QUALITY HOUSING ZONING: APPLICATION TO TOKYO

by

KEISUKE ENOKIDO

Bachelor of Law, Sophia University (1982)

Submitted to the
Department of Urban Studies and Planning
in Partial Fulfillment of the Requirements for the Degree of

MASTER OF CITY PLANNING
at the

MASSACHUSETTS INSTITUTE OF TECHNOLOGY
May 1993

© Keisuke Enokido 1993

The author hereby grants to MIT permission to reproduce and to distribute copies of this thesis document in whole or in part.

Signature of Author

Department of Urban Studies and Planning
May 17, 1993

Certified by

Gary Hack
Professor of Urban Studies and Planning
Thesis Supervisor

Accepted by

Ralph Gakenheimer
Chairperson, Master of City Planning Committee
Department of Urban Studies and Planning

JUN 03 1993
DISCLAIMER OF QUALITY

Due to the condition of the original material, there are unavoidable flaws in this reproduction. We have made every effort possible to provide you with the best copy available. If you are dissatisfied with this product and find it unusable, please contact Document Services as soon as possible.

Thank you.

This thesis (Enokido, Keisuke; 1993) contains B&W images only. This is the best copy available.
QUALITY HOUSING ZONING: APPLICATION TO TOKYO

by

KEISUKE ENOKIDO

Submitted to the Department of Urban Studies and Planning on May 19, 1993 in partial fulfillment of the requirements for the Degree of Master of City Planning.

ABSTRACT

A theoretical study and field research were carried out on the applicability of the Quality Housing Program (QHP), a downtown residential zoning program in New York City adopted in 1987, to Kanda, Tokyo. Kanda, a mixed use downtown district, is suffering from serious loss of its residential population due to consistent activities which replace housing for office space. The coarseness and prescriptiveness of existing zoning are often given as major reasons why destructive developments in Kanda have been overlooked. The necessity for fine-grained flexible zoning is often pointed out. QHP is composed of fine-grained flexible regulations and, while not perfect, shows its high performance in New York City.

A comparison of the urban form of Kanda and New York City showed it was impossible to adopt the regulations of QHP directly to Kanda because of the difference in block shape and street pattern. Rather, the concept of QHP, which respects the quality of comprehensive residential environment, was found to be applicable. The instruments of controlling building bulk are sky exposure plane and setback. Additional critical conditions in Kanda are downzoning and reinforcing walkway conditions.

The establishment of the districts containing the traditional form of narrow internal street, Roji, can be the first step to programming above-mentioned mechanism to cope with non-contextual development and reinforce the identity of Kanda. Also specifying fine-grained land use according to each district's character is necessary.

Thesis Supervisor: Professor Gary Hack
Department of Urban Studies and Planning
To Sanae

(iii)
CONTENTS

Introduction 1

I. Quality Housing Program 6

1. Overview of New York City Zoning Experiences 6

2. Strategy of The Quality Housing Program 30

3. Current Issues 52

II. Issues Involved in Kanda 64

4. Overview of Kanda Today 64

5. Development Policy 70

6. Physical Structure 72

7. Finding Values 74


9. Implementation and Impacts 108

III. Reconsideration of The Current Redevelopment Image by Chiyoda Ward 110

IV. Conclusion 115

Bibliography 118
INTRODUCTION

The Tokyo Metropolitan area has been rapidly losing its residents since 1988, and in 1993 the population finally fell below the level of 1961. On the other hand, the city's daytime population has been continuously increasing. As of January 1993, the residential population is slightly less than 8,000,000, and the daytime population is about 14,500,000. It is said that the most relevant cause of the loss of residents is the rapid increase of land prices brought about by the land speculation boom as developers bought properties for office space that began in central Tokyo in the early 1980s.

The concentration of business activities in Tokyo draws more and more people and increases the number of long distance commuters, because they cannot afford to live closer to their working place. This phenomenon is reinforcing the growth of Tokyo as a consumers' city, while it is leading to the deterioration of the quality of the residential environment. Facing this unfavorable trend, the Tokyo metropolitan government articulated its policy in its publication The Planning of Tokyo: 1992 as follows.

In the future it will become necessary to direct the use of the fruits of economic growth to improve the quality of life, and to provide lifestyles for residents rich in humanistic content, in which not only
economics but also culture and the living environment are treated as important.

The introduction of a cultural viewpoint into all facets of life and urban development will be promoted, with importance attached to creating a city that is enriched and has a beautiful appearance.

To solve the increasingly serious housing problem, the supply of public housing will be steadily increased. Efforts will be made to improve it, housing and measures will be taken to promote increased private construction (P.16).

Politicians, public officials, planners, residents, and business people agree that more effective and strict land use regulation is necessary to control today's growth trends in Tokyo. The most drastically changing area is the traditional downtown mixed residential/commercial area located in central Tokyo, which is suffering from both a serious reduction in the residential population and poorly planned land use changes. Under such circumstances, a new system of zoning regulations is frequently discussed as a powerful remedy for the problems. Many people agree that the existing zoning is not functioning to support the sound growth of Tokyo. Today, various planning alternatives, such as more fine-grained zoning, district planning, and urban design guidelines, are being studied, as are other actions, such as taxation and linkage programs. Each method has its advantage though zoning can be considered the most fundamental urban physical planning instrument.

The biggest problems of the existing Japanese zoning system is its coarseness and rigidity. Several zoning revisions have been made since the current urban planning system was enacted in 1968, but they are still falling behind
reality. The fallacy of the existing zoning system is most apparent in built-up downtown Tokyo, where real estate investment is consistent. It is observed that new office buildings are replacing older houses, and the location of small family businesses. Even many of existing old houses are being converted to office use. In addition, new housing units built recently are rapidly being converted into offices for service industries such as professional business services, software development firms, custom design companies.

Kanda, one of the traditional downtown mixed residential/commercial districts in Tokyo, is now considered the most problematic district in terms of its physical urban form and socioeconomic issues. Kanda shows the dynamic relationship between strong pressure for development and rigid and coarse zoning.1 This study focuses on Kanda; it identifies the issues contributing to the invasion of sporadic development in this district and treats the issues based on Quality Housing Program (QHP).

The Japanese often compare New York City to Tokyo when they talk about urban problems because both are modern, high

---

1. Conventional zoning listed eight Use Districts: three residence districts, a neighborhood commercial district, a commercial district, and three manufacturing districts. Main purpose was to segregate manufacturing from residence. The latest amendment (in 1992) divided three residence districts into seven. It, then, targets to segregate office from residence.
density cities that share similar urban problems. New York City provides interesting urban development controls that planners in Tokyo can consider. New York City has been dealing with zoning issues since the establishment of the first comprehensive zoning in 1916 and can be considered as the showcase of zoning regulations. In the process of zoning evolution, the 1976 Housing Quality Program (HQP) can be regarded as a remarkable zoning method, in that it was the first zoning system that aimed at influencing, in a fine-grained way, the multi-family contextual development and the first to adopt a performance standard system. It was superseded by the Quality Housing Program (QHP) in 1987. This program modified HQP's performance standards. The performance of QHP was closely connected with New York City's unusually uniform rectangular blocks. However, QHP is applicable not only to New York City; this study, will examine the applicability of New York City's QHP to Kanda.

QHP's goal is to maintain the livability of multi-family housing, maintaining neighborhoods' traditional urban form. QHP does not aim at changing the built environment drastically, as Urban Renewal did. Rather, it tries to fine-tune existing urban form. The most significant role imposed on QHP is to encourage contextual urban developments. The importance of the context is briefly described below by Jonathan Barnett.
Designing individual buildings, one at a time, is not at all the same thing as designing a city. Even selected examples of great architecture do not necessarily look well together as a group. This point was brought home to me when I stopped by the office of a friend who teaches an introductory course at an architectural school. He had assigned his students the job of building scale models of some of the most famous houses in the world, and there they all were sitting in rows on his desk. It looked like a scale-model slum. Frank Lloyd Wright's Robie House does not look well next to Jefferson's Monticello. Real-life examples of something like the same phenomenon can be found in New Haven, Connecticut, and Columbus, Indiana. In both places special circumstances have created a collection of fine modern buildings, and in both cases the result as city design is a good deal less than the sum of its parts (1982, P.213).

The goal of this study is to identify those physical characteristics most important to the identity of a neighborhood. And to examine ways to program these characteristics into zoning systems relying on QHP's approach. Direct application of Quality Housing Program to Kanda is not the purpose of this study, instead the applicability of its concept is discussed.
I. Quality Housing Program

1. Overview of New York City zoning experiences

Here the historical backgrounds and building bulk regulations of major zoning systems adopted in New York City are reviewed.

(1) 1916 Zoning

1) Background

The first comprehensive zoning in the United States was formulated in New York City and was adopted in 1916. It aimed at guaranteeing a minimum standard of light and air to both building inhabitants and pedestrians as well as districting land use.\(^2\) The "Street wall concept" and "sky exposure plane" were major technical innovations in the form of zoning (Midtown Development Project, Draft Report, City of New York, 1980). Since 1916 zoning was too rigid and too coarse to cope with diverse and changing needs in urban developments, many amendments had to be added to it. As a result, it almost lost its legal consistency. Although bulky pyramidal buildings built under 1916 zoning were criticized by the people who approved the 1961 comprehensive zoning

\(^2\) Nine Use Districts were listed: a residence district, four retail districts, two business districts, one manufacturing district, and an unrestricted district.
amendment, it is true that the urban landscape that was formed before 1961 came to be perceived by New Yorkers as traditional New York City urbanscape with continuous street walls (Figure 1). It is said that this traditional urbanscape was first questioned by the Seagram Building, built in 1950. A continuously integrated street wall, one of the physical values which was supported by HQP, was formed from 1916 through 1961.

