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PROJECT 15-779

Work of a Master?
Addressing Evaluation of Routine or Prosaic Architecture by Famous Architects on Military Facilities

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Department of Defense Legacy Resource Management Program

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EXECUTIVE SUMMARY

JRP Historical Consulting, LLC (JRP) has prepared "Work of a Master? Addressing Evaluation of Routine or Prosaic Architecture by Famous Architects on Military Facilities" for the Department of Defense Legacy Resource Management Program (DoD Legacy Program) in cooperative agreement with and assistance from the Naval Facilities Engineering Command (NAVFAC) Headquarters, Cultural Resources Program. The goal of this document is to aid military cultural resources managers in compliance with Section 106 and Section 110 of the National Historic Preservation Act (NHPA) of 1966, as amended. The NHPA directs federal agencies to evaluate properties 50 years or older for eligibility in the National Register of Historic Places (NRHP) and manage the properties that meet the eligibility criteria. Under the NHPA, properties can meet the NRHP eligibility criteria by being important works of master architects; however, guidance on completing evaluations under the work of a master aspect is limited. This document is intended to help fill that void.

This report has particular importance for military branches of the Department of Defense (DoD) because they manage hundreds of thousands of buildings and structures, and every year many reach the 50-year threshold requiring their consideration under Sections 106 and 110.[1] Throughout the twentieth century the military branches increasingly contracted private architects and architectural firms to design nearly all types of buildings, from the most architecturally impressive and significant buildings down to the most rudimentary and prosaic structures. Often the military used architects and firms that had established careers in the field and had proven capable of completing such projects. These two factors, the increased use of private architects and the use of architects with proven records, elevate the chances that a prosaic or routine building — such as a warehouse, storage building or utility structure — was designed by an architect considered a master for the purposes of the NRHP. Yet, there is little guidance on how to determine whether an architect should be considered a master and whether a building is an important work of that master architect. These are critical issues in deciding whether or not a building should be determined a historic property. Given the limited guidance, one might be inclined to conclude, based on the simple fact that a military building is designed by a famous architect, that it constitutes the work of a master. While the conclusion may hold true, the evaluation must provide sufficient support. A conclusion that does not sufficiently establish proof for the conclusions can rightly be questioned by reviewers at State Historic Preservation Offices (SHPO).

[1] Buildings evaluated for Section 106 and 110 purposes that have not reached 50 years old must meet the higher standard of exceptional significance as defined in NRHP Criteria Consideration G. The 50-year cutoff and Criteria Consideration G exceptional significance standard is in place to allow sufficient historical perspective and understanding of the prevailing trends and contexts within which the buildings are best evaluated.

The goal, therefore, of this guidance document is to shed light on the process of evaluating buildings under the work of a master aspect of NRHP Criterion C, and, in doing so, provide a source that can be used by military cultural resources managers, SHPO reviewers, and consulting architectural historians to demonstrate sufficient support for a NRHP significance conclusion regarding the work of a master aspect under Criterion C. This is particularly important for military facilities which frequently evaluate prosaic buildings that lack architectural significance but, because of the history of the military's use of private architects, were designed by well-known architects.

To illustrate the guidance presented herein, and because of the enormous number of resources in the DoD, JRP focused its efforts on one branch of the military – the Department of the Navy. This document includes a chapter on the historical background of design and construction activities on naval facilities and, using case studies from the around the nation, a chapter that analyzes military buildings designed by private architects for their potential significance as the work of a master architect. While the historic context and case studies focus on Navy facilities, the guidance prepared in this document is applicable to all branches of the military. It is also applicable outside the military, where the issue of analyzing buildings by famous architects is frequently encountered.

JRP would like to acknowledge the assistance of a group people who made this document possible. This report was prepared for, and funded by, the DoD Legacy Program. NAVFAC cultural resources personnel provided invaluable assistance during all phases of this project. It would not have been possible without the guidance, support and sponsorship of Navy Acting Deputy Federal Preservation Officer William Manley, who serves as NAVFAC Headquarters Cultural Resources Lead, as well as Cultural Resources Manager at Naval Air Station Fallon, Robin Michel. NAVFAC Headquarters Cultural Resources Historical Architect Scott Keyes' helpful support also proved valuable in the process of preparing this report. A special thanks to Ms. Michel, who oversaw the predecessor of this document and helped refine the ideas presented herein. There were several cultural resources managers who helped identify and collect the case studies included in Chapter 5. These include NAVFAC Southwest Cultural Resources Lead Alex Bethke, NAVFAC Southwest Cultural Resources Manager David Sproul, NAVFAC Mid-Atlantic Cultural Resources Manager Heather Robbins, NAVFAC Northwest Historian Russell Sackett, Naval Weapons Station Seal Beach Cultural Resources Manager Lisa Ellen Bosalet, NAVFAC Southeast Historic Preservation Officer Len Winter and NAVFAC Southeast Cultural Resources Manager Donna Covington. To all of these people, we offer our sincerest thanks.

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1. INTRODUCTION

1.1 Goals of Guidance Document

JRP prepared this report for the Department of Defense Legacy Resource Management Program (DoD Legacy Program) in cooperative agreement with Naval Facilities Engineering Command (NAVFAC) Headquarters. This guidance document was developed to provide clear and concise instructions for cultural resources managers at Department of Defense (DoD) facilities, as well as cultural resources practitioners outside the military, when evaluating buildings designed by famous or well-known architects under the work of a master aspect of National Register of Historic Places (NRHP) Criterion C. A property may be found eligible for listing in the NRHP if it is considered to be an *important* work within the career of an architect recognized for their greatness in the field; however, the existing guidance on this subject is general in nature. The failure in some cases to properly consider this aspect has caused important project delays.

For cultural resources managers on military facilities, this report will act as a reference guide to assist in compliance with Sections 106 and 110 of the National Historic Preservation Act (NHPA) of 1966, as amended. Section 106 requires federal agencies to take into account effects of undertakings on historic properties, which are defined as any building, structure, object, district, or site included in, or eligible for inclusion in, the NRHP (36 CFR 800.16(l)(1)). Section 110 sets out the broad historic preservation responsibilities of federal agencies, including charging each federal agency with the affirmative responsibility for considering projects and programs that further the purposes of the NHPA, such as establishing a preservation program for the identification, evaluation, nomination to the NRHP, and protection of historic properties.

As indicated, compliance with Sections 106 and 110 includes consideration of buildings as the potential work of a master architect. As more and more Cold War–era buildings and structures turn 50 years of age and thus require standard consideration for Section 106 projects, the likelihood increases that well-known private architects were responsible for the designs of those buildings. Even the most prosaic and routine buildings were designed by private architects, some of whom are or could be considered masters. If evaluations of these buildings and structures do not sufficiently take into account the master architect aspect, it could lead to incomplete analysis that could be questioned by reviewers at State Historic Preservation Offices (SHPO). The guidance presented herein is applicable to all branches of the military even though this document's historic context and case studies focus on the Department of the Navy.

This guidance document can also be used as a reference tool for those outside the DoD. For non-military cultural resources managers and architectural historians, this guidance document can be used to help evaluate properties for eligibility in the NRHP as well as state and local

registers. This report will be instructive to State Historic Preservation Officers (SHPO) reviewing these evaluations. It will also prove valuable for state and local government agencies performing the evaluations, because many have established historic preservation guidelines similar to the NHPA and often include a criterion for state or local listing similar to the "work of a master" aspect of NRHP Criterion C.

This guidance document will be helpful for all practitioners because it aims to help fill a void in the existing guidance literature relating to the work of a master eligibility criterion. The primary evaluation guidance document is *National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation*, which defines a master as "a figure of generally recognized greatness in a field, a known craftsman of consummate skill, or an anonymous craftsman whose work is distinguishable from others by its characteristic style and quality." It further explains that "a property is not eligible as the work of a master … simply because it was designed by a prominent architect." Instead the property must "express a particular phase in the development of the master's career, an aspect of his or her work, or a particular idea or theme in his or her craft." However, in the process of researching and analyzing buildings designed by well-known architects, many questions arise. How does an evaluator determine if an architect is a master? What is the process for concluding a building is important within a master architect's career? Are there special considerations when evaluating military buildings under the work of a master aspect? This document is intended to provide clear and concise guidance for assessing whether an architect meets the definition of master and whether the property being evaluated is an important representative example of the master's career. Ultimately, this guidance document is intended to provide a clear path with concrete steps toward a satisfactory evaluation of buildings under the work of a master aspect of NRHP Criterion C.

1.2 Report Structure

Many of the properties that would be evaluated under the work of a master on military facilities were designed by private architects hired by the military for specific projects. This is part of a trend in which the military increasingly hired civilian architects, who held private practices and usually did not specialize in military architecture, to design a wide array of buildings on military facilities. For the purposes of evaluating military buildings designed by private architects, it is important to understand the historical background of the military's use of private architects. While in some respects this context goes back to the early history of the federal government, it only became common practice in the twentieth century. Chapter 2 of this report illustrates these trends by presenting the context for the Navy's design and construction history from its origins through the Cold War, focusing particularly on the historic period. This chapter also provides a broad context for the architectural styles popular among architects designing military buildings, a key element in assessing any building under NRHP Criterion C.

Chapter 3 provides a detailed discussion of the challenges involved with evaluating military properties — both prosaic buildings as well as high-style buildings — under the work of a master aspect of NRHP Criterion C. Despite the focus on the Navy in the historic context of Chapter 2, Chapter 3 broadens the scope to discuss the issues encountered in all branches of the military. Additionally, while this document focuses on the challenges faced by military cultural resources managers, many of the issues are familiar to practitioners outside the DoD. This chapter also discusses the issues relating to assessing a property's integrity when it was designed by a master architect.

In Chapter 4, this guidance suggests ways of meeting the challenges presented in Chapter 3. A step-by-step process from research to evaluation is the main element of this document and can be used as a reference for any such evaluations. This chapter offers some guidance on how to sufficiently document properties that are identified as significant works of a master architect. The guidance presented in this chapter will be useful to all branches of the military as well as practitioners outside the military.

A guidance document is most helpful when it provides specific examples of the challenges being addressed and the proposed solutions. Chapter 5 does this with case studies from Navy facilities across the country where buildings designed by well-known or famous architects have been evaluated. The examples include buildings designed by architects considered masters, as well as those not considered masters. It includes both architecturally important and prosaic buildings. While these are case studies of Navy facilities, the biographies and analysis in each case study demonstrate how the guidance can be applied to facilities in all military branches as well as to non-military properties.

Resources most valuable to practitioners, both inside and outside the military, can be found in Chapter 6. These include a discussion of how to present the issue and determinations to SHPO reviewers, and a simplified checklist of the research process and flowchart illustrating the evaluation process for use by practitioners and reviewers. Finally, this chapter ends with an annotated list of the most helpful research sources when undertaking such an evaluation.

The final two chapters of this report include a conclusion that summarizes the issues and solutions of evaluating a military property under the work of a master aspect of NRHP Criterion C, and a bibliography of the sources used to illustrate this guidance document.

1.3 Methodology

The idea for this project emerged during a Section 106 report JRP completed for Naval Air Station (NAS) Fallon and NAVFAC Southwest. That project was delayed on the very issue being addressed in this document: whether prosaic buildings designed by master architects are significant under NRHP Criterion C. Based on outcome of that project, JRP, NAS Fallon, and NAVFAC Southwest prepared a base-wide Section 106 survey of buildings at NAS Fallon to

review this particular issue. That report, *Analysis of Military Buildings by Master Architects at Naval Air Station (NAS) Fallon*, provided a model for this guidance document prepared for and funded by the DoD Legacy Program. Many of the methods developed during that project were utilized in the completion of this report.[2]

JRP began developing this guidance document by assessing the extent of the issue. JRP contacted 44 SHPO reviewers and six past and present DoD environmental planners and cultural resources staff to assess the need for a guidance document on identifying the work of a master. There was general consensus at SHPO offices that military facilities are primarily evaluated under Criterion A because of their association with historic military themes and trends. In part because of this focus, several SHPO respondents noted, reports often lacked sufficient architectural contexts. In areas where regional or statewide architectural context statements had been developed and widely disseminated, or where biographies of the most famous architects were readily available, SHPO reviewers frequently referred to them when reviewing evaluations. Most reviewers said that a guidance document on the work of a master aspect would be helpful in providing additional information and, they added, they would like to see the military assess their facilities for merit as a work of a master. DoD personnel contacted during this process also saw this as helpful. One said the guidance would give military cultural resources managers something to refer to when their SHPO disagrees with a conclusion or requires clarification to demonstrate a reasonable good faith effort was employed. Finally, as one SHPO reviewer pointed out, this guidance would be important in providing continuity and consistency in evaluations, especially across the broad spectrum of people preparing such evaluations.

With the information garnered during the NAS Fallon study and collected through these interviews, JRP set out to contact Navy cultural resources managers across the country to collect case studies that could be used to illustrate the guidelines. With the assistance of project sponsors Robin Michel, William Manley, and Scott Keyes, a questionnaire was developed and disseminated to the identified cultural resources managers. The questionnaire requested information regarding existing evaluations of buildings under the work of a master aspect, general architectural information, and building-specific data, such as photographs.

Upon collecting case studies, JRP reviewed the existing documentation to determine the best examples that could illustrate the issues encountered during work of a master evaluations. JRP staff then conducted additional research on the architects and architecture firms to supplement the existing information. JRP staff reviewed previous studies and conducted thorough research

[2] JRP Historical Consulting, "NAS Fallon Technical Report No. 112 and Bureau of Land Management, Stillwater Field Office No. CRR3-2617, Volume II: Historic Resources Inventory and Evaluation Report of Buildings and Structures on Range B-16, Naval Air Station, Fallon," April 2012; JRP Historical Consulting, LLC, "Analysis of Military Buildings By Master Architects at Naval Air Station (NAS) Fallon," prepared for Naval Facilities Engineering Command Southwest, October 2014.

by examining JRP's in-house library, local repositories, and online historical archives such as historical newspapers and journal articles from various online sources, the American Institute of Architects Historical Directory, Avery Index of Architectural Periodicals, JSTOR — an online collection of academic journal articles — and census, directory, and other biographical records. During this research phase, JRP also reviewed previous reports and photographs to identify the architectural styles used. Understanding architectural styles helped create a context for placing the buildings within individual architect's careers, especially when architects applied different styles during different phases of their careers. JRP used this research to complete the biographical sections of the case studies. The analysis sections of the case studies — where the guidance is applied to the specific buildings — were based on existing evaluations, biographies prepared during this project and the guidance recommended in Chapter 4.

2. CONTEXT

2.1 Introduction

A crucial element of evaluating any property for significance in the National Register of Historic Places (NRHP) is understanding and assessing the context within which the property was developed. In evaluating Navy properties designed by private, outside architects, the context is the history of the Navy's design and construction activities. This chapter provides that context, from the earliest period of development when the Navy relied on a small cadre of unranked, civil servant engineers and architects to the most recent period during which projects are contracted to outside architects and engineers. In between was a slow progression marked by increased centralized control by the Navy Bureau of Yards and Docks (BuDocks), expansion of the ranks of civil engineers and architects within the Navy, and, eventually, use of outside engineers and architects when it became important to the national defense. This context, which extends into the Cold War and focuses largely on the historic period, should prove helpful for both military and consultant cultural resources personnel as well as reviewers at State Historic Preservation Offices (SHPO). When interviewing SHPO reviewers for this project, it came as a surprise to multiple reviewers that the military did not design all of its own buildings. As this context demonstrates, the process was a gradual shift, starting in the nineteenth century, as the need for shore-based facilities slowly grew.[3]

2.2 Traditional Era, 1776-1897

Through its early history, the Navy had only limited need for outside architects or civil engineers as its shore facilities were few in number and modest in scale. During the nineteenth century, new naval recruits learned their craft at sea and then took up quarters aboard ship. When ashore, sailors were responsible for arranging their own living accommodations; consequently, there were no training stations and few barracks. The Navy also relied upon private shipyards for all new vessel construction, and needed only small shipyards for maintenance, repair, and supply needs. In general, even the government-owned shipyards were operated and maintained by civilians, with the ships alone under military command. Buildings were limited to commandant's houses, a small number of Marine Corps barracks, carpenter and blacksmith shops, and storage sheds. The engineered features were sea walls, piers, wharves, marine railways, and the like. All of the construction was done by hired civilian workers and most of the facilities were simple enough not to require specialized design.

Still, the largest projects — particularly the construction of dry docks — required a higher level of engineering and design skills and helped to forge early relations between the Navy and

[3] This guidance document was prepared for Naval Facilities Engineering Command using Navy case studies. As a result, this context focuses on the Navy's history of design and construction activities.

nationally prominent architects. Thomas Jefferson supported building government dry docks as early as 1802, envisioning a massive facility capable of accommodating twelve frigates. He employed Benjamin H. Latrobe, an architect of the US Capitol, to produce designs. Ultimately Congress elected not to fund construction of the docks. However, several smaller Latrobe naval projects were built, including the main gate to the Washington Navy Yard. The Latrobe Gate (**Figure 1**), as it is now known, featured a Greek Revival design, with some Italianate features, and was thus typical of the Classical Revival styling that dominated Federal architecture throughout the nineteenth century. One of the oldest extant examples of the style (1806; altered 1881), Latrobe's gate was added to the NRHP in 1973.[4]

Figure 1: The NRHP-listed Latrobe Gate is an early example of an architect-designed building commissioned by the Navy (photo: Keune 1966).

Two decades after Jefferson's effort, Congress revisited the issue in 1824 and authorized construction of two dry dock facilities, one at Charlestown, Massachusetts, and another at Norfolk, Virginia. Oversight for the project fell to the Board of Naval Commissioners. Established in 1815, the board had three members, each a naval officer, and was ordered to assist the Secretary of the Navy in logistical matters such as procuring stores and outfitting vessels of war. Though the board had authority over the construction of shore facilities, it lacked the engineering expertise required for designing a facility as complex as a dry dock. The commissioners thus contracted with Loammi Baldwin Jr., a civil engineer of note, to prepare plans for the two facilities. He in turn employed as assistants Alexander Parris, Boston's leading architect with a background in engineering, and William P.S. Sanger, a young engineer who later went on to a long naval career. After completing both dry

[4] R. E. Bakenhus, "The Shore Establishment of the Navy," *Civil Engineering* 3:8 (August 1933), 443-446; "Public Works of the Navy," *Civil Engineering* 6:6 (June 1936), 359-363; McGinley Kalsow & Associates, "Dry Dock 1 Historic Structure Report, Charlestown Navy Yard, Boston Historical Park," 21 June 2007; Russell V. Keune, Historic American Buildings Survey, Navy Yard Main Gate, 8th and M Streets, SE, Washington Navy Yard, Washington, District of Columbia, Photographs, Written Historical and Descriptive Data, HABS DC, WASH, 74-, January 1966.

docks, the three continued to work as consulting engineers for the commissioners over the next several decades, designing shore facilities both large and small.[5]

As the Navy's construction needs increased through the nineteenth century, driven by the need to safeguard the nation's expanding maritime commerce and to secure the Pacific Coast following the acquisition of Oregon and California in the 1840s, the service developed its own internal architectural and engineering design capacity. In 1842, the Board of Naval Commissioners was superseded by a bureau system that offered more specialized expertise. The initial legislation created five bureaus, the first of which was the Bureau of Naval Yards and Docks (later shortened to Bureau of Yards and Docks and commonly abbreviated in the twentieth century – and hereafter in this context – as BuDocks).[6] A line officer of the Navy headed the bureau, supported by a staff of six that included a civil engineer and a draftsman. Having acquired experience on the Norfolk dry dock with Baldwin, Sanger was appointed the bureau's first engineer, a position he held until his retirement in 1881. The Navy later hired additional engineers to serve at individual Navy yards, all reporting to, and receiving guidance from, Sanger. These engineers remained strictly civilian through the Civil War, neither holding rank nor being authorized to wear the Navy uniform. They functioned as civil servants, holding semi-permanent office with appointments originating from the Secretary of the Navy.[7]

On March 2, 1867, Congress passed legislation authorizing the president to appoint civil engineers to the Navy, a change that opened the possibility of receiving officers' commissions. It is unclear if Congress intended the brief, 31-word measure to create a corps of professional uniformed builders within the Navy, but over the next several decades, the legislation had that effect. Civil engineers gradually started to appear in the Navy Register, a publication that listed all commissioned and warrant officers, and their pay rose to match that of uniformed officers. The change was formalized in February 1881 when Navy General Order 263 created a Civil Engineer Corps (CEC) within the BuDocks and set its size at ten officers. The now uniformed engineers, like all other staff officers, received relative rank.[8]

That small cadre of officers oversaw the design and construction of most new naval facilities during the period between the Mexican War and the Spanish-American War. Included among

[5] Bakenhus, "The Shore Establishment of the Navy," 445; Parris's career and works are addressed in the case study in Chapter 5.5.1.

[6] "Naval" was officially dropped from the Bureau's name in 1862 so that it became simply the Bureau of Yards and Docks. In May 1966, the Navy Department was reorganized and BuDocks was renamed the Naval Facilities Engineer Command (NAVFAC), by which it continues to be known.

[7] Naval Facilities Engineering Command (NAVFAC), "A History of the Navy Civil Engineer Corps, 1867-2007," April 2007, 1-2; Department of the Navy, Bureau of Yards and Docks (BuDocks), *Activities of the Bureau of Yards and Docks, Navy Department, World War 1917-1918* (Washington D.C.: Government Printing Office, 1921), 34.

[8] Actual military rank was reserved for line officers throughout the nineteenth century, so staff officers (surgeons, paymasters, engineers, and others) received a relative rank, which allowed them to "rank with" the line officers without actually possessing the grade. Staff officers were referred to by their professional title (e.g., chief surgeon, assistant civil engineer) rather than by their rank title.

these were the first Navy yards on the Pacific Coast, an example of which was the Mare Island Naval Shipyard at Vallejo. Sanger, as head of the CEC, personally conceived the plan for the Mare Island yard, which was then formalized into drawings by the military and civilian staff of the BuDocks. Yard Civil Engineers Daniel Turner (1854-1860) and Calvin Brown (1862-1864 and 1869-1881) oversaw the individual building design and construction. They enjoyed a fair degree of autonomy in their design decisions, with wide latitude to select the construction materials and architectural styling they deemed most appropriate for the site. In general they hewed closely to the Classical Revival vocabulary that was strongly favored in federal work, though Brown designed a single building in Gothic Revival form. Six buildings from the Turner-era still survive at Mare Island and constitute what is likely the best preserved concentration of nineteenth-century industrial buildings in California (**Figure 2**).[9]

Figure 2: Building 46, an 1856 smithery, is the oldest shop building on Mare Island and one of the oldest and best preserved industrial buildings in California (photo: McDonald 1983).

