



1991

Restoration and Design Project for Philadelphia Chinatown

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University of Pennsylvania

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RESTORATION AND DESIGN PROJECT
FOR PHILADELPHIA CHINATOWN

Kuo-Wei Chang

A THESIS

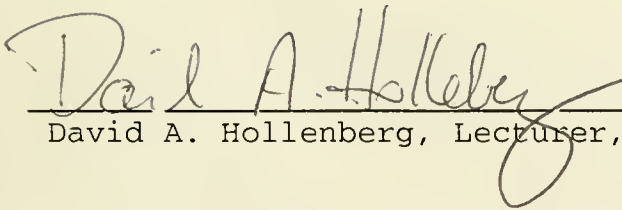
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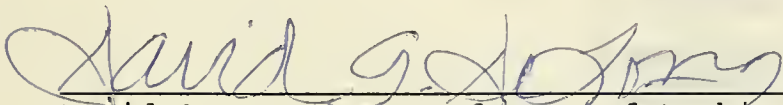
Presented to the faculties of the University of Pennsylvania
in Partial Fulfillment of the Requirement for the Degree of

MASTER OF SCIENCE

1991



David A. Hollenberg, Lecturer, Historic Preservation, Advisor



David G. De Long, Professor of Architecture
Graduate Group Chairman and Reader

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My parents gives great economic and spiritual support during these years. Thanks all of you.

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I. Introduction

A. Statement of Purpose

Like other Chinatowns in North America, Philadelphia Chinatown has struggled for its existence in the central urban area for more than ten decades. Today Philadelphia Chinatown faces the Convention Center's impact and the north expansion of Market Street's commercial district. Unfortunately, its north side is segregated by Vine Street Expressway, and the Penn College of Podiatric Medicine obstructs its east expansion's capability. So it can only stick on its existing own "territory" and continue to struggle for survival in Central City, Philadelphia.

Although recently Chinese immigrants are settling down in South, West, and North Philadelphia¹, the existing Philadelphia Chinatown still plays a major role in Chinese society in the Philadelphia area. On weekends for example, Chinatown becomes a shopping center for most Chinese to buy Chinese stock, which usually doesn't sell in groceries or supermarkets. In this place, people can get, of course, Chinese food, curios, video tapes, magazines and newspapers from China, Hong Kong, or Taiwan. The joss stick, a kind of stick for burning for religious ceremonies is even sold in Chinatown. Most store owners or servants speak Cantonese or Mandarin, and

¹ "Chinatown" Philadelphia City Paper, Oct.12- Oct.19, 1990, p.14.

signs in Chinese are scattered around all over the streets. So, in general, Philadelphia Chinatown is a self-supporting community for Chinese people in the area.

The Chinatown Arch, a 1984 gift from China for improving friendship between Beijing & Philadelphia, probably plays a role in improving the streetscape and gives a clear image of an entrance to the area. However, the existing streetscape lacks of a sense of unity and cultural identity and the facades of some historic buildings are mistreated. Although each Chinatown in United States may have different individual problems, the modern Chinatowns probably have affected by similar problems, such as rapid growth of population, economic expansion into consumer industries, the influx of overseas Chinese capital (especially from Hong Kong), and the emergence of class conflict².

The Urban Form of Center City, drafted by the Philadelphia City Planning Commission, has mentioned that Chinatown is an area suitable for conservation.³ The subject of this thesis will be the preserving of historic buildings' facades on 10th st, Race st. and Arch st. and a design for the streetscape to create the image of

² Peter Kwong, The New Chinatown. (New York, N.Y.: Hill and Wang New York, 1987) p.10

³ Philadelphia City Planning Commission, The Urban Form of Center City. (Philadelphia, PA: Philadelphia City Planning Commission, 1985) p.55

Chinese heritage. The thesis' most important focus is finding ways for preserving and creating cultural & social areas for tourists and community residents. The providing of restoration guidelines for those store owners who want to remodel or have an adaptive use for their stores but do not know what to do will be a secondary topic.

Before turning to the main focus of the thesis, the examination of past and present existing conditions in Philadelphia's Chinatown will be made. This study will focus on the past and existing land use, building facades and the future impact of the Convention Center. Following this examination, two case studies of other Chinatowns will be examined. San Francisco's Chinatown is the earliest place where Chinese immigrants settled down in America. New York City's Chinatown is the earliest Chinatown on the east coast. Both of them are located in the central urban area. How they maintain their internal development and preserve their cultural identity are topics.

Beside those topics mentioned above, the history of Philadelphia Chinatown and the Chinese ideas of town will also be discussed. The philosophy of Chinese town is different from that of the west. How to find the balance in Chinatown is very important. The history and ideas shall be carefully reviewed before setting the restoration guidelines for Chinatown.

B. Problem Definition

The Philadelphia Chinatown lacks space for its future expansion due to its location in Center City's core and its obstacles around its perimeter. So, the internal development and maintenance of Chinatown is especially important.

Today, passing through the Philadelphia Chinatown, it is difficult to find much sense of united identity except the Chinese signs. Although some of the historic buildings' facades have been well preserved, yet they are partially covered by intruding signs or disturbed by inconsistent adjacent buildings. In fact, most store owners have renovated their stores without consideration of preservation issues, and the result of facades becomes casualness. The streetscape in Chinatown lacks considered design. From the pavements to road lamps, the elements of composition for streetscape are treated with casualness. Due to the practical demand, trucks unload stock in front of store and make access inconvenient for the pedestrians and cars. The heavy traffic on Race street also increases the inconvenience of internal connection in Chinatown.

The Chinatown community has no open space within its boundaries and is cut off from Franklin Square by heavy traffic.⁴ The regular scene in Chinatown is the elder wandering on the streets and

⁴ Ibid, p.74

children playing on the sidewalk or even on the street. Unlike New York City's Chinatown, the night life in Philadelphia Chinatown is very quiet, with only the restaurants maintaining late hours. Compared with night activities in Canton or Hong Kong, the Philadelphia Chinatown is quite different. The majority of the Chinese strive to be self-sufficient: they work long hours, and often retain multiple positions or jobs. For those people who are frugal workers and live in Chinatown, life nevertheless seems difficult. How to improve their living quality is not part of the subject of this thesis. But the way to improve the street scape of Chinatown is addressed, in the hopes of contributing to a sense of identity and thereby to quality of life.

C. Proposed Solutions

To develop a sense of united identity in Philadelphia Chinatown, this thesis proposes the following solutions:

- (1) Preserve historic contributing buildings' facades and allow the renovation of their interior for commercial and residential use.
- (2) For non-contributing buildings, set guidelines for their future renovation; concentrate on the street corner buildings which may be required by putting Chinese architectural elements in the design for renovation.
- (3) Design the streetscape in Chinatown on 10th st, Race st. and

Arch st. with consideration for Chinese heritage.

- (4) Find a balance between commercial and residential use in Chinatown.
- (5) Suggest uses for the vacant buildings.
- (6) Try to show the heritage of Cantonese architectural style, which has a lot of decoration and influences Western style.
- (7) Find the solution for the co-existence with the Convention Center and Market Street East's mall.

D. Historic Background -- from China to Philadelphia

Philadelphia Chinatown has existed in Center City for more than 120 years. Although Philadelphia had commercial relation with Canton from 1780, the first Chinese immigrant came to Philadelphia only in 1845⁵.

Due to the Gold Rush and the construction of railroad in California, many Chinese came to California in the mid-1800's. Chinese thought their born place, China, was their final place to rest. They took for granted that America was only a place for earning money, and that they would go back to China after they earned that money. In mid-1800's, there was the turmoil of civil war, the Tai-Pen Rebellion in south China lasting for 14 years

⁵ City Planning Committee, Report on Philadelphia's Chinatown Area (Philadelphia, PA: City Planning Committee, 1975) p.10

(1851-1864). The war caused the death of 25 million people⁶. Confronting two Opium Wars with Britain, the Chinese government became weaker. Life became more and more difficult for the Chinese people. After paying taxes or rental fees for their farms, the peasants had very little, if anything, left for themselves to eat.⁷ Therefore, some Chinese who lived in south China decided to go to the outside world to try their luck, rather than face the torture of war and pains of difficult life.

After the completion of the first transcontinental railway in the U.S. in 1882, there was rising hostile feelings toward the Chinese in California. The Chinese Exclusion Act was passed in 1882 by Congress. This represented the climax of anti-Chinese feelings. Compared with the west coast, the east coast of America showed less tension. So, a lot of Chinese came to New York and then Philadelphia.

The first Chinese laundry was opened in Philadelphia in 1870; the first Chinese restaurant opened in 1880⁸. This restaurant, (possibly the Mei-Hsing Lou at 913 Race Street), was set up by

⁶ Jack Chen, The Chinese of America (San Francisco, Ca:Harper & Row Publishers, 1980) p.9

⁷ Ruthanne Lum Mccunn, An Illustrated History of the Chinese in America. (San Francisco, CA: Design Enterprises of San Francisco, 1979) p.17

⁸ Op. Cit., TCA, p.10

laundryman Lee Fong's cousin over a laundry store⁹. For most Chinese immigrants who couldn't speak English, the service jobs were their only option. Although the total population of Chinese in United States declined by 17 percent from 107,488 to 89,863 between 1890 and 1900, the number of Chinese in Philadelphia tripled during those years.

Living in Chinatown was difficult. Chinese immigrants had to tolerate discrimination as well as poor and crowded living environments in the "ghetto". One newspaper printed around 1907 described Philadelphia Chinatown¹⁰:

When one passed along Race street between Nine and Tenth Streets in the daytime, Chinatown seems all but deserted. But walk along Race st. at night. How different a scene! The brilliant, many colored electric signs in front of the Chinese restaurant are glowing splendidly. The street is crowded with Chinamen, big, little, fat and thin Chinamen. Like rats, which emerge from their holes when night comes forth, they sit on door steps in little groups and chatter to themselves as they smoke their long stemmed pipes. (I-1, I-2)

During the Second World War, Chinese were "emancipated" due to the shortage of labor. Chinese were allowed to participate in many occupations. So, lots of Chinese no longer had to rely on Chinatown for living. They moved out of Philadelphia Chinatown and lived in suburban areas, but still maintained connection with Chinatown.

⁹ Op. Cit., RPCA, p.10

¹⁰ Perkin Collection Roll 2 (Philadelphia, PA: The Historic Society of Pennsylvania) p.43

Philadelphia Chinatown was reduced in size when its main street was incorporated into the Vine Street Expressway leading to the Benjamin Franklin Bridge, which connects Philadelphia to New Jersey. In later years a slum clearance program destroyed more of what remained. The Chinese community of 1,000 was reduced to 200, but it has subsequently increased to over 5,000, ten percent of whom live in Chinatown¹¹. In 1980, there were 1,150 people living in Chinatown. But there were 400 dwelling units located in this small district. The 400 dwellings resulted primarily from the conversion of loft buildings to apartment units.¹² Compared with other neighborhoods like Old City, Society Hill and Rittenhouse. Chinatown is in fact the densest residential district in Center City.

According to informal statistics, there are about sixty major Chinatowns in 26 countries around the world.¹³ Philadelphia's Chinatown is a large Chinatown in North America. It still plays the

¹¹ Op. Cit., TCA, p.258

¹² Philadelphia City Planning Commission, The Urban Form of Center City. (Philadelphia, PA : City Planning Commission, 1985) p.96

¹³ The People's Daily - Overseas Edition (Beijing, China: Dec.22, 1990)

intercultural role and attracts tourists. It also provides a shelter or ghetto for Chinese immigrants for the anticipated immigrations from Hong Kong prior to 1997.

E. Chinese Thoughts on Town and Cantonese Customs

Chinese thoughts of township are deeply based on their concept of the universe. They use panoramas of the universe to apply to towns. The Li-Chi (The Manners), written around 600 B.C., clearly summarized and described the structure of township. Those ideas of city have deeply influenced the Chinese for more than three thousand years.

In Chinese thought, as summarized in the Li-Chi, the sun "moves" from the north to the west, then the south, and the east¹⁴. The sunny side is called "Yang" and the dark one is called "Yun". The sunny side is positive and the dark side is the negative. All of nature can be placed in one of the two categories. In Illustration I, these principles are clearly demonstrated (I-3). The most important aspect of this view is that each side affects the other. In applying these principles to urbanism, the designer of a city

¹⁴ Chinese Collection: Li-Chi. (Tokyo, Japan: Fuji Mountain Publishing Inc., 1977) p.1

first inspected the region which was suitable for living and then determined the city's orientation which was governed by practical considerations and cultural factors¹⁵. The size of cities or towns was ordinarily restricted. The Li-Chi (The Manners) clearly described what kinds of cities should be what sizes and defined their regions according to their names (see the Illustration II, I-1). All cities had walls for protection, and most cities were rectangular or square and were divided into several blocks by roads.

The basic idea of a city's layout was also described in the Li-Chi (The Manner). Illustration III¹⁶ shows the pattern of a typical city. A city was divided into nine districts by roads which run north-south and east-west. The principal entrance of a town was on the central axis and faced south. The public was in the central columns of city and the residential areas were on both sides. The markets were at the back of center, and the temples were on the front. Actually, this layout came from the idea that the ruler was the son of the heaven. Therefore, he lived in the center of city to easily control his servants. The mayors and governors naturally followed this pattern when they constructed their feudal cities (I-4).

¹⁵ Michele Pirazzoli-T'serstevens, Living Architecture: Chinese. (New York: Grosset & Dunlap, Inc, 1971) p.39

¹⁶ Translate from Li-Chi

Street block:

One of the most interesting aspects of Chinese city planning was the use of the block system. A city like Xian in the Tang Dynasty (A.D. 618-907) had 108 blocks. Bai Juyi (A.D. 776-846), a very eminent poet, described the chessboard arrangement: "Ten thousand houses are like a chess game. The streets are like market garden lots¹⁷". Each block had its own wall and two gates, one to the east and one to west. Some large blocks had four gates. These gates were shut at night and reopened at daytime. Each of those blocks consisted of houses and temples. They housed merchants, artists, monks, fortune-tellers and officials. These blocks were so important, that people talked about which block they were going to and not which street.

Markets:

The east and west markets were on the back of the city's government building or palace. The markets opened at noon. At that time, the aristocrats went out to buy products. The citizens were permitted to buy goods during the time before sunset. Specific streets were formed for specific products. As with residential districts, officers were appointed to control the markets.¹⁸

¹⁷ Op. Cit, LAC, p.45

¹⁸ Liu, Laurence G., Chinese Architecture. (New York: Rizzoli International Publication, Inc., 1989) p.43

Cantonese Customs

Streetscape:

Canton is a very hot and humid city. For practical reasons, arcades were used in many old buildings. In some commercial districts, the roads were 10 to 12 feet wide¹⁹. The streets were paved with stone slabs, usually worn down by the traffic to a hollow in the center of the path, by which means the rain water was carried off²⁰. The right of way was contested by people and domestic pigs. "Skylights" made of bamboo basket-work crossing the street provided an effective shelter from the heat. Randomly shaped signs were often hung directly over the streets. Each trade had its special product which was a counterpart to its neighbor.

Chinese Main Festivals

Chinese New Year (around February 15th)

For more than three thousand years, Chinese have used a lunar calendar. Chinese New Year is the most important day in the year. Firecrackers are used for expelling evil spirits, and playing lions

¹⁹ Burton F Beers, China: In Old Photographs 1860-1910 (New York: Charles Scribner's Sons, 1978) p.54

²⁰ John Thompson, China: the Land and Its People. (Hong Kong: John Warner Publication, 1977) p.42

or dancing dragons are symbols for good luck. Eating "year-cake" means everything will be well. Adults give children red envelopes containing money to insure that they will grow up healthy.

The Dragon Boat Festival (around May 25th)

The dragon Boat Festival is in memory of Chu-Yu, a well-known patriotic poet, who sacrificed himself to advise his emperor. On this day, people races dragon boats and eat "jung", a kind of dumpling which contains rice, pork, lotus seeds, and eggs and is covered with bamboo leaves.

Moon Festival (around September 30th)

In the lunar calendar, this day has the biggest full moon in the year. The Moon Festival is second in popularity only to the Chinese New Year. Like Thanksgiving those who live away from home go home and have a good meal. After dinner, people often go outside to see the moon and eat moon cake, a large round cake made of flour and brown sugar and filled with lotus seeds or bean paste.

In Philadelphia's Chinatown, the biggest event in the year is the Chinese New Year. There is a parade, which usually takes place on Saturday or Sunday right after the first day of New Year. The playing of dancing dragons and lions is a very traditional part of the celebration. The dancing dragon goes to every storefront as a

symbol of good luck. At this time, a firecracker must be lit to expel ill-fortune or the unhappy things from the last year. The owner of that store must personally give the players of the dancing dragon a red envelope containing cash. Other festivities like demonstrations of Chinese martial arts and color banners, can also be seen. On this parade day, Chinatown attracts many people and most restaurants offer special discounts.

II. Existing Conditions

A. Define Thesis Boundary

The boundaries for this thesis are limited to those areas where there is substantial mixed residential and commercial use. The construction of the Vine Street Expressway in 1975 separated Chinatown into two parts. This Expressway makes internal connection very difficult, and there are still no good solutions. Since this thesis concentrates on the restoration of building facades and streetscape design, the area of Chinatown north of Vine street will not be included. The south boundary is quite evident because south of Arch Street there are only three Chinese stores. However, considering the focus on the whole image of the streetscape, the thesis focus area will include this area. The Penn College of Podiatric Medicine is situated on the east side of 9th Street. The Commuter Rail Tunnel decreases the possibility of Chinatown's east expansion because the underground construction is right under this site. So, the east boundary is 9th Street (II-1).

Two commercial/ residential buildings were recently constructed along the east side of 9th Street between Cherry and Winter Streets. Actually, both of them are along the borderlines of Chinatown. The Convention Center is on the west side of 11th Street

and is different in character from Chinatown. So the west boundary is 11th Street.

B. Land Use

<Existing Use>

All the land within the boundary drawn by Philadelphia's City Planning Department official map is defined as a Commercial 4 district (C4). Actually, along the 10th, Race, Arch, 9th, and 11th Street are full of commercial activity. Most commercial activities are focused along the Race, Arch, and 10th Streets, and Winter, Spring, and Cherry Streets are residential and office areas. Because it is difficult to identify commercial use or residential use on a block by block basis in Chinatown, since each block is put to a variety of uses, the description which follows uses a street-by-street system to discuss a particular area.

(1) Arch Street

Buildings on both sides of Arch Street are used for commercial use or as rental offices. There are two parking lots, one on the north side of Arch between 10th and 11th Street, the other on the south side between 9th and 10th Streets. Both of them are private parking lots. The unoccupied lot on the south side of Arch Street between 10th and 11th Streets is the bus entrance for the Greyhound Company.

(2) Race Street

The Race Street area includes commercial space and rental offices. Bell of Pennsylvania occupies one whole block. One parking building is located on the corner of Race and 11th Streets.

(3) 10th Street

Tenth Street is actually the most important street in Chinatown, and is the central north-south axis of Chinatown. Most restaurants are located along this street. The fire station on the corner of Cherry Street and 10th Street inhibits the potential development of that area. It is quite a dilemma for the Chinatown neighborhood, because the fire station is necessary for the area, but is located almost in the center of Chinatown and prevents the continuing of commercial activity on 10th Street. One parking lot is located next to this fire station. Both of those occupy a great deal of space.

It is remarkable that Chinatown has such a mix of commercial and residential use. Like most typical oriental residences, the first floor is used as commercial space and the second and the third floor are put to use as residential use. In the area of Winter Street, Spring Street, and Cherry Street, most buildings are either residential use or office use. With developers moving in from all sides, the 2,000 residents, 50 restaurants, and 25 businesses are pinched and frustrated by disappearing breathing space, growling

heavy traffic, and spiraling real estate costs²¹.

C. Building

(1) Building Style

The collaborative studio project of the School of Fine Arts, University of Pennsylvania in 1986 studied Chinatown and divided its building style into seven categories. They are:

- a. Mid 19th century residential rowhouses,
- b. Mid 19th century residential with commercial rowhouses,
- c. Late 19th century commercial rowhouses,
- e. Late 19th century commercial buildings,
- f. Early 20th century commercial buildings,
- g. Post Second World War buildings, and
- h. Culturally significant buildings.

These categories basically cover all the extant building styles in Chinatown. However, due to the different boundary drawn for this study of Philadelphia's Chinatown, these categories may be not suitable for use in this thesis, because most of buildings considered in thesis are commercial or residential/commercial buildings. The studio report's categories are probably too complex to apply in this thesis.

²¹ Cascade. vol.5, no 1 Jan. 1988 (Phila. PA: CASCADE, Federal Reserve Bank of Philadelphia) p.1

So, four categories are used for this thesis:

- a. Early 19th century buildings,
- b. Late 19th century buildings,
- c. Early 20th century buildings, and
- d. Mid and late 20th century buildings.

(II-2, 3)

a. *Early 19th Century Building*

These buildings are typically two to four floors. The dormers generally stretch along the roof with a long ridge board. Most of buildings are Colonial style with hood molding. Most windows have flat lintels and some windows are in the Gothic Revival style. The majority of them have raised first floor and semicircular transoms above the door. (II-2,II-4)

b. *Late 19th Century Buildings*

These buildings are either the Second Empire style or Italian Renaissance. The evident elevated roof on the front facade typically has segmental or triangular pediment dormer. The use of pressed brick and the overhanging eaves with decorative brackets are typical of the Italianate style²². All buildings in Chinatown constructed in the Second Empire style have a somewhat steeper, mansard roof than regular roof. The general effect at the time of construction was monumental ornateness and the provision of a

²² National Trust For Historic Preservation, What Style Is It?. (Washington, D.C.: The Preservation Press, 1977) p.20

comfortable association with the latest European building fashion.²³ (II-2, II-5)

c. *Early 20th Century Building*

This type of building is an early steel and wrought-iron structure with terra cotta and adorning cornices. With the influence of Classic Revival and the Chicago School, those buildings found in Chinatown have large areas of glass, terra cotta and other non-supporting material. This is due to the exterior walls of the skeleton-framed structure which do not bear tremendous weight. Since the facade must be in proper proportion, the base on this type of building is high. (II-3, II-6)

d. *Mid and Late 20th Century Building*

Buildings of this period in Chinatown do not show much diversity. Most are reconstructed or have had a great deal of remodeling. The majority of these buildings are steel-reinforced, masonry construction²⁴. The only structure which is a "Post-Modern" building is on the N.W. corner of 9th and Arch Streets. (II-3, II-7)

²³ Ibid, pp.22

²⁴ Graduate School of Fine Arts, University of Pennsylvania, Philadelphia Chinatown Report. (Phila.,PA: University of Pennsylvania,1986) p.19

(2) Historic Buildings

For the purpose of this thesis, historic buildings in Chinatown are divided briefly into two categories, significant and contributing buildings. In the evaluation system, those buildings fitted into the two categories are based on architectural or cultural significance. An architectural significant building is one that is in good condition and that reflects fine design quality, material and / or aesthetic value that influences the site.²⁵

There are three buildings listed on the National Register of Historic Places and forty seven buildings are Locally Registered properties²⁶. (II-8, II-9)

a. Significant Buildings

The definition of a significant building in this thesis is:

- (a) The building shall have a high quality of architectural features.*
- (b) The building is contributing to the city in historic or cultural events.*
- (c) The building is an example of early building technology or*

²⁵ *Ibid, p.13*

²⁶*Ibid, p.13*

of a particular architectural style.²⁷

Those buildings that fit this criterions are:

National Register Buildings: 1010-14 Race Street, 1003-1005
and 1006-1016 Arch Street

Arch Street: 1011, 1026

Race Street: 907, 909, 924-928, 941

10th Street: 125, 151, 207

(II-10, 11)

* The structure at No. 1006-1016 Arch Street, the Winston Building, was constructed in 1914. This site's original use was for the Presbyterian Church, built in 1822. This building's high wooden steeple was quite famous. the church was sold in 1903 and torn down later. The Winston Building was constructed by the John C. Winston Co. The elegant terra cotta and limestone trimmings make this building quite a graceful landmark. This building also shows the early wrought-iron structural technique used in Philadelphia.

* The building at No 1003-1005 Arch Street was originally used as a theater. The Troc Theater opera house was run by Simmons & Slorum in 1870 and burned in 1872. The existing building was constructed immediately after the fire. Its elegant cornices and window decorations show its cultural heritage. But the existing red brick facade is not original one which a photo shows was white in color.

* No 1026 Arch Street's building was constructed around 1880. The

²⁷ Ibid, p.12

decorative brick and recessed panels show the typical Italianate Style.

* No 907 Race Street's building has very important cultural and historic significance. This building was the home of a famous architect, Thomas U. Walter. From 1908 to 1952, this building was the Far East Chinese Restaurant. This building was also used as the headquarters of the On Leong Tong Society.

* The building at No 125 10th Street is the Chinese YMCA. Although this building was not constructed more than fifty years ago, the significant Cantonese architecture style shows its cultural heritage. It is also the only example of Cantonese architectural style in Chinatown. The elegant proportions of the facade and the graceful construction quality make this building significant in Chinatown.

b. Contributing Buildings

The definition of contributing building in this thesis is :

- (a) The building contributes to the urban fabric or streetscape.
- (b) The details of the building or building features contribute to Philadelphia architectural history.
- (c) The building is important to local social or cultural events.
- (d) The building was designed by a famous Philadelphia architect and is still in sound condition²⁸.

²⁸ Ibid, p.12

The buildings in Chinatown which fall into this category are:

Arch Street: 911, 1007, 1009, 1017, 1025, 1026, 1027-31

Race Street: 930, 1024, 1025-29, 1029-31, 1031-35

10th Street: 127, 218, 229, 231, 233, 235, 237, 239

(3) Big Construction

Since both 10th and Race Streets are only 50 feet wide, any building extending more than five floors may be deemed improper to the human scale. Arch Street is seventy two feet wide, therefore the maximum allowance for proper scale is seven floors, except those buildings on the street corners. The buildings deemed improper to the street's scale are:

Arch Street: 1027-1031, 1006-1016

Race Street: 902-922, 924-928, 1010-1014, 1023-1027, 1029-1031, 1030-1038, 1033-1035

10th Street: 117-119 N, 151 N, 209-219 N

(II-12)

The Bell Telephone Company of Pennsylvania, at Race Street, is the largest building in Chinatown, with a total height of 165 feet, and is totally out of scale with its context. This building also occupies one whole block, and is different in character to Chinatown. No. 1030-1038 Race St. is another example that should be criticized. It is located on the S.E. corner of Race and 11th Streets. This building is an open parking deck of 86 feet and has an indifferent expression of facade. Both the Bell Telephone

Company of Pennsylvania and this open deck parking building are at the edge of the boundary of this study on Race St.. Their inappropriate scale impairs the possibility of harmonious streetscape in Chinatown.

Actually, there are seven improperly scaled buildings on Race Street which has 58% of the total number of large construction in Chinatown. The most evident effect of the unfit scale is the deep shadow. They cast on Race street in the afternoon.

(4) Mistreated Buildings and Inconsistent Buildings

It is difficult to define which buildings are mistreated or inconsistent. It may involve some degree of personal preconception. To be objective about these buildings, this thesis provides some criteria.

- a. Significant buildings whose original style has been changed.*
- b. Contributing buildings' facades which have had alteration or inconsistent materials, especially on the ground floor of the facade.*
- c. The colors or materials of buildings' facades which intrude with their neighbors.*
- d. Buildings' heights which are inconsistent with their neighbors.*
- e. Signs or billboards occupies more than ten percent of the facade.*

The buildings that meet this criterions are:

Arch Street: 901, 905, 906, 909, 925-27, 928, 930, 931-33, 932,
934, 936, 938, 1000, 1001, 1004, 1019, 1021, 1023,
1028

Race Street: 901-03, 915-17, 919-21, 923, 934, 936 ,937, 938, 939
1000, 1002, 1008, 1016-18, 1017-19, 1020, 1023-27,
1030-38, 1037

10th Street: 100 N, 122 N, 124 N,129 N, 131 N, 133 N, 136 N, 145
N, 151 N, 152-58 N,153 N, 204-08 N, 232-36 N,145 N,
225 N

(II-13)

Most buildings in Category c. have their facades/ materials or heights inharmonious with their neighbors.

(5) Vacant Buildings

There are few vacant buildings in Chinatown. The definition of vacant buildings is buildings which haven't been occupied for more than one year. The buildings that are still seeking renters are not counted as vacant buildings. The vacant buildings are:

924-928 Race street

151 N 10th street

922, 924 Arch street

(II-14)

No. 924-928 Race and 151 N 10th Street are actually regarded as one building, because this building has a 90 degree connection in the back of the buildings. This building, Lasher Building, is the largest vacant building in Chinatown. It is seven floors on the 10th Street side and eight floors on the Race Street side. Its original use was the College of Pharmacy, and it was constructed in 1892. The construction on Race street was built in 1910.

No. 922 Arch Street is also abandoned. It is next to a parking lot which occupies a large space. This building will probably be torn down and annexed by the parking lot for future development. No. 924 Arch Street just on the corner of N. Hutchinson and Arch Streets is also a vacant building with a distance of around 146 feet from the entrance to the rear.

D. Streetscape and Traffic

1. Streetscape

Most main streets within Chinatown, including 9th, 10th, 11th, and Race Streets, are fifty feet wide and sidewalks are twelve feet. One of the remarkable aspects of the study area of this thesis is that there are very few sidewalk trees. There are only two trees on Arch Street, one on 10th Street and no trees on Race Street. Compared with other streets in Center City, Chinatown's main

streets are truly barren.

All contribute to this barrenness is the fact that the pavements within Chinatown are concrete; there is very little street furniture, except for parking-meters, fire hydrants, curbs, and a variety signs. Diverse signs can be found anywhere on the facades. The lighting poles in Chinatown are mast arms around 30 feet high, the typical lighting poles on any street. (II-15, 16, 17, 18, 19,)

2. Traffic

(1) Traffic Circulation

Traffic circulation is not complex in Philadelphia's Chinatown compared with that in other Chinatowns. Arch Street is a two-way street. Ninth and 11th Streets are northbound, and 10th Street is southbound. Race Street goes west, and Winter Street is the reverse. The heavily trafficked streets in Chinatown are 10th Street, Race Street, and Arch Street. Due to the fact that it is one of the main roads leading to the Benjamin Franklin Bridge, the traffic on Race Street is more burdensome than on Arch Street. Also Race street is only 50 feet wide. Compared with Arch Street, a 72-foot-wide street, Race Street is jammed with cars during the peak hours. Although on this street parking is banned at all times, the problem remains unsolved. Actually, the heavy traffic has the

obvious result of making the internal circulation of Chinatown difficult, especially for pedestrians.

Tenth Street is the only southbound street in Chinatown. Although it does not have the traffic burden like Race Street, pedestrians safety on this street is still doubtful. (II-20)

2. Parking Space

Both 10th Street and Arch Street have parallel parking. Race Street has no parking at any time. There are two parking garages in Chinatown, one at No. 1030-1038 Race Street and another at No. 920-930 Spring Street. There are open air parking lots at No. 141 10th Street and at No. 1013-1015 and No. 912-920 Arch Street. All of them are private parking lots. (II-20)

E. Convention Center's Impact

The Pennsylvania Convention Center is scheduled to open in Center City in January, 1993. Since it is adjacent to Chinatown and it occupies 17.5 acres, its impact on Chinatown is unavoidable and will be considerable.

In the past two decades, Philadelphia's Chinatown has been confronted with the construction of Independence Mall, the Commuter

Rail, Gallery I , Gallery II, and Vine Street Expressway which cut Chinatown's northern border. Now, the Philadelphia Convention Center is being constructed. It is probable that this will be the last big construction project near Chinatown in this century.

