

MarketHall

Professional Project Research  
Arch. 6313  
Fall 1981

Submitted to Prof. Robert Heatly

By Roger Robison

# CONTENTS

I would like to thank the school of Architecture for the patient indulgence while I have studied Architecture.

Two people who have made this project possible for me Jim Knight for his quiet courage, and Robert Hight and his family.

Robert Hightly who has shown me Black.

# CONTENTS

Preface

Project Description

Context

Historical, Past-1950

Historical, 1950-Present

Oklahoma City Plan

Existing Site

Climate

Legal

Budget

Design Criteria

Schematic Design

## Contents

# PREFACE

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# PREFACE

The City adopted a development plan for the Central business district, which had been by I.M. Fox and Associates. This plan was updated in 1974 by Gruen Associates. The development plan called for practically the complete replacement of the existing central business district.

A part of the plan called for construction of a Galleria on a four block area with a projected cost of \$200 million with construction to be complete in 1981.

The site for the Galleria was razed during the 1970s. At the same time the Galleria site was cleared eight or additional blocks were cleared in the immediate area. Four blocks to the immediate south have now become the Hyriad Gardens. Diagonally to the south east a four block area has become the Hyriad Convention Center. On the block diagonally to the south west the Sumner Theater by Johnson was constructed.

The Fox plan and also Gruen called for all of the adjacent areas and also the existing financial district to be connected with overhead and possibly,

## Preface

In 1964 Oklahoma City adopted a development plan for the central business districts which had been by I.M. Pei and Associates. The plan was updated in 1974 by Gruen Associates. The development plan called for practically the complete replacement of the existing central business district.

A part of the plan called for construction of a Galleria on a four block area with a projected cost of \$100 million with construction to be complete in 1989.

The site for the Galleria was razed during the 1970's. At the same time the Galleria site was cleared eighteen additional blocks were cleared in the immediate area. Four blocks to the immediate south have now become the Myriad Gardens. Diagonally to the south east a four block area has become the Myriad Convention Center. On the block diagonally to the southwest the Mummens Theater by Johanson was constructed.

The Pei plan and also Gruen called for all of the adjacent areas and also the existing financial district to be connected with overhead and possibly,

underground pedestrian walkways.

In 1981 the Galleria site was excavated and construction of an underground parking structure was begun. Construction of two highrise office towers on the northeast corner were just being completed. Following the construction of the parking garage the streets Hudson and Shevidan, on the west and south, were rebuilt including construction of an underground pedestrian walkway connecting to the Myriad Gardens.

In 1982 an overhead walkway was built over Robinson to the financial district.

This is in brief the history of the site for the Galleria project. During this same period several developers with their own ideas have participated in one form or another.

Within the Oklahoma City Plan there are many projects I chose the Retail Core and limited my work to this one project within the plan. The site as I define it are the building and adjacent sidewalks.

I have to the best of my ability tried to weave this project into the remaining central city and the plan

as it was updated by Gruen Associates.

The project was developed only to the level of schematic design, beyond this point many consultants in areas from marketing to engineering would be needed.

Practically none of the following information is original with this writer. Most all has been gleaned from published materials and on site inspection.

I have included with this program an Appendix in the form of a sketch book which documents my struggle to find my own concept.

# PROJECT DISCRIPTION

hotel and a civic square.

people for the purpose of  
retail space, public market,

## Goals:

- (1) Provide increased opportunity for small business people.
- (2) Establish places for people to stop
- (3) Establish a public forum for civic projects.
- (4) Introduce into the project a diversity of scale.

## Project Description,

This project, a gathering place of people for the purpose of exchange, is a market hall, including retail space, public market, hotel and a civic square.

## Goals;

- (1). Provide increased opportunity for small business people.
- (2). Establish places for people to stop.
- (3). Establish a public forum for civic pagents.
- (4). Introduce into the project a diversity of scale.

Stores	ground floor	upper floor
1,200	25	4
900	2	1
400	1	6
3,600 <sup>sq</sup>		27,600
3,000		18,000
2,700		15,100
2,400		3,600
1,800		1,500
1,500		27,600
1,200	25	18,000
900	2	3,600
400	6	
		93,100 <sup>sq</sup>
		80,700 <sup>sq</sup>

# Area Requirements

## Department Stores

I

II

III

## Retail Stores

ground floor

4,800<sup>#</sup>

3,600

2,100

1,500

1,200

900

400

upper floor

3,600<sup>#</sup>

3,000

2,700

2,400

1,800

1,500

1,200

900

600

32

5

6

1

11

12

17

6

2

1

25

2

1

4

1

4

6

2

1

23

2

6

127,200<sup>#</sup>

70,200

21,200

33,600<sup>#</sup>

21,600

4,200

1,500

30,000

18,000

400

14,400<sup>#</sup>

3,000

10,800

14,400

3,600

1,500

27,600

1,800

3,600

218,600<sup>#</sup>

5,712<sup>#</sup>

93,100<sup>#</sup>

182,050<sup>#</sup>

233,360<sup>#</sup>

22,400<sup>#</sup>

276,300<sup>#</sup>

80,700<sup>#</sup>

Pub			
mezzanine			
1200 <sup>sq</sup> level	32	38,400 <sup>sq</sup>	128,500 <sup>sq</sup>
2400 level	5	12,000	50,400 <sup>sq</sup>
Stalls			
286 <sup>sq</sup>	6	1,716 <sup>sq</sup>	716,400 <sup>sq</sup>
240	1	240	
Total (150 <sup>sq</sup> Area)			
150	11	1,650	2,083,450 <sup>sq</sup>
100	12	1,200	
36	16	576	
30	11	330	5,712 <sup>sq</sup>
Hotel			
208 Rooms @ 200 <sup>sq</sup>		41,600 <sup>sq</sup>	
Ballroom & Bar		21,050	
Skylobby		48,000	
Athletic Club		71,400	182,050 <sup>sq</sup>
Carnival			
Enclosed		27,600 <sup>sq</sup>	
Open		205,768	233,368 <sup>sq</sup>
Dry goods market			
		22,400 <sup>sq</sup>	22,400 <sup>sq</sup>
Service			
			276,800 <sup>sq</sup>
Rentable Space			
			1,139,130 <sup>sq</sup>

Percentage of building for rent, excluding parking 85%



Public Space  
ground level  
upper level

128,500<sup>sq</sup>  
69,400<sup>sq</sup>

Parking

746,400<sup>sq</sup>

Total Gross Area

2,083,450<sup>sq</sup>

Percentage of building for rent, excluding parking 85%.

CONTEXT

PAST - 1950

# HISTORICAL PAST - 1950

In Chaco Canyon goods are found which originated hundreds of miles away in salt.

Very little architecture reference has been made of the distribution of goods.

In ancient times a space where goods were distributed was often associated with the temple, supported by a teaching aristocracy of priests educated in the ways of the world and controlling the distribution.

Volume of goods eventually outgrew the temple and began to expand along the surrounding streets and alley and concentrate at the gates of the cities and great cities.

Times have changed the nature of retailing.

1. The product is different from what was being sold before.
2. The consumer has changed in both buying habits and life style.
3. The scale of retailing has grown much larger.  
(dept. stores and malls vs. main & pop shops)

## Distribution of Goods

Since the earliest times of man's unwritten history there has been a distribution of goods.

In Chaco Canyon goods are found which originated hundreds of miles away i.e. salt.

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In ancient times a space where goods were distributed was often associated with the temple, supported by a traveling aristocracy of priest educated in the ways of the world and controlling the distribution.

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Times have changed the nature of retailing.

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2. The consumer has changed in both buying habits and life style
3. The scale of retailing has grown much larger.  
(dept. stores and malls vs. mom & pop shops)

The rapid industrial expansion coupled with increased mobility has led to new retailing solutions which more closely relate to modern living. Most likely this rapid change will continue as long as there is continued change in the market place.

## History

The two classic forms of a market place are;

1. the open place or covered bazaar,
2. the booth or shop lined street.

These forms can be found as early as 2000 B.C.

The Romans expressed the trading area in their new towns and outpost.

Medieval distribution of goods was controlled by guilds in order to control the quantity and quality of goods.

A body of law evolved in Medieval times to control the market

Some Major crimes were.

forestalling - meaning to buy before the market was open

regrating - resaling at a higher price

engrossing - buying in larger than retail lots.

## Nineteenth Century

Modern retailing can be traced to approx 1800 when large numbers of people were able to live in urban areas supported by manufacture and trade.

As rural productivity increased people moved to the urban areas creating a mass market.

Technology allowed the production of a standardised mass product.

The expansion of rail roads expanded the mobility of the market.

Sea Shipping expanded the market to global proportions.

Expansion in mobility led to improved communications.

With the development of canning, food was preserved and sold in standardised units.

During the nineteenth Century retail was expanded rapidly due to the standardization of products which appealed to mass markets at the same time transportation expanded to reach mass markets.

Development of modern building technology led to the dept. store.

1. elevators
2. cast iron frames

Wholesaler began to enter the market place as a middle man between the manufacturer and the retailer leading to the need for a special construction, The warehouse made with a cast iron frame was evolved.

With the expansion of trade and types of goods traded the number and type of retailers grew. The expansion and amalgamation of small retail shops led to the development of department stores.

Department store developed from the following ideas.

1. profit was made by a small mark-up on a large volume.
2. goods could be returned by the buyer
3. no haggling, no obligation to buy

Early examples of Dept. Stores.

John Wanamaker, Philadelphia 1876

Lord and Taylor New York 1826

Macy's New York 1858

Bon Marché Paris 1876

Carson, Pirie and Scott, Chicago 1889

## Twentieth Century

Creation and mass production of the automobile spread the population out into the suburban areas.

Changes in packaging and advertisement led to new developments in marketing.

Manufacturers expanded their role in the market into the distributive portion of the markets. They used mass market advertising with their own brand to create markets for their own particular product.

Dept. store reached a peak of 10% of retail sales in 1929, since then their market share has slipped to about 6% in the US.

The decline of the department stores has been due to their high overhead expense.

As the market shares declined the department stores began to group into chains and buying groups.

Chain stores developed as the goods sold became more specialized and wholesaling was integrated into the retailing chains.



The growth and expansion of chain stores has been a strong trend in this century which continues to the present day.

With the growth of department stores and chain stores the eventual elimination of independents would be expected. However these stores have become increasingly more specialised while filling areas of the marketplace where large organisations cannot compete.

### Modern Shopping Centers

Location is the most important criteria in preliminary planning of a shopping center. From the location a market analysis can be made which will determine the size of the market to be served.

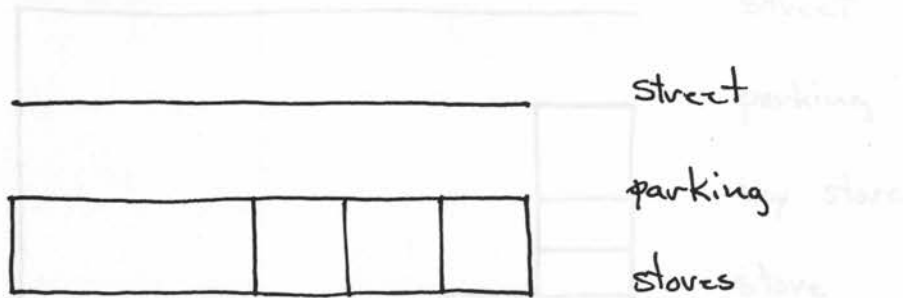
Traffic patterns will determine how to move people into the center if they have the money to spend.

The form of the parcel of land will affect the shape of actual shopping center layout.

There are four basic forms of shopping centers.

1. Strip
2. Corner
3. Mall
4. Cluster

Corner Shopping Center  
Strip Shopping Center



Nearly all neighborhood centers are this type.  
Service where possible is from the car.

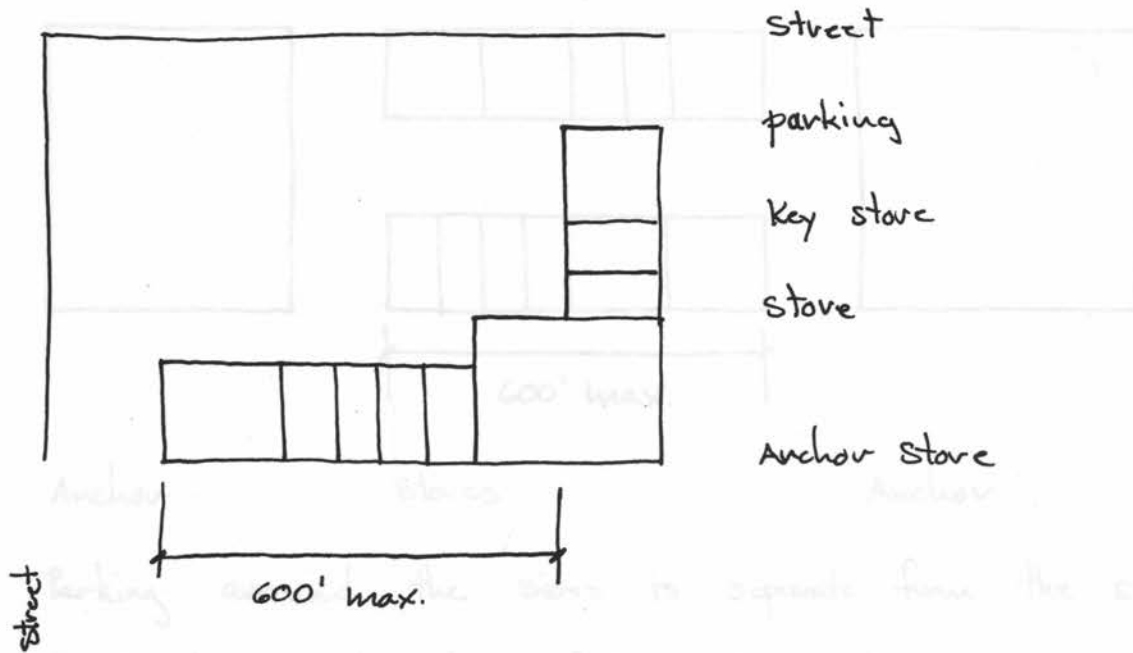
500' max

Parking is close to each store

Variety of shops

located to provide for neighborhood shopping

# Corner Shopping Center

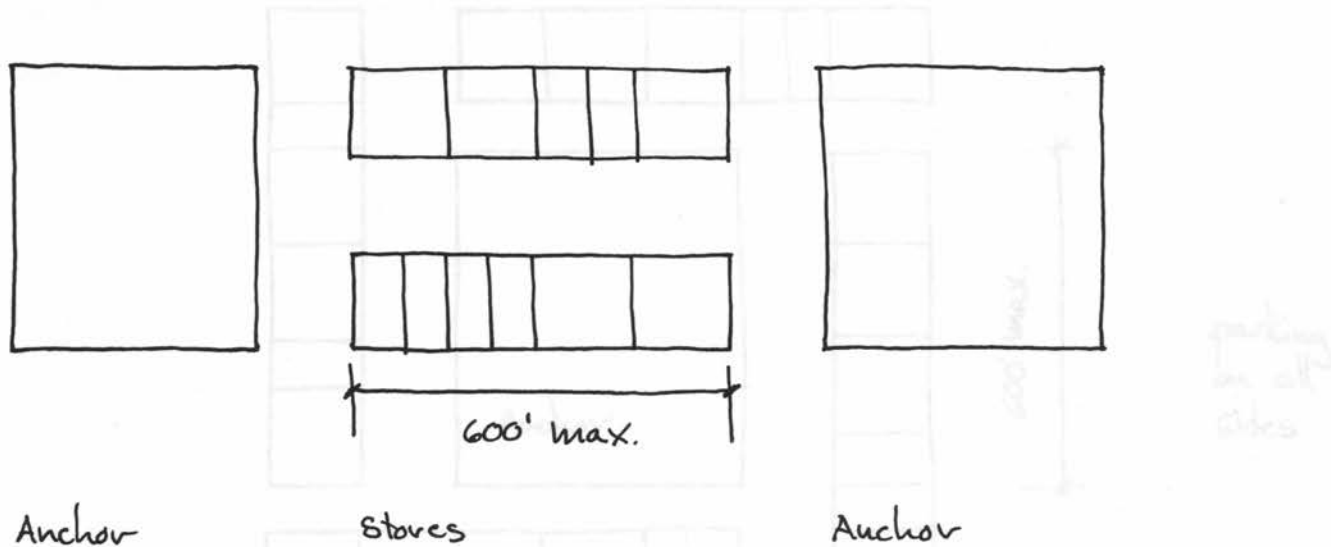


Parking is close to each store

Variety of shops.

located to provide for neighborhood shopping.

## Mall Shopping Center



Anchor

Stores

Anchor

Parking around the sides is separate from the shoppers.

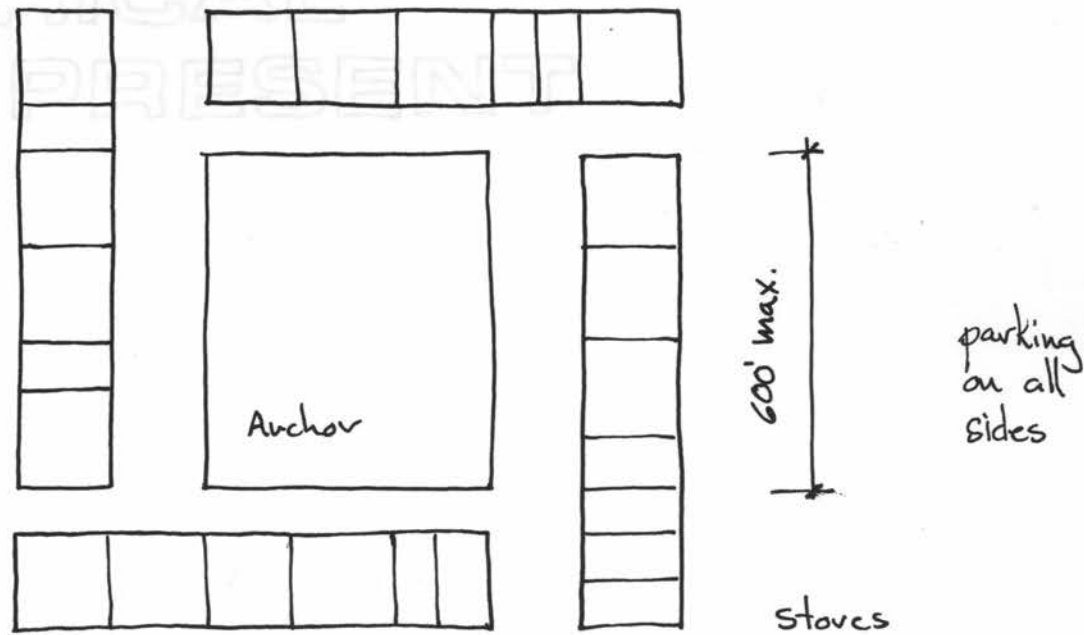
Found at the intersections of large through fares serving the needs of the community.

Shoppers are attracted by the advertisements of the dept. stores.

Shopping experience can be redundant, the shopper must back track to leave.

They store are involved which make this a desirable plan for Regional Shopping Center.

## Cluster Shopping Center



Pedestrians are separate from cars.

Shopping streets are developed.

Shopping experience is no longer necessarily redundant.

Many stores are involved which make this a desirable plan for Regional Shopping Center.

# HISTORICAL 1950 - PRESENT

Architectural expressions.

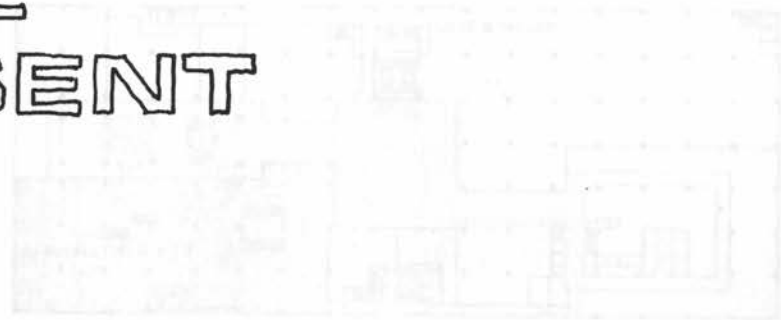
Balance connection to the streets  
more of the highest importance  
to the design.

Central form is a series  
of elevations/sections rising  
through the middle of the  
project. The central elevation  
is the only form constant  
of the project.

The retail plan is random form  
one to floor.

Project also includes a  
shopping hotel and 44 floors  
of luxury condominiums.

There is no graphic standard  
for retail stores.



Water tower Place - Chicago, Ill  
Harren Platner Associates

Project is a series of archi-  
tectural expressions.

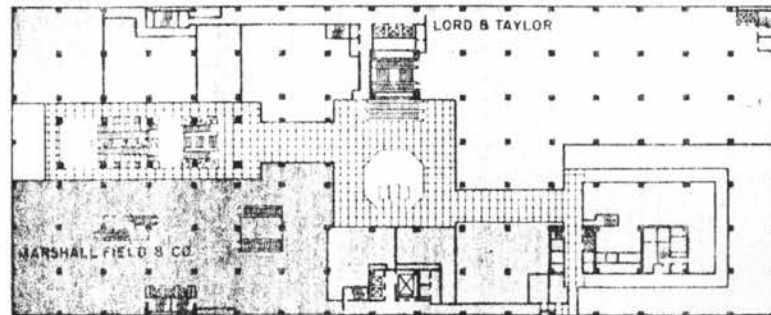
Entrance connection to the streets  
were of the highest importance  
to the design.

Central form is a seven  
story elevator/atrium rising  
through the middle of the  
project. The central atrium  
is the only form constant  
in the project.

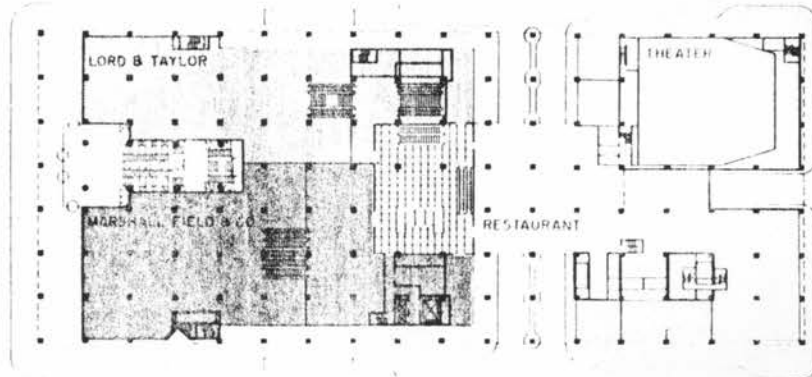
The retail plan is random from  
floor to floor.

Project also includes a  
22 story hotel and 44 floors  
of luxury condominiums.

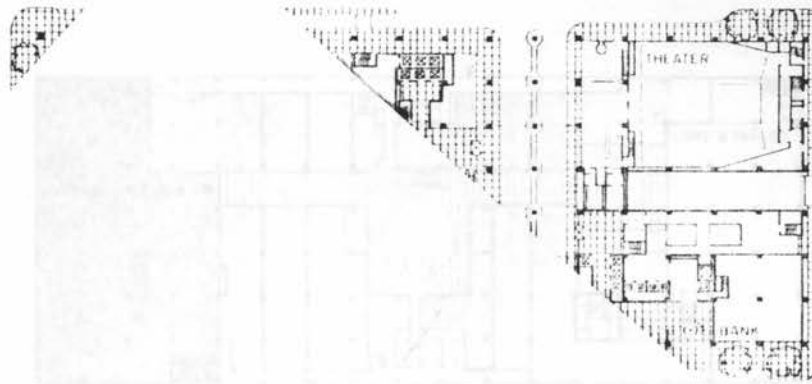
There is no graphic standard  
for the retail stores.



SECOND FLOOR



MEZZANIN



Water tower Place - New York City

High Stations & Associates

Architectural Record April, 1976

A specialty shopping mall for international trade

directed toward the middle class consumer while  
excluding other segments of the population

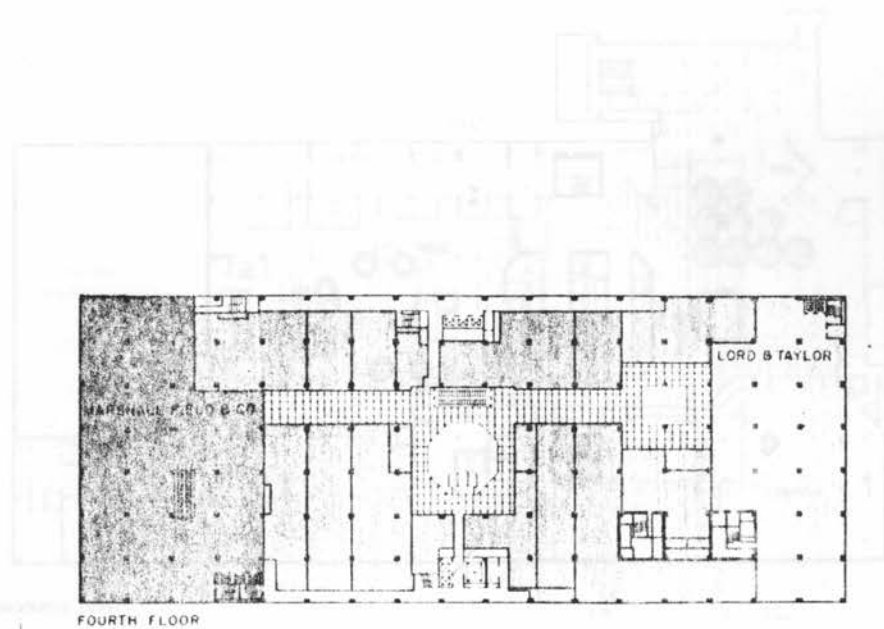
large was the cornerstone of the architectural  
design.

Tower is 914 ft tall sitting on stilts 120 ft  
above the street

Total usable floor area is  
13 million sq-ft in 16  
stories in the tower and  
eight in the base part.

Total height is of a 20  
story building. Total height  
in the Midtown.

Project includes a plaza,  
shopping mall, subway connection  
and a church





Market at Citicorp - New York City  
Hugh Stubbins & Associates

A specialty shopping mall for international foods.

Directed toward the middle class consumer, while excluding other segments of the population.

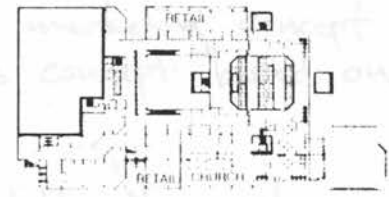
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Tower is 914 ft tall sitting on stilts 123 ft above the street.

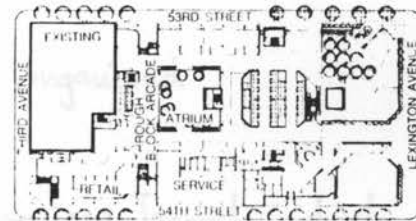
Total usable floor area is 1.3 million sq. ft. in 46 stories in the tower and eight in the low rise part.

Actual height is of a 70 story building. Third tallest in the Midtown.

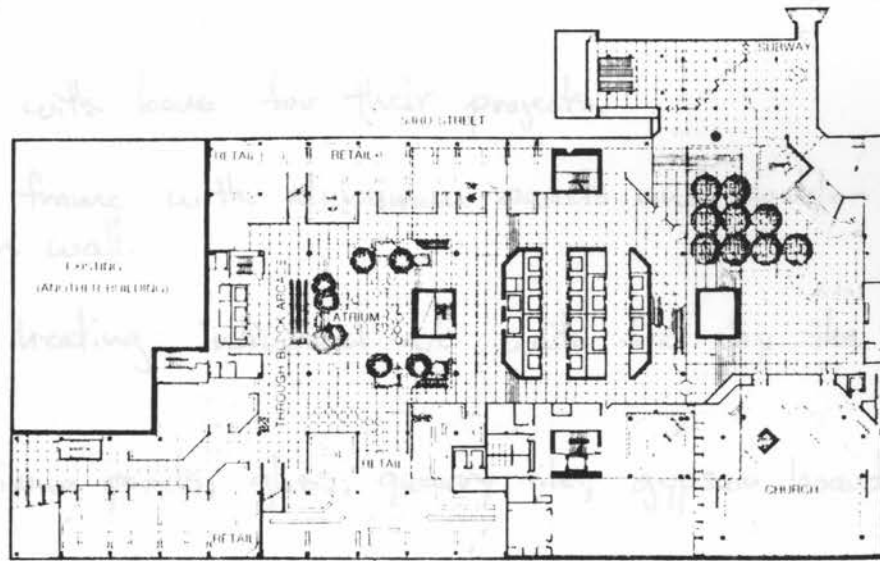
Project includes a plaza, shopping mall, subway connection and a church.



SECOND LEVEL



STREET LEVEL



CONCOURSE LEVEL

A marketing firm, Halcyon was consulted to design a marketing concept for the project. Halcyon developed an international foods concept based on Citibank's international banking aspect.

Halcyon was able to use a moderately priced, household items store as an anchor for the project.

The three levels of retail space, 65,000 sq. ft. are organized around an atrium 90 ft by 100 ft by 85 ft high.

The retail shops must be approved by a design review board which maintains control of percentage of openness to the atrium, as well as materials, signage, graphics, skylight treatment and the first 4 ft. of every shop.

Citibank provides its renters with loans for their projects.

Structural system is a steel frame with aluminum panels and double-glazed reflective glass curtain wall.

Mechanical system is steam heating: individual a/c units fed by the building chilled water system.

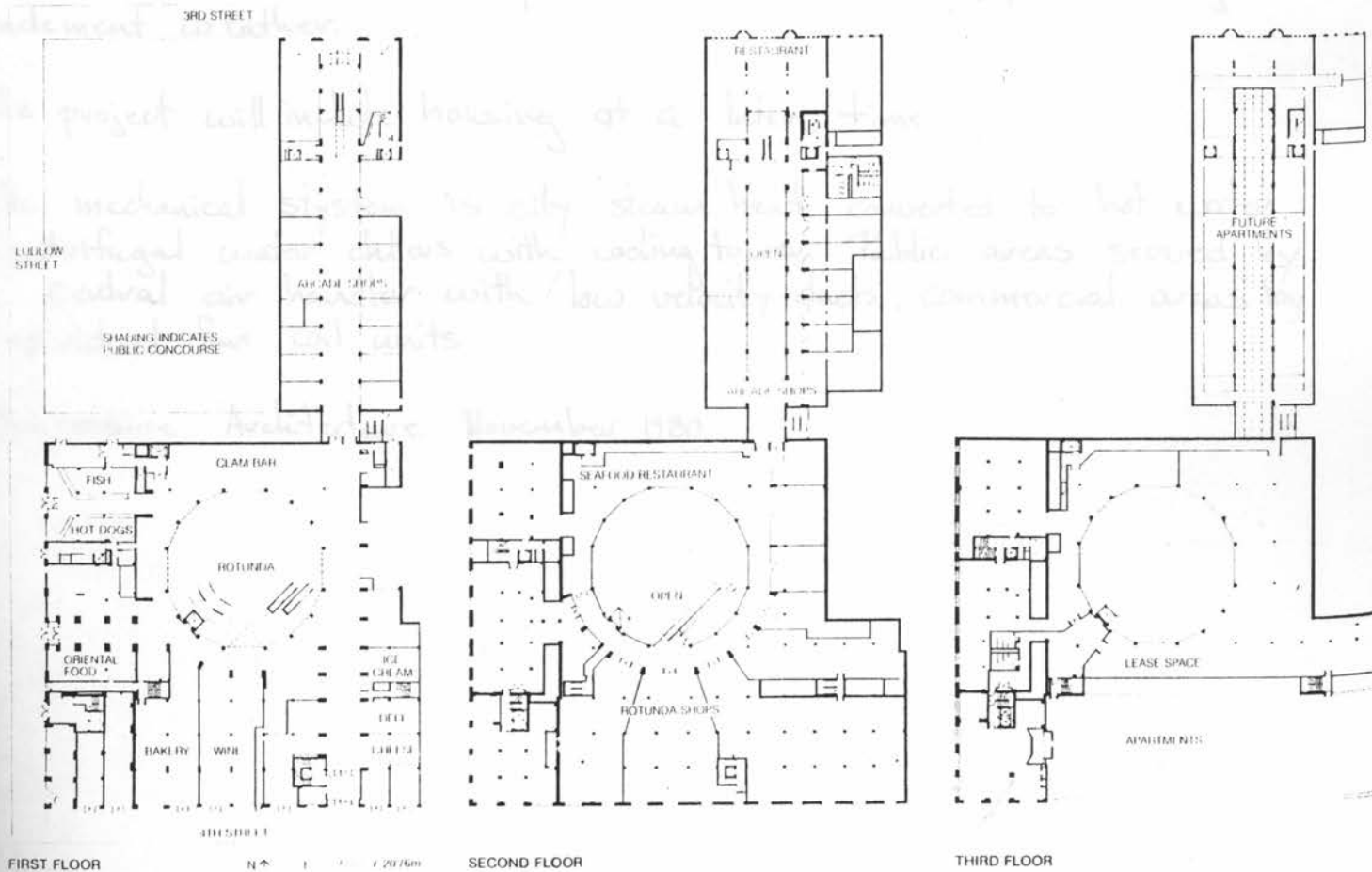
Major materials are steel, aluminum panels, glass, quarry tile, gypsum board.

Progressive Architecture December, 1978

Arcade Square - Dayton, OH  
Lorenz & Williams Inc.

Renovation of a farmers market in central Dayton. (1902-1904)

City of Dayton paid for construction of public walk-way areas.



Public funding paid for reconditioning of the mechanical systems, reglazing, repaving, installation of interior transportation components, and general refurbishing.

Halcyon Ltd was the marketing consultant for the project.

The rotunda is a counter part to the Courthouse square during inclement weather.

The project will include housing at a later time.

The mechanical system is city steam heat converted to hot water. Centrifugal water chillers with cooling tower. Public areas served by a central air handler with low velocity ducts, commercial areas by individual fan coil units.

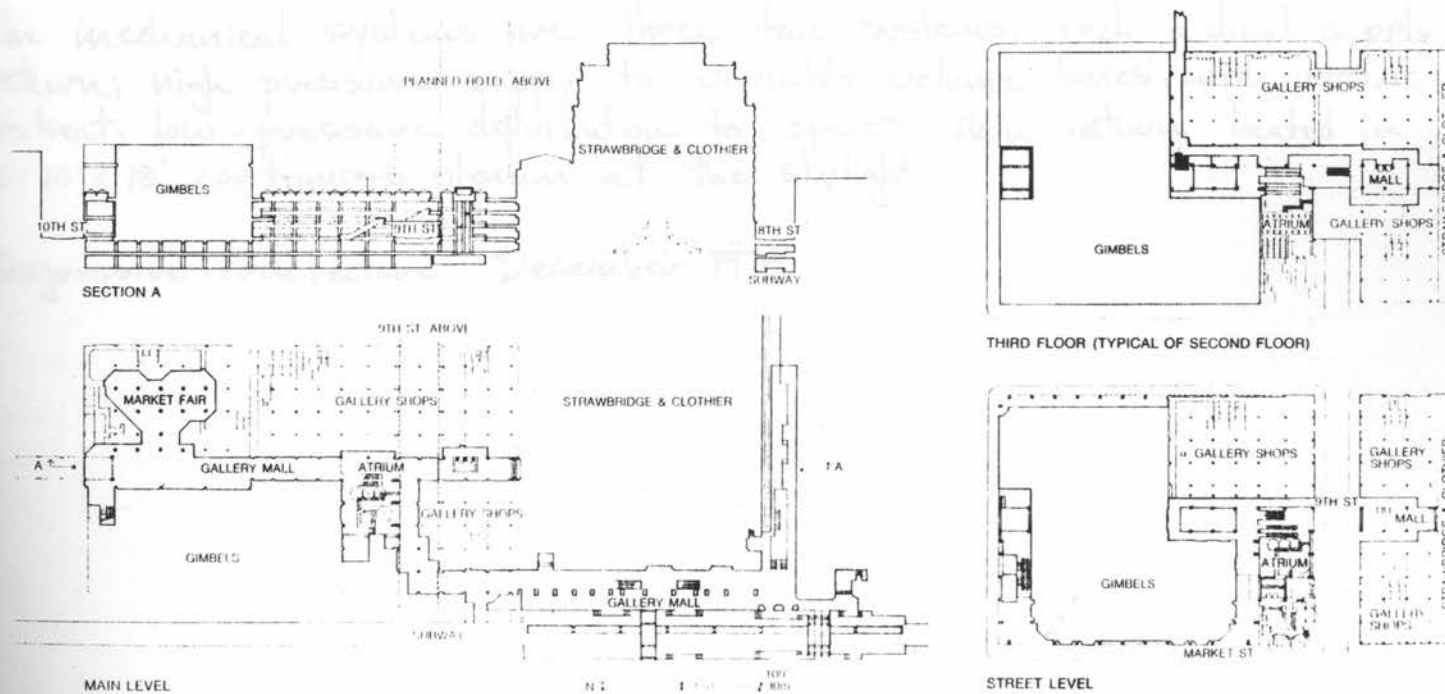
Progressive Architecture November 1980

The Gallery at Market East - Philadelphia, PA  
Bower & Fradley

Project was to have 125 shops in a 405,000 sq. ft building area.

The project has on site parking, separate underground truck access, and a good connection to the city's major transportation arteries.

Where possible vast glazed walls open onto the street to bring activity inside the shopping area.



lighting is kept low in the mall with the shops being brighter to attract the eye.

The redevelopment authority paid for the building of the mall's shell.

Structural system is a cast in place concrete foundations, structural steel frame, light weight concrete floors on a metal deck.

Major materials are preformed insulated exterior wall panels, coated aluminum and coated galvanized steel interior wall panels, paving tile, gypsum-board partitions, painted and clear anodized aluminum window frames.

The mechanical systems are three fan systems, each a dual supply and return, high pressure supply to variable volume boxes, with electric reheat, low-pressure distribution to spaces. Main return located in a 10' x 18' continuous plenum at the skylight.

Progressive Architecture December, 1978

Eaton Centre - Toronto, Canada

Bregman & Haman

Zeidler Partnership

The project is 1 million sq. ft. of retail space on three levels, with 125 shops in the first phase.

The top retail level has expensive chic shops, and a lot of light and fairly pleasant ambience.

