

**PRESERVING HISTORY IN MILITARY BASES:  
A REDEVELOPMENT ISSUE**

by

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**ABSTRACT**

Historic preservation has always taken a back seat to economic development in base conversion projects. No matter how historically significant the base or the resources within the base, reuse plans have been based on the most efficient and economically viable reuse purposes. Job creation and regaining local economy are indeed important and necessary, especially when a base that has been an integral part of the local economy faces closure; however, a number of bases that have been closed or slated for closure possess valuable historic resources and heritage and deserves a careful consideration in reuse possibilities. This thesis argues that economic development and preservation efforts need not be two opposing goals in base redevelopment. Rather, preserving the historic character and resources in a former base can contribute to economic development strategies.

Three cases on nationally historic bases are presented to illustrate different approaches taken in preservation and redevelopment. The Benicia Arsenal represents the norm where preservation responsibilities have been ignored in pursuit of a quick economic recovery. The Charlestown Navy Yard demonstrates that contrary to the widely-held notion that historic preservation offers minimal economic gain, preservation efforts can indeed produce a host of assets to spur sustainable economic development. Finally, the San Francisco Presidio is discussed as an alternative way to approach preservation by entrusting a federal agency to preserve the former base for public use.

The redevelopment experience at the three cases suggests that preservation is most successful when it is based on federal leadership and local involvement. Thus, the government's role in revamping preservation resources and enacting economic incentives for undertaking preservation in military bases is crucial. With the Clinton Administration's proposals to iron out the bureaucratic kinks to expedite the transfer and reuse process and to increase planning grants, future base closures present preservation and economic development possibilities of an unprecedented level and provide unique opportunities for preserving history embedded in military bases.

Thesis Supervisor: Bernard J. Frieden  
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## **Introduction**

During the sixties, the Pentagon first began its long-range plans to close redundant military installations throughout the country. In 1973, additional military operations were deactivated and consolidated as part of a plan to realign the nation's armed forces for the post-Vietnam world. Downsizing of the military operations continued for the next two decades. In 1988, Congress and the Secretary of Defense established a non-partisan Commission on Base Realignment and Closure in an effort to further reduce military operations, and under the supervision of the United States Department of Defense, the Commission compiled a closure list of more than 150 bases. Since then, 50 military bases have been closed and additional 35 bases have been selected for closure in 1993.

These bases have served as a major employer in local communities and in many cases, base closures signified a death knell for the local economy. Thus, economic development has inevitably been the dominant goal in many of base conversions. Under such redevelopment scenario, social and physical concerns were cast aside to pursue a quick economic recovery scheme. Among those neglected planning issues, this thesis is concerned, in particular, with historic preservation and argues that preservation efforts need not deter economic development goals but that preservation can actually enhance economic development.

This discussion is sketched in the following manner. Section 1 begins with a brief history on military bases and alerts the reader to the rise in the



number of base closures in the recent years, especially those that are historically significant. The changing context of base conversions is addressed and the current base disposition and transfer processes are discussed. The remainder of this section presents preservation as an important redevelopment issue and defines the standards for determining historic significance and the incentives for undertaking preservation.

Sections 2 through 4 examine the cases of the Benicia Arsenal, the Charlestown Navy Yard, and the San Francisco Presidio, respectively. Each project is investigated in terms of its site amenities, its historic character and resources, and the key aspects of the reuse planning process. The preservation and economic development components of the reuse plans are highlighted for further discussion. All three sites are of national historic significance but each has taken a different approach to preservation planning. The Benicia Arsenal project represents the case where the urgency to regain the city's economic viability dismissed any attempt at preservation; the Charlestown Navy Yard is presented as an exemplary base conversion project where the economic development plans were complemented by preservation efforts; and the unique case of a federal agency charting the future of the Presidio as a national park is explored as a potential alternative to achieve preservation in future base redevelopment.

Section 5 outlines those principal issues linked with preservation and economic development, based on the experience of the three conversion projects. Despite the differences in the redevelopment context of each project and the success in accomplishing preservation, the cases lead to the conclusion

that a more active federal government's role in revamping preservation resources is crucial in achieving preservation. A set of recommendations to promote preservation efforts in future base conversions further emphasizes the notion that the rise in the current wave of base closures that includes a number of national historic landmarks demands more federal funding and provisions for preservation incentives.

**SECTION 1:  
THE BASE CONVERSION ISSUE**

## 1.0 Introduction

For more than two generations since the Cold War began, the menace of nuclear holocaust dominated the U.S. defense policy. Elaborate defense measures have since resulted in the form of arsenals and military installations in various cities across the nation. For many years, these installations served many functions. The primary role, however, was to house research and development sites for defense technology, weapon storage facilities, and training grounds for the troops. In addition to serving the missions of the military, they also became homes to millions of military families and places of employment for the neighboring communities. These installations were physically, and often socially, a separate entity, complete with their own infrastructure, housing units, education and cultural institutions, medical and social services, retail and convenience stores and even recreational amenities.

Beginning in the mid-sixties, however, necessary changes in the U.S. defense strategies, technology and budgets threatened to bring activities in some of these bases to a virtual halt. According to the legislation, base consolidations and closures were required to free funds for research, new weapons, and more effective delivery mechanisms.<sup>1</sup> Within the United States, the Department of Defense (DoD) currently owns 3,874 military properties, totalling 25 million acres and operates 485 major bases.<sup>2</sup> (Note: The term "military base" includes any camp, post, station, fort, base, yard, facility, or other installation under defense authority employing 500 or more civilians.) Many of the bases were

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<sup>1</sup>Military Base Closings: Benefits for Community Adjustment. American Enterprise Institute for Public Policy Research, p.3

<sup>2</sup>Ibid. p.3

built during World War II, when the services encompassed more than 12 million military personnel. In recent years approximately 2.1 million men and women have been on active duty, roughly one-sixth the number of military personnel once housed.<sup>3</sup>

### **1.1 A History of U.S. Military Base Closures**

Now, after almost fifty years, the demise of the Cold War is once again causing a stir in many parts of the country. The Pentagon's paring down of the military structure has slated hundreds of communities that depend upon the bases for their economic well-being and they are struggling to keep their base open. Opposition to the closing of military bases is hardly surprising, considering the close economic ties the local communities have had with the bases. Nevertheless, the Senate Armed Services Committee contends that "the decision to close or reduce a military installation must be based on military necessity with due regard for environmental impact and they cannot be maintained to support other than national defense requirements."<sup>4</sup>

To expedite the base closure process, Congress and the Secretary of Defense established a non-partisan Commission on Base Realignment and Closure in 1988. Under the supervision of the United States Department of Defense, the Commission compiled a closure list of more than 150 bases. On April 18, 1989, the House of Representatives approved closure of 86 military bases throughout the country by 1995. While the approval of the plan

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<sup>3</sup>Hill, Catherine and Raffel, James. "Military Base Closures in the 1990s: Lessons for Redevelopment." National Commission for Economic Conversion and Disarmament.

<sup>4</sup>Military Base Closings: Benefits for Community Adjustment. p.13

exacerbated the fears of communities slated for base closures, the Defense Department warrants that closing 150 installations will lead to annual savings estimated at \$694 million and a 20-year savings with a net present value of \$5.6 billion (in 1988 dollars) from its first round of base closings.<sup>5</sup>

In 1990, Secretary of Defense Richard Cheney recommended a second round of base closures including larger bases. Thus the second round of base closures began, costing impacted localities thousands of jobs. Since then, 50 military installations have been closed and an additional 35 bases have been scheduled to close in 1993. As a result, hundreds of thousands of acres of military bases that are often prime sites in major metropolitan areas have already been closed or will be closed in the near future. Many of the recently announced base closings represent well-located properties in some of the most valuable and dynamic American real estate markets. For example, 8,000 acres of flat, developable, waterfront land - close to mass transit, rail, and highways and with infrastructure in place - sit in five bases proposed for closure in the San Francisco Bay Area.<sup>6</sup> Others include Fort Sheridan near Chicago and the Puget Sound Naval Station in Seattle. Both of these bases lie in proximity to major urban growth centers with much redevelopment potential.

As the political climate continues to thaw, it is highly likely that the Pentagon will slate further sites for disposition, and the military installations will no longer remain as mere relics of the Cold War but will undoubtedly be recycled to serve the needs of the civilian population. The issue of surplus

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<sup>5</sup>Laubernds, William L. "Opportunities Abound at Closed Military Installations." The Real Estate Finance Journal. p.37

<sup>6</sup>Fisher, Bonnie. "Seizing the Opportunity in Military Base Closures." Urban Land. p.11

military sites has, thus, put in motion the question of what to do with these valuable properties and how they could be best redeveloped. The adaptive reuse of former military bases, particularly those that are designated as historically significant and house historically significant properties, marks the point of departure for the discussion of this thesis.

## **1.2 Base Conversions In a Changing Context**

Beginning in the mid-sixties, dozens of military installations were closed for the first time in American history. Many of them have since been redeveloped into industrial parks, airports, educational facilities, recreational complexes, shopping centers, offices, and prisons. After a hiatus of more than a decade, the Pentagon has once again slated over 80 major military installations for closure. The recent wave of closures, however, operates in a considerably different context, making redevelopment of the bases in the 1990s even more challenging. Communities hosting bases now have access to far fewer federal economic development grants than did their historical counterparts. In addition, a greater environmental task lies ahead as higher standards for toxic cleanup are implemented and public awareness of the environmental issues rises. The environmental evaluation and remedial costs necessary to restore the property to a safe and clean condition can well exceed the fair market value of the property. Moreover, the time needed to prepare a federally required environmental impact statement for closure of a major military installation can take as long as two years, and the clean-up could add five years or more years.

As the number of bases scheduled for closure has increased dramatically, the number of closures within a single region has also increased. For example, two major military installations were proposed for closure in Philadelphia, two in Charleston, South Carolina, and five in the San Francisco Bay Area in 1993.<sup>7</sup> More multiple closures within a single region will undoubtedly have major impacts on the neighboring communities, even though the DoD has responded by establishing a program to cushion the adverse impact and to assist the affected communities to adjust to a civilian economy. Its Office of Economic Adjustment offers the service of facilitating private businesses and new jobs into affected communities, and the Economic Adjustment Committee aims to reduce the community's dependence on Defense activities.

The Clinton Administration has also recognized the urgent need to streamline the base closure and conversion process and has proposed a new set of goals to lessen the impact of base closures. Under the Administration's plan, the Pentagon would speed the disposition and transfer of bases, fast-track the environmental clean-up, and increase economic planning grants to \$300,000 from the previous average of \$100,000. As an addition to the existing public benefit conveyance provision that transfers bases for lower or no-cost for public uses such as recreation, aviation, education, and health are also being considered for economic development purposes.<sup>8</sup>

These proposals translate to \$5 billion over the next five years, with \$2.2 billion allocated to environmental clean-up and \$2.8 billion for economic

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<sup>7</sup>Fisher, Bonnie. p.12

<sup>8</sup>The New York Times. July 3, 1993



development, and they are directed at all communities affected by both the first and second round of base closures.<sup>9</sup> Although the Clinton Administration's proposed measures are subject to Congressional approval, they certainly offer a note of encouragement for all the communities and planners involved in base conversions.

### **1.3 Historic Preservation In Base Redevelopment**

The central mission of the U.S. military forces has been the defense of its people, land and heritage and military installations have served this purpose over the years. Contained within many of the bases are places, objects, and structures that are tangible reminders of people, events, and ideas that shaped the American history. A number of bases that have been deactivated or that are slated for closure are, in fact, designated as National Historic Landmarks and/or house historically significant resources and properties. These historic bases are somewhat of a mixed blessing since they present both constraints and unique opportunities for base redevelopment. Often times, however, constraints such as the restoration and rehabilitation regulations and the costs involved outweigh the potential benefits of preservation and discourage preservation attempts. The following details the background on historic preservation and presents preservation as an important issue for base redevelopment.

#### **1.3.1 Defining Historic Preservation**

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<sup>9</sup>The New York Times. July 3, 1993

The American historic preservation movement began in the mid-nineteenth century with the campaigns of private groups to save national landmarks, such as Mount Vernon and Gettysburg Battlefield. Private action influenced public policy, and the first major federal preservation legislation, the Antiquities Act of 1906 restricted the destruction of archaeological resources on federal property and authorized the designation of national monuments on federal land. Interest in historic preservation assumed new proportions in 1926 when private efforts resulted in the restoration of Colonial Williamsburg as a museum village. This ambitious project fueled an unprecedented interest in colonial period design and introduced large scale restoration to the historic preservation movement.

In 1931, preservation efforts expanded beyond the confines of museums to encompass cities. The first local historic district ordinance was adopted in Charleston, South Carolina. National legislative support for preserving history followed in 1949 when the U.S. Congress chartered the National Trust for Historic Preservation. Following World War II, the nation embarked on a vast building program that often destroyed historic landmarks. In response, Congress enacted the National Historic Preservation Act in 1966 to balance respect for the past with regard for the future. This law established an inventory of properties, known as the National Register of Historic Places that lists "districts, sites, buildings, structures, and objects significant in American history, architecture, archeology, engineering, and culture," and is maintained by the Secretary of the Interior. The Act also defined historic preservation. The definition was stated as the "identification, evaluation, recordation,

documentation, curation, acquisition, protection, management, rehabilitation, restoration, stabilization, maintenance and reconstruction , or any combination of the foregoing activities."<sup>10</sup>

Though the definition of preservation is rather comprehensive, this thesis is primarily concerned with restoration and rehabilitation for the purpose of preserving history in military bases. While these two approaches share the fundamental ways of preservation, there are differences. Restoration is the process of accurately recovering the form and details of a property as it appeared at the particular period of time by means of removal of later work and the replacement of missing original work.<sup>11</sup> Rehabilitation, on the other hand, is the process of returning a property to a state of utility, through repair or alteration, which makes possible an efficient contemporary use.<sup>12</sup> The purpose of rehabilitation is to halt further deterioration and to add a functional dimension without significant rebuilding. Thus, rehabilitation often introduces the concept of adaptive reuse which is to maximize the often-hidden value of real property and to provide a process for the reemployment of this property.

### **1.3.2 Standards and Criteria for Evaluating Historic Significance**

A building is certified as historic if it is listed individually in the National Register of Historic Places or located within a district listed as historic. Resources of national importance are designated as National Historic

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<sup>10</sup>Guidelines for Rehabilitating Old Buildings. National Park Service.

<sup>11</sup>Austin, Richard L. Adaptive Reuse: Issues and Case Studies in Building Preservation. p.4

<sup>12</sup>Ibid.

Landmarks and are also included in the National Register. The Department of the Interior uses the following criteria to evaluate historic significance<sup>13</sup>:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and

(a) that are associated with events that have made a significant contribution to the broad patterns of our history; or

(b) that are associated with the lives of persons significant in our past; or

(c) that embody the distinctive characteristics of type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

(d) that have yielded, or may be likely to yield, information important in prehistory or history.

For properties within already registered historic districts, the Secretary of the Department of the Interior has set the standards as follows<sup>14</sup>:

(a) A building contributing to the historic significance of a district is one which by location, design, setting, materials,

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<sup>13</sup>National Register of Historic Places. National Park Service. Rule 36 C.F.R. §60.4

<sup>14</sup>Ibid. Rule 35 C.F.R. §67.5

workmanship, feeling, and association adds to the district's sense of time and place and historical development.

(b) A building not contributing to the historical significance of a district is one which does not add to the district's sense of time and place and historical development; or one where the integrity of the location, design, setting, materials, workmanship, feeling, and association has been so altered or has so deteriorated that the overall integrity of the building has been irretrievably lost.

(c) Ordinarily buildings that have been built within the past 50 years shall not be considered to contribute to the significance of a district unless a strong justification concerning their historical or architectural merit is given or the historical attributes of the district are considered to be less than 50 years old.

The three case studies explored in this thesis have met these criteria to be placed on the National Register of Historic Places and to be designated as National Historic Landmarks.

### **1.3.3 Economic Incentives for Historic Preservation**

For those properties and districts that are certified as historic, there are economic advantages to putting in preservation efforts. Of the range of federal regulations that have contributed to the current interest in preservation, the federal income tax incentives are, perhaps, the most important. The Tax Reform Act of 1976 restructured the existing tax code that reflected a policy bias favoring new construction over rehabilitation and introduced the 25% tax credit

on rehabilitation of certified historic properties. The tax credit is a dollar-for-dollar reduction of income tax owed and could provide significant savings to the taxpayer. The Act also attempts to adjust the rates at which the costs of historic structures can be written off as amortization or depreciation deductions so that a financial incentive for preservation is established.

The incentive to stimulate preservation and rehabilitation of historic structures and to discourage destructive actions to such properties continued although the Tax Reform Act of 1986 reduced the amount of tax credit. Instead of the previous 25% tax credit, the Act of 1986 permits owners and some lessees of historic buildings to take a 20% income tax credit on the cost of rehabilitating historic buildings or 10% of the cost of rehabilitating non-historic buildings constructed before 1936.<sup>15</sup> The Act also restricted the ability of real estate developers and investors to use deductions and credits to shelter income other than that directly related to the deductions or credits.

Since its implementation, the rehabilitation tax credit has worked as has no other tool to encourage and facilitate the preservation of historically or architecturally significant structures and has been responsible for revitalizing cities and towns throughout the country. Since the enactment of the Tax Reform Act of 1976, more than \$3.95 billion had been invested in over 6,935 rehabilitation projects, and from 1982 through 1985, the rehabilitation credit alone has stimulated an estimated \$8.8 billion of investment in more than 11,700 buildings.<sup>16</sup> This investment not only has been made in large projects,

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<sup>15</sup>A Guide To Tax-Advantaged Rehabilitation. National Trust For Historic Preservation. p.5

<sup>16</sup>Ibid. p.6

such as Union Station in St. Louis, the Willard Hotel in Washington, D.C., and the Pullman Factory in Chicago, but in smaller projects as well. In addition to the federal tax incentive, various state and local government have also provided reductions in property taxes and other state and local taxes for undertaking any certified rehabilitation projects.

#### **1.3.4 Section 106 Review**

Congress, as part of the National Historic Preservation Act of 1966 (NHPA), established Section 106 review as an effort to preserve our nation's historic resources that were either neglected or harmed by federal activities. The Review specifically states that any federal agency undertaking construction, rehabilitation, restoration, demolition, and transfers of properties listed in or eligible for the National Register of Historic Places must "take into account" the impact of their activities on these properties. This Review could be a crucial component of a base reuse planning process, particularly when the base is transferred to a federal agency. For instance, the redevelopment plans for the Presidio are subject to the Section 106 Review.

An independent federal agency responsible for administering this review process is the Advisory Council on Historic Preservation. The Council follows the regulations stated in Section 106 of the National Historic Preservation Act 1966 (NHPA). Following is a brief overview of the steps of Section 106 review<sup>17</sup>:

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<sup>17</sup>Fact Sheet. Advisory Council on Historic Preservation.

- (1) Identify and evaluate historic properties in the area of the proposed activity. They survey for not only those structures that are listed in the National Register but those that meet the criteria to be listed.
- (2) Determine whether the proposed activity will affect the historic structures in any way. Three possible findings are: no effect, no adverse effect, and adverse effect.
- (3) Depending on the outcome of the finding, the agency begins the consultation process to mitigate the adverse effect. The consulting parties are the agency and the State Historic Preservation Office (SHPO).
- (4) The Council makes its decision. Based on the outcome of the decision, the agency either proceeds with their project as intended or makes alternative plans and proposals for another Council review.

#### **1.3.5 Why Preserve?**

Aforementioned economic incentives aside, the underlying question remains: Why preserve? There are a number of reasons for preservation. Jonathan Barnett suggests four reasons that prompts preservation.<sup>18</sup> First is historical association. An example of historical association is: George Washington slept here. Intrinsic historical interest such as an early use of steel frame construction, may be another reason. A third is contextual: a historic district that would be spoiled by intrusive elements. A fourth reason might be that a building is literally a landmark, a significant point in the cityscape that

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<sup>18</sup>Austin, Richard L. Adaptive Reuse: Issues and Case Studies in Building Preservation.



helps people to orient themselves and is remembered as part of the city's image. Still, properties may be preserved just for the outstanding architectural value.

Based on these reasons, the Benicia Arsenal, the Charlestown Navy Yard and the Presidio more than merit preservation. Not only do they mark a significant period in American history, they possess the historic character and physical remnants worth preserving for future generations. With the exception of the Arsenal, preservation efforts have prevailed amidst economic development pressures. The following details the preservation experience gained at each site and continues the discussion on how preservation can be achieved in the redevelopment of military bases.

**SECTION 2:  
THE BENICIA ARSENAL**

## 2.0 Introduction

The guards that once stood at vigil in front of the heavy steel gates at the Benicia Arsenal are no where in sight. Instead, the main entrance gate to the Arsenal is wide open. The no-man's land that clearly marked the military territory from the rest of the city of Benicia has disappeared, too. Now, rows of houses line up on either side of the gate, blurring any notion of boundary. The entry is not all that has changed, however. Buildings that were used as a depot for the deposit and distribution of ordnance stores since the 1850s are now home to some 400-plus tenants of various businesses, and the Arsenal is now called the Benicia Industrial Park. (BIP)

Within a short period of time since the closure, the industrial reuse of the site has revived the Arsenal as the dominant fact in the life of Benicia. The Benicia Industrial Park has accommodated three thousand new civilian jobs and contributed greatly to increasing the assessed value of the City by 9.5 times in ten years.<sup>1</sup> Today the BIP is the largest port-oriented industrial park in Solano County. Benicia's economic success has been achieved at a price, however. With the Army, the City's largest income generator, withdrawing from the local economy, quickly regaining economic stability was the driving force in their redevelopment plans. In the process, historic preservation has been dismissed. In pursuit of economic development, Benicia has neglected the responsibility of preserving the Arsenal's historic character and resources. The case of the Arsenal represents the case where economic development has surpassed historic preservation goals. Through the conversion experience at the Arsenal, the

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<sup>1</sup>Communities in Transition. The President's Economic Adjustment Committee. p.20

factors that made economic development and preservation goals mutually exclusive in base conversions are investigated.

## 2.1 Site Characteristics

The Benicia Arsenal is located in California's upper San Francisco Bay Area. Approximately 35 miles northeast of San Francisco, the city of Benicia lies on the northern waterfront of the Carquinez Strait in Solano County. With the approximate population of 26,000, the City itself is only 3.1 square miles. The Arsenal is located about a mile from its downtown. The main topographical characteristics of the area are defined by the rolling terrain and the land that slopes gently from the Carquinez Strait to the hills to the west. Numerous small valleys also run from the hills to the Strait.

