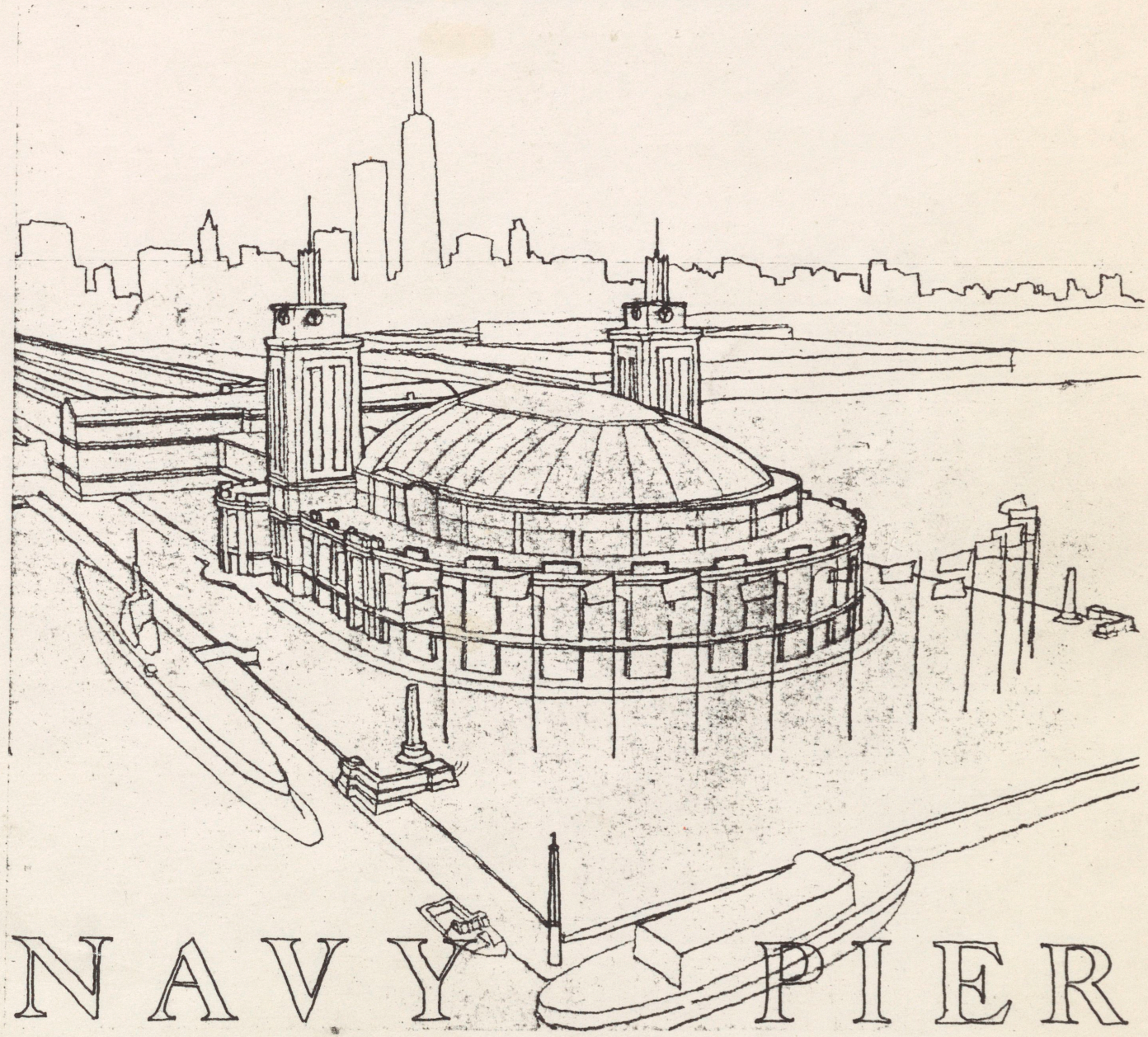

NAVY PIER

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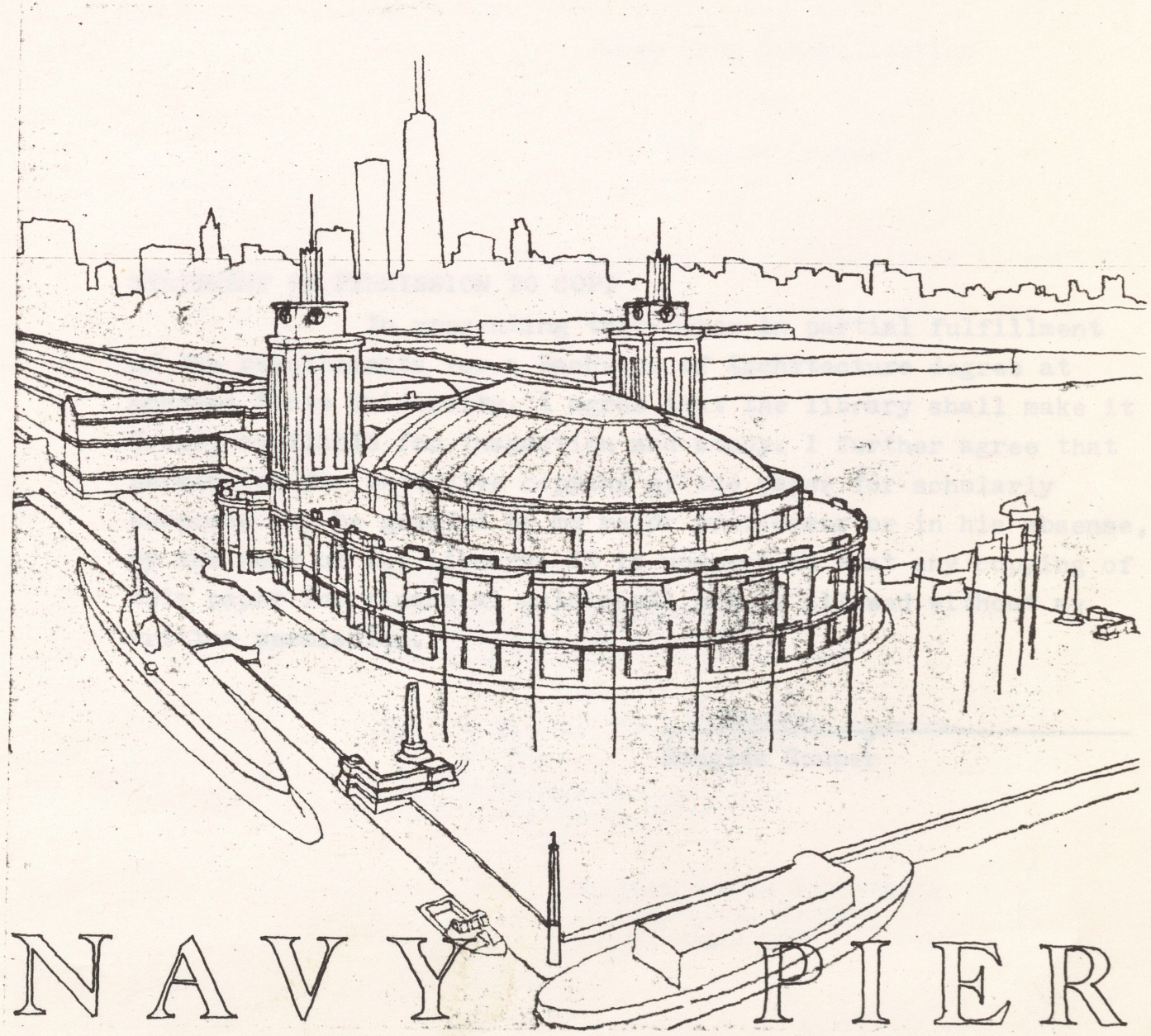
NAVY PIER

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Douglas Couper

Navy Pier Rehabilitation

by

Douglas Couper

An Undergraduate Thesis submitted in partial fulfillment of the requirements for the degree of Bachelor of Architecture

Approved by

Jerry Bancroft, Thesis Advisor

Robert Meeker, Thesis Coordinator

Robert Utzinger, Director

Montana State University
Bozeman, Montana
June 1986

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THESIS STATEMENT

The exploration of ideas changed into form to fulfill the needs of a client is the most fascinating aspect of architecture. Through the creation of a new structure or the rehabilitation of an old one, the idea is given life and shared with everyone.

For this thesis the rehabilitation of an old structure will be explored. Not only will the original ideas of the structure need to be understood, but new ideas need to be added and mixed with them to give the structure a new life.

INTRODUCTION

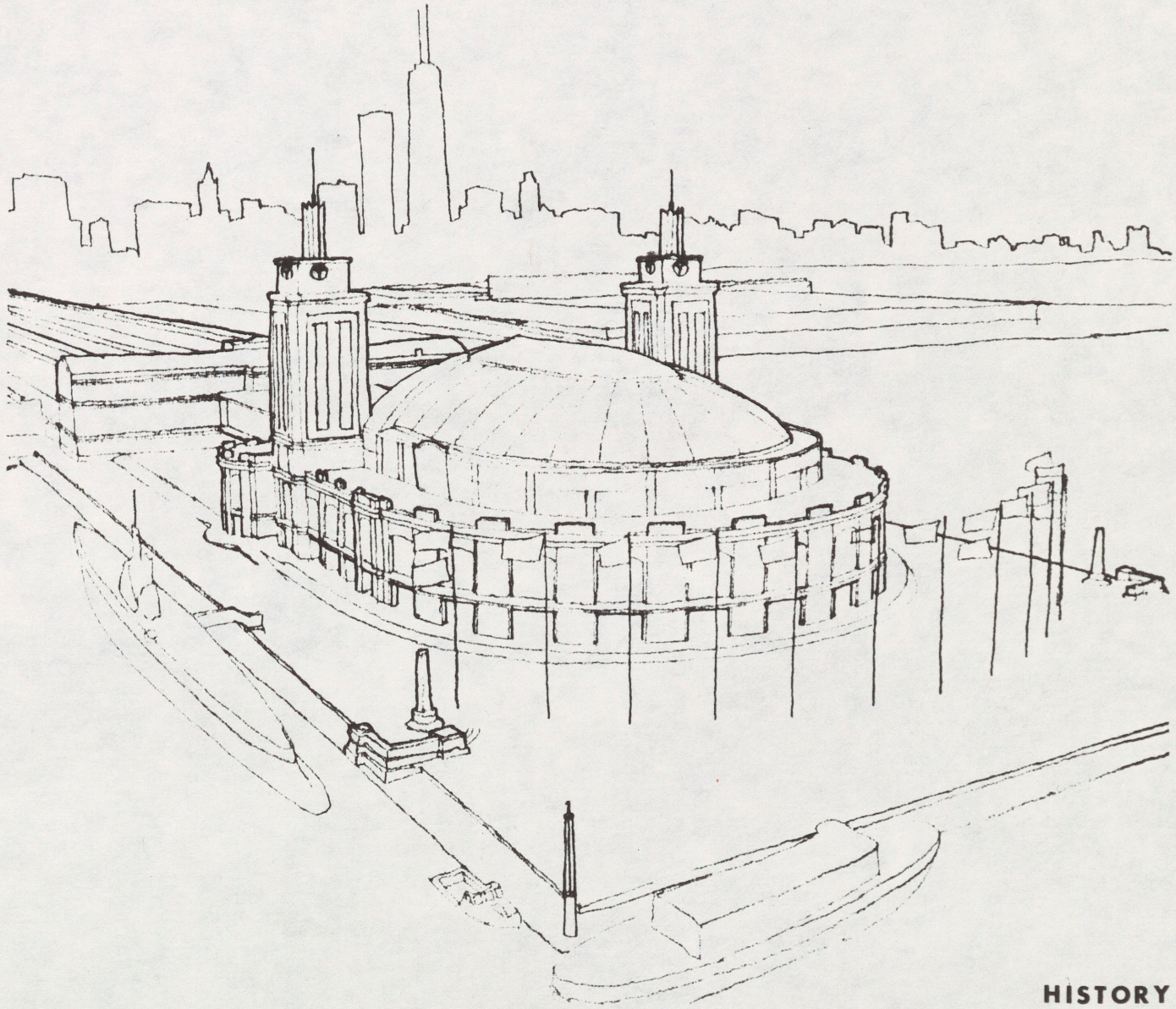
Navy Pier is Chicago's most prominent historical landmark. It is a three thousand foot long structure which is located at the mouth of the Chicago River on Lake Michigan. It was originally built to serve as a passenger and parcel freight shipping terminal as well as a lakefront recreation facility, but over the years it has served many different functions. Today a new use is sought that will bring back its vitality and make it an active place for the rest of the city.

In 1985 Mayor Harold Washington of Chicago formed the Navy Pier Task Force to look into and discuss possible new uses for the pier. The task force was made up of public and private sectors all having some interest or experience with the pier. By forming several subcommittees the task force was able to

address a wide range of issues; these included generic concept developments, budget, development approach, and transportation. Upon completion of each committee's examination a document was published by the task force and presented to the public. In general this is what the task force decided.

> .....the Mayor's Navy Pier Task Force enthusiastically recommends the development of the Pier as an urban park with extensive and innovative cultural, educational and community activities. Specifically, it recommends a wide range of expositions, cultural exhibits, museums, educational institutions and entertainment events, along with limited retail activities. The task force also recommends passive and active park areas (both open and enclosed) and noncompetitive recreation facilities for year-round use. The task force envisions the Pier as a community center whose base would be the entire City of Chicago. Its programs and facilities would both serve and reflect Chicago's diverse cultural life.[1]

By using these ideas as a base to start from, new ideas can be generated and developed. From this point, the process that leads to a solution begins.

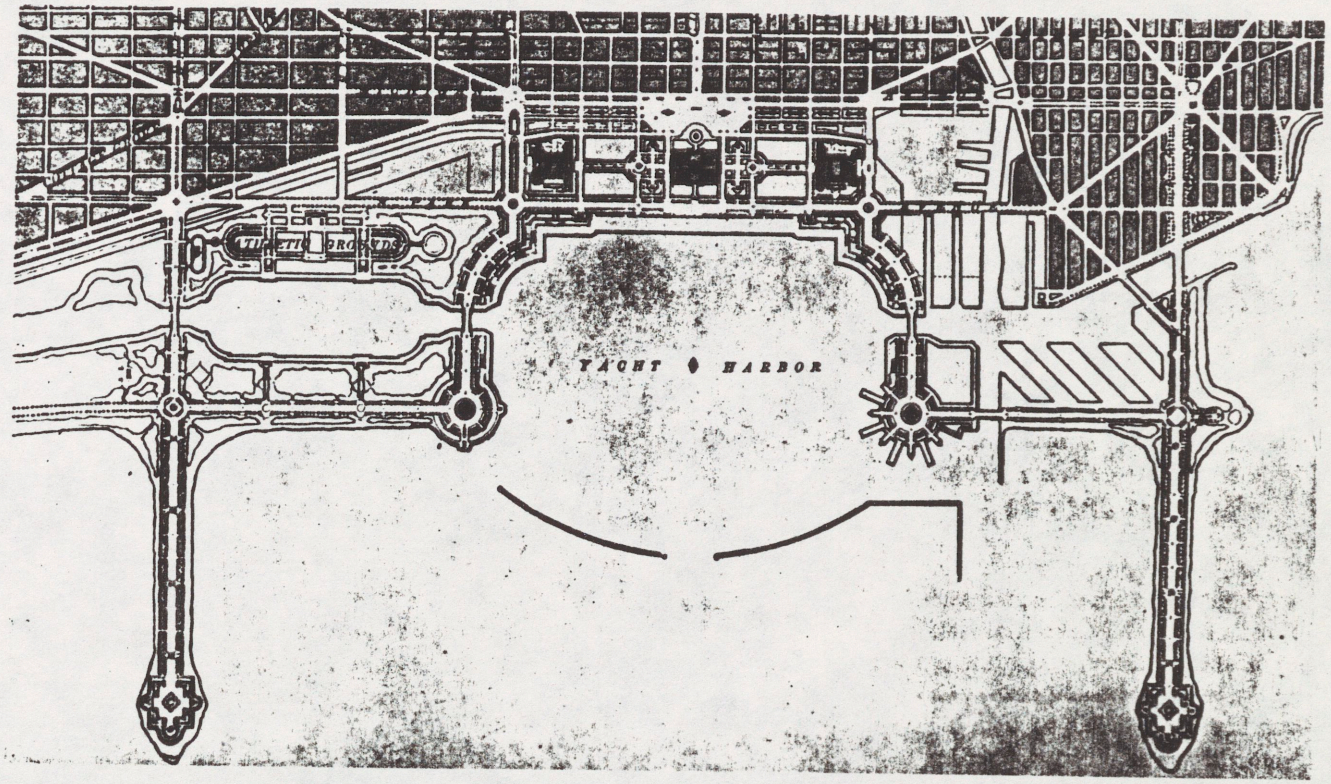


HISTORY

During its seventy year history, Navy Pier has served many different functions. It has been a recreation facility for Chicago, a naval training center for aviation mechanics, a major branch for the University of Illinois and a shipping facility for lake travel and world commerce. Today, however, the pier is dormant and a new use is sought to bring it back to life.

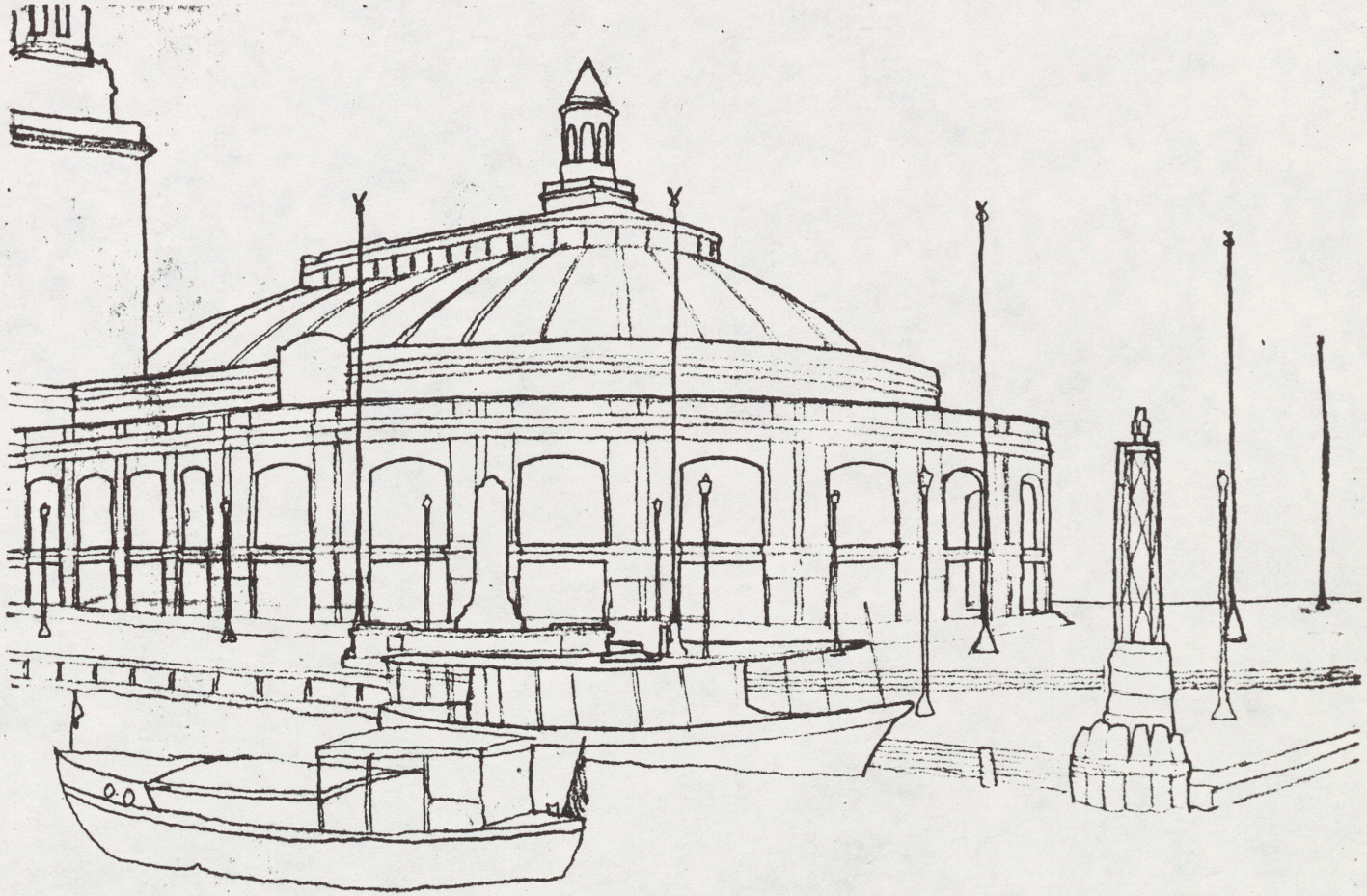
The pier was originally conceived from the Burnham plan of 1909 for Chicago. This in part planned to develop Chicago's lakefront as a recreation area and inland seaport. In 1912 Mayor Carter Harrison II took the seaport idea and proposed to build five piers near the mouth of the Chicago River. Only Navy Pier was ever built.[4]

