I. **Dennis J. O'Bryant, State of California, Department of Conservation, May 24, 1990**

N-1. As described in response to comment C-12, a supplemental study of the potential geotechnical hazards at the project site was conducted by Woodward-Clyde Consultants, and is included herein as Section 4 of this appendix. Please refer to that section. A copy of the geotechnical report prepared by Woodward-Clyde Consultants (1988) for Hirsch and Company has been provided to the commentator.

N-2. Please see the 1990 Woodward-Clyde report in Section 4 of this appendix for a response to this comment, particularly 3.2 and 3.2.1 thereof.

N-3. Please see the 1990 Woodward-Clyde report in Section 4 of this appendix for a response to this comment, particularly 3.3 and 3.3.1 thereof.

N-4. Please see the 1990 Woodward-Clyde report in Section 4 of this appendix for a response to this comment, particularly 3.4 and 3.4.1 thereof.

O. Peter M. Douglas, California Coastal Commission, June 8, 1990

O-1. The commentator indicates that Commission staff is generally pleased with the concept of development of the site for Navy uses provided that provisions for public use of the area are made. The Commission staff supports Alternatives A and F which include "large open space areas". These comments are noted and no response is needed.

O-2. Please see topical response TR-5.

O-3. This comment addresses the California Coastal Commission's review of the Coastal Consistency Determination (CCD), a document with a review process that is separate from the EIS. Although the Navy disagrees that the Navy Broadway Complex is "oceanfront land," discussion about the consistency of the project with Section 30221 has been elaborated in the CCD (Section 4.1.2). The discussion indicates that present and future recreational needs are fulfilled in the Central Bayfront area around the Navy Broadway Complex and that the project contributes important additional public and commercial recreation opportunity which is specifically designed to complement its Central Bayfront setting. As a result, the Navy has determined that the project is consistent with this coastal policy. Please refer to Response O-4.

O-4. This comment addresses the California Coastal Commission's review of the Coastal Consistency Determination (CCD), a document with a review process that is separate from the EIS. Although the comment is not directed to the EIS, a response is provided to explain how present and future recreation demand is accommodated in the Central Bayfront vicinity of the project and how the project contributes to coastal recreation opportunity.

Accommodation of Present and Future Demand For Recreation

The Central Bayfront area of Centre City San Diego contains a very substantial concentration of existing and planned public and commercial recreational opportunities. These opportunities are extremely varied and emphasize the role of the bayfront as a primary visitor destination and recreation area for both visitors and city residents. Existing recreational opportunities within the vicinity of the Navy Broadway Complex (from north to south within approximately 0.5 mile) include the following:

Recreation Opportunity	Type of Use
Embarcadero (North of Broadway)	Pedestrian Promenade
County Administrative Center West Lawn	Public Open Space
Maritime Museum	Public Museum
Holiday Inn/Restaurants	Commercial Recreation
B Street Pier	Recreational Cruises, Pedestrian Areas
Broadway Pier	Plaza, Viewing Areas
Harbor Excursion Boats	Bay Cruising and Dining
Harbor Promenade (South of Navy Pier)	Landscaped Promenade
G Street Mole	Park, Viewing Area, Restaurant

Seaport Village	Commercial Recreation, Specialty Shopping, Street Entertainment, Promenade, Viewing Areas
Embassy Suites	Commercial Recreation
Marina Linear Park	Park, Trail, Fishing Pier
Embarcadero Marina Park	Park, Picnic Area
Embarcadero Marina	Commercial Recreational Marina
Marriott Hotel	Commercial Recreation
Convention Center	Major Visitor Destination

Local coastal planning has fulfilled the demand for commercial and public recreational activity in the allocation of substantial land resources to restaurants, hotels, shopping, attractions, promenades, plaza areas, and open space. Table 1 (page 3-40) describes the allocation of land use in the Centre City Embarcadero Precise Plan of the Port Master Plan. The majority (54 percent) of the land area is devoted to either commercial or public recreation area. (Additionally, a number of developments adjacent to the coastal zone also provide commercial recreation opportunities that support visitation to the Central Bayfront.) Excluding streets, which account for 21 percent of the land, non-recreation land uses constitute 25 percent of the plan area.

The Port Master Plan is an approved local coastal plan, so its allocation of land to recreation opportunity has been approved by the California Coastal Commission, recognizing the presence of the Navy Broadway Complex as non-recreational, Federal land proximate to the waterfront. In consideration of the variety of recreation opportunities, the amount of land area devoted to recreation in the Centre City Embarcadero Precise Plan around the project site, and the prior Commission approval of the Port Master Plan containing the precise plan, it is evident that present and foreseeable demand for public and commercial recreation have been accommodated in the area of the waterfront near the Navy Broadway Complex.

Project Contribution to Public and Commercial Recreation

The project, as defined by the Navy's preferred Alternative A, contributes important additional public and commercial recreation resources that have been specifically designed to complement its Central Bayfront setting. Commercial recreation opportunity would be provided in the hotels, specialty retail, and attendant uses on the southern blocks (3 and 4) where they can best support visitation to the nearby Seaport Village. Wide pedestrian facilities along E, F, and G Streets provide public recreation opportunity and connection to important waterfront open space areas along the promenade and G Street Mole. The maritime museum would establish a recreation destination in the project that complements the character of the waterfront. The 1.9-acre open space at the foot of Broadway would serve as a prominent recreation use area with excellent association with and vistas to the bay.

TABLE 1

ALLOCATION OF LAND FOR RECREATION OPPORTUNITY

Type of Use	Centre City/ Embarcadero Precise Plan		Navy Broadway Complex Project	
	Acres	%	Acres	%
Commercial Recreation	85.7[a]	37%	6.56[b]	42%
Public Recreation	40.4[c]	17%	4.97[d]	32%
Total Recreation Area	**126.1**	**54%**	**11.53**	**74%**
Streets	47.6	21%	1.89	12%
Other Non-Recreation Land Uses	58.1	25%	2.19	14%
Total Non-Recreation Land Area	105.7	46%	4.08	26%
TOTAL LAND AREA	231.8	100%	15.62[e]	100%

[a] Includes Commercial Recreation and Specialty Shopping (page 82, Port Master Plan, San Diego Unified Port District, 1980).

[b] Includes hotel, restaurant, retail, and museum uses (with service, parking, and support areas).

[c] Includes Park/Plaza, Promenade, and Open Space (page 82, Port Master Plan, San Diego Unified Port District, 1980).

[d] Includes pedestrian facilities, gallerias, and open space.

[e] This area constitutes the land held in fee and leased by the Navy (15.62 acres). Acreage of uses for the project is based on ground-level use.

The original concept for the project was to develop sufficient square footage of commercial space to support the Navy office space with no financial assistance and to accommodate the demand for open space and recreation opportunity generated by the project. As a result, a concept that included 3,500,000 SF of mixed-use development (including commercial recreation) and 0.5 acre of open space at the foot of Broadway was formulated. Local officials requested that a larger area of the site be devoted to open space, instead of commercial development, to serve the needs of a broader area of the waterfront. The current project was designed to address this request by increasing the size of the open space at the foot of Broadway to 1.9 acres and diminishing the commercial development by 250,000 SF.

The proportion of land area, based on ground-level uses, devoted to recreation by the Navy Broadway Complex Project exceeds that allocated in the Centre City/ Embarcadero Precise Plan area of the Port Master Plan, as shown in Table 1. Total recreation area constitutes 74 percent of the project's ground-level uses compared to 54 percent of the Port's precise plan land area. The proportion of commercial recreation land and public recreation land in the Navy Broadway Complex Project both exceed that allocated in the Port's precise plan area. This demonstrates that not only is the project meeting the demand for its own recreation needs, but it also is enhancing the opportunities for public and commercial recreation for the greater Central Bayfront. In addition, the table also demonstrates that the ground-level use area designated for non-recreation, commercial use in the project represents a very small proportion of land along the waterfront (less than one percent), considering the total area of the Centre City/Embarcadero Precise Plan area and Navy Broadway Complex.

Open space and recreation area objectives of the Centre City San Diego Community Plan focus on providing a ceremonial open space as a "grand public place" at the foot of Broadway and a system of small open spaces, such as vest pocket parks, in the downtown area. The specific need for the latter is identified as six new, vest pocket parks in the Centre City (on page 77 of the plan). This identified need is limited and reflects, among other things, that the open space and recreation area in parts of the Centre City, including the waterfront, already accommodates the needs of the area. The design of the project is tailored to contribute to the major objective of the ceremonial open space at the foot of Broadway, so it is consistent with the latest community planning for open space and recreation areas in Centre City.

In conclusion, the project provides substantial public and commercial recreational facilities on the majority of the site (i.e., part of Block 1, pedestrian ways along new streets, and Blocks 3 and 4), and present and foreseeable demand for coastal recreation use is accommodated in the immediate vicinity. With the accommodation of recreation demand by current and future development, the small ground-level use area proposed for non-recreation uses (office) on the Navy Broadway Complex can be provided in a manner that is consistent with coastal policy.

O-5. The commentator is correct in that the proposed office and hotel uses would increase the employee and visitor population of the area, creating additional demand for use of recreation facilities along the waterfront. The preliminary Centre City Community Plan (page 77) indicates the need for 0.7 to 8.4 acres of additional, open space improvements in six vest pocket parks to satisfy the requirements for the buildout of the Centre City. The Navy Broadway Complex Project alone, in Alternative A, would

provide an open space of 1.9 acres at the foot of Broadway (as well as other pedestrian facilities). The demand for recreation use of the waterfront would involve activities, such as strolling, jogging, bay viewing, and use of open space or plaza areas. As indicated in Response O-4, the project would provide substantial additional recreation opportunity in a greater proportion (based on ground-level uses) than allocated in land area within the Centre City/Embarcadero Precise Plan of the Port Master Plan, the approved coastal land use plan for the surrounding waterfront. The proposed recreational facilities (i.e., pedestrianways, open space on Block 1, waterfront museum, restaurants, and other commercial recreation) would accommodate the waterfront recreation use from the project's employees and visitors, and would contribute recreational resources over and above the project's requirements.

O-6. This comment addresses the California Coastal Commission's review of the Coastal Consistency Determination (CCD), a document with a review process that is separate from the EIS. The issue of priority uses in the coastal zone has been discussed in the CCD (Section 4.1.5) and also presented herein as a response to this comment.

Section 30255 is intended to direct land use planning decisions in the coastal zone to ensure that certain uses are given priority. It is important to emphasize that the project is not within the State coastal zone and that land use planning policies of the State coastal management program cannot override Federal land use decisions. Therefore, consistency with Section 30255 is not required; however, an evaluation of the project confirms that it would be consistent with this policy, as discussed below.

Master Planned Development of High Priority Coastal Uses

The proposed project is predicated on providing a mix of coastal-related and visitor-serving uses with a complement of other uses that support the project as a whole. The majority of the ground-level uses in Alternative A are devoted to public or commercial recreation uses, both visitor serving, which are high priority for a coastal location.

The Navy Pier adjacent to the project is a coastal-dependent facility that is essential for the Navy's supply activities in San Diego Bay. It is also essential to the national security as a mobilization asset for the Navy. The supply function of the Navy Pier is dependent on the presence of supporting administrative office space, so the Navy office use proposed for the project is coastal-related. Also, the mobilization function of the pier relies on adjacent space to process supplies and personnel for transshipment. Consequently, the hotels and restaurants, which would support personnel preparing for departure, and the offices, which support mobilization processing, are also coastal-related in the event of mobilization. These coastal-related functions of the project are unique because the property is adjacent to the pier and would remain in Navy ownership. This further reinforces the fact that the project is an integrated development of high priority, coastal uses.

Commercial office use is not considered a coastal-related (except to the extent that maritime businesses occupy it) or visitor-serving use, but it is integral to the project's financial feasibility (discussed below) and completes a unified master plan of development that provides substantial coastal benefits. It is emphasized that if the project is not financially feasible, it would not proceed and the substantial open space, access, and recreation benefits described above would not be available to the public.

Because the mix of uses determines the project's viability, the commercial office component is essential to the success of the whole project. Since the large majority of the ground-level use area (90 percent) in Alternative A supports high priority uses, the primary concept of the project involves a master planned, multi-use high priority coastal development. This concept for the whole development would be consistent with coastal policy accommodating coastal-related developments within reasonable proximity to the coastal-dependent uses they support. The presence of (non-priority) commercial office use would not conflict with this policy in light of the facts that it is financially essential for the success of the public/private venture authorized by Congress and will not adversely affect this policy or land uses within the coastal zone.

Essential Financial Role of the Multi-Use Approach

The five-year defense program contains no appropriations to accomplish the consolidation and collocation of Navy administrative facilities in the San Diego area with military construction funds. In view of current Federal budget reductions and the likelihood of even more severe constraints in the future, Congress has acknowledged that direct funding is not available for this project by authorizing redevelopment of the Navy Broadway Complex through a public/private venture in P.L. 99-661.

The public/private venture concept requires that development of the Navy Broadway Complex include compatible private land uses sufficient to offset the cost of development of the necessary Navy office space. The process of formulating alternatives for the type and intensity of development on the site, therefore, integrated consideration of compatibility with surrounding development, specific environmental issues, and the financial feasibility of potential alternatives.

To evaluate the economic requirements of the public/private venture, the Navy engaged the firm of Williams Kuebelbeck & Associates (WK&A) to make an independent financial feasibility analysis. A market assessment was performed to determine the potential types of uses which could be developed on the site without adversely affecting the absorption of similar development planned in the Centre City San Diego. The marketable development program was refined from a City planning perspective, considering urban design guidelines, massing, viewsheds, access and traffic, and significantly reduced in total scope. The reduced density was further analyzed on a financial pro forma basis to determine the overall return from the non-Federal land uses and the residual cash flow and present value attributable to the long term ground lease provided to the developer by the Navy. The financial analysis tested these cash flows and values against the estimated construction cost of Navy office space and the value of the leased land. The financial tests confirmed the amount of development and mix of uses, including commercial office, necessary to feasibly implement the Navy's objectives in a manner consistent with Congressional authorization.

The enabling federal legislation mandates the selection of the developer for the redevelopment through a competitive process. The financial analysis performed by WK&A forms the basis of the government estimate to be used in the evaluation of competitive proposals submitted for award of the redevelopment. The WK&A study is therefore proprietary solicitation information which, in accordance with Federal procurement regulations, cannot be published so as to protect the integrity and

competitiveness of the selection process. The selected developer, the WK&A financial feasibility study, and the actual financial proposal from the developer are subject to review by the Congress, prior to award, in accordance with the legislation.

No Appropriate Coastal-Dependent Uses for the Property

Although it is the Navy's position that the project is consistent with the policies related to placement of high priority uses near the waterfront, it is also important to understand that there are no other appropriate coastal-dependent uses for the property. The Port Master Plan certified by the Commission has distributed coastal-dependent uses along the San Diego Bay waterfront portion of the coastal zone. The Centre City/Embarcadero Precise Plan addressing the waterfront around the Navy Broadway Complex focuses on coastal-related, primarily visitor-serving and recreational uses for the land area of the plan. No major coastal-dependent uses are designated for the land in the vicinity of the Navy Broadway Complex, except for the existing piers. The arrangement of land uses in the plan demonstrates that there is no unmet need for additional land to be allocated to coastal-dependent uses along this part of the waterfront, because such a large proportion is designated for other, non-coastal-dependent uses. The majority of coastal-dependent uses in the port's coastal zone is located in the maritime industry areas around the Tenth Avenue Marine Terminal and National City Bayfront, as would be expected. The character of the Central Bayfront from the Convention Center to the north end of the promenade is oriented to public and commercial recreation uses, rather than coastal-dependent development. Therefore, incorporating coastal-dependent uses in the Navy Broadway Complex would not be needed or appropriate.

Coastal-Related Uses Are Fully Accommodated

The emphasis for coastal-related uses in the Centre City Embarcadero area is placed on public and commercial recreation opportunity. It has been explained previously in Response O-4 that the present and foreseeable need for public and commercial recreation in this part of the waterfront is accommodated, in part by the Navy Broadway Complex Project. In addition, the market study commissioned by the Navy identified the mix of uses that could be supported by the forecasted demand and found that commercial recreation use beyond that already planned by others and included in the project could not be supported during the buildout period of the project. Essentially, the Navy Broadway Complex Project, in an effort to meet financial requirements of the public/private venture and be consistent with the policies of the California Coastal Act maximized the amount of commercial recreation (i.e. hotel, restaurant, and retail) space that could be feasibly developed. Therefore, the addition of still more coastal-related, commercial recreation area, instead of the financially necessary commercial office space, would not be appropriate. Recognizing this market reality, the commercial office space proposed for the project is an appropriate, as well as necessary, use.

O-7. The intensity of development and mix of uses proposed for the Navy Broadway Complex are necessary to achieve the Congressional mandate of providing the Navy office space "without compensation or at substantially below market value" (P.L.99-661), which has been interpreted by recent Office of Management and Budget directives to mean obtaining the space at no cost. The five-year defense program

contains no project to accomplish the collocation of Navy administrative facilities with military construction funds, so additional Federal funding is not available. In view of the current Federal budget reductions and the likelihood of even more severe constraints, the prospect of future appropriations is extremely remote. Therefore, generation of sufficient revenue stream and equity from the public/private venture concept is necessary for the feasibility of the project. Please see Response O-6 for a discussion of the financial analysis conducted for the project.

The density of the Navy Broadway Complex Project was considered in the development of the preliminary Centre City San Diego Community Plan recently adopted by the City Council. The Navy's preferred alternative is consistent with the overall floor area ratios designated by the plan for the project site and with the step-down design approach described in the plan. Therefore, the density of the proposed action appears to be appropriate for the city's concept of development along the Central Bayfront. (Please also see Response O-4 for a discussion of consistency with coastal land use planning in the Central Bayfront area).

O-8. The reduced density alternative suggested by the commentator would not yield sufficient residual cash flow to support the objectives of the Congressional mandate. The financial analyses performed by the Navy have confirmed that the amount and mix of development necessary for financial feasibility is represented in Alternative B, assuming no local government financial support. (Alternative A's reduced density relies on local government financial assistance for certain infrastructure improvements.) Consequently, a substantially reduced density alternative would not be feasible. See Responses O-4 and O-6 for discussions of the relationship of local coastal plans and the financial feasibility requirements of the project.

The proportion of ground-level use area in the Navy's preferred Alternative A devoted to commercial and public recreational use already exceeds the proportion of land area so designated in the approved Port Master Plan for the surrounding waterfront, so a reduced density alternative emphasizing recreation use would not be needed to maintain the planned allocations of land to these uses. This issue is discussed in detail in Response O-4.

O-9. The commentator's explanation of support for Alternative F is noted. Please refer to Responses O-4 and O-7 for discussion of how Alternative A meets the needs for public and recreation opportunity in the Central Bayfront and proposes the mix of uses necessary to meet the objectives of the project.

O-10. Please see topical response TR-2.

O-11. Please see topical response TR-2 concerning project economics and market demand. Note that the proposed project was determined after review of a variety of land use combinations, including combinations that included no commercial office development. Concerning Navy funding contributions, topical response TR-1 addresses the prospect of providing Military Construction funding for this project.

O-12. The statement identified by the commentator is an explanation of the existing setting of the project site. The site is currently, and for many years has been, fully covered with impervious surfaces. The development of the alternatives reduce the extent of

impervious surface, and attendant runoff, with the implementation of landscaped open space. Therefore, no increase in urban runoff would occur with any of the alternatives, and a decrease would occur with alternatives that include open space (Alternatives A, B, D, and F.)

O-13. This comment addresses the California Coastal Commission's review of the Coastal Consistency Determination (CCD), a document with a review process that is separate from the EIS. The issue of relationship between local coastal plans and the project has been discussed in the CCD (Section 4.2.2) and in Response O-4. Consistency of the project with local plans for transportation and parking is discussed in Section 4.2 of the EIS.

Max Schmidt, Centre City Development Corporation, June 13, 1990

P-1. Section 4.5 of the DEIS identifies the potential impact of cumulative and project traffic and suggests improvement programs to mitigate those impacts. The DEIS suggests a combination of traffic reduction measures (e.g., TDM program) and physical roadway improvements that would mitigate the long-term traffic conditions. The northbound right turn lane and second westbound left turn lane are needed to mitigate the impacts of project and cumulative traffic at the Broadway/Pacific intersection. It should be noted that the open space plan and streetscape requirements established in the draft urban design guidelines for the Navy Broadway Complex provide a substantial increase in landscaping and amenities for pedestrians in the study area.

P-2. The suggested improvements at study area intersections along the Pacific Highway corridor are necessary to mitigate the impacts of project and cumulative traffic. In all cases, the mitigation measures that are suggested in the EIS are at intersections that are the junction of major intersections based on traffic projects and do not necessarily establish a precedent for the widening of crossings of Pacific Highway by minor streets located between these junctions. As such, it would appear that many of the landscaping improvements suggested for the corridor between major intersections could be accommodated.

P-3. Please see response to comments N-1 and N-2. Note that the proposed Urban Design Guidelines, in conjunction with a major 1.9-acre open space plaza at the foot of Broadway, were developed to meet a longstanding City goal of making Broadway the waterfront entrance to the City of San Diego.

Q. Deanna M. Wieman, United States Environmental Protection Agency, June 15, 1990

Q-1. Comment Q-1 is a summary of agency concerns that are presented elsewhere in more detail and the determination of the rating of the EIS as "Adequate". Responses to the environmental concerns are provided below where the more detailed comments are discussed. The rating of the EIS as adequate is noted.

Q-2. Incorporation of appropriate water conservation measures into the project is a valid suggestion. The requirement to include water conservation features will be stated in the request for development proposals. The specific list of measures will be presented in the development bids and will include the water-saving devices mentioned in the comment for showers, toilets, plumbing maintenance, landscaping, and irrigation.

Q-3. The Navy will commit to the implementation of the air quality mitigation measures recommended by the EPA and discussed in the EIS Section 4.8.3 as part of the Record of Decision.

Q-4. The Navy will adopt the hazardous materials mitigation measures discussed in the EIS Section 4.11.3 as part of the Record of Decision.

Q-5. The hazardous materials investigation conducted for the project, including soil borings, identified the potential for contamination. This information is presented in the Draft EIS. Estimates of specific types and quantities of hazardous substances to be remediated would be made as part of remedial investigations prior to site development. As described in the mitigation discussion in Section 4.11.3 of the EIS, all applicable requirements of the Comprehensive Emergency Response Compensation and Liability Act (CERCLA) will be implemented if hazardous materials regulated by it are found. Commitment is also made to follow the process required by CERCLA and the National Contingency Plan, if remediation of hazardous waste is determined to be needed.

Q-6. The measures recommended by the EPA are consistent with the mitigation presented in the EIS, Section 4.11.3. These measures will be adopted as part of the Record of Decision.

Q-7. As a commercial office, hotel, and retail development, the Navy Broadway Complex Project would not be expected to use or generate substantial amounts of hazardous materials or wastes. As an example, a dry cleaning operation is not anticipated as part of the retail or hotel uses within the project. Landscape maintenance could use pesticides, so storage of small quantities on site may occur. Other activities normally found in office buildings, retail shops, and hotels that may use hazardous substances have not been conceived at this time. Consequently, although it is possible to conceptualize that limited use and generation of hazardous substances would occur, it is premature to estimate the specific potential types and quantities. Specific uses will be defined when the development bids are received following completion of the EIS. All tenants of the project will follow regulations regarding the generation, use, handling, disposal, and disclosure of hazardous materials in full compliance with the law.

The comment suggests an appropriate mitigation measure to incorporate into the project. The following measure is added to Section 4.11.3 of the EIS:

- Waste minimization practices, as required by the 1984 RCRA amendments, will be incorporated into the project construction and operation.

Q-9. The Navy accepts the EPA's recommendation to include the implementation of a solid waste recycling program in the Record of Decision. Please also refer to Response H-23.

Q-10. Based on the investigation of potential hazardous waste on the Navy Broadway Complex conducted by the Navy for the EIS, there are no SWMU's on the site. Consequently, RCRA corrective actions are not anticipated.

Q-11. The comment stating that the removal of PCB's is governed by the Toxic Substance Control Act (TSCA) is noted. The Navy has an ongoing PCB removal program for the site, and other facilities in the San Diego naval complex, which is conducted in full compliance with Federal regulations.

HA. **Colleen Cronin, National Safety Associates, May 16, 1990 (Public Hearing)**

HA-1. This comment does not address the contents of the DEIS. No response is necessary.

HB. Don Wood, C-3 and the Bayfront Coalition, May 16, 1990 (Public Hearing)

HB-1. The commentator's support for certain features of the project and for open space included in Alternative F is noted. The comments are not specific to the environmental impacts of the project, so no other response is provided.

HB-2. The commentator's concern that this project may set a development intensity precedent for the area between Pacific Highway and Harbor Drive is noted. The proposed project was designed to be consistent with the Central Bayfront Design Principles, which provide standards for other development in a broader area to the north and south. The proposed project fits within the context of development intended to be provided along the project area. Whether the San Diego Unified Port District complies in its developments with these same guidelines is beyond the control of the Navy.

HB-3. The Mission Bay fault is considered a strand of the Rose Canyon Fault Zone. Like several faults is this zone, the Mission Bay Fault is often projected southwards towards San Diego Bay and downtown San Diego (please see the 1990 Woodward-Clyde report in Section 4 of this appendix, particularly 2.3). The faults suspected to extend into the downtown area (Kennedy 1975) are typically mapped as "inferred or concealed," hence their specific location is not known. Based on previous fault investigations in the west part of downtown San Diego by Woodward-Clyde Consultants (Schug 1989) and others, it appears unlikely that a significant fault like the Mission Bay fault extends under or near this site.

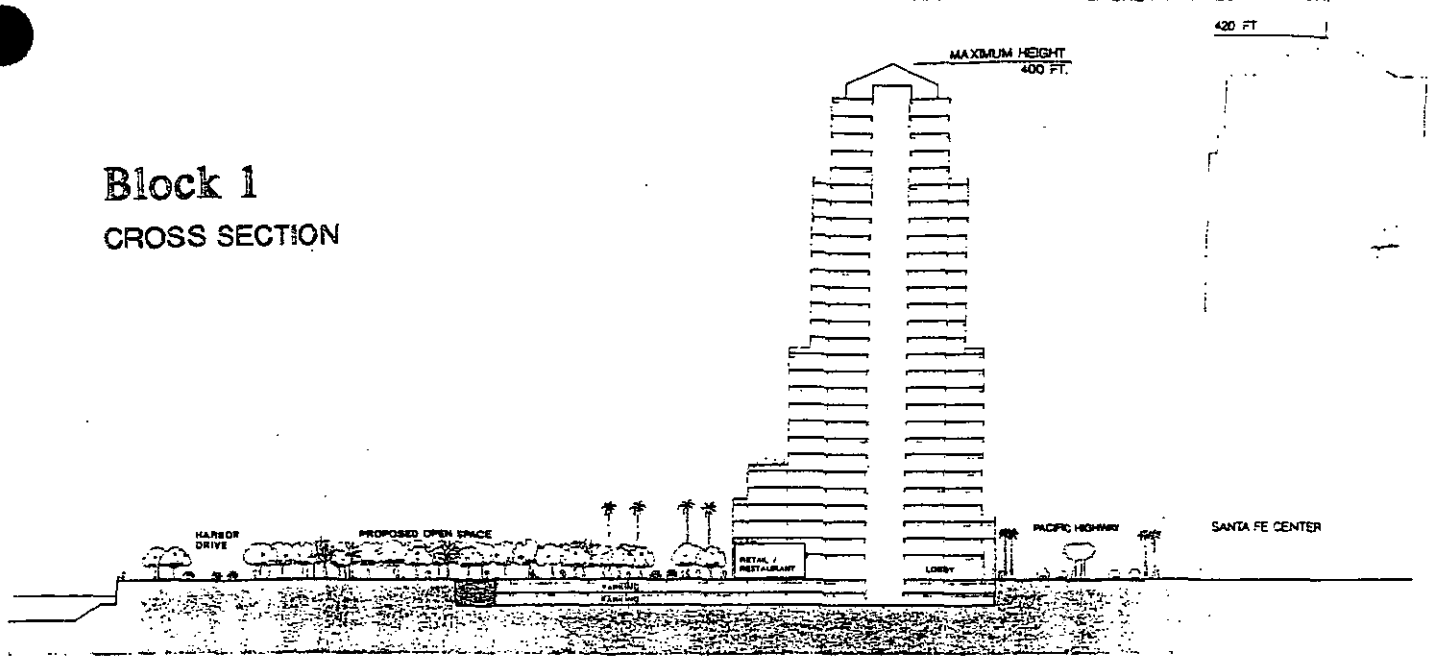
HB-4. In response to this comment, Figures 3-8b and 3-8c have been developed to show the relationship between existing/proposed development on the east side of Pacific Highway and the proposed project on the west side of Pacific Highway. As shown, the project is visually consistent with the proposed or existing adjacent development, stepping down from the east at Blocks 1, 2, and 4, and rising before stepping down to the waterfront at Block 3. Future development at Block 2 reflects FARs for that area.

HB-5. Figure 3-6 of the DEIS (page 3-10) depicts design guidelines for the project. As shown, buildings would be set back along Pacific Highway to provide a minimum 17-foot-wide sidewalk.

NOTE: BUILDING DESIGNS INDICATED ARE FOR ILLUSTRATIVE PURPOSES AND REPRESENT ONLY ONE POSSIBLE SOLUTION.

Block 1

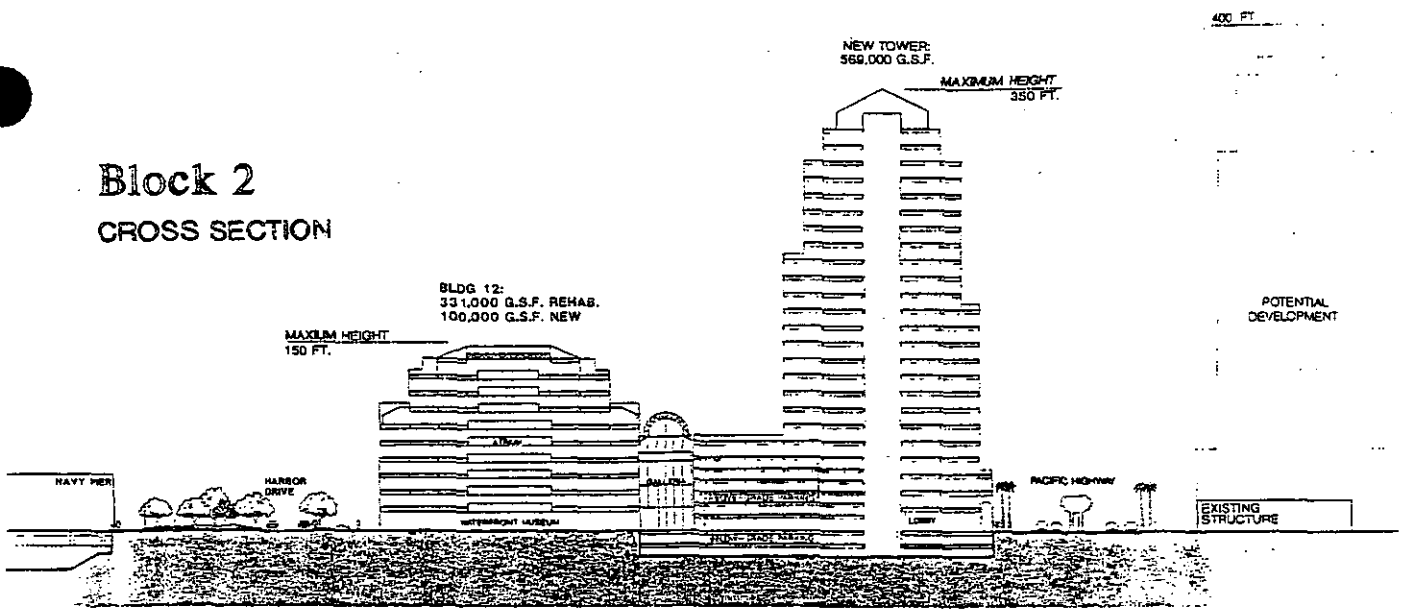
CROSS SECTION



BLOCK 1 : OFFICE 650,000 G.S.F.

Block 2

CROSS SECTION



BLOCK 2 : OFFICE 1,000,000 G.S.F.
WATERFRONT MUSEUM 55,000 G.S.F.

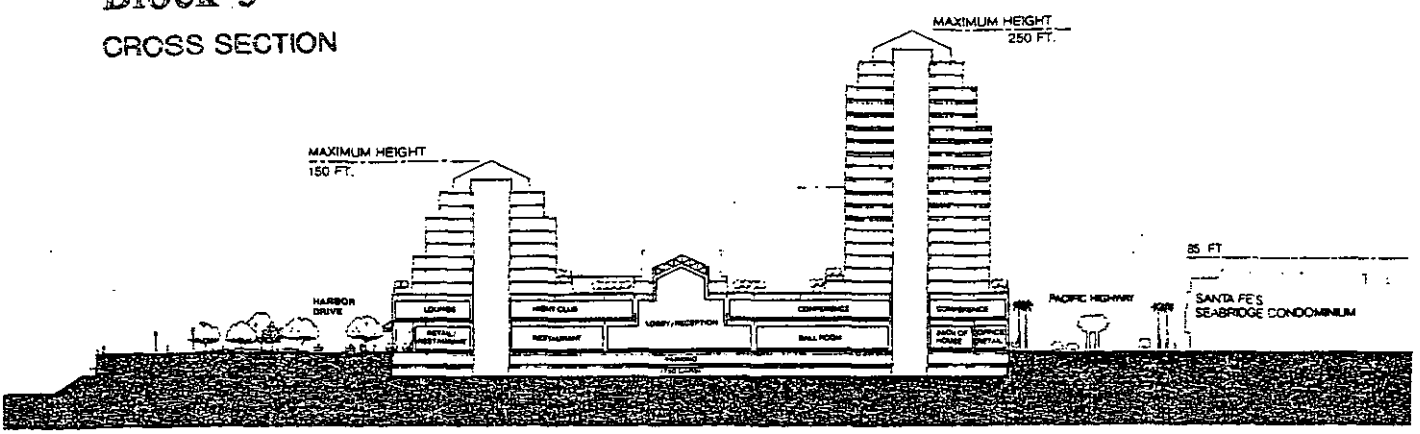
ıustrative Cross Sections
Navy Broadway Complex Project

9640001- July 1990
Figure 3-8b

NOTE: BUILDING DESIGNS INDICATED ARE FOR ILLUSTRATIVE PURPOSES AND REPRESENT ONLY ONE POSSIBLE SOLUTION.

Block 3

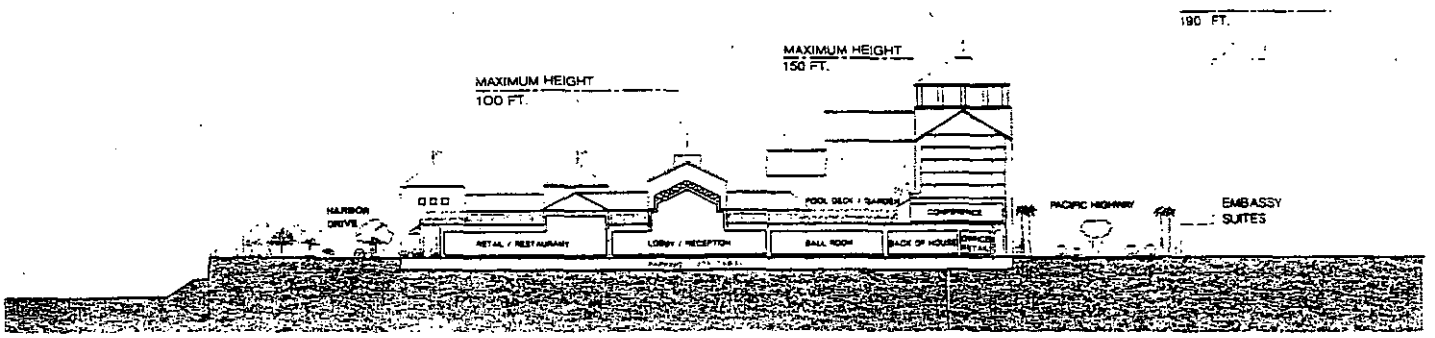
CROSS SECTION



BLOCK 3: BUSINESS HOTEL 745,000 G.S.F./1,000 ROOMS

Block 4

CROSS SECTION



BLOCK 4: LUXURY HOTEL 475,000 G.S.F./500 ROOMS
RETAIL/RESTAURANT 25,000 G.S.F.

Illustrative Cross Sections
Navy Broadway Complex Project

6640001 - July 1990
Figure 3-8c

SECTION 4

SEISMIC STUDY

In response to comments on the geologic analysis in the draft EIS, Woodward-Clyde Consultants prepared "Additional Geologic, Seismic, and Geotechnical Studies. Navy Broadway Complex, San Diego, California." This report is presented in its entirety as Section 4 of this appendix.

ADDITIONAL GEOLOGIC, SEISMIC AND GEOTECHNICAL STUDIES NAVY BROADWAY COMPLEX SAN DIEGO, CALIFORNIA

Prepared for:

Roma Design Group
1420 Sutter Street
San Francisco, California 94109

1550 Hotel Circle North
San Diego, California 92108
(619) 294-9400
Fax: (619) 293-7920

Woodward-Clyde Consultants

September 5, 1990
Project No. 9051207D-GE01

Roma Design Group
1420 Sutter Street
San Francisco, California 94109

Attention: Mr. Jim Adams

ADDITIONAL GEOLOGIC, SEISMIC
AND GEOTECHNICAL STUDIES
NAVY BROADWAY COMPLEX
SAN DIEGO, CALIFORNIA

Gentlemen:

Woodward-Clyde Consultants is pleased to provide the accompanying report, which presents the results of our geotechnical investigation for the project. This study was performed in accordance with our proposal dated July 11, 1990 and the Government Scope of Work dated July 16, 1990.

This report presents our additional geologic/geotechnical studies for the Navy Broadway Complex. The geologic and seismic information presented in this report is intended to supplement the DEIS/DEIR as well as to address review comments that concern geological issues and dewatering.

If you have any questions or if we can be of further service, please give us a call.

Very truly yours,

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ADDITIONAL GEOLOGIC, SEISMIC AND GEOTECHNICAL STUDIES
NAVY BROADWAY COMPLEX
SAN DIEGO, CALIFORNIA

1.0 INTRODUCTION AND PURPOSE

This report presents the results of Woodward-Clyde Consultants' (WCC) additional geologic/geotechnical studies for the Navy Broadway Complex. The purpose of this study is to provide additional geologic and seismic hazards information to supplement the project DEIS/DEIR as well as to address review comments that concern geological issues and dewatering. We have also been asked to provide an updated discussion of site dewatering for use of a hydrostatic resistant mat-type foundation for subsurface construction.