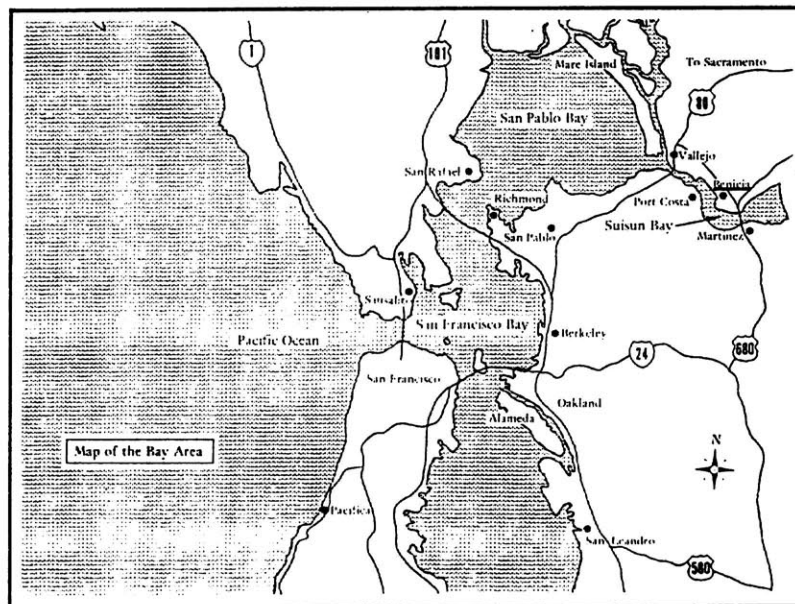


Fig. 2.1 Regional Map of the Bay Area (Source: Bruegmann)

As one of the oldest cities in California and as the fourth location of the state's capital at one time, Benicia boasts of its historic past. Founded in 1847, the City grew up along the waterfront on the Carquinez Strait where primary industries - tanneries, canneries, and shipyards - were located and where the first railroad ferry west of the Mississippi River began service in 1879. Benicia was also a cradle for California's educational institutions. Several schools were established in Benicia in the mid-nineteenth century, including the Dominican College and Mills College, though both campuses were relocated by the century's end. Among its other benchmarks of history, Benicia counts the state's first official Masonic Hall, built in 1850, and the depot and shops of the Pacific Mail Steamship Company, the first large industrial enterprise in California, that was established that same year on the shores of the Carquinez Strait.<sup>2</sup>

## **2.2 A History of the Arsenal**

Foundations for the former military complex that defended the great San Francisco Bay Area and the state were begun immediately following the dramatic taking of possession of California by American forces in the 1840s. With the growing military need of the West, the Army transferred the supply depot from San Francisco to Benicia. The Benicia Arsenal was built on a hilly site jutting dramatically out into the Carquinez Straits. In addition to storing military supplies, the Arsenal overhauled, rebuilt and processed equipment for other tactical organizations. During the Korean conflict in 1950, the Arsenal

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<sup>2</sup>Arsenal Park Historic Conservation Plan. The City of Benicia.

was especially active. With the end of the Korean War in 1953, however, the Arsenal witnessed a period of contraction and retrenchment, chartered by directives from Washington. That same year, the new administration, headed by President Eisenhower, also put into effect a stringent economic policy. There had been sharp cuts in personnel and freezes on new hirings. The Arsenal payroll dropped from 5,371 to 4,404 within six months in 1953.<sup>3</sup>

The Arsenal's mission was then reduced to storage, maintenance, and stock control. During its last days as an active depot, the Arsenal's basic function was to supply ordinance material to installations within the states of California and Nevada and to overseas agencies through the Pacific Coast Army Terminals. On March 30th, 1961, the Army announced the inactivation of the Arsenal by 1964. Today the Arsenal is no longer active, and the land and buildings are in both private and public hands.

### 2.3 Site Attributes

One can count many "firsts" in the city of Benicia, but the longest lived is the establishment of the U.S. Benicia Arsenal (USBA), located on a large tract of land east of the city boundary overlooking the Strait. The site was acquired in 1849 by the federal government for use as a U.S. Military Reservation. Several other army installations preceded and coexisted for a time with the Arsenal, including the Benicia Barracks and the Ordnance Supply Depot. The Benicia Arsenal itself was established in 1852 as one of five permanent arsenals in the country and the first on the Pacific Coast and grew to

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<sup>3</sup>Cowell, Josephine W. History of Benicia Arsenal.

be a major presence in the City. Accompanied by the increasing employment opportunities at the Arsenal, the city of Benicia developed according to the pattern of the "walking-city" where the places to work and live are closely knit together.

### **2.3.1 Historic Resources**

Within the Arsenal property, there are four distinct historic districts that have been placed on the National Register of Historic Places since 1975 and twenty buildings that have been designated as National Historic Landmark. Historic resources that have been recognized as contributing to the historic districts include buildings, open space, landscape feature and urban design elements. The District has some of the state's most distinguished buildings, representative of common styles and building types of its military history.

The two broad categories or types of historic buildings in the Arsenal are the military/industrial buildings that comprise most the district's historic structures and the residential buildings where military personnel were formerly quartered. The military/industrial buildings are more scattered over the site whereas the residential buildings tend to be concentrated in the middle zone of the district. These Arsenal buildings are valuable not only individually but also as a group because they represent a broad range of nineteenth-century American military architecture. The simple and symmetrical masses of plain wall surfaces are punctured by rectangular openings and semi-circular and arches. Some of the most distinguished buildings are as follows: the Camel Barns, the Clocktower, the Shops and the Officer's Residences.

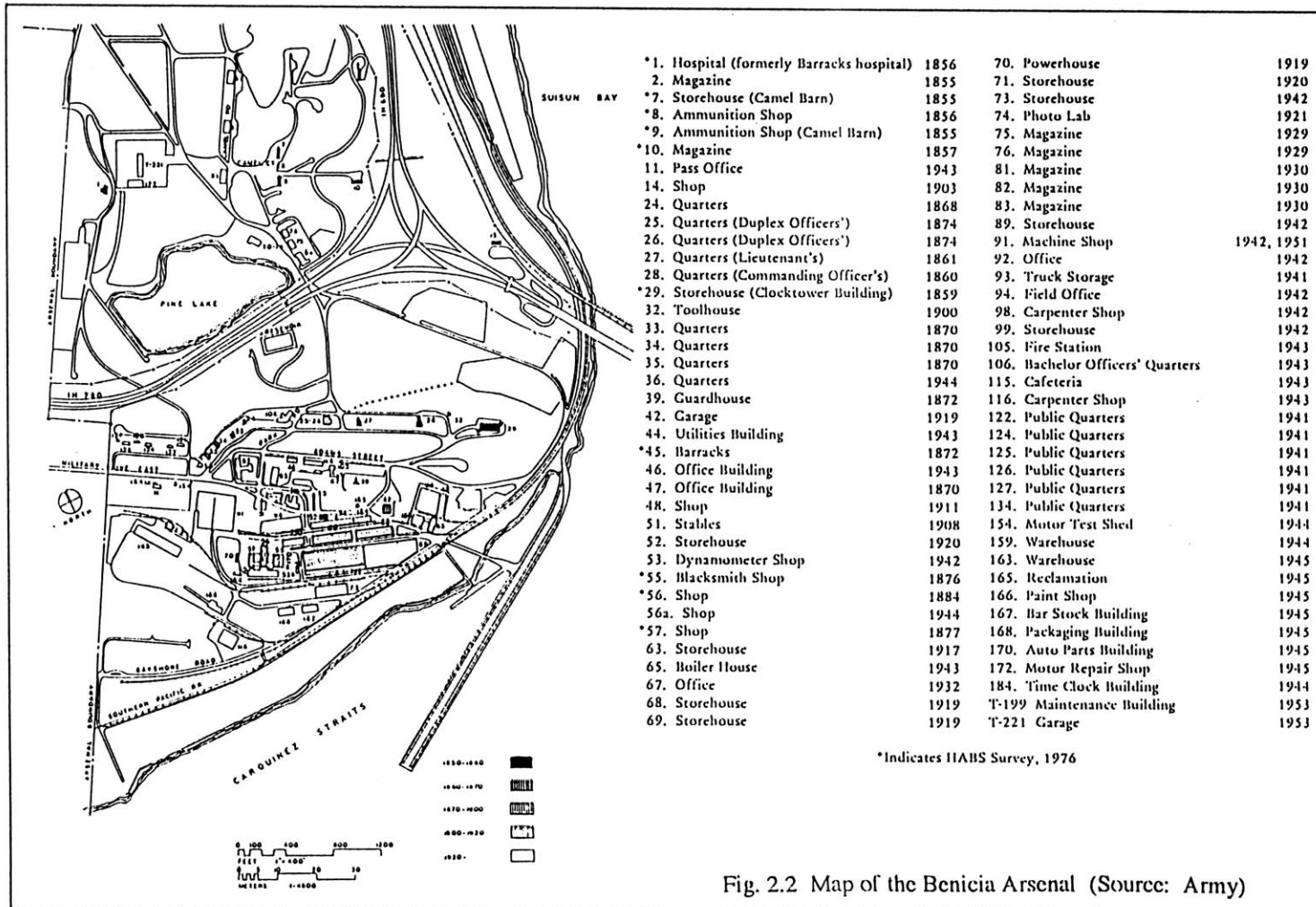


Fig. 2.2 Map of the Benicia Arsenal (Source: Army)



### 2.3.2 Historic Structures

#### The Camel Barns

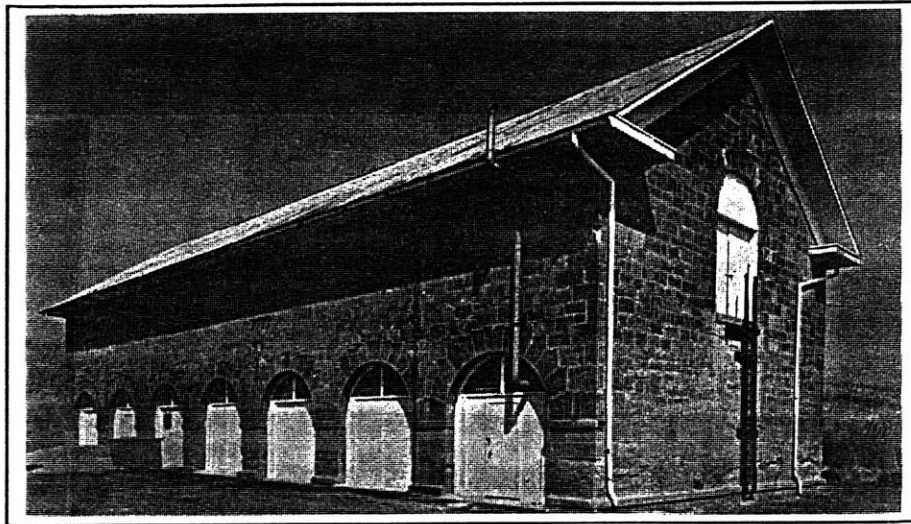


Fig. 2.3 The Camel Barns (Source: HABS)

The first permanent Arsenal structures, built between 1853 and 1856, are two large storehouses with a small engine house between them, all constructed of a fine sandstone. Their massive, austere style set a precedent at the Arsenal that was followed for most of the buildings constructed in the 1850s. There is some evidence that the storehouses were based on standard army plans, slightly modified to fit this particular site. These storehouses were later nicknamed the "Camel Barns," in the 1860s, during the last chapter of the United States Camel Corps.<sup>4</sup> A local non-profit organization, the Benicia Museum Foundation has leased the four barn buildings and is currently using them as a museum of the city.<sup>5</sup>

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<sup>4</sup>A herd of camels was purchased by the U.S. government in 1855 for military use in the American Southwest.

<sup>5</sup>Arsenal Park Historic Conservation Plan. pp.14-18.

## The Clocktower

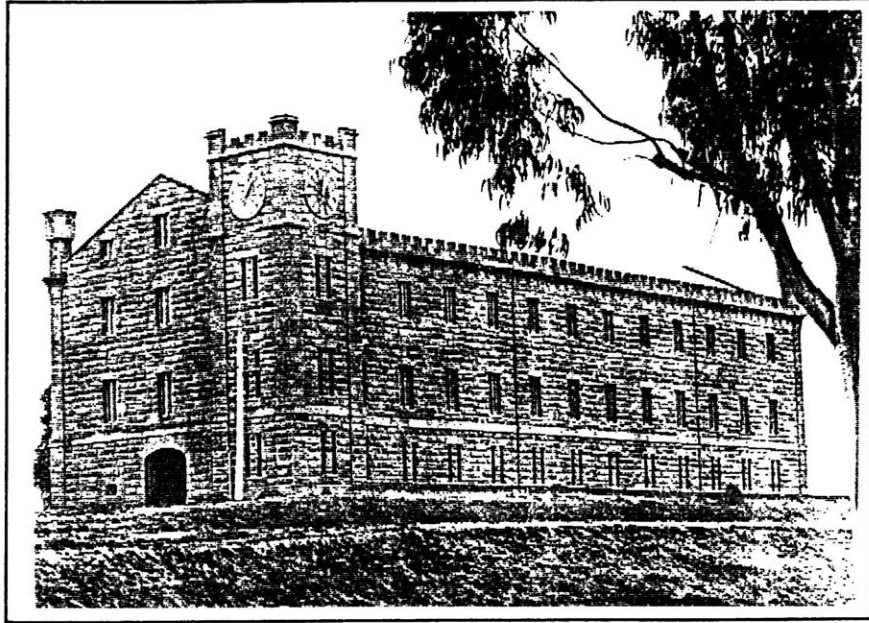


Fig. 2.4 The Clocktower

The main storehouse, Arsenal Building Number 29, also known as the Clocktower Building, is a structurally innovative design; the second story space is clear of supports, in a castellated style built in 1859. It was originally constructed as a building with towers on all four corners, to be used for flank defense in case of attack. The corner towers distinguish the Clocktower Building from earlier storehouses, that usually consisted of a long rectangular main block with a tower housing a stairway in the center of the long side. Following an explosion and fire in 1912 that badly damaged the structure, it was rebuilt. In the process, the upper story walls were removed along the top of the northeast tower and the small turrets on the remaining corners. According to an architectural historian, Robert Bruegmann, this early sandstone building may well be the most architecturally impressive set of structures built

before the Civil War in the western United States. The current use of the Clocktower is a community meeting hall.

### **The Shops**

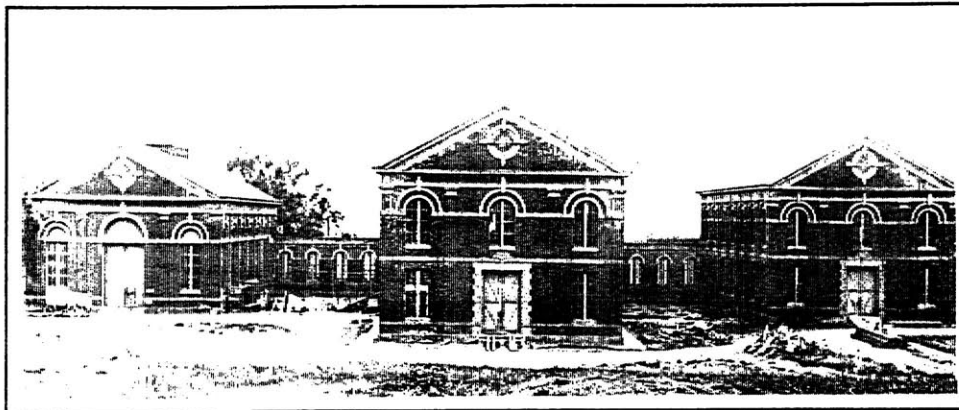


Fig. 2.5 The Shop Buildings (Source: Army, 1884)

The Blacksmith, Machine and Carpenter Shop structures erected in 1876, 1884, and 1877, respectively, are impressive for their Classical styling in the Italianate mode in brick. Their notable features are the bull's-eye windows in the triangular pediments on the gable-ends, the running architrave in raised brick that ties the round-headed windows together around the upper story of the building. The Office Building and the Guard and the Engine House are more residentially-scaled examples of the Italianate style in brick with sandstone trim.

### **The Officers' Residences**

The most imposing residential buildings that remain on the Arsenal property are the Commanding Officer's Quarters of 1860 and the Lieutenant's Quarters of 1861. It is supposed that the Officer's Quarters was built as a

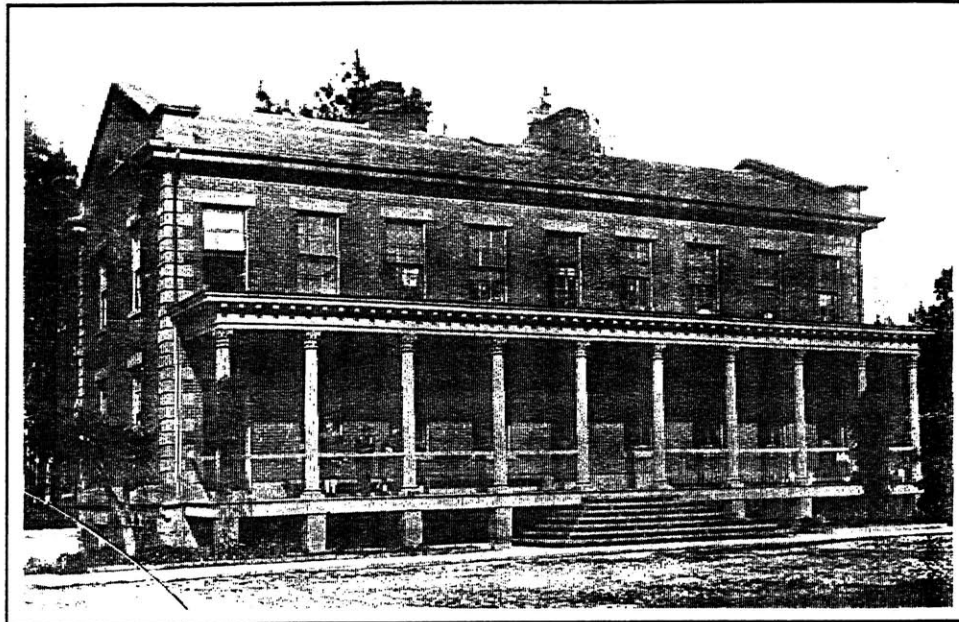


Fig. 2.6 The Barracks (Source: Bruegmann)

duplex in 1874 from the same standard plans that were used for 1860s buildings. Over the years, poor maintenance of these buildings has resulted in deteriorated and derelict structures. Old photographs suggest that these buildings were originally painted with contrasting trim on cornices, quoins, and part of the porches; the porches and main roof also had simple parapets that no longer exist.

#### **2.4 Development of the Benicia Industrial Park (BIP)**

When the federal government first acquired the Arsenal site for use as a U.S. Military Reservation, a unified plan for the entire site was never made. The Reservation was built up according to the more discrete needs of the different sections of the army; the residential areas and quarter of the different installations were scattered about the site and far removed from one another.

Hence there was no cohesive physical organization to the overall site as is found, for example, at installations such as the Presidio of San Francisco nearby. The 1950's construction of two interstate highways and their interchange through the Arsenal further added to this chaotic lay-out. The Arsenal has always been physically isolated from the City despite the significant number of Benicia residents who worked there. Partly due to its ties to shipping and warehousing near the edge of the City, it has continued to stand on its own.

#### **2.4.1 Closure of the Arsenal**

When the U.S. Army announced in 1961 that the Arsenal is slated for closure in 1964, the community readied itself for the toughest battle yet. The residents' protest was only natural, since the Arsenal provided 2,318 jobs or over one-third of the total employment figure at the time of closure. At its peak, during the Korean War in the early fifties, the Arsenal employed 6,700 civilians in the area.<sup>6</sup> The City itself also feared the imminent closure of the largest income generator in the region. Only one strategy seemed plausible for the city of Benicia to cope with massive job losses and quickly restrengthen the local economy: to purchase the Arsenal from the General Services Administration (GSA) and work with the City's biggest private developer that had financing and marketing capabilities it needed to a successful reuse of the Arsenal.

A record of the inventory taken at the time of the Arsenal's inactivation order is as follows<sup>7</sup>:

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<sup>6</sup>Bruegmann, Robert. Benicia: Portrait of an Early California Town.

<sup>7</sup>Ibid. p.141

<b>Total Area</b>	2,192.49 acres
<b>Cost of Fixed Government-owned Assets:</b>	Total of \$39,858,433
(a) Land	\$226,848
(b) Buildings/improvements	\$32,238,200
(c) Capital and Production Equipment	\$7,393,385
<b>Number of Buildings:</b>	Total of 322
(a) Permanent	191
(b) Semi-permanent	91
(c) Temporary	40
<b>Civilian Employees</b>	2,321
<b>Payroll</b>	\$ 20,000,000 (in 1960 \$)

#### 2.4.2 The Reuse Planning Process

Within a few months of the DoD's base closure announcement, the city of Benicia began annexation proceedings for the property. Despite the residents' strong determination to reverse the DoD's decision to close the Arsenal, the City Council began to prepare a reuse strategy almost as soon as the announcement was made. Taking into account the findings of economic feasibility studies, traffic and environmental considerations, as well as planning and architectural aspects, the City determined that the Arsenal site was best suited for an industrial reuse. They reasoned that its waterfront orientation, the existing waterside activities, and the accessibility to regional and inter-regional

expressways implied potential as an industrial complex. Area Development Associates of Berkeley was then commissioned to prepare a report on the economic potential of the area as an industrial park.

In light of the Arsenal's historic significance, an alternative plan to create a state historical park, setting aside historic structures such as the Clocktower Building, the Officers' Quarters, and the Barracks Hospital for public use was also proposed and a study was conducted on the possibility of creating this park. The City Council rejected the state historical park proposal, since the study showed that it would not generate enough revenue for operation. The immediate economic needs of Benicia were pressing and the existing buildings provided an inexpensive way of housing small industrial activities. Furthermore, neither the state nor the federal government gave support to the public retention of the land, and there were few ideas about how the area could be used to generate revenue. Thus the City voted on the industrial reuse of the site and began making contacts to various private corporations and developers in the area.

During this time, the city of Benicia obtained a special state legislation that allowed them to establish an independent agency to negotiate a deal with the GSA for the purchase of the Arsenal. The state of California did not support the public retention of the Arsenal and approved a legislation that created Benicia Surplus Property Authority. This Authority negotiated the purchase of the Arsenal directly with the GSA and the City finally made a purchase for \$4,587,200 payable over a 10-year period.<sup>8</sup> The City's purchase of the Arsenal

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<sup>8</sup>Benicia, California Herald. April 2, 1964.

brought them one step closer to a booming industrial reuse development of the site.

The only missing element was the right developer who had the financial means and a good track record to turn around the state of the local economy with a successful base conversion project. The City's active search for a privately held California corporation that developed industrial property brought them to Benicia Industries, Inc. Soon after the transfer of the Arsenal, the City and the Benicia Industries, Inc. formed a partnership. The 66-year lease on the Arsenal property was executed on terms that Benicia Industries, Inc. would return to the City the purchase price of \$4,587,200 within ten years. As the master developer of the Arsenal, Benicia Industries, Inc. had the full control in steering the Arsenal's future as an industrial park.

The Benicia Industries began the reuse process by first identifying the physical conditions and the adaptability of the former Arsenal buildings. Based upon these assessments, they concluded that no significant alteration or rehabilitation was necessary and concentrated on formulating economic development concepts to attract industries to the site. Focused marketing strategies combined with solid financing and management, the Benicia Industries was able to pay off its entire \$4.5 million indebtedness to the City in 1966, a full nine years ahead of schedule. This, in turn, allowed the City to complete its payments for the purchase of the Arsenal well ahead of the pay-off date.