(II-21, 22)

The Grand Hall of this center will make adaptive use of Reading Terminal Train's Shed. With an enclosed walkway over Arch Street connecting with main exhibition halls, the major construction work is on the Exhibit Hall, which is defined by Race, Arch, 11th, and 13th Streets. The loading docks are to be Race Street. Basically, the main pedestrian entrance will be on Market Street. This transportation route will be jeopardized due to the existing overburden of Race Street's traffic. The Urban Design Committee collected from AIA members had cited the question about the Convention Center's design: " Race Street should have retail use, not parking, at street level so that it could continue as retail on both the north and south sides, as in Chinatown"²⁹. But this concern does not affect the later design's scheme. Some retail space will be on the west side of 11th Street between Arch Street and Race Street. This may be beneficial to Chinatown which is just on the other side of street.

²⁹ Philadelphia Architect (Philadelphia, PA: Philadelphia Chapter/ AIA, Feb. 1989) p.6-p.7

The presumption of Convention Center's development is that it has a different character from Chinatown. But this center also provides 70 specialty food merchants and craftsmen in Reading Terminal Market. This is quite a challenge to Chinatown's restaurant service. Although they are providing different styles of service, the Convention Center will probably attract more people due to its entrance facing away from Chinatown.

III. Survey and Document Existing Facades

For this thesis, the survey and documentation of existing building facades was divided into three steps: A: Photographing, B: Drafting, and C: CAD

A. Photographing

When taking photos of architecture, utilizing PC (prospective-correcting) lens provides a vertical image without distortion for a 35mm camera. It is very important to get a flat image of building for such surveying. The PC lens has two kinds of focal lengths, 28mm and 35mm, available for professional use. Since the regular street width in Chinatown is 50 feet and buildings exceed more than 30 feet in general, the 28mm lens was seemed to be the appropriate one.

The photographs provide basic documentation for the project and served as a pictorial checklist when away from the site³⁰. Each building has an individual shot taken directly across the street. The camera is kept at eye-level with the horizon. This can capture a flat image for buildings not exceeding 35 feet in height on Race and 10th Streets and 55 feet in height on Arch Street. In those

³⁰ Sid Delmar Leach, Photographic Perspective Drawing Techniques. (New York, NY: McGraw-Hill Publishing Company, 1990) p.4

and 10th Streets and 55 feet in height on Arch Street. In those cases where one cannot get a flat image, the distortion of upper parts of buildings will be accepted with later correcting work of the drafting process. (III-1)

For the difficult photographic document at taking pictures of a whole block of buildings, some experiments were made before the final shot was taken. The experiments included: taking photos with color print and black-and-white print, on a sunny day and on a cloudy day, and in the morning and in the afternoon. After taking this test, some conclusions can be made:

- (1) A low Contrast photo is better than high contrast one. Unlike the general architectural photos which require high contrast, those photos shall be low contrast to get as many details of the building facades as possible.
- (2) Black and white prints are easier to process in a darkroom than are colors prints. Some photos needed to be corrected or improved with darkroom processes to get low contrast photos due to the different situation of buildings.
- (3) Cloudy days are better than sunny days, because on cloudy days there are fewer shadows below the cornices, lintels, and decorative trims, etc..
- (4) Photos of street facades facing east shall be taken in the morning. Ten o'clock is the best time. For those facades facing west, four o'clock in afternoon is the best time. The buildings

facing south can be photographed either in the morning or afternoon. The building facing north can not be photographed on even slightly sunny days. On Race Street it is evident that this street is shadowy even on sunny days because of the high buildings on south side. So, the best time to take photos of this street is at noon on a cloudy day.

B. Drafting

This process is not complex. Tracing paper is placed on the top of photos, and then the building facades are traced. Since these drawings are to provide the reference of dimensions for later computer work, the details of facades will be not so much as the existing facades.

Using information from the Business Property Atlas of Philadelphia and the City Planning Commission's building line map on the width and height of buildings, and the flat image of lower section in one shot, the upper parts of the facade can be deduced based on the proportion. The width and height of windows, doors and signs are based on the proportion of the lower section. The width and height of windows, doors, and signs is based on the proportion of their widths to the building's width. This may result in some degrees of difference from the actual size, but it can be tolerated due for the broad purposes of this thesis.

C. CAD

The most time-consuming processes of documenting building facades is the work with AutoCAD. Compared with traditional hand-recorded drawings, the use of computers will not save much time. But it dose save energy for later design sessions and will also create an accurate perspective view of the streetscape.

The drawings of building facades are divided into several layers which are outlines & prominent profiles of building, window ledges, doorways, decorative trims, signs, and diagram frames. Separating the different layers provides a great benefit to facade study. Clearly, AutoCAD's drawing capabilities can easily handle this project. For example, it can show the windows and the building profiles layers. This provides the pattern of windows and their relation and portion to the whole facade or even the whole block.

(III-2 - III-9)

One periodical³¹ has mentioned that using the scanner to trace the outlines of buildings from photos into a computer file can create very accurate drawings which can be adjusted or to which further details can be added. By using the scanning process, one can skip the process of drafting moves the process of surveying from taking photos directly to computer work. Since the price of a scanning

³¹ Thomas K. Butt, " How CADD Helped Restorations". Architecture Nov. 1989 p.115-118

system is very high, and since it can not evaluate depth and perspective as well as scale, this thesis will stick to the typical CAD work for the method of surveying existing building facades.

Combining the program of AutoCAD with AutoShade, a building's shadow effects on the street can be imitated and manipulated. This application is very useful, especially for the Race Street study.

(III-10 - III-14)

IV. Case Study

A. San Francisco Chinatown

In 1848, gold was discovered in Coloma, California. In 1852, 20,000 Chinese arrived in San Francisco to seek their fortune³². Now, there are estimated 200,000 people in San Francisco of Chinese descent³³. Although San Francisco's Chinatown is the second most densely populated area in the United States outside of parts of Manhattan, it still attracts lots of new immigrants to this jammed "ghetto".

San Francisco's Chinatown is bounded by Columbus Avenue, Montgomery Street, California Street, Powell Street, and Broadway Street. It includes 24 blocks which contain a mixed residential and commercial zone, a commercial zone, and some light industry which is mainly garment making and food processing. It is really a minuscule city within a city. It is also the second most attractive tourist area in San Francisco, second only to Fisherman's Wharf.³⁴

³² Ruthanne Lum Mccunn, An Illustration History of the Chinese in America. (San Francisco, California: Design Enterprise of San Francisco, 1979) p.26

³³ Katherine Bishop, " San Francisco's Chinatown Seeks to Save Its Soul". The New York Times December 17, 1990.

³⁴ Tze-Yen Chen, " The Stepping Stone of Reconstruction of San Francisco's Chinatown" China Times Weekly. March 16, 1991 (Washington D.c.: Hina Times Inc.) p.78

The Chinatown Entrance Gate is on Stockton Street near the corner of Bush Street. Like Philadelphia's, this gate is located on the central axis of Chinatown. The building styles are diverse and balconies are very popular on front facades. One of the striking things is the large number of commercial signs on building facades. These signs can also be found on any part of a building with random sizes, colors, and letters. Philadelphia's Chinatown seems more conservative its advertising than the oldest and largest Chinatown in United States-- San Francisco Chinatown.

Since the 1989 earthquake, San Francisco's Chinatown has encountered a big disaster, economic recession. In 1990, commercial trade has declined 30 to 50 percent. Some stores which mainly run the tourist business face the threat of bankruptcy.³⁵ This threat is the most serious challenge since the 1906 San Francisco earthquake. Around three hundred buildings were damaged, and thousands of living units need repair after the 1989 earthquake. Actually, the 1989 earthquake simply brought lots of change to the surface.³⁶ Several years ago, the Bank of Canton donated money for the cleaning of Chinatown. Several years passed by and San Francisco's Chinatown is still dirty especially at night. The lack of parking space, the traffic jams, the raising of rental fees, and

³⁵ Tze-Yen Chen, " San Francisco Chinatown Shall Step Out The Crossroads". China Times Weekly. Feb. 16, 1991 (Washington D.C. : Hina times Inc.) p.96

³⁶ Katherine Bishop, " San Francisco's Chinatown Seeks yo Save Its Soul". The New York Times Dec. 17,1990.

the fighting of gangs are also part of Chinatown's problems.

The demolition of Highway 480 on February 1991 which connected the heart of Chinatown to central city was damaged by earthquake cut the main economic supply route to Chinatown. The controversy of demolishing or preserving Highway 480 was settled by City Council's vote: 6 to 5.³⁷ New tunnel construction will take the place of Highway 480 and take four to seven years to finish. As Philadelphia's Chinatown stood the inconvenient of construction of the Vine Street Expressway and the Convention Center, those years will be very harsh to San Francisco Chinatown.

B. New York Chinatown

New York's Chinatown had its first permanent Chinese resident, a tea merchant, around late 1840 or early 1850.³⁸ After the anti-Chinese movement rose in the 1880s, around one thousand Chinese arrived in New York. In 1980, there were around 39,000 Chinese living in Chinatown. Today, there are more than 100,000 Chinese living in Manhattan's Chinatown³⁹ who are concentrated in the small, congested triangular area between Canal Street, Broadway

³⁷ Op. Cit., SFCSC, pp.97

³⁸ Jack Chen, The Chinese of America. (San Francisco, CA: Harper & Row, Publishers, 1980) p.258

³⁹ There are some other area of Chinatown like Queens or Flushing other than Manhattan Chinatown.

Street, Worth Street, Catherine Street, South Street, and the Manhattan Bridge. The area has expanded from three streets to thirty streets. Their lives are in sharp contrast to the surrounding metropolis.

Mott, Bayard, and Canal Streets are the major shopping streets. There are twelve Buddhist temples in Chinatown and lots of restaurants serving Cantonese, Beijing(Peking), Szechuan, and Shanghai style dishes, unlike Philadelphia which mainly serves Cantonese cuisine. Manhattan's Chinatown has a variety of commercial stores. Due to the availability of lots of seamstresses, the Chinese garment industry is a major source of income for the Chinese who live in Chinatown.⁴⁰

Around thirty percent of the houses in New York's Chinatown were constructed one hundred years ago. Most of those buildings are not quite suitable for living, yet more than seventy percents' Chinese who live in Chinatown live in those houses in usually crowded conditions. The rents for retail stores are more expensive than those for Wall Street offices.⁴¹ Some stores are shut down or have moved out of Chinatown due to the unreasonable rental fees.

⁴⁰ Bernard Wong, Chinatown: Economic Adaptation and Ethnic Identity of the Chinese. (New York, N.Y.: CBS College Publishing, 1982) p.11

⁴¹ Michi, " The Shadow behind the prosperity of America Chinatown" The People's Daily.--Overseas Edition (Beijing, China: April 1, 1991)

The major problem for New York Chinatown's streetscape is the maintenance of cleanliness. The open-air market, like a traditional market, creates a lot of environmental problems. Drainage water and litter spoil the quality of the street environment. Most Chinese living in Chinatown have conflicting feelings about Chinatown. They do not like the living quality and high rental fees, but they have no choice but to earn a living in Chinatown.

Confucius Plaza is the center of Chinatown, but it doesn't play the proper role of cultural exhibition or a place for people to chat or slow down the speed of life in a crowded urban area. New York's Chinatown badly needs open space. Although it is quite difficult to get land now due to the extremely high prices of real estate, it still needs to set restrictions or policy requirements for further construction in Chinatown.

V. Proposals

The proposal of this thesis can be divided into three categories. They are : A. Concepts B. Guidelines for rehabilitation C. Design and suggestion for building facades and streetscape.

A. Concepts

The concept of this proposal is to revitalize Philadelphia Chinatown into a commercial , cultural and residential neighborhood. Although this will probably have many internal and external conflicts in practical application, this diverse role is the only way to ensure the vitality and uniqueness of Chinatown within its Center City context. The following steps are proposed:

1. Define the commercial boundary, which lies within Arch, Race, 9th, and 11th Streets, by using gateways or Chinese Style poles.
2. Establish clear connections with Independence Center, Gallery Mall, and Convention Center. Since the Convention Center, Gallery Mall, and Independence Center are big scale of construction on architecture or landscape, Chinatown may play the role of connection all of them with individual stores which are treated as whole. Therefore, all of them can become a continuing cultural, social, and commercial district.
3. Historic buildings, significant and contributing buildings,

shall be preserved. Inconsistent buildings shall be reconstructed or removed. Redesign or infill shall be at a proper scale and shall express a unity of vision.

4. Solve the vacant buildings and unoccupied lots' problem. This can decrease some pressure of housing problem in Chinatown.
5. Emphasize 10th street as an axis of Chinatown. Change the paving from Market Street to Arch Street. A special paving detail will create an attractive sidewalk space and an identifiable trademark for that area. Concrete of warm sand color, bordered by bricks in soft gray is suitable for paving.
6. Redesign the streetscape
 - a. Forbid parking on 10th and Race Streets. Construct compatible open deck parking buildings to replace lost parking and ease the pressure for spaces on the others streets.
 - b. Redesign the pavements, tree plantings, light poles, kiosks, signs, and street furniture, etc..
 - c. Design the 10th and Race Streets with a somewhat Chinese Style streetscape.
 - d. Address the combination of The Western and Eastern architecture style in Arch Street. Arch Street shall strengthen the connection with Convention center.
 - e. Design a sightseeing route of Chinatown.
 - f. Solve the inharmonious streetscape of Greyhound's entrance. Place directional sign on the N.W. corner of 10th and Market Streets.
 - g. Emphasize the streetscape on the corners of Race and 10th

Streets.

7. Consult with architects familiar with a Chinese style architecture.
8. Restrict the use of commercial signs and regularly clean the street.
9. Use the existing fire department's site for a plaza which can provide a venue for martial arts or street arts' performance.
10. Put a description of Chinatown in a brochure and in tourist guides.
11. Close part of 10th Street from Race Street to Arch Street on weekends and holidays for use as an outdoor market or public place.

The image of Chinatown to non-Chinese people is a place for only food and curios. Chinatown doesn't have a high class hotel to attract tourists. Most Chinese in the Delaware Valley come here for socialization or shopping. So, it is difficult for Chinatown to become a major financial or commercial area. How to break through these problems? It may involve a lot of aspects like social or cultural issues. This proposal will try to improve the quality of Chinatown environment for residents and tourists. (V-1)

B. Guideline for Rehabilitation

These guidelines emphasize the rehabilitation of historic building facades in Philadelphia Chinatown. They suggest ways for historic building preservation which enhance the sense of history, the link with Philadelphia's past, and express the cultural significance of the property. They are based on "The Secretary of the Interior's Standards for Rehabilitation" .

Chapter 2 has mentioned that this study divides Chinatown's historic buildings into two categories, Significant and Contributing Buildings. There are twelve Significant Buildings in Chinatown. Three of them are National Register Buildings and nine of them are local Significant Buildings. (II-8, II-9) Twenty buildings are designated Contributing. The following guidelines will strengthen China's cultural and physical identity and suggest guidelines that are based on the historical and cultural heritage.

*** Significant Buildings**

1. Maintain the existing historic building materials as possible.
2. Retain significant buildings original style and fabrics.
3. Retain the early color and texture of the buildings' surface.
4. Replace the missing parts of structure or decoration with precise duplication based on documents or photos.
5. Repair or replace the deteriorated materials with the same

color, size, texture, and shape as possible.

6. For the Chinese YMCA and No. 907 Race Street, buildings which have Chinese architectural style, consultation shall be made with an architect experienced in Chinese architectural design or preservation.
7. Clean the facades without deteriorating surface. If deterioration can't be avoided, the gentlest way of cleaning is preferred.
8. Since these buildings are important to Chinatown's cultural or historical identity, any new addition or alternation of facade is discouraged. If those additions or alternations are unavoidable, they shall be removable in the future without impairing the original fabric.
9. Regular maintenance and cleaning buildings' facade.

** Contributing Buildings*

1. Additions, if not contributing to the quality of facades, shall be suggest to be removed.
2. The fabric and facade shall retain its original characters as much as possible. Additions on the upper parts of buildings is discouraged. If unavoidable, the additions shall be compatible with its original style
3. Replacement of missing material or duplicating original materials shall be based on the original shape, color, style,

texture, and size.

4. The storefronts' design and scale shall be proportional to the existing buildings. The color and display windows shall be compatible with the facade.
5. Install exterior electrical and telephone cables underground, unless they are parts of historic scene.⁴²
6. Providing access for the handicapped without damaging the essential character of a property.⁴³

C. Project

The processes this project proposes can be divided into two parts:

1. Buildings facades 2. Streetscape. These proposals may be taken as guidelines for Chinatown's future development and they shall have some flexibility to accommodate some difference or change in the future.

1. Building facades

Most buildings in the thesis study area are commercial stores and almost all of them are only ground floor stores except for some

⁴² Heritage Conservation and Recreation Service Technical Preservation Services Division, U.S. Department of the Interior, The Secretary of the Interior's Standards for Historic Preservation Projects. (Washington, D.C.:U.S. Government Printing Office, 1979) p.46

⁴³ Ibid, p.47

restaurants with dinning hall on the second floor. Each facade's design is treated differently but all have consistent features. The primary idea is separating the storefront of first floor from the upper floors. The design of storefront shall be restricted on the first floor and should not extend more than 12 feet for the low rise buildings and 15 feet for the high rise buildings.

For the historic buildings that have been reconstructed or altered many times since they were built, their design shall be based on their initial style or its architecturally significant characteristics. Additions shall be removable without impairing the original features and texture. Display windows shall be restricted to certain sizes or in specific proportions to the storefront. Generally, ten to twenty percent of storefront for the windows' dimension may be deemed proper. Any windows extending more than these percentages are discouraged for historic buildings. The doorway shall be compatible to the storefront and every step shall be at least 11 inches deep, and the same width as the doorway.

For the general storefronts, the proportion of display windows are not to be confined to a certain size. But the overlarge or small sizes are not favorable. The use of glazed tiles, stucco, or reflective material as facade is discouraged. Using proper sizes and colors of bricks is favorable. The glass shall have good transparency and the description of this store shall be attached on the window with English and Chinese in standard sizes. The design

of doorway and steps are similar to the historic buildings. (V-1)

Infill building may be important to the Chinatown, since they can improve the whole streetscape of Chinatown, if they are designed properly. Such infill buildings shall be compatible to their neighbor in fabric and scale. Generally, the same cornice heights or roof heights should be maintained and the same sizes or colors of bricks used as their neighbors.

Additions on the low rowhouses are encouraged, if they don't destroy the image of streetscape. Since Chinatown lacks area for further expansion, the additions can increase the living units of Chinatown. But the major criterion is that the structure of buildings shall be reinforced and the safety of structure shall be promised. Those additions' materials shall be light weight. If the additions considered are to be higher than its neighbors, using setback structures from the facade may be deemed proper. Since Race and 10th Street are 50 feet wide a set back of 20 feet for a three story building and 14 feet for a four story building are necessary if they are not to be seen by a 6 feet man on the sidewalk. If the setback structure is visible from the street' sidewalk, its style, color, and materials shall be compatible to the main facade. (V-2)

2. Streetscape

The streetscape of Chinatown's three major streets will be discussed individually. Arch street is 72 feet wide, and both Race Street and 10th Street are 50 feet wide. The three roads play different roles for Chinatown's service. The design of each of these streetscapes are to be treated differently. Arch street plays the role of entrance to Chinatown and to the Convention Center. It forms the southern boundary line of Chinatown. The basic design of its streetscape should express its intercultural nature. Race and 10th Street are internal streets of Chinatown. They have strong sense of a Chinese streetscape's design. The little plaza within Chinatown, the existing Fire Station and parking lots on the 10th Street should be concentrated to a place for community and tourists activity. This will improve the quality of living environment and enhance tourism.

Chinatown is both a commercial and residential district. Around two thousand people live in this community. So, its streetscape can not be designed with absolutely residential or commercial interests in mind. It shall be designed as both a commercial and a residential district. The role of home, of culture, and of commerce must be integrated. (V-3)

a. Arch Street

As mentioned above in this chapter, Arch Street is important to Chinatown and to the Convention Center. Actually, most tourists come from Market Street. Arch Street is the tourist's first contact with Chinatown. The Convention Center will have an entrance on Arch Street. The Arch Street is the secondary entrance to Convention Center, the main entrance being on Market Street. The idea of the streetscape's design is let the Arch Street have a continuing pleasant sidewalk from 9th Street to 11th Street where it connects with the Convention Center. Both of the north corners of Arch and 10th Streets should thus be specially emphasized.

The existing sidewalk of Arch Street is 15 feet wide. Due to the importance of traffic to the Convention Center, the sidewalk should be kept to its existing wide.

< Paving >

The paving of the sidewalk should be of a light color of concrete and trimmed with light red brick. The concrete must have texture and strips to generate a sense of rhythm.

< Street light poles >

The street light poles on Arch Street are 12 feet high, standard for street lights. The round lamp shade creates comfortable atmosphere for pedestrians and increases the street's aesthetic value.

< Benches >

Benches are very important to the streetscape. They provide a place

to relax, temporarily isolating people from the intensity of urban life. They provide viewing stations for events such as street art performances. The benches are made of wood and are 15 inches high.

< Plant containers >

Chinatown lacks sidewalk trees , so its streetscape is quite boring and aloof to the pedestrians. Plant container are made of wood and the dimensions are 2'7" x 2'7" X 2'7". They must have the wood's original color, be treated with preservatives, and coated with transparent paints. They shall be removable for special or seasonal exhibition requirements.

< Sidewalk trees >

The sidewalk tree shall be able to withstand the impact of urban environment such as soil compaction, air pollution, acid rain, and poor drainage. There are many trees are suitable for this environment: Silver Maple, Tree of Heaven, Ginkgo, Yellowwood, Tulip Poplar, Princess Tree, American Sycamore, Quaking Aspen, Scarlet Oak, Black Locust, and Zelkova, etc.

< Kiosks >

Kiosks and points of interest maps will provide information about Chinatown. They shall be restricted to certain sizes and colors for a sense of harmony. Their style and shape, however can be slightly different from each other. The kiosks must be weather proof, they must not have too many tedious descriptions and should be internally illuminated. (V-4 - V-8)

b. 10th Street

10th Street is the main road and the central axis of Chinatown. The existing gateway on 10th Street is a landmark for Chinatown or Philadelphia. Now there is the suggestion of linkage to this gateway. It stands apart from its surrounding streetscape. The idea of this proposal is to extend the entrance to the Market Street. By changing the pavement from Arch Street to Market Street, putting directories and Chinese style poles on the N.W. corner of Market and 10th Street, the incomplete feeling of entrance can be improved.

< Sidewalk >

The existing 10th Street is fifty feet wide and its sidewalk is ten feet wide. The width of this sidewalk is uncomfortable for pedestrians touring the area. The ideal solution would be to close 10th street from Vine Street to Arch Street, but it is quite impractical due to its commercial importance to Chinatown and surrounding area. An alternative would be to enlarge both sides of sidewalks to 15 feet wide, leaving 20 feet of road for the traffic and no parking at anytime.

< Paving >

Bricks should be used as main paving for the sidewalk. Some parts of road can use stone slabs for people to cross the street and these can decrease the traffic's speed on the 10th Street.

< Street light poles >

The street light poles are designed as Chinese style light poles, 12 feet height.

< Benches >

The numbers of benches should be limited due to the narrowness of 10th Street. The benches will be combined with plant containers. This can provide a unifying design element to the diversity of streetscape and can reduce the sense of over massing on this narrow but important street.

< Plant containers >

Using round plant containers which are fabricated of fiberglass with a textured finish can create a Chinese style planter that can be mass produced. The diameters of plant containers should be from 2 feet to 4 feet.

< Sidewalk trees >

The choice of sidewalk trees are as the same as those for Arch street, but they can't be too high for a street that has lot of rowhouses. High trees will spoil the harmony sense of 10th Street.

< Kiosks >

Since every store is required to have a description, a kiosk is only necessary on the corner of 10th Street and Race Street. The 8 feet high kiosk has two sides of tempered safety glass displaying directories. (V-9 - V-12)

c. Race Street

Race Street is the original street of Chinatown. The first Chinese restaurant opened here in 1880.⁴⁴ The important historic building, Far East Restaurant, is also on Race Street. The design of this street is based on its historical aspects. Race Street is only fifty feet wide. The shadow effects on this street are quite evident with the Bell Telephone Company of Pennsylvania casting the largest shadow on the street. So, the way to relieve the feelings of the strange sense of streetscape is quite important. The primary idea is to incorporate lots of colors on this street. The materials should not be reflective or glazed. Two entrance poles should be designed on the corners of 9th & Race Streets and 10th & Race Street.

< Sidewalk >

The major existing problem of Race street is the heavy traffic. Race Street leads to the Benjamin Franklin Bridge. The recently finished Vine Street Expressway has reduced part of traffic burden, but the onerous traffic load on this street is still evident. Race street is 50 feet wide. The sidewalk is extending to 15 feet wide.

< Paving >

The sidewalk paving material is rustic bricks, the same as 10th Street sidewalk's paving.

< Street Light Poles >

The Street light's design is the same as the 10th Street's, the

⁴⁴ See the Historic Background-- from China to Philadelphia in Chapter.

Chinese Style street light.

< Benches>

The bench style is the same as for 10th Street's benches.

< Plant container>

The plant container is the same as 10th street's plant container, but the plants should be flowers.

< Sidewalk tree>

Since the shadow effect on the Race Street is strong, sidewalk trees are not encouraged on this street. Race Street will be decorated with flowers which are planted on the plant container.

< Kiosks>

Two Kiosks should be put on the corners of 9th Street & Race Street and 11th Street & Race street. The style of design is the same as 10th Street kiosks' design. (V-13 - V-21)

D. Plaza of Chinatown

This plaza's site is in the existing Fire Station and parking lots on the 10th Street. The idea of this plaza is to provide a place for community recreation and tourists' relaxation. Its location is very near the center of Chinatown and its main entrance is on 10th Street. This plaza is 166 feet long and 105 feet wide. Basically, the plaza's design should combine traditional Chinese and modern architectural elements to reflect the spirit of Chinatown. It's the place for people to chat and rest. It also can be a place for

celebrating all kinds of Chinese festivals. Since Chinatown lacks open space for community, this plaza is quite important to Chinatown. (V-22, 24)

The design idea for this plaza is to use tall tree on the north and east side of this lot to screen the inconstant back views of Bell Tel. Co. of Pa. and Lasher Building. The entrance should be recessed to create feelings of invitation to this plaza. Putting a two-face clock made of cast iron at the entrance will increase the quality of the plaza. The pavement should be terra-stone block with two colors for different levels of plaza.

VI. Conclusions

A. Future of Chinatown-- Positive and negative aspects

During the two decades since 1970, Chinatown faced many internal and external conflicts. The construction of Independence Center, the Commuter Rail, Gallery I & II, Vine Street Expressway, and Convention Center brought different impacts to Chinatown. However, Chinatown's community with standing these impacts and continues to thrive. Politically, Chinatown has gradually rid itself of its reliance on the support of K.M.T.⁴⁵ and now leads its own way. Economically, Chinatown is still keeps its stereotype as solely a restaurant industry. Culturally, Chinatown doesn't have the center or library or museum ⁴⁶to support its cultural events. Socially, the growth of Chinatown has been accompanied by problems with gangs, problems with housing, medicare, aging, childcare, labor disputes, and social inequality.⁴⁷

⁴⁵ The leading political party in Taiwan which have dominated Taiwan for forty years has almost ninety years of relation with American Chinese. The founder of K.M.T. had cited that overseas Chinese were the mothers of political revolution.

⁴⁶ There was a Chinese museum called Wood's Museum on N.W. corner of 9th and Arch Streets. This museum had cases of Chinese figures, representing various phases of Chinese life and customs. It opened from 1870 to 1914. Before this museum, the Old Chinese Museum had opened at 9th and Sansome Streets since 1839.

⁴⁷ Bernard P. Wong. Chinatown: Economic Adaptation and Ethnic Identity of the Chinese (New York, N.Y.: CBS College Publishing, 1982) p.107

Some of the historic buildings are mistreated. Their owners are not concerned about historic background. They also don't have the budget to restore their building's facade. Consequently most of the designs of building storefronts are inconsistent with the buildings' upper floors' facades.

The proposals of this thesis is to try and retrieve existing Chinatown's commercial and cultural identity and preserve its historic buildings. If Chinatown is renovated, the living environment and quality of life will be improved.

The Convention Center's impact on Chinatown will definitely be great. Will it increase the prosperity of Chinatown or jeopardize its living quality in the future? It is quite hard to say. But one thing is for sure. The traffic problems will worsen, if city planning can't solve the problems of access to Benjamin Franklin Bridge or the shortage of parking space around the Convention Center.

The future development of Chinatown is : Chinatown shall maintain /enhance its cultural and commercial identity. It must have different characteristics than the Convention Center, Gallery I & II, and Independence Mall. The ideal way is to connect the four of them to become one cultural and commercial district. Comparing with

New York Chinatown or San Francisco Chinatown⁴⁸, Philadelphia Chinatown doesn't have so many problems that they can't be handled within the community. Philadelphia Chinatown's future is promising.

B. Applicability of resolution to other Chinatown

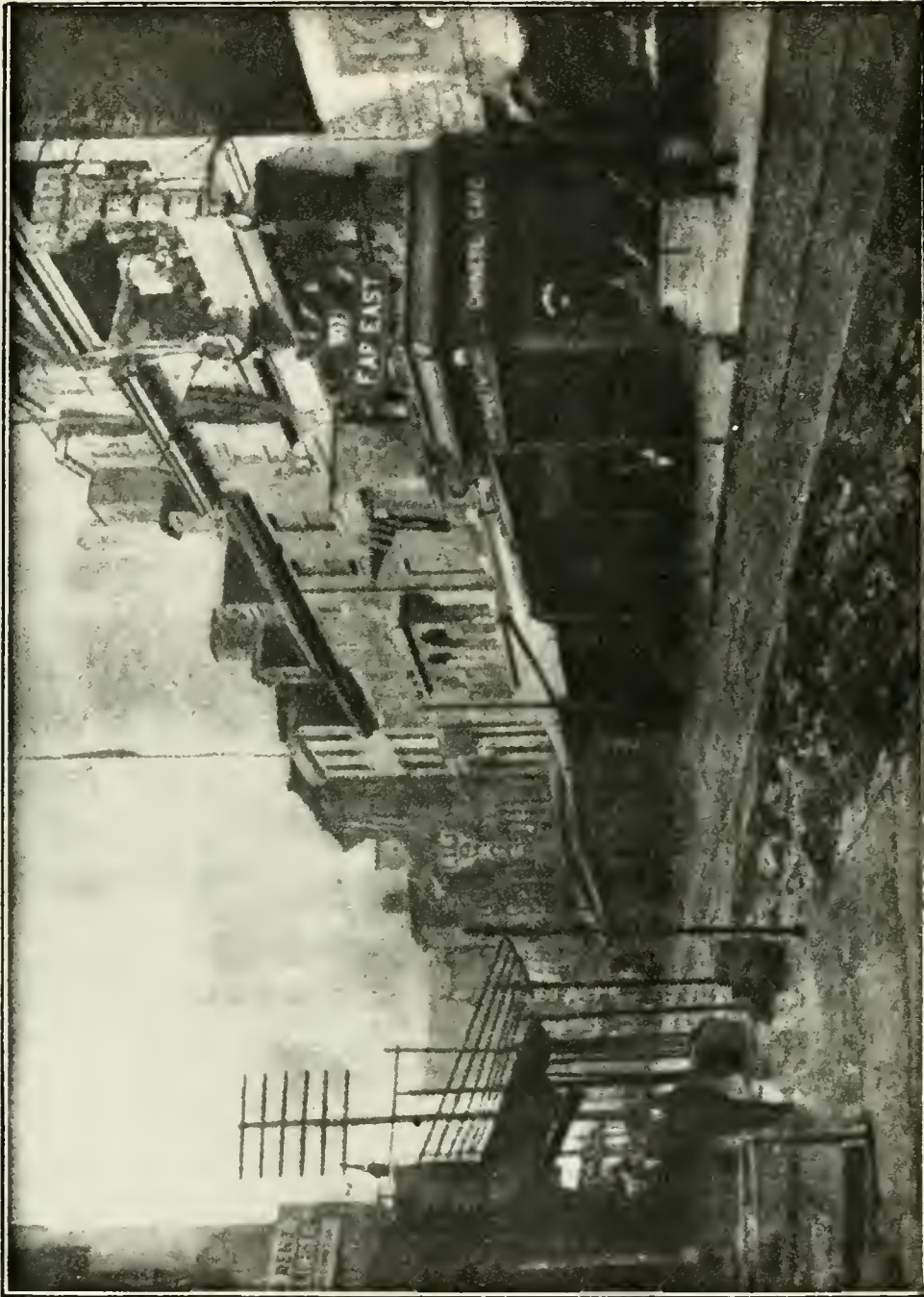
As mentioned in the chapter 1, there are sixty major Chinatowns in 26 countries. While every Chinatown has its own systems and problems, some issues are the same as Philadelphia Chinatown.