When it first openned in 1916 the pier served a



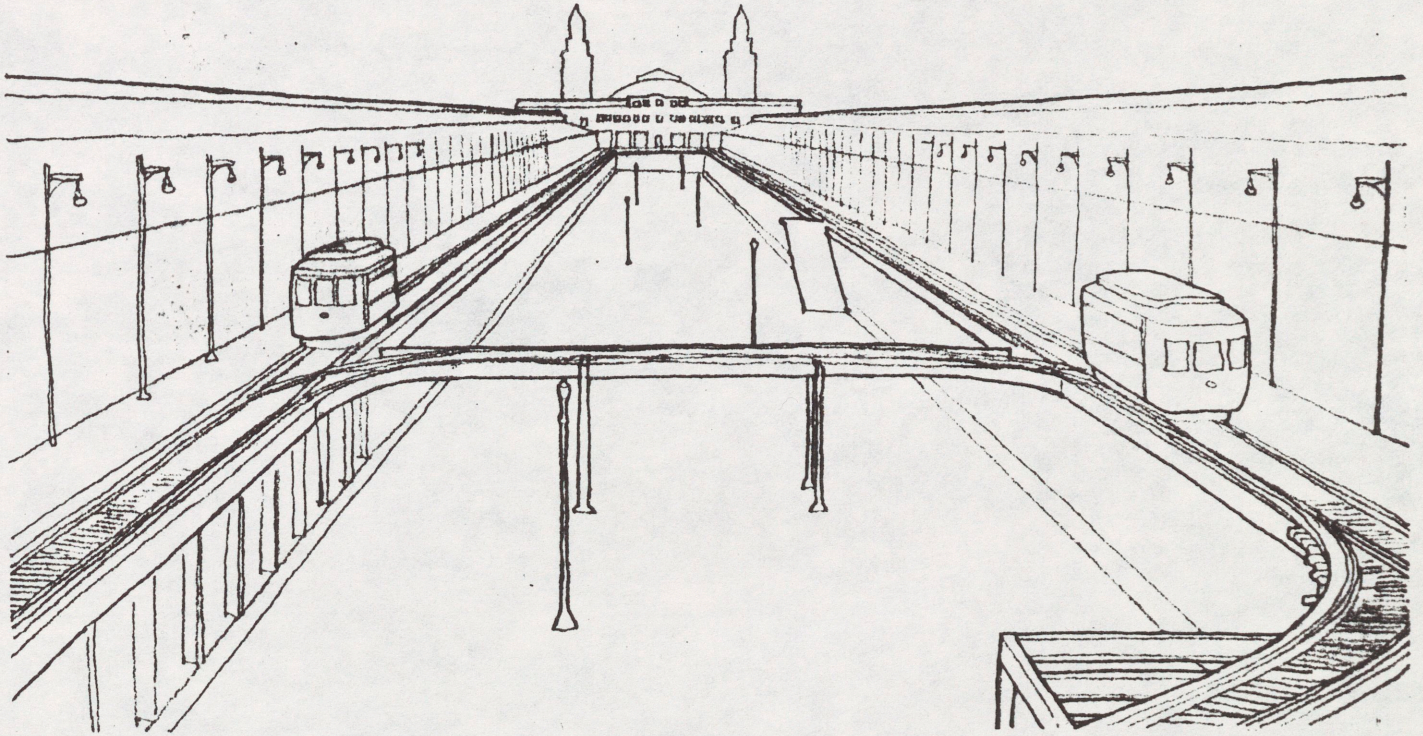
dual purpose. It not only was a produce and package freight facility, it was also a public recreation facility. There were carnival rides, observation towers, a concert hall for music and dancing, a cafeteria and a roof garden. These were open to the public 8 am to midnight from Memorial Day until Labor Day. The shipping ran all year round.[5]

In 1921 and 1922 the Pageants of Progress were held on the pier. These lasted for about two weeks each summer and consisted of merchandise exhibits, air plane, pigeon and motor boat races, fireworks, daredevil and musical entertainment. Originally



this was planned as an annual event, but due to a change in political leadership it was canceled.[6]

By the 1930's the pier began its decline as a commercial and recreational structure. The Great Depression slowed the passenger traffic first, then the automobile did the rest. Trucking produce was now faster than shipping it by boat and



riding in your own car to other recreation spots was the new thrill.[7]

In 1941 the carnival rides were removed from the pier and the whole facility was closed to the public. This time the U.S. Navy took over and established a Naval Aircraft Mechanics Training School. This lasted until the end of WWII at which time the pier was turned into a civilian educational facility.[8]

When the servicemen returned to the University of Illinois at Champain an overcrowding problem arose. Because there were already educational facilities at the pier, the decision was made to establish the branch campus there. This lasted until 1965



when the university branch moved to its new facilities at Circle Campus.[9]

In 1959 when the St. Lawrence Seaway Openned, the pier saw the return of commercial shipping. An addition was built along the south side to accommodate ocean going vessels. Shipping peaked in the mid Sixties and began to decline by the Seventies. By 1974 the pier was once again abandond.[10]

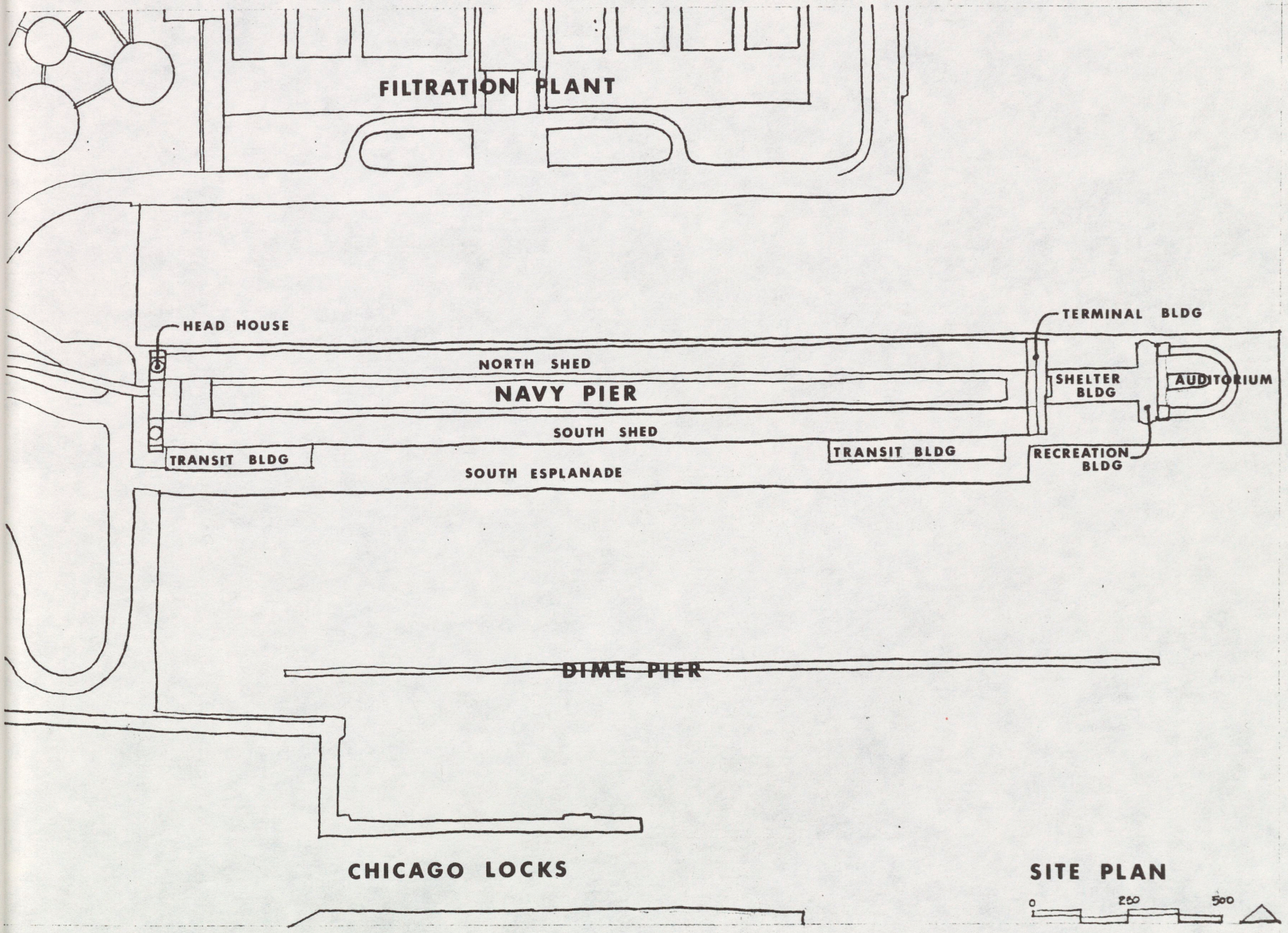
As shipping was just starting to decline in the 60's, the pier saw an increase in convention activities. Due to the destruction of the local convention center by fire, the available space at the pier was openned for conventions. This lasted from 1967 until 1971 at which time the convention center was rebuilt.[11]

In 1974 the Department of Public Works began a two-phase redevelopment. The east end was totally renovated and by 1976 it saw new activity as a cultural and exposition center.[12] The second phase was going to rehabilitate the rest of the pier, but again because of a change in political leadership it never took place.

In the summers from 1978 to 1982 the pier hosted Chicagofest, a two week music festival. This,at least for a short time, broght back recreation and entertainment to the pier. Originally this was going to be an annual event, but again due to a change in political leadership it was cancelled.

In 1984 the pier was completely closed due to its deteriorating condition and high maintenance cost.

Finally in 1985 a Mayoral task force was formed and new ideas were discussed.


FILTRATION PLANT
HEAD HOUSE
TERMINAL BLDG
NORTH SHED
NAVY PIER
SHELTER BLDG
AUDITORIUM
SOUTH SHED
TRANSIT BLDG
TRANSIT BLDG
RECREATION BLDG
SOUTH ESPLANADE
DIME PIER
CHICAGO LOCKS
SITE PLAN
0
250
500

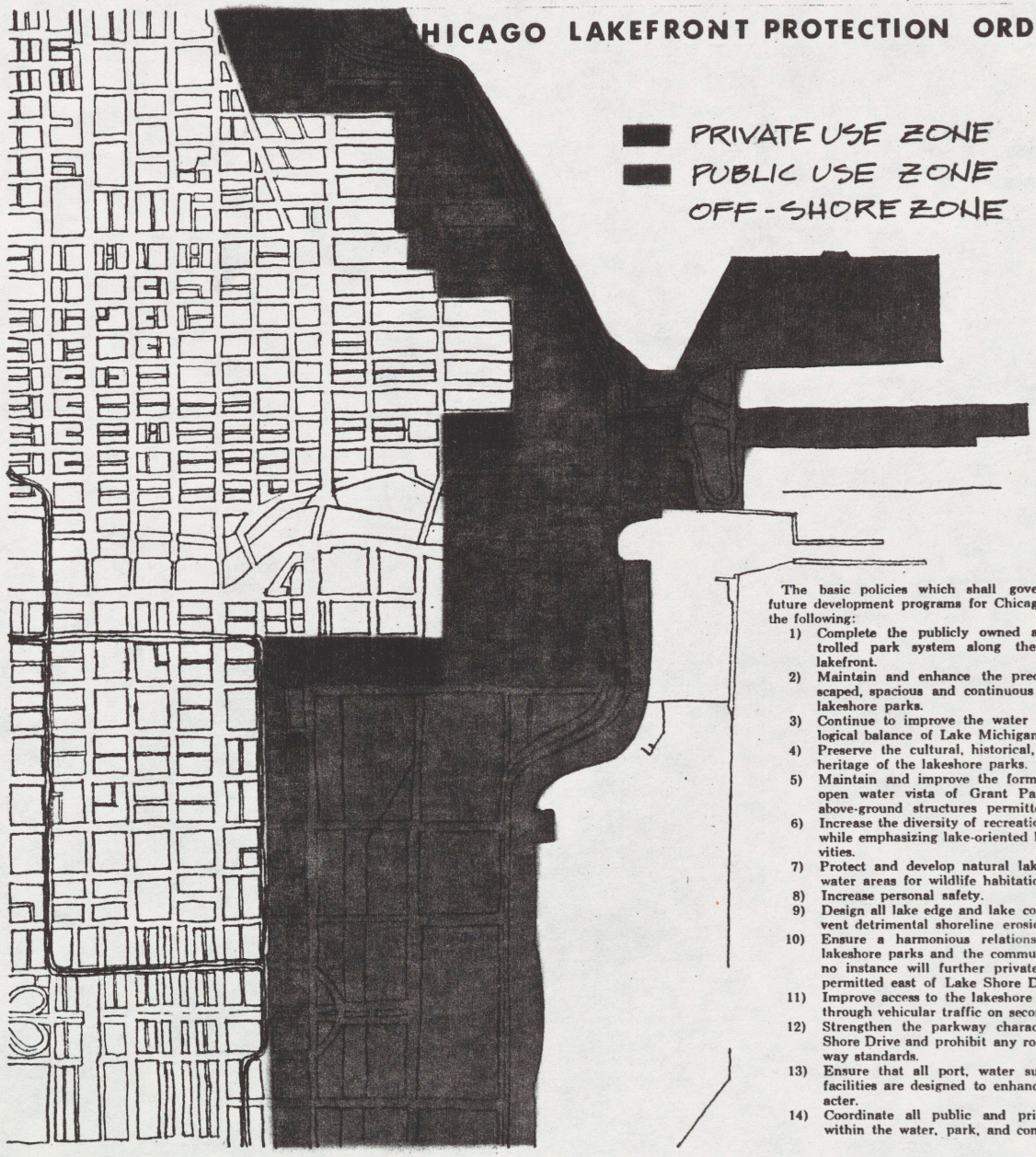
As was stated earlier, Navy Pier is a three thousand foot long structure located on the lakefront of Chicago. It is comprised of a head house, two long shed buildings, a terminal building, a shelter building, a recreation building and an auditorium. The Head House, located at the western end of the pier, not only housed the administrative offices for all of the pier functions, it also served as the entry for the rest of the pier. Directly east of the Head House are the North and South Sheds. These two structures are each 2340 feet long by 100 feet wide and are separated by an 80 foot open space which runs their entire length. These two story structures were originally designed to serve as warehouses and receiving areas for freight on the lower levels with the upper levels providing passengers and visitors

acess to the ships. The rest of the pier, made up of the Terminal Building, the Shelter Building, the Recreation Building and the Auditorium, served as the recreational facilities when the pier was originally constructed. The three story Terminal Building served primarily as an entry way to the Shelter Building and the east end of the pier. The Shelter Building is more of a walkway connecting the Terminal Building to the Recreation Building and the Auditorium. It consists of an open first level, an enclosed second level and a roof terrace. On either side is where the carnival rides and picnic tables were located. Finally there is the Recreation Building and the Auditorium. (These are grouped because one serves as the entry for the other.) The semicircular Auditorium is the easternmost structure on the pier. It originally had a seating capacity of 3500 and is ringed by a 250 foot semi-circular balcony.[2]

The entire structure rests on 20,000 Oregon timber pilings covered with a concrete slab. The buildings themselves are of steel-frame construction with a brick shell.[3]

SITE ANALYSIS

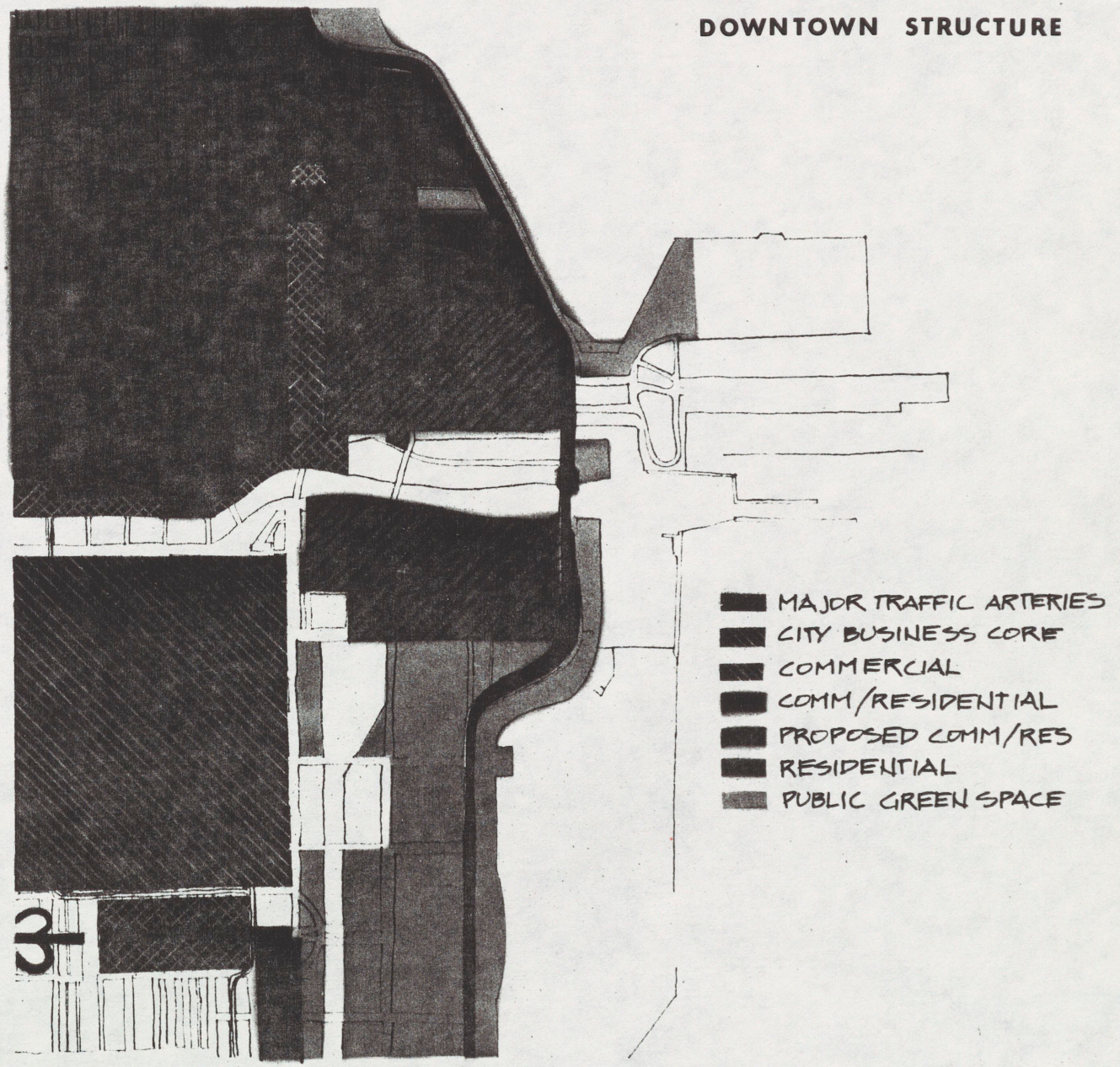
CHICAGO LAKEFRONT PROTECTION ORDINANCE



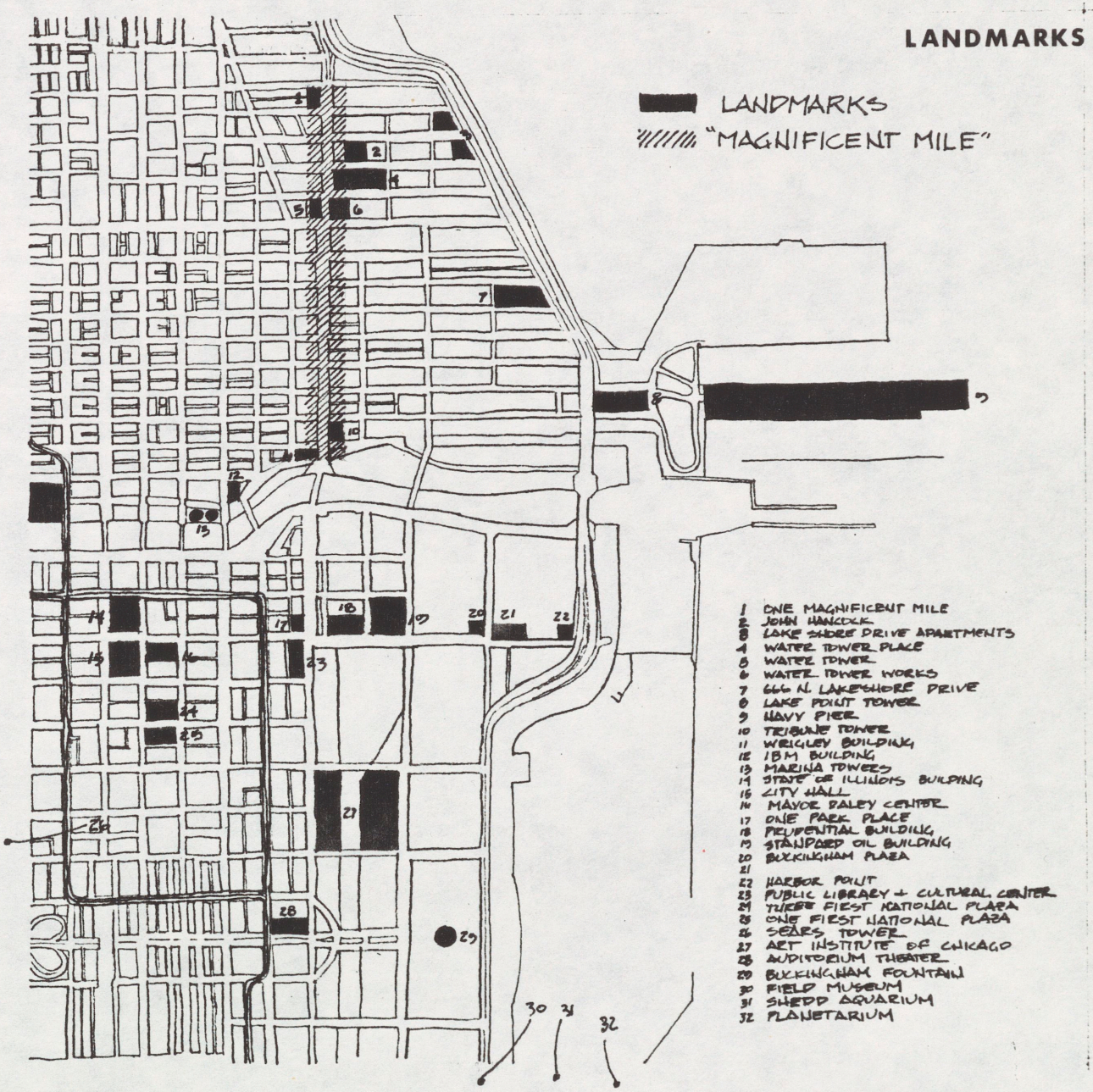
The basic policies which shall govern present and future development programs for Chicago's lakefront are the following:

1) Complete the publicly owned and locally controlled park system along the entire Chicago lakefront.
2) Maintain and enhance the predominantly landscaped, spacious and continuous character of the lakeshore parks.
3) Continue to improve the water quality and ecological balance of Lake Michigan.
4) Preserve the cultural, historical, and recreational heritage of the lakeshore parks.
5) Maintain and improve the formal character and open water vista of Grant Park with no new above-ground structures permitted.
6) Increase the diversity of recreational opportunities while emphasizing lake-oriented leisure time activities.
7) Protect and develop natural lakeshore park and water areas for wildlife habitation.
8) Increase personal safety.
9) Design all lake edge and lake construction to prevent detrimental shoreline erosion.
10) Ensure a harmonious relationship between the lakeshore parks and the community edge, but in no instance will further private development be permitted east of Lake Shore Drive.
11) Improve access to the lakeshore parks and reduce through vehicular traffic on secondary park roads.
12) Strengthen the parkway characteristics of Lake Shore Drive and prohibit any roadway of expressway standards.
13) Ensure that all port, water supply, and public facilities are designed to enhance lakefront character.
14) Coordinate all public and private development within the water, park, and community zones.