## **2.5 Key Elements of the Benicia Arsenal Reuse Project**



The Benicia Industries was not required to develop any coherent, overall planning document that the redevelopment of the Arsenal was based on. Rather, they concentrated on developing marketing strategies to attract tenants to the site. Several aspects of the redevelopment contributed to the Arsenal's rapid and successful economic recovery. First it was the City's expeditious action in initiating reuse possibilities even before the Arsenal was closed. Their insight has lent them the virtue of facilitating the transfer process and organizing effective reuse strategies. The state government's involvement in the early stage of the planning process also played a role in the conversion of the Arsenal. In the case of Benicia, the City was lacking a Surplus Property Authority that could negotiate directly with the GSA for the purchase of the Arsenal, speeding up the City's reuse planning process. Their collaboration in the transfer of the Arsenal illustrates that sometimes enabling state legislation can be a vital source in base conversions. While most local governments have established authority to acquire property for public purposes for disposing of unneeded property, existing legislation may not have considered negotiating with the federal agency for the purchase of former base property. In addition, such organizations could assist local governments in its subsequent sale or lease to private interests. The following chapters further examine the implementation elements of the Arsenal's reuse efforts.

### **2.5.1 Financing**

The 66-year lease on the Arsenal property was executed on the condition that Benicia Industries repay the sum of \$4,587,200 within ten years of their

ownership. As part of this transfer contract, the Benicia Industries accepted the responsibility of financing all aspects of redeveloping the Benicia Arsenal property. Partly due to the type of military activities that had been taking place at the Arsenal for almost a century, no major physical alterations were necessary for reuse as an industrial park. Not having had to undertake much rehabilitation work, the Benicia Industries began an initiative to attract tenants almost immediately after the transfer of the property.

As the sole developer and the financier of the project, the Benicia Industries was committed to achieving a long-term economic stability which required a well-planned marketing strategy and cooperation from the City. By balancing a proper mix of anchor tenants and small-scale local businesses, Benicia Industries was able to create a self-supporting industrial complex, independent of any governmental subsidies. The City also encouraged this type of development and froze the purchase sum of \$4,587,200 for the first 10 years of the lease for the purpose of providing a favorable economic stability for inducing tenants to locate in the Arsenal.

The faith and confidence in developing the Arsenal as a major industrial center drove Benicia Industries to discover the economic opportunities embedded in this former military property and their solid financing capabilities proved the value of reuse within a year of its closure. In addition to making an advance payment of \$150,000 for preliminary acquisition costs and loaning the City \$75,600 for the entire water facilities in the Arsenal, this San Francisco-based developer paid off the entire purchase cost of \$4.5 million within only two years of operating the Benicia Industrial Park.

### **2.5.2 Management**

The City of Benicia and the Benicia Industries' concerted efforts in managing the Arsenal have been crucial in sustaining the former base as a thriving industrial park. A fundamental tenet of the management concept was based on marketing the BIP's strong site characteristics and emphasizing its low rental costs compared to its neighbor waterfront facilities in San Francisco and the East Bay. Its ideal waterfront location with convenient regional access and well-equipped with industrial-oriented facilities served as the key marketing inducements. The Benicia Industries targeted a few major industries to locate at the Arsenal property as well as seeking smaller local tenants. Motor sales/distribution companies including Toyota Motors and major refinery-oriented companies such as Exxon made up their main anchor tenants while a variety of small-scale businesses that employ less than 25 people, ranging from a bakery to a martial arts school diversified the tenant base.

As a result of the Benicia Industries' marketing and management strategies, other industrial clusters such as steel fabrication, chemical manufacturing, warehousing and distribution and heavy construction have since located at the BIP. Even with a number of these independent users, the BIP appears as a single-use industrial complex, however. Owing to the City's master lease arrangement of the Arsenal property with Benicia Industries, a uniform character of the Arsenal property has been retained as well as avoiding any potential conflicts in property disputes among different developers. The multi-pronged initiative to attract a diverse tenant mix and to continue to develop

a niche in the industrial market has enabled the Benicia Industries to maintain a low vacancy rate (5%). The success of the BIP is clearly evident in the Benicia Industries' future plans to expand the complex to accommodate a continuing demand for waterfront facilities in Benicia.

### **2.5.3 Historic Preservation**

The redevelopment of the former base has proven to be economically successful, although the conversion process lacked any efforts to preserve the Arsenal's historic past and numerous historic resources throughout the site. Despite the Arsenal's historic value, preservation has never been a factor for the City nor the Benicia Industries in the reuse planning process. The imminent closure of the Arsenal pressured the City to respond to the immediate economic needs of the community and thus, overlooked the preservation concept of rehabilitating the historic structures for possible industrial reuse. Many of these historic structures were desperately in need of restoration and reconstruction to meet safety and accessibility regulations for civilian use, and given the time and monetary constraints, mostly non-historic buildings were considered for reuse.

In 1975, the Benicia Industries obtained the land outright through a trade of properties with the City. As part of the sales, the City received land along the Carquinez Straits and reached an agreement that specified that several of the most historically important Arsenal buildings, including the Clocktower Building, the Commandant's House, the Camel Barns, and the Second Powder Magazine would remain in public hands. Although the City has maintained

ownership of these buildings, much of the area of the historic district, including the entire waterfront and northern sector, is still owned by Benicia Industries.

The City's decision to sell the site to Benicia Industries did not jeopardize most of the remaining structures, as those used by the industrial park were not significantly altered, but granted the City with some of the most historic structures in the Arsenal. The City thus found itself with two clusters of historic structures, the Clocktower and the Commandant's House in the southern part of the Arsenal and the Camel Barns and the second powder magazine in the northern area. These structures eventually served a purpose in the BIP: the Commandant's House was leased by the City to a private group that rehabilitated it for use as a restaurant; the Clocktower has since been in use as a community meeting hall; and the Camel Barns have become a museum of the old Arsenal. As the Arsenal's oldest surviving structure, the old Post Hospital has been converted for use as the administrative offices of Benicia Industries, Inc. The majority of the historic structures in the BIP are still unoccupied, and some, such as the Guard House, are nearly in ruins. When considering the fact that many of the original military structures served similar functions as the light industrial uses at the BIP, the number of historic structures that have been preserved and used for non-military purposes are insignificant.

## **2.6 Experience Gained**

Several factors contributed to the preservation neglect in redeveloping the Arsenal. The lack of funding from the state and federal government for

preserving the Arsenal property as a state historical park compelled the City to search elsewhere to regain its economy. In their pursuit of economic betterment, the local government failed to recognize their responsibility to preserve a vital source of the community's as well as the nation's history. The city of Benicia made no effort to initiate preservation before or after the closure of the Arsenal. Rather than supporting a local preservationist group's effort to place the Arsenal on the National Register of Historic Places, the local government discouraged any attempt at preservation for fear that the regulations accompanied by the national recognition of historic significance might stymie the future expansion of the Benicia Industrial Park.

A private developer that pursued only profits from redeveloping the Arsenal did not consider preservation as an important base conversion issue. With no economic incentives granted for undertaking historic preservation, the Benicia Industries did not even consider it in its redevelopment process. At the time of the Arsenal's conversion, hardly any preservation incentives nor assistance from the government was available. Without the local government's cooperation and the funding and support at the federal level, the preservation attempt of the City's sole interest group, the Benicia Historic Society, was fruitless.

The effect of the Arsenal's preservation neglect is of long-term. The appearance of the Arsenal today belies the fact that it has been closed three decades. Despite the BIP's flourishing business, it is devoid of the old Arsenal's character and it lacks a sense of place. The entire site is fragmented, with large parcels of empty land and derelict buildings scattered throughout the

Arsenal. Many of those buildings designated as national historic landmark are unoccupied and those that are occupied are in poor condition. It is misleading to suggest that restoration and rehabilitation of the Arsenal's historic buildings and resources could have furthered business at the BIP; however, giving life to those historic buildings and enhancing the Arsenal's impressive nineteenth century military architecture through preservation and creating an overall site plan could have provided a more advantageous use of the site, not to mention unseen development opportunities. Instead, they remain only as relics.

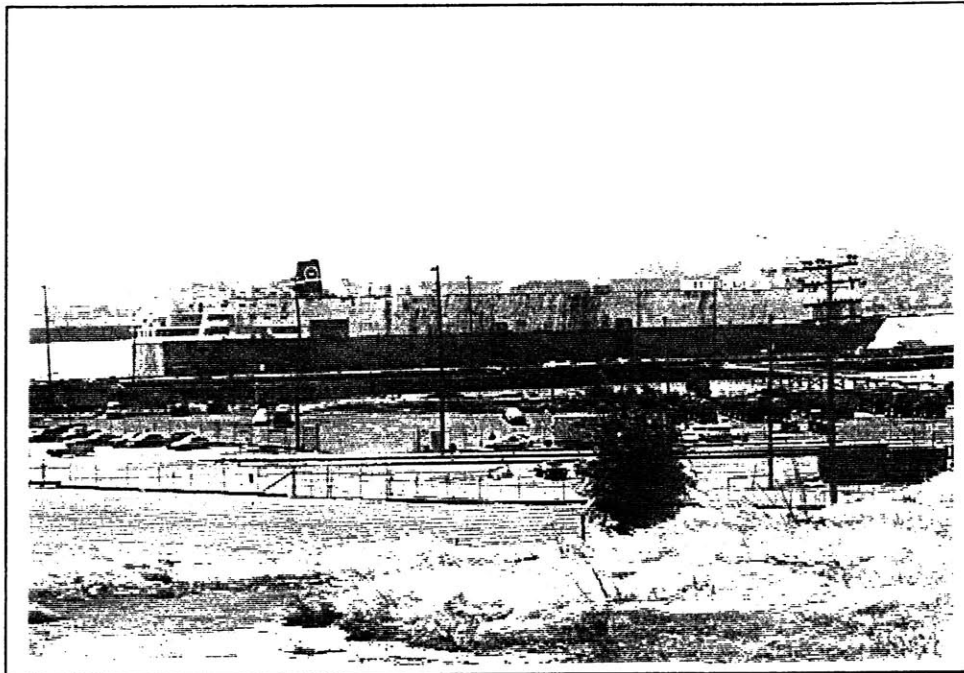


Fig. 2.7 An empty parcel of land near the Benicia Port.

## 2.7 The Benicia Arsenal in 1994

Among many lessons the conversion of the Benicia Arsenal teaches, it is

most illustrative of an economically successful base reuse project. For almost thirty years since the closure of the Arsenal, the Benicia Industries has operated a thriving industrial park . This case study demonstrates that in some instances, it is judicious to rely on a qualified private developer to undertake a base reuse project. A recent profile of the BIP reveals the following<sup>9</sup>:

- 69% of City's sales tax is generated from the BIP.
- Estimated 5.6 million square feet of building space exist in BIP.
- Current vacancy rate is estimated at 5%. (280,000 square feet)
- BIP employs 7,000 workers, representing 64% of total City employment.
- 80% of BIP businesses employ less than 25 workers.
- Approximately 400 tenants operate businesses in BIP.
- Some of the tenants are: West Coast distribution centers for Ace Hardware Corporation, British Motor Car Distributors, Ltd., Chrysler Marine Products, Exxon and Toyota Motor Sales, Babcock-Wilcox, CorBan Industries, Olin Corporation, Owens-Illinois, Inc., J.C. Penney Co., and the administrative offices of a Sperry Rand Corporation Division.
- Other smaller tenants work in the following areas: accounting, architects, art studios (lofts), attorneys, doll making, cabinet/woodworking, machinery repairs, petroleum products, and warehousing.

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<sup>9</sup>Benicia Economic Development Office.



While the BIP is deemed as an economically viable reuse project, both the City and Benicia Industries have overlooked the responsibility of preserving the Arsenal's historic character and resources. Driven by the City's need and desire to regain its economic well-being, historic preservation of the Arsenal's valuable resources has been forfeited. Recently, historic preservation has begun to receive the local government's attention, though the involvement of a local preservation group, the Benicia Historic Society, spurred this city-wide effort. The local officials are working on a document titled, "Arsenal Park Historic Conservation Plan," that establishes policies and design guidelines to direct future reuse of the Arsenal's historic resources and to promote historic preservation within the City.<sup>10</sup> Although this city-wide historic preservation effort is indicative of the better-late-than-never rationale, preserving history in the Arsenal after three decades of neglect could, perhaps, be a more challenging task than economic development.

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<sup>10</sup>Benicia Planning Office.

**SECTION 3:  
THE CHARLESTOWN NAVY YARD**

### **3.0 Introduction**

The Charlestown Navy Yard is one of the largest and most ambitious base reuse efforts in the United States. This project has transformed a former shipyard into a mixed-use community, incorporating light industrial, office, retail, residential, and recreational activities in a waterfront setting. The phased development of housing, commercial, industrial, and office space along with parks, a marina, and other public uses has filled the remainder of the site. Not only is the Navy Yard noted for one of the most economically successful base redevelopment projects, it has also demonstrated that economic development goals need not deter historic preservation efforts. Rather, the redevelopment of the Yard has demonstrated that historic preservation can greatly complement economic development. Indeed, its near two centuries of history is still reflected in the Yard today.

The Charlestown case is presented in this thesis as a base reuse model that has taken advantage of its historic character as well as existing historic resources as an essential component of the reuse plans. Despite the conflicts in the conversion process, preservation efforts have prevailed and this section examines those factors and planning strategies integral to achieving preservation in base redevelopment.

### **3.1 Site Characteristics**

Charlestown Navy Yard is located near the heart of Boston's regional core, north of the downtown area across Boston's Inner Harbor. It is bounded by the Charles River, the Inner Harbor, the Mystic River, and the Tobin

Bridge, well situated at the junction of major highways connecting to points in all directions in the metropolitan region. Situated at the foot of Breed's Hill and the Bunker Hill Monument, the 105-acre Navy Yard is a relatively flat piece of land created on mud flats between the Charles River and Mystic River estuaries; its northwestern, landward edge is defined by the Mystic Bridge and ramp system separating the shipyard from the Charlestown residential community.



Fig. 3.1 Aerial view of the Charlestown Navy Yard (Source: BRA)

While its strategic location adjacent to the main channel of Boston's harbor, the Charlestown community, the U.S.S. Constitution National Historic Site and less than one mile from Boston's Central Business District is ideal, access to the shipyard has been rather difficult. Local linkages between

highways and the Navy Yard are not very convenient, primarily due to local traffic problems in and around Charlestown where local street traffic converges with highway traffic. In addition to making access to the Navy Yard needlessly more difficult, these traffic problems combined with the presence of the Mystic River Bridge have had the further effect of isolating the shipyard from the Charlestown community. The barriers created by the Bridge and the highway ramps also make pedestrian movement between the residential community and the Navy Yard unsafe and troublesome.

### 3.2 A History of the Charlestown Navy Yard

The shipyard first developed on the southeasterly shore of the Charlestown between what was known as "Wapping's Point" (near the site of the first Charlestown Bridge of 1786) and "Moulton's Point" where the British landed for the assault on the patriots in the famous 1775 Battle of Bunker Hill. Hence, the historic importance of the site precedes its use as a shipyard. On this marshy shore were several shipyards and private wharves. The best known of these was Edmund Hart's yard where the U.S.S. Constitution was built between 1794 and 1797.<sup>1</sup>

At the close of the 18th century, the local shipbuilding industry was revitalized after a period of decline during the Revolutionary era. It was during this time, several months before the establishment of the U.S. Navy Department in the spring of 1797, that a resolve from the Naval Committee of the House of Representatives recommended that an appropriation be made for the

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<sup>1</sup>A Proposal for a National Historic Park & Naval Museum: Charlestown Navy Yard.  
Boston Redevelopment Authority.

establishment of a government dockyard. The existence of active shipyards made the Charlestown site a logical location for such a dockyard. On June 17, 1800, the Massachusetts Legislature approved an act, authorizing the United States to purchase a tract of land in Charlestown for use as a naval shipyard. The U.S. Navy purchased the first 23 acres at a price of \$19,350 and for the next 150 years, the Navy Yard served as the headquarters for the first Naval District.<sup>2</sup>

The yards that were set up along the Eastern seaboard during the opening years of the 19th century were not intended to be defense stations but were rather intended for shipbuilding and repair. Thus, even though an 1818 survey of Boston Harbor found it to be an "extraordinary natural means of defense," the Navy Commissioners did not recommend the establishment of a "great national depot and rendezvous at Boston" but a dry dock to facilitate ship repair work.<sup>3</sup> The shipyard provided facilities for shipbuilding, conversion and repair and the manufacture of rope and chain, producing the first U.S. warship in 1813.

In 1827, Dry Dock 1, one of the two oldest dry docks in the country, was begun. The U.S.S. Constitution was its first occupant and the last commissioned ship to be overhauled there. The shipyard continued to expand as an industrial complex, following a classical grid plan drawn by Colonel Loammi Baldwin, the "father of civil engineering in America."<sup>4</sup> In 1836, the

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<sup>2</sup>Charlestown Navy Yard: Master Plan for the Yard's End. Boston Redevelopment Authority. p.3

<sup>3</sup>A Proposal for a National Historic Park & Naval Museum: Charlestown Navy Yard.

<sup>4</sup>Charlestown Navy Yard: Master Plan for the Yard's End. p.4

1,350 foot long Rope Walk was constructed and this granite structure provided all of the rope requirement of the Navy for the last 135 years. Construction of Dry Dock 2 began in 1899 as the shipyard continued to expand.

From 1926 to 1971, the Navy Yard manufactured its standard anchor chain in the forge shop. During World War I and II when a new ship was launched from the Yard every month, 50,000 people, mostly civilians from Boston and the metropolitan area, worked at the Yard; however, shipbuilding virtually ceased after World War II and the Navy Yard returned to specializing in the repair and outfitting of ships. In 1971, production ended at the Rope Walk and the U.S.S. Constitution became the last ship to be repaired at the Yard. Finally, the Navy Yard was decommissioned by President Nixon in 1974, ending the Yard's 174 years of history.

### **3.3 Site Attributes**

The Charlestown Navy Yard is the second oldest naval shipyard in the U.S. dating back to 1803. During its 200 years as a shipyard, it has become the site of numerous technological innovations that forged the U.S. Navy into the world's preeminent fleet. Its 19th century ship houses and dry docks revolutionized shipbuilding and the invention of "die-lock" chains of greater strength and the first iron-clad vessels were manufactured at the Navy Yard. In addition to its contribution to naval technological advancements, the shipyard has housed a number of historic structures and resources. Building construction varies in type with the more solid buildings consisting primarily of brick, granite and stone. Particularly notable are Alexander Parris' granite

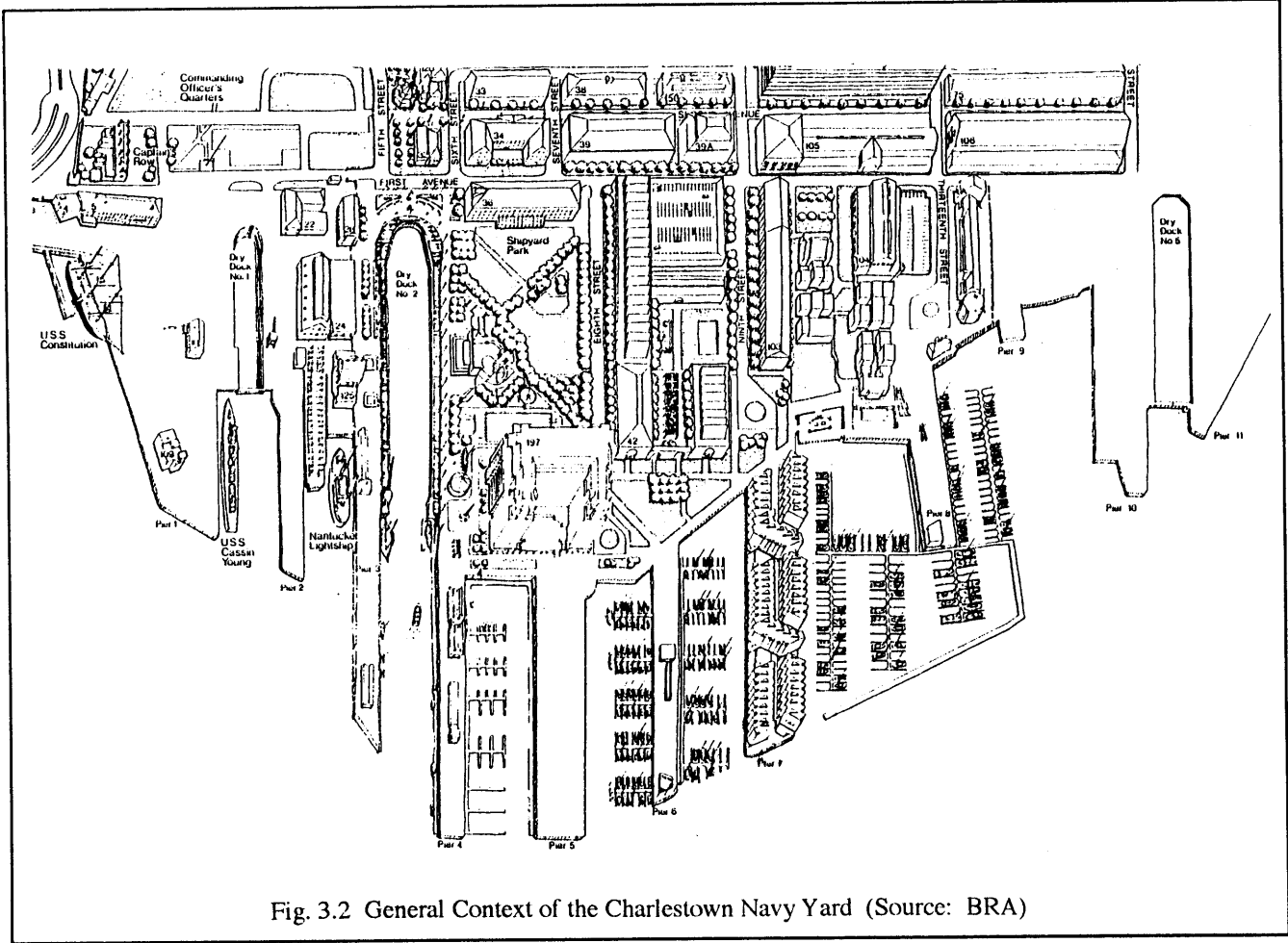


Fig. 3.2 General Context of the Charlestown Navy Yard (Source: BRA)



buildings that have served in a variety of capacities since the middle of the 19th century.

Nearly all of the structures having the most historic and architectural significance are concentrated in a linear grid along the western portion of the Yard between Chelsea Street and First Avenue. The Navy Yard contains numerous historic resources within its waterfront boundary but within brief walking distance outside the Navy Yard are several other historical attractions that depict Charlestown's rich heritage. These include the Bunker Hill Pavilion with its multi-media presentation of the famous battle, the Bunker Hill Monument and the Charlestown Community Museum.

