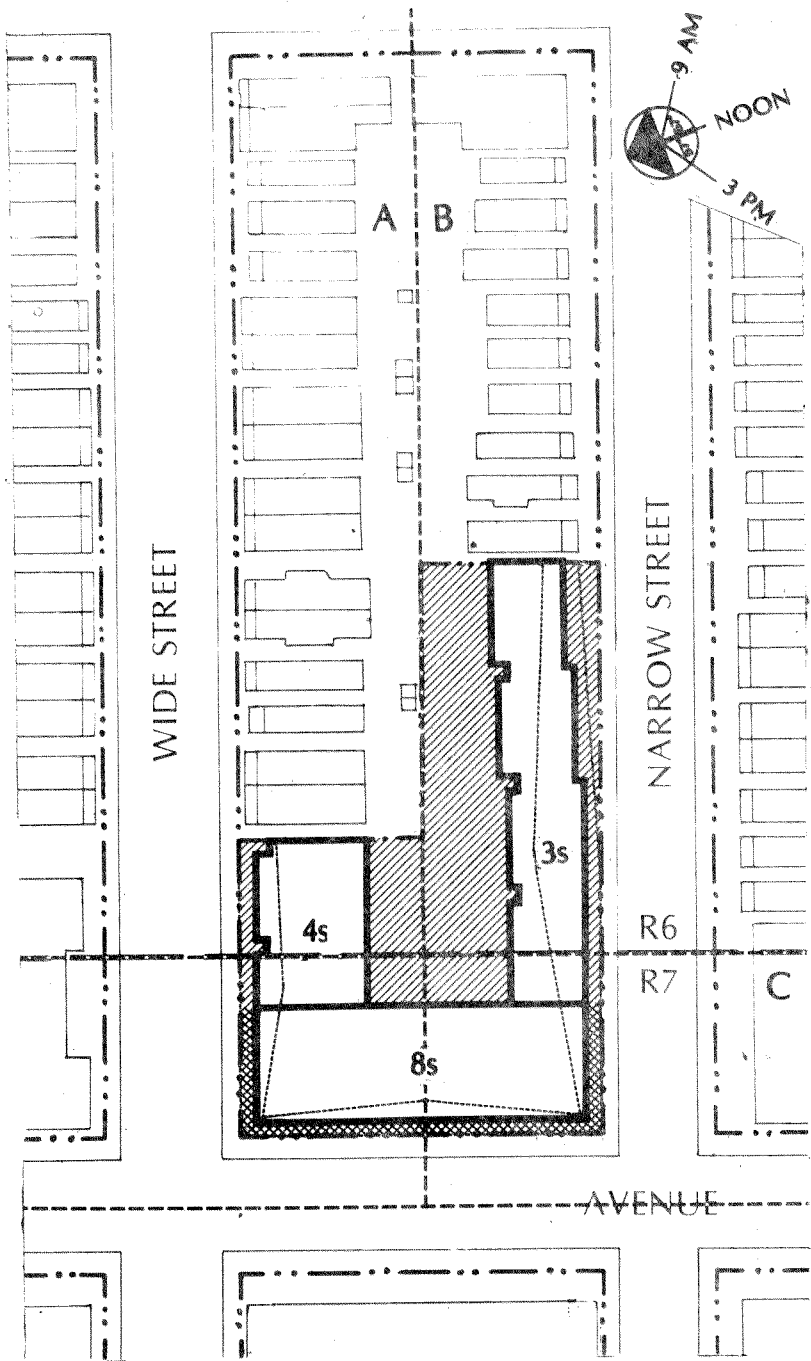


## SCHEME 2

Total **55.6**

	max. pts.	points
<b>A. Neighborhood Impact</b>		
1. Offsite Sunlight	8.0	5.7
2. Street Wall Length	4.0	0.0
3. Ground Floor Activity	4.0	0.0
4. Street Wall Height	3.1	0.0
5. Building Height	2.8	0.9
6. Street Trees	2.2	2.8
<b>Total</b>	<b>25.0</b>	<b>9.4</b>
<b>B. Recreation Space</b>		
1. Type and Size	9.4	2.4
2. Sunlight Onsite	5.5	4.2
3. Parking	4.1	2.8
4. Planting	3.1	0.0
5. Trees	2.9	2.9
<b>Total</b>	<b>25.0</b>	<b>12.3</b>
<b>C. Security and Safety</b>		
1. Density of Public Corridor	5.0	5.0
2. Visibility of Public Space to Elevator Doors	5.0	5.0
3. Visibility of Private Outdoor Space from the Lobby	5.0	0.0
4. Surveillance from Apartments Parking Garage or Lot	4.4	0.9
5. Entry of Building from Parking Garage or Lot	3.1	0.0
6. Visibility from Elevator Door to Apartment Door	2.5	2.5
<b>Total</b>	<b>25.0</b>	<b>13.4</b>
<b>D. Building Interior</b>		
1. Size of Apartment	4.5	4.5
2. Sunlight in Apartments	3.9	2.0
3. Window Size	3.8	3.8
4. Visual Privacy—Onsite	2.7	2.7
5. Visual Privacy—Offsite	2.7	2.7
6. Cross Ventilation	2.6	0.0
7. Daylight in Public Corridors	1.8	1.8
8. Pram, Bicycle, Bulk Storage	1.6	1.6
9. Waste Storage	1.4	1.4
<b>Total</b>	<b>25.0</b>	<b>20.5</b>