[9] JRP Historical Consulting Services, "Historic Context for Evaluating Buildings, Structures, Historic Archeological Sites, and Landscape Features at Mare Island, Vallejo, California," November 1995; Melissa McDonald, Historic American Buildings Survey, Mare Island Naval Shipyard, Smithy, Building 46, Vallejo, Solano County, California, Photographs, Written Historical and Descriptive Data, HABS No. CA-1543-D, July 1983. California's military architectural heritage is discussed in depth in: JRP Historical Consulting Services, "California Historic Military Buildings and Structures Inventory," prepared for U.S. Army Corps of Engineers, Sacramento District, March 2000. That report is in four volumes. This guidance document draws heavily from Volume III, "Historic Context: Themes, Property Types, and Registration Requirements," cited hereafter as JRP, "California Historic Military Inventory."

The BuDocks staff, however, did not have complete control over base design because the bureau system continued to decentralize construction authority, allowing each functional division to design and build its own facilities. So while the BuDocks designed the administrative, shop, and most residential buildings in the shipyards, the Bureau of Medicine and Surgery had responsibility for the hospitals, the Bureau of Ordnance constructed naval magazines, and the Marine Corps generally made its own decisions. These other bureaus, which were less well-staffed with trained engineers, turned more regularly to outside architects. At Mare Island, this was best illustrated by the original Naval Hospital, which was constructed in 1869 on a design by Philadelphia architect John McArthur Jr., who had developed a specialty for military hospital design during the Civil War. The Second Empire design with its prominent mansard roof looked like nothing else on Mare Island (**Figure 3**). When that building was irreparably damaged in an 1898 earthquake, the new hospital constructed upon the original foundation was also designed by an outside architect, W. W. Poindexter of Washington D.C., and had a Beaux Arts style that isolated it from the remainder of the base design (**Figure 4**). Likewise, the Marine Corps officers' quarters, with Eastlake designs, disrupted any attempt by the BuDocks engineers to apply a unified design to the overall station.[10]

Figure 3: The original 1869 hospital at Mare Island. This building was destroyed in an 1898 earthquake (photo: Historic American Buildings Survey n.d.).

Figure 4: The replacement hospital was also designed by a non-BuDocks architect (W. W. Poindexter of Washington D. C.) in a Beaux Arts style that stood out from the architecture of the remainder of the base (photo: Dewey 1998).

[10] JRP Historical Consulting Services, "National Register of Historic Places Registration Form for Mare Island Historic District, Vallejo, California," January 1996; William B. Dewey, Historic American Buildings Survey, Mare Island Naval Shipyard, Hospital Headquarters (Building H), Vallejo, Solano County, California, HABS No. CA-1543-BX, April 1998; Historic American Buildings Survey, Mare Island Naval Shipyard, Vallejo, Solano County, California, Photographs, HABS No. CA-1543, n.d.

2.3 Modernization Era, 1898-1915

BuDocks and the CEC expanded and gained greater power and recognition as a result of the Spanish-American war. The establishment of overseas bases, coupled with the growth of stateside facilities, produced a near doubling in the number of Navy yards and stations in the years immediately after the war. The number of CEC officers correspondingly increased to 21 during the war with Spain, and then again to 40 in 1903. The practice of using relative rank ended and civil engineers assumed regular staff officer rank. Significantly, an engineer, Mordecai Endicott, rose in 1898 to head BuDocks, ending the tradition of only line officers directing the bureaus. Endicott directed BuDocks for nearly nine years, until he retired as a rear admiral in 1907. By the time he departed, Congress had mandated that all future BuDocks heads be drawn from the ranks of the CEC.[11]

One of Endicott's key contributions was to set up a system for training engineers from within the service. Prior to 1906, almost all CEC officers were commissioned from civilian life, having received their education and training from non-military schools. Aspiring officers submitted themselves to a competitive Civil Service Commission examination, from which results the small number of vacant slots were filled. In 1906, Endicott began a program of training at his alma mater, Rensselaer Polytechnic Institute. Naval Academy graduates who were found physically unfit for sea service but showed an aptitude for engineering were enrolled in a two-year post-graduate program in civil engineering. This system remained in place until World War II, and for more than a decade every new CEC officer was commissioned out of it, meaning that a large part of the Navy's design team shared the same background and most had never worked as architects outside of the military.[12]

BuDocks also consolidated its control over Navy construction during this era. In 1904, the bureau was designated the lead agency for building and operating central power plants on each Navy yard or station, replacing the practice of each department operating its own plant. Then in March 1911, BuDocks was legally vested with design and construction responsibility for all of the Navy's public works, including hospitals, ordnance magazines, and all other assorted buildings. Local yard engineers also lost a degree of their former autonomy. Rather than designing buildings within broad authorized limits, the yard engineers now simply filled out cards on which all the technical requirements for the proposed building were noted. The cards were passed on to the architects and engineers in the central office of BuDocks for the design work to be completed. Some degree of adapting the plan to fit site circumstances was still permitted, and local Public Works Officers continued to independently handle design of much

[11] Frank Blazich Jr., "Profile: Rear Adm. Mordecai T. Endicott, CEC, USN, 1844-1926," *Seabee Online*, 12 October 2015.
[12] NAVFAC, "A History of the Navy Civil Engineer Corps," 12; Blazich, "Profile: Rear Adm. Mordecai T. Endicott."

of the infrastructure and many of the ordinary small buildings that filled out a naval base, but the overall trend was towards central control.[13]

At the same time that the Navy was narrowing its circle of designers, the Army was taking the opposite course and making increasing use of outside architects. Beginning in the 1890s, the Army started to replace its older, scattered frontier forts with large, permanent installations. These new bases became showpieces for the military and the Army leadership decided to construct them in accordance with contemporary City Beautiful planning concepts, which had gained wide acclaim following the 1893 Chicago Columbian Exposition. The Quartermaster Department had responsibility in the Army for facilities construction. Its leadership turned to professional civilian architects to create plans that could exhibit the aesthetic refinement and compositional harmony that typified the City Beautiful movement. The architects drafted overall site designs, individual building plans, and standardized blueprints for such common facilities as barracks, headquarters, and post exchanges. The new buildings made regular use of Colonial Revival designs, a style that was fashionable in civilian circles but also blended easily with older Greek Revival buildings. It was a change that offered a hint of modernization in a rapidly industrializing nation without losing touch with the deeply rooted aesthetic traditions of the military.[14]

The Navy followed this example only in a limited way at its one new facility that most mimicked the large installations the Army was creating. The Great Lakes Naval Training Center (now Naval Station Great Lakes) was authorized in 1904 by Theodore Roosevelt as the first land-based training site for new entry naval recruits. As such, its mix of drill halls, dormitories, administrative centers, and officers' quarters much resembled the Army bases of the era, and it too was designed in accordance with City Beautiful ideals. The CEC officer in charge of the site was Lt. George McKay, a graduate of the Rensselaer Polytechnic Institute program. He was joined by MIT-educated architect Jarvis Hunt, who had designed the Vermont State Building at the Chicago Columbian Exposition. Hunt's office handled the design for most of the original 39 buildings constructed between 1905 and 1911, but he worked closely with Lt. McKay on a site plan that was organized around a formal, axial arrangement (**Figure 5**). After 1911, in-house Navy architects also added additional buildings that followed the scale and Neo-classical style of Hunt's designs.[15]

[13] JRP, "A Historic Context for Mare Island," 26; NAVFAC, "A History of the Navy Civil Engineer Corps," 5.

[14] The broad patterns of military design are surveyed in: U.S. Department of Defense (DoD), "Built on Strong Foundations: Constructing Our Nation's Military Heritage," prepared for the Department of Defense Legacy Resource Management Program, 2004; and Michelle Michael, Adam Smith, and Jennifer Sin, "The Architecture of the Department of Defense: A Military Style Guide," prepared for DoD Legacy Resource Management Program, December 2011. More thorough on this time period is: R. Christopher Goodwin and Associates, Inc., "National Historic Context for Department of Defense Installations, 1790 – 1940," prepared for U.S. Army Corps of Engineers, Baltimore District, August 1995.

[15] DoD, "Built on Strong Foundations," 20; Hasbrouck Hunderman Architects, National Register of Historic Places Inventory -- Nomination Form, Great Lakes Naval Training Station, July 1985; T.A. Crose, "In Review Before Pres.

Figure 5: Great Lakes Naval Training Station dedication ceremony, 1911 (photo: Crose 1911).

2.4 WWI and Interwar Era, 1916-1937

America's entry into World War I required a rapid expansion of naval shore facilities, opening opportunities for civilian architects to serve within the Navy. BuDocks expended a total of $347 million for public works during the course of the war, more money than had been spent on shore facilities in the Navy's prior 116 years. The money funded expansion of existing yards as well as constructing new facilities, including 35 training camps and multiple submarine bases and naval air stations. The Navy first expanded its own construction corps to handle the workload. The Naval Act of August 1916 removed the 40 officer limit on CEC rolls, and instead set the unit's size at two-percent of the total Navy officer strength, allowing the force to grow with the overall mobilization. More than 1,000 civilian-trained engineers and architects applied for the first openings, taking the Civil Service Commission examination and Navy physical. The highest scoring 37 then underwent five days of examination in Washington, before 25 were accepted for commissioning. By the end of the war, the number of regular uniformed officers had augmented by another nine men, for a total of 74.[16]

A much larger increase came through the creation of a Civil Engineer Corps Reserve Force. Several hundred technical assistants, including the first three women, were brought in to BuDocks as drafters. Initially these applicants were also required to complete the Civil Service Commission examination, but when this proved too time consuming, it was waved and the candidates were rated based upon the information on training and experience they provided in their application. Later even this was dispensed with and CEC officers were authorized to offer temporary appointments to architects or engineers in the area of construction on the condition that a regular application later be filed with the Civil Service Commission. This body of drafters was then divided as follows among eight different sections, each handling a particular area of construction: yard development (60 individuals); ordnance, submarine and naval aviation (73); power plants (27); hospitals (23); Marine Corps, fuel, and radio (22); training camps (16); armor and projectiles (16); and dry docks (5). A limited number of professional architects were also

Taft at the Dedication of the U.S. Naval Training Station, N. Chicago, Ill., Oct. 28, 1911," Panoramic Photographs Collection, Library of Congress.

[16] NAVFAC, "A History of the Navy Civil Engineer Corps," 6-12.

employed as special assistants to the bureau without receiving a reserve appointment. These were particularly assigned tasks somewhat tangential to the Navy's core building program, such as constructing emergency housing for civilian employees, or for taking on very large, high-visibility projects in a manner similar to Hunt's work at the Great Lakes Naval Training Station.[17]

Much of the wartime construction was of a temporary and utilitarian nature, but permanent construction methods were used for buildings expected to provide lasting service. Technological change, epitomized by the adoption of the airplane, drove much of the need for new facilities, and some of these buildings helped to introduce a modern aesthetic to tradition-bound military design. Because most military aviation assets were contained within the Army Signal Corps, the Army again led the Navy in adopting the new design methods. In 1917, the Army appointed renowned industrial architect Albert Kahn as Architect-in-Chief of the Signal Corps. Kahn designed multiple structures for Langley Field, Maryland (now Langley Air Force Base). On the Pacific Coast, he created hangars and officer quarters for Rockwell Field on San Diego's North Island (**Figure 6**). At the time, North Island was jointly occupied by Army and Navy aviation units, and while Kahn's buildings originally served the Army flight school, they have since been absorbed by the Navy as part of Naval Air Station (NAS) North Island.

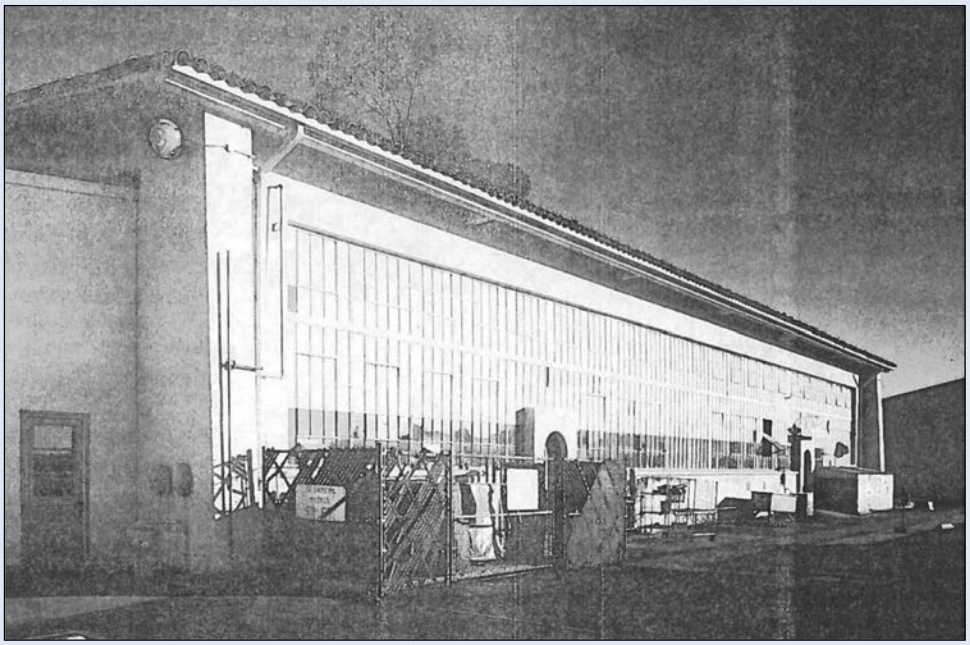


Figure 6: Building 501 at NAS North Island, built in 1918, is one of three hangars designed by Albert Kahn for Rockwell Field. The reinforced concrete frame and large band of steel-sash windows are indicative of Kahn's work. The Spanish tile roof demonstrates the influence of local San Diego architect Richard Requa, whom Kahn's office subcontracted to give the buildings a gloss of regional style (photo: Williamson and Watts 1988).

[17] BuDocks, *War Activities of the Bureau of Yards and Docks*, 30, 496.

Kahn's reputation rested on the highly practical factories that he built for the automobile industry making use of steel frames, flat roofs, large expanses of industrial-sash windows, and little or no exterior ornamentation. The military was attracted to the functionality and low cost of Kahn's buildings, rather than to any style statement, but his prominent role laid a foundation for Modernism to exert a more direct influence in World War II.[18]

The influence of industrial design opened up a divide in military architecture between two seemingly contradictory trends. While hangars and shipyard warehouses trended towards a modern, functional design, the planning for residential, administrative, and hospital buildings ever more clearly reflected the concept of "total base design" and the traditional aesthetics of the regional revival movements. The construction of NAS San Diego, near North Island, was typical of the latter trend, as well as illustrative of the almost accidental manner in which top tier architects found their way into military planning. On the eve of World War I, San Diego's boosters sponsored the Panama-California Exposition in Balboa Park. They employed well-known New York architect Bertram Goodhue to design the grounds and major buildings, for which he used a Spanish Colonial Revival style. When the Navy almost concurrently began planning for Naval Station San Diego, the boosters pushed the service to contract with Goodhue. The actual design process reflected a complex interplay between Goodhue, BuDocks, the local Public Works Office, and the station commander. BuDocks and Public Works designed all the temporary buildings and minor permanent buildings, but Goodhue reviewed every plan and occasionally modified one when the accelerated wartime schedule allowed. Because the war concluded before the station was completed, BuDocks ended up taking over responsibility for a number of remaining buildings, but used in-house architects who had become intimately familiar with Goodhue's work. Despite the messy process, the ultimate result was a well-executed, thoroughly planned site that integrated a distinctive regional architectural style with complementary landscaping (**Figure 7**).[19]

[18] On the military's adoption of Modern design see: Roy Hampton, "Historic Context for Evaluating Mid-Century Modern Military Buildings," prepared for the Department of Defense Legacy Resource Management Program, May 2012, 13-18; David W. Moore Jr, Justin B. Edgington and Emily T. Payne, "A Guide to Architecture and Engineering Firms of the Cold War Era," prepared for the Department of Defense Legacy Resource Management Program, March 2010. On North Island in particular see: Williamson and Watts Architects, "The Architectural/Historical Significance of Buildings at Naval Air Station, North Island, San Diego, California," prepared for US Navy, Naval Station North Island, May 1988; JRP Historical Consulting Services, "Maintenance Plan for Historic Buildings and Structures, Naval Air Stations North Island, San Diego, California," prepared for Naval Facilities Engineering Command, Southwest Division, April 1995.

[19] JRP, "California Historic Military Inventory," 5-1, 6-20 – 6-25; Williamson and Watts Architects, "Naval Air Station, North Island," 16-26. The Marine Corps Base at San Diego (now Marine Corps Recruit Depot) was also designed by Goodhue at this time.

Figure 7: The Goodhue-designed headquarters building at NAS North Island in about 1920. The tower was reminiscent of San Diego's Panama-California Exposition and also highly characteristic of Goodhue's public buildings, most notably the Nebraska State House, designed shortly after World War I (photo: Williamson and Watts 1988).

Building activity slowed across the military between the wars, with the Navy, in particular, being forced to curtail construction following the Washington Naval Disarmament Conference of 1921-1922. Despite the general austerity, the Navy still undertook a modest building program as it adapted to new technology and responded to the needs of veterans wounded or disabled in World War I. Navy shore facilities were modernized during the 1920s with the addition of new power sources, electrical lighting, telephone networks, and elevators. The modern tools of war that had emerged from the war led to constructing nine new submarine or naval air bases in Hawaii, Washington, Oregon, California, and Florida, as well as the Naval Experimental and Research Laboratory in Washington D.C. The Navy met medical needs of wounded veterans through completion of four new hospitals and expansion and modernization of existing facilities.[20]

In order to manage this construction within tight budget constraints, most of the design work was handled in-house by the BuDocks military and civilian staff. However, the impact that

[20] Judith Johnston, "Navy Public Works—1776-1976," *The Military Engineer* 443 (May-June 1976), 186-193.

private architects had made during the prior war remained apparent as much of the BuDocks work followed the aesthetic models of Kahn, Goodhue, and other civilian architects. Thus, the Navy Hospital in Balboa Park was designed by BuDocks architects in a Spanish Colonial Revival Style that conformed with the Goodhue designs (**Figure 8**), and the Mare Island shipyard in the San Francisco Bay Area added several modern curtain wall factory buildings that displayed obvious debts to Kahn.[21] This work remained somewhat backwards looking, as it reproduced the popular styles of the 1910s.

Figure 8: The Naval Hospital in Balboa Park, constructed starting in 1921, was designed by BuDocks personnel without consulting with private sector architects, but many of the Navy designers had worked closely with Goodhue on NAS North Island and had internalized much of his aesthetic (photo: Rutlege and Ferris n.d.).

Outside of the military, architectural design took off in bold new directions with Art Deco and Streamline Moderne styles that reflected the self-consciously modern spirit of the 1920s. Because few BuDocks designers had familiarity with these styles, their impact on Navy facilities

[21] JRP, "Mare Island," 1995, 32. Williamson and Watts, "NAS North Island," 26; William Rutlege and Donald Ferris, Historic American Buildings Survey, U.S. Naval Hospital, Administration Building (Bldg No. 1), Park Boulevard, Balboa Park, San Diego, San Diego County, California, Photographs, Written Historical and Descriptive Data, HABS No. CA-1548-A, n.d.

was limited prior to the very end of the 1930s. The exception occurred in cases where a project's scale warranted contracting with civilian architects, such as at the Philadelphia Naval Hospital, the Navy's first high-rise medical building. Funded by Congress in 1931, the $3.2 million, fifteen-story building was designed by the Philadelphia architecture firm of Karcher and Smith with Art Deco styling in a classical Beaux-Arts site arrangement (**Figure 9**). As the Depression deepened, employing civilian architects for a military project began to seem extravagant and Congress nearly defunded the project in 1932, but eventually allowed it to go forward to completion in 1935. A small number of additional good 1930s Moderne buildings can be found scattered at other Navy facilities with one of the largest concentrations at Naval Air Station Alameda in California.[22]

Figure 9: Naval Hospital, Philadelphia. The hospital was closed under the BRAC Act of 1988 and demolished in 2001 (photo: Historic American Buildings Survey n.d.).

[22] Hampton, "Mid-Century Modern Military Buildings," 18-27; JRP, "California Historic Military Inventory," 6-1; Preservation Pennsylvania, "Pennsylvania at Risk, 1996," *Preserving Pennsylvania* 10:1 (Spring 1966), 6; Historic American Buildings Survey, Naval Hospital Philadelphia, Main Hospital, North end of Ramp A, North of Pattison Avenue, Philadelphia, Philadelphia County, PA, Photographs, HABS No. PA-6206-A, n.d; JRP Historical Consulting LLC, "Cultural Landscape Report for Naval Air Station Alameda," prepared for NAVFAC Southwest Division, April 2012

2.5 World War II Era, 1938-1945

Large scale construction for the military resumed only at the end of the 1930s, prompted by the expansion of the Axis Powers and the nation's concomitant increase in defense measures. The Naval Act of 1938 mandated a 20 percent increase in the strength of the Navy and required the service to begin a rapid buildup of its shore facilities. Again, the Navy vastly expanded its own ranks of uniformed officers, building up the regular ranks to 200 men and eventually adding more than 10,000 officers to the CEC Reserve program. These officers had responsibility for a limited amount of stateside construction, including that of a confidential or highly-specialized nature, such as the World War II-era blimp hangars — still the largest wooden buildings in the world — built at Navy Air Stations along the coasts and based on an innovative design by BuDocks engineer Arsham Amirikian (**Figure 10**).

Figure 10: A blimp hangar designed by BuDocks engineer Arsham Amirikian at the now closed, Naval Air Station Santa Ana (photo: National Archives 1951).

