

method was going to work but unfortunately Marinship management was initially not up to the task. Their failure resulted in production delays, idled labor, and increasing tensions between labor and management and black and white workers.<sup>50</sup>

By 1944, management had resolved the procurement and supply chain issues, a significant feat given that most of the yard's steel plating, machinery, and other supplies had to be shipped to Sausalito from factories and steel mills on the East Coast or in the Midwest. In a bid to further accelerate the yard's efficiency, Management instituted several new policies, including switching production from seven to six days a week, allowing maintenance and repair work to occur on the seventh day so that these tasks would not impede production.

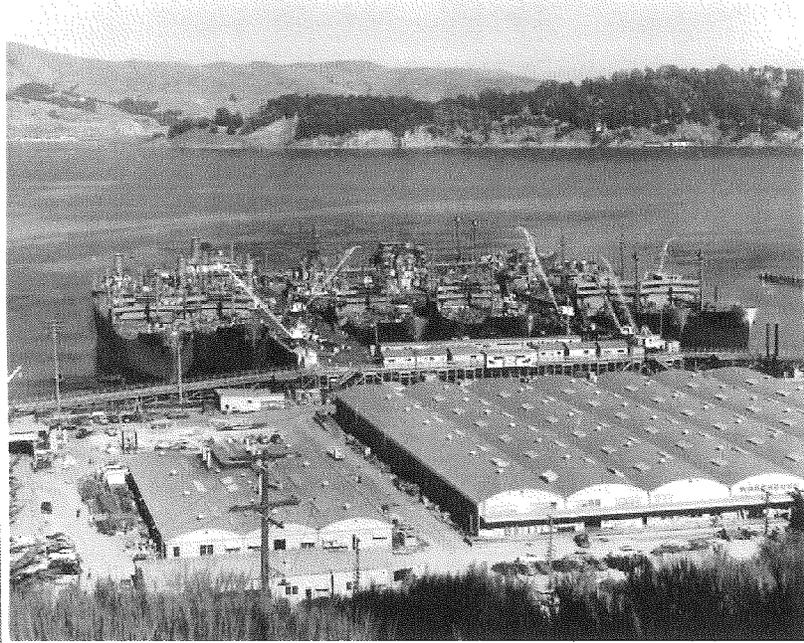


Figure 26. Multiple tankers and oilers at the Outfitting Docks, ca. 1944  
Source: Sausalito Community Development Department

Management also learned how to more efficiently deploy labor. The switchover to tankers significantly complicated the outfitting stage. As mentioned, the tankers were much more complicated vessels than the Liberty Ships and consequently Marinship decided to assign more staff to the Outfitting Department, removing a major bottleneck in the post-launch production process (Figure 26). In addition, the management created "flying squads" of workers who were especially good at a particular task, moving them from way to way to finish important tasks.<sup>51</sup>

Marinship's workforce, which numbered almost 22,000 at its highpoint, was recruited from all over the Bay Area, California, and eventually the entire United States, including large contingents from Texas, Louisiana, Arkansas, Oklahoma, Iowa, Minnesota, and Missouri. The workforce included large numbers of draft-exempted senior citizens and women and minorities. Many were white and Native American Dustbowl refugees from the Southwest – the famous "Okies" of John Steinbeck's *Grapes of Wrath* – as well as thousands of African-Americans seeking to escape the strictures of the Jim Crow South. By 1944, Marinship was so desperate for workers that it began paying relocation costs for every worker who would agree to relocate to California. Marinship was the most integrated shipyard on the West Coast; African-Americans made up 10% of the workforce and women 25%.<sup>52</sup>

Once recruited and relocated, workers had to be processed and issued a draft deferment (if an age-eligible male). Because nearly 90 percent of the new workers had never worked in a shipyard before,

<sup>50</sup> Charles Wollenberg, *Marinship at War: Shipbuilding and Social Change in Wartime Sausalito* (Berkeley: Western Heritage Press, 1990), 36.

<sup>51</sup> *Ibid.*, 37.

<sup>52</sup> *Ibid.*, 42.

nearly all had to be trained. Welders were in biggest demand and welder trainees trained for about three weeks before receiving certification as journeymen welders. Training was provided at the Training Shop (Building 28) and also at local high schools, colleges, and other facilities.<sup>53</sup> Workers who demonstrated their capabilities rose quickly through the ranks, often becoming leadermen or gang bosses in mere months.

Except for African-Americans, all workers were covered by collective bargaining agreements and were represented by a union.<sup>54</sup> Unions included the Teamsters, Building Service Workers, Electrical Workers, Printing Specialists, Technical Engineers, and Machinists. Most yard workers were represented by metal trades unions such as the Metal Trades Department of the AFL.<sup>55</sup> They were also covered by a Master Agreement between the unions and the Pacific Coast shipbuilders that had been brokered by the Roosevelt Administration. The Master Agreement governed wages (\$1.20 per hour for journeymen), bonuses for swing and graveyard work, and overtime for any work over 40 hours a week. In addition, the agreement maintained a closed shop and established Joint Labor-Management committees. In 1944, a day-shift journeyman earned around \$270 per month and a graveyard worker with overtime could earn \$365 per month.<sup>56</sup> These wages were quite good, especially for minorities and women who had traditionally been excluded from industrial work, as well as for the "Okies" and other poor whites who had slogged through the Depression working as migrant agricultural laborers.

Although labor disputes did occur occasionally, as well as recurring tensions between white and black workers, morale remained good at Marinship throughout the war. The Employee Relations department was founded to build morale, and they did so with talent shows, painting exhibits, fishing derbies, sports tournaments, and performances by famous entertainers like Bing Crosby and Marian Anderson. The department also issued the *Marin-er* monthly from June 1942 onward. The 9 x 12, three-color glossy was initially edited by Marin County journalist Fred Drexler. It contained photo essays, news, gossip, and a column by General Manager Bill Waste. Workers produced their own newsletter called *The Stinger*, a muckraking publication edited by yard employee John Connolly. *The Stinger* was soon co-opted and printed as part of the *Marin-er*.

Although most workers lived in San Francisco, others lived in Sausalito and in surrounding communities. At first many lived in rented quarters, such as empty rooms in residents' houses, trailers, tents, and sometimes converted agricultural buildings. To ease the pressure on Sausalito in particular, the National Housing Authority, in cooperation with Bechtel, began constructing a war defense workers' housing project called Marin City in June 1942. By the end of 1943, nearly 6,000 people lived in the 1,500 units located north of Marinship.<sup>57</sup>

Good morale and changes in management strategy paid off and by early 1944, Marinship was building a tanker every 10 days. A photograph taken ca. 1944 shows all six ways occupied by either a tanker or an oiler under construction (**Figure 27**). In April 1945, Marinship delivered the *Ellwood Hills* in a record-breaking time of 59 days. Two months later, it produced the *Huntington Hills* in just 33 days – 28 days on the ways and five days at the outfitting docks. By the spring of 1944, improvements in efficiency meant that Marinship was building T-2 tankers at a faster rate than other shipyards.<sup>58</sup> During the three-and-a-half years of its existence, Marinship built 93 major vessels (not counting barges and launches), includ-

<sup>53</sup> Charles Wollenberg, *Marinship at War: Shipbuilding and Social Change in Wartime Sausalito* (Berkeley: Western Heritage Press, 1990), 46.

<sup>54</sup> Initially African-Americans were not allowed to join the main shipyard workers' unions, instead being forced to join auxiliary locals that did not have the right to vote.

<sup>55</sup> Charles Wollenberg, *Marinship at War: Shipbuilding and Social Change in Wartime Sausalito* (Berkeley: Western Heritage Press, 1990), 41.

<sup>56</sup> *Ibid.*, 56.

<sup>57</sup> *Ibid.*, 52.

<sup>58</sup> *Ibid.*, 37.

ing 15 Liberty Ships and 78 T-2 tankers. The yard also repaired 23 vessels and was in the process of building barges for the invasion of the Japanese mainland when the Japanese surrender came.<sup>59</sup>

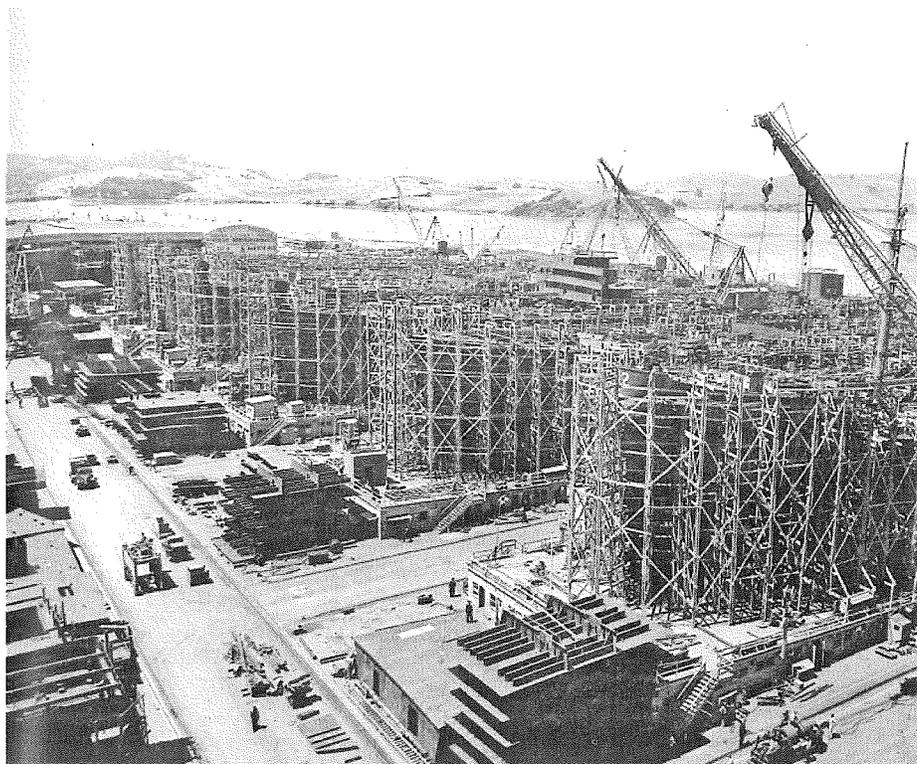


Figure 27. Tankers on the ways, ca. 1944

Source: Source: Richard Finnie, *Marinship: The History of a Wartime Shipyard*

As the war wound down in Europe and as invasion of the Japanese homeland appeared likely, the U.S. Maritime Commission requested Marinship to build a special “mini-shipyard” to construct dozens of 104’ invasion barges for transporting vehicles and other equipment required in a land invasion.<sup>60</sup> The obliteration of Hiroshima and Nagasaki in August 1945 by nuclear attack put an end to Japanese resistance and on September 2, 1945, the Japanese government surrendered to the United States and its allies on board the *U.S.S. Missouri* in Tokyo harbor.

Up until the day of the Japanese surrender Marinship was building tankers as quickly as it could. It built its last tanker, the *Mission San Francisco*, on September 8, 1945 (**Figure 28**). Initially contracted by the Maritime Commission to build 100 ships, Marinship built 93 – the final seven were cancelled following the Japanese surrender. Only one Marinship vessel – the Liberty Ship *Sebastian Cermeno* – was lost to enemy action.<sup>61</sup> Although many had hoped that the yard would remain open after the war – and management frequently hinted that it would – Marinship was unceremoniously closed in 1946.

Marinship had been very profitable to Bechtel and its partners. Because the Maritime Commission owned the yards, paid all capital costs, and purchased major machinery and supplies, Bechtel had almost nothing at risk. During postwar congressional hearings it was estimated that Marinship received total pre-tax profits of \$11,871,394 on Commission contracts of \$280,941,573. In three-and-a-half years,

<sup>59</sup> Charles Wollenberg, *Marinship at War: Shipbuilding and Social Change in Wartime Sausalito* (Berkeley: Western Heritage Press, 1990), 5.

<sup>60</sup> Wayne Bonnett, *Build Ships!* (Sausalito, CA: Windgate Press, 1999), 148.

<sup>61</sup> *Ibid.*, 35.