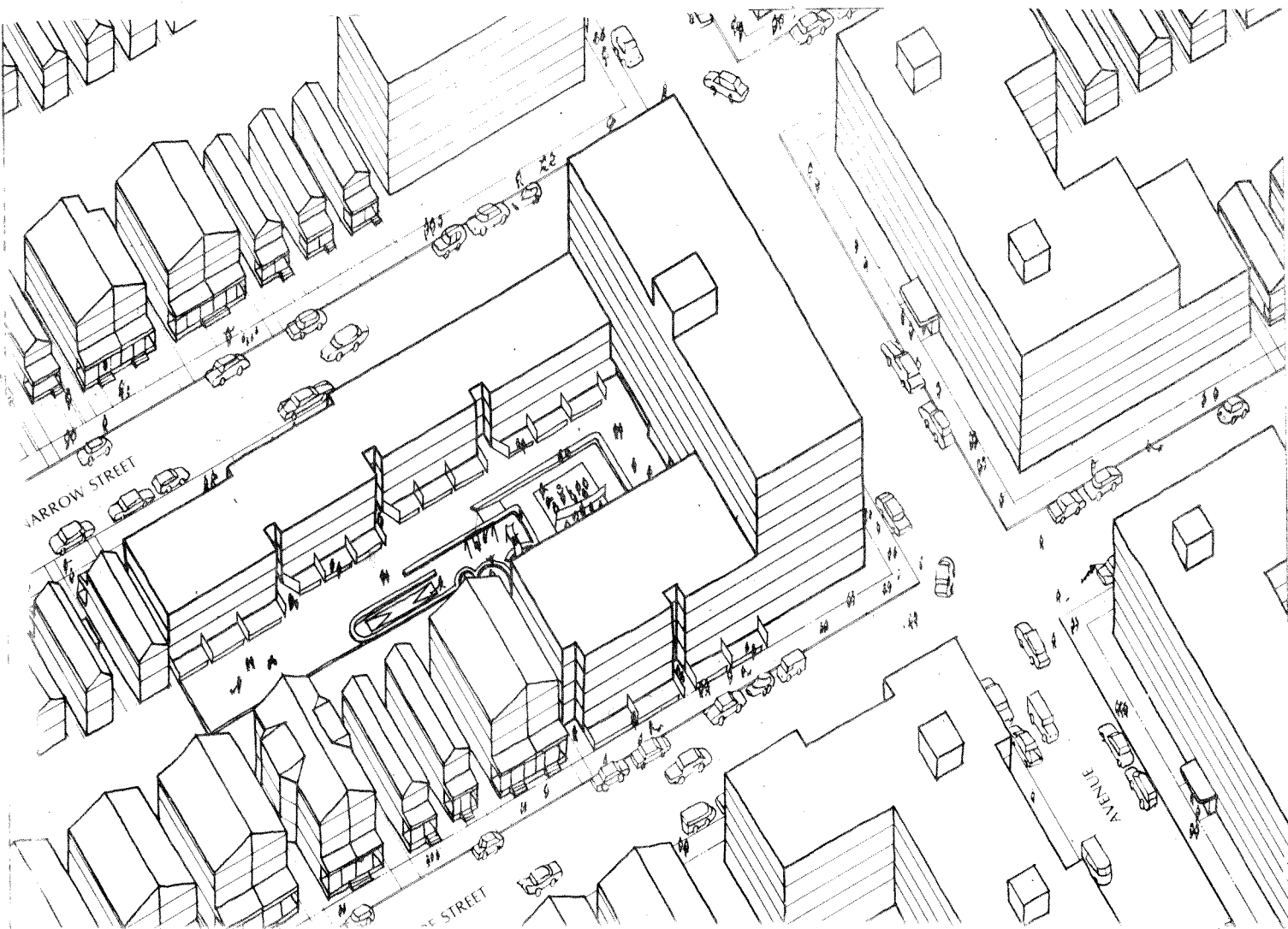




### SCHEME 3

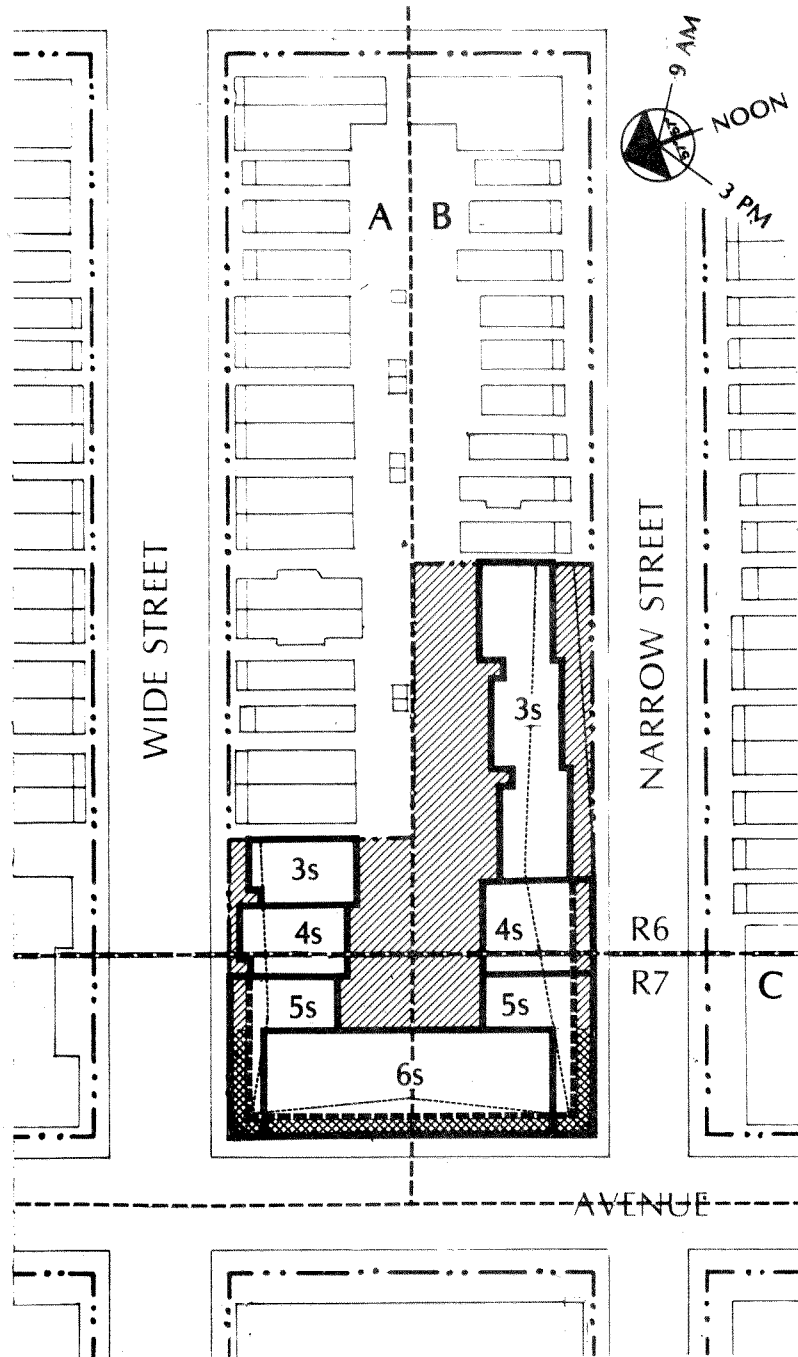
Total 90.0

	max. pts.	points
<b>A. Neighborhood Impact</b>		
1. Offsite Sunlight	8.0	6.8
2. Street Wall Length	4.0	4.0
3. Ground Floor Activity	4.0	3.6
4. Street Wall Height	3.1	3.0
5. Building Height	2.8	2.7
6. Street Trees	2.2	2.8
<b>Total</b>	<b>25.0</b>	<b>22.9</b>
<b>B. Recreation Space</b>		
1. Type and Size	9.4	8.7
2. Sunlight Onsite	5.5	3.4
3. Parking	4.1	2.8
4. Planting	3.1	4.1
5. Trees	2.9	2.4
<b>Total</b>	<b>25.0</b>	<b>21.4</b>
<b>C. Security and Safety</b>		
1. Density of Public Corridor	5.0	5.0
2. Visibility of Public Space to Elevator Doors	5.0	5.0
3. Visibility of Private Outdoor Space from the Lobby	5.0	5.0
4. Surveillance from Apartments	4.4	3.7
5. Entry of Building from Parking Garage or Lot	3.1	3.1
6. Visibility from Elevator Door to Apartment Door	2.5	3.1
<b>Total</b>	<b>25.0</b>	<b>24.3</b>
<b>D. Building Interior</b>		
1. Size of Apartment	4.5	4.5
2. Sunlight in Apartments	3.9	2.2
3. Window Size	3.8	3.8
4. Visual Privacy—Onsite	2.7	2.7
5. Visual Privacy—Offsite	2.7	2.7
6. Cross Ventilation	2.6	0.7
7. Daylight in Public Corridors	1.8	1.8
8. Pram, Bicycle, Bulk Storage	1.6	1.6
9. Waste Storage	1.4	1.4
<b>Total</b>	<b>25.0</b>	<b>21.4</b>