Figure 1. Continuous street walls along Park Avenue.
Figure 2. Views formed by typical 1916 "wedding cake" buildings. (An Introduction To Urban Design).
2) Height and Setback regulation

Height and setback were the function of street width.

Figure 3. New York City's 1916 street-wall and sky-exposure concept. (Public Street for Public Use).

(2) 1961 Zoning

1) Background

A comprehensive zoning amendment called "Incentive Zoning" was made in 1961. Regulating building bulk, the floor area ratio, as well as a floor area bonus for open space, plazas, and arcades the new concept was introduced. The 1961 zoning aimed at increasing public open space by granting a floor area bonus.
The new zoning encouraged towers with low coverage, which resulted in destroying New York City's traditional urbanscape composed of the continuous street walls. People involved did not pay special attention to maintaining this traditional sense of place. Their strong interest was in the efficient distribution of light and open space and modern buildings. They needed new instruments that could bring the city a new harmonious urban environment with efficiency. This practical need seemed to be fulfilled by Le Corbusier's utopianism. His ideal city indicated them the direction of the modern age city. Le Corbusier denied the organic city; the city that emerged slowly as the result of many individual decisions was a thing of the past (Fishman, 1982, P.190). His idea of offering resident density and open space at once in the same place, such as "the tower in a park" or "the city in the park," was persuasive. His utopian visions of realizing equal access to sun and open space looked possible supported by technological advancements.

However, the utopian approach of the 1961 zoning, was not successful in New York City because it broke traditional residential and commercial urbanscape, producing discontinuous street walls by allowing towering buildings to be greatly set back from the street line. By doing this, the zoning failed to create the modern age urbanscape that was
loved by residents. Also, the zoning could not supply open space to people efficiently because it aimed heavily at supplying open space and did not focused on how it would be used and by whom.³

Figure 4. Typical 1961 residential towers.

³. Open Space was mostly used as outdoor parking.
2) Height and Setback Regulation

Alternate provisions (except R1 through R5) permit the following options if a lot-width open area of specified depth (depth of optional front open area) is provided.

   a. Higher front walls
   b. A steeper sky exposure plane
   c. No initial setback distance
Tower provisions permit the following options if towers are set back specified distances from the street line in certain districts.

A tower (the portion of a building which penetrates a sky exposure plane) may rise to any height, provided the FAR is not exceeded.

a. On lots of over 20,000 square feet, towers may cover no more than 40 per cent of their lots.

b. On lots of under 20,000 square feet, towers may cover a greater percentage of the lot, up to 50 per cent for lots on a sliding scale.

FAR and room bonus are provided for open space or plaza. Bonus provision is an incentive for developers.

a. Bonus for open space

• Floor Area Bonus: In R5 through R9 districts, every required increase in the Open Space Ratio\(^4\) results in an increase in the permitted FAR.

• Room Bonus: Every increase in the Open Space Ratio

---

4. Open Space Ratio = 100 x open space/floor area
also results in an increase in the number of rooms permitted on the lot.

b. Bonus for plazas, plaza-connected open areas and arcades (in high bulk residence and commercial districts, and M1-6 district).

• Floor Area Bonus: The provision of plazas, plaza-connected open areas, and arcades.

Figure 6. Basic provisions.
h is the height of the alternate sky exposure plane
s is the depth of the optional front open area

Figure 7. Bonus provisions.
### RESIDENTIAL HEIGHT AND SETBACK REQUIREMENTS

#### Standard Regulations

<table>
<thead>
<tr>
<th>District</th>
<th>Initial Setback Distance (in feet)</th>
<th>Maximum Height of Front Wall or Building within Setback Distance (in feet)</th>
<th>Sky Exposure Plane</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1 to R4</td>
<td>None</td>
<td>Street level</td>
<td>Height above Street Line or Front Yard Line (in feet)</td>
</tr>
<tr>
<td>R5</td>
<td>None</td>
<td>Street level</td>
<td>Slope over Zoning Lot (vertical distance to horizontal distance)</td>
</tr>
<tr>
<td>R6 and R7</td>
<td>20</td>
<td>60</td>
<td>60²</td>
</tr>
<tr>
<td>R8 to R10</td>
<td>20</td>
<td>85</td>
<td>85²</td>
</tr>
</tbody>
</table>

#### Alternate Regulations (R6 to R10)

<table>
<thead>
<tr>
<th>District</th>
<th>Depth of Optional Front Open Area (in feet)</th>
<th>Sky Exposure Plane</th>
</tr>
</thead>
<tbody>
<tr>
<td>R6 and R7</td>
<td>15</td>
<td>Narrow Street</td>
</tr>
<tr>
<td>R8 to R10</td>
<td>15</td>
<td>Wide street</td>
</tr>
</tbody>
</table>

1 Above front yard line.
2 Above street line.

Figure 8. The 1961 residential height and setback requirements: standard and alternative regulations. (Zoning Handbook, 1961).

(3) Housing Quality Program

1) Background

In order to prevent the destruction of the urban form of the residential districts by a 1961 incentive zoning, field research that aimed at finding typical residential building types, was carried out by the city. The result was the establishment of the Housing Quality Program (HQP), which was
the first performance standard based and context based zoning for residential districts in 1976.

When city planners started field research, they did not think that zoning was the only solution. Other methods, such as urban design guidelines and design reviews, were being considered until they came up with the idea of the performance standard. This was because they found it was impossible to decide a specific building type that could be considered "typical." They found that both building forms and residents' preferences were too diverse to summarize. The idea of aesthetic zoning became less important. Their efforts to understand how local residents look at their living environments and what values are respected have to be considered.
Figure 9. The Belgravia: a HQP building in Upper East Side Manhattan.
Figure 10. Montana: a HQP building in Upper West Side Manhattan.

2) Height and setback regulation

a. Street Wall Height
The height is decided by finding the median height of the street walls of the existing buildings within the "Street District" and on the same side of the street. Up to 15 feet may be added to or subtracted from the median height.

Figure 11. Street district. (reprinted from Guide To Housing Quality Programs).
Figure 12. Existing street wall height. (reprinted from Guide To Housing Quality Programs).

b. Building Height

The height is decided by finding the median height of all roof surfaces of existing buildings on both sides of the street within the "Street District."
Figure 13. Existing building heights. (reprinted from Guide To Housing Quality Programs).

c.Setback Distance (Street Wall Polygon).

The street wall of the proposed building should be located in a "Street Wall Polygon," which is determined by the location of adjoining building setbacks and the street line.
Figure 14. Street Wall Polygon. (reprinted from Guide To Housing Quality Programs).

(4) Quality Housing Program

1) Background

The Quality Housing Program is also a residential zoning system that was adopted as a part of zoning amendments and as
a revision of HQP in 1987. QHP was basically designed as As-of-Right zoning. The program only regulates the design and the program of an individual residential building. One should note that QHP functions in conjunction with Contextual Zoning, which is imposed district-wide. The major task of both zoning resolutions is to maintain the traditional physical context of each neighborhood in New York City. A Quality Housing Program reflects the residents' needs specific to New York City; however, its concept, targeting the fine-tuning of built-up city, has global value.

There are two kinds of contextual zoning districts: one is the Lower Density Contextual District applicable to low-rise neighborhoods in the Bronx, Brooklyn, Queens and Staten Island (R2X, R3A, R4-1, R4A, R4B), established as one part of amendment in 1989; the other is the Medium and Higher Density Contextual Districts (R6A, R6B, R7A, R7B, R7X, R8A, R8B, R8X, R9A, R9X, R10A) established in 1984 and 1987. Contextual zoning aims at controlling the building form of new developments in the attempt to make then compatible with traditional neighborhoods' built form.
Figure 15. A QHP building in an R10A district in Upper West Side Manhattan.
Figure 16. A mixed residential/commercial QHP building in an R4-6A district in Upper West Side Manhattan.