Bechtel and its partners earned more than a 2,000 percent return on their original investment of \$500,000.<sup>62</sup>

In the final analysis, Marinship was a very important shipyard that set the standard for efficiency in shipbuilding. It was also responsible for tremendous social changes in Sausalito and Marin County. In comparison with other inner Bay Area counties, Marin County had remained an overwhelmingly rural bastion up until the war. Marinship resulted in the doubling of Sausalito's population (then the largest city in Marin County) and the creation of a large enclave of blue collar workers – (mostly in the shipyard workers' community of Marin City) that had not existed before the war. Author Charles Wollenberg described the yard: "Marinship was thus a military-industrial comet, briefly lighting up the Bay Area economic skyline. The yard was smaller and less publicized than Henry Kaiser's Richmond complex, but Marinship was in many ways the most technologically innovative and efficient of all the Bay Area's shipbuilding plants. At Marin, the application of mass production techniques to ship construction may have reached its highest stage of development."<sup>63</sup>

#### G. Postwar Period

As mentioned above, Marinship gradually shut down after the Japanese surrender. Although many workers had hoped that the yard would remain open – after all it had given many long-excluded social groups good, well-paying jobs – this was not to be. Although the yard had some residual work retrofitting wartime vessels for peacetime uses, there was no demand for new merchant vessels when there were so many surplus vessels decommissioned from active wartime use. Most of the other post-Pearl Harbor Emergency shipyards in the Bay Area and elsewhere also closed after the war, leaving shipbuilding and repair to established pre-war yards such as Bethlehem Shipbuilding's San Francisco Yard or the Navy's Mare Island and Hunters Point Naval shipyards.

On May 16, 1946, the Maritime Commission conveyed the decommissioned Marinship yard to the U.S. Army Corps of Engineers, which needed a large base on San Francisco Bay from which to complete its local construction and conservation projects – both locally and in the entire South Pacific region.<sup>64</sup> The U.S. Army Corps did not need the entire shipyard, and in 1949, the Corps subdivided it and sold off over 56 acres, retaining only 11 acres in the former outfitting zone, including one of the Outfitting Docks, the Outfitting Shops (Building 15), the Outfitting Warehouse (Building 29), and the Machine Shop (Building 11).<sup>65</sup> The 1950 Sanborn maps indicate that the rest of the yard had been sold off to various building

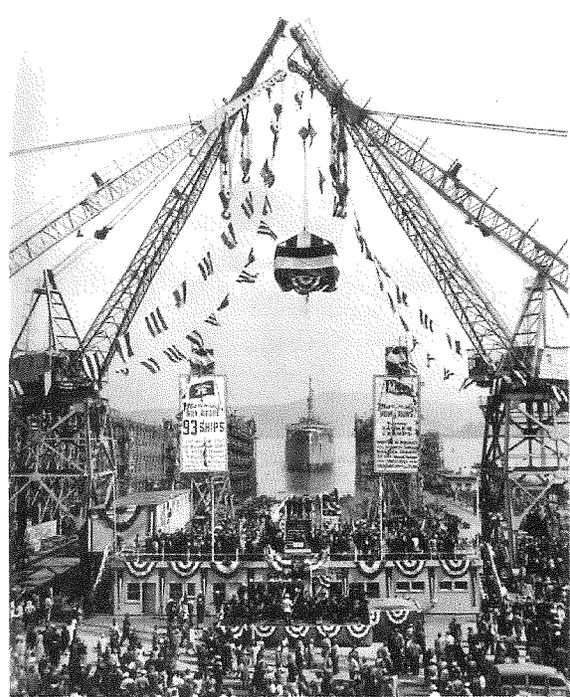


Figure 28. Launching of the *Mission San Francisco*, September 8, 1945

Source: Sausalito Community Development Department

<sup>62</sup> Charles Wollenberg, *Marinship at War: Shipbuilding and Social Change in Wartime Sausalito* (Berkeley: Western Heritage Press, 1990), 36.

<sup>63</sup> *Ibid.*, 6.

<sup>64</sup> Richard Finnie, *Marinship: the History of a Wartime Shipyard* (San Francisco: Marinship, 1947), 371.

<sup>65</sup> Telephone conversation with Chris Gallagher, Manager of the San Francisco Bay Model, U.S. Army Corps of Engineers, March 14, 2011).

contractors, manufacturers, and smaller boat yards, with the massive Plate and Subassembly Shops demolished and replaced by smaller structures serving these various businesses (Figure 29).

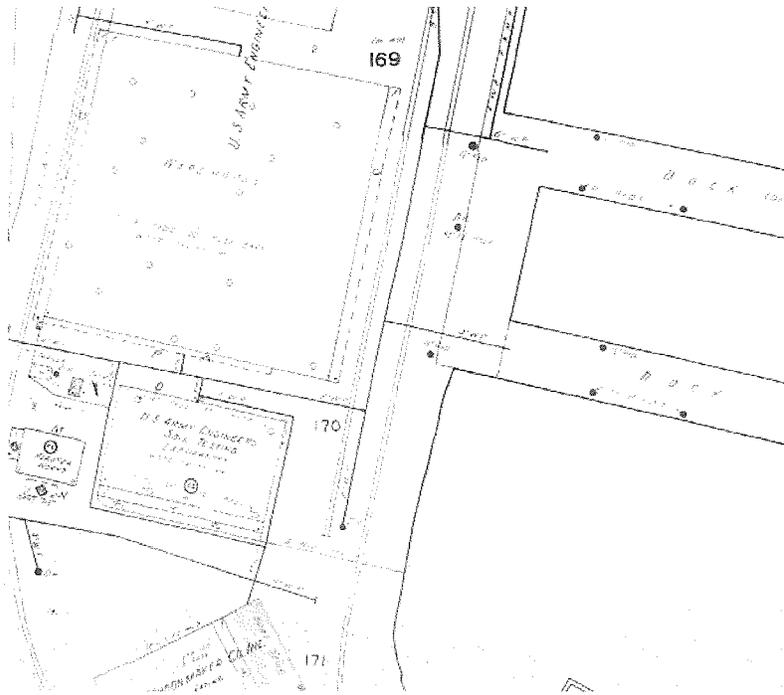


Figure 29. 1950 Sanborn Map showing Machine Shop and Warehouse

Source: Sausalito Historical Society

The Army Corps made some changes to their property, including demolishing and rebuilding the Outfitting Docks out of concrete and converting their three buildings to new uses. The new uses did not at first result in major changes to any of the three buildings, which functioned well as general-purpose industrial buildings. The agency eventually assigned the Outfitting Shops (Building 15) to the Navigation Department, which was responsible for dredging and removing hazards in San Francisco Bay and surrounding navigable waterways. In 1949, this building was increased in height by one story. The former Outfitting Warehouse (Building 29) was used as general-purpose warehouse. Meanwhile, the Army Corps converted the former Machine Shop (Building 11) into a laboratory

for testing clay, soil, and concrete materials commonly used in dam and levee construction. The Corps constructed kilns throughout the machine shop section of the building where materials would be subjected to different temperatures to assess their efficacy and performance in various conditions. Other testing methods were used, including compaction. Laboratory spaces were set up in the former office wing to conduct chemical analyses of various soil and concrete types.<sup>66</sup>

In 1956, the Army Corps of Engineers began building a three-dimensional model of San Francisco Bay in response to a proposal to dam San Francisco Bay below the San Francisco-Oakland Bay Bridge and San Pablo Bay north of the Richmond-San Rafael Bridge to create two huge freshwater reservoirs. The Army Corps wanted to test the viability of the project before it was built and the only way to do it in the era before computer modeling was to create a massive, three-dimensional hydraulic model. The Bay Model revealed that the proposed reservoirs would not work due to the shallowness of both San Francisco and San Pablo bays. Its usefulness proven, the Bay Model was put to use testing the real-world effects of dredging and filling projects, as well as oil spills in various parts of the bay. Between 1966 and 1969, the Army Corps expanded the Bay Model to include Suisun Bay and the Sacramento/San Joaquin Delta.<sup>67</sup>

<sup>66</sup> Telephone conversation with Chris Gallagher, Manager of the San Francisco Bay Model, U.S. Army Corps of Engineers, March 14, 2011).

<sup>67</sup> Ibid.

Ever since the Bay Model was constructed in 1956-59, it has been housed in the large Outfitting Warehouse next door to the Machine Shop. The building's tremendous footprint, measuring 122,500 square feet, was ideal for housing the 1.5-acre model, as well as the Construction and Operations departments of the Army Corps of Engineers' South Pacific Division office. With growing general interest in the Bay Model, the Army Corps opened it to the public. In 1980, the Army Corps decided to adopt a more proactive stance toward tourism and built a visitor center at each of its divisions. The visitor center for the South Pacific Division was constructed at the former Outfitting Warehouse, next to the former Machine Shop. An additional structural bay was added to the east side of the building to accommodate a museum, bookstore, and offices. In addition, a new toilet room structure, amphitheater, and landscaping were constructed east of the building. As part of the project, the exteriors of Buildings 15 and 29 were reclad in stucco to give them a uniform appearance.

Because it did not have a public function, the former Machine Shop (Building 11) was left largely unchanged by the Army Corps of Engineers. At some point after 1946 the exterior walls were clad in asbestos ("Transite") shingles and the vehicular entrances along the west side were paneled over in plywood. Building 11 continued in its use as a materials testing laboratory until 1996. Sometime in the early 1990s, the Army Corps installed steel moment frames within the interior of the building, probably in the wake of the 1989 Loma Prieta Earthquake. In 1996, the Army Corps decided that it did not need the building anymore and declared it surplus property. GSA handled the sale, which was not finalized until 2006 when the Veterans Administration (VA) took over the property. Initially the VA intended to remodel the building, and indeed it got as far as removing the asbestos shingles and roofing materials. In 2009, the VA decided to demolish the building instead and build a smaller facility on the site.

## V. Evaluation of Historic Status

### A. National Register of Historic Places

KVP evaluated the Marinship Machine Shop (Building 11) to determine if it appeared eligible for listing in the National Register of Historic Places (National Register). The National Register of Historic Places is the nation's most comprehensive inventory of historic resources. The National Register is administered by the National Park Service and includes buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level. Typically, resources over fifty years of age may be eligible for listing in the National Register if they meet any of the four significance criteria *and* if they retain sufficient historic integrity. However, resources under fifty years of age can be determined eligible if it can be demonstrated that they are of "exceptional importance," or if they are contributors to a potential historic district. National Register criteria are defined in depth in *National Register Bulletin Number 15: How to Apply the National Register Criteria for Evaluation*. There are four basic criteria under which a structure, site, building, district, or object can be considered eligible for listing in the National Register. These criteria are:

Criterion A (Event): Properties associated with events that have made a significant contribution to the broad patterns of our history;

Criterion B (Person): Properties associated with the lives of persons significant in our past;

Criterion C (Design/Construction): Properties that embody the distinctive characteristics of a 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 distinguishable entity whose components lack individual distinction; and

Criterion D (Information Potential): Properties that have yielded, or may be likely to yield, information important in prehistory or history.

A resource can be considered significant on a national, state, or local level to American history, architecture, archaeology, engineering, and culture.

### B. California Register of Historical Resources

KVP also evaluated the Marinship Machine Shop for eligibility in the California Register of Historical Resources (California Register). The California Register is an authoritative guide to significant architectural, archaeological, and historical resources in the State of California. Resources can be listed in the California Register through a number of methods. State Historical Landmarks and National Register-eligible properties (both listed and formal determinations of eligibility) are automatically listed. Properties can also be nominated to the California Register by local governments, private organizations, or citizens. These include properties identified in historical resource surveys with Status Codes of 1 to 5 and resources designated as local landmarks or listed by city or county ordinance. The evaluation criteria used by the California Register for determining eligibility are closely based on those developed by the National Park Service for the National Register of Historic Places (National Register). In order to be eligible for listing in the California Register a property must be demonstrated to be significant under one or more of the following criteria:

Criterion 1 (Event): Resources that are associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.

Criterion 2 (Person): Resources that are associated with the lives of persons important to local, California, or national history.

Criterion 3 (Design/Construction): Resources that embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of a master, or possess high artistic values.

Criterion 4 (Information Potential): Resources or sites that have yielded or have the potential to yield information important to the prehistory or history of the local area, California or the nation.

A resource can be considered significant on a national, state, or local level to American history, architecture, archaeology, engineering, and culture.