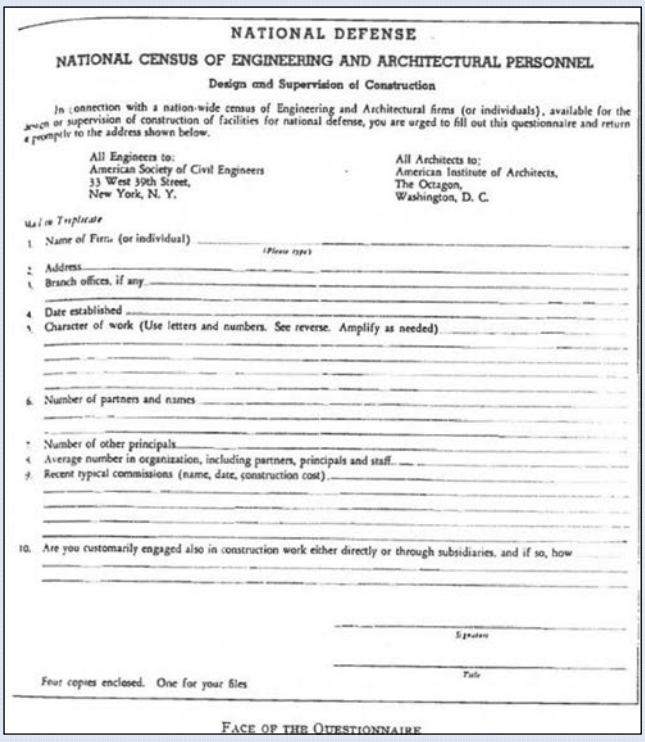
Their primary function, however, was to manage construction at advance bases in the Pacific and Atlantic, where the proximity to hostilities precluded employing civilian contractors. For the first time, enlisted Navy personnel did much of the actual building through the newly created Naval Construction Battalions, known popularly as the Seabees.[23]

With uniform officers committed overseas, the Navy turned to an unprecedented degree to using civilian engineers and architects at home. On April 25, 1939, the Navy for the first time received from Congress blanket authority to hire civilian architects whenever the service deemed it "to be advantageous to the national defense." The legislation specifically granted the

[23] Bureau of Yards and Docks, *Building the Navy's Bases in World War II: History of the Bureau of Yards and Docks and the Civil Engineer Corps, 1940-1946* (Washington D.C.: Government Publishing Office, 1947), 71; R. Christopher Goodwin and Associates, Inc., "Historic Context for Department of Defense Facilities World War II Permanent Construction," prepared for U.S. Army Corps of Engineers, Baltimore Division, May 1997, 52-60; JRP, "Maintenance-Management Guide Lighter-Than-Air Hangars, MCAS Tustin," February 1991; "Blimp Flying Over Hangar," [photograph], Marine Corps Air Station Tustin, 28 October 1951, Neg # 436076, Record Group 80-G, National Archives and Records Administration.

Secretary of the Navy authority "to employ, by contract or otherwise, outside architectural or engineering corporations, or firms, or individuals for the production and delivery of the designs, plans, drawings, and specifications required for the accomplishment of any naval public works or utilities project or the construction of any naval vessel, aircraft, or part thereof." The same act also authorized the use of cost-plus-fixed-fee contracts, which sped construction by eliminating the need for multiple reviews of plans before work could begin. Additionally, the contracts facilitated adapting plans on the fly, and somewhat freed architects to create innovative designs without the usual degree of formal evaluation.[24]

In 1939, authority for approving construction remained concentrated in Washington D.C., with the Bureau Chief directly awarding contracts and approving design of new installations. Quickly, however, authority became decentralized and field officers starting drawing up bids and approving plans. The First War Powers Act, passed December 18, 1941, accelerated this process by allowing the services to dispense with advertising bids and instead to directly negotiate with contractors that were determined to be suitable for the work. The Bureau immediately began to develop extensive files on the nation's designers and builders. The Bureau had begun circulating questionnaires (**Figure 11)** to the members of the American Institute of Architects,



NATIONAL DEFENSE

NATIONAL CENSUS OF ENGINEERING AND ARCHITECTURAL PERSONNEL

Design and Supervision of Construction

In connection with a nation-wide census of Engineering and Architectural firms (or individuals), available for the design or supervision of construction of facilities for national defense, you are urged to fill out this questionnaire and return it promptly to the address shown below.

All Engineers to:
American Society of Civil Engineers
33 West 39th Street,
New York, N. Y.

All Architects to:
American Institute of Architects,
The Octagon,
Washington, D. C.

Make in Triplicate

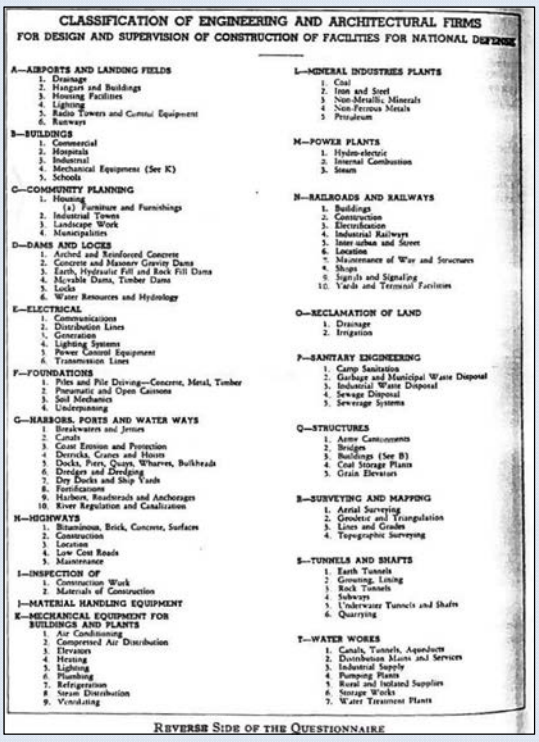
1. Name of Firm (or individual) _____ (Please type)
2. Address _____
3. Branch offices, if any _____
4. Date established _____
5. Character of work (Use letters and numbers. See reverse. Amplify as needed) _____
6. Number of partners and names _____
7. Number of other principals _____
8. Average number in organization, including partners, principals and staff _____
9. Recent typical commissions (name, date, construction cost) _____
10. Are you customarily engaged also in construction work either directly or through subsidiaries, and if so, how _____

Signature _____

Title _____

Four copies enclosed. One for your files

FACE OF THE QUESTIONNAIRE



CLASSIFICATION OF ENGINEERING AND ARCHITECTURAL FIRMS
FOR DESIGN AND SUPERVISION OF CONSTRUCTION OF FACILITIES FOR NATIONAL DEFENSE

A—AIRPORTS AND LANDING FIELDS
1. Drainage
2. Hangars and Buildings
3. Housing Facilities
4. Lighting
5. Radio Towers and Control Equipment
6. Runways

B—BUILDINGS
1. Commercial
2. Hospitals
3. Industrial
4. Mechanical Equipment (See K)
5. Schools

C—COMMUNITY PLANNING
1. Housing
(a) Furniture and Furnishings
2. Industrial Towns
3. Landscape Work
4. Municipalities

D—DAMS AND LOCKS
1. Arched and Reinforced Concrete
2. Concrete and Masonry Gravity Dams
3. Earth, Hydraulic Fill and Rock Fill Dams
4. Movable Dams, Timber Dams
5. Locks
6. Water Resources and Hydrology

E—ELECTRICAL
1. Communications
2. Distribution Lines
3. Generation
4. Lighting Systems
5. Power Control Equipment
6. Transmission Lines

F—FOUNDATIONS
1. Piles and Pile Driving—Concrete, Metal, Timber
2. Pneumatic and Open Caissons
3. Soil Mechanics
4. Underpinning

G—HARBORS, PORTS AND WATER WAYS
1. Breakwaters and Jetties
2. Canals
3. Coast Erosion and Protection
4. Derricks, Cranes and Hoists
5. Docks, Piers, Quays, Wharves, Bulkheads
6. Dredges and Dredging
7. Dry Docks and Ship Yards
8. Fortifications
9. Harbors, Roadsteads and Anchorages
10. River Regulation and Canalization

H—HIGHWAYS
1. Bituminous, Brick, Concrete, Surfaces
2. Construction
3. Location
4. Low Cost Roads
5. Maintenance

I—INSPECTION OF
1. Construction Work
2. Materials of Construction

J—MATERIAL HANDLING EQUIPMENT

K—MECHANICAL EQUIPMENT FOR BUILDINGS AND PLANTS
1. Air Conditioning
2. Compressed Air Distribution
3. Elevators
4. Heating
5. Lighting
6. Plumbing
7. Refrigeration
8. Steam Distribution
9. Ventilating

L—MINERAL INDUSTRIES PLANTS
1. Coal
2. Iron and Steel
3. Non-Metallic Minerals
4. Non-Ferrous Metals
5. Petroleum

M—POWER PLANTS
1. Hydro-electric
2. Internal Combustion
3. Steam

N—RAILROADS AND RAILWAYS
1. Buildings
2. Construction
3. Electrification
4. Industrial Railways
5. Inter-urban and Street
6. Location
7. Maintenance of Way and Structures
8. Shops
9. Signals and Signaling
10. Yards and Terminal Facilities

O—RECLAMATION OF LAND
1. Drainage
2. Irrigation

P—SANITARY ENGINEERING
1. Camp Sanitation
2. Garbage and Municipal Waste Disposal
3. Industrial Waste Disposal
4. Sewage Disposal
5. Sewerage Systems

Q—STRUCTURES
1. Army Cantonments
2. Bridges
3. Buildings (See B)
4. Coal Storage Plants
5. Grain Elevators

R—SURVEYING AND MAPPING
1. Aerial Surveying
2. Geodetic and Triangulation
3. Lines and Grades
4. Topographic Surveying

S—TUNNELS AND SHAFTS
1. Earth Tunnels
2. Grouting, Lining
3. Rock Tunnels
4. Subways
5. Underwater Tunnels and Shafts
6. Quarrying

T—WATER WORKS
1. Canals, Tunnels, Aqueducts
2. Distribution Mains and Services
3. Industrial Supply
4. Pumping Plants
5. Rural and Isolated Supplies
6. Storage Works
7. Water Treatment Plants

REVERSE SIDE OF THE QUESTIONNAIRE

Figure 11: The questionnaire sent out by the National Committee on Construction Preparedness. An identical form was used for both engineers and architects (images: *Civil Engineering 1944*).

[24] Apr. 25, 1939, ch. 87, 53 Stat. 590-592; BuDocks, *Building the Navy's Bases*, 77.

the American Society of Civil Engineers, and the Associated General Contractors requesting data on the composition of their companies and recent experience. By 1945 they had gathered responses from 3,500 architect-engineers and 5,500 contractors.[25]

In all, the Navy awarded 7,427 construction contracts during World War II, seven times the number and more than 50 times the value of World War I contracts. About 10 percent of those contracts (739) involved architectural or engineering design by civilian professionals. It would be difficult to estimate the total number of architects employed by the Navy during World War II, as many of the contracts involved repeat awards to a single firm, while the largest defense projects employed great numbers of architects. For example, the Army Corps of Engineers contract for the design of the Manhattan Project Complex at Oak Ridge, Tennessee, awarded to Skidmore, Owings & Merrill (SOM), ultimately required participation of over 450 architects.[26]

The military architecture of World War II fell into two distinct and divergent phases. From the start of mobilization in 1939 through approximately 1942, construction continued to adhere to the concept of total base design with an emphasis on permanent buildings and clear aesthetic statements. By 1942, however, all branches had abandoned the old design concepts in favor of quick, inexpensive, standardized construction. This marked a permanent change in the design philosophy of the military, and never again would military bases be designed as they had been before the war. Postwar architecture would have much more in common with the temporary buildings that were ubiquitous to World War II training camps and forward posts, than to the formal grounds and Neoclassical architecture that dominated military design before the attack on Pearl Harbor.[27]

In the first phase of pre-war construction, work continued to largely resemble that of the interwar era. The regional styling of buildings, typified by Spanish Colonial Revival in California, was reflected nationwide, so that buildings in the Northeast were styled in Georgian Colonial Revival, while occasional Gulf state buildings featured French Provincial design. A small number of simplified Art Deco buildings, often with touches of Neoclassical styling, were also added piecemeal to bases at this time. The chief ways in which the post-1939 works differed from those of the interwar era was in the greater use of reinforced concrete to create mammoth buildings, and in the bolder use of Modernism as a design aesthetic.[28]

Modernism's main appeal remained its ability to meet the military's needs for speed, efficiency, and economy, but increasingly civilian architects turned to it for an opportunity to explore cutting edge design principles. The war also directly helped spread Modernism to the United States by forcing into American exile such leading European Modernists as Walter Gropius,

[25] "Census for Construction Preparedness," *Civil Engineering* 10 (July 1940), 464-465.
[26] BuDocks, *Building the Navy's Bases*, 85-87; Moore, Edgington and Payne, "A Guide to Architecture and Engineering Firms of the Cold War Era," 354.
[27] JRP, "California Historic Military Inventory," 7-43.
[28] JRP, "California Historic Military Inventory," 7-44; DoD, "Built on Strong Foundations," 29.

Marcel Breuer, and Ludwig Mies van der Rohe. While these individuals' greatest influence would be felt after the return of peace, a number of Modernism-inspired architects found opportunities to create significant works during the war. Albert Kahn, nearing the end of his career, again designed buildings for the Navy in his Industrial Modernism style, including a Bachelor Officer Quarters (BOQ) at Quonset Point, Rhode Island in 1940.[29] The influence of a more explicitly European, Bauhaus-influenced Modernism was evident in the work of a number of architects that went on to larger careers after the war. Gordon Bunshaft created one of his first designs for SOM with the Hostess House at the Great Lakes Naval Training Center, and Paul Revere Williams — working with Adrian Wilson as Allied Engineers — designed a number of distinctly Modernist buildings for Roosevelt Naval Base in Long Beach, California (**Figure 12**).[30]

Figure 12: The administrative building at Roosevelt Naval Base, built 1940-1941, shows the influence of high European Modernism. Designer Paul Revere Williams was the first African-American to join the American Institute of Architects (AIA) in 1923 (photo: Cole, Murray and Dewey 1996).

[29] Hampton, "Mid-Century Modern Military Buildings," 28; R. Christopher Goodwin & Associates, Inc., "Air Force and Navy Unaccompanied Personnel Housing During the Cold War Era (1946-1989)," prepared for Naval Facilities Engineering Command, Washington Navy Yard, D.C., May 2011, 4-11.

[30] Hampton, "Mid-Century Modern Military Buildings," 28-36; Alexandra C. Cole, Fermina B. Murray, and William B. Dewey, Historic American Buildings Survey, Roosevelt Base, Administration and Brig Building (Building No. 1), Bounded by Nevada Street, Reeves Avenue, Colorado Street and Richardson Avenue, Long Beach, Los Angeles, California, Photographs, Written Historical and Descriptive Data, HABS No. CA-2663-A, April and May 1996. The Roosevelt Base Historic District was declared eligible for the NRHP for its site planning, landscaping, architectural style, and its association with Paul Williams. Following the closure of the Navy base in 1997, the property was transferred to the Port of Long Beach and subsequently all of the original buildings and structures were demolished.

The Army began to build primarily with inexpensive, standardized, temporary buildings after the resumption of the draft in 1940, and the Navy made the same transition soon thereafter, fully committing to temporary buildings in 1942.[31] These buildings were characterized by two seemingly contradictory characteristics: their great diversity of function and their uniformity of design. Nearly every conceivable military task was conducted within buildings that showed only subtle differences between the branches of service and over the broad geography and time of use. These World War II temporary buildings are nearly unique among military resources in that they are covered by a nationwide programmatic agreement that allows for them to be demolished without review under the standard provisions of Section 106 of the NHPA.[32]

The classic temporary, prefabricated structure of the war was the Quonset hut, developed for the Navy by a team of designers at Quonset Point Naval Air Station in Rhode Island. In early 1941, the Navy approached the George A. Fuller Company, a large New York City construction contractor, to develop a structure that could be shipped in pieces to any location around the world and then be set up quickly by untrained personnel. Fuller appointed Peter Dejongh, an engineer, and Otto Brandenberger, the company's only architect, to head the project. Within two months, the team had arrived at a design, constructed a manufacturing plant, and begun to churn out the huts. Simple, rugged, and versatile – "the architectural equivalent of the jeep" – the huts found service around the world with an estimated 170,000 being assembled during the conflict. Many remained in service after the war, perhaps most famously and elegantly in the chapel at Camp Parks, California, designed by Bruce Goff in 1945 (**Figure 13**).[33]

Figure 13: The Camp Parks Chapel and Library in Dublin, CA was constructed in 1945 by Bruce Goff from three standard dimension Quonset huts (photo: Decker and Chiei).

[31] JRP, "Mare Island," 30.

[32] The provisions of the Programmatic Agreement, signed in 1986, are discussed at length in John S. Garner, "World War II Temporary Military Buildings: A Brief History of the Architecture and Planning of Cantonments and Training Stations in the United States," USACERL Technical Report CRC-93/01, March 1993.

[33] Julie Decker and Chris Chiei, *Quonset Hut: Metal Living for a Modern Age* (New York: Princeton Architecture press, 2005). Quote from Michael Lamm, "The Instant Building," *Invention and Technology* 13:3 (Winter 1998), 68-70.

2.6 Cold War Era, 1946-1989

The military drawdown after World War II's conclusion proved short-lived as the start of the Cold War in 1947 and Korean War in 1950 once again pushed up defense spending. Though the number of Americans in uniform fell sharply from the total World War II strength in excess of 16 million, the military maintained its largest ever peace time force, averaging more than two million service members through the 1950s and 1960s. The National Security Act of 1947 reorganized the military into three co-equal branches of the Army, Navy, and Air Force, all under the umbrella of the newly created Department of Defense (DoD). Beginning in 1949, the separate service budgets were consolidated into a single DoD budget, and increasingly the Secretary of Defense attempted to integrate construction planning across the services. Running counter to the trend towards standardization was the uniquely technological nature of the Cold War. As each service developed increasingly specialized weapon systems, they required new types of facilities for designing, testing, storing, and operating their highly technical new equipment.[34]

The number of uniformed engineers and architects shrank greatly at the end of World War II, as nearly all of the Reserve CEC officers were released from active duty in 1946. As the need for continuing construction during the Cold War became apparent, the Navy moved to rebuild its force. The Officer Personnel Act of May 1947 increased the strength of the CEC from two to three percent of the total number of commissioned officers. This expanded the regular force to more than 800 CEC officers; but this group faced a growing range of responsibilities. The Seabees were made a permanent part of the Navy in 1947, requiring CEC officers to serve in command positions. The global nature of the Cold War kept a large number of officers overseas, designing major base complexes in Guam, Spain, and eventually Vietnam, where BuDocks had responsibility for nearly all U.S. construction, including that of the Army, Air Force, and other Federal agencies.[35]

As a result, the Navy again turned to civilian architectural firms to design many of the Cold War-era buildings. Indeed, by the mid to late years of the Cold War, outside architect-engineer (A/E) firms accounted for between 70 and 90 percent of Navy design work. The Naval Facilities Engineering Command (NAVFAC), which superseded BuDocks in 1966, continued to perform enough design to retain competency, but increasingly its expertise was called upon primarily for drafting procurement documents, checking submitted plans, and handling construction management. The system for selecting a designer for a particular project remained much the same through the Cold War as it had been in World War II. Individuals or firms interested in performing government work submitted a Standard Form 251 (later 254 or 255) with basic information about personnel and prior works (**Figure 14**).

[34] DoD, "Built on Strong Foundations," 41; Goodwin, "Unaccompanied Personnel Housing," 3-1.
[35] NAVFAC, "A History of the Navy Civil Engineer Corps," 22-30.

STANDARD FORM (SF) **254**
Architect-Engineer And Related Services Questionnaire

1. Firm Name/Business Address:

2. Year Present Firm Established

3. Date Prepared:

4. Specify type of ownership and check below, if applicable.
- A. Small Business
- B. Small Disadvantaged Business
- C. Woman-owned Business

1a. Submittal is for ☐ Parent Company ☐ Branch or Subsidiary Office

5. Name of Parent Company, if any:

5a. Former Parent Company Name(s), if any, and Year(s) Established:

6. Names of not more than Two Principals to Contact: Title/Telephone
1)
2)

7. Present Offices: City / State / Telephone / No. Personnel Each Office

7a. Total Personnel _____

8. Personnel by Discipline: (List each person only once, by primary function.)

___ Administrative	___ Electrical Engineers	___ Oceanographers	___ _____
___ Architects	___ Estimators	___ Planners: Urban/Regional	___ _____
___ Chemical Engineers	___ Geologists	___ Sanitary Engineers	___ _____
___ Civil Engineers	___ Hydrologists	___ Soils Engineers	___ _____
___ Construction Inspectors	___ Interior Designers	___ Specification Writers	___ _____
___ Draftsmen	___ Landscape Architects	___ Structural Engineers	___ _____
___ Ecologists	___ Mechanical Engineers	___ Surveyors	___ _____
___ Economists	___ Mining Engineers	___ Transportation Engineers	___ _____

9. Summary of Professional Services Fees
Received: (Insert index number)

	Last 5 Years (most recent year first)				
	19____	19____	19____	19____	19____
Direct Federal contract work, including overseas					
All other domestic work					
All other foreign work *					

*Firms interested in foreign work, but without such experience, check here: ☐

Ranges of Professional Services Fees INDEX
1. Less than $100,000
2. $100,000 to $250,000
3. $250,000 to $500,000
4. $500,000 to $1 million
5. $1 million to $2 million
6. $2 million to $5 million
7. $5 million to $10 million
8. $10 million or greater

STANDARD FORM 254 PAGE 4 (REV. 11-92)