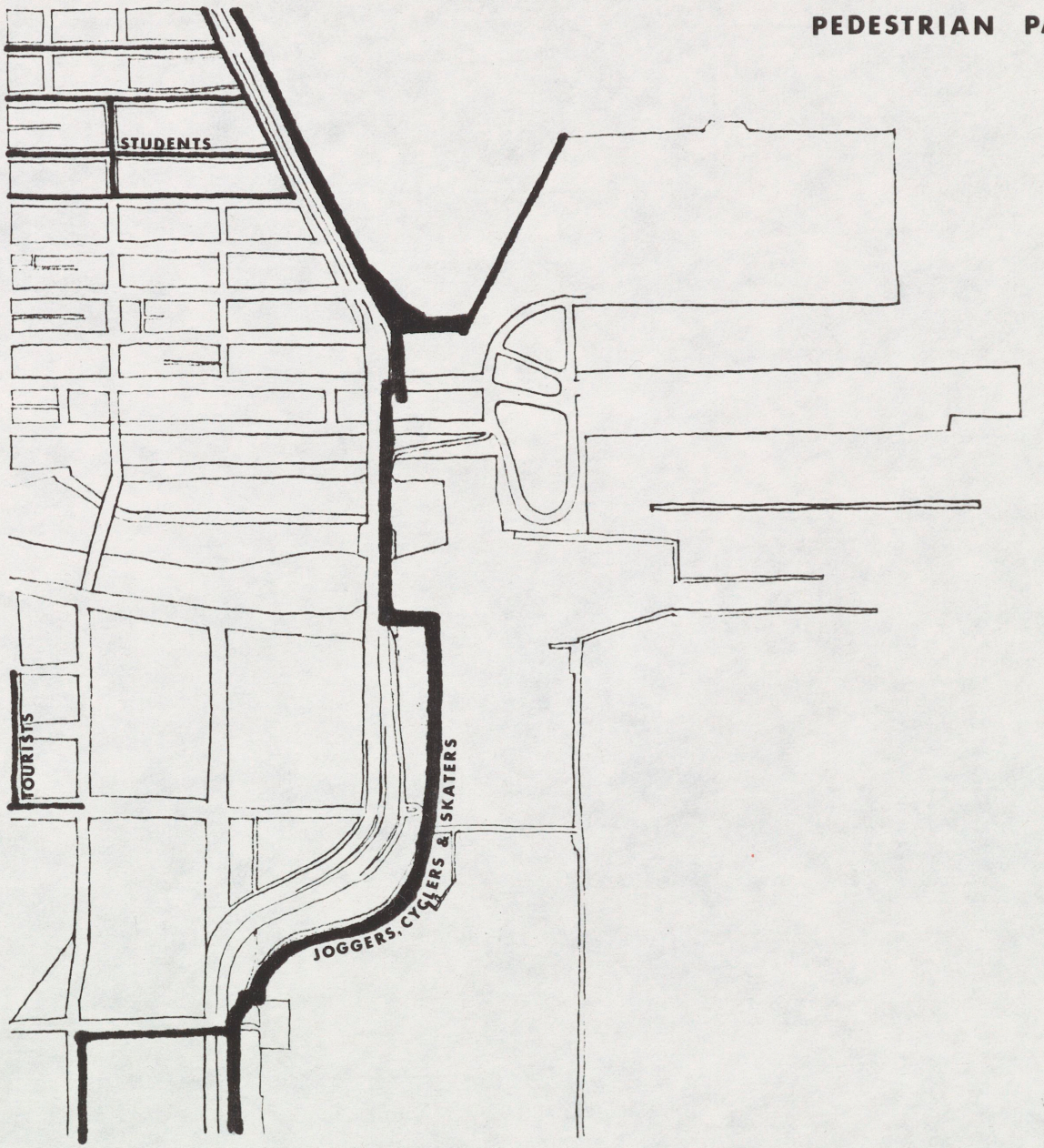
DOWNTOWN STRUCTURE



LANDMARKS

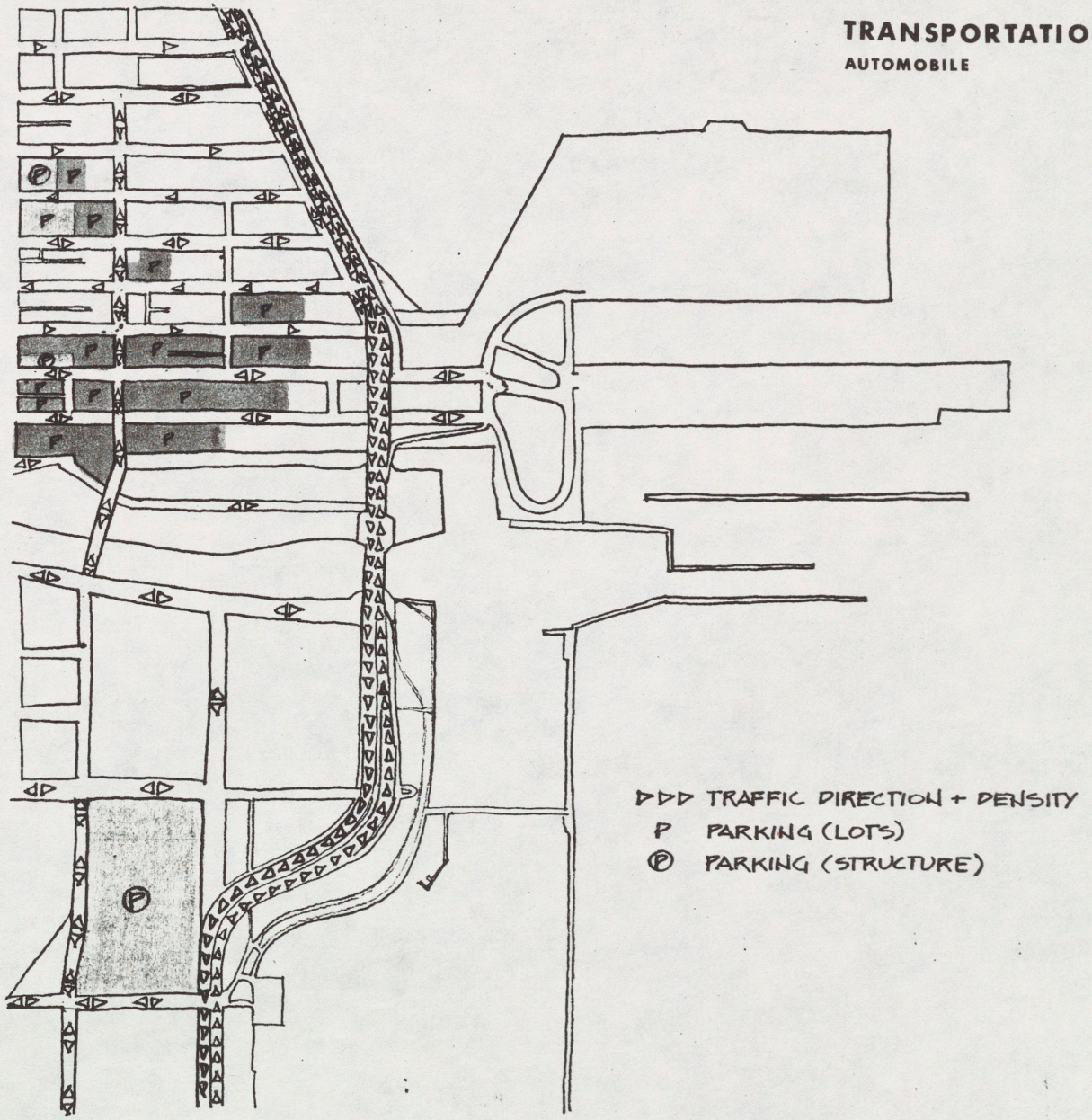

LANDMARKS
"MAGNIFICENT MILE"
1 ONE MAGNIFICENT MILE
2 JOHN HANCOCK
3 LAKE SHORE DRIVE APARTMENTS
4 WATER TOWER PLACE
5 WATER TOWER
6 WATER TOWER WORKS
7 666 N. LAKESHORE DRIVE
8 LAKE POINT TOWER
9 NAVY PIER
10 TRIBUNE TOWER
11 WRIGLEY BUILDING
12 IBM BUILDING
13 MARINA TOWERS
14 STATE OF ILLINOIS BUILDING
15 CITY HALL
16 MAYOR DALEY CENTER
17 ONE PARK PLACE
18 PRUDENTIAL BUILDING
19 STANDARD OIL BUILDING
20 BUCKINGHAM PLAZA
21
22 HARBOR POINT
23 PUBLIC LIBRARY + CULTURAL CENTER
24 THREE FIRST NATIONAL PLAZA
25 ONE FIRST NATIONAL PLAZA
26 SEARS TOWER
27 ART INSTITUTE OF CHICAGO
28 AUDITORIUM THEATER
29 BUCKINGHAM FOUNTAIN
30 FIELD MUSEUM
31 SHEDD AQUARIUM
32 PLANETARIUM

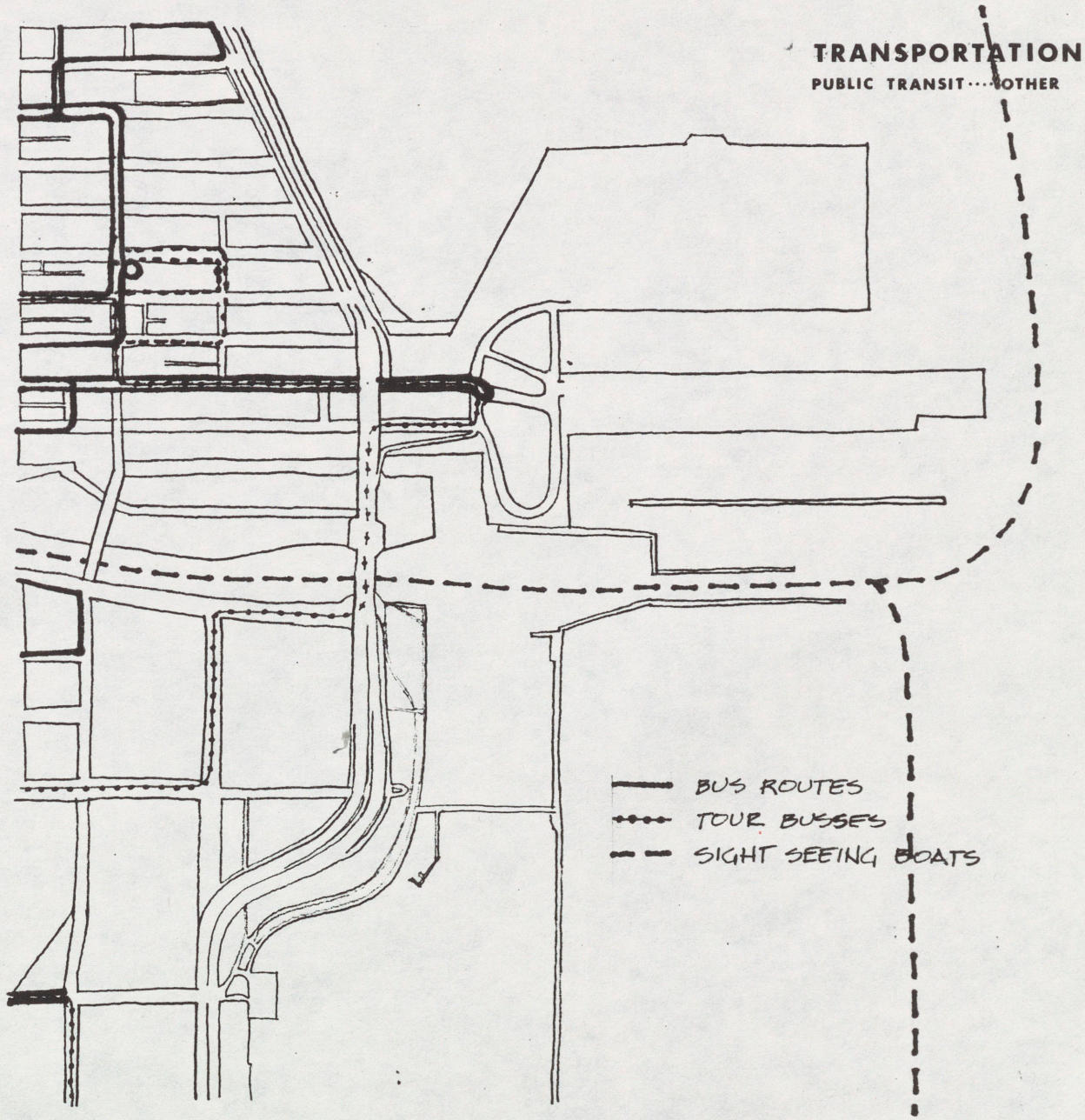
PEDESTRIAN PATHS



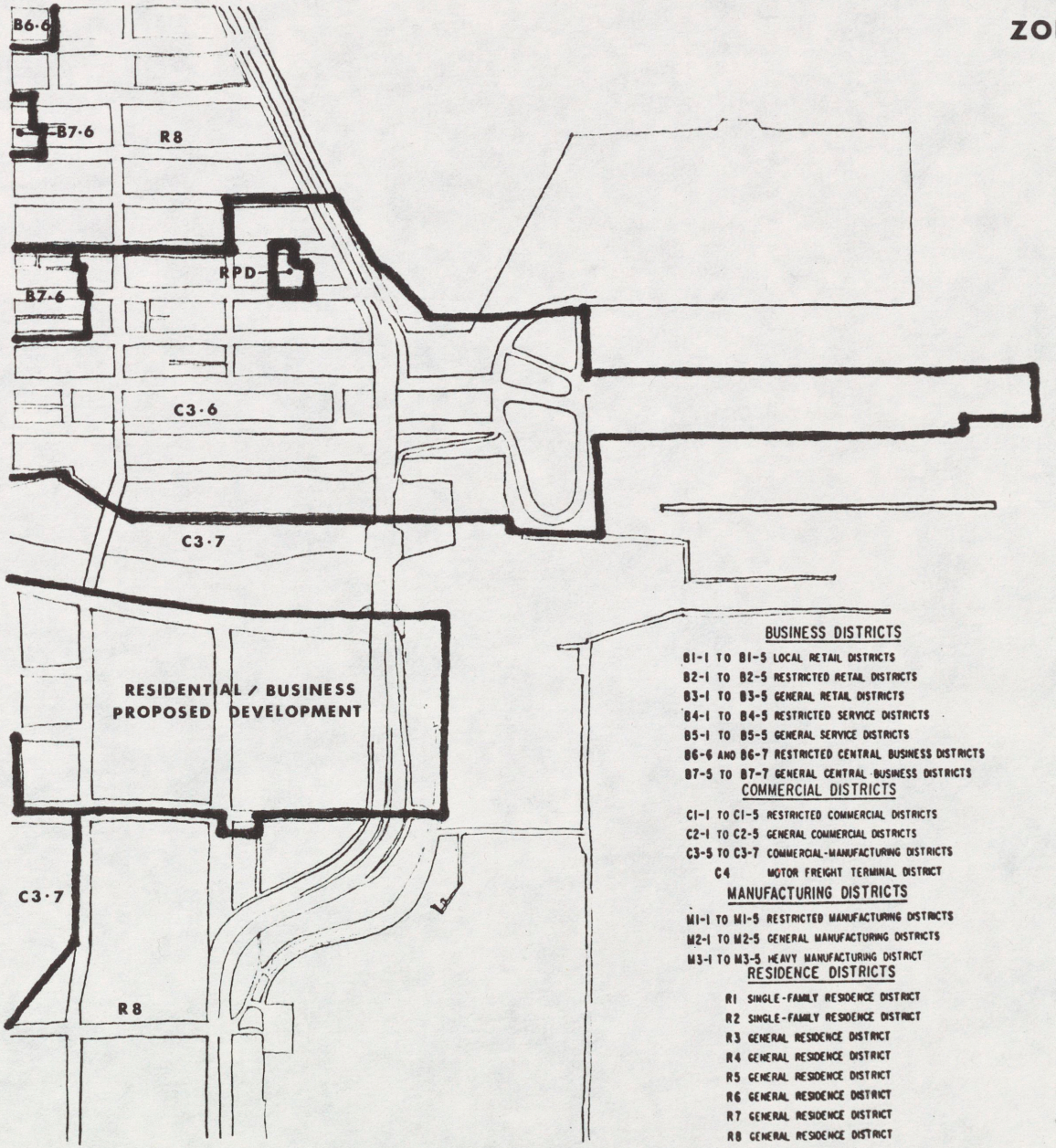
TRANSPORTATION

AUTOMOBILE




TRANSPORTATION
PUBLIC TRANSIT····OTHER
BUS ROUTES
TOUR BUSSES
SIGHT SEEING BOATS

ZONING



BUSINESS DISTRICTS

B1-1 TO B1-5 LOCAL RETAIL DISTRICTS
B2-1 TO B2-5 RESTRICTED RETAIL DISTRICTS
B3-1 TO B3-5 GENERAL RETAIL DISTRICTS
B4-1 TO B4-5 RESTRICTED SERVICE DISTRICTS
B5-1 TO B5-5 GENERAL SERVICE DISTRICTS
B6-6 AND B6-7 RESTRICTED CENTRAL BUSINESS DISTRICTS
B7-5 TO B7-7 GENERAL CENTRAL BUSINESS DISTRICTS

COMMERCIAL DISTRICTS

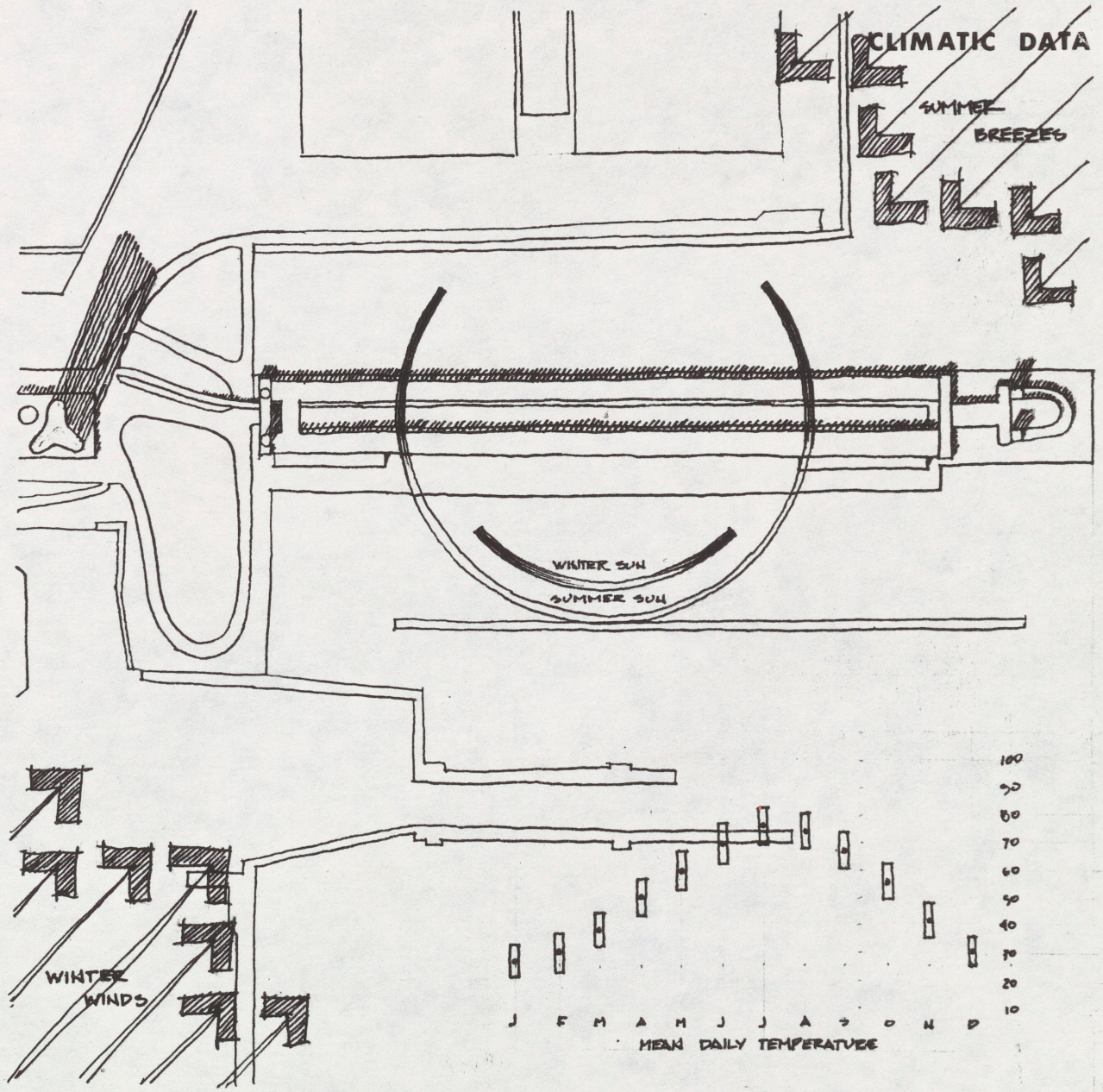
C1-1 TO C1-5 RESTRICTED COMMERCIAL DISTRICTS
C2-1 TO C2-5 GENERAL COMMERCIAL DISTRICTS
C3-5 TO C3-7 COMMERCIAL-MANUFACTURING DISTRICTS
C4 MOTOR FREIGHT TERMINAL DISTRICT