### *C. Evaluation*

As is clear from the criteria for both registers, the National Register and the California Register are both closely related. Indeed, the California Register was consciously based the National Register. Because the two registers essentially use the same criteria, we evaluated the Marinship Machine Shop under National Register Criteria with the understanding that a property determined eligible for listing in the National Register Criteria automatically qualifies for listing in the California Register. The main difference between the registers is that the California Register uses a slightly more lenient approach to integrity and also the fifty-year threshold for eligibility is not as rigorously applied. Although the California Register recognizes properties with national significance, the focus of the California Register are properties significant within the local and state contexts that may not rise to the level of national significance. This is the reason why properties determined eligible for listing in the National Register are automatically listed in the California Register but not the other way around.

### **Criterion A (Events)**

If its components retained integrity, the entire former Marinship yard in Sausalito would appear eligible for listing in the National Register under Criterion A (also California Register Criterion 1) for its association with the expansion of "Homefront" industries in the Bay Area during the Second World War. Evaluated under the National Park Service's "World War II and the American Home Front, National Historic Landmark Theme Study," it appears that most surviving property types associated with the Homefront industries – in particular shipbuilding – may qualify for listing in the National Register. Shipbuilding was the Bay Area's most important contribution to the war effort on the "Homefront." To expedite the construction of much-needed freighters and tankers, the U.S. Maritime Commission sponsored six "Emergency" shipyards in the Bay Area, including Henry J. Kaiser's Richmond Yards 1-4, Barrett & Hilp's Belair Shipyard in South San Francisco, and W.A. Bechtel Corporation's Marinship in Sausalito. Together these yards (in combination with the existing Bay Area yards) built approximately 1,400 vessels between 1939 and 1946. During World War II, the San Francisco Bay Area was the largest shipbuilding complex in the world, and it has never been surpassed. Its freighters and tankers were critical to victory in the European Theater and played an important role in the island hopping expeditions of the Pacific Theater.

After the War, the Bay Area's colossal shipbuilding complex gradually disintegrated. With thousands of surplus vessels available, there was no need for the extra capacity and the Emergency yards were all closed by the end of 1946. Little remains of these yards. The vast Richmond yards were demolished after the war, with only a handful of buildings and docks surviving at Kaiser Yard No. 3. Only the outlines of the Belair graving docks survive in the tidelands of South San Francisco.

Most of the historic pre-war yards closed between the late 1950s and the mid-1990s, casualties of more efficient overseas shipyards and the post-Cold War "Peace Dividend." Although Bethlehem Shipbuilding Company's San Francisco Yard survives, most of the World War II-era structures were demolished. Only

the power house at Bethlehem's Alameda yard survives and it is a pre-World War II building. Moore Dry Dock closed in the 1960s and the entire yard was cleared to make way for Port expansion in Oakland. Mare Island Naval Shipyard closed in 1996. Most of it survives but its future is uncertain as it is being redeveloped with suburban-style tract housing. Although it closed in 1971 most of the Hunters Point Naval Shipyard survives, including many World War II-era structures. Probably the most intact of the World War II-era yards, nearly all of Hunters Point Naval Shipyard will soon be demolished to make way for new residential and mixed-use development.

In contrast to other historic Bay Area shipyards (and all of the post-Pearl Harbor Emergency yards) more than half of Marinship's original buildings and ways survive. However, since it was decommissioned and transferred to the Army Corps of Engineers in 1946, the former shipyard was incrementally converted into an unofficial industrial park. The large, open-span World War II-era shipyard buildings are readily adaptable for a full range of light industrial, warehousing, office, and craft/art uses. However, all were built quickly using lightweight materials, necessitating frequent maintenance or extensive remodeling to make them suitable for higher-end office space. Recognizable by their vaulted bowstring-truss roofs, most Marinship buildings have been otherwise extensively altered on their exterior, including recladding in stucco, new aluminum windows and doors, and the building-out the interiors with multiple floors of office space.

The former Marinship Machine Shop appears *individually* eligible for listing under Criterion A (Events) as a rare property type associated with what was arguably the most important event in the history of the United States during the twentieth century – World War II, in particular the American Homefront. The building played a critical role in the outfitting of the Liberty Ships and tankers produced by the yard, vessels that were critical to the Allied war effort and that assured eventual victory. There appear to be no other extant World War II-era maritime machine shops left in the Bay Area that retain this degree of significance or integrity. Building 11 is also the Marinship building that retains the highest degree of integrity. The period of significance is 1942-1946, beginning with the building's construction and ending with the year that Marinship was decommissioned.

#### ***Criterion B (Persons)***

The former Machine Shop appears ineligible for listing in the National Register under Criterion B (or California Register Criterion 2). There are no individual owners of the building that appear to be important to local, California, or national history.

#### ***Criterion C (Design/Construction)***

The former Machine Shop appears eligible for listing in the National Register under Criterion C (also California Register Criterion 3) as a building that embodies the distinctive characteristics of a type, period, and method of construction – in this case, a utilitarian machine shop constructed by the W.A. Bechtel Corporation as part of Marinship, one of six Emergency shipyards commissioned by the U.S. Maritime Commission in the San Francisco Bay Area. Although not as well-known today as the world-famous Kaiser yards in Richmond, Marinship was the most efficiently designed shipyard in the Bay Area and an excellent embodiment of the "turning-flow" technique.<sup>68</sup> The yard was largely built within six months, on filled ground occupying what had been the mudflats of Richardson's Bay. In order to construct over 30 buildings in a short period of time, industrial materials and modular building components were combined assembly-line fashion, much as the Liberty Ships and tankers would be assembled in the upcoming years.

Under Criterion C, the former Machine Shop is an excellent and well-preserved example of an inexpensively constructed industrial building erected during World War II. Designed without any ornament, the

<sup>68</sup> Indeed, no mention of Marinship is made in the Introductory page to the National Park Service's "World War II in the San Francisco Bay Area" website: <http://www.nps.gov/history/nr/travel/www.lbayarea/intro.htm>

Machine Shop was built almost entirely of plywood in order to simplify its construction, as well as to avoid the use of steel and other rationed building materials. The building's design makes use of several modular and mass-produced industrial building materials and prefabricated products that became widespread during the war, including glulam bowstring trusses and standardized 4' x 8' plywood sheets. The wood double-hung and ribbon windows were also standard off-the-shelf materials. All of it could be quickly and easily assembled without highly skilled labor.

The Machine Shop was part of the yard's Outfitting Zone, where the final installation of machinery, furnishings, masts, weapons, bunks and other fittings occurred following the vessel's launch. Like nearly all shipyard machine shops, the Marinship Machine Shop was designed first and foremost as a place to shelter the work processes that went on inside – mostly highly skilled parts fabrication and repair. The interior's high, open-span work spaces made the most of natural light and ventilation. Heavy materials and machinery were moved around by the overhead traveling and jib cranes that operated in each bay. The office wing contained offices, a lunch room, and toilet and locker rooms for both male and female employees. Although not explicitly designed in any architectural style, the gently curving profile of the barrel-vaulted roof as well as the horizontal ribbon windows, recall the Streamline Moderne style popular during the 1940s. Otherwise, the building is a testament to the oft-repeated architectural dictum: "Form follows function."

#### ***Criterion D (Information Potential)***

Examination of the former Machine Shop for eligibility under National Register Criterion D (or California Register Criterion 4) is beyond the scope of this report.

#### ***B. Integrity***

Out of all of the remaining World War II-era Marinship buildings, the Machine Shop retains the most of its original design and materials. As opposed to nearly all of the other Marinship-era buildings that have been re-clad in more permanent exterior materials, the exterior of the Machine Shop is still clad in its original painted plywood sheathing. The plywood was protected behind asbestos shingles for around 60 years, but its removal several years ago revealed the exterior as it would have appeared when it was constructed in 1942, including the large hand-painted signs on the east and west façades. Other exterior elements that remain intact include the double-hung wood windows and wood ribbon windows, the two metal-clad barn doors on the east façade, and several of the wood-panel pedestrian doors along the south façade. The only major changes to the exterior of the Machine Shop after World War II include the removal of what appeared to have been a water tank from the roof of the office wing, the infilling of three vehicular openings along the west façade (probably after 1949 when the property was subdivided and there was no longer vehicular access to the west side of the building), the addition of an exterior steel stair on the west façade at an unknown date, and the re-cladding of a small portion of the south façade (above the office wing) in T-111 siding ca. 2006.

Although the interior was inaccessible and therefore not surveyed as part of this report, comparing the drawings made as part of Richard Grambow's (Chief Engineer and Naval Architect of Marinship) report: *Marinship at the Close of the Yard in 1945*, reveals that very few alterations have occurred within the north bay of the machine shop interior. The concrete flooring, exposed wood wall framing, bowstring trusses, wood-plank interior walls, and overhead traveling crane remain intact. The center bay has undergone more alterations, including the addition of several structures containing kilns and other equipment used by the Army Corps, although these alterations are additive in nature and do not detract from the overall open volume of the center bay. The southern bay has been more heavily altered, including the removal of half of its north interior wall and the enclosure of its western section. The office wing appears to retain much of its original fabric on the first floor level.

One final point that should be discussed here in regard to integrity is that it refers to the intactness of a building's design not necessarily its physical condition. Although a conditions assessment of the build-

ing was not conducted as part of this report, it is obvious that the building faces many problems related to prolonged neglect/deferred maintenance, including a failing roof, broken and missing windows, deteriorating plywood siding, etcetera. Structurally speaking, the building may be in salvageable condition; its post and beam frame are of large enough dimensions that they are probably physically intact. In addition, the building underwent a seismic upgrade in the 1990s. We could not observe the foundation or any subsoil conditions.

## VI. Conclusion

Constructed in 1942 according to the design of W.A. Bechtel Corporation's Engineering and Drafting Department, the Machine Shop is one of approximately 30 buildings constructed as part of the Marinship yard, one of six "Emergency" shipyards commissioned by the U.S. Maritime Commission in the Bay Area to build merchant vessels for the war effort. Designed in a utilitarian mode and constructed of lightweight wood construction, the Machine Shop was intended, like the rest of the shipyard, to be erected as quickly and easily as possible to serve a temporary need. The building makes use of several modular building materials that came of age during the Second World War, including glue-laminated bowstring roof trusses and standardized 4' x 8' plywood sheets used to clad the exterior. Aside from the overhead traveling cranes and the hardware and machinery, the Machine Shop was almost entirely wood, sparing structural steel for the war effort. Although entirely utilitarian, the curved profile of the roof vaults and the ribbon windows echo the Streamline Moderne style popular in the 1940s. Designed as a machine shop and used for this purpose during the war, its large open bays, concrete flooring, and overhead cranes were effectively adapted for its postwar use as a soils testing laboratory for U.S. Army Corps of Engineers, a function that characterized the building's postwar history for nearly 50 years. The Machine Shop appears eligible for listing in the National Register under Criteria A (Events) and C (Design/Construction) as a well-preserved (if physically deteriorated) industrial building from the important – if little-known – Marinship facility. Under Criterion A, the building is significant for its central role in the outfitting of the Liberty Ships and T-2 tankers constructed at Marinship between 1942 and 1945, vessels that were instrumental in Allied victory. Under Criterion C, the Machine Shop embodies the characteristics of a type, period, and method of construction as a rare and intact World War II-era shipyard building constructed of wood using time and labor-saving materials and techniques.

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X. Appendix *DPR 523 A & B Forms*

State of California The Resources Agency

Department of Parks and Recreation

PRIMARY RECORD

Primary # \_\_\_\_\_

HRI # \_\_\_\_\_

Trinomial \_\_\_\_\_

NRHP Status Code 3S\_3CS

Other Listings \_\_\_\_\_

Review Code \_\_\_\_\_

Reviewer \_\_\_\_\_

Date \_\_\_\_\_

Page 1 of 4

\*Resource name(s) or number (assigned by recorder)

Building 11

P1. Other Identifier Marinship Machine Shop

\*P2. Location:  Not for Publication  Unrestricted

\*a. County: Marin

and P2b and P2c or P2d. Attach a Location Map as necessary.