Background

The project area encompasses four blocks in west downtown San Diego between North Harbor, Broadway and Pacific Highway (Figure 1). Current plans for the Navy Broadway Complex are generally as described in "Alternative A" in the DEIS/DEIR prepared by Michael Brandman Associates. Woodward-Clyde Consultants conducted a preliminary geotechnical investigation for the site; a copy of our report entitled "Geotechnical Investigation for the Proposed Navy Broadway Complex, San Diego, California," prepared for Hirsch Company, dated February 4, 1988 is on file at the Navy Broadway Complex Detachment.

We have been provided with and have reviewed the memorandum dated May 24, 1990 prepared by California Division of Mines and Geology (CDMG). We have also addressed specific comments from other agencies and individuals. Responses to comments are being provided in a separate document.

1.2 Scope of Study

r studies have been based upon review of published geologic information and review of our previous geotechnical investigations for the site and other sites in the vicinity of the

Navy Broadway Complex. Additional geotechnical analyses were performed utilizing information from our previous test borings and geotechnical laboratory analyses. No new subsurface explorations were performed for this study.

We have organized the following sections of this report as follows:

- Section 2 & 3: Responses to CDMG Comments
- Section 4: Geotechnical Considerations

2.0 SEISMICITY

The following paragraphs present an overview of site seismicity and local/regional faults.

2.1 Tectonic Setting

The tectonic setting of the San Diego area is influenced by plate boundary interaction between the Pacific and North American lithospheric plates. This crustal interaction occurs along a broad zone of northwest-trending predominantly right-slip faults that span the width of the Peninsular Ranges and extend offshore into the California Continental Borderland Province. At the latitude of San Diego, this zone extends from the San Clemente Fault Zone, located approximately 60 miles west of San Diego to the San Andreas fault, located about 90 miles east of San Diego.

Geologic, geodetic and seismic data indicate that the faults along the eastern margin of the plate boundary, including the San Andreas, San Jacinto and Imperial Faults along with their associated branches, are currently the most active and appear to be dominant in accommodating the motion between the two adjacent plates. A smaller portion of the relative plate motion is being accommodated by northwest-trending faults to the west including the Elsinore Fault, Rose Canyon fault, San Miguel fault, Agua Blanca fault, and offshore faults including the Coronado Bank, San Diego Trough, and San Clemente fault zones. Major regional faults of tectonic significance are shown on Figure 2.

2.2 Historical Seismicity

The locations of earthquakes in the vicinity of San Diego are shown on Figure 3. The historical pattern of seismicity in coastal San Diego (since about the 1930s) has generally been characterized as a broad scattering of small earthquakes; whereas the surrounding regions of Southern California, northern Baja California and the nearby offshore regions are characterized by a high rate of seismicity, where many moderate to large earthquakes (magnitudes up to 6.5) have occurred during the past 50 years or so (Simons, 1977; Anderson and others, 1989). The record of historical earthquakes (magnitude 6 or larger earthquakes) available for San Diego is probably as complete as any other region in California dating back to the early mission days in the late 1700s (Anderson and others, 1989). San Diego has not had a local damaging earthquake since becoming a major population center.

San Diego has experienced strong shaking and minor damage from several local and distant earthquakes, but none have been very destructive (Agnew, 1979; Toppozada and others, 1981). Most of these earthquakes apparently originated at long distances from San Diego, generally from locations in the Imperial Valley or northern Baja California. Earthquakes in 1800, 1862 and 1892 are believed to have produced the strongest felt intensities in the downtown area. The location of the 1800 earthquake (which is estimated to have Modified Mercalli intensity VII[1] in San Diego) is thought to have been somewhere between San Juan Capistrano and San Diego because of the damage it caused at both missions (Toppozada and others, 1981). Anderson and others (1989) suggest that the 1862 earthquake seems to have produced the strongest shaking and to have been located closer to the San Diego metropolitan area than other earthquakes (see Figure 4). During the 1862 earthquake, shaking of an estimated intensity of VI to VII on the Modified Mercalli scale was felt in San Diego based on reported damage that included cracking of adobe buildings and upsetting of small objects (breaking of dishes, etc.). The epicenter for the 1862 earthquake is not known; based on an evaluation of felt reports by Toppozada and others (1981), it is

[1] Prior to the installation of seismographs in California in the early 1900's and the development of the hter magnitude scale, earthquakes were described based upon their ground shaking effects on man-made uctures and natural features and felt reports. These descriptions were incorporated into an intensity scale of which the present version most commonly used is the Modified Mercalli (MM) (Table 1).

suggested the event could have been in or near San Diego Bay. Toppozada and others estimated the magnitude of the 1862 earthquake at M 5.9. The 1892 earthquake is believed to have been located in northern Baja California, Mexico, about 100 to 150 km east from San Diego (Strand, 1980). This earthquake caused widespread minor damage in San Diego; shaking intensity VI to VII is estimated for downtown San Diego (Anderson and others, 1989).

Seismographs were established in San Diego in the early 1930s. Since then, San Diego Bay has been the location of repeated "swarms" of small to moderate magnitude earthquakes. A 1985 series of earthquakes (largest event M4.7) was centered generally within about 0.6 miles (1.0 km) south of the San Diego - Coronado Bay Bridge. A similar series of small earthquakes in 1964 was also generally located beneath southern San Diego Bay. In July, 1986 a M = 5.3 earthquake ("Oceanside Earthquake") occurred about 40 miles (70 km) offshore and northwest of San Diego; the area offshore from Oceanside has experienced an abundance of small aftershocks since 1986. Although the 1986 Oceanside earthquake was felt strongly in many areas of San Diego, it did not cause significant damage in downtown San Diego. The recent increase in seismicity offshore from Oceanside and in San Diego Bay is considered significant by some researchers compared to the relative seismic quiescence over the past several decades. Heaton (1989) compares the increase in earthquake activity in San Diego to other areas of California, where increases in seismic activity has preceded large earthquakes; although Heaton also points out there are also many examples of large earthquakes for which seismicity increases did not occur.

There are differences of opinion regarding the lack of damaging earthquakes in the San Diego area. Despite the fact that the historical record (at least for large earthquakes) dates back some two hundred years, it is important to note that the historical record is typically very short compared to the average interval, or return period between large, potentially damaging earthquakes. Therefore, based only on the historical record of earthquake activity, seismic hazard in San Diego is, in our opinion, difficult to quantify.

2.3 Significant Faults

The Rose Canyon fault zone is the closest major fault zone to the downtown San Diego area and the project site; it extends on land from La Jolla generally through parts of the downtown area, to San Diego Bay, and beyond to the south (see Figure 5). The zone is complex and is comprised of many related fault segments and associated folds. In the offshore areas near San Diego Bay, Holocene age sediments are displaced by faults associated with the Rose Canyon fault zone (Kennedy, 1975, 1980); whereas onshore, localized evidence also exists for Holocene faulting (Patterson and others, 1986; Rockwell, 1989). The locations of significant strands of the Rose Canyon fault zone are not well documented in many areas of downtown San Diego, largely because of the extensive early urban development.

the vicinity of San Diego Bay and the project site, the Rose Canyon fault zone has been apped (Kennedy, 1975) as being comprised of several fault strands which include: the Old Town fault, Spanish Bight fault, Coronado fault and Silver Strand fault. The Mission Bay fault is also considered a strand of the Rose Canyon fault zone and, like several faults in the zone, the Mission Bay fault is often projected southwards towards San Diego Bay and the downtown San Diego area. The faults suspected to extend into the downtown area (e.g., Kennedy, 1975) are typically mapped as "inferred" or "concealed" hence their specific location is not known. Because of the uncertainty in regard to fault locations, the project site is considered to be located about 0.5 to 1.0 miles from significant strands of the Rose Canyon fault zone. Collectively, the main faults comprising the Rose Canyon fault zone are considered capable of a maximum M7 earthquake (Woodward-Clyde Consultants, 1986).

The eastern-most branch of the Rose Canyon fault zone is considered to be the Old Town fault. The Old Town fault displaces late Pleistocene sedimentary deposits near Mission Valley. Southeast of the Old Town area, the location and characteristics of the Old Town fault are not known with confidence; however, it is suspected by Kennedy and others (1975) to extend into the downtown area. The Old Town fault is located about 2 miles rth-northwest of the project site.

The Spanish Bight fault is another important strand of the Rose Canyon fault zone that is mapped about 1 mile (1.6 km) west of the site in San Diego Bay (Figure 6). Based on marine geophysical studies in and around the Bay, the Spanish Bight fault is believed to displace Holocene sediments (Kennedy and Welday, 1980). Prior to dredging and the hydraulic filling operations, the Spanish Bight fault had prominent expression across North Island and may have partly created the channel (Spanish Bight) that formerly separated North Island and Coronado.

The Coronado fault is mapped as extending northerly across the Bay where it appears to project on land about 0.5 mile to the east of the project area (see Figure 6). Although the fault is suspected to extend beyond the Bay onland (Treiman, 1984) its location in the downtown area (east of the site) is not known.

The Silver Strand fault extends from Coronado south to the offshore area west of the U.S./Mexico International Border (Kennedy and Welday, 1980). Based on marine geophysical profiling, the Silver Strand fault is located about 2 miles south of the project area where it appears to die out in San Diego Bay.

2.4 Distant Seismic Sources

The La Nacion fault is mapped about five miles to the east of the downtown area; it extends from Mission Valley south to Otay Mesa (Figure 2). The Coronado Bank fault zone extends roughly parallel to the coastline about 14 miles offshore from downtown. The Elsinore fault zone is about 42 miles northeast of downtown. Each of the above mentioned fault zones, as well as more distant fault zones further to the east, offshore and in Baja California, are considered capable of producing large (M>6 1/2) earthquakes (Woodward-Clyde Consultants, 1986)

3.0 GEOLOGIC AND SEISMIC HAZARDS

3.1 Fault Surface Rupture

The project site, like all of the downtown area, is considered to generally lie within the Rose Canyon fault zone. Some fault strands within this zone are considered active (WCC, 1985, 1986; Rockwell, 1989), and therefore present surface rupture hazards. Although portions of the Rose Canyon fault zone are being evaluated by the State Geologist and are to be included in an Alquist-Priolo Special Studies Zone[2], the west downtown San Diego area (and the project site) is not currently being considered for zonation. The City of San Diego Municipal Code includes a geologic hazards ordinance which requires geologic hazards investigations for new buildings over two stories in height in all of downtown San Diego.

e southern reach of the Rose Canyon fault zone appears to widen and become more complex in the vicinity of San Diego Bay. Within the Bay, and in the immediate offshore areas, the Rose Canyon fault zone has been interpreted to be comprised of several subparallel strands which include the Spanish Bight, Coronado, and Silver Strand faults (Kennedy and Welday, 1980). However, the eastern extent of the Rose Canyon Fault Zone on land through the downtown area is not well-defined. Reconnaissance geologic logging during the excavation of an east-west, mile-long sewer interceptor (WCC, 1981) that extended west on Broadway to the intersection of Kettner and "E" Streets encountered a single fault in the vicinity of Front and First Streets about 0.5 mile east of the site. This fault is not considered active. Most often, interpretations of possible locations of faults within downtown areas have either projected the Old Town fault to the southeast (e.g., Kennedy, 1975), or have been landward projections of offshore faults.

The faults shown on Figure 6 that are located in San Diego Bay were mapped (Kennedy and Welday, 1980) by marine geophysical surveys that included traverses located generally parallel to the bay margins. These marine geophysical surveys conducted to date have not identified significant faults in the bay that appear to project through the Broadway Complex

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Alquist-Priolo Zones are established by the State Geologist along active faults and regulates certain development within the zone (CDMG Special Publication 42).

area. Kennedy and Welday (1980) mapped a short, apparently discontinuous fault extending generally between Coronado and the Broadway Pier (location "A" on Figure 6). This feature was not considered to be prominent on their subbottom reflection profiles and it apparently dies out in the bay and does not extend on land into the Broadway Complex area.

Other portions of the Rose Canyon fault zone are suspected to extend into the downtown area on land (Kennedy, 1975). In addition to the geologic logging of the sewer interceptor excavation along Broadway (ending at Kettner and "E" streets), WCC conducted site-specific fault investigation for several downtown blocks east of the Broadway Complex along Pacific Highway and several blocks to the east. Previous geologic investigations by Woodward-Clyde Consultants and others at these nearby sites immediately east of the Broadway Complex did not encounter significant faults. Therefore, it is believed that previously unrecognized, major active faults do not appear to extend through the west downtown area (Schug, 1989).

Based on previous geologic investigation conducted in San Diego Bay (Kennedy and Welday, 1980 and others) and land areas near the Broadway Complex, it appears unlikely that the site is traversed by a fault that would present a significant fault rupture hazard. Although it is our opinion that it is unlikely the site is traversed by a significant fault, the possibility of on-site faulting cannot be precluded based on the available geologic information.

3.1.1 Remedial Measures

The project site area is underlain by hydraulic fill soils placed over natural bay deposits. The geologically recent bay deposits extend down to elevations below Mean Sea Level (MSL), whereas groundwater typically occurs within several feet above MSL in the project area. Therefore, site subsurface and groundwater conditions generally preclude using typical geologic exploration methods such as trench excavations to evaluate possible faults. Other geologic investigative techniques are possible (such as geophysical profiling and/or deep, closely spaced test borings) which have been used to evaluate suspected faults at nearby project sites and adjacent areas of the bay. However, these methods are somewhat

indirect and can be inconclusive. Also, at other nearby sites it has been possible to make confirmational geologic observations in the several story deep basement excavations (which extended into Pleistocene materials).

As indicated in our previous geotechnical investigation for the Navy Broadway Complex, the floor level for a two-story basement will be in bay deposits. Without being able to directly observe Pleistocene (Bay Point Formation) materials in below ground excavations, it is unlikely that a fault will be discovered on the site during construction. If a fault were observed in construction excavations or discovered during future investigations, it will be necessary to evaluate its recency of past displacements and surface rupture potential. If evaluation of the fault indicates a significant likelihood for renewed movement within the expected project lifetime, and in particular, if the fault was considered "active[3] it would be inconsistent with current engineering and geologic practice to site structures directly across the fault. Therefore, development options would likely include relocating structures so that they are not sited across the fault.

3.2 Seismic Ground Shaking

Southern California is a seismically active region and the potential that local strong ground shaking could occur in the San Diego area as a result of an earthquake on the Rose Canyon or other nearby fault system has been recognized for many years. Thus, significant ground shaking in response to nearby or distant earthquakes should be anticipated during the typical design life of structures. Earthquake ground motions are possible from a number of active fault zones, including the Rose Canyon, fault zones in northern Baja California, areas offshore from San Diego, and the Imperial Valley. Table 2 includes a summary of

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[3] An "active fault", as defined by the California Division of Mines and Geology, is a fault that has "had surface displacement within Holocene time (about the last 11,000 years)" (California Division of Mines and Geology Special Publication 42). "Potentially active" faults are defined as those that have evidence of activity during the Pleistocene (last 2 to 3 million years but not within the last 11,000 years).

For planning and siting purposes, the potential for surface fault rupture is generally considered to exist along "active" and, to a lesser degree, along "potentially active" faults. Those faults that have been most recently active, and particularly those faults that have been repeatedly active during the Holocene, are considered to have the greatest potential for future displacements.

significant local and regional seismic sources, their estimated maximum magnitudes and distance from the site.

Because of its proximity, and recognized potential to produce a large earthquake, the Rose Canyon fault zone is considered a significant seismic hazard to downtown San Diego. Estimates of the maximum earthquake for the Rose Canyon fault zone range from M 6 1/2 to 7 1/4 (Woodward-Clyde Consultants, 1986) with a maximum M 7 earthquake typically considered in local seismic hazard evaluations. A maximum M7 earthquake on the Rose Canyon fault zone is also generally consistent with studies by others including Wesnousky, 1986. The maximum earthquake (or "maximum credible earthquake") is generally considered to be the largest earthquake which may ever be expected at the site within the known geologic framework. An earthquake of M7 on the Rose Canyon fault occurring at an approximate distance on the order of 0.5 to 1.0 miles from the study area can be considered the maximum earthquake for this site. Based on attenuation relationships such as Joyner and Boore, 1988, this maximum earthquake could result in peak ground accelerations in the Navy Broadway Complex area ranging from 0.45 g to 0.60 g. This estimate is in general agreement with peak ground accelerations reported by Mualchin and Jones (1987).

It is important to note that the estimated maximum earthquake generally represents a rare seismic event with a very low probability of occurrence. Because the site is close to an active fault, it is generally considered unrealistic to design for seismic events considered to have a very low probability of occurrence (such as the maximum earthquake occurring on the closest reach of the fault). For a local seismic source such as the Rose Canyon or La Nacion fault zones, there is an approximate probability of occurrence of the maximum earthquake of 1 to 2 percent within a 50-year period (WCC, 1986 and on-going in-house studies).

Regional studies have included probabilistic evaluation of seismic hazards in San Diego. For example, Anderson and others (1989) report that peak accelerations of 0.10 to 0.20 g are "expected about once every 100 years". Earthquake resistant design of important or critical structures in settings such as downtown San Diego more commonly considers results of site-specific probabilistic seismic hazard analysis. For sites near downtown San

Diego (and within about 1 mile from the Rose Canyon fault zone) current studies for sites near the Broadway Complex indicate that there is about a 10% probability that an earthquake will occur in a 50-year period that will generate peak ground accelerations that exceed about 0.35 g. This estimate includes the combined contributions of the Rose Canyon, La Nacion, Coronado Bank and Elsinore faults and for all earthquakes of M5 and greater. In our opinion, this estimate can generally be considered the "maximum probable earthquake" for this site.

The estimates of seismic ground shaking discussed above are intended to provide a general assessment of the site seismic hazard and are not intended for design purposes.

3.2.1 Remedial Measures

The coastal zone of San Diego, including the downtown area, is currently assigned to UBC .smic Zone 3. Based on our recent conversations with the Structural Engineers Association of San Diego, strong consideration is being given to changing coastal San Diego from Zone 3 to Zone 4. The U.S. Navy has historically considered San Diego to be Zone 4.

The maximum earthquake on the Rose Canyon or other nearby fault, if it were to occur, would likely result in strong ground shaking, in excess of local building codes, over much of coastal San Diego. However, buildings designed and built in accordance with modern building codes typically have greater earthquake resistance than indicated by the code design and typically have fared well under relatively strong ground shaking conditions (Housner and Jennings, 1982).

Like any other important structure in downtown San Diego, design studies for future projects should consider the likelihood of strong seismic shaking within the design life of structures. Earthquake resistant design, utilizing results of site-specific seismic hazard analyses (typically including seismic ground motion information, seismic response spectra, and characteristic site period), would reduce potential damage from earthquakes. Even so, 's generally considered economically unfeasible to build a totally earthquake-resistant project; therefore it is possible that a large or nearby earthquake could cause damage at the

site. In this regard, the seismic hazard associated with the Navy Broadway Complex project is not considered appreciably different than nearby areas of downtown San Diego and most of coastal San Diego County.

3.3 Liquefaction

Seismically induced liquefaction is a phenomenon in which loose, saturated granular materials develop high porewater pressure and lose strength due to ground vibrations induced by earthquakes. Soil liquefaction can result in ground settlements and increased lateral and uplift pressures on underground structures. Buildings supported on soils that have liquefied often settle and tilt; light-weight structures may float upwards to the ground surface and foundations may displace laterally causing structural failure.

The City of San Diego Municipal Code requires an evaluation of liquefaction potential for building sites that lie within areas identified on the City of San Diego Seismic Safety Study as being susceptible to liquefaction. The City of San Diego Building Code (Section 91.02.2905) includes the criteria for a liquefaction evaluation. The Broadway Complex site lies within Geologic Hazard Category No. 31 (as identified on the City Seismic Safety Study) in which potential ground failure associated with liquefaction is considered "relatively high", and therefore a liquefaction evaluation is required by the Code.

Using information from our previous geotechnical investigation, we have made a preliminary evaluation of liquefaction susceptibility based on penetration resistance blow counts of the sampler on the technique outlined by Seed and Idriss (1982), and Section 91.02.2905 of the City of San Diego Building Code. We have converted the blow counts obtained by a Modified California Sampler to corrected blow count values $(N_1)_{60}$ by using the appropriate correction factors for the type of sampler used, the influence of overburden pressure, drill rod length, and grain size. The Seed and Idriss analysis method evaluates susceptibility to liquefaction using empirical relationships between the corrected blow count values and the stress conditions for a design peak ground acceleration and earthquake magnitude. Section 91.02.2905 (g) in the Building Code specifies that liquefaction susceptibility analyses be performed using a minimum Magnitude 6 earthquake with a peak ground acceleration of approximately 0.19 g and 0.23 g for structures with occupancy

importance factors[4] of 1.0 and 1.25, respectively. For this evaluation, it was assumed that either occupancy importance factor may apply to the site.

The results of our analysis are presented in Figure 7. Blow counts for the hydraulic fill soils above the water table at the time of drilling are not presented. Critical blow count values $(N_1)_{60}$ falling to the left of lines of calculated critical values $(N_1)_c$ for peak ground accelerations of 0.19 g and 0.23 g indicate soils that are potentially liquefiable under the assumed conditions. Figure 7 indicates that approximately 45 percent of the granular hydraulic fill, bay deposits and Bay Point formation between elevations of approximately +3 feet and -30 feet MSL are equal to or smaller than the $(N_1)_c$ values for a peak ground acceleration of 0.19 g. It is our opinion that the relatively denser and/or more cohesive soils of the Bay Point Formation below -15 feet have a low potential for liquefaction, so as not to constitute a potential liquefaction hazard.

.e potentially liquefiable bay deposits underlie the entire site with a general thickening of the layer to the south. The consequences of liquefaction, should it occur at this site, probably would be manifested in the form of localized sand boils, differential ground settlements and increased lateral earth pressures on retaining structures. Based on the analyses by Tokimatsu and Seed (1987), we estimate that the total and differential settlements on the order of perhaps 2 to 7 inches could occur during the seismic ground shaking associated with the San Diego Building Code. A more severe earthquake could produce more extensive liquefaction.

3.3.1 Remedial Measures

Because of the potential for liquefaction at the site, we recommend that deep pile foundations, or structural mats designed for the anticipated settlements, be used to mitigate or reduce potential structural damages to buildings.

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[4] Occupancy importance factors are defined in the Uniform Building Code. Any building where the imary occupancy in for assembly use for more than 300 persons (in one room) has an importance factor of 1.25; all others are 1.0 except for essential facilities which are 1.5.

Quay wall failure in the event of liquefaction is possible. The effects of a failure would be lateral spreading and settlement of the soil contained behind the existing quay wall which would result in disruption of local street and rail traffic and damage to below ground utilities. The zone of impact could extend for several hundred feet behind the quay wall. To mitigate the potential damages due to quay wall failure, the quay wall design should be reviewed and modified or reconstructed as necessary to withstand effects of liquefaction and ground motion associated with a design earthquake.

3.4 Tsunamis/Seiches

A tsunami is a sea wave generated by a submarine earthquake, landslide or volcanic action which travels over the ocean. Earthquakes generated either locally or at great distances are considered to be the primary mechanisms capable of generating a tsunami. A seiche is an earthquake-induced wave in a confined body of water such as San Diego Bay. Hazards from tsunami and seiche inundation in the San Diego Bay area are difficult to assess because of the relatively short historical record and the lack of detailed studies in the subject area.

Tsunamis travel across the ocean as a powerful wave up to 50 miles long, 1 to 2 feet high, and at speeds up to 500 mile per hour. As the tsunami waves approach the coastline, the shallow bottom topography and configuration of the coastline can transform the waves into very high and potentially damaging waves and strong currents. Most damaging tsunamis are associated with vertical tectonic displacements and earthquakes with a magnitude of 6.4 or greater (Iida, 1963). The threat to San Diego of tsunamis generated from remote earthquakes appears to be minor since the offshore topography of Southern California would act as a diffuser and reflector (Joy, 1968). The primary horizontal movement of the local offshore faults minimizes the potential for a locally generated tsunami. Houston and Garcia (1978) predicted that the inner San Diego Bay would be protected by the shoaling effect of the local coastline. The San Diego Coast Regional Commission (1974) presented an opposing view by stating that the offshore area is insufficiently studied to make statements on the configuration of the bay.

Historical data from the past 170 years indicates that wave heights and run-up elevations experienced along the Southern California coast as a result of distant tsunamis have fallen within the normal range of the tides (Joy, 1968). Five of the greatest tsunamis representing all of the major generating zones of the Pacific produced minimal or no damage along the San Diego coastline. Only two or three tsunamis generated off of Southern California have been recorded and all were barely noticeable in San Diego. The largest recorded tsunami to reach San Diego was caused by the 1960 earthquake in Southern Chile and measured at 4.6 feet in height. Recorded tsunamis that produced waves at San Diego greater than one foot is presented in Table 3. Houston and Garcia (1974) estimate the 100-year and 500-year runup from tsunamis as being 7.4 feet and 14.5 feet (above Mean Sea Level), respectively, for the San Diego Bay area near the Broadway Complex.

There has been no reported occurrence of significant seiches within the San Diego area. Strong, local earthquakes on the Rose Canyon fault or Coronado Bank fault zone could duce a seiche with significant run-up and unusually high water levels.

3.4.1 Remedial Measures

The hazard from tsunamis and seiches in San Diego Bay is considered low. To our knowledge, coastal structures in and around San Diego Bay do not include design considerations for tsunamis nor seiches. An extreme tsunami or seiche resulting from a strong local earthquake could damage existing coastal facilities and also result in strong currents and/or waves overtopping quay walls with some associated flooding. However, these possible events are not likely to produce substantial damage to facilities located several hundred feet back from the shoreline. Therefore, special design considerations for tsunamis or seiches do not appear warranted for the Navy Broadway Complex.

4.0 GEOTECHNICAL CONSIDERATIONS

Preliminary foundation alternatives were evaluated in our previous geotechnical investigation for the Broadway Complex. In the following paragraphs we present an lated discussion of possible foundation types and dewatering.

4.1 Soil Conditions and Subsurface Construction Options

The existing ground surface at the site is relatively flat with surface elevations +9 to +12 feet (MSL). The groundwater levels at the site are tidally influenced, but typically are in the elevation range of 1/2 to 2 1/2 feet above MSL Datum. The soil profile typically consists of fill over bay deposits over Pleistocene marine terrace materials. The Pleistocene materials are competent bearing material for deep foundations or shallow footings. This bearing strata is typically encountered at elevation of -10 to -15 feet MSL. The overlying materials are potentially liquefiable and moderately compressible, but have and are supporting one- and two-story structures.

Construction of a single level below grade can probably be accomplished with little or no dewatering, with support of the buildings on pilings and use of a structural floor system. Construction of two levels below grade will require construction dewatering, pile foundations and structural floor system to support building loads and to resist uplift water forces on the order of 7 to 10 feet. Waterproofing of floors and walls will be required. It will probably take a 3 level below grade structure to completely penetrate all loose compressible and liquefiable soil. At this depth and at greater depths, dewatering will be needed during construction and a very strong mat or structural floor system will be required to resist 16 to 20 feet of uplift force. Waterproofing of walls and floor will be required.

We have prepared an order-of-magnitude estimate relative to cost differences for various foundation treatments. At depths of one and two levels below grade, the pile foundations and structural floor slab costs are probably roughly equivalent to a hydrostatic mat (assuming a five or six level structure and basement floor slab good for 500 psf loading). At a depth of three levels below grade (where bearing capacity of the soils is sufficient to support the structure on spread footings and could permit use of a 6-inch thick, unreinforced floor slab) the hydrostatic mat is on the order of 6 to 7 times more expensive than the cost of spread footings, a floor slab, and the capital cost of installing a permanent dewatering system.

4.2 Dewatering

As discussed above, construction of two levels below grade will require dewatering for construction purposes. However, permanent dewatering systems with discharges to San Diego Bay are no longer allowable. Temporary dewatering for construction purposes could also potentially impact adjacent off-site areas. Therefore the effects of construction dewatering should be limited to on-site areas as closely as possible. Based on our experience on previous projects along and near the bay, the following are general considerations and possible options for construction dewatering:

- Deep wells have been used on similar sites to do construction dewatering and appear feasible for the Broadway Complex site.

- It may be possible to use well points and ground sumps and/or pumps for localized areas which could reduce potential off-site impacts.

- Some groundwater contamination is known at nearby areas. Any encountered contaminated groundwater would require treatment of water removed.

- A perimeter cutoff with slurry wall would significantly reduce inflow to dewatering system. It appears possible to use sheetpile to shore excavations and to provide perimeter cutoff of groundwater on a temporary basis (i.e. during construction). The sheetpiles need to be driven deep and the interlocks grouted.

- Reinjection wells to put groundwater back into ground and maintain groundwater levels around the outside of the construction area was only marginally successful at other sites along the bayfront. If this method is proposed to mitigate potential consolidation settlement at nearby sites, the design, construction and generation of reinjection wells needs careful attention and special expertise.

4.3 Permitting

4.3.1 Dewatering Discharge During Construction

On April 23, 1990 the Regional Water Quality Control Board - San Diego Section (RWQCB) adopted Order Number 90-31 (Order). This Order defines the general requirements for groundwater dewatering discharges to San Diego Bay (and its tributaries). This Order also establishes a ban on all new permanent dewatering systems which would discharge to San Diego Bay. However, the Order does not prohibit construction dewatering provided specific guidelines and requirements of the Order are complied with.

New construction projects which require dewatering will be required to submit an application to the RWQCB requesting authorization for discharge under authority of the National Pollution Discharge Elimination System (NPDES) Permit No. CA0108707. The application is to be prepared in the form of a letter, specifically addressing each item presented in RWQCB Order No. 90-31. In brief, the Order requires the applicant to comply with the following:

- Acknowledgement that the specific discharge prohibitions will be complied with;
- Development of a treatment system, or adequately demonstrate compliance with specific discharge effluent limitations;
- Adequate justification supporting compliance with limitations (water quality objectives) on impact and affect to receiving waters;
- Acknowledgment of specific provisions in the Order with a statement of compliance to achieve those provisions (i.e., by-pass conditions, upset conditions, documentation, etc.);
- A program to fulfill specified monitoring and reporting requirements; and

- A letter signed by a licensed engineer certifying the adequacy of the treatment system to achieve compliance with the Order, including required manuals, contingency plans, and monitoring programs.

Subsequent to submittal of the above described applications, RWQCB staff will review the information for its completeness relative to the Order and if satisfactory, staff will issue a letter authorizing discharge of groundwater for a specific construction period. Factors important to receipt of the authorization letter include the following:

- Maximum groundwater discharge flowrate;
- Accurate estimate of dewatering period (length of time);
- Certification that contaminant mass loads[5] will comply with the Ocean Plan and the San Diego Basin Plan; and
- Reasonable, practicable contingency plans.

Based on Woodward-Clyde Consultant's experience (San Diego Convention Center), a project of this size (approximately 16 acres) and proximity to the bayfront may require at or near 250 gallons per minute of groundwater discharge for each of the 4 city blocks to adequately dewater the area during construction.

4.3.2 Soil Removal

Excavation and removal of soil could be addressed by the excavation contractor in two phases. As necessary, Phase I would address those areas contaminated with hazardous and/or petroleum hydrocarbon waste material. If soil is found at this site contaminated with hazardous materials (i.e., RCRA listed or characteristic waste material as defined in the Code of Federal Regulations, Chapter 40, Subpart C & D and/or California Waste identified in the California Code of Regulations, Title 22), the soil must be treated to meet

[5] A contaminant mass load is equivalent to the actual cumulative mass of contaminant being discharged per unit time (i.e., pounds of petroleum hydrocarbons per 24 hours).

current Federal and State and disposal requirements and disposed of at an appropriately licensed landfill. If the soil is contaminated with petroleum hydrocarbons, the excavation contractor may select one of several alternatives, including the following:

- Bioremediate the petroleum hydrocarbon contamination under approval from the County Department of Health Services (CDOHS) and dispose off-site at a landfill whose operator has been informed of the nature of the contamination and the resultant characteristics of the treated soil;

- Arrange for other suitable CDOHS approved on-site treatment and off-site disposal;

- Contract for off-site treatment and disposal with a licensed treatment facility.

Phase II soil removal would address non-contaminated soil. The excavation contractor would be required to identify off-site users of excavated soils and arrange for processing (spreading out the material for sun-drying, mechanical discing and/or other appropriate soil processing techniques) prior to alternative use. Phase II may not require CDPHS approval, rather it is dependant on the requirements of those parties purchasing and/or accepting the fill material.

5.0 REFERENCES

Anderson, J.G., Rockwell, T.K., and Agnew, D.C., 1989, Past and possible future earthquakes of significance to the San Diego Region; Earthquake Spectra, v. 5, no. 2, p. 229-335.

Berger, V., 1989, Seismic Hazards in San Diego: Probabilistic perspectives [abstract]: seismic risk in the San Diego Region: A workshop on the Rose Canyon Fault System (sponsored by Southern California Earthquake Preparedness Project).

Heaton, T.H., 1989, Anomalous seismicity in the San Diego Coastal Region: seismic risk in the San Diego region, A workshop sponsored by the Southern California Earthquake Preparedness Project.

Houston, J.R. and Garcia, A.W., 1974, Type 16 flood insurance study: tsunami predictions for Pacific coastal communities, U.S. Department of Housing and Urban Development, Federal Insurance Administration.

Iida, K., 1963, Magnitude, energy and generation mechanism of tsunamis and a catalog of earthquakes associated with tsunamis, Union Geodesique et Geophysique Internationale, Monographie, No. 24, Paris.

Joy, J., 1968, Tsunamis and their occurrence along the San Diego County coast: Westinghouse Ocean Research Lab report prepared for The Unified San Diego County Civil Defense and Disaster Organizations, unpublished.

Kennedy, M.P., 1975, Geology of the western San Diego metropolitan area, California; Del Mar, La Jolla, and Point Loma quadrangles, in Geology of the San Diego Metropolitan area, California: California Division of Mines and Geology Bulletin 200, p. 9-39.

Kennedy, M.P., Clark, S.H., Greene, H.G., and Legg, M.R., 1980, Recency and character of faulting offshore from metropolitan San Diego, California; Point La Jolla to Baja California: California Division of Mines and Geology Map Sheet 42.

Kennedy, M.P., Tan, S.S., Chapman, R.H., and Chase, G.W., 1975, Character and recency of faulting, San Diego metropolitan area, California: California Division of Mines and Geology, Special Report 123.

Kennedy, M.P., and Welday, E.E., 1980, Character and recency of faulting offshore, metropolitan San Diego, California: California Division of Mines and Geology Map Sheet 40.

Leighton and Associates, 1982, City of San Diego Seismic Safety Study.

Patterson, R.H., Schug, D.L., and Ehleringer, B.E., 1986, Evidence for Recent Faulting in Downtown San Diego, California (abstract); GSA 82nd Annual Meeting, Abstracts with Programs.

Moore, G.W., 1972, Offshore extension of the Rose Canyon fault, San Diego, California: U.S. Geological Survey Professional Paper 800-C, p. 8113-8116.

Moore, G.W., and Kennedy, M.P., 1975, Quaternary Faults of San Diego Bay, California: U.S. Geology Survey, Journal of Research, v. 3., no. 5, p. 589-595.

Rockwell, T., 1989, Tectonic geomorphology of the Rose Canyon Fault Zone: implications of seismic hazards in San Diego, California (abstract): Seismic Risk in the San Diego Region, a workshop on the Rose Canyon Fault System (sponsored by Southern California Earthquake Preparedness Project).

Rockwell, T.K., and Lindvall, S., 1990, Holocene Activity of the Rose Canyon Fault in San Diego, California Based on Trench Exposures and Tectonic Geomorphology in Geological Society America, abstracts with programs, 86th Annual Meeting, Cordillera Section, Tucson, Arizona.

San Diego Coast Regional Commission, 1974, Coastal geology and geological hazards of the San Diego Coast; San Diego Regional Commission.

Schug, D., 1989, Impacts of the Rose Canyon fault zone in downtown San Diego, California: [abstract] Seismic Risk in the San Diego Region: A workshop on the Rose Canyon Fault System (sponsored by Southern California Preparedness Project).

Seismic Risk in the San Diego Region, 1989, Proceedings of the Workshop on the Rose Canyon Fault System, June 29-30, 1989.

Simons, R.S., 1977, Seismicity of San Diego, 1934-1974: Seismological Society of America Bulletin, v. 67, p. 809-826.

Simons, R.S., 1979, Instrumental seismicity of the San Diego area, 1934-1978, in Abbott, P.L., and Elliott, W.J., eds., Earthquakes and other perils, San Diego region: San Diego Association of Geologists, prepared for Geological Society of American field trip, November, 1979, p. 101-105.

Strand, C.L., 1980, Pre-1900 earthquakes of Baja California and San Diego County, M.S. Thesis, San Diego State University.

Toppozada, T.R., Parke, D.L., and Real (1981), Preparation of isoseismal maps and summaries of reported affects for pre-1900 California earthquakes: California Division Mines and Geology Open File Report 81-11.

Treiman, J.A., 1984, The Rose Canyon Fault Zone, A Review and Analysis: California Division of Mines and Geology (Draft Report submitted to FEMA).

Wesnousky, S.G., 1986, Earthquakes, Quarternary Faults and Seismic Hazard in California, Journal of Geophysical Research, Vol. 91, No. B12.

Woodward-Clyde Consultants, 1979, Report of the Evaluation of Maximum Earthquake and Site Ground Motion Parameters Associated with Offshore Zone of Deformation, San Onofre Nuclear Generation Station.

Woodward-Clyde Consultants, 1981a, Trenching the Rose Canyon fault zone, San Diego, California: Final Technical Report, sponsored by U.S. Geological Survey Contract No. 14-08-0001-19118.

Woodward-Clyde Consultants, 1981b, Trenching the Rose Canyon fault zone: Final Technical Report sponsored by U.S. Geological Survey, Contract No. 14-08-0001-19824.

Woodward-Clyde Consultants, 1981c, Supplemental geologic investigation for the proposed Naval Regional Medical Center, Florida Canyon, west site, San Diego, California: Woodward-Clyde Consultants, Project No. 581613-GE01, May 21, 1981.

Woodward-Clyde Consultants, 1985, Geological Investigation for the Police Administration and Technical Center.

Woodward-Clyde Consultants, 1986, Evaluation of Liquefaction Potential in the San Diego, California Urban Area: Final Technical report sponsored by U.S. Geological Survey.

Ziony, J.I., 1973, Recency of faulting in the greater San Diego area California, in Ross, A., and Dowlen, R.J., eds., Studies on the geology and geologic hazards of the greater San Diego area, California: San Diego Association of Geologists and the Association of Engineering Geologists, Guidebook for the May, 1973 Field Trip, p. 68-75.

Ziony, J.I., and Buchanan, J.M., 1972, Preliminary report on recency of faulting in the greater San Diego area, California: U.S. Geological Survey Open-File Report.

TABLE 1

ABRIDGED MODIFIED MERCALLI INTENSITY SCALE
INTENSITY VALUE AND DESCRIPTION*

I) Not felt except by a few under especially favorable circumstances. (I Rossi-Forel Scale).