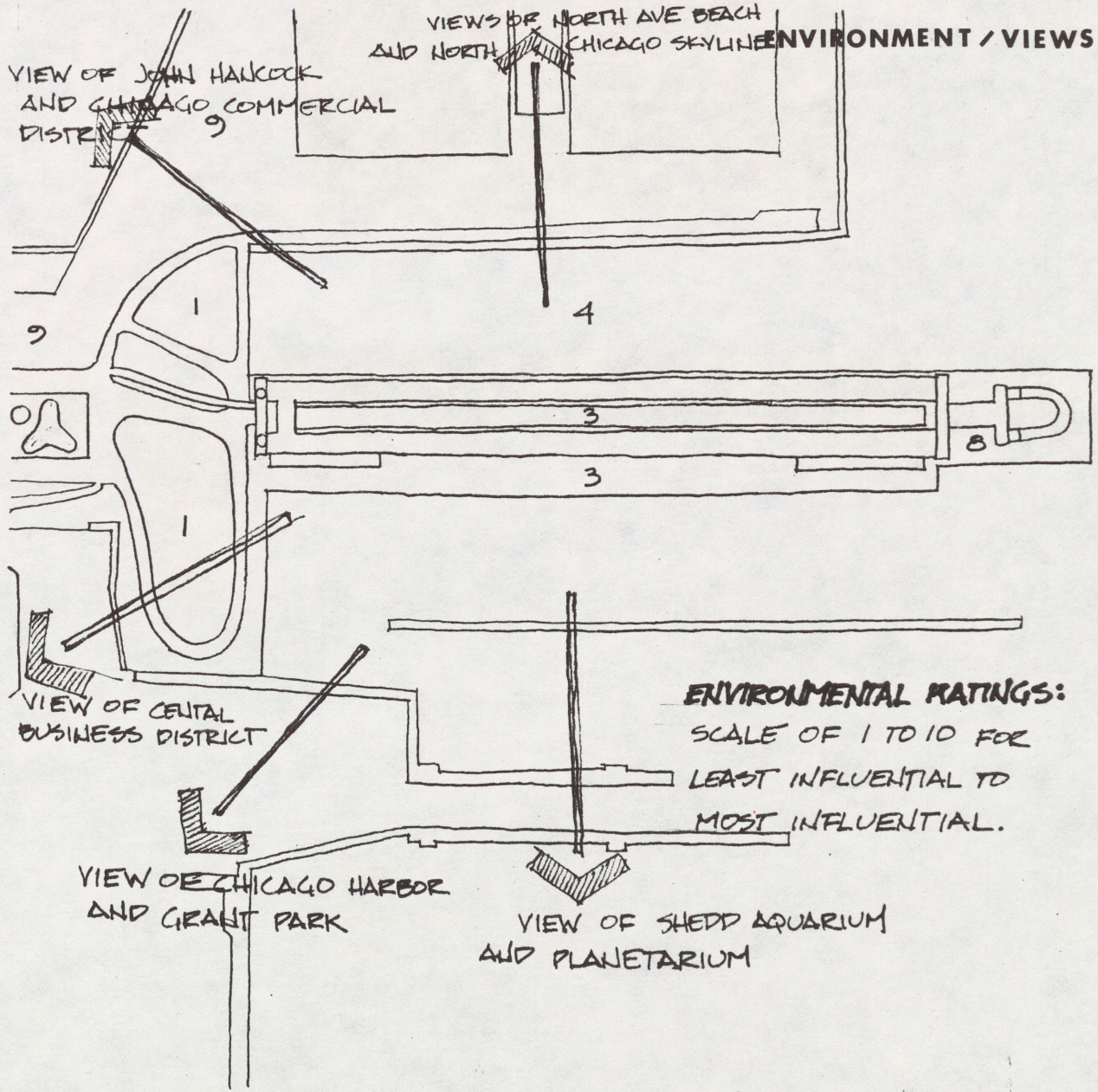
MANUFACTURING DISTRICTS

M1-1 TO M1-5 RESTRICTED MANUFACTURING DISTRICTS
M2-1 TO M2-5 GENERAL MANUFACTURING DISTRICTS
M3-1 TO M3-5 HEAVY MANUFACTURING DISTRICT

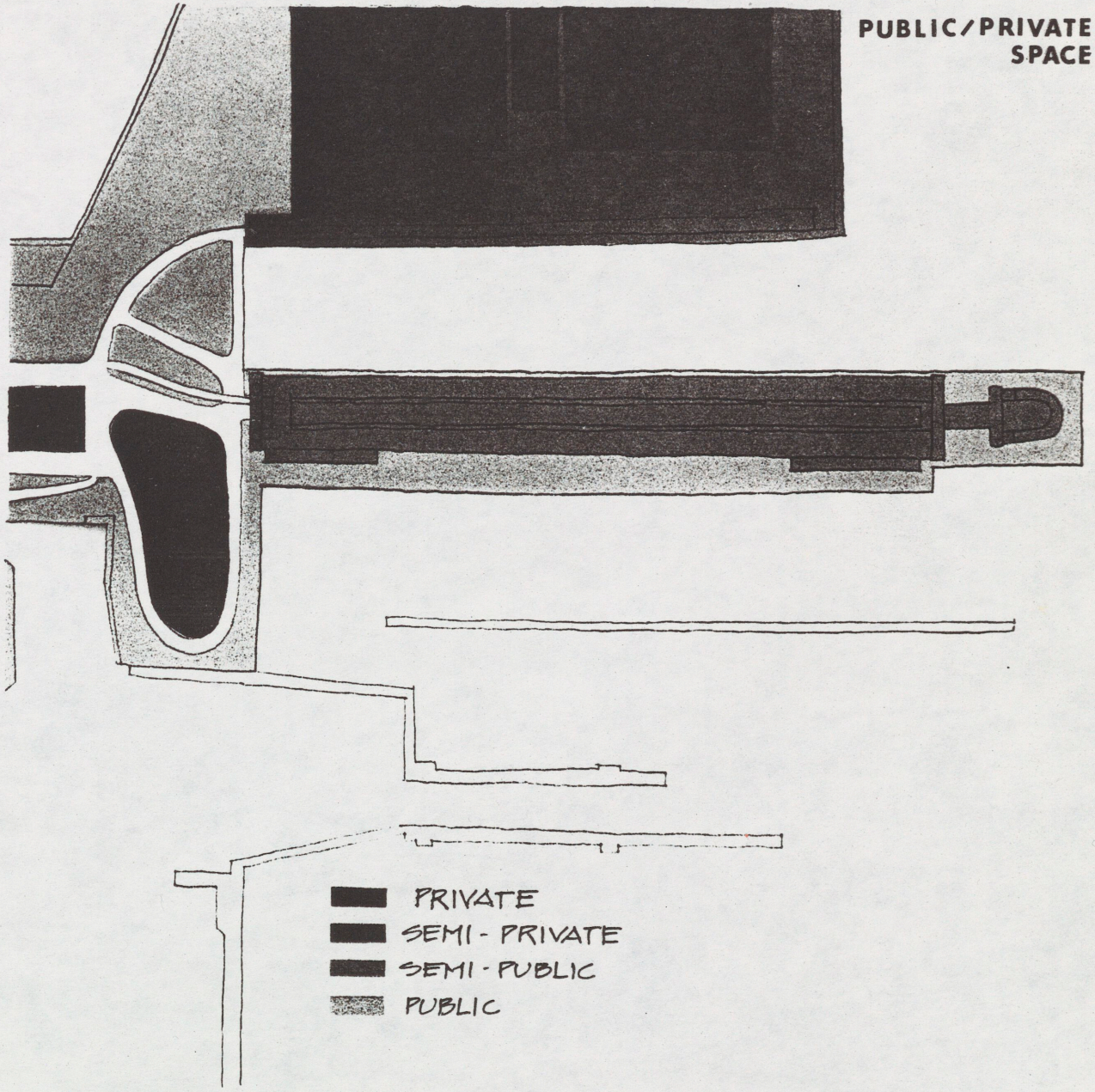
RESIDENCE DISTRICTS

R1 SINGLE-FAMILY RESIDENCE DISTRICT
R2 SINGLE-FAMILY RESIDENCE DISTRICT
R3 GENERAL RESIDENCE DISTRICT
R4 GENERAL RESIDENCE DISTRICT
R5 GENERAL RESIDENCE DISTRICT
R6 GENERAL RESIDENCE DISTRICT
R7 GENERAL RESIDENCE DISTRICT
R8 GENERAL RESIDENCE DISTRICT

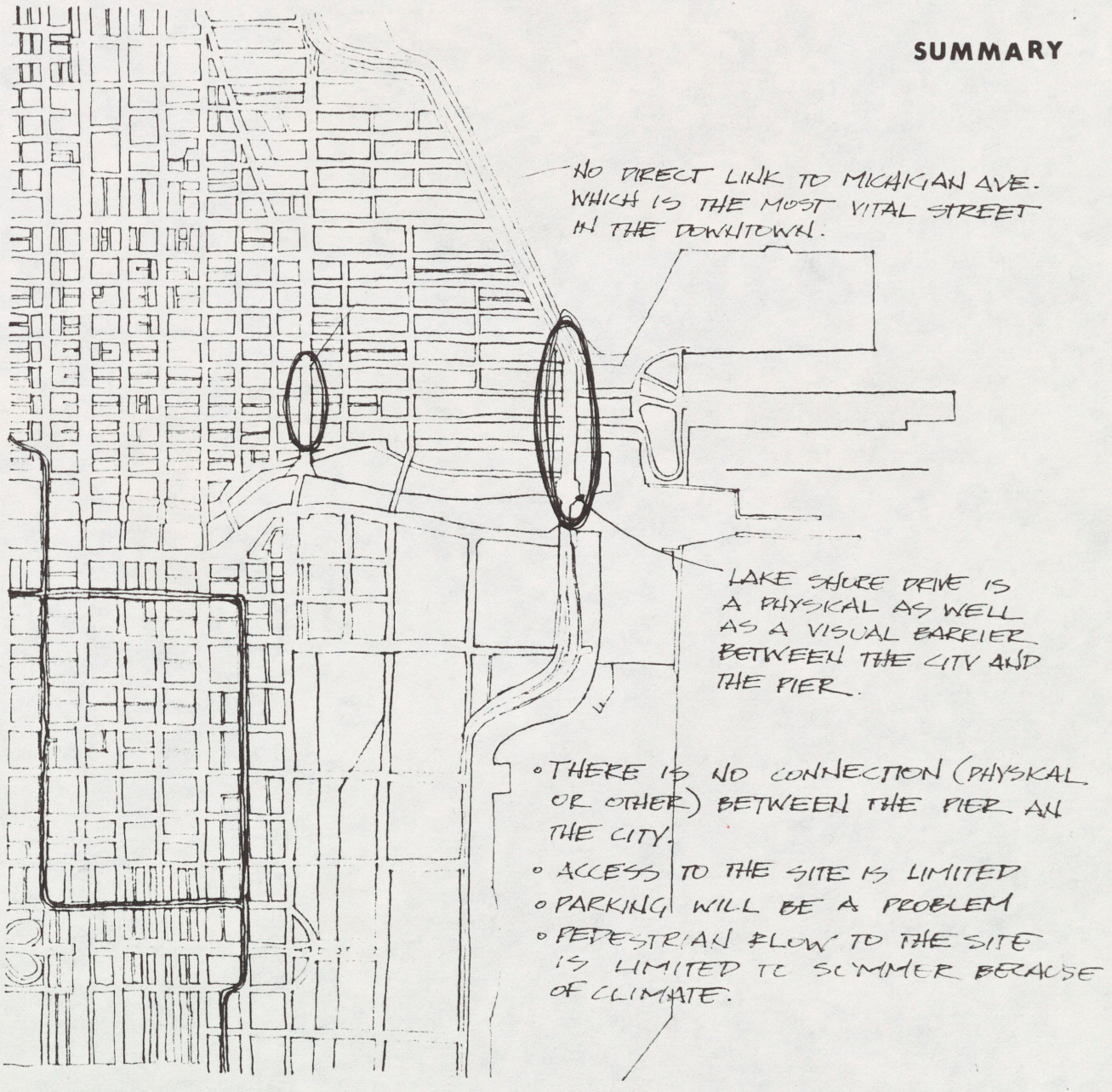

CLIMATIC DATA
SUMMER BREEZES
WINTER SUN
SUMMER SUN
WINTER WINDS
100
90
80
70
60
50
40
30
20
10
J F M A M J J A S O N D
MEAN DAILY TEMPERATURE


VIEWS OF NORTH AVE BEACH AND NORTH CHICAGO SKYLINE
VIEW OF JOHN HANCOCK AND CHICAGO COMMERCIAL DISTRICT
9
4
9
1
3
8
3
1
VIEW OF CENTAL BUSINESS DISTRICT
ENVIRONMENTAL RATINGS:
SCALE OF 1 TO 10 FOR LEAST INFLUENTIAL TO MOST INFLUENTIAL.
VIEW OF CHICAGO HARBOR AND GRANT PARK
VIEW OF SHEDD AQUARIUM AND PLANETARIUM

PUBLIC/PRIVATE SPACE

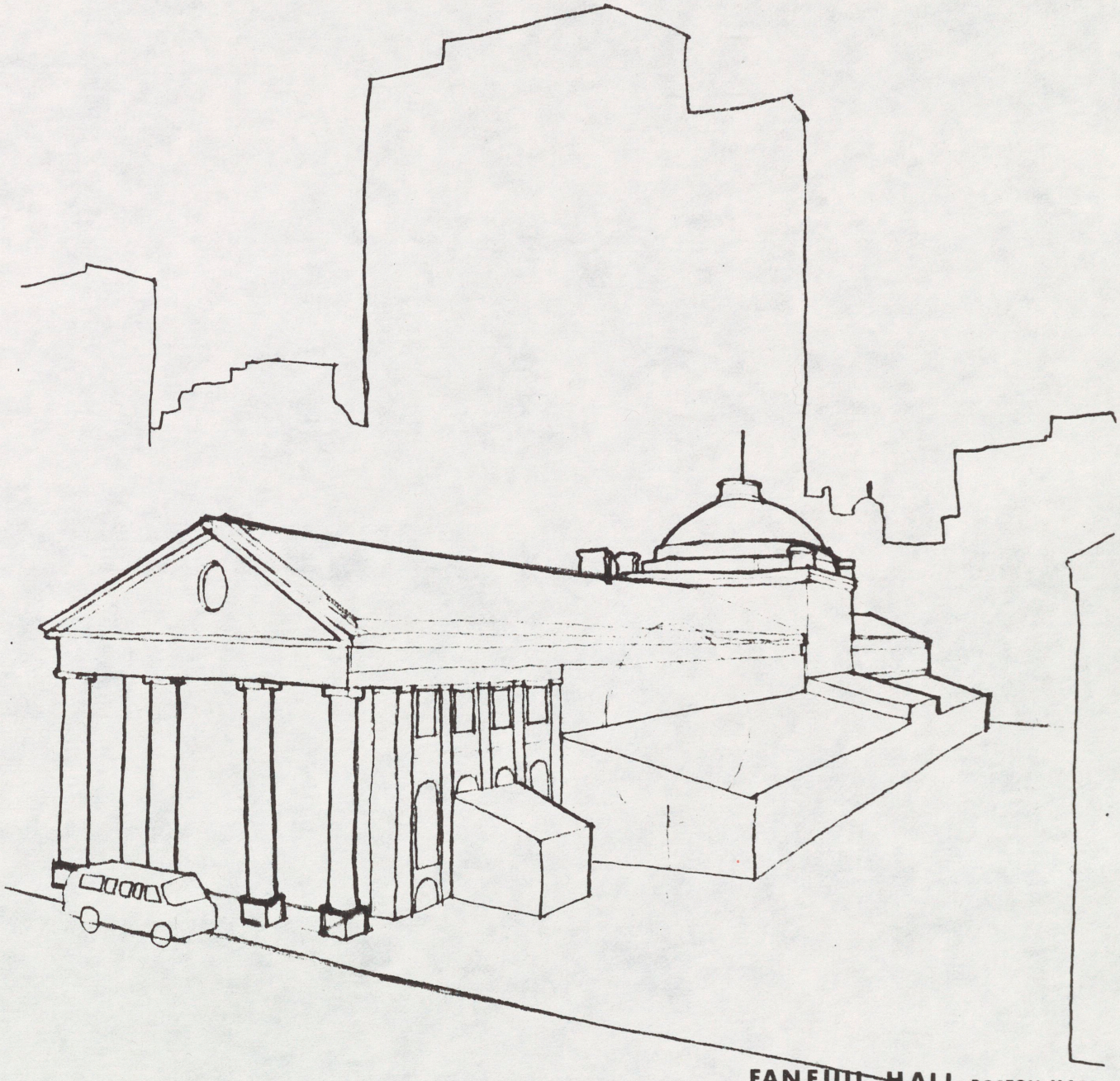


SUMMARY


NO DIRECT LINK TO MICHIGAN AVE. WHICH IS THE MOST VITAL STREET IN THE DOWNTOWN.
LAKE SHORE DRIVE IS A PHYSICAL AS WELL AS A VISUAL BARRIER BETWEEN THE CITY AND THE PIER.
• THERE IS NO CONNECTION (PHYSICAL OR OTHER) BETWEEN THE PIER AN THE CITY.
• ACCESS TO THE SITE IS LIMITED
• PARKING WILL BE A PROBLEM
• PEDESTRIAN FLOW TO THE SITE IS LIMITED TO SUMMER BECAUSE OF CLIMATE.

CASE STUDIES

Now that there is an understanding of the existing structure and its history the solution process can now begin. Since new ideas need to be tried an understanding of what can be successful in similar projects should be explored. By doing case studies, an understanding of how an idea was successful or unsuccessful for a given situation can be determined. Then by applying this to the situation at hand a successful solution can be developed.



FANEUIL HALL BOSTON, MASS.
BENJAMIN THOMPSON & ASSOC. 1976

The Faneuil Hall Marketplace is comprised of three 535 foot buildings built in 1824 as an extension of Boston's first public market, Faneuil Hall. The central structure is Alexander Parris' Quincy Market whichserved as a public market and meeting hall. The two other structures, the North and South Market buildings, were independent rows of commercial offices and warehouses.

By the turn of the century the market's prosperty began to fade and it wasn't until the 1960's that interest in the Market was renewed. Finally in 1975 Benjamin Thompson and Associates completed what is now known as the Faneuil Hall Marketplace.

The 225,000 square feet of retail space and 150,000 square feet of office space offer a wide variety of activities

for Boston and its visitors.[13] People are surrounded with the smell, taste and color of food, specialty merchandise of small shops, and street entertainment. The atmosphere created by this is furthur enhanced by the arrangement of the circulation paths and the outdoor spaces that allow for social interaction and people watching. What Thompson was trying to create was a festive atmosphere for human interaction.