\*b. USGS 7.5' Quad: San Francisco North Date: 1999

\*c. Address: 25 Liberty Ship Way

City: Sausalito

Zip: 94965

d. UTM: (Give more than one ofr large and/or linear resources) Zone \_\_\_\_\_; \_\_\_\_\_ mE/ \_\_\_\_\_ mN

e. Other Locational Data: Assessor's Parcel Number: 063-100-11

\*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

Building 11 is located on the northwest side of Liberty Ship Way, just north of Marinship Way in Sausalito. It is a two-story, wood post-and-beam, industrial building clad in plywood sheathing and capped by an undulating bowstring truss roof. The building has a two-story, shed-roofed office wing along the southeast elevation. The redwood-sheathed roof of the machine shop is punctuated by sheet metal ventilators and large wood-frame, wire-glass skylights. The primary facade faces southeast and comprises the office wing. It is ten bays long, clad in painted plywood, and punctuated by an asymmetrical arrangement of double-hung wood windows, wood ribbon windows, and pedestrian entrances. The office wing is capped by an overhanging eave consisting of wood rafter ends concealed behind a wood fascia board. A portion of the south wall of the machine shop proper is exposed to view above the office wing roof; it is clad in newer T-111 plywood. The northeast façade mostly comprises the machine shop. It is four bays wide; the southernmost bay consists of pairs of double-hung wood windows on the first and second floor levels of the office wing. The next three bays are largely the same, consisting of large barrel-vaulted bays articulated by vehicular openings and double-hung windows at the first floor level and two bands of ribbon windows above. Occupying the spandrel panels between the ribbon windows in the central bay of the machine shop are the words "MACHINE SHOP" painted in capitalized red letters. The northeast façade terminates with a band of wood trim and metal flashing that outline the barrel vaulted roof. (continued)

\*P3b. Resource Attributes: (list attributes and codes) HP8. Industrial building

P4. Resources Present:  Building  Structure  Object  Site  District  Element of District  Other

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects)



\*P5b. Photo (view, date, accession #  
View toward west, April 6,  
2011. 100\_1470

\*P6. Date Constructed/Age and Sources  
 Historic  Prehistoric  Both  
1942, *Marinship: The History of a Wartime Shipyard*

\*P7. Owner and Address:  
United States Of America  
2479 E Bayshore Rd.  
Palo Alto, Ca 94303

\*P8. Recorded by  
Knapp & VerPlanck Architects  
235 Montgomery St., Ste. 747  
San Francisco, CA 94104

\*P9. Date Recorded:  
April 22, 2011

\*P10. Survey Type: (Describe)  
Intensive

\*P11. Report Citation: (Cite survey report and other sources, or enter "none")

Finnie, Richard. *Marinship: The History of a Wartime Shipyard*. San Francisco: 1947.

\*Attachments

- Archaeological Record
- Artifact Record

- BSOR
- NONE
- District Record

- Photograph Record
- Location Map
- Linear Feature Record

- Continuation Sheet
- Other...

*Exhibit E*  
Required Information  
*(4 pages)*

**BUILDING, STRUCTURE, AND OBJECT RECORD**

Page 2 of 4 \*NRHP Status Code 3S, 3CS  
\*Resource Name or # (Assigned by recorder) Building 11

B1. Historic Name Marinship Machine Shop  
B2. Common Name Building 11  
B3. Original Use Industrial B4. Present Use: Vacant  
\* B5. Architectural Style Utilitarian

\*B6. Construction History  
Building 11 was constructed between June and August 1942. A second floor accommodating women's facilities was added in 1943. The building was seismically upgraded in the early 1990s.

\*B7. Moved?  No  Yes Date? \_\_\_\_\_ Original Location: \_\_\_\_\_

\*B8. Related Features

B9a. Architect Bechtel Engineering Department b. Builder MacDonald & Kahn

\*B10. Significance: Theme World War II Homefront Area: Marinship, Sausalito

Period of Significance 1942-1946 Property Type Industrial Applicable Criteria 1 & 3

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity)

Building 11, the Machine Shop, was constructed early on in the life of Marinship. The pilings were set and the foundation poured by June 30. The building was initially completed August 8, 1942. Less than a month later, a second-floor addition to the office wing was begun to accommodate women workers. This addition was completed in early 1943. As originally outfitted, the large 27,400 s.f. building contained one three-ton crane, three 10-ton bridge cranes, and four jib cranes. The building also had truck loading docks. The Machine Shop was under the directly of the Outfitting Department - Machinery Section - and was under the direct administration of Albert Webb, Yard Superintendent. In contrast to many of the Marinship departments, which employed mostly unskilled laborers, the Machine Shop employed many previously trained and highly skilled machinists. (continued)

B11. Additional Resource Attributes: (List attributes and codes) HP8. Industrial building

\*B12. References: Finnie, Richard. *Marinship: The History of a Wartime Shipyard*. San Francisco: 1947.  
Grambow, Richard. *Marinship at the Close of the Yard*. Sausalito, CA: 1945.  
Wollenberg, Charles. *Marinship at War: Shipbuilding and Social Change in Wartime Sausalito*. Berkeley: Western Heritage Press, 1990.

(Sketch Map with north arrow required.)

B13. Remarks

\*B14. Evaluator Christopher VerPlanck  
\*Date of Evaluation April 22, 2011

(This space reserved for official comments)



CONTINUATION SHEET

Page 3 of 4 Resource Name or # (Assigned by Recorder) Building 11

\*Recorded by: Knapp & VerPlanck Architects Date April 22, 2011

Continuation  Update

**P3a: Description (continued)**

The northwest façade is entirely symmetrical, with each of the ten bays consisting of groups of four double-hung wood windows on the first floor level and two bands of wood ribbon windows above. The northwest façade is clad in 4' x 8' plywood sheets and terminates in a cornice consisting of the exposed 2" x 6" rafter ends linked together by recessed fascia boards. The first floor of the southwest façade has three infilled vehicular entrances and a metal stair leading up to the second floor level of the office wing. Above the first floor level, the west façade has plywood cladding, wood ribbon windows, and painted signage reading: "MACHINE SHOP." Alterations include increasing the office wing to two-stories in 1943, removal of a water tank at an unknown date, and a seismic upgrade in the early 1990s. The rest of the property is mostly paved, although there is a narrow band of landscaping and several street trees along Liberty Ship Way. Building 11 appears to be in poor condition.

**B10: Significance (continued)**

The Machine Shop operated three shifts a day, seven days a week, and turned out all types of machinery and equipment, including tail and line shafts, bearings, stern tubes and liners, coupling bolts and chocks, and anything that required precise tolerances within thousandths of an inch. After Marinship was decommissioned in 1945 and conveyed to the U.S. Army Corps of Engineers, the Army Corps sold off most of the former yard, keeping only a core section comprising Buildings 11, 29, and 15 and the Outfitting Docks. The Army Corps converted Building 11 into a soil testing laboratory to test various dam and levee building techniques. The building required little in the way of alteration for this new use, although the Army Corps clad the plywood exterior in asbestos shingles and made some changes to the interior of the three large industrial bays. In the early 1990s, the Army Corps completed a seismic retrofit of the Machine Shop. In 1996, the Army Corps decided it did not need the building anymore and declared it surplus property. The Veterans Administration (VA) took it over in 2006. Initially intending to rehabilitate the building, the VA stripped the roofing materials and the asbestos shingles from the exterior.

**Integrity:**

Building 11 has undergone few major alterations aside from the removal of a water tank from the roof and the infilling of several vehicular entrances on the southwest elevation when the property was subdivided. The exterior was covered in asbestos shingles for some time but these were removed in 2008. The building has not been moved, so that it retains integrity of location. Neither the design nor the materials or examples of workmanship have been changed either. The setting appears largely intact. Of all buildings that remain of the old Marinship yard, Building 11 most evocatively expresses the appearance of the facility in World War II, retaining integrity of feeling and association. In summary, Building 11 retains integrity of location, design, setting, materials, workmanship, feeling, and association.

**Evaluation:**

Building 11, the former Marinship Machine Shop, appears individually eligible for listing in the California Register under Criteria 1 (Events) and 3 (Design/Construction) and likely in the National Register under the corresponding Criteria A and C. The building is one of six surviving major industrial buildings and warehouses that survive from the World War II era in the former Marinship yard. The building is part of what was the Outfitting Department, the most intact part of the yard. The building appears eligible under Criterion 1 and A as a building that is closely associated with the production of Liberty Ships and tankers during World War II. It is also significant under Criterion 3 and C as an intact and well-preserved and increasingly rare example of an industrial building built for one of the "Emergency Yards" constructed in the San Francisco Bay Area after Pearl Harbor. The building is also a good example of lightweight and inexpensive (probably temporary) construction making use of standardized materials and building techniques and very little steel or other rationed materials.

Page 4 of 4 Resource Name or # (Assigned by Recorder) Building 11

\*Recorded by: Knapp & VerPlanck Architects

Date April 22, 2011

Continuation  Update



Northwest elevation, 100\_1480



Portion of southwest elevation, 100\_1527



Southeast elevation, 100\_1470



Northeast elevation, 100\_1481

EVALUATION OF HISTORIC RESOURCES  
IN COMPLIANCE WITH  
**THE NATIONAL HISTORIC PRESERVATION ACT OF 1966**  
(as amended)

36 CFR PART 800 – SECTION 106

To Consider the  
Potential for Historic Resources to be Affected by the Development of a  
U.S. Department of Veterans Affairs Medical Research Facility in  
Sausalito, California



Located at: 25 Liberty Ship Way, Sausalito, Marin County, California

**Advance Design Consultants, Inc.**

998 Park Ave. San Jose, CA 95126

**Urban Programmers**

10710 Ridgeview Avenue. San Jose, CA

Exhibit

# Table of Contents

Table of Contents .....	1
1 Introduction .....	2
2 Executive Summary of Conclusions .....	2
2.1 History of Marinship.....	3-8
2.2 Marinship Machine Shop Data .....	9
2.3 Marinship Machine Shop Architectural Description and Details.....	10- 11
2.4 Marinship Machine Shop Construction and Use History .....	12- 14
2.5 Marinship Machine Shop Functions as Essential to the Building.....	15- 16
2.6 Marinship Machine Shop Evaluation of Integrity and Significance .....	17- 19
2.7 Marinship And Marinship Machine Shop Major Bibliographical References .....	20- 21
2.8 Marinship Machine Shop Photographs .....	22- 29
2.9 Archeological Study .....	30- 36
3 Summary Assessment .....	37
3.1 Area of Potential Effects .....	38
3.1.1 Resources within the Area of Potential Effects .....	39
3.1.2 Purposed Development Site .....	40 - 41
3.1.3 Southeast of the Project Site .....	42
3.1.4 Northwest of the Project Site .....	43
3.1.5 Northeast of the Project Site .....	44
3.1.6 Southwest of the Project Site .....	45- 46

1. **Introduction to the Work**

The San Francisco Veterans Affairs Medical Center (SFVAMC) acquired the former Marinship Machine Shop property in Sausalito from the General Services Administration as a location in which to expand its capacity for research related to VA's medical mission of serving the Nation's veterans.

SFVAMC contracted with Advanced Design Consultants and their subcontractor Urban Programmers to provide technical studies, including a the Cultural Resources Evaluation. This report contains the background, historic building survey, and evaluation of the property at 25 Liberty Ship Way, Sausalito, California.

2. **Executive Summary of Conclusions**

The Historic Buildings Study combined historical research and physical inspections of the building to establish the historical context and to evaluate the Marinship Machine Shop for historical and/or architectural significance. Marinship Machine Shop was evaluated within the historical context of the "World War II and the American Home Front, National Historic Landmark Theme Study", National Historic Landmarks Survey, National Park Service, U.S. Department of the Interior, August 2004. It is also evaluated within the Context of WWII and the War Effort Industry-Shipbuilding in Northern California, Industry and Community Development in Sausalito, and Ethnic Heritage - Civil Rights. Although Marinship is described and referenced in several publications the Machine Shop had not been previously evaluated for National Register eligibility.

The period of documented significance is set between May 1942 and September 1946 – including the construction of Marinship and the end of WWII when the Marinship facility was decommissioned. Following the decommissioning of Marinship, the property was occupied by the U.S. Army Corps of Engineers as a material testing laboratory. Research did not uncover significant events or associations that would warrant extending the period of significance.

The Marinship ship building yard in Sausalito was important to the World War II effort by its efficiency in constructing "Liberty Ships" for the U.S. Navy. Of the many primarily wood constructed buildings, the Machine Shop is one of the few in the San Francisco Bay Area that retains integrity of location, design, materials, workmanship, feeling, setting and association. The building represents a distinctive form of architecture of which few remain in the San Francisco Bay Area.

Based upon the evaluation the building appears eligible for listing in the National Register of Historic Places under the following criteria.