Experience Profile Code Numbers for use with questions 10 and 11

001 Acoustics, Noise Abatement
002 Aerial Photogrammetry
003 Agricultural Development; Grain Storage; Farm Mechanization
004 Air Pollution Control
005 Airports; Navaids; Airport Lighting; Aircraft Fueling
006 Airports; Terminals and Hangers; Freight Handling
007 Arctic Facilities
008 Auditoriums and Theatres
009 Automation; Controls; Instrumentation
010 Barracks; Dormitories
011 Bridges
012 Cemeteries *(Planning and Relocation)*
013 Chemical Processing and Storage
014 Churches; Chapels
015 Codes; Standards; Ordinances
016 Cold Storage; Refrigeration; Fast Freeze
017 Commercial Building *(low rise)*; Shopping Centers
018 Communications Systems; TV; Microwave
019 Computer Facilities; Computer Service
020 Conservation and Resource Management
021 Construction Management
022 Corrosion Control; Cathodic Protection; Electrolysis
023 Cost Estimating
024 Dams *(Concrete; Arch)*
025 Dams *(Earth; Rock)*; Dikes; Levees
026 Desalinization *(Process and Facilities)*
027 Dining Halls; Clubs; Restaurants
028 Ecological and Archeological Investigations
029 Educational Facilities; Classrooms
030 Electronics
031 Elevators; Escalators; People-Movers
032 Energy Conservation; New Energy Sources
033 Environmental Impact Studies, Assessments, or Statements
034 Fallout Shelters; Blast-Resistant Design
035 Field Houses; Gyms; Stadiums
036 Fire Protection
037 Fisheries; Fish Ladders
038 Forestry and Forest Products
039 Garages; Vehicle Maintenance Facilities; Parking Decks
040 Gas Systems (Propane; Natural, etc.)
041 Graphic Design
042 Harbors; Jetties; Piers; Ship Terminal Facilities
043 Heating; Ventilating; Air Conditioning
044 Health Systems Planning
045 High-rise; Air-Rights-Type Buildings
046 Highways; Streets; Airfield Paving; Parking Lots
047 Historical Preservation
048 Hospital and Medical Facilities
049 Hotels; Models
050 Housing *(Residential; Multi-Family; Apartments; Condominiums)*
051 Hydraulics and Pneumatics
052 Industrial Buildings; Manufacturing Plants
053 Industrial Processes; Quality Control
054 Industrial Waste Treatment
055 Interior Design; Space Planning
056 Irrigation; Drainage
057 Judicial and Courtroom Facilities
058 Laboratories; Medical Research Facilities
059 Landscape Architecture
060 Libraries; Museums; Galleries
061 Lighting *(Interiors; Display; Theatre, etc.)*
062 Lighting *(Exteriors; Streets; Memorials; Athletic Fields, etc.)*
063 Materials Handling Systems; Conveyors; Sorters
064 Metallurgy
065 Microclimatology; Tropical Engineering
066 Military Design Standards
067 Mining and Mineralogy
068 Missile Facilities *(Silos; Fuels; Transport)*
069 Modular Systems Design; Pre-Fabricated Structures or Components
070 Naval Architecture; Off-Shore Platforms
071 Nuclear Facilities; Nuclear Shielding
072 Office Buildings; Industrial Parks
073 Oceanographic Engineering
074 Ordnance; Munitions; Special Weapons
075 Petroleum Exploration
076 Petroleum and Fuel *(Storage and Distribution)*
077 Pipelines *(Cross-Country - Liquid and Gas)*
078 Planning *(Community, Regional, Areawide and State)*
079 Planning *(Site, Installation, and Project)*
080 Plumbing and Piping Design
081 Pneumatic Structures; Air-Support Buildings
082 Postal Facilities
083 Power Generation; Transmission; Distribution
084 Prison and Correctional Facilities
085 Product; Machine and Equipment Design
086 Radar; Sonar; Radio and Radar Telescope
087 Railroad; Rapid Transit
088 Recreation Facilities *(Parks; Marinas, etc.)*
089 Rehabilitation *(Buildings; Structures; Facilities)*
090 Resource Recovery; Recycling
091 Radio Frequency Systems and Shieldings
092 Rivers; Canals; Waterways; Flood Control
093 Safety Engineering; Accident Studies; OSHA Studies
094 Security Systems; Intruder and Smoke Detection
095 Seismic Designs and Studies
096 Sewage Collection; Treatment; Disposal
097 Soils and Geologic Studies; Foundations
098 Solar Energy Utilization
099 Solid Wastes; Incineration; Landfill
100 Special Environments; Clean Rooms, etc.
101 Structural Design; Special Structures
102 Surveying; Platting; Mapping; Flood Plain Studies
103 Swimming Pools
104 Storm Water Handling and Facilities
105 Telephone Systems *(Rural; Mobile; Intercom, etc.)*
106 Testing and Inspection Services
107 Traffic and Transportation Engineering
108 Towers *(Self-Supporting and Guyed Systems)*
109 Tunnels and Subways
110 Urban Renewals; Community Development
111 Utilities *(Gas and Steam)*
112 Value Analysis; Life-Cycle Costing
113 Warehouses and Depots
114 Water Resources; Hydrology; Ground Water
115 Water Supply; Treatment and Distribution
116 Wind Tunnels; Research/Testing Facilities Design
117 Zoning; Land Use Studies
201 Economic and financial studies
202 _____
203 _____
204 _____
205 _____

Figure 14: The Cold War-era Architect-Engineer questionnaires, such as this Standard Form (SF) 254, continued to resemble those produced during World War II, though with a more comprehensive listing of professional experience codes (image: GSA).

When a project became available, the firms in a region were compared based on their specialized experience, ability to promptly perform the work, and the volume of previously awarded DoD contracts. The price for completing the design job was then negotiated with the top ranked firm, and only if it proved impossible to arrive at a satisfactory agreement was the next highest ranked firm contacted. Congress regularly pressed to introduce more direct price competition into the rewarding of design contracts, but the Navy, like the DoD as a whole, resisted the effort, believing that well-executed design paid for itself through improved utility and reduced life-cycle costs.[36]

Price controls, instead, were implemented through the use of standardized design requirements — known as "Definitives" — and the imposition of statutory cost limits. These constraints tightly guided the construction of common, duplicative buildings, particularly barracks and BOQs. The focus on reducing life-cycle maintenance costs required that most of these buildings be built with exposed reinforced concrete frames and exteriors walls of concrete masonry units. While the results met the military's need for economy and utility, the service engineers admitted the buildings were "not always gracefully accepted by the users." Writing in 1955, the head of the Army's construction program noted that "by comparison with some of the fine architecture to be found at older installations … and any number of good architectural structures built in the pump-priming days of the 1930's — the design under the present-day austerity policy seems severe and drab" (**Figures 15** and **16**).[37] These restraints lifted partially in 1973 with the implementation of the all-volunteer force, which suddenly made quality of life — including very directly the quality of the built environment — an issue for personnel recruitment and retention.[38] Architects were then granted somewhat greater freedom to modify standard designs and to build with more welcoming materials, but they still operated in a closely controlled environment that required them to respond to multiple directives on a building's design.[39]

[36] Donald Iselin, "Designing the Navy's Shore Installations," *The Military Engineer* 459 (January-February 1979), 6-10; D. A. Raymond, D.G. Iselin, and M. R. Reilly, "Architect/Engineers and Military Construction," *The Military Engineer* 419 (May-June 1972), 166-169.

[37] David H. Tulley, "Engineering Aspects of Military Construction," *The Military Engineer* 318 (July-August 1955), 288-292.

[38] Goodwin & Associates "Air Force and Navy Unaccompanied Personnel Housing During the Cold War Era," 4-7, 5-42; DoD, "Built on Strong Foundations," 45.

[39] Goodwin & Associates "Air Force and Navy Unaccompanied Personnel Housing During the Cold War Era," 4-7; JRP, "California Historic Military Inventory," 4-3; JRP Historical Consulting LLC, "Historic Resources Inventory and Evaluation Report, Naval Facilities Centerville Beach, Humboldt County, California," Prepared for NAVFAC Southwest Division, Nov 2009.

Figure 15: A typical late-nineteenth century barracks at the Benicia Arsenal, a building now listed in the NRHP (photo: JRP 2000).

Figure 16: The now demolished 1973 Bachelor Enlisted Quarters (BEQ) at Naval Facilities Centerville Beach near Ferndale, California had a concrete beam frame, concrete slab roof, and concrete masonry unit walls, all of which remained exposed without any attempt at ornamentation (photo: JRP).

The tangled bureaucracy behind military construction decisions can complicate singling out any particular designer. One study of the leading Cold War A/E firms concluded that DoD procedures for issuing contracts "were highly complex and individualized" to the point that it was often difficult to identify the firm responsible for a project's final form. Behind any given building lay Congressional guidance, preferences of national and local commanders, institutional habits of the construction bureaus, history of plans contained in a standard design book, and ultimately the vision, corporate character, and staffing nature of the responsible architectural firm. Untangling those influences to identify the leading hand in a building's design is often a tall task.[40]

Architectural firms retained the greatest control in two sorts of buildings: those requiring innovative, specialized designs, such as laboratories or missile launch facilities, and those with the most public faces, such as officers' clubs or chapels, where the military conceded the importance of aesthetic concerns. Good examples of both building types are present at Naval Air Weapons Station (NAWS) China Lake. First envisioned towards the end of World War II, the station offered facilities for testing and evaluating rockets and missiles that were being jointly developed by the Navy and scientists at the California Institute of Technology (CalTech). The station's major industrial buildings, typified by the propellant press plants, fulfilled such a specialized function that their design was left entirely in the hands of the CalTech scientists and their contracted structural engineer and architect, Oliver Bowen. The buildings' forms entirely followed their functions, literally taking the shape of the machinery they housed. While the buildings were more engineered than designed, and were constructed without concern for

[40] Moore, Edgington and Payne, "A Guide to Architecture and Engineering Firms of the Cold War Era," 6-7.

aesthetics, their final forms had an exaggerated sculptural quality that was striking for their complex assemblage of abstract geometrical shapes (**Figure 17**). The station's chapel, designed by Los Angeles architectural firm Austin, Field & Fry, also made use of exaggerated geometric shape expressed in a heavy concrete forms, though it did so with obvious aesthetic intent (**Figure 18**).[41]

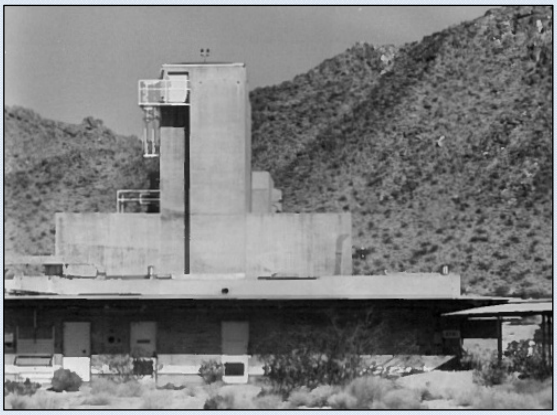


Figure 17: The 12-inch propellant press plant at NAWS China Lake shows the stark geometrical design of a building engineered for highly-specialized purposes (photo: JRP 1996).

Figure 18: The All Faith Chapel makes similar use of concrete and geometric shape in a purposeful statement of Modernist design (photo: JRP).

In a separate category, also granting considerable control to civilian architects, was family housing. Two pieces of Congressional legislation, the Wherry and Capehart acts, forged a public-private partnership to rapidly build up the family housing stock in the postwar era. Under both programs, private architects and builders constructed large tracts of housing under highly favorable financial terms. With the Wherry Act (1949-1956), developers retained control of the buildings for 40 years, renting them to military families, while the Capehart Act (1955-1962) transferred the completed building directly to the military. Richard Neutra, who master planned major projects for the Navy in California, and the Army and Air Force in Arizona and Idaho, was but one of the many prominent architects who designed Wherry and Capehart housing.[42] Like World War II temporary buildings, Wherry and Capehart projects are today covered by program

[41] JRP Historical Consulting Services, "Inventory and Evaluation of National Register Eligibility for Buildings and Structures, Main Site, China Lake Propulsion Laboratory (CLPL), Salt Wells Propulsion Laboratory (SWPL), Armitage Field, Naval Air Weapons Station (NAWS) China Lake, California," prepared for Engineering Field Activity, West, Naval Facilities Engineering Command, November 1996; Moore, Edgington and Payne, "A Guide to Architecture and Engineering Firms of the Cold War Era," 31-33.

[42] Moore, Edgington and Payne, "A Guide to Architecture and Engineering Firms of the Cold War Era," 7, 295-296; United States Environmental Center, Aberdeen Proving Ground, "'For Want of a Home': A Historic Context for Wherry and Capehart Military Family Housing," 1988.

comments between the various service branches and the Advisory Council on Historic Preservation.

Among the Cold War's most successful architect-engineer firms, there were two trends that stand out: a full embrace of Modern design and a history of military service among the firm's partners. Modernism continued to appeal to military planners for the same reasons of economy and functionality that had made Albert Kahn a leader in military aviation design as far back as World War I. However, in the Cold War, the military also began to value Modernism for aesthetic reasons. Classical design had met important ideological and nationalistic needs in the early twentieth century, but now seemed dated. Particularly in the Air Force, there was a desire to project a more forward-looking, technological, even futuristic appearance. This was perhaps best exemplified by the Air Force Academy, designed by SOM in 1954, which at the time, was one of the very few completely Modernist university campuses in the United States.[43] The Navy Postgraduate School in Monterey, California, also designed by Walter Netsch at SOM in 1952, showed a similar commitment to Modern design.[44]

That so many of the leading Cold War architects had prior military service is, of course, in part simply a reflection of the high national rate of service during World War II. Nonetheless, it is clear that the personal and professional relationships that were forged during the war contributed heavily to design firms continuing to be selected for projects during the post-war era. An example of this is the firm Mosher / Drew / Watson / Ferguson, which designed a very large part of the Navy and Marine Corps infrastructure in southern California. While Mosher had a medical discharge from the Army, both Drew and Watson had served as naval officers during World War II, Watson as a commander in the Civil Engineering Corps. Also typically, as the company expanded it acquired other firms with a military background, including Architects / Larson / Carpenter, where Jack Carpenter had served as a lieutenant in the Navy from 1963 to 1967. With time, many of these companies became focused on DoD work, eventually displacing non-specialized firms and helping to consolidate the design element of military construction.[45]

[43] Moore, Edgington and Payne, "A Guide to Architecture and Engineering Firms of the Cold War Era," 6-7; Hampton, "Mid-Century Modern Military Buildings," 36, 47-54.

[44] Moore, Edgington and Payne, "A Guide to Architecture and Engineering Firms of the Cold War Era," 6-7; Hampton, "Mid-Century Modern Military Buildings," 36, 41-43, 47-54. Nesch's Naval Postraduate School designs are addressed in the case study in Chapter 5.3.1.

[45] Moore, Edgington and Payne, "A Guide to Architecture and Engineering Firms of the Cold War Era," 6-7, 275-279.

3. THE CHALLENGES

The history of the design and construction in the Navy, and the military in general, is a progression toward contracting private architects to design an increasingly number of its buildings. As a result, military installations contain a substantial number of buildings designed by private architects, many of whom are or could be considered masters for the purposes of National Register of Historic Places (NRHP). As discussed in Chapter 2, in the twentieth century and especially during and since World War II, the military increasingly relied on outside architects, making it more likely that buildings nearing 50 years of age, the threshold for standard NRHP evaluations, could be considered the work of a master architect. Many of the architects hired by the military had a relatively minor impact in the field of architecture; however, the military also purposely hired well-known regional or national architects — those who might be considered masters — because of their proven record in completing similar projects. While some of the buildings they designed are functionally important and architecturally impressive structures with obvious architectural merit, a much larger number are routine, relatively unadorned structures, such as warehouses, hangars, armories, residential units, medical facilities, shop and storage complexes, or morale, welfare, and recreation (MWR) units. Evaluations of these prosaic buildings must account for the work of a master aspect of NRHP Criterion C, despite their lack of apparent architectural importance.

In recent years, the issue of whether military buildings are important works of master architects has led to some protracted Section 106 consultation on projects as military installations and Section 106 reviewers at State Historic Preservation Offices (SHPO) disagree on work of a master conclusions. In some cases NRHP evaluations have been questioned by SHPO reviewers for their lack of consideration of work of a master. The evaluations under Criterion C are sometimes insufficient or altogether absent. Other times they are not supported by context. In some cases where evaluations have been substantively supported, the disagreement about the conclusion has been as a result of different interpretations of the existing guidance.

These disagreements bring with them the potential to cause project delays that might affect a facility's mission. They are often the result of a lack of clear and concise guidance on preparing such evaluations which leaves numerous questions unanswered. What does it mean to be a master? Which buildings within a master's career are important and which are not? Is this evaluation process any different for military facilities, and if so, how? How should the evaluator of routine or prosaic buildings assess their place in the career of the master designer? This chapter, which presents some of the basic existing guidance and explores these questions, works in tandem with Chapter 4, which delves into the research and analytical steps that can lead to satisfactory solutions to the challenge.

3.1 Defining Work of a Master

First, some definitions are in order. The central existing guidance for any NRHP evaluation is the Department of the Interior's *National Register Bulletin 15*, which describes how to apply the NRHP criteria. As stated in the bulletin, a property may be considered eligible for listing in the NRHP under Criterion C if it represents the work of a master architect or builder.[46] The bulletin outlines a two-tier process for evaluating a building under this standard. First, the architect must be considered a master, which is defined as "*a figure of generally recognized greatness in a field, a known craftsman of consummate skill, or an anonymous craftsman whose work is distinguishable from others by its characteristic style and quality*." If the architect is found to be a master, the property being evaluated must also be an important example of that master's work. In the words of the bulletin, it must "*express a particular phase in the development of the master's career, an aspect of his or her work, or a particular idea or theme in his or her craft*." In other words, not every building by a master architect will be eligible for listing in the NRHP.

What is a master architect?

"A master is a figure of generally recognized greatness in a field, a known craftsman of consummate skill, or an anonymous craftsman whose work is distinguishable from others."

When is a building eligible as the work of a master?

"The property must express a particular phase in the development of the master's career, an aspect of his or her work, or a particular idea or theme in his or her craft. A property is not eligible as the work of a master, however, simply because it was designed by a prominent architect."

National Register Bulletin 15

The challenge of defining a master is oftentimes more complicated when evaluating buildings for military installations, and the challenges can start with simply identifying who should be evaluated. Many architecture projects, especially larger or complex ones undertaken by the military, are completed by a team of architects or an architectural firm with many contributors. This begs the question when evaluating properties under this criterion: does a master include an architectural firm or team of architects? Among the most famous architect collaborations was the effort undertaken by Frank Lloyd Wright that included his collaboration with young, rising architects and creation of the Taliesin Fellowship, where he trained and worked with a select group of architects. At Taliesin in Wisconsin, and Taliesin West near Phoenix, Wright led a group of some 50 apprentice and licensed architects each year in the development of many projects. In some ways, it resembled the Bauhaus School in Germany during the 1920s and 1930s, which is credited with helping to

[46] Work of a master is one element of NRHP Criterion C. A building can also be considered eligible for NRHP listing if it embodies the distinctive characteristics of a type, period, or method of construction, or possess high artistic values.

launch architecture's Modern movement. Among the architects who worked for or with Wright were Richard Neutra, John Lautner and Rudolf Schindler, all of whom became masters in their own right. After Wright's death in 1959, Taliesin Associated Architects carried on his work. The projects under Wright's name are widely recognized as his work; he led the designs and actively worked on their development from concept to completion.

This clear distinction between a project's ultimate designer and those who assisted is less clear among other firms and collaborations. Skidmore, Owings, & Merrill (SOM) rose from their original formation in the 1930s to one of the preeminent architectural firms of the mid-twentieth century. The company specialized in corporate office buildings, designing some of the most famous high-rise Modern style buildings in New York, Chicago, and other cities across the country. In its early years credit for designs by architects in the firm were claimed by the company as a whole, creating ambiguity on the question of design authorship. While the firm began revealing individual designers of its projects in the 1950s, it was typical of architectural companies to claim collective rather than individual responsibility.[47]

Holmes & Narver, a perennial military contractor during World War II and the Cold War, is a revealing example of this process. Founded in 1933, the Los Angeles architectural and engineering firm received its first military commissions prior to World War II before becoming a major developer of military bases during and after the war. The firm designed buildings at NAWS China Lake, Edwards AFB and Air Force Plant 42, and Vandenberg AFB. However research into the specific architects of the buildings can prove challenging. It is difficult to determine an individual in charge of the designs in part because the size of these projects necessitated a small army of engineers and architects to work on the designs. Moreover, standard accepted practices for military projects do not happen to aid in this endeavor, as illustrated in a title block from a building the company designed at Vandenberg Air Force Base (**Figure 19**). For those who designed and drew the building plans, only initials were included. The signature of the civil engineer who submitted the project is included, but it remains unclear which of these people

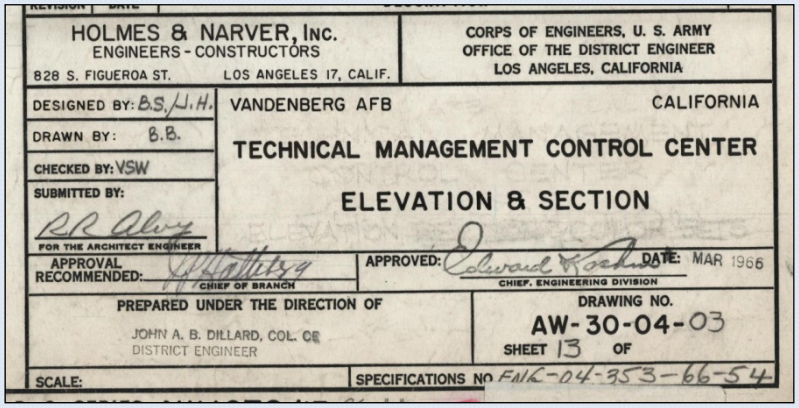

HOLMES & NARVER, INC.
ENGINEERS - CONSTRUCTORS
828 S. FIGUEROA ST. LOS ANGELES 17, CALIF.
CORPS OF ENGINEERS, U. S. ARMY
OFFICE OF THE DISTRICT ENGINEER
LOS ANGELES, CALIFORNIA
DESIGNED BY: B.S., J.H.
DRAWN BY: B.B.
CHECKED BY: VSW
SUBMITTED BY:
FOR THE ARCHITECT ENGINEER
VANDENBERG AFB CALIFORNIA
TECHNICAL MANAGEMENT CONTROL CENTER
ELEVATION & SECTION
APPROVAL RECOMMENDED:
CHIEF OF BRANCH
APPROVED:
CHIEF, ENGINEERING DIVISION
DATE: MAR 1966
PREPARED UNDER THE DIRECTION OF
JOHN A. B. DILLARD, COL. CE
DISTRICT ENGINEER
DRAWING NO.
AW-30-04-03
SHEET 13 OF
SCALE:
SPECIFICATIONS NO FAIL-04-353-66-54

Figure 19: Title block for Holmes & Narver elevation design of building at Vandenberg AFB showing only initials for those responsible for the design and drawing (image: Vandenberg AFB).

[47] Reinhold Martin, "The Bunshaft Tapes: A Preliminary Report," *Journal of Architectural Education* 54, no. 2 (Nov 2000), 82.

are responsible for the architectural design or for assuring engineering sufficiency. The use of initials in title blocks is typical and can disguise who was the architect of a project.[48]

The practices of these firms demonstrate some of the issues of evaluating architects of a firm as masters. Even through thorough research, it can be challenging to assign a given building to a specific architect. If a specific architect is known for one project, it can be hard to know what other projects with that firm the architect worked on. This type of research can require access to and extensive research in an architectural firm's archives, which are rarely available. Finally, if individual architects are not revealed through research, how is an evaluator supposed to assess a firm that may employ many architects? Or, should the firm as a whole be considered the master?