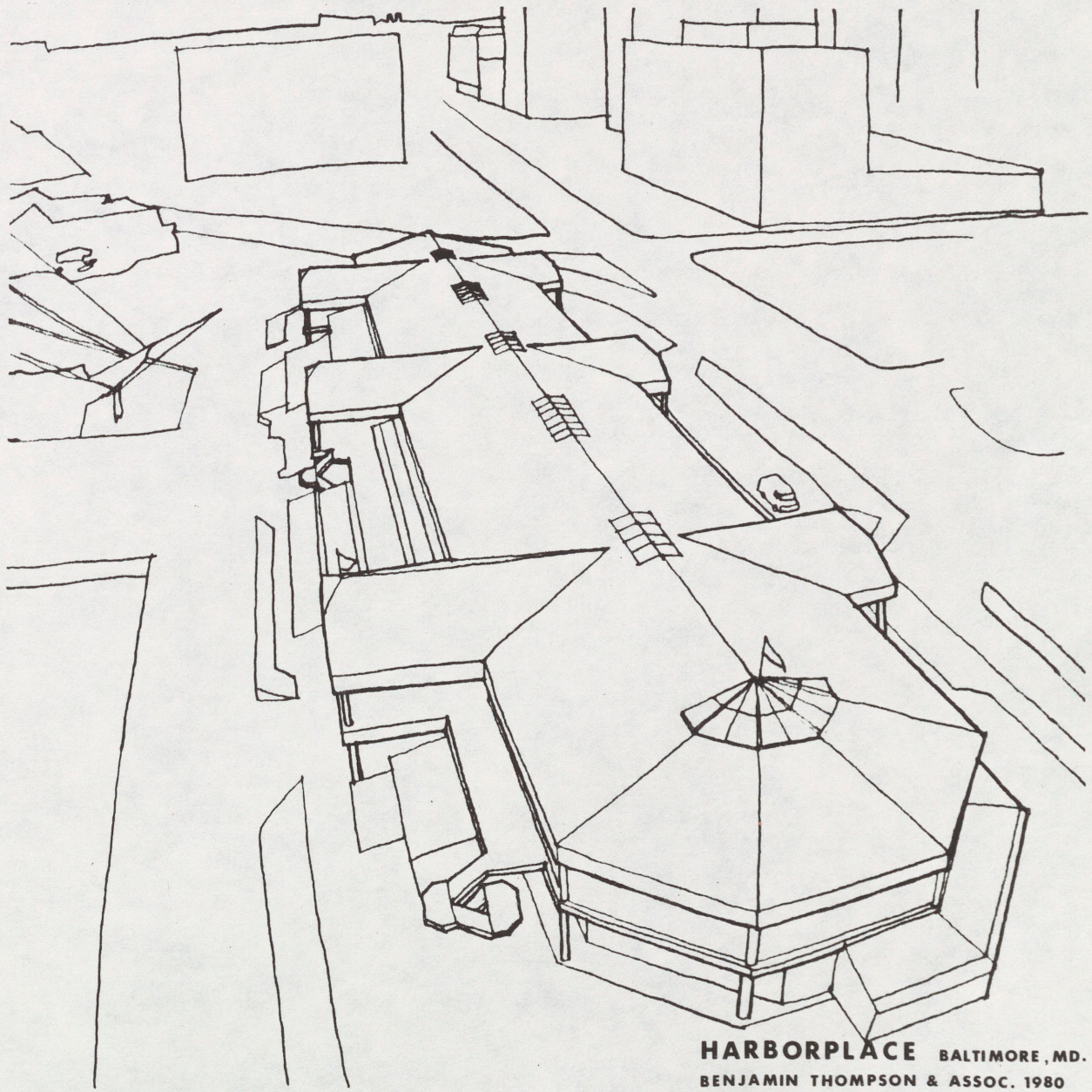
Of the 12 million visits per year, roughly half are tourists or conventioneers. The rest are drawn from Boston's office workers who are within a 20 minute walk or are students from Boston's 65 colleges. On average each visitor stays one and a half hour and spends $6. That comes out to be about $350 per square foot of rented space.[14]

Most of the business is done by tennants that specialize in food. In 50 percent of the space, food does 60 percent of the business. Next, small specialty theme merchandise does best. Few chain stores are permitted to keep the sense of a special place in the marketplace.[15]

With any project there are problems and criticisms and Faneuil Hall is no exception. There is criticism that form and function do not say the same thing. One critic feels that the function of the marketplace is as Boston's piazza, but the form is that of a street. Other criticisms involve the congestion in the center aile. According to the same critic "there aren't clear transepts to move laterally out of the aile." Finally there is the criticism of depth. "There is something for everyone but not

a lot for any one person."[16] is what a socialogist said, "You go for the experience, like a scenic vista. Like scenery you remember it but you don't watch it for long.

By far the successes overshadow any of the criticisms. Faneuil Hall offers a different experience not found in many other places. The necessary components and needs already existed at the site. All that was needed was the right combination of activities to revive the marketplace and Thompson has provided that.



HARBORPLACE BALTIMORE, MD.
BENJAMIN THOMPSON & ASSOC. 1980

Harborplace is comrised of two pavillions located on the north and west shorelines of Baltimore's Inner Horbor. The nothern pavillion is mostly made up of shops and restaurants that are layed out around a narrow central corridor. This corridor widens where the vertical circulation occurs and in turn provides gathering spaces. In the western pavillion there are more fastfood establishments all arranged around an open plan. Both buildings are designed with neither a front or back and very transparent exterior walls. They embrace the shore without blocking it, which is on of the basic design considerations.

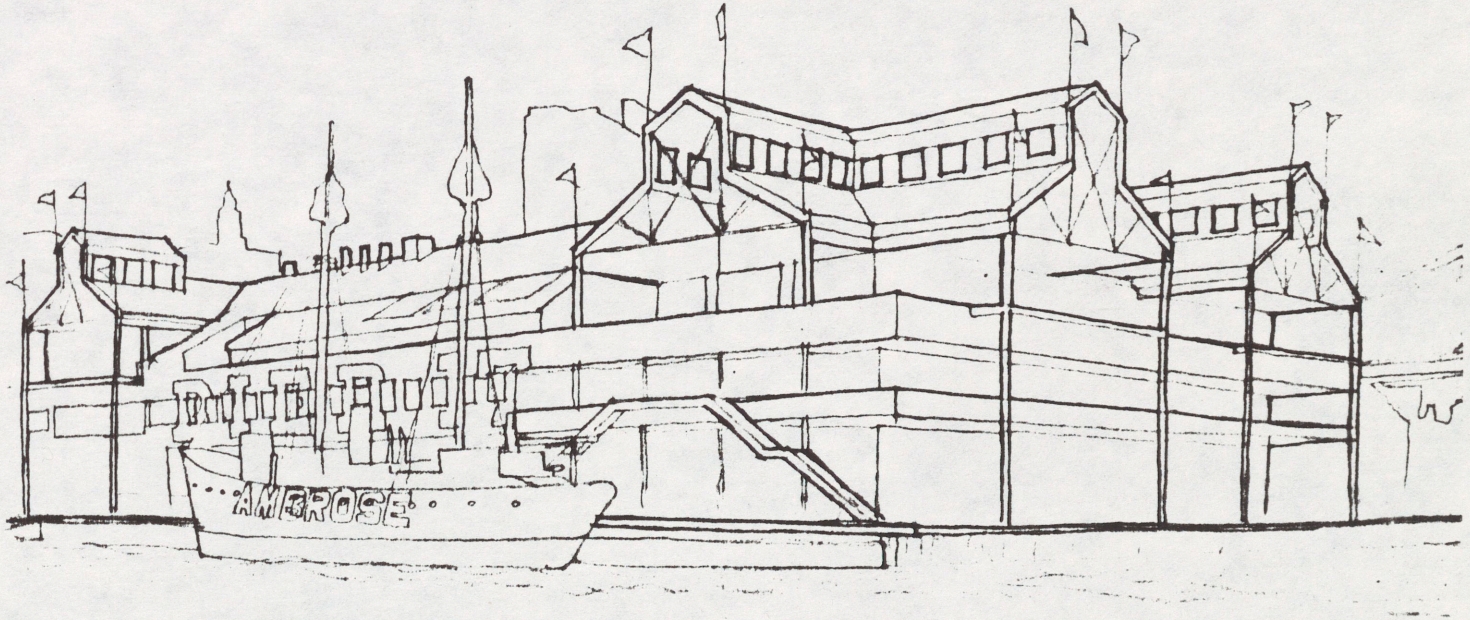
Although it is made up of all new buildings, the ideas behind Harborplace have their roots in the past. According to Jane Thompson, Benjamin's wife

> We remembered the tradition of commercial waterfront construction: shedlike warehouses and covered piers, ferry terminals, yacht clubs and waterfront grandstands for viewing races and regattas. We also remembered the great traditions of America's city parks, once animated by dramatic greenhouses, horticultural halls and exposition buildings.[17]

These traditions are all evident in the pavillions' porticos, angular forms and greenhouse glazing. Yet, the buildings themselves do not look like they are from the past, they look like they have always been there.

Like Faneuil Hall, Harborplace has become a commercial and social success. Through the encouragement of Thompson and Associates, the variety of businesses has created the "setting for festive human interaction" and has provided downtown Baltimore with a lively unifying focus. The two pavillions have become an active town center and have created a new "traditional" marketplace. This has all taken place despite the problem of access across the surrounding busy streets.

Success has come quite easy to Harborplace because it seems as though all that Thompson had to do was to provide a focus for the already existing vitality of the Inner Harbor. The buildings provided the history, the foods and crafts provide the activities, Baltimore provided the need and the people provided the rest.



SOUTH STREET SEAPORT NEW YORK, N.Y.
BENJAMIN THOMPSON & ASSOC. 1985

Pier 17 of the South Street Seaport in New York is a recently completed project by Benjamin Thompson and Associates. It is a 100 foot high bright red structure that projects 400 feet into the East River and is designed to accommidate about 100 shops, cafes, and restaurants on three 50,000 square foot levels. The building is a glass and steel shed with skylighted arcades, crossings and openair decks. The bright "nautical red" corrugated steel skin is offset by charcoal steel structural frames, white graphics,and blue awnings all under a grey steel roof. It was openned in 1985 and although it has yet to be proven a success, it was felt that the initial criticisms could be helpful.

The design methodology is much like that of Faneuil Hall and Harborplace. The draw and money makers are the food and

crafts, which in turn create the atmosphere for festive gatherings. The only difference is that the South Street Seaport project is located in an old commercial/residential fishing district and on the edge of a business area. Faneuil Hall and Haborplace, on the other hand, are centrally located in their city's plans and have created the atmospheres for the surrounding context. The commercial ideas of Pier 17 are imposed on an already existing atmosphere.

The biggest fear is that the new commercial focus will change the low scale historic character of the community. In no way did the development strengthen the wholesale fish operations of the area. What it did do was inject new and different uses. Because of this many critics feel that the commercial interest will deteriorate the areas cultural heritage thus destroying the historic character. They also feel that the commercial interests would draw away from the cultural offerings of the local museum and neighborhood.[18]

From a planning standpoint the biggest problem so far has been that of transportation. With over 10 million visitors expected a year, there is very little provision for parking and access. There are areas in the nearby financial district, but they would only be available on weekends. And as it is now the area is difficult to get to.[19]

For Pier 17 time will determine what the overall cost will be. The formula of success has been applied, but this time it has a new ingredient.

PROGRAM

DESIGN CHALLENGE

FROM THE NAVY PIER TASK FORCE'S PUBLICATION
"WINDOW ON THE FUTURE"

TASK FORCE GUIDELINES

The Mayor established the following guidelines so that neither the City's goals nor public concerns would be ignored in the task force's deliberations.

A. Planning and development goals:

1. Encourage the creation of public space and use of the Pier.
2. Recognize and respect the Pier's landmark status.

3. Maximize the use of the Pier's east end.

4. Comply with the Lakefront Protection Ordinance.

5. Encourage compatible and appropriate uses.

6. Maximize opportunities for job creation and equal opportunity.

B. Fiscal goals:

1. Minimize the investment of City funds that could be used for other public purposes.

2. Minimize utilization of the full faith and credit of the City of Chicago.

3. Maximize opportunities for generating income to the City.

4. Minimize operating costs of the Pier to the City.

INTERIM RECOMMENDATIONS

Early in the discussion of long-term development options for the Pier, the task force members came to recognize that although the Pier is one of Chicago's greatest treasures, it remains undiscovered for much of the public. Because of the task force's serious commitment to the public use of the Pier, it made the following two interim recommendations to Mayor Washington in May 1985:

A. Open the outdoor recreation areas to the general public.

The task force recommended opening the south esplanade and walkways around the auditorium seven days a week during the summer months. The task force also suggested the installation of benches, street furniture, and other amenities to encourage pedestrians. It was also recommended that the City should open the Pier to licensed food

vendors, along with licensed street performers and musicians. As a result of the task force's recommendations, the Department of Economic Development, the Department of Public Works, and the Office of Budget and Management identified funds to make the repairs necessary before the Pier could be opened. On July 1, 1985, the south esplanade and area surrounding the east end opened to the public.

B. Reopen and maximize the use of the east end complex for special events and exhibitions as a long-term development plan evolves.

The task force recommended the development of a marketing program and leasing policy to increase Pier use by parties sponsoring public and private events. A task force subcommittee agreed to assist the City in its marketing efforts, if desired. The City did not have sufficient funds to implement this recommendation in 1985, but will consider it for 1986.

RECOMMENDED DEVELOPMENT

A. Basic considerations

The task force believes the following considerations must guide the future of the Pier. They are a reflection of the strong consensus that emerged from the task force's deliberations and are intended to define the type of development the City should seek for the Pier.

1. Navy Pier as a unique asset for Chicago

Navy Pier is an imposing, well-recognized, and treasured Chicago landmark -- one of the most visible artifacts of the Burnham Plan -- and it has the potential to showcase Chicago in a manner that no other public space can match.

2. Navy Pier as an accessible public facility

Recognizing the Pier's history as a multi-faceted public facility, the task force wholeheartedly recommends that this histori-

cal precedent not be ignored. Two task force members stated this principle clearly:

> The simple principle that must be adhered to is that Navy Pier belongs to the people. Any program or use of the Pier must be geared to the . . . general public.
> - Bernard Stone, Alderman 50th Ward

> Finally, it is important to remember that the Pier belongs to the people, and Chicago should join the many cities in the world whose harbors have become a place of pride and celebration to be visited and enjoyed by all.
> - Fransisco Restrepo, Architect

The task force recommends that the majority of the space be devoted to the following:

a. Public space: Access to this space is unrestricted. Citizens may enjoy whatever amenities are available -- open spaces, picnic areas, and winter and summer gardens, for example.

b. Specialized public space: Access to this type of space may involve entry fees and will consist of cultural, en-

tertainment or recreational facilities.

B. Recommended uses for the Pier

After considering private and public uses for the Pier that ranged from office space to parks, the task force recommends treating the Pier as a stage for a multitude of compatible activities that would create an exciting place for people to visit, explore and use. Specifically, the task force strongly recommends the following:

1. Expositions

- Utilize the Auditorium, Recreation, Shelter and Terminal buildings and portions of the Shed buildings to house a range of expositions on cultural, educational, civic, ethnic or neighborhood themes.
- Expositions would be cultural, educational, civic, ethnic or entertainment events open to the public. These expositions would not compete with the trade

shows held at McCormick Place. Expositions could have entry fees.

- Expositions should produce revenue to defray the Pier's operating costs and pay fees for the use of the Pier according to the amount of space utilized and length of occupancy.

2. Culture and entertainment

- Arts activities should include both performing arts (dance, theater, music) and visual arts (painting, sculpture, filmmaking, photography, video and the like).
- Adjunct space for existing museums might be established, or new museums -- such as a maritime museum, ethnic museum, building arts museum or a children's museum -- could be developed.
- Small theaters (200-300 seats) would be appropriate, but the Pier should not

compete with present or proposed institutions or facilities such as the North Loop's Theatre Row, nor constitute a major performing arts center.

- Entertainment activities should also include classic or foreign film centers.
- Facilities should accommodate community and neighborhood cultural events.

3. Parks

- Park space on the Pier should accommodate both passive and active space.
- The south esplanade, the dock area surrounding the east end, and the north arcade should be equipped with benches and appropriate outdoor furniture.
- A winter garden and a plant conservatory should be included.

4. Sports and recreation

- To complement and expand enjoyment of the open space and winter garden, the

Pier should accommodate noncompetitive recreational activities such as jogging, biking, fishing and picnicking. Recreation facilities that only can be used by a few people at a time (tennis and racquetball courts) or have unique space requirements (swimming pools) should be avoided.

- Facilities should cater to all ages.

5. Marinas

- The overall development of the Pier should not preclude a marina on the north side.
- Consideration should be made to provide the necessary support and security facilities required by a marina.
- Management of the Pier should encourage use of the south dock or wharf for tour boats, commuter boats, temporary boat shows or boats of historical signifi-

cance, and it should provide adequate mooring facilities.

- The number and size of boats located along the south dock should not obstruct the vistas looking south.
- The task force recommends that the City review the condition of Dime Pier and, if it seems feasible, restore it for use as a fishing pier and a temporary docking facility for boats.

6. Retail

- Retail activities on the Pier should directly support the Pier's primary activities. Retail endeavors could include restaurants, cafes, specialty shops, convenience shops and book shops.

7. Office

- Limited office, studio or working space that supports on-Pier exposition, cultural or civic activities could be

considered. Traditional private office or residential development was viewed as an inappropriate use for the Pier.

The task force recommendations may seem to suggest an unusual package of uses for what some consider prime real estate. Chicago, however, has many other appropriate and desirable sites available for major residential, commercial, hotel and/or office developments. In addition, Chicago's century-old commitment to a public lakefront has served as a compelling policy strongly supported by the public. The task force believes its suggestions will create an exciting, innovative, year-round public facility that will preserve and capture the uniqueness of the Pier and will be economically viable. At the same time, the Pier will generate increased tourism and sales tax revenues, while contributing to Chicago's status as a spectacular world-class city.

PROGRAM AREA SUMMARY

Since there is no formula for determining what size and relationship a function should have within any given project, a methodology should be determined. By using the data from the case studies and by considering the task force guidelines the methodology can be simplified.

For this project a number of general factors were considered from both the task force guidelines and the case studies. First, by using the recommendations of the task force for the Pier to be a publicly oriented facility with a commercial area as a financial base, a larger percentage of the total area was given over to public space. Then to determine what the numerical percentages should be, the case studies were evaluated. The most proven and also the largest project studied was Faneuil Hall

Marketplace. The total of the commercial and office areas is about 350,000 square feet. By taking this as the maximum area that any commercial area should be, the project percentages were determined.

-EXISTING AREAS

*Total for Navy Pier

(buildings)		
Head House	31,700 sq. ft.	
Sheds	936,000	
Terminal Building	44,000	these four buildings
Shelter Building	36,500	were hesvily rehab-
Recreation Building	24,000	ilitated in 1976 by
Auditorium	43,000	the City of Chicago
Total	1,115,200 sq. ft.	

(open spaces)	
Between Sheds	187,200 sq. ft.
South Esplanade	210,600

*Project Total

Since the east end of the pier was heavily rehabilitated in 1976 the Head House and the Sheds will be the only buildings considered in this project. (This does not mean that the other buildings will be ignored in design considerations.)

(buildings)		
Head House	31,700 sq. ft.	
Sheds	936,000	
Total	967,800 sq, ft.	
(open spaces)		
Between Sheds	187,200 sq. ft.	
South Esplanade	210,600	
Total	397,800 sq.ft.	

--Total 1,365,500 sq. ft.

-PROGRAM OF SPACES

*Circulation: 30% of the total area = 410,000 sq. ft. This by far the most important design consideration for this project. Entry, exit, service, pedestrian and transit all happen at the west end and run various lengths of the Pier. The goal here is to integrate all these types of circulation into the overall scheme so that one does not dominate everything or create barriers and boundries between areas.

considerations
- -pedestrians
- -vehicular
  - on site transit
  - service
  - emergency
- -vertical

*Commercial: 25% of the total area = 340,000 sq. ft. 25% of the total area is approximately the size of Faneuil Hall Marketplace's commercial which, as stated earlier, was decided to be the maximum for a commercial area. Thisarea will be the financial base for the entire system.

considerations
- -open year-round
- -provide an enjoyable atmosphere for spending money
- -offer a diverse number of products

Although the financial goals are important the overall design goals have greater bearing. Since the project is to be oriented to the public the commercial areas should:

- -only be a financial anchor and not be the major attraction
- -reflect the ethnic diversity of Chicago
- -be more than just a tourist attraction. it should be geared towards everyone
- -reflect the character and mood of the adjacent public space

commercial spaces

restaurants	150 sq.ft/person
cafes	100/person
specialty shops/crafts	30/person
markets	as required
offices	100/person
-management	
-security	
-other	
galleries	20,000 sq. ft.
theaters	2,000 each
exhibition (pub.&priv.)	40,000
mechanical	21,000
fast food	75/person

*Public Spaces: 45% of the total area = 610,000 sq. ft. As stated in the task force guidelines this is to be the primary function of the Pier. It should provide a large number of activities and be flexible enough to accommidate all of Chicago's ethnic groups.