2) Height and Setback

The QHP has a specific set of street wall and height and setback regulations. Regulation standards vary with the district. FAR bonus is available (FAR 10 to 12) only in R10A for lower-income housing.
Figure 17. Illustrations of sky exposure planes. (reprinted from New York City, zoning regulations).
d: Street wall setback distance from street line
h: Height of a street wall within setback distance
hf: Front sky exposure plane (Height above the street line)
v: Vertical distance
a: Horizontal distance
hr: Rear sky exposure plane (height above the 100-foot line)
## STREET WALL AND HEIGHT AND SETBACK REGULATIONS

<table>
<thead>
<tr>
<th>Districts</th>
<th>Maximum Street Wall Setback Distance from Street Line (in feet)</th>
<th>Minimum Required Height of a Street Wall within Setback Distance (in feet)</th>
<th>Slope over Zoning Lot (Expressed as a Ratio of Vertical to Horizontal Distance)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>on a Wide Street</td>
<td>on a Narrow Street</td>
<td>Front Sky Exposure Plane</td>
</tr>
<tr>
<td></td>
<td>(in feet)</td>
<td>(in feet)</td>
<td>Height above the Street Line</td>
</tr>
<tr>
<td>R8B (1)</td>
<td>20</td>
<td>20</td>
<td>35</td>
</tr>
<tr>
<td>R8 Narrow Street (1)(2)</td>
<td>—</td>
<td>15</td>
<td>40</td>
</tr>
<tr>
<td>R8 Wide Street — Inside Core (3)</td>
<td>8</td>
<td>15</td>
<td>55</td>
</tr>
<tr>
<td>R8A, R8 Wide Street (3) — Outside Core (4)</td>
<td>8</td>
<td>15</td>
<td>60</td>
</tr>
<tr>
<td>R7B (1)</td>
<td>8</td>
<td>15</td>
<td>55</td>
</tr>
<tr>
<td>RT Narrow Street (1)(2)</td>
<td>—</td>
<td>15</td>
<td>55</td>
</tr>
<tr>
<td>RT Wide Street (3) — Inside Core (4)</td>
<td>8</td>
<td>15</td>
<td>60</td>
</tr>
<tr>
<td>R7A, RT Wide Street (3) — Outside Core (4)</td>
<td>8</td>
<td>15</td>
<td>65</td>
</tr>
<tr>
<td>R7X — Alternative 1</td>
<td>8</td>
<td>15</td>
<td>85</td>
</tr>
<tr>
<td>Alternative 2</td>
<td>8</td>
<td>15</td>
<td>115</td>
</tr>
<tr>
<td>Alternative 3</td>
<td>8</td>
<td>15</td>
<td>135</td>
</tr>
<tr>
<td>R80 (7)</td>
<td>(5)</td>
<td>(5)</td>
<td>60</td>
</tr>
<tr>
<td>R8 Narrow Street (2)</td>
<td>—</td>
<td>15</td>
<td>80</td>
</tr>
<tr>
<td>R8 Wide Street (3) — Inside Core (4)</td>
<td>8</td>
<td>15</td>
<td>85</td>
</tr>
<tr>
<td>R8A</td>
<td>0</td>
<td>(6)</td>
<td>85</td>
</tr>
<tr>
<td>R8X — Alternative 1</td>
<td>8</td>
<td>15</td>
<td>85</td>
</tr>
<tr>
<td>Alternative 2</td>
<td>8</td>
<td>15</td>
<td>125</td>
</tr>
<tr>
<td>Alternative 3</td>
<td>8</td>
<td>15</td>
<td>175</td>
</tr>
<tr>
<td>R9 Narrow Street (2)</td>
<td>—</td>
<td>15</td>
<td>93</td>
</tr>
<tr>
<td>R9 Wide Street (3)</td>
<td>8</td>
<td>15</td>
<td>102</td>
</tr>
<tr>
<td>R9A Narrow (2)</td>
<td>—</td>
<td>(6)</td>
<td>102</td>
</tr>
<tr>
<td>R9A Wide (3)</td>
<td>(8)</td>
<td>60</td>
<td>102</td>
</tr>
<tr>
<td>R9X Narrow (2)</td>
<td>—</td>
<td>(6)</td>
<td>120</td>
</tr>
<tr>
<td>R9X Wide (3)</td>
<td>(8)</td>
<td>106</td>
<td>120</td>
</tr>
<tr>
<td>R10 Narrow Street (2)</td>
<td>—</td>
<td>15</td>
<td>150</td>
</tr>
<tr>
<td>R10 Wide Street (3)</td>
<td>8</td>
<td>15</td>
<td>150</td>
</tr>
<tr>
<td>R10A Narrow (2)</td>
<td>—</td>
<td>(6)</td>
<td>150</td>
</tr>
<tr>
<td>R10A Wide (3)</td>
<td>(8)</td>
<td>125</td>
<td>150</td>
</tr>
</tbody>
</table>

1. A front yard with a minimum depth of 5 feet is required.
2. Refers to that portion of a district on a narrow street except within a distance of 100 feet from its intersection with a wide street.
3. Refers to that portion of a district which is within 100 feet of a wide street.
4. Core refers to Manhattan Core.
5. Varies, see Section 23-633 (c).
6. Varies, see Section 23-633 (b).
7. A setback of 20 feet from the mandatory street wall is required at a height of 60 feet.
8. Varies, see Section 23-633 (a).

Figure 18. Street wall and height and setback regulations. (reprinted from New York City, zoning regulations).
2. Strategy of the Quality Housing Program

Design strategy, regulatory strategy, and administrative/implementation strategy are examined.

(1) Design Strategy

1) Housing Quality Program

In order to understand QHP design strategy, reviewing the designing process of HQP is necessary. As shown in Figure 19, the building on the left was encouraged by the zoning of 1961, the "Towers in A Park" style, and the right hand building was encouraged by HQP. It is remarkable that despite the difference in the height and the coverage, and the setback of the buildings, they have the same FAR. In other words, the height and coverage are traded-off without affecting FAR. This is because the prototype of the HQP building was found in these bulky and/or perimeter block buildings built under 1916 zoning.

The most important physical value held in this prototypical design is in the contextual relationship between a new development and its surrounding urban form, which was defined by "Street District." This idea is illustrated in the Guide to Housing Quality Provisions.
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 (p.10).

HQP's design strategy is based on the above mentioned "Street District" and four quality programs: neighborhood impact, recreation space, security and safety, and building interior. The four programs were composed of 26 design elements with numerical value, as shown below.

<table>
<thead>
<tr>
<th>A. Neighborhood Impact</th>
<th>Non Built-up</th>
<th>Built-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Offsite Sunlight</td>
<td>8.0</td>
<td>10.0</td>
</tr>
<tr>
<td>2. Street Wall Length</td>
<td>4.0</td>
<td>6.0</td>
</tr>
<tr>
<td>3. Ground Floor Activity</td>
<td>4.0</td>
<td>5.0</td>
</tr>
<tr>
<td>4. Street Wall Height</td>
<td>3.1</td>
<td>0.0</td>
</tr>
<tr>
<td>5. Building Height</td>
<td>2.8</td>
<td>0.0</td>
</tr>
<tr>
<td>6. Street Trees</td>
<td>2.2</td>
<td>4.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>25.0</strong></td>
<td><strong>25.0</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B. Recreation Space</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Type and Size</td>
<td>9.4</td>
<td></td>
</tr>
<tr>
<td>2. Sunlight Onsite</td>
<td>5.5</td>
<td></td>
</tr>
<tr>
<td>3. Parking</td>
<td>4.1</td>
<td></td>
</tr>
<tr>
<td>4. Planting</td>
<td>3.1</td>
<td></td>
</tr>
<tr>
<td>5. Trees</td>
<td>2.9</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>25.0</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C. Security and Safety</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Density of Public Corridor</td>
<td>5.0</td>
<td></td>
</tr>
<tr>
<td>2. Visibility of Public Space to Elevator Doors</td>
<td>5.0</td>
<td></td>
</tr>
<tr>
<td>3. Visibility of Private Outdoor Space from the Lobby</td>
<td>5.0</td>
<td></td>
</tr>
<tr>
<td>4. Surveillance from Apartments</td>
<td>4.4</td>
<td></td>
</tr>
<tr>
<td>5. Entry of Building from Parking Garage or Lot</td>
<td>3.1</td>
<td></td>
</tr>
<tr>
<td>6. Visibility from Elevator Door to Apartment Door</td>
<td>2.5</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>25.0</strong></td>
<td></td>
</tr>
</tbody>
</table>
D. Building Interior

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 element has its own numerical value that differs in Built-up areas and Non built-up areas. There are also formulas to calculate scores, which are on a sliding scale. Eighty-five points are needed to waive As-of-Right bulk regulations under 1961 zoning, such as lot coverage and setback, and to obtain the special permit that allows a lower bulk building. Each of the four programs must achieve a minimum of 15 points.

"Street District" underlies contextual design. The concept of "Street District" is that a street should not be a separation of two districts along a street. Rather, it should stitch two areas facing each other as an instrument to maintain an overall neighborhood context. This means that the fundamental neighborhood context is formed by buildings not only on the same side of a street but also those facing each other across the front street, and by a street as public space. Also, the value of a street in residential districts is that it is used as common ground for people where they share the sense of the neighborhood and interact with each
other. In this sense, a street functions as a stage in a neighborhood (Figure 20 and 21).

Among all the program elements, recreation space is important for HQP. It completely revised the concept of open space provided by 1961 zoning. The zoning of 1961 specified the forms of open space, but did not pay attention to how it could be used and by whom. In contrast, HQP defines Adult Use Space, Child Use Space, Mixed Use Space for both children and adults and undesignated Free Use Space. By doing so, HQP could offer substantial recreation space.

Figure 19. Typical 1961 Tower in A Park building (left) and typical HQP building (right). (reprinted from Guide To Housing Quality Program Provisions).
Figure 20. Sidewalk along Broadway in Upper West Side Manhattan.

Figure 21. Sidewalk along the Central Park in Upper East Side Manhattan.
2) Quality Housing Program

Although HQP showed great flexibility in designing buildings and in maintaining and reinforcing contexts, QHP adopted a more rigid set of design requirements, abandoning the "Street District" concept. QHP did not succeed in HQP's flexible performance standard system directly and adopted a prescriptive set of standards although the key concepts of HQP--lowering building height, increasing coverage, and constructing a street wall closer to the street line--were built into QHP. As shown in I-1-(4), prescriptive street wall height, setback, and front and rear sky exposure planes are major instruments of QHP to encourage contextual building. The largest difference from HQP affecting a building form was the introduction of Sky Exposure Planes. The most symbolic change is that QHP came to prohibit 'Tower-on-a-Base' style buildings, which penetrate the sky exposure plane (Figure 22).
Figure 22. A HQP building (left) and a QHP building (right).