3.2 Work of a Master and High Style or Architecturally Significance Properties

Buildings found eligible for listing in the NRHP under Criterion C are most likely going to be important examples of an architectural style. As the bulletin states, these buildings "embody distinctive characteristics of a type, period or method of construction" or possess "high artistic value." In this regard, the military is no exception. By a wide margin, the majority of military buildings eligible under NRHP Criterion C are architecturally impressive buildings. In many cases, architecturally significant buildings are designed by well-known architects. It is arguably an easier research and analytic path to demonstrate that buildings of architectural significance or high artistic style are important within the career of master architects. Sometimes if a building of architectural importance is designed by a master architect, the evaluation conclusion simply states the building is important because it is by a master without providing a thorough analysis. However, this should not be considered an indisputable conclusion. While this can be a seemingly cost-effective path, it should be avoided as it does not follow protocol and can tie the hands of future practitioners and facilities managers. An assessment of a master architect, even of an architecturally significant building, must be complete to be sufficient.

3.3 Work of a Master and the Prosaic

A more challenging endeavor is evaluating buildings that lack architectural significance under the master architect aspect. One might be inclined to conclude the work of a master is important for the very reason that it is the work of a master. Who wants to say a building by Frank Lloyd Wright, arguably the most famous and celebrated American architect, is not actually significant as the work of a master? However, the guidance on this issue is clear: not

[48] JRP Historical Consulting, LLC, Department of Parks and Recreation (DPR) 523 Primary Record, Vandenberg Air Force Base Facility 7000, [in draft], July 2015; Vandenberg Air Force Base, Technical Management Control Center [as-built building plans], prepared for Corps of Engineers U.S. Army, Drawing No. AW-30-04-03, drawn March 1966, As-Built 9 April 1968, on file at Vandenberg Air Force Base, Drawings Vault.

every building by a master architect qualifies for listing in the NRHP. *National Register Bulletin 15* explains that "a property is not eligible as the work of a master … simply because it was designed by a prominent architect" noting that "not every building designed by Frank Lloyd Wright is eligible under this portion of Criterion C," even if is considered important under other portions of Criterion C, for example as a representative of Prairie style architecture. Nonetheless, when it comes to analyzing the importance of a building in a master's career, the guidance remains fairly general.

The analysis of buildings within a master career is likely going to be a key part of any assessment of military properties. It has particular importance for military cultural resources managers, who often record and evaluate prosaic or routine buildings for Section 106 and Section 110 projects. After all, only a handful of buildings, at most, on a given military facility will possess architectural significance. The vast majority of buildings are prosaic or routine both in function and design. But what does it mean to be prosaic or routine? To start, there is considerable overlap between functionally and architecturally prosaic and routine buildings. Functionally, prosaic buildings are ubiquitous features within a built environment that fill the basic requirements of the community. From an architectural standpoint, buildings that lack prominence within the built environment — often because of their routine function — often have prosaic designs. These buildings are stripped of aesthetic flourishes of a given architectural style and exhibit an often stark utilitarian appearance. If it is designed with a large group of buildings, it may reflect the general aesthetic themes of the other buildings, but will feature the least amount of architectural refinement. This reflects the importance both the builder and the architect place on these buildings.

On military installations, prosaic buildings are the innumerable warehouses, shop and storage buildings, barracks, utility buildings and other buildings with utilitarian functions found on every military facility. Often they are constructed of basic building materials, such as concrete blocks, steel, wood, and stucco, and intended to be cost-effective and long-lasting, although many are temporary, prefabricated buildings, such as the Quonset huts or Butler buildings. If prosaic buildings can even be assigned a specific architectural style, they are likely to be among the most rudimentary examples of that style. They may have been designed from standardized plans, especially because the military increasingly relied on standardized plans through the twentieth century. As a result, the buildings'

What is a prosaic building?

Prosaic buildings are ubiquitous features that fill the basic requirements of the community and thus lack prominence within the built environment. As such, they are often stripped of aesthetic flourishes of a given architectural style and exhibit a stark utilitarian appearance.

Examples

- Warehouses
- Utility Buildings
- Shops
- Storage Buildings

designers lacked a substantial measure of the design independence they might have retained in civilian projects. Designers were given a series of required specifications for each building that included square footage, number of rooms, and general plan and layout. Under these constraints, buildings of similar functions can often look very similar at different facilities across the country, despite having different architects. Or, in many cases, a single architect or firm prepared standardized designs for a specific building that was then used by several military facilities. For example, Joel E. Bowman, about who very little is documented in the standard historical sources, designed a barracks complex at Naval Air Station (NAS) Fallon that appears nearly identical to a barracks complex at NAS Lemoore, which were likely also designed by him (**Figures 20** and **21**).[49]

Figure 20: Building 888 at NAS Lemoore with mostly original features (photo: JRP).

Figure 21: Despite modifications, Building 358 at NAS Fallon retains original form (photo: JRP).

3.4 Integrity Issues When Considering Work of a Master

A property found eligible for listing in the NRHP must possess significance and historic integrity. While the majority of this guidance report focuses its attention on the former requirement, it is instructive to address the integrity issues particular to dealing with a property important as a work of a master. As defined by *National Register Bulletin 15*, "integrity is the ability of a property to convey its significance." There are seven aspects that define integrity: location, design, setting, materials, workmanship, feeling, and association. These seven can be roughly grouped into three types of integrity considerations. Location and setting relate to the relationship between the property and its environment. A property retains integrity of location if it has not been moved, while integrity of setting refers to its immediate surroundings. Design,

[49] JRP Historical Consulting, LLC, "Analysis of Military Buildings By Master Architects at Naval Air Station (NAS) Fallon," prepared for Naval Facilities Engineering Command Southwest, October 2014, 67; JRP Historical Consulting, LLC, "Base Wide Historic Buildings and Structures Survey and Evaluation at Naval Air Station (NAS) Lemoore, California, prepared for Naval Facilities Engineering Command Southwest, September 11, 2013.

materials, and workmanship, as they apply to historic buildings, relate to construction methods and architectural details. These are critical elements of the building's basic architectural and construction features and are importantly tied to the building's place in construction history and architectural trends. Feeling and association are the least objective of the seven criteria and pertain to the overall ability of the property to convey a sense of the historical time and place in which it was constructed. These aspects are retained when the structure continues in military use.

When it comes to assessing the historic integrity of a property significant under NRHP Criterion C, *National Register Bulletin 15* emphasizes that those elements relating to the building's construction technique or architectural style must be retained. It also recognizes that some changes may not offend the overall integrity. A building can only retain overall historic integrity even if it has lost some of its historic materials, if most of the important features are retained. The building must retain those elements that illustrate its style, including the massing, spatial relationships, proportion, pattern of windows and doors, texture of materials, and ornamentation. It will not retain integrity, and therefore not be eligible for listing in the NRHP, if it has lost a majority of its key features. It is therefore critical to place building within its architectural context and describe those elements that make it architecturally significant.

While a property must retain overall historic integrity to be eligible, there are certain aspects of integrity that are more important than others when a building is significant under NRHP Criterion C. Design, workmanship and materials are usually the most important aspects when assessing such a building. These are the aspects most closely related to the architectural style. A building eligible for its importance as a Craftsman style residence which has retained its original location, general setting, and function as a residence will not retain overall integrity if past alterations have removed key features of the style that made it distinctive in the first place. Nonetheless, a property must be analyzed under all aspects because each plays an important role in conveying a building's sense of historic place and time.

Aspects of integrity most important for work of a master

- **Design:** the combination of elements that create the form, plan, space, structure, and style
- **Workmanship:** the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory
- **Materials:** the physical elements that were combined or deposited during a particular period of time and in a particular pattern of configuration to form a historic property
- It is important to note that a property must retain overall integrity, which is determined through an assessment of all aspects of integrity.

4. MEETING THE CHALLENGES

The path of assessing a building under the work of a master aspect of National Register of Historic Places (NRHP) Criterion C can follow different directions. Depending on the facts of the building and architect, it can be a relatively brief process, or a lengthy one. A building designed by a nationally famous architect may require greater research and comparative analysis than one designed by a significant local or regional architect. The goal of this chapter is to outline the various steps involved in the process of evaluating a building under the work of a master aspect, from the initial research and context development to the final assessment. While the final evaluation naturally requires a measure of subjectivity, and thus the guidelines of this chapter do not function as definitive rules, the steps outlined below can and should be used as an aid in completing a satisfactory NRHP evaluation. References for the sources mentioned in this chapter, as well as other helpful source, can be found in Chapter 6 of this report.

4.1 Existing Guidance

At the outset, it is helpful to review the most helpful existing guidance documents. As discussed in Chapter 3, *National Register Bulletin 15* is the primary guiding document when evaluating properties for eligibility for listing in the NRHP. However, it provides only brief information on the work of a master aspect and its related issues. Several reports have been prepared to augment the guidance in *National Register Bulletin 15* that help elaborate on the process of, or provide important resources for, evaluating properties under the master architect standard. The Department of Defense Legacy Resource Management Program (DoD Legacy Program) has addressed this issue with reports that help illuminate some information necessary for conducting such an evaluation.

"A Guide to Architecture and Engineering Firms of the Cold War Era," by David Moore, et al., is a valuable source on the architectural history of military installations during the Cold War as well as an important resource on some of the more active architects and engineers who designed buildings on military bases during the Cold War. This should be used as a starting point for any research on the topic of master architects; however, it should be remembered that this is not a comprehensive list of known architects, nor is it intended to be a list of master architects. Individual architects who designed military buildings are not identified in this document, and this document includes architects who are likely not considered masters.[50]

Roy Hampton's recent "Historic Context for Evaluating Mid-Century Modern Military Buildings" provides a helpful framework for interpreting the architectural influences behind defense-related development during mid twentieth century. The discussion of architectural styles is thorough and should be used during research and development of an architectural context for

[50] Moore, Edgington and Payne, "A Guide to Architecture and Engineering Firms of the Cold War Era."

military facilities. This report also provides guidance on evaluating buildings under NRHP Criterion C, discusses this process within each architectural style, and offers sample assessments of military buildings. Hampton's guidance for evaluating buildings under the master architect standard generally mirrors the guidance found in *National Register Bulletin 15*. His guidance notes that the architect or firm must be considered important and the building being evaluated must be a significant work of the master, and also states the importance does not need to be on the national level. An architect who is important to a local community or state may also be considered under this standard. In Hampton's discussion on the importance of the architect or firm, the definition of "important" remains unclear. An interpretation could lead one to think an important architect is someone who has a strong reputation and influence in the community and profession. *National Register Bulletin 15*, on the other hand, identifies a master as someone who has been recognized for their great works and consummate skill, focusing on the quality of their work. The distinction between having achieved stature in a community and having been recognized by that community for great craftsmanship is a nuanced but important one and it is the latter that should be followed. Hampton also provides some advice for comparing an architect's or firm's important buildings with the one being evaluated. "If you get the sense that the building is not a good example of what the designer or firm was known for, or if the building does not seem like a very creative expression of their work, or if the design was not well thought out," Hampton observed, "then the building is probably not eligible as the work of a master." Beyond these general guidelines, however, the report lacks specific guidance for evaluations.[51]

4.2 Steps in Considering Work of a Master in Military Context

4.2.1 Contextualizing Work of a Master

Context is the keystone to supporting any NRHP evaluation. Without a sufficient context, no evaluation can stand. The first step of evaluating a building under the work of a master standard is providing enough context to understand the various elements of the assessment. This includes broad construction and architectural trends, including major architects of the era, such as that which is provided in Chapter 2 of this document. Indeed, that chapter can be used as a starting point for many work of a master evaluations of military buildings. Understanding the construction and design goals of the builder helps contextualize the use of particular architects.

There can be no accurate analysis of a master architect without understanding the prevailing architectural trends within which they operate. Architects do not work in a vacuum. They are influenced by preceding architectural, cultural, and social movements as well as other

[51] Roy Hampton, "Historic Context for Evaluating Mid-Century Modern Military Buildings," Department of Defense Legacy Resource Management Program, 2012.

architects. They may in turn influence succeeding generations of practitioners or transform the profession with their designs. Architectural contexts help illustrate the prevailing trends in the field throughout the nation, in the military, and locally, as well as over time. Many valuable sources of architectural history are available, including Hampton's "Historic Context for Evaluating Mid-Century Modern Military Buildings" and "The Architecture of the Department of Defense: A Military Style Guide," by Michelle Michael, Adam Smith, and Jennifer Sin, which should be referenced in any discussion of twentieth century architectural trends in the military. General contexts often provide brief overviews of each style but if more information is necessary, books specific to specific styles are also widely accessible. Chapter 6.3 of this document provides a few additional sources for architectural contexts.[52]

It is perhaps obvious to note that military facilities are unique in that they have public works offices with plan rooms containing blueprints for the buildings under their jurisdiction. A required early step in any inventory and evaluation is collection of information from plans related to buildings being evaluated, examination of as-builts and alterations, and other data. Title blocks provide invaluable information regarding architects, original function, and contract numbers that guide further work. **Figure 19** in Chapter 3 is an example of such a title block.

4.2.2 Researching an Architect's Biography

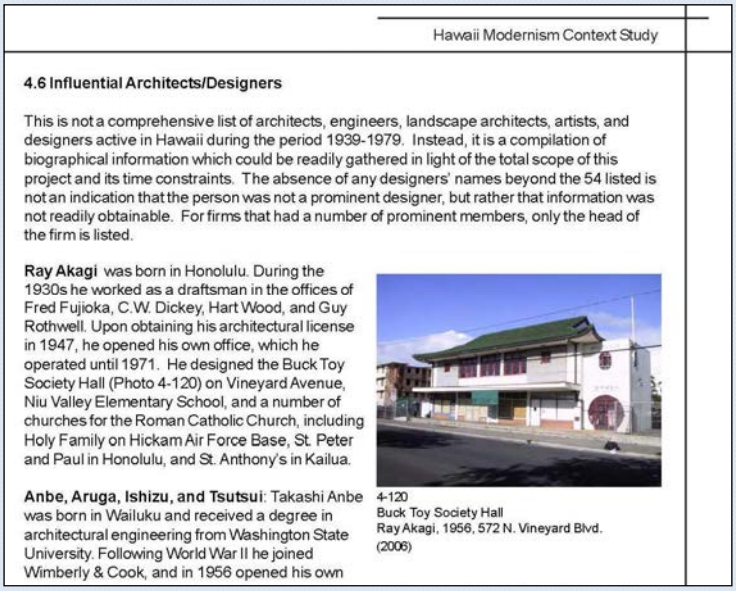
A final element of contextualizing a master architect is documenting, where possible, the life and work of the architect. This is arguably the most important aspect of the process as it forms the backbone of the analysis, and yet can prove one of the most challenging. A detailed description of the biography and career of an architect has two roles in the analysis process. First, it helps demonstrate whether the architect has been recognized for greatness or is a known craftsman of consummate skill, as defined by *National Register Bulletin 15*. If it can clearly be shown that an architect was widely lauded among their peers, critics and/or historians, then it is easy to make the case that they are a master in their craft. The second role of a detailed biography is to place an architect's individual buildings within the broader context of their careers and the trends of the profession. The importance of this is paramount. As discussed above, not only must a building be an example of a master, it must also be important within the master's career. In order to determine that, it is best to have a comprehensive understanding of the architect's career. The absence of information on an architect could be a sign that they lack "recognized greatness." It should be noted that even an anonymous architect with outstanding and distinguishable quality and style may be judged a master, although in practice, this part of the master architect aspect is rarely applicable and rather difficult to substantiate.

[52] Michael, Smith, and Sin, "The Architecture of the Department of Defense: A Military Style Guide."

Research for developing an architect's biography can be challenging. One the one hand, there are numerous sources for potential information. Yet on the other hand, a given architect, especially if they are not widely known or have had careers in the recent past, may not be in many of the sources. Nevertheless, an architect's biography is crucial to the process, and can be undertaken in a methodical and efficient manner.

The first steps in developing an architect's biography should include reviewing readily available known sources of information. The American Institute of Architects (AIA) maintains a database of architects from the nineteenth and twentieth centuries who were members of the AIA, a roster that would include most licensed architects. This database includes basic membership information as well as digitized files from AIA archives, including member portfolios and directory entries. The directories can be a very valuable source because they provide major examples of the architect's work, awards and honors they have received, and basic biographical information, such as education and work history.

Other readily available sources can be regional or statewide historic architectural context reports, which often include chapters or appendices on locally or regionally important architects. For example, in 2011 Historic Hawaii Foundation prepared a "Hawaii Modernism Context Study" that includes a chapter on influential architects and designers (**Figure 22**).[53] Of course, not every state or region has prepared these studies, so availability of such sources can vary. Additionally, some contexts that have been prepared are decades old, and architects that were prominent during the mid twentieth century and beyond are not discussed. Being aware of whether your geographic area has such a study is important. The studies usually can be accessed through local or regional historic preservation organizations, city preservation commissions or SHPOs. There are also a number of biographical directories of



Hawaii Modernism Context Study

4.6 Influential Architects/Designers

This is not a comprehensive list of architects, engineers, landscape architects, artists, and designers active in Hawaii during the period 1939-1979. Instead, it is a compilation of biographical information which could be readily gathered in light of the total scope of this project and its time constraints. The absence of any designers' names beyond the 54 listed is not an indication that the person was not a prominent designer, but rather that information was not readily obtainable. For firms that had a number of prominent members, only the head of the firm is listed.

Ray Akagi was born in Honolulu. During the 1930s he worked as a draftsman in the offices of Fred Fujioka, C.W. Dickey, Hart Wood, and Guy Rothwell. Upon obtaining his architectural license in 1947, he opened his own office, which he operated until 1971. He designed the Buck Toy Society Hall (Photo 4-120) on Vineyard Avenue, Niu Valley Elementary School, and a number of churches for the Roman Catholic Church, including Holy Family on Hickam Air Force Base, St. Peter and Paul in Honolulu, and St. Anthony's in Kailua.

4-120
Buck Toy Society Hall
Ray Akagi, 1956, 572 N. Vineyard Blvd.
(2006)

Anbe, Aruga, Ishizu, and Tsutsui: Takashi Anbe was born in Wailuku and received a degree in architectural engineering from Washington State University. Following World War II he joined Wimberly & Cook, and in 1956 opened his own

Figure 22: Chapter 4.6 of "Hawaii Modernism Context Study" discusses the important architects and designers in the state (image: Fung Associations 2011).

[53] Fung Associations, Inc., "Hawaii Modernsim Context Statement," prepared for Historic Hawaii Foundation, November 2011.

architects, many of which are cited on the AIA Historical Directory website.[54] These easily accessed sources should serve as a start in the process of answering the questions of whether the architect is considered a master and if the subject building is an important example of their work. While many architects are included in these documents, many more are not. If very little or no information is garnered from this effort, it could suggest that the architect has not been widely recognized, helping to support the conclusion they are not a master.

Digging deeper into the research can help identify gaps in the architect's biography and assess whether they have received recognition for outstanding work. This second-level research could include searching for your architect in journals and magazines from the period the architect was active. Contemporary architects and critics would be among the most well-informed about architectural trends of the given era, the performance of specific architects, and the importance of individual buildings. Some architectural publications provide reviews of newly designed and constructed buildings focusing on the architect and design. While these tend to focus on the buildings, some will also provide the architect's biographical information. They also feature honors and awards, either bestowed by the journal or by other organizations. These sources may be difficult to access for free, but are available through university and college libraries, local libraries, and fee-based online sites.

A number of other sources should be used to form the architect's biography. Local and regional press may provide keys to how architects were perceived during their careers. City newspapers and regional or local magazines often document the construction of significant local buildings, identifying the architect, describing the building's physical characteristics, and noting its relative importance. Newspapers are often available at local libraries, which sometimes include searchable indexes. Increasingly newspapers can also be searched online, for example, on fee-based sites like newspaperarchive.com. Like architectural publications, newspapers and other sources might include mention of awards and honors given to a local architect. The AIA and its regional chapters, as well as numerous other local, regional, and national organizations and publications, regularly honor professionals and recognize great buildings. In addition to checking newspapers for these awards, checking local and national chapters could also prove useful.

Sources aimed at basic biographical data should also be reviewed. These include census records, city directories, local archives, government files, and other local history sources. Many of these sources are available at local libraries, but like newspapers, they are increasingly available online at places like the fee-based site ancestry.com.

While contemporary sources are an important first step in the research process, they have sometimes missed important architects and shifts in architectural history. Therefore, it can be

[54] "Biographical directories and databases about architects" http://public.aia.org/sites/hdoaa/wiki/Wiki%20Pages/Biographical%20directories%20and%20databases.aspx#sthash.4C9jVedD.dpuf, accessed 2016.

instructive to review recently published sources as well. Architectural historians and modern critics review architects and their work in the context of broader historical trends. They recognize when buildings or their architects, who may not have received a wealth of attention during their time, made important contributions to the field, whether through the use of innovative materials, application of unique design characteristics, or influence of future architectural developments. This information is often found in scholarly works in the field of architectural history, architecture, and design. The work of preservation groups can also be illustrative when used in conjunction with a variety of other sources. Modern sources also prove helpful when looking at well-known architects. Academics and critics will often review an architect's career, placing individual buildings within the context of the architect's broader work, highlight the most important of these buildings, and categorize different periods of their career.

Another important source of information can be existing NRHP, state or local evaluations of buildings designed by the architect. These are helpful in assessing whether the architect's other buildings are architecturally significant and whether the architect has been deemed a master in the profession in other evaluations. The ease in obtaining these documents can vary from location to location. Some documents are readily available in all areas, such as Historic American Building Surveys (HABS) and Historic American Engineering Records (HAER), many of which have been scanned and are searchable on the US Library of Congress website. Likewise, many NRHP Nomination Forms can be accessed through the National Park Service website. These reports are frequently prepared for buildings listed in the NRHP and, for HABS / HAER documents, deemed important enough for this extra level of recordation; the chances that these sources will be helpful vary widely.

For evaluated buildings not meeting these thresholds, records can be hard to come by. In some states, SHPOs or affiliated offices maintain lists or databases of evaluated properties. While the inventory forms for such evaluations differ from state to state, all request the name of the building's architect. These names are frequently stored in SHPO lists and databases. While these databases and documents may not be accessible to the public, SHPO reviewers may have knowledge of architects whose buildings are commonly found significant for their architecture. Similarly, city and county governments often have a local register with a list of eligible buildings, but the documents supporting listings, including architects' names, might not be available. The City of Pasadena, for example, has a searchable online database that includes a field for architect, making it easy to see which buildings by an architect have been surveyed and what their status is (**Figure 23**).[55]

[55] City of Pasadena, "California Historical Resources Inventory Database," accessed online at http://pasadena.cfwebtools.com/search.cfm in May 2016.