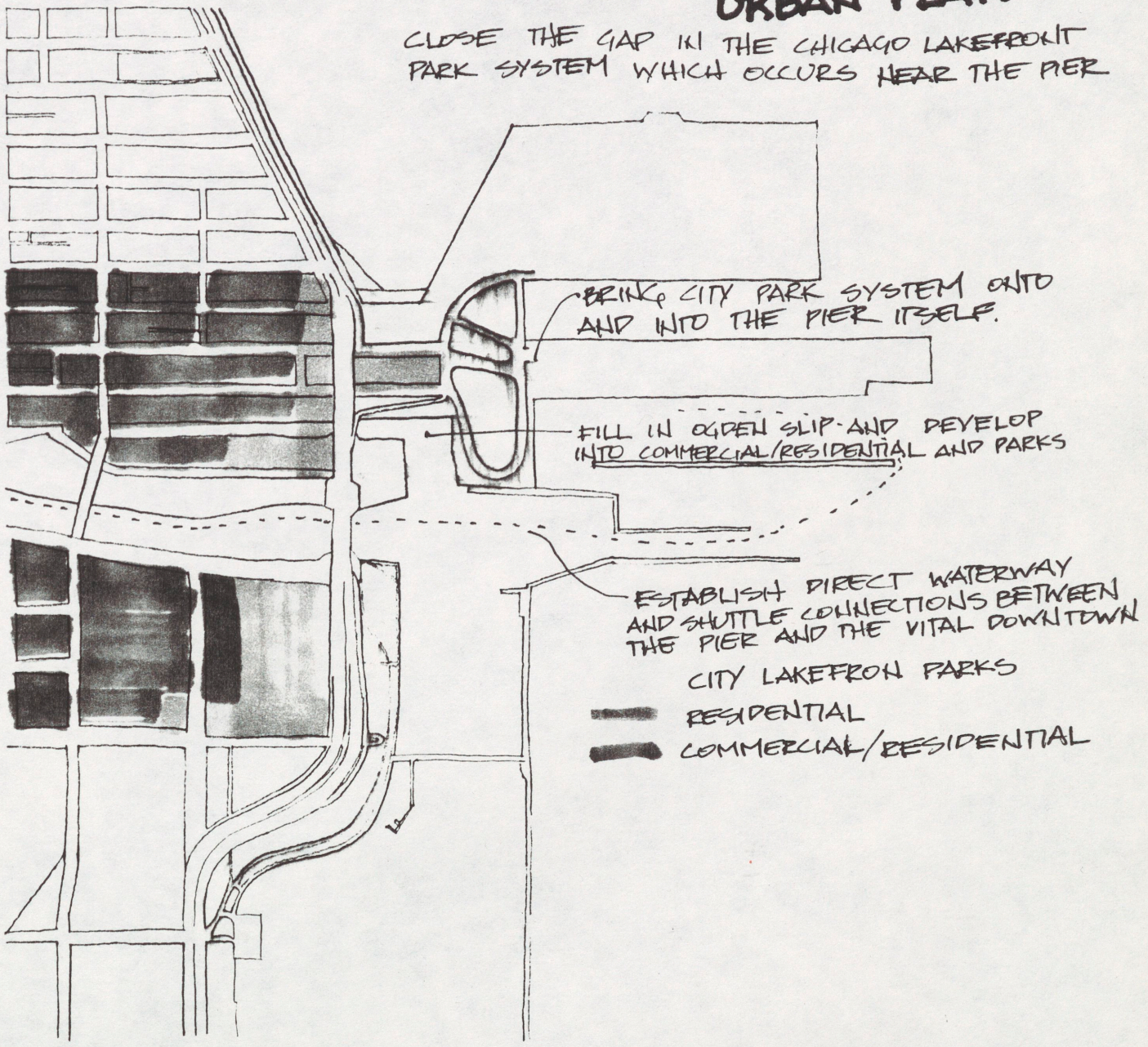
public spaces

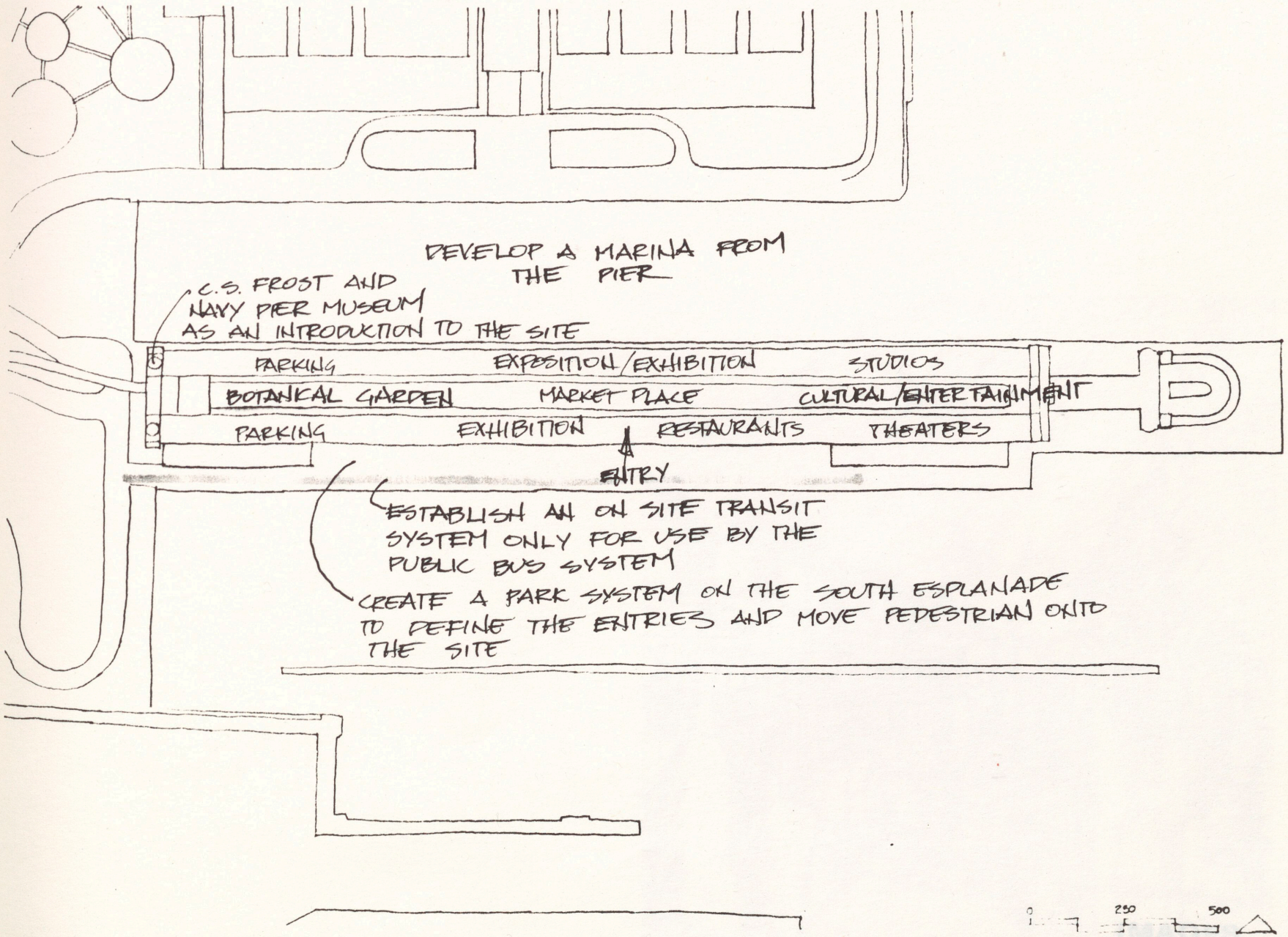
interior greenspaces	
-botanical gardens	50,000 sq. ft.
-park system throughout	as required
outdoor greenspaces	as required
passive gathering areas	as required
active gathering areas	as required
recreation areas	as required
storage	55,000 sq. ft.
management offices	100 sq. ft./person
mechanical	47,000 sq. ft.
security	750
medical	3,000
entertainment	as required
exhibition (pub. & priv.)	40,000 sq. ft.
marina	
marina support	3,000
parking	

CONCEPT

URBAN PLAN

CLOSE THE GAP IN THE CHICAGO LAKEFRONT PARK SYSTEM WHICH OCCURS NEAR THE PIER

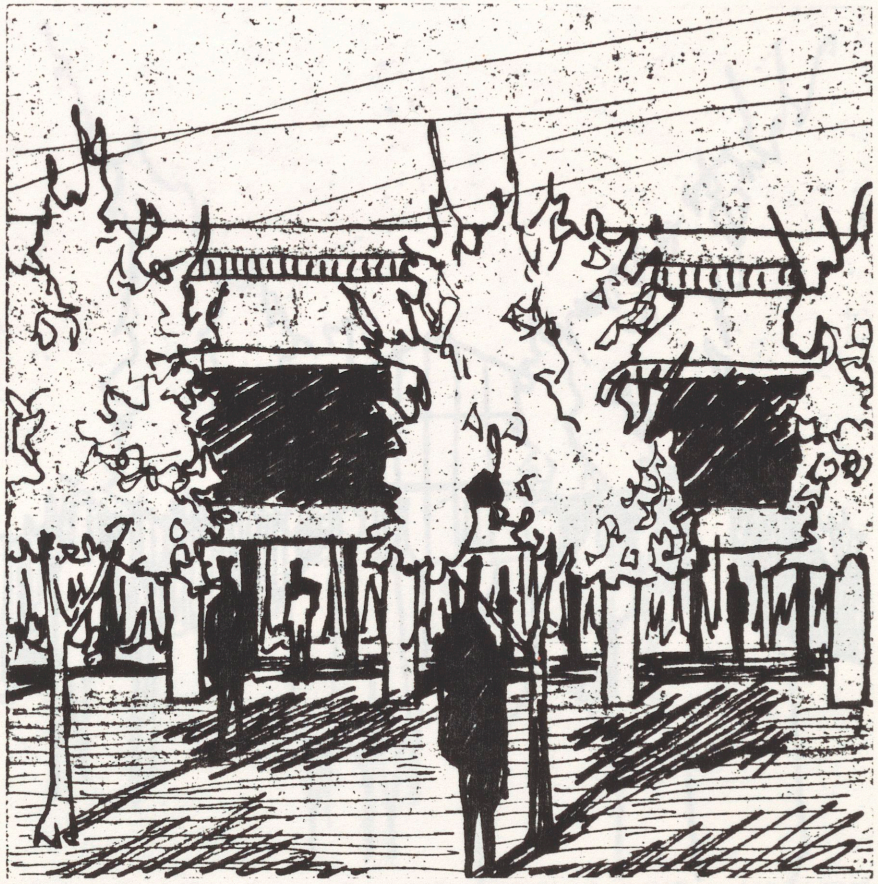


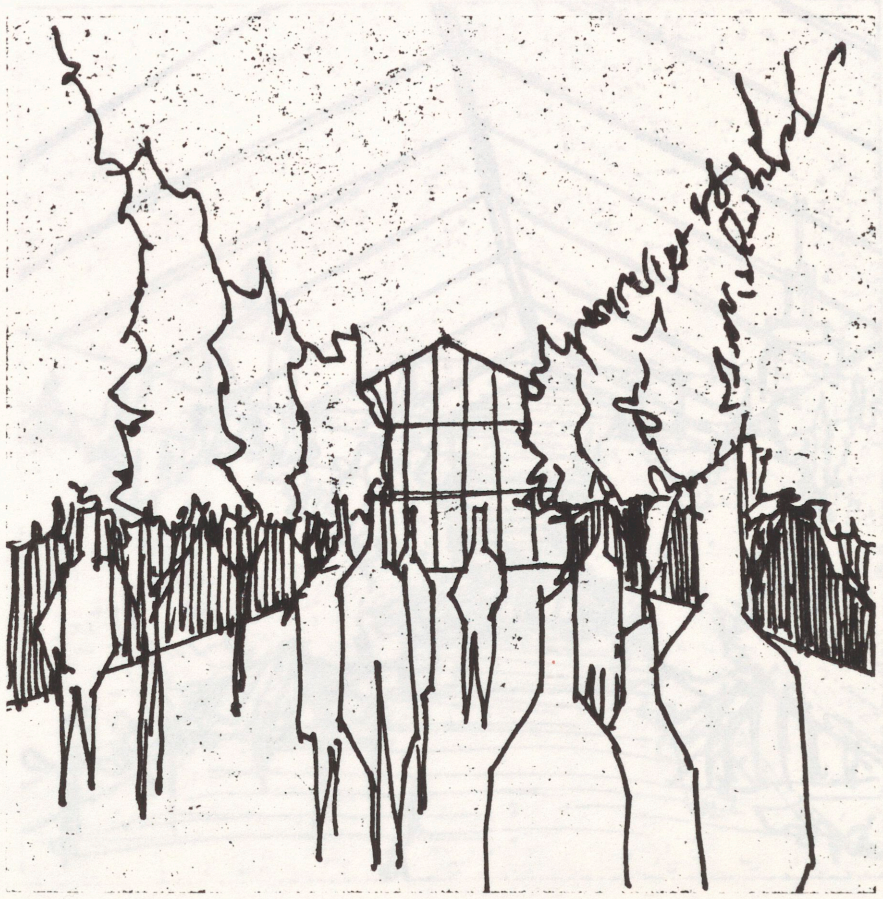

DEVELOP A MARINA FROM THE PIER
C.S. FROST AND NAVY PIER MUSEUM AS AN INTRODUCTION TO THE SITE
PARKING
EXPESITION/EXHIBITION
STUDIOS
BOTANICAL GARDEN
MARKET PLACE
CULTURAL/ENTERTAINMENT
PARKING
EXHIBITION
RESTAURANTS
THEATERS
ENTRY
ESTABLISH AN ON SITE TRANSIT SYSTEM ONLY FOR USE BY THE PUBLIC BUS SYSTEM
CREATE A PARK SYSTEM ON THE SOUTH ESPLANADE TO DEFINE THE ENTRIES AND MOVE PEDESTRIAN ONTO THE SITE
0
250
500

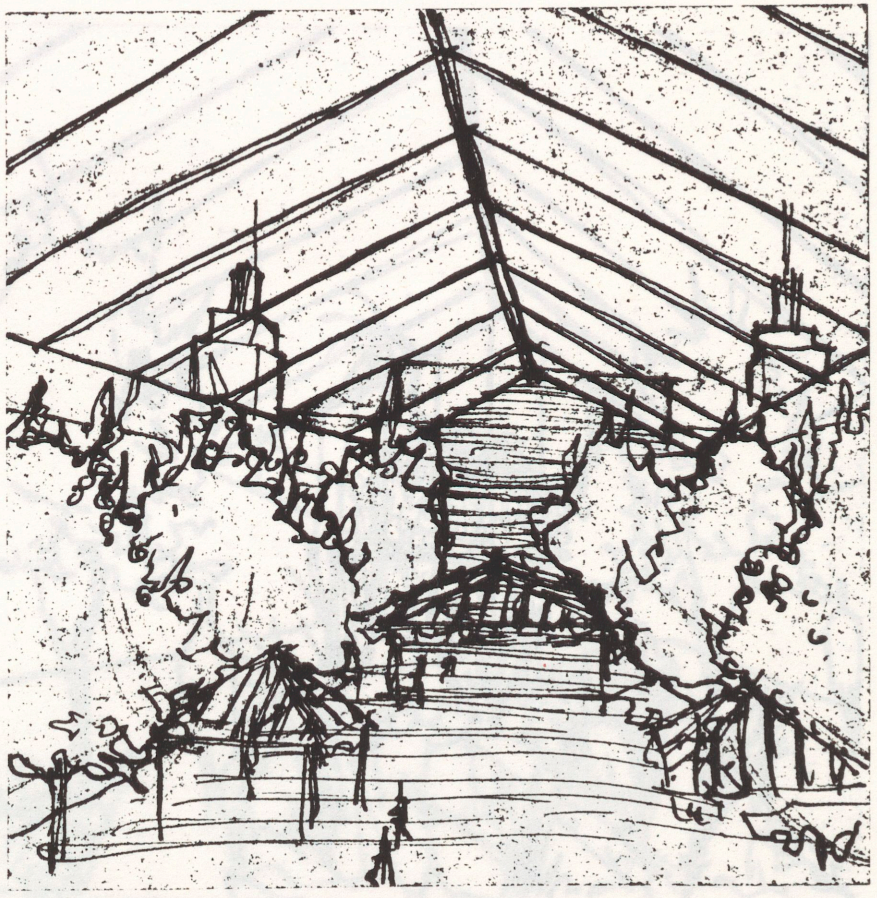
IMAGES













APPENDIX

U.S. Department
of the Interior
National Park
Service

The Secretary of the Interior's Standards for Rehabilitation

and Guidelines for Rehabilitating Historic Buildings

THE SECRETARY OF THE INTERIOR'S STANDARDS FOR REHABILITATION

The Secretary of the Interior is responsible for establishing standards for all programs under Departmental authority and for advising Federal agencies on the preservation of historic properies listed or eligible for listing in the National Register of Historic Places. In partial fulfillment of this responsibility, the Secretary of the Interior's Standards for Historic Preservation Projects have been developed to direct work undertaken on historic buildings.

Initially used by the Secretary of the Interior in determining the applicability of proposed project work on registered properties within the Historic Preservation Fund grant-in-aid program, the Standards for Historic Preservation Projects have received extensive testing over the years--more than 6,000 acquisition and development projects were approved for a variety of work treatments. In addition, the Standards have been used by Federal agencies in carrying out their historic preservation responsibilities for properties in Federal ownership or control; and by State and local officials in the review of both Federal and nonfederal rehabilitation proposals. They have also been adopted by a number of historic district and planning commissions across the country.

The Standards for Rehabilitation (36 CFR 67) comprise that section of the overall historic preservation project standards addressing the most prevalent treatment today: Rehabilitation. **"Rehabilitation" is defined as the process of returning a property to a state of utility, through repair or alteration, which makes possible an efficient contemporary use while preserving those portions and features of the property which are significant to its historic, architectural, and cultural values.**

The Standards for Rehabilitation are as follows:

1. Every reasonable effort shall be made to provide a compatible use for a property which requires minimal alteration of the building, structure, or site and its environment, or to use a property for its originally intended purpose.

2. The distinguishing original qualities or character of a building, structure, or site and its environment shall not be destroyed. The removal or alteration of any historic material or distinctive architectural features should be avoided when possible.

3. All buildings, structures, and sites shall be recognized as products of their own time. Alterations that have no historical basis and which seek to create an earlier appearance shall be discouraged.

4. Changes which may have taken place in the course of time are evidence of the history and development of a building, structure, or site and its environment. These changes may have acquired significance in their own right, and this significance shall be recognized and respected.

5. Distinctive stylistic features or examples of skilled craftsmanship which characterize a building, structure, or site shall be treated with sensitivity.

6. Deteriorated architectural features shall be repaired rather than replaced, wherever possible. In the event replacement is necessary, the new material should match the material being replaced in composition, design, color, texture, and other visual qualities. Repair or replacement of missing architectural features should be based on accurate duplications of features, substantiated by historic, physical, or pictorial evidence rather than on conjectural designs or the availability of different architectural elements from other buildings or structures.

7. The surface cleaning of structures shall be undertaken with the gentlest means possible. Sandblasting and other cleaning methods that will damage the historic building materials shall not be undertaken.

8. Every reasonable effort shall be made to protect and preserve archeological resources affected by, or adjacent to any project.

9. Contemporary design for alterations and additions to existing properties shall not be discouraged when such alterations and additions do not destroy significant historical, architectural or cultural material, and such design is compatible with the size, scale, color, material, and character of the property, neighborhood or environment.

10. Wherever possible, new additions or alterations to structures shall be done in such a manner that if such additions or alterations were to be removed in the future, the essential form and integrity of the structure would be unimpaired.

In the past several years, the most frequent use of the Secretary's "Standards for Rehabilitation" has been to determine if a rehabilitation project qualifies as a "certified rehabilitation" pursuant to the Tax Reform Act of 1976, the Revenue Act of 1978, and the Economic Recovery Tax Act of 1981, as amended. The Secretary is required by law to certify rehabilitations that are "consistent with the historic character of the structure or the district in which it is located." The Standards are used to evaluate whether the historic character of a building is preserved in the process of rehabilitation. Between 1976 and 1982 over 5,000 projects were reviewed and approved under the Preservation Tax Incentives program.

As stated in the definition, the treatment "Rehabilitation" assumes that at least some repair or alteration of the historic building will need to take place in order to provide for an efficient contemporary use; however these repairs and alterations must not damage or destroy the materials and features--including their finishes--that are important in defining the building's historic character.

In terms of specific project work, preservation of the building and its historic character is based on the assumption that (1) the historic materials and features and their unique craftsmanship are of primary importance and that (2), in consequence they will be retained, protected, and repaired in the process of rehabilitation to the greatest extent possible, not removed and replaced with materials and features which appear to be historic, but which are--in fact--new.

To best achieve these preservation goals, a two-part evaluation needs to be applied by qualified historic preservation professionals for each project as follows: first, a particular property's materials and features which are important in defining its historic character should be identified. Examples may include a building's walls, cornice, window sash and frames and roof; rooms, hallways, stairs, and mantels; or a site's walkways, fences, and gardens. The second part of the evaluation should consist of assessing the potential impact of the work necessary to make possible an efficient contemporary use. A basic assumption in this process is that the historic character of each property is unique and therefore proposed rehabilitation work will necessarily have a different effect on each property; in other words, what may be acceptable for one project may be unacceptable for another. However, the requirement set forth in the definition of "Rehabilitation" is always the same for every project: those portions and features of the property which are significant to its historic, architectural, and cultural values must be preserved in the process of rehabilitation. To accomplish this, all ten of the Secretary of the Interior's "Standards for Rehabilitation" must be met.

GUIDELINES FOR REHABILITATING HISTORIC BUILDINGS

The Guidelines were initially developed in 1977 to help property owners, developers, and Federal managers apply the Secretary of the Interior's "Standards for Rehabilitation" during the project planning stage by providing general design and technical recommendations. Unlike the Standards, the Guidelines are not codified as program requirements. Together with the "Standards for Rehabilitation" they provide a model process for owners, developers, and federal agency managers to follow.

It should be noted at the outset that the Guidelines are intended to assist in applying the Standards to projects generally; consequently, they are not meant to give case-specific advice or address exceptions or rare instances. For example, they cannot tell an owner or developer which features of their own historic building are important in defining the historic character and must be preserved--although examples are provided in each section---or which features could be altered, if necessary, for the new use. This kind of careful case-by-case decisionmaking is best accomplished by seeking assistance from qualified historic preservation professionals in the planning stage of the project. Such professionals include architects, architectural historians, historians, archeologists, and others who are skilled in the preservation, rehabilitation, and restoration of historic properties.

The Guidelines pertain to historic buildings of all sizes, materials, occupancy, and construction types; and apply to interior and exterior work as well as new exterior additions. Those approaches, treatments, and techniques that are consistent with the Secretary of the Interior's "Standards for Rehabilitation" are listed in the **"Recommended"** column on the left; those approaches, treatments, and techniques which could adversely affect a building's historic character are listed in the **"Not Recommended"** column on the right.