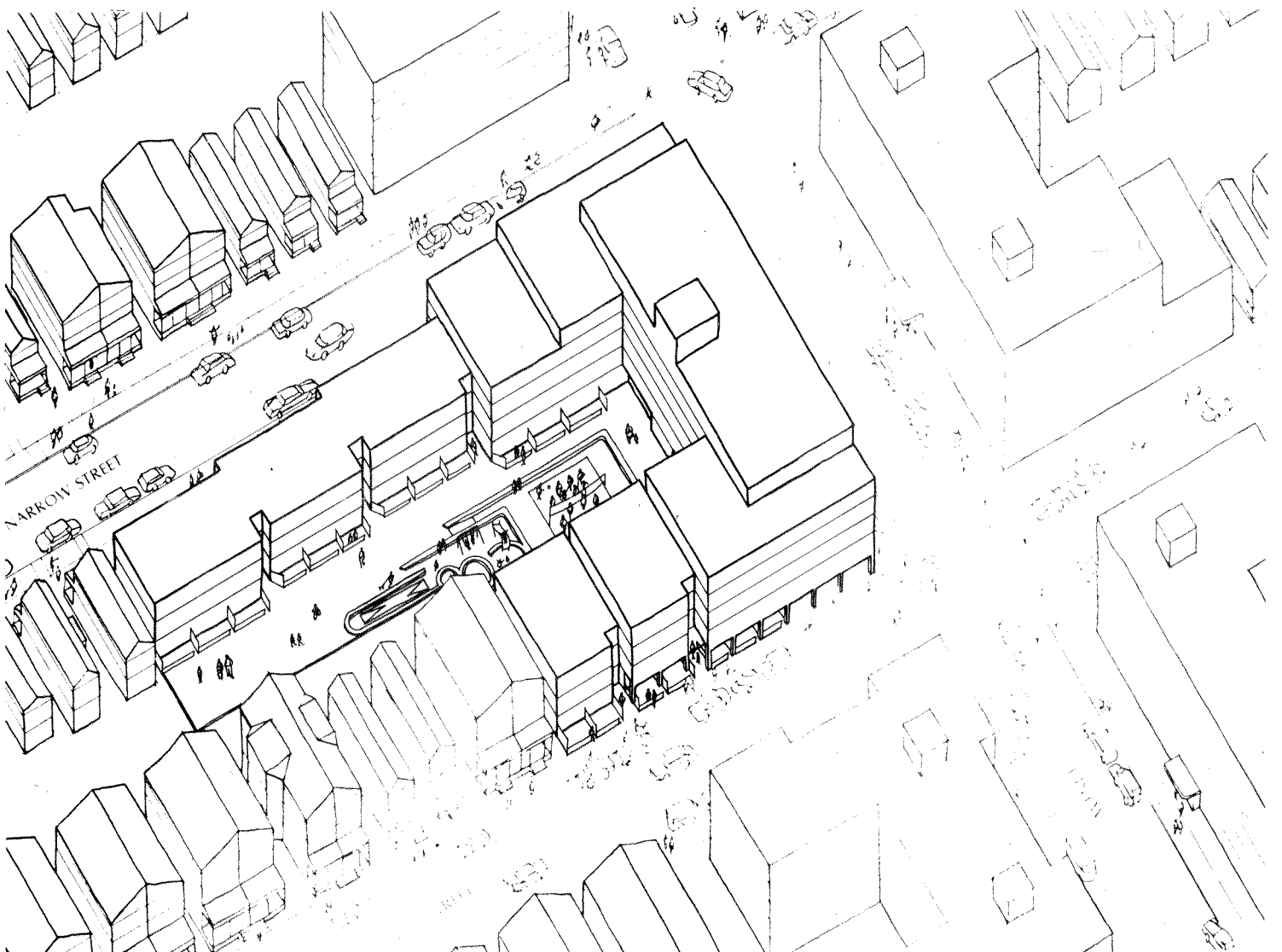


# SCHEME 4

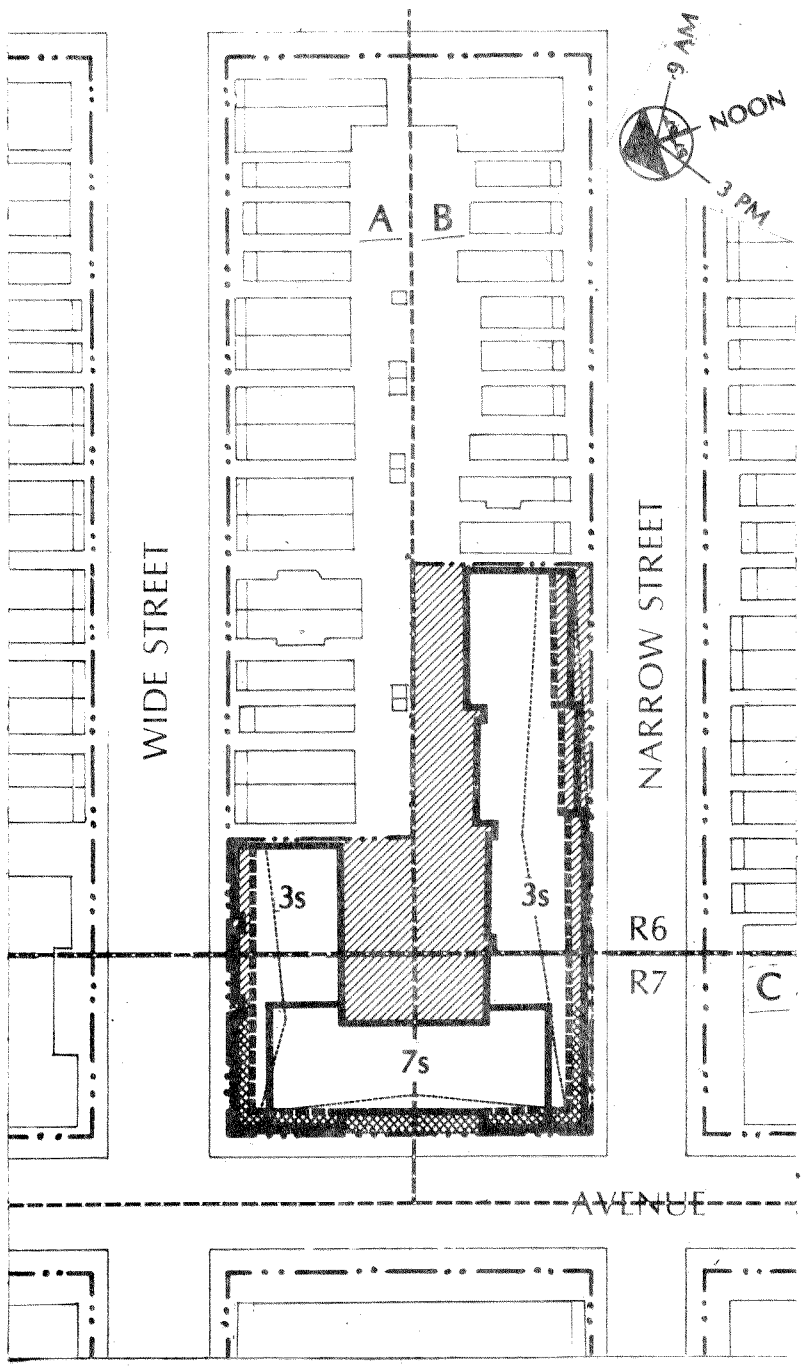
Total **90.2**



	max. pts.	points
<b>A. Neighborhood Impact</b>		
1. Offsite Sunlight	8.0	6.6
2. Street Wall Length	4.0	4.0
3. Ground Floor Activity	4.0	3.6
4. Street Wall Height	3.1	3.1
5. Building Height	2.8	3.0
6. Street Trees	2.2	2.8
<b>Total</b>	<b>25.0</b>	<b>23.1</b>
<b>B. Recreation Space</b>		
1. Type and Size	9.4	8.9
2. Sunlight Onsite	5.5	3.7
3. Parking	4.1	2.8
4. Planting	3.1	4.1
5. Trees	2.9	2.4
<b>Total</b>	<b>25.0</b>	<b>21.9</b>
<b>C. Security and Safety</b>		
1. Density of Public Corridor	5.0	5.0
2. Visibility of Public Space to Elevator Doors	5.0	5.0
3. Visibility of Private Outdoor Space from the Lobby	5.0	5.0
4. Surveillance from Apartments	4.4	3.7
5. Entry of Building from Parking Garage or Lot	3.1	3.1
6. Visibility from Elevator Door to Apartment Door	2.5	2.5
<b>Total</b>	<b>25.0</b>	<b>24.3</b>
<b>D. Building Interior</b>		
1. Size of Apartment	4.5	4.5
2. Sunlight in Apartments	3.9	2.0
3. Window Size	3.8	3.8
4. Visual Privacy—Onsite	2.7	2.7
5. Visual Privacy—Offsite	2.7	2.7
6. Cross Ventilation	2.6	0.4
7. Daylight in Public Corridors	1.8	1.8
8. Pram, Bicycle, Bulk Storage	1.6	1.6
9. Waste Storage	1.4	1.4
<b>Total</b>	<b>25.0</b>	<b>20.9</b>