- Criterion A: Military Industrial Complex WWII.
- Criterion B: The association with Joseph James; Civil Rights Movement.
- Criterion C: Embodying the distinctive characteristics of WWII, primarily wood construction and industrial design, engineering and architecture.
- Criterion D: Information on wood constructed industrial buildings of WWII and the potential for archeological material (See Section 36 CFR Part 800).

In addition to individual listing, the Marinship Machine Shop appears eligible for listing as a contributing property in a yet undocumented Marinship National Register Historic District.

2.1 History of Marinship Sausalito California (Historical Context)

On December 8, 1941, the United States declared war on Japan. Immediately, ports all across the nation began converting their operations to wartime pursuits. Other ports were created from scratch to meet the wartime need of manufacturing warships and other support vessels. Marinship was one of those new ports which were created to manufacture ships for the war effort.

On March 3, 1942, Kenneth K Bechtel of W. A. Bechtel Corporation <sup>1</sup>, together with Marin County residents Harry Allen, Ted Panton, and Fred Boole, began construction of the shipyard at this location. They formed Marinship Corporation to construct the facility and bid for contracts from the U.S. Maritime Commission.

The land which was initially chosen for this facility was the old 1870's Northwestern Pacific Railroad repair yard, located at the base of Spring Street, at the northern end of Sausalito, California. It is situated along a stretch of mud flats on the shores of Richardson Bay, about three miles north of the Golden Gate. At the time of its purchase by the Marinship Corporation, the yard was owned by the Southern Pacific Railroad.



*Photograph # 1: The lagoon c. 1942 prior to filling the bay to construct Marinship. Railroad is in foreground with long piers extending in to Richardson Bay.*

*Source: Courtesy of Marinship Exhibit, Bay Model Building, USACOE August 2009.*

---

<sup>1</sup>"Marinship" Comp., Tim Colton, 23 May 2008, 27 Aug., 2009 <<http://shipbuildinghistory.com/history/shipyards/4emergency/wwtwo/Marinship.htm>>.

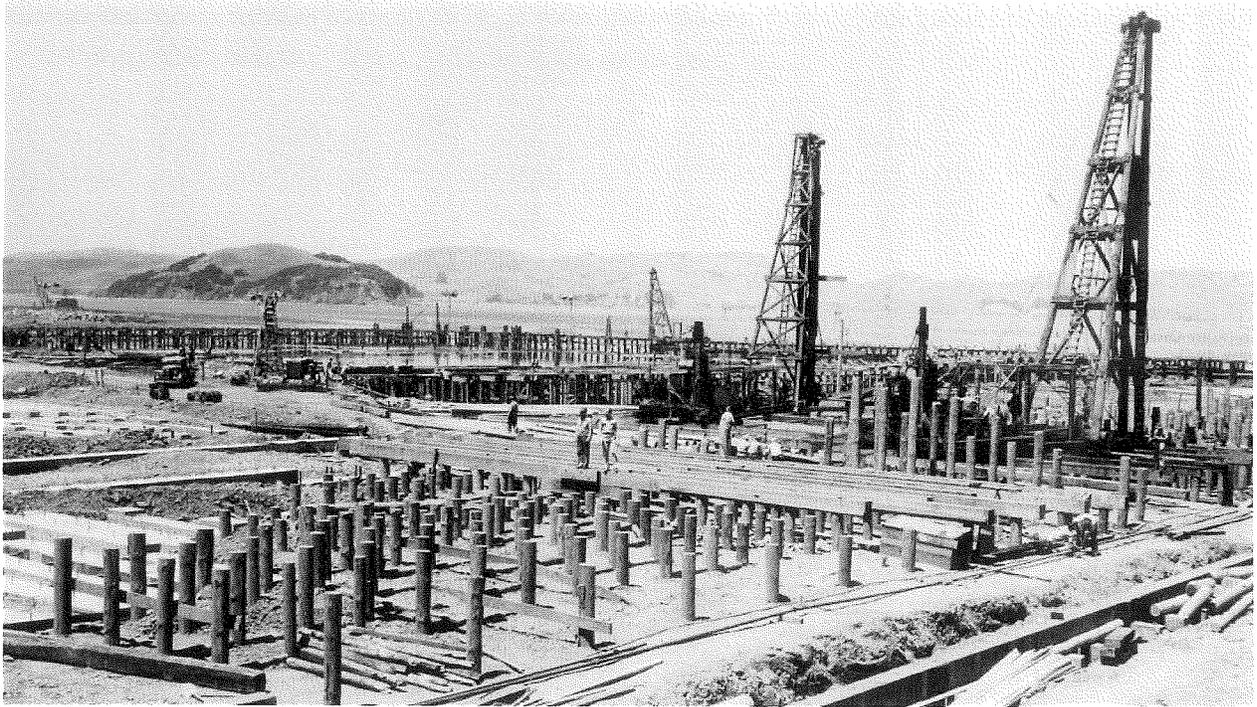
The original plan was to construct six ship launching slip-ways. Unfortunately, it was discovered that the amount of space acquired from the Southern Pacific Railroad was insufficient to accommodate this need. Due to the emergency nature of the war effort and the dire need of the Maritime Commission to supply the Navy with more ships, the Marinship Corporation was granted eminent domain powers to acquire the additional land they needed from adjacent property owners. They turned to a community located on the edge of the bay, on a picturesque knoll called Pine Point (aka Pine Hill). With a deadline of March 28, 1942, the residents and tenants of 42 buildings were given only two weeks' notice to vacate their homes and businesses before they were razed.

At least 12 residences were saved from demolition by quickly relocating them elsewhere in Sausalito. The residents began to be removed from Pine Point from March 18, 1942 with the last one leaving on April 26, 1942.



*Photograph # 2 Lagoon created by the railroad (right) and long piers. March 28, 1942  
Source: Marinship Archives, Bay Model Building, Sausalito*

Once the people were gone, the buildings were destroyed and the Pine Point hill was dynamited. An estimated 838,763 cubic yards of earth were removed from Pine Point, Waldo Point, and other nearby areas to be used as landfill to extend the Marinship yard out over the adjacent mud flats. This extra land created a shipyard 202 acres in size, making it one of the largest shipyards on the west coast. Twenty-five thousand nine hundred and fifty-two (25,952) timber pilings were driven into Richardson's Bay to support the new buildings, structures, and heavy machinery.

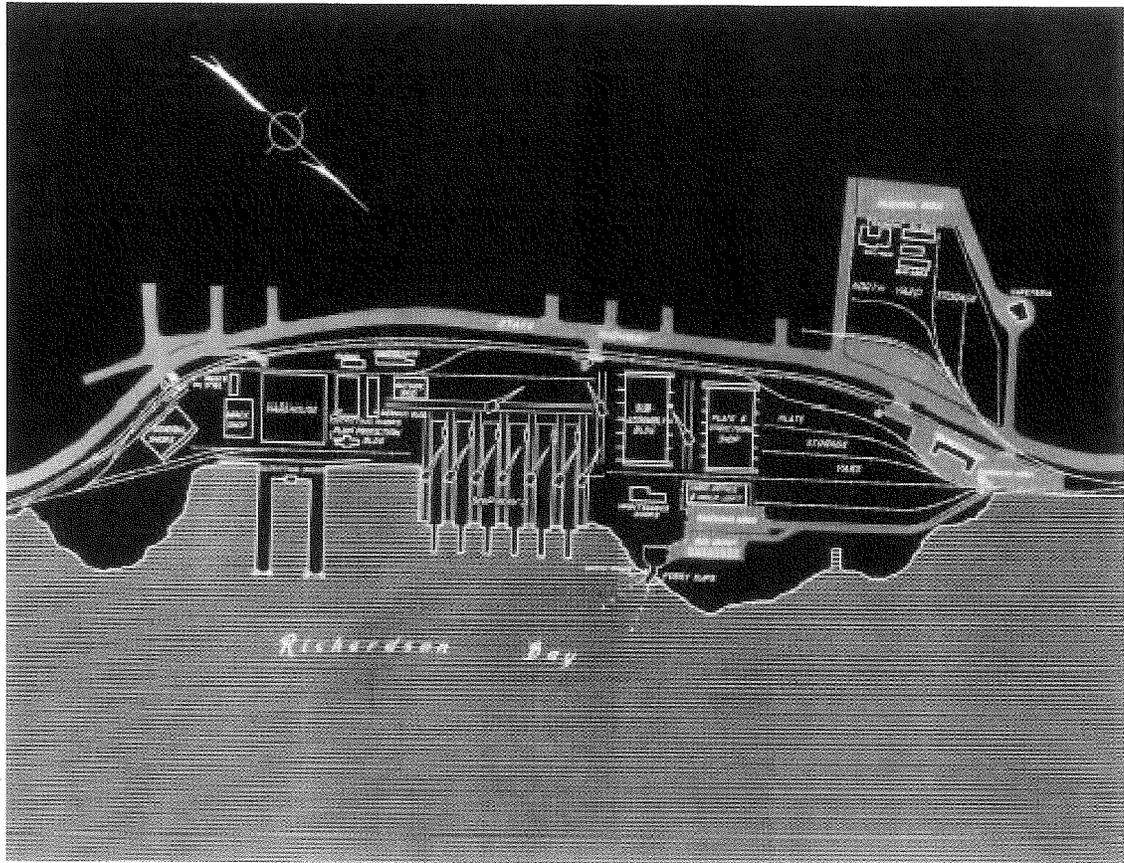


*Photograph # 3 Pile foundations driven at Marinship c. May 1942  
Source: Marinship Archives, Bay Model Building, Sausalito*

A 300 foot wide by 1.5 mile long deep water ship channel was constructed by dredging 3,000,000 cubic yards of sea floor. Once the land was ready, the main buildings and structures of the Marinship yard were constructed.<sup>2</sup>

These included the six slipways, a ferry slip, and several buildings, including:

1. Industrial Center Building (ICB) at 480 Gate Five Road (originally the Yard Office and Mold Loft Building)
2. Schoonmaker Building at 10 Liberty ship Way (originally the General Shop)
3. Bay Model Visitor Center (originally the Warehouse)
4. Machine Shop Building at 25 Liberty Way<sup>3</sup>



Photograph # 4 Plan for Marinship c. March 1942

Source: Marinship Archives, Bay Model Building, Sausalito

The first ship keel was laid for the Liberty Ship "William A Richardson" on June 27, 1942; a mere three months after construction of the shipyard began.<sup>4</sup> Two thousand laborers worked in shifts around the clock to accomplish this feat.<sup>5</sup>

<sup>2</sup> Finnie, Richard, editor, *Marinship: The History of a Wartime Shipyard*. San Francisco: Taylor and Taylor, 1947

<sup>3</sup> "Marinship," Comp., Tim Colton.

<sup>4</sup> *Ibid.*

<sup>5</sup> *Ibid.*

Marinship operated 24 hours a day. At its peak, 20,000 workers were employed at Marinship. These men and women worked in one of three, 8-hour shifts, at least six days a week. Like other major shipyards along the west coast, this workforce was composed of immigrants from regions all over the nation. These new residents swelled the local population and the housing shortage was acute. To relieve this burden, the Maritime Commission and the Federal Housing Authority built a new community to the north of the shipyard, called Marin City. Housing for 6,000 was provided and within one year, it was the second largest city in Marin County.<sup>6</sup>

Given that Marinship was a relative latecomer in the shipbuilding industry, most of the experienced craftsmen they needed were already employed in other, more established shipyards.

This required extensive on the job training for most new hires, with experienced craftsmen supervising junior employees who learned their trade as they produced. Surprisingly, quality was exceedingly high with not a single major failing of any ship released from this ship yard.

Ships were constructed on a large assembly line. The process began on the north side of the yard where the raw steel was delivered. It proceeded south on open-air skids through the various specialized pre-assembly shops. These included the Plate and Sub-Assembly Shops. At each shop, the materials were combined and recombined to construct ever larger sections of the vessel being built. Once a particular section was completed, a large, traveling crane was brought in to lift it onto the hull where it was welded together. Each launch was greeted by the workers with much enthusiasm. The ship was then towed to the Outfitting Docks and given the finishing touches.<sup>7</sup> Depending on the ship, these finishing touches could last anywhere from one week to nearly seven months.