To provide clear and consistent guidance for owners, developers, and federal agency managers to follow, the "Recommended" courses of action in each section are listed in order of historic preservation concerns so that a rehabilitation project may be successfully planned and completed--one that, first, assures the preservation of a building's important or "character-defining" architectural materials and features and, second, makes possible an efficient contemporary use. Rehabilitation guidance in each section begins with protection and maintenance, that work which should be maximized in every project to enhance overall preservation goals. Next, where some deterioration is present, repair of the building's historic materials and features is recommended. Finally, when deterioration is so extensive that repair is not possible, the most problematic area of work is considered: replacement of historic materials and features with new materials.

To further guide the owner and developer in planning a successful rehabilitation project, those complex design issues dealing with new use requirements such as alterations and additions are highlighted at the end of each section to underscore the need for particular sensitivity in these areas.

Identify, Retain, and Preserve

The guidance that is basic to the treatment of all historic buildings--**identifying, retaining, and preserving** the form and detailing of those architectural materials and features that are important in defining the historic character-- is always listed first in the "Recommended" column. The parallel "Not Recommended" column lists the types of actions that are most apt to cause the diminution or even loss of the building's historic character. It should be remembered, however, that such loss of character is just as often caused by the cumulative effect of a series of actions that would seem to be minor interventions. Thus, the guidance in all of the "Not Recommended" columns must be viewed in that larger context, e.g., for the total impact on a historic building.

Protect and Maintain

After identifying those materials and features that are important and must be retained in the process of rehabilitation work, then **protecting and maintaining** them are addressed. Protection generally involves the least degree of intervention and is preparatory to other work. For example, protection includes the maintenance of historic material through treatments such as rust removal, caulking, limited paint removal, and re-application of protective coatings; the cyclical cleaning of roof gutter systems; or installation of fencing, protective plywood, alarm systems and other temporary protective measures. Although a historic building will usually require more extensive work, an overall evaluation of its physical condition should always begin at this level.

Repair

Next, when the physical condition of character-defining materials and features warrants additional work **repairing** is recommended. Guidance for the repair of historic materials such as masonry, wood, and architectural metals again begins with the least degree of intervention possible such as patching, piecing-in, splicing, consolidating, or otherwise reinforcing or upgrading them according to recognized preservation methods. Repairing also includes the limited replacement in kind--or with compatible substitute material--of extensively deteriorated or missing parts of features when there are surviving prototypes (for example, brackets, dentils, steps, plaster, or portions of slate or tile roofing). Although using the same kind of material is always the preferred option, substitute material is acceptable if the form and design as well as the substitute material itself convey the visual appearance of the remaining parts of the feature and finish.

Replace

Following repair in the hierarchy, guidance is provided for **replacing** an entire character-defining feature with new material because the level of deterioration or damage of materials precludes repair (for example, an exterior cornice; an interior staircase; or a complete porch or storefront). If the essential form and detailing are still evident so that the physical evidence can be used to re-establish the feature as an integral part of the rehabilitation project, then its replacement is appropriate. Like the guidance for repair, the preferred option is always replacement of the

entire feature in kind, that is, with the same material. Because this approach may not always be technically or economically feasible, provisions are made to consider the use of a compatible substitute material.

It should be noted that, while the National Park Service guidelines recommend the replacement of an entire character-defining feature under certain well-defined circumstances, they never recommend removal and replacement with new material of a feature that--although damaged or deteriorated--could reasonably be repaired and thus preserved.

Design for Missing Historic Features

When an entire interior or exterior feature is missing (for example, an entrance, or cast iron facade; or a principal staircase), it no longer plays a role in physically defining the historic character of the building unless it can be accurately recovered in form and detailing through the process of carefully documenting the historical appearance. Where an important architectural feature is missing, its recovery is always recommended in the guidelines as the first or preferred, course of action. Thus, if adequate historical, pictorial, and physical documentation exists so that the feature may be accurately reproduced, and if it is desireable to re-establish the feature as part of the building's historical appearance, then designing and constructing a new feature based on such information is appropriate. However, a second acceptable option for the replacement feature is a new design that is compatible with the remaining character-defining features of the historic building. The new design should always take into account the size, scale, and material of the historic building itself and, most importantly, should be clearly differentiated so that a false historical appearance is not created.

Alterations/Additions to Historic Buildings

Some exterior and interior alterations to the historic building are generally needed to assure its contined use, but it is most important that such alterations do not radically change, obscure, or destroy character-defining spaces, materials, features, or finishes. Alterations may include providing additional parking space on an existing historic building site; cutting new entrances or windows on secondary elevations; inserting an additional floor; installing an entirely new mechanical system; or creating an atrium or light well. Alterations may also include the selective removal of buildings or other features of the environment or building site that are intrusive and therefore detract from the overall historic character.

The construction of an exterior addition to a historic building may seem to be essential for the new use, but it is emphasized in the guidelines that such new additions should be avoided, if possible, and considered only after it is determined that those needs cannot be met by altering secondary, i.e., non character-defining interior spaces. If, after a thorough evaluation of interior solutions, an exterior addition is still judged to be the only viable alternative, it should be designed and constructed to be clearly differentiated from the historic building and so that the character-defining features are not radically changed, obscured, damaged, or destroyed.

Additions to historic buildings are referenced within specific sections of the guidelines such as Site, Roof, Structural Systems, etc., but are also considered in more detail in a separate section, NEW ADDITIONS TO HISTORIC BUILDINGS.

Health and Safety Code Requirements; Energy Retrofitting

These sections of the rehabilitation guidance address work done to meet health and safety code requirements (for example, providing barrier-free access to historic buildings); or retrofitting measures to conserve energy (for example, installing solar collectors in an unobtrusive location on the site). Although this work is quite often an important aspect of rehabilitation projects, it is usually not part of the overall process of protecting or repairing character-defining features; rather, such work is assessed for its potential negative impact on the building's historic character. For this reason, particular care must be taken not to radically change, obscure, damage, or destroy character-defining materials or features in the process of rehabilitation work to meet code and energy requirements.

BUILDING EXTERIOR

Masonry: Brick, stone, terra cotta, concrete, adobe, stucco and mortar

Masonry features (such as brick cornices and door pediments, stone window architraves, terra cotta brackets and railings) as well as masonry surfaces (modelling, tooling, bonding patterns, joint size, and color) may be important in defining the historic character of the building. It should be noted that while masonry is among the most durable of historic building materials, it is also the most susceptible to damage by improper maintenance or repair techniques and by harsh or abrasive cleaning methods. Most preservation guidance on masonry thus focuses on such concerns as cleaning and the process of repointing. For specific guidance on this subject, consult Preservation Briefs: 1, 2, 5, 6, and 7. (See Reading List and Ordering Information on pg. 58.)

Recommended	Not Recommended
Identifying, retaining, and preserving masonry features that are important in defining the overall historic character of the building such as walls, brackets, railings, cornices, window architraves, door pediments, steps, and columns; and joint and unit size, tooling and bonding patterns, coatings, and color.	Removing or radically changing masonry features which are important in defining the overall historic character of the building so that, as a result, the character is diminished.
	Replacing or rebuilding a major portion of exterior masonry walls that could be repaired so that, as a result, the building is no longer historic and is essentially new construction.
	Applying paint or other coatings such as stucco to masonry that has been historically unpainted or uncoated to create a new appearance.
	Removing paint from historically painted masonry.
	Radically changing the type of paint or coating or its color.
Protecting and maintaining masonry by providing proper drainage so that water does not stand on flat, horizontal surfaces or accumulate in curved decorative features.	Failing to evaluate and treat the various causes of mortar joint deterioration such as leaking roofs or gutters, differential settlement of the building, capillary action, or extreme weather exposure.
Cleaning masonry only when necessary to halt deterioration or remove heavy soiling.	Cleaning masonry surfaces when they are not heavily soiled to create a new appearance, thus needlessly introducing chemicals or moisture into historic materials.

Recommended	Not Recommended
Carrying out masonry surface cleaning tests after it has been determined that such cleaning is necessary. Tests should be observed over a sufficient period of time so that both the immediate effects and the long range effects are known to enable selection of the gentlest method possible.	Cleaning masonry surfaces without testing or without sufficient time for the testing results to be of value.
Cleaning masonry surfaces with the gentlest method possible, such as low pressure water and detergents, using natural bristle brushes.	Sandblasting brick or stone surfaces using dry or wet grit or other abrasives. These methods of cleaning permanently erode the surface of the material and accelerate deterioration.
	Using a cleaning method that involves water or liquid chemical solutions when there is any possibility of freezing temperatures.
	Cleaning with chemical products that will damage masonry, such as using acid on limestone or marble, or leaving chemicals on masonry surfaces.
	Applying high pressure water cleaning methods that will damage historic masonry and the mortar joints.
Inspecting painted masonry surfaces to determine whether repainting is necessary.	Removing paint that is firmly adhering to, and thus protecting, masonry surfaces.

Recommended	Not Recommended
Removing damaged or deteriorated paint only to the next sound layer using the gentlest method possible (e.g., handscraping) prior to repainting.	Using methods of removing paint which are destructive to masonry, such as sandblasting, application of caustic solutions, or high pressure waterblasting.
Applying compatible paint coating systems following proper surface preparation.	Failing to follow manufacturers' product and application instructions when repainting masonry.
Repainting with colors that are historically appropriate to the building and district.	Using new paint colors that are inappropriate to the historic building and district.
Evaluating the overall condition of the masonry to determine whether more than protection and maintenance are required, that is, if repairs to the masonry features will be necessary.	Failing to undertake adequate measures to assure the preservation of masonry features.
Repairing masonry walls and other masonry features by repointing the mortar joints where there is evidence of deterioration such as disintegrating mortar, cracks in mortar joints, loose bricks, damp walls, or damaged plasterwork.	Removing nondeteriorated mortar from sound joints, then repointing the entire building to achieve a uniform appearance.
Removing deteriorated mortar by carefully hand-raking the joints to avoid damaging the masonry.	Using electric saws and hammers rather than hand tools to remove deteriorated mortar from joints prior to repointing.
Duplicating old mortar joints in width and in joint profile.	Changing the width or joint profile when repointing.

Recommended	Not Recommended
Duplicating old mortar in strength, composition, color, and texture.	Repointing with mortar of high portland cement content (unless it is the content of the historic mortar). This can often create a bond that is stronger than the historic material and can cause damage as a result of the differing coefficient of expansion and the differing porosity of the material and the mortar.
	Repointing with a synthetic caulking compound.
	Using a "scrub" coating technique to repoint instead of traditional repointing methods.
Repairing stucco by removing the damaged material and patching with new stucco that duplicates the old in strength, composition, color, and texture.	Removing sound stucco; or repairing with new stucco that is stronger than the historic material or does not convey the same visual appearance.
Using mud plaster as a surface coating over unfired, unstabilized adobe because the mud plaster will bond to the adobe.	Applying cement stucco to unfired, unstabilized adobe. Because the cement stucco will not bond properly, moisture can become entrapped between materials, resulting in accelerated deterioration of the adobe.

Recommended	Not Recommended
Repairing masonry features by patching, piecing-in, or consolidating the masonry using recognized preservation methods. Repair may also include the limited replacement in kind--or with compatible substitute material--of those extensively deteriorated or missing parts of masonry features when there are surviving prototypes such as terra-cotta brackets or stone balusters.	Replacing an entire masonry feature such as a cornice or balustrade when repair of the masonry and limited replacement of deteriorated or missing parts are appropriate.
	Using a substitute material for the replacement part that does not convey the visual appearance of the surviving parts of the masonry feature or that is physically or chemically incompatible.
Applying new or non-historic surface treatments such as water-repellent coatings to masonry only after repointing and only if masonry repairs have failed to arrest water penetration problems.	Applying waterproof, water-repellent, or non-historic coatings such as stucco to masonry as a substitute for repointing and masonry repairs. Coatings are frequently unnecessary, expensive, and may change the appearance of historic masonry as well as accelerate its deterioration.
Replacing in kind an entire masonry feature that is too deteriorated to repair--if the overall form and detailing are still evident--using the physical evidence to guide the new work. Examples can include large sections of a wall, a cornice, balustrade, column, or stairway. If using the same kind of material is not technically or economically feasible, then a compatible subsitute material may be considered.	Removing a masonry feature that is unrepairable and not replacing it; or replacing it with a new feature that does not convey the same visual appearance.

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Design for Missing Historic Features

Designing and installing a new masonry feature such as steps or a door pediment when the historic feature is completely missing. It may be an accurate restoration using historical, pictorial, and physical documentation; or be a new design that is compatible with the size, scale, material, and color of the historic building.

Creating a false historical appearance because the replaced masonry feature is based on insufficient historical, pictorial, and physical documentation.

Introducing a new masonry feature that is incompatible in size, scale, material and color.

Architectural Metals: Cast iron, steel, pressed tin, copper, aluminum, and zinc

Architectural metal features--such as cast-iron facades, porches, and steps; sheet metal cornices, roofs, roof cresting and storefronts; and cast or rolled metal doors, window sash, entablatures, and hardware--are often highly decorative and may be important in defining the overall historic character of the building. Their retention, protection, and repair should be a prime consideration in rehabilitation projects. For specific guidance, consult "Metals in America's Historic Buildings." (See Reading List and Ordering Information on pg. 58.)

Recommended	Not Recommended
Identifying, retaining, and preserving architectural metal features such as columns, capitals, window hoods, or stairways that are important in defining the overall historic character of the building; and their finishes and colors.	Removing or radically changing architectural metal features which are important in defining the overall historic character of the building so that, as a result, the character is diminished.
	Removing a major portion of the historic architectural metal from a facade instead of repairing or replacing only the deteriorated metal, then reconstructing the facade with new material in order to create a uniform, or "improved" appearance.
	Radically changing the type of finish or its historic color or accent scheme.
Protecting and maintaining architectural metals from corrosion by providing proper drainage so that water does not stand on flat, horizontal surfaces or accumulate in curved, decorative features.	Failing to identify, evaluate, and treat the causes of corrosion, such as moisture from leaking roofs or gutters.
	Placing incompatible metals together without providing a reliable separation material. Such incompatibility can result in galvanic corrosion of the less noble metal, e.g., copper will corrode cast iron, steel, tin, and aluminum.
Cleaning architectural metals, when necessary, to remove corrosion prior to repainting or applying other appropriate protective coatings.	Exposing metals which were intended to be protected from the environment.
	Applying paint or other coatings to metals such as copper, bronze, or stainless steel that were meant to be exposed.

Recommended	Not Recommended
Identifying the particular type of metal prior to any cleaning procedure and then testing to assure that the gentlest cleaning method possible is selected or determining that cleaning is inappropriate for the particular metal.	Using cleaning methods which alter or damage the historic color, texture, and finish of the metal; or cleaning when it is inappropriate for the metal.
	Removing the patina of historic metal. The patina may be a protective coating on some metals, such as bronze or copper, as well as a significant historic finish.
Cleaning soft metals such as lead, tin, copper, terneplate, and zinc with appropriate chemical methods because their finishes can be easily abraded by blasting methods.	Cleaning soft metals such as lead, tin, copper, terneplate, and zinc with grit blasting which will abrade the surface of the metal.
Using the gentlest cleaning methods for cast iron, wrought iron, and steel--hard metals--in order to remove paint buildup and corrosion. If handscraping and wire brushing have proven ineffective, low pressure dry grit blasting may be used as long as it does not abrade or damage the surface.	Failing to employ gentler methods prior to abrasively cleaning cast iron, wrought iron or steel; or using high pressure grit blasting.
Applying appropriate paint or other coating systems after cleaning in order to decrease the corrosion rate of metals or alloys.	Failing to re-apply protective coating systems to metals or alloys that require them after cleaning so that accelerated corrosion occurs.
Repainting with colors that are appropriate to the historic building or district.	Using new colors that are inappropriate to the historic building or district.

Recommended	Not Recommended
Applying an appropriate protective coating such as lacquer to an architectural metal feature such as a bronze door which is subject to heavy pedestrian use.	Failing to assess pedestrian use or new access patterns so that architectural metal features are subject to damage by use or inappropriate maintenance such as salting adjacent sidewalks.
Evaluating the overall condition of the architectural metals to determine whether more than protection and maintenance are required, that is, if repairs to features will be necessary.	Failing to undertake adequate measures to assure the preservation of architectural metal features.
Repairing architectural metal features by patching, splicing, or otherwise reinforcing the metal following recognized preservation methods. Repairs may also include the limited replacement in kind--or with a compatible substitute material--of those extensively deteriorated or missing parts of features when there are surviving prototypes such as porch balusters, column capitals or bases; or porch cresting.	Replacing an entire architectural metal feature such as a column or a balustrade when repair of the metal and limited replacement of deteriorated or missing parts are appropriate.
	Using a substitute material for the replacement part that does not convey the visual appearance of the surviving parts of the architectural metal feature or is that physically or chemically incompatible.
Replacing in kind an entire architectural metal feature that is too deteriorated to repair--if the overall form and detailing are still evident--using the physical evidence to guide the new work. Examples could include cast iron porch steps or steel sash windows. If using the same kind of material is not technically or economically feasible, then a compatible substitute material may be considered.	Removing an architectural metal feature that is unrepairable and not replacing it; or replacing it with a new architectural metal feature that does not convey the same visual appearance.

The following work is highlighted to indicate that it represents the particularly complex technical or design aspects of rehabilitation projects and should only be considered after the preservation concerns listed above have been addressed.

Design for Missing Historic Features

Designing and installing a new architectural metal feature such as a sheet metal cornice or cast iron capital when the historic feature is completely missing. It may be an accurate restoration using historical, pictorial, and physical documentation; or be a new design that is compatible with the size, scale, material, and color of the historic building.

Creating a false historic appearance because the replaced architectural metal feature is based on insufficient historical, pictorial, and physical documentation.

Introducing a new architectural metal feature that is incompatible in size, scale, material, and color.

Roofs

The roof--with its shape; features such as cresting, dormers, cupolas, and chimneys; and the size, color, and patterning of the roofing material--can be extremely important in defining the building's overall historic character. In addition to the design role it plays, a weathertight roof is essential to the preservation of the entire structure; thus, protecting and repairing the roof as a "cover" is a critical aspect of every rehabilitation project. For specific guidance on roofs and roofing material, consult Preservation Briefs: 4. (See Reading List and Ordering Information on pg. 58.)

Recommended	Not Recommended
Identifying, retaining, and preserving roofs--and their functional and decorative features--that are important in defining the overall historic character of the building. This includes the roof's shape, such as hipped, gambrel, and mansard; decorative features such as cupolas, cresting, chimneys, and weathervanes; and roofing material such as slate, wood, clay tile, and metal, as well as its size, color, and patterning.	Radically changing, damaging, or destroying roofs which are important in defining the overall historic character of the building so that, as a result, the character is diminished.
	Removing a major portion of the roof or roofing material that is repairable, then reconstructing it with new material in order to create a uniform, or "improved" appearance.
	Changing the configuration of a roof by adding new features such as dormer windows, vents, or skylights so that the historic character is diminished.
	Stripping the roof of sound historic material such as slate, clay tile, wood, and architectural metal.
	Applying paint or other coatings to roofing material which has been historically uncoated.
Protecting and maintaining a roof by cleaning the gutters and downspouts and replacing deteriorated flashing. Roof sheathing should also be checked for proper venting to prevent moisture condensation and water penetration; and to insure that materials are free from insect infestation.	Failing to clean and maintain gutters and downspouts properly so that water and debris collect and cause damage to roof fasteners, sheathing, and the underlying structure.
Providing adequate anchorage for roofing material to guard against wind damage and moisture penetration.	Allowing roof fasteners, such as nails and clips to corrode so that roofing material is subject to accelerated deterioration.

Recommended	Not Recommended
Protecting a leaking roof with plywood and building paper until it can be properly repaired.	Permitting a leaking roof to remain unprotected so that accelerated deterioration of historic building materials--masonry, wood, plaster, paint and structural members--occurs.
Repairing a roof by reinforcing the historic materials which comprise roof features. Repairs will also generally include the limited replacement in kind--or with compatible substitute material--of those extensively deteriorated or missing parts of features when there are surviving prototypes such as cupola louvers, dentils, dormer roofing; or slates, tiles, or wood shingles on a main roof.	Replacing an entire roof feature such as a cupola or dormer when repair of the historic materials and limited replacement of deteriorated or missing parts are appropriate.
	Using a substitute material for the replacement part that does not convey the visual appearance of the surviving parts of the roof or that is physically or chemically incompatible.
Replacing in kind an entire feature of the roof that is too deteriorated to repair--if the overall form and detailing are still evident--using the physical evidence to guide the new work. Examples can include a large section of roofing, or a dormer or chimney. If using the same kind of material is not technically or economically feasible, then a compatible substitute material may be considered.	Removing a feature of the roof that is unrepairable, such as a chimney or dormer, and not replacing it; or replacing it with a new feature that does not convey the same visual appearance.

The following work is highlighted to indicate that it represents the particularly complex technical or design aspects of rehabilitation projects and should only be considered after the preservation concerns listed above have been addressed.

Design for Missing Historic Features

Designing and constructing a new feature when the historic feature is completely missing, such as a chimney or cupola. It may be an accurate restoration using historical, pictorial and physical documentation; or be a new design that is compatible with the size, scale, material, and color of the historic building.	Creating a false historical appearance because the replaced feature is based on insufficient historical, pictorial, and physical documentation. Introducing a new roof feature that is incompatible in size, scale, material, and color.

Alterations/Additions for the New Use

Installing mechanical and service equipment on the roof such as air conditioning, transformers, or solar collectors when required for the new use so that they are inconspiuous from the public right-of-way and do not damage or obscure character-defining features.	Installing mechanical or service equipment so that it damages or obscures character-defining features; or is conspicuous from the public right-of-way.
Designing additions to roofs such as residential, office, or storage spaces; elevator housing; decks and terraces; or dormers or skylights when required by the new use so that they are inconspicuous from the public right-of-way and do not damage or obscure character-defining features.	Radically changing a character-defining roof shape or damaging or destroying character-defining roofing material as a result of incompatible design or improper installation techniques.