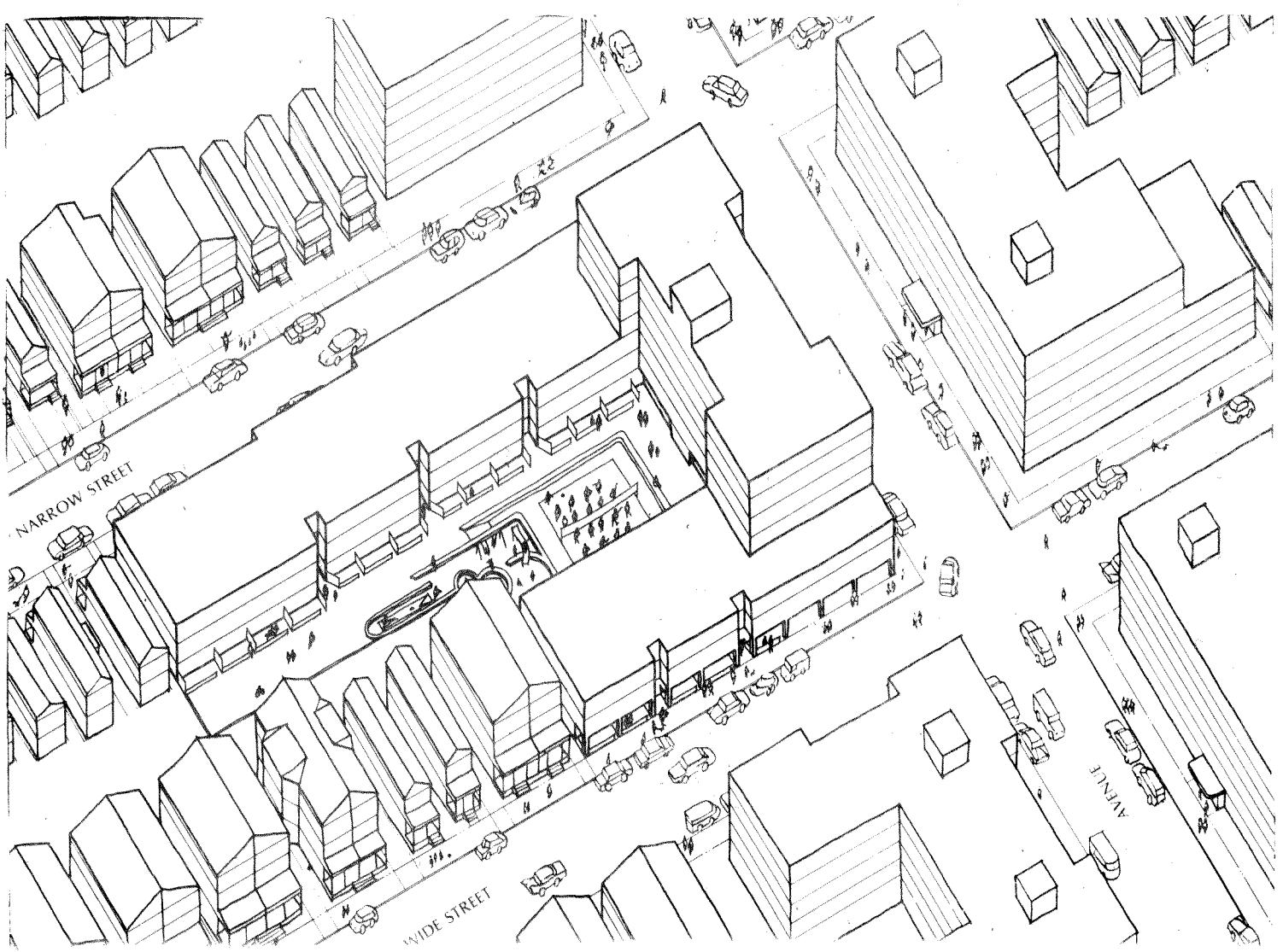


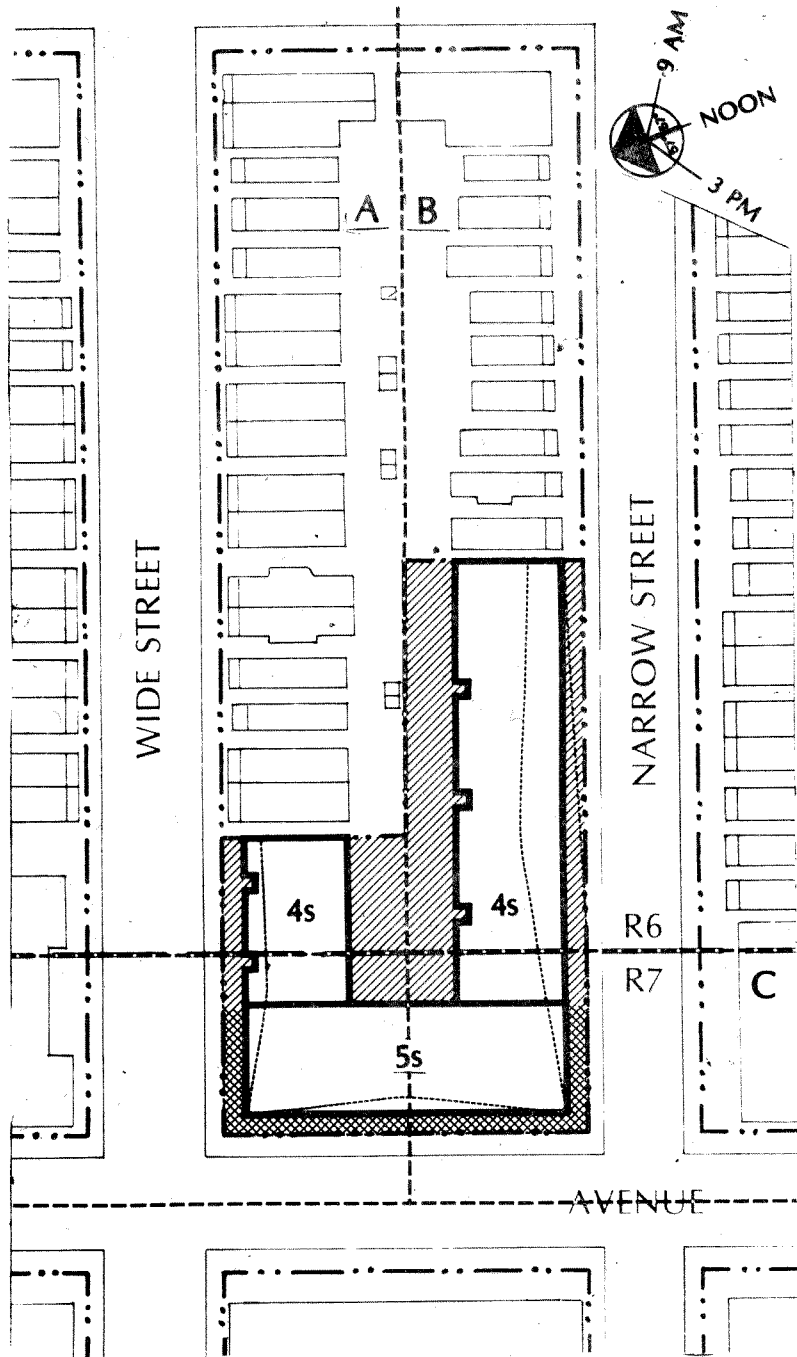


### SCHEME 5

Total **89.9**

	max. pts.	points
<b>A. Neighborhood Impact</b>		
1. Offsite Sunlight	8.0	7.2
2. Street Wall Length	4.0	4.0
3. Ground Floor Activity	4.0	3.6
4. Street Wall Height	3.1	3.1
5. Building Height	2.8	3.1
6. Street Trees	2.2	2.8
<b>Total</b>	<b>25.0</b>	<b>23.8</b>
<b>B. Recreation Space</b>		
1. Type and Size	9.4	8.5
2. Sunlight Onsite	5.5	3.7
3. Parking	4.1	2.8
4. Planting	3.1	4.1
5. Trees	2.9	1.8
<b>Total</b>	<b>25.0</b>	<b>20.7</b>
<b>C. Security and Safety</b>		
1. Density of Public Corridor	5.0	5.0
2. Visibility of Public Space to Elevator Doors	5.0	5.0
3. Visibility of Private Outdoor Space from the Lobby	5.0	5.0
4. Surveillance from Apartments	4.4	4.0
5. Entry of Building from Parking Garage or Lot	3.1	3.1
6. Visibility from Elevator Door to Apartment Door	2.5	2.5
<b>Total</b>	<b>25.0</b>	<b>24.6</b>
<b>D. Building Interior</b>		
1. Size of Apartment	4.5	4.5
2. Sunlight in Apartments	3.9	2.0
3. Window Size	3.8	3.8
4. Visual Privacy—Onsite	2.7	2.7
5. Visual Privacy—Offsite	2.7	2.7
6. Cross Ventilation	2.6	0.3
7. Daylight in Public Corridors	1.8	1.8
8. Pram, Bicycle, Bulk Storage	1.6	1.6
9. Waste Storage	1.4	1.4
<b>Total</b>	<b>25.0</b>	<b>20.8</b>