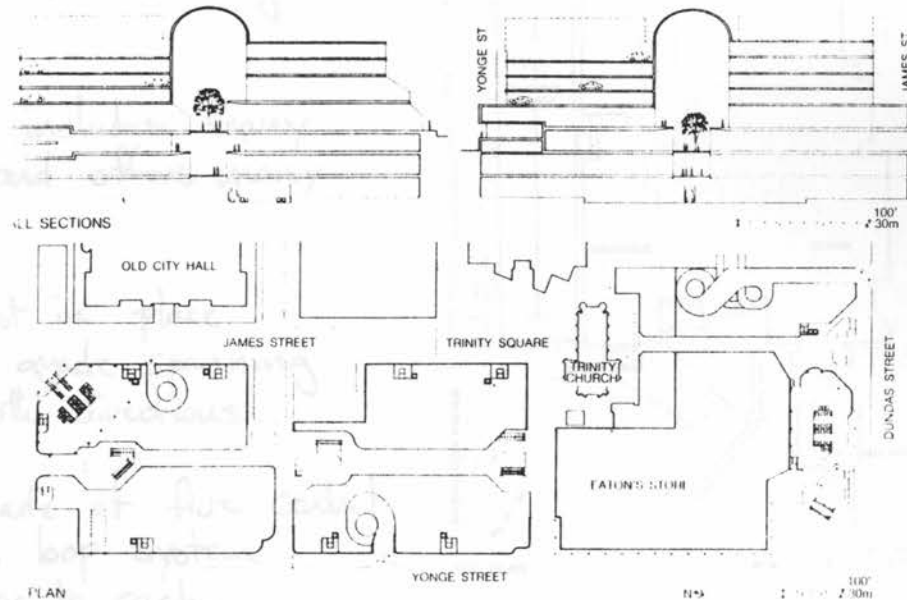
The second retail level is comprised of chain stores.

The lower level, underground is dominated by low-priced chain stores and fast food stores.

Doesn't seem to work.

Structural system of concrete foundations and floors with steel framing. The exterior steel framing elements hung by tension cables.

Progressive Architecture Dec. 78



Midlands Mall - Council Bluffs, Ia  
Astle, Ericson & Associates

The major materials of this project are exposed concrete block on major walls, exposed waffle slabs for most ceilings with high space frames and chevroned skylighted areas for circulation nodes.

Major finish materials are cedar and oak.

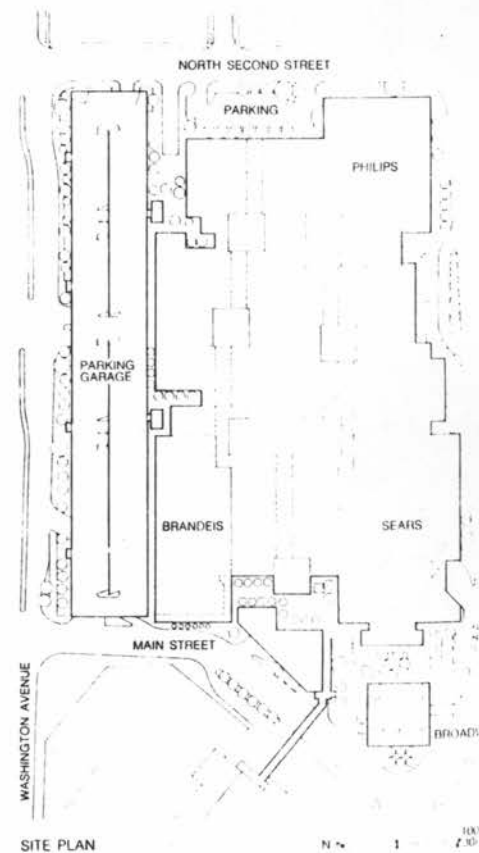
Signage is controlled.

Lighting is reduced in the mall and brighter within the stores.

The exterior of the project includes many public outdoor amenities and offers many routes of approach.

The structural system is cast in place reinforced concrete slab on grade spanning between piles 24'-0" oc. both directions.

The mechanical system is made of five central mechanical areas, central gas loop system provides hot and chilled water to each.





The major materials are a concrete frame, concrete block walls, glass and metal panel exterior in-fill.

Progressive Architecture December, 1978

rooms on a relatively small site.

Hotel rooms were clustered into a tight tower.

The public spaces were placed below in a base building.

The hotel tower is 70 stories high with the top three being a restaurant.

The base building is a terraced opening in a seven story building which blends in to the rest of the area.

The floor of the main space is covered by a reflecting pool.



Peachtree Plaza Hotel - Atlanta  
by John Portman

Project contains 1200 hotel  
rooms. on a relatively small-  
site.

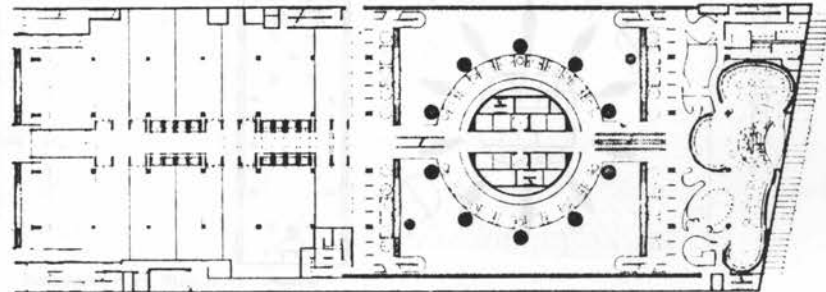
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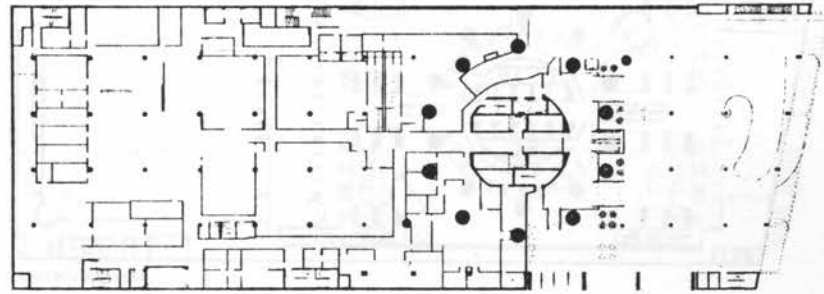
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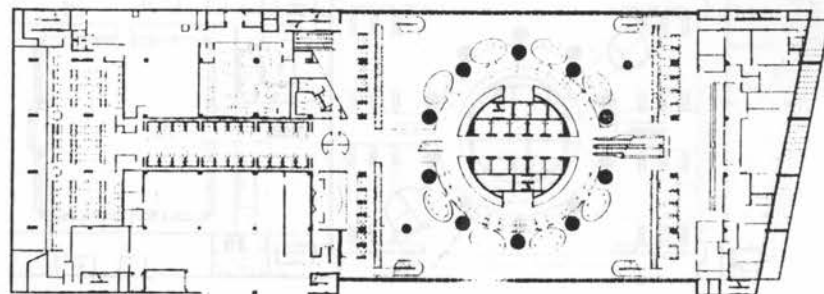
The floor of the main  
space is covered by a  
reflecting pool.



PEACHTREE STREET LEVEL



SPRING STREET LEVEL

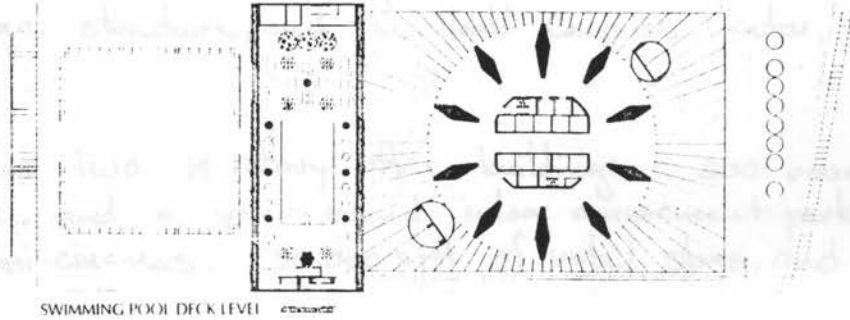


MAIN LOBBY LEVEL

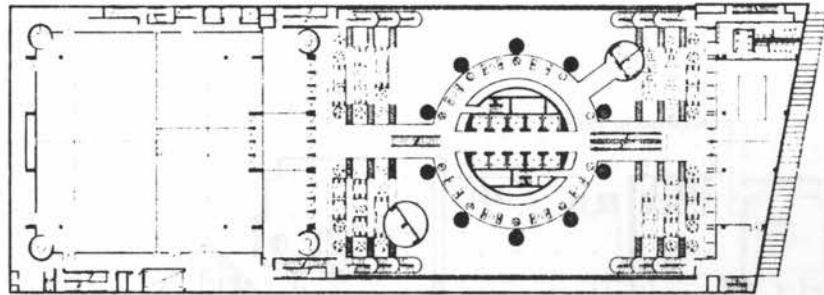
Access to the tower is by two elevators which move up the outside of the building.

Portman was the developer.

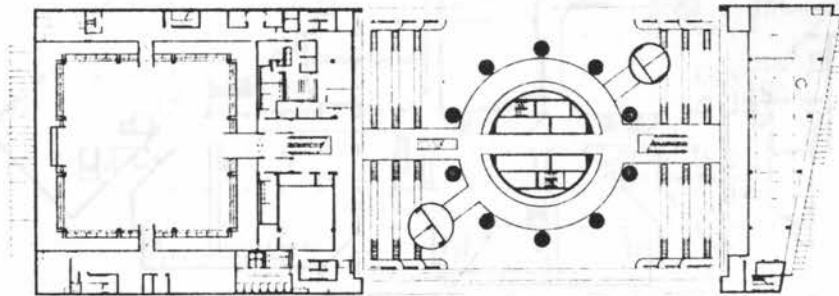
Architectural Record June 1976



SWIMMING POOL DECK LEVEL



BALLROOM LEVEL



BANQUET LEVEL

The Omni is located five blocks from John Paulson Peachtree Center, four blocks from Five Points, the financial district, two blocks from Rich's, and 10 blocks from the Capitol.

The tower is a phallic shape with a double loaded corridor at 45 degree angles.

All the rooms have circular openings opening into the central space.

Omni International, Atlanta, Ga - Thompson, Ventulett & Stainback

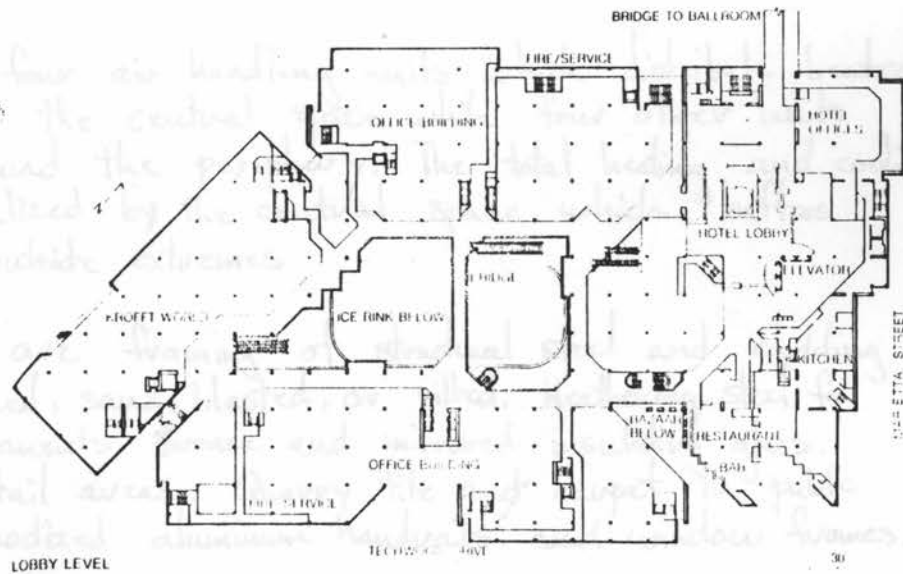
Development, in the inner city of Atlanta, of five separate components, The Deck, a parking structure, The Omni, a sports coliseum, The Omni International, a multi-use mega structure, and the World Congress Center, a state convention center.

Project Omni International contains two 14 story office buildings, a 500 room hotel, an Olympic-size ice rink, and a year round indoor amusement park. Also in the project are six mini-cinemas, 230,000 sqft of retail stores, and 10 restaurants.

The Omni is located five blocks from John Portman's Peachtree Center, four blocks from Five Points, the financial district, two blocks from Rich's, and 10 blocks from the Capitol.

Hotel rooms are placed along a double loaded corridor at 45 degree angles.

Half the rooms have carpeted balconies opening into the central space.



Omni international seems to sell itself by the fact that its different functions are not hidden but are exposed by the structure.

The site for the project is leased air rights above railroad tracks in a deteriorated downtown area. It is the location for a future rapid transit station.

The structural system is varied with different types including ice skate level: steel plate girder platform spanning railroad tracks and supporting all other buildings; hotel and office buildings, steel frames. The Great space west wall is an independent self supporting braced frame structure, an extension of the roof, supporting nine stepping roof trusses that span 168 ft. Hotel and office interior walls support Warren truss spanning up to 180 ft at 15 ft deep.

The mechanical system are four air handling units which distribute heated and cooled air to blanket the central space while four other units supply air downward around the periphery. The total heating and cooling of the building is not penalized by the central space which buffers the interior facades from outside extremes.

The major materials used are framing of structural steel and cladding of limestone, smooth finished, sand blasted, or villed. Weathering steel for the stepped roof and other elements. Bronze and mirrored insulating glass. Metal paraline ceiling in retail areas. Quarry tile and carpet in public spaces. Dark bronze anodized aluminum handrails and window frames.

Progressive Architecture, May, 1976

Bonaventure Hotel  
Los Angeles, Ca  
John Portman

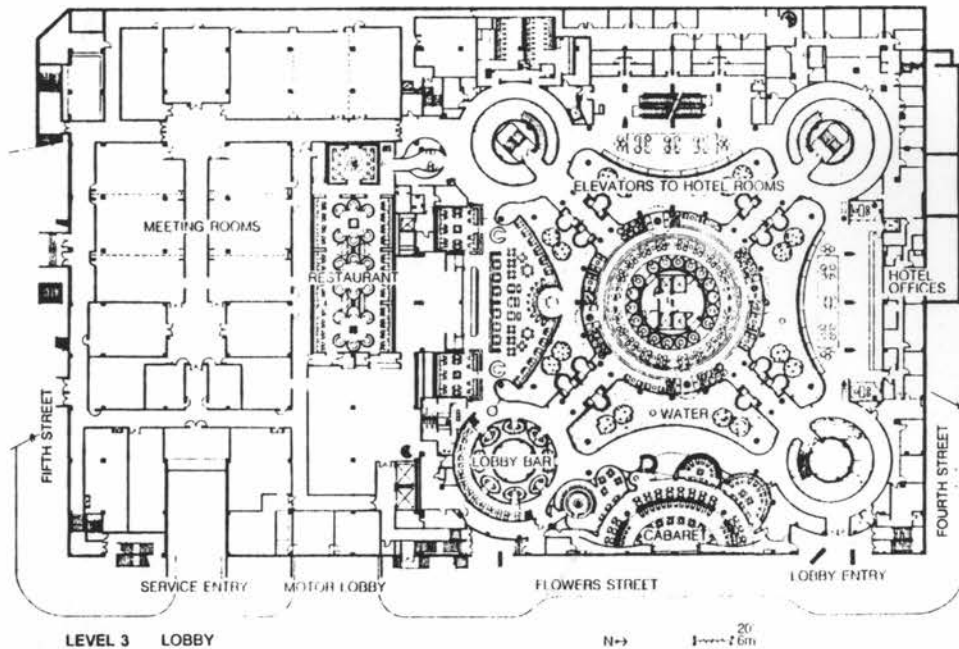
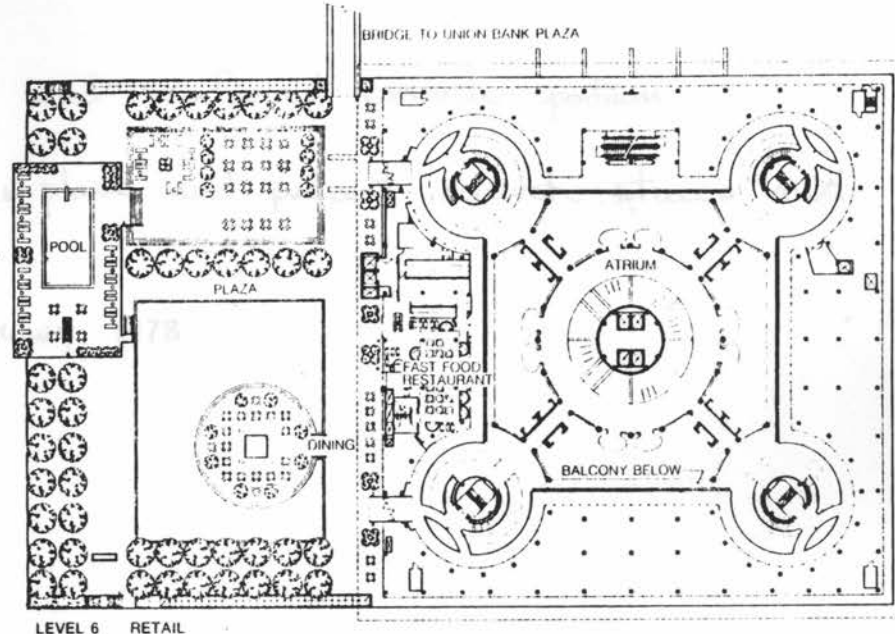
Complex is designed to  
give a focus to a city  
without a downtown.

The complex forms a  
landmark and visual  
focus to downtown area.

The hotel with 1318 rooms  
150 suites, 77 shops and  
8 restaurants is the  
focal point of the Bunker  
Hill Redevelopment area.

Portman's goal is to  
"create a grandeur of  
space, almost a resort,  
in the center of the city."

The structural system is  
a steel frame, with struct-  
ural precast concrete  
frame and floors.



Sandblasted concrete walls and reinforced concrete podium.

Major materials are cast-in-place and precast concrete stucco and bronze reflective glass.

Progressive Architecture, February, 1978

# SITE OKLAHOMA CITY PLAN



Oklahoma City is located geographically in the center of the state.  
The cross roads of both inter- and interstate highways.



# Major Highways



Oklahoma City is located geographically in the center of the state.  
The cross roads of both intra- and interstate highways.

# Markethall within Oklahoma City

Bradway Extension

Lake Hefner

Baptist Hospital

State Capitol

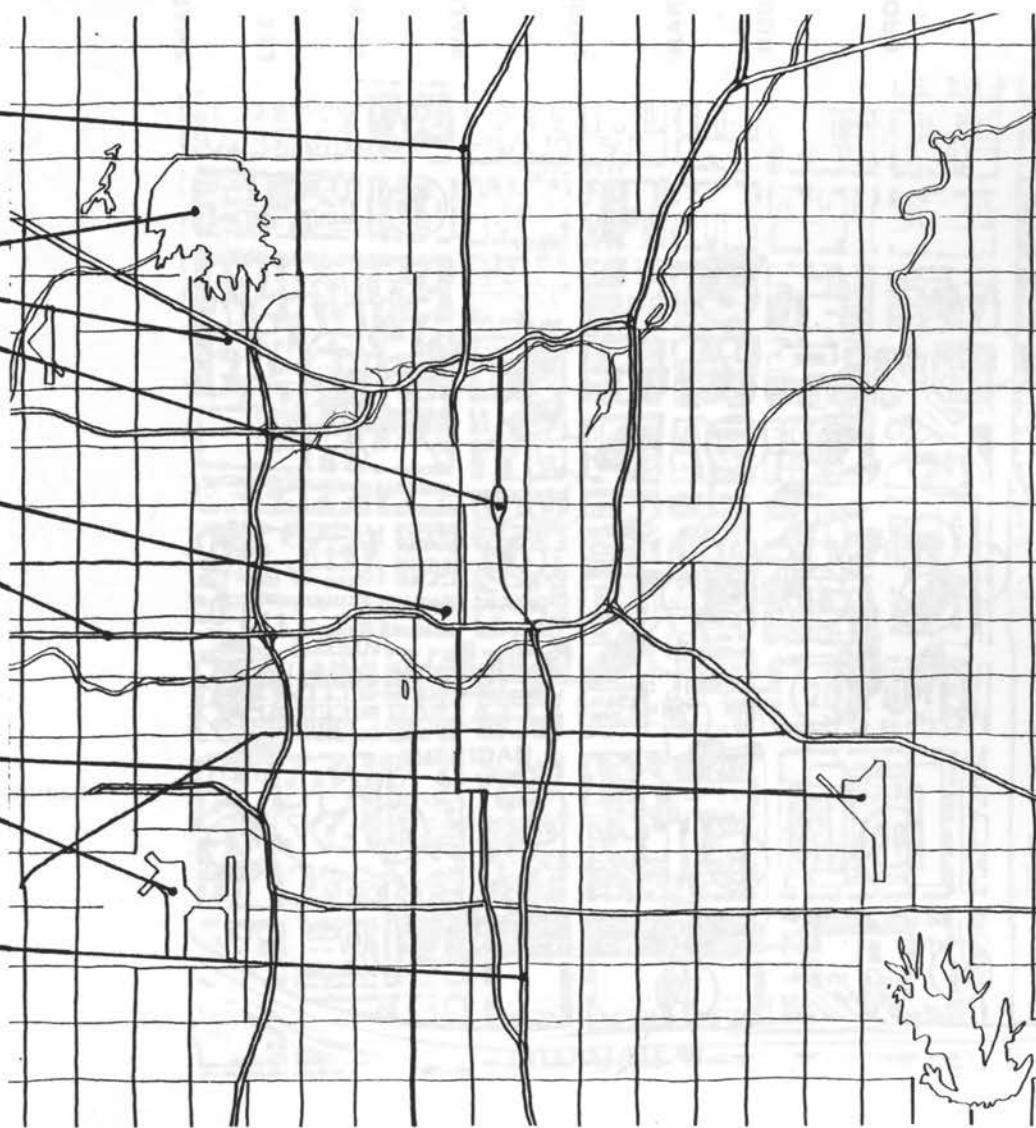
Markethall

I-40

Tinker AFB

Will Rogers Airport

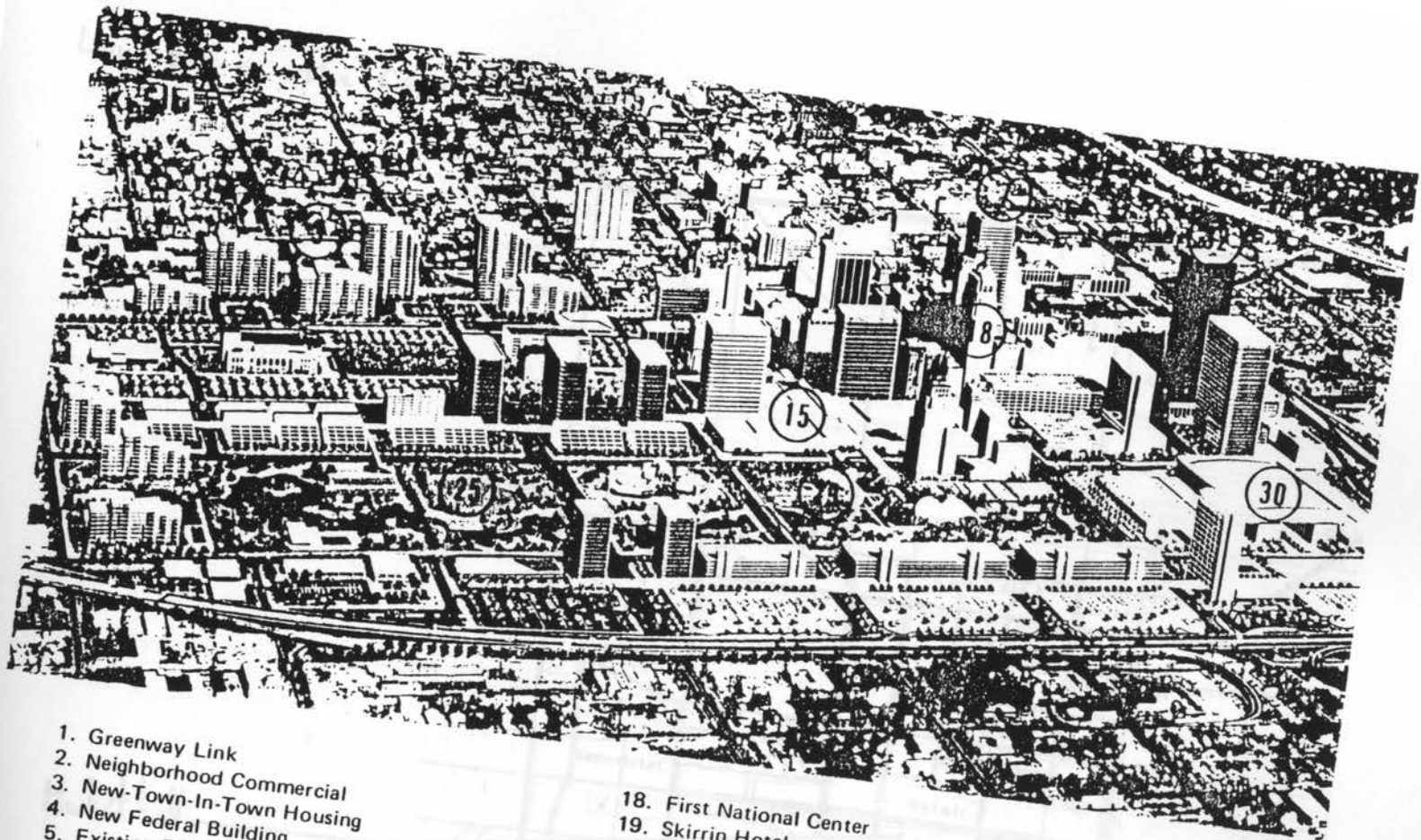
I-35



1. Greenway Link
2. Neighborhood Commercial
3. New-Town-In-Town Housing
4. New Federal Building
5. Existing Federal Offices
6. Fidelity National Bank
7. Kerr-McGee Center
8. New Office Building
9. Police Parking
10. Central Police Station
11. Central Fire Station
12. Municipal Auditorium
13. City Hall
14. City Hall Annex
15. Galleria Shopping Mall
16. Galleria Expansion
17. City National Bank
18. First National Center
19. Skirrin Hotel
20. Sheraton Century Center
21. Old Huckins Block
22. Civic Center Housing
23. Myriad Gardens Housing
24. Multi-Use Spine (Office, Hotel, Residential)
25. Myriad Gardens, Phase 2
26. Mummer's Theater
27. Joint Use Parking Facilities
28. Myriad Center Offices and Hotel
29. Myriad Gardens
30. Myriad Convention Center
31. Transportation Center
32. Liberty National Bank
33. COTPA Garage No. 1
34. COTPA Garage No. 2



33. COTPA Garage No. 1  
 34. COTPA Garage No. 2



1. Greenway Link
2. Neighborhood Commercial
3. New-Town-In-Town Housing
4. New Federal Building
5. Existing Federal Offices
6. Fidelity National Bank
7. Kerr-McGee Center
8. New Office Building
9. Police Parking
10. Central Police Station
11. Central Fire Station
12. Municipal Auditorium
13. City Hall
14. City Hall Annex
15. Galleria Shopping Mall
16. Galleria Expansion
17. City National Bank

18. First National Center
19. Skirrin Hotel
20. Sheraton Century Center
21. Old Huckins Block
22. Civic Center Housing
23. Myriad Gardens Housing
24. Multi-Use Spine (Office, Hotel, Residential)
25. Myriad Gardens, Phase 2
26. Mummer's Theater
27. Joint Use Parking Facilities
28. Myriad Center Offices and Hotel
29. Myriad Gardens
30. Myriad Convention Center
31. Transportation Center
32. Liberty National Bank
33. COTPA Garage No. 1
34. COTPA Garage No. 2

# Land use in the CBD "Pei Plan"

Shurston Hotel  
 County Court House  
 City Hall

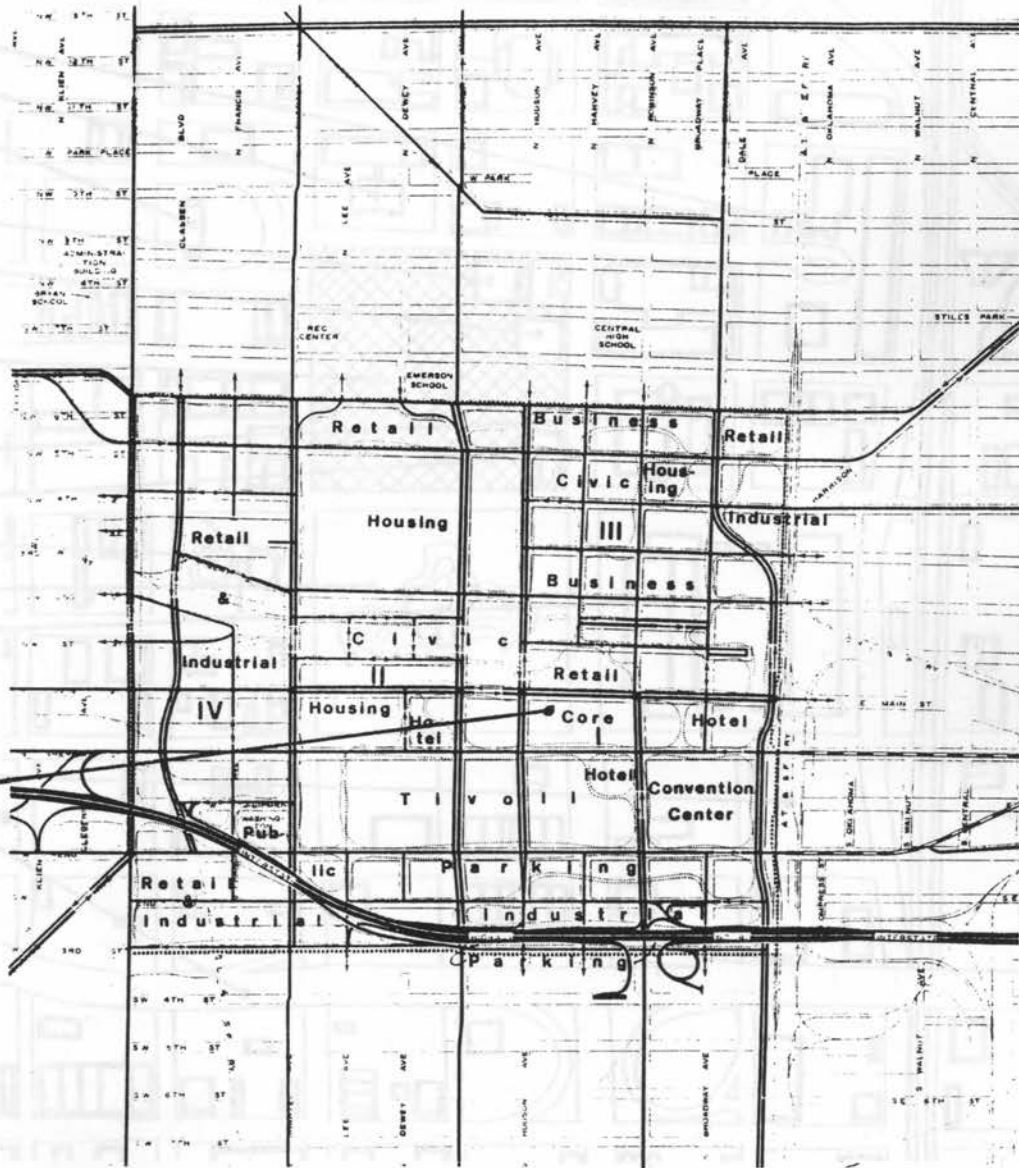
Galleria II  
 Galleria I

Market Hall

Shurston Hotel  
 Calcord Building  
 Municipal Theatre  
 Gardens  
 Convention Center

Market hall

⊕ 1" = 1600'





# Key to CBD

Skirvan Hotel  
County Court House  
City Hall

Galleria II  
Galleria I

Market Hall

Sheraton Hotel  
Colcord Building  
Mummers Theatre  
Gardens  
Convention Center

Buss Transfer  
1-40



⊕ 1"=500"

Major auto corridors

one way streets  
have one lane against  
the flow of traffic

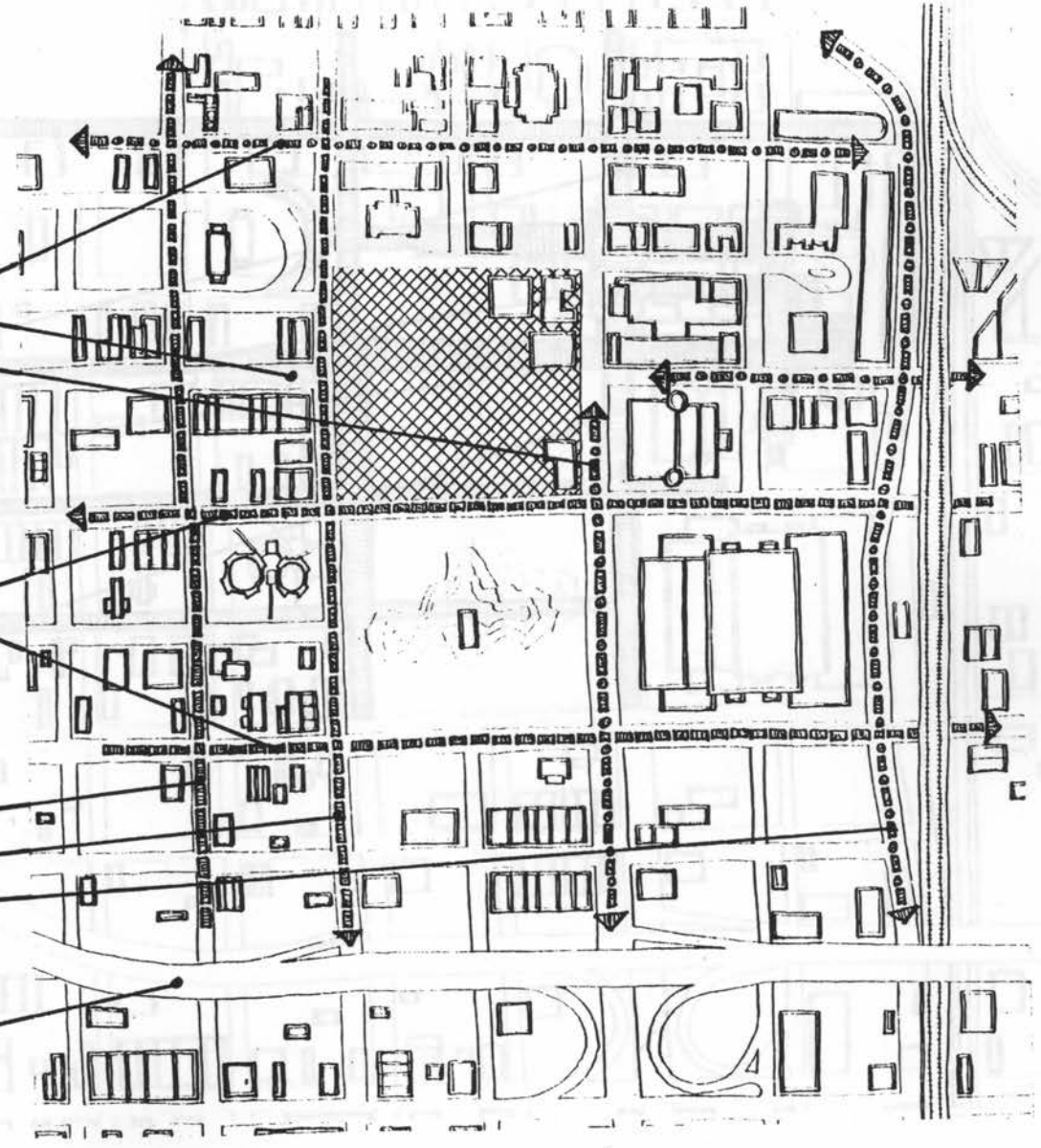
Robert S. Kerr Ave.  
Main Street  
Robinson Ave

Sheridan Ave  
Reno

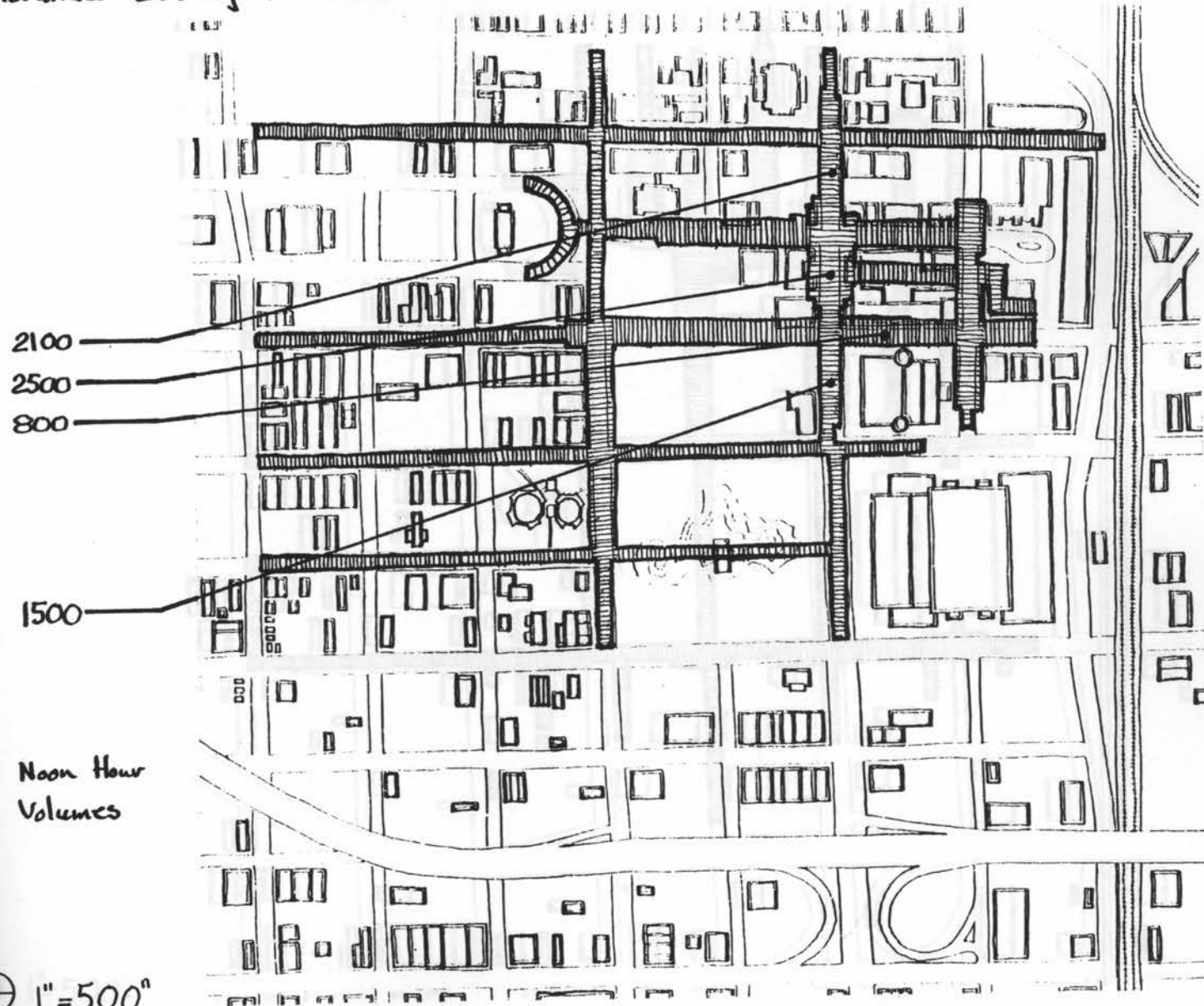
Walker Ave.  
Hudson Ave  
E.K. Gaylord Blvd.