For the environment and streetscape matters, Chinatown should reevaluate their existing circumstances and propose streetscape revitalization. The shortage of parking space is the problem of many Chinatown. The Construction of open deck parking may be the solution. The conversion of some buildings or open lots to a plaza for recreational or cultural use should be considered. The demolition or remodeling of inconsistent buildings will improve the consistency of the streetscape and can provide for economic expansion. Historic buildings should be based on guidelines to preservation and restoration. Important building, significant buildings, or contributing buildings should be preserved.

Tourists sightseeing's routes should be proposed with the emphasis

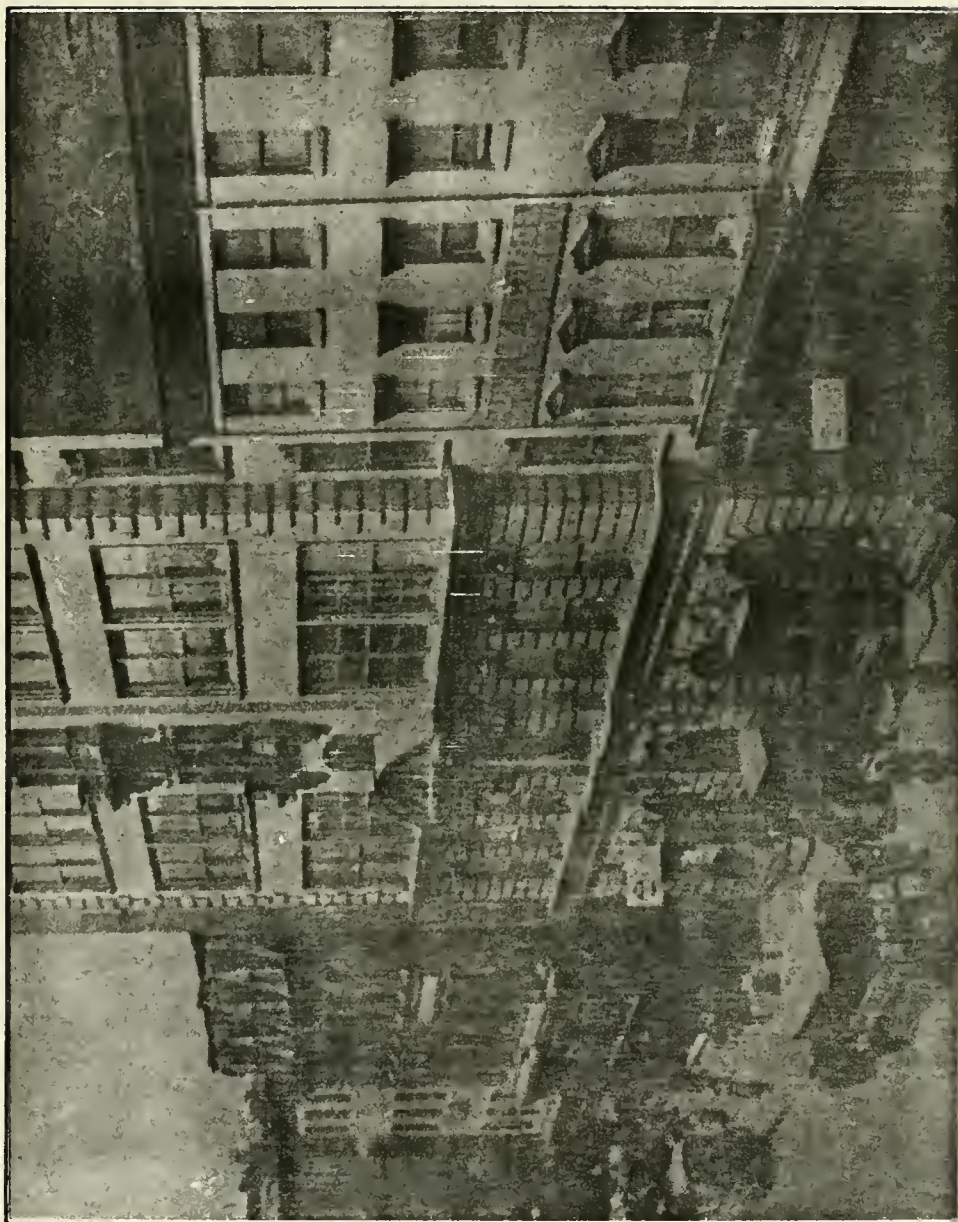
⁴⁸ See the Chapter 4, Cases study of San Francisco Chinatown and New York Chinatown.

on interesting stores. Chinatown should not isolate itself from the society and city but rather establish linkage to its surrounding commercial or cultural areas for the benefit of both.



Race Street between 9th and 10th Streets Ca. 1910

(I-1)



Winston Building on Arch Street between 10th and 11th Streets

Ca. 1914

(I-2)

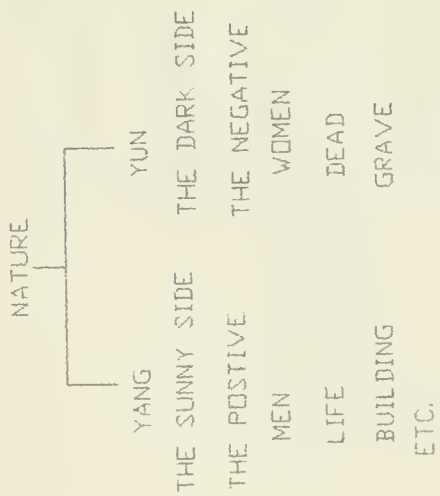
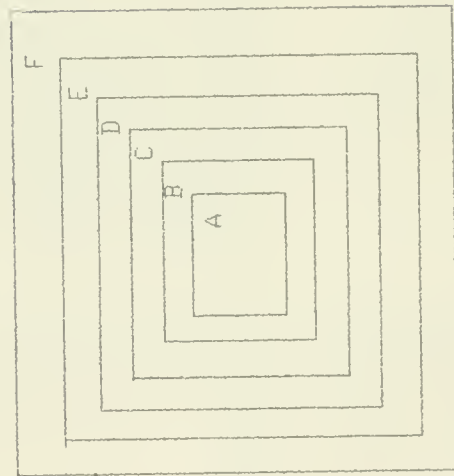


ILLUSTRATION I



- A. PLACE OR CITY GOVERNMENT
- B: NEAR RULAR AREA 50 L
FAR RULAR AREA, 100L
- C: DISTRICT, 200 L
- D: REGION, 300 L
- E: COUNTY, 400 L
- F: STATE, 500 L

1 L = 400 METERS

ILLUSTRATION II

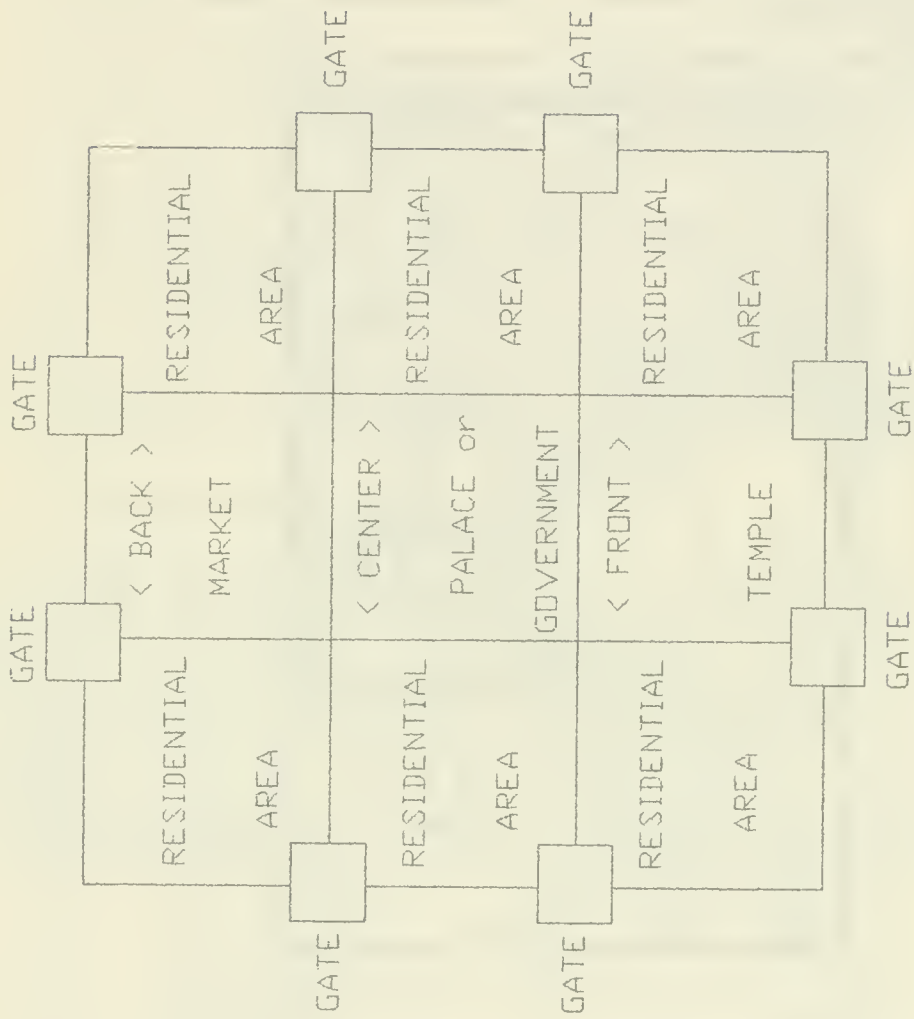
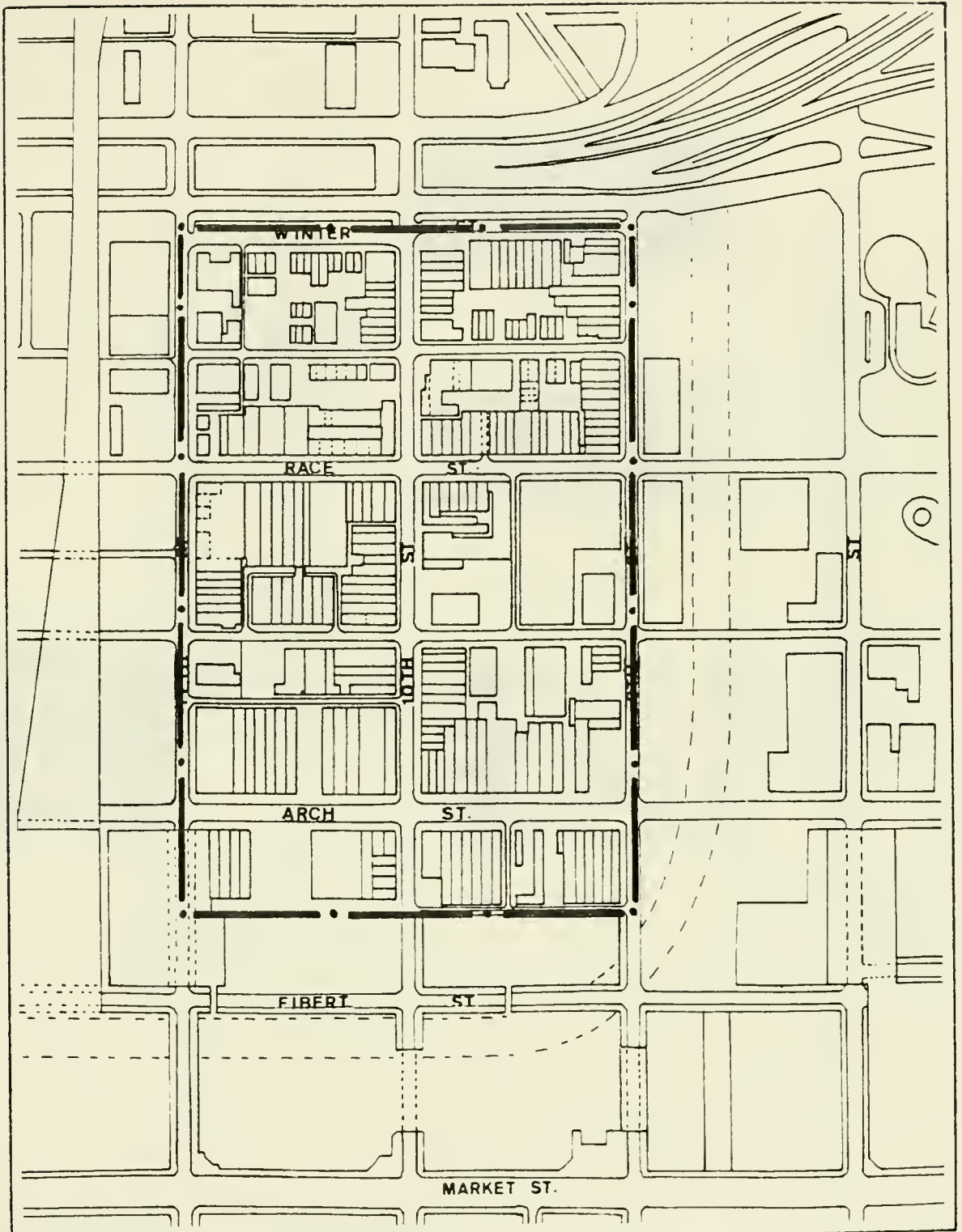


ILLUSTRATION III

(I -4)



RESTORATION AND DESIGN PROJECT

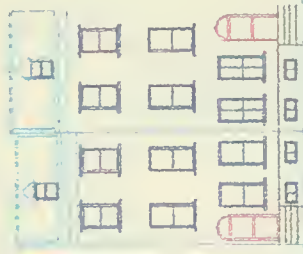
FOR

Thesis Boundary

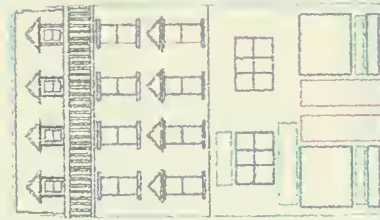


PHILADELPHIA CHINATOWN

KUO-WEI CHANG

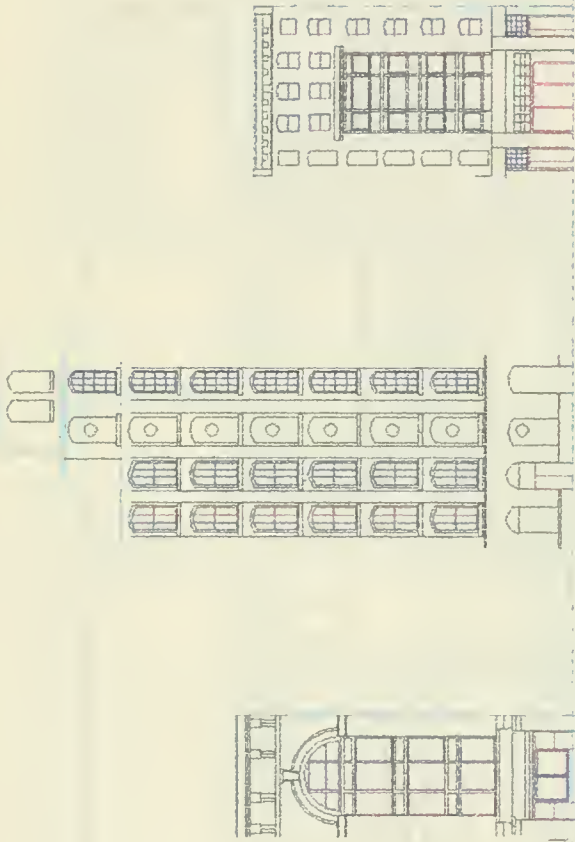


Early 19th Century Building

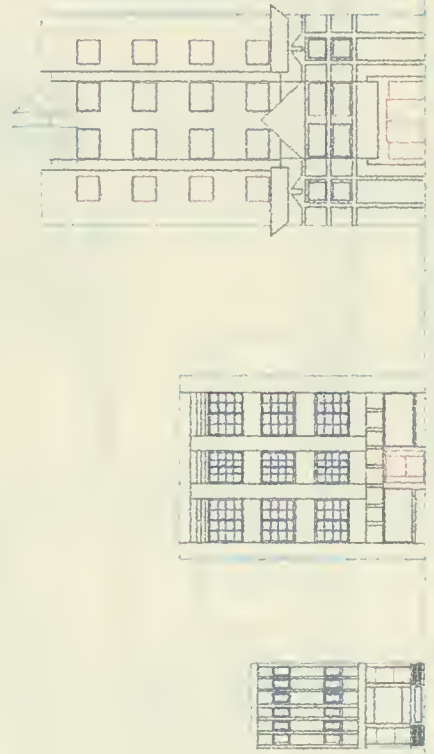


Late 19th Century Building

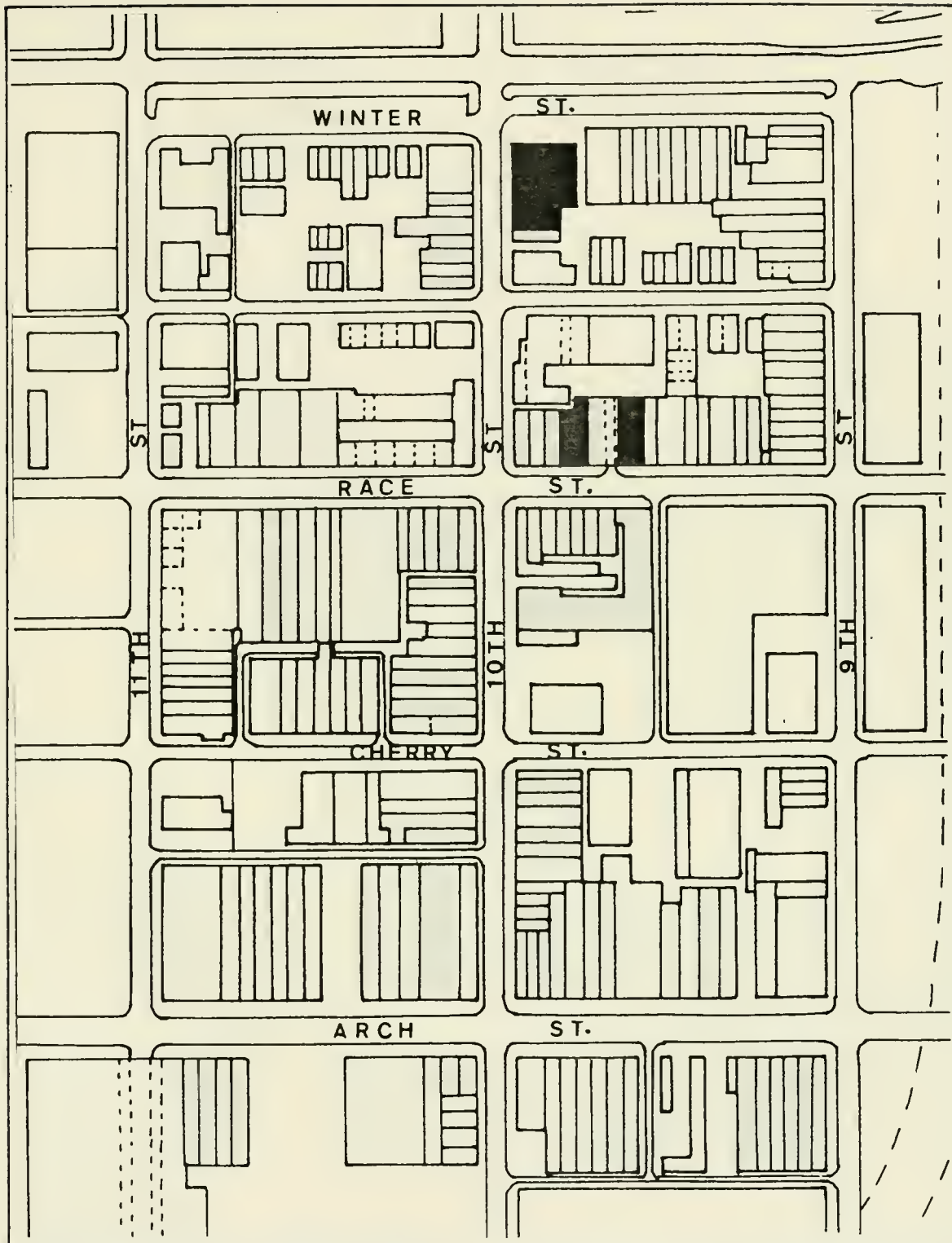
(II-2)



Early 20th Century Building



Mid and Late 20th Century Building



RESTORATION AND DESIGN PROJECT

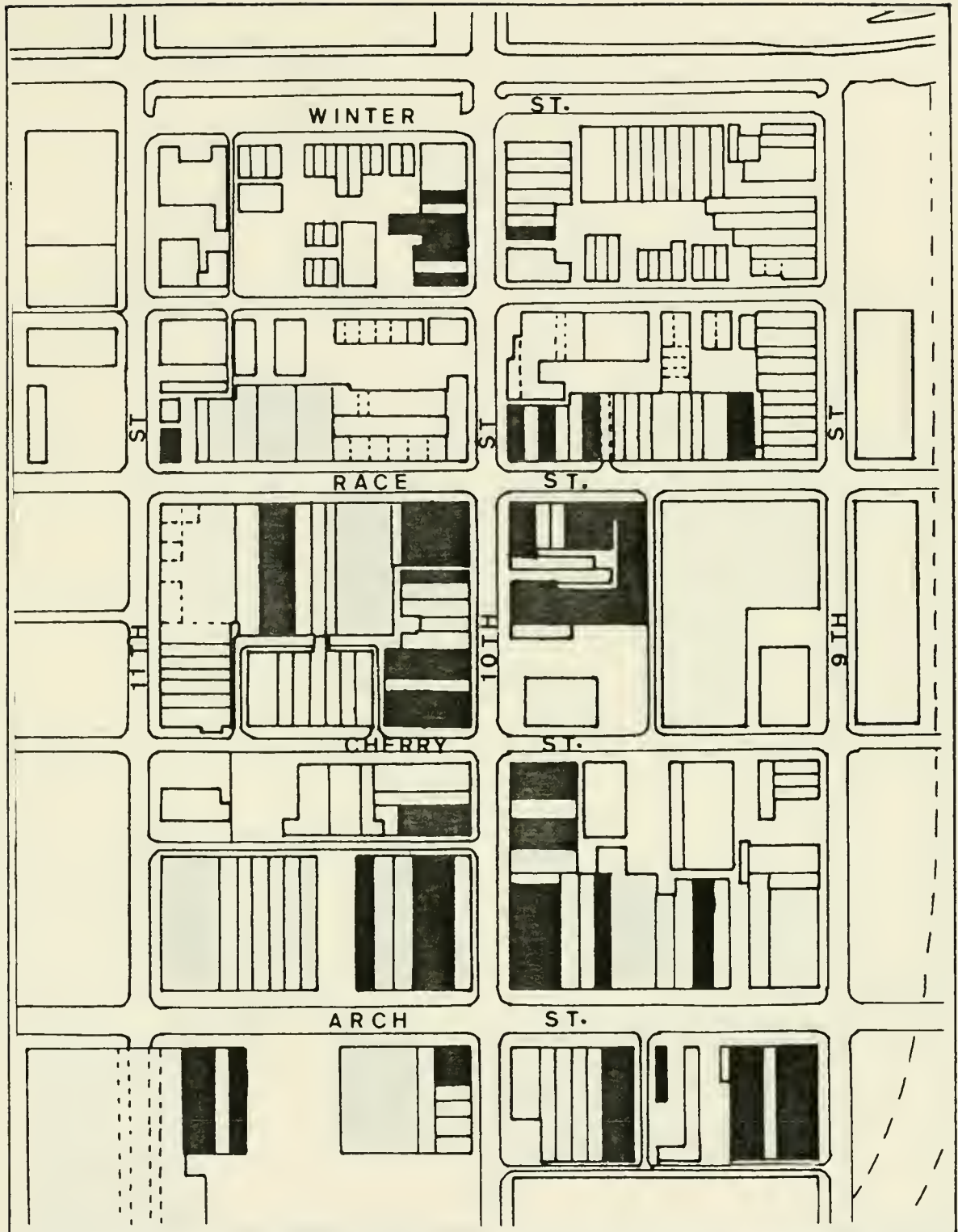
FOR

PHILADELPHIA CHINATOWN

Early 19th Century Building



KUO-WEI CHANG



RESTORATION AND DESIGN PROJECT

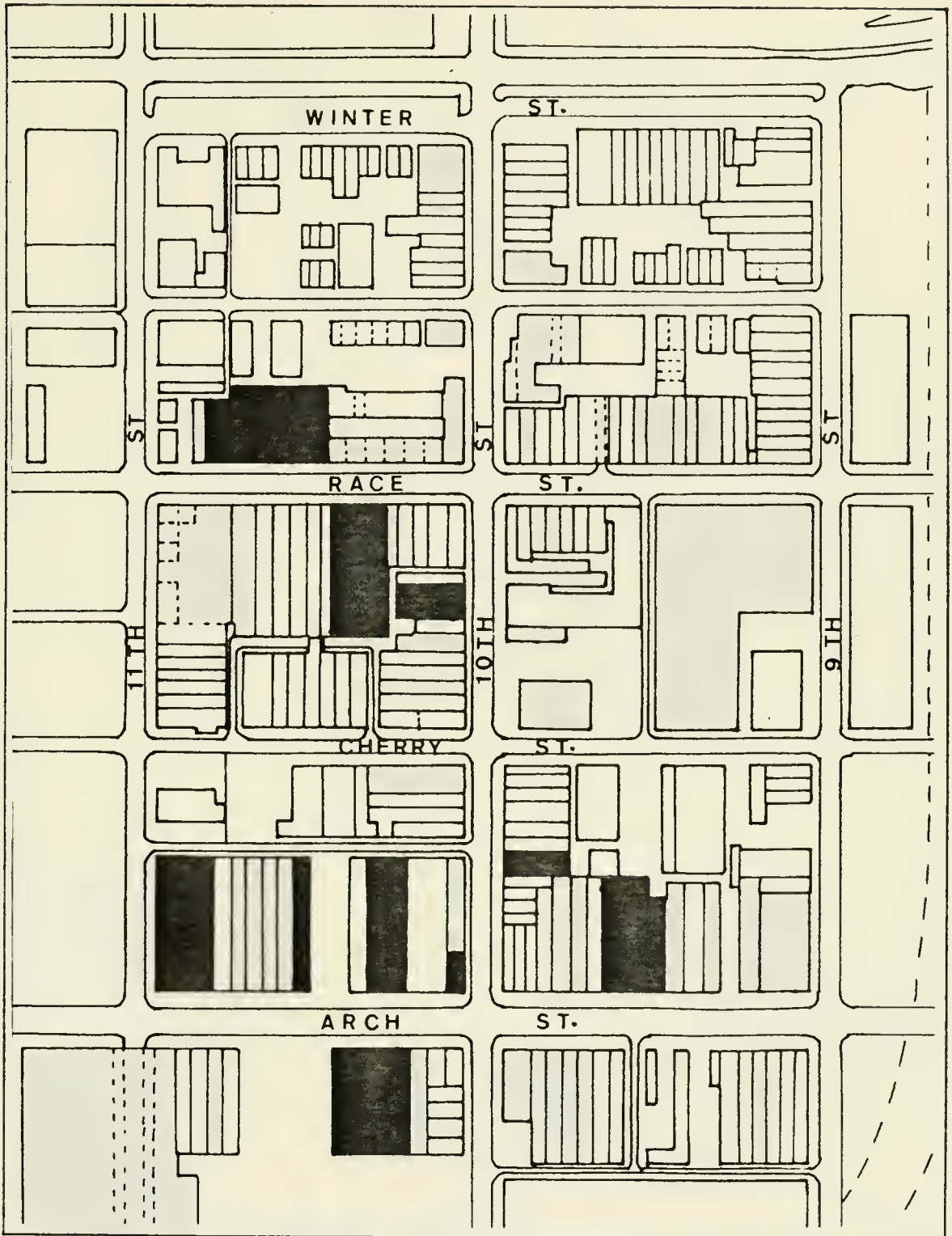
FOR

PHILADELPHIA CHINATOWN

Late 19th Century Building



KUO-WEI CHANG



RESTORATION AND DESIGN PROJECT

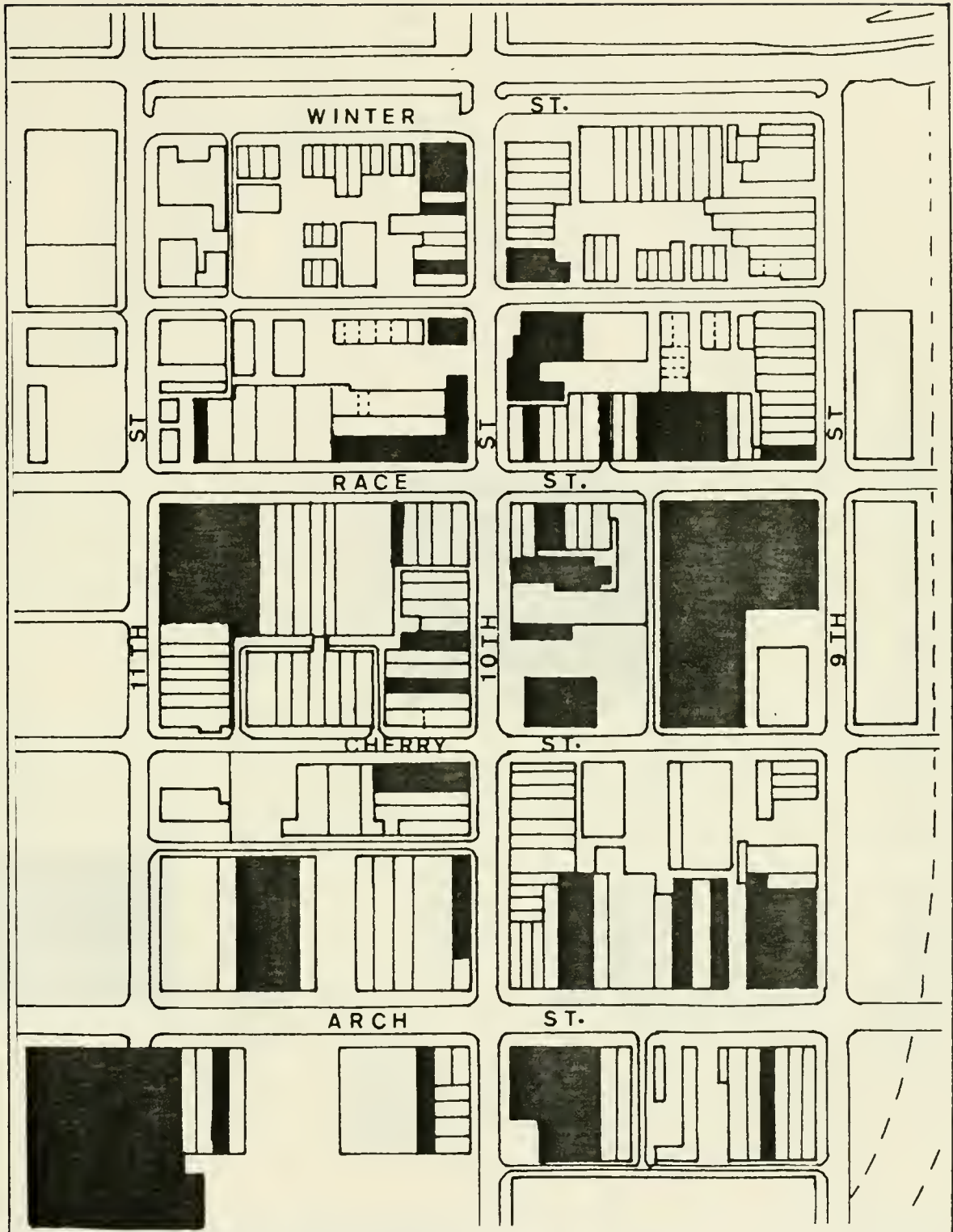
FOR

PHILADELPHIA CHINATOWN

Early 20th Century Building



KUO-WEI CHANG



RESTORATION AND DESIGN PROJECT

FOR

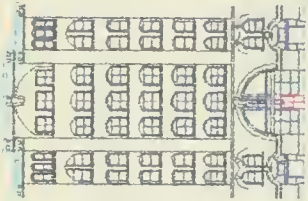
PHILADELPHIA CHINATOWN

Mid and Late 20th Century Building

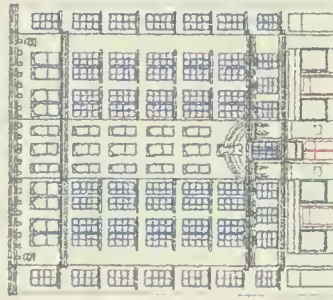


KUO-WEI CHANG

(II-7)