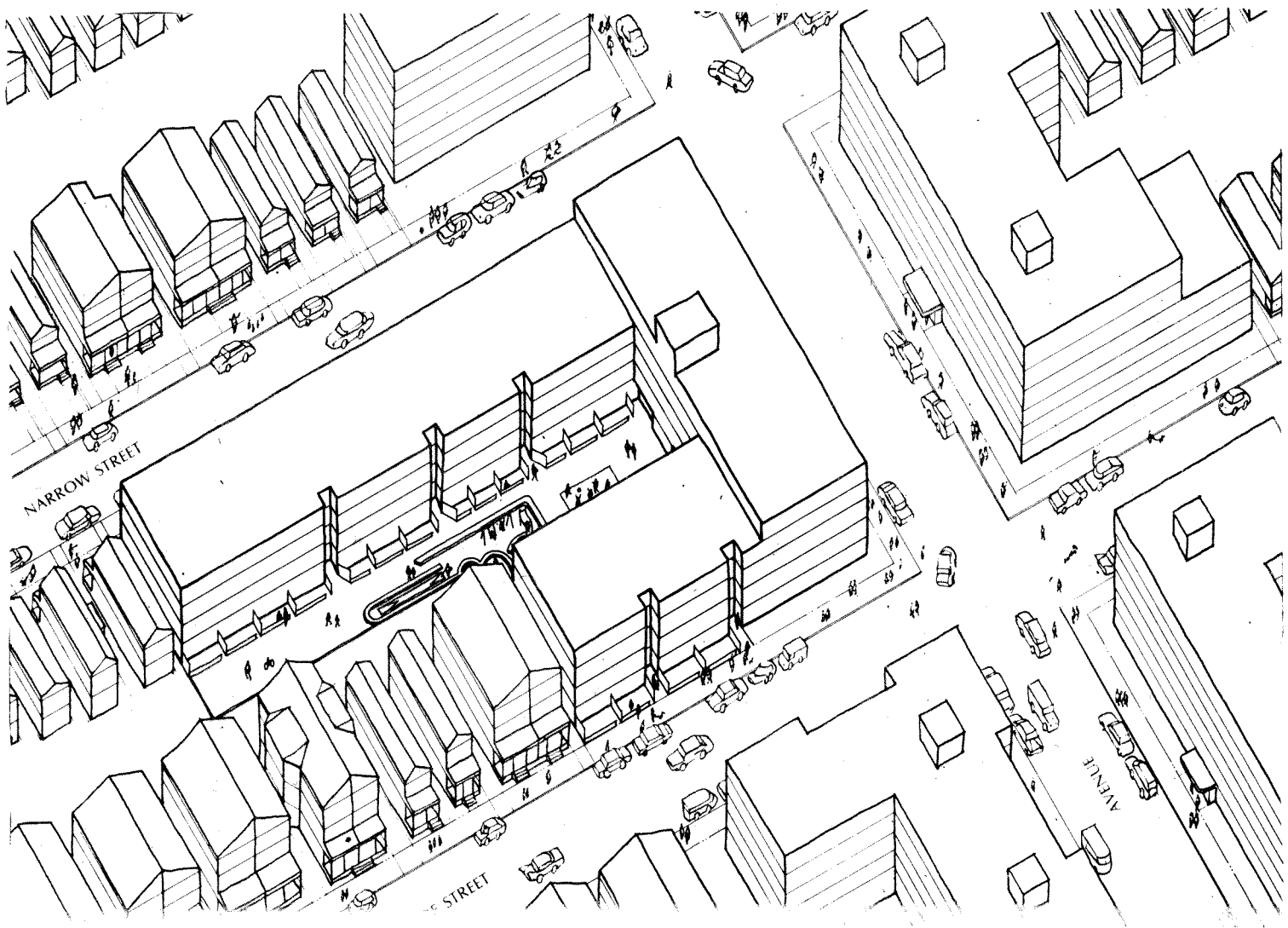


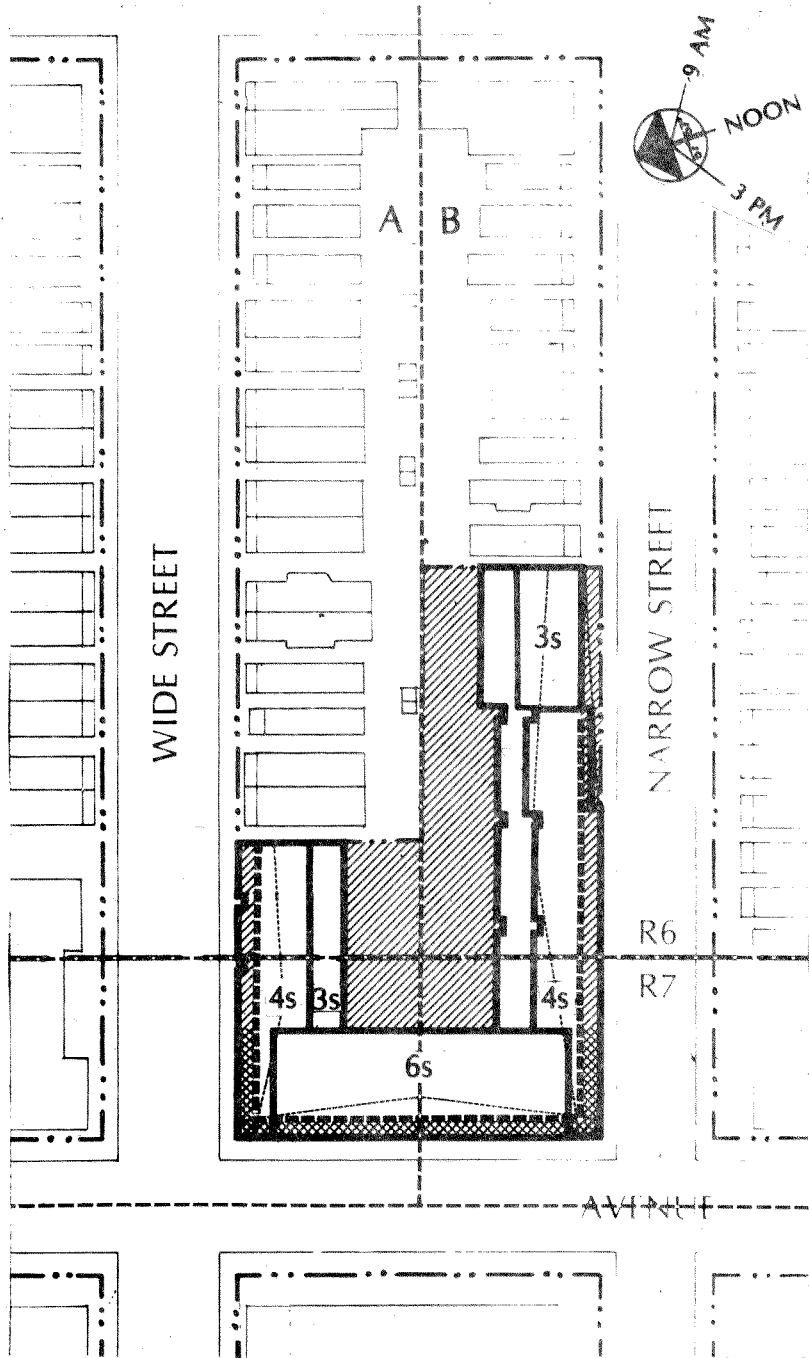


## SCHEME 6

Total **84.7**

	max. pts.	points
<b>A. Neighborhood Impact</b>		
1. Offsite Sunlight	8.0	7.3
2. Street Wall Length	4.0	4.0
3. Ground Floor Activity	4.0	3.6
4. Street Wall Height	3.1	2.9
5. Building Height	2.8	2.9
6. Street Trees	2.2	2.8
<b>Total</b>	<b>25.0</b>	<b>23.5</b>
<b>B. Recreation Space</b>		
1. Type and Size	9.4	5.8
2. Sunlight Onsite	5.5	2.4
3. Parking	4.1	2.8
4. Planting	3.1	4.1
5. Trees	2.9	1.6
<b>Total</b>	<b>25.0</b>	<b>16.7</b>
<b>C. Security and Safety</b>		
1. Density of Public Corridor	5.0	5.0
2. Visibility of Public Space to Elevator Doors	5.0	5.0
3. Visibility of Private Outdoor Space from the Lobby	5.0	5.0
4. Surveillance from Apartments	4.4	4.0
5. Entry of Building from Parking Garage or Lot	3.1	3.1
6. Visibility from Elevator Door to Apartment Door	2.5	2.5
<b>Total</b>	<b>25.0</b>	<b>24.6</b>
<b>D. Building Interior</b>		
1. Size of Apartment	4.5	4.6
2. Sunlight in Apartments	3.9	1.3
3. Window Size	3.8	3.8
4. Visual Privacy—Onsite	2.7	2.7
5. Visual Privacy—Offsite	2.7	2.7
6. Cross Ventilation	2.6	0.1
7. Daylight in Public Corridors	1.8	1.8
8. Pram, Bicycle, Bulk Storage	1.6	1.6
9. Waste Storage	1.4	1.4
<b>Total</b>	<b>25.0</b>	<b>19.9</b>