I-40

⊕ 1" = 500'

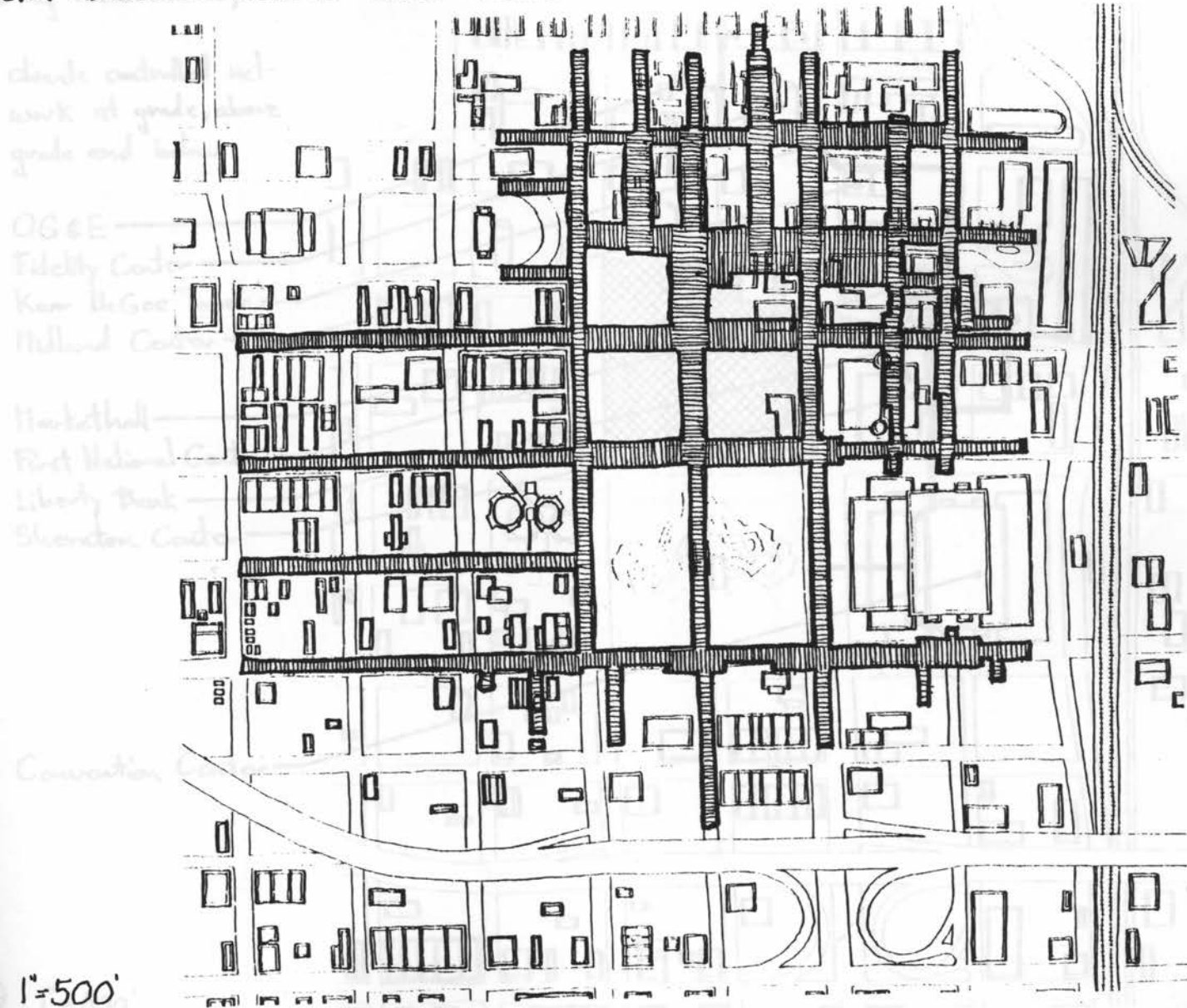


# Generalized Existing Pedestrian Volumes





# Projected Generalized Pedestrian Traffic Volumes



# Existing Pedestrian System

Climate controlled network at grade, above grade and below

OG & E

Fidelity Center

Kerr McGee Tower

Midland Center

Markethall

First National Center

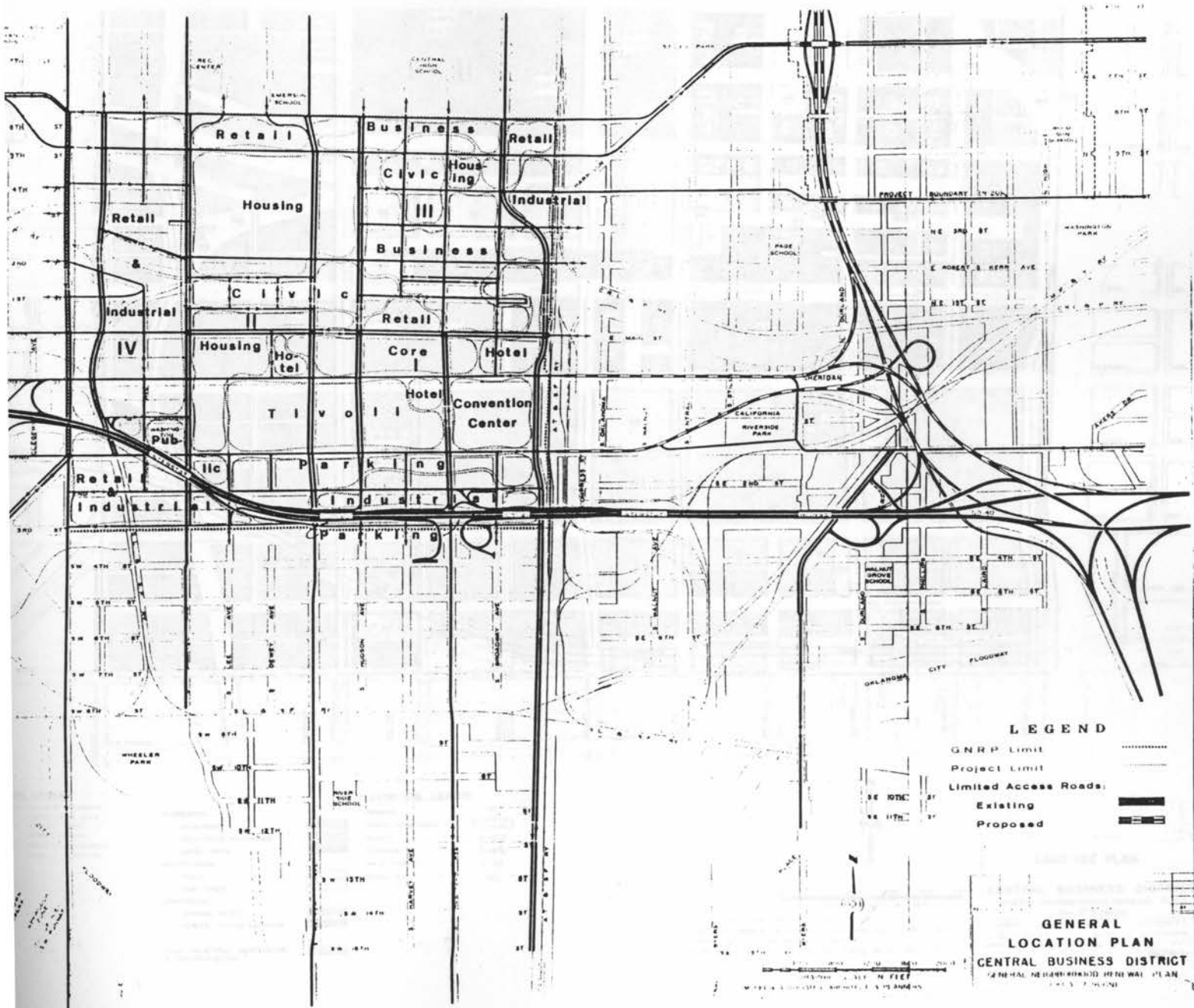
Liberty Bank

Sherraton Center

Convention Center

⊕ 1" = 500'

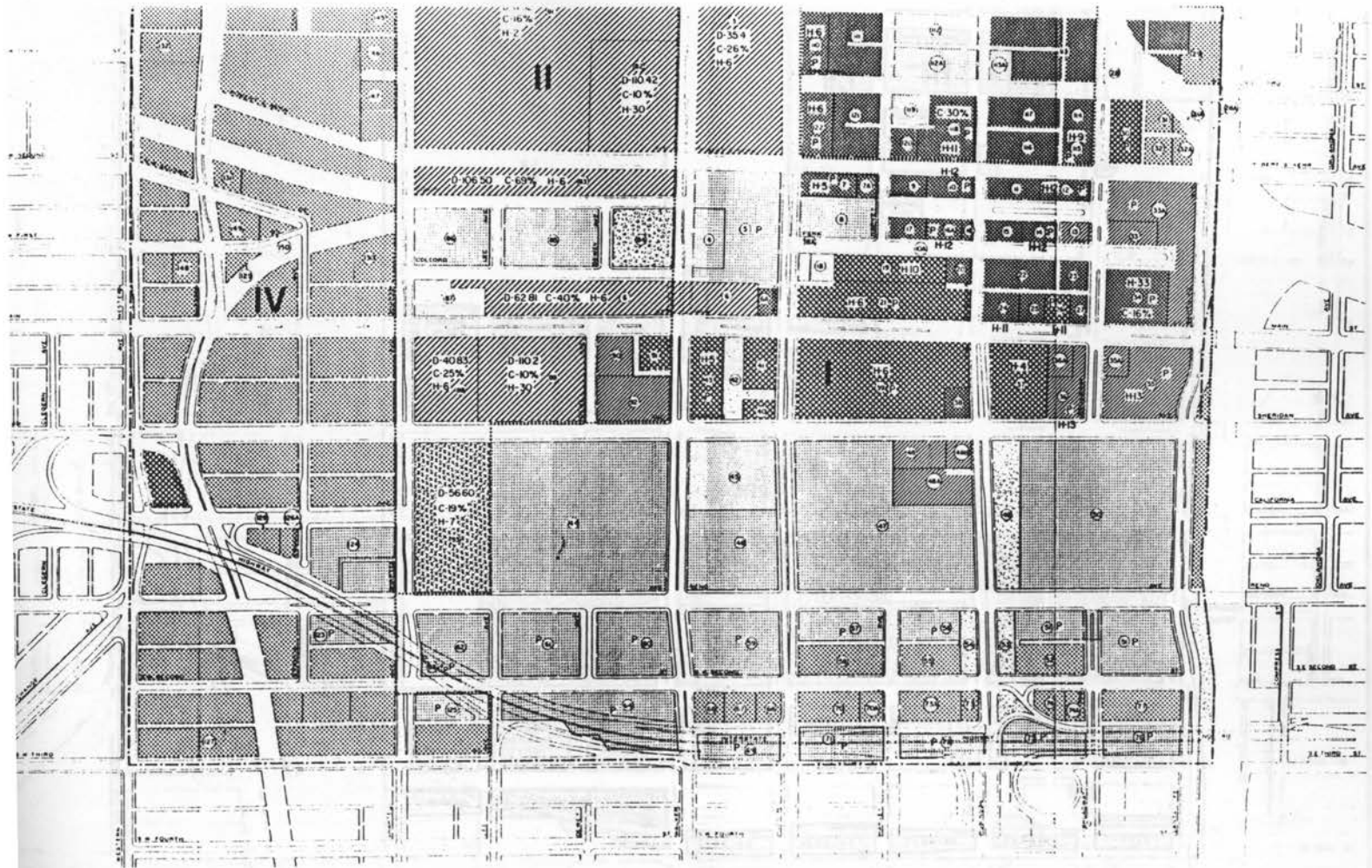




**LEGEND**

GNRP Limit .....  
 Project Limit .....  
 Limited Access Roads:  
 Existing [Symbol]  
 Proposed [Symbol]

**GENERAL LOCATION PLAN**  
**CENTRAL BUSINESS DISTRICT**  
 GENERAL NEIGHBORHOOD REDEVELOPMENT PLAN  
 1965



**USE LEGEND**

--- 66' W.P. BOUNDARY  
 --- LIMITS OF BLOCKS  
 --- STREET NAME  
 --- STREET PLACING  
 --- PROJECT BOUNDARIES  
 --- PROJECT NUMBERS

**RESIDENTIAL**

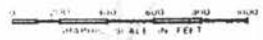
- MULTI-FAMILY
- MULTI-FAMILY INSTITUTIONAL
- HOTEL, MOTEL
- INSTITUTIONAL
- PUBLIC
- SEMI-PUBLIC
- COMMERCIAL
- GENERAL RETAIL
- GENERAL OFFICE & BANKING
- LIGHT INDUSTRIAL, WAREHOUSING & TRANSPORTATION



**LAND USE LEGEND**

- PARKING
- PUBLIC OPEN SPACE
- DENSITY
- COVERAGE
- NO. OF STORES
- PARCEL NO.

P  
 D-1102  
 C-16%  
 H-30  
 (a)



MAP & EXHIBITS PREPARED BY THE  
 PLANNING & ZONING DEPARTMENT OF THE  
 CITY OF OKLAHOMA CITY  
 1962

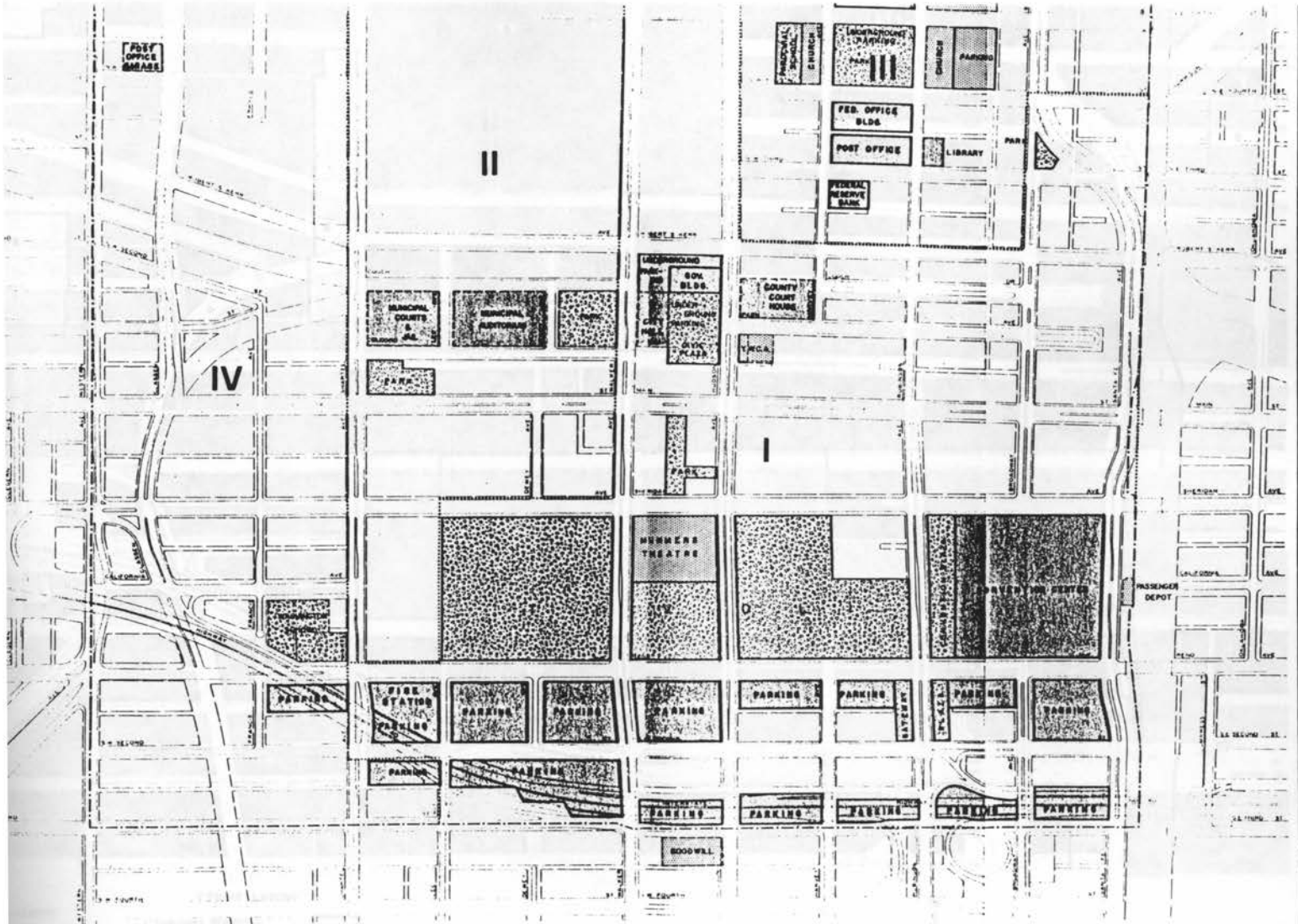
**LAND USE PLAN**

**CENTRAL BUSINESS DISTRICT  
 GENERAL NEIGHBORHOOD RENEWAL PLAN  
 (OKLA. H. 2056)**

APPROVED BY THE CITY COUNCIL OF OKLAHOMA CITY  
 MAY 15, 1962

OK205-2



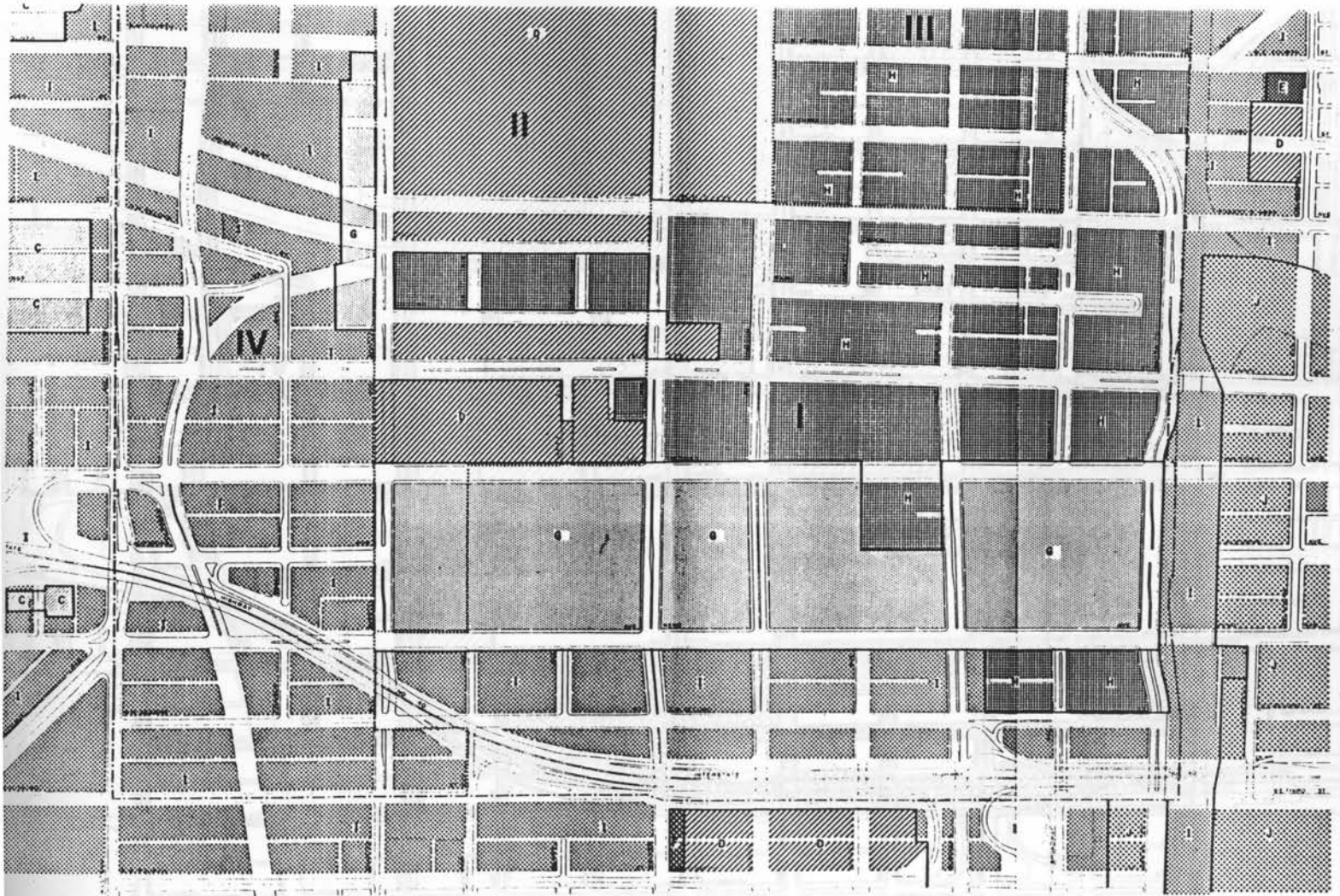


**LEGEND**  
 1. 1/4" = 100' (SCALE)  
 2. 1/4" = 100' (SCALE)  
 3. 1/4" = 100' (SCALE)  
 4. 1/4" = 100' (SCALE)  
 5. 1/4" = 100' (SCALE)

**FACILITIES LEGEND**  
 PUBLIC  
 QUASI-PUBLIC  
 SCHOOLS & PARKS



**COMMUNITY FACILITIES PLAN**  
**CENTRAL BUSINESS DISTRICT**  
 (GENERAL REDEVELOPMENT REZONING PLAN)  
 (DATE: 1/1/1964)

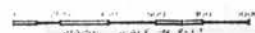


**BASE LEGEND**

- - - - - UNIMPROVED  
 - - - - - IMPROVED  
 - - - - - UNIMPROVED  
 - - - - - IMPROVED  
 - - - - - UNIMPROVED  
 - - - - - IMPROVED  
 - - - - - UNIMPROVED  
 - - - - - IMPROVED

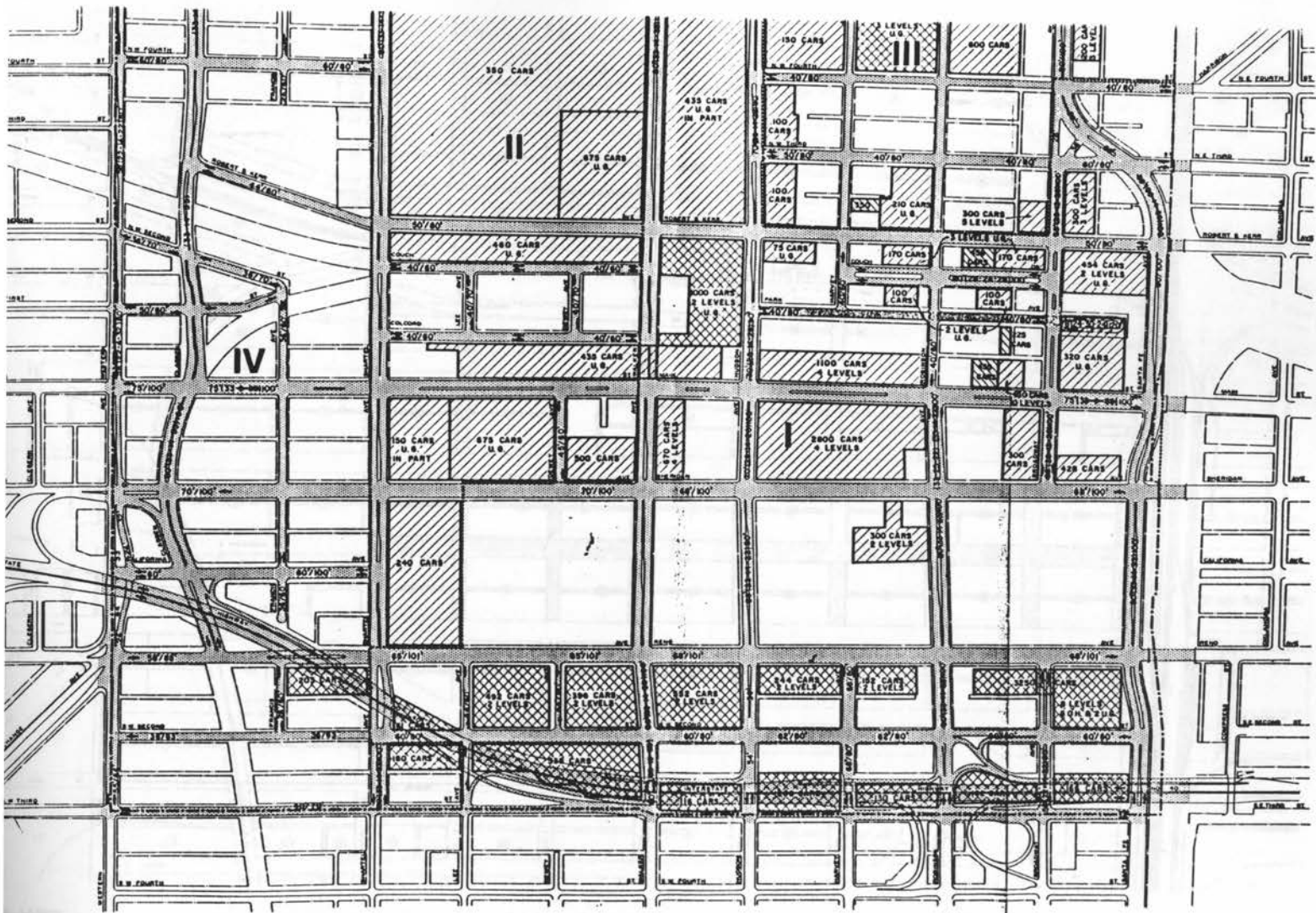
**ZONING LEGEND**

- |      |                             |   |
|------|-----------------------------|---|
| IV   | FOUR-FAMILY RESIDENTIAL     | [Pattern: Diagonal lines, top-left to bottom-right] |
| V    | MULTIPLE DWELLING           | [Pattern: Diagonal lines, bottom-left to top-right] |
| VI   | LOCAL COMMERCIAL            | [Pattern: Horizontal lines]                         |
| VII  | COMMERCIAL                  | [Pattern: Vertical lines]                           |
| VIII | RESTRICTED LIGHT INDUSTRIAL | [Pattern: Stippled]                                 |
| IX   | BUSINESS                    | [Pattern: Horizontal lines, thicker]                |
| X    | LIGHT INDUSTRIAL            | [Pattern: Vertical lines, thicker]                  |
| XI   | HEAVY INDUSTRIAL            | [Pattern: Stippled, thicker]                        |



**ZONING PLAN**  
**CENTRAL BUSINESS DISTRICT**

GENERAL NEIGHBORHOOD ZONING PLAN  
 CITY OF CHICAGO  
 DEPARTMENT OF PLANNING AND DEVELOPMENT  
 1963



**BASE LEGEND**

- S. N. R. P. BOUNDARY
- LIMITS OF BLOCKS
- STREET NAME
- STREET PAVING
- PROJECT BOUNDARIES
- PROJECT NUMBERS

**KEY TO SYMBOLS**

PAVEMENT WIDTH / MEDIAN WIDTH

80/133 IN 33100'

LANE WIDTHS / ROW WIDTH

60/80'

PAVEMENT WIDTH / ROW WIDTH

60/80'

PAVEMENT WIDTH / ROW WIDTH

60/80'

PAVEMENT WIDTH / ROW WIDTH

60/80'

PAVEMENT WIDTH / ROW WIDTH

60/80'

**LEGEND**

- STREET PAVEMENT
- SPECIAL STREET PAVEMENT
- 175 CARS PRIVATE PARKING & NO. OF CARS
- 175 CARS PUBLIC PARKING & NO. OF CARS
- TRAFFIC DIRECTION ARROW
- EXISTING PARKING STRUCTURE TO REMAIN



REVISION	DATE	REASONING	BY

**STREETS & PARKING PLAN**

**CENTRAL BUSINESS DISTRICT**  
 GENERAL NEIGHBORHOOD RENEWAL PLAN  
 OKLA R-2610N)

PREPARED BY **CARTER & BURGESS**  
 ENGINEERS  
 FORT WORTH, TEXAS

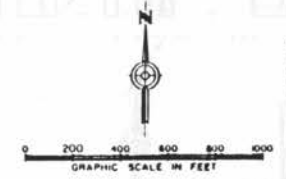
APPROVED BY **URBAN RENEWAL AUTHORITY**  
 OKLAHOMA CITY, OKLAHOMA CO., OKLAHOMA  
 APPROVED DATE: 11/22/60





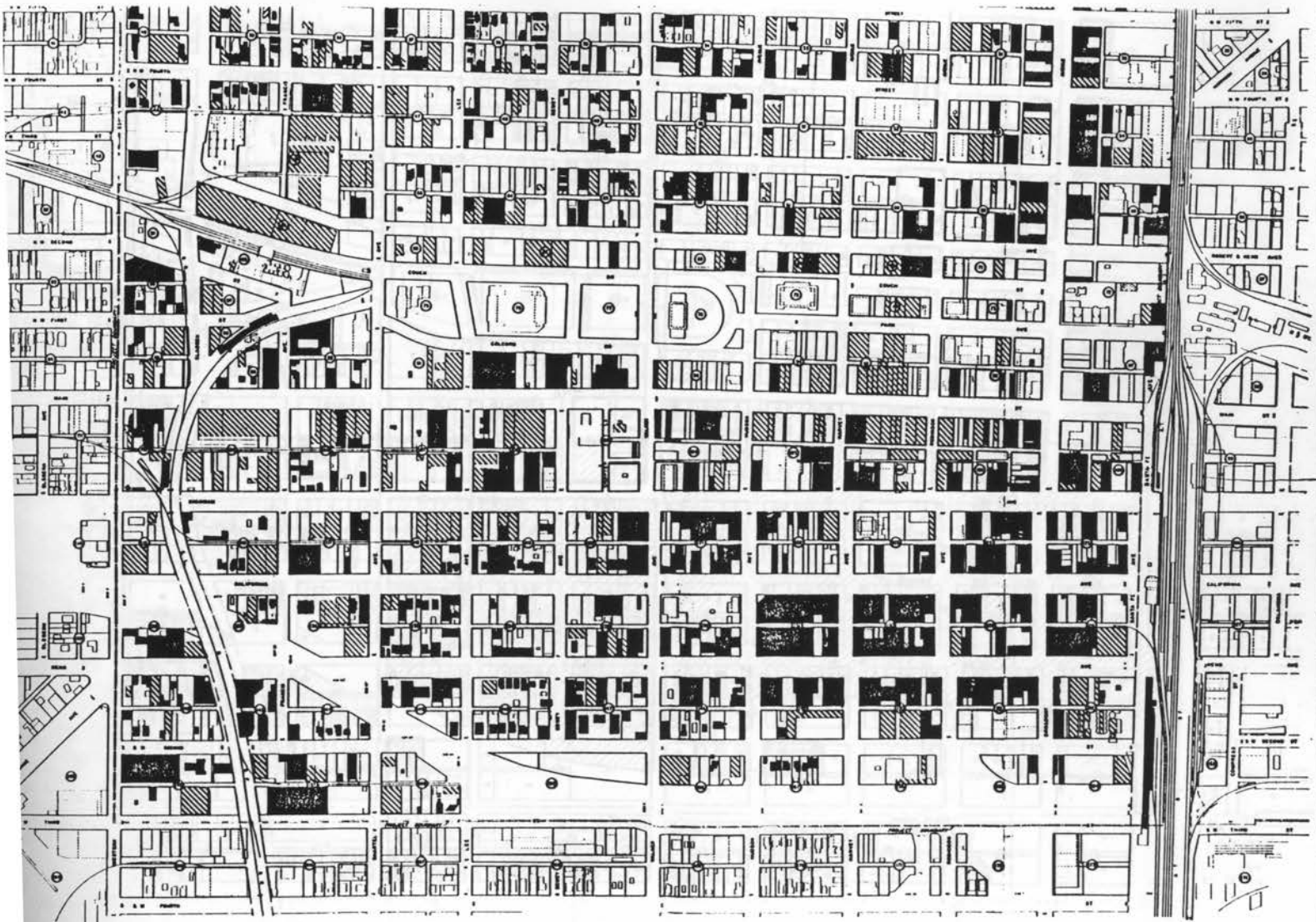
**LEGEND**  
 W & F BOUNDARY  
 MITS OF BLOCK & NO  
 STREET NAME  
 ULTRA ROAD  
 ULTRA ROAD RIGHT-OF-WAY  
 MENTIONS STREET ROW

**RIGHT-OF-WAY LEGEND**  
 [Symbol] NEW RIGHT-OF-WAY TO BE ACQUIRED  
 [Symbol] EXIST RIGHT-OF-WAY TO BE VACATED  
 [Symbol] EXIST RIGHT-OF-WAY TO REMAIN



7-24-57	REVISION	DATE	BY
<b>RIGHT-OF-WAY ADJUSTMENT PLAN</b>			
<b>CENTRAL BUSINESS DISTRICT</b>			
GENERAL NEIGHBORHOOD RENEWAL PLAN			
(OKLA R 268GN)			
PREPARED BY	CARTER & BURGESS	ENGINEERS	ARCHITECTS
1100 MACON ST.	FORT WORTH, TEXAS		
DESIGNED BY	SUBMITTED BY		
URBAN	RENEWAL	AUTHORITY	
CITY OF FORT WORTH	CITY ENGINEER	CITY CLERK	
APPROVED	DATE	EXHIBIT	
		GN201-17	



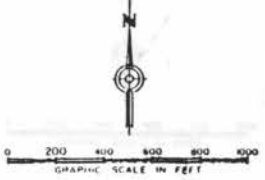


**LEGEND**

**BASE MAP**  
 STREET BOUNDARY  
 10' TO 15' WIDE IN 1940  
 15' TO 20' WIDE IN 1950  
 UNDEVELOPED LOT  
 STREET BOUNDARY  
 10' TO 15' WIDE IN 1940

**BASE MAP**  
 MAIN LANE  
 SERVICE LANE  
 SEPARATED ON ONE LEVEL  
 STREET SIDE DRIVE

**STRUCTURAL CONDITIONS**  
 STRUCTURALLY SOUNDING BLUE  
 STRUCTURALLY DETERIORATED BLUE  
 STRUCTURALLY SUB STANDING BLUE

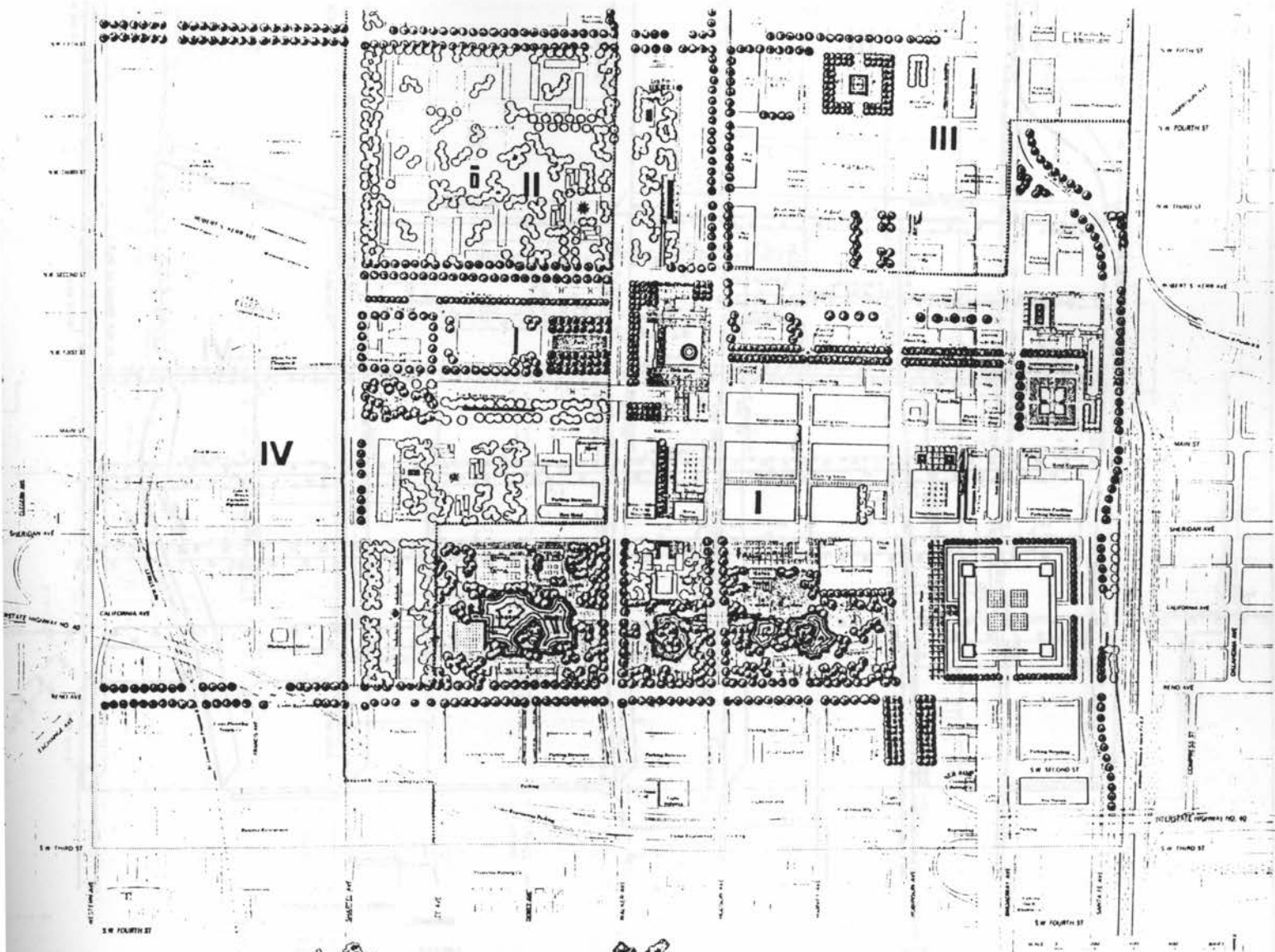


REVISION	DATE	DESCRIPTION	BY

**STRUCTURAL CONDITIONS**

**CENTRAL BUSINESS DISTRICT**  
 GENERAL NEIGHBORHOOD RENEWAL PLAN  
 PART 2 - STRUCTURE





**LEGEND**

- 1. PLANTING
- 2. PLANTING
- 3. PLANTING
- 4. PLANTING
- 5. PLANTING
- 6. PLANTING
- 7. PLANTING
- 8. PLANTING
- 9. PLANTING
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- 90. PLANTING
- 91. PLANTING
- 92. PLANTING
- 93. PLANTING
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- 96. PLANTING
- 97. PLANTING
- 98. PLANTING
- 99. PLANTING
- 100. PLANTING