II) Felt only by a few persons at rest, especially on upper floors of buildings. Delicately suspended objects may swing. (I to II Rossi-Forel Scale).

III) Felt quite noticeably indoors, especially on upper floors of buildings, but many people do not recognize it as an earthquake. Standing motorcars may rock slightly. Vibration like passing of truck. Duration estimated. (III Rossi-Forel Scale).

IV) During the day felt indoors by many, outdoors by few. At night some awakened. Dishes, windows, doors disturbed; walls make creaking sound. Sensation like heavy truck striking building. Standing motorcars rocked noticeably. (IV to V Rossi-Forel Scale).

V) Felt by nearly everyone, many awakened. Some dishes, windows, and so on broken; cracked plaster in a few places; unstable objects overturned. Disturbances of trees, poles, and other tall objects sometimes noticed. Pendulum clocks may stop. (I Rossi-Forel Scale).

VI) Felt by all, many frightened and run outdoors. Some heavy furniture moved; a few instances of fallen plaster and damaged chimneys. Damage slight. (VI to VII Rossi-Forel Scale).

VII) Everybody runs outdoors. Damage negligible in buildings of good design and construction; slight to moderate in well built ordinary structures; considerable in poorly built or badly designed structures; some chimneys broken. Noticed by persons driving cars. (VIII Rossi-Forel Scale).

VIII) Damage slight in specially designed structures; considerable in ordinary substantial buildings with partial collapse; great in poorly built structures. Panel walls thrown out of frame structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. Persons driving cars disturbed. (VIII+ to IX Rossi-Forel Scale).

IX) Damage considerable in specially designed structures; well designed frame structures thrown out of plumb; damage great in substantial buildings, with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken. (IX+ Rossi-Forel Scale).

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* Wood and Neumann, 1931.

X) Some well built wooden structures destroyed; most masonry and frame structures destroyed with foundations; ground badly cracked. Rails bent. Landslides considerable from river banks and steep slopes. Shifted sand and mud. Water splashed, slopped over banks. (X Rossi-Forel Scale).

XI) Few, if any, (masonry) structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipelines completely out of service. Earth slumps and land slips in soft ground. Rails bent greatly.

XII) Damage total. Waves seen on ground surface. Lines of sight and level distorted. Objects thrown into the air.

TABLE 2

SEISMIC SOURCES SUMMARY

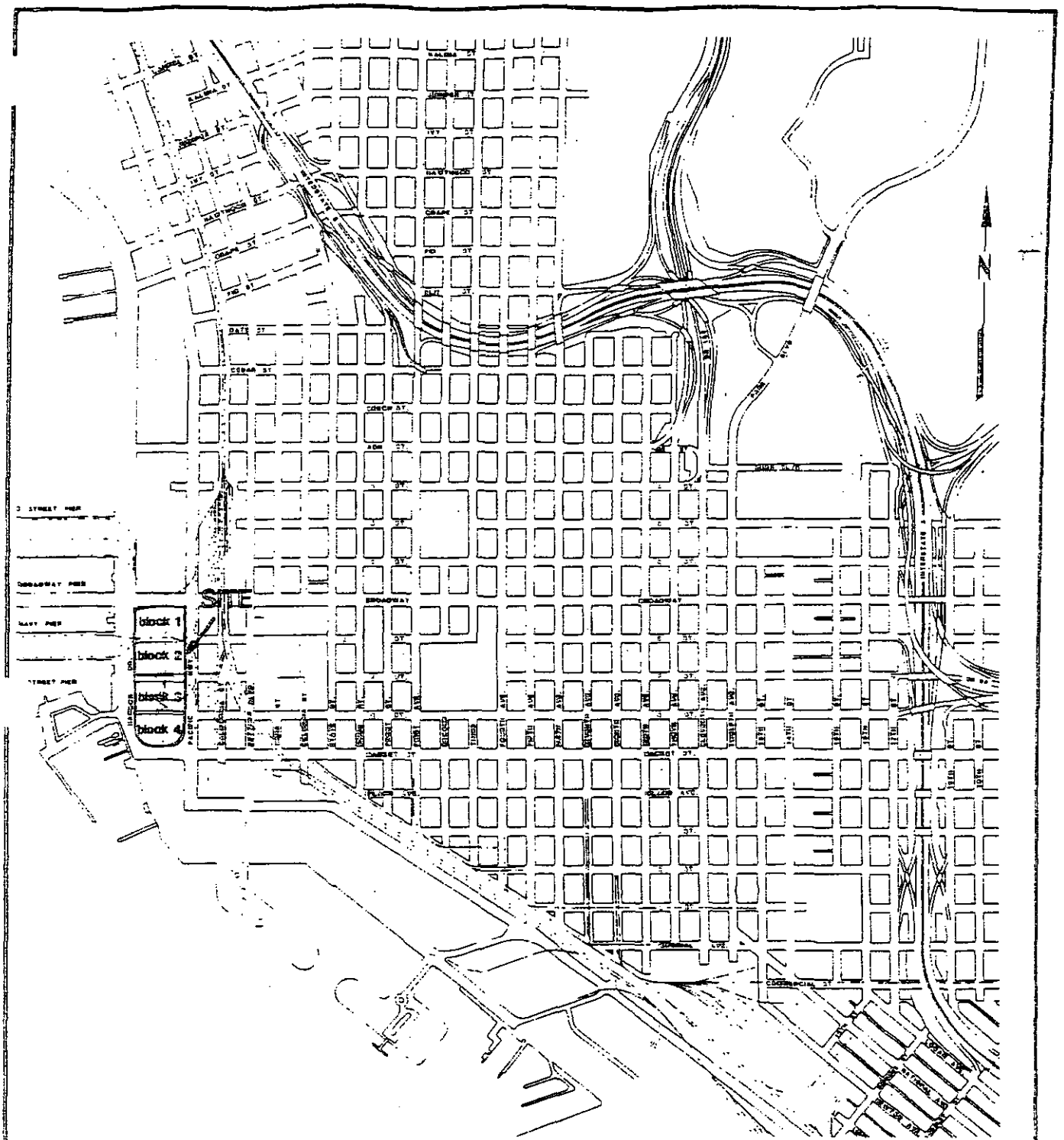
Source Name	Primary Displacement	Estimated Length, miles	Closest Distance From Site, miles	Slip Rate mm/yr	Estimated Maximum Magnitude
Rose Canyon	Strike-Slip and Oblique	50	0.5 - 1.0	1.2-1.9	7
La Nacion	Normal	16	7	0.05	6 1/2
Coronado Bank	Strike-Slip	156	13	3.0	7 3/4
San Diego Trough	Strike-Slip	156	24	1.0	7 1/2
SCOZD	Strike-Slip	43		0.5	7
Elsinore	Strike-Slip	194	41	5.0	7 1/2
San Jacinto	Stike-Slip	160	60	8.0	7 1/2
San Andreas (South Segment)	Strike-Slip	>200	90	25.0	8
Agua Blanca	Strike-Slip	90	60	4.0-6.0	7 1/2
San Miguel	Strike-Slip	60	90	0.5-2.0	7

TABLE 3

TSUNAMIS RECORDED AT SAN DIEGO

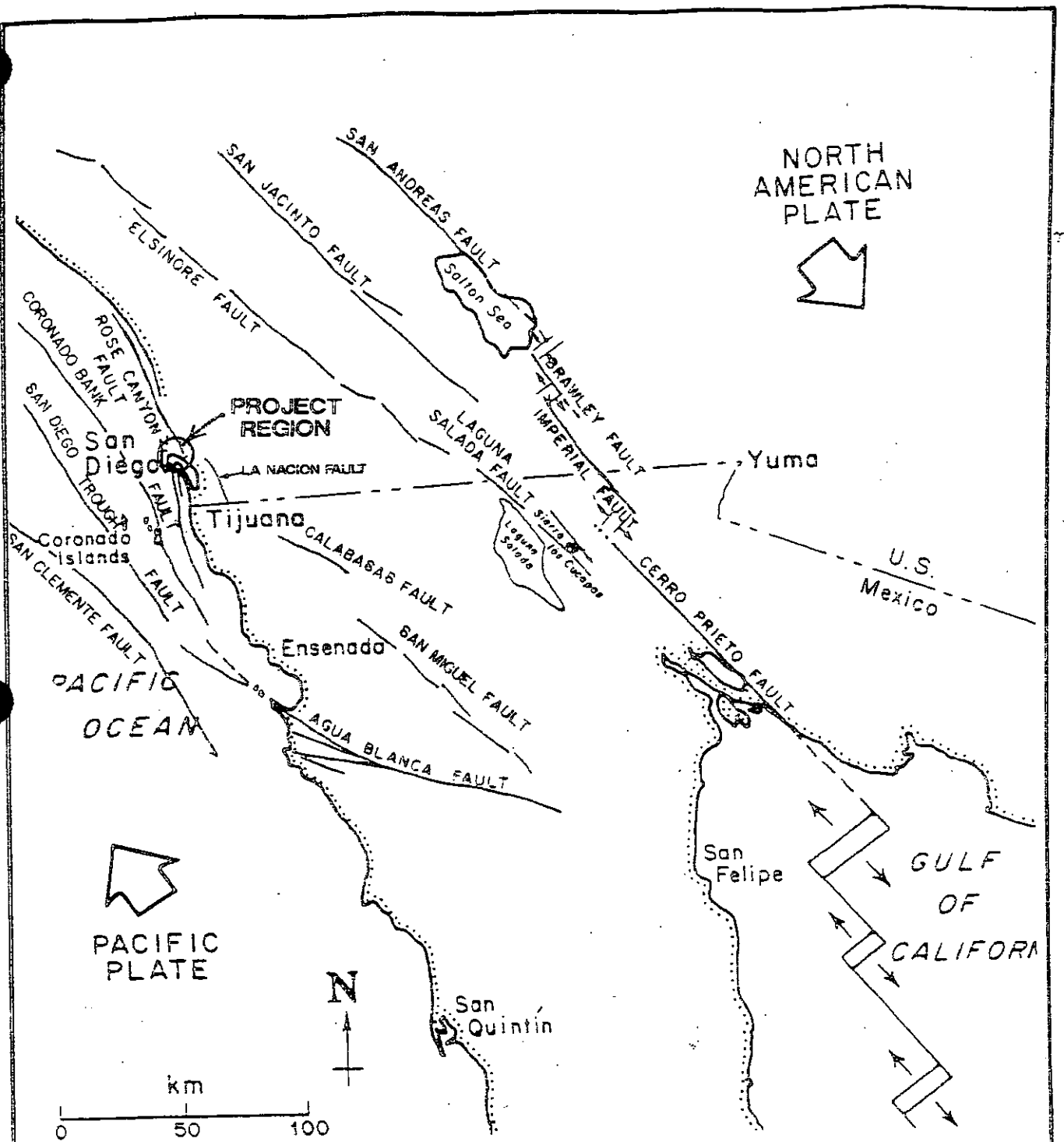
Earthquake Magnitude	Date	Epicenter	Approximate Height at San Diego
(?)	Aug. 13, 1868	N. Chile; So. Peru	1.0 ft.
8.3	Nov. 10, 1922	Atacama, No. Chile	1.3 ft.
8.3	Feb. 4, 1923	Kamchatka	1.3 ft.
7.4	Apr. 1, 1946	Aleutian Islands	1.3 ft.
8.25	Nov. 5, 1952	Kamchatka	2.3 ft.
8.0-8.5	Mar. 9, 1957	Aleutian Islands	1.5 ft.
8.25-8.5	May 22, 1960	So. Chile	4.6 ft.
8.4	Mar. 27, 1964	Alaska	3.7 ft.

Source: Joy, 1968



VICINITY MAP
NAVY BROADWAY COMPLEX

DRAWN BY: dm	CHECKED BY: dlg	PROJECT NO: 9051207D-GE01	DATE: 8-24-90	FIGURE NO: 1

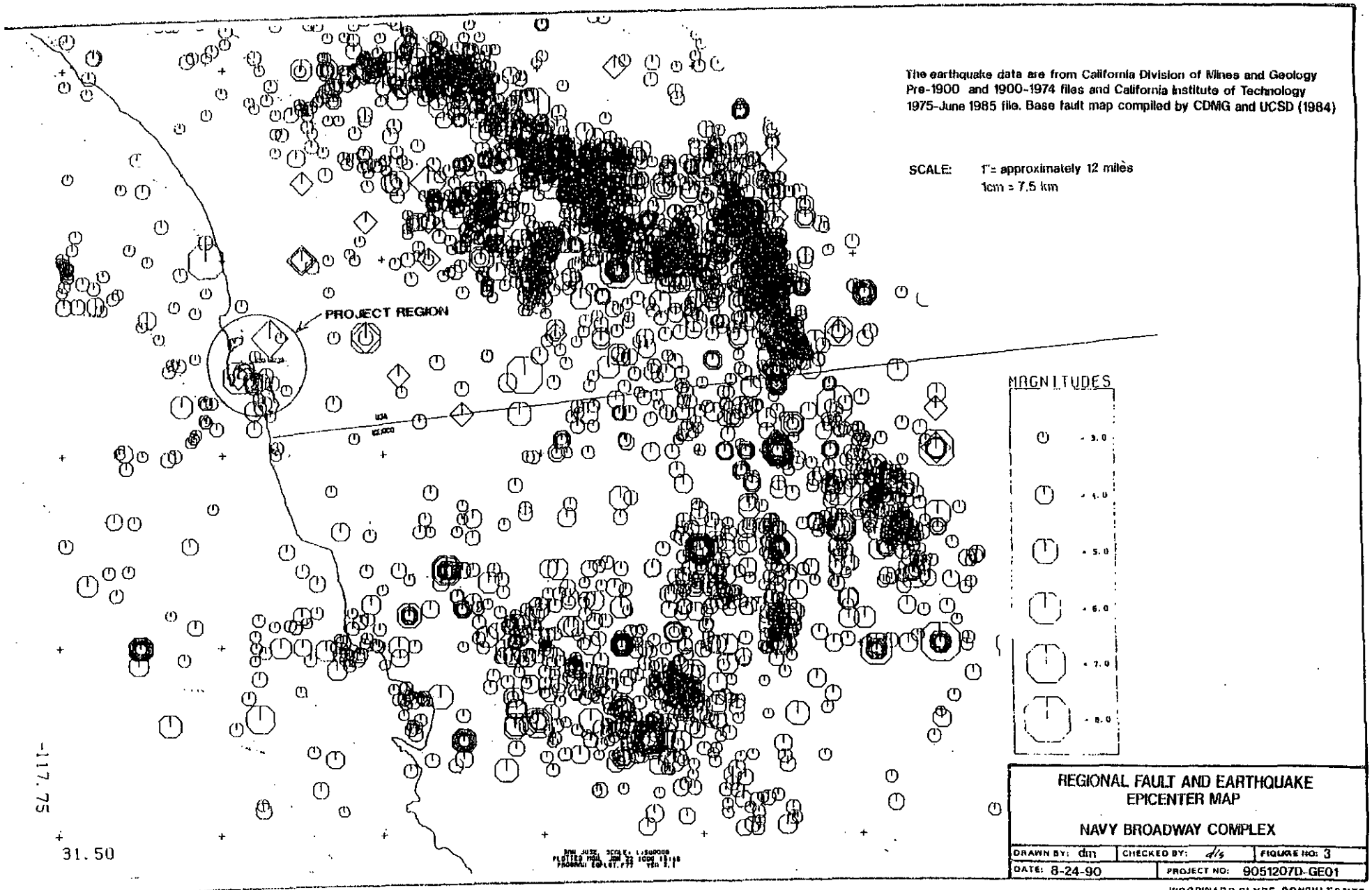


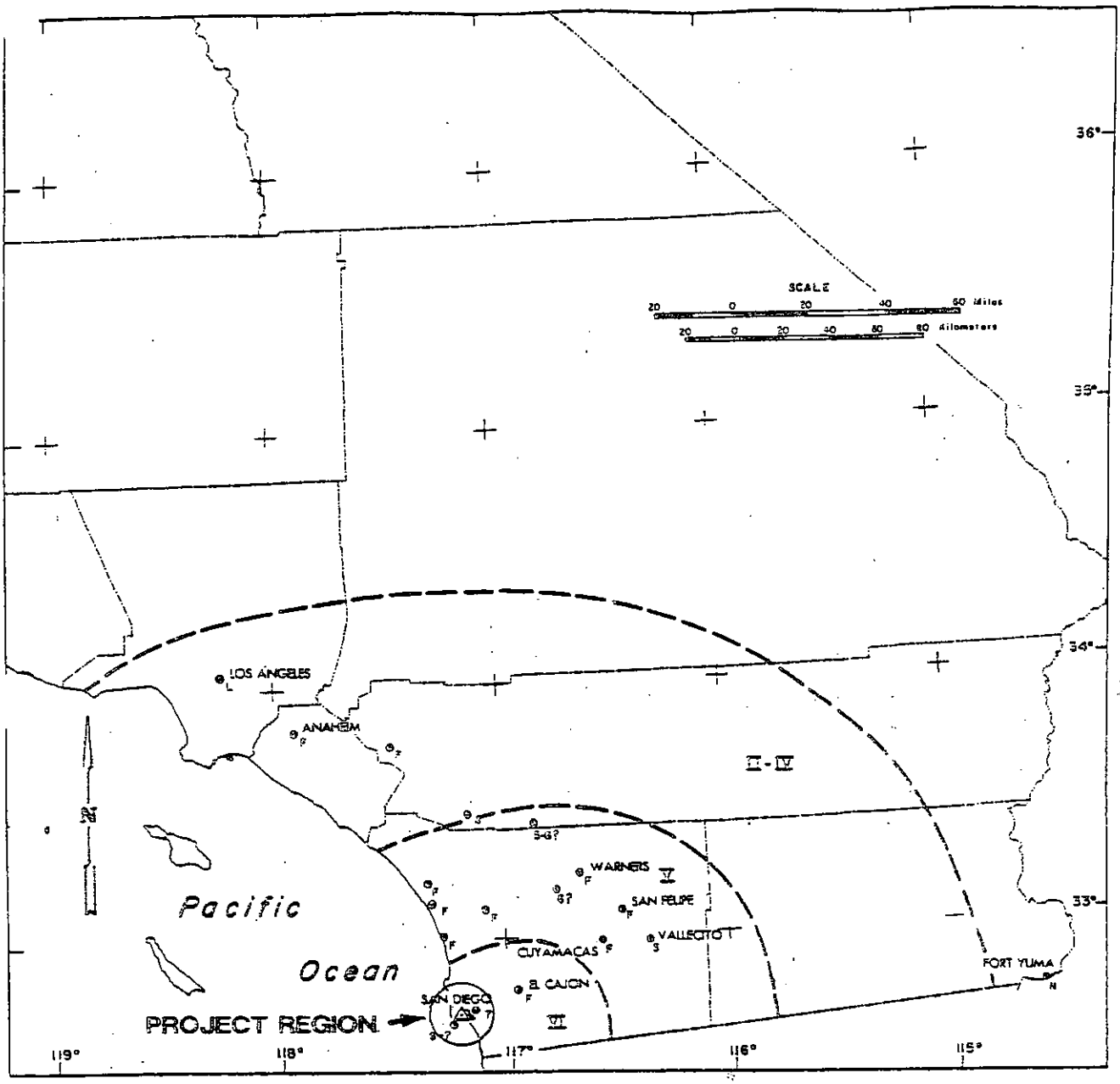
(Modified after Brune and Simons, 1979)

GENERALIZED REGIONAL FAULT MAP

NAVY BROADWAY COMPLEX

DRAWN BY: cb	CHECKED BY:	PROJECT NO. 9051207D-GE01	DATE: 8-24-90	FIGURE NO: 2


The earthquake data are from California Division of Mines and Geology Pre-1900 and 1900-1974 files and California Institute of Technology 1975-June 1985 file. Base fault map compiled by CDMG and UCSD (1984)
SCALE: 1"= approximately 12 miles
1cm = 7.5 km
PROJECT REGION
MAGNITUDES
-117.75
31.50
REGIONAL FAULT AND EARTHQUAKE EPICENTER MAP
NAVY BROADWAY COMPLEX
DRAWN BY: dm
CHECKED BY: d/s
FIGURE NO: 3
DATE: 8-24-90
PROJECT NO: 9051207D-GE01
WOODWARD-CLYDE CONSULTANTS



- $\bullet_5$ Site reporting intensity 5 effects
- $\bullet_N$ Reported not felt
- V Zone of intensity 5 effects
- △ Estimated epicenter
- $\bullet_F$ Felt
- $\bullet_L$ Light
- $\bullet_H$ Heavy
- $\bullet_S$ Severe

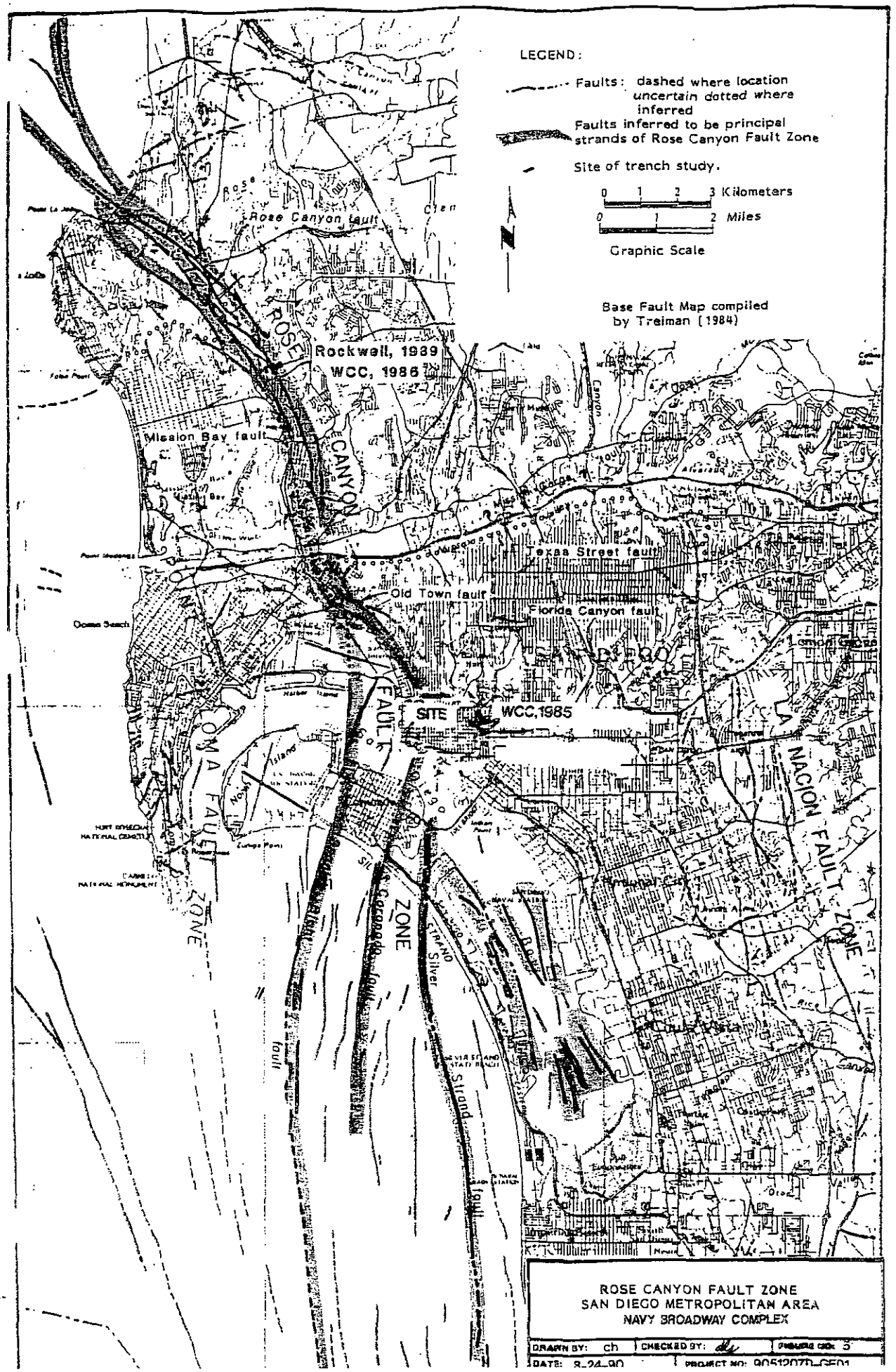
} Indeterminate intensity

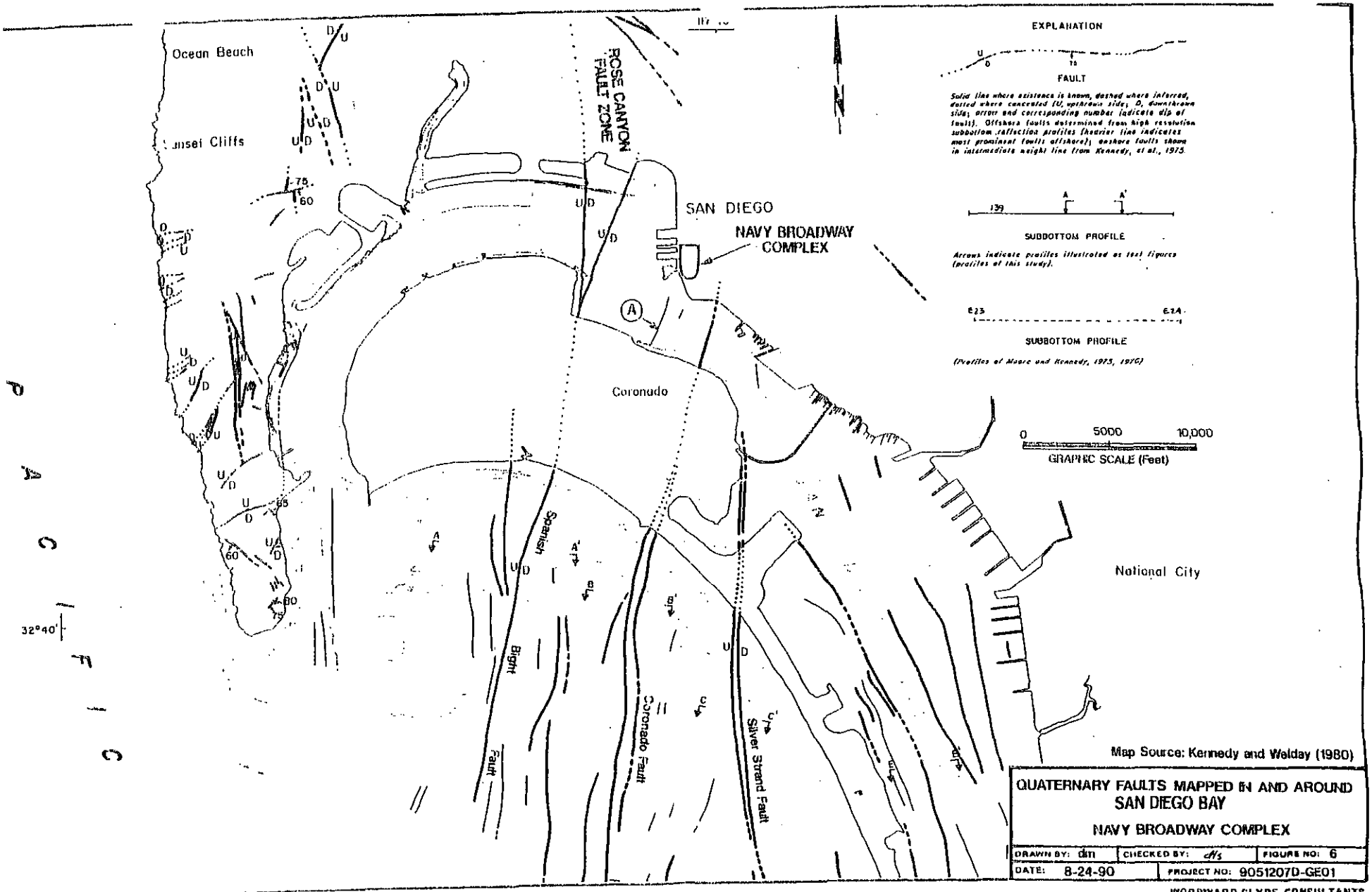
——— — — — Smoothed isoseismal line, dashed where data is lacking

...um: Toppozada and others, 1981

MODIFIED MERCALLI ISOSEISMAL MAP
1862 EARTHQUAKE
NAVY BROADWAY COMPLEX

DRAWN BY: cb	CHECKED BY:	PROJECT NO: 9051207D-GE01	DATE: 8-20-90	FIGURE NO: 4


LEGEND:
Faults: dashed where location uncertain dotted where inferred
Faults inferred to be principal strands of Rose Canyon Fault Zone
Site of trench study.
0 1 2 3 Kilometers
0 1 2 Miles
Graphic Scale
N
Base Fault Map compiled by Treiman (1984)
Rose Canyon fault
ROSE CANYON FAULT ZONE
Rockwell, 1989
WCC, 1986
Mission Bay fault
Texas Street fault
Old Town fault
Florida Canyon fault
Point Loma
SITE
WCC, 1985
NEWPORT-INGLEWOOD FAULT ZONE
Silver Strand fault
Coronado fault
LA NACION FAULT ZONE
ROSE CANYON FAULT ZONE
SAN DIEGO METROPOLITAN AREA
NAVY BROADWAY COMPLEX
DRAWN BY: ch
CHECKED BY:
FIGURE NO: 3
DATE: 8_24_90
PROJECT NO: 9051207D_GE01



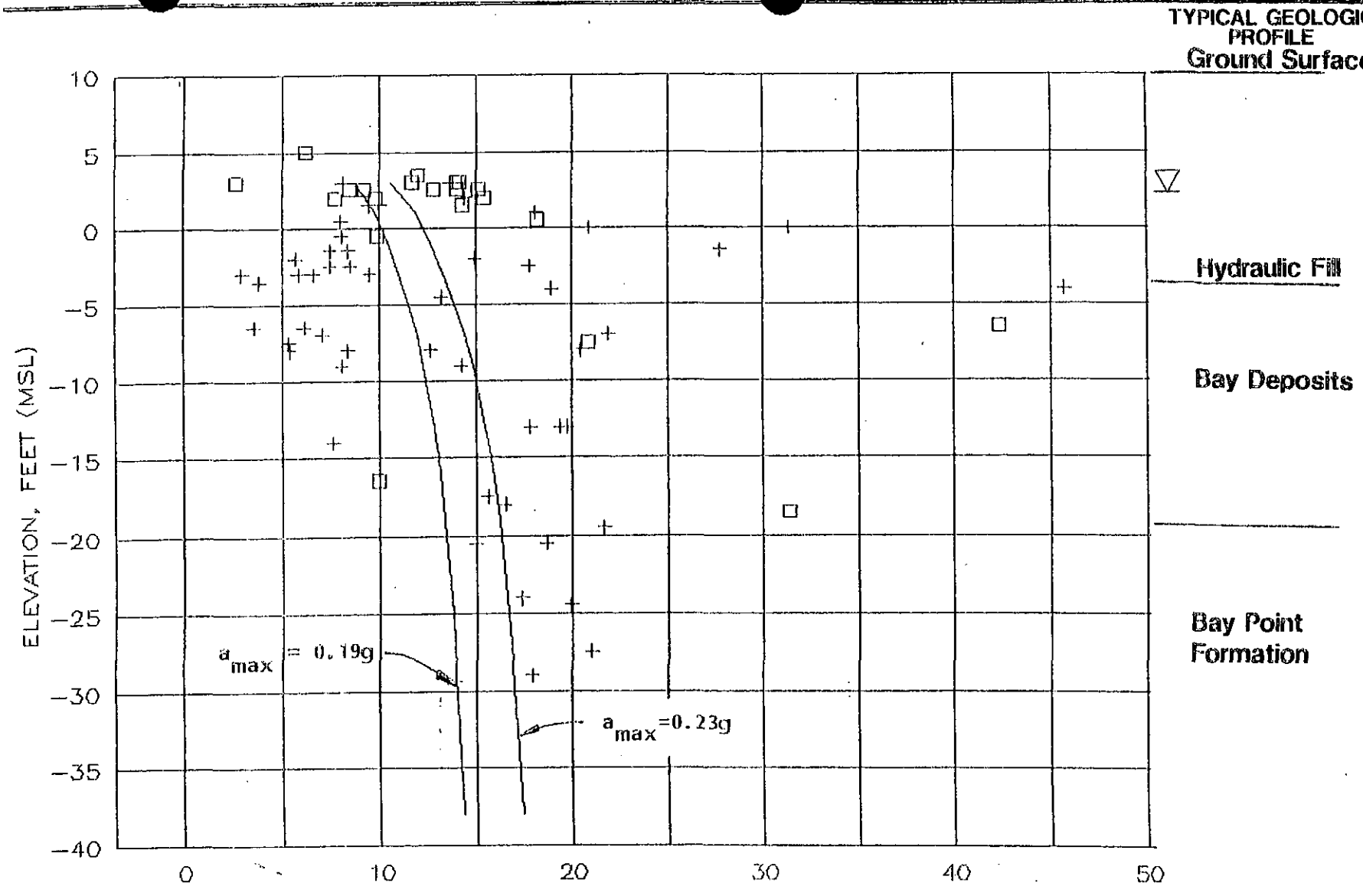
Map Source: Kennedy and Welday (1980)

QUATERNARY FAULTS MAPPED IN AND AROUND SAN DIEGO BAY

NAVY BROADWAY COMPLEX

DRAWN BY: dm	CHECKED BY: MS	FIGURE NO: 6
DATE: 8-24-90	PROJECT NO: 9051207D-GE01	

WOODWARD-CLYDE CONSULTANTS



LEGEND:

SOIL TYPES

□ SP, SP–SM

\+ SM, SW, ML, SM–ML

(Data from geotechnical investigation by WCC, 1988)

SUMMARY OF EVALUATION OF LIQUEFACTION POTENTIAL
NAVY BROADWAY COMPLEX

DRAWN BY: cb	CHECKED BY:	PROJECT NO: 9051207D-GE01	DATE: 8-17-90	FIGURE NO: 7

WOODWARD-CLYDE CONSULTANTS

SECTION 5

ADDITIONAL RECIPIENTS OF THE DRAFT AND FINAL ENVIRONMENTAL IMPACT STATEMENTS

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Mr. Craig Adams
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SECTION 6

ADDITIONAL REFERENCES

Section 4 of the appendix provides references used to prepare the additional geologic, seismic, and geotechnical studies for the project. In addition to those references, the following references were used in preparation of this appendix:

San Diego, City of. 1990. Interim Centre City San Diego Development and Design Ordinance.

San Diego, City of. 1990. Preliminary Centre City San Diego Community Plan.

City of San Diego

Draft Environmental Impact Report

Navy Broadway Complex Project

San Diego, California

April 1990

R-281915

DRAFT
ENVIRONMENTAL IMPACT REPORT
FOR THE
NAVY BROADWAY COMPLEX PROJECT

City of San Diego
City Administration Building
202 "C" Street
San Diego, California 92101

Contact: Maureen A. Stapleton
Deputy City Manager

April 1990

PREFACE TO THE DRAFT EIR

The legislation authorizing the Navy Broadway Complex project is the National Defense Authorization Act for fiscal year 1987, Public Law 99-661. The Navy and City of San Diego executed a Memorandum of Understanding (MOU) agreeing to enter into a development agreement, which will include a development plan and urban design guidelines for the project.

Because both the Navy and the City of San Diego must approve the development agreement, both an environmental impact statement (EIS) in accordance with the National Environmental Policy Act (NEPA) and an environmental impact report (EIR) in accordance with the California Environmental Quality Act (CEQA) are being prepared to address the potential environmental impacts of the proposed project.

This document is the EIR, for which the City of San Diego is the lead agency. In accordance with Section 21083.5 of CEQA, an EIS may be submitted in lieu of an EIR, to the extent that the EIS complies with CEQA and the State CEQA Guidelines. According to Section 21083.7 of CEQA, when a project requires preparation of both an EIS (in accordance with NEPA) and an EIR (in accordance with CEQA), "the lead agency shall, whenever possible, use the EIS as such EIR as provided in Section 21083.5."

The EIS was prepared to fully comply with the provisions of both NEPA and CEQA, and contains all discussions required by each act. As provided by Section 15150 of the State CEQA Guidelines, an EIR "may incorporate by reference all or portions of another document which is a matter of public record or is generally available to the public." This EIR incorporates by reference the EIS for the Navy Broadway Complex project. The EIS fully complies with CEQA and the State CEQA Guidelines, so the EIS shall also serve as the EIR for this project. The EIS is being circulated concurrently with and to the same agencies and members of the public as the EIR. Therefore, a summary of the contents of the EIS is not necessary within this EIR. The address to submit comments and request additional information is provided below.

CONTACT FOR INFORMATION AND SEND COMMENTS TO:

Officer in Charge
Western Division Naval Facilities Engineering Command Detachment
Broadway Complex
555 West Beech Street, Suite 101
San Diego, California 92101-2937
(619) 532-3291

COMMENTS ON THE DRAFT EIR

Written comments must be received at the above address by: 04 JUN 1990

CONCLUSIONS TO EIR:

An Environmental Impact Statement (EIS) was prepared to address the environmental impacts of each of the proposed alternatives. This EIR incorporates the EIS by reference. The EIS addressed land use and applicable plans, transportation and circulation, aesthetics and viewshed, public services and utilities, socioeconomics, the physical environment, biological resources, air quality, noise, cultural resources, public health and safety, and energy and conservation.

The preferred alternative, Alternative A, would include a 1.9-acre open space area, a museum, and specific design guidelines consistent with existing plans. Beneficial impacts to land use, viewsheds, recreational facilities, and socioeconomics would result from this alternative.

The proposed alternatives would include transportation demand management measures that would reduce the potential air quality impacts of the project. According to the California Air Resources Board, incorporation of these measures would demonstrate consistency with the State Implementation Plan.

The Regional Air Quality Strategy establishes a goal of maintaining a Level of Service (LOS) C or better to reduce idling of times and vehicular emissions. Cumulative development in the project vicinity would create congestion (Level of Service D or below) at six intersections. The proposed project would contribute a substantial increment to this congestion at one to two of these intersections. City of San Diego standards provide that this incremental contribution to the region's non-attainment of ozone and carbon monoxide standards is a cumulatively significant unmitigated impact.

RECOMMENDED MITIGATION OR ALTERNATIVES FOR SIGNIFICANT UNMITIGATED IMPACTS:

The No Project alternative, which would retain the site in its current condition, would eliminate impacts to air quality and traffic circulation. Other alternatives considered in the EIS would have similar impacts to the proposed project. These alternatives would have a cumulatively significant air quality impact.

MITIGATION MEASURES INCORPORATED INTO THE PROJECT:

In order to mitigate adverse circulation impacts, intersection improvements would be made in phases timed to construction on the various blocks of the project site. The improvements include the addition of turn lanes at the Broadway/Pacific Highway intersection and the signalization of Harbor Drive north of Broadway and the Pacific Highway/Harbor Drive intersection.