1010-14 Race Street

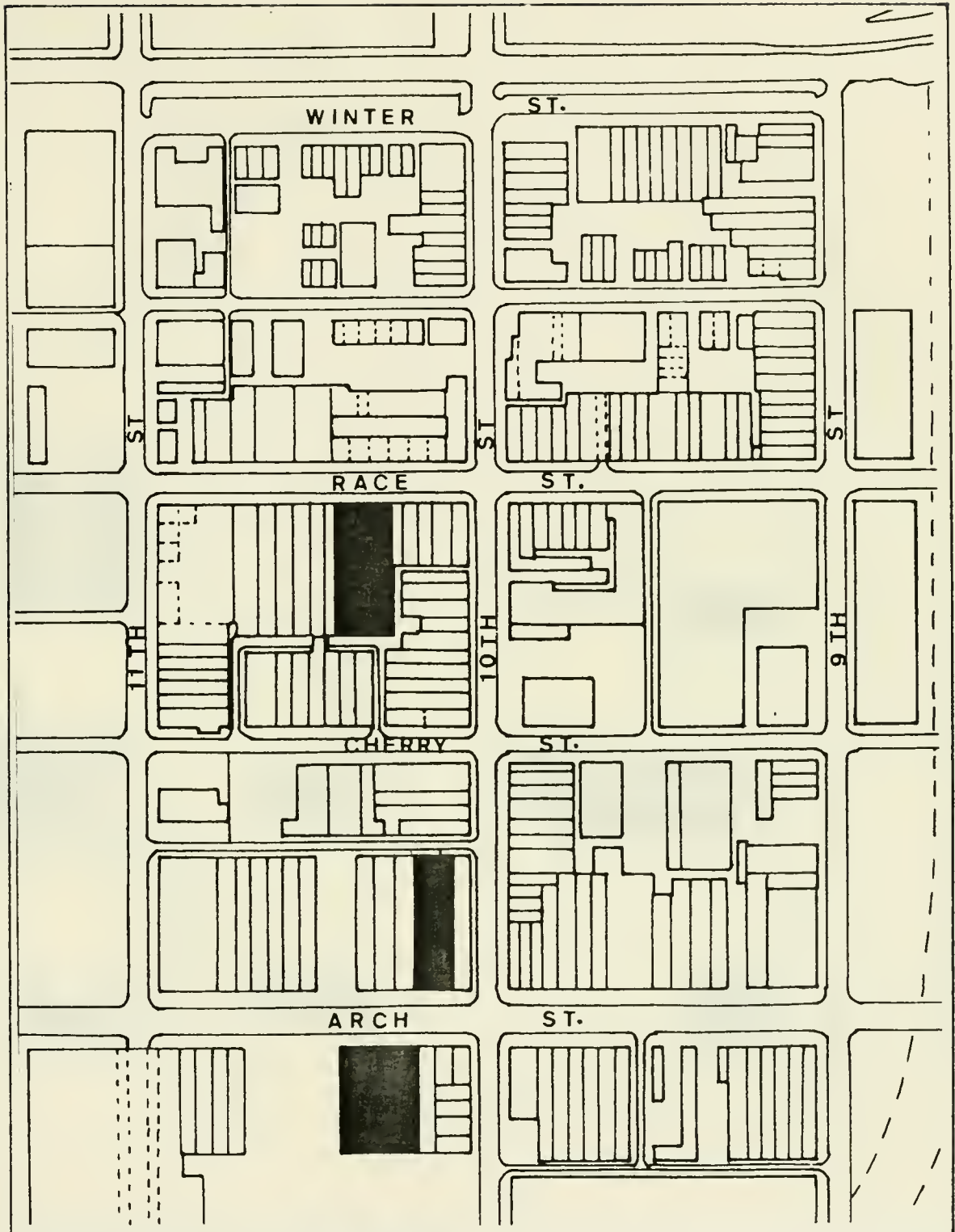


1003-05

1006-16

Arch Street

National Register Building



RESTORATION AND DESIGN PROJECT

FOR

PHILADELPHIA CHINATOWN

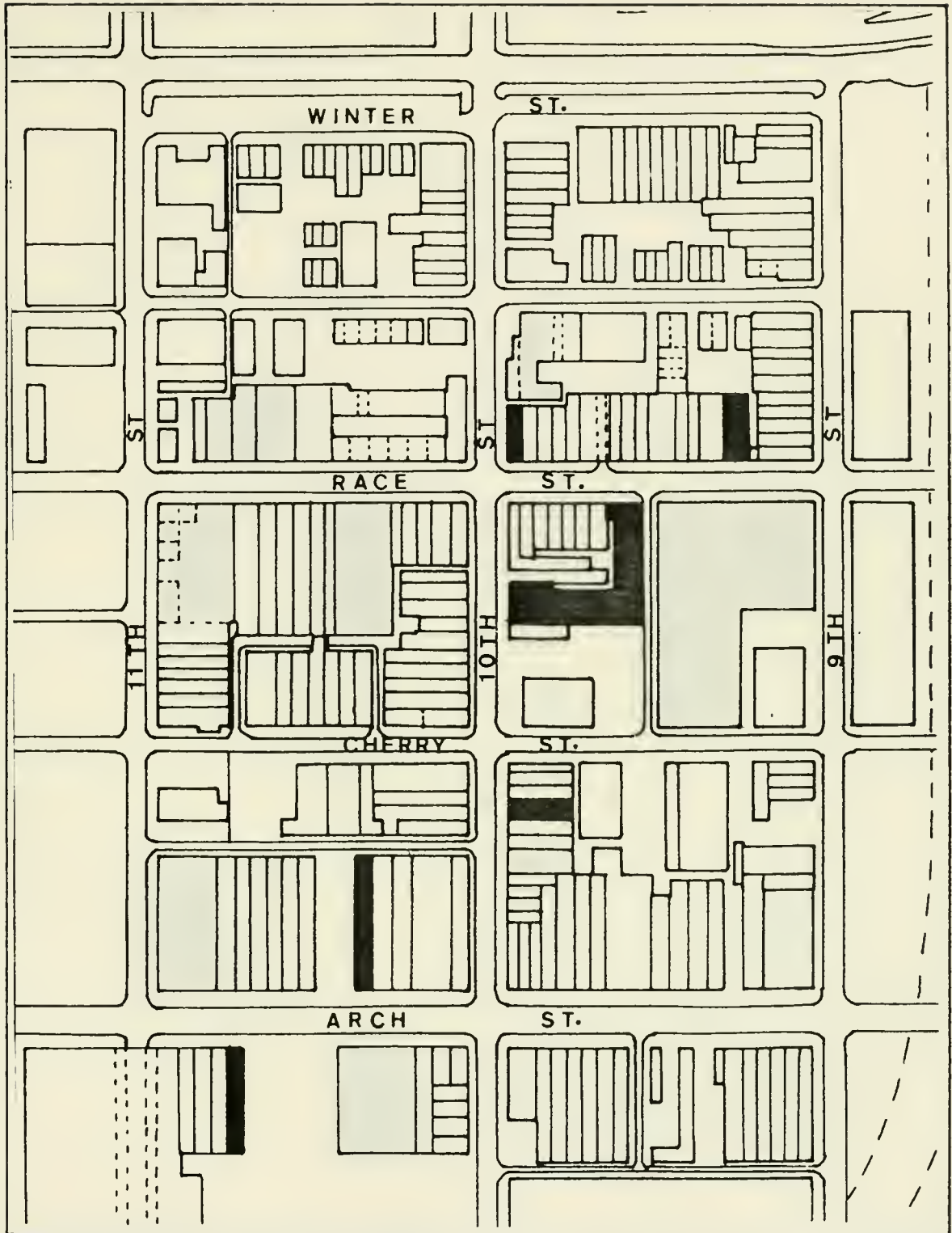
National Register Building



KUO-WEI CHANG



Significant Buildings



RESTORATION AND DESIGN PROJECT
FOR

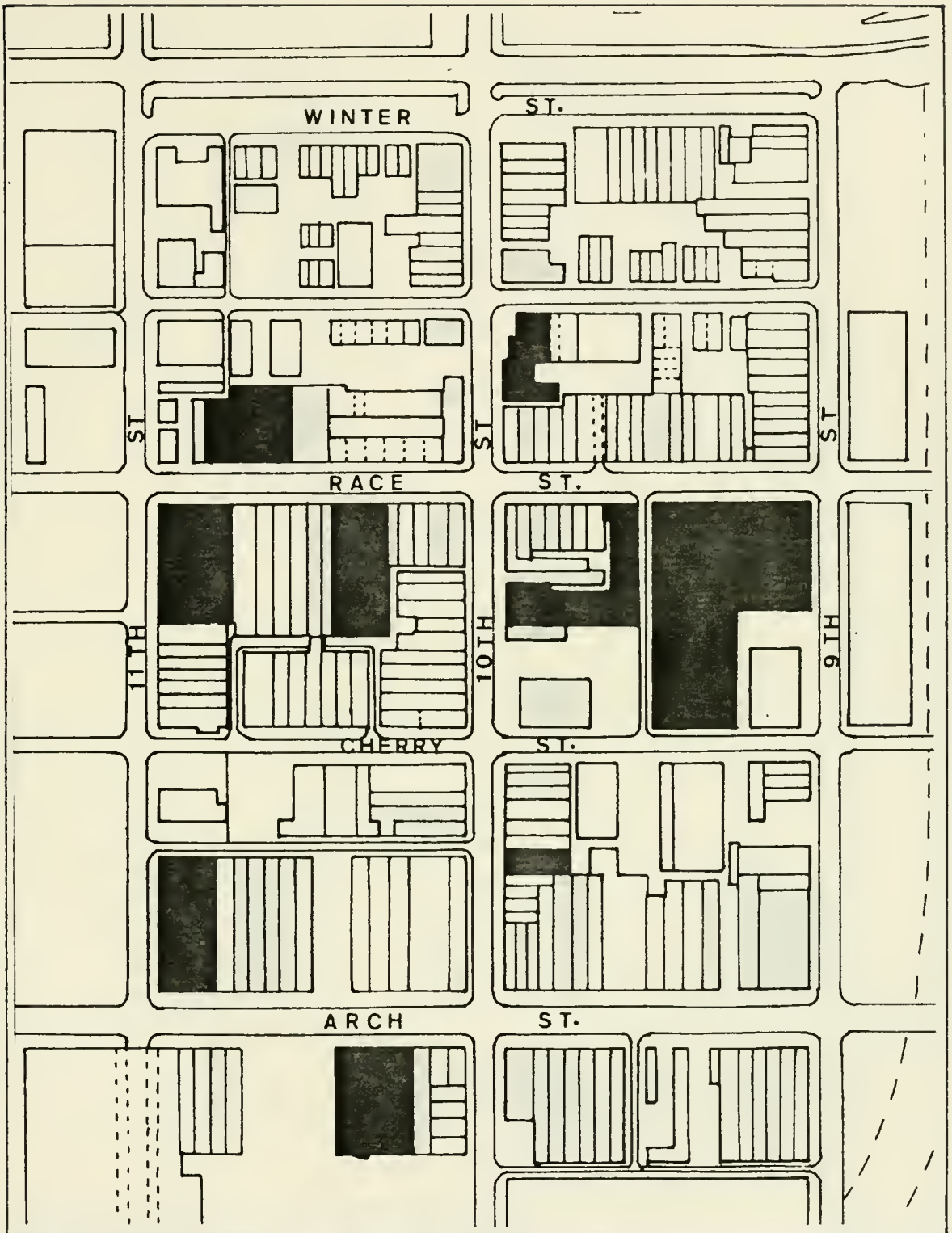
PHILADELPHIA CHINATOWN

Significant Building



KUO-WEI CHANG

(II-11)



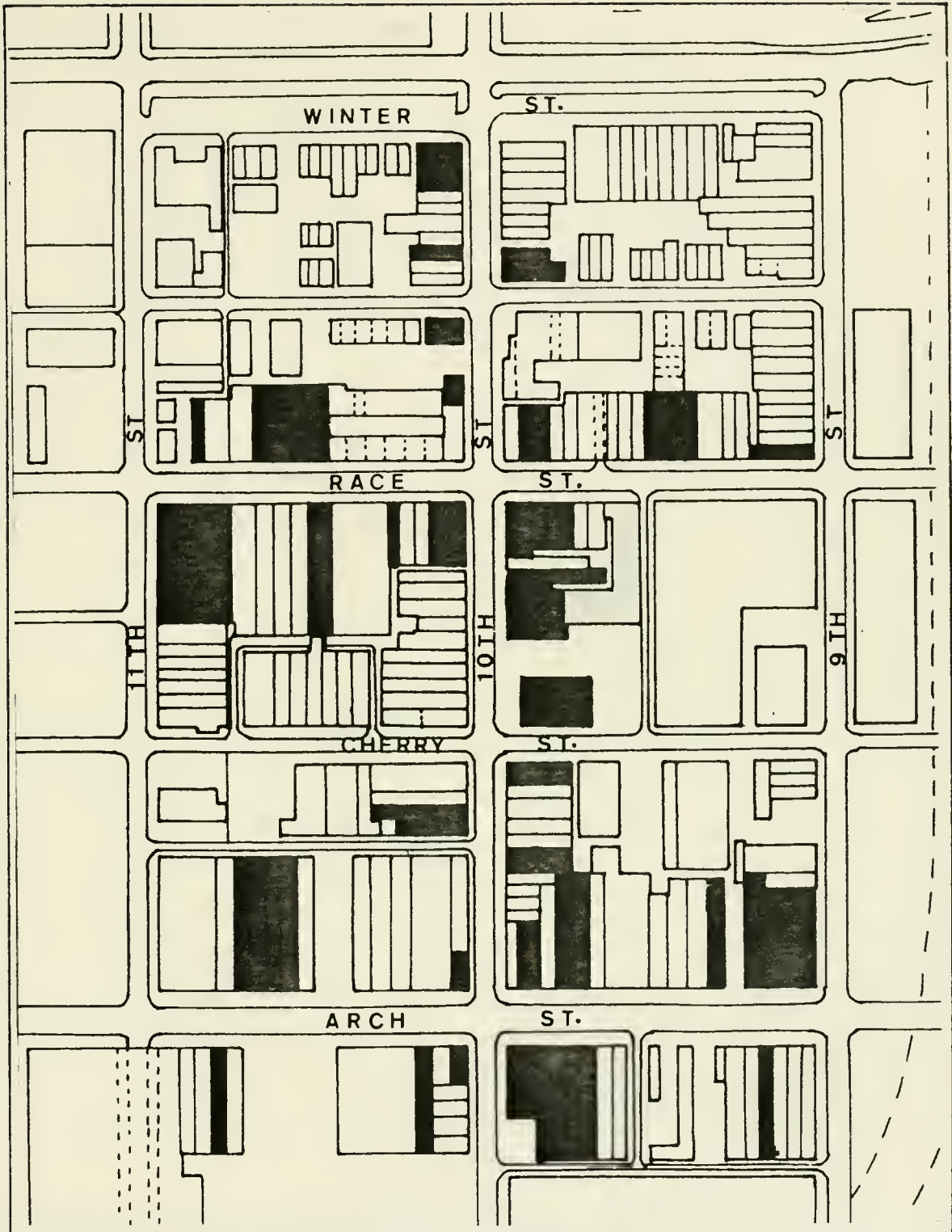
RESTORATION AND DESIGN PROJECT
FOR

PHILADELPHIA CHINATOWN

Big Construction



KUO-WEI CHANG



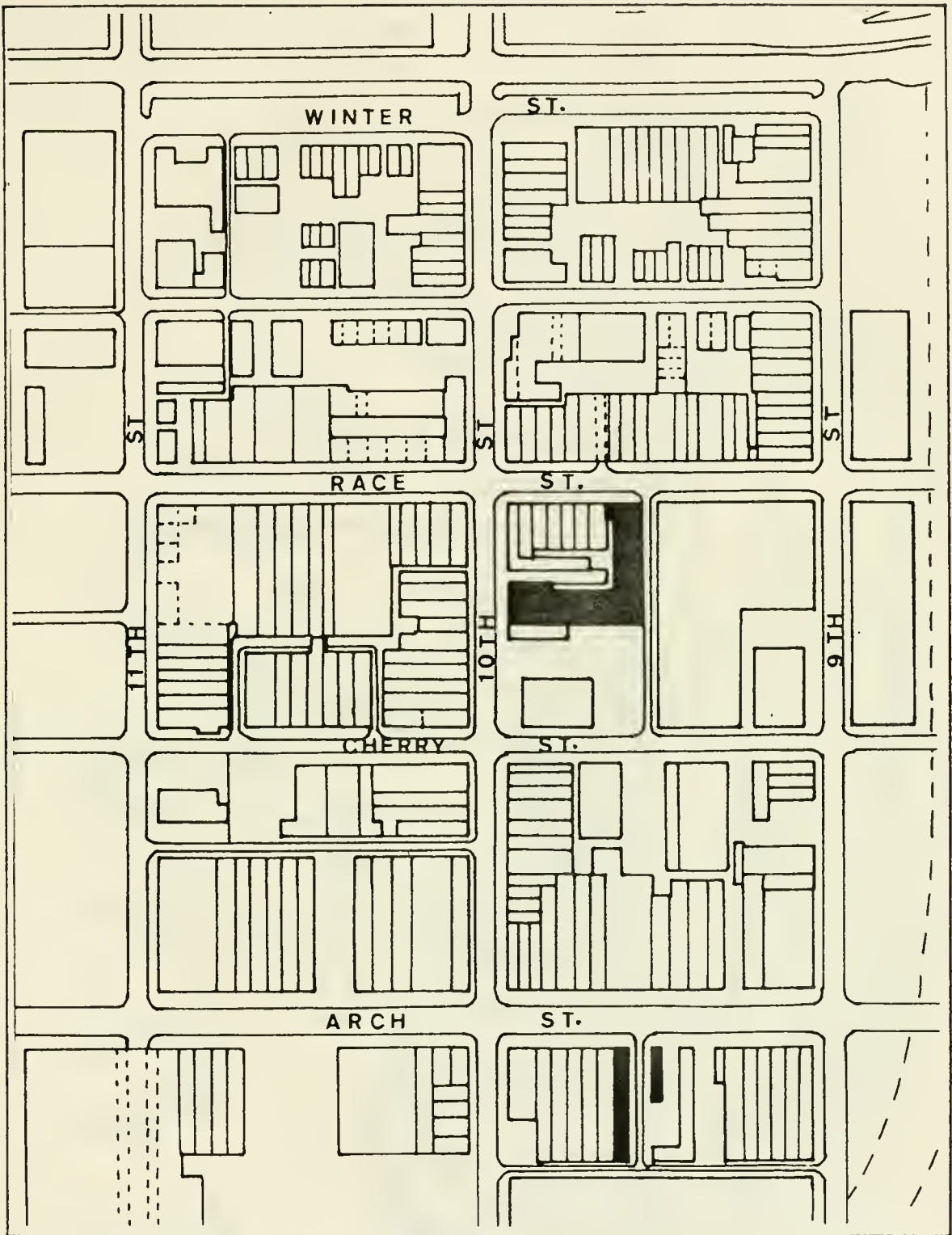
RESTORATION AND DESIGN PROJECT
FOR

PHILADELPHIA CHINATOWN

Mistreat Buildings &
Inconsistent Building



KUO-WEI CHANG



RESTORATION AND DESIGN PROJECT
FOR

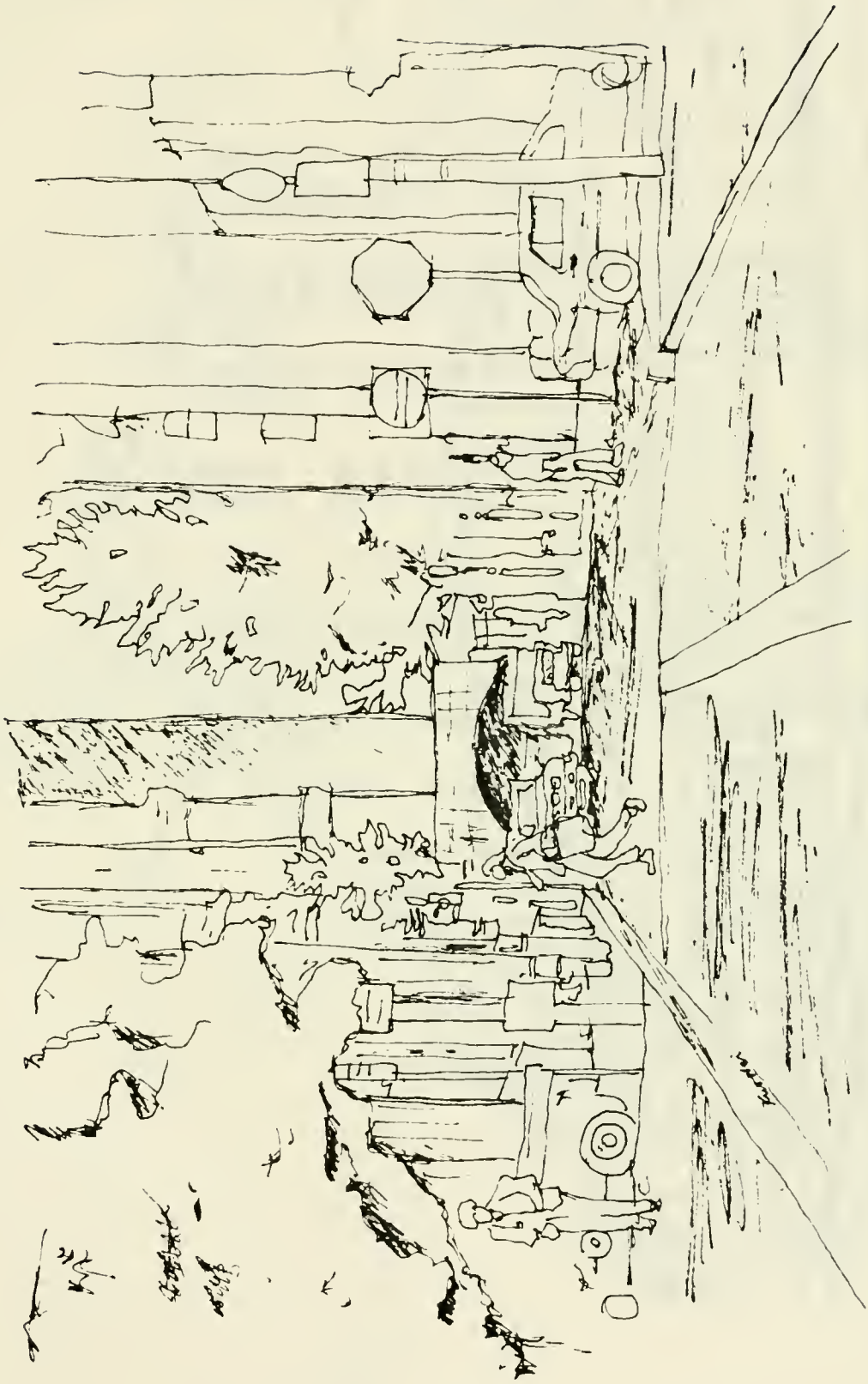
Vacant Building



PHILADELPHIA CHINATOWN

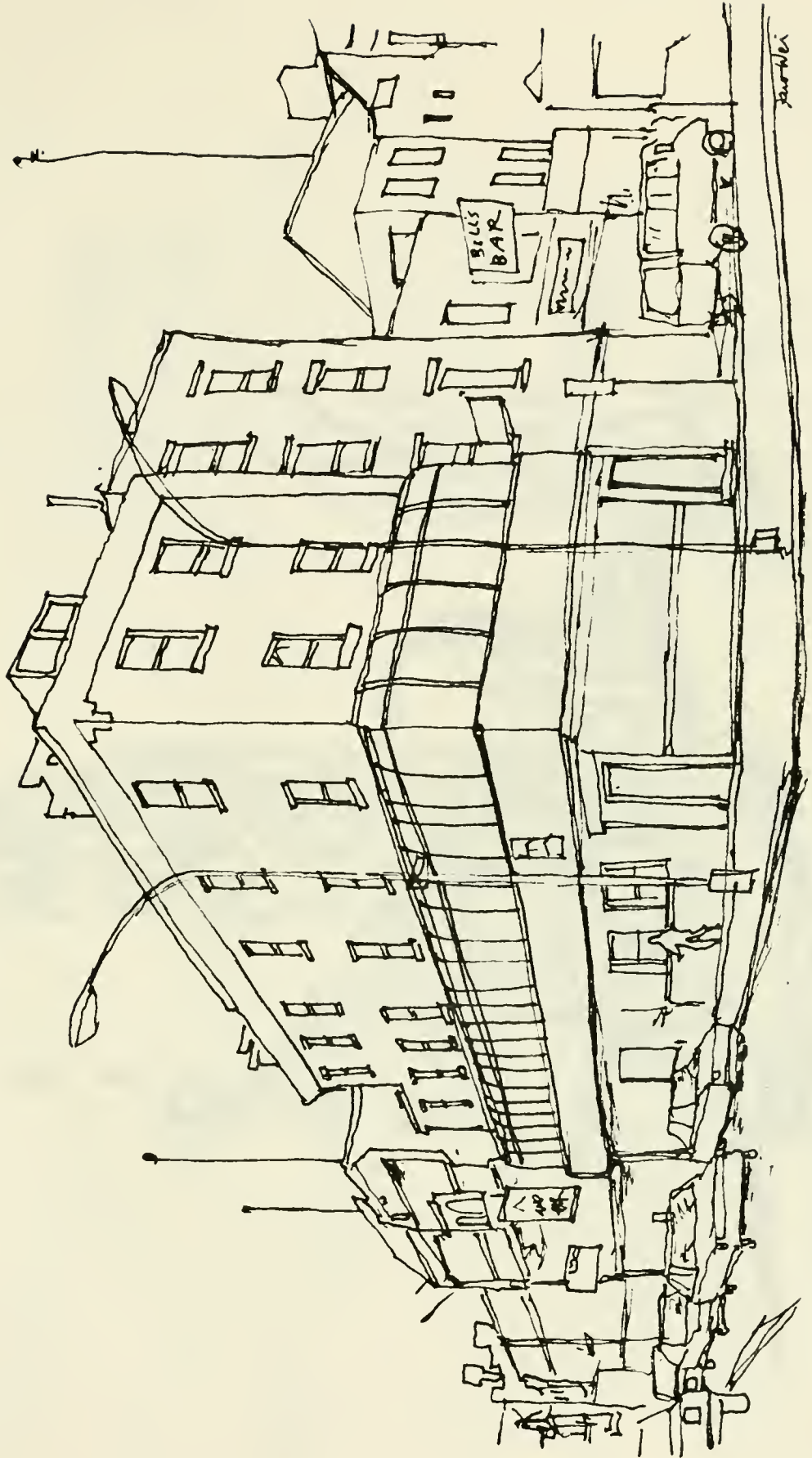
KUO-WEI CHANG

(II-14)

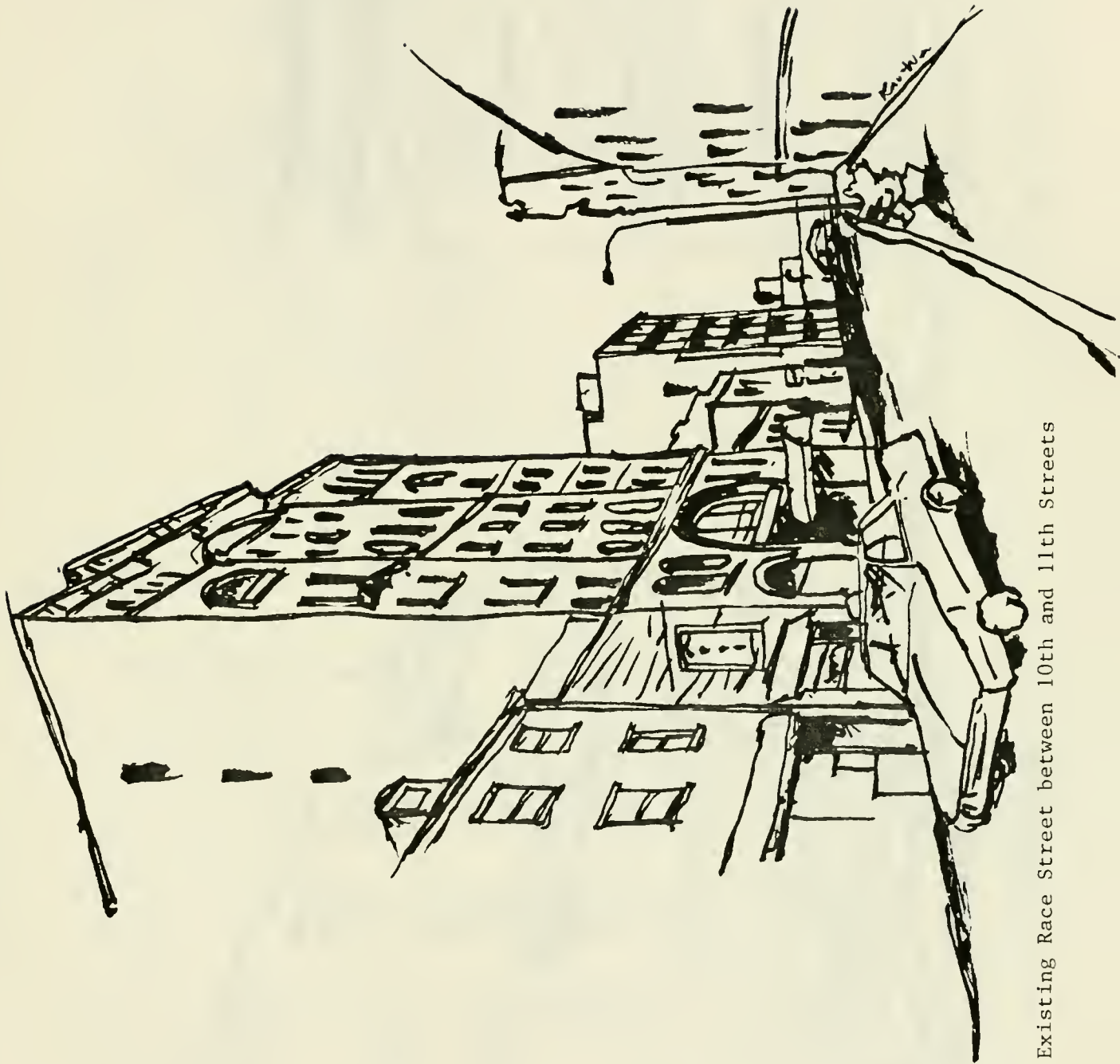


Existing Cherry Street between 8th and 9th Streets

(II-15)