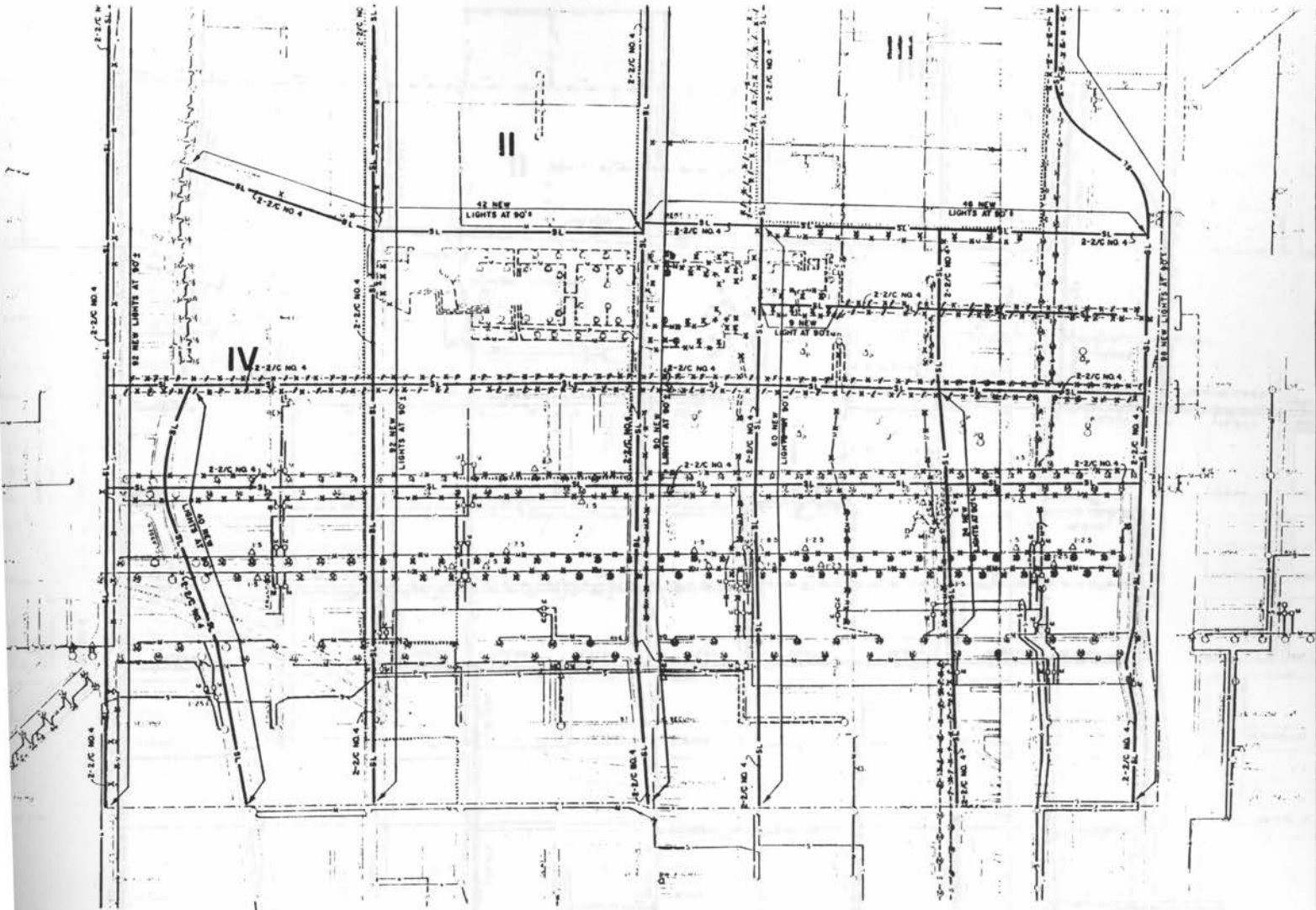


TYPICAL SECTION THRU TIVOLI GARDENS



**LANDSCAPE PLAN**

OKLAHOMA CITY CENTRAL BUSINESS DISTRICT  
 GENERAL NEIGHBORHOOD RENOVATION PLAN Oklahoma City Urban Renewal Authority

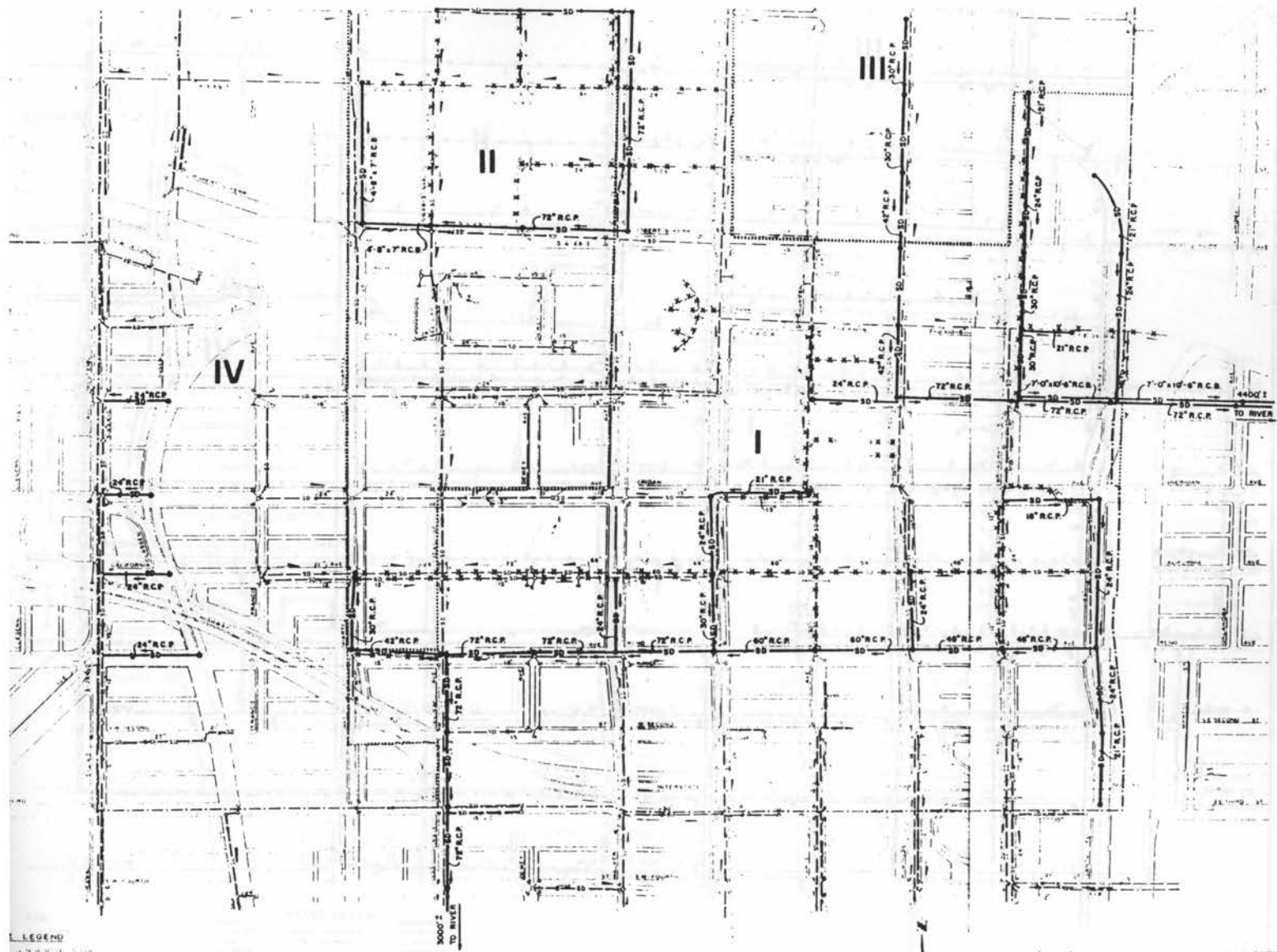


STREET LIGHT LEGEND

EXISTING	PROPOSED
(Symbol: solid line with dot)	(Symbol: dashed line with dot)
(Symbol: solid line)	(Symbol: dashed line)
(Symbol: solid line with '2-Z/C NO. 4')	(Symbol: dashed line with '2-Z/C NO. 4')
(Symbol: solid line with 'SL')	(Symbol: dashed line with 'SL')

STREET LIGHTING  
PLAN  
CENTRAL BUSINESS DISTRICT



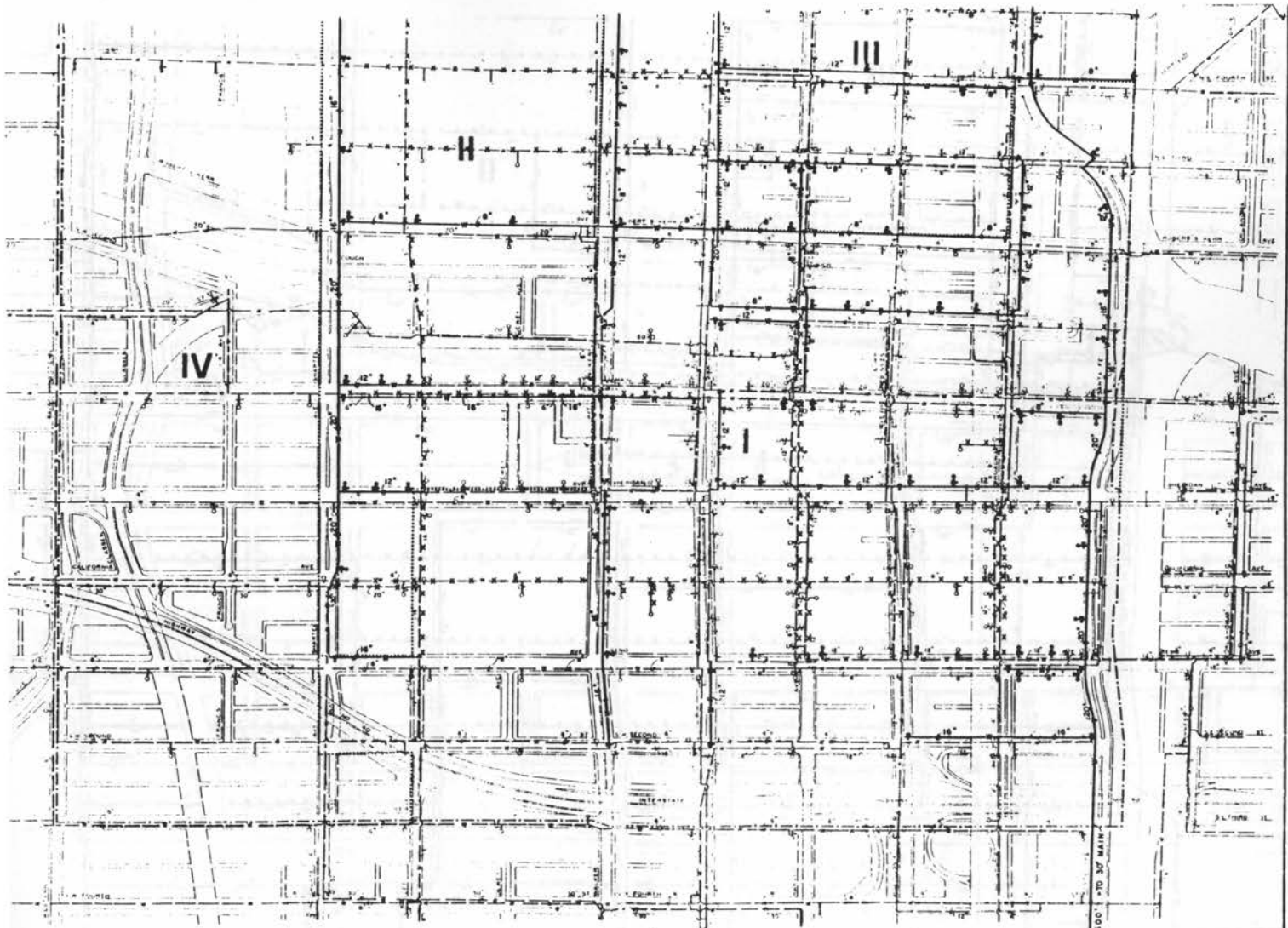


LEGEND  
 --- 12\"/>

STORM DRAIN LEGEND  
 PROPOSED  
 50 25'  
 ---  
 ---



STORM DRAINAGE  
 PLAN  
 CENTRAL BUSINESS DISTRICT  
 (GENERAL AND PRELIMINARY PLAN)

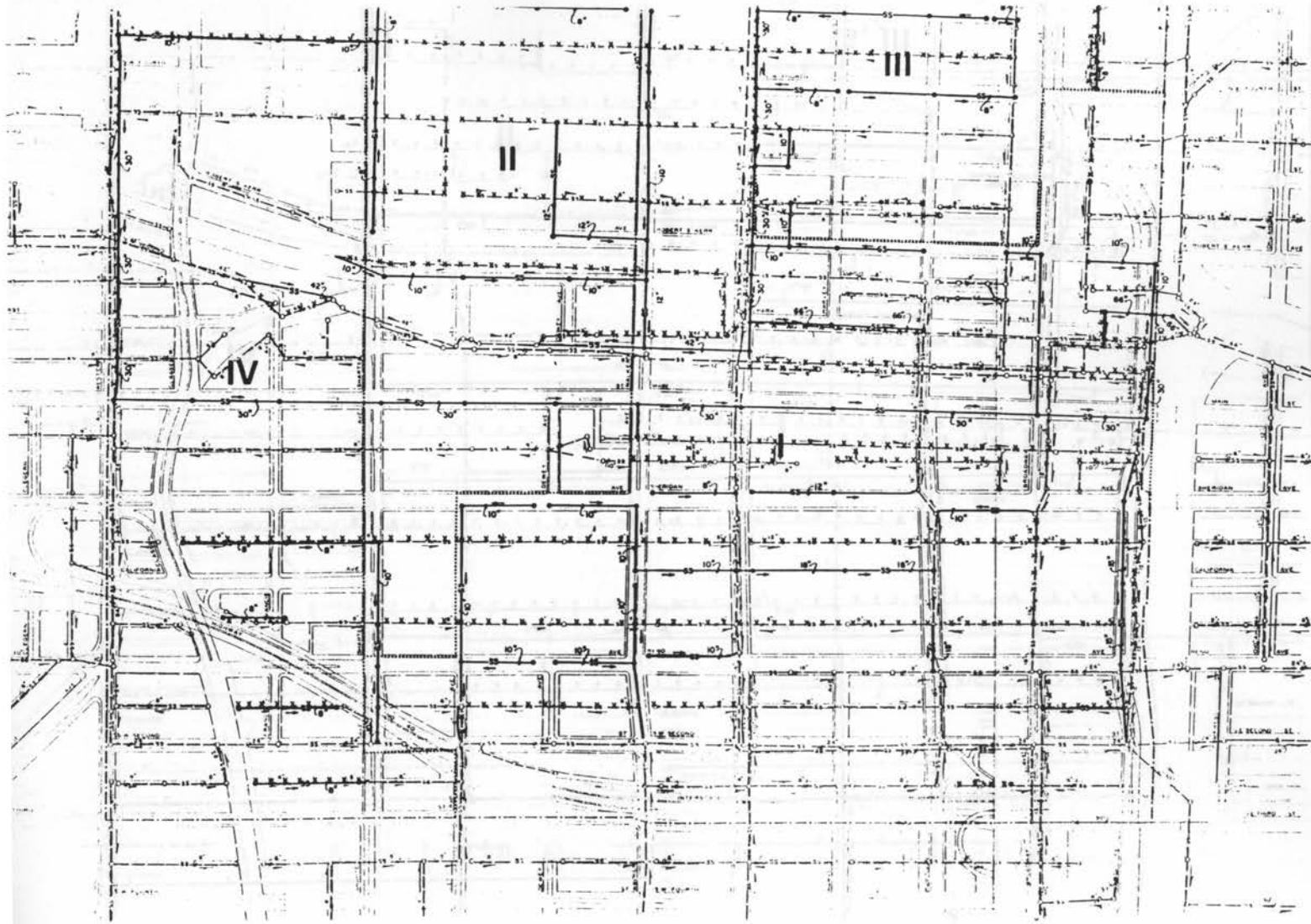


10  
 11  
 12  
 13  
 14  
 15  
 16  
 17  
 18  
 19  
 20

EXIST		WATER LEGEND		PROPOSED	
—	W.C.	—	WATER MAIN 18"	—	WATER MAIN 18"
- - -	HYDRANT	- - -	HYDRANT	—	HYDRANT
•	VALVE	•	VALVE	—	VALVE
- - -	EXIST TO BE REMOVED	X X X X	EXIST TO BE REMOVED	X X X X	EXIST TO BE REMOVED



WATER DISTRIBUTION  
 PLAN  
 CENTRAL BUSINESS DISTRICT  
 GENERAL REDEVELOPMENT PLAN  
 1963



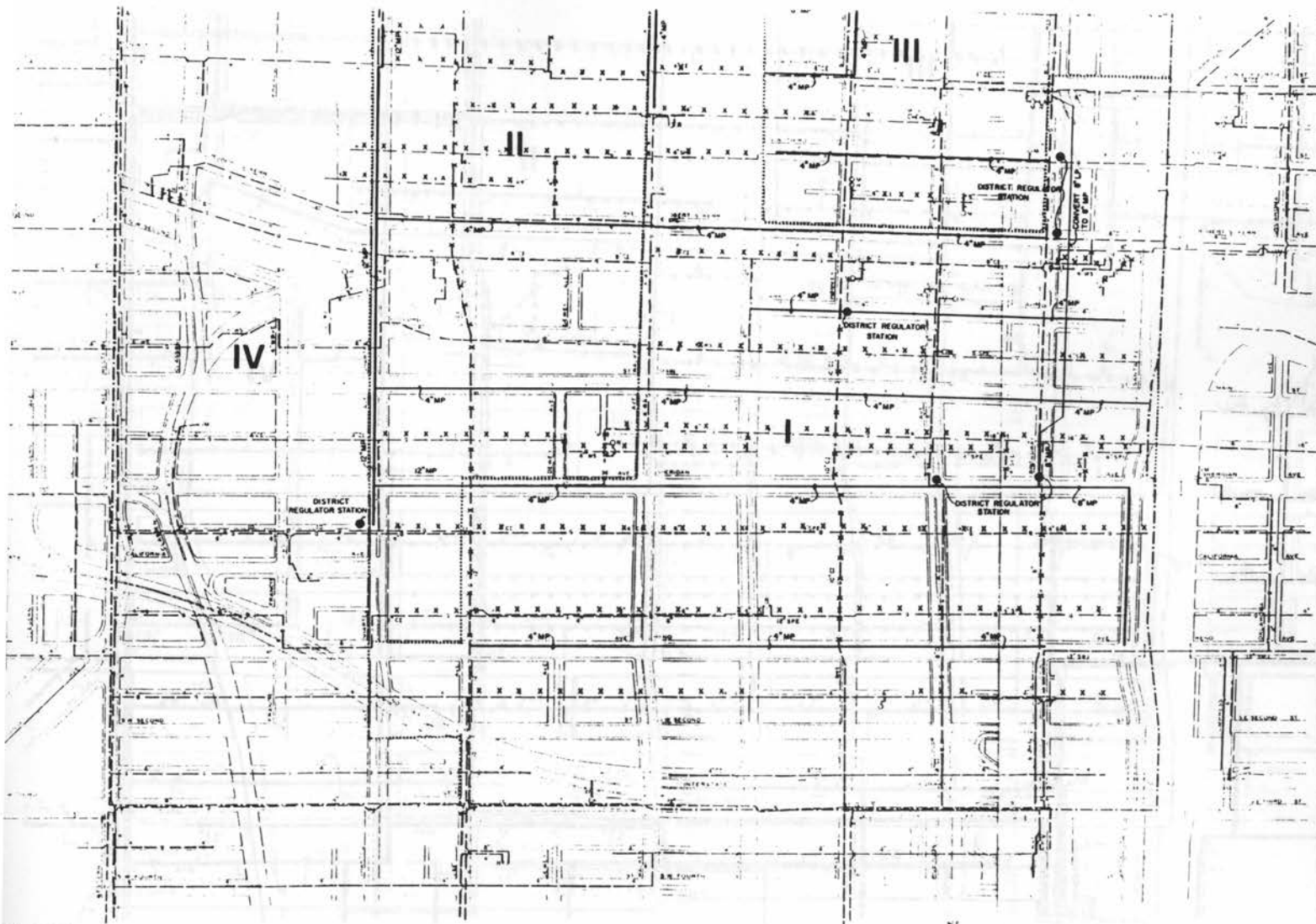
**E. LEGEND**  
 --- EXISTING  
 --- PROPOSED  
 --- TO BE REMOVED

**SANITARY SEWER LEGEND**  
 --- SANITARY SEWER MAIN  
 --- MANHOLE  
 --- TO BE REMOVED

**PROPOSED**  
 --- 10"  
 --- 12"  
 --- 18"  
 --- 24"  
 --- 30"  
 --- 36"  
 --- 42"  
 --- 48"  
 --- 54"  
 --- 60"  
 --- 66"  
 --- 72"  
 --- 78"  
 --- 84"  
 --- 90"  
 --- 96"  
 --- 102"  
 --- 108"  
 --- 114"  
 --- 120"



**SANITARY SEWER  
 PLAN  
 CENTRAL BUSINESS DISTRICT  
 GENERAL IMPROVEMENT PLAN**



**BASE LEGEND**

- - - - - Dotted line  
 - - - - - Dashed line  
 - - - - - Dash-dot line  
 - - - - - Long-dash line  
 - - - - - Solid line

**GAS LEGEND**

- - - - - HIGH PRESSURE  
 - - - - - MEDIUM PRESSURE  
 - - - - - LOW PRESSURE  
 - - - - - TO BE REMOVED  
 - - - - - PRESSURE DEGRADATION  
 - - - - - HIGH PRESSURE  
 - - - - - LOW PRESSURE

**EMPOBED**

●  
 X X X X  
 MP  
 LP



**GAS DISTRIBUTION PLAN**

**CENTRAL BUSINESS DISTRICT**

GENERAL HEADWORK RENEWAL PLAN

DATE: 10/1/1910

IV

DISTRICT REGULATOR STATION

DISTRICT REGULATOR STATION

DISTRICT REGULATOR STATION

DISTRICT REGULATOR STATION

16 SECOND

16 SECOND

16 SECOND

16 SECOND

16 SECOND

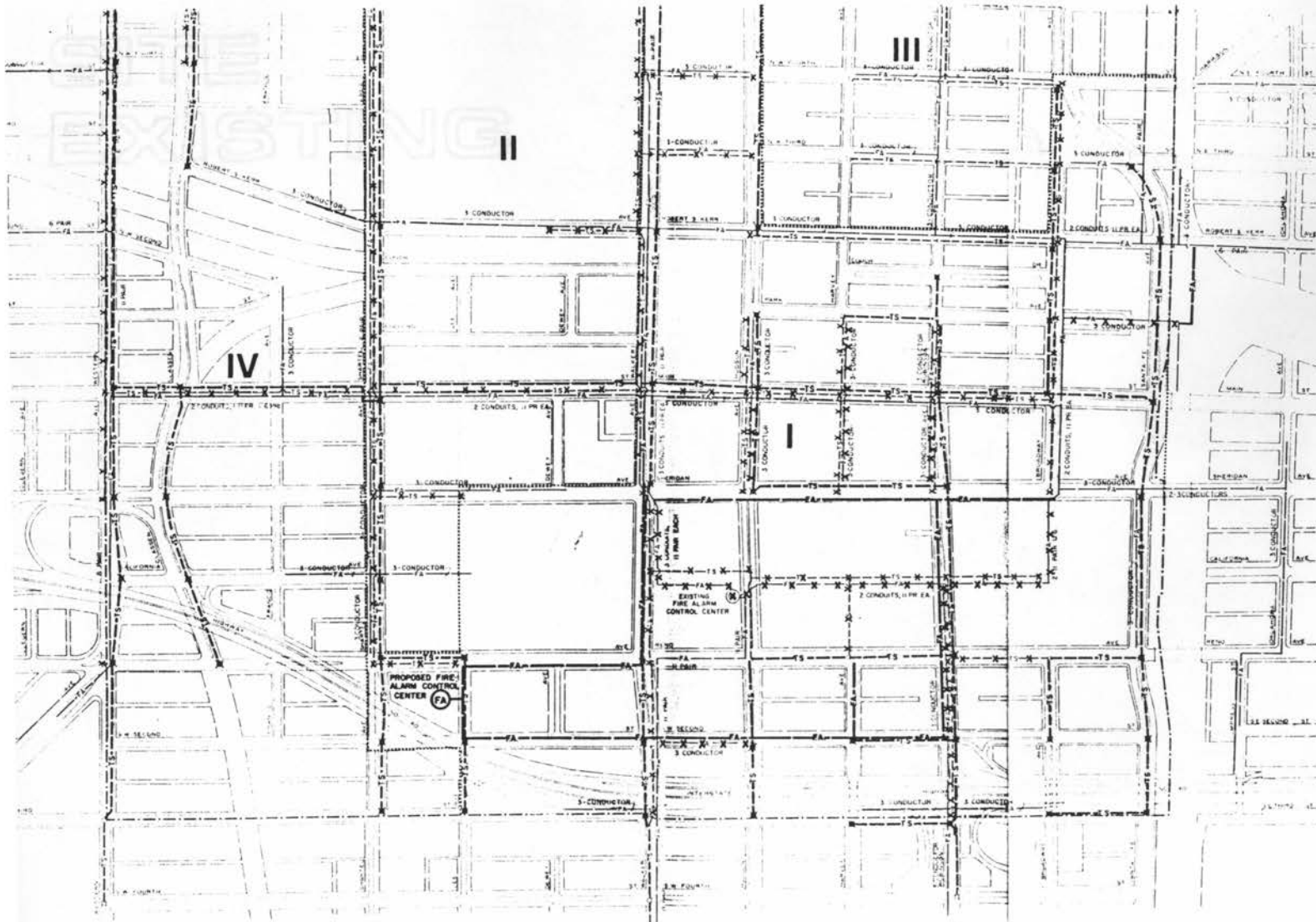
16 SECOND

16 SECOND









**LEGEND**  
 1. 11 P.M. BACK  
 2. 11 P.M. BACK  
 3. 11 P.M. BACK  
 4. 11 P.M. BACK  
 5. 11 P.M. BACK

**SIGNAL LEGEND**  
 EXISTING  
 11 P.M. BACK  
 11 P.M. BACK  
 11 P.M. BACK  
 11 P.M. BACK  
 11 P.M. BACK

**PROPOSED**  
 TS  
 II  
 X X X X X



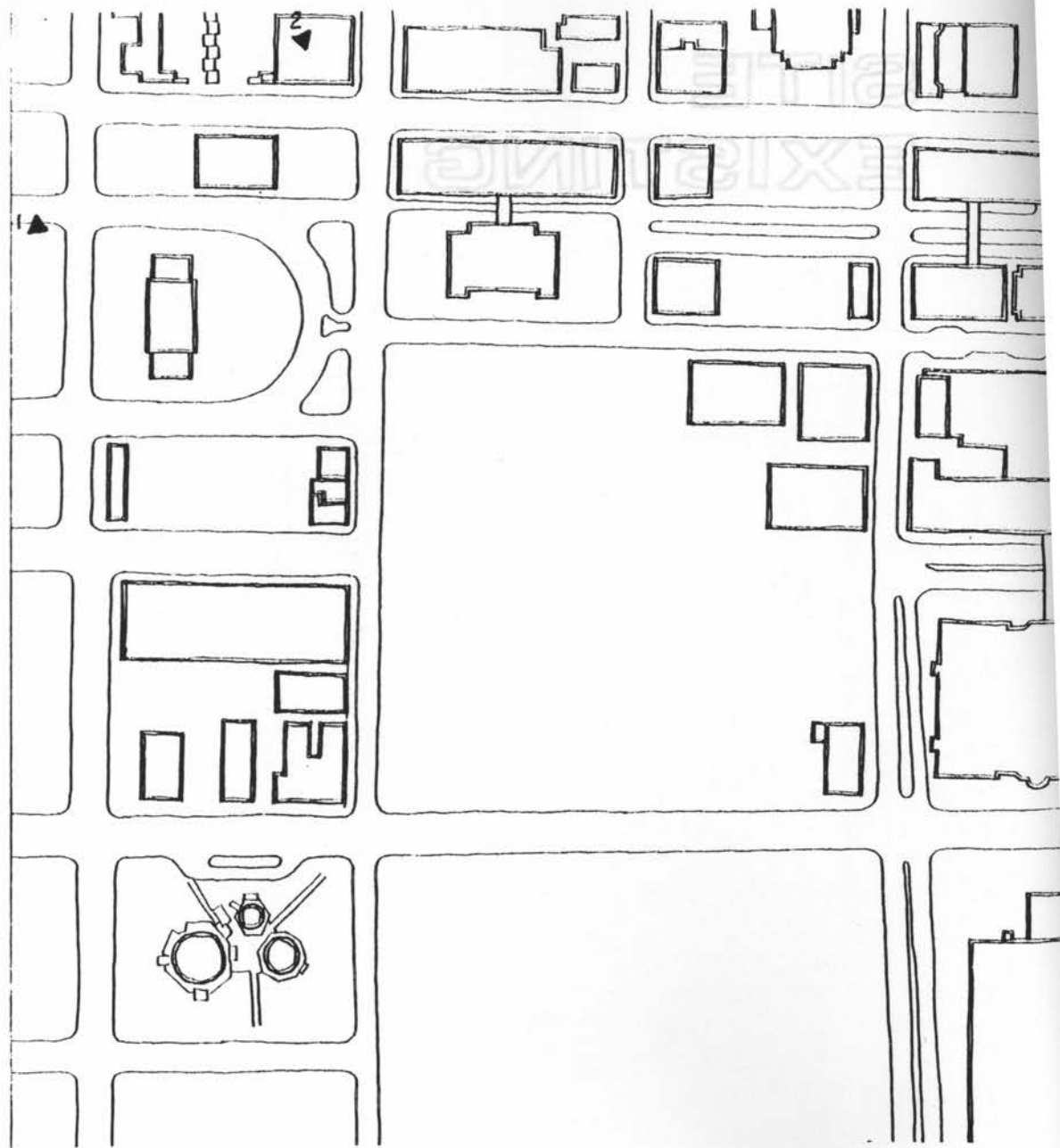
0 200 400 600 800 1000  
 GRAPHIC SCALE IN FEET

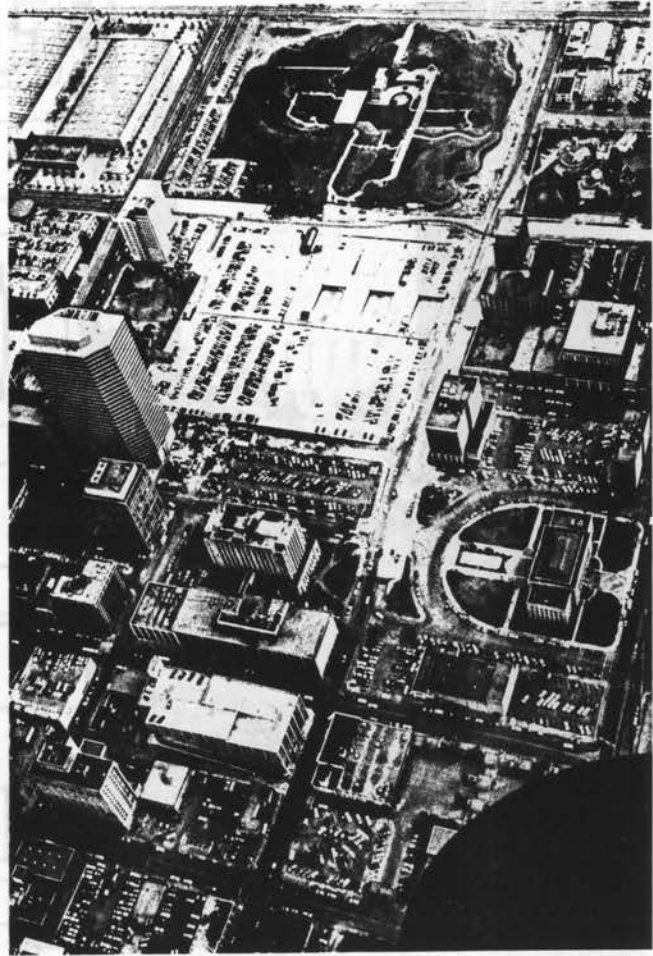
**FIRE ALARM & TRAFFIC SIGNAL PLAN**  
**CENTRAL BUSINESS DISTRICT**  
 GENERAL NEIGHBORHOOD RENEWAL PLAN  
 OKLA. R 2662M

1. M. H. & S. S. ENGINEERS, INC., 1111 N. W. 23rd ST., OKLA. CITY, OKLA. 73102  
 2. M. H. & S. S. ENGINEERS, INC., 1111 N. W. 23rd ST., OKLA. CITY, OKLA. 73102  
 3. M. H. & S. S. ENGINEERS, INC., 1111 N. W. 23rd ST., OKLA. CITY, OKLA. 73102