Notice of Preparation

NOTICE OF PREPARATION (NOP) FOR A
CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)
DRAFT ENVIRONMENTAL IMPACT REPORT

LEAD AGENCY:

The City of San Diego, California

PROPOSED ACTION:

The Department of the Navy, in coordination with the City of San Diego, is proposing to redevelop its land known as the Navy Broadway Complex. The project site is located on approximately sixteen acres in downtown San Diego adjacent to the San Diego Bay waterfront and consists of eight city blocks that are bounded by Harbor Drive on the west, Market Street on the south, Pacific Highway on the east, and Broadway on the north (see Exhibits 1 and 2). The site is currently improved with a series of sixteen miscellaneous office and warehouse buildings containing in excess of one million square feet of gross floor area. The buildings were constructed between 1922 and 1945.

The Navy is proposing to consolidate in modern facilities the general regional administrative activities of the naval shore establishment in the San Diego area. These facilities are to be central to the San Diego naval commands, the population of the San Diego area and regional transportation systems. The Navy's objective is to redevelop this site through a public/private partnership designed to meet the Navy's regional administrative office space needs in a manner that will compliment San Diego's bayfront redevelopment. Approximately one million square feet of Navy office space is contemplated to be developed on the site by a private developer(s) for use by the Navy. Additional mixed-use (e.g. office, hotel, specialty retail) private development on the site will be allowed which is intended to offset the cost of the Navy-occupied space thereby reducing cost to the taxpayer.

A conceptual master plan and urban design guidelines will be prepared in coordination with the San Diego community through the City of San Diego to guide the development of the site. It is proposed that the Navy and the City will enter into a development agreement as the mechanism for approval and control of the site's development.

ENVIRONMENTAL CONSIDERATIONS

Prior to entering into such a development agreement, the City of San Diego is required to prepare an Environmental Impact Report (EIR) in compliance with the CEQA. The Navy will also be preparing an Environmental Impact Statement (EIS) for its proposed actions in compliance with the National Environmental Policy Act (NEPA). Because of issues common to both and to facilitate administration, joint hearings and meetings will be conducted for the NEPA and CEQA processes.

The EIR will be a full scope document that will cover all matters of potential environmental concern (an initial study is not attached to this NOP). The environmental analysis will address, but not be limited to, traffic and circulation, land use and planning, waterfront access, aesthetics and view

corridors, public services and utilities, socioeconomics, geology and seismicity, extractable resources, hydrology and drainage, biology, endangered species and critical habitat, air quality, noise, cultural resources, coastal zone management, public health and safety, and energy conservation.

Alternatives that are being considered include variations of private and Navy development on the Broadway Complex site, Navy-only development of the site, development of an alternative site in downtown San Diego, and no action.

COMMENTS ON THE SCOPE OF THE EIR:

The City of San Diego is requesting any comments you may have regarding the scope of the environmental analysis in the EIR. Because of issues common to both the Navy's environmental review and this process and to facilitate administration, the Navy is designated to collect and disseminate questions and comments regarding this process to the City of San Diego for response. Please submit comments, in writing, to the address provided below:

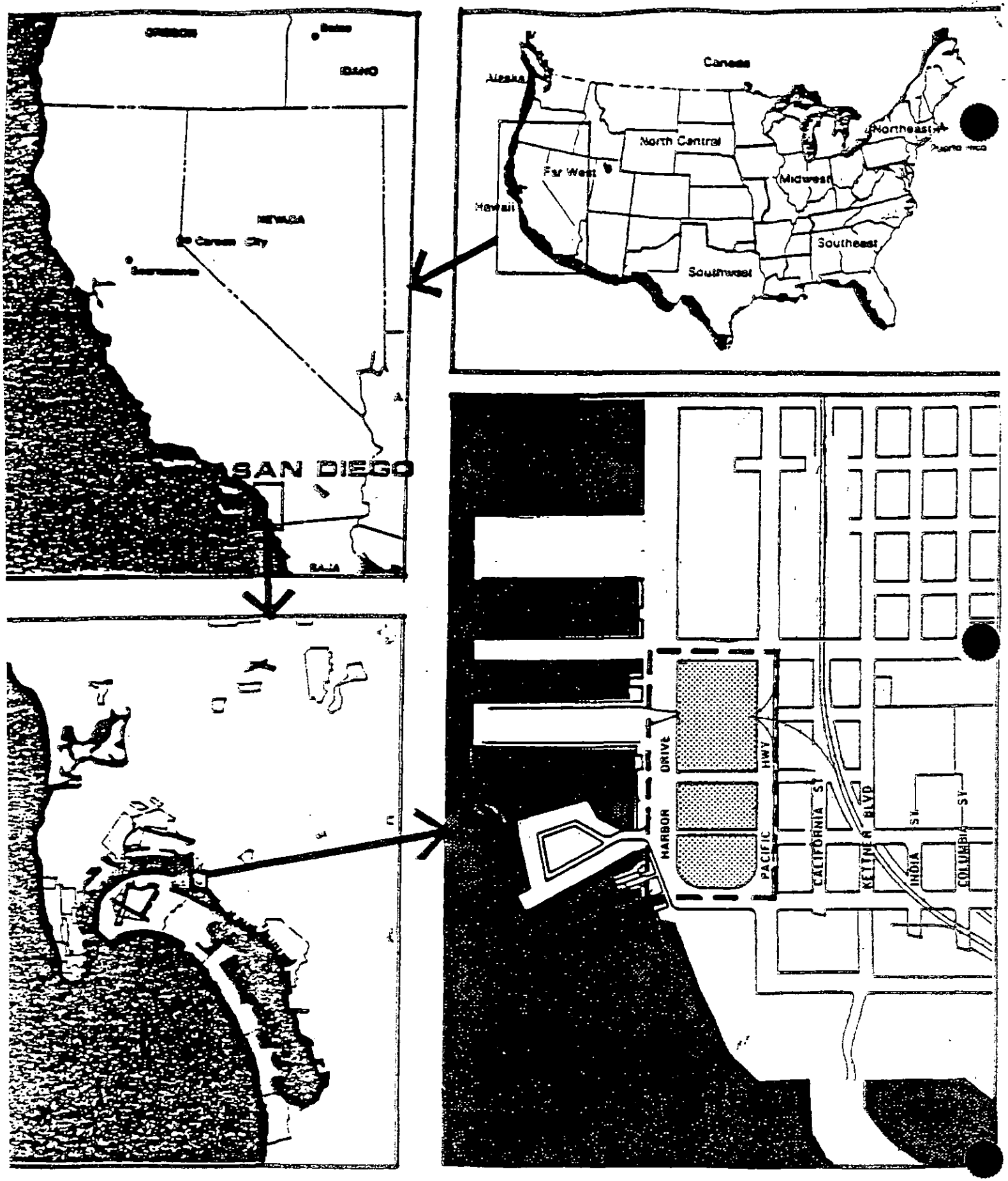
Officer in Charge
Western Division
Naval Facilities Engineering Command Detachment
Broadway Complex
1220 Pacific Highway
San Diego, California 92132-5190
Attn: Captain Wayne Goodermote, CEC, USN

Questions should be addressed to the same address or telephone inquiries can be directed to Anthony Principi, General Counsel, Broadway Complex Project Office, at (619) 532-3291. Written comments must be submitted by December 16, 1988.

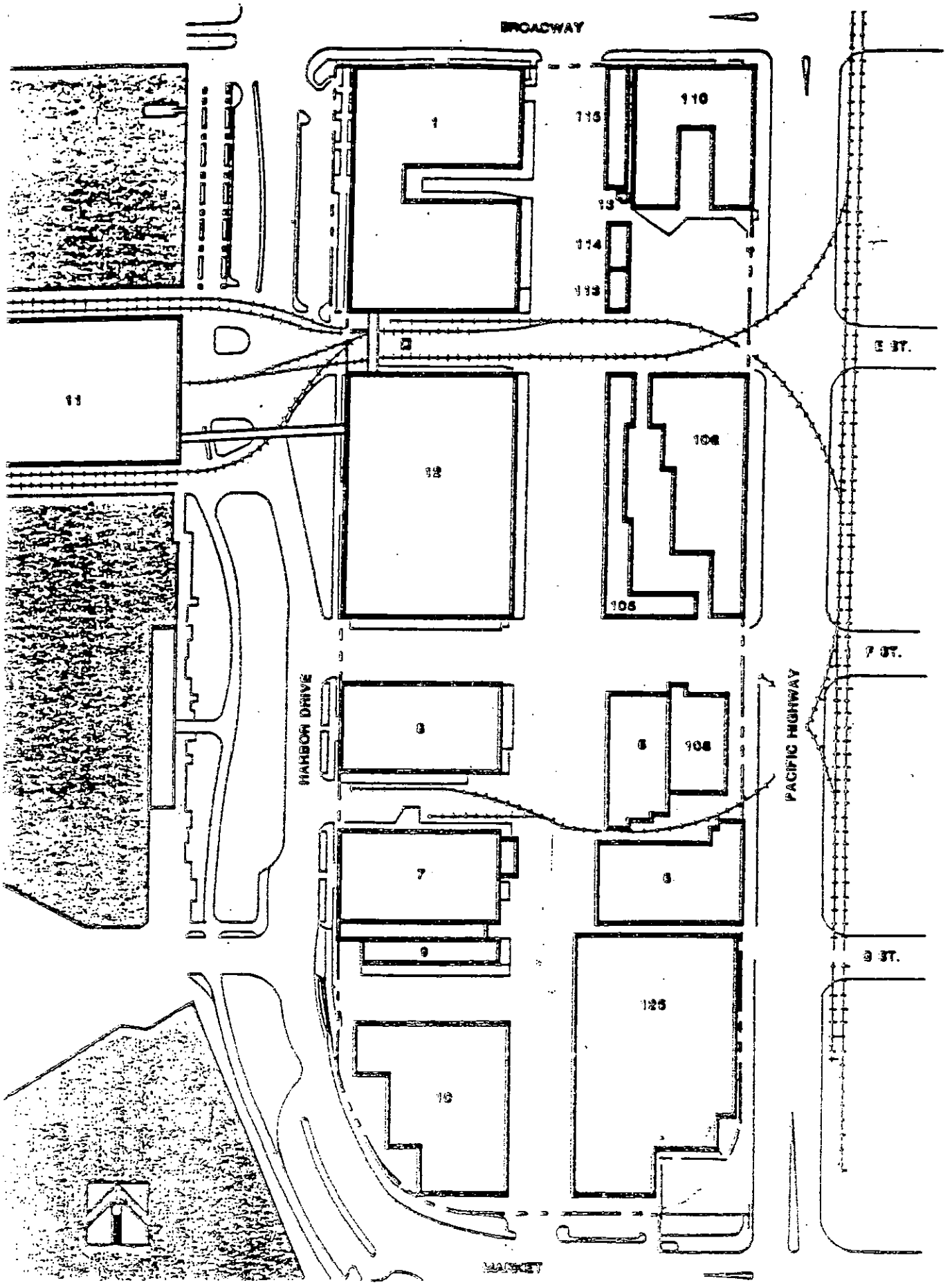
In addition, joint public scoping meetings will be held to receive written and oral testimony from governmental agencies and the public about issues that should be addressed in the EIS/EIR. A morning session has been scheduled for agency representatives and an evening session for members of the public. The evening session will adjourn at 11:30 P.M. or earlier, if all comments have been received. The scoping meetings will be conducted by Captain Wayne Goodermote, the Officer in Charge of the Broadway Complex Project Office. The meetings will be informal. Individual speakers will be requested to limit their statements to five minutes. Written statements will be accepted at the meetings or they may be mailed to the address given above.

Both meetings will be open to the general public at the times and locations indicated below:

Morning Session	Evening Session
November 14, 1988 - 9:00 a.m.	November 14, 1988 - 7:00 p.m.
City Administration Building 12the Floor 202 'C' Street San Diego, CA 92101	City Administration Building 12the Floor 202 'C' Street San Diego, CA 92101



ROADWAY COMPLEX,
AN DIEGO, CALIFORNIA



ROADWAY COMPLEX,

AN DIEGO, CALIFORNIA

Officer in Charge
Western Division
Naval Facilities Engineering Command
Detachment, Broadway Complex

Draft Environmental Impact Statement

Navy Broadway Complex Project

San Diego, California

April 1990

DRAFT
ENVIRONMENTAL IMPACT STATEMENT
FOR THE
NAVY BROADWAY COMPLEX PROJECT

Western Division Naval Facilities Engineering Command Detachment
Broadway Complex
555 West Beech Street, Suite 101
San Diego, California 92101-2937

April 1990

DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS)

U.S. DEPARTMENT OF DEFENSE
DEPARTMENT OF THE NAVY

Pursuant to Section 102 of the National Environmental Policy Act of 1969, as amended (42 USC 4321 et seq.), OPNAV Instruction 5090.1, and 40 CFR 1500-1508, November 29, 1978.

PROPOSED ACTION

Redevelopment of Navy Land Known as the Navy Broadway Complex, San Diego, California

LEAD AGENCY

Department of the Navy

ABSTRACT

The Navy has identified a need to consolidate the regional administrative activities of the San Diego naval shore establishment in modern facilities at a site central to other Navy facilities in San Diego. The Navy Broadway Complex is centrally located on approximately 16 acres in downtown San Diego, adjacent to the San Diego waterfront. The site is proposed for redevelopment through a public/private partnership to meet the Navy's regional administrative office space needs in a manner that will complement San Diego's bayfront, while retaining support activities for the continued operation of the adjacent Navy Pier. Approximately 1 million square feet of office space is needed for use by the Navy. Additional mixed-use private development (e.g., office, hotel, retail) on the site will be included to offset the cost of the Navy-occupied space, thereby reducing the cost to the taxpayer. It is proposed that the Navy and the city will enter into a development agreement as the mechanism for approval and control of the site's development.

The EIS addresses the issues of traffic and circulation, land use and planning, aesthetics and view corridors, public services and utilities, socioeconomics, geology and seismicity, hydrology and drainage, biology, air quality, noise, cultural resources, coastal policy consistency, public health and safety, and energy conservation. Alternatives assessed in the EIS include variations of combined private and Navy development on the Navy Broadway Complex, Navy-only construction on the site, development of the site in conjunction with an alternative location in downtown San Diego, and no action.

CONTACT FOR INFORMATION AND SEND COMMENTS TO:

Officer in Charge
Western Division Naval Facilities Engineering Command Detachment
Broadway Complex
555 West Beech Street, Suite 101
San Diego, California 92101-2937
(619) 532-3291

COMMENTS ON THE DRAFT EIS

Written comments must be received at the above address by: 04 JUN 1990

PREFACE TO THE DRAFT EIS

The legislation authorizing this project is the National Defense Authorization Act for fiscal year 1987, Public Law 99-661. The Navy and City of San Diego executed a Memorandum of Understanding (MOU) agreeing to enter into a development agreement, which will include a development plan and urban design guidelines for the project.

Because both the Navy and the City of San Diego must approve the development agreement, both an environmental impact statement (EIS) in accordance with the National Environmental Policy Act (NEPA) and an environmental impact report (EIR) in accordance with the California Environmental Quality Act (CEQA) are being prepared to address the potential environmental impacts of the proposed project.

This document is the EIS, for which the Department of the Navy is the lead agency. The EIR, prepared in accordance with CEQA, is being circulated to the public by the City of San Diego simultaneously with this EIS. The EIR incorporates by reference the EIS. The public is invited to review and submit comments on either or both of these documents.

DRAFT ENVIRONMENTAL IMPACT STATEMENT
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LIST OF FIGURES (continued)

LIST OF FIGURES (continued)

LIST OF FIGURES (continued)

SECTION 1

SUMMARY OF PROPOSED ACTION, ENVIRONMENTAL IMPACTS, AND MITIGATION MEASURES

1.1 INTRODUCTION

The Navy Broadway Complex is an existing facility in downtown San Diego, California, which is the location of the Naval Supply Center, San Diego; the Commander, Naval Base, San Diego; and several other activities. Constructed primarily between 1921 and 1944, the complex consists of approximately 400,000 square feet (SF) of administrative office and 600,000 SF of warehouse uses on a 15.6-acre site near the San Diego Bay waterfront. It is bounded by Broadway on the north, Harbor Drive on the west and south[a], and Pacific Highway on the east, and is centrally located amidst the 17 other Navy installations in the metropolitan San Diego area. The location of the Navy Broadway Complex and other Navy installations is depicted in Figure 1-1.

In 1982, the Navy reviewed a plan to provide an efficient, upgraded, and centralized administrative facility for numerous Navy installations in the San Diego area. The Navy Broadway Complex was selected as this facility because of its central location, appropriate size, land constraints on area Navy operational bases, and adjacency to the Navy Pier which will continue to operate as a key military asset. The Chief of Naval Operations (CNO) approved this centralized administrative office complex concept (called co-location) at the Navy Broadway Complex in 1983. Subsequently, it was determined that approximately 1 million SF of Navy office space would be needed to accommodate the regional administrative office program, and redevelopment of the site would be necessary.

Construction of Navy offices, or other military uses, is typically funded through Military Construction (MILCON) appropriations, which are taxpayer funded and Congressionally approved. However, the Navy began considering a public-private development venture whereby a private developer would finance the construction of the new central naval facility in exchange for a ground lease for a portion of the site. In this way, the Navy offices could be provided at a reduced cost to taxpayers. An advisory group--the Broadway Complex Coordinating Group (BCCG)--was formed in August 1985 under the auspices of the San Diego Association of Governments (SANDAG) to serve as community advisors for the planning of the Navy Broadway Complex and to initiate consultation with local government authorities.

A co-location program was introduced, which provided for the Federal Government to retain title to the property and to lease portions of the property for private revenue-generating uses that could offset the cost of Navy facilities. A key objective of the co-location program was to encourage private land uses that are compatible with Navy administrative uses and surrounding land uses. Federal legislation was passed in 1987 (P.L. 99-661) that authorized the pursuit of a public-private venture to implement the co-location concept on the site (see Appendix A). This legislation specified that detailed plans and terms of the development should be formulated by the Navy and the San Diego community through coordination with the BCCG.

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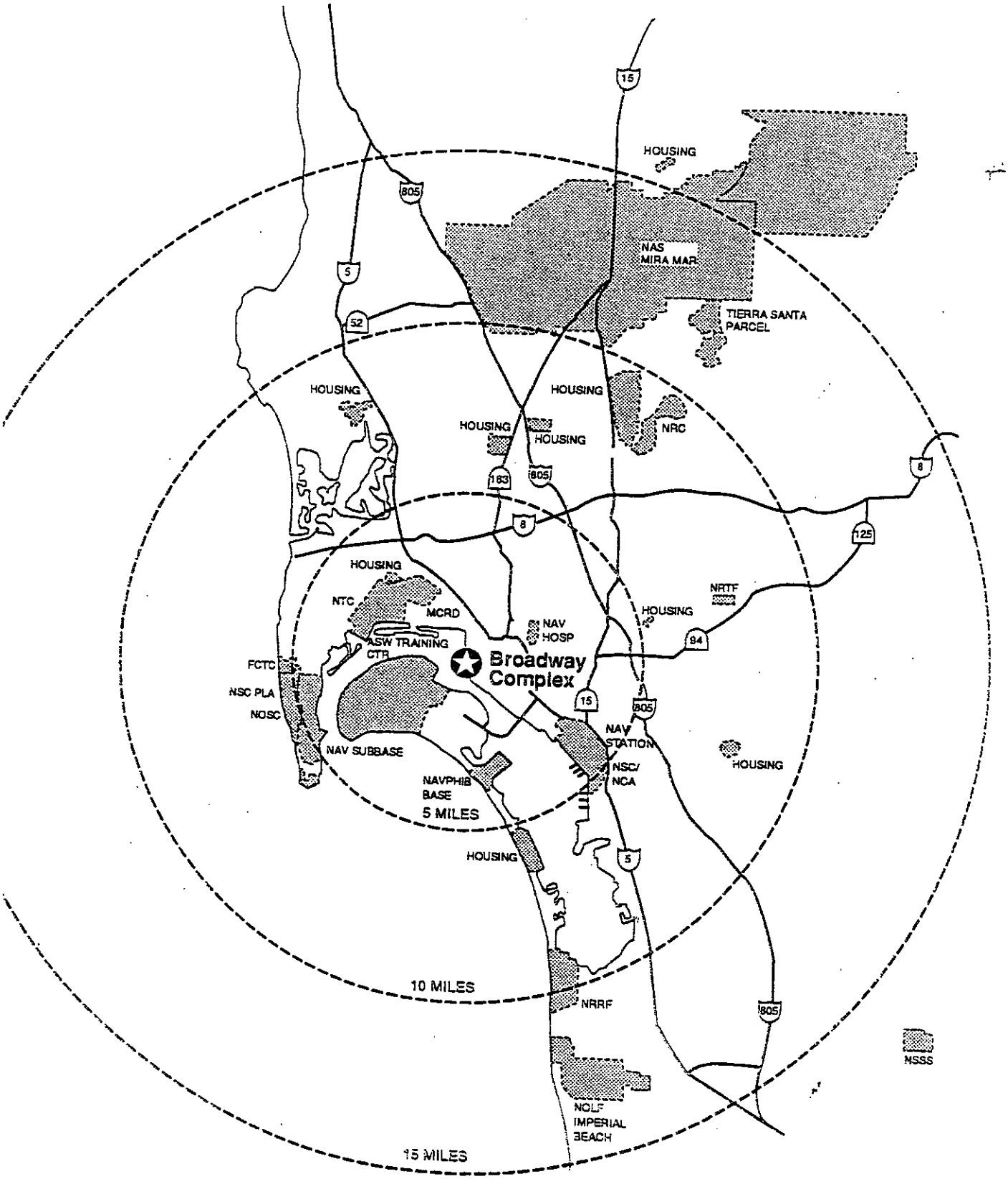
[a] Harbor Drive until recently was known as Market Street along the southern boundary of the site, and is occasionally referred to as such in the EIS.



Navy Facilities:
Diego Region
y Broadway Complex Project

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NORTH

The Navy and City of San Diego signed a Memorandum of Understanding (MOU) in June 1987 to help implement P.L. 99-661. The MOU specifies that the Navy and City will enter into an agreement for the future development of the Navy Broadway Complex site. According to the MOU, the development agreement will include a development plan, urban design guidelines, and phasing for the project (see Appendix B).

1.2 PROPOSED ACTION AND ALTERNATIVES

The Department of the Navy proposes to redevelop the Navy Broadway Complex with up to 1 million square feet of Navy offices and up to 2.5 million square feet of mixed commercial office, hotel, and retail uses. To implement the project, the Navy is proposing to enter into a long-term ground lease of property on the Navy Broadway Complex to a private party(ies). In consideration of the lease, the Navy would obtain its administrative offices without compensation, or at substantially below market value, thereby developing needed Navy facilities at a reduced cost to taxpayers. The ground lease would be with a private party, and would allow for the development and operation of a mix of private office, hotel, and/or retail uses on a portion of the Navy Broadway Complex, along with the Navy offices. The existing Navy Pier and rail lines serving the pier would be retained for use by the Navy.

The development agreement between the Navy and the City of San Diego would guide the redevelopment of the complex. Separate from this project, the Navy has already started a modernization plan to relocate existing warehousing functions on the Navy Broadway Complex to other, more modern storage facilities in the San Diego region.

1.2.1 PROCESS FOR ALTERNATIVES PLANNING

Proposed alternatives to the redevelopment of the Navy Broadway Complex have been formulated through an extensive planning process. Through the BCCG, as well as through general public responses to the potential redevelopment of the site, the Navy has prepared and refined alternative plans to provide a preferred development plan that meets the objectives of the community while also satisfying the needs of the Navy for 1 million SF of office space at a reduced cost to taxpayers.

The expressed community objectives for redevelopment of the Navy Broadway Complex include the following:

- Provision of a significant open space area at the foot of Broadway.
- Opening of access through the site to provide a link between the downtown core, residential areas, and the waterfront.
- Creation/protection of view corridors along Broadway, E Street, F Street, and G Street.
- Provision of public uses, such as a museum.

The Navy had to balance these community objectives with consideration of coastal development policies and financial objectives for the project. In addition, the Navy needed to consider a

transition of land uses from the high-intensity commercial office, hotel, and residential uses to the east and the waterfront to the west.

The Navy first examined a concept developed in 1986 as part of an overall study of Navy options for the site. The concept included nearly 5 million SF of development on the site, which would have been accommodated with several high-rise structures, approximately 400 feet high, throughout the site. The Navy rejected this alternative because it seemed too dense for the waterfront.

Several other alternatives were considered during the planning process, each with up to 1 million SF of Navy offices. A relatively large amount of specialty retail was considered (over 100,000 SF) within a mixed-use development that also included offices and hotels with approximately 3 million SF of overall development. This alternative was rejected because of insufficient market demand for this amount of specialty retail, given expansion of the nearby Seaport Village specialty shopping center and proximity to a regional shopping mall (Horton Plaza).

Residential use (860 dwelling units) was considered within an approximately 3 million SF development that also included Navy office and hotel uses. This alternative was rejected because it did not provide sufficient revenues on a per-square-foot basis to offset the cost of Navy offices and would result in a more intense development to provide a financial return equal to other alternatives.

1.2.2 SUMMARY OF ALTERNATIVES

The potential alternatives were narrowed to seven, five of which are consistent with the objectives of providing up to approximately 1 million SF of Navy offices at a reduced cost to the taxpayer. Table 1.2-1 presents a statistical summary of each alternative. The Navy's preferred alternative (Alternative A) is described here in more detail than the other six. A detailed description of each alternative is presented in Section 3, beginning on page 3-1.

Alternative A

Alternative A (Figure 1-2), the Navy's preferred alternative, would be developed with 3,250,000 SF of mixed uses (including 300,000 SF of above-grade parking). This alternative is intended to provide a balance between developed and open space uses on the site, while meeting the Navy's office space objective. This alternative would be designed to maximize community objectives and provide for a number of beneficial uses. Such uses are described below.

- A 1.9-acre public open space area would be provided for community use at the foot of Broadway, adjacent to the waterfront (see Figure 1-3). This area could potentially be combined with adjacent properties to create an even larger open space that could be considered a new waterfront gateway to downtown San Diego (Figure 1-4).

- Space for a museum up to 55,000 SF in size oriented to the maritime history and influence on San Diego would be provided (see Figure 1-3).

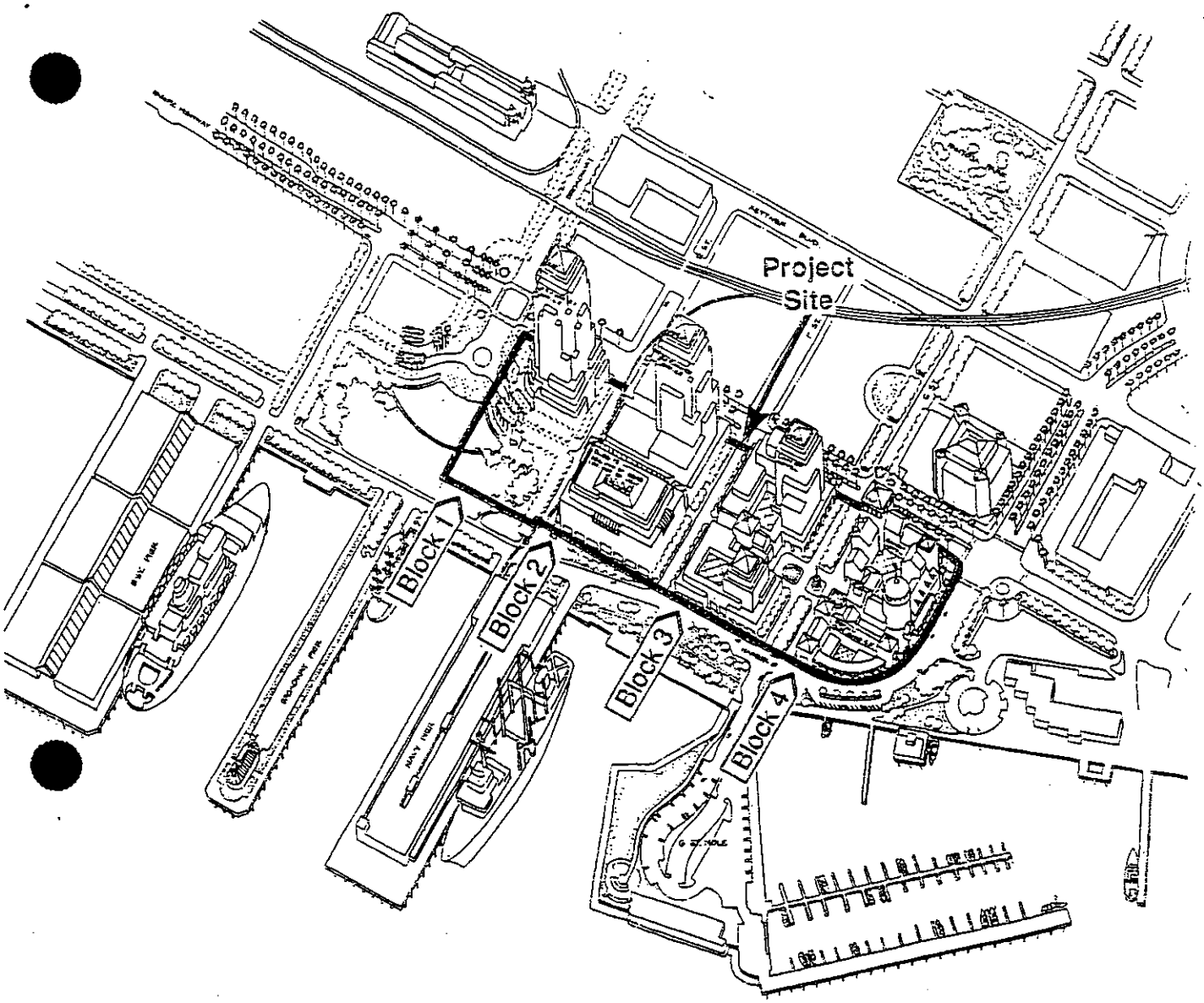
TABLE [illegible]-1

LAND USE SUMMARY OF I[illegible]OSED ALTERNATIVES

Land Uses
(in Square Feet)

Alternatives	Navy		Private			Public Uses[c]		Parking		Total	
	Office[a]	Industrial	Office	Hotel	Retail[b]	Open Space	Museum	Above-Ground Floor Area[d]	Total Spaces[e]	Square Feet[f]	FAR[g]
A	1,000,000	0	650,000	1,220,000	25,000	85,000 (1.9 acres)[h]	55,000	300,000 (800 spaces)	3,105	3,250,000	5.45
B	1,000,000	0	900,000	1,220,000	25,000	21,000 (0.5 acre)[h]	55,000	300,000 (800 spaces)	3,355	3,500,000	5.88
C	1,000,000	0	0	1,220,000	25,000	0	0	225,000 (600 spaces)	2,455	2,470,000	4.15
D	20,000/ 980,000 (1,000,000)[i]	0	1,430,000	1,440,000	25,000	21,000 (0.5 acre)[h]	0	0	2,905/1,205 (4,110)[i]	2,915,000/ 980,000 (3,995,000)[i]	5.40[j]
E	1,000,000	0	0	0	0	0	0	0	1,230	1,000,000	1.68
F	1,000,000	0	650,000	1,220,000	25,000	152,000 (3.5 acres)[h]	55,000	365,000 (1,040 spaces)	3,105	3,315,000	5.70
G	405,753	601,276	0	0	0	0	0	0	425	1,007,029	1.69

a The requested Navy office square footage would be 1,000,000 SF. If not filled by the Navy, the remaining square footage could transfer to commercial office uses.
b Retail square footage excludes ground-level support retail that would be integrated into private office and hotel uses.
c Square footage and acreage are approximate.
d Includes only the square footage in above-grade parking structures.
e Includes both above- and below-grade parking spaces.
f Total square footage devoted to above-grade, enclosed structures. The square footage of open space areas is not included.
g FAR (floor-to-area ratio) is the ratio of gross square footage to the land held in fee by the Navy (13.67 acres). Above-grade structured parking is included. Square footage devoted to surface and below-grade parking and open space is not included in the FAR.
h Includes only the open space located on the Navy Broadway Complex site.
i Figures shown are: Navy Broadway Complex/Alternative Site and the total, which is shown in parentheses.
j FAR is for Navy Broadway Complex only.



PROGRAM

Block Number	Land Use	Gross Square Footage	Parking	Max. Height (Feet)
1	Commercial Office Open Space (1.9 acres)	650,000	650 below-grade	400
2	Navy Office: - Bldg. 12 - New Museum	331,000 669,000 85,000	420 below-grade 800 above-grade	350
	Above-Grade Parking	300,000		
3	Hotel	745,000	750 below-grade	250
4	Hotel Retail	475,000 25,000	375 100 below-grade	150
Total	—	3,250,000	3,105	—

Site Density = 5.45 Gross FAR

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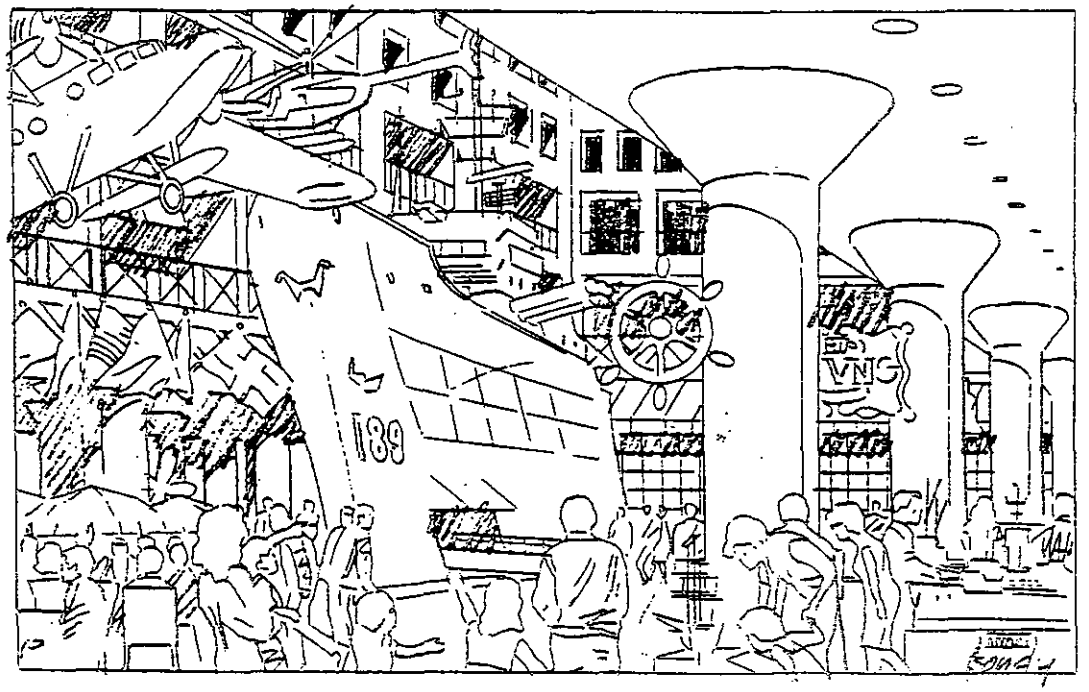
NORTH

Alternative A Illustrative
Navy Broadway Complex Project

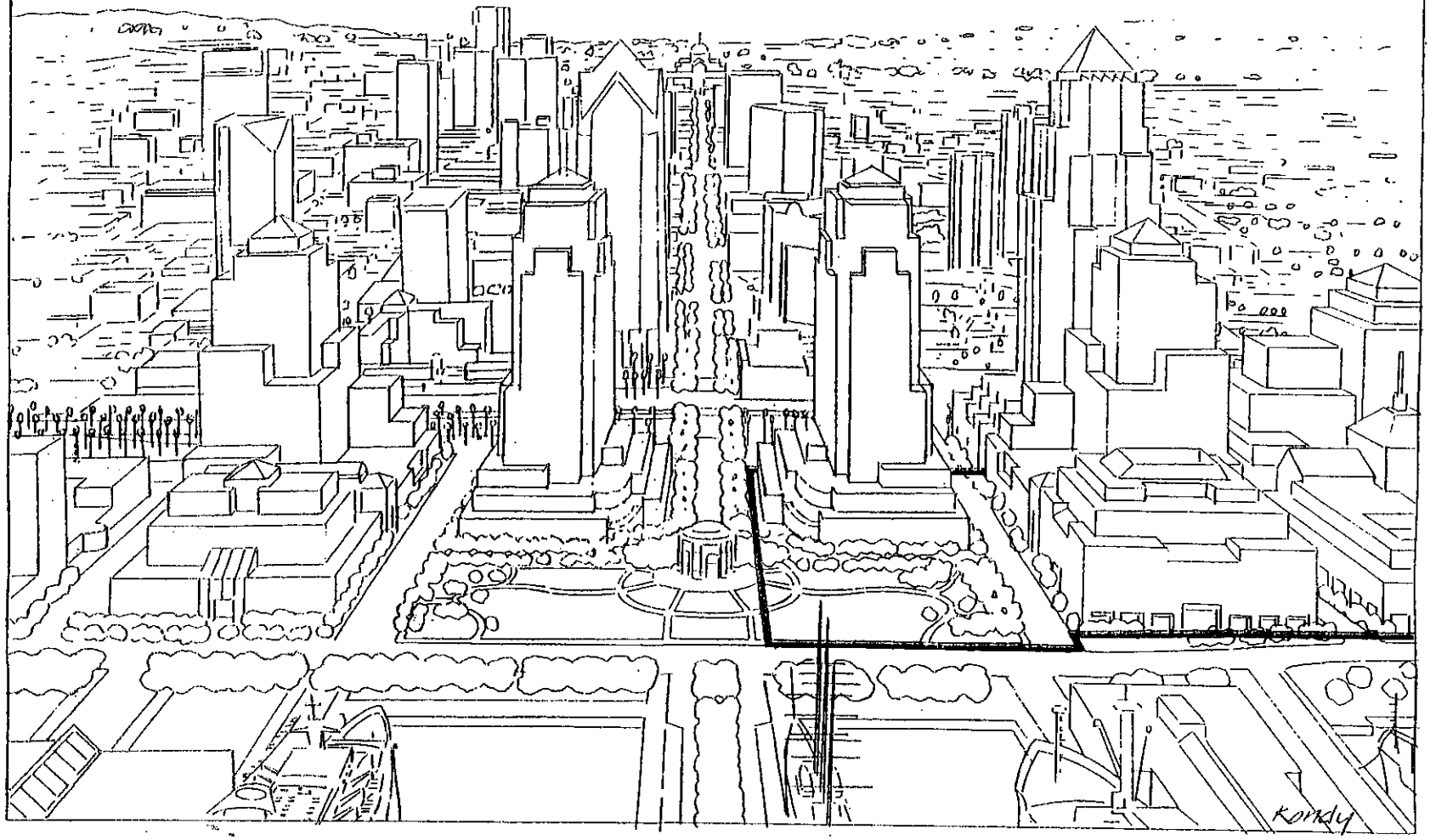
Figure 1-2

Open Space at the Foot of Broadway



Waterfront Museum in Building 12

Perspective Sketches, Open Space and Museum
Alternative A
Navy Broadway Complex Project



Perspective Sketches
Broadway Terminus,
Alternative A
Navy Broadway Complex Project

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Figure 1-4

- Pedestrian corridors would be developed along E, F, and G Streets and would be upgraded on all streets surrounding the site so that access between the downtown core and the waterfront would be improved (see Figure 1-5). Access along the waterfront would also be improved by providing a midblock pedestrian passage parallel to the bayfront.