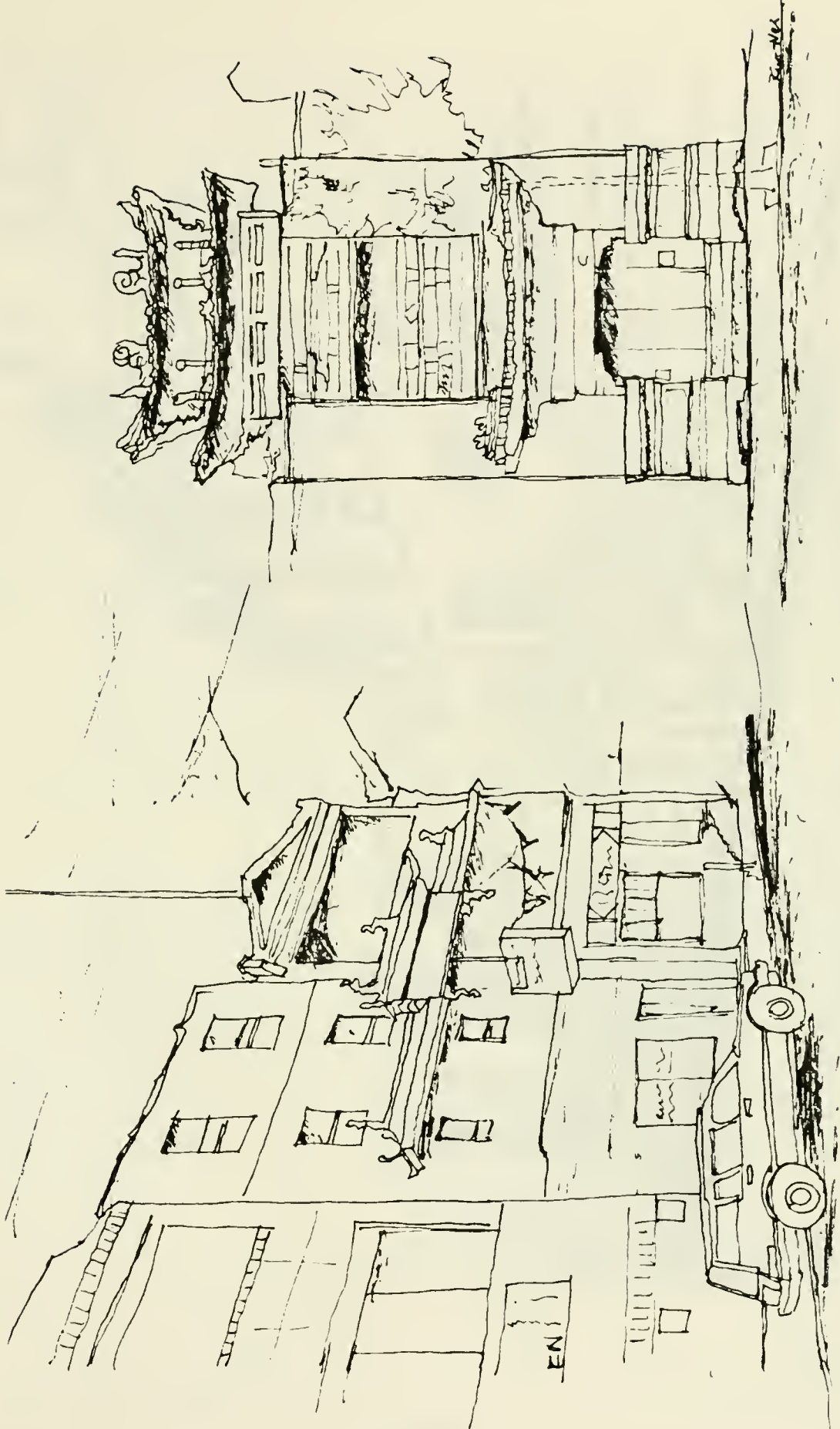


Existing Race Street on the corner of Race and 9th Streets



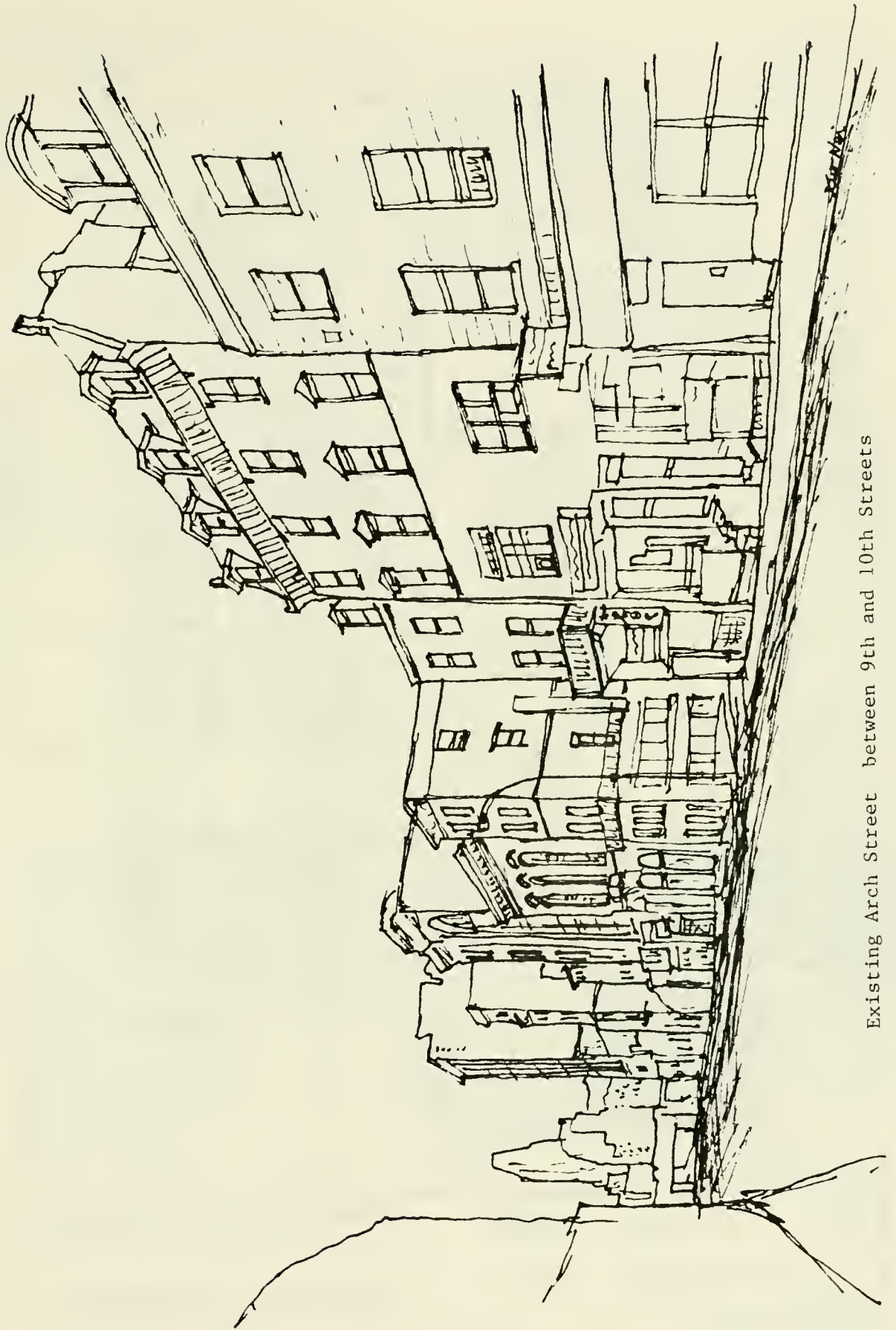
Existing Race Street between 10th and 11th Streets

(II-17)

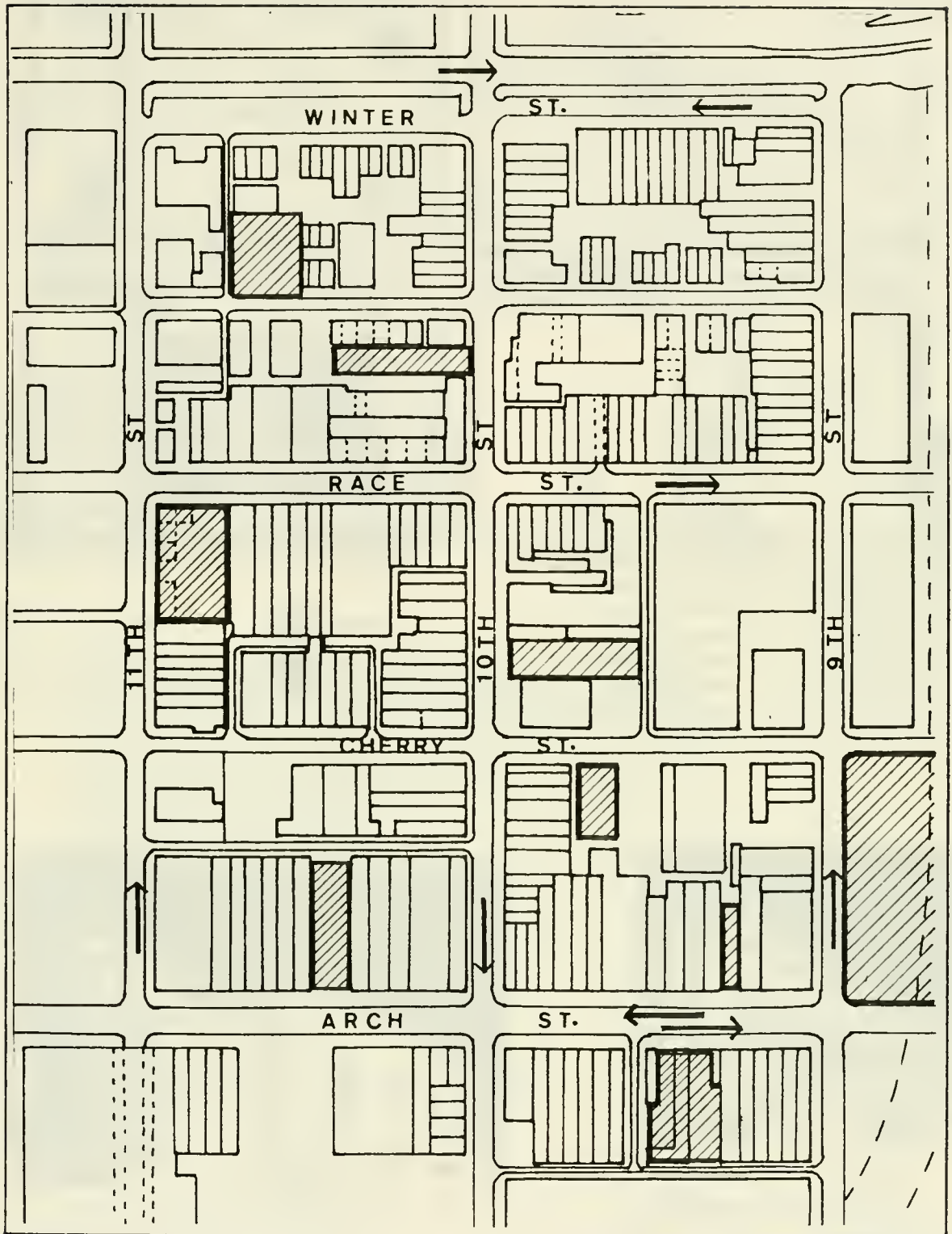


No. 125N 10th Street

No. 907-09 Race Street



Existing Arch Street between 9th and 10th Streets



RESTORATION AND DESIGN PROJECT
FOR

PHILADELPHIA CHINATOWN



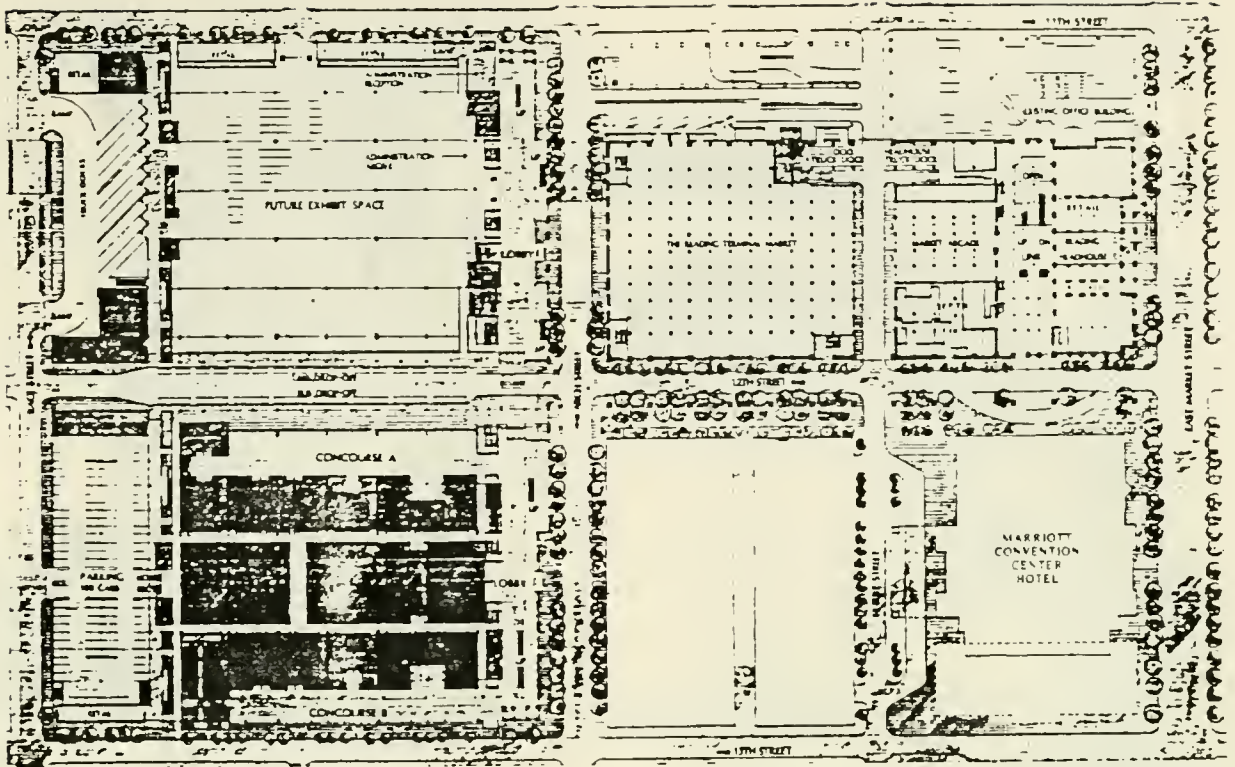
Parking Area



Traffic Direction

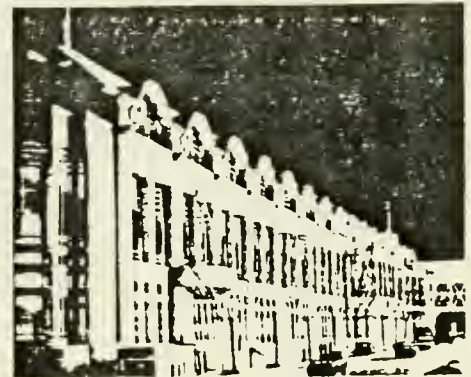
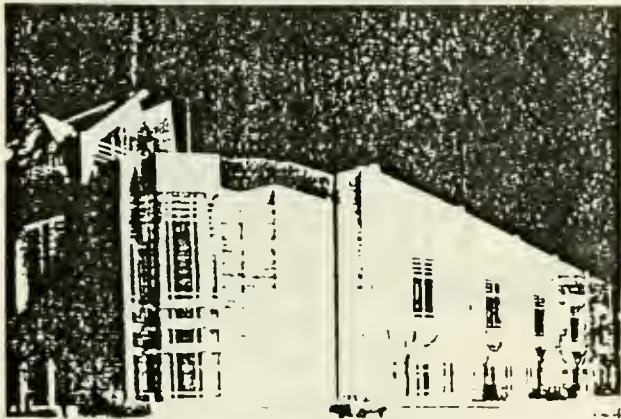


KUO-WEI CHANG

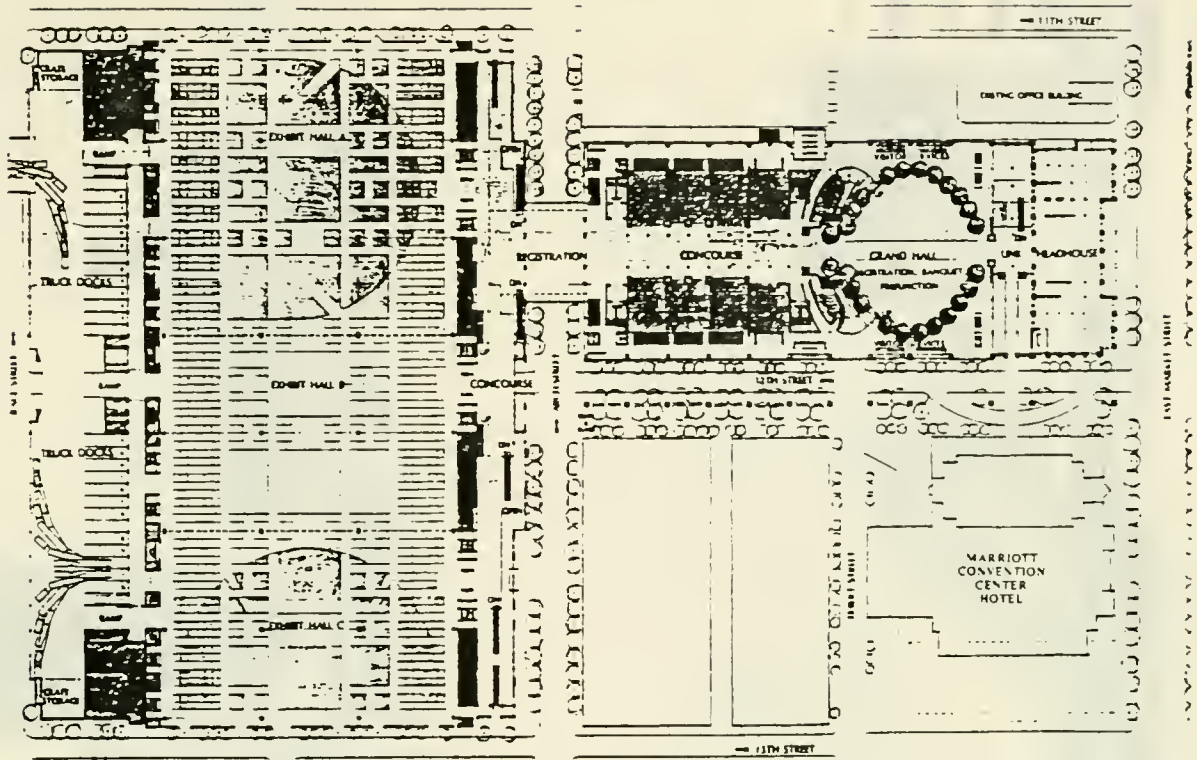


- Exhibition Halls
- Meeting Rooms
- Registration Public Areas
- Storage Restroom Areas

FIRST LEVEL (street level)
 More than 60,000 square feet of meeting space and a 115,000 auxiliary hall connect to the major exhibit space on the second level. The historic, Reising Terminal Market, located below The Grand Hall offers convenient access to the main exhibit space from more than 70 specialty food, beverage, and restaurant.

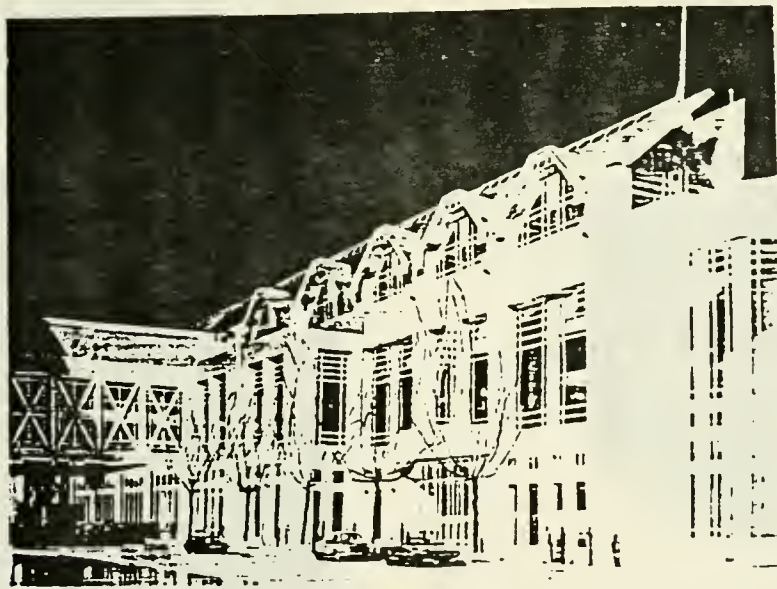


An enclosed walkway over Arch Street connects The Grand Hall to the major exhibit space.



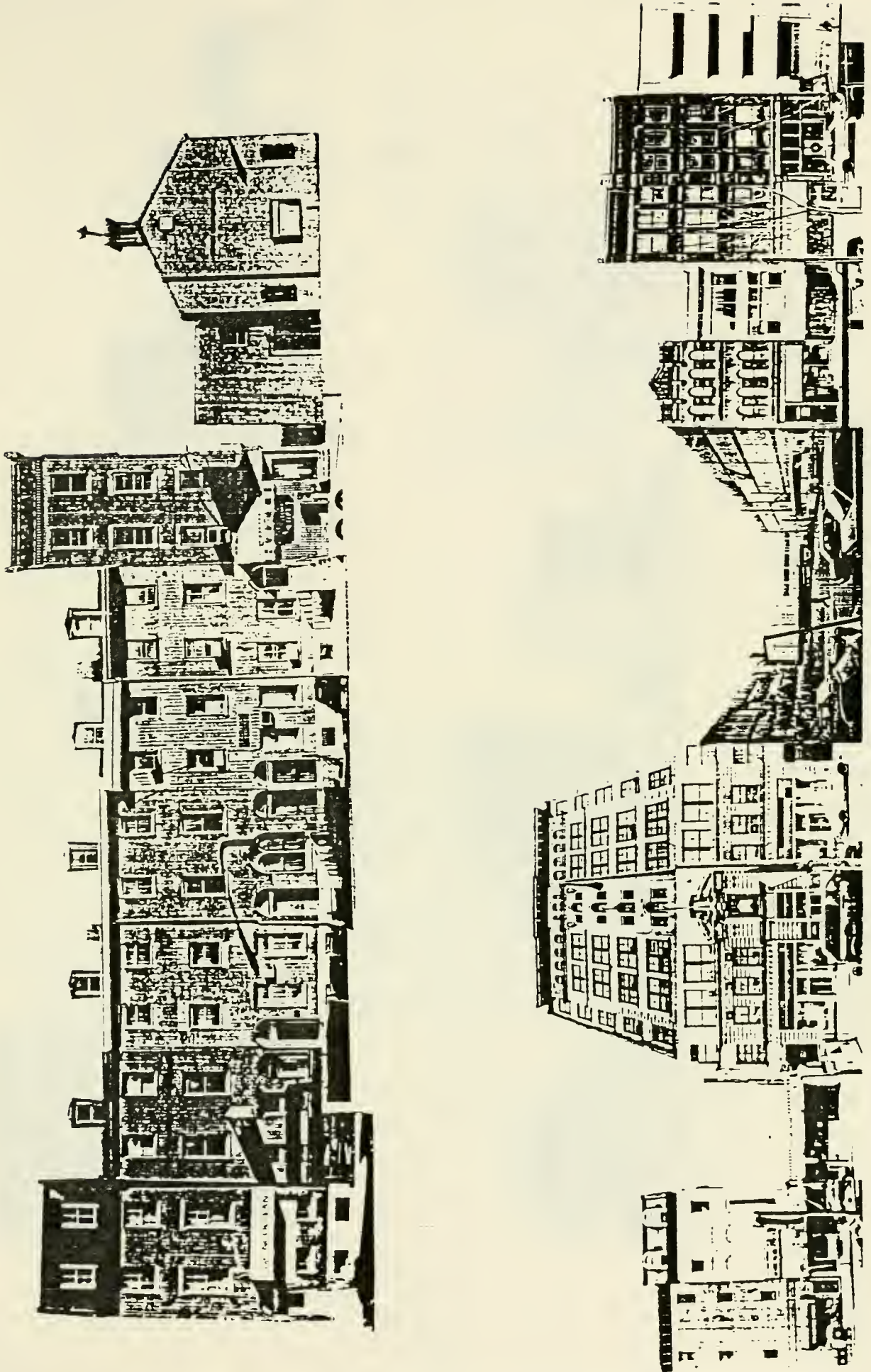
SECOND LEVEL

More than 315,000 square feet of exhibit space is connected to the magnificent Grand Hall and accessed by a private 5 lane viaduct.



The Pennsylvania Convention Center is located in the heart of downtown Philadelphia.

(II-22) Convention Center Proposal



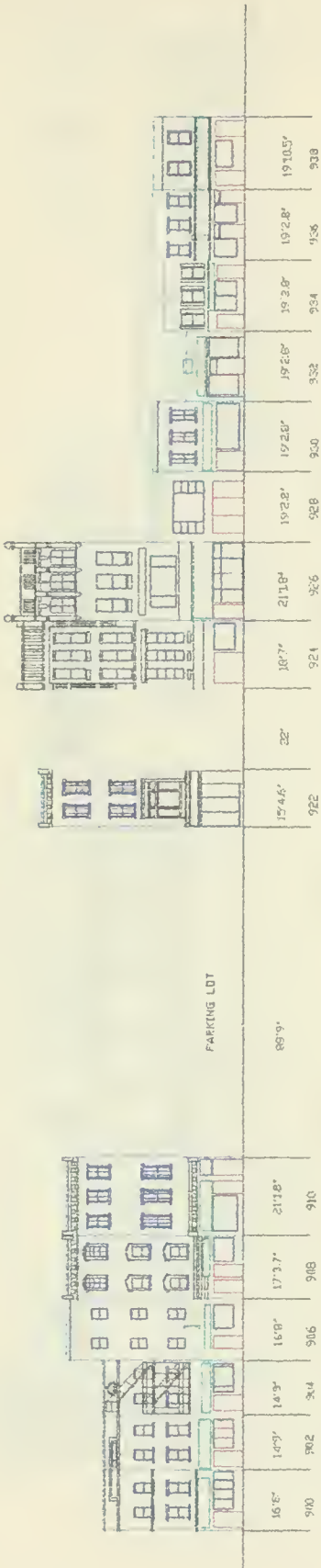
(III-1) Sample of Photographing Buildings



ARCH ST. NORTH ELEVATION

MAY 1991 EXISTING CONDITIONS

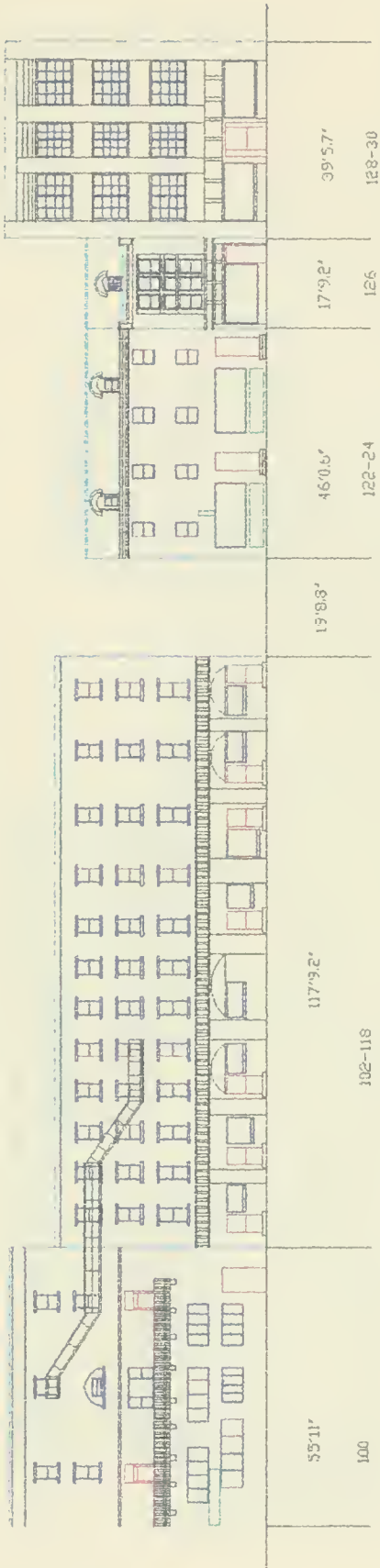
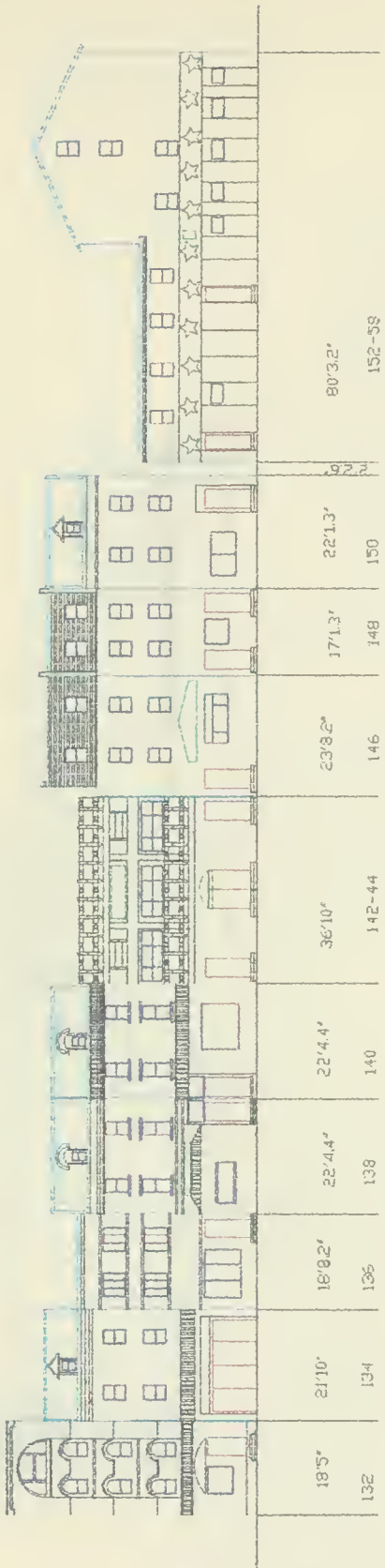
(III-2)