### **3.3.1 Historic Resources**

Charlestown Navy Yard has been an integral part of Boston since 1800 as a cornerstone in the nation's naval defense system. From this shipyard, hundreds of ships were built and launched. Originally planned by Alexander Parris, the Navy Yard reflects many eras: notably the first half of the nineteenth century, the Victorian period, and World War I and II. The structures in the Charlestown Navy Yard also illustrate many building types and several phases of 19th and 20th century architectural styles. Early 19th century residential examples exist as well as later industrial buildings and temporary sheds dating from World War II. Many of the structures are of considerable architectural merit. The construction dates fall roughly into five periods, which generally coincide with major wars of the two centuries. As well as illustrating popular

building styles, the shipyard structures exhibit the increasing size and capacity of industrial structures permitted by changes in technology.

Representative of the 1800-1828 period is the Marine Barracks, a large, irregularly shaped brick structure of four stories. The barracks has also retained its original use since 1823. The exterior of the building has been altered by the addition of full height enclosed porches. Representative of the 1828-1850 is the Rope Walk. As the only remaining rope walk in the country, and as the sole producer of all the rope used by the Navy over a century, this structure is significant for its architecture as well as its historical contribution. A 1360 foot long granite structure with a three-story head house at its eastern end, the Rope Walk was supervised in planning and construction by architect Alexander Parris. Overall, the 1828 plan for the shipyard imposed, for the first time, a logical order for future development. During this period, most structures were built of granite, in keeping with the popular use of granite for prominent civic buildings in Boston such as the Custom House, harbor wharf and warehouse buildings, and religious structures.

The Civil War period between 1850-1870 saw the construction of the last of the large granite buildings. Several brick structures were added during this period as well. The larger brick buildings were similar to the granite structures in mass and symmetry, while the smaller brick structures exhibited more romantic shapes and silhouettes. The period between 1870 to 1906 centered around the Spanish-American War theme. Generally, the remaining structures are large brick structures that exhibit popular commercial styles of the day. Buildings from this period were generally located northeast of the granite

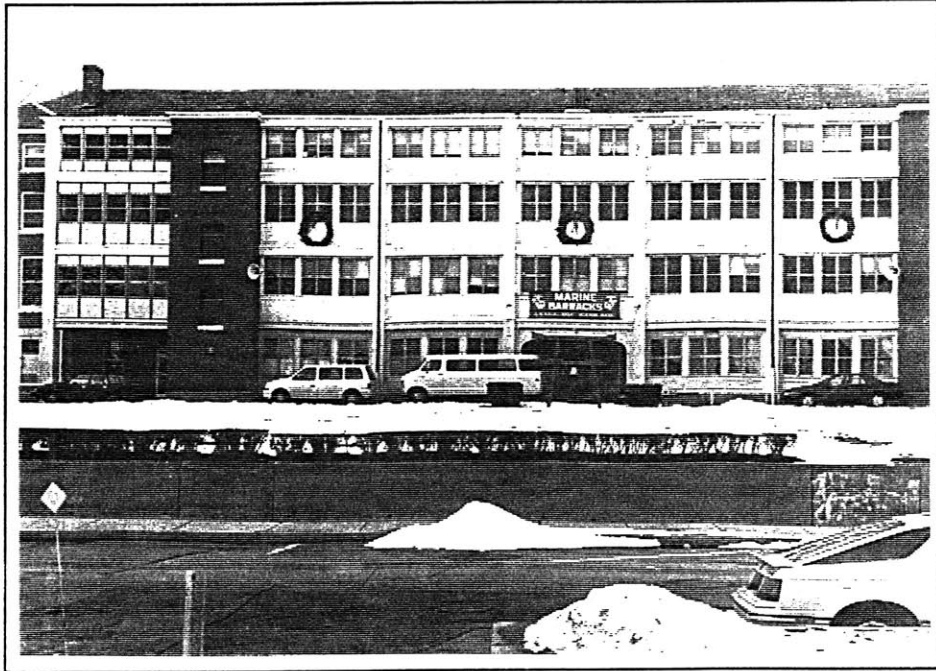


Fig. 3.3 The Marine Barracks



Fig. 3.4 The Rope Walk

structures in the same grid pattern, although those south of First Avenue are oriented to the finger piers and are perpendicular to the avenue. In 1899, the second dry dock was constructed and first occupied by U.S.S. Maryland in 1905. Representative buildings from this period include the Round House and the Paint Shop.

The structures constructed from 1906 on are the largest and tallest of all buildings in the Yard, indicating the need for enormous spaces for construction and repair of increasingly larger vessels.<sup>5</sup> Most of the historic structures at the Charlestown Navy Yard contain a massive amount of industrial space differing considerably in age, efficiency, and suitability to current industrial practices; to date, nineteen historic buildings have been rehabilitated and adaptively reused.

### **3.3.2 Project Areas**

This 130-acre site has major historical significance due to its connection with the Revolutionary War and the establishment of the U.S. Navy, its role in the building and maintenance of important ships of the fleet, and for the firsts in naval facilities and operations that occurred here. Because of the important role which the Charlestown Navy Yard has played in the construction, repair, and servicing of Navy vessels, and the technological innovations that have occurred, the entire shipyard is a National Historic Landmark and is listed on the National Register of Historic Places. The Navy Yard now consists of four main areas: the Shipyard Park, the Historic Monument Area, the New Development Area, and a 30-acre Boston National Historic Park.

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<sup>5</sup>A Proposal for a National Historic Park & Naval Museum: Charlestown Navy Yard.

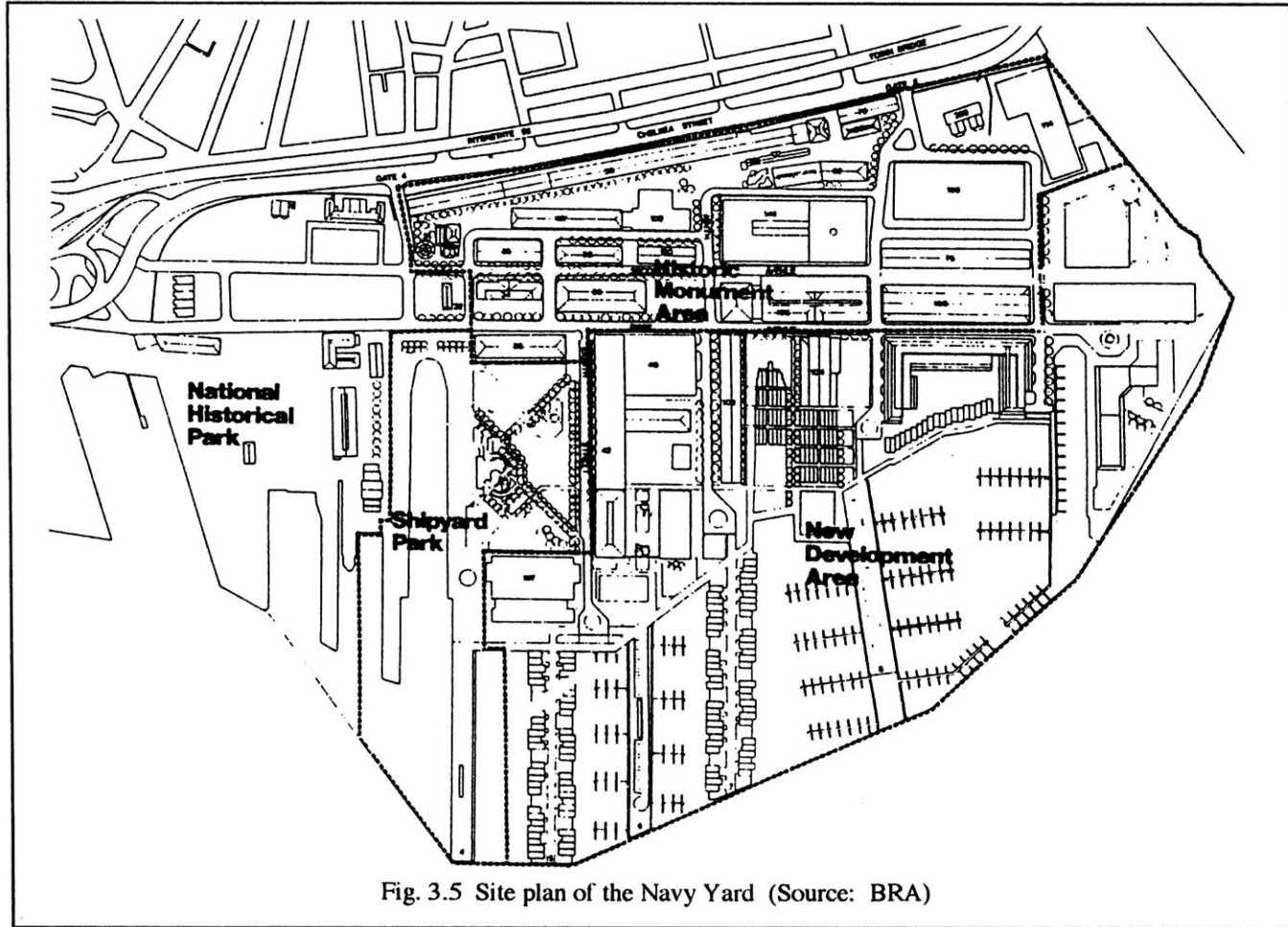


Fig. 3.5 Site plan of the Navy Yard (Source: BRA)

In 1973, the National Park Services initiated a plan to create a National Historic Park on 30 acres of the surplused Charlestown property. This segment of the Navy Yard was in fact one of the seven sites in the 1974 Boston National Historic Park bill. Operated by the NPS in cooperation with the U.S. Navy, the Charlestown Navy Yard portion of the Boston National Historic Park includes the U.S.S. Constitution, the destroyer Cassin Young, the U.S.S. Constitution Museum, Dry Dock 1, and the 19th century Commandant's House. The Historic Park contains informative displays on the Constitution, the Charlestown Navy Yard and life in the U.S. Navy over the years. The Constitution Foundation, a private non-profit corporation, operates a museum and gift shop within this area.

Adjacent to the Historic Park lies the Historic Monument Transfer Area. This area encompasses 31 acres to the north of First Avenue and contains a number of buildings identified as particularly significant, including the Parris granite buildings, the Rope Walk, the tar and hemp houses and the forge. A total of 22 buildings offers 2,000,000 square feet of reusable space, and streets and pedestrian areas here reflect the 19th century history of the Navy Yard. The BRA has rehabilitated fourteen of the buildings in this area for office and commercial uses since the Yard's closure. One of the rehabilitated buildings is Building 106. The Basilica that was originally used as a boiler and die-sink shop, is currently being used for museum and restoration workshop space by the Society for the Preservation of New England Antiquities (SPNEA). The Society consults actively to institutions and individuals interested in preservation and uses the site as a place to carry out university courses in

historic preservation. The presence of SPNEA contributes significantly to the continuance of a dedication to the historic quality of the site. The BRA plans to reuse or preserve the rest of the buildings for a similar purpose in this area by year 2000.

### **3.4 Redeveloping the Navy Yard**

The closure of the Navy Yard called for the end of all industrial operations by December, 1973 and of all other operations by July, 1974. Massachusetts congressmen and senators protested the termination of the Yard and the National Association of Government Employees went to court and obtained a ten-day restraining order against implementation of the closings. However, the Pentagon's decision prevailed. Many employees of the Navy Yard responded to the closing with anger, directed chiefly at political office holders. Both local and federal agencies, particularly the BRA and the NPS had been preparing plans for preserving a portion of the shipyard as Historic Park and this, somewhat, acquiesced political pressures to resist the closing.

The U.S. Department of Defense officially closed the Charlestown Navy Yard on July 1, 1974 and the GSA was delegated the responsibility for disposing of the surplus property. The closure resulted in the direct loss of some 5,900 jobs in 1973-74, a year of unusually high unemployment and caused an immediate drop in related port activity and business procurement.<sup>6</sup> The shipyard has traditionally been a major blue-collar employer in Boston. In a city facing a long-term decline in manufacturing jobs, the shipyard was a place

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<sup>6</sup>Boston Naval Shipyard/Charlestown. Boston Redevelopment Authority. p.4

where skilled and semi-skilled resident labor could find permanent employment. The presence of ships with home port in the First Naval District was also of vital importance to the three ship repair companies in the port of Boston that relied on Navy contracts to provide continuity of employment for up to 1,000 people.<sup>7</sup>

In 1975, the first master plan for the Navy Yard was prepared and the reuse planning process began. The loss of jobs and the historic value of the site motivated the city of Boston to begin a reuse process of creating new sources of employment and preserving the historic resources. After negotiations and reviews involving the NPS, the U.S. Navy, the Bureau of Outdoor Recreation, the GSA and the BRA, the land and buildings became available for redevelopment in 1976. The Bureau of Outdoor Recreation (BOR) sold the Shipyard Park site to the BRA for one dollar on the condition that it be used only for public recreational purposes.<sup>8</sup> The GSA transferred the 30-acre Historic Monument Area to the BRA for one dollar, contingent upon preservation of the buildings and development and maintenance following strict guidelines. These guidelines were formed in an agreement between the BRA and the National Advisory Council on Historic Preservation. The NPS portion of the Yard included 30 acres of land, 20 of the 86 historic buildings, one of the dry docks, three piers, and an assemblage of artifacts including a large collection of navy documents relating to the history of the facility.

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<sup>7</sup>Ibid. p.5

<sup>8</sup>Charlestown Navy Yard Redevelopment: Draft Supplemental Impact Report. Boston Redevelopment Authority.



### **3.4.1 The BRA and EDIC**

The city of Boston, through its two development entities, the Boston Redevelopment Agency (BRA) and the Economic Development and Industrial Commission (EDIC), began extensive planning and analysis work seeking to optimize the reuse of the former shipyard. Both the BRA and the EDIC were commissioned to facilitate private development of the Yard and to reap public benefits. While the EDIC's role was limited to economic development concerns, the BRA was entrusted with a variety of planning and implementation tasks. Some of the BRA's responsibilities included site preparation and the improvement of all public areas - streets, parks, and related open space, marketing the site, identifying appropriate private developers for historic buildings as well as new developments such as the hotel and housing, and coordinating developers' plans with the Charlestown community and the Interior Department's Division of Archaeology and Historic Preservation and all other relevant agencies. In addition, the phasing of development, the compatibility of design and scale were to be closely monitored by the BRA.

### **3.4.2 The Reuse Planning Process**

The planning process of the Navy Yard was not a smooth sail by any means. Several groups from varying levels of government involved in the reuse planning of the Charlestown Navy Yard posed inter-agency conflicts and competition. From the federal to local level, each agency acted on its own behalf, allowing little room for collaboration. For instance, the BRA encountered conflicts in the acquisition process with the GSA and the

Massachusetts Land Bank. Established in 1976, the Massachusetts Government Land Bank was authorized to use state funds to purchase and hold the bases in Westover, Chelsea and Boston for five years. During the five years, the municipality was allowed to improve the site and sell any parcels in conformance with the agreement of both the municipality and the Bank. Proceeds from the sale of land had to be shared between the municipality and the Bank proportional with the investment of each entity. The state appropriations for the Land Bank only covered the costs of property acquisition and the municipal interest payments had to cover the operating costs of the Bank. The BRA saw no monetary advantage in going through the Bank since the costs of borrowing from the Land Bank had to pay for its operations. Instead, the BRA unofficially used the GSA to land bank the shipyard property until the public benefit discounts were confirmed and the specific dimensions of the negotiated sale property and the acquisition price.

At the community level, the BRA also experienced friction from the Charlestown residents and interest groups. A long history of exploitation by government agencies has led the Charlestown Townies to be suspicious of any public project contemplated in their community. A number of community watchdogs were concerned about adverse impacts of the Yard's redevelopment such as vehicular traffic and job opportunities to match the skills and needs of the Charlestown labor force. The Preservation Society and the Historical Society strongly advocated preserving the Yard's history and kept a close eye on the development of the Yard.

Dual objectives of the Yard's reuse plan were to maximize conservation of the historic and architectural character of the site while realizing its potential for economically viable purposes. In the early planning period, specialists in architectural history, including the NPS staff, evaluated the site and its structures in order to determine which structures were to be considered of most significant historical interest. Buildings were evaluated on the basis of age, architectural significance and historic importance. Following this evaluation process, the BRA at once initiated a review of alternative development concepts and began to develop a viable plan for a mixture of appropriate new uses at the Navy Yard. The BRA and EDIC jointly commissioned a comprehensive land use planning and transportation study that identified alternative land use concepts for the redevelopment of the shipyard at Charlestown. This lengthy planning effort involved the combination of disciplines including planning, architectural, environmental and traffic analysis as well as extensive economic feasibility studies.<sup>9</sup>

The studies indicated that the former shipyard site was too large and varied for a single kind of reuse and that a mixed development concept with strong public sector participation was necessary. Initially, substantial efforts were made to promote the site for manufacturing reuse; preferably, port-related ship construction and ship conversion. This course was chosen as the best means to reemploy labor displaced by the closing of the Yard, to further the creation of needed blue collar jobs and to minimize public sector investment in converting the site to civilian use. The Charlestown Navy Yard was extensively

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<sup>9</sup>Boston Naval Shipyard/Charlestown. p.5

marketed as a unified shipbuilding facility and as individual buildings to other manufacturers. After two years of such marketing efforts, it has been concluded that the Charlestown shipyard is too crowded with obsolete structures and too limited in terms of access for modern industrial reuse.<sup>10</sup>

A city-wide reassessment of efforts took place in the summer of 1975 and other possible land use packages were explored. The BRA eventually developed a master plan for the Navy Yard, which was seen as the focus of the City's efforts to "turn Boston's face back to the sea."<sup>11</sup> The plan for the development of the 105-acre area included a waterfront park, reuse of the historic buildings for housing, commercial, institutional and light industrial, and a 1,2000-unit residential complex.

The original plan proposed that as naval operations phased out of shipyard facilities at Charlestown, a portion of the shipyard containing sites and structures of historical, architectural, and technological importance be dedicated to a Historic Park of national significance. The primary focus of such a park was the U.S.S. Constitution and a National Naval Museum. Additional institutional uses of cultural importance, as well as commercial support facilities and services were also to be incorporated into the reuse program for the shipyard. The remainder of the site was to be used for industrial or other purposes. This plan also divided the remainder of the site into three major areas: the New Development Area, the Historic Monument Transfer Area, and the Shipyard Park. Dividing the Navy Yard into distinct components and

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<sup>10</sup>Boston Naval Shipyard/Charlestown. p.6

<sup>11</sup>Charlestown Navy Yard: Master Plan for the Yard's End. p.3

responding to the special characteristics of each area resolved many potential development conflicts and subsequent redevelopment plans of the Navy Yard have all been based on this concept.

The New Development Area consists of 59 acres and 8 buildings, and has been developed by Immobiliare New England, an international development firm, with a total investment estimated at \$120 million. Current development consists of more than 1,200 apartment and condominium units, a yacht club and marina, retail and commercial uses. Immobiliare created both rental housing units and condos, with about half being produced through the recycling of factory and warehouse structures in this area. Ten percent of the housing is reserved for senior citizens. Also completed are 20,000 square feet of commercial space, parking for about 1,200 cars, and a 500-room hotel. In addition, the Marina and Yacht Club situated on pier overlooking Boston Harbor have been developed to contain 150 slips, each with hookups for water, telephone and electricity.

The Shipyard Park Area covers 16 acres, including a landscaped area, the historically significant Dry Dock 2 and Pier 4. The Shipyard Park itself provides 4.5 acres of open green space. A public promenade around the historic flooded dry dock, a public landing, and landing for harbor island ferries and commuter boats account for the remaining 11.5 acres of the area. Also completed are nearly \$11 million in improvements to the Navy Yard infrastructure such as new water and sewer lines, streets, lighting and landscaping.

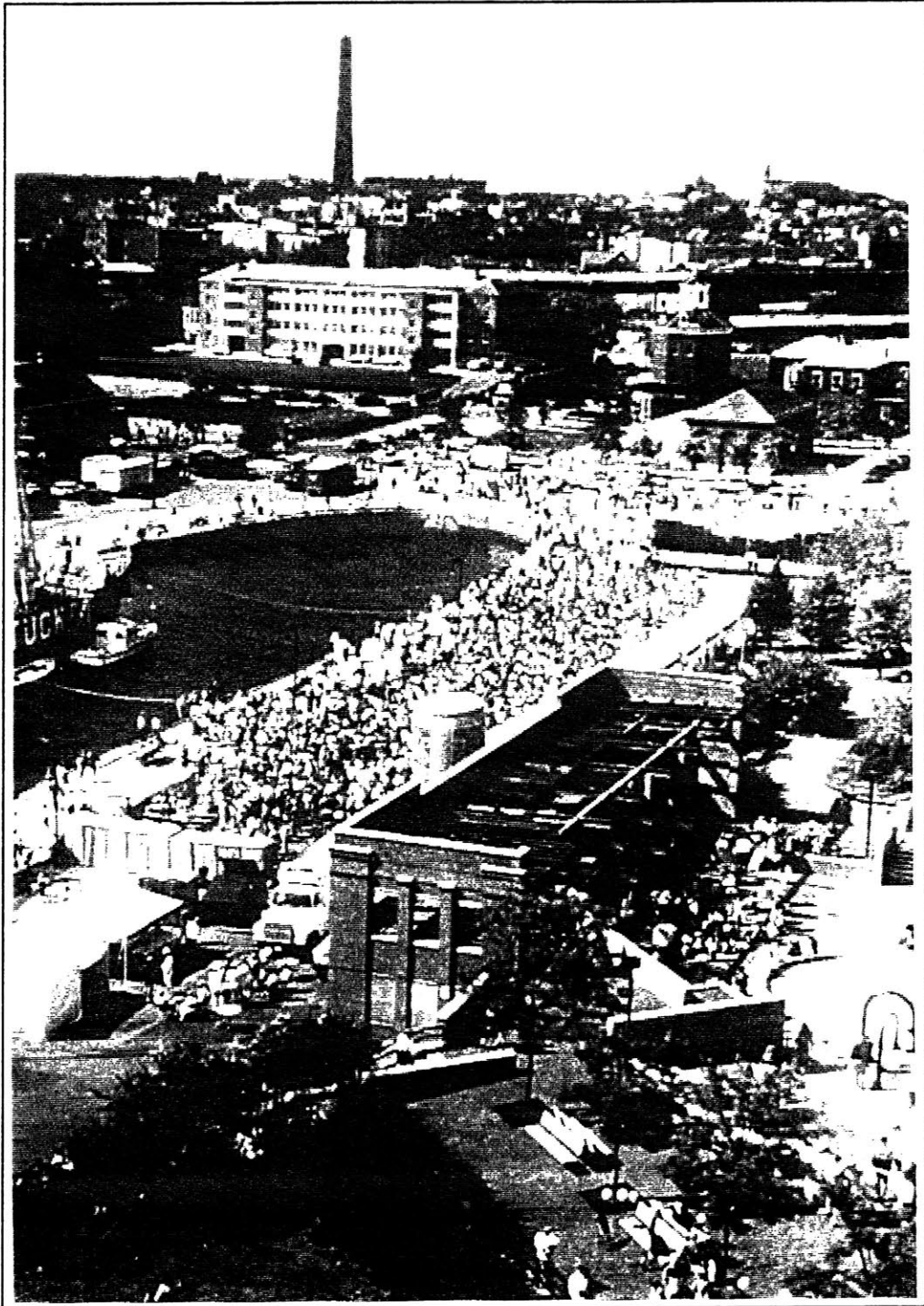


Fig. 3.6 View of the Shipyard Park (Source: BRA)

The 30-acre Historic Monument Transfer Area contains a concentration of the Navy Yard's historic structures. This area includes buildings dating from the 1820's through the turn of the century. Among them are solid granite workshops and warehouses, built in the 1830's and 1840's, a period of intensive Navy yard expansion. This area has been targeted for office and commercial uses and many of the rehabilitated buildings are now in use as a medical and research facility.