Marinship was one of several yards in the San Francisco Bay Area. Along with the Kaiser Shipyard in Richmond, Marinship was classified as an "emergency yard"<sup>8</sup>, which was part of the Federal Emergency Shipbuilding Program. These yards were charged with building cargo ships and/or tankers quickly, to facilitate the transport of cargo, troops, and fuel to foreign theaters. Marinship was initially expected to be one of four yards which were to exclusively produce T2 type tankers. However, the T2 type tanker was still in the design stage at the time Marinship became operational. Therefore, the initial 5 months of operations were devoted exclusively to the construction of cargo ships. These cargo ships were commonly referred to as Liberty ships. They were designed so that they could be built fast and cheap. Little effort was put into comfort or durability. Their designed lifespan was a mere five years. A total of 15 Liberty ships were launched from Marinship, the last one being delivered on August 14, 1943. On December 7, 1942, a retooled Marinship yard began making T2-SE-A2 type tankers. This type of tanker was built nowhere else.

This tanker (along with the T2-SE-A1 and T2-SE-A3 type) came to dominate construction at the shipyard after April, 1943. Marinship set a world speed record on June 16, 1945 by delivering the T2-SE-A1 tanker, "Huntington Hills", just 33 days after its keeled was laid on May 14, 1945. At that time, this was nearly twice as fast as any comparable tanker produced anywhere else. Marinship was active from June 27, 1942 until September 25, 1945.

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<sup>6</sup> "Marinship." Comp., Tim Colton

<sup>7</sup> Ibid.

<sup>8</sup> United States. National Park Service. "Shipbuilding Essay--World War II in the San Francisco Bay Area:

A National Register of Historic Places Travel Itinerary" Build Ships! San Francisco Bay Wartime Shipbuilding Photographs. 28 Aug. 2007.

National Park Service. 27 Aug. 2009. <<http://www.nps.gov/history/nr/travel/ww11bayarea/shipbuilding.htm>>.

In that time, it delivered 15 Liberty ships, 16 fleet oilers, and 62 tankers, with a new vessel produced, on average, every 13 days. Marinship's flagship, the USS Tamalpais was among eight Marinship tankers present in Tokyo Harbor to witness Japan's surrender on August 14, 1945.

Marinship was the most racially and sexually integrated shipyard in California. Thousands of African-Americans made up 10% of the workforce, making them the largest ethnic minority at Marinship. Women comprised 25% of the workforce.<sup>9</sup> However, racial tension existed between the African-Americans, Marinship Corp. and their unionized white co-workers. Local Union No. 6 of the International Brotherhood of Boilermakers, Iron Shipbuilders and Helpers of America (International Brotherhood) had a "closed shop" agreement with Marinship Corp. that compelled the company to dismiss any worker of a profession covered by the International Brotherhood who was not a dues-paying member in good standing.

This union did allow the African-Americans to join an auxiliary union "lodge" (Auxiliary A-41), but did not allow them to join the bona fide union Local No. 6. The African-Americans felt that this policy was discriminatory because it did not grant them full membership privileges and in fact excluded them from higher-paid skilled labor positions which the union reserved for white members. In the summer of 1943, 950 African-Americans refused to join the union's Auxiliary A-41 lodge. The union felt that this refusal disqualified them from employment at Marinship and demanded that Marinship Corp. fire them. Marinship Corp. complied and the workers appealed this to the Fair Employment Practices Commission, who directed the union to abolish the auxiliary lodges in December, 1943. However, the union refused to obey this order. As a result, in 1944, one of the African-American workers, Joseph James, filed suit against Marinship Corp. and the union in state court, claiming unlawful discrimination in violation of the anti-discrimination provisions of Marinship's contract with the U.S. Maritime Commission. He won an injunction in the lower court and the men returned to their jobs. However, the union and Marinship Corp. appealed to the California Supreme Court. The final decision was handed down in January, 1945, and reaffirmed the lower courts ruling. This was a major victory in the civil rights movement that upheld the Federal prohibition on racial discrimination outlined in President Roosevelt's Executive Order 8802 (issued, 1941). It became a legal precedent for many future civil rights cases involving racial discrimination against African-Americans. Joseph later went on to become the President of the National Association for the Advancement of Colored People.<sup>10 11</sup>

After World War II ended, Marinship's workforce quickly dwindled, until by November, 1945, only 600 employees remained.<sup>12</sup> In 1946, it was decommissioned and many of its former workers remained to enlarge Sausalito's large houseboat community or remained in Marin City.<sup>13</sup> That year, it was turned over to the War Assets Administration. In 1948, they turned it over to the U.S. Army Corps of Engineers, who in turn sold most of the land to private and public owners. They only retained the Machine Shop and Warehouse, which they transformed into the South Pacific Division Laboratory and Bay Model.

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<sup>9</sup> United States. US Army Corps of Engineers. "US Army Corps of Engineers." 12 May 2009. US Army Corps of Engineers. 27 Aug. 2009. <[http://www.spn.usace.army.mil/bmvc/bmjourney/visit\\_model/exhibits/marinship.html](http://www.spn.usace.army.mil/bmvc/bmjourney/visit_model/exhibits/marinship.html)>.

<sup>10</sup> Fenison, Jimmy B. "James, Joseph (? -- ?) | The Black Past: Remembered and Reclaimed." BlackPast.org. 28 Aug. 2009. <<http://www.blackpast.org/?q=aaw/james-joseph>>.

<sup>11</sup> Gibson, C.J. "James v. Marinship (1944) | The Black Past: Remembered and Reclaimed." James v. Marinship, (1944) 25C2d 721. BlackPast.org. 28 Aug. 2009. <<http://www.blackpast.org/?q=primaryWEST/james-v-marinship-1944>>.

<sup>12</sup> United States. US Army Corps of Engineers.

<sup>13</sup> Stafford, Matthew. "Marin County Genealogy - Marin County - Our Towns." 19 March 2007. Marin County Genealogical Society. 27 Aug. 2009. <[http://www.sfgenealogy.com/marin/ourtowns/ot\\_s.htm](http://www.sfgenealogy.com/marin/ourtowns/ot_s.htm)>.

2.2 Marinship Machine Shop Data

**Address:** 25 Liberty Ship Way, Sausalito, CA

**Acres:** 1.3 acres

**APN:** 06310011

**Former uses:** Machine Shop for the Marinship shipyard 1942-1945  
U.S. Army Corps of Engineers  
South Pacific Division Laboratory 1950-1997

**Owners:** Marinship Corporation 1942-1946  
U.S. Army Corps of Engineers 1948-2006  
Dept. of Veteran's Affairs 2007-Present

### 2.3 Marinship Machine Shop Architectural Description and Details

The Marinship Machine Shop represents a typical American industrial architecture design ethic, focusing on utilitarian concepts at the expense of any aesthetic consideration. The functionality of the building is paramount and expresses itself in a beauty based on utility, strength, stability, and function rather than picturesqueness often associated with other building types. This approach to industrial design was given new acceptance in the 1940's by the increasing popularity of modernism in residential and commercial designs, which introduced the philosophy of form following function to a heretofore non-minimalist architectural tradition.

The Machine Shop is a wood frame building, generally aligned on a northeast-southwest axis and clad in plywood panels. The four rows of skylights running lengthwise along the three-compass roof, coupled with the three rows of ribbon window side walls along the northeast, northwest, and southwest elevations provide the building with extensive natural lighting.

Each row of ribbon windows contains four windows, aligned symmetrically with the row above it. The top two rows are fixed, while the bottom row is double-hung sash. The southeast facade, which contains the offices, sports two rows symmetrically aligned double-hung sash windows.

The northeast facade is equipped with three roll-up metal doors, with two of them protected by sliding plywood doors. A painted sign between the second and third rows of ribbon windows reads "MACHINE SHOP." The southeast facade has an identical arrangement.

Measuring 139 x 203 feet, the building provides 37,500 square feet of floor space. The ends are three bays wide, with a two-story row of offices attached to the southeast elevation. The roof is supported by three rows of bow-string truss systems. The main block of the building is divided into three large partitioned bays approximately two and one half stories in height, while a two-story lean-to along the southeast side affords office, and crew space. It has a smooth, continuous concrete floor. Three traveling cranes, supported on crane girders mounted on the wall, served each bay, one assembly remains. The original fire hose reels (installed in all Marinship buildings<sup>14</sup>) are found along the walls.

As part of the hazardous materials remediation the yellow asbestos tile, added by the USACOE to cover the facades was removed in the spring of 2008.<sup>15</sup> Other work has removed the roofing material on the main sections of the building. Vandals have broken many of the windows. In addition, time and natural forces have deteriorated the piles supporting the building.

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<sup>14</sup> Finnie, "Marinship: The History of a Wartime Shipyard" pp. 83-84

<sup>15</sup> Prado, Mark. "VA construction work prompts asbestos worries in Sausalito."



*Photograph # 5 Marinship facility c. 1943, Arrow locates the Machine Shop Building  
Source: Marinship Archives, Bay Model Building, Sausalito*

The materials used to construct the original building represent the importance of using wood to preserve metal for the war effort. The siding, large panels of plywood would have been metal were it not for this national directive to preserve metal. Because of this construction restriction many of the WWII buildings, built for a specific purpose and short life or temporary use life, have deteriorated.

The interior exhibits numerous partition walls and large open spaces typical of industrial uses. Many of the interior features and surfaces appear to be original material although the exact locations have not been verified. Floor plans that document the building as it was used by the USACOE appear to have divided the large spaces of the Marinship Machine Shop.

## 2.4 Marinship Machine Shop Construction and Use History

For the first three months during the construction of the Marinship yard, a Construction shack was used as a first aid station. This station was located near what was later to be the northeast corner of the Machine Shop.<sup>16</sup>

Construction of the Machine Shop began on June 20, 1942 with the driving of the foundation piles. This work was completed on June 22, 1942. Between June 24th and June 30th, 1942, the concrete foundation was poured. On August 8, 1942, the Machine Shop was completed. The two-story extension attached to the southeast elevation was built from October 30, 1942 through March 22, 1943.<sup>17</sup>

The building was used as a machine shop for the Marinship shipyard during World War II. In 1946, the Marinship yard was decommissioned. That year, it was turned over to the War Assets Administration. In 1948, they turned it over to the U.S. Army Corps of Engineers (USACE); who, in 1950, converted it into the South Pacific Division Laboratory. This laboratory conducted geotechnical testing. In the early 1990's, an analytical laboratory capability was added. The USACE Laboratory closed in 1997. Between March and June, 2006, the site underwent remediation for polychlorinated biphenyls (PCB) contamination.

In 2007, the USACE transferred the building to the General Services Administration, who in turn transferred it to the Department of Veterans Affairs, San Francisco Veterans Affairs Medical Center (SFVAMC). The SFVAMC took possession of the building with the intention of turning it into a research center, where researchers would study post-traumatic stress, HIV, liver disease, cardiac surgery and other ailments.