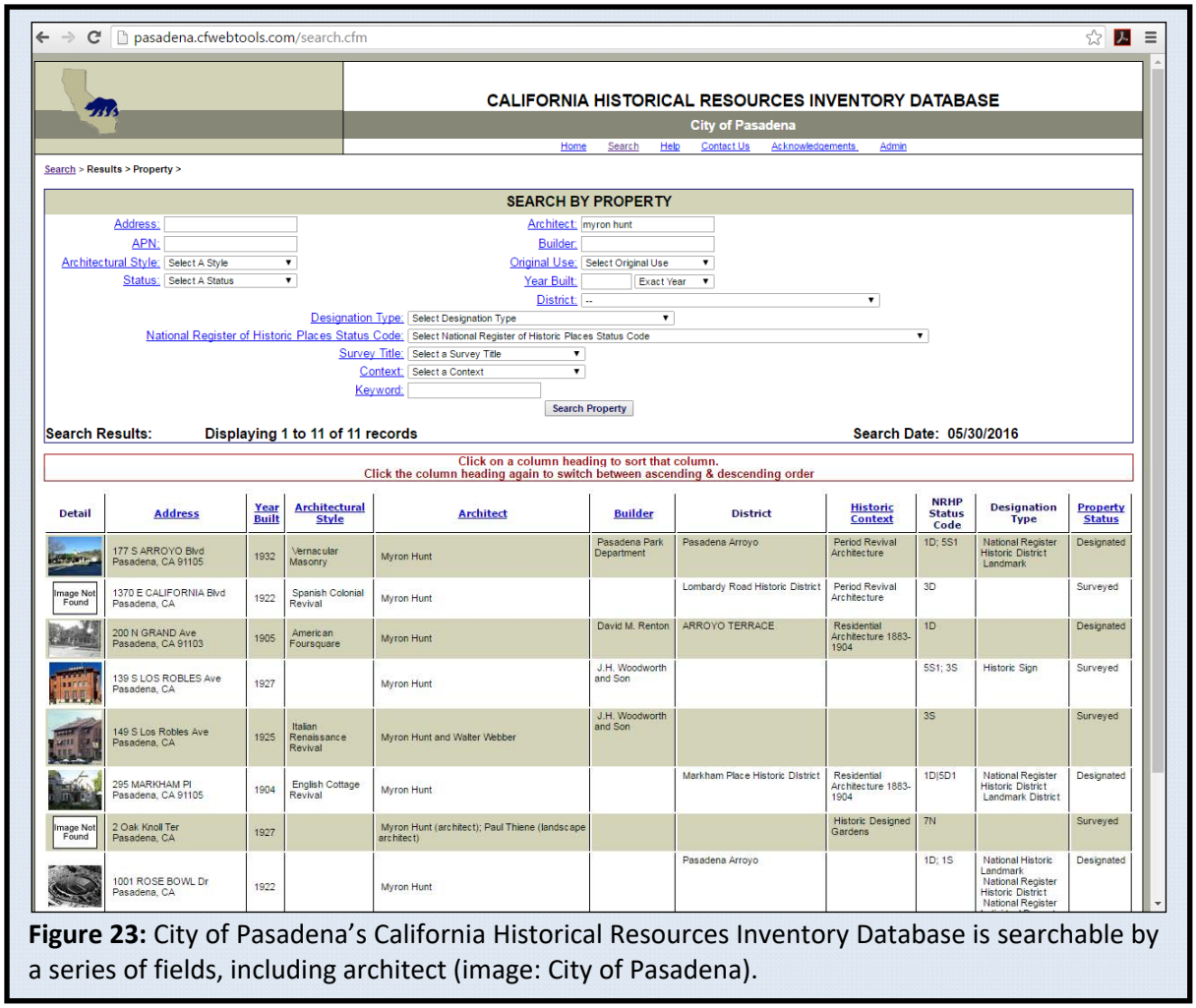


Figure 23: City of Pasadena's California Historical Resources Inventory Database is searchable by a series of fields, including architect (image: City of Pasadena).

It is worth knowing if state and local governments in your region have these documents available, and it is always helpful to search the NRHP and HABS/HAER databases. Although it is relatively rare and not always easily accessible, some architects and firms have donated their records to archives, which can be extraordinarily valuable for this type of research. For example, the collected records of Frederic DeLongchamps, famous Reno, Nevada architect from the early and mid twentieth century, are stored at the University of Nevada, Reno libraries. Similarly, Richard Neutra's papers are housed at the University of California, Los Angeles. Typically, it is distinguished local architects whose records are preserved and available in archives, but it is worth investigating for any architect.[56]

Taken together, these various sources should help determine if an architect may meet the requirement of having been recognized for greatness. If a large number of contemporary and

[56] Frederic J. DeLongchamps Architectural Records, Special Collections, University Library, University of Nevada, Reno; Richard and Dion Neutra Papers, 1925-1970, UCLA Library Special Collections, Charles E. Young Research Library University of California, Los Angeles.

more recent reviewers praise the architect, it is a clear conclusion that they are considered a master of their craft. If, on the other hand, an exhaustive search of these sources provides no indication that the architect is considered a great designer, or even mentioned, it is likely safe to conclude they do not meet that aspect of the master architect standard. Ultimately, a master is someone who was and/or is broadly recognized by a variety of sources for the consummate skill they demonstrated throughout their career.

This definition of a master can also serve to evaluate a firm if the research does not provide sufficient information to identify an individual responsible for the design, or if it appears the design was prepared by a collaborative effort. If individual architects are known, it is always best practice to research and assess their importance in addition to the firm as a whole. Individual names, however, are not always available, as discussed in Chapter 3.1 above. If no individual architects are known, the evaluation of a firm should follow the same research guidance for individual architects. The goals should be similar: collect information to help assess whether contemporaries and historians consider the firm to have achieved greatness in the field or represented consummate skill; and examples of their work with an eye toward comparing the subject building to other buildings within the firm's body of work. The history and size of the firm can alter the level of effort required. If it is a large firm and/or has been around for awhile, it is particularly important to define different aspects and phases of the history of the firm.

4.2.3 Assessing a Master's Building

If an architect is concluded to be a master, the next step is determining if a particular building is important within the architect's career. At its core, this is a comparative activity. It requires analyzing their career with an eye toward identifying different phases or themes, which can be based on a number of categories, such as chronology, style, and building type. The design preferences and careers of some architects shift over time, and with historical perspective, a historian can separate their work into different time periods. Stylistic considerations can also be important, and may not be tied to specific time periods. An architect may employ different styles based on client desires, project type, geographic location, or any number of other decisions. An architect's career may also be broken down by property type. Identifying and understanding different phases in an architect's career is an important aspect of the assessment of the building's importance. By reviewing the biographical research, these themes and phases should become apparent.

Identifying the architect's most important buildings within those themes or phases is the next step. While this can be a subjective task, it should be based on research. The most important buildings are likely the ones most often featured in the publications or addressed by the critics and scholars, or they are previously evaluated as eligible for inclusion in the NRHP or state or local registers. If an architect had a long and illustrious career, the list of important buildings

may by long. If the architect is well-known there may be a few buildings within each defined phase of their career that have received wide attention. It is also highly possible the architect is recognized for only one or two key buildings throughout their entire career. In any case, it is important to delineate the key qualities and features of the master's significant buildings. These can be determined by reviewing descriptions and/or photographs of the buildings.

Understanding the style or styles most often employed is a key element of this step. It is also important to understand the types of properties the architect most frequently designed. This will help when it comes to comparing the subject building to other buildings in the architect's career. The building being evaluated must stand out in some respect among others of its style or type. If the evaluated building is of a different style or property type than the master's important works, it is instructive to compare the building to other buildings from that style or type. In this comparison process, there must be a careful balance between simply enumerating key elements of buildings and offering a completely subjective decision. A final judgment is necessary, but it should be wholly based in the context and research.

In some cases, the building being evaluated will be the only of its type or style designed by the master architect. The simple fact that a building represents a style or type that differs from known styles and types within the architect's career does not automatically imbue it with significance. It must still meet the elements of this criterion. But this lack of comparative examples may require a slightly different approach to the evaluation. One approach would be to compare the architect's prevailing stylistic characteristics or trends with the subject building, or attempt to identify signature elements that appear in all of the architect's buildings. Some architectural trends transcended specific architectural styles, especially in the twentieth century. The building could also be assessed for its impact on the architect's career as well as how it influenced the architect's stylistic or typological preferences. Ultimately, a newly discovered style or type of building by a master architect is not important on its own – it must reveal something a distinguishable element of their career, the work they did in their career, or their craftsmanship.

The assessment of a firm should generally follow the same principles, but there are some special elements to keep in mind. First, the size and history of the firm should be acknowledged. If it is a large firm that has been in operation for several decades or more, the people associated with the firm from its early period will likely not be part of the firm's later years. And the firm's preferred styles will likely have changed as well, sometimes dramatically. The comparative analysis should be narrowly defined, either by a specific period of time or style or type. In this respect it may be easier if the firm is small and under the direct control of a lead architect, who has a hands-on role in the firm's design direction.

4.2.4 Special Considerations for Military Buildings

Evaluations of military buildings under the master architect aspect will follow the same general standards used for other building types. However, within the parameters of those standards there are special considerations to take into account when assessing the importance of military buildings. The context of military development has few parallels elsewhere in the built environment. The military uses a unique set of criteria for designing and constructing buildings. To reduce costs and improve efficiency, the military standardizes requirements for a large number of building types. Similar or nearly identical buildings can be found on different facilities. The military also requires a wide range of buildings, from the most simple and prosaic utility and storage buildings to the most technologically advanced scientific facilities. These are important peculiarities to take into account.

The use of standardized plans, even when implemented by a master architect, requires unique considerations. As discussed in Chapter 2 of this document, the military relies on standardized requirements for a large set of its buildings. The requirements often come in the form of criteria which the buildings must meet, including size, shape, number of rooms, and security features. In practice, this means functionally similar buildings appear alike. For example, the design of the Cold Storage Warehouse at NAS Lemoore in California in 1957 was developed from Navy criteria that detailed the square footage of such a building based on the number of personnel it would serve. In this case, the 5,655 officers and enlisted men required 7,200 square feet of storage. Other instructions set out criteria for the structural and mechanical designs as well as fire prevention.[57] The resulting designs took these criteria into account.

For an evaluation of a building based on standardized criteria, the building should be compared to other buildings of its standard type, if possible. In some cases, architects are hired to design a set of plans that could be used on multiple installations. If so, it may be important to explain how the subject building on one facility is more or less important than other such buildings elsewhere. If the other buildings were designed by different architects, it would be an important step to compare the buildings with an eye toward identifying distinct architectural features that reveal independent stylization by the architect. However, just because the architect added his or her own style to the standardized building does not eliminate the requirement for it to be important within the architect's career. A building that is primarily based on standardized plans or criteria that are used across the military but lightly stylized by a master architect is likely not going to rise to the level of importance within their career.

Categorizing buildings in order to compare them as an aspect of phase of an architect's career is just as important, if sometimes more difficult, when analyzing military buildings. The most basic

[57] Urbahn, Brayton & Burrows, and Milton T. Pflueger, "Advance Planning Report for Cold Storage Warehouse, SSDB Project 12ND, 1166-45," prepared for Bureau of Yards and Docks, Department of the Navy, August 1957, Naval Air Station Lemoore, Public Works Office, Facilities Management Division archives, Land Contracts (Leases).

category would be military buildings. But it might also help to further distinguish the building by architectural style or function. In this respect, military buildings can be easier to categorize because so many have very similar functions. For example, storage buildings on one facility are very similar to storage facilities on another. This is a helpful step because it could make it easier to argue for or against importance within an architect's career, especially if the buildings under assessment are the only ones known to have been designed by the architect. If the building is prosaic in function, it likely was not among the architect's most important buildings.

Finally, it should be noted that the threshold for significance is no different for military buildings. There might be an urge to conclude that simply because it is a military building there is a higher likelihood for significance. For example, if the building is the architect's only military work, one might want to argue that it represents a unique element of their work. However, it must be shown to have importance within their career as well. This may be the case if it can be demonstrated through research that the architect's one military building was important in the development of their broader career. Did it influence their stylistic maturity? Did the design directly lead to an important break-through in the progression of their career? It could also be important if the military project could be defined as a distinguishable aspect of their career. As such, it would need to be on par with other defined aspects, either based on architectural style or building type. In this case it is highly unlikely a single building would rise to that level, but a single major project consisting of numerous buildings could.

4.2.5 Buildings of the Recent Past and Criteria Consideration G

Many Cold War–era properties, like many of the buildings found on military facilities, pose unique challenges for evaluation under NRHP criteria, which stipulates that properties less than 50 years of age must be of "exceptional importance," per NRHP Criteria Consideration G. The 50-year-rule is in place to allow for sufficient historical perspective and avoid evaluations based on recent trends. Application of this criteria consideration is discussed fully in *National Register Bulletin: Guidelines for Evaluating and Nominating Properties that have Achieved Significance within the Last Fifty Years*, which must be used in conjunction with the guidelines and contextual theme reports to fully evaluate the significance of buildings, structures, and objects that are not yet 45 years old.

Buildings of the recent past present a particular challenge when evaluating buildings under the master architect standard because there is a greater chance that the architect will have done most of their work within the recent past. Because Section 106 and 110 cultural resources reports evaluate buildings recently turning, or soon to turn, 50 years of age, many of the architects being evaluated will have come of age in the years after World War II and would have worked a majority of their careers within the last 50 years. The practical implications are that buildings designed by these architects have not been considered for NRHP purposes and there is a smaller chance that the architects will have been studied and recognized by historians,

which may require a wider research effort. In addition, the evaluation itself must be treated differently to account for the "exceptional importance" rule, which states that the significance of the property being studied must be exceptional within the context of its importance.

Exceptional significance is a high bar, especially when considering the work of a master standard, and should be reserved for only the most important buildings. A building constructed within the last 50 years can be found to be an important work of a master and still not meet the requirements of NRHP Criteria Consideration G because it does not hold exceptional significance. There are two contexts that need development: the context for evaluating an architect as a master and the context for placing the building within the master's career. Unlike a building's date of construction which is a specific year, an architect's career spans decades. For sufficient historical perspective on whether an architect has achieved master status, it is crucial if a substantial portion of the architect's career occurred more than 50 years ago. Assuming there is sufficient historical perspective to assess the importance of the architect, there may not be sufficient information to properly understand whether the building is important in that architect's career. Therefore, if the building is less than 50 years old and is an important example of a master architect, it must also be exceptionally important to meet Criteria Consideration G.

Assessing exceptional significance requires a substantial amount of research. Not only should the evidence of this be clear, it should be overwhelming. An architect who has undeniably reached the pinnacle of his or her profession could be considered an exceptionally significant master. Likewise, the building being assessed must rise to an especially high level of significance within the architect's career.

4.3 Making a Definitive Decision

All of these steps inform one final conclusion: whether the subject building is an important work of a master architect. Making that definitive decision can be challenging. It must be substantially supported by research but ultimately is a subjective judgment. The steps discussed in the chapter should be used in determining significance. A "Work of a Master Checklist" and "Work of a Master Flowchart" provided in Chapter 6.2 outline these steps. Ultimately, a series of questions need to be answered.

- Does the architect qualify as a master?
    - Did they receive honors and awards from contemporaries for the quality of their work?
    - Were they featured in architectural publications or popular magazines for their designs?
    - Have historians recognized their importance based on their architectural greatness?

- Are their buildings listed in local, state or national registers for their architectural significance?

- Is the building important within their career?
  - Does it represent a particular phase in the development of their career?
  - Is it a worthy example of an aspect of their career?
  - Is it an important representation of a definable idea or theme of their craft?
  - Does it rise above other buildings within their career, especially those with similar styles or property types?
  - If the building is based on standardized plans, does it feature important design qualities beyond the standardized criteria? Does the architect's biography demonstrate importance within their career?
- If the building is less than 50 years of age, does it meet Criteria Consideration G?
  - Is there sufficient context to understand the architect's importance within broader trends?
  - Is the biography of the architect sufficient to understand the importance of the building within their career?
  - Does the building possess exceptional significance?
- Does the building retain integrity?
  - Does it retain overall integrity?
  - Doe it retain integrity of materials, design, and workmanship?

If the property is found to be significant, it is important to document it properly. The goal is to provide a complete record of the building and what makes it important. This will help support the case for significance to SHPOs, but also it will permit future cultural resources managers to easily identify potential effects under Section 106 project reviews. Such a recordation will include a well-researched and factually supported significance statement, complete assessment of the building's historic integrity, clearly established period of significance, proper determination of level of significance (local, state, or national), a comprehensive accounting of character-defining features, and property boundaries.

5. CASE STUDIES

This chapter is intended to provide examples of some of the most common work of master evaluation scenarios with case studies from Navy facilities across the county. These case studies represent work previously performed by the responsible facility and regional cultural resources offices, as well as additional research and analysis performed by JRP. This chapter starts with a look at a building found architecturally significant at Naval Submarine Base New London, Connecticut. It was designed by a local architect, Carl R. Blanchard, Jr., whose contributions to the profession did not receive the level of appreciation and recognition necessary to be considered a master under NRHP Criterion C. The case study incorporates a detailed biography into the comparative analysis.

The next section, Chapter 5.2, looks at buildings that are not architecturally significant and designed by prolific architects not considered masters. This case study is instructive because it falls into an area where the conclusion could be less obvious. The architects responsible for these buildings had productive careers and designed one or two buildings that are considered important; but, as demonstrated in the biography of this section, the architects never gained widespread recognition among their peers, critics or architectural historians. The analysis also demonstrates that even if these architects were considered masters, the military buildings they designed lacked architectural significance. Some of the buildings are interesting and slightly unique, but not important within their styles. Others are clearly standardized or routine buildings featuring mostly utilitarian design aesthetics.

In contrast, Chapter 5.3 presents cases of architecturally significant military buildings designed by master architects. These buildings are some of the best representations of their style and the architects are widely considered important in the profession. The buildings are also important works within the architects' careers when compared to other designs the architects did. Chapter 5.4 reviews a building eligible for listing in the NRHP as an important work of a master architect. In this case study, a standardized building was adapted by master architect Myron Hunt, and is found to be an important example of a phase of his career and aspect of his work. While not architecturally meritorious in its own right, it is also important as a representation of World War II temporary construction techniques. Most standardized-plan buildings are not going to rise to the level of importance within an architect's career, even if they are considered a master. This unusual case offers an example of how a standardized plan could represent the work of a master.

In Chapter 5.5, the case study of master architect William Pereira's Camp Pendleton buildings addresses the issue of assessing buildings under Criteria Consideration G for exceptional significance. This is followed by a case study of buildings that were designed by a master

architect and are architecturally significant, but not considered important works of the very prolific and renowned nineteenth century architect, Alexander Parris.

This chapter ends with three case studies of routine or prosaic work designed by architects considered masters for the purposes of NRHP. These examples represent the scenarios most likely to be encountered during evaluation projects. In each of these cases, the architects were widely praised in the local or regional area, though probably would not be recognized as national figures in the profession. Their careers were dominated by designs that made lasting impressions on the region and influenced the patterns of local architecture. However, as these case studies illustrate, the military buildings they designed had little impact in their careers or on the profession. In many cases, they were based on standardized designs and featured relatively minimal individualized expression of an aesthetic. As such the buildings do not represent important works of architects considered masters under NRHP Criterion C.

These case studies demonstrate the process of evaluating buildings under the master architect aspect of NRHP Criterion C. They rely on the guidance provided in Chapters 3 and 4. These case studies used the research techniques and sources recommended in this guidance document to prepare the biographies of the architects. The biographies are suitably developed to properly analyze the architects' importance within the profession and assess the importance of the buildings within the architects' careers. Each case study concludes with an analysis of the architect and the subject buildings.

5.1 Architecturally Significant Buildings by Architects Not Considered Masters

5.1.1 Naval Submarine Base New London – Carl Blanchard

CARL R. BLANCHARD, JR.

- Architect
- Years Active: 1935 – 1976
- Styles Preferred: Modernism; New Formalism; Brutalism
- Property Types: Religious, educational
- Best Known For: College Memorial Union and Connecticut Hall at Southern Connecticut State College, New Haven, CT; Alterations of Center Church in New Haven, CT, and South Congregational Church in Granby, CT
- Other notable accomplishments: President of AIA Connecticut Chapter; Chair of Architecture and Engineering Committee of New Haven Citizens Action Committee

The Shepherd of the Sea Chapel at Naval Submarine Base New London was constructed in 1966 on a design by New Haven architect Carl R. Blanchard, Jr. (**Figure 24**). Commissioned by the Navy, the building was located just outside of Naval Submarine Base, New London, in Groton, Connecticut. In 2011-2012, Public Archaeology Laboratory (PAL) surveyed the Cold War-era facilities of the base in a historical architectural inventory. Though the church was not yet 50 years old, it was identified as possessing sufficient architectural merit to warrant listing in the NRHP under Criterion C, with state and local significance, once the building reached the half-century mark in 2016. The report described the chapel's modern design and construction techniques as "superlative when compared to other identified examples of Navy religious construction for the Cold War period."[58] The Connecticut SHPO and New London's Environmental Division Director both concurred with the findings, describing the building as "representative of a post-World War II trend towards Modernist construction."[59] Neither report nor concurrence correspondence indicated that the building was evaluated as a significant work of a master. As a case study, the example of Blanchard's Shepherd of the Sea Chapel offers a look at an architecturally significant building designed by a local architect. Ultimately Blanchard is deemed not a master for the purposes of NRHP, in part because he had relatively few examples of architecturally important designs and has not been generally recognized for his greatness or consummate skill in architecture.

[58] Public Archaeology Laboratory, Inc. (PAL), "Architectural Resources Survey, Cold War-Era Resources, U.S. Naval Submarine Base New London, Groton, Connecticut," prepared for U.S. Navy Submarine Base New London, Groton, Connecticut, September 2014, 55, 57.

[59] Michael Brown, Environmental Division Director, to Daniel Forrest, Connecticut SHPO, "Conveyance of Building 1001 (Shepherd of the Sea Chapel)," 18 September 2015.

Figure 24: The Shepherd of the Sea chapel in a photograph from 2012. The skylight monitor running the length of the building's peak is a later addition that was not part of Blanchard's original 1965 design (photo: PAL, 2014).