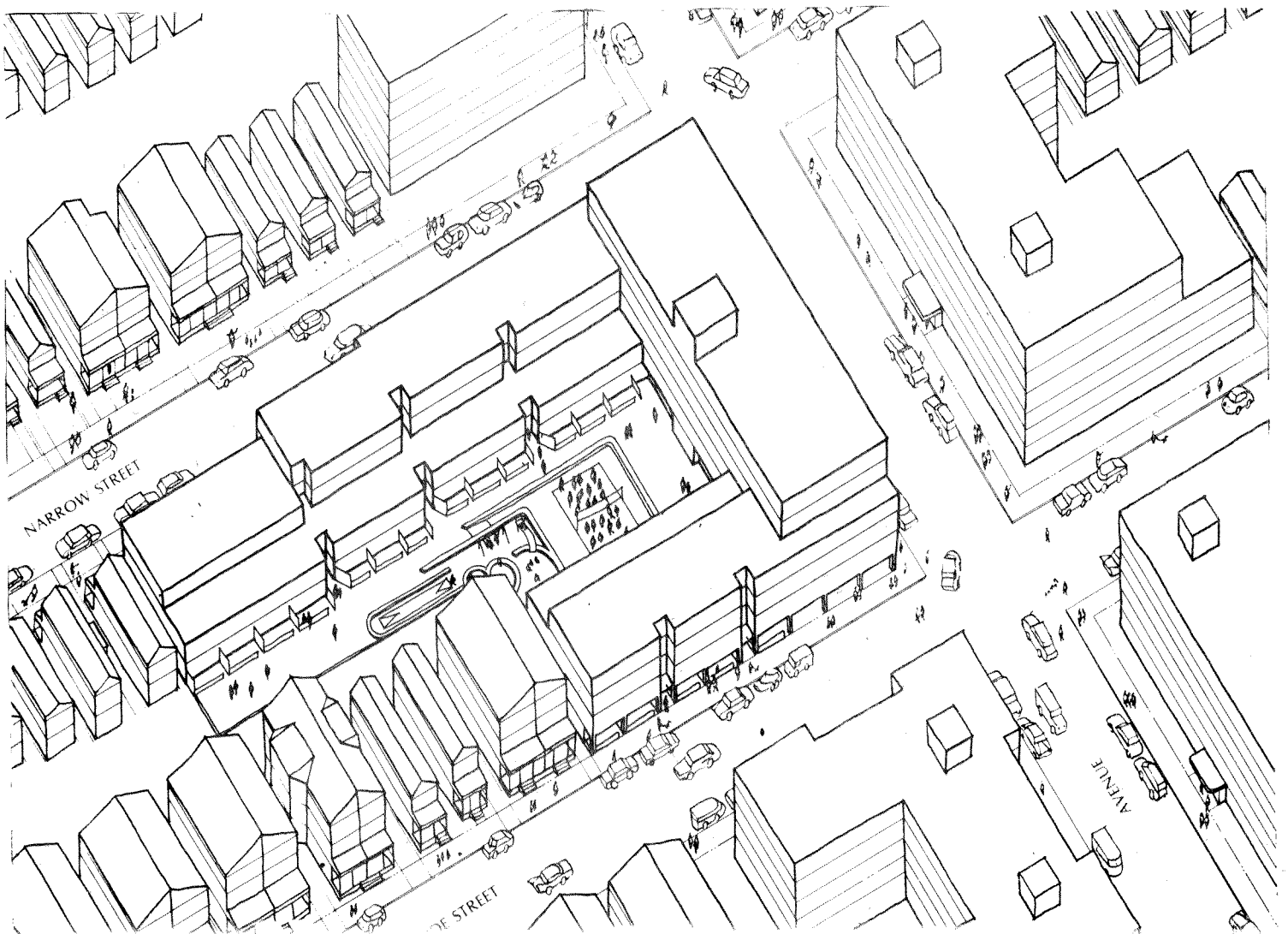




### SCHEME 7

Total **90.4**

	max. pts.	points
<b>A. Neighborhood Impact</b>		
1. Offsite Sunlight	8.0	7.0
2. Street Wall Length	4.0	4.0
3. Ground Floor Activity	4.0	3.6
4. Street Wall Height	3.1	3.1
5. Building Height	2.8	3.1
6. Street Trees	2.2	2.8
<b>Total</b>	<b>25.0</b>	<b>23.6</b>
<b>B. Recreation Space</b>		
1. Type and Size	9.4	8.5
2. Sunlight Onsite	5.5	3.8
3. Parking	4.1	2.8
4. Planting	3.1	4.1
5. Trees	2.9	1.6
<b>Total</b>	<b>25.0</b>	<b>20.8</b>
<b>C. Security and Safety</b>		
1. Density of Public Corridor	5.0	5.0
2. Visibility of Public Space to Elevator Doors	5.0	5.0
3. Visibility of Private Outdoor Space from the Lobby	5.0	5.0
4. Surveillance from Apartments	4.4	4.0
5. Entry of Building from Parking Garage or Lot	3.1	3.1
6. Visibility from Elevator Door to Apartment Door	2.5	2.5
<b>Total</b>	<b>25.0</b>	<b>24.6</b>
<b>D. Building Interior</b>		
1. Size of Apartment	4.5	4.5
2. Sunlight in Apartments	3.9	2.3
3. Window Size	3.8	3.8
4. Visual Privacy—Onsite	2.7	2.7
5. Visual Privacy—Offsite	2.7	2.7
6. Cross Ventilation	2.6	0.6
7. Daylight in Public Corridors	1.8	1.8
8. Pram, Bicycle, Bulk Storage	1.6	1.6
9. Waste Storage	1.4	1.4
<b>Total</b>	<b>25.0</b>	<b>21.4</b>



Elements	Formula			points
	max. pts.	Street District	Street District	
1. Offsite—Sunlight	8.0 or 10.0 - 8.0 or 10.0	$\left[ \frac{a}{A} \frac{7718 SF}{44119 SF} \right]$		= 6.6
		<b>A</b>	<b>B</b>	<b>C</b>
	max. pts.	max. pts.	max. pts.	max. pts.
2. Street Wall Length	4.0 or 6.0	$\left[ \frac{b}{B} \frac{165'}{157'-175'} \right] = 4.0$	$\left[ \frac{b''}{B''} \frac{315'}{292'-325'} \right] = 4.0$	$\left[ \frac{b'''}{B'''} \frac{180'}{180'-200'} \right] = 4.0$
3. Ground Floor Activity	4.0 or 5.0	$\left[ \frac{c}{C} \frac{1560 SF}{1733 SF} \right] = 3.6$	$\left[ \frac{c}{C} \frac{2977 SF}{3308 SF} \right] = 3.6$	$\left[ \frac{c}{C} \frac{1701 SF}{1890 SF} \right] = 3.6$
4. Street Wall Height	3.1 or 0.0	$\left[ \frac{d}{D} \frac{46'}{15'-45'} \right] \times$	$\left[ \frac{d}{D} \frac{37'}{5'-35'} \right] \times$	$\left[ \frac{d}{D} \frac{31'}{50'-60'} \right] \times$
5. Building Height	3.1 or 0.0	$\left[ \frac{b}{B} \frac{165'}{157'-175'} \right] = 3.0$	$\left[ \frac{b}{B} \frac{315'}{292'-325'} \right] = 2.9$	$\left[ \frac{b}{B} \frac{180'}{180'-200'} \right] = 3.1$
6. Street Trees	3.1 or 0.0	$\left[ \frac{e}{E} \frac{57'}{15'-45'} \right] = 2.4$	$\left[ \frac{e}{E} \frac{46'}{5'-35'} \right] = 2.4$	$\left[ \frac{e}{E} \frac{66'}{50'-80'} \right] = 3.1$
	2.8 or 4.0	$\left[ \frac{f}{F} \frac{7}{7} \right] = 2.8$	$\left[ \frac{f}{F} \frac{13}{13} \right] = 2.8$	$\left[ \frac{f}{F} \frac{8}{8} \right] = 2.8$
	DISTRICT SUBTOTAL	15.8	15.7	16.6
District Multiplier	$\left[ \frac{B'}{(B'175') + (B''225') + (B'''200')} \right] = .25$	$\left[ \frac{B''}{(B''175') + (B'''225') + (B''''200')} \right] = .46$	$\left[ \frac{B'''}{(B''175') + (B''''225') + (B''''''200')} \right] = .29$	DISTRICT TOTAL
	DISTRICT TOTAL	4.0	7.2	4.8