- View corridors along E, F, and G streets would be opened to the waterfront.

- Ground-level retail would be provided to encourage pedestrian use of the area.

The anticipated mix of uses for Alternative A is shown below. Depending on market conditions, the square footage may be modified, with the overall square footage not exceeding 3,250,00 SF.

- Navy office: 1 million SF
- Museum: 55,000 SF
- Commercial office: 650,000 SF
- Hotel: 1,220,000 SF (1,500 rooms)
- Retail: 25,000 SF
- Above-grade parking: 300,000 SF (800 spaces)
- Total parking spaces: 3,105

This alternative would be designed so that the tallest buildings are on the northeastern area of the site closest to downtown San Diego, while shorter structures step down to the waterfront to midwest and south. The tallest building would be up to 400 feet in height, with the other buildings ranging from 100 to 350 feet. Buildings would have a slender design to provide open view corridors.

This alternative meets the basic project objectives of providing one million SF of Navy office space at a reduced cost to taxpayers. Because a substantial portion of the site is devoted to public open space instead of buildings, off-setting local government financial contributions would be needed for certain public infrastructure improvements (e.g., roadway and streetscape improvements).

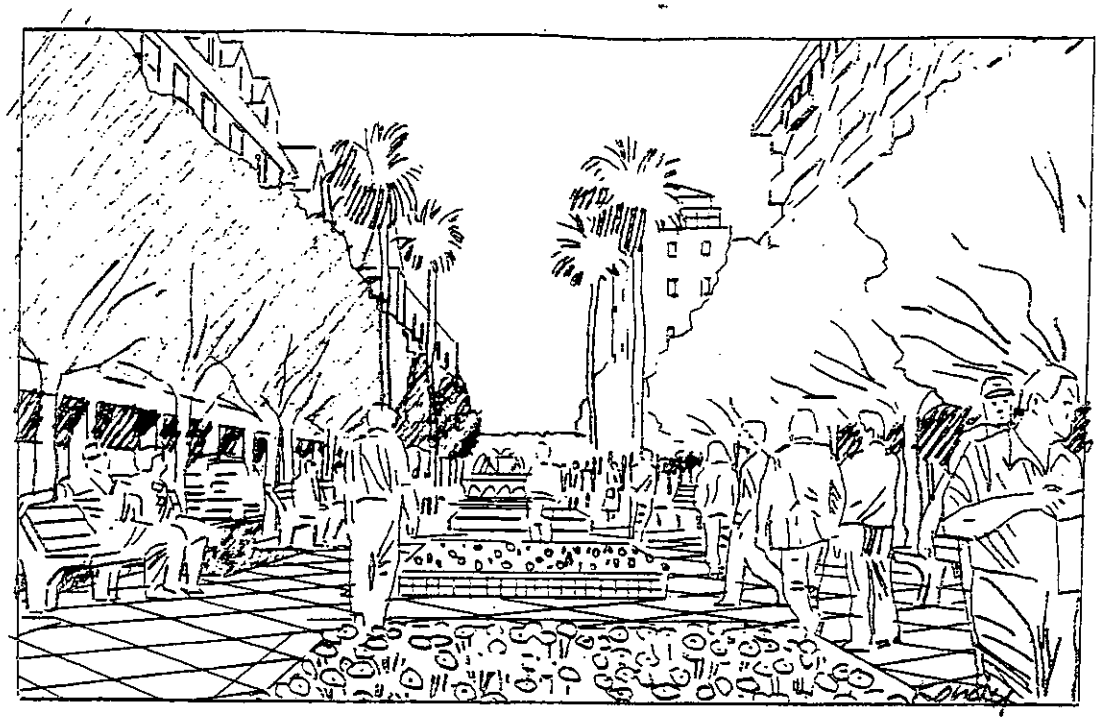
Alternative B

Alternative B (Figure 1-6) would be developed with 3,500,000 SF of mixed uses (including 300,000 SF of above-grade parking). The intent of this alternative is to provide sufficient private development to meet the Navy's office objectives without financial contribution from local government for infrastructure improvements. Proposed uses are similar to Alternative A. However, 300,000 SF more commercial office and 1.4 acres less open space would be developed, as shown in Table 1.2-1 (page 1-5). The 0.5-acre open space in this alternative would be a public plaza at the corner of Broadway and Harbor Drive.

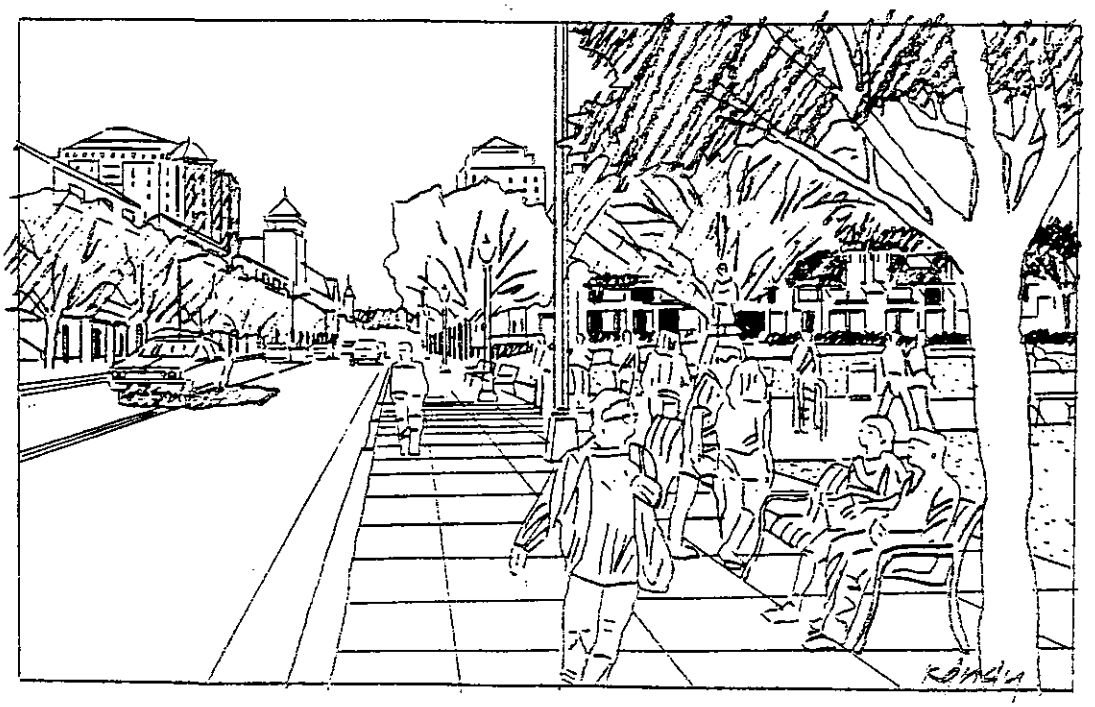
This alternative meets the basic project objectives.

Alternative C

Alternative C (Figure 1-6) would be developed with 2,470,000 SF of mixed uses (including 225,000 SF of above-grade parking). The intent of this alternative is to emphasize rehabilitation of the existing buildings as the means for achieving the Navy's office objectives. Existing Navy buildings would be rehabilitated on the northern half of the site for Navy uses only, with hotels



G Street "Promenade"



G Street, Looking Toward Site

Perspective Sketches, Pedestrian Amenities
Alternative A
Navy Broadway Complex Project

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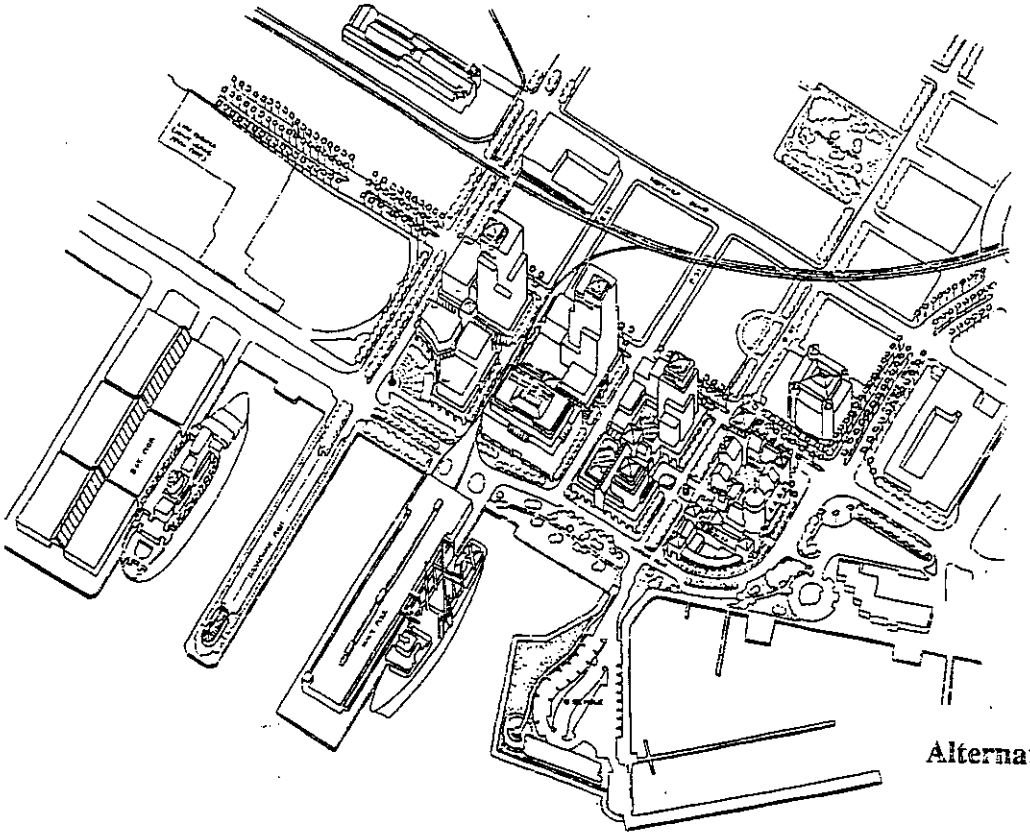
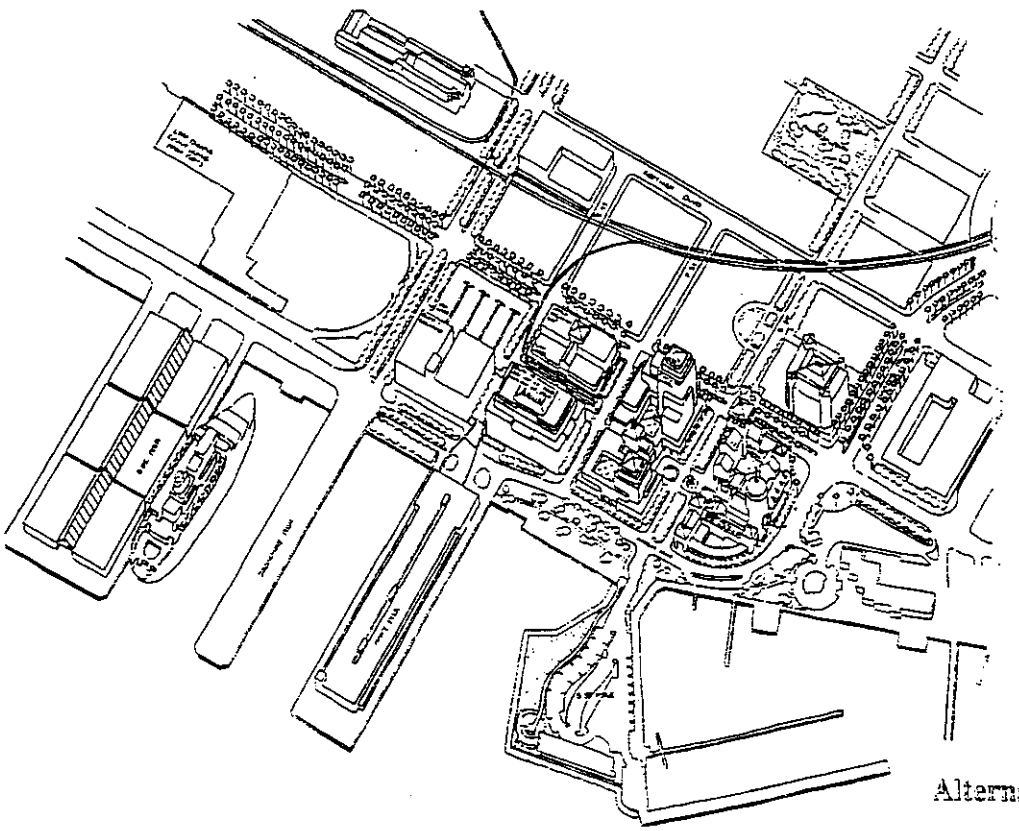
Figure 4-5



Alternative B



Alternative C

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Alternatives B and C Illustratives

Navy Broadway Complex Project

on the southern half. This alternative would require the least amount of private development to support Navy offices without any local financial assistance. Unlike Alternative A, no commercial office would be developed, and, due to space constraints and the configuration of existing buildings that would be rehabilitated, open space and a museum would not be provided. Proposed uses are listed in Table 1.2-1 (page 1-5).

This alternative meets the basic project objectives.

Alternative D

Alternative D is intended to evaluate how an alternative site for the Navy's office objectives could be developed. It would require private development on the Navy Broadway Complex site to generate sufficient revenue for acquisition and use of a second site. Alternative D would be developed with 2,915,000 SF of mixed uses, including approximately 20,000 SF of Navy offices, at the Navy Broadway Complex, and approximately 980,000 SF of Navy offices on a site in the eastern area of downtown San Diego (Figure 1-7). A minimal Navy presence (20,000 SF) would remain at the Navy Broadway Complex to support the Navy Pier. Proposed uses on the Navy Broadway Complex would be similar to Alternative B in intensity and layout--with 0.5 acre of open space--but additional commercial office and hotel uses would be developed in place of Navy offices to meet project financial objectives. No museum would be provided. Proposed development is listed in Table 1.2-1 (page 1-5).

This alternative meets the basic project objectives.

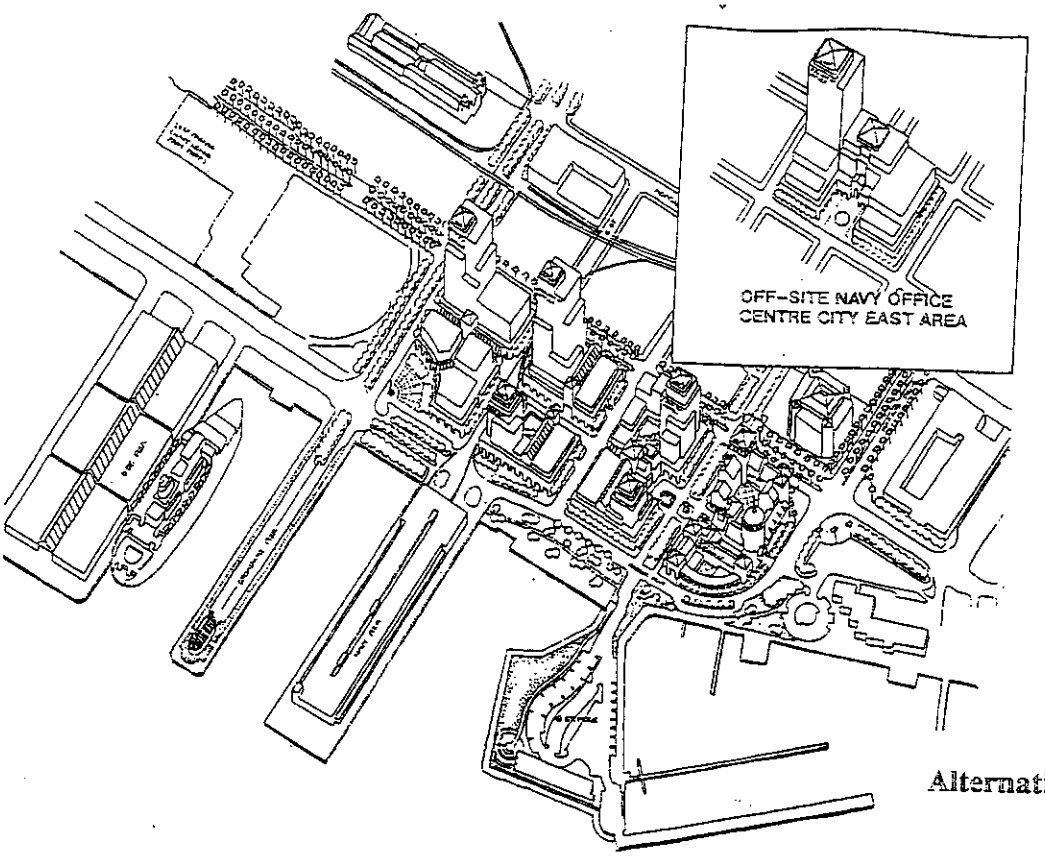
Alternative E

Alternative E (Figure 1-7) would include construction of 1 million SF of Navy offices on the Navy Broadway Complex site and no private development. This alternative evaluates traditional taxpayer-financed congressional funding for construction. Construction would primarily involve the rehabilitation of the two largest buildings on the property, and construction of one new building. Due to the configuration of buildings that would be rehabilitated and the need to minimize expenditure of public funds, no open space or museum would be provided. Table 1.2-1 (page 1-5) lists the uses that would be developed.

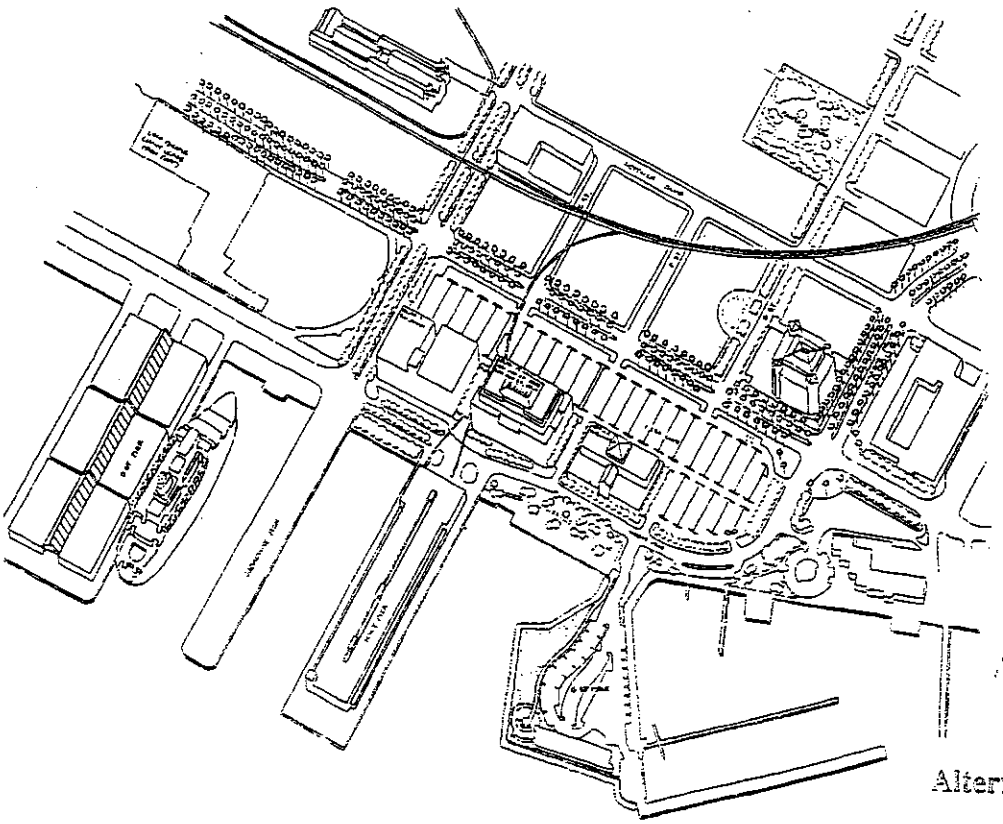
Although this alternative provides one million SF of Navy offices, it does not meet the basic project objectives of providing the Navy offices at a reduced cost to taxpayers, because it relies on direct Federal appropriation of tax dollars to totally finance the project.

Alternative F

Alternative F (Figure 1-8) would be similar to Alternative A, and would be developed with 3,315,000 SF of mixed uses (including 365,000 SF of above-grade parking), but includes no development on the most northern of the four blocks on the site. The intent of this alternative is to maximize open space onsite, particularly at the foot of Broadway. Approximately 3.5 acres of open space would be provided, 1.4 acres more than with Alternative A. In order to provide this additional open space, development on the other three blocks of the site would be intensified (compared with Alternative A), and up to 500-foot-tall buildings would be built. Proposed uses are listed in Table 1.2-1 (page 1-5).



Alternative D



Alternative E

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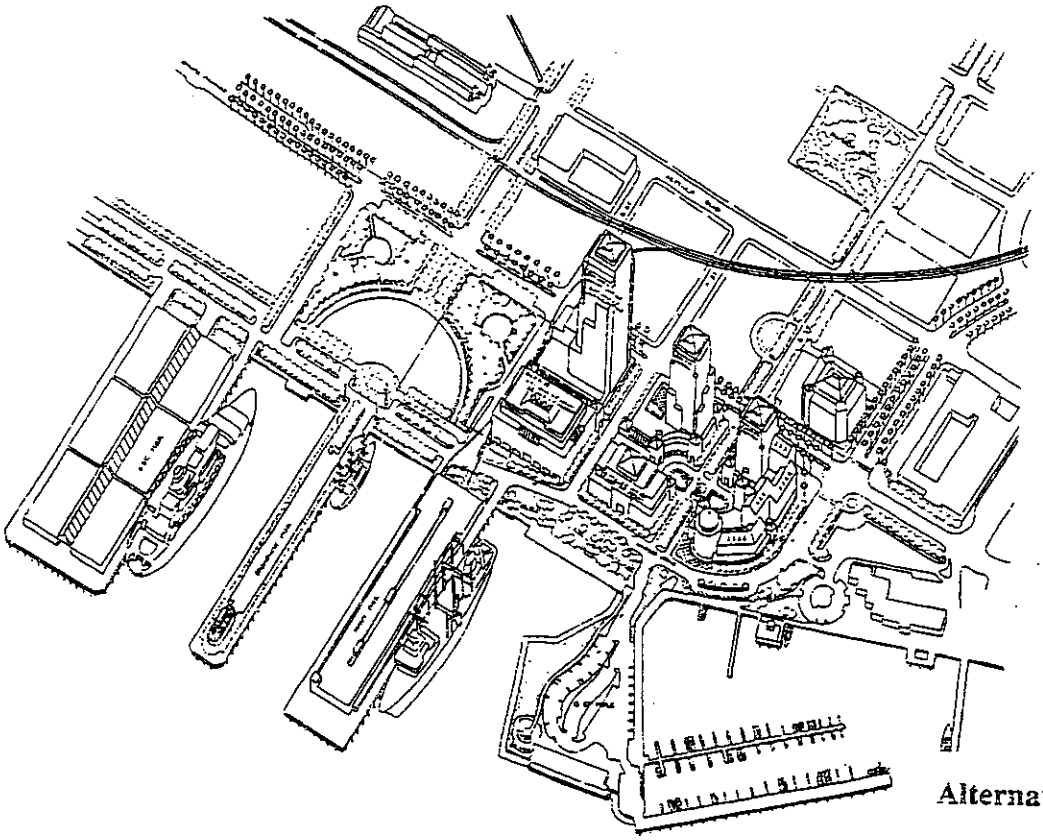
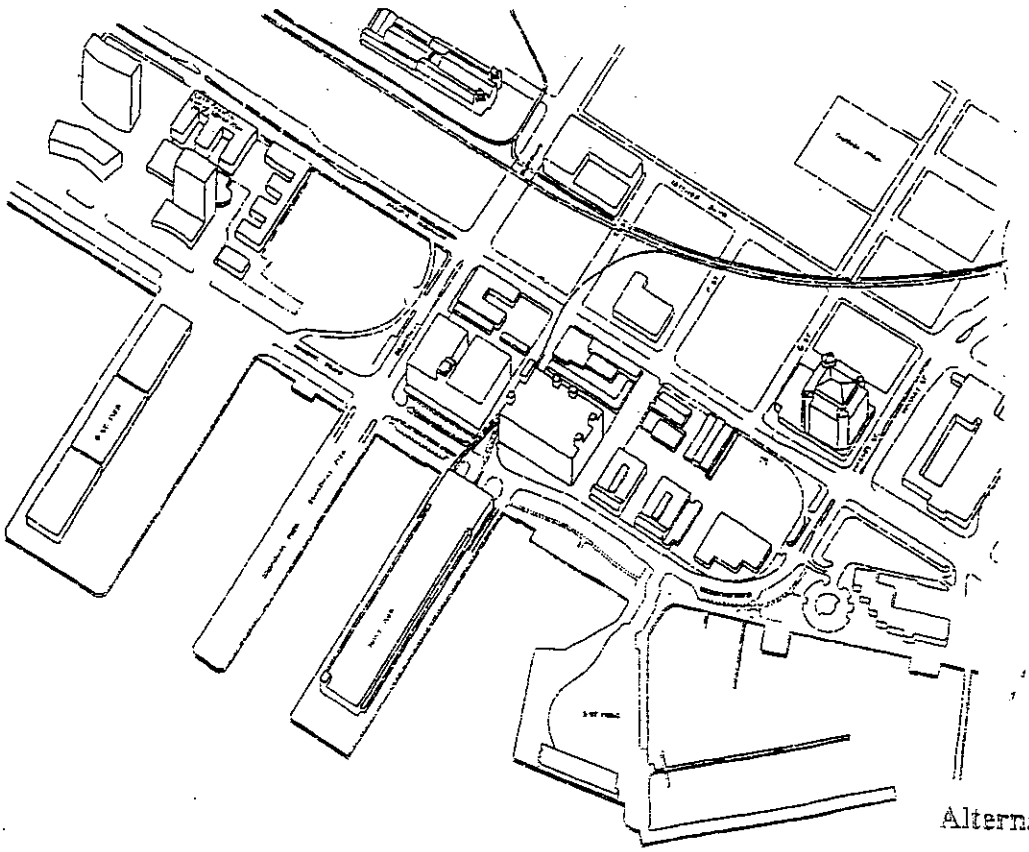
Alternatives D and E Illustratives

Navy Broadway Complex Project



Alternative F



Alternative G

SS40001 - 1/80

NORTH

Alternatives F and G Illustratives
Navy Broadway Complex Project

This alternative meets the basic objectives of the project; however, local government financial assistance would be needed for certain infrastructure improvements.

Alternative G

Alternative G (Figure 1-8) is the no-action alternative, so there would be no new development on the Navy Broadway Complex. Existing uses that would be retained are listed in Table 1.2-1 (page 1-5).

This alternative does not meet the objectives of the project.

1.3 DISCRETIONARY ACTIONS

Development of any of the alternatives would require a number of discretionary actions. Provided below is a list of actions that may be required and for which this environmental document may be used:

- Final project approval by Secretary of the Navy and the United States Congress.
- Development Agreement (City of San Diego/Navy). In addition to allowing development of the project, the development agreement would bind subsequent developers to specific conditions and will provide mechanisms for periodic review.
- National Pollution Discharge Elimination System (NPDES) permit (California Regional Water Quality Control Board).
- Federal Aviation Administration Construction Notification (Federal Aviation Administration).
- Coastal Consistency Determination (California Coastal Commission).

1.4 ENVIRONMENTAL SCOPING

On October 18, 1988, a Notice Of Intent (NOI) for the proposed Navy Broadway Complex Project Environmental Impact Statement (EIS) was published in the Federal Register in accordance with the National Environmental Policy Act (NEPA) as implemented by the Department of Navy. A Notice Of Preparation (NOP) of an Environmental Impact Report (EIR) in accordance with the California Environmental Quality Act (CEQA) was released concurrently. The NOI and NOP briefly described the proposed action, possible alternatives, and the scoping process, and provided the name and address of a contact person. The comment period ended on December 16, 1988. Copies of the NOI and NOP are presented in Appendix C. A copy of the NOP is presented in the EIR.

The purpose of the NOI and NOP was to (1) notify responsible agencies and the general public about the proposed project, (2) solicit comments on issues that should be addressed in the environmental document, and (3) foster coordination and cooperation.

In addition to the NOI and the NOP, two scoping meetings were held on November 14, 1988, to solicit additional public and agency comments.

The following agencies submitted responses to the NOI and NOP:

- United States Department of Health and Human Services
- United States Department of the Interior--Fish and Wildlife Services
- United States Environmental Protection Agency
- California Office of Historic Preservation--Department of Parks and Recreation
- California Department of Transportation--District 11
- California Coastal Commission
- California State Land Commission
- California Department of Fish and Game
- City of San Diego--Transportation Planning Section
- County of San Diego, Chief Administrative Office
- San Diego Unified Port District
- San Diego Metropolitan Transit Development Board
- Centre City Development Corporation

Copies of the specific NOI and NOP responses are available at the address shown on the cover page.

1.4.1 SCOPING COMMENTS

Responses to the NOI and NOP and comments at public scoping meetings requested discussions of the following topics in the document.

Land Use/Planning

- Address compatibility of the proposed project in scale and character with the adjacent planned land uses.

- Address consistency of the project and alternatives with the redevelopment plans and other relevant land use plans and policies of the City of San Diego and the San Diego Unified Port District.

- Address retention of existing and future Navy water-dependent uses on the site, including continued use of the rail spur that serves the site, and planned uses of the Navy Pier.

- Evaluate impacts on public shoreline access, with respect to the Coastal Zone Management Act (CZMA) and the California Coastal Act. Evaluate the opening of E and F Streets and the extension of G Street to the shoreline.

- Address potential impacts on pedestrian activities on the waterfront.

Transportation/Circulation

- Evaluate the potential use of public transit as mitigation for parking and traffic congestion impacts.

- Determine the short-range traffic impacts of project development.

- Determine daily traffic, potential long-range impacts of the development, and a qualitative level of service analysis of affected roadways.

- Include intersection capacity utilization (ICU) analysis at all potentially affected intersections.

- Consider parking demand that may be generated by the project, and any impact on adjacent or nearby public and/or private on-street and off-street parking resources.

- Evaluate applicability of parking strategies currently being considered in downtown San Diego.

Aesthetics and Viewshed

- Address the compatibility, scale, and intensity of the alternatives with all adjacent uses.

- Address consistency of the alternatives with City of San Diego adopted urban design standards and criteria.

- Discuss the effect of the project on view corridors.

- Include a shadow analysis.

Public Services and Utilities

- Include a discussion of the open space and public amenities for recreation to be provided onsite.

- Discuss the sewage and wastewater treatment requirements of the project and impacts on the Point Loma Wastewater Treatment Plant.

- Discuss impacts of increased flows from the project on the existing wastewater treatment system, especially on the system's ability to meet National Pollutant Discharge Elimination System (NPDES) or state-issued permit conditions.

- Discuss any compliance problems that the City experiences with the current sewage treatment and conveyance system (enforcement actions, consent decrees, etc.) and the potential impacts of the proposed project on compliance problems.

- Determine the consistency of the project with the Regional Water Quality Control Board's (RWQCB) new nonpoint-source water management programs.

Physical Environment (Geology/Hydrology/Water Quality)

- Discuss potential adverse impacts from any increased runoff, sedimentation, soil erosion, and/or urban pollutants on streams and watercourses on or near the project site.

- Analyze the effect of groundwater pumping at the project site and throughout Centre City. Address potential underground contamination on the Navy Broadway Complex.

- Determine the project's compliance with state and local water quality management plans.

- Discuss any impacts to beneficial uses that depend on the protection of water quality.

Biological Resources

- Evaluate shading effects to the marine environment that would result from construction of structures located over or adjacent to the San Diego Bay waterfront.

- Evaluate direct, indirect, and cumulative impacts to biological resources.

Air Quality

- Analyze existing air quality conditions; describe violations of Federal and state air quality standards.

- Determine conformity of each alternative with the 1982 State Implementation Plan for the San Diego air basin.

- Evaluate impacts to air quality based on increases in vehicle trips and mileage associated with the full buildout of the project.

Cultural Resources

- Consider Section 106 of the National Historic Preservation Act, and its implementing regulations 36 CFR Part 800.

- Evaluate the historical significance of the existing structures onsite, some of which were built as early as 1922.

Public Health and Safety

- Discuss whether any hazardous substances or hazardous materials are known or suspected to be on the site, and whether they pose a threat to public health, safety, or the environment as a result of contamination of air, soils, or surface water or groundwater. Reference any studies the Department of Defense has performed or contracted under the Defense Environmental Restoration Program (DERP) or the Installation Restoration Program (IRP), and discuss the pertinent findings of such studies.

1.5 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Table 1.5-1 lists the environmental impacts of each alternative and describes the impact as beneficial, not significant, significant but mitigable, or significant and unmitigable (i.e., unavoidable significant impact). A significant impact is defined as a substantial adverse change in the environment.

Based on a comparison of the impacts of the alternatives, Alternative G, the no-action alternative, is the environmentally superior alternative. No environmental changes would occur with this alternative, so there would be no significant impacts. However, none of the public benefits of the project would occur either. This alternative, therefore, does not meet the basic objectives of the project.

Alternatives A, B, and D are environmentally superior alternatives that include new development on the Navy Broadway Complex. Each of these alternatives has substantial public benefits to four environmental resources: City of San Diego and regional planning policy consistency, waterfront access, recreational facilities, and socioeconomics. Alternative A has a substantially larger open space area (1.9 acres versus 0.5 acre) at the foot of Broadway than Alternatives B and D, which would be a beneficial effect associated with recently adopted regional plans intended to guide development in the project vicinity (SANDAG Central Bayfront Design Principles). Therefore, Alternative A is the environmentally preferred alternative that meets both project and community open space objectives.

1.6 ISSUES TO BE RESOLVED AND AREAS OF CONTROVERSY

All environmental issues associated with development of any of the seven proposed alternatives have been addressed. There are no unresolved environmental issues.

The project, because of its location between San Diego's downtown and waterfront, has generated substantial public interest, especially related to the intensity of development of the site and the provision of open space at the foot of Broadway. These issues are discussed in detail in this document.

TABLE 1.5-1

SUMMARY OF ENVIRONMENTAL IMPACTS

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Land Use Compatibility (Section 4.1)	Project is compatible with surrounding land uses and provides active pedestrian uses such as open space area (1.9 acres), pedestrian corridors, and waterfront museum. (B)	Same as Alt. A, except open space area is smaller (0.5 acre). (B)	Same as Alt. A, except no open space is provided and no museum is provided.(N)	Same as Alt. B, except no museum is provided. (B)	Compatible with surrounding land uses, but no pedestrian amenities created. (N)	Same as Alt. A, except larger open space area created. (B)	Same as Alt. E. (N)
Waterfront Access (Section 4.1)	Project would substantially improve waterfront access by extending E, F, and G Streets through the site to the waterfront and providing pedestrian-oriented improvements. (B)	Same as Alt. A. (B)	Same as Alt. A. (B)	Same as Alt. A. (B)	Would improve waterfront access across site, although access would be primarily across parking lots. (N)	Same as Alt. A. (B)	No access across the site to the waterfront would be provided; current conditions would remain. (N)

JB/66400011.S

Key: Each impact is followed by one of the following notations:

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S/M - Significant but mitigable, i.e., environmental change is substantial and adverse, and can be mitigated to a level below significance.
S/U - Unavoidable adverse impact, i.e., environmental change is significant and cannot be reduced to a level below significance.

TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Coastal Development Policies (Section 4.1)	Project is consistent with public access, coastal development, and visual resource policies of the California Coastal Act. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A, although the degree to which access through the site is provided would be less than Alt. A. (N)	Same as Alt. A. (N)	None of the coastal policies for public access, coastal development, or visual resources would be implemented. The current conditions would be retained. (N)
San Diego Association of Governments Central Bayfront Design Principles Compatibility (Section 4.1)	Project is consistent with general principles adopted for development of properties located in San Diego's Central Bayfront. (B)	The lack of a large open space area at Broadway/Harbor Drive (only a 0.5-acre plaza would be provided onsite) would not fully meet the intent of contributing to a "significant civic place" at this location. However, such a feature, on a somewhat smaller scale, could still be provided. All other basic guidelines would be followed. (N)	A significant element of the guidelines, provision of an open space area at Broadway/Harbor Drive, would not be provided. This would substantially affect the ability to implement a locally adopted plan. (S/U)	Same as B, although no cultural features (i.e., a museum) would be provided adjacent to the open space, which is an element of the design guidelines. Other pedestrian amenities would be provided. (N)	Same as C. (S/U)	Same as A. (B)	Would not implement design guidelines, but no new development and no change from existing conditions would occur. (N)

JB/66400011.S

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
San Diego General Plan Compatibility (Section 4.1)	Mixed-use development of the site is consistent with land use designations for the site. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N) Navy office site in Centre City East is likely to be consistent with land use designations. (N)	Office uses are consistent with land use designations for the site. (N)	Same as Alt. A. (N)	No development is proposed, so general plan consistency is not applicable. (N)
San Diego Centre City Community Plan Compatibility (Section 4.1)	Project creates a strong linkage between downtown and waterfront and implements goals of providing open space at the foot of Broadway and waterfront-oriented land uses. (B)	Same as Alt. A. (B)	Same as Alt. A with respect to waterfront linkages and waterfront orientation. (N) Would not provide open space at the foot of Broadway. (S/U)	Same as Alt. A at the Navy Broadway Complex. (B) Navy office site in Centre City East is likely to be consistent with land use designations in that area. (N)	Same as Alt. A with respect to waterfront linkages and waterfront orientation. (N) Would not provide open space at the foot of Broadway. (S/U)	Same as Alt. A. (B)	No development is proposed, so community plan compatibility is not applicable. (N)
City of San Diego Columbia and Marina Redevelopment Plan Compatibility (Section 4.1)	Provides a logical and complementary transition between redevelopment project areas and the waterfront. (B)	Same as Alt. A. (B)	Same as Alt. A. (B)	Same as Alt. A. (B)	Would be compatible with redevelopment project areas, although transition to the waterfront would not be as complementary. (N)	Same as Alt. A. (B)	No elements of current operations are incompatible with adjacent redevelopment project areas. (N)

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TABLE 1.5-1 (continued)

Environmental Resource *(Section in document)*	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
San Diego Urban Design Program Compatibility (Section 4.1)	Would implement pedestrian (along E, F, G Streets, Broadway and Harbor) design, and open space (at the foot of Broadway) features provided in the city's program.	Same as Alt. A. (B)	Same as Alt. A with respect to pedestrian and design features along E, F, and G Streets and Harbor Drive. (B) Would not provide pedestrian orientation along Broadway as no open space would be provided. (U)	Same as Alt. A. (B)	Would not implement the design features of the city's program. (U)	Same as Alt. A. (B)	Would not implement city's program, but no change from current conditions would occur. (N)
Short-Term Traffic Impacts (Section 4.2)	Development of Phase I of the project (by 1995) would not substantially affect any intersections. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	No new development would occur by 1995, so no increase in traffic would occur. (N)	Same as Alt. A. (N)	No new development would occur, so no increase in traffic would result. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Long-Term Intersection Traffic Impacts (Section 4.2)	The operation of several intersections in the vicinity would be substantially affected: • Grape/Pacific (S/M) • Broadway/ Harbor (S/M) • Broadway/ Pacific (S/M) • Broadway/ Front (S/M) Intersection improvements associated with the project or programmed by the City of San Diego would reduce impact at each intersection to below significance.	Same as Alt. A, except the intersection of Broadway/Harbor would also be adversely affected. Intersection improvements associated with the project or programmed by the City of San Diego would reduce impact at each intersection to below significance. (S/M)	Same as Alt. B. (S/M)	Same as Alt. A. (S/M)	Same as Alt. B. (S/M)	Same as Alt. A. (S/M)	No new development will occur so there will be no increase in traffic. (N)

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TABLE 1.5-1 (continued)

Environmental Resource *(Section in document)*	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Long-Term Roadway Segment Impacts (Section 4.2)	Substantial traffic will contribute to overcapacity conditions along several segments of roadway. • Pacific Highway south of Broadway (S/M) • First Avenue south of Ash (S/M) Planned improvements along First Avenue would reduce to below significance expected impacts along the segment south of Ash.	Same as Alt. A. (S/M and S/U)	Same as Alt. A. (S/M and S/U)	Substantial traffic will contribute to overcapacity conditions in vicinity of Navy Broadway Complex along Pacific Highway south of Broadway. (S/M)	Same as Alt. A. (S/M and S/U)	Same as Alt. A. (S/M and S/U)	No new development will occur so there will be no increase in traffic. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Parking Impacts (Section 4.2)	With implementation of a Travel Demand Management program, sufficient parking would be provided to meet parking demands onsite. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A, except 5 percent of the parking for the Centre City East site would be provided in offsite facilities in that area. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Current parking conditions would remain unchanged. (N)
Viewshed Impacts (Section 4.3)	Viewshed would be altered by replacing or upgrading the existing buildings with more intensive development. Project would be designed to be visually compatible with the surrounding viewshed; would beneficially affect viewshed by opening up view corridors along Broadway and E, F, and G streets. (B)	Same as Alt. A. (B)	Same as Alt. A. (B)	Same as Alt. A. (B)	The site would appear visually similar from most views, so would not be a substantial change from current conditions. However, view obstructions across the site from G Street toward the waterfront would be removed. (N)	Same as Alt. A, except development on Block 2 may substantially contrast with the scale of surrounding development, introducing an up to 500-foot-high building that would stand out from certain street-end viewpoints. May substantially contrast with surrounding development. (S/U)	There would be no change from current conditions so no impact would occur. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Shading Impacts (Section 4.3)	Substantially larger shadows would be cast from the site. Because the project area climate is generally moderate, shade is not, itself, considered adverse. No substantial shadows would be cast on any residential uses. (N)	Same as Alt. A. (N)	Same as Alt. A, although shadows would be less than with A. (N)	Same as Alt. A. (N)	Shadows would not be substantially greater than current conditions as only 50 feet in height would be added on one structure. (N)	Same as Alt. A, although shadows associated with Block 2 development would be longer than Alt. A. (N)	There would be no change from current conditions, so no impact would occur. (N)
Police Protection (Section 4.4.)	Police protection can be provided to the site without substantially affecting the ability of the San Diego Police Department to provide services to the project vicinity. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Fire Protection (Section 4.4)	Fire protection devices (e.g., roof sprinklers) that will be required will provide sufficient protection under current water flow pressures to the site (2,500 gallons/ minute). Sufficient fire protection personnel are available in the area to provide emergency services to the site without affecting the ability to provide services to the project vicinity. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	No changes in the existing conditions would occur, so no affect an fire protection would occur. (N)

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TABLE 1.S-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Schools (Section 4.4)	The number of Navy personnel in the region would remain unchanged. An influx of new non-military personnel could cause secondary impacts that contribute cumulatively to schools in the San Diego area that are near or over capacity. School fees for private development would be implemented. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Military personnel in the region would relocate to the site. No increase in regional employment would result, so no increase in students would be expected. (N)	Same as Alt. A. (S/M)	No changes in the existing conditions would occur, so no affect on schools would occur. (N)
Recreational Facilities (Section 4.4)	No existing recreation facilities would be adversely affected. A significant open space area (1.9 acres) would be provided at the foot of Broadway. (B)	Same as Alt. A, except the open space area at the foot of Broadway would be smaller (0.5 acre). (B)	No existing recreation facilities would be adversely affected. (N)	Same as Alt. B. (B)	Same as Alt. C. (N)	Same as Alt. A, except a larger open space area (3.5 acres) would be placed at the foot of Broadway. (B)	No change from existing conditions would result, so there would be no impact. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Water (Section 4.4)	Existing water supplies and conveyance facilities are sufficient to provide water services to the site. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	There would be no change from existing conditions, so no impact would occur. (N)
Wastewater (Section 4.4)	Existing sanitary sewer lines are not sufficient to transport the increased amounts of wastewater from the site, so would need to be upgraded. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	A reduced amount of wastewater than currently generated would result from this alternative, and it could be handled by existing conveyance facilities. (N)	Same as Alt. A. (S/M)	There would be no change from existing conditions, so no impact would occur. (N)
	The Point Loma Wastewater Treatment Plant has sufficient capacity to accommodate project flows without adversely affecting the plant's ability to provide services or its ability to eventually meet clean water standards. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A, except the net flow from the site would be less than current conditions. (N)	Same as Alt. A. (N)	There would be no change from existing conditions, so no impact would occur. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Solid Waste Disposal (Section 4.4)	Existing and planned landfills would be able to accommodate solid waste generated by the project without substantially affecting the ability to handle solid waste in the region. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	There would be no change from existing conditions, so no impact to landfills would occur. (N)
Socioeconomics (Section 4.5)	An estimated 8,700 new employment opportunities would be created at the Navy Broadway Complex, a positive effect on job formation in downtown San Diego. (B)	Same as Alt. A, except 11,900 new employment opportunities would be created. (B)	Same as Alt. A, except 5,800 new employment opportunities would be created. (B)	Same as Alt. A, except 14,500 new employment opportunities would be created. (B)	Same as Alt. A, except 6,700 new employment opportunities would be created on the Navy Broadway Complex. However, these personnel would be relocated from other bases in the region. (N)	Same as Alt. A. (B)	No changes in employment would occur. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Erosion (Section 4.6)	During construction onsite soils would be exposed to rain and other hydraulic forces that could eventually convey sediments to the ocean, potentially significantly affecting marine life. An erosion control plan would be implemented. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	No new construction would occur, so no impacts to erosion would result. (N)
Seismicity (Section 4.6)	There is the potential that a branch of the active Rose Canyon fault may bisect the site. The project could be subjected to severe seismic shaking, with a potential onsite liquefaction hazard. Compliance with building codes would be necessary. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	No new construction would occur, so there would be no change from current conditions. (N)

JB/66400011.S

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TABLE 1.S-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Extractable Resources (Section 4.6)	No known extractable resources are located on or be-neath the site. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. In addition, no new development would occur. (N)
Hydrology (Section 4.6)	Because the project site is already covered with impervious materials, no increase in runoff from the site would result. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	No change in current conditions would occur so there would be no increase in runoff. (N)
Runoff Water Quality (Section 4.6)	Accidental fuel spills during construction could contaminate water quality. Notification of public officials and immediate cleanup would be necessary in this unlikely instance. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	No new construc-tion would occur, so there would be no potential impact. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Construction Air Emissions (Section 4.6)	During construction, equipment emissions from the site would be substantial. Because this is a temporary effect and would not contribute substantially to the violation of air quality standards, the impact is not significant. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	No new construction would occur with this alternative, so there would be no impact. (N)
Construction Dust Generation (Section 4.6)	Fugitive dust created during construction could create short-term nuisance impacts. Dust control measures would be required. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	No new construction would occur with this alternative, so there would be no impact related to dust. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Biological Resources (Section 4.7)	Terrestrial biological resources are not present because the site is already developed, so no impacts would occur. No substantial shadows would be cast over the bayfront during the time of the day when the sun is direct (after 9:30 a.m., even during the winter season), thus avoiding any potential significant effects to marine life. Reflective glass would be prohibited in tall buildings *reducing the* possibility for bird strikes. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	No change in existing conditions would occur, so *there would be no* impact to biological resources. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Long-Term Vehicular Emissions (Section 4.8)	Substantial new vehicle trips would be generated. An extensive Travel Demand Management Program would be implemented to substantially reduce the use of single-occupancy vehicles. The air quality management plan and State Implementation Plan are being updated to reflect current growth conditions. Primary means to reduce emissions will be reduction in single occupancy vehicles. The project would be compatible. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	No new development would occur, so there would be no increase in vehicle emissions. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Long-Term Vehicular Emissions - Cumulative (Section 5.8)	There would be sufficient congestion at an intersection after project traffic mitigation to result in a significant contribution to cumulative regional air quality impacts. (S/U)	Same as Alt. A, except two intersections would have sufficient congestion after mitigation to result in a significant contribution to cumulative regional air quality impacts. (S/U)	Same as Alt. A. (S/U)	Same as Alt. A. (S/U)	Same as Alt. A. (S/U)	Same as Alt. A. (S/U)	No new development would occur, so there would be no increase in cumulative intersection congestion. (N)
Carbon Monoxide Emissions (Section 4.8)	Carbon monoxide concentrations associated with traffic would be within federal and state air quality standards. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	No increase in vehicle emissions would occur, so no carbon monoxide increase would result. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Construction Noise (Section 4.9)	Temporary construction noise could create significant noisance noise impacts, especially on weekends when the nearby waterfront would be actively used. Construction would be scheduled in accordance with local noise ordinances. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	No new construction would occur, so there would be no impact related to construction noise. (N)
Traffic Noise (Section 4.9)	Although long-term noise would increase over existing levels as a result of increased traffic, no sensitive receptors would be significantly affected. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	No new traffic would be generated by this alternative, although it would be exposed to increased noise from general traffic growth in the project area. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Onsite Noise (Section 4.9)	*Hotels constructed* on the site would be within the 65 dB CNEL from traffic noise, which could create substantial interior noise levels. Engineering design to reduce interior noise levels would be necessary. (S/M)	*Same as Alt. A.* (S/M)	*Same as Alt. A.* (S/M)	*Same as Alt. A.* (S/M)	*No hotel uses are* proposed so no impact would occur. (N)	*Same as Alt. A.* (S/M)	No new development would occur, so there would be no impact. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Subsurface Cultural Resources (Section 4.10)	Site is underlain with artifacts from waterfront development between the 1880s and 1910s. These materials are buried beneath the dredged fill placed onsite to create dry land for more development. The archaeology, while containing many artifacts, lacks stratigraphic integrity, and context, and is therefore unlikely to contribute important information about San Diego's early history. The archaeological resources do not appear to qualify for inclusion in the National Register of Historic Places. This has been confirmed through consultation with the California State	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	No subsurface excavation would occur, so there would be no impact to subsurface archaeology. (N)	Same as Alt. A. (N)	Same as Alt. E. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
	Historic Preservation Officer. Excavation for footings and other below-grade construction would destroy any archaeology that might exist but this would not result in the loss of a significant resource. Should an *unanticipated* significant archaeological resource be *discovered during* project excavations it would be evaluated and, if *found to be* important, it would be treated in accordance with 36 CFR 800.11. *(N)*						
Historical Archaeology (Section 4.10)	Navy Broadway Complex Buildings 1 and 12, combined with the Navy Pier (located outside the	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	No building modification would occur, so there would be no impact. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
	project boundaries) form a unit that represents every major period of Navy development at this location. These structures for nearly 50 years have been an architectural anchor to the San Diego Harbor and skyline. As a unit they appear to qualify for the National Register of Historic Places. Demolition or any substantial modification of these structures would constitute a significant impact. Specific mitigation will be developed in consultation with California SHPO pursuant to the regulations (36 CFR 800) for implementing Section 106 of the National Historic						

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
	Preservation Act (16 U.S.C. 470f). The Navy proposes to record Buildings 1 and 12 in accordance with the Historic American Buildings Survey Standards prior to demolition or modification. (S/M)						
Historical District Eligibility (Section 4.10)	Several buildings within a three-block area of the project are either listed, eligible for listing, or appear to qualify for listing on the National Register of Historic Places. The project will not affect the use or integrity of these structures. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	No change in existing uses would occur, so there would be no effect on nearby historic resources. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Soil Contamination (Section 4.11)	Minor hazardous waste spills were located or may be located on the site. In addition, transformers that contain PCBs are located on the site although none are known to be leaking. Because the presence of hazardous waste can affect public health, this would be considered a significant impact with any of the alternatives. There are no known major hazardous waste spills or leaking underground storage tanks on the site. Remedial action to remove and properly dispose of any hazardous waste found on the site will occur. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	There would be no change in the current onsite conditions, so no impact would occur. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Asbestos (Section 4.11)	Most of the existing buildings on the site contain asbestos. A potential public health hazard would result during demolition, when asbestos fibers could become air-borne. The project would be required to comply with the Federal Clean Air Act to protect the public from exposure to asbestos. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	There would be no change in current site conditions. Asbestos in onsite buildings does not present an imminent health risk. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Groundwater (Section 4.11)	A groundwater plume that has been contaminated with hydrocarbons is *located an estimated* 1/3 mile and down-gradient of the Navy Broadway Complex. Groundwater quality testing at the site found no evidence of contamination. Although unlikely, groundwater dewatering during *subsurface con-*struction could draw the plume toward the site. A National Pollution Discharge Elimination System (NPDES) permit application will be filed with the Regional Water Quality Control Board (RWQCB). The project would comply with any conditions specified in a NPDES permit. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	Same as Alt. A. (S/M)	No groundwater dewatering would be necessary, so no impact would occur. *(N)*	Same as Alt. A. (S/M)	Same as Alt. E. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Aircraft Heights (Section 4.11)	The 400-foot-high building on Block 1 would exceed non-operational imaginary height surfaces, but based on a Federal Aviation Administration (FAA) determination, would not result in a hazard to air navigation. Buildings on the easterly areas of Blocks 1, 2, and 3 would be obstruction lighted, per FAA standards. (N)	Same as Alt. A, except the building on Block 1 would be 300 feet high. It would nevertheless exceed imaginary surfaces, but would not result in a hazard to air navigation. The project would comply with any FAA-imposed conditions. (N)	All buildings would be below any FAA imaginary height surfaces, and would not result in a hazard to air navigation. (N)	Same as Alt. B. (N)	Same as Alt. C. (N)	The 500-foot-high building on Block 2 would exceed operational imaginary height surfaces, but based on previous FAA determinations, would not likely result in a hazard to air navigation. The project would comply with any FAA-imposed conditions. (N)	No new development would occur, so there would be no effect on air navigation. (N)
Natural Gas (Section 4.12)	Natural gas could be provided without adversely affecting the ability of the San Diego Gas and Electric Company (SDGE) to provide services to its service area, and without adversely affecting conveyance facilities. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	Same as Alt. A. (N)	No new development would occur, so there would be no impact on natural gas. (N)

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TABLE 1.5-1 (continued)

Environmental Resource (Section in document)	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F	Alternative G
Electricity (Section 4.12)	Conveyance facilities are not sufficient to provide adequate electrical service to the site. A new 12 kV looped system would be required. (S)	Same as Alt. A. (S)	Same as Alt. A. (S)	Same as Alt. A. (S)	Same as Alt. A. (S)	Same as Alt. A. (S)	No new development would occur, so there would be no impact on electrical service. (N)

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SECTION 2

PURPOSE OF AND NEED FOR ACTION

This section addresses the purpose of and need for the proposed action, as required by the National Environmental Policy Act (NEPA), as well as the project objectives, in accordance with the California Environmental Quality Act (CEQA).

The United States Department of the Navy is the owner and/or operator of 18 administrative, support, and operational installations throughout the City of San Diego area. One such facility is known as the Navy Broadway Complex, which primarily contains administrative and warehouse facilities, and is the location of the Commander, Naval Base, San Diego; the Naval Supply Center, San Diego; and several other Department of Navy activities. As previously shown in Figure 1-1, the Navy Broadway Complex is centrally located to the other Navy installations.

The Navy Broadway Complex is located on approximately 15.6 acres in downtown San Diego near the waterfront. Onsite structures were built primarily between 1922 and 1944, with a small gatehouse added in 1956. The site currently houses 405,753 square feet (SF) of office, 179,616 SF of industrial/warehouse buildings, and 421,660 SF of industrial uses for the Navy with a total 1,007,029 SF of development. Although outside of the boundaries of the proposed project, the adjacent Navy Pier is supported by personnel at the Navy Broadway Complex and is part of the complex.

The Naval Supply Center initiated long range plans in 1979 to move much of the warehousing from the Navy Broadway Complex site to new, modern facilities located at existing naval operational bases in the San Diego region. Subsequent to this, a regional study of Navy administrative and facility requirements was conducted. The study reaffirmed that the Navy Broadway Complex with the Navy Pier was essential for national security purposes and also found that consolidation of administrative personnel at one location would free valuable operational space at the other installations. The Navy Broadway Complex was determined to be the most suitable facility for co-location because of its:

- Central location in relation to other Navy installations;
- Proximity to several major regional transportation facilities, including light rail transit lines, a railroad, several bus lines, and an extensive freeway complex;
- Ideal size to support necessary office space.

This co-location concept at the Navy Broadway Complex, with continued operation of the adjacent Navy Pier, was approved by the Chief of Naval Operations in 1983. A need for approximately 1 million SF of upgraded office space has since been identified to accommodate Navy administrative personnel.

The typical means by which construction of Navy offices, or other military facilities, is funded is through Military Construction (MILCON) appropriations, which are taxpayer-funded and Congressionally approved. However, Congress endorsed, through Public Law (P.L.) 99-661, a concept proposed by Navy planners and community groups by which the site would be developed at reduced cost to the taxpayers through a public/private venture. P.L. 99-661 was a component of the National Defense Authorization Act of 1987.

The legislation allows the Secretary of the Navy to enter into long-term leases of property on the Navy Broadway Complex, providing that in consideration of the lease, the Navy obtains without compensation, or at substantially below market value, administrative office facilities for the use by the Navy, thereby providing needed Navy facilities at little or no cost to the taxpayer. The lease would be to a private party(ies), who would develop private uses on a portion of the site, with the Navy offices on other portions of the site.

Pursuant to P.L. 99-661, the Navy is proposing to redevelop the Navy Broadway Complex with the following uses:

- Up to 1,000,000 square feet (SF) of Navy administrative offices.
- A mix of private office, commercial, and/or retail uses up to 2,145,000 SF in size.

The proposed development and alternatives are described in detail in Section 3. A copy of P.L. 99-661 is provided in Appendix A.

The Navy and the City of San Diego entered into a Memorandum of Understanding (MOU) on June 1, 1987 to guide the planning and approval process for redevelopment of the Navy Broadway Complex. The MOU specifies that the Navy, in consultation with the City of San Diego, will prepare a development plan and urban design guidelines that will define the nature of development that will occur on the Navy Broadway Complex. The development plan and urban design guidelines would become part of a development agreement between the Navy and the City of San Diego. A copy of the MOU is provided in Appendix B.

SECTION 3

ALTERNATIVES INCLUDING THE PROPOSED ACTION

3.1 PROJECT LOCATION

The site of the proposed project, known as the Navy Broadway Complex, is located in the City of San Diego, California, within the downtown area known as Centre City. The regional location of the site is depicted in Figure 3-1. The Navy Broadway Complex is located in the western area of the City near the San Diego Bay waterfront, as depicted in Figure 3-2. It is bounded by Broadway on the north, Pacific Highway on the east, and Harbor Drive on the south and west. The Navy Broadway Complex, which consists of approximately 15.6 acres, is located on eight city blocks. As shown in Figure 3-3, the eight city blocks are consolidated into four larger blocks, noted in this document as Blocks 1, 2, 3, and 4 from north to south, with each bounded by Pacific Highway on the east and Harbor Drive on the west, and separated by the extensions of E, F, and G streets.

3.2 ALTERNATIVES

The planning process for the co-location of administrative offices at the Navy Broadway Complex was initiated in 1979 when relocation of warehouses on the site was first considered, followed in 1983 by approval of the co-location concept by Chief of Naval Operations. The formation of the advisory Broadway Complex Coordinating Group (BCCG) served as the next step in the planning process. It was not until passage of P.L. 99-661 in 1987 that the process to generate detailed development concepts for the Navy Broadway Complex was initiated. Since that time, and particularly since 1988--after a project development team was assembled--a number of alternatives to redevelopment of the Navy Broadway Complex have been systematically examined.

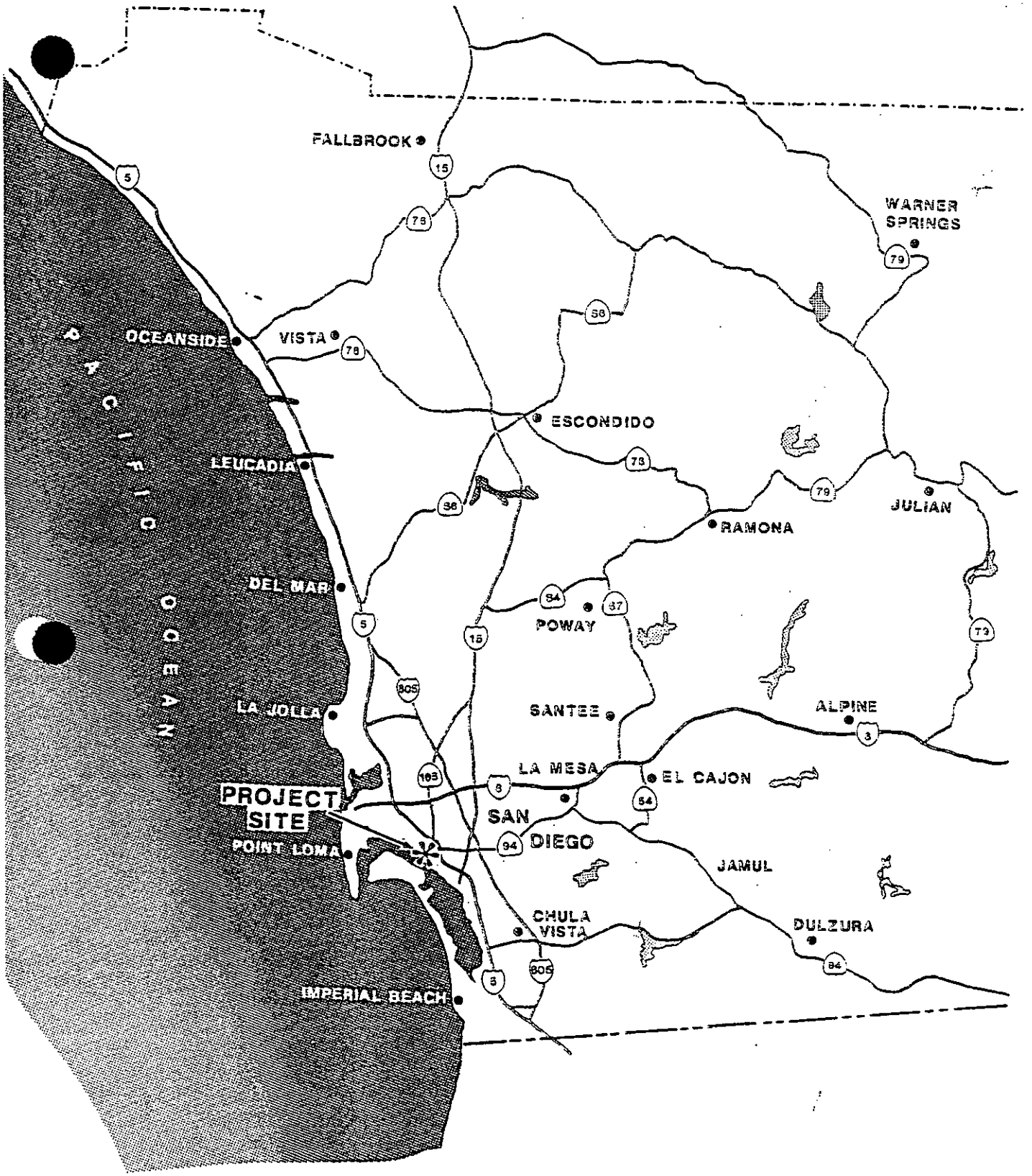
The following criteria were considered in developing alternative concepts:

- Provide up to 1 million square feet (SF) of administrative offices for the co-location onsite of Navy administrative personnel in the San Diego Region.

- Maintain a Navy presence at the Navy Broadway Complex. This is required by the need to provide support personnel for the adjacent Navy Pier, which must continue in operation for national security purposes. The Navy Pier is used for ship berthing, storage, and load-outs. In order to support the Navy Pier, a rail line that bisects the site and is used periodically would be retained.

- Allow for private development opportunities through a ground lease such that sufficient lease revenues are generated to significantly or fully offset the cost of Navy offices.

- Develop a high-quality project that provides open space at the foot of Broadway, opens view corridors between the downtown core and the waterfront, maximizes pedestrian access and public uses, and results in an aesthetically pleasing project. This responds to community desires as expressed in local policy plans and through the BCCG.



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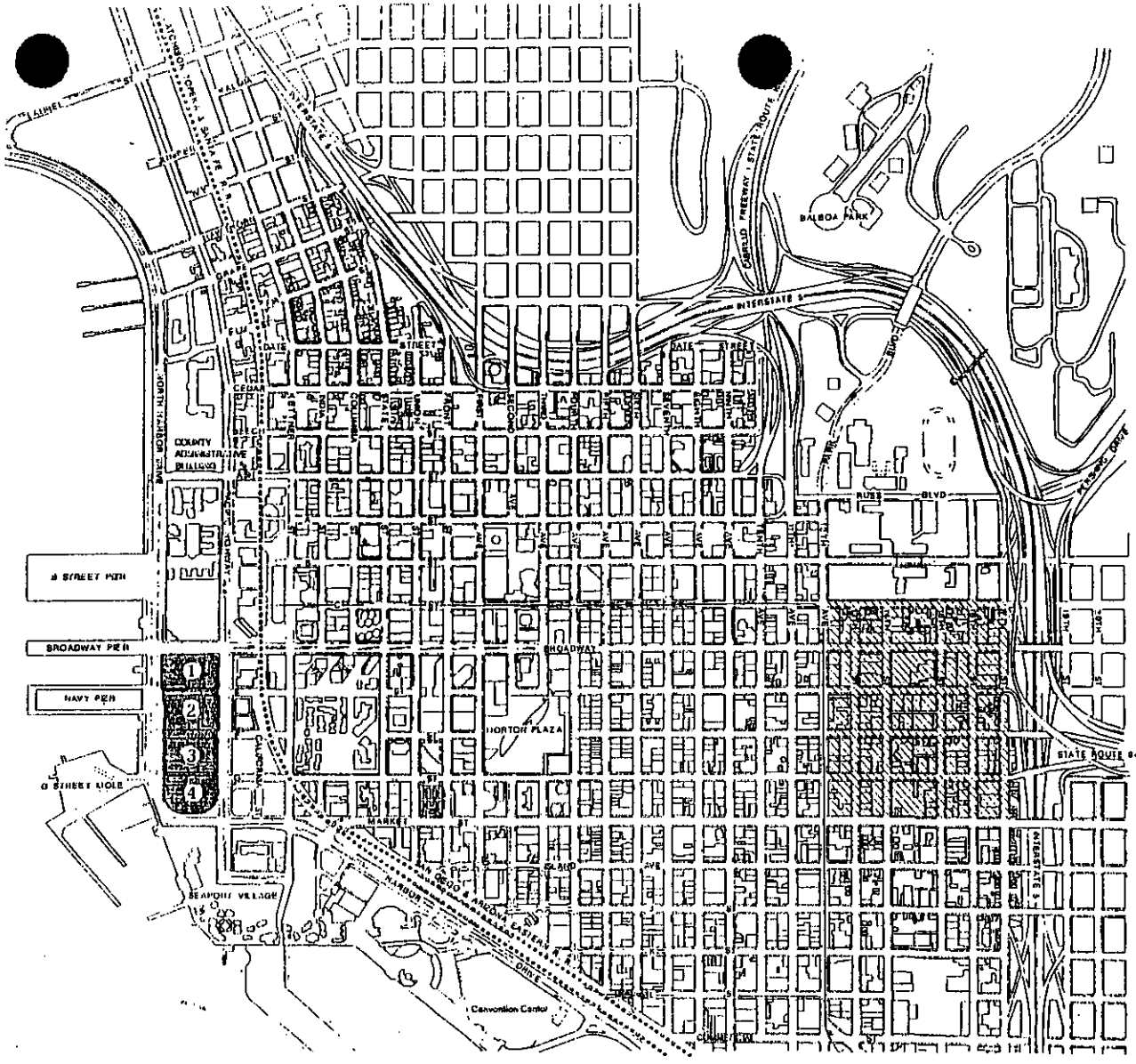


Legend

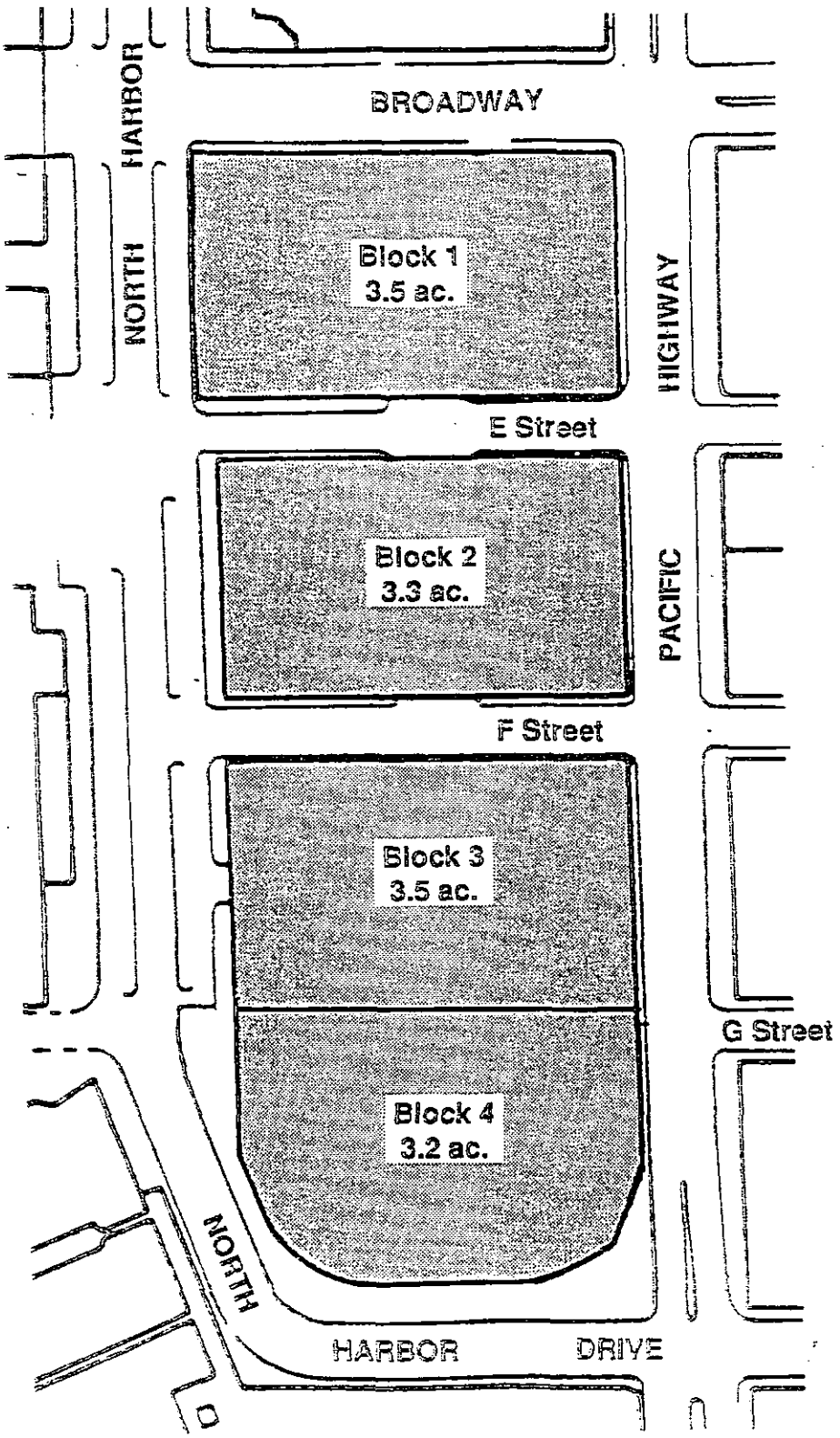
- 1 — Block Number
- Project Site
- Location of possible Navy Office for Alternative D (Will Encompass 2 Blocks)

Figure 3-2

Vicinity Map

0 470 940 FEET NORTH

Navy Broadway Complex Project



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oject Blocks

lavy Broadway Complex Project

NORTH

Several alternative concept plans were considered but rejected in the planning process. Each alternative included a mix of land uses that included 1 million SF of Navy offices. Each alternative was evaluated for its consistency with the criteria expressed above, and its compatibility with planning policies.

Several alternatives with variations in overall square footage were considered, but were found to either be insufficient in size to offset the costs of the Navy offices or were too intense to meet community objectives. These alternatives were rejected from further consideration.

An alternative that included over 100,000 SF of specialty retail, along with a mix of other uses, was considered. Although this alternative would have met with criteria that were being considered for redevelopment of the site, it was rejected because of insufficient market demand for this much specialty retail, given the expansion of the nearby Seaport Village specialty retail shopping center and the Horton Plaza regional shopping mall.

A mixed-use development that would have included 860 residential units in mid- and high-rise structures on a portion of the site was also considered. This alternative was rejected because it would not have provided sufficient revenues per square foot to offset the costs of Navy offices.

A final alternative that was considered was similar to the Navy's preferred alternative, Alternative A, and was announced to the public in March, 1989. This alternative included a mixed-use development of Navy and commercial offices, a museum, hotels, and a small amount of retail. It also included 1.3 acres of open space at the northwest area of the site, at the foot of Broadway. The tallest building would have been 350 feet in height. Subsequent to the announcement, there was community discussion calling for additional open space at the foot of Broadway. In response to this community input, this alternative was revised and replaced by an alternative that provided 1.9 acres of open space at the foot of Broadway and a 400-foot-high building.

The Navy narrowed the potential development concepts to seven alternatives after consideration of potential alternatives and after receiving community input on a preferred alternative. The seven alternatives are considered in the environmental impact analysis, and are listed below and described in detail in the following sections. Table 1.2-1 (page 1-5) summarizes each alternative. Alternatives include:

- The proposed action (i.e., the preferred alternative) and three mixed-use development alternatives on the Navy Broadway Complex.
- Construction of only military uses on the Navy Broadway Complex using traditional congressionally funded Military Construction (MILCON).
- An alternative with development of primarily private commercial and office uses on the Navy Broadway Complex and development of Navy offices on a second site in the eastern area of downtown San Diego.
- The no action alternative, whereby existing Navy uses on the site remain unchanged.

The rationale for selecting each of these alternatives for further consideration is discussed in the following sections.

The Navy Broadway Complex would be developed according to design guidelines to be adopted by the Navy and the City of San Diego. Draft design guidelines have been prepared for the project and are presented in Appendix D. The guidelines would become part of the development agreement to be adopted by the City and Navy. The guidelines describe allowable land uses, land use intensities, maximum heights (by block), and parking standards. With the exception of the Alternative E, which includes military construction only, and Alternative G (no action), each of the alternatives is generally consistent with the design guidelines. Alternatives E and G are not consistent with the guidelines because they retain the site for exclusive Navy use.

The mix of land uses shown for each of the proposed mixed-use alternatives (i.e., Alternatives A, B, C, D, and F) is based on anticipated market conditions. Depending on actual market conditions at the time of development, modifications in the square footage of each proposed land use may occur. However, in no event would the overall square footage of development exceed the total square footage shown for each alternative.

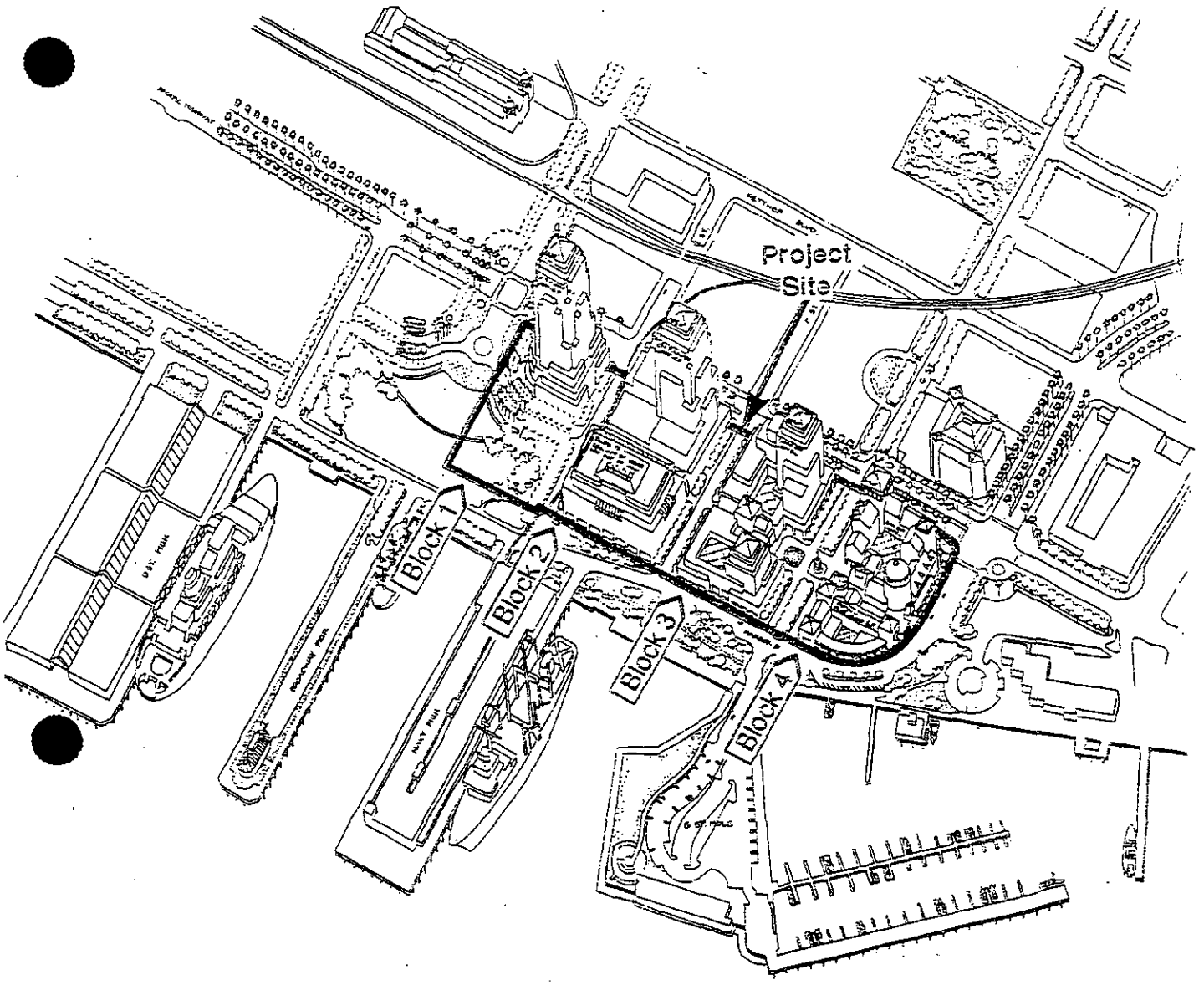
3.2.1 ALTERNATIVE A

Alternative A implements all the criteria that were established in developing the alternatives, and is conceptually illustrated on Figure 3-4. Alternative A is the Navy's preferred alternative, and it includes the following public benefits:

- A 1.9-acre open space would be provided at the foot of Broadway (see Figure 1-2, page 1-6). This open space area would help implement a long-standing desire by the City of San Diego to provide a gateway to the City from the waterfront. The City of San Diego and the San Diego Unified Port District may contribute adjacent property to create an even larger open space at the foot of Broadway. (Coordination with the City and the Port District would be needed to reserve the adjacent area as open space. If reserved, an approximately 10-acre open space area at the foot of Broadway could be provided. (See Figure 1-3, page 1-7). The provision of open space outside of the project boundaries is not a part of this project.