ACRH ST. SOUTH ELEVATION

MAY 1991 EXISTING CONDITIONS

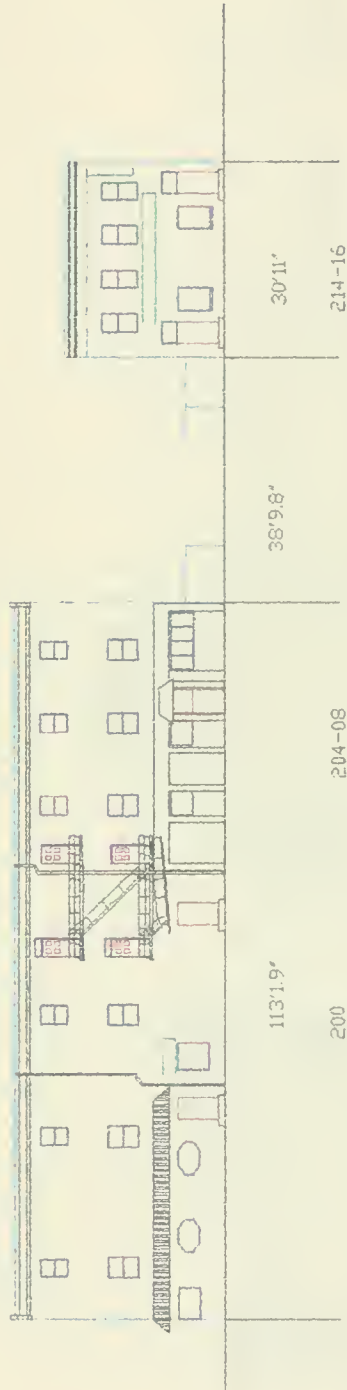
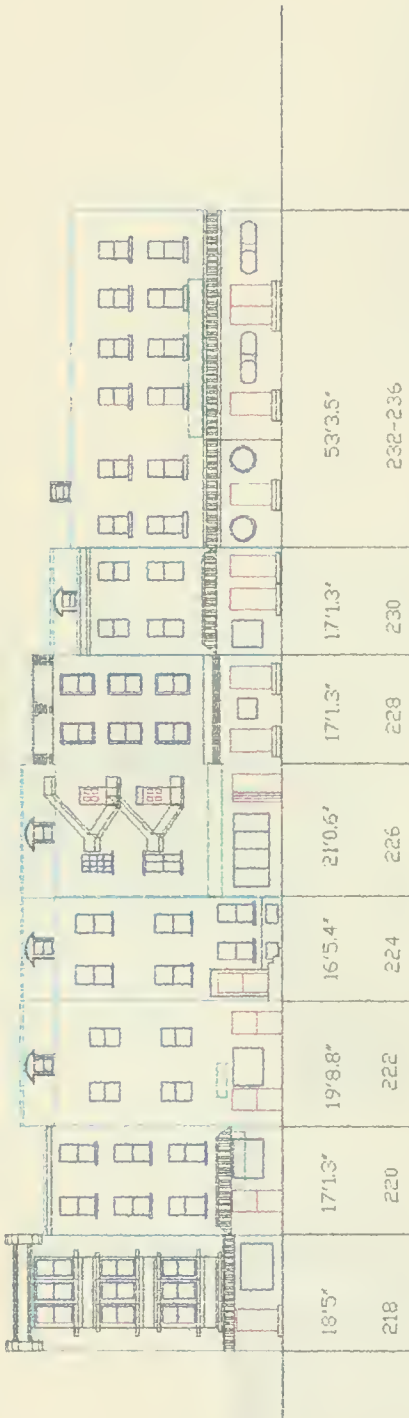
(III-3)



10TH ST. WEST ELEVATION

MAY 1991 EXISTING CONDITIONS

(III-4)



10TH ST. WEST ELEVATION

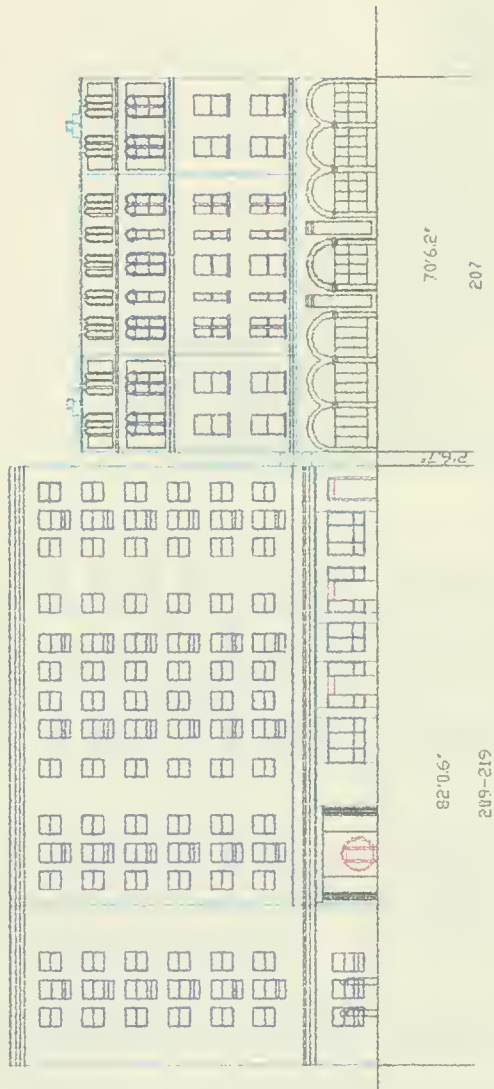
MAY 1991 EXISTING CONDITIONS



10TH ST. EAST ELEVATION

MAY 1991 EXISTING CONDITIONS

(III-6)



10TH ST. EAST ELEVATION
MAY 1991 EXISTING CONDITIONS

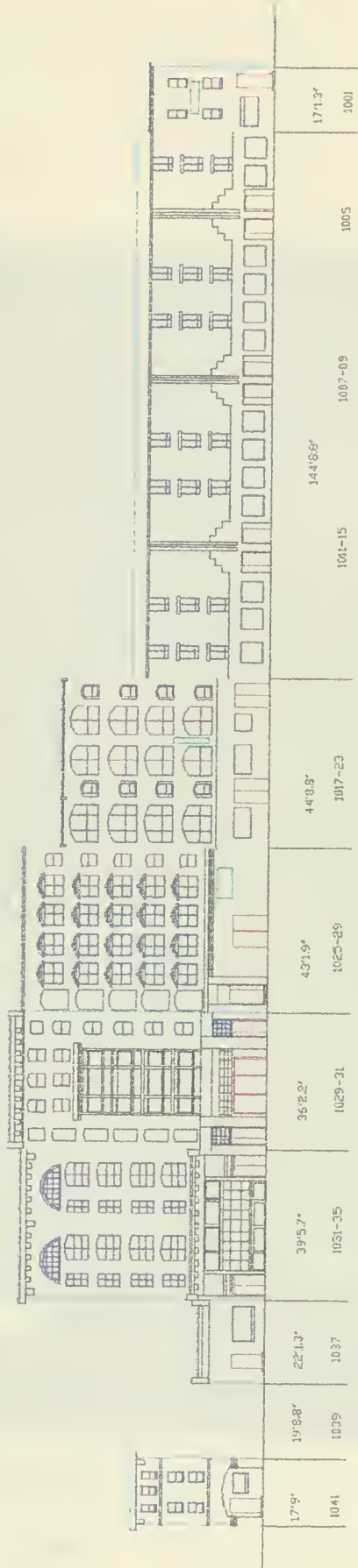
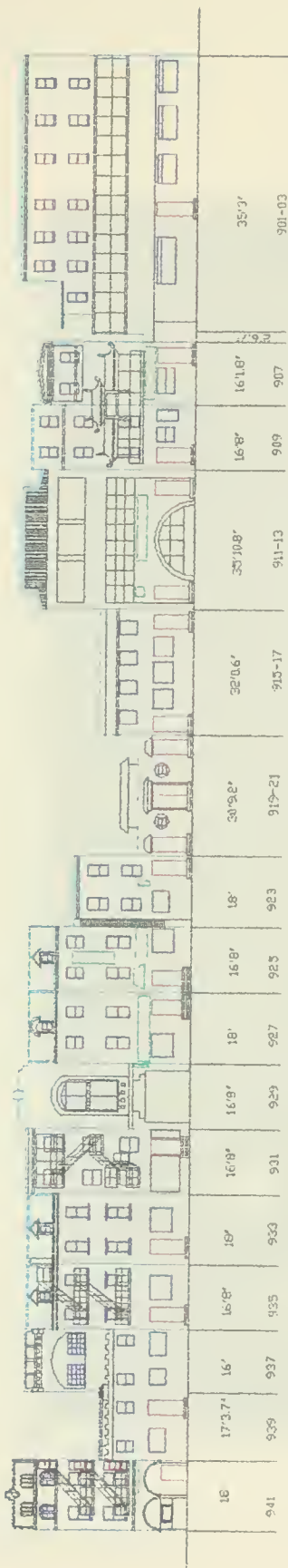
(III-7)



RACE ST. SOUTH ELEVATION

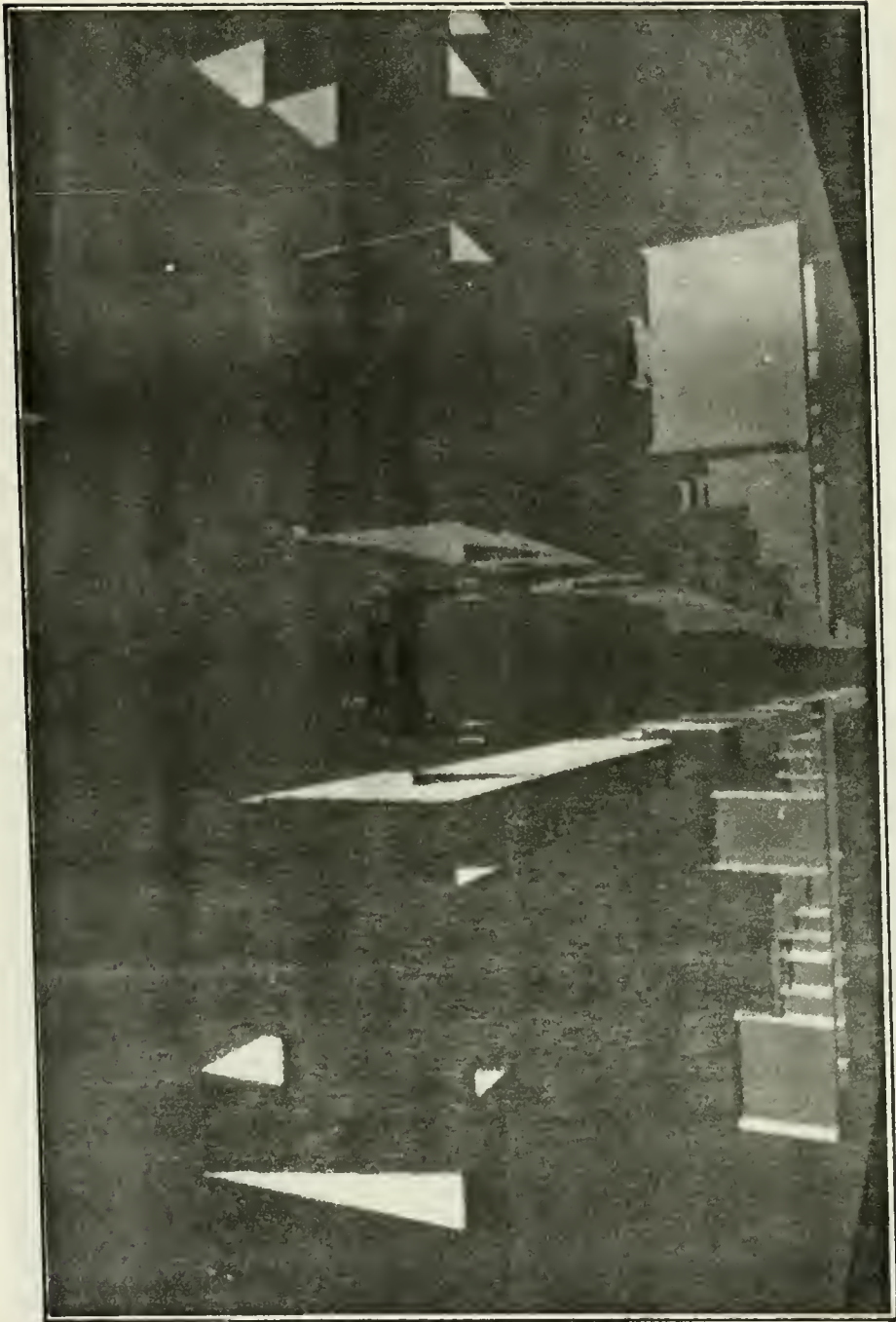
MAY 1991 EXISTING CONDITIONS

(III-8)



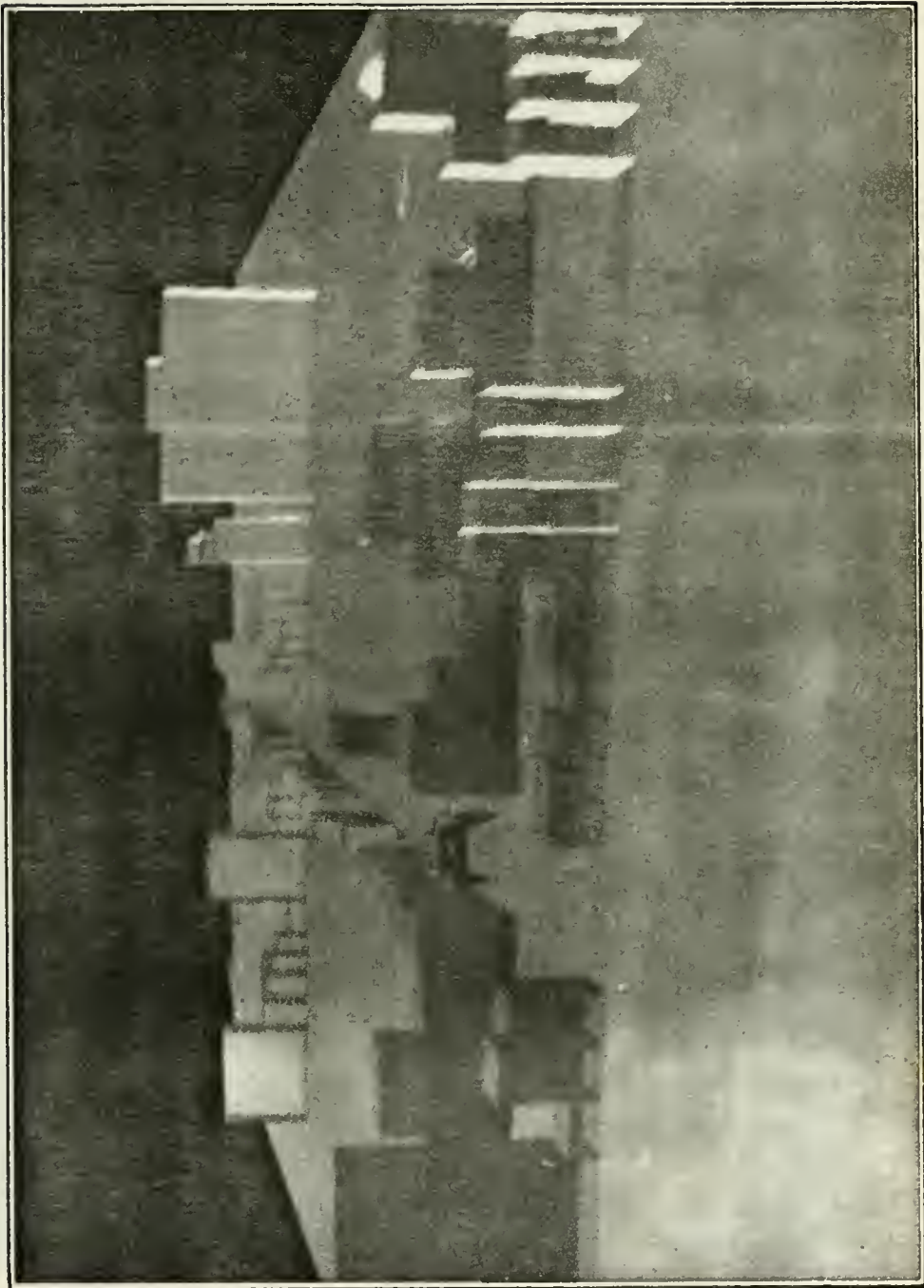
RACE ST. NORTH ELEVATION

MAY 1991 EXISTING CONDITIONS



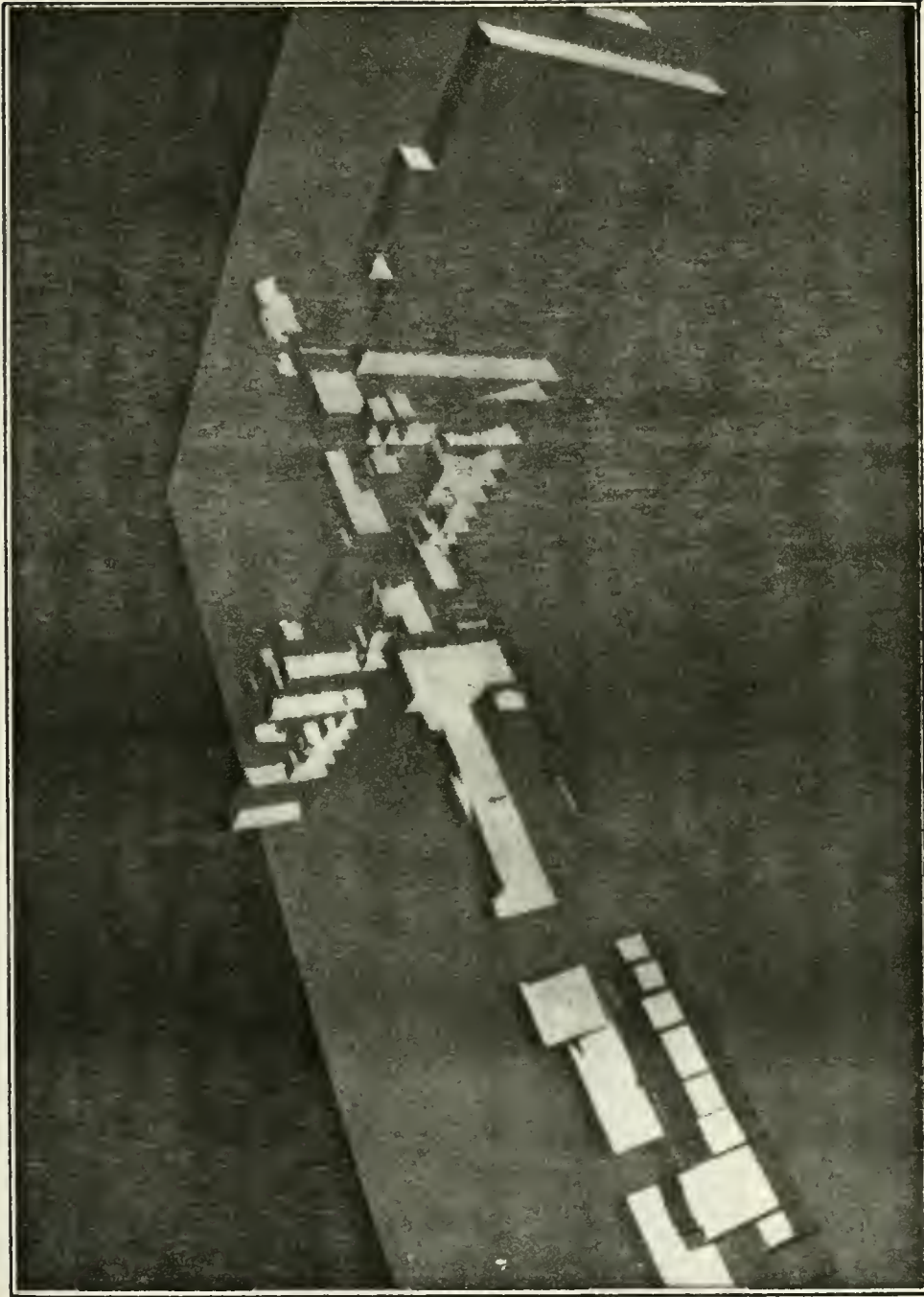
Existing Chinatown Fabrics

(III-10)



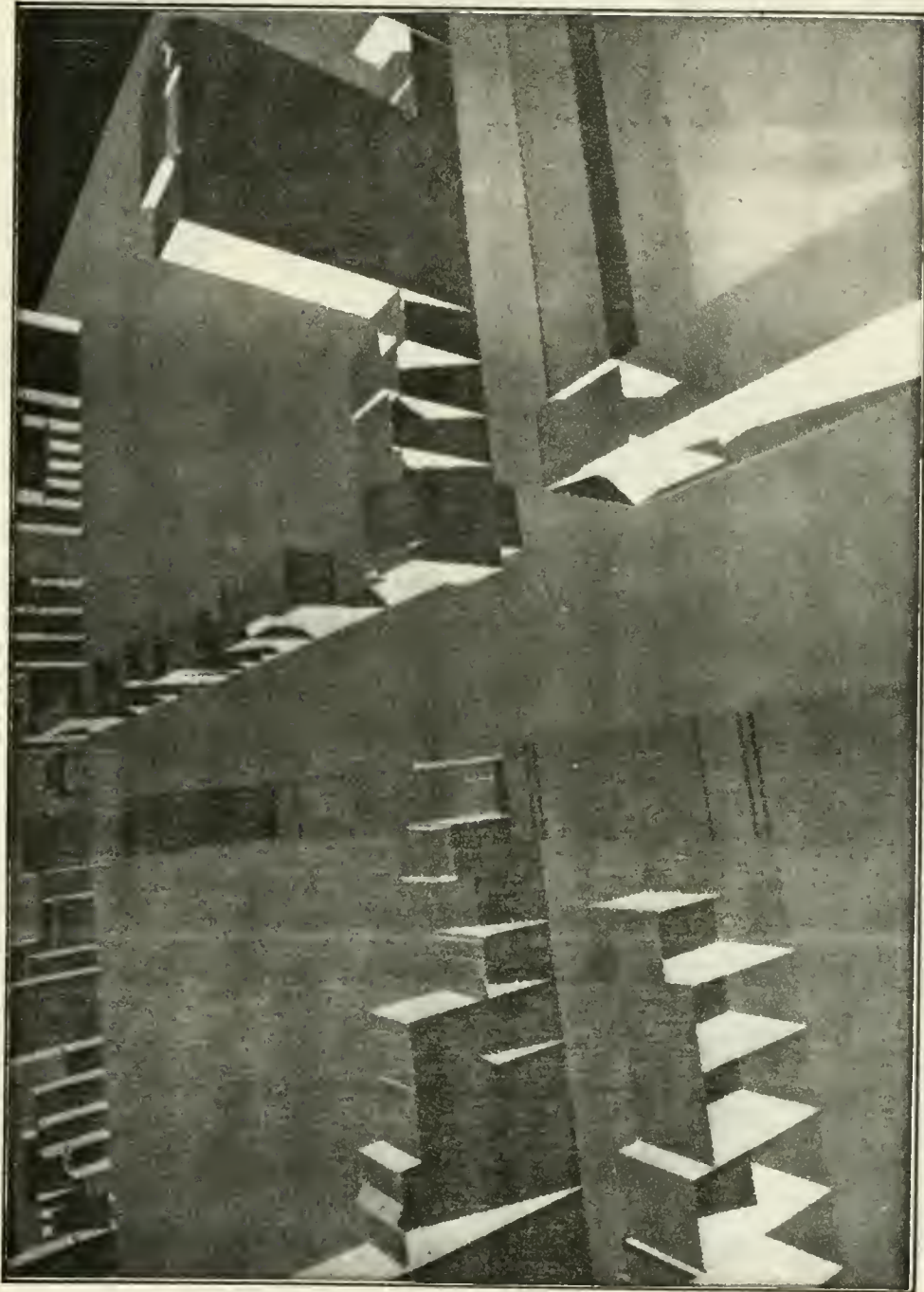
Existing Chinatown Fabrics

(III-11)



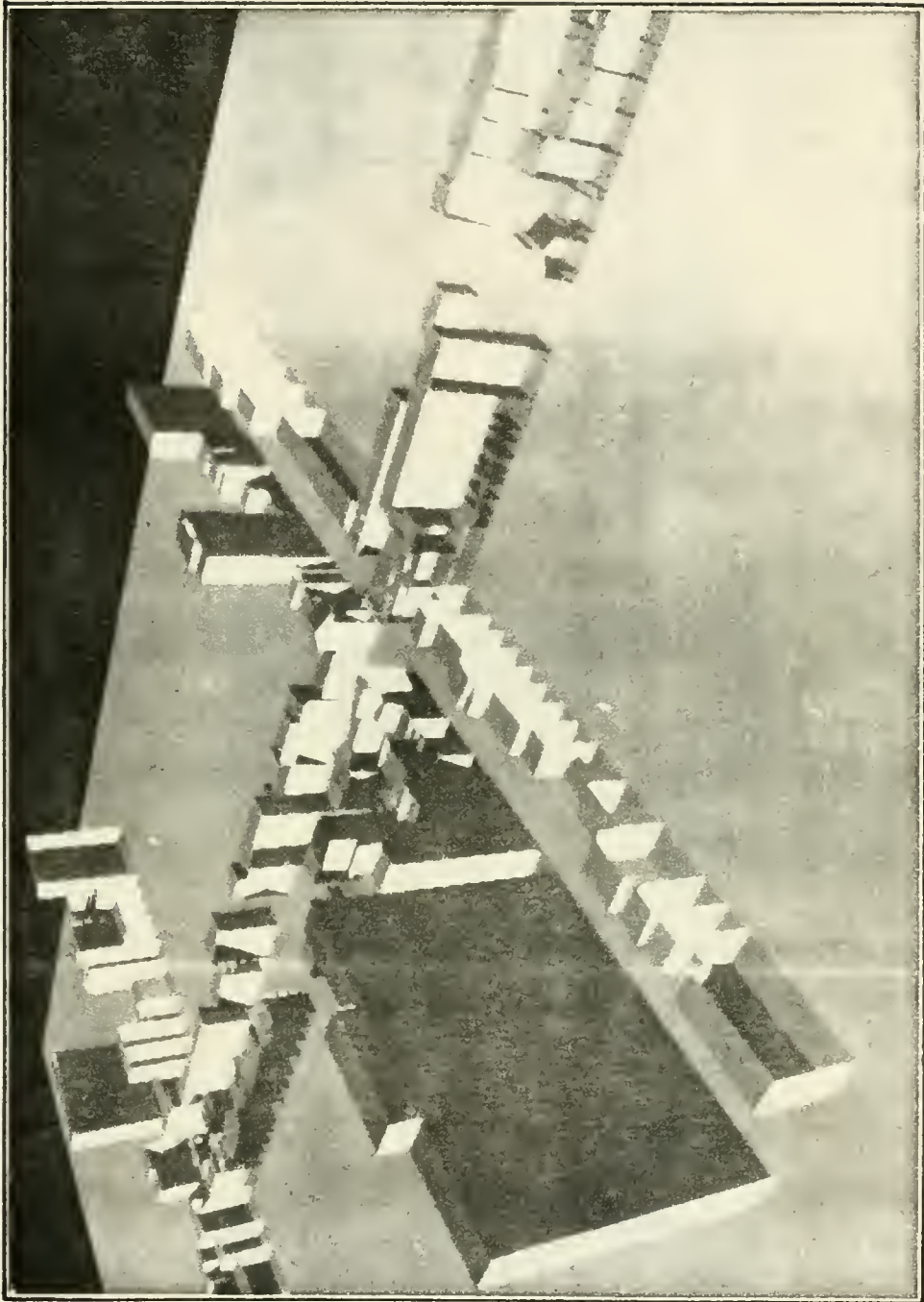
Existing Chinatown Fabrics. Facing the corners of 10th and Race Streets

(III-12)



The corners of 10th and Race Streets

(III-13)

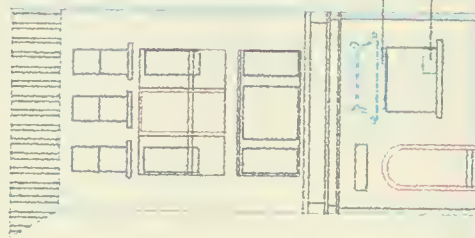


Existing Chinatown Fabrics

(III-14)