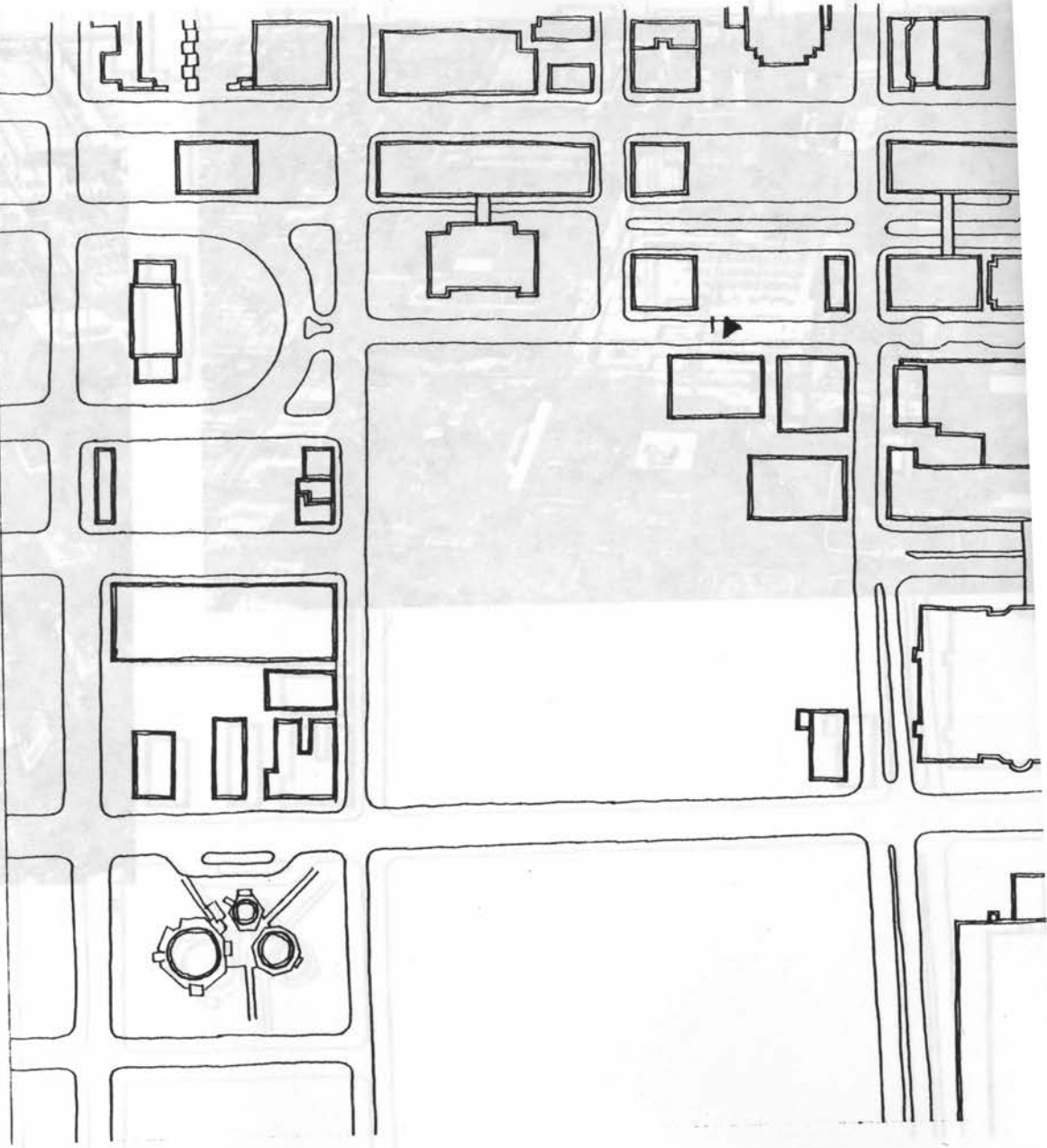
SITE  
EXISTING











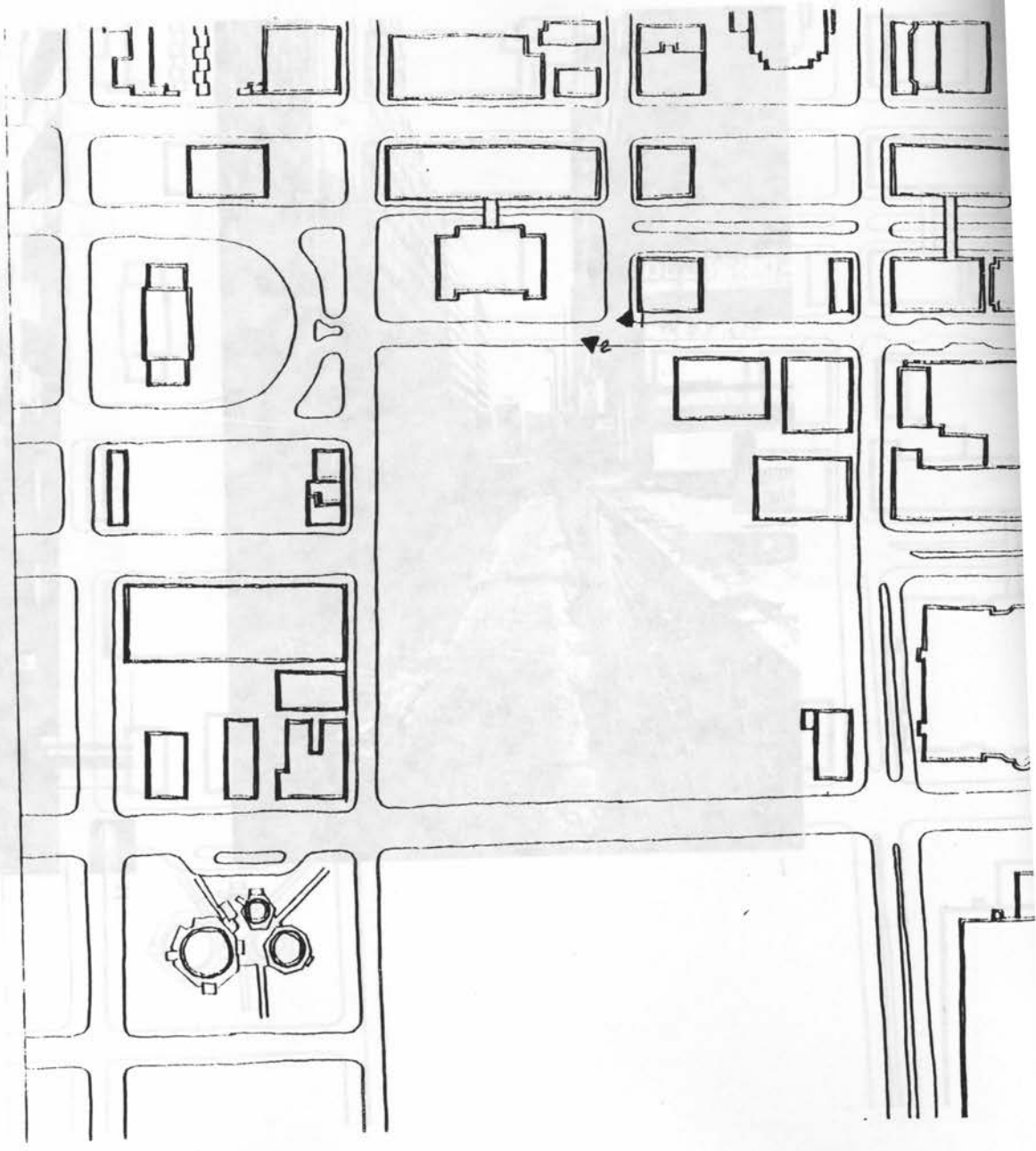


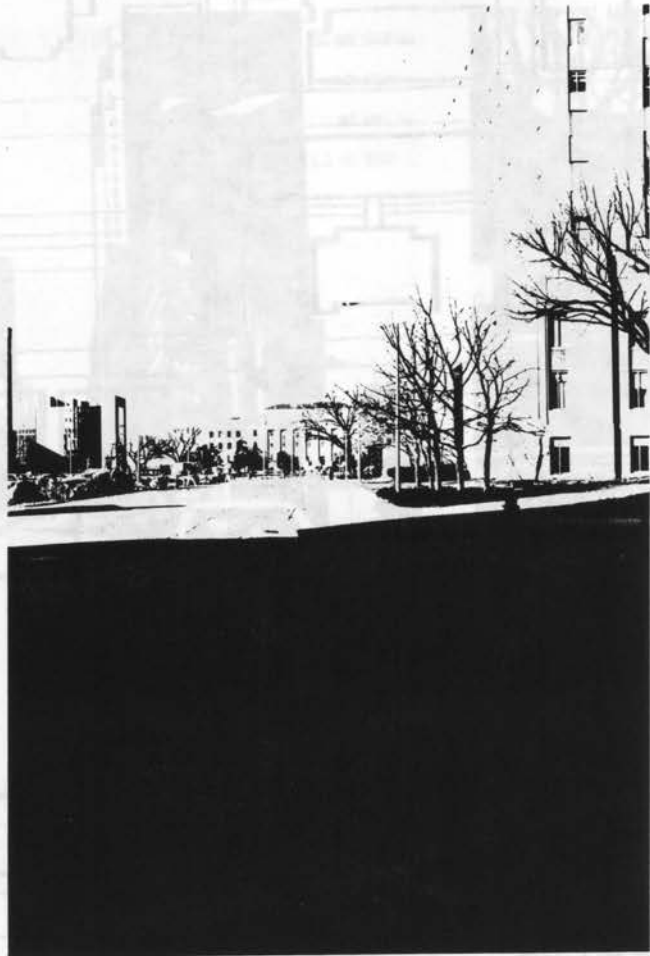
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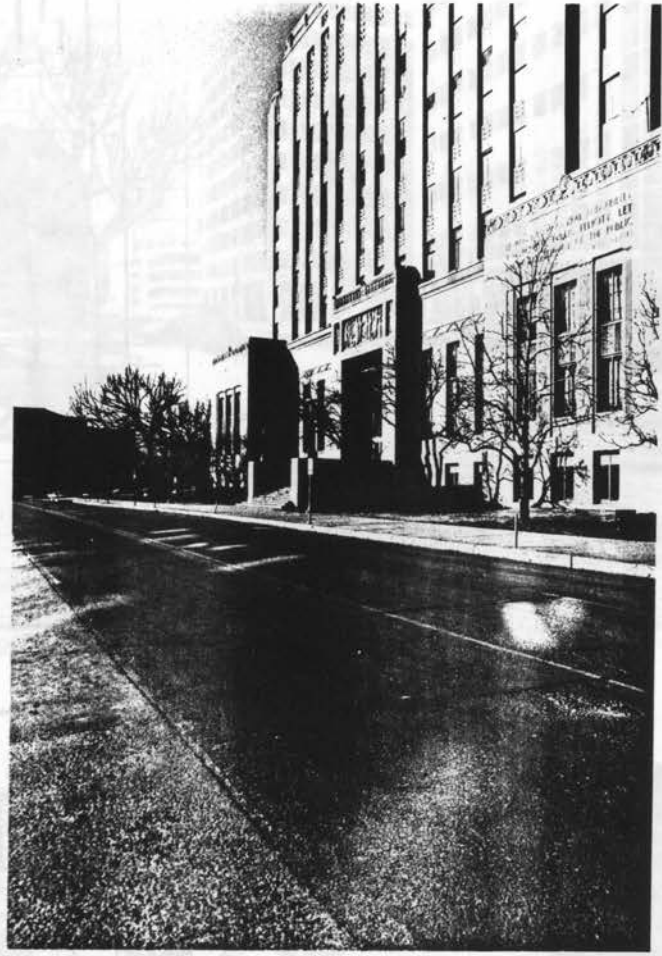
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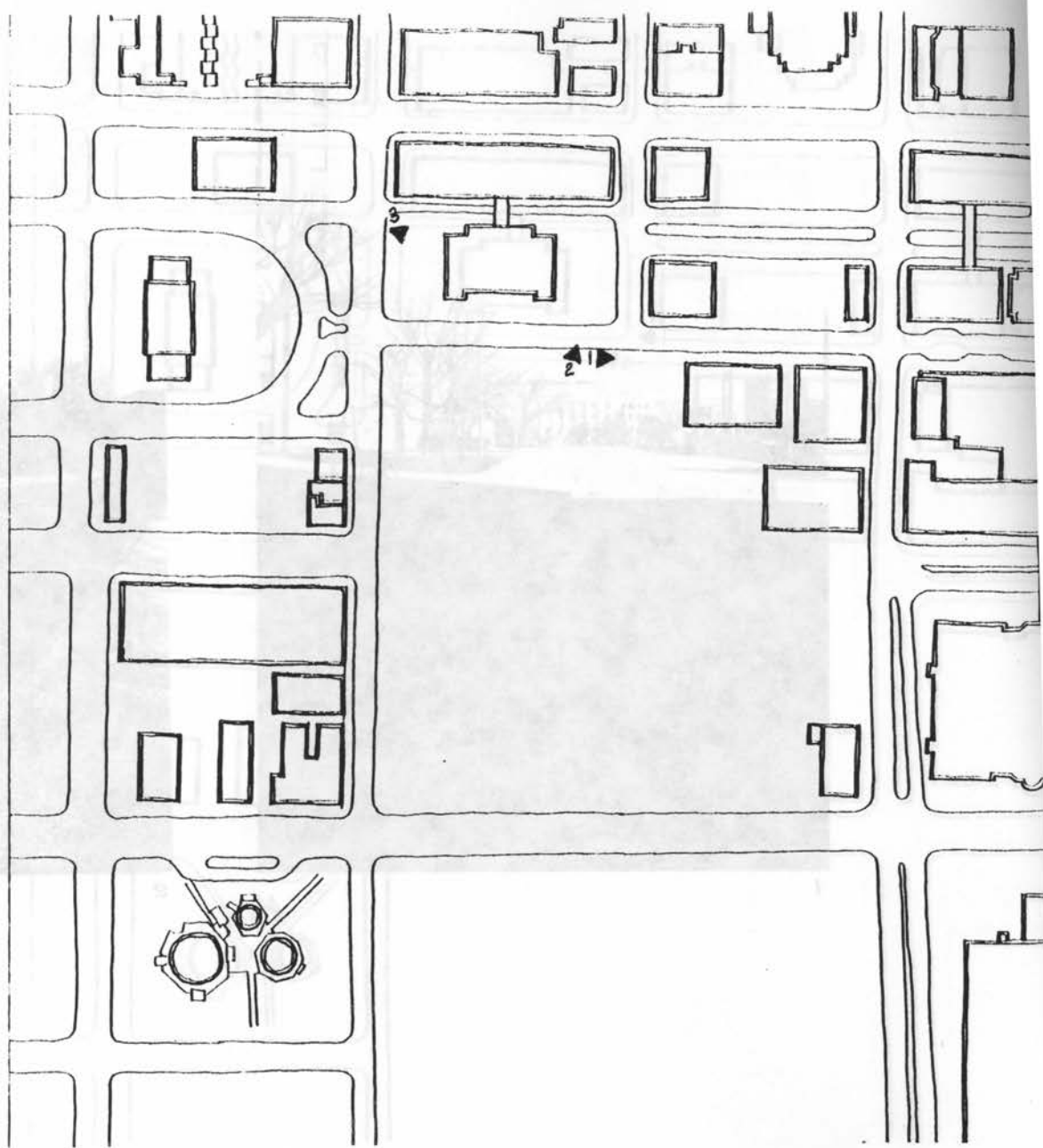
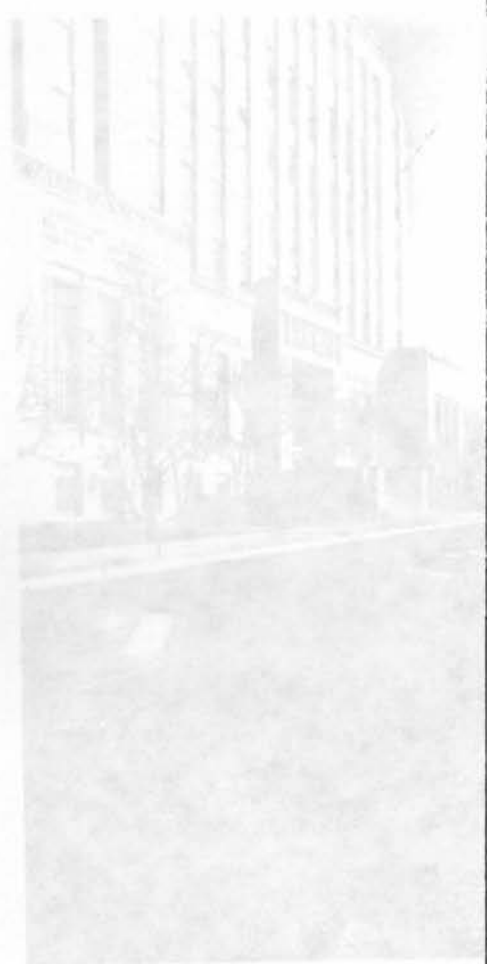


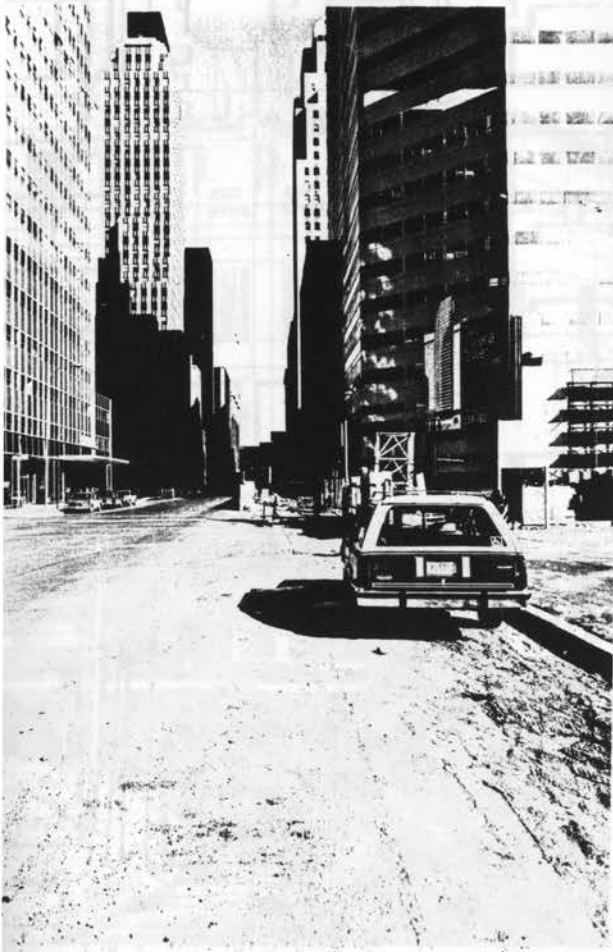


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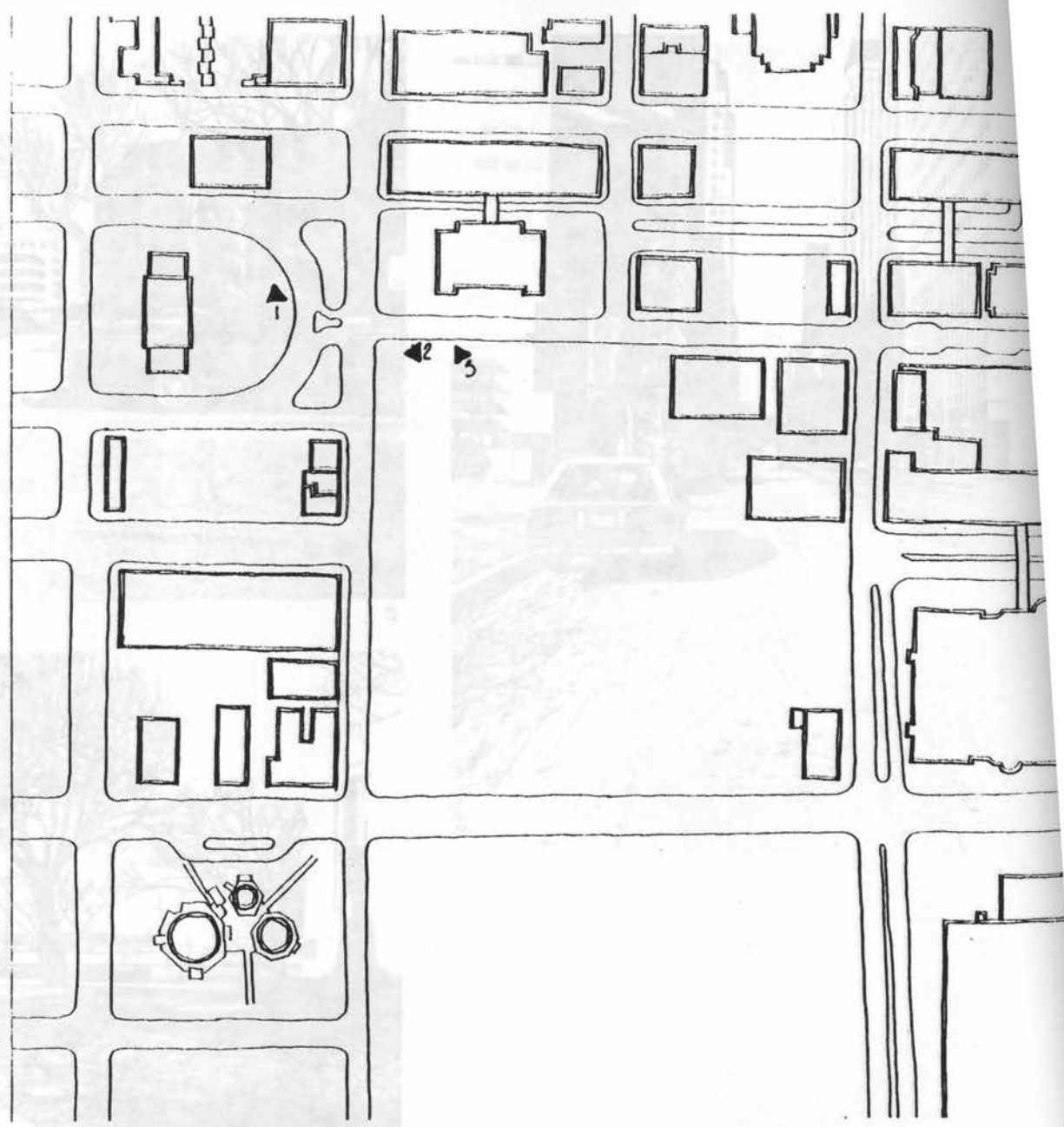




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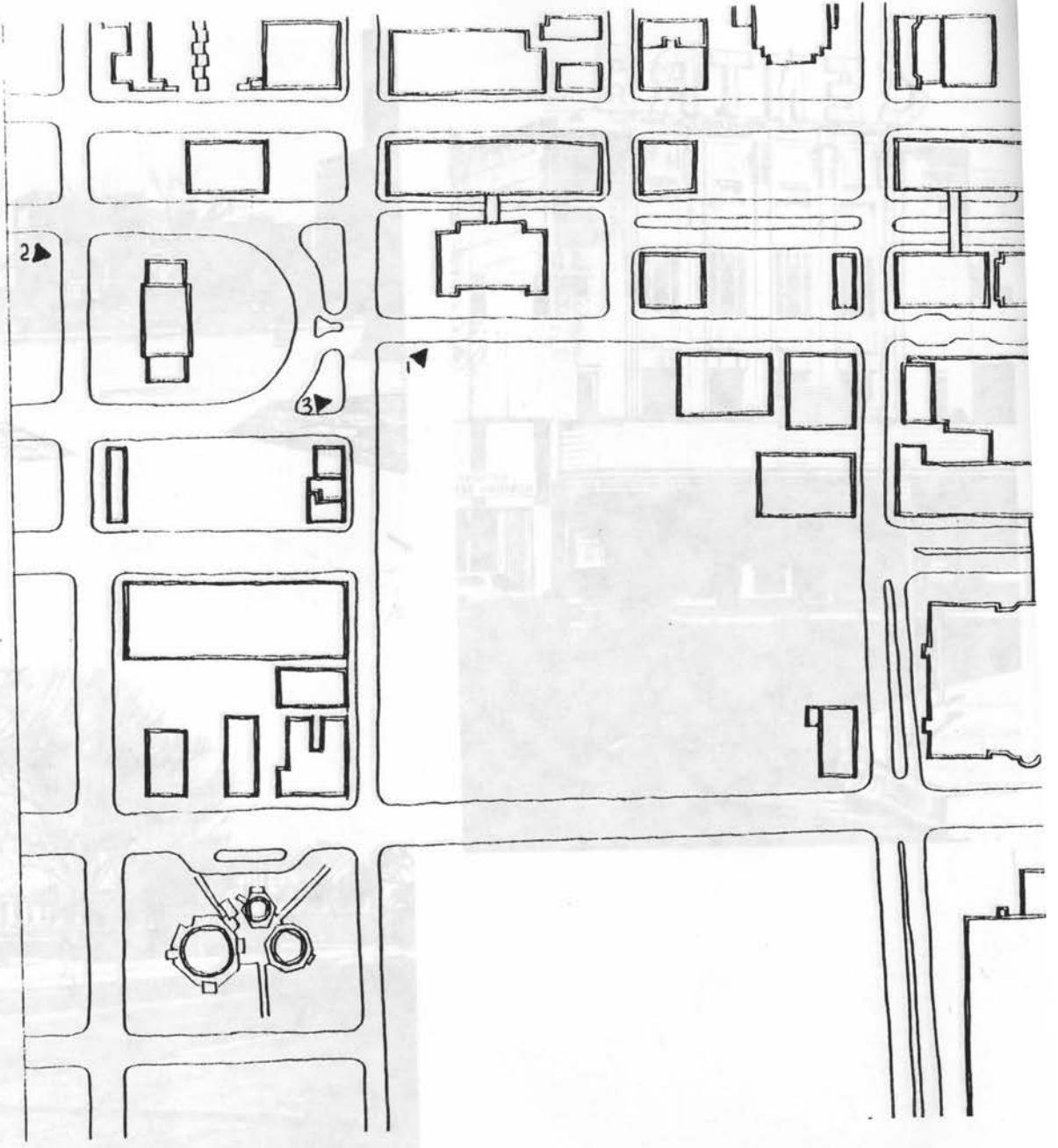


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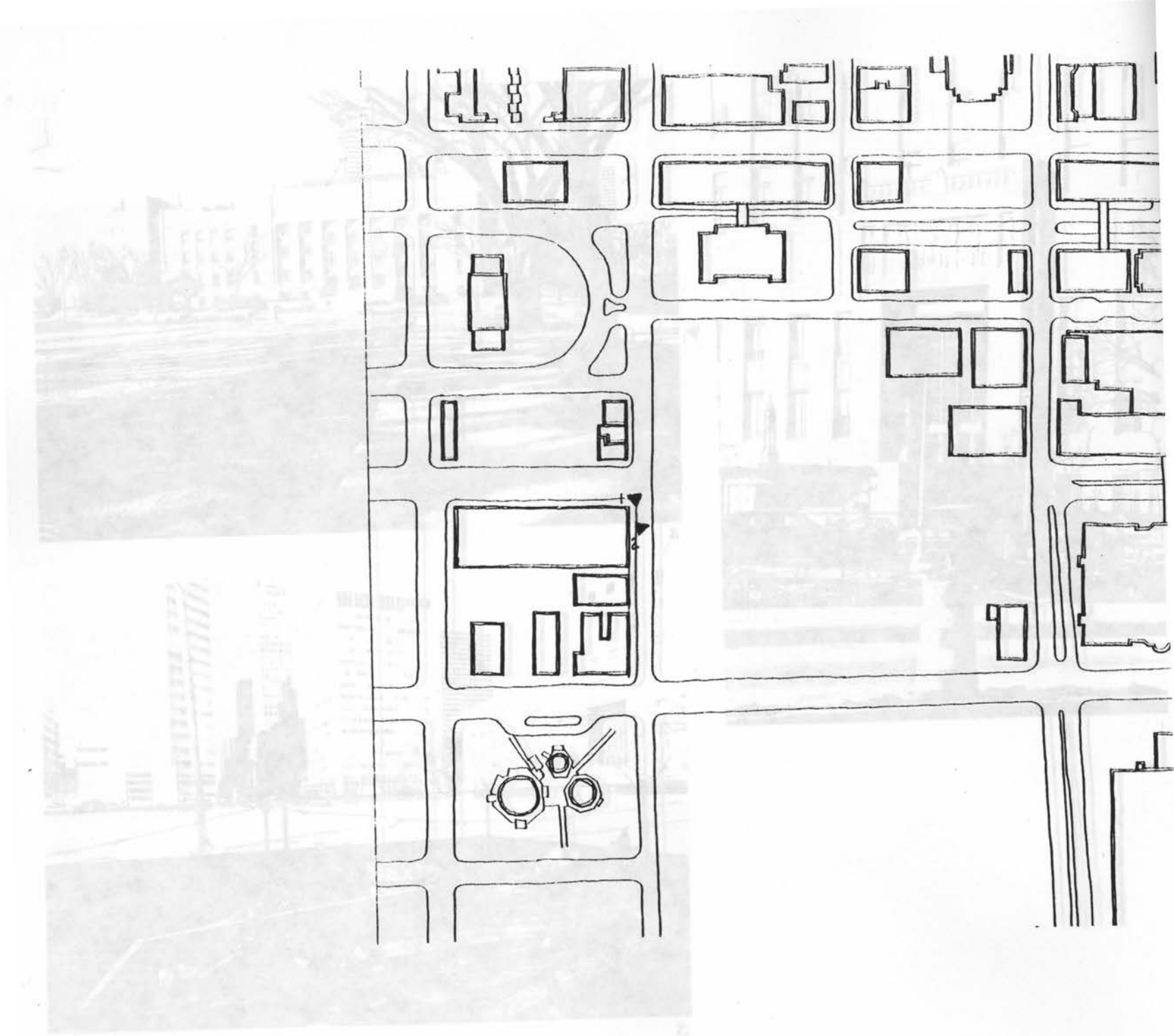










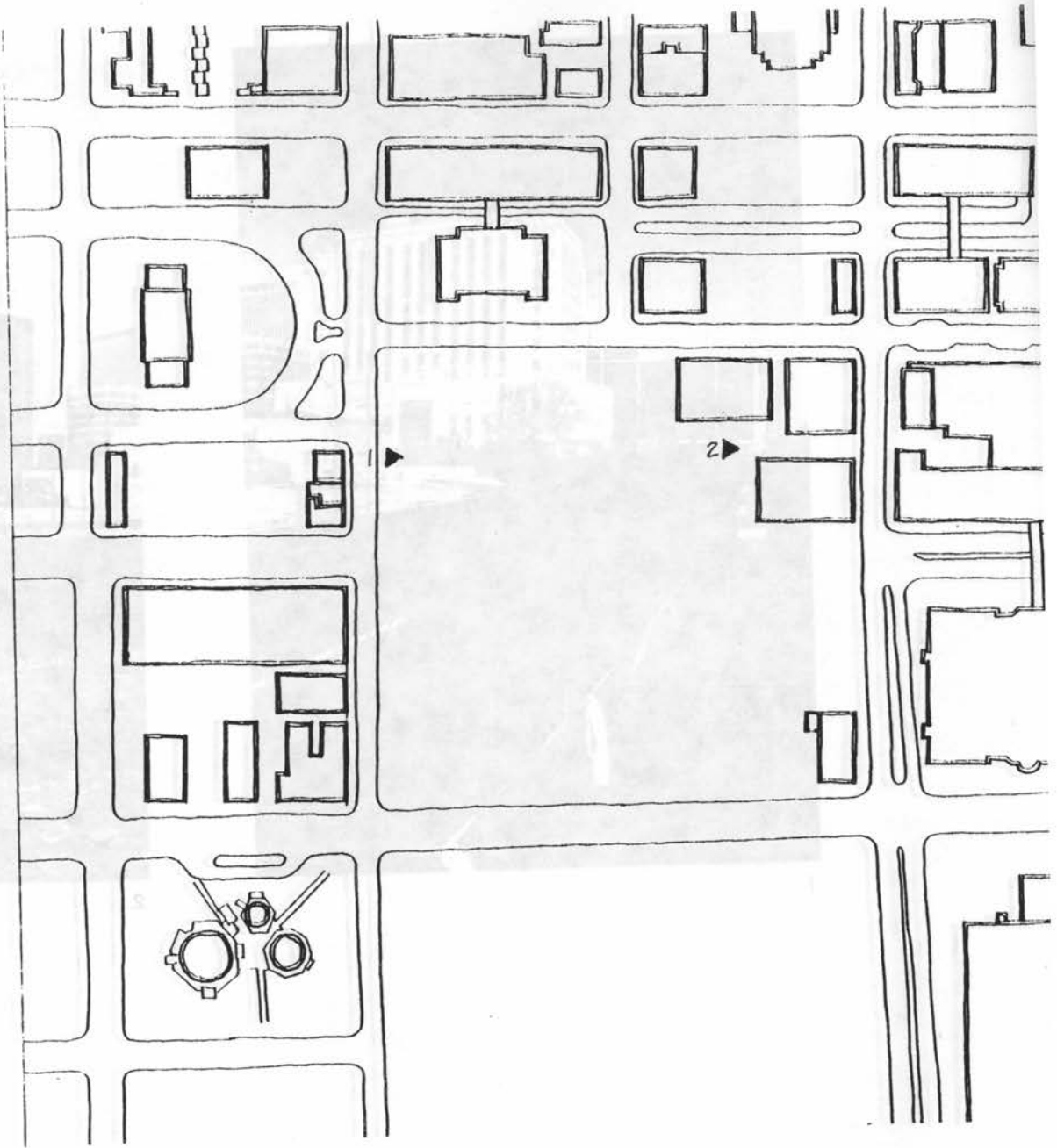




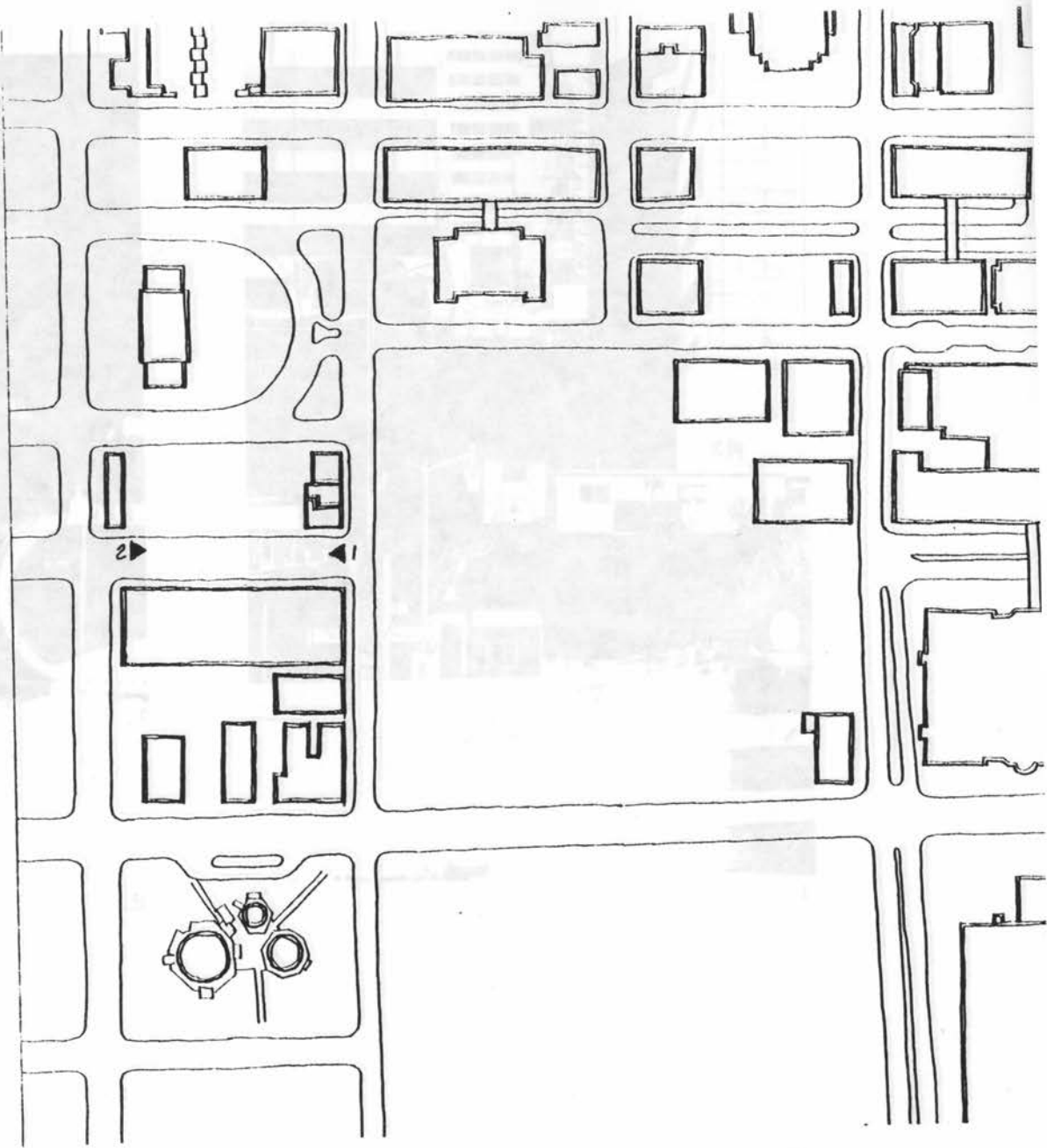
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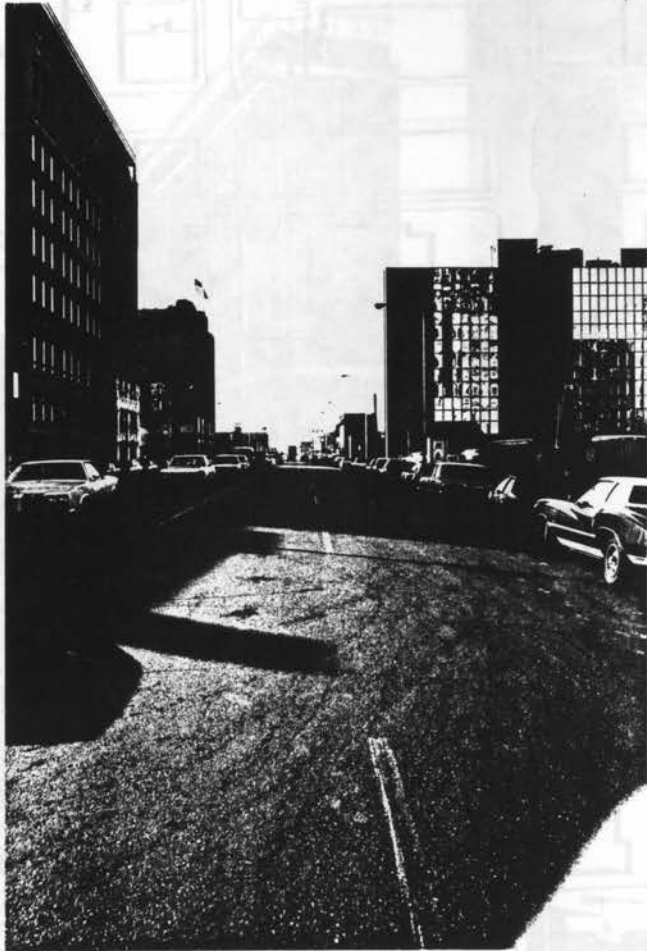
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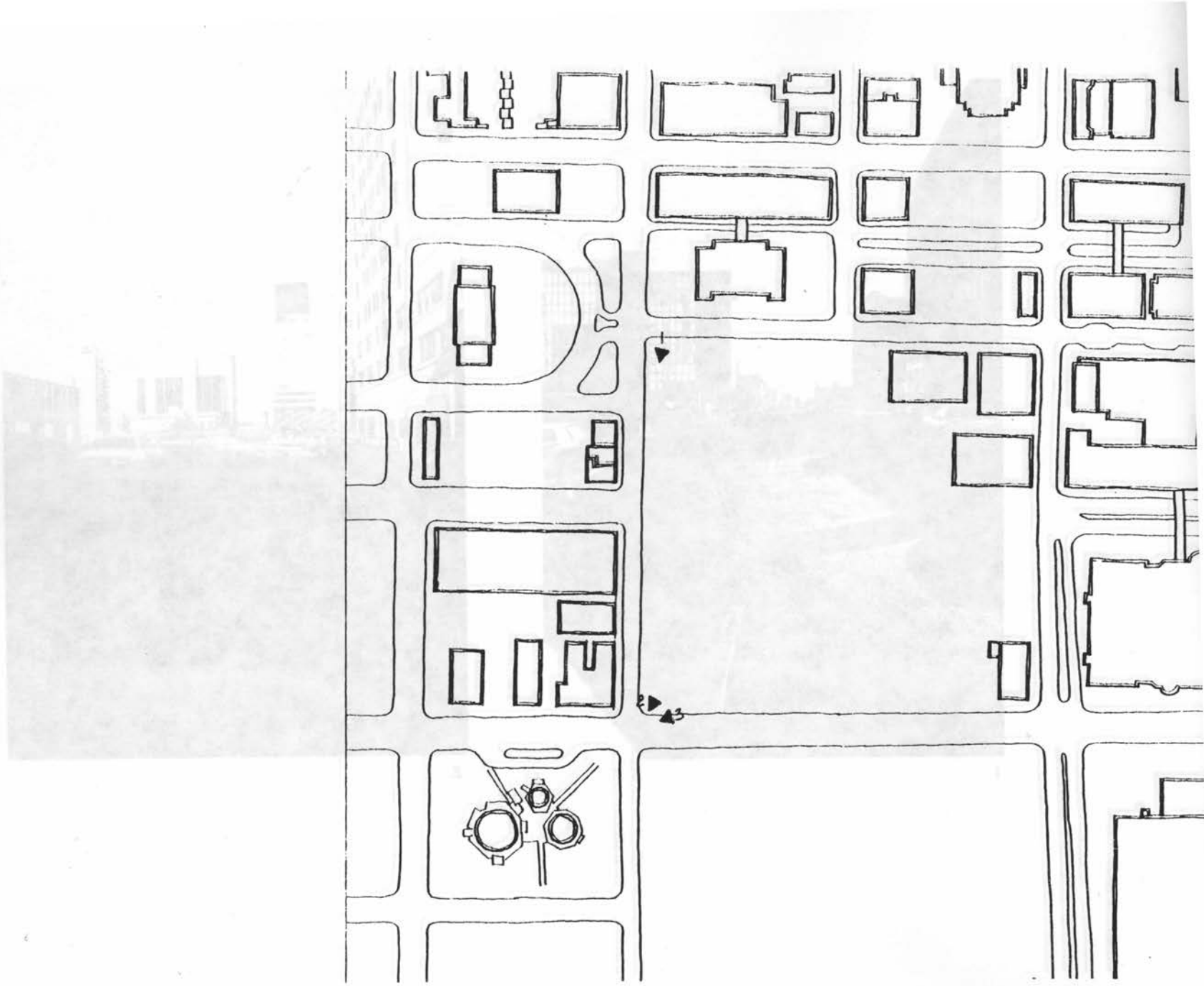