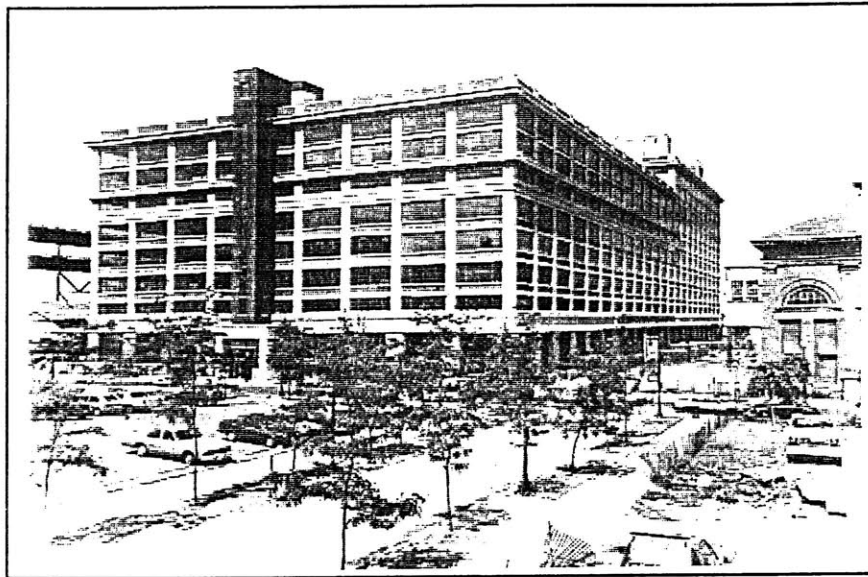


Fig. 3.7 The medical research center (Source: BRA)

### 3.5 Lessons for Redevelopment

The Charlestown Navy Yard reuse project has shown the potential contributions of historic preservation and base redevelopment to the distinction and livability of neighboring cities. Since its closure in 1974, the Yard has opened up the waterfront to public access, created a 16-acre park, preserved

historic ships and structures and is expected to accommodate over 16,000 jobs over the next decade.

One should, however, note that the Navy Yard also benefited from a favorable change in the regional economic condition at the time of the conversion. The redevelopment of the Navy Yard coincided with growth trends of the Boston economy in the sixties, when the economy of the City began to grow, reversing over a decade of decline in population and employment.<sup>12</sup> This economic trend continued throughout the seventies during the initial phase of the Yard's redevelopment and instilled a sense of optimism among developers in the area, encouraging them to expand their operations. Due to its location and other site amenities, many developers became interested in the redevelopment of the Yard and sought to lease land and buildings there.

The key to satisfying the conflicting demands voiced by the federal agencies involved in the project was due to BRA's unique approach to reuse planning. The redevelopment experience at the Yard offers the following planning strategies and implementation measures.

### **3.5.1 Financing Mechanisms**

Even before the closure of the Yard, the BRA has acted as the catalyst to bring about the acquisition and development of the entire shipyard using the appropriate acquisition mechanisms. An acquisition scheme to minimize public investment and speculative risk has been devised by applying for all applicable public benefit discounts. The BRA took advantage of the Federal Property and

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<sup>12</sup>Boston Naval Shipyard/Charlestown. p.67



Administrative Service Act of 1949 which allowed for the disposal of Federal properties for specified purposes at a 100% discount. Three provisions of the statute were applicable to the shipyard development. An amendment to the property disposal act in 1966 made it possible for areas of historic merit to be acquired by an appropriate government entity for the purposes of historic preservation. This provision required that the property remain in public hands and that any profits generated from leases of the property be used for historic preservation and parks funding. The 30 acres of Historic Preservation District was thus acquired by the BRA. Developed properties within this area were to be disposed of via long-term lease rather than sale. Similarly, the Property Disposal Act provided for the disposal of land for park and recreation purposes via the Bureau of Outdoor Recreation of the Department of the Interior. The public park and marina portion of the site was acquired via this mechanism.<sup>13</sup>

Following the acquisition process, the redevelopment of the Yard required a substantial investment of public funds and a commitment of federal and state funds. Some 46 acres of the Yard were transferred to the BRA at no cost by the federal government in return for agreements regarding future use of the property. The Bureau of Outdoor Recreation (BOR) gave the 16-acre Shipyard Park site on condition that it be used exclusively for public recreational purposes. And the GSA, through BOR, transferred the 30-acre Historic Monument Transfer Area to the BRA in return for an agreement that the buildings there will be preserved and the area developed and maintained following the guidelines established by the BRA. The BRA has tapped various

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<sup>13</sup>Boston Naval Shipyard/Charlestown. p.55

funding sources to carry out improvements in the Navy Yard, with a total commitment of more than \$11 million. Federal funding has been obtained from the Economic Development Administration of the Department of Commerce, the Bureau of Outdoor Recreation, and the Urban Development Action Grant program of the Department of Housing and Urban Development. Additional contributions have been made from the city of Boston.

Most of the private financing came from the Yard's primary developer, Immobiliare. As the designated developer for the entire New Development Area, Immobiliare has made financial contributions to numerous redevelopment projects. In addition, the BRA has received linkage payments of \$3 million from other private developers in the Historic Monument Area.<sup>14</sup> The money was used in a housing trust to support construction of affordable housing. Smaller developers in the area have also made contributions.

### **3.5.2 Management Strategies**

The Navy Yard was of such scale that it could not be redeveloped within a short time frame. Because there was too much space to be absorbed over a short-term, it was phased over ten to twelve years. Timing has acted as a function of the demand for space in the local economy and the availability of capital generally. Rather than forging ahead on an extensive development program, the BRA and the private developers have renovated and constructed buildings in phases, using revenues from initial projects to kick off subsequent phases while testing the market for housing, office, and retail demands.

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<sup>14</sup>Charlestown Navy Yard Redevelopment: Draft Supplemental Impact Report.

The Charlestown Navy Yard has demonstrated that the key to a successful base conversion is public sector ownership and management with private sector development. The role of BRA as the coordinator of historic preservation and reuse efforts has been fruitful since the Yard's closure 20 years ago. As the lead manager of the project, the BRA has been responsible for various aspects of redevelopment; the design, execution of improvements, and all public development activities. In 1976, the BRA has incorporated the Navy Yard into the Charlestown urban renewal plan, thus insuring the careful and orderly development of the area. The BRA has also overseen the phasing of private development and served as the conduit between developers and the federal, state and city agencies that have an interest in the Navy Yard. In addition, the BRA has directed long-term maintenance of buildings and the landscaped sections of the Historic Monument areas under agreements with the federal government.

### **3.6 Lessons for Historic Preservation**

The Navy Yard has been recognized both for the fine historic structures as well as for its character as a naval shipyard. Thus, preserving structures of architectural and cultural merit has been an important factor in the reuse planning process but preserving some of the essential qualities of the shipyard such as the piers, the scale, the textures, the relationship to the water has also been crucial to the plan. The effort to neither recreate the impression of an earlier time nor destroy all evidence of the area's industrial past has maximized both preservation and rehabilitation for economically viable purposes. Largely

due to active community participation and the availability of public funding, those preservation goals have been achieved.

### **3.6.1 Local Involvement**

Though the BRA and the Charlestown residents and local interest groups stood on conflicting grounds on many reuse issues, the local commitment has been one of the most influential factor in the reuse process. The Charlestown community has always maintained an active interest in the Navy Yard since many local residents worked at the Yard and maintained various commercial services that relied on the existence of the shipyard. Charlestown residents, particularly the membership of the Charlestown Preservation Society and the Charlestown Historical Society have been concerned with the preservation of key structures within the Yard and the creation of a National Park to protect those structures and the U.S.S. Constitution. It is in large measure through their efforts that the National Historic Park site was created.

The Charlestown Historical Society, in particular, has been actively involved with the preservation of the Yard since 1966. Shortly after the DoD's review of the military operations in the northeast, the Society initiated the plan to declare the entire shipyard site a National Historic Land Mark and to list it on the National Register of Historic Places. Again in 1969, when the Society learned of the negotiations between the City and the U.S. Navy to have the U.S.S. Constitution moved from Charlestown to a berth elsewhere in the City, the President of the Historical Society appointed a committee to work with the

BRA to preserve the Charlestown Navy Yard as a national park. Within three days of the committee's foundation, 1,200 Charlestown residents had signed a petition in opposition to any move of the U.S.S. Constitution from Charlestown, and the BRA, at the request of the Society, drew up plans that became the basis of the proposal for a National Historic Park.

The commitment of the local preservationist groups and the local residents has been the key to a balanced base redevelopment and historic preservation. Since the beginning of the reuse planning efforts, the community has been continually involved through the Charlestown Base Conversion Advisory Committee. City officials have met regularly with this group to establish community goals and references for land use alternatives. The future of the shipyard has been an issues of major concern to the community and the Charlestown Little City Hall Manager and Charlestown District Planner have maintained a continued dialogue with individual residents and specific interest groups throughout the reuse planning process.<sup>15</sup>

### **3.6.2 Federal Assistance**

In addition to acquiring land through public benefit conveyance, various sources of federal funding enabled the BRA to achieve its preservation goals. The BRA tapped project funding from the following sources: \$4.8 million from Economic Development Administration; \$2.5 million in Urban Development Action Grant; \$1.4 million from Bureau of Outdoor Recreation.<sup>16</sup> In addition,

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<sup>15</sup>Boston Naval Shipyard/Charlestown. p.7

<sup>16</sup>Boston Naval Shipyard/Charlestown. p.55

the BRA obtained \$2.2 million from City Council Bond Authority. These public funds provided the BRA with the means to plan for historic preservation as well as for improving the shipyard site. Using these funds, the BRA carried out extensive site improvements, including streets, sidewalks, lighting and landscaping to make the Yard more attractive to potential developers and tenants.

### **3.7 The Charlestown Naval Shipyard in 1994**

Since the shipyard's closure in 1974, the BRA has taken the lead role in redeveloping the site. Not content with stewarding the former shipyard for private redevelopment, the BRA focused its reuse efforts on formulating a plan involving a public-private partnership. The BRA has also maximized value by matching distinctive site attributes to lure potential developers and tenants, a strategy that has over the past 20 years been successful. The result is an extensive, multi-dimensional project that has transformed 133 acres of surplus land and buildings into new homes and commercial structures and renovated and preserved historic elements. More than 900,000 visitors visit the Historic Park at the Navy Yard each year, making it one of the most popular attractions in Boston.<sup>17</sup>

The case of the Charlestown Navy Yard has demonstrated, in many ways, that a base closure does not necessarily imply economic crippling and abandoned property for the community but rather an opportunity to revitalize the community. Several aspects of the Charlestown Navy Yard project merit

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<sup>17</sup>Charlestown Navy Yard. A publication by the City of Boston.

special attention. First, the reuse of surplus federal property in this project demonstrates the tremendous rewards that are possible when there is cooperation between federal agencies and local governments. By disposing of the lands, the GSA has enabled the City to increase its tax base and infuse new vitality into the former military installation while the federal government was able to obtain funds from the sale and subtract future maintenance from the federal budget. The role of a public agency that planned and coordinated the shipyard's pre-development, development, and post-development is also noteworthy. Without the involvement of the BRA, a project of this complexity and scale would not have been possible.

Experience gained, in terms of historic preservation, is the role of the local residents and interest groups. Throughout the planning for the Navy Yard project, a committee of Charlestown residents, merchants, harbor advocacy groups, and local preservationist groups has been actively involved, and their participation has contributed to achieving preservation of the Yard. Although the local committee is now inactive, preservationist groups have continued to monitor the reuse planning process and participate in improving the historic character of the Yard. Local preservation groups such as the Massachusetts Historical Commission, the Boston Landmarks Commission and other local preservation interests have continued to foster historic preservation in the City. They have focused on developing a specific measure that minimizes and mitigates potential impacts on historic resources, and together with the BRA,

they are currently working on the "Double Interpretive Loop," a scheme to enhance visitors' appreciation of the entire Yard as a historic resource.<sup>18</sup>

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<sup>18</sup>Double Interpretive Loop. Boston Redevelopment Authority.



**SECTION 4:**  
**THE SAN FRANCISCO PRESIDIO**

## **4.0 Introduction**

The Presidio in San Francisco has always been accessible to public, with the entrance gates never closed during its over two-hundred years of operation. This army post has continuously shared its facilities and spectacular site attributes with the public and welcomed their use of the base. As on-site military activities have decreased over the years, the Presidio has become less of a military base and more of a regional park. It has become common to spot civilians enjoying its 49-mile scenic drive course, taking advantage of the running and hiking courses, basking in the sun in its beaches, and playing golf on the 18-hole golf course. The Presidio has indeed offered a variety of recreational and cultural resources for many Bay Area residents.

With only a year remaining until the Sixth Army moves out, the National Park Services (NPS) has been, along with a number of local interest groups, preparing for the reuse of the post as a national park. The conversion of the Presidio is discussed in this thesis with the intent to illustrate an alternative way of preserving history in military bases. It is a unique case where a federal agency is responsible for charting the future of a military base with one of the most valuable historic resources in America. Entrusted with the mission of returning the post to civilians and to public at large, the NPS has been tackling a range of historic preservation issues and reuse options. This section investigates the interplay between creating a model of sustainability and preserving a rich historical and cultural legacy .

### **4.1 Site Characteristics**

The Presidio's geographic location on the northwestern tip of the San Francisco peninsula within the city of San Francisco provides a unique environment for a military installation. By any standard, the Presidio is like no other military installation. This world-class army post is framed by the Pacific Ocean on the west and the San Francisco Bay and the Golden Gate Bridge on the north. On its landward sides, the Presidio is contiguous to densely developed residential areas of the city of San Francisco, and the central business district is located two miles to the southeast. By routes through the Presidio, US Highway 101 and State Highway 1 converge on the Golden Gate Bridge.

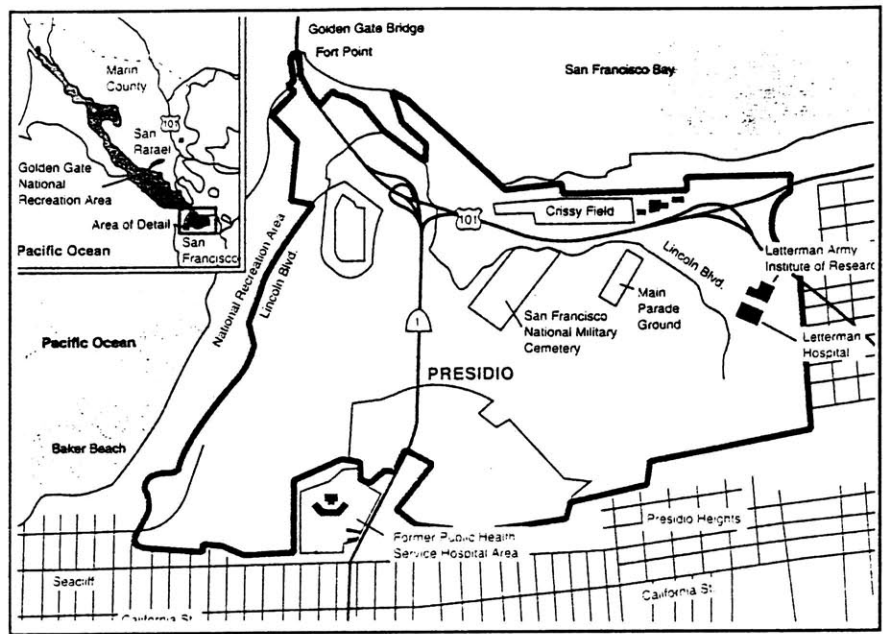


Fig. 4.1 General Context of the Presidio (Source: Department of the Interior)

From any point on the site, its strategic location provides spectacular views and a panoramic landscape. When the Army acquired the property from

the Spanish in 1848, only a few buildings and mounds of adobe scattered on the site existed. Its two centuries of growth has transformed this once barren military garrison to six million square feet of building space, including two hospitals, and a medical research facility. Currently, the open area includes an 18-hole golf course, a 28-acre national military cemetery, a former air field, and a parade ground.

The Presidio is comprised of 1,480 acres - 780 acres of open space and 700 acres of developed areas with about 50 miles of roads. Seven principal areas define the base. The bulk of this development exists along the northern tier of the installation, oriented towards the bay. These neighborhoods include the Main Post, the Letterman Complex, Crissy Field, the Cavalry Stable Area, and Fort Winfield Scott. The southern tier of the post is much less densely developed and is principally comprised of scattered family housing areas and the site of the old U.S. Public Health Service Hospital. A large portion of the open space (about 290 acres) is a historic forest, composed of rare and endangered plant species.<sup>1</sup>

#### **4.2 A History of the Presidio**

Recognized as a Spanish colonial military settlement in 1776 and as a U.S. Army Post from 1846 to the present, the Presidio is a living museum of 200-year military history. During its pre-colonial era, however, the original inhabitants of the Presidio area were the Ohlone Indians. In the coastal area between Point Sur and the San Francisco Bay, their population exceeded

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<sup>1</sup>Transfer of the Presidio from the Army to the National Park Service. Department of the Interior. U.S. General Accounting Office.

10,000.<sup>2</sup> By 1776, the Spanish established a military garrison as part of their northern frontier expansion. After a brief Mexican occupation from 1822 to 1846, the Presidio was transferred to the U.S. Army in 1848. Having served under the flags of Spain, Mexico and the United States, the Presidio is the oldest continuously active U.S. military installation. In its 200 years as a military post, the Presidio has played key roles throughout history including the era of extension of Spanish settlement into Northern California, the Indian Wars, the Civil War, the Spanish-American War, and the United States' territorial expansion into the Pacific basin.<sup>3</sup>

By the 1870s and 1880s when the city of San Francisco was experiencing a rapid expansion and development, plans to insulate the post from the encroaching density of the city were initiated. This resulted in the forestation of the entire site, transforming the barren landscape into a park-like reserve. At the turn of the century, the Nationalist Expansion era (1890 - 1910) led the Presidio with a major building campaign. Brick buildings replaced wooden quarters and barracks. The Army's first permanent hospital, now known as Letterman Army Medical Center, was also established during this time.

While the Presidio was undergoing a significant on-site development of its own, it also contributed to a period of urban growth in the city of San Francisco. The Army attained the reputation of being a "good neighbor" by providing transportation links between the Presidio and the city and housing

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<sup>2</sup>Draft Environmental Impact Statement. National Park Service. p.91

<sup>3</sup>Nakata Planning Group, Inc. Presidio of San Francisco Design Guide.

those that became homeless from the 1906 earthquake. In addition, for the Panama Pacific International Exposition, a world's fair designed to celebrate the completion of the Panama Canal and San Francisco's post-earthquake reconstruction, the Army promoted the city as the host of the Exposition. In October, 1911, President Taft broke ground for this "Jeweled City," nearly half of which stood on Presidio property. Four years later, Governor Johnson of California led a crowd of 150,000 to the grand opening of the Exposition on February 20, 1915.

From the outbreak of World War I in 1917 till the end of World War II in 1946, the Presidio played a vital role by serving as headquarters for the Western Defense Command. The Letterman Hospital, especially, was very active, becoming the largest debarkation hospital in the country. Since the end of World War II, the Presidio of San Francisco has occupied a lesser role in national defense; however, it has retained the active missions of headquarters the Sixth U.S. Army, Letterman Army Medical Center, Letterman Army Institute of Research, and permanent staff support of field operation agencies and activities.<sup>4</sup> Currently, the Presidio is a multi-mission installation, housing a thriving community of military personnel and their dependents, retirees, and civilian staff. The post is home to some 4,000 dependents and employs a total of 5,600 people, 61% of which comprises a civilian work force.<sup>5</sup>

#### **4.3 Site Attributes**

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<sup>4</sup>Nakata Planning Group, Inc.

<sup>5</sup>Draft Environmental Impact Statement.

Recognizing its important role in the colonial and military history of the west, the entire property of Presidio was designated a National Historic Landmark in 1962 and was later designated as a registered California historical landmark. The estimated land value of the Presidio's land is \$555 million in 1989 dollars.<sup>6</sup> The overall architectural ambiance of the Presidio exhibits its historic significance and generally displays a rich, controlled visual mix of varied periods, styles and materials. Two design vocabularies are Spanish Colonial Revival/Mediterranean influences and Colonial Revival and Georgian Revival influences, easily identified in the use of brick. The primary architectural vocabulary on the Presidio, however, relates to Spanish Colonial Revival.

#### **4.3.1 Historic Resources**

The Presidio contains a substantial number of buildings, landscape features, and archeological remains that have been determined to be significant in history. Fort Point, an area within the historic district boundary, is listed individually on the National Register. A total of 870 buildings includes not only military-use structures dating from the Civil War to the present, but also contains facilities such as a commissary, a post office, a gas station, and a variety of support services crucial to the operation of the Presidio as a community. Of the 870 structures, 510 have been identified as contributing to the National Historic Landmark district.<sup>7</sup> A 1991 survey of all the structures on

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<sup>6</sup>Reier, Stone. "Mission Impossible." Financial World.

<sup>7</sup>Draft Environmental Impact Statement. p.94

the site indicated that their conditions, for the most part, are in good to fair condition. The most discernible deficiencies are related to compliance with building and safety codes; therefore, most buildings are inaccessible to people with disabilities.