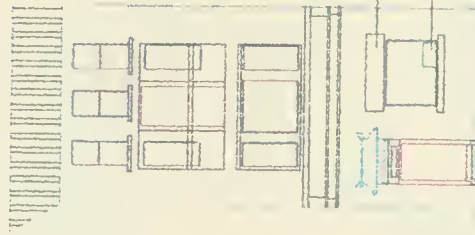


Existing Storefront



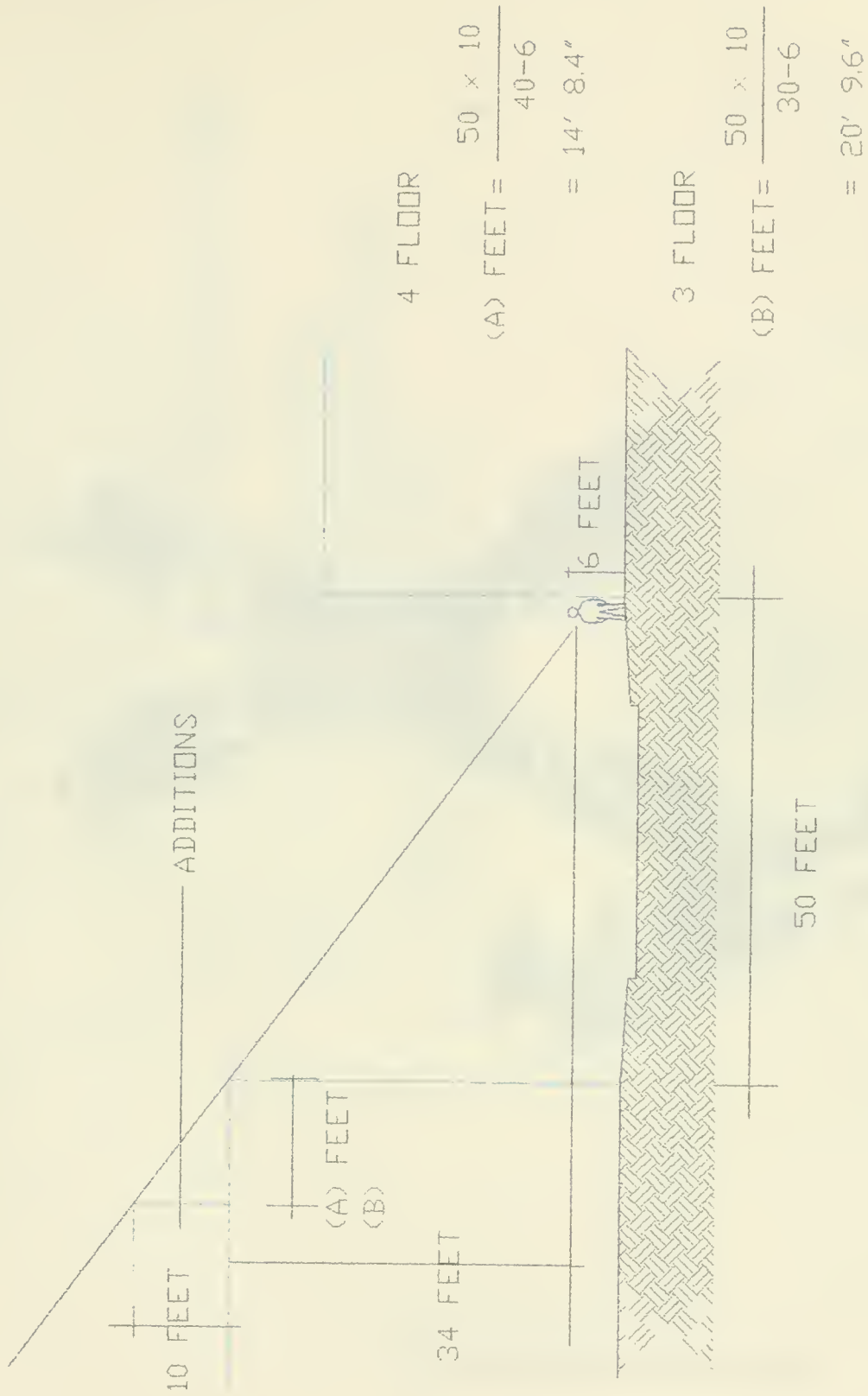
Sign
Description

Proposal 1

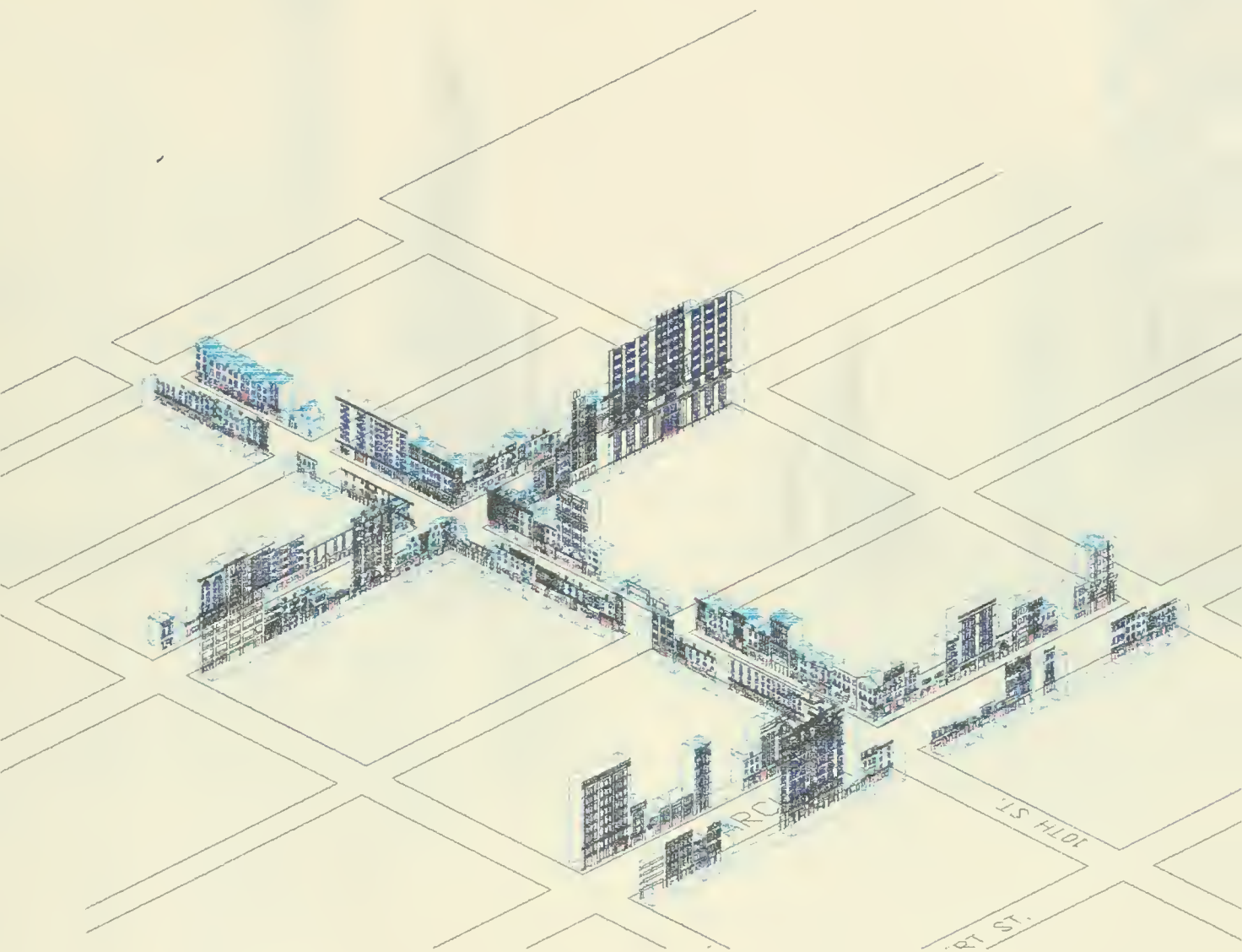


Sign
Description

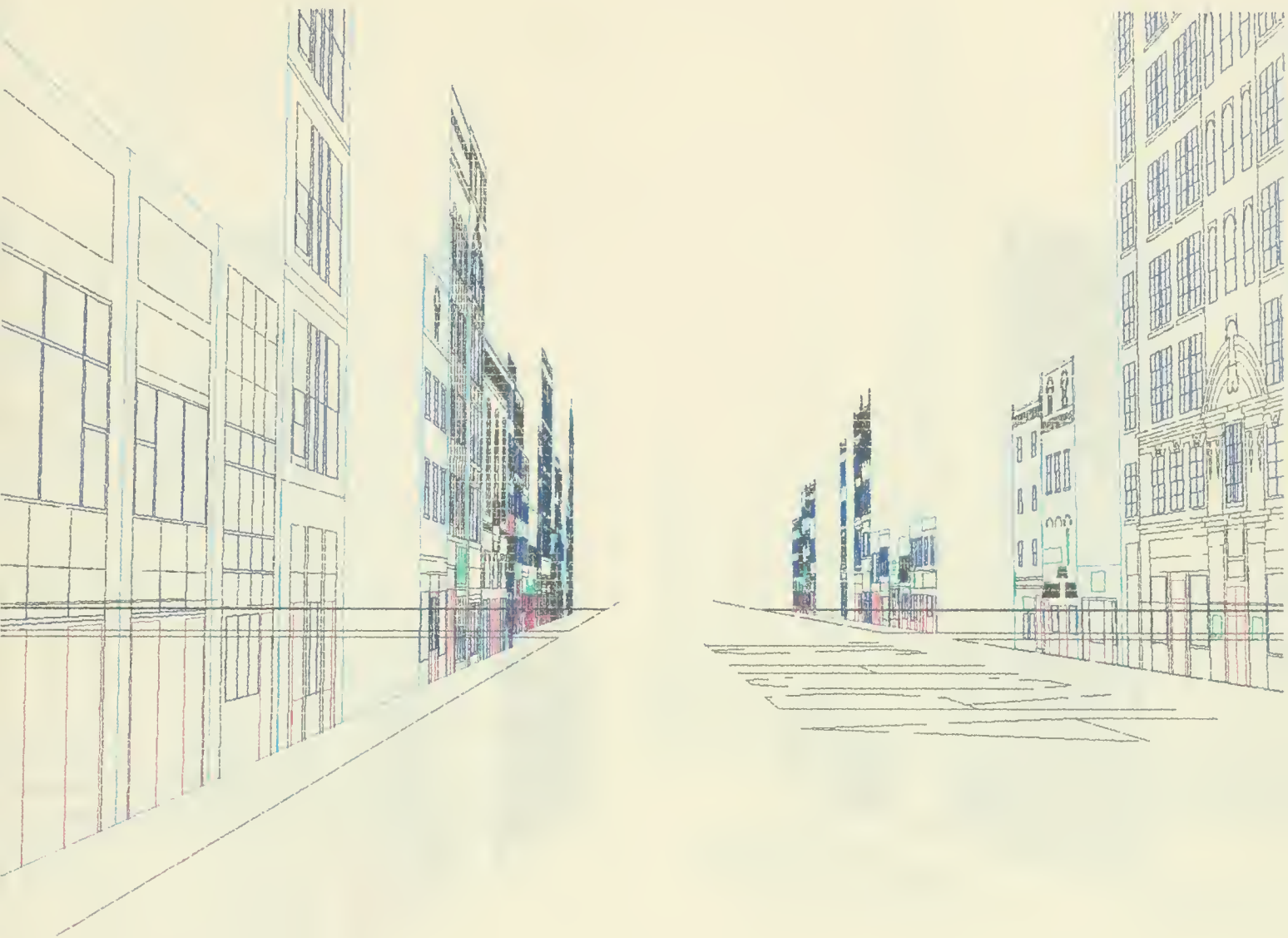
Propoasl 2



(V-2) Diagram of Setback



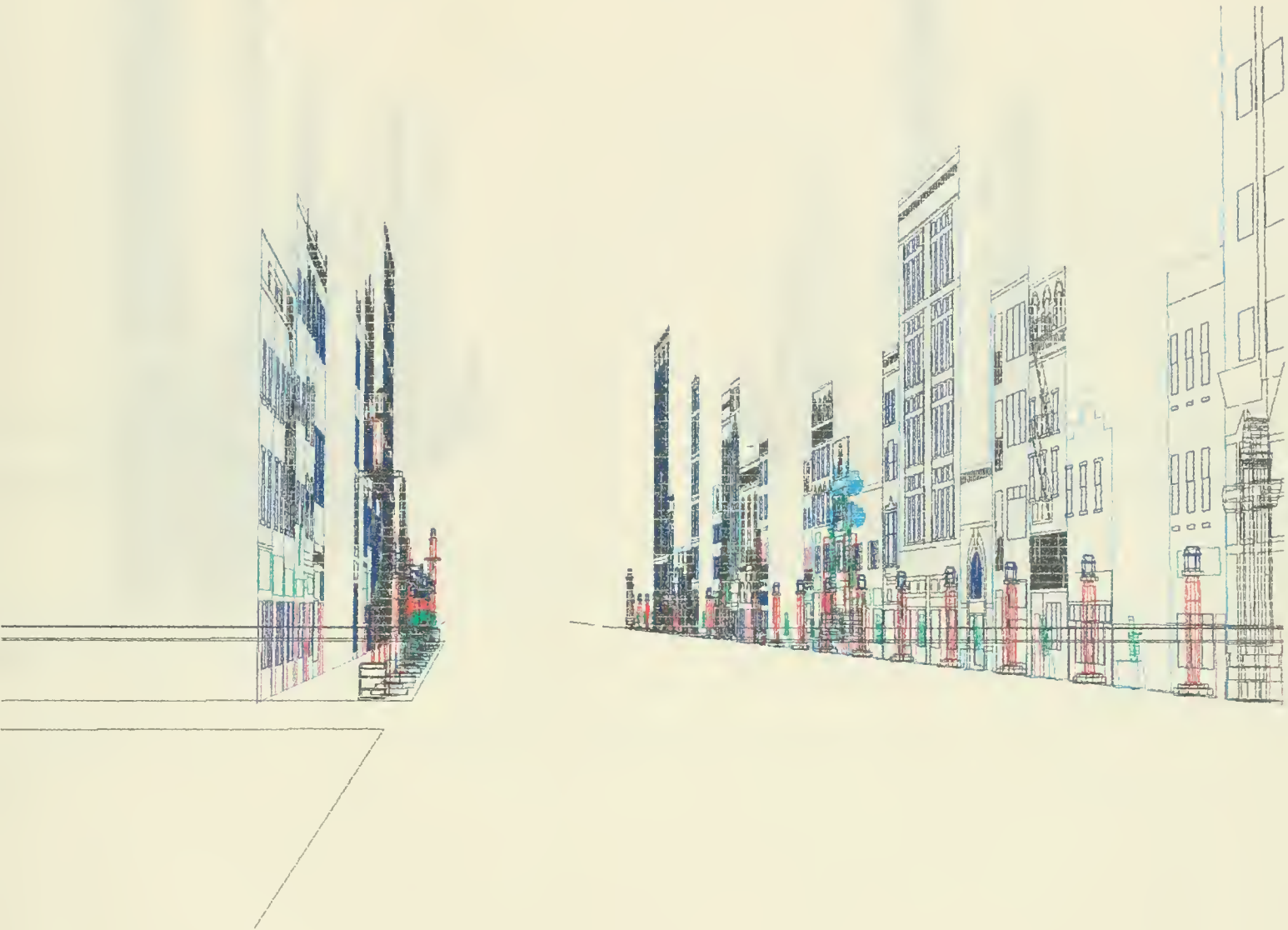
(V-3) Whole View of Chinatown



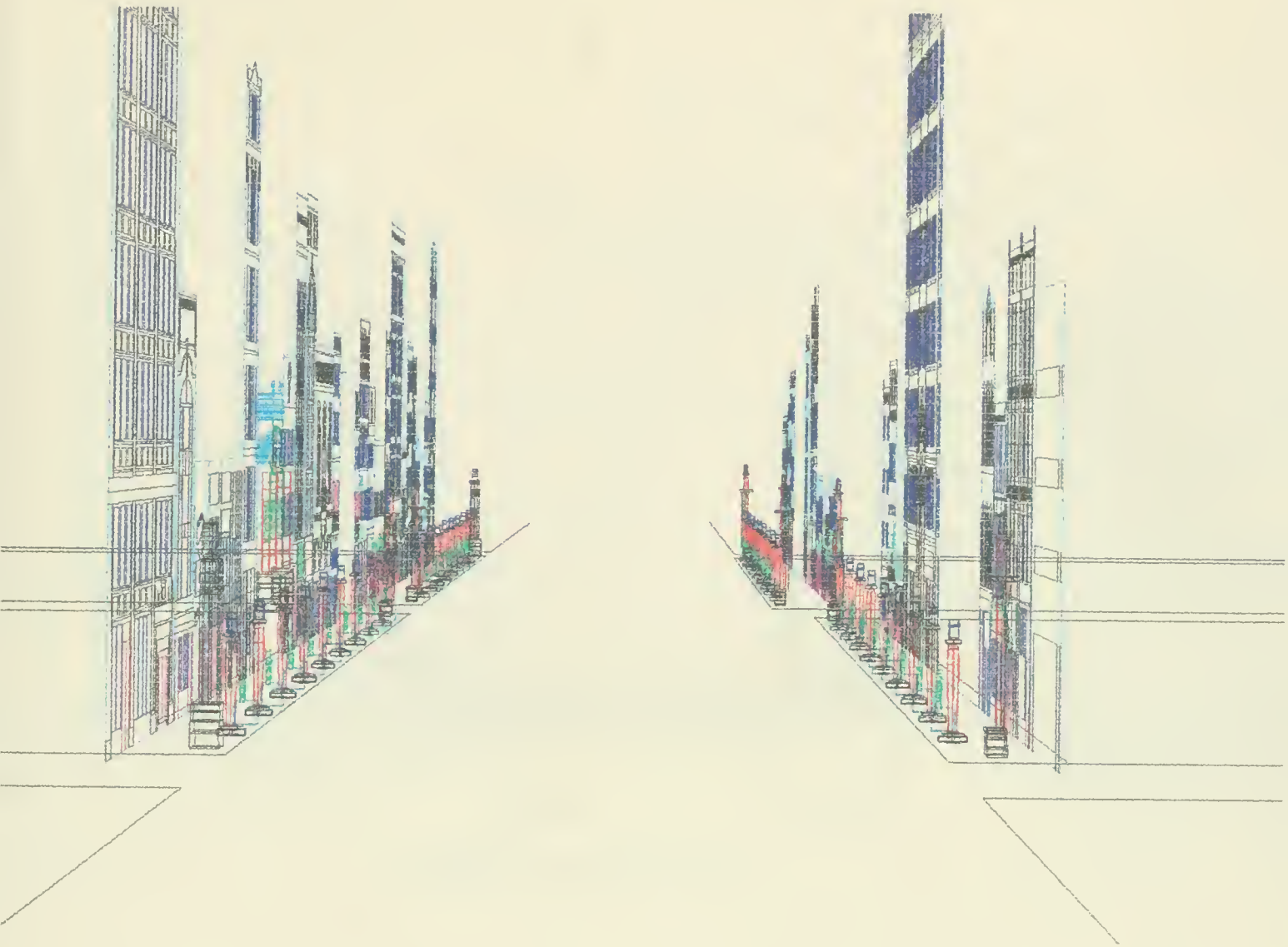
(V-4) Existing Arch Street



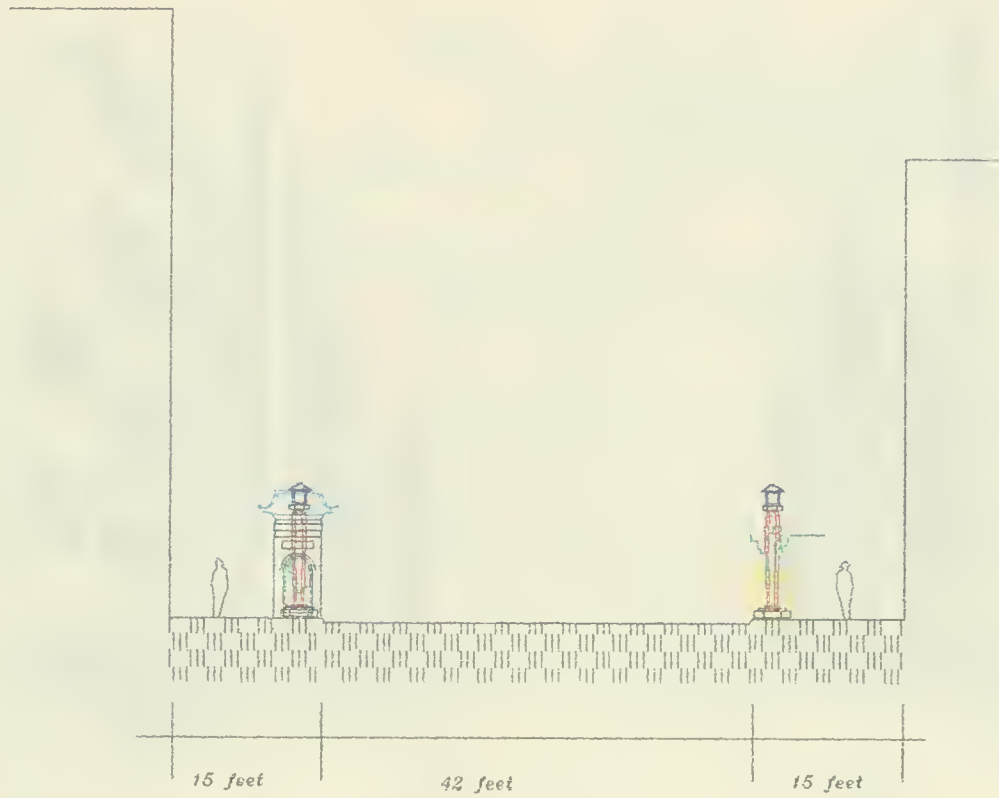
(V-5) Existing Arch Street



(V-6) Proposal for Arch Street



(V-7) Proposal for Arch Street

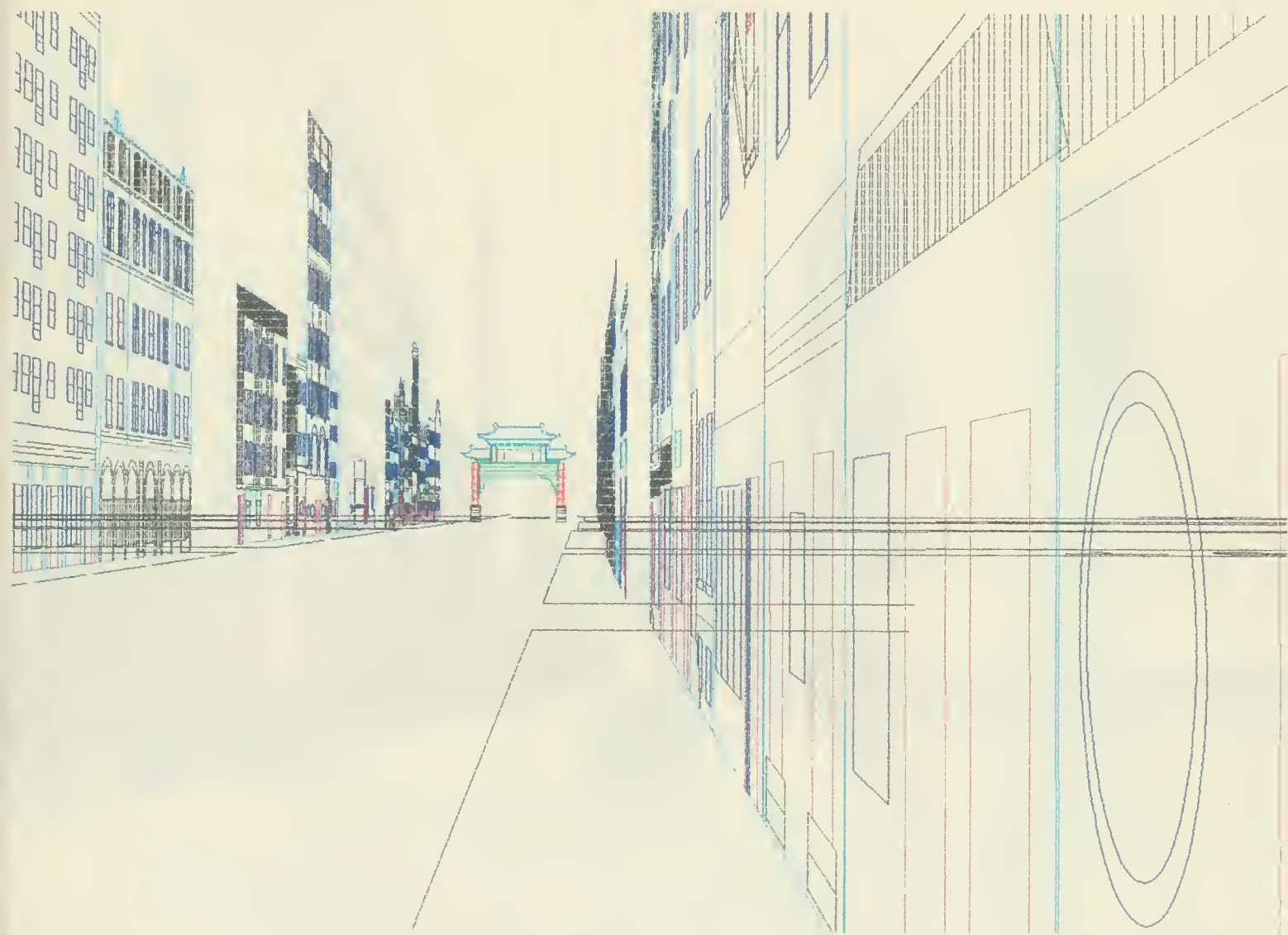


Design for Arch Street

(V-8)