HQP's four program categories are preserved with some modifications. A QHP development has to conform to all the requirements of a 'Neighborhood impact' program, which includes building bulk provisions as shown in CH1 and can trade-off among the rest of the program elements which have minimum and preferred standards: Building Interior, Recreation Space and Planting Areas, and Safety and Security.
Quality Housing Program Elements

A. Neighborhood Impact

1. Bulk Regulations
2. Street Tree Planting
3. Ground Floor Glazing

B. Building Interior

1. Size of Dwelling Units
2. Windows
3. Refuse Storage and Disposal
4. Laundry Facilities
5. Daylight in Corridors

C. Recreation Space and Planting Areas

1. Types of Recreation Space
2. Required Indoor and Outdoor Recreation Space
3. Location of Recreation Space
4. Standards for Recreation Space
5. Planing Areas

D. Safety and Security

1. Density per Corridor
2. Entrance to Buildings
3. Visibility of the Vertical Circulation Core from the Street
4. Visibility of the Vertical Circulation Core Doors from Dwelling Unit or Rooming Unit Doors

Figure 23. QHP program elements.

From a designer's stand point, this change was favorable because designing a HQP building required substantial extra time to coordinate 26 program elements to find the best alternative. Compared to this, QHP has an easier designing strategy. In terms of a design control mechanism, HQP was functionally broken down into
QHP and contextual zoning so that contextual developments would be extended all across the residential neighborhoods. Contextual districts are expected to be filled by QHP buildings gradually.

The contextual district is another instrument that substitutes for "Street District" functionally, if not perfectly. It provides building bulk standards that are incorporated into QHP's "neighborhood impact." QHP is mandatory in contextual districts and optional in non-contextual districts where 1961 zoning is otherwise applied. Also, QHP cannot be applied to special districts.

The highest density R10A contextual districts are located in the Upper East Side and Upper West Side of Manhattan. In the Upper East Side of Manhattan, R10A contextual residential districts are located along east-west wide streets such as East 72nd, and East 79th street perpendicular to Central Park and other neighboring lower contextual districts, and two Special Districts, Madison Avenue Preservation District and Park Improvement District, where contextual development is mandatory. This zoning district arrangement maintains the traditional streetscape of the Upper East Side without breaking each zoning district into irrelevant parts (Figure 24).
In the Upper West Side of Manhattan, R10A districts and C4-6A contextual commercial districts, which have nearly identical street wall and height and setback regulations as the R10A district, are located side by side, parallel to the park as well. Because of this zoning configuration, a large part of the Upper West Side, either in residential or commercial districts, is expected to be filled with contextual buildings. This fine-grained zoning districts arrangement is contributing to make differently zoned districts interact harmoniously in guiding contextual change in urban form.
Figure 24. Zoning map. (Upper West Side and East Side Manhattan).
(2) Regulatory Strategy

In terms of regulatory strategy, QHP is placed between the performance standard-based zoning (HQP), and the prescriptive zoning (1916 and 1961 zoning). HQP became possible when a proposal lead to the grant of a special permit by the Department of City Planning; when a proposal achieved 85 points or over, original restrictions of the As-of-Right ordinance were waived. QHP, on the other hand, is conducted by an As-of-Right ordinance, which is more flexible than 1961 zoning. Consequently, QHP has become less innovative than HQP, but it is more widely applicable.

In order to understand the QHP's regulatory strategy, an understanding of the characteristics of each zoning's regulatory strategies is required. There are four major zoning strategies adopted in New York City: 1916 and 1961 prescriptive zoning, 1967 discretionary zoning (Special District Zoning), 1976 Housing Quality performance standard based zoning, and 1987 Quality Housing flexible prescriptive zoning.

1) Prescriptive Zoning

Prescriptive zoning is composed of a series of detailed specifications which show minimum requirements for a development project. A designer has only to satisfy all the
specifications to receive development permission As-of-Right. He does not need to pay serious attention to match his building to its surrounding urban context. This is an automatic process; therefore, it is efficient in terms of the processing speed for both designers and administrators.

However, there are two serious problems. First, prescriptive zoning does not show what values developers must respect. Rather, it shows what rules they must follow. As long as they comply with the rules, they are allowed to build anything they want. And commercial developers desire the highest return from projects. Prescriptive ordinances which legislate a building type\textsuperscript{5} show very few choices of design approach for all the developers who want to maximize their economic profits from developments. This results in yielding uniform building bulk and form in every district no matter how unusual the character of each project site. For example, under 1961 zoning, obtaining larger lots by assembling small lots and FAR bonuses for plazas is the most profitable development method. Since the zoning mechanism does not encourage contextual building form, many towers in the park appeared independent of local character.
Second, the fast growing and changing urban environment makes prescriptive zoning less efficient. Since zoning ordinances are created to cope with existing problems, they cannot guarantee coverage of unexpected problems in advance. This is true especially when they do not embody sustainable local values. Therefore, in a fast changing city which already has its own problems, it is not reasonable to expect one prescription to work for various situations for a long period.

If prescriptive zoning has to be kept, the possibility of amendments must remain. For example, it was reported that from 1916 to 1940 in New York City, the number of amendments totalled 1371. Also, despite the comprehensive amendment in 1961, numerous amendments were adopted. Administrators found it was unrealistic to make perfect prescriptive zoning ordinances that could cope with each district's unique

5. The 1961 Zoning Ordinances produced uniform freestanding buildings. On the other hand, a variety of building types emerged under the 1916 Zoning Ordinances such as setback, tower and base, setback slab, and freestanding. (Zoning and the American Dream. P.207)
6. The Politics of Zoning. P.45

7. In 1977, it was identified that the original 937 sections of the 1961 Zoning had grown to 2,131 sections. (An Introduction to Urban Design. P.100)
requirements. They created Special District Zoning instead, so that they might not change original ordinances.

The possibility of amendments can cause problems. There is a Japanese case showing, for example, difficulties in the timing of amendment. In 1992, the Japanese government amended conventional prescriptive zoning ordinances established in 1960, adopting more fine-grained land use control so that it could cope with the intensive land speculations that started in the early 1980s in Tokyo. Underlying idea is that it is possible to cope with excessive land speculation by breaking existing Use Districts which permit both residential development and office development into finer pieces and limiting the number of districts which permit office development. As the amendment was approved by the Diet, a serious economic recession suddenly affected not only Tokyo but also all Japan. Consequently, the heated land speculation and building developments were stopped, and semi-developed land and vacant small lots in the midst of assemblage were left in central downtown areas. The amendment timing was too late to maintain a favorable urban living environment.

Prescriptive zoning itself has conclusive power. Therefore, it defines the physical character of an entire city when it is immature. In the case of New York City, 1916 zoning created continuous street walls, and 1961 zoning
created towers in the park. Although 1916 zoning produced various physical urban problems, such as a shortage of open space and canyon-like dark streets, the continuous street walls came to be highly valued by the time they were about to be replaced by towers. The rigidity of 1916 zoning enabled New York City to form a distinctive urban streetscape. On the other hand, the rigidity of 1961 prescriptive zoning resulted in destroying the fruits of the previous prescriptive zoning.

2) Performance Zoning

The most distinctive advantage of performance zoning is that it can regularize a certain quality of life that is desired by a neighborhood. In other words, it encourages values, not specifications, to be considered in a development project. The following passage concisely illustrates this characteristic of performance zoning.

For example, at the most basic level, a "primitive" standard might specify that adjoining buildings be separated by a firewall. A "specification" standard (in the context of zoning also called a "prescriptive" standard) would also specify suitable materials and dimensions of a satisfactory firewall. A performance standard, on the other hand, might specify that the surfaces between adjoining buildings must be capable of withstanding a certain temperature for a certain length of time. The performance standard would result in buildings with fireproof adjoining walls, but the methods of construction and the materials to be used would be left unspecified, allowing room for innovation and technological change. (Flexible Zoning P11.)
The problem is that it is not clear who can identify relevant values or who has the right to decide a neighborhood's quality of life. Since finding one right value or building type is impossible, multiple answers within a certain range are equally valid. This requires the involvement of various people in the process of making zoning ordinances. If general consensus about neighborhood values is obtained, this could be possible. Then, the performance zoning could be accountable.

In order to coordinate those issues as a consistent public program, rationale criteria need to be introduced to zoning ordinances. Rational criteria must not be the ones that impose one-sided values but be the ones that balance competing demands. For example, when we are required to achieve four hour direct sunlight a day into an interior space from a window, we may be able to realize the equivalent quality of life by achieving three hour direct sunlight plus one hour direct sunlight on children's play area. Therefore, rationale criteria should be considered both in terms of scientific rationale and years of experience.

In reality, however, there is a significant problem; flexibility requires extra labor for designers and developers. When infinite approaches are possible, they cannot make decisions at once because developers might lose opportunities to earn extra profit by choosing a certain
approach without checking other approaches. Therefore, designers have to spend extra time to come up with various alternatives complying with a certain range of choices. On the other hand, residents can make known their preference for a development proposal within an authorized range if a residents participation system is elaborately built in. When their coordination is successful, they will see creative and contextual development. Therefore, efficiency in adjusting developers' ideas and neighborhoods' preferences is critical.

The Housing Quality Program as performance zoning shows a self-adjusting mechanism through "Street District." HQP has to comply with the existing context of relevant "Street District," such as street wall height and setback from a street line. Consequently, a project automatically has to adjust its built form to a certain extent. This promotes responsiveness of a project to the sense of a specific place.