Windows

A highly decorative window with an unusual shape, or glazing pattern, or color is most likely identified immediately as a character-defining feature of the building. It is far more difficult, however, to assess the importance of repeated windows on a facade, particularly if they are individually simple in design and material, such as the large, multi-paned sash of many industrial buildings. Because rehabilitation projects frequently include proposals to replace window sash or even entire windows to improve thermal efficiency or to create a new appearance, it is essential that their contribution to the overall historic character of the building be assessed together with their physical condition before specific repair or replacement work is undertaken. See also Energy Retrofitting. Preservation Briefs: 9 should be consulted for specific guidance on wooden window repair. (See Reading List and Ordering Information on pg. 58.)

Recommended	Not Recommended
Identifying, retaining, and preserving windows--and their functional and decorative features--that are important in defining the overall historic character of the building. Such features can include frames, sash, muntins, glazing, sills, heads, hoodmolds, panelled or decorated jambs and moldings, and interior and exterior shutters and blinds.	Removing or radically changing windows which are important in defining the overall historic character of the building so that, as a result, the character is diminished.
	Changing the number, location, size or glazing pattern of windows, through cutting new openings, blocking-in windows, and installing replacement sash which does not fit the historic window opening.
	Changing the historic appearance of windows through the use of inappropriate designs, materials, finishes, or colors which radically change the sash, depth of reveal, and muntin configuration; the reflectivity and color of the glazing; or the appearance of the frame.
	Obscuring historic window trim with metal or other material.
	Stripping windows of historic material such as wood, iron, cast iron, and bronze.
Protecting and maintaining the wood and architectural metal which comprise the window frame, sash, muntins, and surrounds through appropriate surface treatments such as cleaning, rust removal, limited paint removal, and re-application of protective coating systems.	Failing to provide adequate protection of materials on a cyclical basis so that deterioration of the windows results.

Recommended	Not Recommended
Making windows weathertight by re-caulking and replacing or installing weatherstripping. These actions also improve thermal efficiency.	Retrofitting or replacing windows rather than maintaining the sash, frame, and glazing.
Evaluating the overall condition of materials to determine whether more than protection and maintenance are required, i.e. if repairs to windows and window features will be required.	Failing to undertake adequate measures to assure the preservation of historic windows.
Repairing window frames and sash by patching, splicing, consolidating or otherwise reinforcing. Such repair may also include replacement in kind of those parts that are either extensively deteriorated or are missing when there are surviving prototypes such as architraves, hoodmolds, sash, sills, and interior or exterior shutters and blinds.	Replacing an entire window when repair of materials and limited replacement of deteriorated or missing parts are appropriate. Failing to reuse serviceable window hardware such as brass lifts and sash locks. Using a substitute material for the replacement part that does not convey the visual appearance of the surviving parts of the window or that is physically or chemically incompatible.
Replacing in kind an entire window that is too deteriorated to repair--if the overall form and detailing are still evident--using the physical evidence to guide the new work. If using the same kind of material is not technically or economically feasible, then a compatible substitute material may be considered.	Removing a character-defining window that is unrepairable and blocking it in; or replacing it with a new window that does not convey the same visual appearance.

The following work is highlighted to indicate that it represents the particularly complex technical or design aspects of rehabilitation projects and should only be considered after the preservation concerns listed above have been addressed.

Design for Missing Historic Features

Designing and installing new windows when the historic windows (frame, sash and glazing) are completely missing. The replacement windows may be an accurate restoration using historical, pictorial, and physical documentation; or be a new design that is compatible with the window openings and the historic character of the building.

Creating a false historical appearance because the replaced window is based on insufficient historical, pictorial, and physical documentation.

Introducing a new design that is incompatible with the historic character of the building.

Alterations/Additions for the New Use

Designing and installing additional windows on rear or other-non character-defining elevations if required by the new use. New window openings may also be cut into exposed party walls. Such design should be compatible with the overall design of the building, but not duplicate the fenestration pattern and detailing of a character-defining elevation.

Installing new windows, including frames, sash, and muntin configuration that are incompatible with the building's historic appearance or obscure, damage, or destroy character-defining features.

Providing a setback in the design of dropped ceilings when they are required for the new use to allow for the full height of the window openings.

Inserting new floors or furred-down ceilings which cut across the glazed areas of windows so that the exterior form and appearance of the windows are changed.

BUILDING INTERIOR

Structural System

If features of the structural system are exposed such as loadbearing brick walls, cast iron columns, roof trusses, posts and beams, vigas, or stone foundation walls, they may be important in defining the building's overall historic character. Unexposed structural features that are not character-defining or an entire structural system may nonetheless be significant in the history of building technology; therefore, the structural system should always be examined and evaluated early in the project planning stage to determine both its physical condition and its importance to the building's historic character or historical significance. See also Health and Safety Code Requirements.

Recommended	Not Recommended
Identifying, retaining, and preserving structural systems--and individual features of systems--that are important in defining the overall historic character of the building, such as post and beam systems, trusses, summer beams, vigas, cast iron columns, above-grade stone foundation walls, or loadbearing brick or stone walls.	Removing, covering, or radically changing features of structural systems which are important in defining the overall historic character of the building so that, as a result, the character is diminished.
	Putting a new use into the building which could overload the existing structural system; or installing equipment or mechanical systems which could damage the structure.
	Demolishing a loadbearing masonry wall that could be augmented and retained and replacing it with a new wall (i.e., brick or stone), using the historic masonry only as an exterior veneer.
	Leaving known structural problems untreated such as deflection of beams, cracking and bowing of walls, or racking of structural members.
	Utilizing treatments or products that accelerate the deterioration of structural material such as introducing urea-formaldehyde foam insulation into frame walls.
Protecting and maintaining the structural system by cleaning the roof gutters and downspouts; replacing roof flashing; keeping masonry, wood, and architectural metals in a sound condition; and assuring that structural members are free from insect infestation.	Failing to provide proper building maintenance on a cyclical basis so that deterioration of the structural system results.

Recommended	Not Recommended
Examining and evaluating the physical condition of the structural system and its individual features using non-destructive techniques such as X-ray photography.	Utilizing destructive probing techniques that will damage or destroy structural material.
Repairing the structural system by augmenting or upgrading individual parts or features. For example, weakened structural members such as floor framing can be spliced, braced, or otherwise supplemented and reinforced.	Upgrading the building structurally in a manner that diminishes the historic character of the exterior, such as installing strapping channels or removing a decorative cornice; or damages interior features or spaces.
	Replacing a structural member or other feature of the structural system when it could be augmented and retained.
Replacing in kind--or with substitute material--those portions or features of the structural system that are either extensively deteriorated or are missing when there are surviving prototypes such as cast iron columns, roof rafters or trusses, or sections of loadbearing walls. Substitute material should convey the same form, design, and overall visual appearance as the historic feature; and, at a minimum, be equal to its loadbearing capabilities.	Installing a replacement feature that does not convey the same visual appearance, e.g., replacing an exposed wood summer beam with a steel beam.
	Using substitute material that does not equal the loadbearing capabilities of the historic material and design or is otherwise physically or chemically incompatible.

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Alterations/Additions for the New Use

Limiting any new excavations adjacent to historic foundations to avoid undermining the structural stability of the building or adjacent historic buildings.	Carrying out excavations or regrading adjacent to or within a historic building which could cause the historic foundation to settle, shift, or fail; or could have a similar effect on adjacent historic buildings.
Correcting structural deficiencies in preparation for the new use in a manner that preserves the structural system and individual character-defining features.	Radically changing interior spaces or damaging or destroying features or finishes that are character-defining while trying to correct structural deficiencies in preparation for the new use.
Designing and installing new mechanical or electrical systems when required for the new use which minimize the number of cutouts or holes in structural members.	Installing new mechanical and electrical systems or equipment in a manner which results in numerous cuts, splices, or alterations to the structural members.
Adding a new floor when required for the new use if such an alteration does not damage or destroy the structural system or obscure, damage, or destroy character-defining spaces, features, or finishes.	Inserting a new floor when such a radical change damages a structural system or obscures or destroys interior spaces, features, or finishes. Inserting new floors or furred-down ceilings which cut across the glazed areas of windows so that the exterior form and appearance of the windows are radically changed.
Creating an atrium or a light well to provide natural light when required for the new use in a manner that assures the preservation of the structural system as well as character-defining interior spaces, features, and finishes.	Damaging the structural system or individual features; or radically changing, damaging, or destroying character-defining interior spaces, features, or finishes in order to create an atrium or a light well.

Interior: Spaces, Features, and Finishes

An interior floor plan, the arrangement of spaces, and built-in features and applied finishes may be individually or collectively important in defining the historic character of the building. Thus, their identification, retention, protection, and repair should be given prime consideration in every rehabilitation project and caution exercised in pursuing any plan that would radically change character-defining spaces or obscure, damage or destroy interior features or finishes.

Recommended	Not Recommended
Interior Spaces	
Identifying, retaining, and preserving a floor plan or interior spaces that are important in defining the overall historic character of the building. This includes the size, configuration, proportion, and relationship of rooms and corridors; the relationship of features to spaces; and the spaces themselves such as lobbies, reception halls, entrance halls, double parlors, theaters, auditoriums, and important industrial or commercial use spaces.	Radically changing a floor plan or interior spaces--including individual rooms--which are important in defining the overall historic character of the building so that, as a result, the character is diminished. Altering the floor plan by demolishing principal walls and partitions to create a new appearance. Altering or destroying interior spaces by inserting floors, cutting through floors, lowering ceilings, or adding or removing walls. Relocating an interior feature such as a staircase so that the historic relationship between features and spaces is altered.

Recommended	Not Recommended
Interior Features and Finishes	
Identifying, retaining, and preserving interior features and finishes that are important in defining the overall historic character of the building, including columns, cornices, baseboards, fireplaces and mantels, paneling, light fixtures, hardware, and flooring; and wallpaper, plaster, paint, and finishes such as stenciling, marbling, and graining; and other decorative materials that accent interior features and provide color, texture, and patterning to walls, floors, and ceilings.	Removing or radically changing features and finishes which are important in defining the overall historic character of the building so that, as a result, the character is diminished. Installing new decorative material that obscures or damages character-defining interior features or finishes. Removing paint, plaster, or other finishes from historically finished surfaces to create a new appearance (e.g., removing plaster to expose masonry surfaces such as brick walls or a chimney piece). Applying paint, plaster, or other finishes to surfaces that have been historically unfinished to create a new appearance. Stripping historically painted wood surfaces to bare wood, then applying clear finishes or stains to create a "natural look." Stripping paint to bare wood rather than repairing or reapplying grained or marbled finishes to features such as doors and paneling. Radically changing the type of finish or its color, such as painting a previously varnished wood feature.

Recommended	Not Recommended
Protecting and maintaining masonry, wood, and architectural metals which comprise interior features through appropriate surface treatments such as cleaning, rust removal, limited paint removal, and reapplication of protective coatings systems.	Failing to provide adequate protection to materials on a cyclical basis so that deterioration of interior features results.
Protecting interior features and finishes against arson and vandalism before project work begins, erecting protective fencing, boarding-up windows, and installing fire alarm systems that are keyed to local protection agencies.	Permitting entry into historic buildings through unsecured or broken windows and doors so that interior features and finishes are damaged by exposure to weather or through vandalism. Stripping interiors of features such as woodwork, doors, windows, light fixtures, copper piping, radiators; or of decorative materials.
Protecting interior features such as a staircase, mantel, or decorative finishes and wall coverings against damage during project work by covering them with heavy canvas or plastic sheets.	Failing to provide proper protection of interior features and finishes during work so that they are gouged, scratched, dented, or otherwise damaged.
Installing protective coverings in areas of heavy pedestrian traffic to protect historic features such as wall coverings, parquet flooring and panelling.	Failing to take new use patterns into consideration so that interior features and finishes are damaged.
Removing damaged or deteriorated paints and finishes to the next sound layer using the gentlest method possible, then repainting or refinishing using compatible paint or other coating systems.	Using destructive methods such as propane or butane torches or sandblasting to remove paint or other coatings. These methods can irreversibly damage the historic materials that comprise interior features.

Recommended	Not Recommended
Repainting with colors that are appropriate to the historic building.	Using new paint colors that are inappropriate to the historic building.
Limiting abrasive cleaning methods to certain industrial or warehouse buildings where the interior masonry or plaster features do not have distinguishing design, detailing, tooling, or finishes; and where wood features are not finished, molded, beaded, or worked by hand. Abrasive cleaning should only be considered after other, gentler methods have been proven ineffective.	Changing the texture and patina of character-defining features through sandblasting or use of other abrasive methods to remove paint, discoloration or plaster. This includes both exposed wood (including structural members) and masonry.
Evaluating the overall condition of materials to determine whether more than protection and maintenance are required, that is, if repairs to interior features and finishes will be necessary.	Failing to undertake adequate measures to assure the preservation of interior features and finishes.
Repairing interior features and finishes by reinforcing the historic materials. Repair will also generally include the limited replacement in kind--or with compatible substitute material--of those extensively deteriorated or missing parts of repeated features when there are surviving prototypes such as stairs, balustrades, wood panelling, columns; or decorative wall coverings or ornamental tin or plaster ceilings.	Replacing an entire interior feature such as a staircase, panelled wall, parquet floor, or cornice; or finish such as a decorative wall covering or ceiling when repair of materials and limited replacement of such parts are appropriate. Using a substitute material for the replacement part that does not convey the visual appearance of the surviving parts or portions of the interior feature or finish or that is physically or chemically incompatible.

Recommended	Not Recommended
Replacing in kind an entire interior feature or finish that is too deteriorated to repair--if the overall form and detailing are still evident--using the physical evidence to guide the new work. Examples could include wainscoting, a tin ceiling, or interior stairs. If using the same kind of material is not technically or economically feasible, then a compatible substitute material may be considered.	Removing a character-defining feature or finish that is unrepairable and not replacing it; or replacing it with a new feature or finish that does not convey the same visual appearance.

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Design for Missing Historic Features

Designing and installing a new interior feature or finish if the historic feature or finish is completely missing. This could include missing partitions, stairs, elevators, lighting fixtures, and wall coverings; or even entire rooms if all historic spaces, features, and finishes are missing or have been destroyed by inappropriate "renovations." The design may be a restoration based on historical, pictorial, and physical documentation; or be a new design that is compatible with the historic character of the building, district, or neighborhood.	Creating a false historical appearance because the replaced feature is based on insufficient physical, historical, and pictorial documentation or on information derived from another building. Introducing a new interior feature or finish that is incompatible with the scale, design, materials, color, and texture of the surviving interior features and finishes.

DISTRICT/NEIGHBORHOOD

The relationship between historic buildings, and streetscape and landscape features within a historic district or neighborhood helps to define the historic character and therefore should always be a part of the rehabilitation plans.

Recommended

Identifying, retaining, and preserving buildings, and streetscape, and landscape features which are important in defining the overall historic character of the district or neighborhood. Such features can include streets, alleys, paving, walkways, street lights, signs, benches, parks and gardens, and trees.

Not Recommended

Removing or radically changing those features of the district or neighborhood which are important in defining the overall historic character so that, as a result, the character is diminished.

Recommended	Not Recommended
Retaining the historic relationship between buildings, and streetscape and landscape features such as a town square comprised of row houses and stores surrounding a communal park or open space.	Destroying streetscape and landscape features by widening existing streets, changing paving material, or introducing inappropriately located new streets or parking lots. Removing or relocating historic buildings, or features of the streetscape and landscape, thus destroying the historic relationship between buildings, features and open space.
Protecting and maintaining the historic masonry, wood, and architectural metals which comprise building and streetscape features, through appropriate surface treatments such as cleaning, rust removal, limited paint removal, and reapplication of protective coating systems; and protecting and maintaining landscape features, including plant material.	Failing to provide adequate protection of materials on a cyclical basis so that deterioration of building, streetscape, and landscape features results.
Protecting buildings, paving, iron fencing, etc. against arson and vandalism before rehabilitation work begins by erecting protective fencing and installing alarm systems that are keyed into local protection agencies.	Permitting buildings to remain unprotected so that windows are broken; and interior features are damaged. Stripping features from buildings or the streetscape such as wood siding, iron fencing, or terra cotta balusters; or removing or destroying landscape features, including plant material.

Recommended	Not Recommended
Evaluating the overall condition of building, streetscape and landscape materials to determine whether more than protection and maintenance are required, that is, if repairs to features will be necessary.	Failing to undertake adequate measures to assure the preservation of building, streetscape, and landscape features.
Repairing features of the building, streetscape, or landscape by reinforcing the historic materials. Repair will also generally include the replacement in kind--or with a compatible substitute material--of those extensively deteriorated or missing parts of features when there are surviving prototypes such as porch balustrades, paving materials, or streetlight standards.	Replacing an entire feature of the building, streetscape, or landscape such as a porch, walkway, or streetlight, when repair of materials and limited replacement of deteriorated or missing parts are appropriate. Using a substitute material for the replacement part that does not convey the visual appearance of the surviving parts of the building, streetscape, or landscape feature or that is physically or chemically incompatible.
Replacing in kind an entire feature of the building, streetscape, or landscape that is too deteriorated to repair--when the overall form and detailing are still evident--using the physical evidence to guide the new work. This could include a storefront, a walkway, or a garden. If using the same kind of material is not technically or economically feasible, then a compatible substitute material may be considered.	Removing a feature of the building, streetscape, or landscape that is unrepairable and not replacing it; or replacing it with a new feature that does not convey the same visual appearance.

The following work is highlighted to indicate that it represents the particularly complex technical or design aspects of rehabilitation projects and should only be considered after the preservation concerns listed above have been addressed.

Design for Missing Historic Features

Designing and constructing a new feature of the building, streetscape, or landscape when the historic feature is completely missing, such as row house steps, a porch, streetlight, or terrace. It may be a restoration based on historical, pictorial, and physical documentation; or be a new design that is compatible with the historic character of the district or neighborhood.

Creating a false historical appearance because the replaced feature is based on insufficient historical, pictorial and physical documentation.

Introducing a new building, streetscape or landscape feature that is out of scale or otherwise inappropriate to the setting's historic character, e.g., replacing picket fencing with chain link fencing.

Alterations/Additions for the New Use

Designing required new parking so that it is as unobtrusive as possible, i.e., on side streets or at the rear of buildings. "Shared" parking should also be planned so that several businesses can utilize one parking area as opposed to introducing random, multiple lots.

Placing parking facilities directly adjacent to historic buildings which cause the removal of historic plantings, relocation of paths and walkways, or blocking of alleys.

Designing and constructing new additions to historic buildings when required by the new use. New work should be compatible with the historic character of the district or neighborhood in terms of size, scale, design, material, color, and texture.

Introducing new construction into historic districts that is visually incompatible or that destroys historic relationships within the district or neighborhood.

Removing nonsignificant buildings, additions, or streetscape and landscape features which detract from the historic character of the district or the neighborhood.

Removing a historic building, building feature, or landscape or streetscape feature that is important in defining the overall historic character of the district or the neighborhood.

NEW ADDITIONS TO HISTORIC BUILDINGS

An attached exterior addition to a historic building expands its "outer limits" to create a new profile. Because such expansion has the capability to radically change the historic appearance, an exterior addition should be considered only after it has been determined that the new use cannot be successfully met by altering non-character-defining interior spaces. If the new use cannot be met in this way, then an attached exterior addition is usually an acceptable alternative. New additions should be designed and constructed so that the character-defining features of the historic building are not radically changed, obscured, damaged, or destroyed in the process of rehabilitation. New design should always be clearly differentiated so that the addition does not appear to be part of the historic resource.

Recommended	Not Recommended
Placing functions and services required for the new use in non-character-defining interior spaces rather than installing a new addition.	Expanding the size of the historic building by constructing a new addition when the new use could be met by altering non-character-defining interior spaces.
Constructing a new addition so that there is the least possible loss of historic materials and so that character-defining features are not obscured, damaged, or destroyed.	Attaching a new addition so that the character-defining features of the historic building are obscured, damaged, or destroyed.
Locating the attached exterior addition at the rear or on an inconspicuous side of a historic building; and limiting its size and scale in relationship to the historic building.	Designing a new addition so that its size and scale in relation to the historic building are out of proportion, thus diminishing the historic character.
Designing new additions in a manner that makes clear what is historic and what is new.	Duplicating the exact form, material, style, and detailing of the historic building in the new addition so that the new work appears to be part of the historic building.
	Imitating a historic style or period of architecture in new additions, especially for contemporary uses such as drive-in banks or garages.

Recommended	Not Recommended
Considering the attached exterior addition both in terms of the new use and the appearance of other buildings in the historic district or neighborhood. Design for the new work may be contemporary or may reference design motifs from the historic building. In either case, it should always be clearly differentiated from the historic building and be compatible in terms of mass, materials, relationship of solids to voids, and color.	Designing and constructing new additions that result in the diminution or loss of the historic character of the resource, including its design, materials, workmanship, location, or setting.
	Using the same wall plane, roof line, cornice height, materials, siding lap or window type to make additions appear to be a part of the historic building.
Placing new additions such as balconies and greenhouses on non-character-defining elevations and limiting the size and scale in relationship to the historic building.	Designing new additions such as multi-story greenhouse additions that obscure, damage, or destroy character-defining features of the historic building.
Designing additional stories, when required for the new use, that are set back from the wall plane and are as inconspicuous as possible when viewed from the street.	Constructing additional stories so that the historic appearance of the building is radically changed.

FOOT NOTES

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14. Campbell, Robert, Evaluation: Boston's 'Upper of Urbanity', AIA Journal June 1981 pg 26
15. Campbell, Robert, Evaluation: Boston's 'Upper of Urbanity', AIA Journal June 1981 pg 29

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