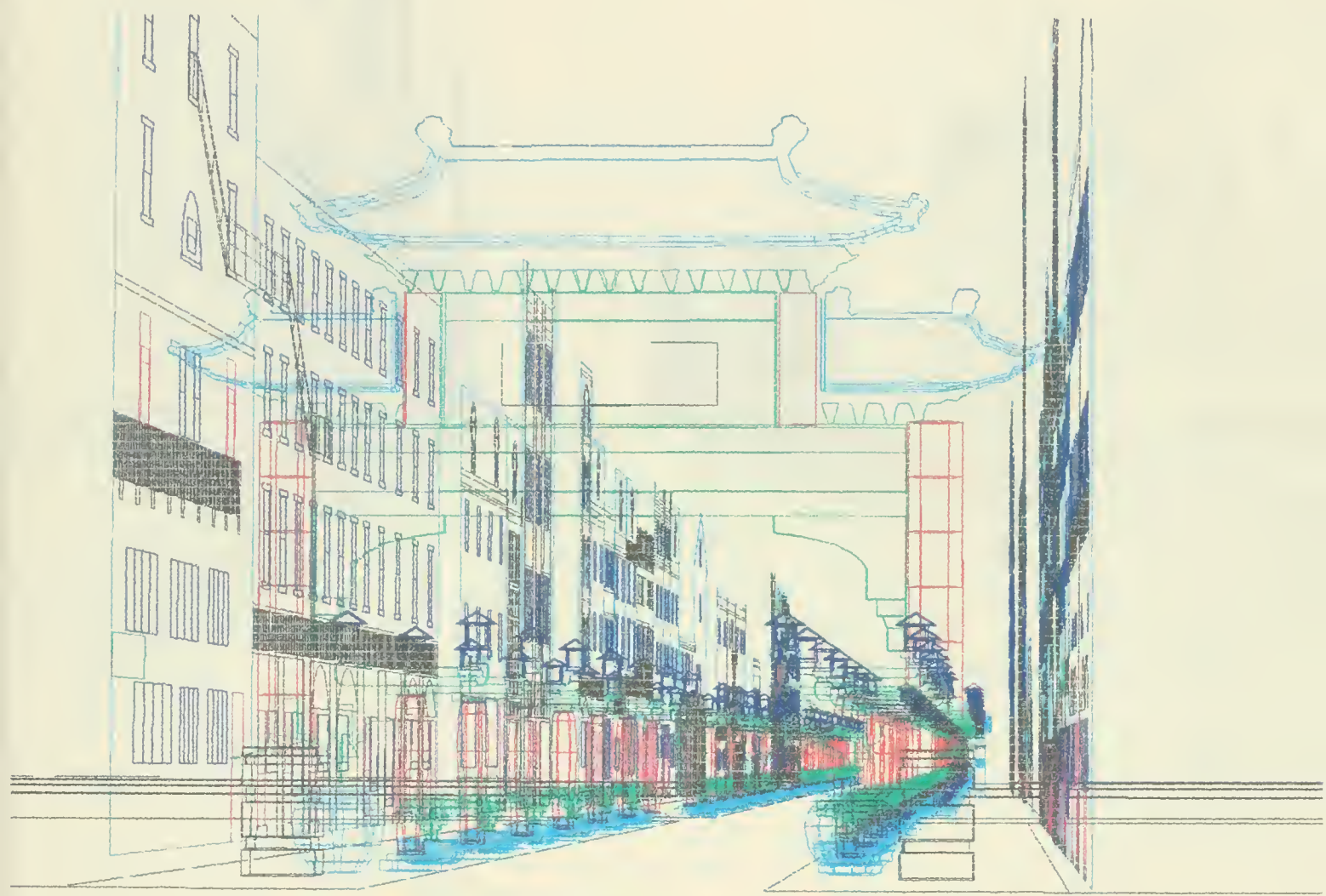
(V-9) Existing 10ch Street



(V-10) Existing 10th Street



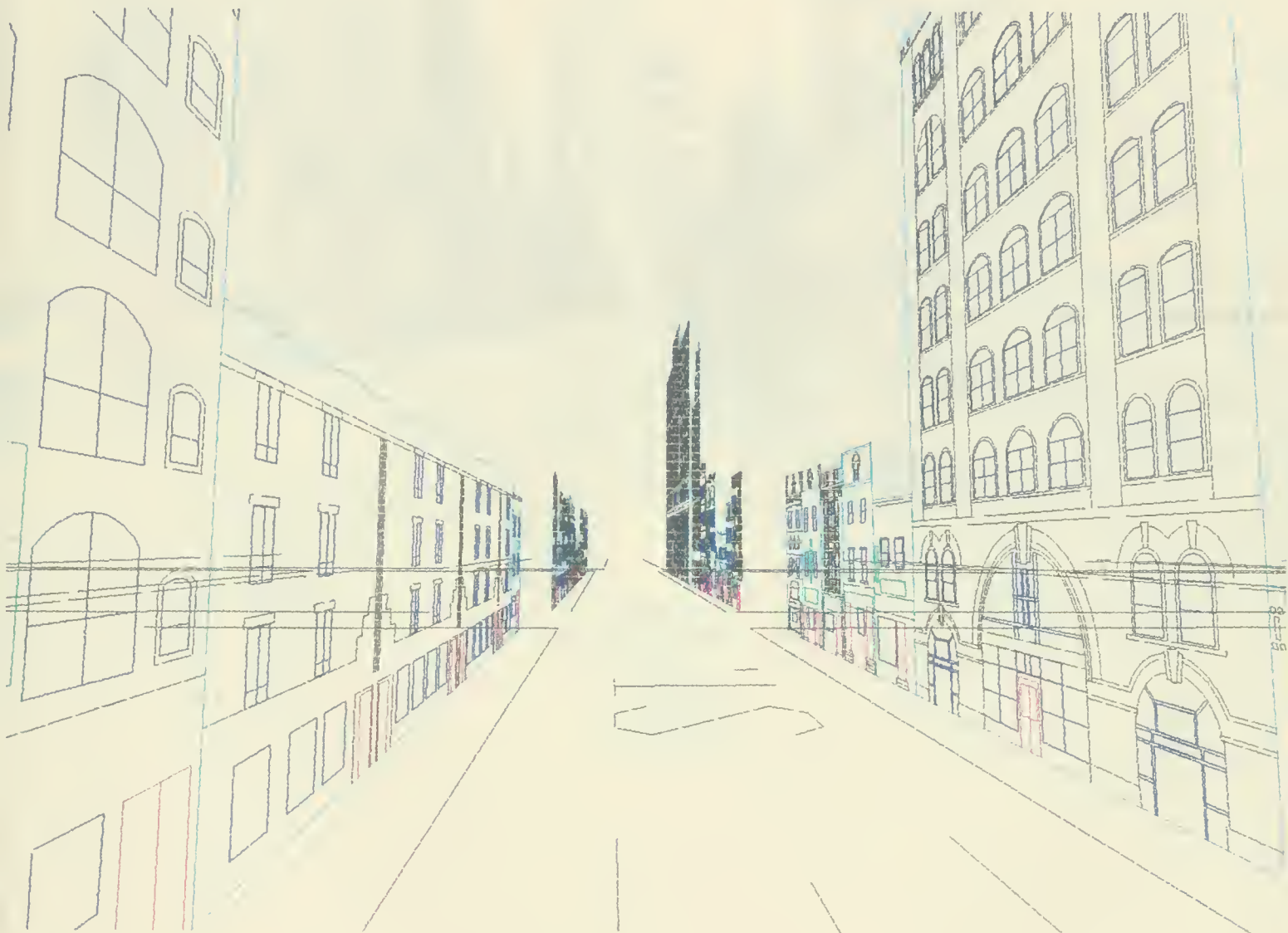
(V-11) Proposal for 10th Street



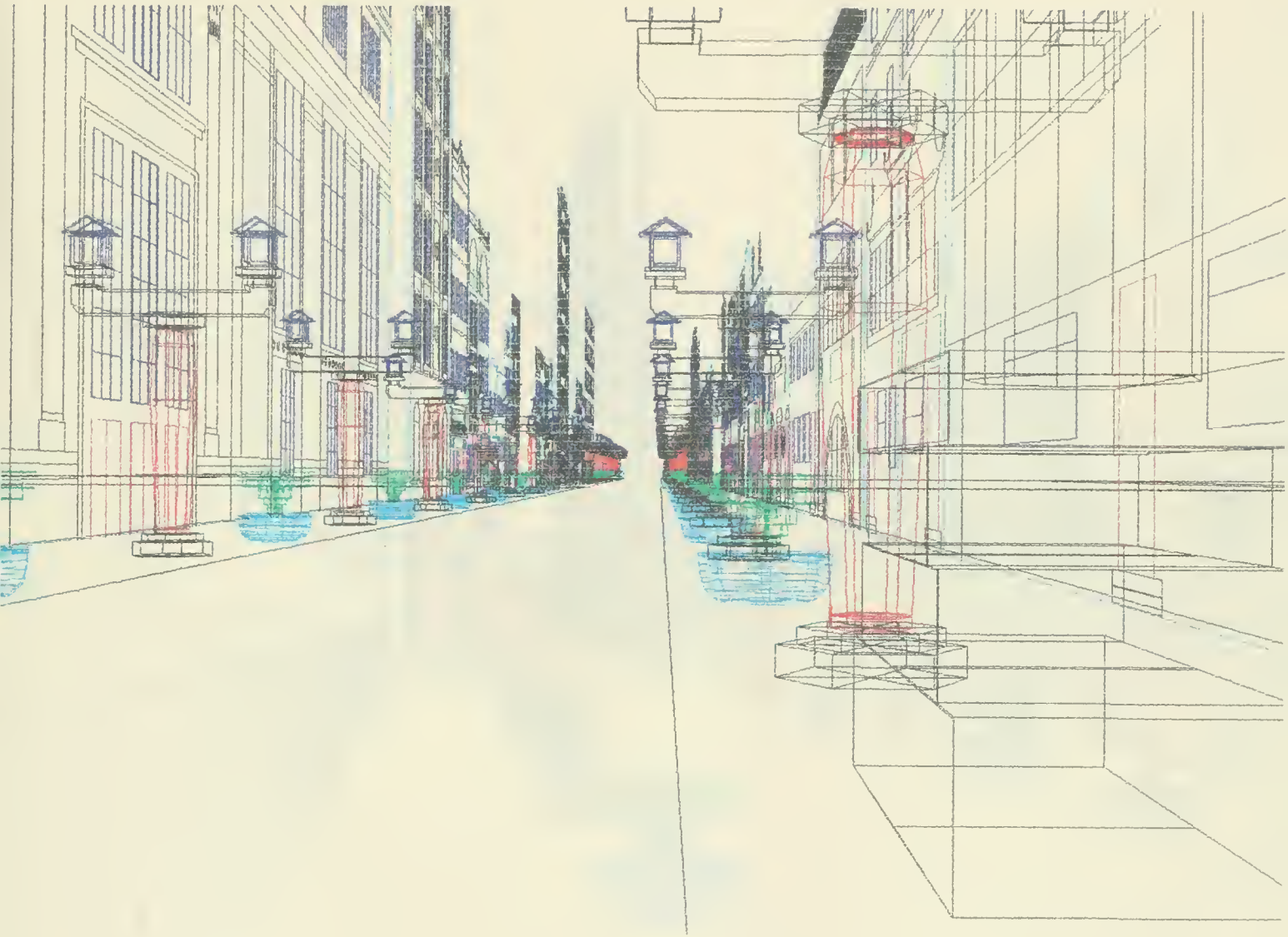
(V-12) Proposal for 10th Street



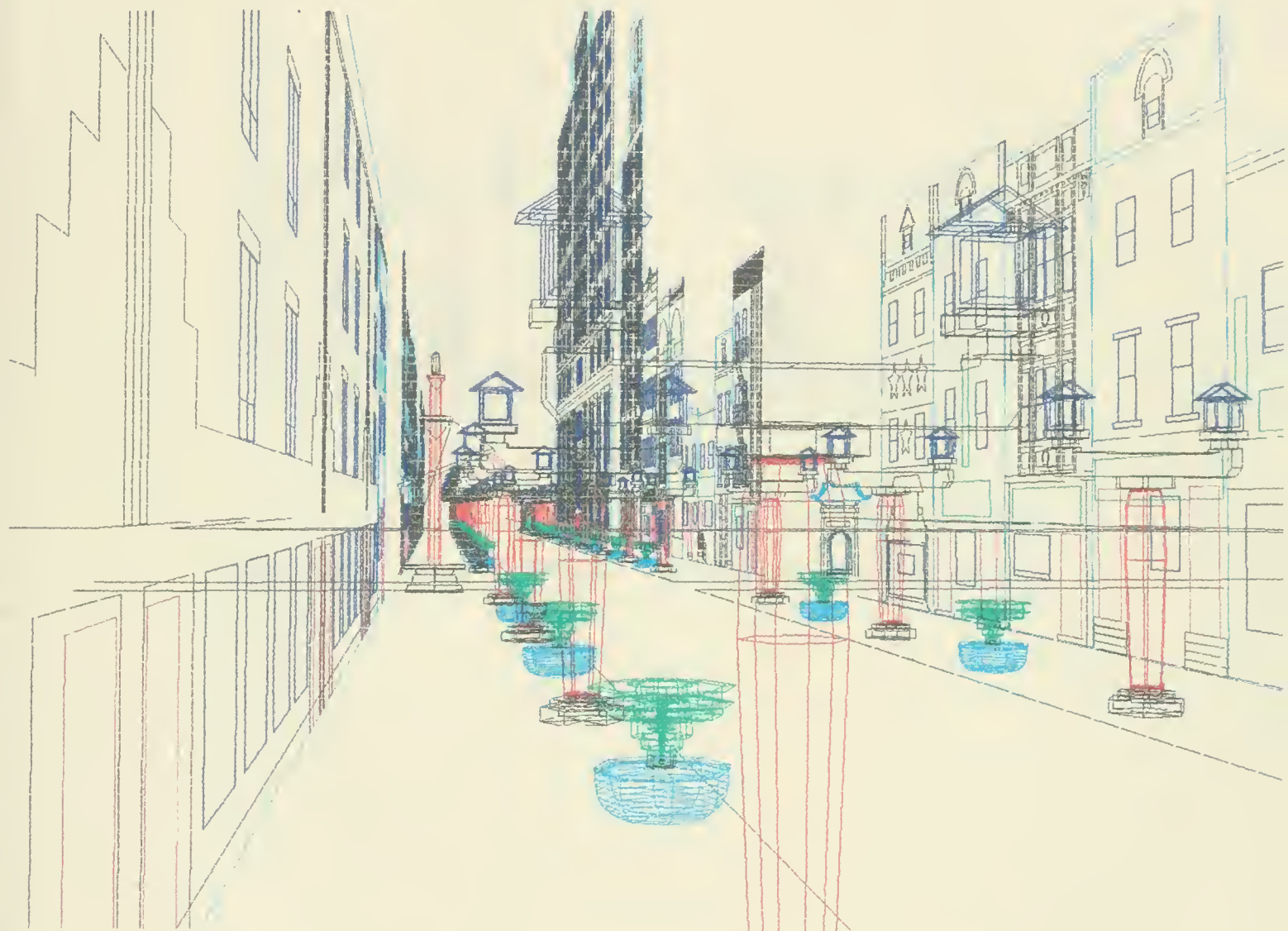
(V-13) Existing Race Street



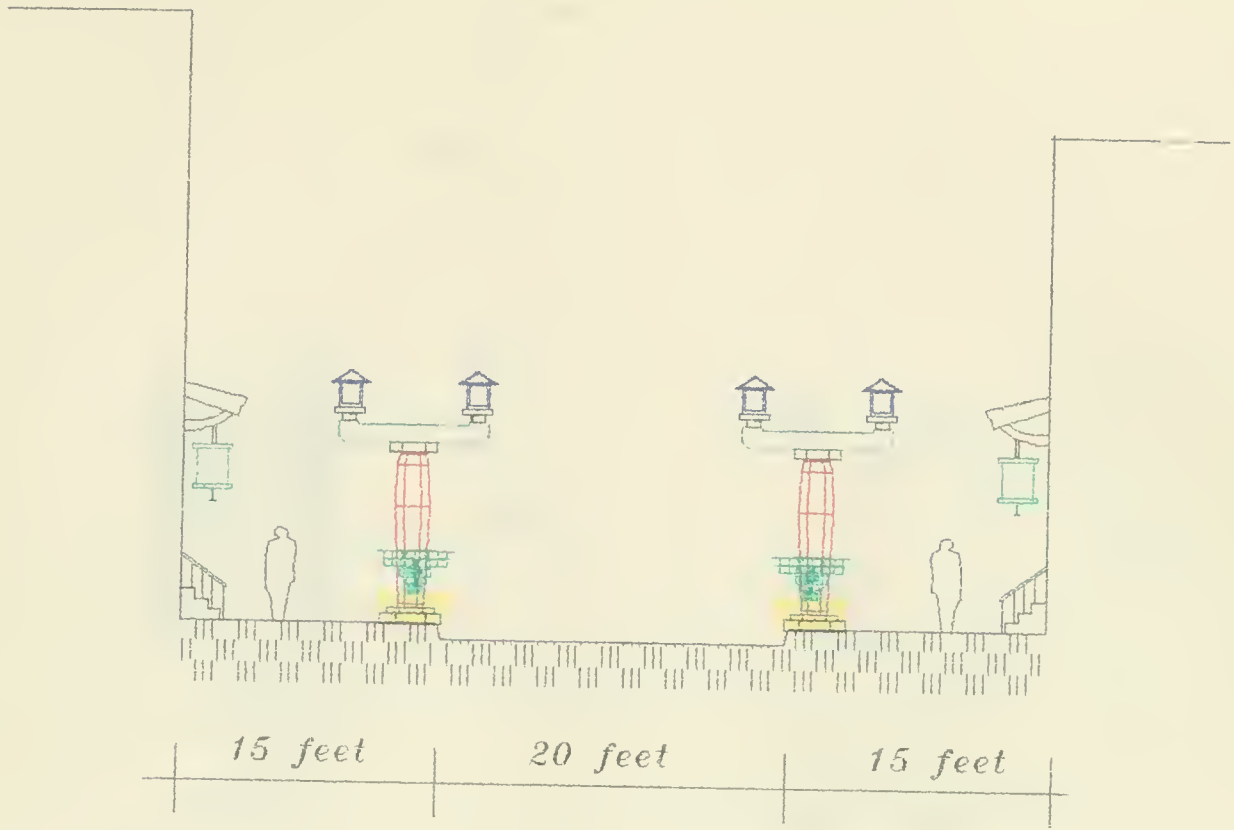
(V-14) Existing Race Street



(V-15) Proposal for Race Street

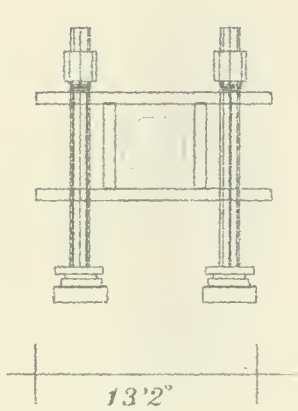


(V-16) Proposal for Race Street

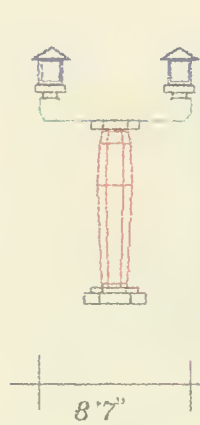
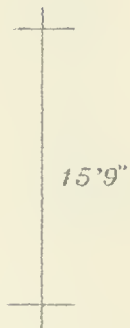


Design for 10th & Race Streets

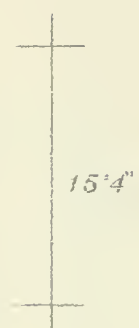
(V-17)



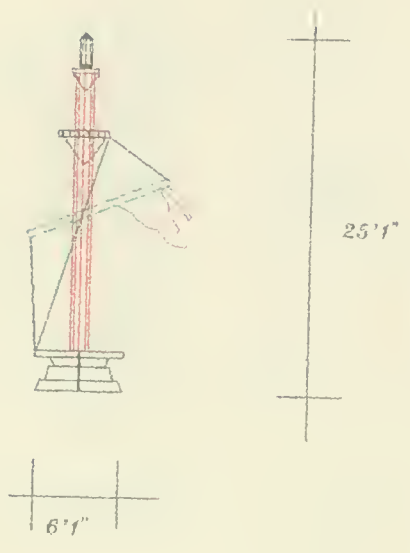
Clock



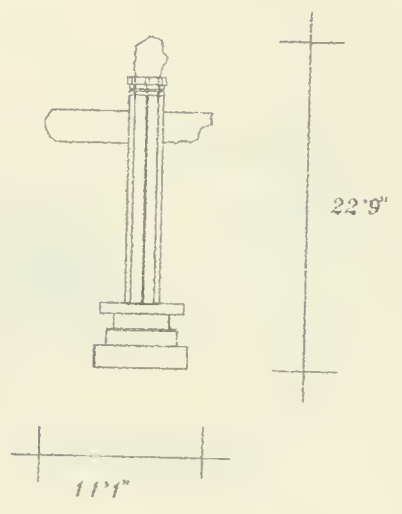
Light Pole



(V-18) Street Equipment

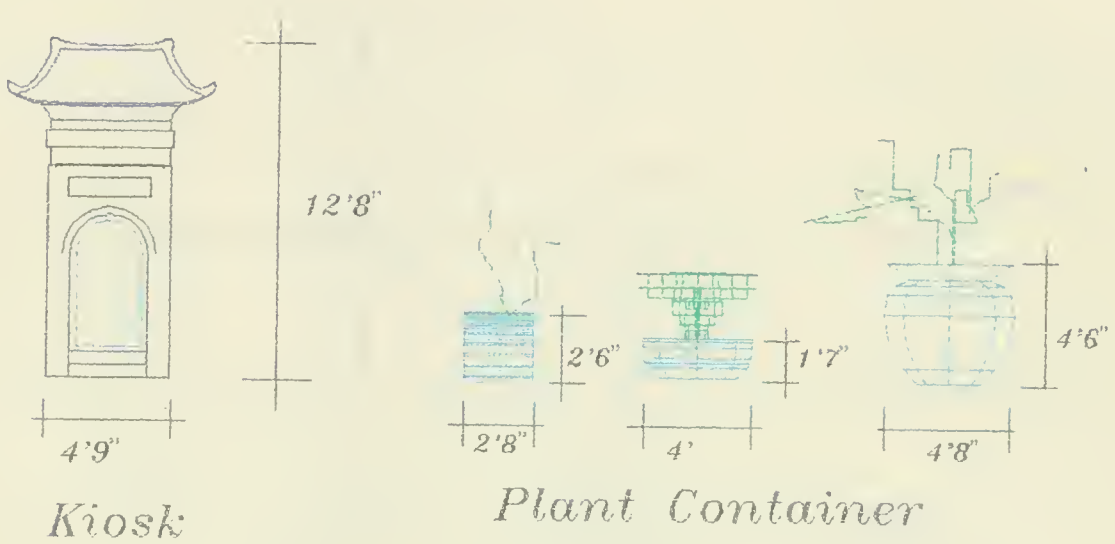


Corner Pole



Entrance Pole

(V-19) Street Equipment



Kiosk

Plant Container

(V-20) Street Equipment

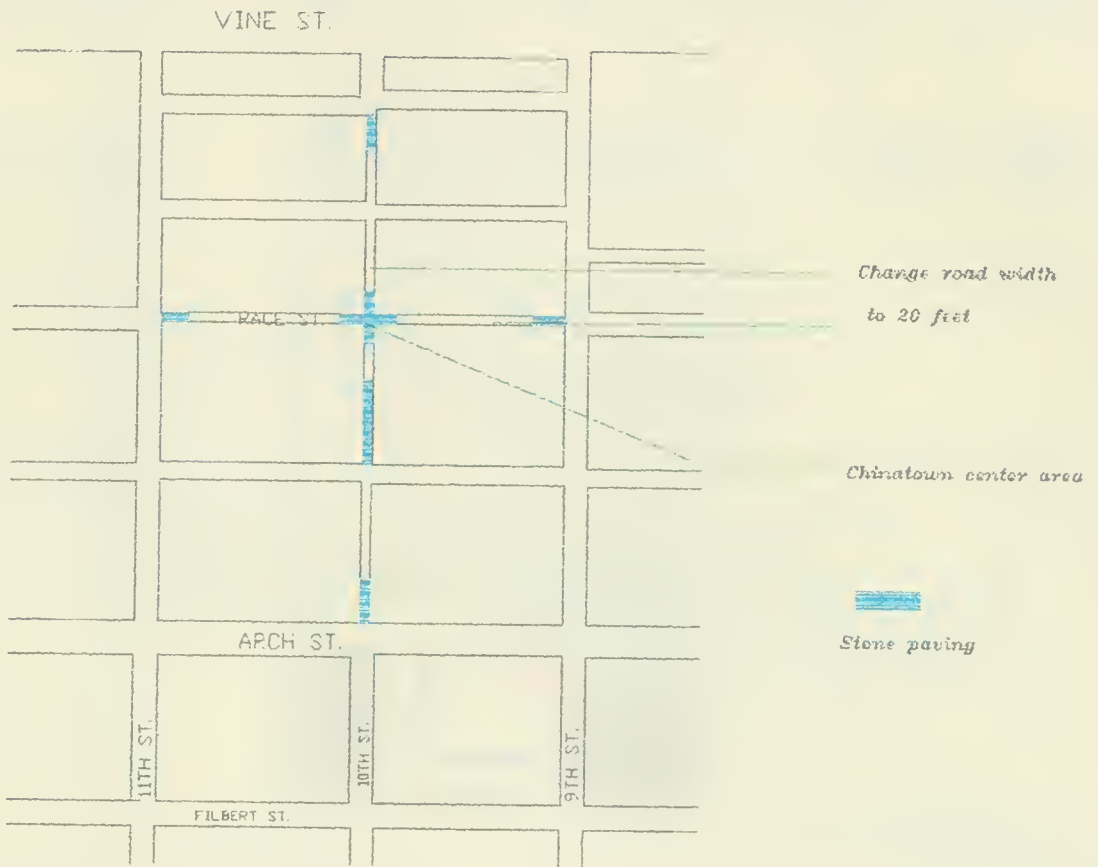
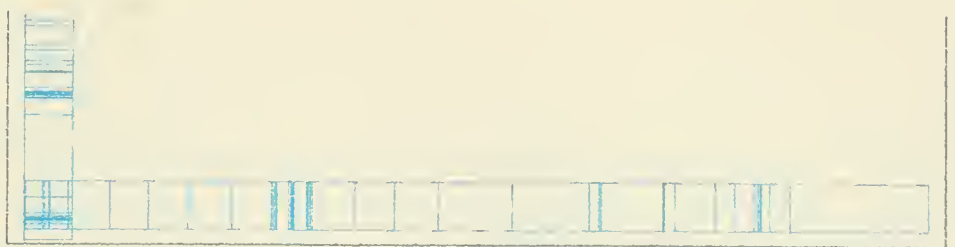
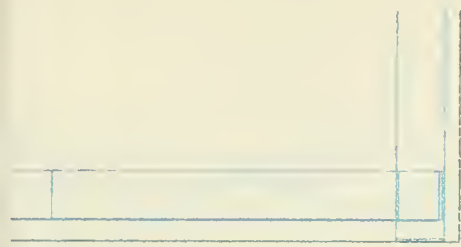
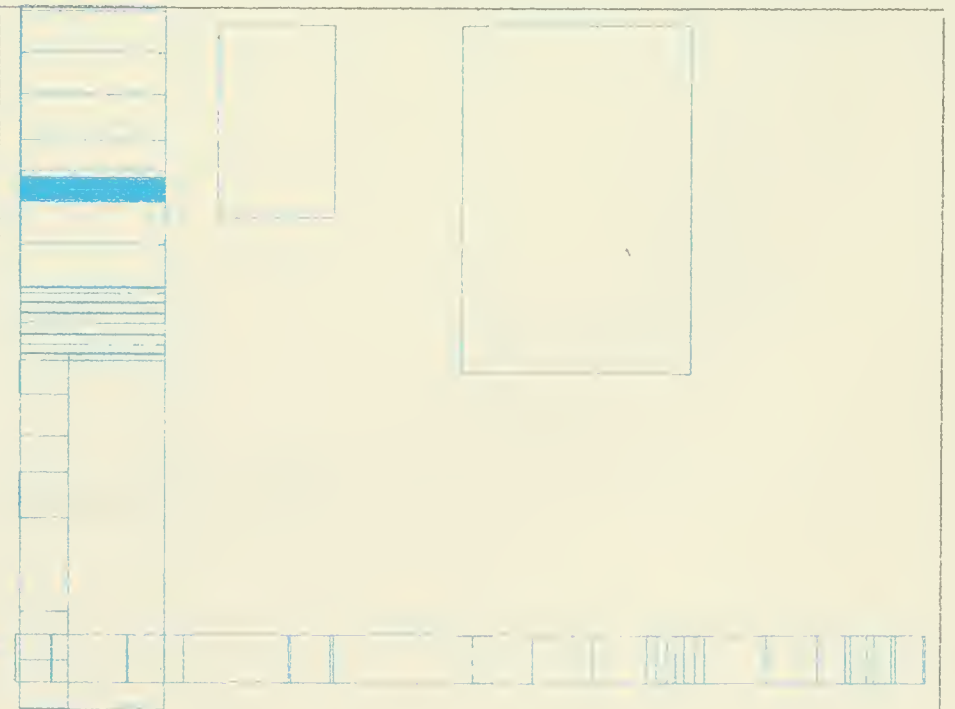
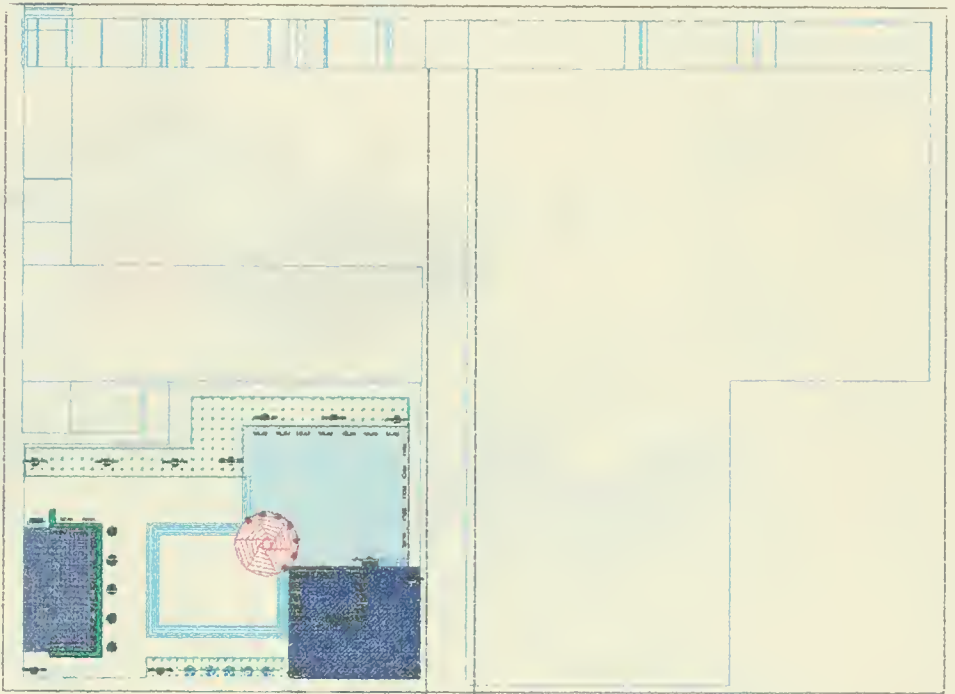
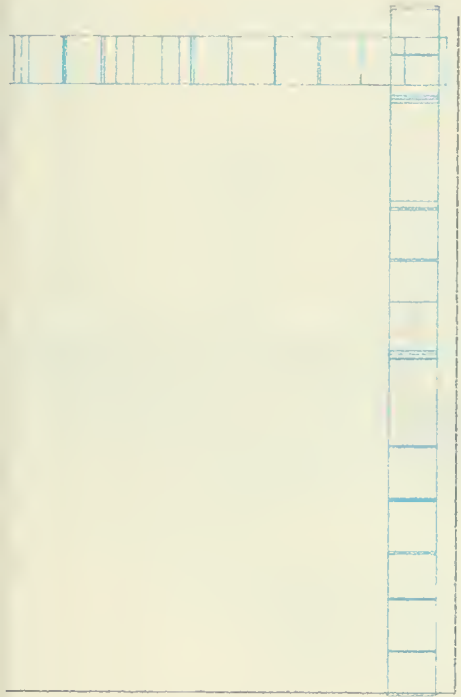


Diagram of paving location

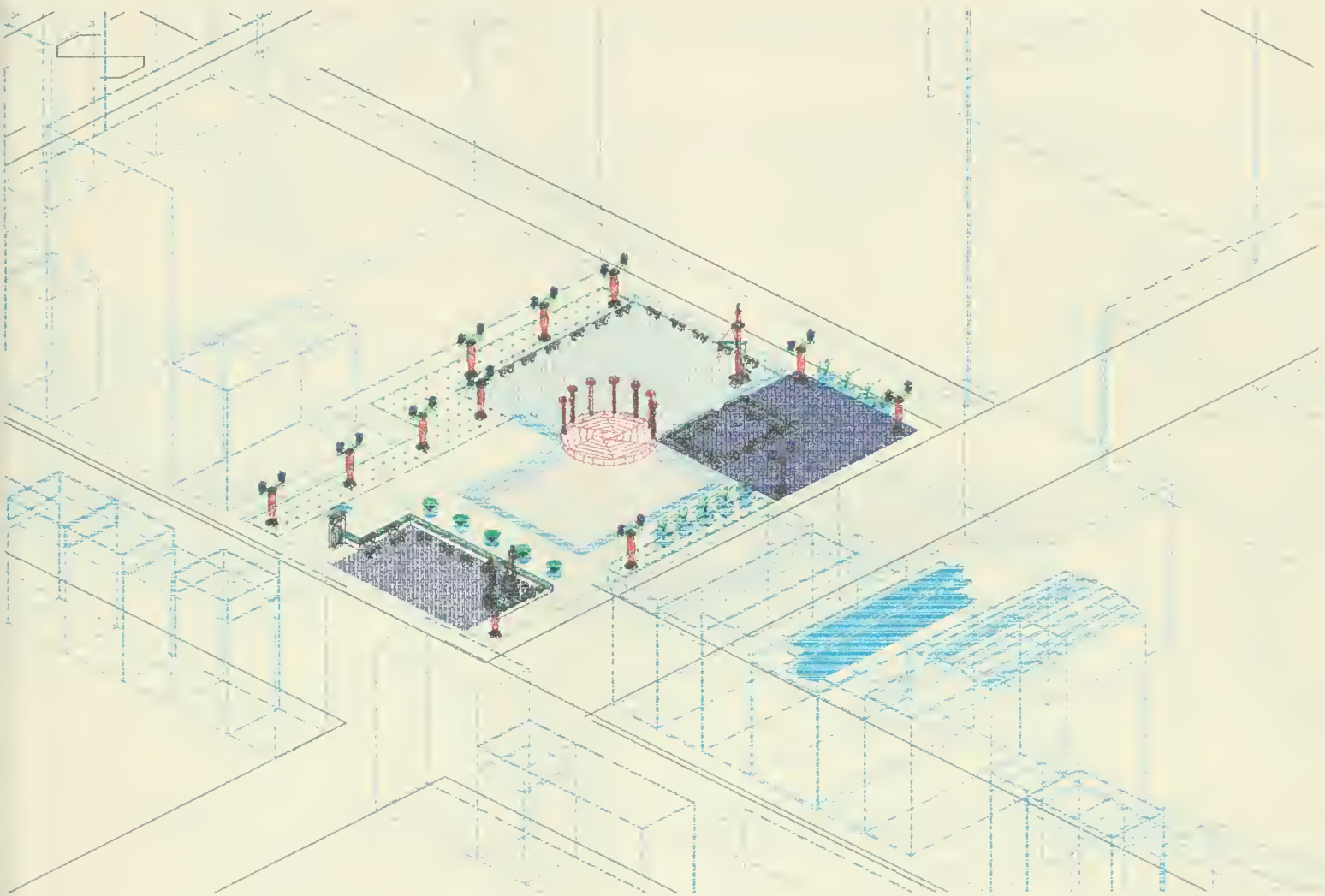
(V-21)



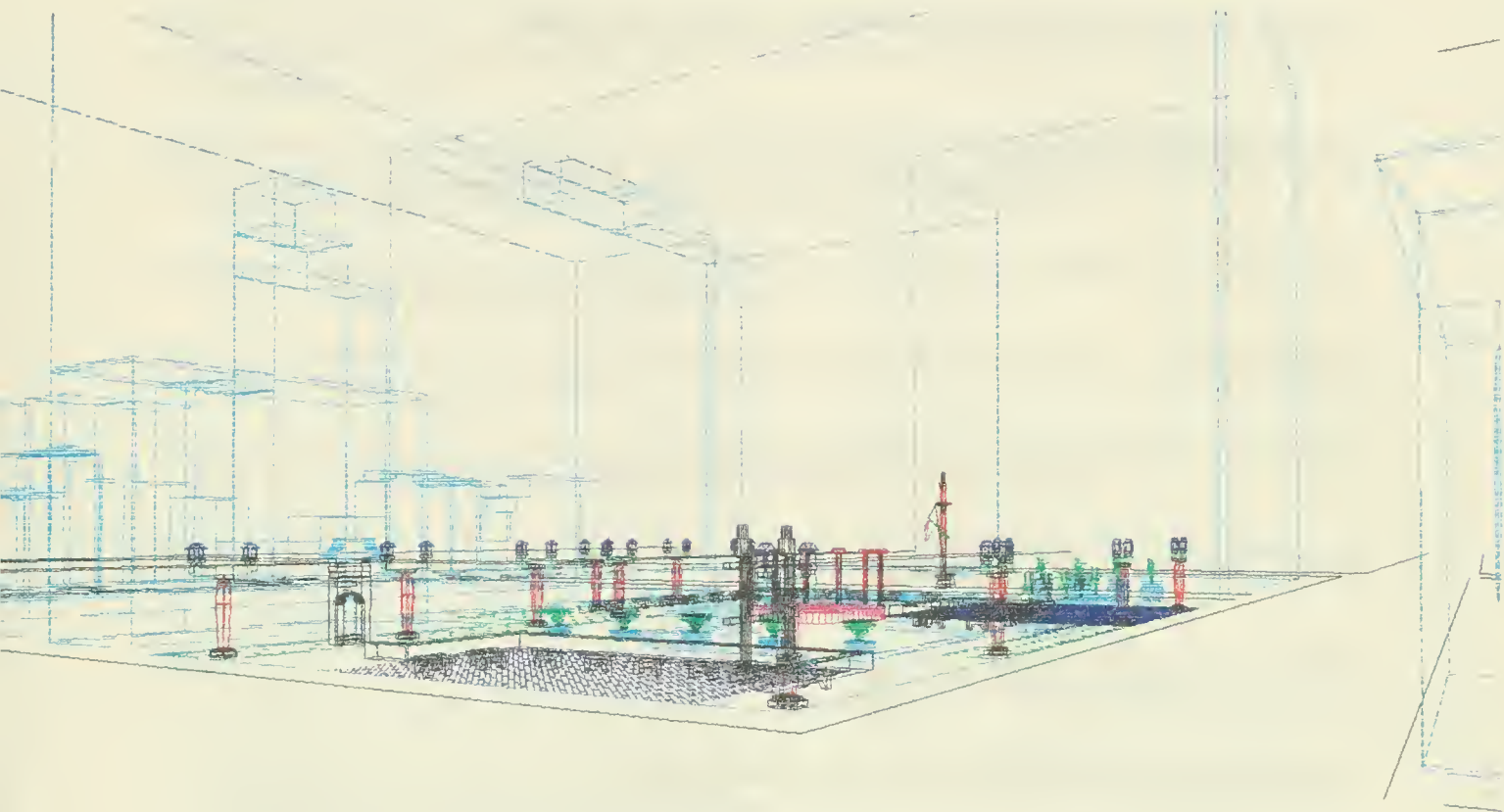
RACE ST.



(V-22) Plaza Plan



(V-23) Design for Plaza



(V-24) Perspective View of Plaza

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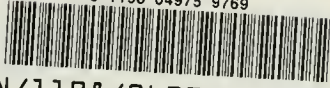
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