3) Special District Zoning

Special District Zoning shows a different approach to urban design and development than other zoning methods. The most distinctive point is that it defines the district boundary in which a specific set of requirements are imposed on development projects. Each district makes its unique set of requirements based on a district's character or the desire
of its inhabitants. Both use characteristics, and design characteristics are taken into consideration. Special Zoning District is effective in that it can maintain a neighborhood's values in detail and reinforce the sense of place; Special Zoning District protects a neighborhood from unfavorable development projects.

There are some inherent problems in Special District Zoning (Babcock, 1990). It is likely that a project that is important for the whole city is not accepted by residents in a Special District. This means that the city may sacrifice its future for maintaining a Special District's status quo. As the number of Special Districts increases, the discordance between a district and the whole city becomes troublesome more and more. Here, we need to consider the important role of zoning; how to distribute urban resources to residents with the maximum equality. There are also administrative problems. Since Special Districts Zoning is discretionary zoning and the degree of discretion varies from district to district, administrators are required to master sophisticated negotiation skills to coordinate and codify various entities' expectations. In addition, setting up special districts usually requires a time consuming negotiation process. It is clear that a lot of talent need to be involved in this zoning method.
4) Mixed Performance/Prescriptive Quality Housing Program

A 1987 Quality Housing Program was established as mixed performance/prescriptive zoning. Unlike HQP, which was conducted based on a special permit, QHP adopted an as-of-right system. The mixed performance/prescriptive system aimed at integrating the superior aspects of both performance zoning and as-of-right prescriptive zoning to encourage contextual development in any neighborhood. Promoting wider applicability and maintaining high responsiveness to different neighborhoods are QHP's mission. In other words, this is a trade-off between applicability and flexibility.

As mentioned above, QHP inherited HQP's four programs with a slight modification: as far as building form belonging to a "neighborhood impact" program is concerned, QHP has prescriptive standards. HQP intended to encourage contextual building under performance zoning, while QHP intends to do the same thing under prescriptive zoning. Each of these items has a fixed value (Figure 23), which varies corresponding to the difference in FAR given to each district. Flexibility is retained in a set of minimum and preferred standards other than building bulk standards, which can be chosen by the developer. This ensures that neighborhoods can predict the building bulk and form in a new development, and that developers can enjoy a certain amount of trade-off, which helps them achieve their own goals.
(3) Administrative and Implementation Strategy

The biggest reason for HQP's transformation to QHP was the complicated and time consuming approval process of the former program. Namely, HQP failed to promote its innovative ideas because it required each development to obtain a special permit. Compared to the HQP approval process, QHP has a much simpler administrative process. The development approval process of each zoning system (HQP, 1961 zoning, Special District Zoning, and QHP) is shown below. It is interesting to note that for HQP, it took nine to twelve months to get approval. For QHP, the 1961 Zoning, and Special Zoning Districts, it takes about two months.
**HOUSING QUALITY PROGRAM**

Step 1: DEVELOPER  
- Public Hearing

Step 2: COMMUNITY BOARD  
- Public Hearing  
- Vote (recommendation)

Step 3: CITY PLANNING COMMISSION  
- Public hearing  
- Vote (enforceable)

Step 4: BOARD of ESTIMATE  
- Public Hearing  
- Vote (enforceable)  
- Grants special permit

Step 5: BUILDING DEPT.  
- Approval

**QHP, 1961 Zoning, Special Zoning District**

STEP 1: DEVELOPER  
- Submit a development proposal

STEP 2: BUILDING DEPT  
- Approval

It is obvious that HQP needed a complicated and lengthy process because it required a special permit. On the other hand QHP's approval process needs less time. This is favorable both for developers and administrators. Reducing time leads to lowering the cost to developers.
Also, the change from the performance standard system to As-of-Right system is favorable for designers in that they do not need to deal with numerous designing trials to come up with the best solution while they lose design flexibility.

3. Current issues: innovation and deficiency

(1) Sense of place

QHP is successful in reinforcing consistent street walls (Figure 25), but not so in creating consistent skylines (Figure 15). A setback QHP building top is conspicuous, especially in higher density districts like R10A. In this case, it is obvious that QHP building cannot reinforce the urban context; there are no setback buildings around the QHP building (Figure 25). This is because QHP necessarily decides building type by prescriptive building bulk provisions, such as front and rear sky exposure planes. In this district, lack of building design flexibility cannot maintain nor improve the sense of place. Because urbanscape formed by setback buildings is not what people wanted to see. alternative building bulk regulation is now proposed to solve this problem (Figure 26). However, this may still not be enough because there are other distinctive designs like the Dual-Tower, which is traditional and could reinforce the sense of place greatly. QHP is not successful in presenting
Figure 25. Consistency of street walls is reinforced by a QHP building.
Figure 26. R10A height and setback regulations: existing and proposed. (reprinted from Quality Housing Zoning: Follow-Up Study and Text Amendment).
(2) Acceptability

According to the Follow-up Study and Text Amendments of Quality Housing Zoning published by the City of New York, 65 Quality Housing developments containing 1,768 dwelling units were approved as of December 1990 (Figure 27).

It is notable that 41 projects, 63% of the total developments, are located in R6(Maximum FAR=2.45)(Figure 28) and R7(Maximum FAR=3.44)(Figure 29), where QHP is optional. Equally interesting is the fact that no QHP project has been in R10, (Maximum FAR=10 increased to 12 when the plaza bonus is granted)(Figure 30) where QHP is also optional. The reason there is no QHP project in R10 is that a developer can receive a bonus of FAR 2 for a large plaza and build a luxurious residential tower that offers better views to the rich tenants than a lower building does. Because providing a plaza is not painful for developers, they prefer to build non-QHP buildings of FAR 12 with plazas. Because there is no FAR bonus provisions in R6 and R7, developers can carry out QHP developments without sacrificing their profitability; indeed, they can take advantage of economical development under QHP. QHP developments are needed in some of the R10 districts where a towering building is out of context. The City is now planning to eliminate the FAR bonus for the provision of plazas leaving only the inclusionary housing to promote QHP projects in such districts.
It is said that developers tend to oppose changes in development regulations only because they resist change in general. For example, it is observed that the same developer who complained about the concept of "Towers in a Plaza," proposed in a 1961 zoning amendment, because it would raise building costs, complained about HQP, saying that it would raise building costs. However, feasibility studies showed that lowering building heights would contribute to lowering building costs. Also, focussing only on building costs is misleading. For example, under QHP, a developer may have to build enclosed parking on a site, which was not necessary under 1961 zoning. However, this extra cost can easily be compensated for by a shortened construction term; a lower building can be built faster than a tower and, then, sold earlier.

At the same time, physical constraints which discourage QHP applications were identified. Because QHP was devised to match New York City's regularly shaped lots, which are especially typical in the core of Manhattan (Figure 31), it is not so applicable to irregularly shaped lots. For example Figure 32 shows an acutely-angled corner lot on which buildings are not located close to the street line. Under such a condition, it is not reasonable to impose the existing QHP building bulk regulation on developments. It would result in producing acutely-angled building configurations that were awkward, impractical, and costly. It is reported
that the building in Figure 21 also penetrates the sky exposure plane. Under current provisions, the sky exposure plane also takes a confusing shape.

It was also identified that QHP provisions do not work in large lots. For example, Figure 33 shows large buildings located away from the street line and penetrating the sky exposure plane. Figures 20 and 21 show similar problems. In such cases, adopting QHP is almost impossible for a developer who wants to build an ordinary building because a QHP type building cannot be considered to be contextual there.

These problems originate in that QHP is prescriptive zoning. As discussed above, one of the most difficult issues of prescriptive zoning is that it is not good at dealing with exceptional conditions and needs further amendment.

<table>
<thead>
<tr>
<th>ZONING DISTRICT</th>
<th>TOTAL PROJECTS</th>
<th>% OF TOTAL</th>
<th>TOTAL UNITS</th>
<th>% OF TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>R6</td>
<td>37</td>
<td>57</td>
<td>562</td>
<td>32</td>
</tr>
<tr>
<td>R6B</td>
<td>13</td>
<td>20</td>
<td>139</td>
<td>8</td>
</tr>
<tr>
<td>R7</td>
<td>4</td>
<td>6</td>
<td>151</td>
<td>9</td>
</tr>
<tr>
<td>R7B</td>
<td>1</td>
<td>1</td>
<td>73</td>
<td>4</td>
</tr>
<tr>
<td>R8B</td>
<td>3</td>
<td>5</td>
<td>139</td>
<td>8</td>
</tr>
<tr>
<td>R9X</td>
<td>1</td>
<td>3</td>
<td>34</td>
<td>2</td>
</tr>
<tr>
<td>R10A</td>
<td>6</td>
<td>9</td>
<td>670</td>
<td>38</td>
</tr>
<tr>
<td>TOTAL</td>
<td>65</td>
<td>100</td>
<td>1768</td>
<td>100</td>
</tr>
</tbody>
</table>

Figure 27. Quality Housing development, by zone (1987-1990). (reprinted from Quality Housing Zoning: Follow-up Study and Text Amendment).
Figure 28. Typical R6 development. (reprinted from Zoning Hand Book).
Figure 29. Typical R7 development. (reprinted from Zoning Hand Book).
Figure 30. Typical R10 low coverage development. (reprinted from Zoning Hand Book).
Figure 31. Regular gridiron blocks in Upper West Side Manhattan.
Figure 32. Site plan: acutely-angled corner condition (reprinted from Quality Housing Zoning: Follow-up Study and Text Amendment).
Figure 33. Site Plan: large, deep lot condition. (reprinted from Quality Housing Zoning: Follow-up Study and Text Amendment).
II. Issues Involved in Kanda

4. Overview of Kanda Today

(1) Geographic conditions

Kanda is a traditional downtown located in the central part of Tokyo and also adjacent to Japan's most prestigious CBD, Marunouchi/Otemachi, and the Imperial Palace (Figure 34). Kanda belongs to Chiyoda ward and the administrative area of which is 11.64Km² (2,876 acres). The residential population is 39,472 as of 1990. It covers about 170 ha (420 acres) of flat land, which is equivalent to two-fifths of Central Park.