Biography

Carl R. Blanchard, Jr. was born in New Haven, Connecticut in 1912, the son of a prosperous bakery owner. He attended New Haven High School, followed by the Pratt Institute in Brooklyn, and graduated with an architectural degree in 1934. After a year of additional study at Yale University, Blanchard took employment as a junior architect with the Resettlement Administration and the State of Connecticut's Public Works Department. In 1938, after a three-year apprenticeship, he attempted to establish his own firm but was unable to build an adequate client base in an economy still crippled by the Great Depression. By 1940, he was clerking at an insurance company while his wife did janitorial work at the Yale. With the start of World War II, he returned to work as a senior draftsman for the major design firm of Fletcher-Thompson, and later served as a technician supervising plant layouts at defense factories.[60]

[60] For understanding Blanchard's career, the chief resources used throughout this discussion are the questioners and directories maintained by the American Institute of Architects: Carl R. Blanchard, Jr., "Questionnaire for Architects' Roster And/Or Register of Architects Qualified for Federal Public Works, American Institute of Architects," November 1, 1946, and "Architect's Roster Questionnaire, American Institute of Architects," March 31, 1953; George Koyl, ed., *American Architects Directory*, First Edition (New York: R. R. Bowker Co, 1956), 46-47; George Koyl, ed., *American Architects Directory*, Second Edition (New York: R. R. Bowker Co, 1962), 60; John Gane, ed., *American Architects Directory*, Third Edition (New York: R. R. Bowker Co, 1970), 77. Also United States of America, Bureau of the Census. *Sixteenth Census of the United States, 1940*. Washington, D.C.: National Archives and Records Administration, 1940; accessed through Ancestory.com, March 2016.

Blanchard relaunched his own firm in September of 1944. He survived the first few years by designing a mix of commercial and residential properties, but seems to have had a different career direction in mind. In 1948, he received his first major commission to oversee a $100,000 alteration to Center Church, an historic 1639 building on New Haven's public green. He later served as a deacon for the church. In 1960, he planned a second extensive renovation that restored the building's interior to its mid-nineteenth century appearance. More church work followed and he oversaw major additions or alterations to at least ten churches over the next five years. His design for these commissions was deliberately understated, intended to blend with a church's existing appearance and limit modern touches to classroom or office spaces. At least two of the churches that he designed additions for — Center Church and South Congregational Church in Granby — are today listed as contributors to NRHP historic districts (**Figures 25** and **26**).[61]

Figure 25: Center Church on the New Haven Green seen in the early twentieth century (photo: Library of Congress).

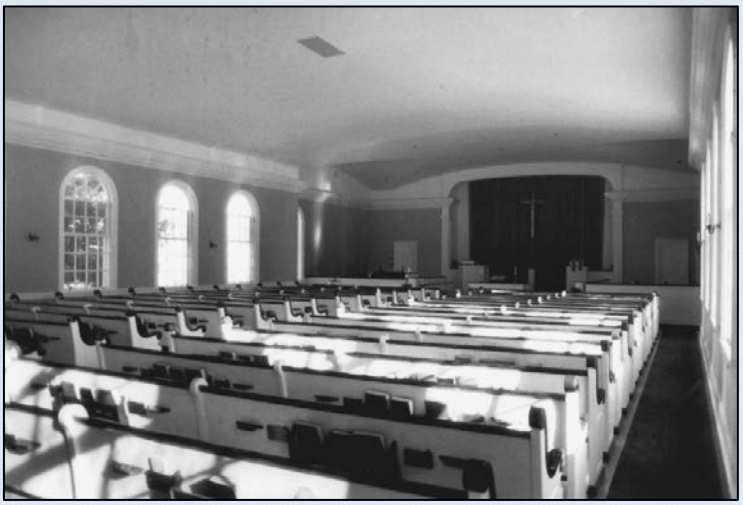


Figure 26: The interior of South Congregational Church in Granby, Connecticut from 1985 (photo: Granby, 1985).

In 1950, Blanchard's career branched off in two new directions as he took on large public housing and educational projects. He worked on the first such projects largely as an associate architect, handling a portion of the design work for a lead firm. Research suggests his patrons were Douglas Orr and R. W. Foote, two established New Haven architects. Blanchard had worked under Foote at the Resettlement Administration and likely came to his attention for that reason. In 1950, Orr and Foote were most famous for their design of Elm Haven (1939-

[61] Historic Sites Survey, National Register of Historic Places, Inventory—Nomination Form, New Haven Green Historic District, June 1971; David Ransom, National Register of Historic Places, Inventory—Nomination Form, Granby Center Historic District, February 1985; "Center Congregational Church, The Green, New Haven, Conn.," circa 1900 - 1915, Detroit Publishing Company Photograph Collection, Library of Congress.

1941), a large public housing project that initiated New Haven's aggressive slum clearance program. The problem of inner city poverty had only deepened during the war as industrial jobs departed the old urban centers in favor of suburban locations in the West. New Haven was thus compelled to resume its public housing efforts after the war, including constructing the first high-rise projects in Elm Haven, which Blanchard assisted designing (**Figure 27**). He also planned additions or alterations for inner city schools, and worked with teams designing entirely new educational complexes in the expanding suburbs.[62]

Figure 27: The Elm Haven project high-rises are at the rear of this 1986 photograph, behind an unrelated factory building. By the mid-1980s, national attitudes on urban renewal programs had changed dramatically from 1952, when Blanchard optimistically helped design this complex. In national reporting the buildings were referred to as "the notorious Elm Haven high-rises," prime examples of "the disasters of the 50's and 60's." They were demolished in 1989 (photo: Sacco 1986).

A strong element of service ran through Blanchard's career, and it is probable that his greatest architectural impact was realized through the committees that he served on and headed, rather than from the individual buildings that he designed. In 1953, Richard C. Lee, a Democratic reform candidate, won New Haven's mayoral campaign. He immediately launched an expanded

[62] Rachel Carley, *Tomorrow is Here: New Haven and the Modern Movement* (New Haven: New Haven Preservation Trust, 2008), 12-13; William Sacco, Historic American Engineering Record, Winchester Repeating Arms Company: Track K Shooting Range, Rear Section of 125 Munson Street, New Haven, CT, Photographs, Written Historical and Descriptive Data, January 1986. On the buildings' changing reputation: "Public Housing Entering New Era," *New York Times*, 5 February 1989; "Uproar in New Haven on Public Housing Role," *New York Times*, 30 September 1991.

urban renewal program that radically remade the city during the mayor's sixteen years in office. To coordinate and put a public face on the efforts, Lee established a Citizens Action Committee (CAC) that brought together the city's business, education, and labor leaders. He asked Blanchard to chair the important Architecture and Engineering Commission. Blanchard held the post through at least 1962 and subsequently served in other similar capacities as a director of the New Haven Chamber of Commerce from 1960 to 1965, with a seat on the Urban Renewal Committee, and as secretary for the New Haven Town Planning and Zoning Commission from 1966 through at least 1970. He also focused on educational efforts, serving as president of the New Haven P.T.A. and as a member of the city's School Study Commission.[63]

Under Mayor Lee's direction, the CAC brought modern architecture to New Haven on a scale intended to rival Yale University. In keeping with the tradition of Le Corbusier and the Bauhaus, Modernism, in urban renewal, involved far more than just a veneer of style. Architectural historian Rachel Carley has argued that "for Mayor Lee, as for other urban leaders of the day, the modern movement represented a holistic solution to poverty and moral injustice by addressing residential neighborhoods and city centers, and by eradicating the old, decaying buildings symbolic of a dying city."[64] This likely is why Blanchard was appointed head of the Architecture and Engineering Commission, for there was little in his background that suggested a stylistic affinity with modern design. Instead, his commitment to housing, schooling, and religious worship seemed to originate from social and moral concerns. Whatever his initial motivation, the position made him a prominent public advocate for modern design and brought him into close working contact with a number of the leading architects of the day, including Ludwig Mies van der Rohe, Louis Kahn, Paul Rudolph, Kevin Roche, and I.M. Pei. Blanchard also developed close relationships with the Yale architectural faculty. He established his personal office directly across from campus, and shared office space and collaborated with Henry A. Pfisterer, a member of the architecture department. As a result, he remained in close touch with the latest trends in architecture, even as his own work largely involved projects like junior high schools and golf courses that did not offer the luxury of doing cutting edge design.

Over the course of his career, Blanchard received several opportunities to create more stylistically assertive buildings, the two most prominent of which were for the campus of Southern Connecticut State College. The school, formerly a two-year teachers' college, expanded in the post-war education boom and was relocated in 1954 to a new campus two miles northwest of Yale. Blanchard was commissioned to design the second building on campus, the College Memorial Union, a combined residential, recreational, and dining center (**Figure 28**). Completed in 1959, the building had a New Formalism-styled façade of repetitive, classically-inspired columns. To create the column's inverted pyramids, the construction made

[63] Carley, *Tomorrow is Here*, 19-20, 82; "Citizen' Action Committee, New Haven: Structure and Membership (partial), 1956, 1958, 1961," Yale University Library, n.d.
[64] Carley, *Tomorrow is Here*, 20.

use of emergent technology that folded the forms out of hollow concrete shells. New Formalism is generally identified as originating in 1954 with Edward Durrell Stone's New Delhi American Embassy, so Blanchard was working in a very contemporary style. The New Haven Preservation Trust has described the building's innovative construction methods as "advanced and bold" and identified the hall as a likely contributor should a Southern Connecticut State University historical district be created.[65]

Figure 28: Set on a hill, the College Memorial Union (1959) is three stories on its front (south) elevation (photo: Karmazinas 2009).

A decade later, the college had outgrown the original dining hall and Blanchard was commissioned to design Connecticut Hall, a replacement dining facility. Completed in 1970, the concrete building featured a bronze oversized mansard roof and deeply recessed windows separated by projecting concrete fins (**Figure 29**). The crouched massing of the building, combined with the suggestion of corner tower elements, gave the hall an imposing fortress-like character. This contrasted strongly with the interior experience of the dining areas which had high ceilings with full-width windows that were sited to offer panoramic views of the campus and its picturesque setting. The concrete construction was reminiscent of works by Le Corbusier

[65] Lucas Karmazinas, The New Haven Preservation Trust, "Historic Resources Inventory – Building and Structures: Old Student Center (Southern Connecticut State University)," 20 August 2009.

in the early 1950s and fit within the Brutalist style that flourished from the 1950s into the 1970s. Though not yet age-eligible for normal consideration of historical listing, the hall has been described as "an authoritative building" that gives focus to the campus, and it would likely warrant status as a contributor to a university historical district.[66]

Figure 29: The left photograph shows the front (north) elevation of Connecticut Hall (1970) shortly after its completion. The front corner tower elements are today largely obscured by vegetation. On right is the rear of the building as seen in 2009 (photo: Karmazinas 2009).

Both of Blanchard's campus commissions required economizing and this is apparent in their use of inexpensive construction materials and limited design features. The New Haven Preservation Trust offered a tempered judgment in maintaining that while the State College buildings do not rise to the same level of national prominence as do Yale's, they possess enough strength of design to merit state and local significance. Neither of Blanchard's campus buildings is perhaps fully realized as a strong and original example of Modernism, but both are highly creditable works that make apparent his ability to design in the most current of styles.[67]

Blanchard received the commission for the Shepherd of the Sea Chapel in approximately 1965, in between the construction of the two college buildings. The chapel appears to have been his only military commission. It has not been identified why the Navy selected him for this project, but he had by then accumulated an extensive history of religious design and had impeccable professional credentials. He was even serving as the president of the Connecticut chapter of the AIA at the time, and it is known that the military favored architects with established careers in the profession.

[66] Elizabeth Mills Brown, *New Haven: A Guide to Architecture and Urban Design,* (New Haven: Yale University Press, 1976), 57; Lucas Karmazinas, The New Haven Preservation Trust, "Historic Resources Inventory – Building and Structures: Connecticut Hall (Southern Connecticut State University dining facility)," 20 August 2009.

[67] The New Haven Preservation Trust, "Survey of Modern Architecture in New Haven, Connecticut: Phase II, Inventory of Historic Resources," June 2011, 15; Carley, *Tomorrow is Here*, 74.

In designing the chapel around an A-frame form, Blanchard was following well-established architectural precedent. Gretchen Buggeln, an historian of mid-century religious architecture, has identified the A-frame as likely the most common church style in the expanding suburban neighborhoods of the 1950s and early 1960s. Relatively inexpensive and simple to construct, the form appealed to newly organized, modestly endowed congregations. The open, up-sweeping form balanced tradition and modernity, while offering a near perfect symbolic fit for the buildings' spiritual purposes. A number of major architects had already taken to the form, particularly in the northern states, including Frank Lloyd Wright for his Unitarian Meeting House in Shorewood Hills, Wisconsin (1946; **Figure 30**) and Eero Saarinen for the chapel at Concordia College in Illinois (1953; **Figure 31**).[68]

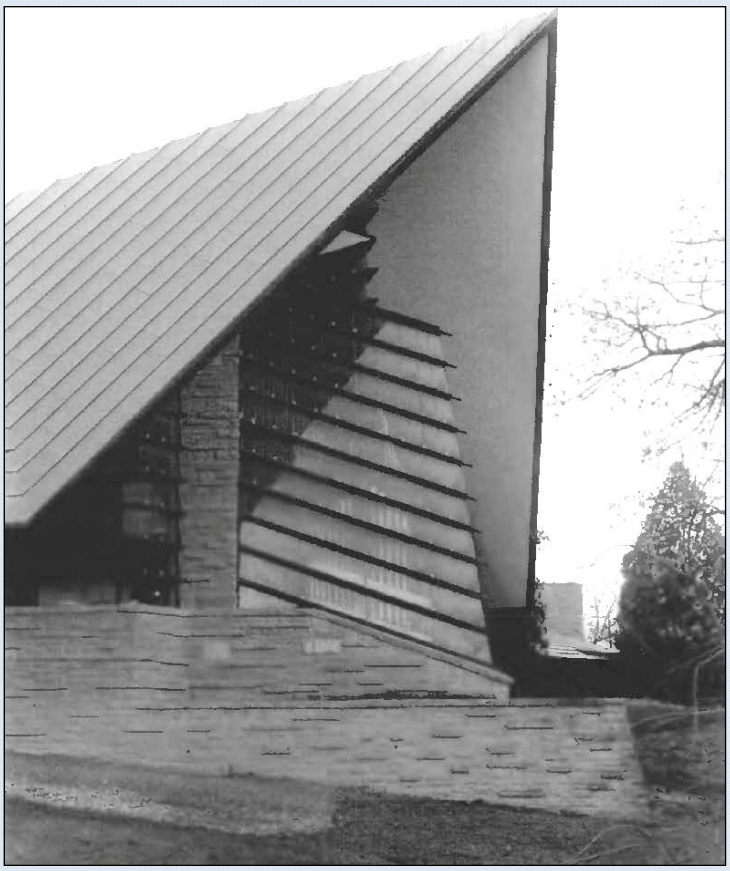


Figure 30: Frank Lloyd Wright's Unitarian Meeting House (photo: Dean 1972).

[68] Gretchen Buggeln, *The Suburban Church: Modernism and Community in Postwar America* (Minneapolis: University of Minnesota Press, 2015); Esley Hamilton and Catie Myers, "Mid-Century Modern Church Survey: Religious Structures 1940-1970 in St. Louis County," prepared for Department of Natural Resources, Missouri, 2009-2010; "Concordia Theological Seminary (originally Concordia Senior College), Fort Wayne, Indiana, 1953-58, Distant view," circa 1953 - 1958, Balthazar Korab Archive, Library of Congress; Jeffrey M. Dean, National Register of Historic Places Inventory – Nomination Form, First Unitarian Society Meeting House, Sherwood Hills, Wisconsin, July 1972.

Figure 31: Eero Saarinen's Kramer Chapel at Concordia College (photo: Library of Congress).

Military architects also favored the design and it was employed regularly on Navy bases during the post-war decades. Examples include the Depot Chapel at Parris Island (1942), the All Faith Chapel at NAWS China Lake (1957), and the Chapel of the Pines at Naval Construction Battalion Center, Davisville, Rhode Island (1963) (**Figure 32**). The style reached its military peak with the Air Force Academy Chapel, designed by SOM starting in 1954, and completed, after considerable controversy, in 1962.[69]

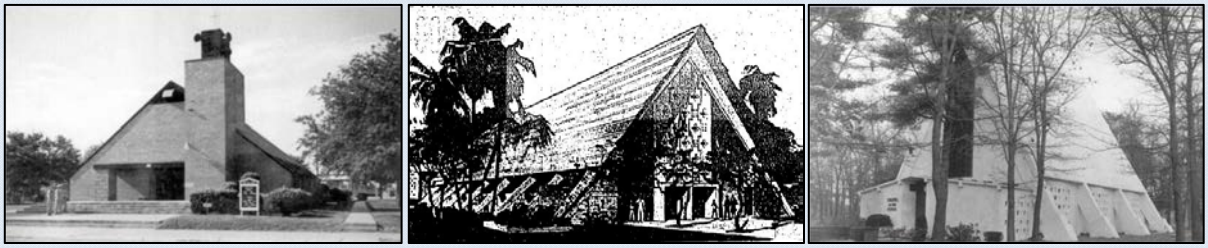


Figure 32: Three A-frame chapels at Navy bases dating from WWII through the early 1960s. From left: Deport Chapel at Parris Island (1942), All Faith Chapel at NAWS China Lake (1957), and Chapel of the Pines at Naval Construction Battalion Center, Davisville, Rhode Island (1963) (photos (l-r): Montano, 2008; *Los Angeles Times* 1957; Schroder and Ema, 1999).

[69] Karen S. Montano, *Parris Island,* Postcard History Series (Charleston, SC: Arcadia Publishing, 2008), 60; Walter K Schroder and Gloria A. Emma, *Davisville and the Seabees,* Images of America Series (Charleston, SC: Arcadia Publishing, 1999), 61; Moore, "A Guide to the Architecture and Engineering Firms of the Cold War," 31-33; Hampton, "Historic Context for Evaluating Mid-Century Modern Military Buildings," 47-55; "Chapel Dedicated at Naval Test Base," *Los Angeles Times* 1957 Nov 10, F2.

By the time Blanchard completed the Shepherd of the Sea Chapel in 1966, the form had likely already passed its peak appeal. Buggeln argues that by the early 1970s the A-frame churches were "rendered almost invisible by their ubiquity." Religious thinkers began to fear that the form's easy invocation of the spiritual bordered on the facile, and architects started to advocate for less common designs. Nonetheless, Blanchard's building was a strong example of the mid-century design style, and it introduced Modern architecture to a small military-base town in a manner that was welcoming to the public. The chapel served as the primary location for religious services at Submarine Base, New London for nearly fifty years before closing in February of 2012. Carl Blanchard retired from active design work around 1976, a decade after completing Shepherd of the Sea. He lived another twenty years in New Haven, and died in 1996 at age 84.[70]

Analysis

Carl Blanchard does not appear to meet the definition of a master for the purposes of NRHP Criterion C. Much of his career in architecture was spent at the local level in and around New Haven, Connecticut, including projects at Southern Connecticut State College. These projects received some level of recognition, but research did not indicate he was bestowed with awards or honors for his designs. The New Haven Preservation Trust, a local organization dedicated to informing and preserving historically and architecturally important buildings, does not include Blanchard in their list of architects who made important design contributions to the local community.[71] His most important contributions to local architecture, instead, appears to have been in helping to steer the direction of designs in New Haven toward Modernism as chair of the Architecture and Engineering Committee on the New Haven Citizens Action Committee. However, because a number of his later and larger works like the chapel and Connecticut Hall at Southern Connecticut State College are just now approaching the 50-year age limit, care should to be taken to assess his full career. Future development of the context of his work may reveal he had a larger impact on the profession than is presently apparent.

This Shepherd of the Sea Chapel at Naval Submarine Base New London has been evaluated as significant under NRHP Criterion C as an example of Modern architecture within the town of Groton, Connecticut, where it is located. As stated in the evaluation of the building, "the design and construction techniques in evidence at the chapel are superlative when compared to other identified examples of Navy religious construction for the Cold War period."[72] Based on research available on Blanchard's career, it does not appear the Shepherd of the Sea Chapel was an important example of his work, even if he were considered a master.

[70] Buggeln, *The Suburban Church*; "Shepherd of the Sea to Close in February," *The Dolphin*, 2012 January 26; U.S. Social Security Applications and Claims Index, 1936-2007; Connecticut Death Index, 1949-2012.
[71] The New Haven Preservation Trust, "Inventory of Historic Resources," 17.
[72] PAL, "Architectural Resources Survey," 57.

5.2 Buildings by Prolific Architects Not Considered Masters

5.2.1 NAS Lemoore – Milton T. Pflueger; Urbahn, Brayton & Burrows

In August 1957, the Navy awarded the New York architectural engineering firm Urbahn, Brayton & Burrows and its San Francisco partner, architect Milton T. Pflueger, a contract to design many of the original buildings at NAS Lemoore. The project was driven by two competing factors. Located in a remote area of California's San Joaquin Valley, the station was intended to act as a community complete with modern amenities; but the design of the advanced air station from scratch was to be accomplished within a tight budget. These two factors were not lost on the architect and engineering team when they were hired to prepare plans for wide range of operational, personnel, and administration buildings, from service stations and storage buildings to the main administration facility and the MWR community center (**Figures 33** and **34**).

MILTON T. PFLUEGER

- Architect
- Years Active: 1929-ca. 1990
- Styles Preferred: Modernism, New Formalism, International Style; Stripped/Classical Modernism
- Building Types: Government, educational, residential
- Best Known For: Holy Names University, Oakland, CA; Richmond Civic Center, Richmond, CA; Department of Motor Vehicles, Sacramento, CA; buildings at University of California, San Francisco, City College of San Francisco, and Stanford University

URBAHN, BRAYTON & BURROWS

- Architecture and engineering firm
- Years Active: ca. 1954-1962
- Styles Preferred: Modernism
- Building Types: Government, educational, military
- Best Known For: National Security Agency Headquarters, Fort Meade, MD

In 2012, the buildings were evaluated as not eligible for listing in the NRHP in part because they were not important works of master architects. The use of this consortium of architects and engineers brought unique challenges to the research and evaluation these buildings. When assessing the work by a team or architectural firm, it is often difficult to determine the precise individual who was directly responsible for the design work. Such was the case at NAS Lemoore, where it appears a variety of individuals worked on drawings for the buildings. Richard Mark "R.M." Brayton officially submitted the plans, suggesting he was project manager, but the designs reflected specific and general elements Pflueger utilized in previous and subsequent projects, signifying his level of involvement in guiding the architectural principles on this project. Based on this information, the evaluation assessed whether Pflueger or Brayton were masters, concluding that despite

having successful careers, they did not appear to gain the level of recognition necessary.[73] This case study is a good example of buildings of varying architectural sophistication – none of which are considered significant for their architecture – designed by architects who do not meet the criteria for master architect.

Figure 33: NAS Lemoore Facility 822, Base Theater (photo: JRP).

Figure 34: NAS Lemoore Facility 740, Telephone Exchange Building (photo: JRP).