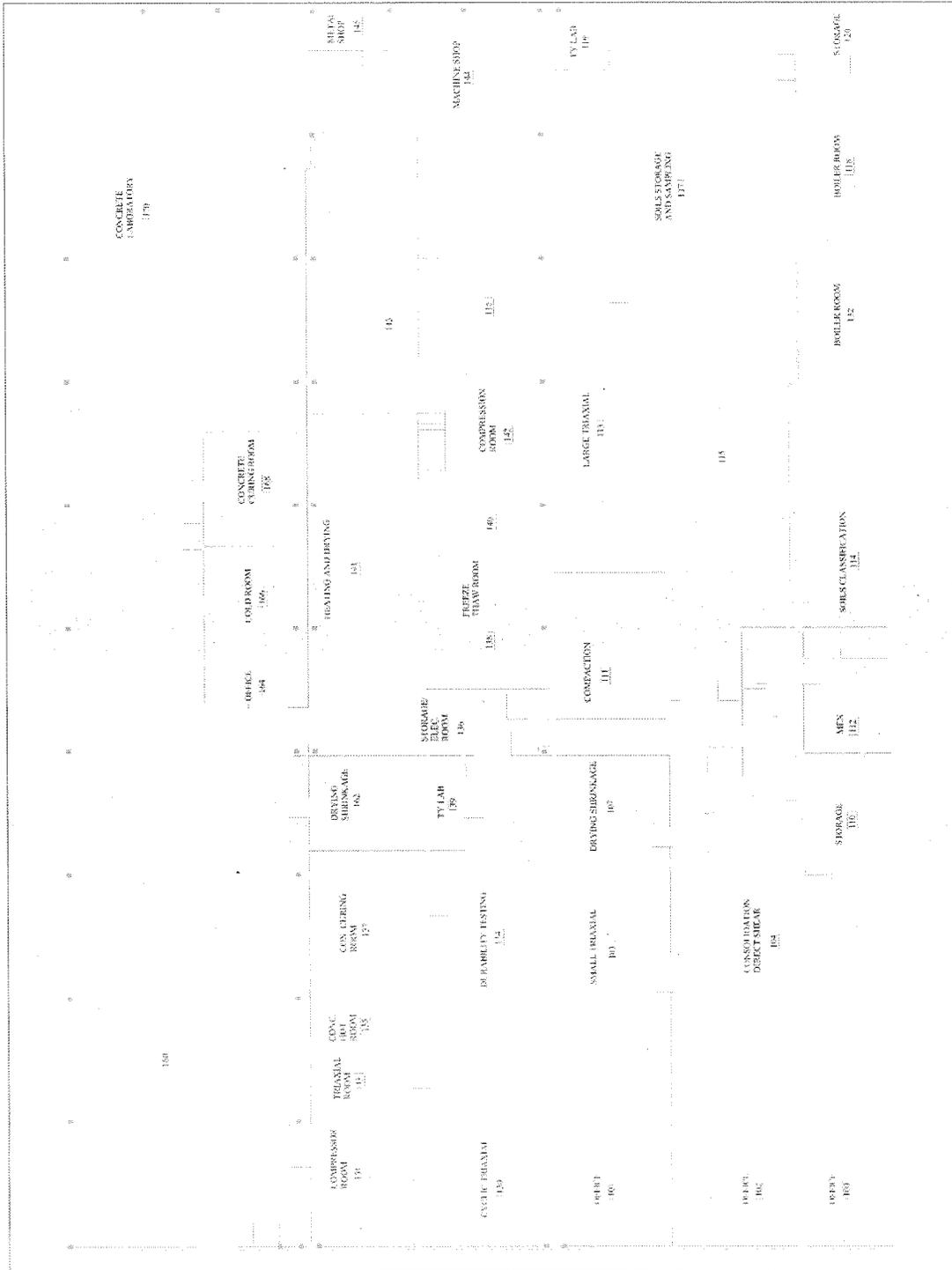
The following diagrams of the Machine Shop Building's first and second floors depict the uses and divisions of the spaces created by the USACOE. The photographs of the active machine shop show the interior was largely open areas filled with milling and other machinery.

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<sup>16</sup> Ibid. p. 74

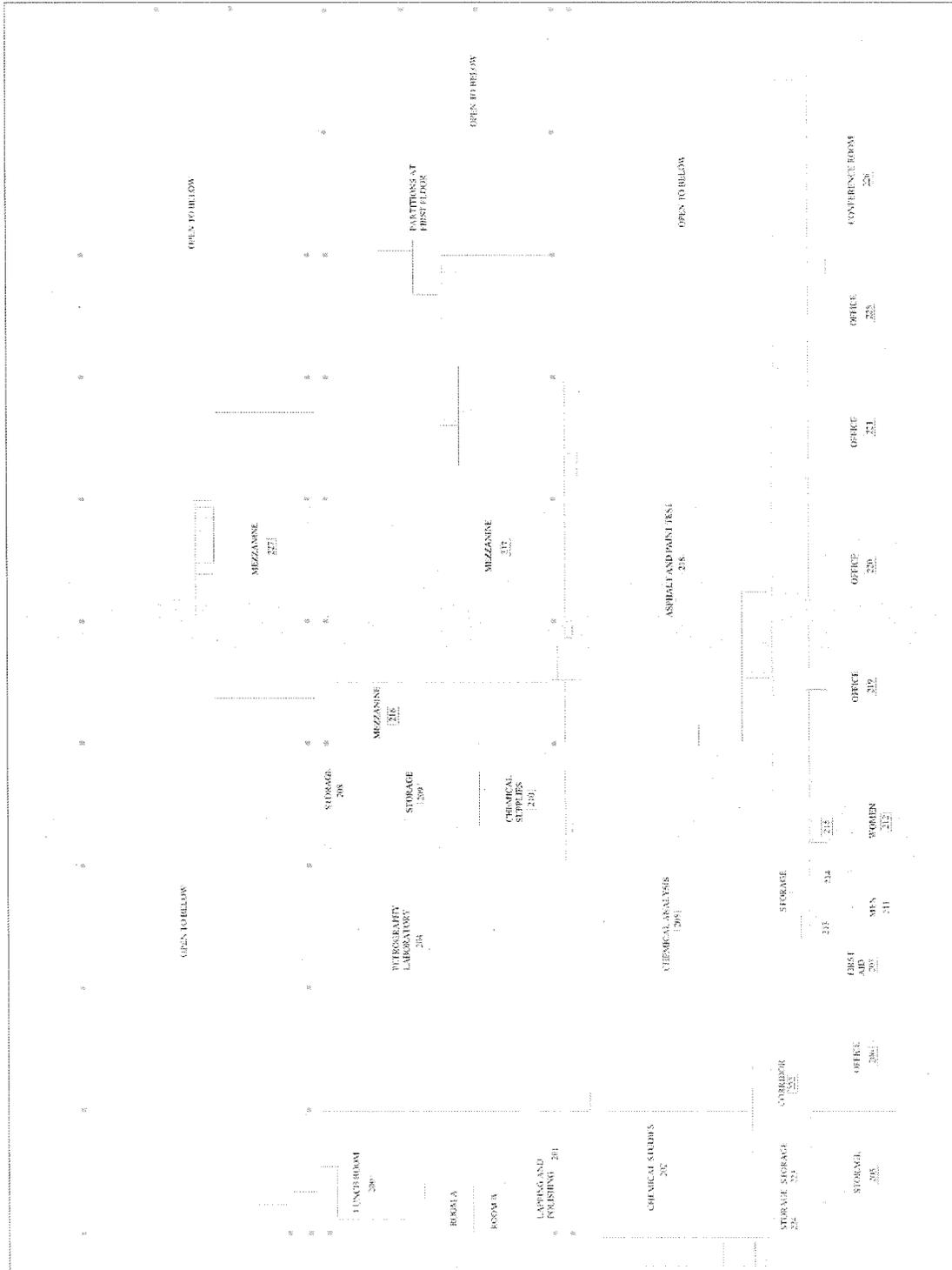
<sup>17</sup> Finnie, "Marinship: The History of a Wartime Shipyard" pp. 20

# Marinship Machine Shop First Floor Plan, USACOE era



ITEM NO. 4 PAGE 72

# Marinship Machine Shop Second Floor Plan, USACOE era



2. 5 Marinship Machine Shop Functions as essential to the Building of Ships<sup>18</sup>

In order to keep up with the tight schedule of delivery imposed on them by the U.S. Maritime Commission and the U.S. Navy, it was essential that the highest level of coordination exist between the various crafts. The mechanical operations of the ship facilities had to synch with the operations of the shore facilities. To accomplish this coordination, it was necessary to clearly separate the ship mechanics from the shore mechanics. The mechanics in the Machine Shop fabricated the boilers, piping, rigging, etc., while the mechanics on the ships installed them. While the installers were performing their work, the fabricators were working on creating the next delivery to be installed. All this was supervised by Section Supervisors or Superintendents for each craft, who in turn were under the overall supervision of the Production Manager.

Like the rest of Marinship, the Machine Shop had three shifts of workers operating 24 hours a day. It was equipped with everything the machinists needed to perform their work. Unlike the rest of the tradesmen in the Marinship yard, including the ship-based machinists, these men were by and large very experienced in their specific skill set, with years of background work in their craft. This high degree of expertise was necessary to produce work within the exact tolerances of marine installations. Much of the equipment, including stern frames, rudders, bearings, and line shafts, needed to be machine-finished and hand-spotted to within one thousandth of an inch.

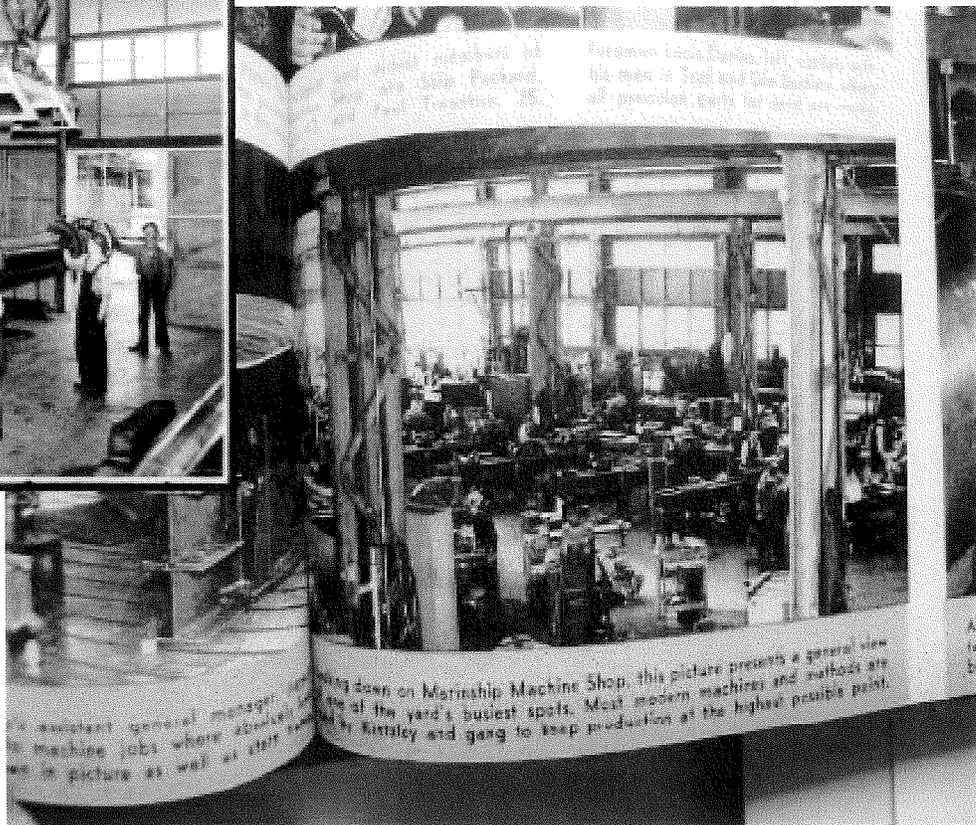
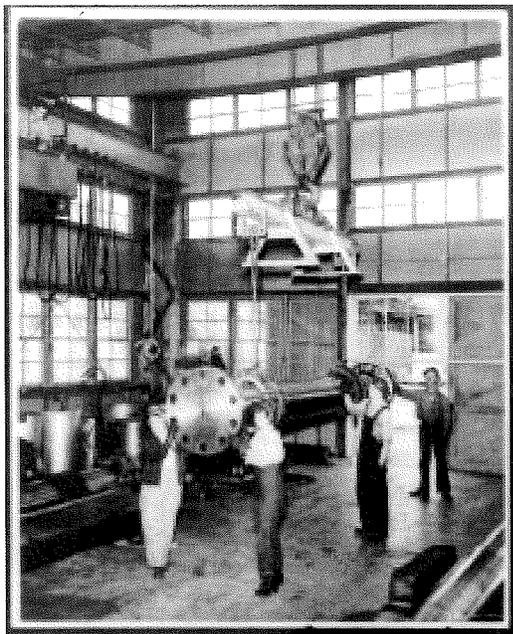
One class of machinists were the most specialized of all. These were the machinists who operated the tool and die department. These individuals made and maintained the set of special tools, dies, cutters, jigs, and so forth that other machinists relied on to make their precision products. These machinists had their own section of the Machine Shop, equipped with the precision machine tools they needed.

The Machine Shop also created and repaired parts the ship yards operating equipment.

The Machine Shop supervised the machinists working in the nearby Machinery Storage Warehouse. These machinists were responsible for auxiliary and less precision-oriented machining. It also housed the clerical employees who kept records of the transactions, shipments, and receipts.