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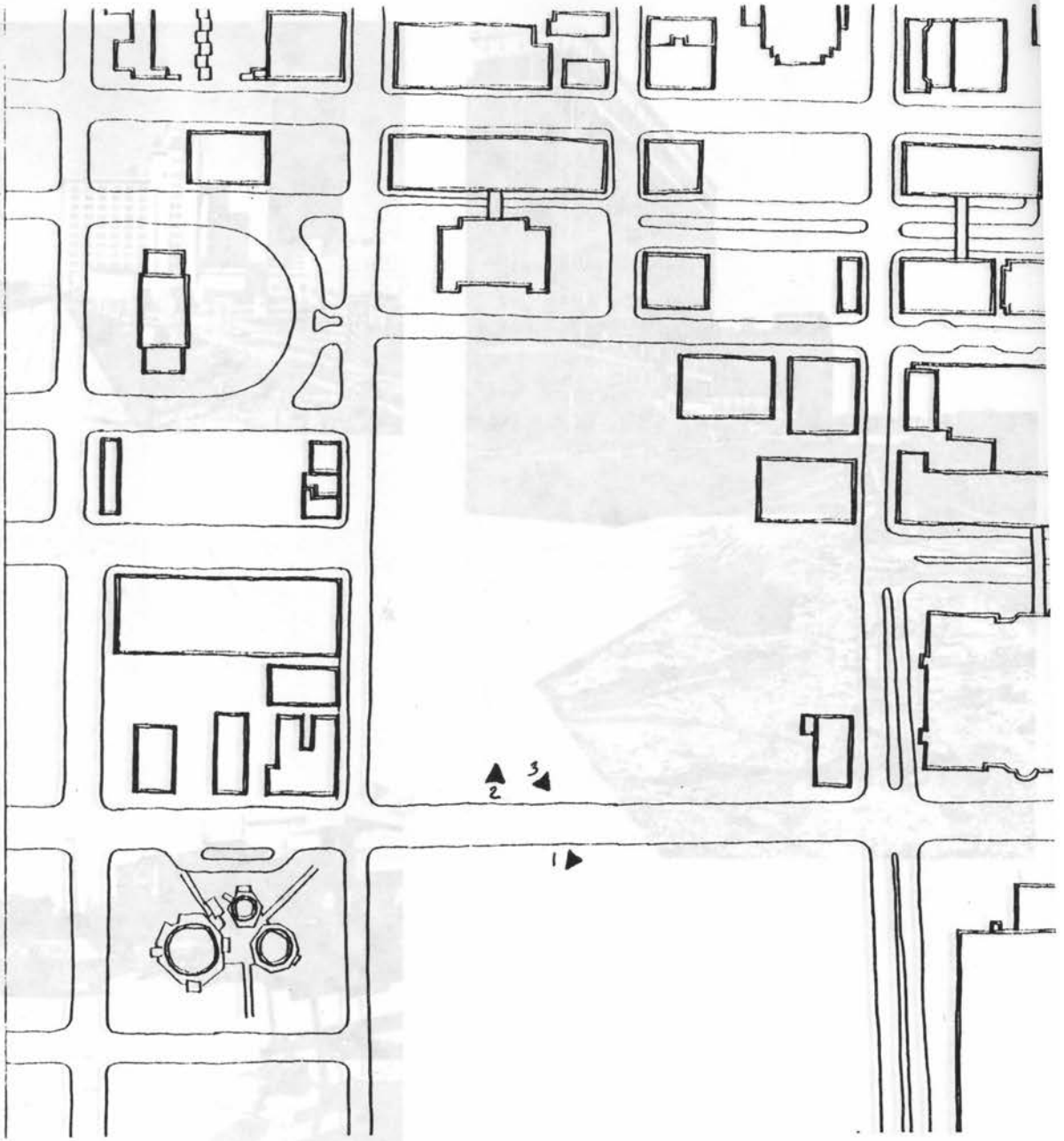






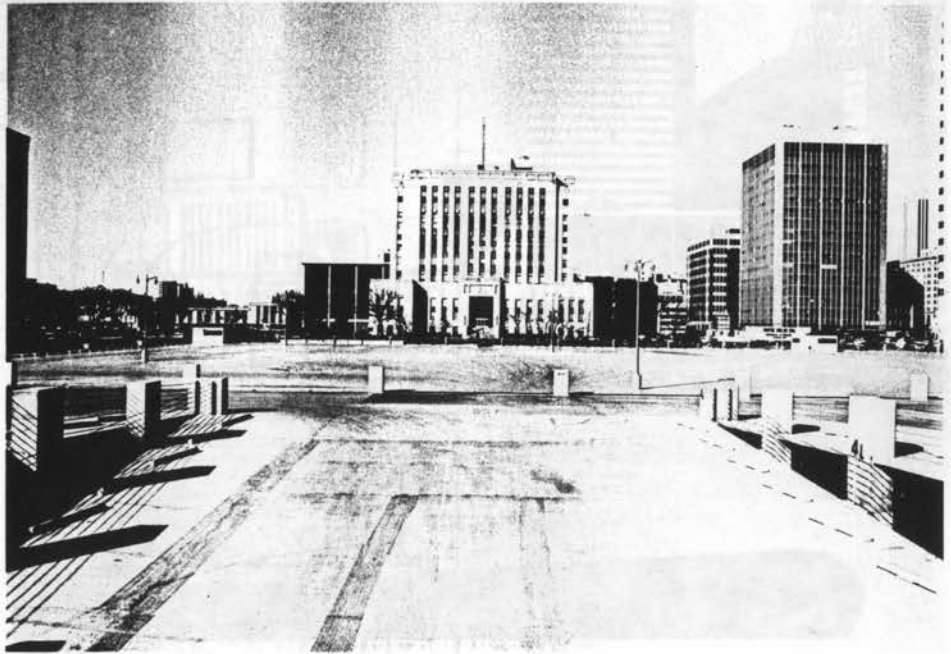
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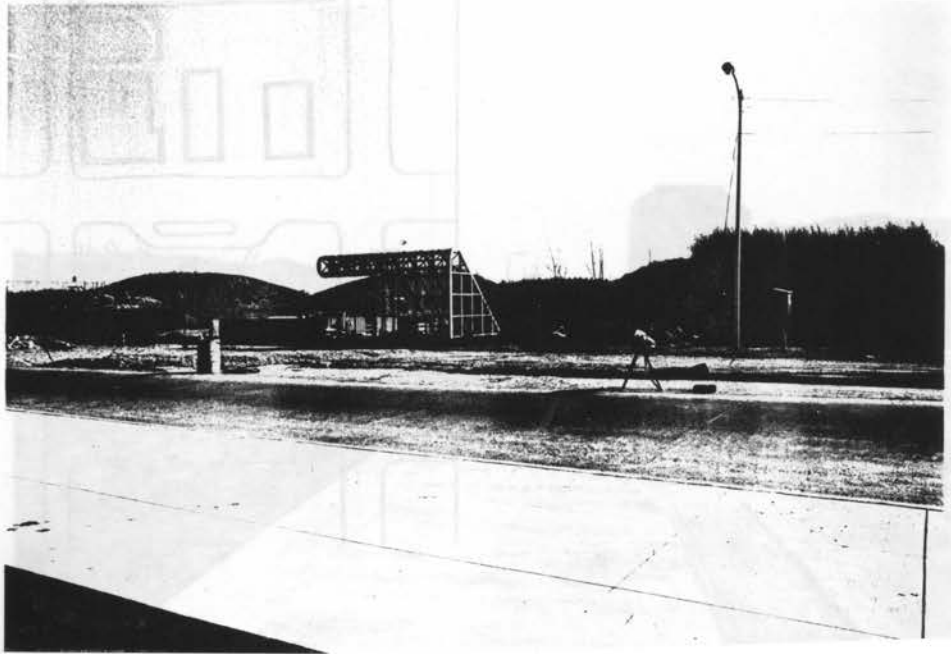


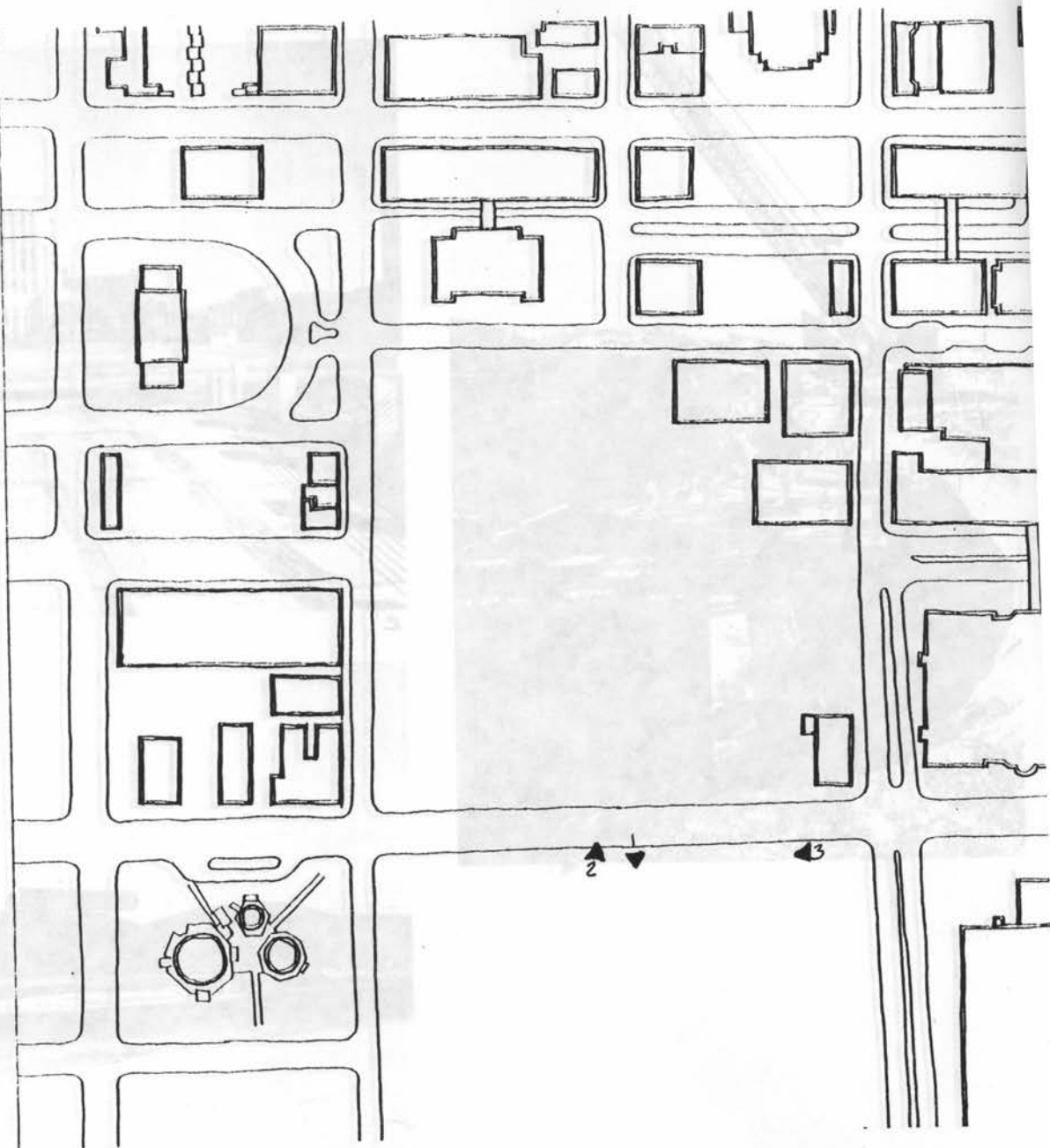
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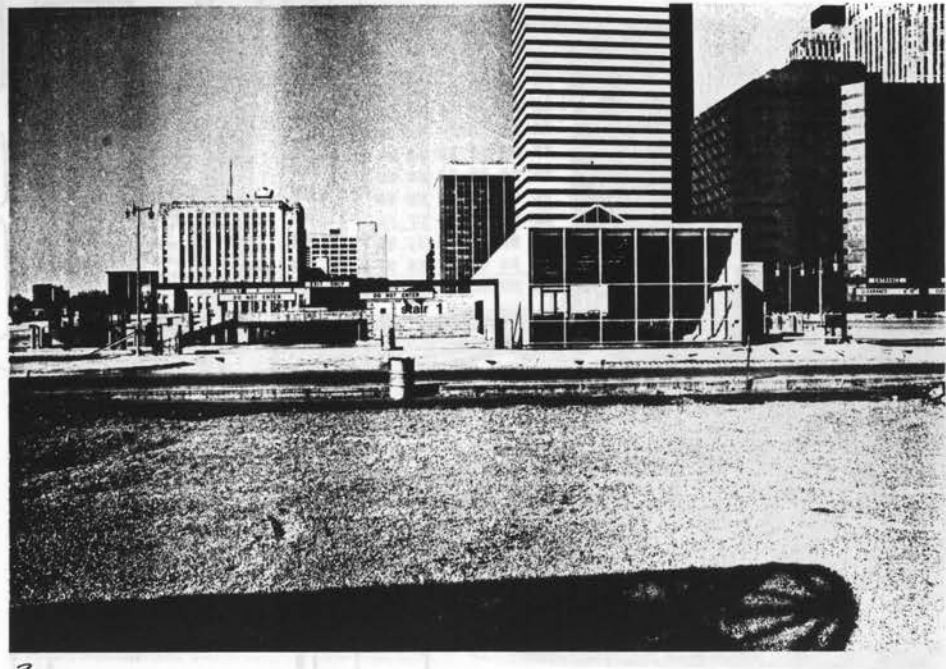
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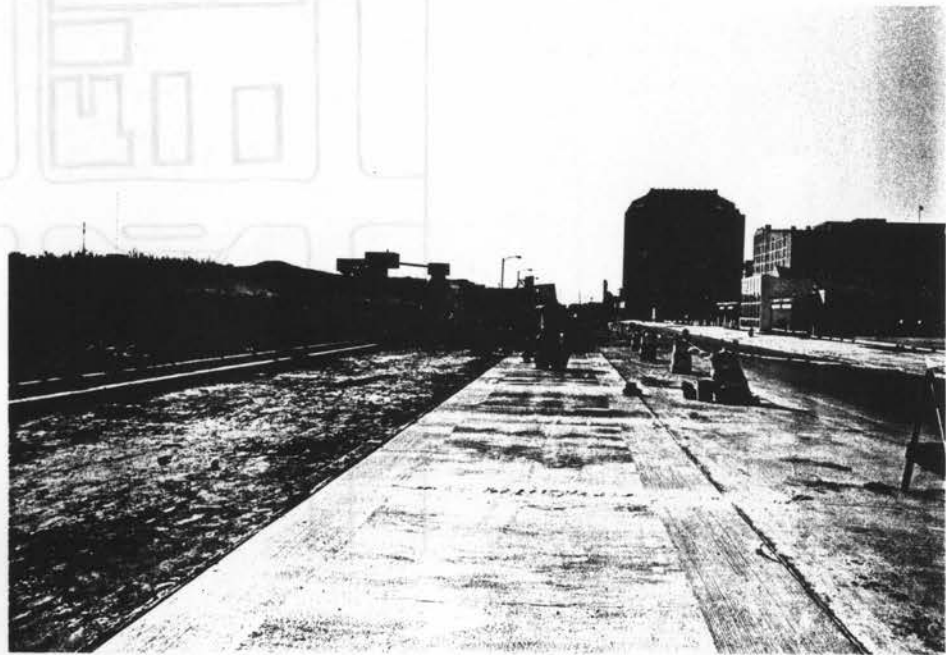
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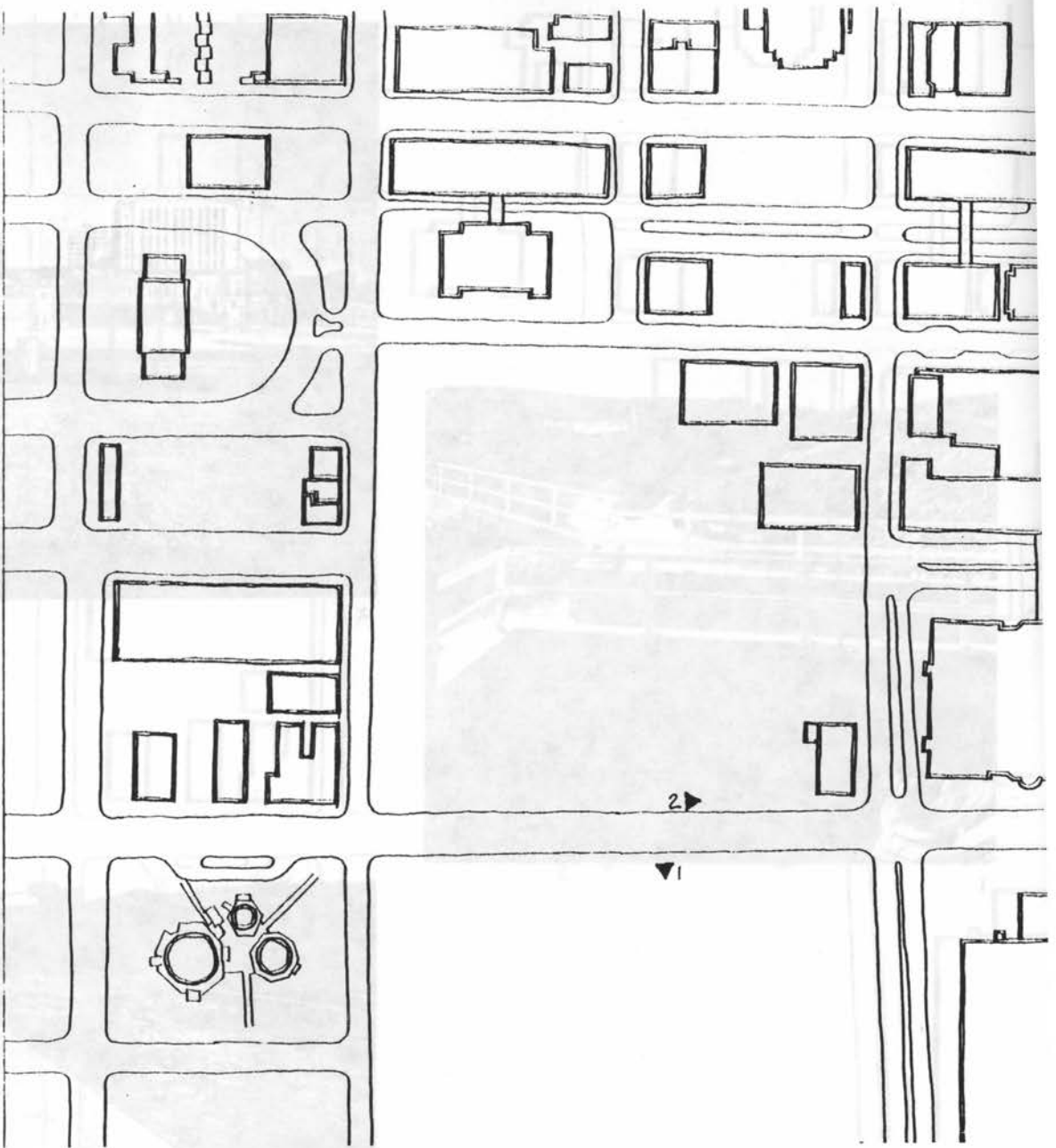


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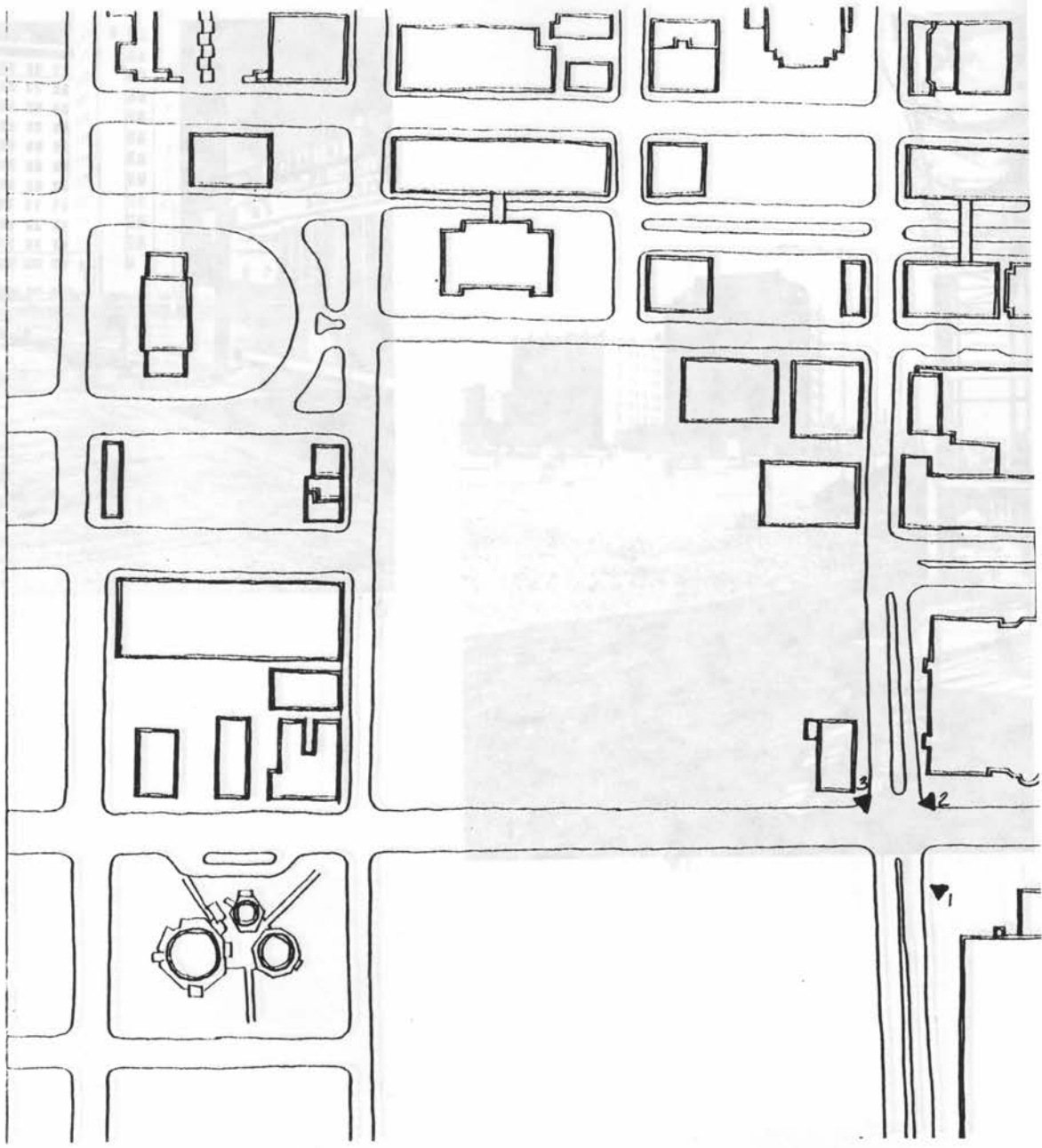


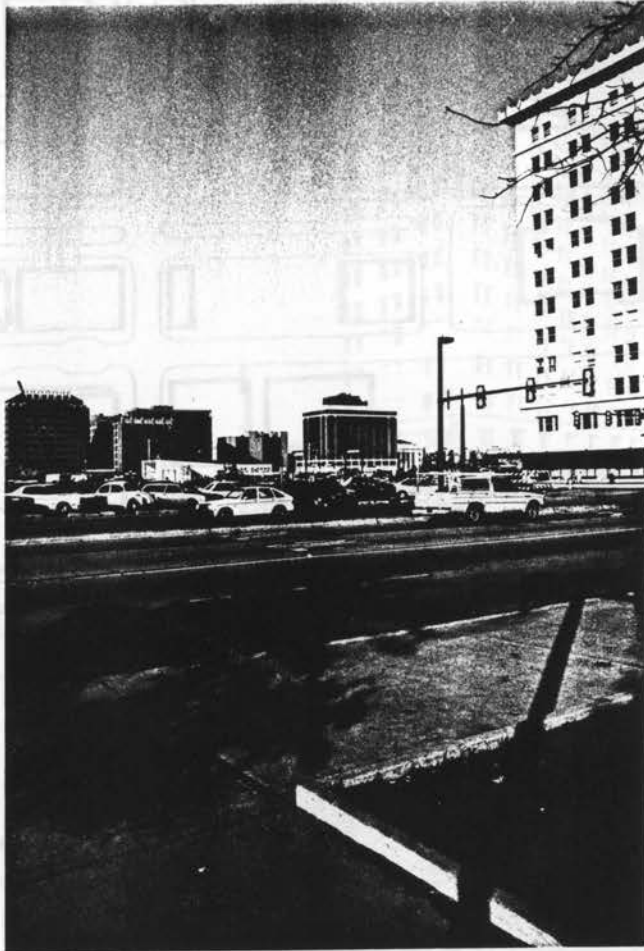




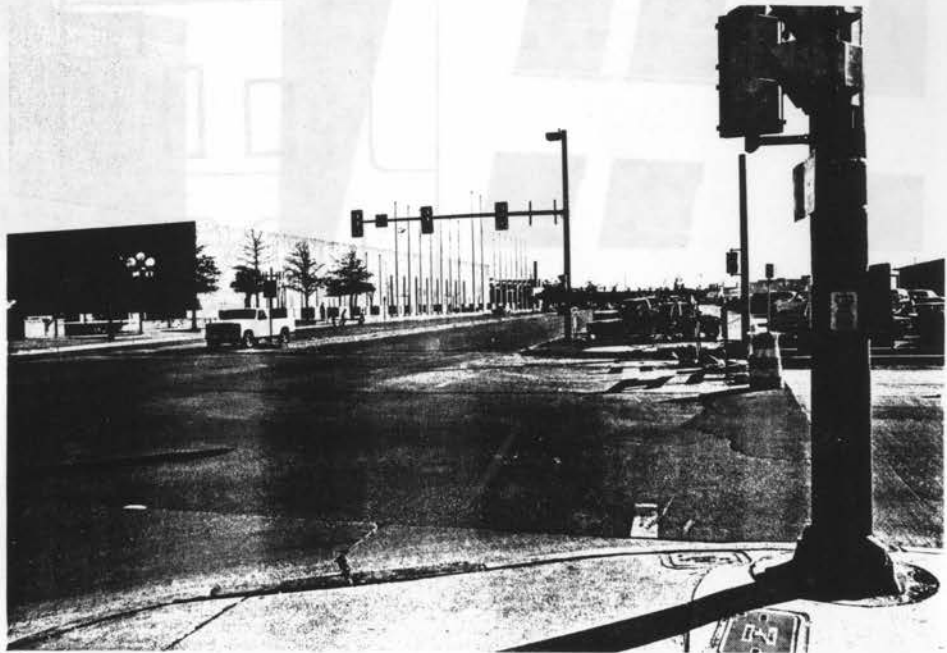
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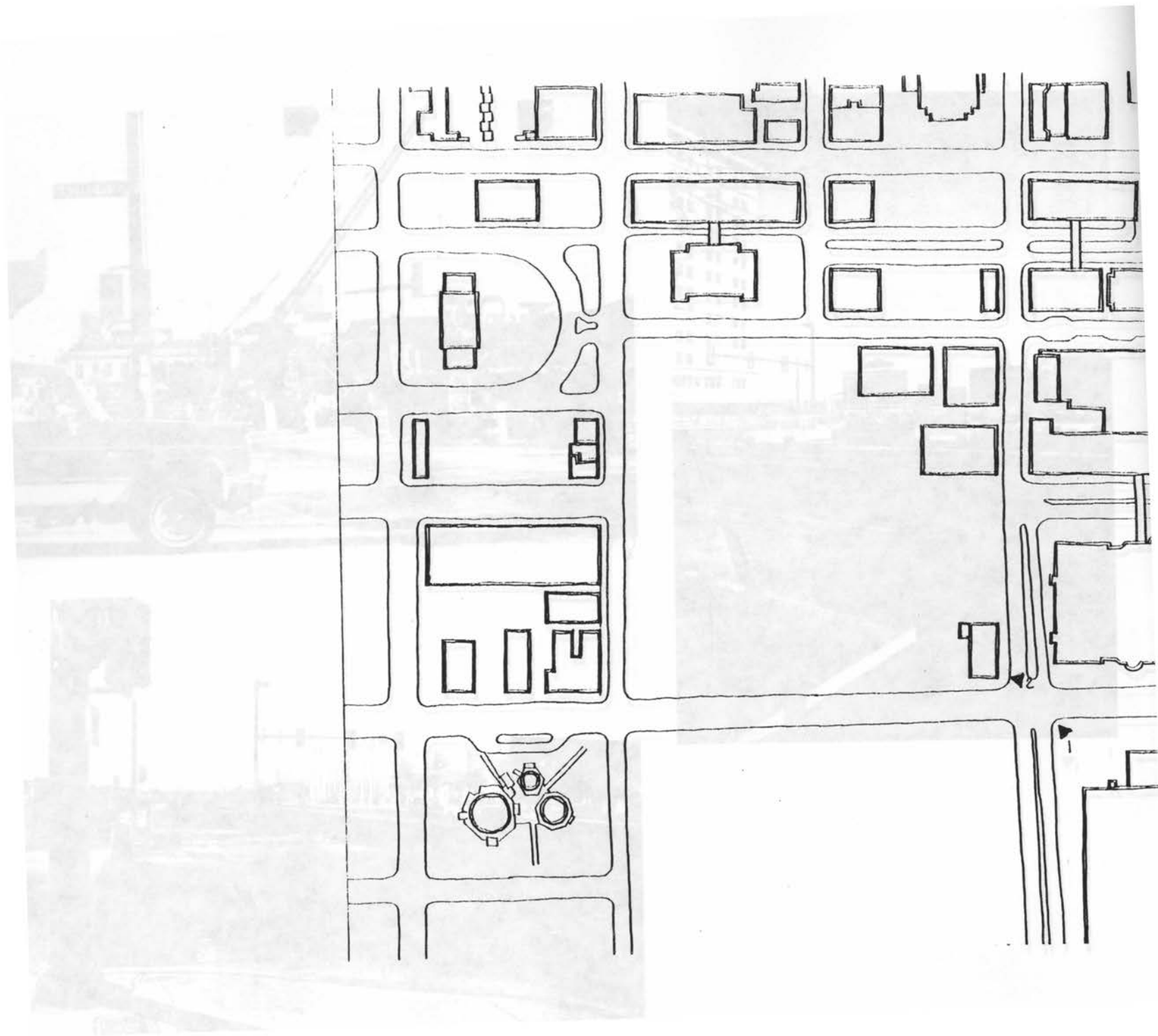




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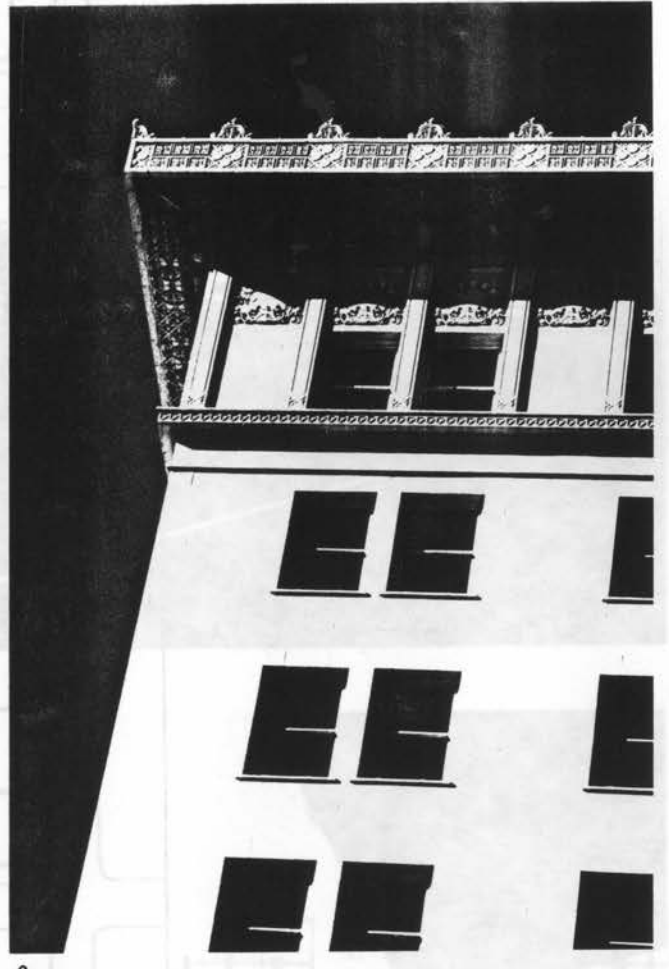


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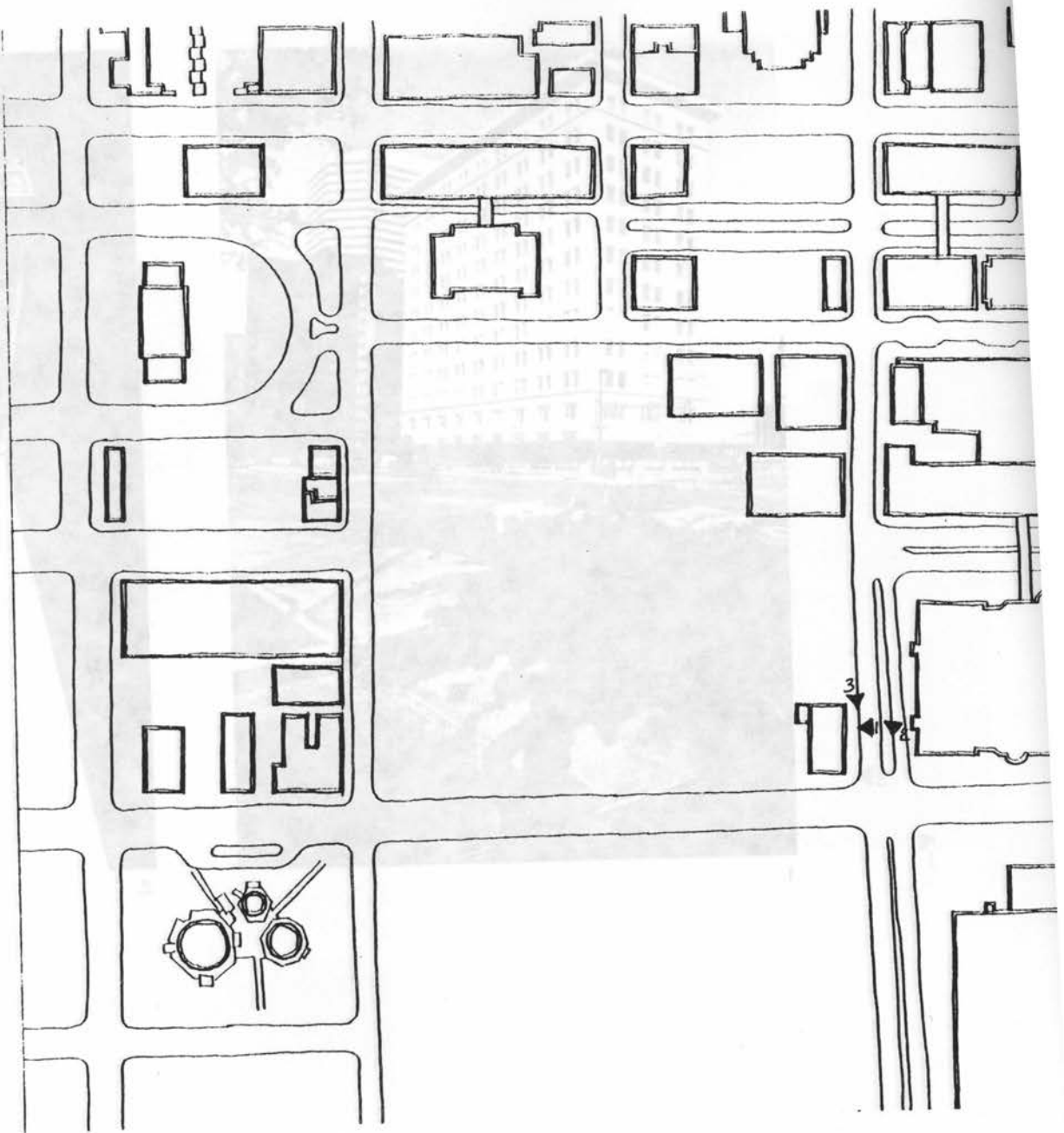