- The project would provide up to 55,000 square feet of unimproved space for a community-sponsored group to have a museum, which would be oriented towards showcasing the maritime heritage of the City, and the historical significance of this section of the waterfront. Together with the open space on Block 1, the museum will help to create a pedestrian environment oriented to the waterfront (see Figure 1-2, page 1-6).

- E, F, and G Streets, which currently terminate at the eastern boundary of the site (at Pacific Highway), would be extended and developed with broad sidewalks through the site to provide vehicular and pedestrian access between downtown and the waterfront (see Figure 1-4, page 1-8). G Street would provide sidewalks up to 30 feet wide that would be landscaped to enhance pedestrian and visual access between the Marina neighborhood to the east and the G Street Mole at the waterfront.



PROGRAM

Block Number	Land Use	Gross Square Footage	Parking	Max. Height (Feet)
1	Commercial Office	850,000	850	400
	Open Space (1.8 acres)		below-grade	
2	Navy Office:			
	- Bldg. 12	331,000	430	350
	- New	569,000	below-grade	
	Museum	55,000	200	
			above-grade	
	Above-Grade Parking	300,000		
3	Hotel	745,000	750	250
			below-grade	
4	Hotel	475,000	375	150
	Retail	25,000	100	
			below-grade	
T	—	3,250,000	3,105	—

Site Density = 5.45 Gross FAR

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NORTH

Alternative A
Navy Broadway Complex Project

- Taller buildings would include slender towers rising from broad bases and would be constructed on the inland side of the site nearest Broadway, stepping down to the waterfront and to the south to provide a visual transition between the higher density downtown core to the north and east and the lower density waterfront and specialty retail to the west and south. View corridors along E, F, and G streets would be enhanced to maximize public views of the waterfront from corridors.

  The basic project objectives of providing Navy offices at reduced cost to the taxpayers would be met, although some local financial assistance by the City of San Diego for infrastructure improvements (e.g., roadway and streetscape improvements) would be required.

Alternative A includes development of 3,250,000 SF of mixed uses on the Navy Broadway Complex. The conceptual illustrative for this alternative shows the tallest buildings on the northeasterly area of the site, peaking on Block 1 with other structures stepping down in height towards the Seaport Village shopping center to the south, and to the waterfront on the west, as shown in Figure 3-4. Figure 3-5 depicts an illustrative site plan for Alternative A. (It should be noted that all figures showing the alternatives are conceptual and intended only to represent an illustrative example of the scale and possible general appearance of development.) Figure 3-6 depicts massing guidelines for this alternative.

Description of Alternative A

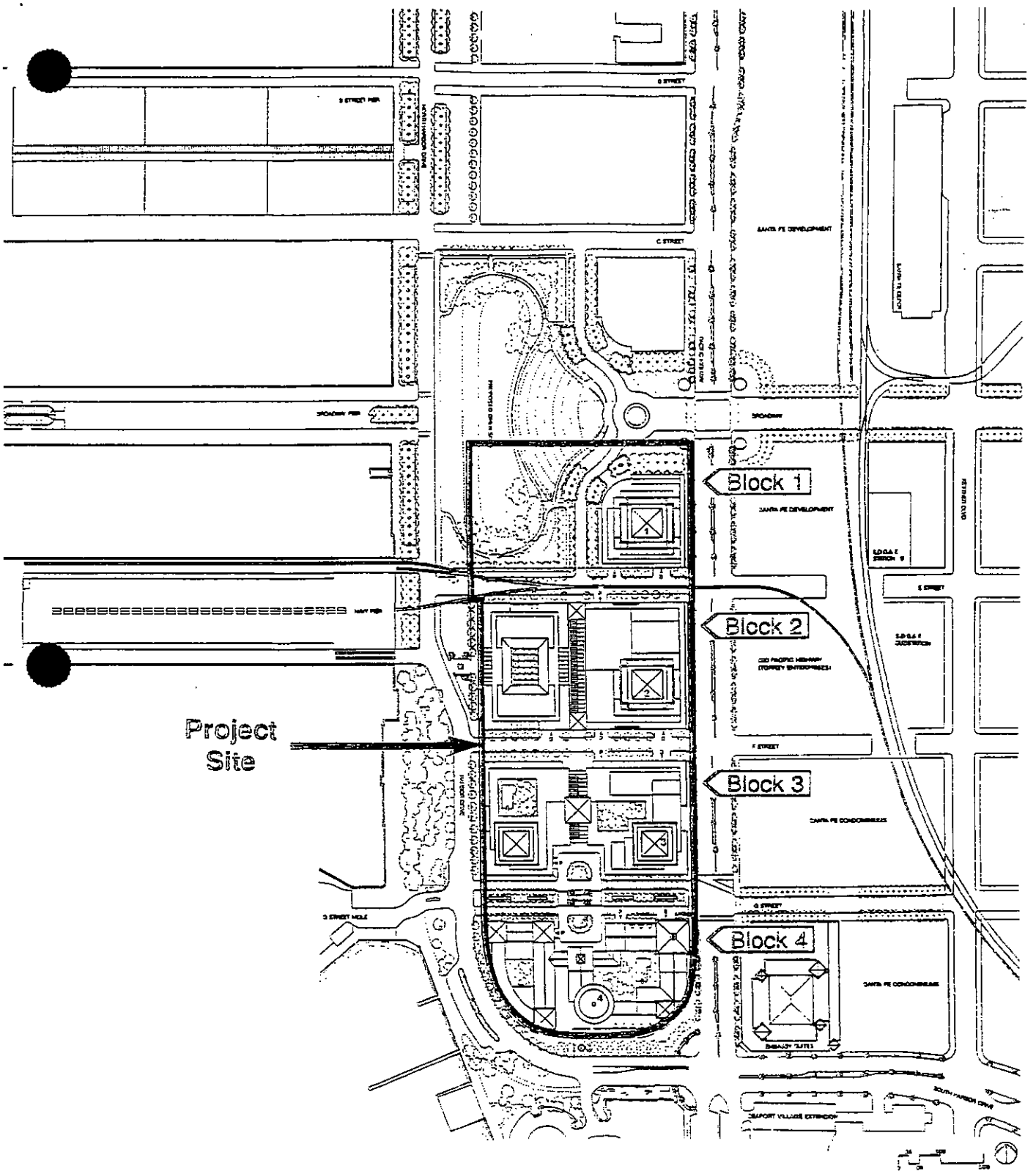
Alternative A would include a mix of open space, Navy office, museum, hotel, commercial office, and retail land uses in up to 3,250,000 SF of development. The gross floor area ratio (FAR) for this alternative would be 5.45. The precise mix and location (by block) of land uses would be determined by market conditions. For purposes of this analysis, the following land uses by block are assumed.

Block 1

A 650,000 SF commercial office building and approximately 1.9 acres of open space are proposed. If a contiguous segment of Broadway is abandoned and the Port District dedicates an adjacent similarly sized area of open space, an approximately 10-acre open space area at the foot of Broadway could be created, as depicted in Figure 3-4. Broadway could be re-routed around the open space to its terminus at Harbor Drive.

The commercial office building would include a street-level podium, upon which a stepped tower would be developed. The office podium would have a 75-foot setback from Broadway to create a visual link to the waterfront and would be 400 feet high. Its tallest component would be next to Pacific Highway at the easterly end of the site, and it would step down towards the open space and the waterfront. Ground-level support retail and restaurant uses would be included. An illustrative cross section of this plan is depicted in Figures 3-7 and 3-8.

Below-grade parking would be provided for 650 vehicles, which is 1 space per 1,000 SF.



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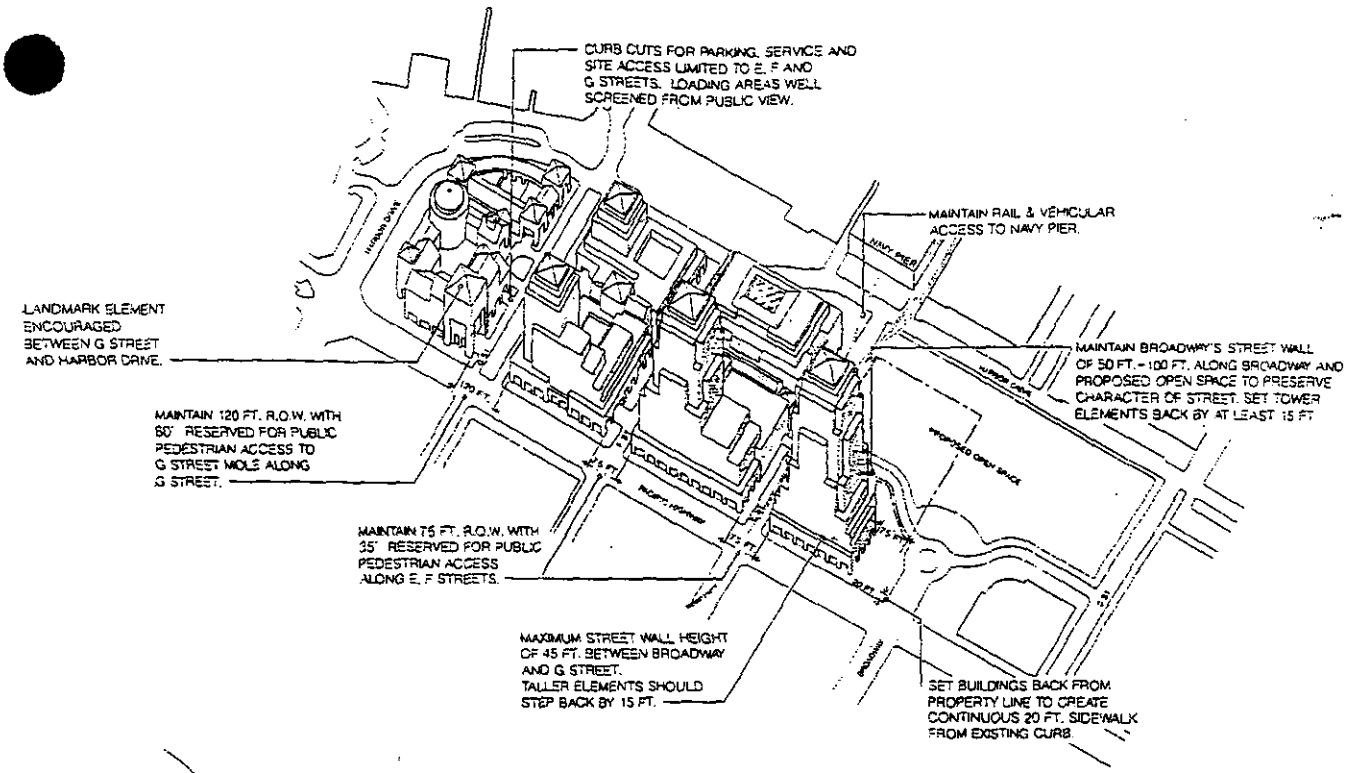
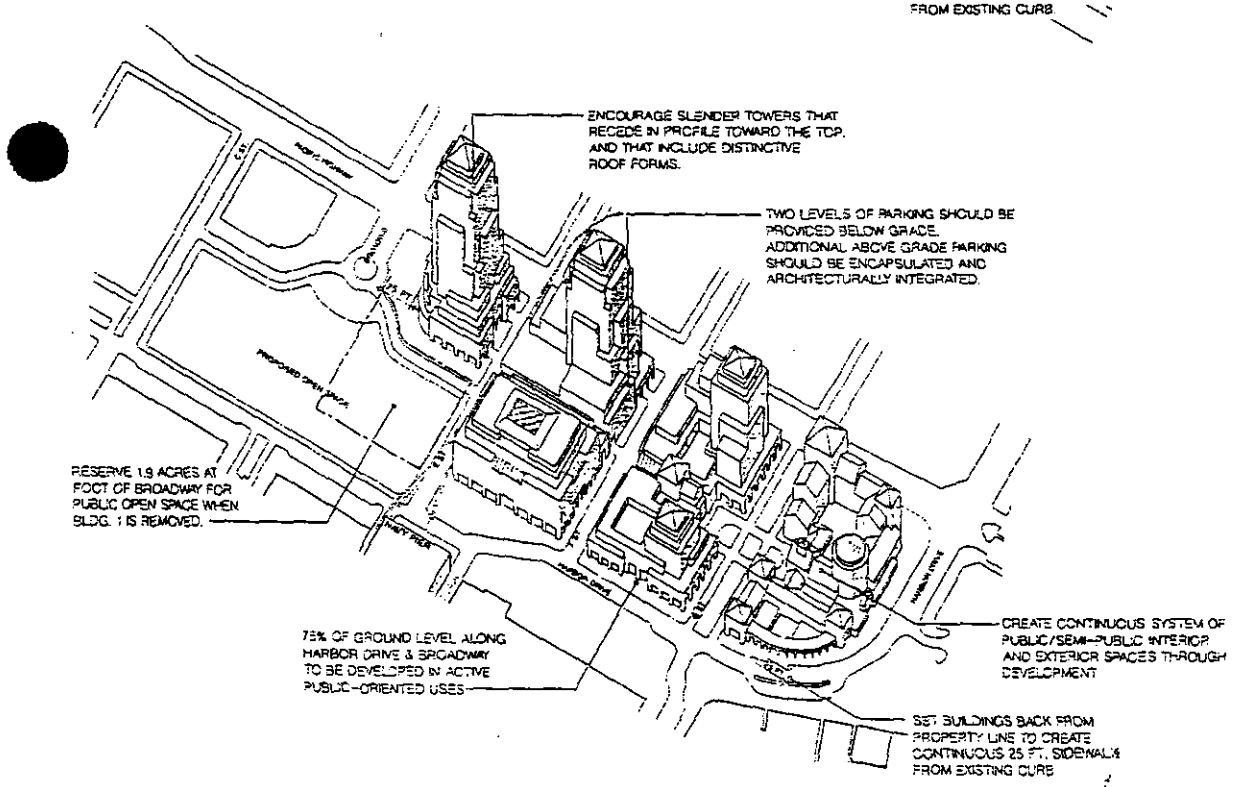
ustrative Site Plan, Alternative A

lavy Broadway Complex Project

NORTH

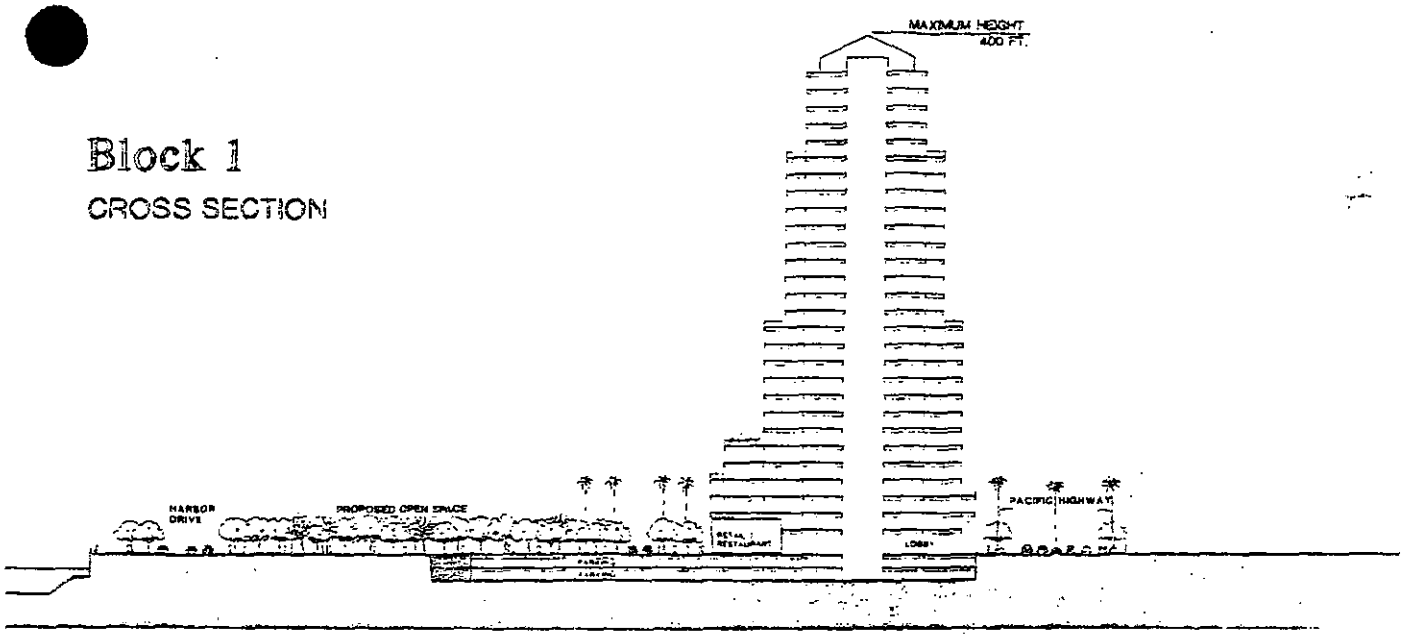




aft Massing Guidelines
ernative A
avy Broadway Complex Project

Block 1

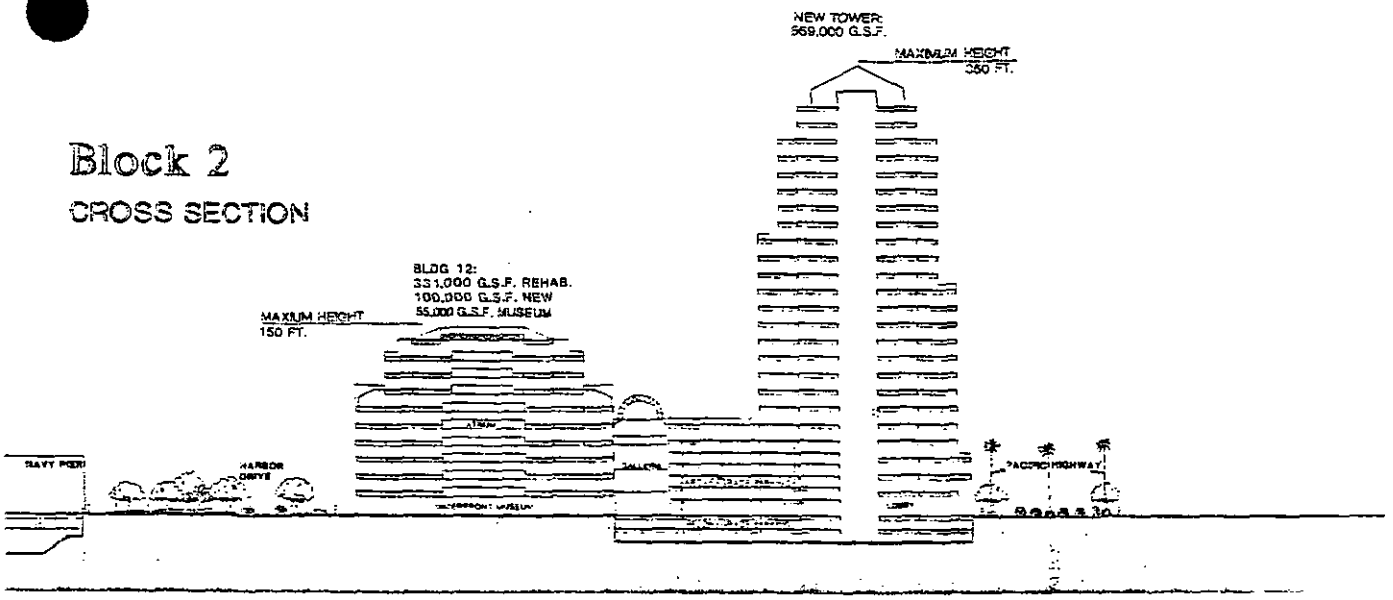
CROSS SECTION



BLOCK 1 : OFFICE 550,000 G.S.F.

Block 2

CROSS SECTION



BLOCK 2 : OFFICE 1,000,000 G.S.F.
WATERFRONT MUSEUM 55,000 G.S.F.

ustrative Cross Sections, Alternative A
ocks 1 and 2
lavy Broadway Complex Project

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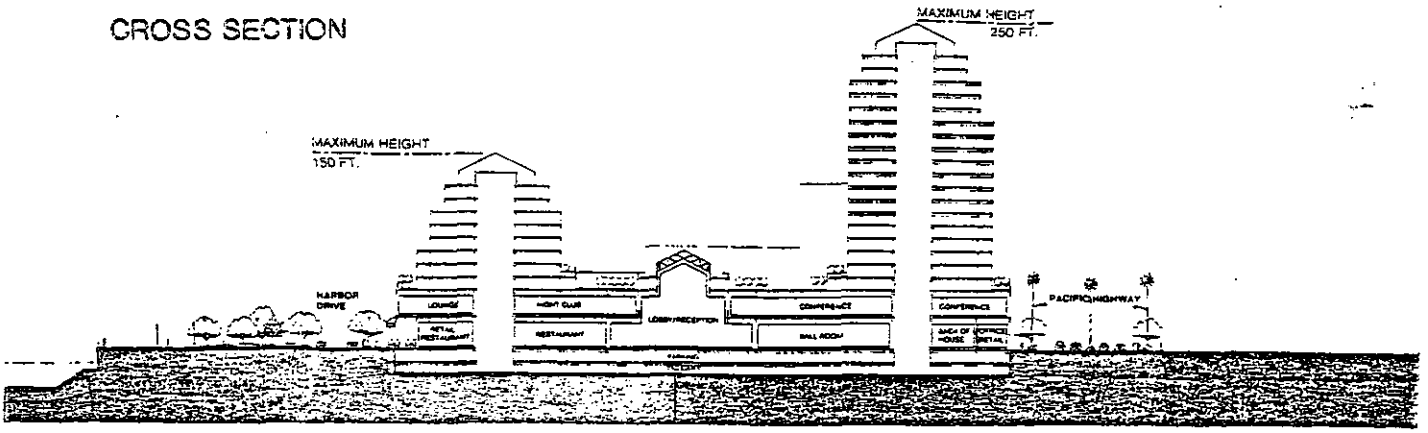
Block 3

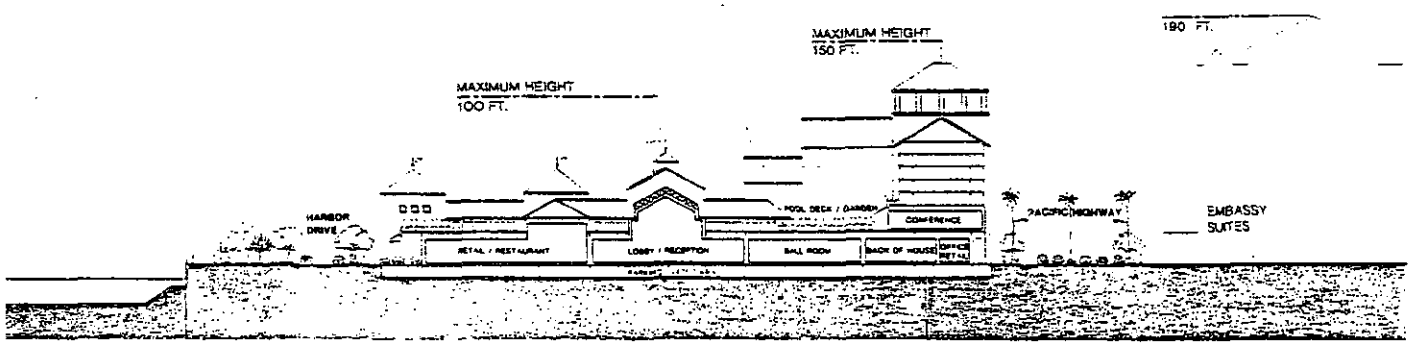
CROSS SECTION



BLOCK 3: BUSINESS HOTEL 745,000 G.S.F./1,000 ROOMS

Block 4

CROSS SECTION



BLOCK 4: LUXURY HOTEL 475,000 G.S.F./500 ROOMS
RETAIL/RESTAURANT 25,000 G.S.F.

ustrative Cross Sections, Alternative A
locks 3 and 4

Navy Broadway Complex Project

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Block 2

Up to 1,000,000 SF of Navy office uses would be developed on Block 2. A 25-floor tower with a maximum height of 350 feet and 569,000 SF would be located on the eastern half of the block along Pacific Highway. On the western half of the block, an existing Navy building (Building 12) would be rehabilitated or a new building of 486,000 SF would be developed. Approximately 100,000 SF within Building 12 would be new construction added above the roof of the existing building, if that building were rehabilitated. Within the Block 2 square footage, a museum of up to 55,000 SF in size would be provided, with its principal entry on the ground floor oriented to the open space on Block 1 at the foot of Broadway. Figure 3-7 also depicts an illustrative cross section of this block.

A total of 1,230 parking spaces would be provided, 430 below grade and 800 in a five- to six-floor, 300,000 SF encapsulated above-grade structure. Fleet vehicle parking and storage would be provided for 230 vehicles within this total. This is equal to about 1.23 spaces per 1,000 SF, of which 0.23 space per 1,000 SF would be for storage of those vehicles and one space per 1,000 SF would be for patrons/employees of the Navy offices.

Block 3

This block would be developed with a 1,000-room, 745,000-SF hotel. As conceptually shown in Figure 3-4, two midrise towers would be constructed on a single base. A tower up to 250 feet high would be constructed on the easterly area of the site adjacent to Pacific Highway, stepping down to a 150-foot-high building on the westerly area of the site toward Harbor Drive. The hotel would include ground- and second-level support retail and restaurants, and conference and ballroom facilities. An illustrative cross section of the proposed Block 3 development is depicted in Figure 3-8.

Below-grade parking would be provided for 750 vehicles, which is approximately 1 space per 1,000 SF or 0.75 spaces per room.

Block 4

Block 4 would be developed with a 500-room, 475,000-SF hotel that includes an additional 25,000 SF of retail and/or restaurant uses. Unlike the support retail that would be provided in the mix of land uses on Blocks 1 and 3, the retail on Block 4 would be independent of, but ancillary to, the hotel uses proposed on this block. As shown in Figure 3-4, the developments on Blocks 1, 2, and 3 step down towards this block, which would have a maximum structural height of 150 feet. As with the other development on the site, the taller structures on Block 4 would be on the easterly area of the block, stepping down to lower structures as the site approaches the waterfront to the west. The hotel would provide retail uses on the ground floor. Figure 3-8 depicts an illustrative cross section of Block 4 development.

Below-grade parking would be provided for 475 vehicles at a ratio 0.75 spaces per hotel room and 4 spaces per 1,000 SF of retail.

Phasing Plan for Alternative A

The phasing for this and all other alternatives would be dictated by market conditions. A possible phasing program is depicted in Figure 3-9. For purposes of analysis, it is assumed that the project would be developed over an approximately 11-year period. Based on market conditions, the timing and onsite location of development may differ from the phasing shown herein. Open space would be provided in the last phase. This is because Navy offices would not be constructed until the third phase of the project, after sufficient private development has occurred to offset the cost of the Navy offices. Building 1, which currently has 319,000 SF of Navy offices and is located on the site of the future open space, would need to be retained on the site until new Navy offices are completed.

The phases and associated construction activity are as follows:

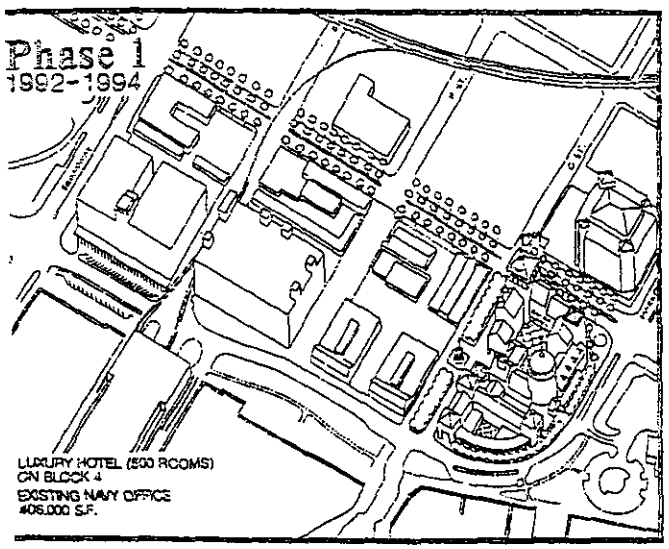
- Phase 1--1992-1994: The hotel on Block 4 would be developed.
- Phase 2--1995-1997: Building 12, located on the westerly area of Block 2, would be rehabilitated and expanded. At the same time, the buildings on the easterly half of Block 2 and all buildings on Block 3 would be demolished and the site used for temporary surface parking.
- Phase 3--1998-2000: The commercial office would be constructed on the easterly area of Block 1. The new Navy office would be constructed on the easterly area of Block 2.
- Phase 4--2001-2003: Building 1 would be demolished for the construction of the open space and the hotel on Block 3 would be constructed.

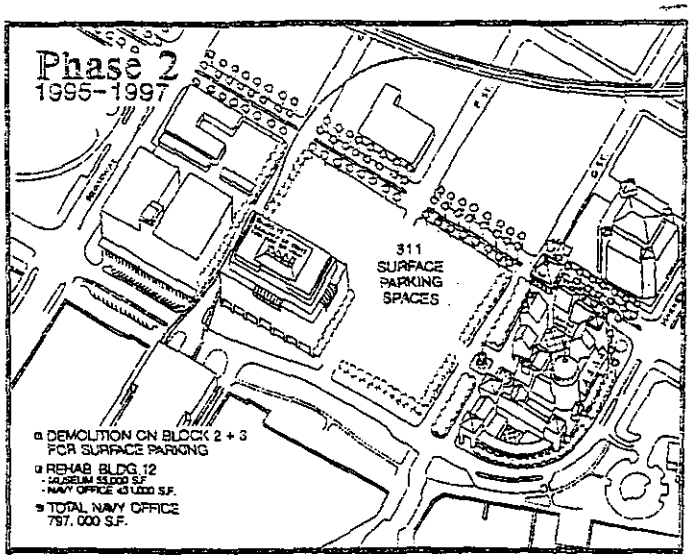
3.2.2 ALTERNATIVE B

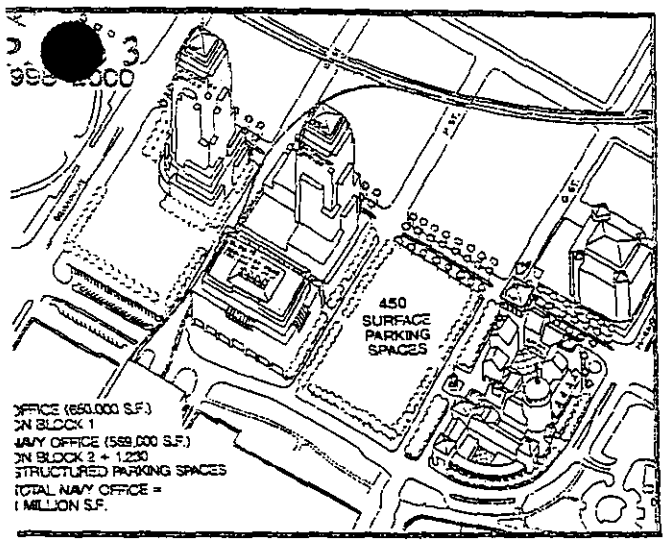
Alternative B is similar to Alternative A, but includes more commercial office space and less open space. This alternative is intended to meet the project objectives with no financial assistance from the City of San Diego. Alternative B includes an additional 250,000 SF of commercial office space for a total onsite development of 3,500,00 SF. This would be sufficient to fully offset the cost of the new Navy offices.

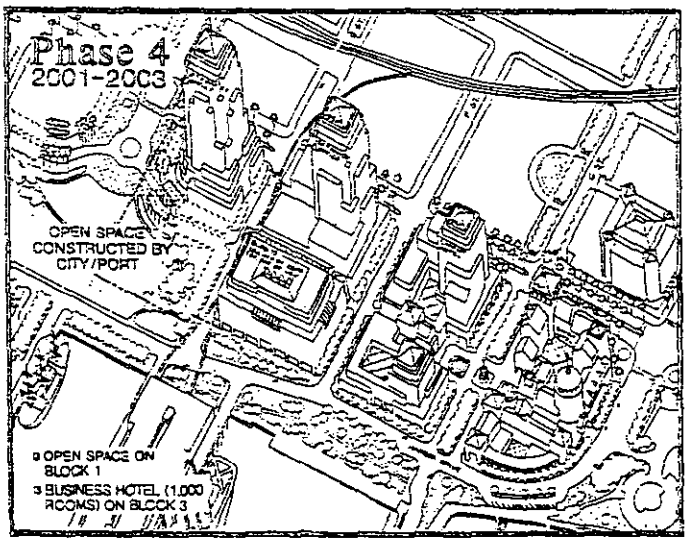
Less open space would be available on Block 1, where the additional commercial office is proposed. Alternative B includes a 900,000-SF commercial office development in a 300-foot-high building on Block 1. As shown in Figure 3-10, the 1.9-acre open space in Alternative A would be reduced to a 0.5-acre pedestrian plaza located at the foot of Broadway. Consolidation of adjacent City and Port District land is not considered in this alternative, and the circulation and configuration of Broadway would not be altered.

All other land uses on Blocks 2, 3, and 4 would be the same as Alternative A, including a maritime museum and public and visual access to the waterfront.









Possible Phasing Program
Alternative A
Navy Broadway Complex Project

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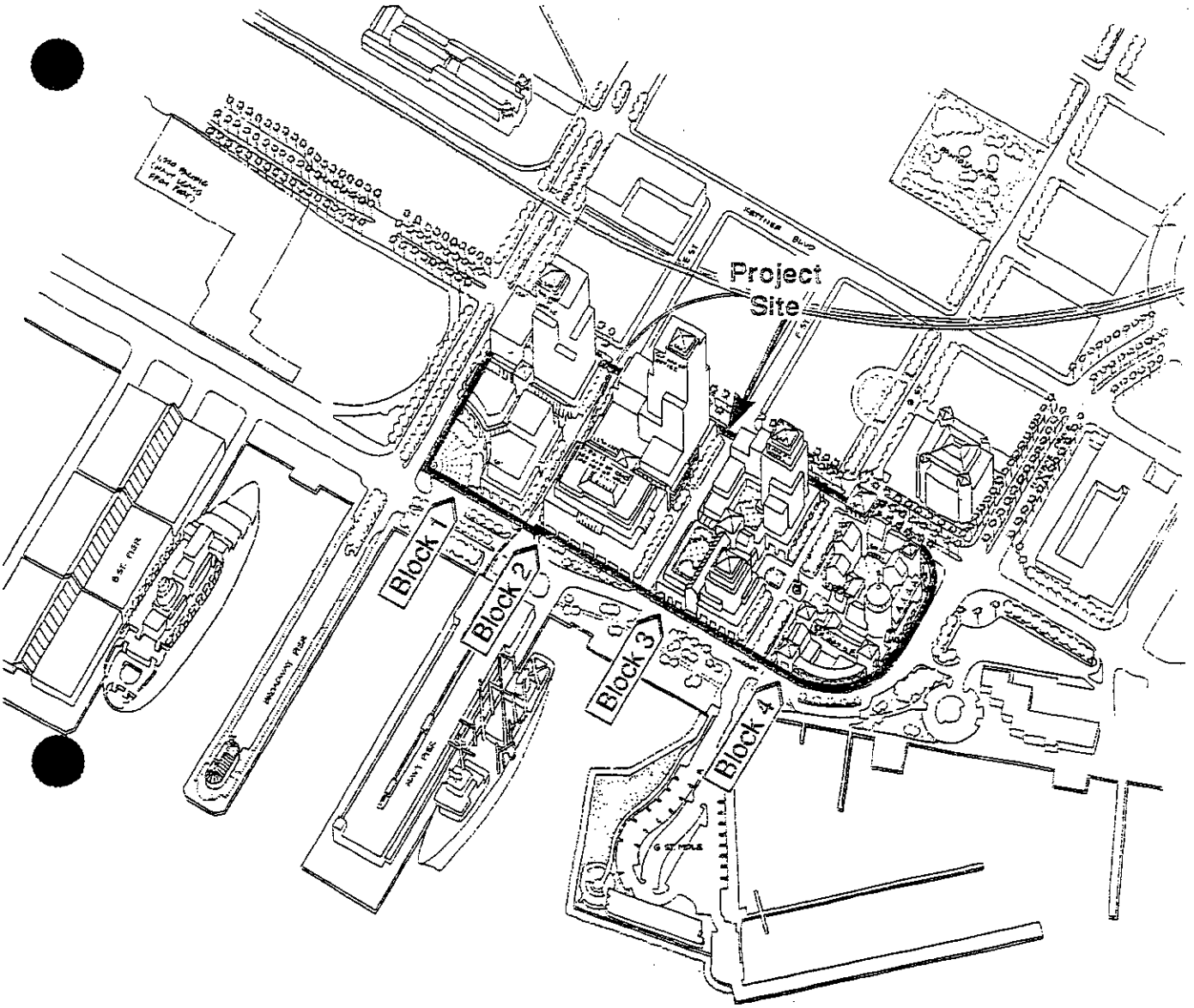

'ROGRAM

lock umber	Land Use	Gross Square Footage	Parking	Max. Height (Feet)
1	Commercial Office	900,000	900	300
	Open Space (0.5 Acre)		below-grade	
2	Navy Office:			
	- Bldg. 12	331,000	430	350
	- New	669,000	below-grade	
	Museum	55,000	200	
			above-grade	
	Above-Grade Parking	500,000		
3	Hotel	745,000	750	250
			below-grade	
4	Hotel	475,000	375	150
	Retail	25,000	100	
			below-grade	
otal	—	3,500,000	3,355	—

ite Density = 5.38 Gross FAR

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Alternative B
Navy Broadway Complex Project

NORTH

Alternative B is similar to Alternative A in terms of building massing and layout, with the tallest buildings on the northeasterly area of the site--in this case peaking on Block 2 at 350 feet--stepping down toward Broadway on the north, Seaport Village on the south, and the waterfront to the west, as shown in Figure 3-10.