The major land use in Chiyoda ward is as follows: 69% of the total floor area is allocated for office space, and 15% is allocated for residences (Tokyo White Paper, 1991). As Chiyoda ward's population decreases year by year, the residential percentage of the population over 65 years old is increasing gradually.9

8. The Tokyo Metropolis is composed of 23 wards, 27 cities, 6 towns, and 8 villages, including islands.

9. It is 15.3% as of 1990, and is higher than the average of the 23 wards comprising metropolis Tokyo (11.6%). (Chiyoda ward Housing Master Plan).
Figure 34. Central area of Tokyo.
(2) Real Estate Activities

In the early 1980s, a land speculation boom started in downtown Tokyo, responding to the unusual increase in the office space demand. Because of Kanda's prime location, developers rushed for Kanda. They purchased small properties owned by powerless individuals and assembled them for office development. Many developers purchased land only to resell it, taking advantage of skyrocketing land prices. Consequently, vacant lots and open parking spaces dot the area, as developers wait to sell them. This has resulted in destroying the urban context. Since then, Kanda has suffered from a rapid loss of residential population due to the replacement of housing for office buildings. Also, many of old houses that were not purchased are being used as small offices (Figure 35).

Figure 35. Old houses used by small businesses.
(3) Chiyoda Ward Housing Master Plan

The administrators of Chiyoda ward are coming to recognize that housing development must be encouraged as a public policy, and a substantial housing supply is considered to be urgent. Under these circumstances, the Chiyoda Ward Housing Master Plan was created to present a new residential redevelopment policy for downtown Tokyo, including Kanda district. Major development strategies in Kanda are summarized below.

1) The maintenance and improvement of the mixed community of residential/commercial/light industrial use in mid-blocks.

2) The rearrangement of the street network/the reorganization of the blocks

   Large scale redevelopment and/or district planning are effective in supplying a substantial amount of housing. Therefore, the reorganization of block configurations by rearranging streets is needed. Such development types as courtyard apartments and zero-lot development are considered.

3) The consolidation of properties which contain small housing and building larger housing.
Kanda is composed of numerous small lots, and small scale individual developments built in their own ways are preventing Kanda from promoting a quality downtown development and housing supply. This method is expected to enable a quality housing supply and the improvement of the living environment.

4) District planning based on fine-grained density (FAR) allocation by use.

The differentiation of maximum FAR between residential and non-residential use will encourage reasonable land use.

(4) Zoning in Kanda

Under existing zoning only heavy industries are excluded from Kanda, as they are in New York City's 1916 zoning. A zoning map (Figure 36) shows an example of how Kanda is divided into three zoning districts. Each of them has a different FAR, but mixed use is permitted everywhere in Kanda.

It is evident that existing coarse zoning did not work well when commercial developers started land speculation in the early 1980s. This did not happen only in Kanda but in other downtown areas. Various people claim that existing land use control is too loose to safeguard housing from office development and have insisted on more strict land use control. More fine-grained zoning provisions are being
discussed. In 1992, the Diet passed an amendment of zoning regulations, including the increase of land use categories from eight to twelve. Among amended provisions, was the introduction of vertical zoning where a building was required to place housing units in mid to high floors.

Figure 36. Zoning map.
5. Development Policy

My argument is that zoning is a fundamental program that affects the future of Kanda as a mixed use downtown district, containing substantial urban housing. Downtown districts should not abandon residential communities that take care of their living environments. If there were not residential communities, Kanda's urbanity will be decreased. By the advancing replacement of housing by office buildings, Kanda would be a monotonous district, lose its original identity, and change its demand for infrastructure. In order to improve the living environments in Kanda, a fine-grained development strategy is needed because Kanda is already built up. Therefore, we should control and guide new developments to reinforce Kanda's traditional character.

Fine-grained zoning has advantages to guide the change. Fine-grained zoning is effective in

- maintaining existing use and scale
- guiding incremental and contextual change
- controlling land speculation

Existing prescriptive zoning is inflexible and conclusive so that it cannot cope with complex problems. Every element composing the area is closely connected with each other.
Therefore, mutual adjustments are needed to support organic change.

Located in the central part of Tokyo, Kanda has already established its role as one part of the downtown districts. If Kanda is drastically changed in terms of land use and built environment, there would be a significant impact not only on Kanda itself but also on surrounding areas. For example, in the case that all of Kanda were occupied by office buildings exclusively, the traffic volume and pattern, the demand for railways and subways, public facilities, and other infrastructures would be greatly affected. This necessarily leads to an impact on surrounding areas and a chain reaction would start. Therefore, we should not impose one seemingly right answer to guide the change in land use and built environment when we seek a harmonious and sustainable evolution of downtown districts.

Instead, we should adopt a demand-side approach in considering new zoning. In other words, both existing and prospective users' demand must be taken into account. Coordinating diverse and conflicting demands of actors living in the area is required to make new zoning. Since people in Tokyo can find better living environments with lower rents in the outskirts of Tokyo, they do not need to live in Kanda when they cannot see any advantage to being there.
QHP adopts a demand-side approach to urban residential developments because it was enacted based on residents' values. QHP also puts the top priority on contextual development. It is neither possible nor favorable to try to adopt QHP itself to Kanda. However, its concept, a demand-side approach, can be applied to look at Kanda again.

As discussed in a previous chapter the concept of QHP provides a strategic approach to downtown residential developments. Is QHP applicable to Kanda? There are some similarities in terms of physical and socioeconomic settings between Kanda and New York City: high-density mixed land use, constant development pressure, traditional urban culture, and suitability to pedestrians. These elements form the fundamental context of both cities.

6. Physical Structure

Kanda is composed of a non-gridiron street network and blocks of different sizes which are divided into small property ownerships. In terms of physical structure, Kanda shows a different urban pattern from New York City (Figure 37). Various intertwined land uses diversify the built form: high-density housing, various kinds of small retail stores such as second-hand book stores and sports shops; light industries, such as the printing and publishing business; offices; and educational institutions, such as
universities, colleges, vocational schools, and preparatory schools. Kanda is one of the most diverse and busy downtown districts in Tokyo.

A different FAR is assigned depending on geographic characteristics. Either FAR 6 or 7 is assigned to strip lots along wide streets, and FAR 5 is assigned to mid-blocks.

Figure 37. Kanda's typical streetscape (Jinbo-cho area).
7. Finding Values

It is impossible to create such a unique and attractive urban form in a short period. Compared to other gentrified areas, Kanda does not look modern because there are neither magnificent office towers nor luxurious fashion buildings. However, it does not make sense to abandon its original characteristics and start competition with other modern districts. Kanda must reinforce its uniqueness and keep its identity. It must respect its specific values and build them into a zoning program.

I conducted a field survey in Kanda based on the value finding approach taken by the Quality Housing Program. Consequently, the following three programs were obtained by modifying QHP's program elements: neighborhood impact, open space and recreation, and walkways. QHP includes building interior programs and safety and security programs. Although the building interior is a fundamental issue for the quality of life, this study does not deal with this issue directly. Instead, building interior programs are partly discussed in neighborhood impact in the form of minimum lot requirement. Safety and security are not discussed because these are not issues in Kanda. The crime rate in Tokyo is not comparable to that in New York City. First, existing values and
problems are discussed; second, the zoning programming strategy is discussed.

(1) Neighborhood Impact

1) The values of small-scale space

The compactness of each property size is one of the most distinctive physical characteristics of Kanda. This is the foundation that creates diversity in the area. In addition, irregular street patterns contribute to reinforce the complexity of the built environment. The resulting mosaic urban form is Kanda's original feature. On the other hand, there are some people who regard Kanda as messy and ugly. They claim that land divided into small ownerships is not an efficient way to improve the quality of life, and insist that small, shabby buildings be cleared away and the land be redeveloped.

Before judging the validity of the arguments, we need to define a way to look at Kanda's urban form. Those people who have negative opinions about Kanda's existing urban form are not evaluating the same aspects while they are looking at the same space. It is likely that when a group of people are looking at a series of casual and human scale small shops on the ground level, the other group might be looking at plastic
garbage cans in front of stores, unseemly bundles of electric wires extending from electric poles to each store, and cheap building materials. These aspects are independent of each other. We need to go one further step to discuss the essential values of the same issues.

Figure 38 shows an renovated mid-block street, Suzuran Street, in Kanda, where bundles of electrical wires were removed. The street was repaved with granite blocks, the parking space for service vehicles is well managed, and new street lights have been set up.

Figure 39 shows another mid-block street in Kanda. It can be observed that bundles of electric wires extend like a spider's web, a plastic garbage can is placed on the sidewalk (seen on the left), and cars are parked on both sides of the street. If these elements are eliminated, the image would be reversed. Bundles of electric wires can be removed, street fronts can be designed, and vehicles can be controlled by parking arrangements. These problems are less serious than advocates of large-scale developments think.