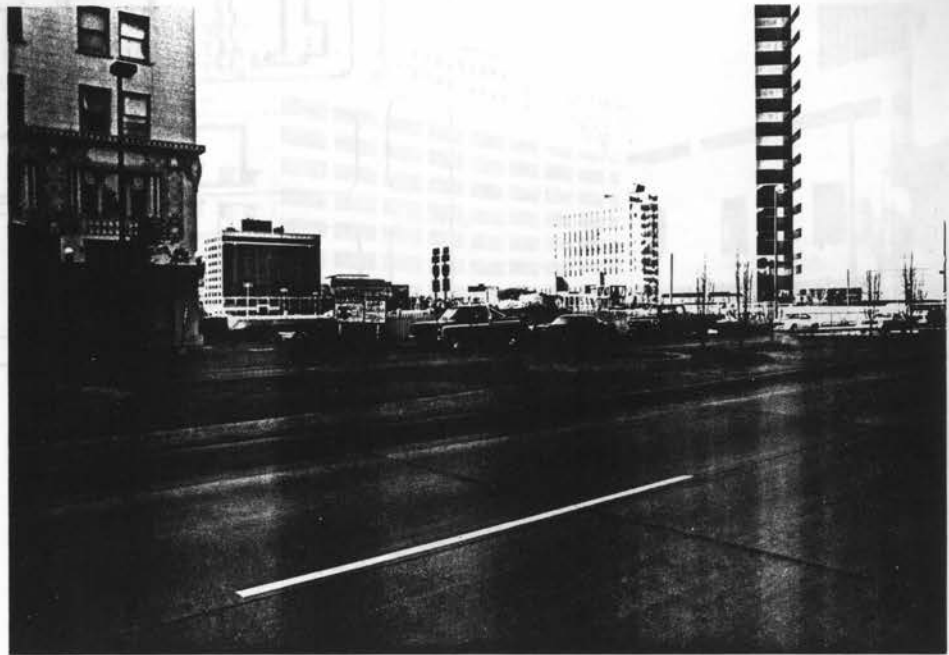
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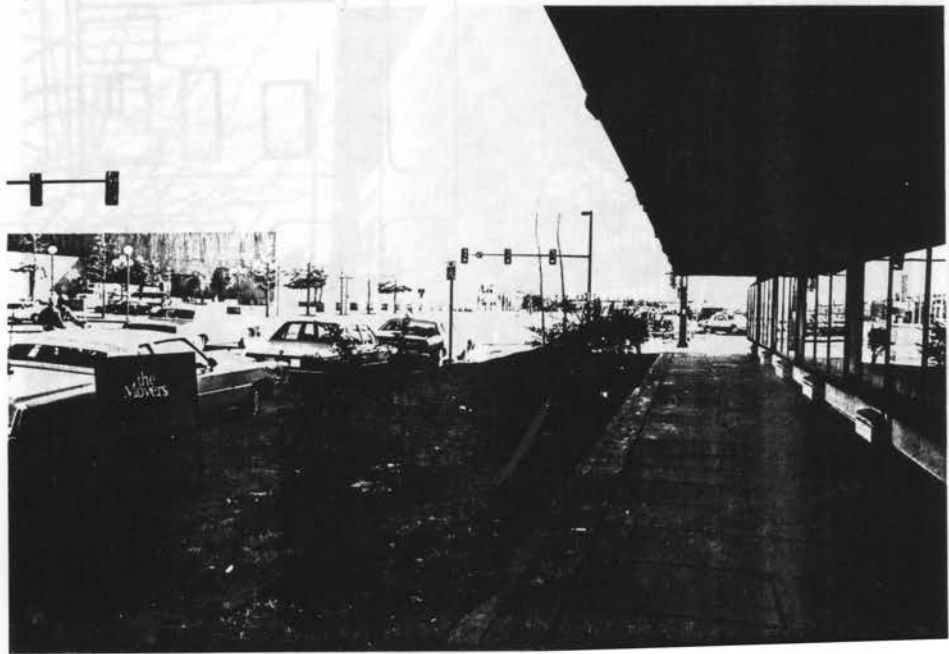
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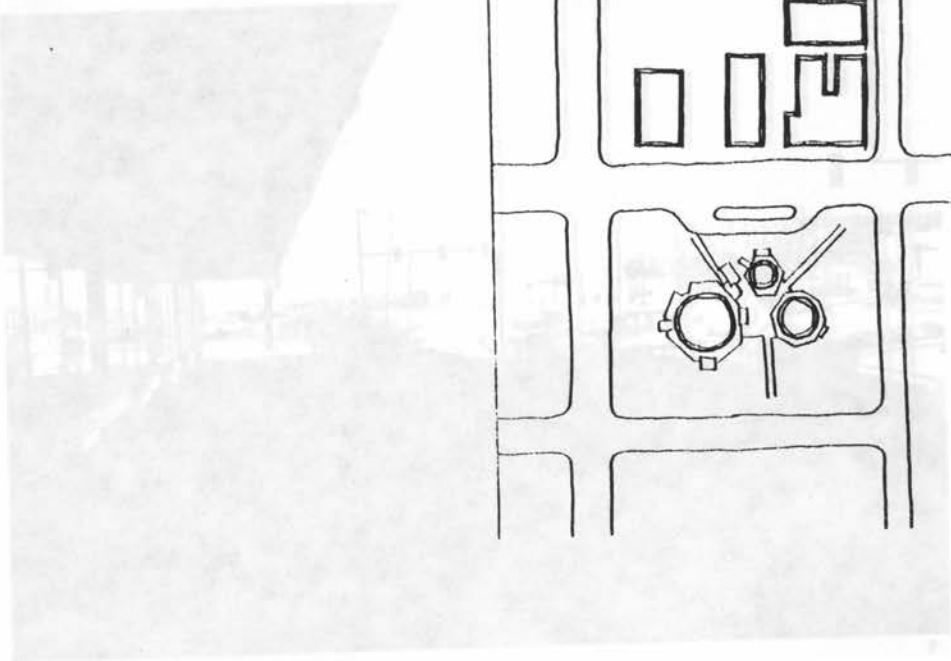
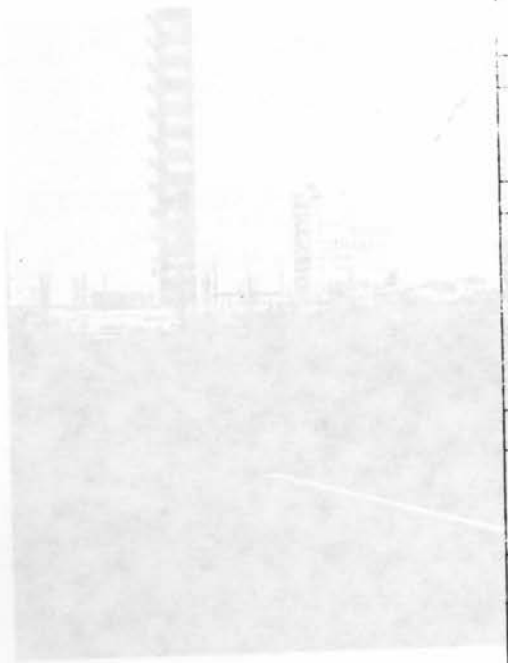
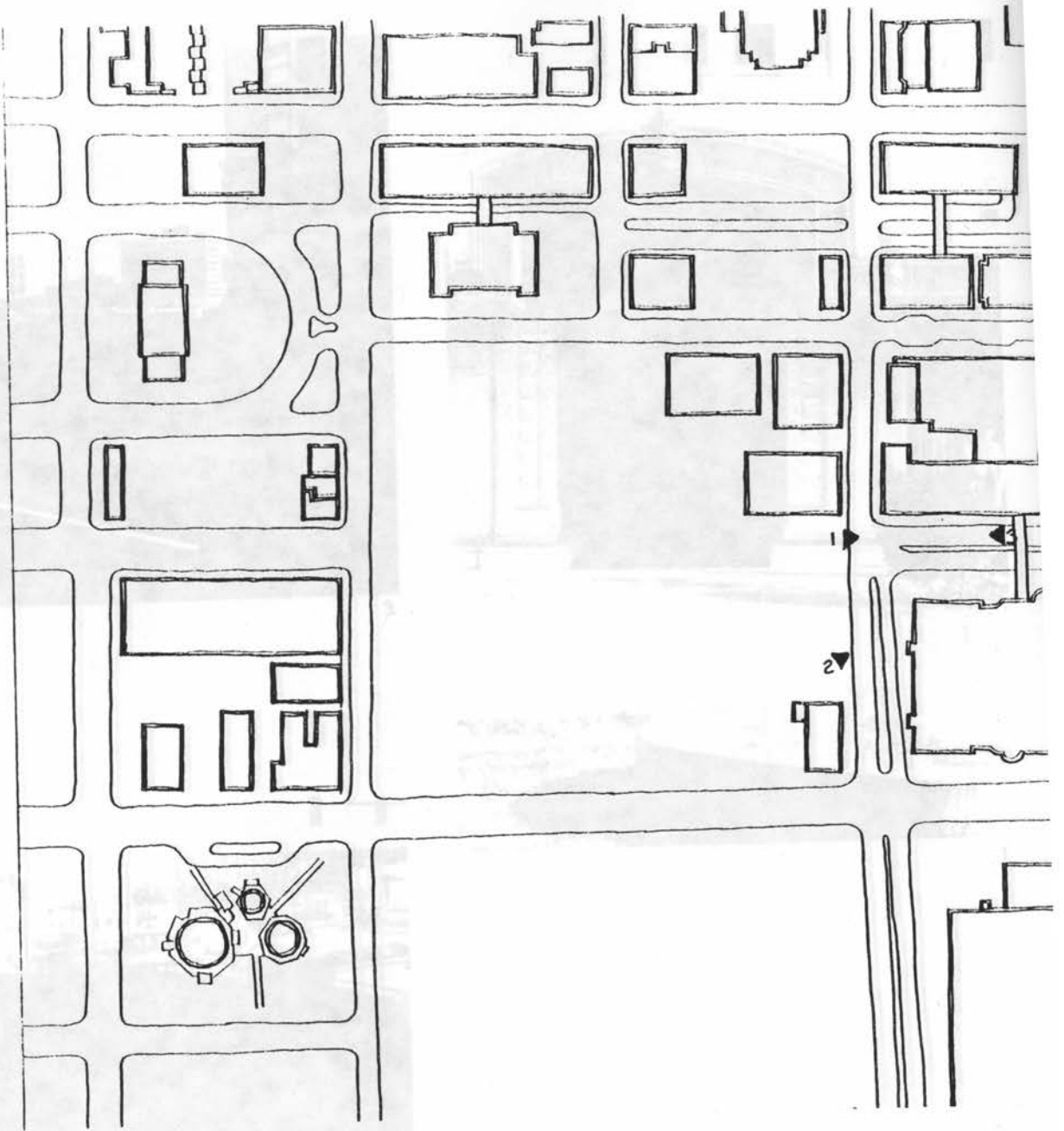


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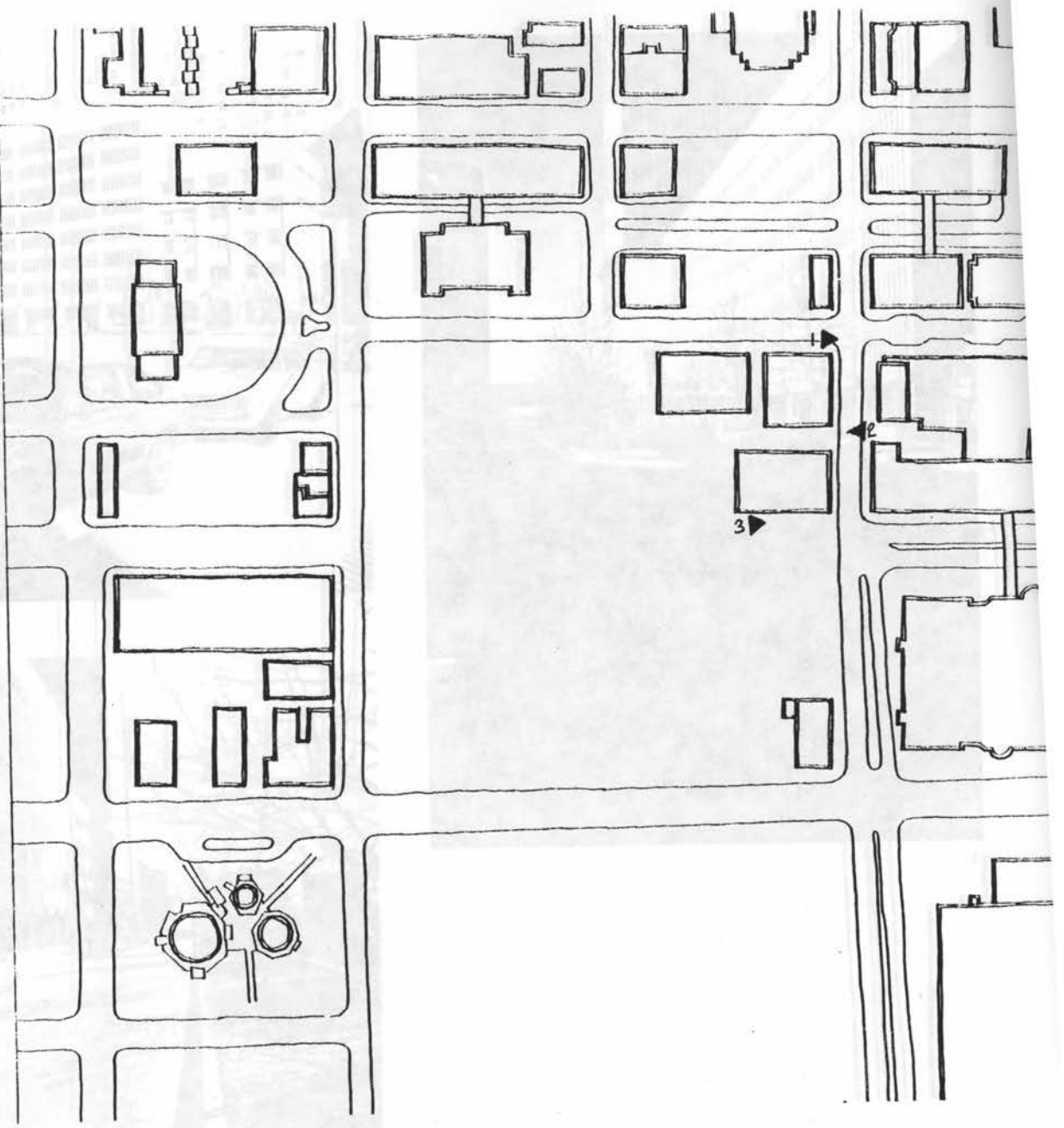


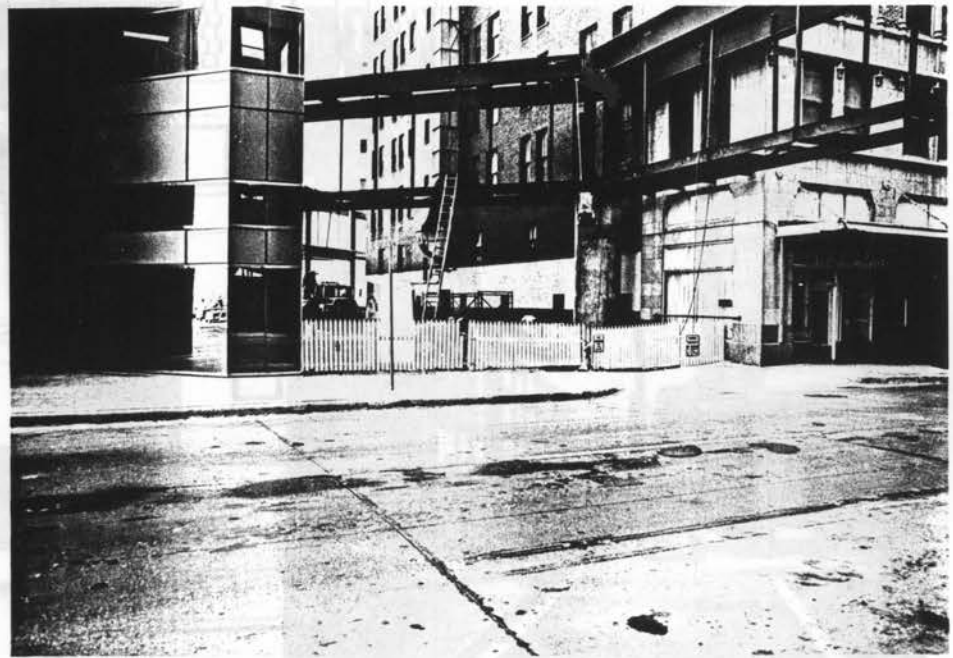
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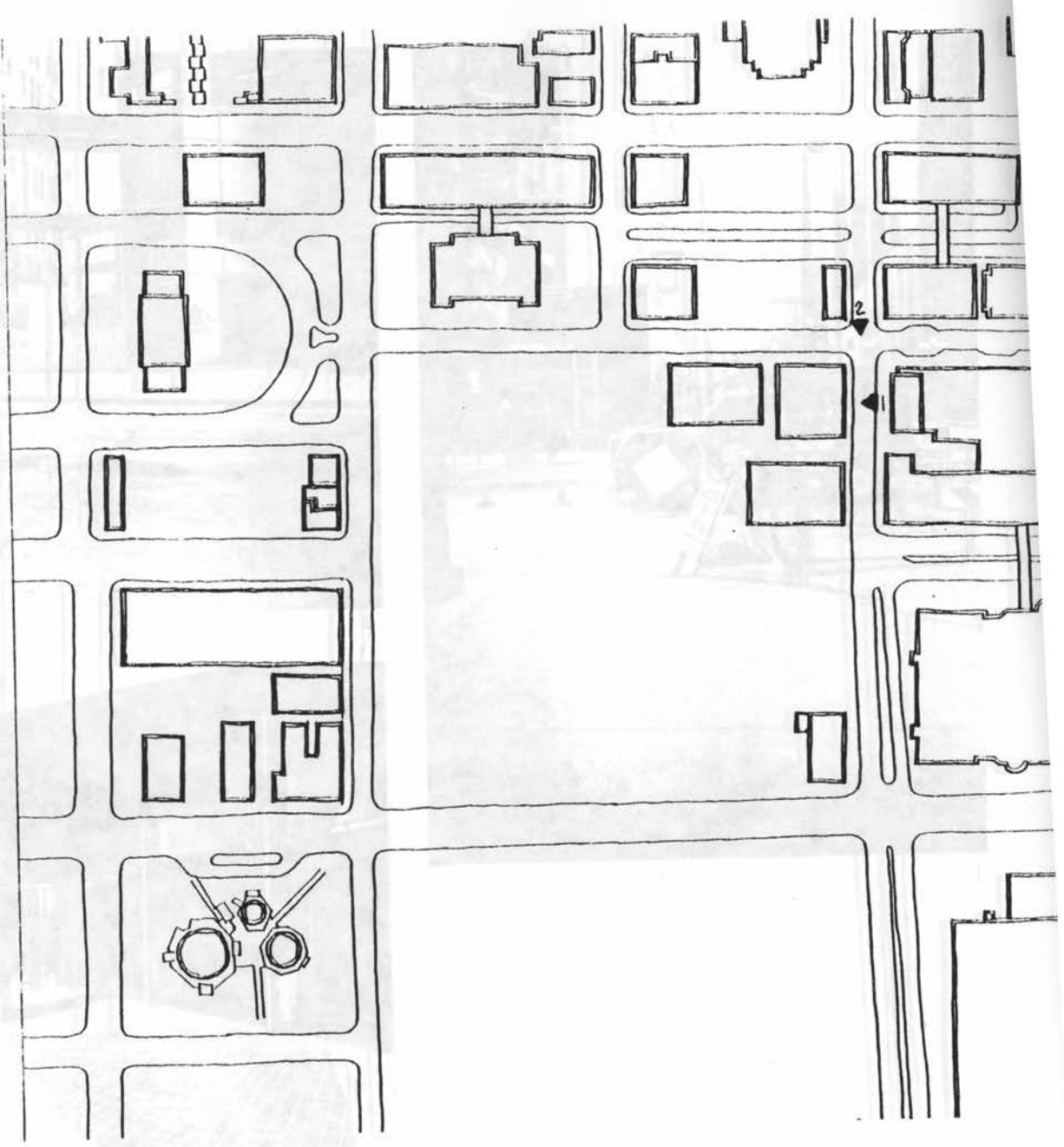






2





CL



1



2



# CLIMATE

Maximum  
Average  
Extreme



Days 90°  
32°

				2	11	20	20	10	1		
20	16	8	1						1	7	17

First date of freeze October 30, Last date March 31 - April 10.

Length of freeze free period 210 days.



# Normal Daily Temperature

precipitation

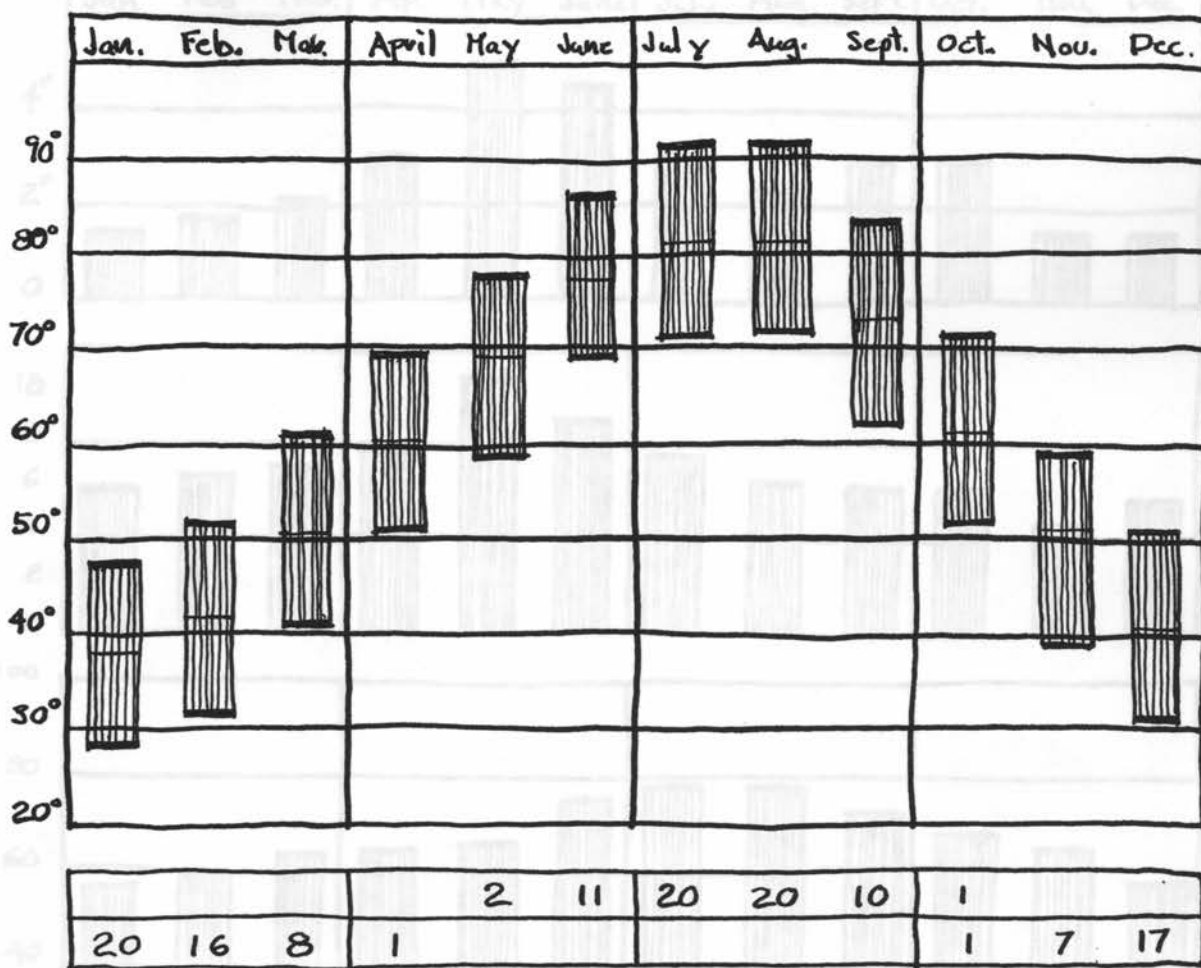
Maximum  
Average  
Extreme

32.25 total

Days of rain

82 days total

% of sunshine



Days 90+

32-

First date of freeze October 30, Last date March 30 - April 10.

Length of freeze free period 210 days.

# Rain

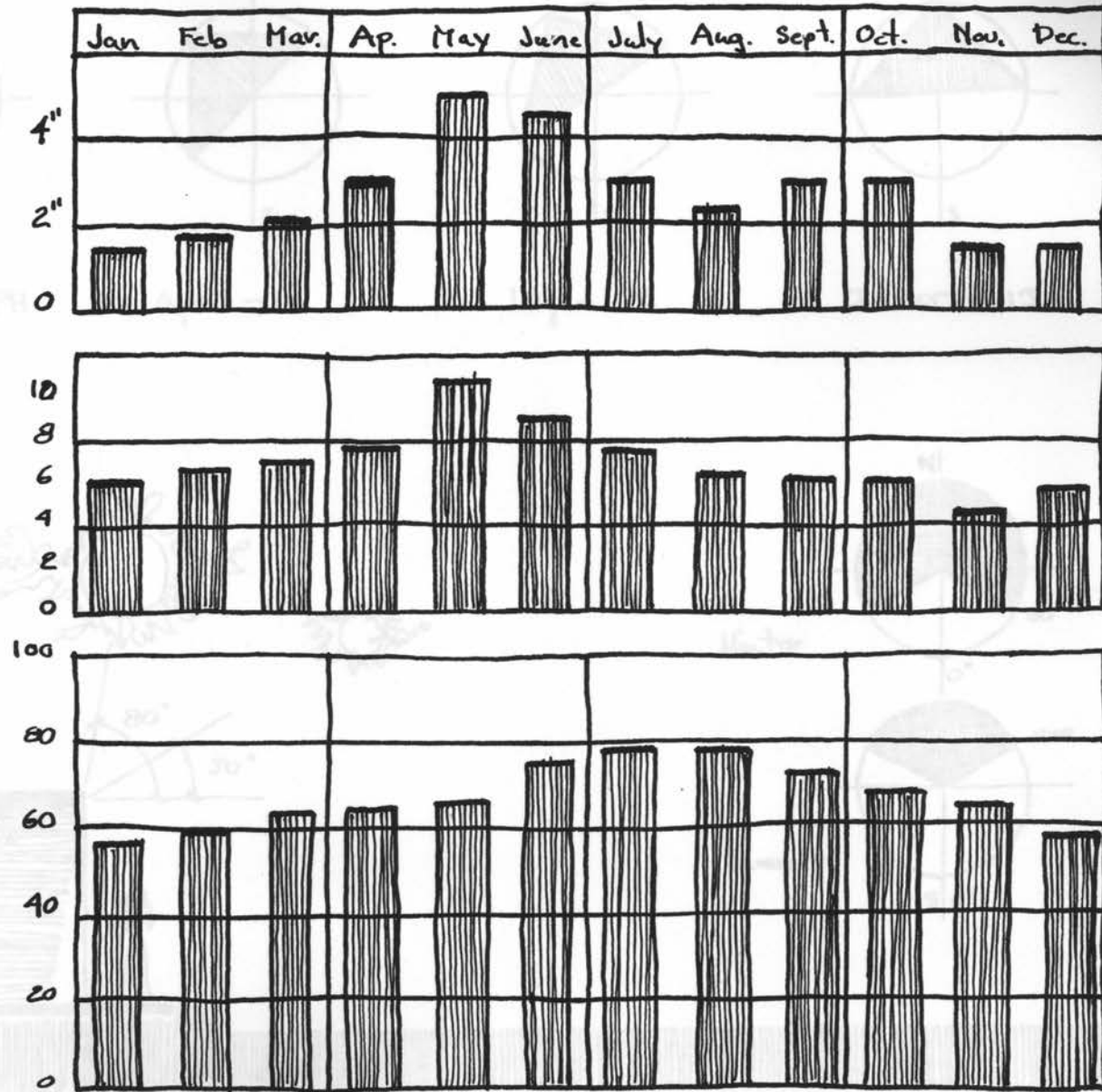
precipitation

32.25 total

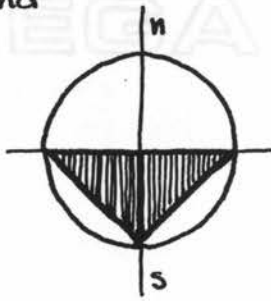
Days of rain

82 days total

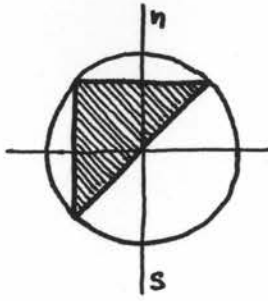
% of sunshine



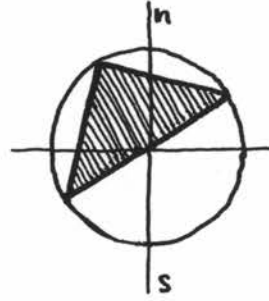
Wind



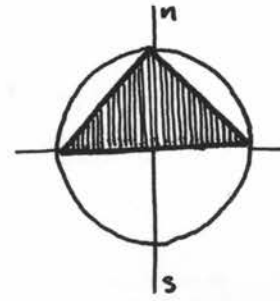
Jan. - 15 MPH



April - 16

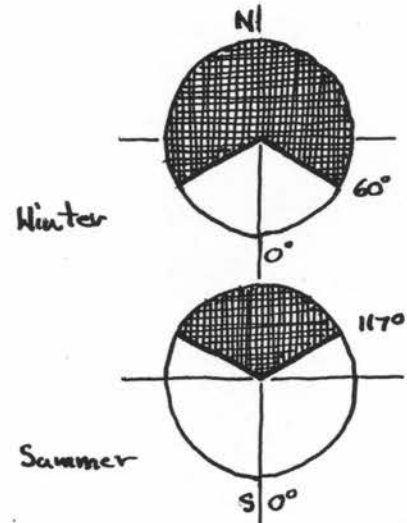
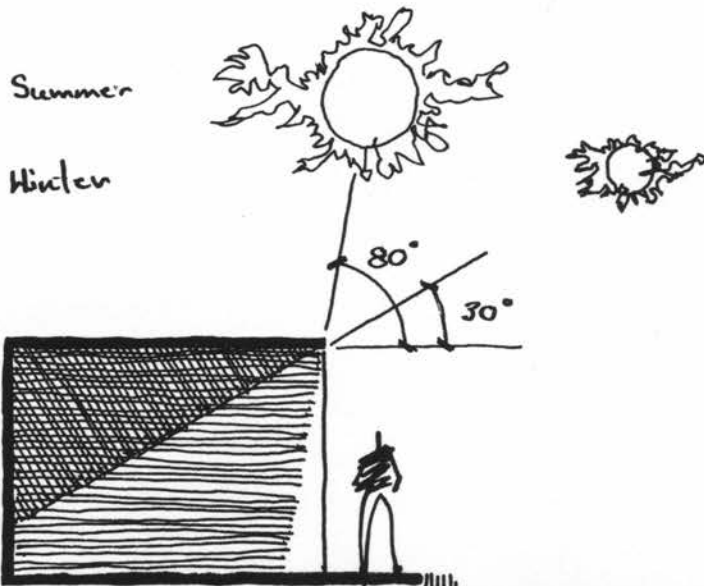


July - 12



October - 13

Sun Angles



# LEGAL

Definitions: A means of egress is a continuous and unobstructed way of exit from any point in a building.

Exit access - leads to an exit

Exit - that portion of the building which is separate from all other parts of the building and provides a protected way of travel.

Exit discharge - portion of a means of egress between the exit and the public way.

Protective enclosure of exits when an exit is required to be separate from a building, it will meet the following requirements:

a. If the exit connects 3 stories or less, it will have a 1 hr fire rating.

b. If the exit connects more than 4 stories, it will be made of non-combustible construction and will have a 2 hr fire rating.

c. Any opening will be protected by an approved self-closing fire door.

d. Openings in an exit enclosure shall be confined to those necessary for access to the enclosure and for egress from the enclosure. No exit will be used for the piping of flammable liquids or gases.

## General Provisions of Means of Egress

Definitions: A means of egress is a continuous and unobstructed way of exit from any point in a building.

Exit access - leads to an exit

Exit - that portion of the building which is separate from all other parts of the building and provides a protected way of travel

Exit discharge - portion of a means of egress between the exit and the public way.

Protective Enclosure of Exits: When an exit is required to be separate from a building it will meet the following requirements:

a. If the exit connects 3 stories or less it will have a 1 hr. fire rating.

b. If the exit connects more than 4 stories it will be made of non-combustible construction and will have a 2 hr fire rating.

c. Any opening will be protected by an approved self closing fire door.

d. Openings in an exit enclosure shall be confined to those necessary for access to the enclosure and for egress from the enclosure.

No exit will be used for the piping of flammable liquids or gases.

## Width and Capacity of Means of Egress

Means of Egress shall be measured in units of exit width of 22 inches. Fractions of a unit shall not be counted except that 12 inches added to one or more full widths shall be counted as  $\frac{1}{2}$ .

Where exits serve more than one floor they shall consider only each floor individually.

The means of egress will not narrow in the direction of exit travel.

When means of egress converge from above and below the point of convergence shall be not less than the sum of the two.

Exits shall be remote from each other.

The travel distance to an exit will be measured along the centerline of a natural path from the most remote point to the centerline of the doorway.

Every exit shall give access to at least 2 exits by separate ways of travel.

Ways of exit shall be clearly recognizable as such. Hangings or draperies shall not be placed over exit doors. Mirrors shall not be placed in or adjacent to any exit in such a manner as to confuse the direction of exit.

Exterior ways of exit shall be smooth, solid, and substantially level with floors.

Where accumulation of snow or ice is possible the exterior way of exit will be protected by a roof.

Movable objects must be kept out of the path of travel.

When permitted a maximum of 50% of the exits can discharge on the floor of discharge provided all of the following are met

a. such exits are to be free and unobstructed way to the exterior of the building.

b. the floor of discharge and all adjacent areas on the floor are provided with automatic sprinkler protection.

Exception: 1. The depth from the exterior is not greater than 10' nor the length greater than 20'.



2. The foyer is separated from the remainder of the building by providing at least the construction of wired glass in steel frame.
  3. The foyer serves only as a means of egress.
- c. The entire area of the floor of discharge is separated from any floors below by at least a 2 hour fire resistance.

Exit stairs which extend beyond the means of egress floor of discharge will be interrupted by partitions or doors.

Ceiling ht. min. of 7'-6", door ht. of 6'-8"

## Doors.

Windows which because of the configuration or design may be mistaken for doors shall be made inaccessible to the occupants by barriers.

Doors will open fully in the direction of egress. when serving an occupant load more than 50.

The force required to open doors shall not exceed 50 pounds applied to the latch stile.

Doors to the stair enclosure or horizontal exit shall have a self-closing mechanism.

No single door in a doorway will be less than 28" wide.

No single door in a doorway will be more than 48" wide.

The floor will be substantially level on both sides of the door for a distance of at least equal to the width of the widest door.  
A door opening to the exterior may step down no more than 8".

Panic bars will release to a force not to exceed 15 pounds.

### Interior Stairs and Smokeproof towers.

All stairs serving as a required means of egress shall be of the permanent fixed construction.

Stairs shall be of Class A or Class B.

	Class A	Class B
Min. width clear of all obstructions, except handrails which may project not more than $3\frac{1}{2}$ " each side and stringers which may project not more than $1\frac{1}{2}$ " each side	44 in	44 in, 36" where total capacity does not exceed 50.
Max ht. of risers	$7\frac{1}{2}$ "	8"
Min width of tread exclusive of nosing or projection	10"	9"
Winders	None	None
Min. headroom	6'-8"	6'-8"
Max. ht. between landings	9 ft.	12 ft.
Min dimension of landing in direction of travel	44 in	44 in
Doors opening immediately on stair with out landing.	No	No

The sum of 2 risers and one tread will be not less than 24" or greater than 25"

The min number of risers in any one flight of stairs will be 3.

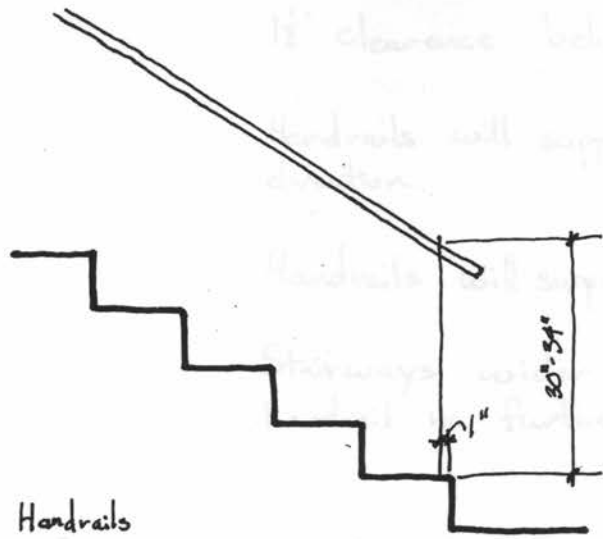
Each stair will carry a load of 100<sup>#</sup>/<sub>ft<sup>2</sup></sub> or a concentrated load of 300<sup>#</sup> located to produce a max. of stress.

There will be no variation of more than  $\frac{3}{16}$ " in the width of treads or the height of risers.

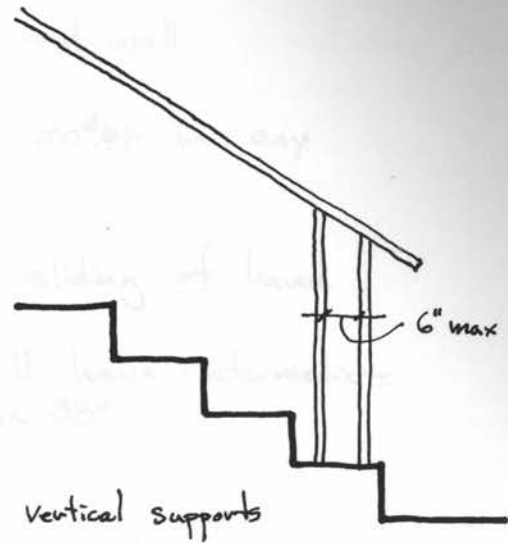
Tread surface will be nonslip.