Description of Alternative B

Alternative B would include a mix of Navy office, museum, commercial office, hotel, open space, and retail uses in up to 3,500,000 SF of development. The overall FAR for this alternative would be 5.88. As with Alternative A, the location and mix of land uses would be determined by market conditions. Proposed uses, by block and approximate heights, are described below.

Block 1

A 900,000-SF commercial office building would be developed. The commercial office building would be similar in design to the building proposed in Alternative A, but would extend development to cover more area of the block (see Figure 3-4 and Figure 3-10). As conceptually shown, the office building would include a stepped tower up to 300 feet high with an adjacent 150-foot-tall wing to the north. These structures would step down to lower-lying bases located to the west, adjacent to a 0.5-acre pedestrian plaza. Ground-level retail uses would be provided adjacent to the pedestrian plaza.

Below-grade parking for 900 vehicles would be provided, which is 1 space per 1,000 SF.

Blocks 2, 3, and 4

The development on these blocks would be the same as with Alternative A. Please see the description in Section 3.2.1 (page 3-13).

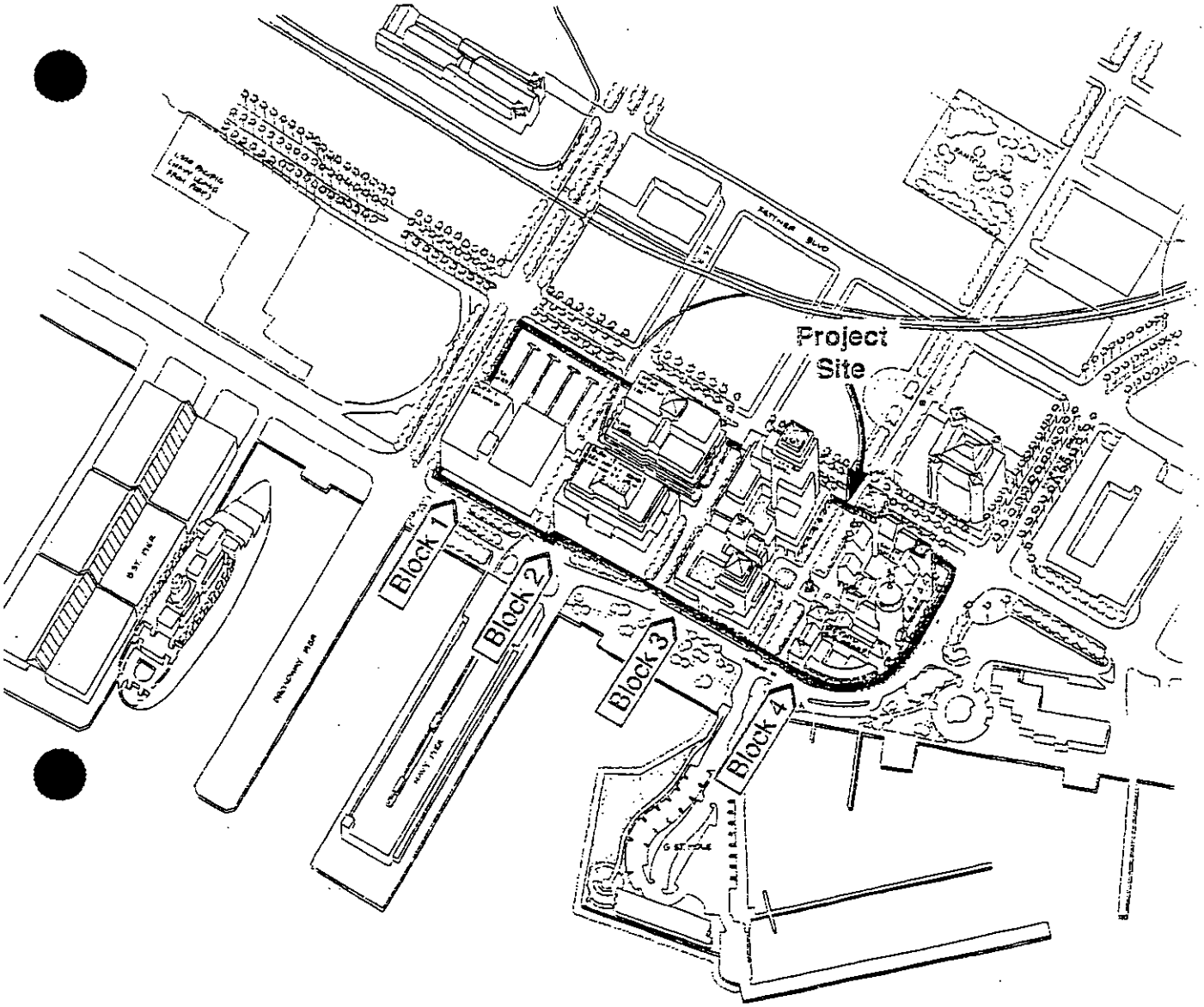
Phasing Plan for Alternative B

Phasing for Alternative B would be the same as for Alternative A. Please see Section 3.2.1 (page 3-14).

3.2.3 ALTERNATIVE C

Alternative C is intended to provide the minimum private development necessary to offset the costs of providing 1,000,000 SF of Navy offices. Instead of new offices on Block 2, supported in part by commercial office on Block 1, Alternative C focuses on rehabilitation of the two largest existing onsite buildings, Buildings 1 (on Block 1) and 12 (on Block 2), supplemented by a new low-rise Navy office building also on Block 2 (see Figure 3-11). The costs of rehabilitating the two existing buildings and building a new one on Block 2 would be offset by the same amount of hotel and retail on Blocks 3 and 4 as in Alternatives A and B. Total onsite development, including Navy offices, would be 2,470,000 SF.

Although this alternative would reduce the total onsite development, compared with Alternatives A and B, its configuration would not allow for the provision of open space on Block 1 at the foot of Broadway, because that is the current location of Building 1. Furthermore, a museum would not be financially supportable with this alternative. The circulation and



PROGRAM

Block Number	Land Use	Gross Square Footage	Parking	Max. Height (Feet)
1	Navy Office (Bldg. 1)	366,000	220 surface	100
2	Navy Office:			
	- Rehab Bldg. 12	366,000	400 below-grade	150
	- New	248,000	600 above-grade	
	Above-Grade Parking	225,000		
3	Hotel	745,000	750 below-grade	250
4	Hotel	475,000	375	150
	Retail	25,000	100 below-grade	
Total	—	2,470,000	2,455	—

Site Density = 4.16 Gross FAR

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NORTH

Alternative C

Navy Broadway Complex Project

configuration of Broadway would not be altered, but E, F, and G streets would be extended through the site, with G Street serving as a major pedestrian linkage.

Alternative C is different from Alternatives A and B in terms of building massing and layout. The stepping down of structures toward the waterfront, as found in Alternatives A and B, would not occur with this alternative. Instead, the massing would generally follow existing patterns found on Blocks 1 and 2, with the higher structures on the westerly area of the blocks, as conceptually shown in Figure 3-11.

Description of Alternative C

Uses proposed for Alternative C are described below. The overall FAR for this alternative would be 4.15. Building heights are approximate.

Block 1

The existing building on the westerly area of the block, Building 1, would be rehabilitated to include 366,000 SF of Navy office uses. The existing building height, 100 feet, would be unchanged. Ground-level retail would not be included in this building.

Surface parking for 230 vehicles would be provided on the easterly area of the block. The parking ratio for this block would be combined with additional Navy office parking that would be provided on Block 2 to arrive at an overall Navy office parking ratio of 1.23 spaces per 1,000 SF. This is delineated further in the discussion of Block 2.

Block 2

This block would include Navy office uses only. Building 12, on the westerly area of the block, would be rehabilitated to include 386,000 SF of rehabilitated and 100,000 SF of new office space within a 150-foot-high structure. A 130-foot-high building housing 148,000 SF of office space would be constructed on the easterly area of the block.

A total of 1,000 parking spaces would be provided, 400 below grade and 600 in a three- to five-floor, 225,000-SF above-grade structure. Including Block 1, a total of 1,230 parking spaces (230 for fleet vehicle storage) would be provided for 1,000,000 SF of Navy office space, a ratio of 1.23 spaces per 1,000 SF of office (of which one space per 1,000 SF would be for employee use).

Blocks 3 and 4

The development on these blocks would be the same as with Alternative A. Please see the description in Section 3.2.1 (page 3-13).

Phasing Plan for Alternative C

Alternative C would be phased as follows (depending on market conditions):

- Phase 1--1992-1994: The hotel on Block 4 would be developed.

- Phase 2--1995-1997: Building 12 would be rehabilitated and expanded on Block 2. At the same time, existing buildings on Block 3 and the easterly area of Block 1 and Block 2 would be demolished and the areas used for temporary surface parking.

- Phase 3--1998-2000: Building 1 would be rehabilitated on Block 1.

- Phase 4--2001-2003: The new Navy office would be constructed on the easterly area of Block 2, and the hotel would be constructed on Block 3.

3.2.4 ALTERNATIVE D

Alternative D was developed to consider development of most of the Navy offices at a location other than the Navy Broadway Complex, with the costs of the Navy offices supported primarily by private development on the Navy Broadway Complex. The Centre City East area--where San Diego's new civic center is proposed--was considered the most likely alternative location for Navy office uses due to the potential availability of parcels that could accommodate nearly 1,000,000 SF of office space and due to its proximity to the Navy Broadway Complex (approximately 1 mile). This area is shown in Figure 3-2, page 3-3.

The Navy would retain approximately 20,000 SF of office space at the Navy Broadway Complex to provide the minimum necessary support personnel for the continued operation of the Navy Pier. Approximately 980,000 SF of Navy offices would be provided in the Centre City East area. To offset the Navy's costs, 2,915,000 SF of mostly private, mixed-use development (except the 20,000 SF of Navy offices) would be provided at the Navy Broadway Complex. Total development with this alternative would be 3,995,000 SF.

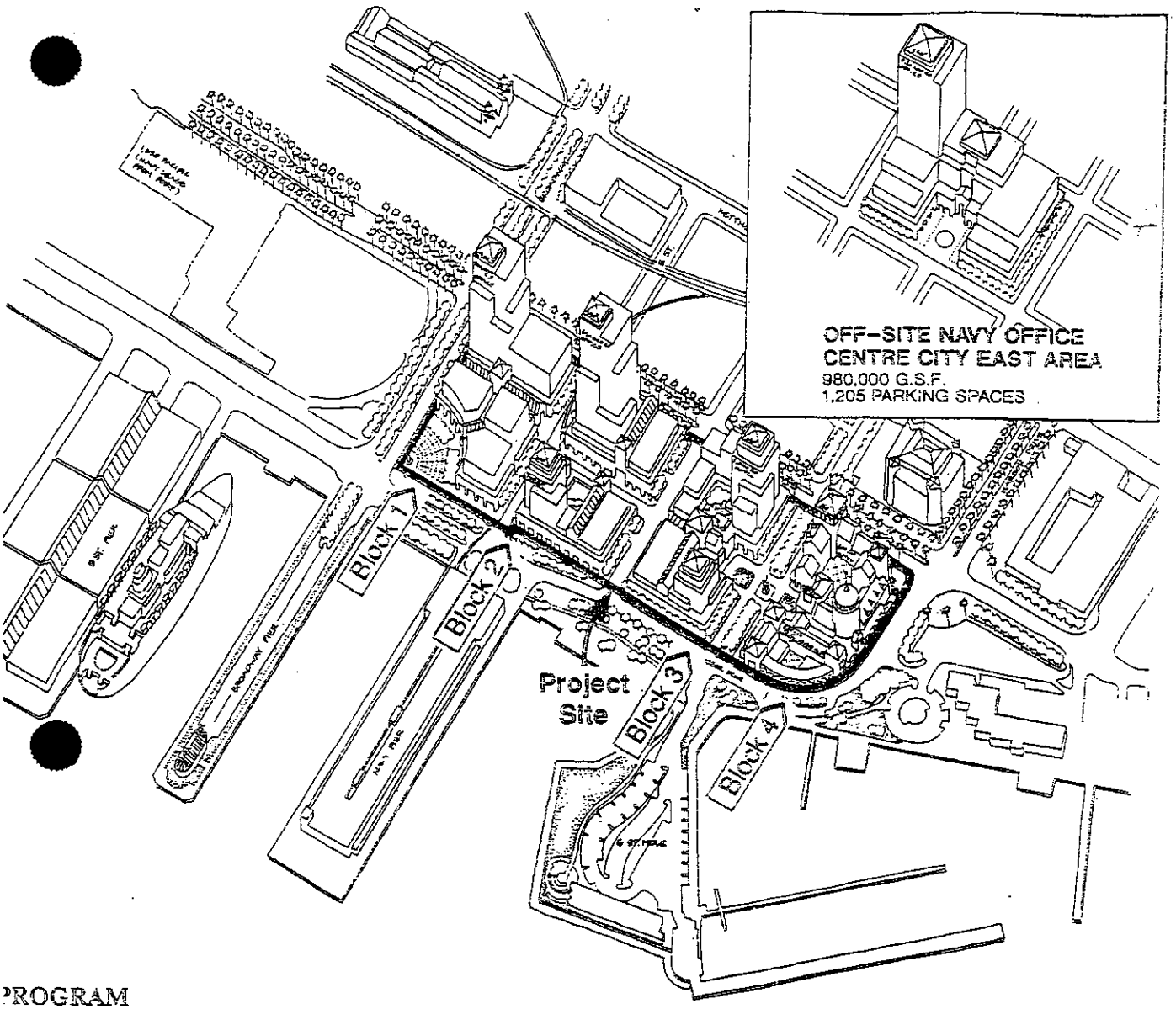
A 0.5-acre pedestrian plaza would be provided at the northwesterly corner of Block 1 at the foot of Broadway, and E, F, and G streets would be extended through the site with G Street providing a major pedestrian linkage. A maritime museum would not be provided because insufficient revenues would be generated by the project.

Alternative D is similar to Alternative B in terms of building massing and layout on the Navy Broadway Complex. The tallest buildings would be on the northeasterly area of the site, with heights peaking on Block 2 and stepping down towards Broadway on the north, Seaport Village on the south, and the waterfront on the west, as shown in Figure 3-12. Blocks 1, 3, and 4 would be developed as proposed in Alternative B. Block 2 would have a 300-room hotel on the westerly area of the block.

The Navy offices would be developed in a 980,000-SF building that covers two currently unspecified blocks in Centre City East, as conceptually shown in Figure 3-12. The building would be designed to have a stepped podium base leading to a 350-foot-high tower.

Description of Alternative D

Uses included in Alternative D are described below by block. The overall FAR on the Navy Broadway Complex would be 5.4 and the offsite development would have an FAR of approximately 7.0. Building heights are approximate.



PROGRAM

Block Number	Land Use	Gross Square Footage	Parking	Max. Height (Feet)
1	Commercial Office Open Space (0.5 Acre)	900,000	900 below-grade	300
2	Commercial Office Hotel Navy Office	530,000 200,000 20,000	780 below-grade	350
3	Hotel	745,000	750 below-grade	250
4	Hotel Retail	475,000 25,000	375 100 below-grade	150
Off Site	Navy Office	980,000	805 below-grade	350
	Above-Grade Parking	100,000	400 above-grade	
Total On and Off	—	3,995,000	4,110	—

Site Density = 5.4 Gross FAR

Alternative D
Navy Broadway Complex Project

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Block 1

The development on Block 1 would be the same as with Alternative B. Please see the description in Section 3.2.2, page 3-13.

Block 2

The easterly area of Block 2 would be developed with 530,000 SF of commercial office and 20,000 SF of Navy office in a tower up to 350 feet high, rising from a broad podium base. The design of this building would be similar to the building proposed in the same location in Alternative A (see Figure 3-4 and Figure 3-12). The office on the easterly area would step down to a 200-foot-high hotel tower located on the westerly area of the block. The hotel would have 200,000 SF of space and would include 300 suites. Total square footage on this block would be 750,000. Ground-level retail uses would be provided in both buildings.

Below-grade parking would be provided for 780 vehicles at a ratio of 1.04 spaces per 1,000 SF.

Blocks 3 and 4

The development on these blocks would be the same as with Alternative A. Please see the description in Section 3.2.1, page 3-13.

Offsite

A total of 980,000 SF of Navy office uses would be developed at the offsite Centre City East location. The maximum height of the building would be 350 feet.

Parking for 1,205 vehicles would be provided--805 spaces in a below-ground structure and 400 spaces in a 100,000 SF above-ground parking structure. A ratio of 1.23 spaces per 1,000 SF of office would be provided, of which 0.23 space per 1,000 SF would be for fleet vehicle storage and one space per 1,000 SF for employees/patrons.

Phasing Plan for Alternative D

Alternative D would be phased as follows (depending on market conditions):

- Phase 1--1992-1994: The hotel on Block 4 would be developed.
- Phase 2--1995-1997: The first 500,000 SF of offsite Navy offices would be developed.
- Phase 3--1998-2000: The commercial office and pedestrian plaza would be constructed on Block 1. The hotel would be developed on Block 3.
- Phase 4--2001-2003: The commercial office (with 20,000 SF of Navy office) and a suites hotel would be constructed on Block 2. In addition, the remaining 480,000 SF of offsite Navy offices would be constructed.

3.2.5 ALTERNATIVE E

Alternative E would provide 1,000,000 SF of Navy offices on the Navy Broadway Complex with no private development. Traditional funding mechanisms, i.e., Congressionally appropriated tax dollars, would be used to finance construction. The project would consist solely of development of 1,000,000 SF of Navy offices, as depicted in Figure 3-13. No open spaces or pedestrian plazas would be developed on the site, nor would there be an extension of E Street, F Street, and G Street for vehicular access through the site. Pedestrian access through the site would not be inhibited by fencing or any other physical barriers, but it would be primarily across parking lots instead of along sidewalks.

Description of Alternative E

Uses proposed in Alternative E are described below. The overall FAR for this alternative would be 1.68. Building heights are approximate.

Block 1

Building 1 would be retained on the westerly area of the block and rehabilitated to include 366,000 SF of office space. The building would be a maximum of 100 feet high. In addition, 270 surface parking spaces would be provided.

Block 2

Building 12 would be retained on the westerly area of the block and would be rehabilitated and expanded to include 486,000 SF of office space, 100,000 SF of which would be new construction on the roof of the building. The building would be up to 150 feet high. The easterly area of the block would be used for surface parking for 360 vehicles.

Block 3

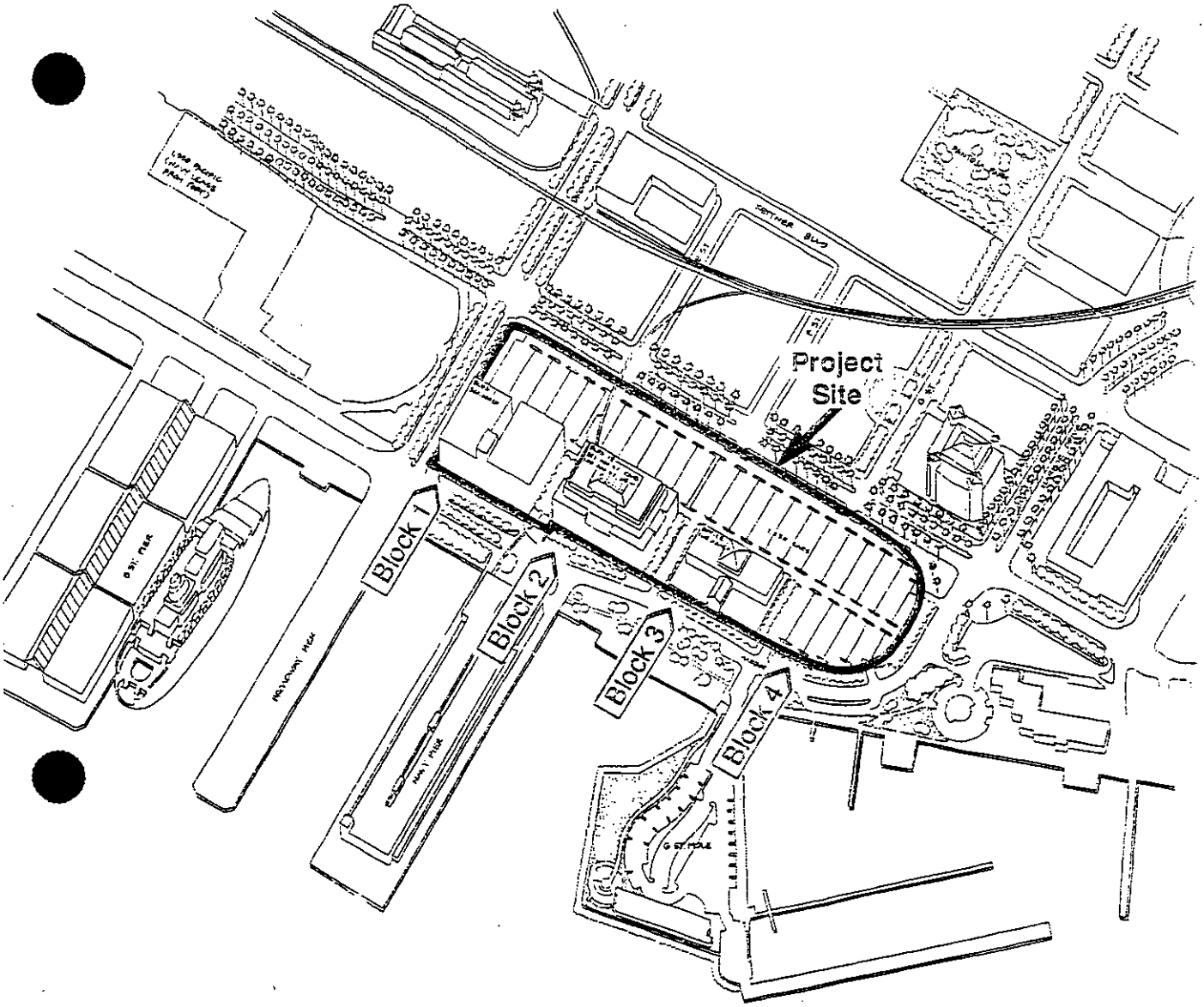
A new 148,000 SF office building that would not exceed 100 feet in height would be constructed on the westerly area of this block. The easterly area of the block would be used for surface parking for 207 vehicles.

Block 4

This block would be used for surface parking. A total of 393 spaces would be provided. Total parking on the site would be 1,230 spaces (230 for fleet vehicle storage), a ratio of 1.23 spaces per 1,000 SF of office, of which one space per 1,000 SF would be for employees/patrons.

Phasing Plan for Alternative E

It is assumed that this alternative would be developed in one phase, between 1996 and 1998.



PROGRAM

Block Number	Land Use	Gross Square Footage	Parking	Max. Height (Feet)
1	Navy Office: - Bldg. 1	365,000	270	100
2	Navy Office: - Bldg. 12 - New	386,000 100,000	360 surface	150
3	Navy Office: - New	148,000	207 surface	0
4	Parking	—	393 surface	0
Total	—	1,000,000	1,230	—

Site Density = 1.68 Gross FAR

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Alternative E

Navy Broadway Complex Project

3.2.6 ALTERNATIVE F

As discussed in Section 3.2, page 3-5, subsequent to the public announcement of the Navy's proposed concept for redevelopment of the Navy Broadway Complex, which included approximately 1.3 acres of open space on the 3.5-acre Block 1 site, there was community discussion of providing a larger open space at the foot of Broadway. The proposed concept was modified to create 1.9 acres of open space at the foot of Broadway (Alternative A).

A concept was also developed, Alternative F, reserving the entire 3.5 acres on Block 1 for open space. The density of development on the other three blocks would be increased equal to the full development program for Alternative A, in order to provide sufficient development to offset the costs of providing Navy offices (see Figure 3-14). Local financial assistance from the City of San Diego for infrastructure improvements (e.g., roadway and streetscape improvements) would be required. Adjacent property to the north under the control of the City of San Diego and the San Diego Unified Port District would be added to create an even larger open space at the foot of Broadway. A significant waterfront gateway to downtown San Diego could be created at the foot of Broadway. Development of this alternative is not contingent upon the development of adjacent City and Port District property.

The public benefits offered by this alternative would be the same as Alternative A, except that more public open space would be provided. Because the same amount of development as shown in Alternative A would be required to sufficiently offset the costs of Navy offices, development on Blocks 2, 3, and 4 would be intensified. Building heights on Blocks 2, 3, and 4 would be higher than Alternative A, with towers up to 500 feet high on Block 2 (instead of Alternative A's 350 feet), 350 feet high on Block 3 (instead of 250 feet high), and up to 250 feet high on Block 4 (instead of 150 feet high). (The tallest building in Alternative A is the 400-foot-high commercial office building proposed on Block 1.) Building massing and layout would be similar to Alternatives A, B, and D, with the tallest buildings on the easterly area of Block 2, stepping down to shorter buildings toward the waterfront to the west and a specialty shopping center to the south, as shown in Figure 3-14.

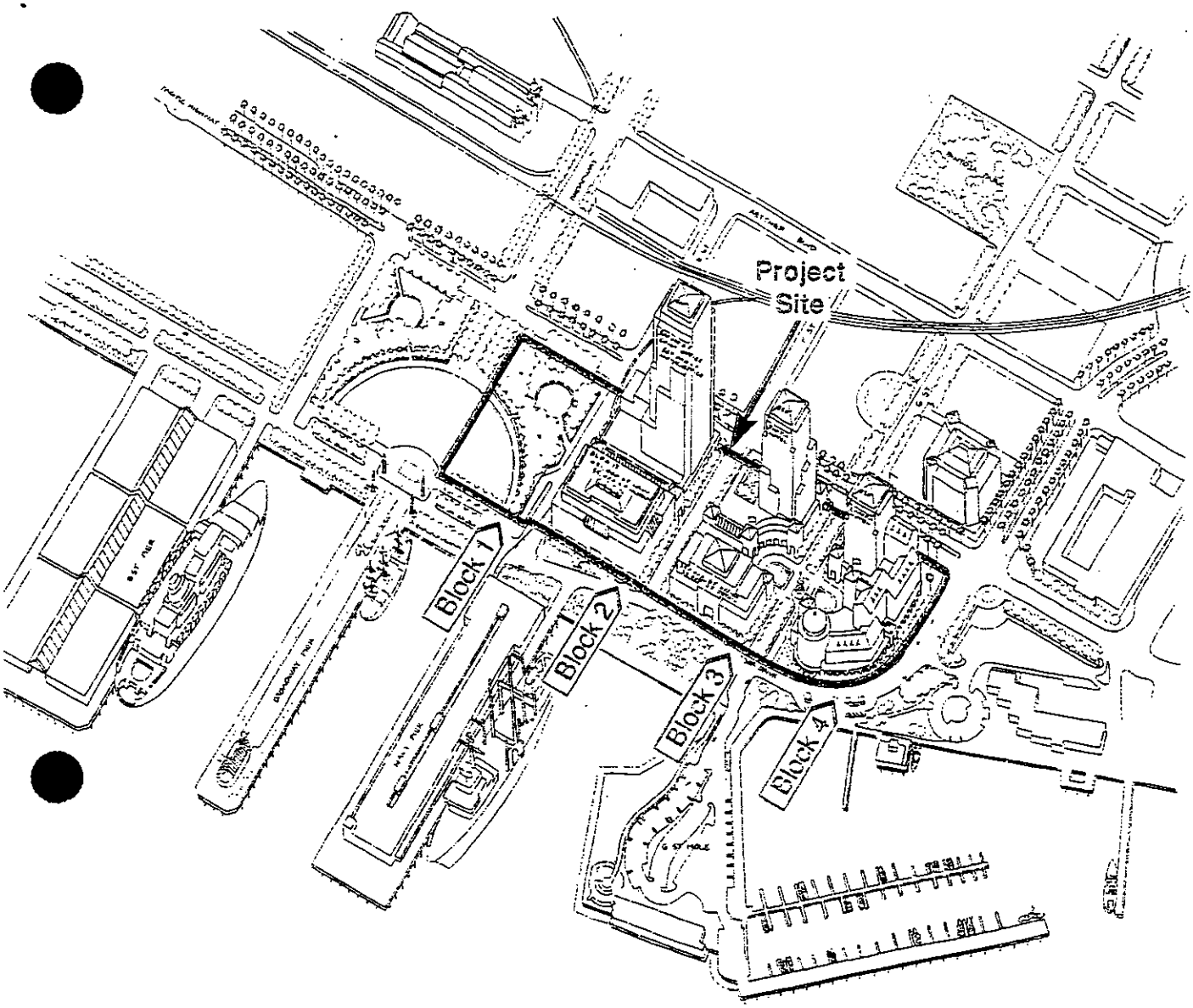
Alternative F includes the development of 3,315,000 SF of mixed uses in the Navy Broadway Complex. A total of 650,000 SF of commercial office, 1,000,000 SF of Navy office, a 745,000 SF and 475,000 SF hotel, and an up to 55,000 SF museum would be developed. E, F, and G streets would be extended through the site, with G Street serving as a major pedestrian linkage. The overall intensity of uses differs from Alternative A only in the amount of above-grade parking that would be provided (to offset parking that would have been on Block 1), with Alternative F providing 365,000 SF versus Alternative A's 300,000 SF.

Description of Alternative F

Uses considered in Alternative F are described below by block. The overall FAR for this alternative would be 5.7. Building heights are approximate.

Block 1

The approximately 3.5-acre block would be developed as open space. If the City abandons a contiguous segment of Broadway to allow open space development and the Port District dedicates an approximately 3.5- to 4-acre parcel of open space, an approximately 10-acre park could be



PROGRAM

Block Number	Land Use	Gross Square Footage	Parking	Max. Height (Feet)
1	Open Space (3.5 acres)	0	0	0
2	Navy Office:			
	- Bldg. 12	331,000	490	500
	- New	669,000	below-grade	
	Commercial Office	300,000	1,040	
	Museum	55,000	above-grade	
	Above-Grade Parking	365,000		
3	Commercial Office	350,000	825	350
	Hotel	475,000	below-grade	
	Retail	25,000		
4	Hotel	745,000	750	250
			below-grade	
Total		3,316,000	3,105	—

= 5.7 Gross FAR

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Alternative F

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developed at the foot of Broadway (see Figure 3-14). Broadway, which currently extends through the proposed bayfront park, would terminate as a "T" intersection at Pacific Highway. No parking would be provided on this block.

Block 2

An 869,000-SF office building would be developed in a 500-foot-high structure on the easterly area of Block 2. The Navy would occupy 569,000 SF, with the remaining 300,000 SF to be used for commercial office. On the westerly half of the block, existing Building 12 would be rehabilitated and 100,000 SF would be added to accommodate a total of 431,000 SF of Navy office and up to a 55,000-SF museum within a building 150 feet high.

A total of 1,530 parking spaces would be provided, 490 below grade and 1,040 in a 6.5-floor, 365,000-SF above-grade structure that would be located in the podium of the new office building. This block would provide parking at a ratio of 1.17 spaces per 1,000 SF, or 1 space per 1,000 SF of commercial office and 1.23 spaces per 1,000 SF of Navy office (of which one space per 1,000 SF would be employee parking and 0.23 space would be for fleet vehicles).

Block 3

This block would be developed with a 500-room, 350-foot-high hotel on the easterly area of the block, and a 150-foot-high building supporting 350,000 SF of commercial office and 25,000 SF of retail and restaurant uses on the westerly area of the block.

Below-grade parking would be provided for 825 vehicles, a ratio of approximately 4 spaces per 1,000 SF of retail, 0.75 spaces per hotel room, and 1 space per 1,000 SF of commercial office.

Block 4

A 1,000-room, 745,000-SF hotel would be developed within an up to 250-foot-high building, with its highest point on the easterly area of the block, stepping down to 75- to 100-foot-high structures on the westerly area of the block.

Below-grade parking for 750 vehicles would be provided at a ratio of approximately 1 space per 0.75 rooms.

Phasing for Alternative F

Alternative F would be phased as follows (depending on market conditions):

- Phase 1--1992-1994: The hotel on Block 4 would be developed.
- Phase 2--1995-1997: Building 12 would be rehabilitated and expanded on the westerly area of Block 2.
- Phase 3--1998-2000: The commercial office and Navy office on the easterly area of Block 2 would be developed.

- Phase 4--2001-2003: The commercial office and hotel would be developed on Block 3. Building 1 on Block 1 would be demolished.

3.2.7 ALTERNATIVE G

Alternative G is the no action alternative, which assumes that the site would continue to operate with a mix of Navy office and Navy warehouse uses. No new development would occur on the site. The project site is currently developed with 405,753 SF of Navy office and 601,276 SF of industrial/warehouse uses, as depicted in Figure 3-15.

No open spaces or pedestrian plazas would be developed on the site. Pedestrian and vehicular access between downtown and the waterfront through the Navy Broadway Complex would not be provided.

Description of Alternative G

Uses existing on the Navy Broadway Complex and included as the no action alternative, by block, are described below. The overall FAR for this alternative is 1.69.

Block 1

A total of 366,452 SF of Navy office and 39,729 SF of industrial/warehouse uses are located on Block 1. Building 1, located on the westerly area of the block, is the tallest building at 100 feet. Surface parking is provided for 140 vehicles.

Block 2

A total of 37,186 SF of Navy office and 421,660 SF of industrial uses are located on Block 2. Building 12, located on the westerly area of the block, is the tallest building at approximately 100 feet. Surface parking is provided for 25 vehicles.

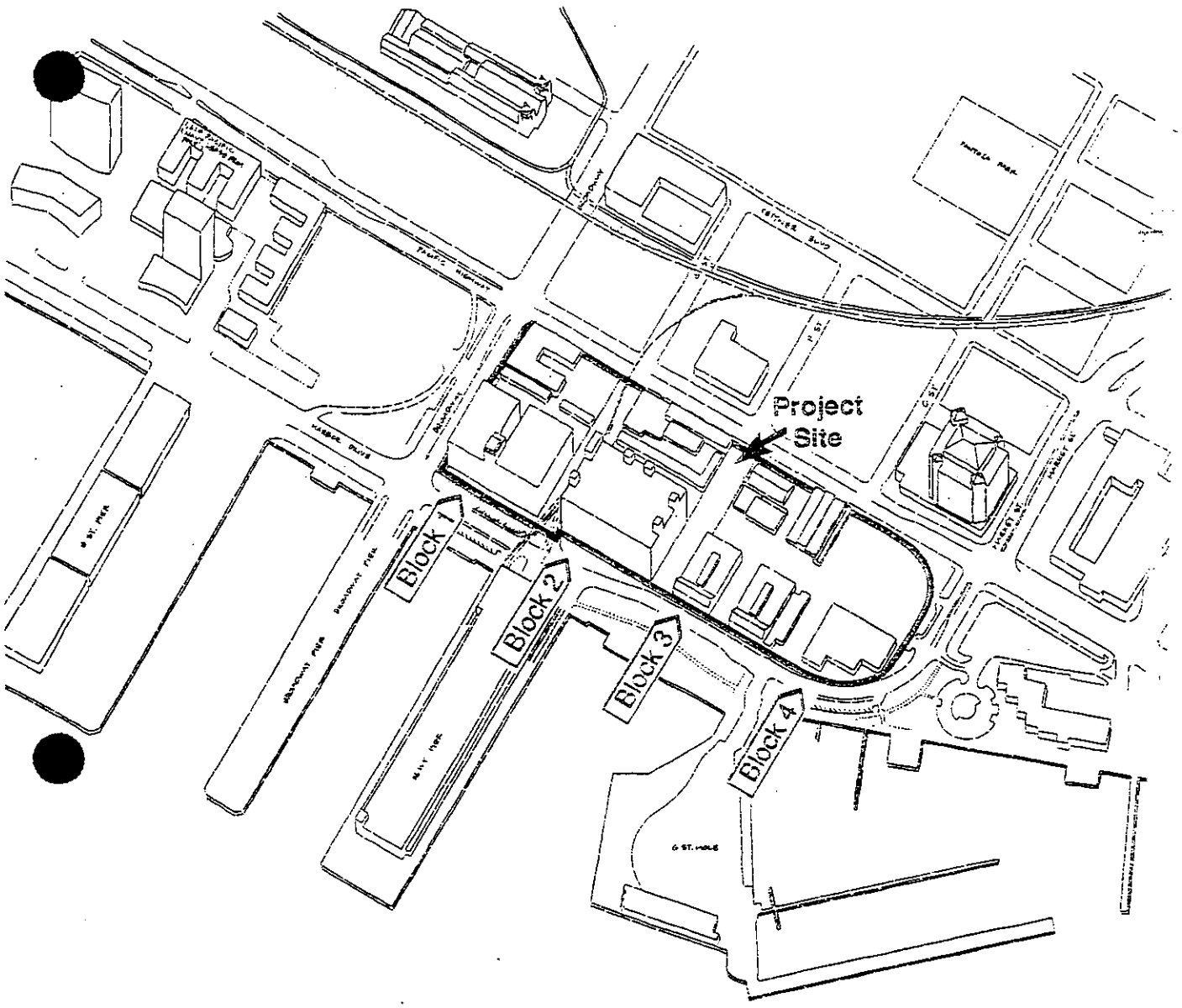
Block 3

A total of 2,115 SF of Navy office and 109,610 SF of industrial/warehouse uses are located on Block 3. The highest building on this block is 40 feet. No parking is provided.

Block 4

A total of 30,227 SF of industrial/warehouse uses are located on Block 4. The highest building is 40 feet. Surface parking is provided for 260 vehicles.

Parking on the entire Navy Broadway Complex totals 425 spaces, which is a ratio of 0.42 spaces per 1,000 SF (approximately one space per 2,500 SF).



PROGRAM

Block Number	Land Use	Gross Square Footage	Parking	Max. Height (Feet)
1	Navy Office Indus./Warehouse	366,452 39,729	140 surface	100
2	Navy Office Industrial	37,186 421,560	25 surface	100
3	Navy Office Indus./Warehouse	2,115 109,610	0	40
4	Indus./Warehouse	20,277	260 surface	40
Total	—	1,007,329	425	—

Site Density = 1.39 Gross FAR

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Alternative G
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