#### 4.3.2 Major Districts

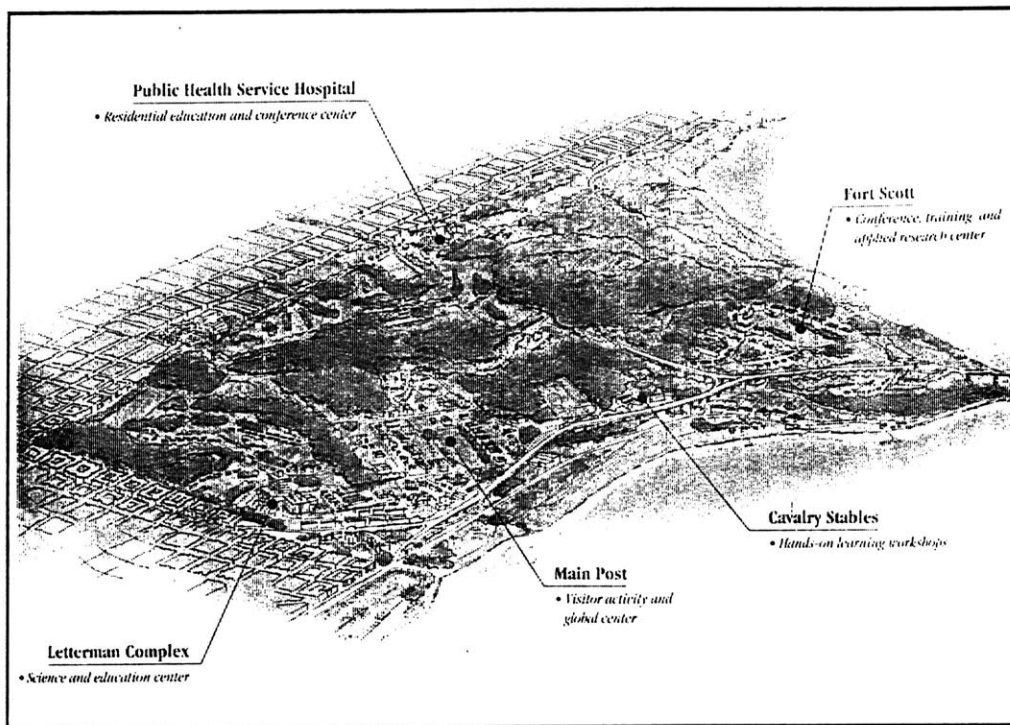


Fig. 4.2 Site plan of the Presidio (Source: NPS)

According to NPS' General Plan Amendment, major planning districts are defined as: the Main Post, Fort Scott, the Letterman Complex, Cavalry



Stables, and Public Health Service Hospital. A brief description of each area is provided.<sup>8</sup>

### The Main Post



Fig. 4.3 The Main Post

This neighborhood is both historically and functionally significant. It is where development of the Presidio as a military outpost and ultimately a United States Army post began. Currently, the Main Post includes 149 (111 of which are historic) buildings that support both the Presidio and Sixth Army headquarters as well as other administrative activities. The boundary of the Main Post is less definitive than that of other areas due to varied architectural styles here.

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<sup>8</sup>Draft General Management Plan Amendment. National Park Service. p.54

## **Fort Scott**

Built in 1912 as a coastal artillery sub-post, this area contains 159 buildings, including barracks, offices, warehouses, and housing communities. This area contains the highest number of historic structures within the entire site, 126.

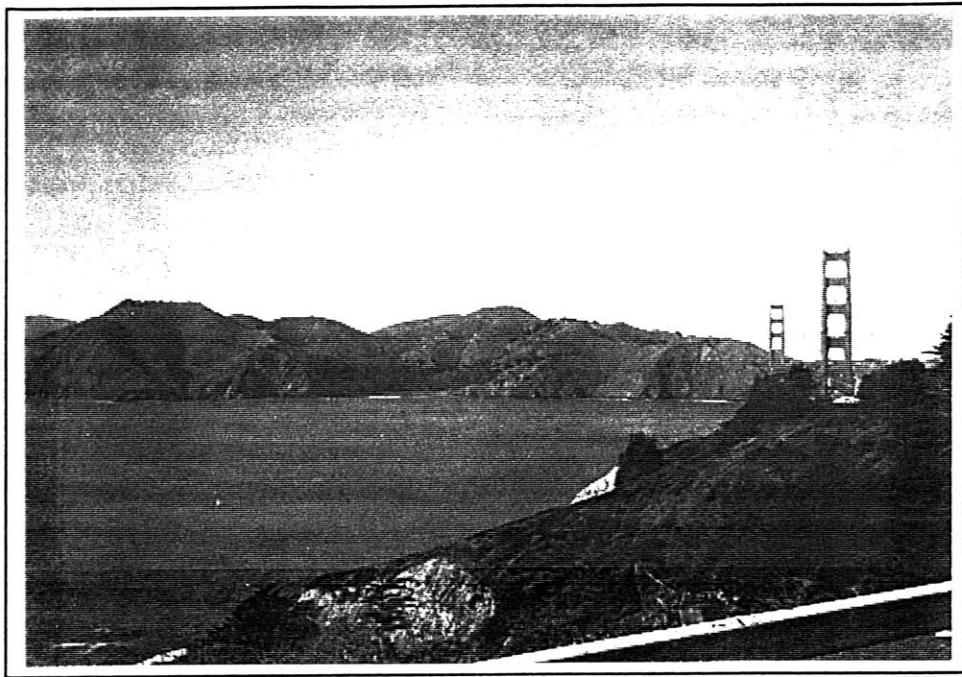


Fig. 4.4 View from Fort Scott

## **The Letterman Complex**

The Complex encompasses approximately 50 structures, dominated by the Letterman Army Medical Center and the Letterman Army Institute of Research (LAIR). 39 of the 50 buildings are historic.

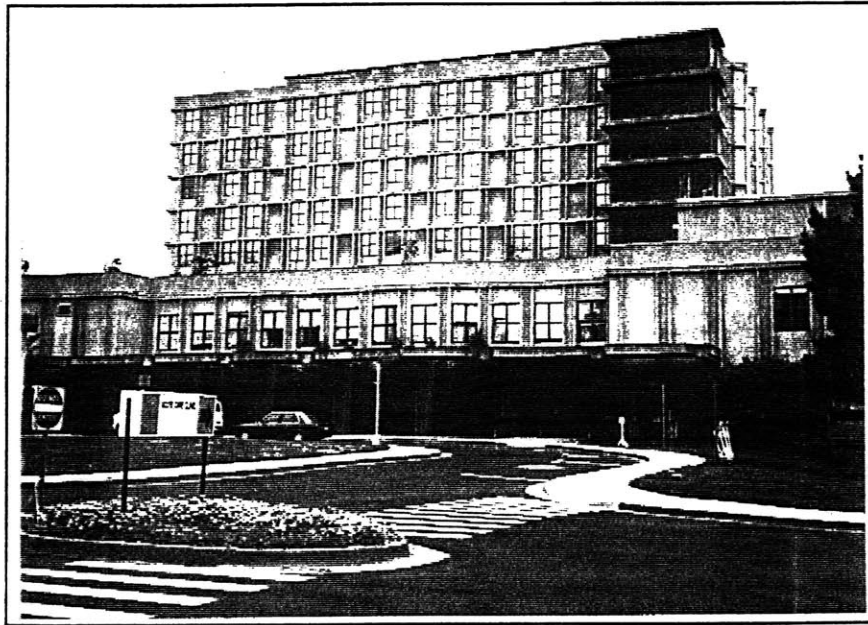


Fig. 4.5 The Letterman Complex

### **Cavalry Stables**

This small forested valley contains 16 buildings that supported Army cavalry troops, large stables and the barracks. 12 buildings are historic. (See Fig. 4.6)

### **Public Health Service Hospital**

Formerly the U.S. Marine hospital, this 37-acre complex was not designated in the 1972 legislation for transfer to GGNRA. However, in 1988 Congress granted the city of San Francisco a 10-year lease option on the facility. Of the 21 buildings, 16 are historic. (See Fig. 4.7)

In addition to these districts, the Presidio embraces a string of smaller areas, both developed and undeveloped. A number of significant outgrants of

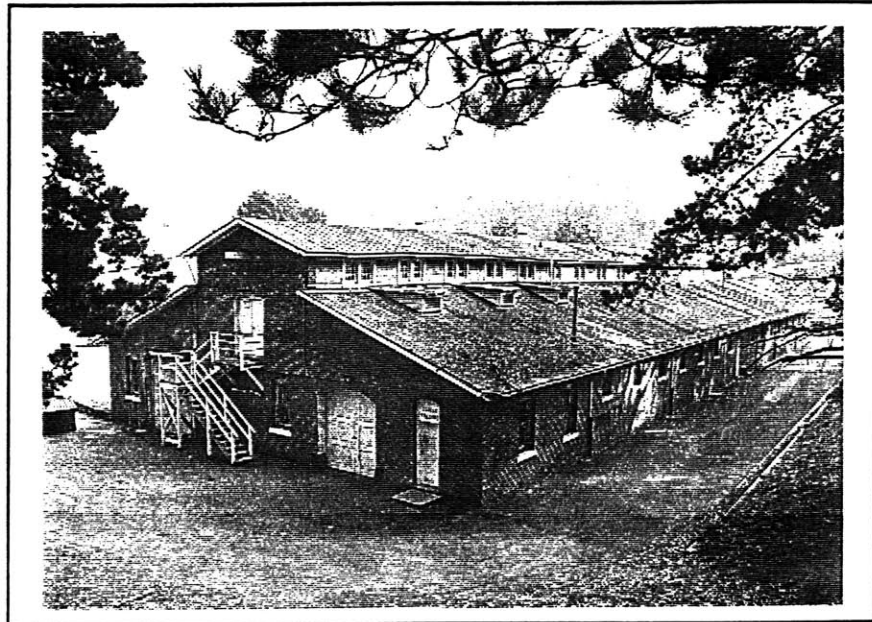


Fig. 4.6 Cavalry Stables (Source: NPS)

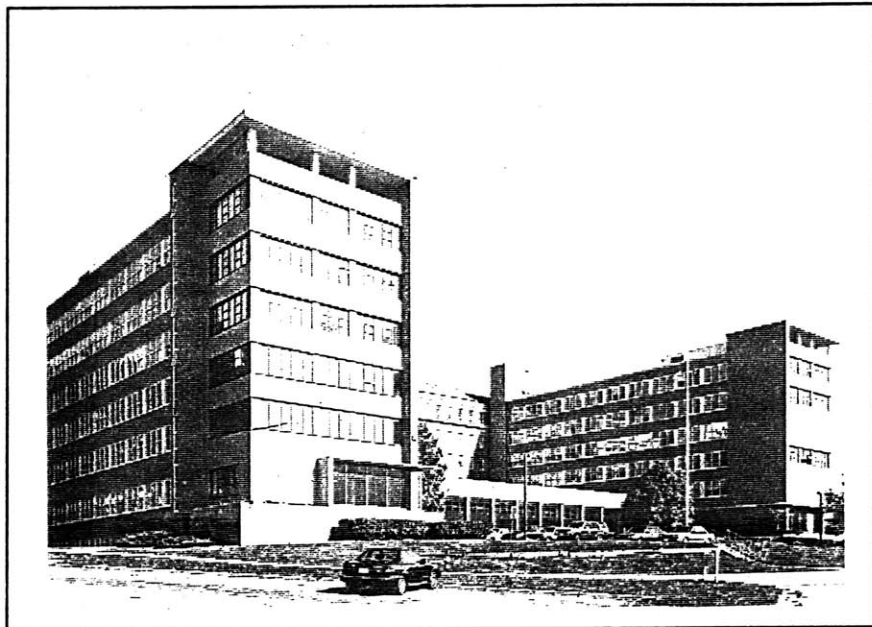


Fig. 4.7 Public Health Service Hospital (Source: NPS)

Presidio land also serves other public functions. The cemetery and the golf course are such examples. The Department of Veterans Affairs operates the 28-acre national cemetery and the Presidio Golf Club administers the golf course, restricting the use to private members and military personnel. Overall, the existing land use pattern is suburban, with a low density level. The following table summarizes a recent site inventory by NPS<sup>9</sup>:

<b>Overview:</b>	
Land Area:	1,400 acres
Open Space	600 acres
Developed Land	800 acres
Total sq. footage of buildings	6.4 million sq. ft
Total sq. footage of historic structures	2.7 million sq. ft
<b>Building Volume By Use:</b>	
Family Housing	1,950,000 sq. ft
Administrative	839,000 sq. ft
Medical	825,000 sq. ft
Research	370,000 sq. ft
Community service facilities	720,000 sq. ft
Supply and storage	381,000 sq. ft
Barracks	370,000 sq. ft
Maintenance	339,000 sq. ft
Operational/training	201,000 sq. ft

<sup>9</sup>Draft General Management Plan Amendment.

#### **4.4 Redevelopment of the Post**

Transformation of the Presidio from a military installation to a park of world-wide distinction has been a challenging task. The conversion plans must not only address the reuse of its numerous historic military structures and landscape, but must also be economically feasible and of sustainable quality.

The draft plan by NPS proposes three major changes:

- Increase open space by 205 acres to nearly 1,000 acres.
- Remove about 300 buildings, mostly non-historic, leaving over 500 others, mostly historic.
- Lease the buildings to tenants and for programs that will create a center for learning and research predominantly on environmental subjects, of national and international caliber.

Based upon various environmental impact statements and other studies examining the effect of the redevelopment on the existing cultural and natural resources at the Presidio, traffic and transportation system, and the local and regional economy, the NPS has proposed several alternatives on the building reuse, site design concepts, activities and programs, and implementation and management strategies. Because the plan is yet to be adopted, it serves as a guideline in achieving the grand vision for the Presidio as a national park, and specific reuse issues are to be addressed once the plan is adopted and one of the alternatives is selected. The Presidio is a case currently in progress; therefore, the rest of this section concentrates on the proposed plans and the planning process thus far as they relate to historic preservation and other base reuse issues.

#### 4.4.1 The Controversy

No one has questioned the importance of preserving the Presidio as a national resource. But a few have questioned the economic viability and the opportunity costs of retaining the entire 1,400 acres for public use. Various economists and developers have criticized the reuse of the post as a park and commented that it ought to be developed as a commercial property or a mixed-use luxury project that promises a higher return. So why isn't this profitable option being considered at all?

The response lies in the foresight of then-Representative Philip Burton (D-California). In the sixties, as pressure to develop remaining open spaces in the San Francisco Bay Area mounted, local environmentalists urged Congressman Phillip Burton to include the Presidio within the boundaries of the Golden Gate National Recreation Area (GGNRA) that encompasses about 73,000 acres as one of the largest urban parks in the world.<sup>10</sup> This legislation mandated that when the post is considered a surplus property by the DoD, it be transferred to the nation's park system. In 1972, Congress authorized the establishment of GGNRA, to preserve sites near San Francisco's Golden Gate that possess outstanding natural, historic, scenic, and recreational value and to provide for recreational open space. The act creating the GGNRA also stated that park resources should be used to provide recreational and educational opportunities and that the recreation area should be protected and preserved in its natural setting.

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<sup>10</sup>Transfer of the Presidio from the Army to the National Park Service.

As a result of the 1988 Base Realignment and Closure Act (BRAC), the Army announced that the post would be closed and vacated by 1995. Following the decision to close the Presidio, the Departments of the Army and the Interior signed an agreement providing for the transfer of the Presidio to the National Park Service (NPS) in September of 1990. A number of sub-agreements followed, listing various responsibilities of each party during the transition.

Since its inception, the GGNRA legislation has fueled much controversy over the issue of paying for the real costs required to develop the post to a park. The City has been criticized for using its political clout to have the federal government cover the high costs of conversion. An opponent of the legislation, Representative John J. Duncan Jr. (R-Tennessee) agrees that the Presidio is one of the country's most historic urban real estate but argues that reusing the entire site for a non-profit use will drain federal expenditures unnecessarily. Currently, Representative Duncan is working on a legislation requiring the city of San Francisco to help defray the cost because he believes that the City will benefit the most from its redevelopment.

The fundamental issue raised by the controversy questions the government's responsibility for preservation and the feasibility of preserving a former base as a public good. While it is true that the mandated inclusion of the Presidio as part of the GGNRA favors the City, it also assures the most publicly beneficial use and ensures the preservation of an invaluable historic property. Does this promise for preservation compensate for the unfair means?



The preservation of the Presidio as a national park will serve as a precedent for future debates on this question.

#### **4.4.2 The Reuse Planning Process**

As the sole inheritor of the Presidio, the NPS has commissioned a team (Presidio Planning Team) of experts in the fields of historical architecture, planning, environmental management, landscape architecture, and natural resource management. To assist the Team, several consultants were also contracted to conduct specialized studies on environmental impact assessment, infrastructure and transportation analysis and various economic impact reports. Due to the GGNRA legislation that has designated the NPS as the only successor of this landmark, the Planning Team was able to avoid the time-consuming and usually complicated disposition and transfer process that has plagued other base closures. Moreover, with the Army's cooperation, the NPS has been able to prepare for the conversion well ahead of the base closure in 1995.

Planning for the Presidio began in the spring of 1990. The reuse planning process began with the NPS initiating an intensive data collection that included a preliminary building inventory and condition assessment of the built resources. This detailed survey was begun in 1991 and has enabled the NPS planners to understand what exists today, to identify what is historically significant and merits preservation, to understand the overall condition and deficiencies of the resources, and to be forewarned of the magnitude of any problems and future capital costs.

Public participation has also been a crucial part of the Presidio reuse planning process. According to Michael Alexander, who chairs the Sierra Club in San Francisco, a countless number of people has shown interest in the conversion process. He has stated: "It's been the most spectacular outpouring of interest I've seen in memory - it's unreal."<sup>11</sup> For example, more than 250 people crowded a public meeting held by the Environmental Design Foundation in 1989, soon after the announcement of the post's closure. Beginning 1991, a series of workshop called "Visions," was held to generate people's ideas for the Presidio's future use. These workshops apparently served the dual purpose of gathering planning ideas and propitiating a potentially volatile community. As a result of these workshops, the NPS, to its surprise, has discovered that preserving the Presidio as an open space was the top priority for virtually everyone involved. Their concepts along with various proposals submitted by individuals, organizations, public agencies and other institutions nationwide since the 1989 announcement of the closure have been incorporated into the NPS' reuse plans and proposals.

As the lead agency in planning for the reuse of the Presidio, the NPS has so far undertaken a comprehensive planning process involving the public to determine the best uses that are consistent with the establishment of the park. Four alternatives have been proposed to date. While each proposal discusses a different planning program and management measures, they share the common theme of open space conservation and historic preservation. Some of the elements of concern that are addressed in these alternatives are existing natural

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<sup>11</sup>Preservation News. 1989

features of the site such as the topography, historic vegetation and the forest, strategic vistas, building clusters/districts, circulation patterns. In addition, innovative ways to finance and manage the park have also been explored.

#### **4.4.3 The Proposed Alternatives**

The alternatives the NPS is considering are generally consistent with the uses that the NPS has proposed with the stated purposes for creating the GGNRA and the NPS. These alternatives are included in the Park Service's Draft General Management Plan for the Presidio which was released to the public on October 19, 1993. This Plan includes four alternatives for managing the Presidio - one of which the Park Service prefers. Although one of the alternatives assumes a continued military presence, none of the alternatives was revised to reflect the June 1993 BRAC Commission's recommendation that the Sixth Army Headquarters remain at the Presidio.<sup>12</sup>

Under the Park Service's preferred alternative, the Park Service would manage the Presidio, and public and private "park partners" would occupy the buildings. The tenants would pay a portion of the costs to rehabilitate these structures, as well as a portion of the total annual Operation and Maintenance (O & M) costs. Under this alternative, the Park Service would remove 301 buildings, including Letterman Hospital. Park Service officials stated, however, that if a tenant could be found that was willing to pay the costs to rehabilitate the hospital, the hospital would not be removed. LAIR would probably remain a research facility, and the Public Health Service Hospital site

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<sup>12</sup>Transfer of the Presidio from the Army to the National Park Service.

would be included within the park boundary. However, only the original historic structure would be rehabilitated. The two wings added during the 1950s would be removed. Under this preferred management alternative, the Park Service's proposed uses for the Presidio are, in general, consistent with the stated purposes for creating the GGNRA and the Park Service.

Under a second alternative, the Park Service would manage the Presidio as a traditional national park, giving greater emphasis to open space and recreation. The Park Service would remove 356 buildings and manage the remaining ones. The Park Service would not include Letterman Hospital or LAIR in its plans for the park, and the Public Health Service Hospital site would not be included within the park boundary.

Under a third alternative, the Park Service would manage the park with the military and park partners. Under this alternative, 152 buildings would be removed, and the Public Health Service Hospital site would be included in the park boundary. The military would continue to use Letterman Hospital, LAIR, and 800 of the 1,200 housing units.

Under a fourth alternative, the Park Service would manage the park as a public sector enclave, and the General Services Administration would be responsible for leasing the buildings. No buildings would be removed under this alternative, and the Public Health Service Hospital site would not be included within the park boundary.

The Park Service believes, however, that additional legislation may be required to implement any of the alternatives in its draft general management

plan. For example, the Park Service believes that it may need to obtain authority to<sup>13</sup> :

- lease structures and facilities;
- create a non-profit corporation with park partners to manage the leases;
- provide capital financing tools, such as federally sponsored loans or lines of credit; and
- retain revenues at the GGNRA to offset O&M costs.

The Presidio Planning Team has reached the final stage of its reuse planning process as of this year. Having completed the draft plan alternatives and impact studies, the Team has begun an active tenant recruiting process. A brochure titled, "Call for Interest" has been released to over 5,000 organizations world-wide, seeking preliminary expressions of interest from organizations proposing programs at the Presidio. One of the more notable organizations that has shown interest is the Mikhail Gorbachev Foundation. The former Soviet President became the first civilian tenant at the new Presidio to sign a 20-month lease on a white-shingled bay-front house as the San Francisco headquarters for his foundation, formally known as the International Foundation for Socio-Economic and Political Studies. The foundation is dedicated to seeking peace through international cooperation and exchange. As of July 1993, approximately 400 organizations have responded to the NPS' "Call for Interest." The Planning Team is now preparing for the Plan Amendment and Environmental Impact Statement (EIS) Amendment, catering specifically to one

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<sup>13</sup>Draft General Management Plan Amendment. pp.4-5

alternative that is expected to be adopted this year. The final Plan is scheduled to be adopted prior to the Army's departure starting September of 1994.

#### **4.5 Issues at Hand**

The NPS has so far recognized the massive undertaking the reuse of the Presidio represents by instituting a number of unique elements in its reuse planning process and proposing several options that differ primarily in their approach to overall management, level of resource preservation and enhancement, and diversity and extent of visitor programs. Nevertheless, the unprecedented nature of the Presidio conversion process has posed an unprecedented level of complexities and planning issues. The following outlines two of the most daunting aspects of the Presidio redevelopment circumstances presented thus far.

##### **4.5.1 Conflicts Among Players**

Although the NPS has been entrusted with the exclusive development rights of the Presidio, many local agencies have been, both directly and indirectly, involved in charting the post's future. The agencies share the mission of creating a world-class park and a global learning/research center, but fundamental differences in each agency's approach are causing conflicts. The County and City of San Francisco and the U.S. Sixth Army are the two key agencies that are being directly affected by the NPS' reuse plans, but research has indicated that their roles have not been more than advisory. Rather, local preservationists and the professional groups in the field of environmental design

have had the most significant impact in the reuse planning process. No major conflicts of interest are shared among the City, the Army, and the local groups; however, the NPS has confronted a few planning challenges with the local government as well as the Army.