Although one could argue whether the new design of Suzuran street is favorable or not, it is clear that neither a small property lot nor a small building, a "pencil building," is a nuisance per se. On the contrary, such
buildings could be precious elements to improve the mixed use urban environment.

In reality, visitors and small businesses are benefitting from them. Visitors can enjoy casual activities such as shopping, eating and drinking, and strolling. Small businesses can survive in small spaces that are inadequate for the uses of large businesses. If those supported by small spaces are replaced by large office buildings, Kanda's physical as well as socioeconomic structure will be transformed seriously. Therefore, the appropriateness of small-scale lots or buildings must be dealt with carefully because they can be evaluated either positively or negatively. Because the small-scale and mixed use urban form is Kanda's characteristic that has been formed in Kanda for over 100 years, we should respect the value created by the use of small spaces.

A negative aspect of small-scale lots is that they directly affect the building interior size of both housing and offices. The Tokyo Metropolitan government indicates that the preferable housing space is 300 square feet for two adults and 540 square feet for two adults and two children. An old two story house, shown in Figure 39 stands on a lot of 10 feet(width) by 33 feet(depth). Since the base coverage ratio is 80% in this area, the approximate area of this house, including the building structure, is 530(10x33x.8x2) square feet, which is far below the above-mentioned
preferable standard for two adults. Figure 40 shows typical "pencil buildings" used for offices. Both of the buildings stand on about 15 feet (width) by 26 feet (depth) lots. Because there are no floor area standards for office space, small businesses or retail stores might be able to make use of such spaces. Therefore, "pencil office buildings" and "pencil residential buildings" need to be treated differently. At least a minimum standard of housing must be respected.

Figure 37. Suzuran street
Figure 38. Typical mid-block streetscape.
Figure 39. An old two-story house
2) The Value of "Roji" streets

Kanda is subdivided by relatively small blocks compared with other areas (Figure 41) in Chiyoda ward. Many of the small blocks are surrounded by narrow streets ranging from 10 feet to 15 feet, including "Roji" streets. These narrow
streets play an important role in keeping the density of Kanda lower than the density allowed by the designated FAR. Because both a building height and setback are determined by the function of the front street width (Figure 42), almost none of the buildings in mid-blocks can achieve their base FAR.

It can be considered that buildings in Kanda achieve approximately 50 per cent of their base FAR. This means that buildings located in a FAR 7 district, which is the highest in the Kanda area, achieve FAR 3.5. In a FAR 6 district, an achievable FAR becomes 3, and in a FAR 5 district, it becomes 2.5 by simple calculation. In reality, this restriction on base FAR was taken into consideration when the existing zoning system was proposed. Public planners knew that many of the downtown districts would be choked up with buildings if the base FARs were achieved completely. Now there are property owners who looking at base FARs as their vested right and are eager to use their base FARs whenever possible.

Commercial banks, which want to develop their investment fields and the ward government, which wants to increase the utility value of the land, are two major supporters of consolidating small lots to achieve a higher FAR. This approach necessarily includes the transformation of Kanda's unique urban form as well as the elimination of the "Roji" streets.
I contend that the "Roji" streets are indispensable for the preservation of Kanda's unique and lively character. A "Roji" street is an instrument to create the sense of community and to facilitate pedestrians' mobility. In a district that contains residential communities, "Roji" used to function as community streets (semi-private spaces) until automobiles took the place of pedestrians, and "pencil buildings" came to cast their shadows and turned "Roji" streets into dark ditches. The "Roji" streets could only exist in the context of the low-key built environment represented in Figure 43.

On the other hand, there are some commercial developers and store owners who are reevaluating the utility value of narrow streets as an instrument to reinforce the sense of place that contributes to attract people who want to experience enjoyment. Such business people have noticed the original value of narrow streets like "Roji" streets for casual walking, information exchange place, and shopping. Given such expectations, it is now clear that "Roji" streets could work both in residential districts and commercial districts. Because Kanda is a highly mixed residential/commercial district, "Roji" could be progressively utilized to improve Kanda's unique built environment.

It is not necessary to preserve "Roji" streets where they are isolated from the surrounding context and cannot be
connected to other pedestrian networks. It is important to define "Roji" streets again in their existing context and develop this utility in Kanda.

Figure 41. Typical blocks in Kanda.
Figure 42. Setback regulations.

Figure 43. Original "Roji" streetscape.
2) Sunlight

The second issue of neighborhood impact is sunlight. In my field survey, sunlight conditions were found to be a critical issue in Kanda, especially in the mid-blocks where a substantial amount of new housing is expected to be built. Now there is no sunlight requirement imposed on the area because the whole Kanda area is zoned as a commercial district, exempt from the sunlight requirement under the existing zoning system. (This does not mean that the municipality cannot provide sunlight requirements. The municipality can make its own ordinance by due process). For example, as Figure 44 shows, existing prescriptive zoning allows such shaded housing. Here, apartments from the ground level to the third level are almost covered by the shadow. The front street is a typical "Roji" street, which is why it cannot function any longer in such a mid-rise housing district; it cannot be a community street. Areas along major streets do not have sunlight problems due to the substantial distance between buildings facing each other across the street.
(2) Recreation, open space and walkways

1) Recreation space

Based on my field survey, there are few residential buildings which provide recreation spaces either inside or outside. Developers cannot afford to spare any space for such non-income generating facilities because of the high land price. As of January 1st, 1990, the average land price in the commercial district of Chiyoda ward is about $14,000/SF, which is nearly twice the average of the commercial districts of the 23 wards. The prices of used condominiums range from $1,900/floor area square feet to $7,000/floor area square feet (Chiyoda ward Housing Master
Plan). Given these high land prices, it is impossible for a private developer to include a recreation space for the tenants in a building. In addition, the small size of each lot makes this issue more difficult. For example, the total site dimensions of the two buildings on the right in Figure 44 is about 20 feet (wide) by 45 feet (depth) -- not exceptional in Kanda. Such an environment can never attract families, especially with small children, from outside this area. This makes the ward's policy of attracting young families difficult to achieve. However, the provision of recreation space is difficult, but it has great value in such a built-up environment and should not be given up.

2) Open space

Open space is also extremely limited in the Kanda area. There are two small public parks, .5 acres and .75 acres respectively. Since there is little land left that the ward can purchase for public open spaces, we cannot expect that a new public space will be built without a special land arrangement. However, residents are eager for additional open space. There is a dispute about an alternative use of an elementary school site that was planned to be closed due to a decrease in the number of students. The ward proposed a middle income public housing project plan for the site, but neighborhoods opposed this plan because the density increase
would not be acceptable there. They insisted that an open space be the alternative.

An existing method to make additional open space is to grant a FAR bonus in exchange for open space. Some developments have already adopted this method in Kanda. This is exactly the same method disseminated by 1961 New York City zoning and has a similar problem as the utility value. Figure 45, a public housing project located just outside of Kanda's boundary, shows the problem. It was granted a FAR bonus for open space. As shown in Figure 46, this space was designed for children's use in conjunction with two side passageways (Figure 47 and 48), but it directly faces busy traffic. This space is also too open to everybody. For example, there was once a homeless man sitting on the bench. Therefore, this open space is dangerous and does not function as a usable open space. Such a space can be neither a recreational space for the residents nor usable open space. In Kanda, both the location and the form of open space affect the utility value, just as in New York City.
Figure 45. Public housing.

Figure 46. Open Space.
Figure 47. Passageway (back side).

Figure 48. Passageway (front side).
(3) Walkways

The walking environment is an important element constituting the urban context on the ground level. However, sidewalks are in very poor condition in Kanda. A pedestrian network is important there because the major means of transportation are railways, subways, and buses, which need to be connected to each other by a pedestrian network. Therefore walkways are valuable infrastructures that support the life and the local economies, maintaining an urban context.

There are four major walkway types observed in Kanda; curb type, guardrail type, white-lined type, and no sidewalk. Wide streets have reasonable sidewalks as shown in Figure 49 and 50, however, the sidewalks of internal streets are in critical condition. As mentioned above, a "Roji" street, which has no sidewalk, can function only in small and lower built environments as shown in Figure 43. Similarly, a white-lined side walk does not function well. Figure 51 shows how service vehicles park across the white line and interrupt pedestrian travel. Since there are many small light-industries, such as printing and publishing, business vehicles drive fast in the streets. Because mixed use is Kanda's essential value, pedestrians and automobiles must
coexist. A curbed sidewalk is the most valuable, and the guardrail type could be an alternative if designed better.

Figure 49. Sidewalk along a main street.

Figure 50. A tree-lined sidewalk.
8. Zoning Programming Strategy

(1) Values for programming

Important values in designing Kanda are fine-grained built form, intertwined mixed use, sunlight access, open space and recreation space, and walking environment.

(2) Problems caused by existing zoning
Existing prescriptive zoning is not working to cope with the above-mentioned values. Major problems caused by its prescriptiveness are as follows.

a. Building bulk is regulated by FAR and street width, however, each district has its own contextual height or preferable height. Therefore, flexible height and setback requirements are needed.

b. The advantages of a small scale built environment is not taken into consideration. Existing zoning has a bias toward large scale development.

c. The importance of each individual street character is not considered. Since a building cannot stand independent of the front streetscape, the character of a street needs to be considered in conjunction with building bulk regulation. For example, the "Roji" street's original role cannot be maintained.

d. All of Kanda is zoned as a commercial district that no sunlight requirement. Since housing is a critical element, sunlight access needs to be considered.
e. Use districting is too loose to guide the change.