District Totals + Sunlight  
**TOTAL** 22.6

# NEIGHBORHOOD IMPACT

Project SCHWMC 1  
Date MARCH 1975

# RECREATION

Project Scheme 1.  
Date MARCH 1975

Elements	max. pts.	Formula	points
1. Type and Size	9.4	$\left[ \frac{a}{A} \frac{2880 SF}{2660 SF} \right] \div 4 +$ $\frac{b}{B} \frac{1780 SF}{1780 SF} \div 4 +$ $\frac{c}{C} \frac{6650 SF}{7380 SF} \div 4 +$ $\frac{d}{D} \frac{16,370 SF}{18,340 SF} \div 4 = 8.9$	
2. Sunlight—Onsite	5.5	$5.5 - 5.5 \left[ \frac{e}{F} \frac{9051 SF}{24800 SF} \right] = 3.5$	
3. Parking	4.1	$\left[ \frac{f}{F} \frac{1020 LF}{1020 LF} \right] = 4.1$	
4. Planting	3.1	$\left[ \frac{g}{G} \frac{10714 SF}{11,904 SF} \right] = 2.8$	
5. Trees	2.9	$\left[ \frac{h}{H} \frac{150''}{187''} \right] = 2.4$	
<b>TOTAL</b>			<b>21.7</b>

	Elements	max. pts.	Formula	points
1.	Density of Building Corridor	5.0	$\left[ \frac{a}{A} \frac{590 \text{ rooms}}{590 \text{ rooms}} \right] = 5.0$	5.0
2.	Visibility from Public Space to Elevator Doors	5.0	$\left[ \frac{b}{B} \frac{2 \text{ doors}}{2 \text{ doors}} \right] = 5.0$	5.0
3.	Visibility of Private Outdoor Space from Lobby	5.0	$\left[ \frac{c}{C} \frac{17 \text{ 050 SF}}{17 \text{ 050 SF}} \right] = 5.0$	5.0
4.	Surveillance from Apartments	4.4	$\left[ \frac{d}{D} \frac{17 \text{ apts.}}{91 \text{ apts.}} \right] = 3.7$	3.7
5.	Entry of Building from Parking Garage or Lot	3.1	$\left[ \frac{e}{E} \frac{95 \text{ spaces}}{95 \text{ spaces}} \right] = 3.1$	3.1
6.	Visibility from Elevator Door to Apartment Door	2.5	$\left[ \frac{f}{F} \frac{147 \text{ apt. doors}}{147 \text{ apt. doors}} \right] = 2.5$	2.5

TOTAL 24.3

# SAFETY AND SECURITY

Project Scheme 1.  
Date MARCH 1975

# BUILDING INTERIOR

Project Scheme 1.  
Date March 1975

Elements	max. pts.	Formula	points
1. Size of Apartment	4.5	$\left[ \frac{a}{A} \frac{135,125 \text{ sf}}{135,125 \text{ sf}} \right] - 3 =$	4.5
2. Sunlight in Apartments	3.9	$\left[ \frac{b}{B} \frac{97 \text{ apts.}}{147 \text{ apts.}} \right] =$	2.5
3. Window Size	3.8	$\left[ \frac{c \text{ assume full compliance}}{C} \right] - 1.7 =$	3.8
4. Visual Privacy—Onsite	2.7	$\left[ \frac{d}{D} \frac{147 \text{ apts}}{147 \text{ apts}} \right] =$	2.7
5. Visual Privacy—Offsite	2.7	$\left[ \frac{(e \ 640')}{E \ 660'} + (e' \ 20') \right] =$	2.7
6. Cross Ventilation	2.6	$\left[ \frac{4.6}{B} \frac{f}{B} \right] =$ If (f/b) is .0 to .33 $\left[ \frac{2.4}{B} \frac{f \ 59 \text{ apts}}{147 \text{ apts}} \right] + .7 =$ 1.7 If (f/b) is .33 to .66 $\left[ \frac{f}{B} \right] + 1.6 =$ If (f/b) is .66 to 1.00	
7. Daylight in Building Corridors	1.8	$\left[ \frac{g}{B} \frac{147 \text{ apts.}}{147 \text{ apts.}} \right] =$	1.8
8. Pram, Bicycle and Bulk Storage	1.6	$\left[ \frac{h}{H} \frac{1850 \text{ sf}}{1850 \text{ sf}} \right] =$	1.6
9. Waste Storage	1.4	$\left[ \frac{i}{I} \frac{9}{9} \right] =$	1.4

**TOTAL**  
**22.7**



### Zoning Tabulations

Zone	R6	R7	TOTAL
Site Size	30,000 <sup>SF</sup>	20,000 <sup>SF</sup>	50,000 <sup>SF</sup>
FAR	2.43	3.44	—
Floor Area	72,900 <sup>SF</sup>	68,800 <sup>SF</sup>	141,700 <sup>SF</sup>
Lot Area/Room	96 <sup>SF</sup>	72 <sup>SF</sup>	—
Rooms	312 rms.	278 rms	590 rms.
% Parking	70%	60%	—
No. of Spaces	48	47	95

Apt. Type	S	1 BR	2 BR	3 BR	4 BR	TOTAL
Number	14	59	59	15	—	147
Size/Apt.	605 <sup>SF</sup>	785 <sup>SF</sup>	1035 <sup>SF</sup>	1285 <sup>SF</sup>	—	—
Total SF	8470	46315	61065	19275	—	135,125

### Housing Quality Parameters

Street District	A		B		C		BU NBU
	Actual	Range	Actual	Range	Actual	Range	
Street Wall Length	175'	157'-175'	325'	292'-325'	200'	180'-200'	✓
	Median	Range	Median	Range	Median	Range	
Street Wall Height	30'	15'-45'	20'	5'-35'	65'	50'-80'	
	Median	Range	Median	Range	Median	Range	
Building Height	30'	15'-45'	20'	5'-35'	65'	50'-80'	
	Median	Range	Median	Range	Median	Range	

Neighborhood Impact

22.6

Security and Safety

24.3

Recreation Space

21.7

Building Interior

22.7

Total Recreation Space	SF
Adult Use Space	2900 SF
Child Use Space	1780 SF
Mixed Use Space	7380 SF
Free Use Space	18,340 SF
Max. Semi-Private Space	4585 SF

PROJECT TOTAL

91.3

# SUMMARY SHEET

Project Scheme 1.

Date MARCH 1975