### **The County and City of San Francisco**

The County and the City of San Francisco is one of the agencies that has monitored the Presidio planning process from afar. In 1989 when Pentagon announced the closure of the post, the former mayor, Art Agnos, realized that the possibility of Congress exempting the Presidio site from the wide-ranging list of base closures was highly unlikely, and without much protest, accepted BRAC's decision to close the post. Since the NPS began its reuse planning, the County and the City of San Francisco has discussed with the NPS only those issues regarding municipality services. Overall, the local government has not been involved in forming the reuse decisions.

After reviewing the Draft Plan released by the NPS in October of 1993, the City's biggest concerns were regarding the demolition of existing housing units and the increased demand for public transit services. The City predicted that the proposed removal of 738 family housing units by 2010 or two-thirds of the Presidio's 1,174 housing units was taking away too many existing affordable housing. They recommended that removal of housing units should be limited to highly visible sites with existing sensitive historic or natural resources and that the NPS replace an equivalent number of housing elsewhere within the Presidio. Given the Bay Area's high housing costs and the

attractiveness and amenities of Presidio housing, the availability of housing to employees of Presidio tenant organizations and to participants in long-term research and training programs could draw potential tenants and participants. The City also implied that reusing some of the housing units to house the homeless would be a desirable alternative.

The Draft Plan's demand for additional public transit linking the Presidio to downtown was another concern for the City. The City claimed that providing a variety of additional extensions to existing Municipal Railway (MUNI) transit services would increase the municipality's operating costs by a substantial amount. The cost to the City seems negligible compared to the benefits of getting a park at almost no cost but the City contends that its contribution for police, fire, emergency medical, water, waste water and storm drainage services on the post is already more than it can handle. Mayor Jordan has recently drafted a letter to the Congress stating the City's contributions to the Presidio project and asking for further financial assistance.

The issue of sharing project costs has always shadowed the relationship between the City and the NPS. To resolve such conversion issues and to coordinate on-going discussions with the NPS, the City has assigned one full-time planner to this task with funding from the NPS. When questioned about the City's lack of participation in the reuse planning process, this planner stated that the Burton legislation has basically granted the NPS a complete control of the conversion and regulating the NPS' reuse plans is out of the City's jurisdictions. She also asserted that the City has advised the NPS on various aspects of the reuse plans, but essentially, the City views the conversion to be a



federal responsibility. In the two previous projects, the local government's involvement has been vital to the redevelopment and preservation undertakings; however, in the case of the Presidio, the Burton legislation excludes the local government as a partner in the reuse planning, although it ensures preservation and public use of the Presidio property.

### **The U.S. Sixth Army**

Both the NPS and the Sixth Army have secretly displayed a sense of hostility towards each other since the post has been slated for closure. Questions over who will control parts of the facility, including potentially lucrative areas such as the panoramic golf course and the historic Officer's Club have sparked a sense of rivalry between the two parties, and the pending ownership of such profitable areas may further damage their relationship. The Army is more determined to hold on to its facilities at the post, especially since it has embarked on a \$100 million construction program. A new barracks complex, child care center, and a commissary have been built by the Army even after the closure announcement has been made.

Moreover, a recent special order has directed that the Sixth Army Headquarters remain in the Presidio. This order meant that the Army will need to keep some buildings on the Main Post and retain support facilities such as housing, the post exchange, the commissary, the officer's club and the recreational facilities for its 1,200 military and civilian personnel. The NPS' Draft Plan proposed, however, that the post exchange and the commissary among other facilities the Army wishes to retain will be torn down. The

Army's Public Affairs Officer has responded that the Army is not willing to hand over the entire property without "detailed negotiations,"<sup>14</sup> indicating that further conflicts between these two parties are brewing.

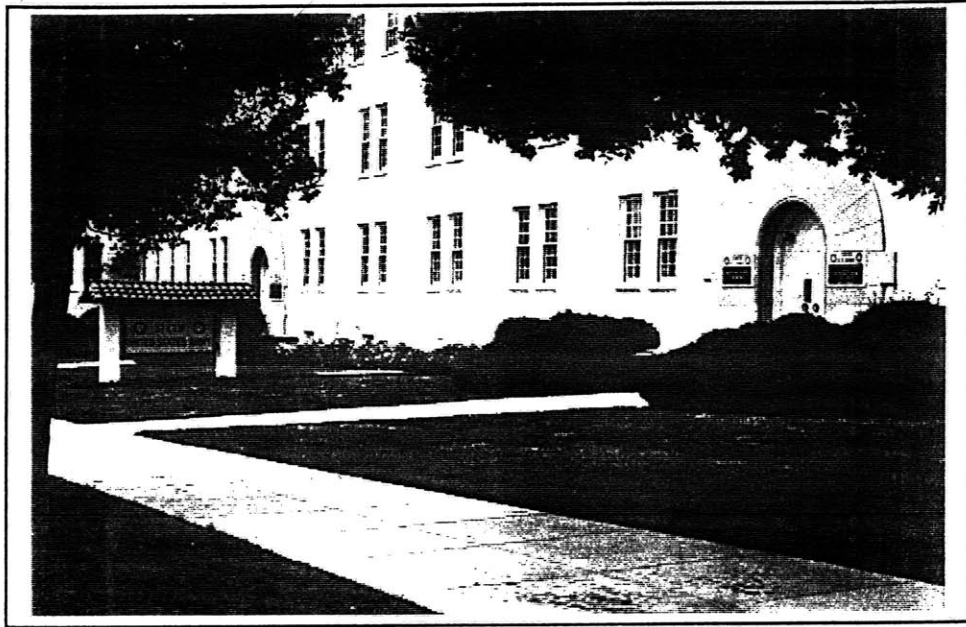


Fig. 4.8 The U.S. Sixth Army Headquarters

### **Local Organizations**

While the County and City of San Francisco and the U.S. Sixth Army have not been an integral part of the Presidio planning process, many local residents and groups have played an important role in shaping the NPS' reuse decisions. Among the issues of concern, historic preservation has been hotly pursued and overseen by these local organizations. In a close alliance with the City's Landmarks Preservation Advisory Board, the preservationists have closely followed the NPS' plans to advise on the removal and retention of

<sup>14</sup>San Francisco Chronicle. 1993

historically significant structures and to ensure their proper reuse. Other private organizations such as the San Francisco Planning and Urban Research Association (SPUR), the San Francisco Chapter of American Institute of Architects, and the Presidio Council have formed their own Presidio Task Force and contributed their expertise and recommendations for the making of the Draft Plan. These organizations have worked on issues such as the redesign of the Doyle Drive, the 1.5-mile stretch of Highway 101 through the Presidio that connects the Golden Gate Bridge to Highway 1, the architectural and landscape design of the future park, guidelines on rehabilitating historic structures and defining tenant selection criteria. The number of local professional and interest groups that have contributed to shaping the reuse plans indicates that local support and participation is always a positive force in base conversions.

#### **4.5.2 Financing Concerns**

Although supported by the federal government, the costs associated with the Presidio's conversion are huge when viewed against the NPS' annual budget. A General Accounting Office report estimates the cost of upgrading the Presidio, including rehabilitating or preserving its historic properties to range between \$702 million and \$1.2 billion or more, depending primarily on the alternative that is adopted.<sup>15</sup> The NPS plans on financing this cost through a combination of private and public sources. Federal appropriations to date, estimated future appropriations, and other potential sources of funding are

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<sup>15</sup>The Washington Post. December 28, 1993.

\$80.5 million during 1991 and 1993 for the Presidio's transition to a park.<sup>16</sup> The difference in the costs must be raised through leases and financial deals devised by the proposed public corporation.

The estimated annual operating and maintenance (O&M) cost is \$45.5 million annually through fiscal year 1995. Beyond 1995, it is expected to range from \$38 million to \$40 million annually through fiscal year 2010.<sup>17</sup> With the Congressional appropriations at \$25 million, the Presidio faces a \$13 million to \$15 million shortfall in yearly operating costs. Leases and philanthropic donations must make up the difference. In the proposed Draft Plan, the Park Services requires that tenants pay for 62% to 90% of the building rehabilitation costs and a portion of the annual O & M costs. The NPS, however, is daunted by the prospect that funding sources will not meet a substantial portion of the yearly costs to rehabilitate the properties nor the shortfall in the O & M costs and is seeking private contributions and an additional federal funding.

#### **4.6 Lessons for Historic Preservation**

Due to its invaluable historic nature, addressing a variety of preservation issues has been an essential component of the Presidio reuse plan. The Presidio's status as a National Historical Landmark requires compliance with Section 106 of the National Historic Preservation Act. The Section 106 Review calls for an impact study called, Determinations of Effect, for any planned redevelopment proposals. In addition, NPS' decisions to rehabilitate and lease

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<sup>16</sup>Transfer of the Presidio from the Army to the National Park Service. p.9

<sup>17</sup>Ibid.

historic buildings must meet the approval of the California State Historic Preservation Office (SHPO) and the Advisory Council on Historic Preservation. These provisions make it imperative to identify and take an inventory of all the historic resources on the site before any reuse planning could take place. The NPS, the very authors of the nation's preservation standards and policies, offers the following five-point procedure in preparing a preservation plan.

#### **4.6.1 Preparing a Preservation Plan**

The first step is to take an inventory of all the buildings in the base. Soon after the base closure announcement has been made official, the NPS formed a Historic Preservation Committee responsible for evaluating all buildings in accordance with the National Historic Preservation Act of 1966 and Technical Manual 5-801-1, Historic Preservation Administrative Procedures. In accordance with these guidelines, the NPS Planning Team has completed an inventory of historic properties located on the site and rated the structures by five categories of significance (I-V) from most to least significant.

Out of 870 buildings at the Presidio, 510 buildings have been considered as contributing to the National Historic Landmark District. Most of the historic buildings were assessed to be in good to fair condition, although major building code deficiencies such as inadequate fire exits and the lack of disabled access were evident.<sup>18</sup> To date, no formal preservation program has been defined for the Presidio except as implied by the specific requirements of

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<sup>18</sup>Draft General Management Amendment Plan. p.14

the Maintenance Plan for individual buildings. However, based on the interviews conducted with the NPS Planning Team, the following factors have determined which buildings would be reserved and which would be removed:

- the building location;
- the building condition;
- the cost of reuse and maintenance versus removal;
- the physical adaptability of reuse;
- the likelihood of being leased; and
- relevance to the selected National Park theme.

Thus, the second step is to evaluate the buildings according to a set criteria.

Based on these criteria, the NPS then developed a plan for restoration, rehabilitation and demolition. They proposed that only 37 contributing historic buildings be removed while nearly 475 contributing buildings be rehabilitated and preserved for new uses.<sup>19</sup> These buildings vary in terms of function and architectural merit but a vast majority of them is housing. After the proposal has been approved by the Advisory Council and the State Historic Preservation Office, the next and final step is to implement the plan.

The NPS is currently awaiting the approval on its proposed preservation plan, but have proceeded to market the Presidio's historic buildings and other historic resources to recruit tenants that are willing to share the cost of preservation and reuse the proposal demands. As a result, this nation-wide marketing campaign, the "Call for Interest" has already captured the interest of tenants who are quite committed to historic preservation. Although a complete

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<sup>19</sup>Draft Environmental Impact Statement. p.9

preservation program is still in the works, the NPS has so far demonstrated a good stewardship in planning for the preservation of the nation's irreplaceable historic resource.

#### **4.6.2 Public-Benefit Corporation**

The NPS is quite proficient in managing parks, but managing lease properties for private sector tenants is a brand new field for them. Therefore, they proposed a "public-benefit" corporation to compensate for their lack of expertise in this area. This management system for leasing properties at the Presidio grants the authority and flexibility to manage the properties assigned to it using private sector methods. This public-private partnership promises to be the least expensive way to handle the property by supplementing federal financing with income from the Presidio tenants and concessionaires and private philanthropy.<sup>20</sup> The financial success of the Presidio could ultimately rest on the establishment of this corporation.

The public benefit corporation has gained much municipality support for it also benefits the City. Representative Nancy Pelosi, D-San Francisco, has introduced a bill, H.R. 3433, that would set up this permanent public-private partnership to oversee the leasing of Presidio buildings. That bill is now under consideration by Congress. Representative Pelosi hopes the bill will produce a compromise that will allow the NPS to pay its bills. Already, Congress has passed legislation to allow the NPS to lease abandoned Army buildings at the Presidio, as well as Letterman Hospital, to private operators. Accepting

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<sup>20</sup>San Francisco Chronicle. November 23, 1993

competitive bids from the private sector, perhaps, signals the way business at U.S. parks will be done in the future.

#### **4.7 The San Francisco Presidio in 1994**

The daily ritual of firing the cannon across the Presidio Main Parade Ground at 5:00 PM has continued throughout its two centuries in military command. Within a year's time, however, this familiar resonance will instead signal the last chapter of its military history. The vision for the Presidio to transfer it into a park that houses a network of national and international organizations devoted to improving human and natural environments will be realized with history and preservation as its foundation. The Presidio project is a special case in that its designated developer is the very federal agency committed to promoting historic preservation and regulating nation's preservation ordinances. Despite this unique redevelopment circumstances, the redevelopment experience at the Presidio reveals similar planning issues raised in the preceding case studies as well as suggesting an alternative way of approaching preservation planning in future base redevelopment projects.



**SECTION 5:  
LESSONS FOR HISTORIC PRESERVATION  
IN BASE CONVERSIONS**

## **5.0 Introduction**

The three preceding case studies suggest several valuable lessons for achieving historic preservation in base conversions. Although they vary in terms of preservation efforts and accomplishment, they all raise important preservation and redevelopment issues and offer innovative reuse planning strategies. The first part of this section refines those critical issues under the following topics: economic development versus preservation; real costs versus opportunity cost; and restoration versus rehabilitation. Based on this discussion, several recommendations that foster preservation efforts in military base conversions are then proposed. The ultimate goal of this concluding section is to establish the motivation for undertaking historic preservation in future base conversion projects.

### **5.1 Economic Development vs. Preservation**

When the military suddenly withdraws from a small, base-dependent city, regaining economic stability and creating new employment opportunities are often the most pressing tasks. The city of Benicia faced such issues when the U.S. Army closed its operations at the Benicia Arsenal in 1964. At the time of closure, over one third of the City's working population was employed at the Arsenal, and the Army was the City's biggest income generator. Although the City acted quickly to minimize the overall impact of the base closure, the fate of Benicia's economic viability lay in redeveloping the Arsenal. Thus, the City focused only on economic development strategies, dismissing any notion of preserving the Arsenal's historic resources.

The dilemma experienced in Benicia poses an important question: Will preservation be attempted at all when a city demands a quick economic recovery? In many cases, economic development priorities will undoubtedly take precedence over preservation responsibilities. Preserving history in military bases requires time and financial resources, and when a city is pressed for regaining its economic viability, it is unlikely that preservation will even be considered as a factor in its reuse planning process. The conversion of Charlestown Navy Yard, however, has demonstrated that economic development and historic preservation need not be two opposing goals in reuse planning, but with innovative planning strategies, both can be successfully achieved.

A decade after the closure of the Benicia Arsenal, Charlestown faced a similar predicament. The closure of the Navy Yard threatened to displace some 5,900 jobs and to cause a major decline in port-related businesses in the City. As was the case in Benicia, economic development was an urgent issue, but it was not the only issue. The BRA's mission was not only to regain the City's economic stability but also to preserve the Yard's significant history. By manipulating the Yard's historic nature to obtain a substantial amount of public funding and by marketing the Yard's unique environment to attract developers to the site, the BRA was able to accomplish both. The redevelopment of the Navy Yard has also demonstrated that collaboration between spirited local preservation groups and a cooperative local government spearheading the reuse planning process is a crucial factor needed to achieve historic preservation in base conversion projects.

### 5.1.1 Community Participation

Unlike the Benicia Arsenal, the Charlestown Navy Yard enjoyed both the cooperation of the City, the developer, as well as participation and support of the local residents and preservationist groups in preserving the Yard's history. Initially, the Navy Yard was to continue its function as an industrial facility; however, the Yard presented several insurmountable design problems and preservation issues for the continued industrial use. It would have been relatively easy to demolish a row of buildings located on the northwest edge of the site and start anew, but the Charlestown residents, along with the Charlestown Preservation Society and the Charlestown Historical Society, persuaded the BRA to reorient its reuse approach from a closely confined industrial facility into a renewed commercial/residential complex based on the historic character of the shipyard. This reuse approach translated into the concept of an Historic Monument Area, and in cooperation with the NPS, the BRA has formulated a plan for the renovation and retention of the historic resources in this area.<sup>1</sup> The retained historic character of the Yard was then promoted as a marketing strategy to attract tenants to the site.

The local preservationist groups' strong advocacy at Charlestown was further supported by a well-funded national lobby group, the National Trust for Historic Preservation. With their influence in the decision-making process, the local preservationists continued to advocate maximum preservation of the Yard throughout its reuse planning process. In 1987, they fought the proposal to

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<sup>1</sup>Planning Civilian Reuse of Former Military Bases. The President's Economic Adjustment Committee. p.26

develop Building 197 into a condominium and negotiated a compromise with the BRA to preserve Pier 5 and to create a new master plan for future preservation and redevelopment of the entire Yard.

### **5.1.2 Public Funding**

The BRA's aggressive campaign for land disposition and obtaining funding enabled them to move forward expeditiously. Some 46 acres of the Yard were transferred to the BRA at no cost by the federal government in return for agreements regarding future use of the property while 16-acre Shipyard Park site was given to the City by the Bureau of Outdoor Recreation (BOR). The BRA also secured the 30-acre Historic Monument Transfer Area from the GSA on the condition that the historic resources within this area be preserved and maintained. The remaining acreage, mostly within the New Development Area, was purchased for \$1.7 million from the GSA, with Immobiliare advancing BRA the acquisition costs. Project funding for all portions of the Yard included: \$4.8 million from Economic Development Administration; \$2.2 million from City Council Bond Authority; \$2.5 million in Urban Development Action Grant; \$1.4 million from Bureau of Outdoor Recreation.

These public funds provided the BRA with the means to plan for historic preservation as an integral component of the Yard's successful reuse planning, even when economic development was a pressing issue. It should be noted, however, that the role of the BRA as both a regulating and redevelopment agency propelled a strong motivation to reap profits from the redevelopment that may be absent in most cities. The BRA continues to act as

an equity partner and owns much of the Navy Yard, and the proceeds from leasing the properties are used for the on-going development.

## **5.2 Real Costs vs. Opportunity Costs of Preservation**

Even when economic development is not the most dominant issue in a base reuse project, the value of preservation is often questioned. Particularly in the San Francisco Presidio case, many have disputed that preserving the entire Presidio site as a national park is not the best reuse option. No doubt the addition of 1,416 acres will enhance the Golden Gate National Recreation Area but opponents argue that enormous opportunity costs are foregone in terms of development. Even if preserving the land as a public resource constitutes "highest and best use," opponents claim that not all the land is needed for that purpose. According to a noted real estate analyst, the value of the raw land at the Presidio is approximately \$1 billion (in 1993 dollars), assuming it was developed as condominiums or as a mixed-use luxury project.<sup>2</sup>

Although selling off portions of the Presidio for private development would have been quite tricky due to its National Historical Landmark status and its historic structures and resources dispersed throughout the site, opponents still make a case for the potential profits associated with developing the Presidio. Some are, however, less concerned about the opportunity costs foregone by preserving the post, but are more concerned with the real costs of preservation. Representative John J. Duncan (R-Tennessee) challenges the late Representative Phil Burton's 1972 law. Known to be a very powerful San

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<sup>2</sup>Reier, Sharon. "Mission Impossible." Financial World. pp.20-21

Francisco Democrat, Representative Burton had managed to get a law passed, mandating that any land not needed by the Army be transferred to the Golden Gate National Recreational Area. Representative Duncan, supported by a few of his peers, contests that while this law insures historic preservation and presents the Presidio as a public good, it is designed to manipulate federal funds to pay for what is essentially a local gain.

More explicitly, the real controversy is over who should pay for preserving the Presidio. Opponents claim that since the city of San Francisco greatly benefits from the post's transformation to a park, they should help defray for some of the costs. The real costs involved in the physical transformation of the post, including toxic clean-ups is expected to range from \$702 million to over \$1.2 billion and the estimated operation and maintenance costs of the park amount to \$40 million a year.<sup>3</sup> The City has managed to shift this huge financial burden to the federal government, justifying its actions with the basis of historic preservation and public use of the Presidio.

This case raises several potent issues concerning preservation in base conversions. When a military installation ceases to serve the nation's defense needs, who should be responsible for its preservation? Is historic preservation a national responsibility or a local responsibility? And who should pay for the opportunity costs and real costs of preserving a military installation of national importance? While the DoD currently provides a set of regulations that guides the base disposition and transfer process, it does not address historic properties nor does it include any preservation and rehabilitation policies for all levels of

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<sup>3</sup>Guskind, Robert.

the government. The existing Section 106 review only addresses federal actions on historic sites and properties. The Presidio case suggests that with the increasing number of historically significant bases that face closures, more effective policies and mechanisms for accommodating preservation are perhaps necessary. Based on the experience gained from the three case studies, several recommendations are made in the second part of this section.

### **5.3 Restoration vs. Rehabilitation**

The controls imposed by the status of the site as a National Historic Landmark have implications relating to feasibility of reuse. On the one hand, there is assurance that restoration of buildings will respect their historic and architectural integrity. On the other hand, carrying out restoration is costly. Virtually all of the buildings on the bases are inadequate in terms of amenities required by civilian users, such as air conditioning, and in many cases, new means of egress and other structural changes including wiring, plumbing and heating are required in order to conform to the current Building Code and Americans with Disabilities Act.<sup>4</sup>

These constraints require substantial capital. It is recognized that in order to achieve the objective of preserving historic and architecturally significant structures, it is necessary to provide substantial public inducements in the form of access improvements, amenities, and careful interpretation of guidelines to attract sufficient private investment to finance rehabilitation. It is to be expected that with these inducements, the process will require the sacrifice

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<sup>4</sup>Boston Naval Shipyard/Charlestown. p.18



of some buildings and areas within the base. Particularly for those bases where the entire site is designated as a National Historic Landmark, some demolition is inevitable.

Where any action proposed with regard to a particular historic resource, the three alternatives are: to keep it, change it, or destroy it. The choice of whether to restore, rehabilitate, or demolish the historically significant buildings hinges on three major factors: design factors, mission factors, and cost factors. The design factors relate primarily to the building's architectural elements and tend to show the relative compatibility of the historic building design and the evaluated use; the mission factors relate primarily to the building's ability to meet master planning and operational requirements; and cost factors relate to the economic components of the building's adaptive reuse compared to construction of a new facility. The following details these factors that are used to determine the cost and benefit of restoration, rehabilitation, and demolition.

### **5.3.1 Determinants**

Many of the buildings in military bases challenge the definition of "historic." Most people equate a historic building with a beautiful building, and military structures, for the most part, do not fit their notion of "beautiful." For example, people have questioned why the Park Services proposed to restore and rehabilitate so many "ugly" buildings at the Presidio. This has brought to the NPS' attention the importance of clearly establishing the definition of "historic" to include not only those that are aesthetically pleasing and of architectural merit, but also those that symbolize a significant event or period in

the course of history. For the Presidio, the NPS assessed the preservation value of the historic resources on the following criteria: the historic significance of the building; the location of the buildings with respect to the overall preservation plan; the condition of the buildings and the likely restoration, rehabilitation, and demolition costs; flexibility of design; and functional requirements of reuse such as handicap accessibility and emergency egress.