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<sup>18</sup> Finnie, "Marinship: The History of a Wartime Shipyard" pp. 323-325



Photograph # 6 & 7: Marinship facility newsletter *The Mariner* 2/5/1944 - photograph of interior of Marinship Machine Shop Source: Marinship Archives, Bay Model Building, and Sausalito

## 2.6 Marinship Machine Shop Evaluation of Integrity and Significance

The Marinship Machine Shop was evaluated within the historical context of “World War II and the American Home Front, National Historic Landmark Theme Study”, National Historic Landmarks Survey, National Park Service, U.S. Department of the Interior, August 2004. It was also evaluated within the Context of WWII and the War Effort Industry-Shipbuilding in Northern California, Industry and Community Development in Sausalito and Ethnic Heritage - Civil Rights, and the as an example of industrial construction during WWII.

The period of significance is set between May 1942 and September 1946 – including the construction of Marinship and the end of WWII and the decommissioning of the Marinship facility.

The Marinship Machine Shop property and building was evaluated to determine if it was eligible for listing in the National Register of Historic Places. The initial evaluation was to determine integrity based upon the seven aspects of integrity identified by the National Park Service in National Register regulations and guidance.

- Location:** The Machine Shop has not been moved since its period of significance and therefore possesses integrity of location.
- Design:** The building retains the original design with very little modification since its period of significance and therefore possesses integrity of design.
- Setting:** The setting has a moderate level of integrity, as its immediate surroundings have not changed considerably since the period of significance. The building is still surrounded to the northwest by the original Warehouse Building, to the northeast by Richardson Bay and Mt. Tamalpais beyond, to the southwest by a 1947, original Butler storage building, and to the southeast by the original General Shop.
- Materials:** Used to construct the Machine Shop, structural frame, siding and interior spaces retain a high degree of integrity. A yellow asbestos siding which was added after the period of significance was removed in 2008 to reveal the original plywood siding and painted “MACHINE SHOP” signage on the northeast and southwest elevations. As the design and materials of the Machine Shop have not been permanently altered since the period of significance, the original workmanship retains a high degree of integrity.
- Feeling:** Is somewhat compromised by the reuse of the surrounding area to one of recreation and commerce.
- Association:** The building retains the link to the association with Marinship and the construction of vessels. Although somewhat compromised by the fact that the shipyard at large and the Machine Shop in particular no longer have the equipment to serve the functions they had during the period of significance. However, the maritime setting, as well as the remaining historic elements of the interior of the Machine Shop, such as the traveling cranes, the exposed duct and pipework, and the fire suppression infrastructure survives to convey a moderate level of integrity for both association and feeling. Therefore, the Machine Shop possesses a relatively high level of integrity encompassing at least some of all seven aspects of integrity.

The Marinship Machine Shop building is a surviving element of the once sprawling Marinship shipyard which was an important component of the United States shipbuilding effort during World War II as well as pivotal in the development of Marin City, Sausalito, and Marin County in general.

Marinship was the only shipyard in the nation that produced the 10,000 horsepower, top of the line tanker class, the T2-SE-A2. These were the most powerful oil tankers ever produced and revolutionized the reach and extent of American firepower in the Pacific. Contrary to the older design, these tankers had the speed to keep up with the fast-moving Navy Task Forces as they swept across the Pacific. They allowed the Navy to stay at sea for longer than ever before.

Coupled with America's classified method of at-sea refueling, these tankers gave it a powerful tactical advantage over their Japanese adversaries. The famed Task Force 58 relied on these super-fast tankers to carry out their remarkable attacks on the Japanese fleet and were instrumental in America's victory in that war.<sup>19</sup>

Marinship was also important in the development of Bechtel Corporation, one of the nation's most powerful corporate empires and one of the first companies to form the class of corporations referred to by President Eisenhower as part of the Military-Industrial Complex. The cooperation which developed between Bechtel Corporation and the federal government provided a template for this controversial partnership that came to characterize the nation's defense economy to this day.<sup>20</sup>

Marinship was center stage in the precedent-setting *James v. Marinship* case that banned racial discrimination in closed shop trade union venues. This case cemented the reputation of the civil rights leader, Joseph James, and led to his eventual position as the President of the National Association for the Advancement of Colored People.<sup>21</sup>

Marinship was a significant element in the World War II explosion of immigration from parts all across the nation. This wave of immigrants were attracted to the shipbuilding industry that was in desperate need of labor and constituted the largest influx of people into the state since the gold rush of 1849-1852. Many immigrants remained after the war was over and the jobs disappeared. Partly due to direct and indirect racial discrimination, the hardest hit segment of this immigrant population were the African-Americans. These people lost their jobs to the returning (predominantly white) servicemen as well as the dramatic decrease in federal money flowing to the shipbuilding industries. These people formed the nucleus of the large black populations in Oakland, Richmond, San Francisco, Marin City, and elsewhere in the Bay Area.<sup>22</sup>

Born under the drive of Kenneth K. Bechtel, Harry Allen, Ted Panton, and Fred Boole as the Marinship Corporation in 1942, the shipyard passed into oblivion at the end of World War II. Today, the piers supporting the landfill, Yard Office and Mold Loft Building, General Shop, Warehouse, and Machine Shop Building and some other minor buildings still remain from the period of significance (1942-1945).

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<sup>19</sup> Finnie, "Marinship: The History of a Wartime Shipyard" pp. 196

<sup>20</sup> Wollenberg, Charles. *Marinship at war: shipbuilding and social change in wartime Sausalito*; foreword by Jack Tracy Imprint Berkeley, Calif.: Western Heritage Press, c1990 p. 6

<sup>21</sup> Fenison, Jimmy B. "James, Joseph (? --?) | The Black Past: Remembered and Reclaimed."

<sup>22</sup> Wollenberg "Marinship at War" p.2-3, 96, 83-84

The Machine Shop, an instrumental part of the Marinship production line, has a direct connection to all these significant events and important individuals in both the nation's, as well as the San Francisco Bay Area's history.

The Machine Shop appears eligible for listing in the National Register of Historic Places under;

- Criterion A: Military Industrial Complex WWII; for association with the Civil Rights Movement.
- Criterion B: The association with Joseph James; Civil Rights Movement.
- Criterion C: For embodying the distinctive characteristics of WWII, primarily wood construction and industrial design, engineering and architecture.
- Criterion D: For information about the wood construction and use of industrial buildings during WWII and providing information on Native American habitation and historic elements of the North Coast Railroad, Marinship or early settlement along Richardson Bay.<sup>23</sup>

In addition to individual listing the Marinship Machine Shop appears eligible for listing as a contributing property in a yet undocumented Marinship National Register Historic District that may encompass the Marinship boundaries 1942-1946.

The second building on the property is a c. 1948 Metal storage building manufactured by the Butler Company. This building was brought to the site by the U.S. Army Corps of Engineers to be used for equipment and vehicle storage. The building was not associated with the Marinship facility during the shipbuilding phase. Research did not uncover any significant events or associations with the people that were significant in the history of the U.S. Army Corps of Engineers or the City of Sausalito. The metal "kit" building was developed by the Butler Company prior to WWII, when the company branched out from making storage tanks to easily assembled, strong buildings. The shortage of metal during WWII limited the production of metal storage buildings and the company did not reenter the commercial markets until after 1945. By 1948-50, the company was producing the expandable, easily assembled, "rib-kit" metal buildings for a wide variety of customers, including the U.S. Army. Often used for storage, the buildings continue to be manufactured.

Applying the criteria of the National Register it does not appear that the building is eligible for listing.

- Criterion A: The metal storage building is not associated with events that have made a significant Contribution to the broad pattern of history.
- Criterion B: The storage building is not associated with individuals significant in the past.
- Criterion C: This is a common style of the building that was produced in large quantity and is still produced. The metal building does not represent distinctive architectural characteristics or the work of a master designer. The building is functional but not artistic.
- Criterion D: The building stands on a shallow concrete base slab atop the piles and fill of the Marinship site. Historic or pre-historic archeology is not likely to have been this far into Richardson's Bay.

<sup>23</sup> Holman & Associates, letter of November 10, 2010

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11. **Interviews:**

**Elizabeth Robertson** Volunteer who organized Marinship records 415-868-0103

**Nance Rogers** US Corp of Engineers Manager of Bay Model 707-431-4555

**Jane Hicks** Corps of Engineers Regulatory Branch SF, Formerly at Sausalito

**Elizabeth Youn** Corp of Engineers Real Estate Department Sacramento  
916-557-7013

**Ed Wiley** - retired Corps of Engineers managed Lab in Machine Shop Building

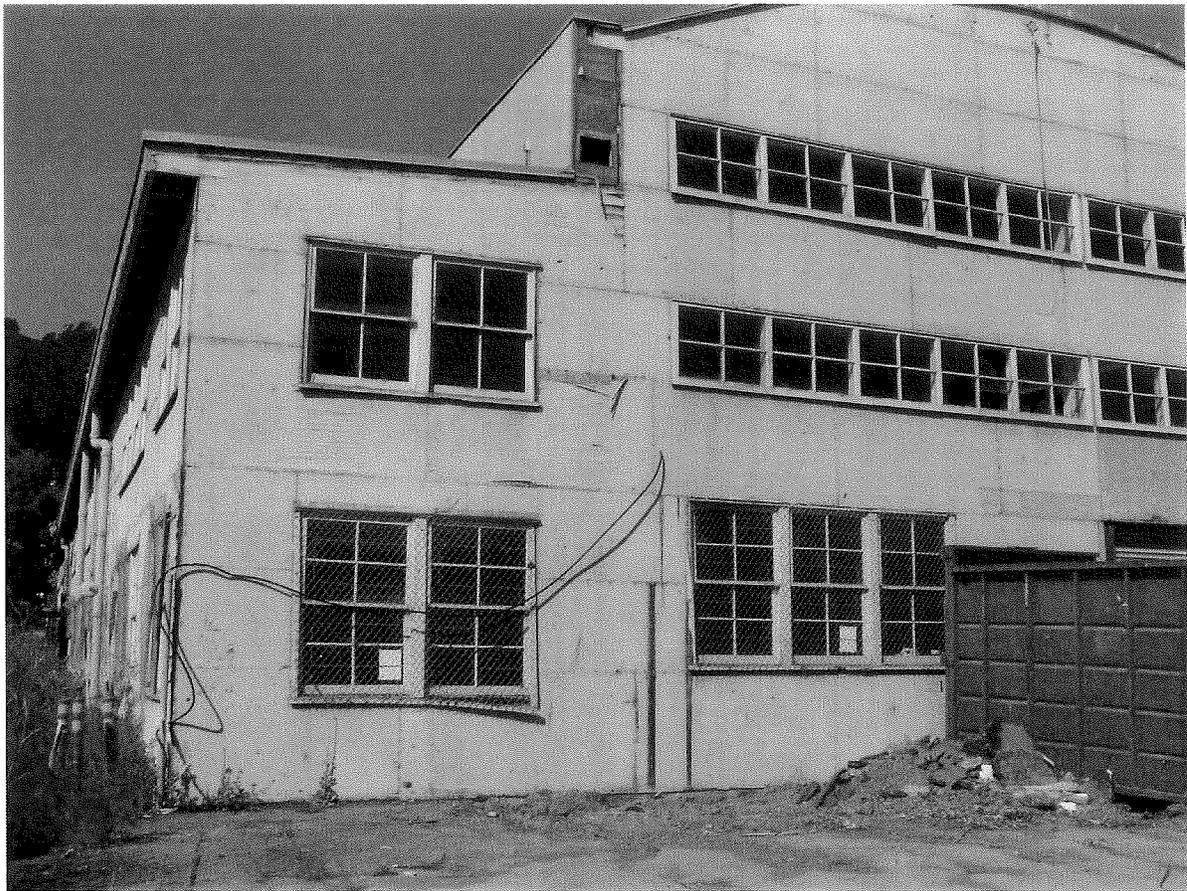
**Heidi Burns** – Sausalito Planning Department – Landmarks; 415-289-4145  
Sausalito Historical Society- 415-298-4117

**Glem Miltenberger** COE Real Property Officer for SF/SAC area. 916-557-6824

2.8 Marinship Machine Shop Photographs



Name: Marinship Machine Shop  
Address: 25 Liberty Ship Way, Sausalito, Marin County CA  
Photographer: Bonnie Bamburg  
Date: July 2009  
View: Main (front) Façade  
Camera Facing West  
Photograph # 2.9. 1



Name: Marinship Machine Shop  
Address: 25 Liberty Ship Way, Sausalito, Marin County CA  
Photographer: Bonnie Bamburg  
Date: July 2009  
View: Front (East) Façade- Office addition, 1943  
Camera Facing Southwest  
Photograph # 2.9. 2