Finer grained zoning which promotes mixed use and stabilizes existing housing from conversion to offices.

(3) Programming proposal

In a highly mixed mosaic city like Kanda, these issues are too complicated to be solved by rigid zoning. Fine-grained flexible zoning is an alternative.

Five critical values found in preceding section 8-(1), "Value for Programming," are realized in the following programming.

1) Block and Building Bulk

Street district, down zoning, vertical zoning and transfer ownership, front and rear sky exposure, and height and setback are major instruments used to carry out development.

Figure 52, 53, and 54 show actual sites in Kanda where redevelopment projects are likely. Programming steps are tested in this setting.
Figure 52. An area in transition.

Figure 53. Redevelopment site (parking).
Figure 54. Redevelopment site (almost abandoned houses).
Step 1: HQP's "Street District" concept is applied to create "Roji Street District."

"Roji Street Districts" are established according to a district's character and its future plan. It aims at imposing stricter requirements on buildings on "Roji" streets.

Figure 55. Roji street district.
Step 2: Down Zoning

A mid block in a "Roji" street is downzoned. This is a concept similar to one adopted in Midtown zoning in New York City.

Figure 56. Downzoned lots (hatched area).

Step 3: Sky exposure plane

The front sky exposure plane is adopted to a building on the "Roji" street.

The rear sky exposure plane is adopted to a building on the wide street.

The street wall of a building on the "Roji" side is allowed to penetrate its front sky exposure plane when it is set back from the street line.
Figure 56. Height and setback by sky exposure plane (image).
Step 4: Vertical Zoning and Transfer of Ownership

There are alternatives of mixing residential space and commercial space.

Case 1: (i) A residential building on a "Roji" street.

(ii) A commercial building on a wide street.

Figure 57. Height and setback (image).
Case 2: (i) A mixed residential/commercial building on a "Roji" street.

(ii) A commercial building on a wide street.

Figure 58. Height and setback (image).
Case 3: Mixed residential/commercial buildings in a block.

Figure 59. Height and setback (image).
Case 4: (i) A commercial building in a block on a wider street.

(ii) A residential building in an inside block.

Figure 60. Separation of uses by block (image).

2) Walking environment

In such a build-up area, making new walkways is difficult unless new buildings and set back from the street line. Another resolution is to redesign a street and arrange on-street parking space (Figure 59 and 60). It is also effective to close streets all day or during a specific time of a day, according to necessity.
Figure 61. A woonelf street. (reprinted from Public Streets for Public Use).

Figure 62. A street and parking: before redesign (a) and after redesign (b). (reprinted from Public Streets for Public Use).
3) Recreation and Open Space

The definition of recreation space is necessary. As QHP shows, recreation space is not necessarily placed on the ground level. If a tower is lowered and has a roof garden, it can be more useable space (Figure 63). An enclosed space on the tower is also acceptable. Open space also has to be defined. In Kanda, a new development has to contribute to extend open space to form an extensive pedestrian network.

Figure 63. Open space on the roof.
9. Implementation and Impacts

(1) Implementation

The institutional process of implementing new zoning must be open to the public. Above all, citizen involvement and master plan are minimum requirements.

Citizen Involvement

People in Kanda must participate in identifying characteristics of their neighborhood. Then, they need to form an agreement on a development policy for each district. Because Kanda is important as an engine to support the dynamic activities in the center of Tokyo, sufficient discussion is necessary. A non-profit organization such as community development authority needs to be established to promote harmonized development projects and check destructive development.

Master Plan

Development master plan that specifies land use districts and FAR districts need to be made based on discussion by residents. Because downzoning and other restrictions are to be included, the master plan must show fairness and clear development policy.
(2) Impacts

**Increase of residential population**

The proposed development strategy does not encourage massive development. Therefore, it would not contribute to increase Kanda's residential population dramatically in the short term. However, in the long term, this development strategy would stabilize residential communities with a moderate increase in residential population and contextual change in built environment.

**Land Price**

In downzoned districts, the land price would go down, resulting in lowering real estate taxes as well as inheritance taxes. Therefore, this would benefit a property owner who wants to keep his land. On the other hand, it becomes difficult for a property owner to sell such land because its profitability would decrease. Such property is not attractive in a real estate market. The balance between land price and the utility value needs to be looked at.
III. Reconsideration of The Current Redevelopment Image by Chiyoda Ward

The Housing Master Plan of Chiyoda ward shows an distinctive housing development model in Kanda. Figure 64 is the image model of a mixed residential/commercial/office development.

This is an typical "Towers in A Park" development denied by QHP in NYC residential districts. The design concept of this model is to harmonize these three land uses: residential, commercial, and office. Again this seems to be made based on the supply-side approach. It is noticeable that the "Towers in A Park" development is still popular among suppliers such as public planners and developers as a modern city model in Tokyo.

A variety of this development prototype can be seen in the Shinjuku skyscraper district, a subcenter of Tokyo (Figure 65). However, here the buildings were developed on the cleared site of a water filtering plant, while development projects in Kanda have to be carried out in an already built-up setting. Although, this model is titled the residential/commercial/office complex, project priority is an office tower development. A tower is an effective billboard to show a company's prestige: therefore, it is difficult, if
not impossible, for a tower to be compatible with apartments for middle class people. Figure 66 shows an office development in this area. It provides an example of how a private company makes an open space in its site. Here, open space is designed like a flower bed; therefore, non-corporate people are hesitant to enter into the space no matter how it is open to them. Such strict separation of ordinary people and office employees is not contextual in Kanda.

Against such supply-side development, QHP shows applicable concepts. As mentioned in a previous chapter, street wall continuity is not so important in Kanda, Here, ground level retail continuity forms the context. In New York City, the Special Theater District dealt with ground level activities. This would work in Kanda theoretically, but a special district zoning method is not appropriate in terms of its administrative difficulties. Instead, widened walkways and ground level retail stores would maintain the vitality along the main street.

A strip lot on a wide street must be occupied by a variety of commercial activities and a mid-block section should be used for housing. By doing so, developers can differentiate the land price between commercial and residential districts, which substantially affect the land use programs. Since large scale land assemblage is very likely in Kanda, new zoning has to anticipate the destruction of the continuous retail stores.
"Towers in a park" developments must not be permitted. This plan is overly concerned with the height of a building and the openness of the ground level, as is existing zoning. However, the horizontal scale of development must also be taken into consideration. Narrow property lots has been identified characteristics of Kanda's urban context, which can easily be sacrificed by "Towers in A Park" development. A wide building in a residential mid-block breaks the context composed by narrow lot housing and affects the walking environment. In such a case, a special design treatment to mitigate this negative impact must be given. On a wide street, ground level continuity of small retail stores are also broken. Only offices or national franchises can be located there due to high rents. Land use and design requirements that maintain diverse fine-grained ground-level activities need to be defined. There would be various alternatives to carrying out profitable development by lowering buildings probably at similar densities and maintaining a lively and casual walking environment with commercial facilities on the periphery of the block.

In reality, Kanda is not a prestigious business district, instead, small individual urban businesses are the main actors. Therefore, by lowering the construction costs and reducing the construction period, such projects can target diverse service industries, such as publishing, software houses, medical services, law firms, architects offices, and
other professional services that are Kanda's contextual businesses.

Figure 64. Image of mixed residential/commercial/office development.
Figure 65. Aerial view of Shinjuku skyscraper zone. (reprinted from Planning of Tokyo 1992).

Figure 66. Site plan of a plaza bonus office building.
Conclusion

In a densely built-up city like New York City or Kanda, the fundamental urbanscape has been transformed by cumulative replacement of existing buildings. Therefore, fine-tuning new developments is a way to determine the future urban form.

When a new development is carried out in such a city, the developer should emphasize increasing the value that is respected or desired by the people.

Through this study of both Quality Housing Program and other zoning systems adopted in New York City, and the built environment in Kanda, the importance of how a street interacts with its surrounding buildings or how buildings on single street interact with each other is identified. In New York City, the continuity of street walls is respected. On the other hand, the space around "Roji" streets and the surrounding buildings is critical in determining the character of a neighborhood in Kanda.

In New York City, the "Street District" of Housing Quality Program and the "Contextual District" that works in conjunction with Quality Housing Program are innovative zoning techniques.

Programming the regulations that deal with the values of a neighborhood must be performed deliberately. There are
alternative regulatory methods such as the Special Zoning District, Urban Design Review, and Zoning Systems. This study found an advantage in As-of-Right zoning in terms of efficiency both for a developer and the administration.

Although QHP has a bias toward a building type that is brought about by the rigidity of the zoning provisions, the performance of QHP can be respected. With further modifications, QHP can reinforce its performance as an alternative to 1961 Incentive Zoning.

In Japan, zoning is now often discussed as an instrument to control land prices and land speculation. However, the contributions that zoning can make toward maintaining and creating a quality of living environment should be discussed. If we focus the mechanism of forming built environment on a densely built-up downtown, we can create effective zoning systems that deal with the living environment and guide real estate activities.

QHP, itself, is closely connected with the characteristics of New York City's urban form; however, starting from the reevaluation of Kanda, this study found the applicability of its concept to Kanda in a variety of ways. Because New York City has tried various zoning regulations by trial and error, it has succeeded in finding a reasonable direction of development. Kanda should be an
important zoning test field in Tokyo because almost all the downtown problems are packed in it to this district.
Bibliography


Paumier, Cyril B. *Designing The Successful Downtown*, The Urban Land Institute, 1988.