Some inconsistencies in their evaluation of the same type of buildings are detected, however. For instance, the World War II barracks near Crissy Fields are proposed for demolition while the same type of barracks located in another area of the site are proposed for preservation. This is due to the Department of Interior's Preservation and Rehabilitation Standards that allow some flexibility for each developer to interpret what contributes to the overall preservation concept and what can be demolished. Although the organization, operation, and development pattern of a military base are still influenced by the original site planning concepts, it is basically up to the developers to determine whether to restore or rehabilitate parts of the base to fit the reuse purpose.

In the case of the Charlestown Navy Yard, the BRA's underlying goals of preservation largely determined whether to restore or to rehabilitate it for new use. The BRA's preservation efforts included increasing the appreciation of the Yard's history by preserving the exterior of historically significant buildings to the extent possible; enhancing the historically significant areas through landscaping, signage and conservation; and ensuring that the design of new structures is compatible with the historic properties and sensitive to historic character of the entire site. As a result, very few buildings were demolished

and the majority of the buildings were rehabilitated to adapt to new uses. Some of the Yard's most historic buildings, especially the Rope Walk, however, have presented serious reuse problems due to the unique spatial configuration and only temporary restoration measures were taken.

### **5.3.2 Adaptive Reuse**

Adaptive reuse, as defined by Martin and Gamzon, is a process by which structurally sound older buildings are developed for economically viable new uses.<sup>5</sup> The preceding case studies suggest that one of the best means to preserve historic resources, perhaps, is to keep them occupied and in use. While restoring a building retains its historic and architectural character, without a function, it runs the risk of becoming a lifeless display piece. The Rope Walk in the Navy Yard and unoccupied Arsenal buildings are such examples where the building has become a mere monument, devoid of any activities and spirit. Rehabilitation for adaptive reuse, on the other hand, faces the challenge of modifying the space without scrubbing away the building's rich spatial and material qualities and require planning considerations beyond the physical property lines. Moreover, not only the building must adapt to a new use, the new use must also adapt to the context of the site. By putting rehabilitated building to use, however, its vitality is renewed and future maintenance and continued preservation is better assured. Rehabilitation for adaptive reuse has the potential to demonstrate that the forms and materials devised in the past are still valid and viable when properly adapted to the functions of today's life.

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<sup>5</sup>Adaptive Use: Development Economics, Process, and Profiles. The Urban Land Institute.

## **5.4 Recommendations**

Despite the differences in the context of each site and situation of each project, the reuse planning objectives in all three preceding cases have implications for the public interest. Whether the reuse priority was economic development or physical redevelopment or both, the underlying purpose of these base conversions was to transform a deactivated military site to a civilian use that most benefits the community. Reviewing the case studies, it is clear that historic preservation is an investment in the future of the community and the reuse of the base. Recognizing the cultural and economic value of historic preservation, the developers of the Presidio and the Charlestown Navy Yard have incorporated it in their reuse planning process and reached a satisfying medium between preservation and redevelopment. Each case study presented various issues surrounding the topic of historic preservation and base reuse and the experience gained from each case offers the following lessons for preserving history in military bases.

### **5.4.1 Local Involvement and Federal Leadership**

There is no doubt that the Benicia Arsenal, the Charlestown Navy Yard and the Presidio are historically significant and merit preservation. All three sites have been placed on the National Register of Historic Places and have been designated National Historic Landmarks. Although the Presidio property outweighs the other two projects in terms of the number of historic structures and in its real estate value, it would be an impossible task to compare historic

significance of the three sites because each site is equally important to history and the life of its respective community. A comparison on preservation planning can be made, however. With the exception of the Benicia Arsenal, preservation was a major component of the reuse mission. The question thus remains: what was missing in the Benicia Arsenal's reuse planning process that its historic character and rich resources were so poorly preserved?

For one thing, the Arsenal lacked the support and the encouragement of the federal government in preserving the Arsenal as a historic state park, driving the City to seek redevelopment assistance from a private developer. Furthermore, the lack of preservation incentives and public funding made it difficult for the City and the Benicia Industries to even consider preservation in the reuse planning process. The preservation work at the Arsenal was largely due to a local preservationist group, the Benicia Historic Society. The Society played an important role in preserving the Arsenal by placing the site on the National Register of Historic Places and having its buildings designated a National Historic Landmark.

The Arsenal case also lacked the benefit of the developer's participation in the Society's preservation attempts. Benicia Industries made all the reuse decisions on their own, without any attempt to include the City nor the community in the reuse planning process. On the matter of historic preservation, the Industries held a lukewarm view; they did not object to the Society's preservation work but did not support it either. The only preservation group in the entire city of Benicia with a dozen or so members was thus left with the mission of historic preservation. The Society worked hard to place the

Arsenal on the National Register but that was their first and last contribution to the Arsenal's preservation effort. Nevertheless, that was a great feat in itself considering the circumstances. With the exception of a few historic structures that are currently in use, the others have not been occupied since its closure and the signs of neglect and deterioration are evident.

While the authority to attach preservation or development conditions as part of the base transfer agreement lies chiefly with the federal government, the rising number of base closures indicates that immediate federal protection will be made difficult. On the other hand, the Charlestown Navy Yard and the Presidio case studies suggest that involving the local forces in the reuse planning process can greatly contribute to accomplishing preservation. (Note: In some instances, a state agency such as the Massachusetts Government Land Bank could also be involved in placing restrictions on the type of reuse of the base.)

Thus the first lesson in preservation of base conversion projects is that the government, both local and federal, is a powerful source for protecting historic places and resources. More than any private or public organizations, the government is best equipped to achieve preservation in military bases. At the local level, the local legislature can protect individual buildings as well as entire historic districts by enacting local preservation ordinances.<sup>6</sup> The leadership of the federal government is also imperative. With the dramatic increase in the number of base closures, the role of the federal government in providing financial assistance to promote local historic preservation efforts will

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<sup>6</sup>Yellow Pages. National Trust for Historic Preservation. p.65

become more intensified, and a clear mechanism that enables the local forces and the federal government to collaborate in preserving the historic resources in military bases needs to be established. With the local and the federal government involved in the total conversion process, the responsibility of protecting historic resources and planning appropriate reuses is heightened.

#### **5.4.2 Federal Assistance**

Base conversions require financing even before the actual redevelopment takes place. As early as in the disposal and transfer stage of the base conversion, financing mechanisms can come into play. There are various mechanisms through which the City, the State, or a public authority could acquire all or part of the site. Military installations could be acquired at negotiated sales with the GSA or through the participation of the State agency that can acquire and hold land for development cooperation with a local development agency. The decision to acquire the site through city-state cooperation must be made rapidly in order to prevent deterioration of the property and in order to commence redevelopment of the site.<sup>7</sup>

Among the three cases, only the Benicia Arsenal employed the city-state mechanism to acquire the site. The Charlestown Navy Yard took advantage of the Historic Monument Area concept and the public park proposal to negotiate directly with the GSA in acquiring the site for a negligible price, and the Presidio avoided any disposal and transfer complications due to the inter-governmental transfer. Regardless of the varying transfer mechanisms, the

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<sup>7</sup>Boston Naval Yard/Charlestown. p.8

three projects demonstrate that preservation and redevelopment requires a substantial amount of financing once the sites are acquired. The Arsenal relied heavily on the private sector to finance a bulk of its project costs while the Charlestown Navy Yard and the Presidio obtained financing assistance from both the private and public agencies.

The case studies reveal that the investment of public funds at the federal level as well as a commitment of a private investor is absolutely necessary to a successful conversion project. As illustrated in the case studies, preservation can contribute to economic development but because its financial benefits are not immediately obtainable, money is needed up front to plan for base preservation. Therefore, providing greater public financing resources for the purpose of preservation is one of the most urgently needed changes in the base conversion system. The Charlestown Navy Yard project indicates that it has benefited tremendously by tapping into various sources of public funding and phasing its redevelopment over the years. The BRA secured a total commitment of more than \$11 million through various federal funding from the Economic Development Administration of the Department of Commerce, the Bureau of Outdoor Recreation, and the Urban Development Action Grant program of the Department of Housing and Urban Development.

In recent years, public funds earmarked exclusively for rehabilitation and preservation have become quite scarce, making preservation work undesirable and uneconomic. A wide array of financing assistance is potentially available at the federal level, although less money, overall, challenges rehabilitation and preservation projects to compete for funding. Public funding



could range from direct grants and loans to indirect forms of assistance such as tax incentives and loan guarantees. In addition to absorbing part of project costs, government financing assistance can lower interest rates or extend a loan's term. The types of assistance could include the following<sup>8</sup>: formula grants that are allocated to states or their subdivisions according to a distribution formula prescribed by law; project grants that fund specific projects for a fixed period; direct payments for specified use that are given to eligible beneficiaries by the federal government with restrictions on the use; guaranteed loans that protect the lender and thereby encouraging it to extend financing for rehabilitation and preservation purposes; and direct loan services that lend federal moneys for preservation projects, without interest or at below-market rates.

Without generous federal funding, preservation will not be attempted in many of the future base conversion projects. The Clinton Administration has recently proposed an increase in the economic development planning grants and a speedy processing of the grant applications. Whether these planning grants will directly affect preservation efforts or not remains to be seen; however, the Administration's recognition of the need for federal government's financial assistance to support the continuation of preservation is a positive indication.

The dramatic reduction in the federal budget, however, may also require financing assistance from the local and state government as well as from the private sector. State and local governments may provide necessary funding for preservation activities in a number of ways: by allocating tax revenues for

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<sup>8</sup> Kass, Stephen L. Rehabilitating Older and Historic Buildings. p.79

preservation purposes; through revolving funds that are regenerated through repayment of the loans it awards; and by the sale of tax-free municipal bonds. Indirect sources of financing may be available in the form of income and property tax relief. The current budgetary constraints at all levels of the government may also require financing assistance from the private sector. Private foundations and private corporations are a potentially fruitful source of preservation funding since the private initiative has remained the cornerstone of historic preservation efforts in this country. Private contributors generally prefer to donate to preservation projects if their donations will qualify for a charitable deduction for federal and state income tax purposes. Therefore, greater measures of preservation incentives are necessary to encourage financing assistance from the private sector.

#### **5.4.3 Preservation Incentives and Programs**

Along with the increase in the public and private funding, greater incentives to pursue preservation as part of a base reuse planning process are recommended. Economic incentives to rehabilitate and to preserve historic properties have decreased since the enactment of the Tax Reform Act of 1976. Currently, the Tax Reform Act of 1986 permits private owners and some lessees of historic buildings to take a 20 percent income tax credit on the cost of rehabilitating historic buildings or 10 percent of the cost of rehabilitating non-historic buildings constructed before 1936. These tax credits provide a dollar-for-dollar reduction of income tax owed. According to the National Trust for Historic Preservation, the goal of the rehabilitation credit is not to preserve a

building as a museum but to put it back to use to meet current housing, retail, commercial and industrial needs.<sup>9</sup> More economic incentives of greater benefits, are, then, necessary to promote preservation.

The Clinton Administration has proposed several measures to expedite the base disposition and reuse process, and the changes focus on speedy economic development and the fast-tracking of environmental clean-up. While these changes promise to lessen the economic impact of base closures, they do not necessarily encourage preservation. This is not to suggest, however, that the proposed changes should not be implemented but to emphasize that mechanisms for assisting and promoting preservation responsibilities also need to be considered. In addition, the disposition policies for historic districts or resources within a closed base need to be streamlined to give those who are willing to undertake preservation the priority over the others.

A federally-funded preservation program similar to the Legacy Resource Management Program is also recommended. Recently launched by the DoD in an effort to conserve and manage cultural and natural resources in the military-owned properties, the Legacy Program has been quite successful in establishing a leadership in promoting the conservation of significant cultural and natural resources in federally-owned properties. The concept of the proposed program for preservation of historic resources in military bases closely follows the Legacy Program. The preservation program would act as a central agency at the federal level to administer and support local preservation groups to continue preservation efforts. Furthermore, this federal organization could act as a

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<sup>9</sup> Respectful Rehabilitation. National Trust for Historic Preservation.

liaison to link the local preservation interests to that of the national since some historic resources tend to be more of a national objective rather than the community's. Preserving historic resources in military bases has been the DoD's mission and the closure of the bases should not immediately end that responsibility.

## **5.5 Conclusion**

The premise of this thesis has been that in pursuit of a quick economic recovery, base conversions during the last three decades have, in general, dismissed efforts to preserve historic resources and to adapt them for civilian uses. The Benicia Arsenal represented this situation where the city becomes tunnel-visioned by regaining its economic stability and loses sight of preserving historically resources in the base. In many aspects, economic development and preservation of a base may be viewed as two opposing goals in a base conversion process, but a probing look at the Charlestown Navy Yard and the San Francisco Presidio projects indicated otherwise.

As illustrated in this thesis, the redevelopment of Charlestown Navy Yard has shown that preservation efforts need not impede economic development. By pursuing historic preservation as part of a collaborative reuse planning with the local government and interest groups, the Navy Yard has demonstrated the opportunities embedded in historic resources to not only create a unique reuse environment but to greatly contribute to economic development strategies. Furthermore, the reuse of the base has revitalized the entire Charlestown community.

The case study on the Presidio presented an alternative means to accomplish the preservation of historic bases. The involvement of the National Park Services and the provision for federal funding rendered the Presidio project a unique scenario for preservation and base redevelopment. The outcome of this planning approach remains to be seen for the reuse planning of the Presidio is currently in progress; however, as was the case in the Charlestown Navy Yard, the most significant lesson learned here was that despite the context and situation of the conversion project, the involvement of the local forces and the assistance from the federal government in the reuse planning process are the essential components of the preservation success.

The three projects further prompt an active federal government's role in ensuring that future base conversions projects carefully weigh short-term economic advantages against long-term preservation loss. The government's role in revamping preservation resources and in implementing greater preservation incentives is thus crucial. By providing additional funding and implementing incentives for the inheritors of military bases to undertake preservation, more base closure communities will make an effort to preserve historic resources in their base reuse planning process.

## References

- A Guide to Tax-Advantaged Rehabilitation. National Trust for Historic Preservation, 1986
- A Proposal for a National Historic Park & Naval Museum: Charlestown Navy Yard. Boston Redevelopment Authority, 1973
- Adaptive Use: Development Economics, Process, and Profiles. The Urban Land Institute, 1978
- Alliance Review. National Alliance of Preservation Commissions, 1993
- Arsenal Park Historic Conservation Plan. The City of Benicia, 1993
- ✓ • Austin, Richard L. Adaptive Reuse: Issues and Case Studies in Building Preservation. Van Nostrand Reinhold Company, New York, 1988
- Bearss, Edwin. Charlestown Navy Yard: 1800-1842. National Park Service, 1984
- Bearss, Edwin. Historic Structure Report: Building 198, Charlestown Navy Yard. Denver Service Center, National Park Service, 1982
- Benicia Arsenal Site for General Distribution Depot. Benicia Military Affairs Committee, 1947
- Benicia, California Herald. April 2, 1964
- Berke, Arnold. "A Ford Plant in Their Future?" Preservation News. March, 1989
- Beyard, Michael. "When the Military Leaves Town." Urban Land. June, 1987
- Black, Frederick R. Charlestown Navy Yard, 1890 - 1973. Boston National Historical Park, National Park Service, Boston, MA 1988
- ✓ • Blumenthal, Sara K. Federal Historic Preservation Laws. National Park Service, Washington, D.C. 1990
- Boston Naval Shipyard/Charlestown. Boston Redevelopment Authority, 1975
- Boundary Enlargement Report. National Park Service, 1978
- Brauer, Molly. "Restored Arsenal Going Great Guns as Shopping Mall." Chain Store Age Executive. May, 1984

- Brown, Jeffrey and Basilio, Lois Levit. Redevelopment of the Charlestown Navy Yard. Boston Redevelopment Agency, 1987
- Brown, Jeffrey and Hong, Jung-Hwa. Review of the Retail Development Plans in the Charlestown Navy Yard. Boston Redevelopment Agency, 1985
- Bruegmann, Robert. Benicia: Portrait of an Early California Town. 101 Productions, San Francisco, CA 1980
- Building 198, Charlestown Navy Yard, Boston National Historical Park. National Park Service, 1982
- √ • Burchell, Robert W. and Listokin, David. The Adaptive Reuse Handbook. Center for Urban Policy Research, New Jersey, 1981
- Call for Interest. The Presidio of San Francisco. National Park Service, 1992
- Cavaglieri, Giorgio. "Design in Adaptive Reuse." Historic Preservation. 1974
- √ • Cavaglieri, Giorgio. "Old Buildings Need Lots of New Love." AIA Journal. July 1970
- Charlestown Navy Yard Redevelopment: Draft Supplemental Impact Report. Boston Redevelopment Authority, 1991
- Charlestown Navy Yard: Master Plan for the Yard's End. Boston Redevelopment Agency, 1990
- City & State. January 16, 1989
- Civilian Reuse of Former Military Bases. Office of Economic Adjustment, June, 1990
- Closson, Michael. "Closings: A Call for Citizen Participation." The Neighborhood Works. August/September, 1993
- Communities in Transition. The President's Economic Adjustment Committee, 1991
- Cowell, Josephine W. History of Benicia Arsenal. Howell-North Books, Berkeley, CA, 1963
- Creating a Park for the 21st Century: Draft General Management Plan Amendment. National Park Service, 1993
- Cunningham, Keith. Base Closure and Reuse: 24 Case Studies. A report of the BENS Defense Transitions Project, Washing, D.C., April, 1993
- Disposal of Surplus Real Property. General Services Administration, April, 1988

- Draft Environmental Impact Statement. National Park Service, 1993
- Draft General Management Plan Amendment. National Park Service, 1993
- Duffus III, James. Transfer of the Presidio From the Army to the National Park Service. Department of the Interior, Washington D.C., 1993
- Dusek, Edward, Diminic Jasenka, and Harrell, John. The Charlestown Navy Yard Design Guidelines for Reuse. Boston Redevelopment Agency, 1980
- Erwin, Kenneth and Stewart, Earle K. History of the Presidio. U.S. Army, Washington, D.C., 1957
- Fact Sheet. Advisory Council on Historic Preservation, 1986
- Finlayson, Colin. "Cashing in the Peace Dividend." Planning Week. October, 1993
- Fisher, Bonnie. "Seizing the Opportunity In Military Base Closures." Urban Land. August, 1993
- Freeman, Allen. "Changing of the Guard." Historic Preservation. July/Aug. 1991
- Fulton, William. "Base Closures Provide Planning Opportunity." California Planning Development Report. July, 1991
- George, Vernon. "Defense Realignment: An Important Development Niche." Development Magazine. November/December, 1991
- Guidelines for Rehabilitating Old Buildings. United States Office of Archeology and Historic Preservation, National Park Service, Washington, D.C., 1976
- Guskind, Robert. "Picking Up the Pieces." Planning. June, 1990
- Hansell, David A., Kass, Stephen L., and LaBelle, Judith M. Rehabilitating Older and Historic Buildings. John Wiley & Sons, Inc., 1985
- Henig-Elona, David. Making and Learning: A Vocational School. Thesis, Harvard University, 1993
- Hill, Catherine, Deitrick, Sabina, and Markusen, Ann. "Converting the Military Industrial Economy: The Experience at Six Facilities." Journal of Planning Education and Research. Volume 11, 1991
- Hill, Catherine and Raffel, James. "Military Base Closures in the 1990s: Lessons for Redevelopment." National Commission for Economic Conversion and Disarmament. March, 1993



- Hussey, John Adam. Benicia Arsenal. Registered Landmark #176. Department of Natural Resources, State of California, Berkeley, CA 1936
- Kleye, Frederec Ellsworth. Rehabilitation of Historic Buildings: an Annotated Bibliography. US Department of the Interior/Technical Preservation Services Division, Washington, D.C., 1980
- Langellier, John Phillip. Bastion by the Bay: A History of the Presidio of San Francisco. Unpublished Dissertation, Kansas State University, 1982
- Laubernds, William L. "Opportunities Abound At Closed Military Installations." The Real Estate Finance Journal. Summer 1989
- Local Preservation. Interagency Resources Division, National Park Service, Washington, D.C., 1988
- Locke Associates. Fort Lawton Historic District Adaptive Reuse Study. Seattle, WA, 1983
- Los Angeles Times. June 29, 1993
- Lyne, Jack. "U.S. Base Closings Opening Significant Development Opportunities." Site Selection. April, 1989
- Master Plan for the Charlestown Navy Yard. Boston Redevelopment Agency, 1990
- Military Base Closings: Benefits for Community Adjustment. American Enterprise Institute for Public Policy Research, Washington, D.C., 1977
- Minter, Nancy L. "Reenlisting Old Bases for New Uses." Urban Land. November, 1990
- Nakata Planning Group, Inc. Presidio of San Francisco Design Guide. Colorado Springs, Colorado, 1986
- Pearson, Clifford A. "Case Study: Reinventing Alameda." Architectural Record. October, 1993
- Planning Civilian Reuse of Former Military Bases. The President's Economic Adjustment Committee, November, 1991
- Preservation News.
- Presidio of San Francisco: National Historic Landmark District. Historic American Buildings Survey Report. National Park Service, 1985
- Presidio, National Register of Historic Places Registration Forms. National Park Service. Denver, CO 1993
- Reier, Sharon. "Mission Impossible." Financial World. March, 1989

- Respectful Rehabilitation. National Trust for Historic Preservation. Washington, D.C.
- Roberts, Shelley K. and Marie, Audrey. Historic Structure Report: Building 136, Charlestown Navy Yard. Denver Service Center, National Park Service, 1982
- San Francisco Chronicle. November 23, 1993
- Steinberg, Barry P. "The Hidden Costs of Closing Military Bases." PM. May, 1991
- The Boston Sunday Globe. May 19, 1992
- The Committee for the Citizens of Benicia. U.S. Arsenal at Benicia: A Memorial to Congress and Accompanying Papers. H.S. Crocker, Benicia, CA, 1880
- The New York Times. September 23, 1987
- The New York Times. July 3, 1993
- The Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings. U.S. Department of the Interior, National Park Service. Washington, D.C. 1990
- The Washington Post. December 28, 1993
- Timmons, J.D. and Collinge, R.A. "Military Base Closings: Thrifty, Objective Spendthrift Process." Real Estate Issues. Spring/Summer, 1993
- Transfer of the Presidio from the Army to the National Park Service. Department of the Interior, U.S. General Accounting Office. Washington, D.C., 1993
- Walters, Jonathan. "Battle Plan for a Texas Arsenal." Historic Preservation. July/August 1986
- Wrenn, Douglas M., Casazza, John A., and Smart, J. Eric. "Charlestown Navy Yard, Boston, Massachusetts." Urban Waterfront Development. Washington, D.C., 1983
- Yellow Pages. National Trust for Historic Preservation.