Guards and handrails will continue for the full length of each flight of stairs.

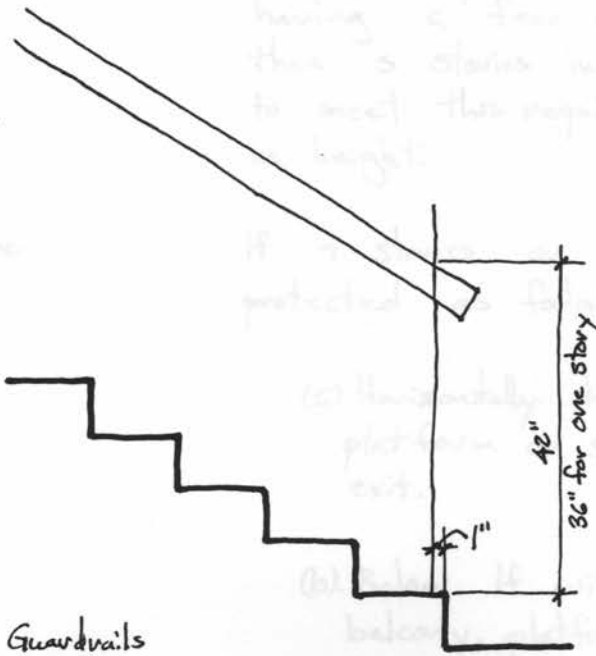
Nothing will catch on to loose clothing.



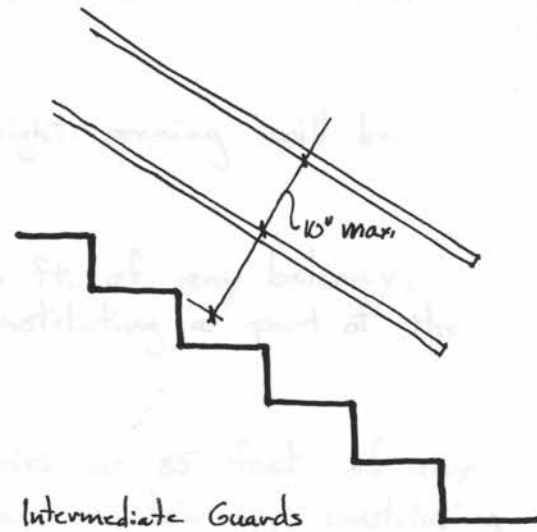
Handrails



Vertical supports



Guardrails



Intermediate Guards

$1\frac{1}{2}$ " clearance between hand rail and wall.

Handrails will support a load of 200#/ft in any direction.

Handrails will support continuous sliding of hand.

Stairways wider than 88" will have intermediate handrail no further apart than 88"

#### Outside Stairs-

Outside stairs will be arranged as to avoid any handicap to the use of the stairs by persons having a fear of high places. For stairs more than 3 stories in height any arrangement intended to meet this requirement will be at least 4 feet in height.

#### Enclosure

If 4 stories or more in height opening will be protected as follows.

(a) Horizontally. If within 15 ft. of any balcony, platform or stairway, constituting a part of the exit.

(b) Below. If within 3 stories or 55 feet of any balcony, platform, walkway or stairway constituting

Exit Marking

a part of the exit or within 2 stories or 20 feet of a platform or walkway leading from any story to the exit.

(C.) Above. If within 10 feet of any balcony, platform or walkway as measured vertically or from any stair treads as measured vertically from the face of the outside riser.

(d.) Top story. Protection for wall openings in the top story shall not be required where stairs do not lead to the roof.

### Illumination of Means of Egress

The floors of means of egress shall be illuminated at all points including angles and intersections of corridors and passageways, stairway landings of stairs and exit door to values not less than 10 ft-candles measured at the floor.

Any required illumination shall be arranged so the failure of any single lighting unit will not leave any area in darkness.



## Exit Marking

Any door, passage, or stairway, which is neither an exit nor a way of exit access and which is so located or arranged as to be likely to be mistaken for an exit, shall be identified by a sign reading "Not An Exit" or similar designation or shall be identified by a sign indicating its actual character, such as "To Basement," "Storeroom," "Linen Closet" or the like.

Every required sign designating an exit or way of exit access shall be so located and of such size, color, and design as to be readily visible. No decorations readily visible furnishings, or equipment which impair visibility of an exit sign shall be permitted, nor shall there be any brightly illuminated sign (for other than exit purposes) display or object in or near the line of vision to the required exit sign of such a character as to so detract attention from the exit sign.

A sign reading "exit" or similar designation, with an arrow indicating the direction shall be placed in every location where the direction of travel to reach the nearest exit is not immediately apparent.

Every sign shall be distinctive in color and shall provide contrast with decorations, interior finish or other signs.

## Illumination of Signs

Every sign shall be suitably illuminated by a reliable light source giving a value of not less than 5 ft-candles on the illuminated surface.

Such illumination shall be continuous as required under the provisions of sec. 5-10 Illumination of means of egress, and where emergency lighting facilities are required exit signs.

(a) The lowest or next to the lowest level is a street floor.

(b) The entire area including all communicating floor levels is sufficiently open and unobstructed so that it may be assumed that a fire or other dangerous condition in any part will be immediately obvious to the occupants of all levels and areas.

(c) Exit capacity is sufficient to provide simultaneously for all the occupants of all communicating levels and areas, all communicating levels in the same fire area being considered as a single floor area for the purpose of determining capacity of required exit.

## Features of Fire Protection

In any building with low hazard occupancy or with ordinary hazard occupancy with automatic sprinkler protection up to 3 communicating floor levels are permitted without enclosure protection between floors, providing all the following conditions are met:

- (a). The arrangement is permitted by the applicable occupancy section of the Code and by the authority having jurisdiction.
- (b). The lowest or next to the lowest level is a street floor.
- (c). The entire area including all communicating floor levels is sufficiently open and unobstructed so that it may be assumed that a fire or other dangerous condition in any part will be immediately obvious to the occupants of all levels and areas.
- (d) Exit capacity is sufficient to provide simultaneously for all the occupants of all communicating levels and areas, all communicating levels in the same fire area being considered as a single floor area for the purpose of determining capacity of required exit.

### Protective Signaling

(e). Each floor level considered separately, has at least one-half of its individual required capacity provided by an exit or exits leading directly out of that area without traversing another communicating floor level or being exposed to the spread of fire or smoke.

### (f) Manual fire alarm initiation

(f). All requirements of this code with respect to interior finish, protection of hazards, construction and other features are fully observed, without waivers.

### extinguishing systems provision

### (a) Automatic detection and alarm initiation of individual

### Interior Finish

- Class A interior finish, Flame spread of 0-25
- Class B interior finish, Flame spread of 26-75
- Class C interior finish, Flame spread of 76-200
- Class D interior finish, Flame spread of 201-500
- Class E interior finish, Flame spread of 500+

### Automatic Sprinklers

Where a complete system of sprinklers is installed, interior finish with a flame spread rating not over Class C may be used in any location where class B is normally specified, and with a rating of class B in any location where class A is normally specified unless specifically prohibited elsewhere in the Code.

audible alarm initiation shall produce signals which are distinctive from audible signal indicating devices used

## Protective Signaling Systems

A signaling system shall provide signal indication due to any or all of the following means of initiation:

- (a). Manual fire alarm initiation
- (b). Automatic fire detection and alarm initiation
- (c). Automatic smoke detection and alarm initiation
- (d). Automatic detection and alarm initiation of extinguishing system operation
- (e). Automatic detection and alarm initiation of industrial processes or other conditions endangering life.
- (f). Monitoring and supervisory signal initiation of conditions which would prevent operation of an extinguishing system.
- (g). Voice communication alarm initiation.

## Signal Indicating Devices

Audible alarm indicating devices shall be of such character and so distributed to be effectively heard above the maximum noise level obtained under normal conditions of occupancy.

Audible alarm indication shall produce signals which are distinctive from audible signal indicating devices used

for other purposes in the same area.

Visual alarm indicating devices may be used in lieu of audible devices where permitted.

Except as provided in sentence 2, where a protective signaling system is required for the purpose of evacuation it shall be so installed as to provide effective warning of fire in any part of the building. Where a building is divided by (1) fire walls into separate fire sections or (2) by other means with adequate safeguards against the spread of fire or smoke from one section to another each section may be considered a separate building.

#### Common requirements.

Systems shall be arranged to cause effective response of all required signal indicating devices without the necessity of manual operation after the operation of any signal initiating device.

A signal system may be arranged to automatically perform local incidental control functions necessary to make the premises safer in the event of fire or to make it possible to hear alarm signals. The performance of incidental control functions, such as the release of self-opening or self-closing doors, shutting

off of supplies of gas, fuel oil or electrical power. Switching on emergency lights, switching off air supply ventilating fans and the like shall not in any way impair the effective response of all required alarm indicating devices. The performance of incidental control functions shall not interfere with the power or lighting or fan operating elevators.

### Manual Alarm Initiation

A manual fire alarm box shall be provided in the natural path of escape from fire near each exit from an area and shall be readily accessible, unobstructed and at visible points.

Additional fire alarm boxes will be located so that from any point of the building not more than 200 ft horizontal distance on the same floor must be traversed in order to reach a fire alarm box.

Each manual fire alarm box on a system shall be of the same general type

### Automatic Detection and Alarm Initiation

The connection of automatic fire detection devices shall not impair the effectiveness and dependability



of operation of manual fire alarm boxes to sound the alarm indicating signals.

### Segregation and Protection of Hazards.

Any operation or storage having a degree of hazard greater than that normal to the general occupancy of the building or structure under consideration shall be enclosed with construction having at least a 1-hour fire resistance rating or shall be provided with automatic fire protection or both. Where the hazard is severe, both the fire-rated construction and automatic fire protection shall be used.

All construction enclosing hazardous operations or storage shall have not less than 1 hour fire resistance, and all openings between the balance of the building and rooms or enclosures for hazardous operation or process shall be protected with self closing or automatic fire doors.

### Smoke Partitions

Smoke partitions shall have openings only for egress and for building service equipment. Doorways shall be protected by doors meeting the provisions of 6-613 and any openings where building service equipment pierces the partitions

New Mercantile shall be closed. Transfer grilles whether equipped with fusible link-released dampers or not shall not be used in these partitions.

Classification of ordinary hazard  
Doors in smoke partitions will be of swinging type and shall have a fire protection rating of not less than 20 minutes.

- a. Street floor - one person for each 30 sq ft gross floor area
- b. Sales floor below the street floor - one person for each 30 sq ft gross floor area
- c. Upper floors used for sales - one person for each 30 sq ft gross floor area
- d. Floors or portions of floors used only for office or other space - one person for each 100 sq ft gross floor area of office space
- e. Floors or portions of floors used for storage or open to the general public - one person for each 300 sq ft gross floor area
- f. Floors or portions of floors used for assembly purposes - Occupant load determined in accordance with place of assembly

All buildings one person for each 30 sq ft gross floor area for street level and one person for each 60 sq ft gross floor area for upper floors.

## New Mercantile Occupancies

Classification of Hazard. Mercantile occupancies shall be classed as ordinary hazard

Occupant load - The occupant load of mercantile buildings will be not less than follows.

- a. Street floor one person for each 30 sq ft of gross sales space.
- b. Sales floor below the street floor - same as street floor.
- c. Upper floors used for sales - one person for each 60 sq ft.
- d. Floors or portions of floors used only for offices one person for each 100 sq ft gross floor area of office space.
- e. Floors or portions of floors used for storage not open to the general public - one person for each 300 sq. ft.
- f. Floors or portions of floors used for assembly purposes - Occupant load determined in accordance with place of assembly.

Mall buildings one person for each 30 sq ft gross floor area for street level and one person for each 60 sq ft gross floor area for upper floors.

Each individual tenant space shall have means of egress to the outside and/or to the mall.

Each individual anchor store shall have means of egress independent of the covered mall.

### Means of Egress Requirements

Where a stairway, escalator, outside stair or ramp serves two or more upper floors, the same stairway or other exit required to serve any one floor may also serve the upper floors.

No inside open stairway, escalator or ramp may serve as a required egress facility from more than one floor.

Travel distance to exits shall not be more than 100 ft. 150 ft. in a sprinkled building.

The covered mall may be considered a pedestrian way if all the following are met.

(a) The covered mall shall be wide enough to accommodate the required egress as set forth and not less than 20 ft in width.

b the mall will provide a required means of exit access on each side of the mall not less than 10 ft.

Places of Assembly

Location of Place

c. The covered mall and all buildings connected thereto shall be protected throughout by an automatic sprinkler system.

d. Walls dividing stores from each other shall extend from the floor to the underside of the roof deck or floor deck above.

e. The covered mall will be provided with a smoke control system.

(1) In buildings of fire-resistant construction, a class A, B or C place of assembly shall be permitted at the level of exit discharge and in any story above the level of discharge.

(2) In buildings of heavy timber, protected noncombustible, protected ordinary and protected wood-frame construction, a class B or C place of assembly shall be permitted at the level of exit discharge.

(3) In buildings of noncombustible, ordinary and wood frame construction, a class C place of assembly shall be permitted at the level of exit discharge.

(4) In a building of any type of construction, a class A, B, or C place of assembly shall be permitted in any story below the level of exit discharge if the story in which the place of assembly and any story intervening between that story and the level of discharge are provided with complete automatic sprinkler protection.

If there is any opening between the level of discharge and the exit serving the place of assembly,

## Places of Assembly

### Location of Places of Assembly

The location of a place of assembly shall be limited as follows

- (a). In a building of fire-resistive construction, a Class A, B or C place of assembly shall be permitted at the level of exit discharge and in any story above the level of discharge.
- (b). In buildings of heavy timber, protected noncombustible, protected ordinary and protected wood-frame construction, a Class B or C place of assembly shall be permitted at the level of exit discharge.
- (c). In buildings of noncombustible, ordinary and wood frame construction, a Class C place of assembly shall be permitted at the level of exit discharge.
- (d). In a building of any type of construction, a Class A, B, or C place of assembly shall be permitted in any story below the level of exit discharge if the story in which the place of assembly and any story intervening between that story and the level of discharge are provided with complete automatic sprinkler protection.

If there is any opening between the level of discharge and the exits serving the place of assembly,

Classification of Pl. the level of discharge shall also be sprinkled.

The level of exit discharge shall be measured at the point of principle entrance to the building.

Where the principal entrance to a place of assembly is via a depressed terrace, the terrace shall be at least as wide as the exit which it serves, but not less than 5 feet wide, and it will be increased in width by 50 percent of any other exits tributary thereto.

Any place of assembly and its access to exits in buildings of other occupancy, such as ballrooms in hotels, restaurants in stores, roof top places of assembly or assembly rooms in schools shall be so located, separated, or protected as to avoid any danger to the occupants of the place of assembly from a fire originating in the other occupancy or smoke therefrom.

Occupancy and Occupant load.

Definition of Places of Assembly. Places of Assembly include, but are not limited to, all buildings or portions of buildings used for gathering together 50 or more persons in commercial places of assembly and 100 or more persons in non-commercial places of assembly.



## Classification of Places of Assembly

Each place of Assembly shall be classified according to its capacity.

Class A - 1000 persons or more

Class B - 500-1000 persons

Class C - 100-500 persons or 50-500 in commercial places of assembly.

Occupant load - The occupant load permitted in any assembly building, structure or portion thereof shall be determined by dividing the net floor area or space assigned to that use by the square feet per occupant as follows:

(a) An assembly area of concentrated use without fixed seats such as an auditorium, church, chapel, dance floor, and lodge room - 7 # per person.

(b) An assembly area of less concentrated use such as a conference room, dining room, drinking establishment, exhibit room, gymnasium, or lounge - 15 # per person

(c) Standing room or waiting space 3 # per person

The occupant load of an area having fixed seats shall be determined by the number of fixed seats installed. Required aisle space serving the fixed seats shall not be used to increase the occupant load.

## Exit Details

Every place of assembly, every tier or balcony and every individual room used as a place of assembly shall have exits sufficient to provide for the total capacity there of as determined as follows:

(a). No individual unit of exit width shall serve more than 100 persons

(b). Doors leading outside the building at grade level or not more than 3 risers above or below grade. Class A ramps or horizontal exits. 100 persons per exit unit adjusted according to location of exits as required.

(c). Stairs or other type of exit not specified in b. above 75 persons per exit unit.

## Minimum Number of Exits

Every class A place of Assembly shall have at least 4 separate exits as remote from each other as practicable.

Every class B place of Assembly shall have at least 2 separate exits as remote from each other as practicable and if of a capacity of over 600 each exit not less than 2 units.

### Travel Distance

Every class C place of assembly shall have at least 2 means of exit consisting of separate exits or doors leading to a corridor or other spaces giving access to 2 separate and independent exits in different directions

### Location of exits

#### Type of Exit

**Main exit-** Every place of assembly shall be provided with a main exit. The main exit shall be of sufficient width to accommodate one half of the total occupant load, but shall be not less than the total required width of all aisles, exit passage ways and stairways leading there to, and shall connect to a stairway leading to the street.

**Other exits-** Each level of an assembly occupancy shall have access to the main exit and in addition shall be provided with exits of sufficient width to accommodate two thirds of the total occupant load served by that level. Such exits shall open directly to a street or into an exit court, enclosed stairway, outside stairway or exit passage way leading to a street.

Such exits shall be located as far apart as practicable and as far from the main exit as practicable. Such exits shall be accessible from a cross aisle or a side aisle.

## Travel Distance to Exits

Seating

Exits shall be arranged that the total length of travel from any point to reach an exit will not exceed 150 ft in any place of assembly for unsprinkled spaces and 200 ft in areas protected by sprinklers.

## Types of Exits

Exits will be one of the following types:

- (a). Doors of the swinging type leading directly or through a lobby, or passage way to the outside.
- (b). Horizontal Exits
- (c). Smoke proof towers
- (d). Stairs, class A for all new places of assembly
- (e). outside stairs
- (f). ramps
- (g). escalators

No turnstiles or other devices to restrict the movement of persons shall be installed in any place of assembly in such a manner as to interfere in any way with required exit facilities.

## Seating, Aisles, and Railings

### Seating

(a) The spacing of rows of seats from back to back shall not be less than 33 inches nor less than 27 inches plus the sum of the thickness of the back and inclination of the back. There shall be a space of not less than 12 inches between the back of one seat and the front of the seat immediately behind.

(b) Rows of seats between aisles shall have not more than 14 seats.

(c) Rows of seats opening on to an aisle at one end only shall have not more than 7 seats.

(d) Seats without dividing arms shall have their capacity determined by allowing 18 inches per person.

### (e) Continental seating

(i) With continental seating the spacing of rows of unoccupied seats shall provide a clear width between rows measured horizontally as follows: auto. or self-rising seats shall be measured in the seat up position, other seats shall be measured in the seat down position, 18 inches clear width between rows of 18 seats or less, 20 inches clear width between rows of 35 seats or less, 21 inches clear width between rows of 45 seats or less and 22 inches between rows of 46 seats or more.

- (2). With continental seating the number of intervening seats between any seat and an aisle may be increased to 49 where exit doors are provided along each side aisle of the row of seats at the rate of 1 pair of exit doors for each 5 rows. Such exit doors shall provide a minimum clear width of 66 inches. There shall be not more than 5 seat rows between pairs of doors.

Aisles

Every portion of any assembly building which contains seats, tables, displays, equipment or other materials shall be provided with aisles leading to exits as follows:

(a). When serving more than 60 seats every aisle shall not be less than 3 ft. wide when serving seats on one side only, and not less than 3 ft 6 inches wide when serving seats on both sides. Such minimum width shall be measured at the point farthest from an exit, cross aisle or foyer and shall increase in width by  $1\frac{1}{2}$  inches for each 5 ft. in length toward the exit cross aisle or foyer.

(b). When serving 60 seats or less aisles shall be not less than 30 inches wide.

(c). Aisles shall terminate in a cross aisle, foyer, or exit. The width of such cross aisle, foyer or exit shall be not less than the sum of the required width of the widest aisle plus 50 percent of the total required

Rankings

## Illumination

## Waiting Spaces

- width of the remaining aisles which it serves.
- (d) No dead-end aisle shall be greater than 20 ft in length. In arena or thrust stage theaters, dead-end aisles at the stage shall not exceed five rows beyond a cross aisle.
  - (e) The length of travel to an exit door by any aisle shall not exceed 150 ft.
  - (f) With continental seating side aisles shall be not less than 44 inches in width.
  - (g) Steps shall not be placed in aisles to overcome differences in level unless the gradient exceeds 1 ft of rise in 8 ft of run.
  - (h) The gradient of sloping aisles shall not exceed 1 ft of rise in 8 ft of run.

## Railings

- (a) The fasciae of boxes, balconies, and galleries shall have substantial railings not less than 26 inches high above the floor.
- (b) The railing at the ends of aisles extending to the fascia shall be not less than 30 inches high for the width of the aisle, or 36 inches high at the foot of steps.
- (c) Cross aisles shall be provided with railings not less than 26 inches high.



### Illumination

In every auditorium or other place of assembly where pictures motion pictures or other projections are made by means of directed light the illumination of the floors of exit access may be reduced during such period of projection to values of not less than  $\frac{1}{5}$  foot-candle.

### Waiting Spaces

In theaters and similar places of assembly where persons are admitted to the building at times when seats are not available for them and are allowed to wait in a lobby or similar space until seats are available, such use of lobby or similar space shall not encroach upon the required clear width of exits. Such waiting shall be restricted to areas other than the required means of egress. Exits shall be provided for such waiting spaces on the basis of one person for each 3 square feet of waiting space area. Such exits shall be in addition to the exits specified for the main auditorium area and shall conform in construction and arrangement to the general rules for exits.

### Hazardous Areas

Rooms containing high pressure boilers, refrigerating machinery of other than the domestic refrigerator type, large transformer or other service equipment subject to possible explosion shall not be located directly under or adjacent to required exits. All such room shall be effectively cut off from other parts of the building by construction having not less than a 1-hour fire resistance rating.

# BUDGET

There has been a great amount of private money into the project. The final balance would be beyond the scope of this project and is a study of its own.

The final cost of the project could only be determined after an extensive market study of the region, city, county and much of the central portion of the state.

## Budget

The budget for this project is undetermined.

There has been a great investment of public and private money into this project to date. What the final balance would be is beyond the scope of this project and is a study of its own.

The final cost of the project could only be estimated after an extensive market study of the neighborhood, city, county and much of the central portion of the state.

# DESIGN CRITERIA

The project will provide different functions mixed together to make one design statement

The different parts will support and enhance each other

The project will also provide functions which are not now present in the CBD

The different parts will as best they can provide functions which will vary during the day

The different parts will change with their type and location with the seasons of the year

The parts will be of different size from very large to extremely small

The largest group of parts will be a retail function

The building form will relate to the seasons of the year and provide a different primary space for each season and by extension each time of day

The building form must provide protection from wind and rain to all pedestrians in or out of the building

The building form will provide a varied degree of protection to exterior pedestrians

The building form will protect pedestrians from the sun

The building form will provide a diversity of scale from the monumental to the super human

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The building form will provide a varied degree of protection to exterior pedestrians.

The building form will protect pedestrians from the sun.

The building form will provide a diversity of scale from the monumental to the super human.

The changing scales of the spaces will complement each other in order that each will be perceived as a separate but part of the whole.

The scale of the spaces will be grouped around a pedestrian path which will take several hours to explore.

The absolute height of the project will be less than most of the buildings surrounding the project.

The building form will be transparent at most all of pedestrian locations along the street.

Graphic articulation of the building form will express the concept "exchange".

The city of Oklahoma City has spent a great deal of money to build this project. The project must relate to the various public areas with an open form, freely enhancing the area.

All finish materials are to be chosen from a pallet of materials presently existing in the CBD.

Fan units located throughout the project will be connected the CBD central mechanical plant which will provide steam and chilled water.

SCHE  
Any atrium space must be designed such that it will not be conditioned most of the year.

The acoustic criteria is a space which will be hard, sharp and with echo. The central space will roar with even a small group of hawkers.

The project must allow for a 50% expansion.

Service to the retail stores will be separated from the general public by the use of time rather than place.

Public toilets with attendants are to be centrally located within the project.

The project must convey a sense of security with no blind spots.

All spaces are to be readily accessible to the handicapped.



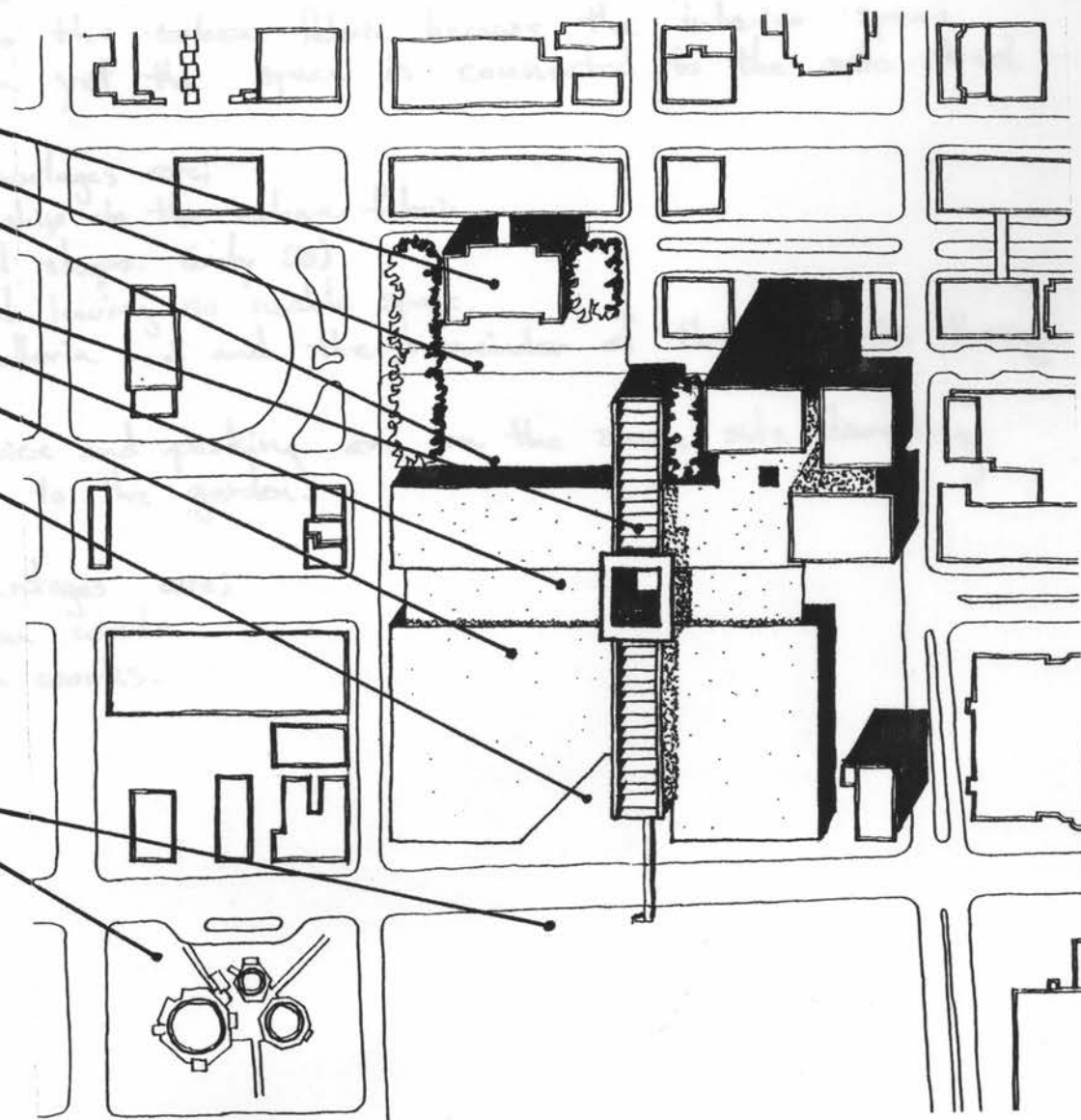
# SCHEMATIC DESIGN



# Scheme 1

I copied from the structure of the streets and a chain to reconstruct the form of the streets. The plan links the strong relationship to the pedestrian.

- Courthouse
- Plaza
- Flower Market
- Galleria
- Small stores
- Dept. store
- Public Market
- Garden
- Mummers



⊕ 1" = 275'

Scheme 1 evolved from the structure of the streets and a desire to reconstruct the form of the streets. The plan finds no strong relationship to the urban fabric because the interior space is for the pedestrian yet the space is connected to the auto-street.

The major disadvantages are;

- (1). no true relationship to the urban fabric
- (2). not enough small shops. (only 58)
- (3). Roof is disjointed leaving no usable space.
- (4). Connection to Galleria 1, 2 and the remainder of the CBP is through a maze.
- (5). Entrance to service and parking are on the south side disrupting the relationship to the garden.

The major advantages are;

- (1) Mechanical system works.
- (2) Structural system works.

Garden

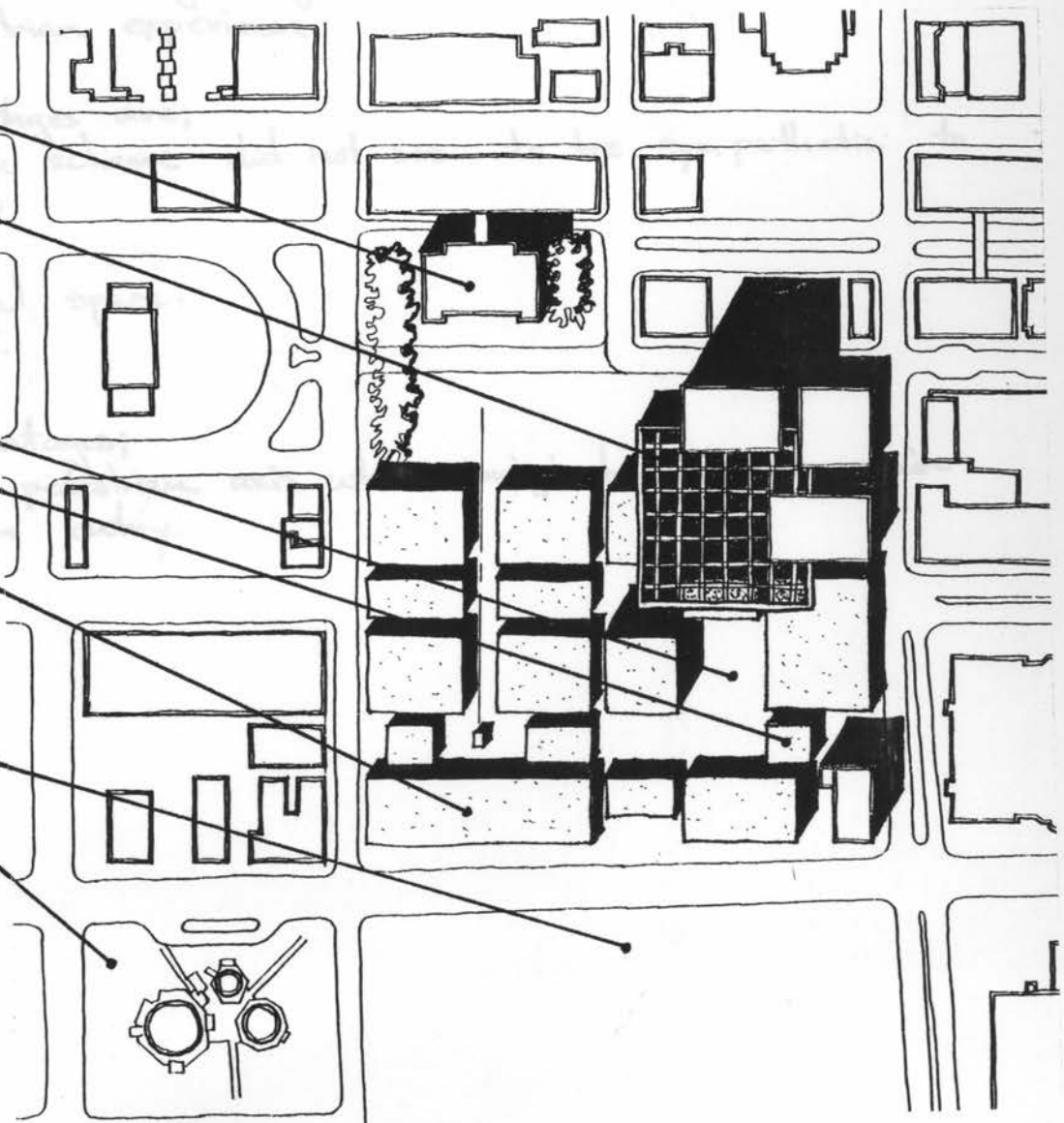
Managers

⊕ 1-275'

# Scheme 2

derived from a survey of pre-war quarters. The quarters were connected by a rectangular grid which was articulated to modulate the pattern.

- Court House
- Hinten Garden
- Public Market
- Chapel
- Dept. Store
- Garden
- Mummers



⊕ 1"=275'

Scheme 2 evolved from a survey of pedestrian generators. The generators were connected by a rectangular grid which was articulated to modulate the pedestrian experience

The major disadvantages are;

- (1). The scale of the scheme did not seem to be sympathetic to the existing CBD
- (2) Not enough rental space.
- (3) Weak imaginability.

The major advantages;

- (1). Discovery of the pedestrian axis which originates at the main south court house entry.

# Scheme 3

Curt Union  
Place  
Flower Market

Stoa  
Dry Goods Market  
Produce Market

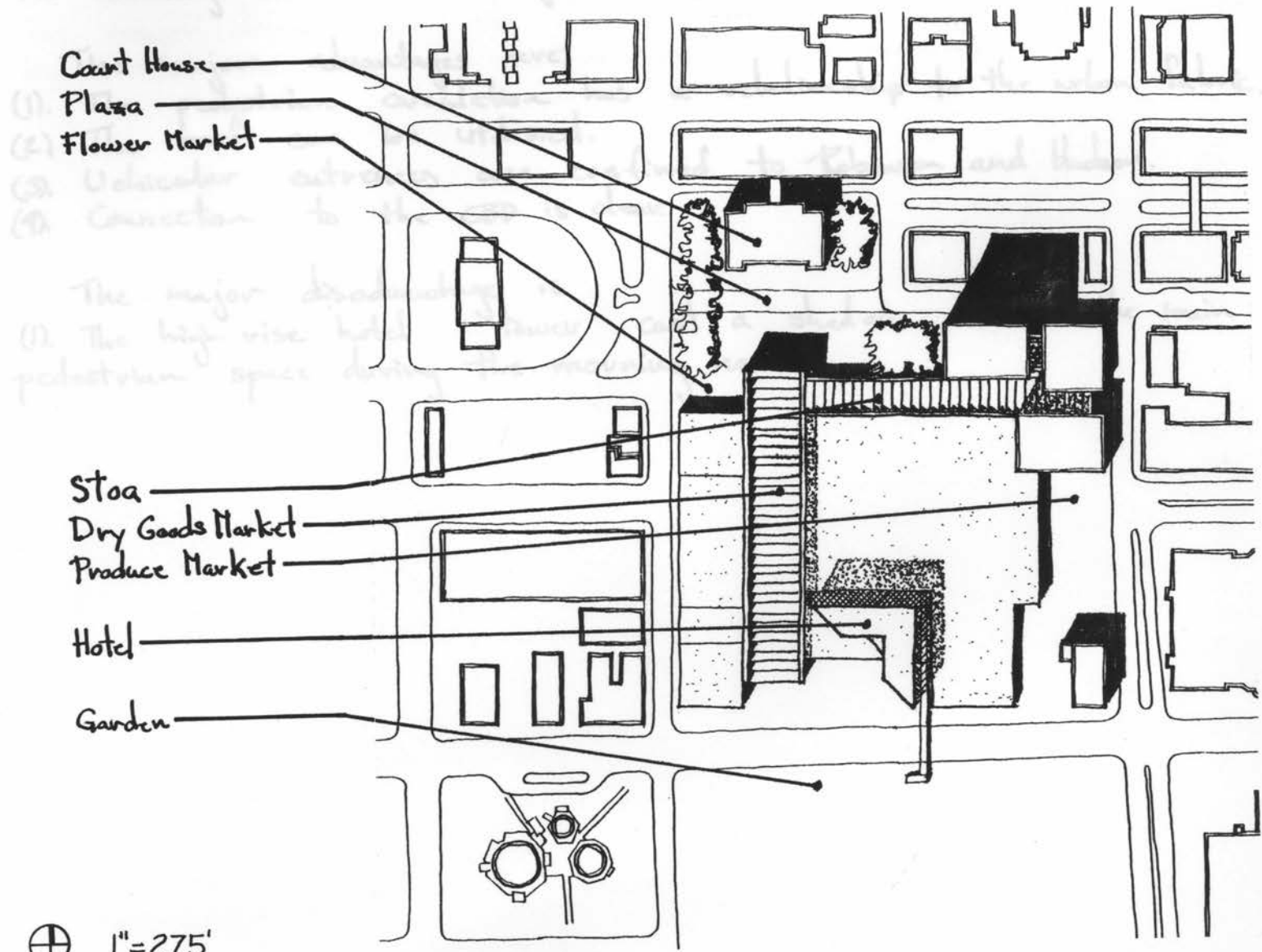
Hotel  
Garden

⊕  $\rho=275'$



### Scheme 3

3 evolves from the axis of the county court house, the existing CBD and the gardens.



⊕ 1"=275'



Scheme 3 evolves from the axis of the county court house, the existing CBD and the gardens.

The major advantages are;

- (1). The pedestrian circulation has a relationship to the urban fabric.
- (2). The roof can be utilized.
- (3). Vehicular entrances are confined to Robinson and Hudson.
- (4). Connection to the CBD is clear.

The major disadvantage is

- (1). The high rise hotel tower cast a shadow across the main pedestrian space during the morning hours.

Scheme 3 was selected for development because it seems to be woven into the urban fabric with the greatest sensitivity. The major disadvantage, the shadow from the tower, can be solved by moving the mass to another location or reducing the height.