[73] JRP Historical Consulting, LLC, "Base Wide Historic Buildings and Structures Survey and Evaluation at Naval Air Station (NAS) Lemoore, California," Navy contract N62473-11-D-2220, prepared for Naval Facilities Engineering Command Southwest, September 2013, 83.

Biography

Born in New York, Brayton earned a degree in architecture from Cornell University in 1939 before joining the Navy where he was stationed at a naval air base in American Samoa as the Charge Architect. Following the war, Brayton took his architecture degree and experience to Shreve, Lamb and Harmon, a New York firm best known for its design — nearly two decades before Brayton's time — of the Empire State Building. The firm's principal projects included office buildings and the architects often used the styles popular at the time. As with the Empire State Building, Shreve, Lamb and Harmon styled many of their 1930s buildings in Art Deco motifs. The list of skills Brayton took away from his time with Shreve, Lamb and Harmon is likely long, and management of large projects may have been among them. Brayton left Shreve, Lamb and Harmon to work as a draftsman for a small New York firm, though the details of his activities during this period remain vague.[74]

The exact point at which Brayton joined Max Otto Urbahn and John Shober Burrows to form their own firm remains unclear, though it appears to have been in the mid 1950s. During Brayton's tenure with Urbahn, Brayton & Burrows, the firm was awarded several commissions for military and college campuses in part because of Urbahn's extensive experience in master planning, though Brayton's military experience likely helped. The firm's versatility also allowed it to work on a variety government projects, primary education schools, recreational buildings, and residential properties. Despite bringing together the interests of three separate partners, Urbahn, Brayton & Burrows tended to agree on its overriding architectural aesthetic, relying heavily on Modernist designs. Although none of the principals at Urbahn, Brayton & Burrows rose to the level of national prominence, Urbahn was the most recognized of the three. Having received architecture and fine arts degrees from University of Illinois and Yale in the 1930s, Urbahn worked with large architectural firms in the years leading up to World War II. After applying his skills in the Army Corps of Engineers during the war, he co-founded Reisner & Urbahn in 1945. He became known as an effective project manager, someone who could successfully assemble a sizeable team of experts from different fields to design multifaceted complexes. His most notable projects were the iconic Vehicle Assembly Building at Cape Canaveral, Florida and the design of the National Security Agency (NSA) headquarters in Fort Meade, Maryland. Urbahn's leadership capabilities were recognized by the profession when he became president of the AIA between 1971 and 1972.[75]

By 1954, Reisner had left the firm and Brayton and Burrows became partners of the short-lived Urbahn, Brayton and Burrows. After only a few years, Burrows departed, and firm continued on

[74] David W. Moore, Jr, Justin B. Edgington and Emily T. Payne, "Blueprints for the Citizen Soldier: A Nationwide Historic Context Study of United States Army Reserve Centers," Department of Defense Legacy Resource Management Program, July 2008, 63-64, 91.

[75] "Max O. Urbahn Is Dead at 83; Designed Vast NASA Building," *The New York Times*, 13 July 1995; Moore, Edgington and Payne, "Blueprints for the Citizen Soldier," 63-64, 91.

as Urbahn & Brayton for another half-decade or so. During this time, Brayton appears to have led several of the company's educational projects, including high schools and junior high schools throughout New York. Along with Burrows, he contributed to the NSA headquarters and worked directly with Pflueger on NAS Lemoore. None of these projects, including NAS Lemoore, gained Brayton wide-spread praise or recognition and, shortly after his NSA work, Brayton accepted a position as Director of Physical Plant Development at the University of New Hampshire, where he appears to have drifted into relative obscurity.[76]

The other member of the team, Milton Pflueger, had nearly 30 years of experience designing buildings in California, especially in the San Francisco Bay Area, when he took the commission for NAS Lemoore. Having received a private education in architecture, Pflueger went to work with the renowned San Francisco architectural firm of Bakewell and Brown, known for their numerous landmark contributions to San Francisco's built environment during the early twentieth century, among which were private residences, Coit Tower (1933) and San Francisco City Hall (1913-15). Pflueger joined the firm during the period when it designed such works as Pasadena City Hall (1927) and the Pacific Gas and Electric (PG&E) Building (1923-25) in San Francisco. The Pasadena City Hall represents Mediterranean Revival style architecture with strong influences of Spanish Colonial Revival style and is listed in the NRHP. A 17-story Beaux-Arts office tower, the PG&E Building is listed in the NRHP. While both are eligible in part for their architecture, neither building is specifically identified as an important work of a master. As a young architect, Pflueger's contributions to these designs were likely supportive of the principal architects. In fact, the work likely had more impact on him, especially the way in which architecture can be utilized to impact the built environment. Following a half-decade stint with Bakewell and Brown, in 1929 Pflueger joined the firm of his widely successful older brother Timothy Pflueger, who had amassed an impressive list of architectural accomplishments during his career. Indeed, by the time he died unexpectedly in 1946 at the age of 54, the elder Pflueger had completed designs on a number of Bay Area landmarks, including two 26-floor Art Deco office towers in San Francisco — at 450 Sutter Street (1929) and the other the Pacific Telephone Building (1925) — the Castro Theatre (1922) and Alhambra Theatre (1926) in San Francisco, and the Paramount Theatre (1931) in Oakland. Following Timothy Pflueger's death and Milton's subsequent rise to head of the Pflueger firm, Milton began to distinguish himself in Northern California, winning commissions for commercial, government, and educational projects.[77]

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[76] "Max O. Urbahn Is Dead at 83; Designed Vast NASA Building," *The New York Times*, 13 July 1995; Moore, Edgington and Payne, "Blueprints for the Citizen Soldier," 63-64, 91; Koyl, ed., *American Architects Directory*, First Edition,61, 76, 570; Koyl, ed., *American Architects Directory*, Second Edition, 77, 96, 716; Gane, ed., *American Architects Directory*, 99; R. Randall Vosbeck, Tony P. Wrenn, and Andrew Brodie Smith, *A Legacy of Leadership: The Presidents of the American Institute of Architects, 1857-2007* (Washington, DC: The American Institute of Architects, 2008), 124-126.

[77] Lloyd Watson, "New Role for Pioneer S.F. Architect," *San Francisco Chronicle*, 19 February 1986, 27; "History," John Pflueger Architect, AIA, webpage, accessed at www.johnpfluegerarchitect.net on 3 December 2012; Koyl, ed., *American Architects Directory*, First Edition, 432.

Of Milton Pflueger's many commissions during the second half of the century, his work at Holy Names University (1955-1958) gained him the greatest attention, even if, on the larger scale of architecture throughout the state and nation, it remained relatively poorly recognized. Situated atop a hill in Oakland, California, all of the college campus buildings were designed by Pflueger, who applied a Modernist aesthetic to the buildings. The most prominent campus building was the tall McLean Chapel which featured a broad façade with unique geometrical designs and sat perched above most of the campus (**Figure 35**). Aside from its location on campus and distinct geometric elements, though, the building was by-and-large modest. In an era when architects often molded religious buildings into fascinating designs, the McLean Chapel lacked the level of sophisticated and distinguishing qualities that had come to be the norm. The remaining Holy

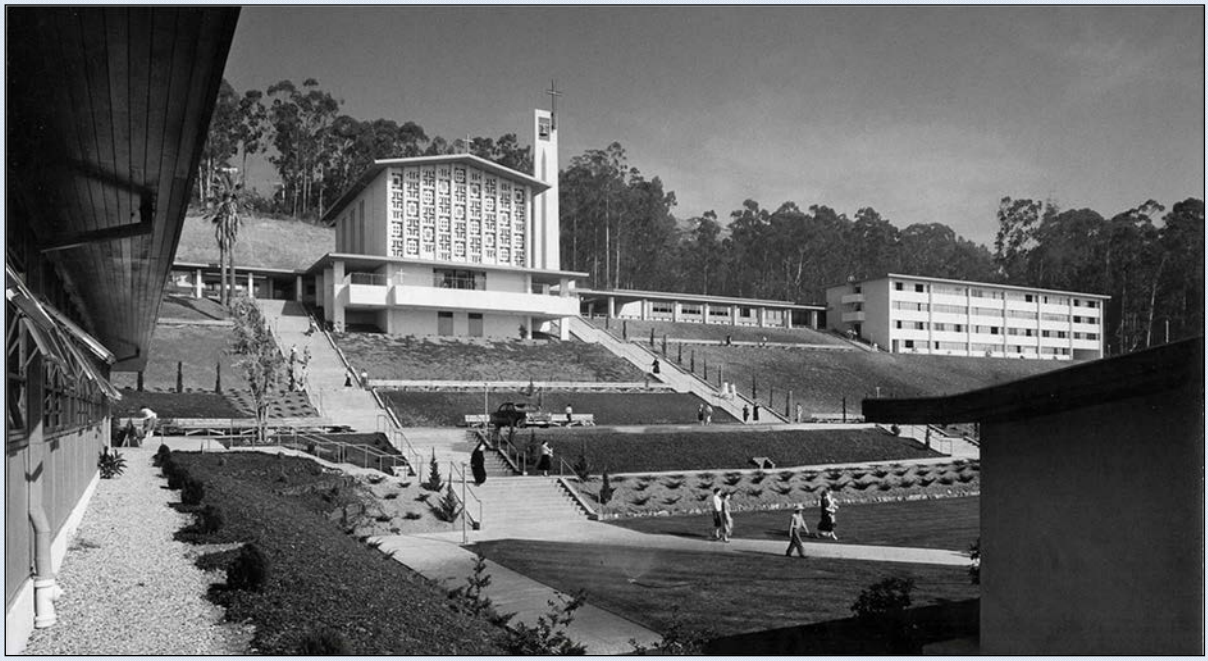

Figure 35: Holy Names University, circa 1957, featuring the prominent McLean Chapel (center left) (photo: Holy Names University).

Names University buildings were uniform in appearance and even more reserved than the chapel, featuring low-pitch or flat roofs, little decorative elaboration, and extensive window openings. While these were some of the tenets of Modernist architecture, little set these buildings apart from the vast number of similarly styled educational buildings being erected across the country. The windows of one-story buildings were generally vertically aligned in sets of two or three, and grouped together along a large section of wall, creating large bays that allowed extensive natural light into the classrooms, which were features widely used in educational facilities (**Figure 36**). Multi-story buildings used rows of windows across each floor,

emphasizing, along with the wide eaves, horizontality. Pflueger went on to use several of these architectural elements found at Holy Names University for work he did at NAS Lemoore.[78]

Figure 36: Wall of windows on Holy Names University building (photo: Holy Names University).

Other notable works by Milton Pflueger include the Department of Motor Vehicles building in Sacramento (1953); Sunnyvale Civic Center (1958-1960); Cowell Hall at California Academy of Science (1968); several buildings at University of California, San Francisco, City College of San Francisco, and Stanford University; a collaborative project with his brother on the Richmond Civic Center complex (1945-1949); and, as managing principal of a joint venture, four military hospitals including a major addition to Walter Reed Army Medical Center. Also featuring Modernist designs, many of these buildings and complexes contain similar appearances to facilities found at NAS Lemoore. While some, like the Richmond Civic Center, garnered local interest, none appeared to have been considered significant or influential contributions to Modernist architecture in the postwar period. In the late twentieth century, Milton Pflueger's son, John Pflueger rose in the ranks of the architectural firm, eventually succeeding his father as the company's managing partner. Milton Pflueger died in 1993.[79]

[78] "Milton T. Pflueger, College of the Holy Names architect," *Preserving Historical HNU: Documenting Our Rich History Through Our Photographic Archives*, accessed at https://www.hnu.edu/about/history/milton-t-pflueger-college-holy-names-architect on April 2016; Koyl, ed., *American Architects Directory*, Second Edition, 549; Gane, *American Architects Directory*, 715-716.

[79] *The AIA Historical Directory of American Architects*, s.v. "Pflueger, Milton T."; "Milton T. Pflueger, College of the Holy Names architect," Pacific Coast Architecture Database, "Architects: Pflueger, Milton," accessed at https://digital.lib.washington.edu/architect/architects/532/ on April 2016; John King, "Richmond Civic Center: Where the Past Meets the Future," *San Francisco Chronicle*, 26 May 2009; Lloyd Watson, "New Role for Pioneer

NAS Lemoore was a relatively low-profile, tightly budgeted installation intended to replace aging naval air stations located in the densely populated San Francisco Bay Area and be an advanced jet training facility. Its primary goal, therefore, was functionality. To the extent architecture was important, it was to create a pleasant setting for those stationed at this relatively isolated rural station. Based on the fact that the Navy hired Brayton and Pflueger, it is apparent they wanted the buildings to be consistent with popular architectural trends emphasizing modern aesthetics. However, the $100 million allotted for the new installation did not permit an elaborate emphasis on architecture. In their Preliminary Reports for the Welfare and Recreation Center, one of the more interesting facilities on station, the architects suggested that not only were they not asked to prepare elaborate designs, the budget did not allow it. "The design is reasonable, adequate, and in keeping with requirements … ," Brayton and Pflueger reported, stating later that, "[t]he estimated cost is economical." In essence, NAS Lemoore was not budgeted for a showcase architectural program, and therefore did not receive one.[80]

In keeping with their budgetary restrictions, Pflueger and Brayton's designs varied in quality and sophistication based on the buildings' location and function. Their commission consisted of a broad range of military buildings, including a mixture of utilitarian, MWR, office, and barracks buildings. Just as the functions of these buildings varied greatly, so did the extent to which Pflueger and Brayton applied overtly Modernist characteristics in their designs. Many of the utilitarian buildings lacked any elaborate or significant architectural elements that would distinguish them from similar buildings on any other military base. Most of the buildings that supported personnel, administrative, and MWR functions were somewhat more elaborate, but by-and-large remained modest examples of the architectural style. Pflueger and Brayton prepared the most extensive and elaborate designs for a select few MWR buildings, including the Welfare and Recreation Center.[81]

Overall, these original designs are best categorized as stripped or classical Modernism with clear influences from the International Style. Most of the buildings, from the most prosaic to the more elaborate, feature several unifying elements. Flat or low-pitch roofs, exposed concrete structural posts, and rows of windows are key elements that can be found on many buildings, and helped emphasize the intersection of vertical and horizontal lines. The buildings also shared many of the same materials, including a near-universal application of concrete

S.F. Architect," *San Francisco Chronicle*, 19 February 1986, 27; "History," John Pflueger Architect, AIA, webpage, accessed at http://www.johnpfluegerarchitect.net/pflueger_history.html on February 2016; David Gebhard et al, *A Guide to Architecture in San Francisco and Northern California* (Santa Barbara, CA: Peregrine Smith, Inc., 1973), 90, 152, 173, 230; Susan Dinkelspiel Cerny, *An Architectural Guidebook to San Francisco and the Bay Area* (Layton, UT: Gibbs Smith, Publisher, 2007), 277, 347.

[80] Urbahn, et al., "Preliminary Engineering Report for Welfare & Recreation Center," 5.

[81] JRP, "Base Wide Historic Buildings and Structures Survey and Evaluation at Naval Air Station (NAS) Lemoore, California," 2014, 83.

block walls, which added to the restrained appearance of the designs. Poured concrete frames, concrete roofs, and aluminum-framed windows and doors were also widely used features. The roofs often featured wide eaves, helping to shade the buildings from the hot San Joaquin Valley sun and protect the walls from rain splash-back. This functional element also worked on an aesthetic level, emphasizing horizontality of the buildings, a feature often utilized in Modern architecture. Many of the buildings included vertically aligned, multi-light windows, which on several buildings were used in groups and took up much of the wall space. In combination with wide eaves, the extensive windows helped provide plentiful indirect lighting. Indeed the Administration Building (Facility 700) was described as having no shortage of windows (**Figure 37**).[82] The windows of many buildings were sandwiched between solid, brightly colored panels below and above the openings, a feature that helped to visually unify the buildings of the station. Many of these elements appear to have been inspired by the International Style, which relied on geometric and axial designs, and extensive use of windows.[83]

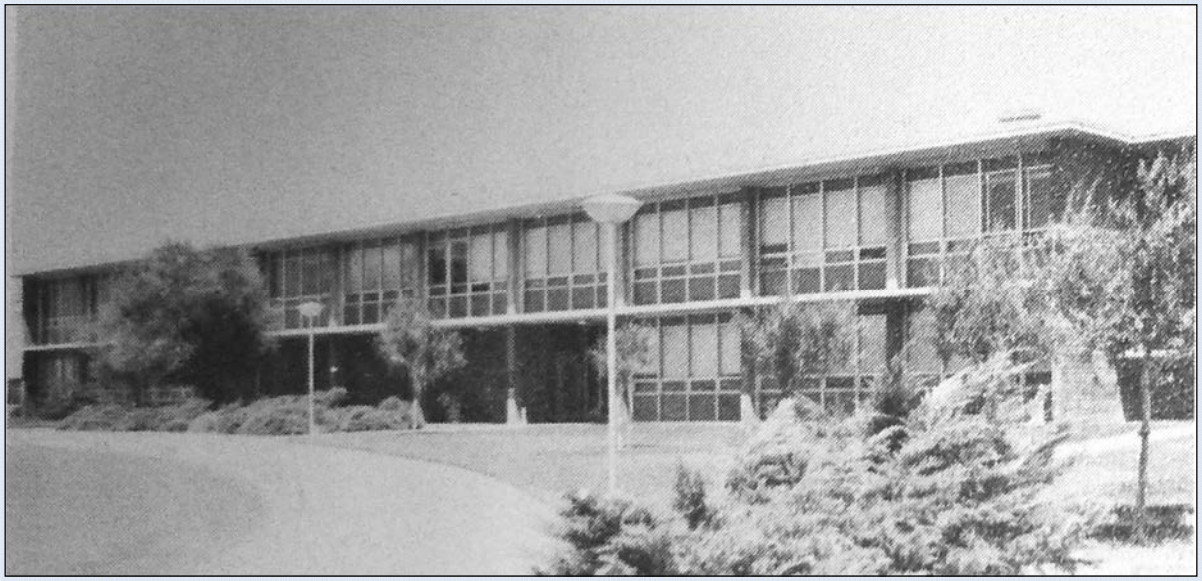

Figure 37: NAS Lemoore Administration Building (Facility 700) ca. 1965 features multi-light vertically aligned widows with solid panels above and below. The windows are grouped between concrete structural posts, and sheltered under a wide roof eave (photo: Golden Eagle circa 1965).

Some characteristics of the NAS Lemoore buildings represent later Modernist motifs, signaling the shifting architectural trends of the second half of the twentieth century. These were most often applied to a variety of higher-profile MWR buildings. Some of the concrete walls feature elements that add a subtle geometric element to them, including concrete blocks with patterns

[82] "Each Base Facility Has a Purpose," *Hanford Sentinel*, 6 July 1961, 4D.

[83] Roth, *A Concise History of American Architecture*; Whiffen, *American Architecture Since 1780: A Guide to the Styles*, 247-252; "Naval Air Station, Lemoore, California," [photograph book], [ca. 1965], Naval Air Station, Lemoore, Public Affairs Office, *Golden Eagle* [newspaper] archives, NAS Historical File folder.

scored onto the block face to make it appear as if different sized blocks were used. This feature is present on the original Navy Exchange building (now the Navy College, Facility 828) and closed Officers' Club (presently the Billeting Building, Facility 800). Another feature interspersed slightly projecting blocks, also known as shadow blocks for the unique patterns their shadows create when exposed to direct light, along the wall of flush concrete blocks. Shadow blocks were typically used on secondary walls, like the concrete walls that support exterior staircases on multi-story buildings. However, it was a prominent feature on the Theater (Facility 822, **Figure 38**). The Theater featured another element representing a divergence from the International Style: a fluted roof pattern distinguished by the repeating, parallel, barrel-style roof elements (**Figures 38** and **39**). This variation of a standard Classical element — arched columns — revives Classical architecture while embracing a new, Modernist twist. The buildings with this feature include the original Navy Exchange, closed Officers' Club, Subsistence Building (Facility 860), and the Gymnasium (since demolished). This fluted roof was not a universal architectural element of the period, but it was part of many Modernist buildings of the 1950s and 1960s. Indeed, Pflueger extensively applied this element to his Sunnyvale Civic Center, a complex that includes seven interconnected buildings with fluted roofs.[84]

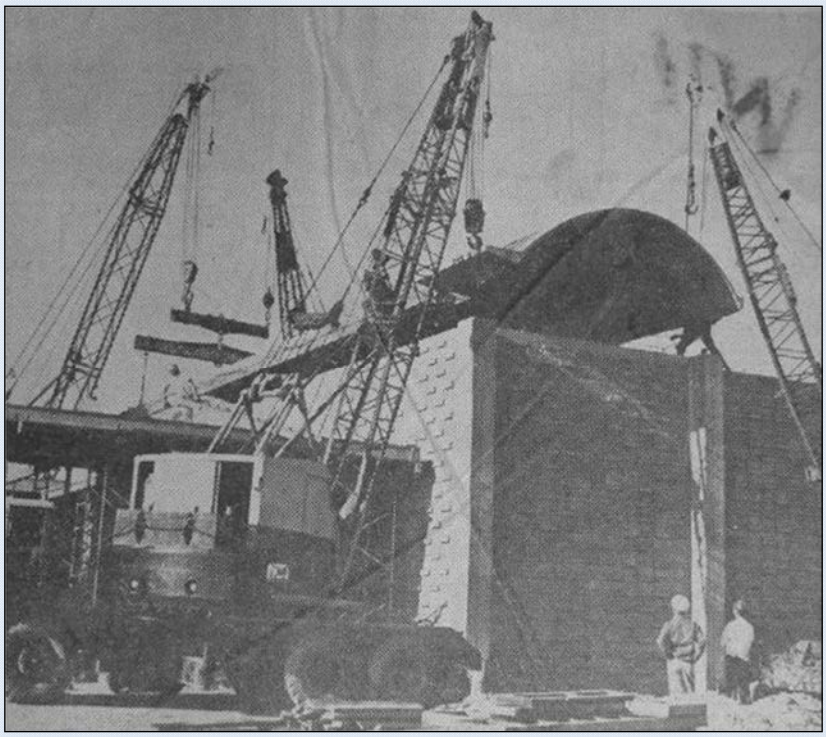

Figure 38: Construction crews install a piece of the fluted roof onto the Theater (Facility 822) during construction, which also features raised concrete blocks on the walls (photo: *Fresno Bee* 1961).

[84] Gebhard et al, *A Guide to Architecture in San Francisco & Northern California*, 173; "Heavy Roof is Eased into Place," *Fresno Bee*, 2 March 1961; Ron Taylor, "Food Serving to Lemoore Navy Men Will Be Vast Operation," *Fresno Bee*, 26 December 1960, 1-C.

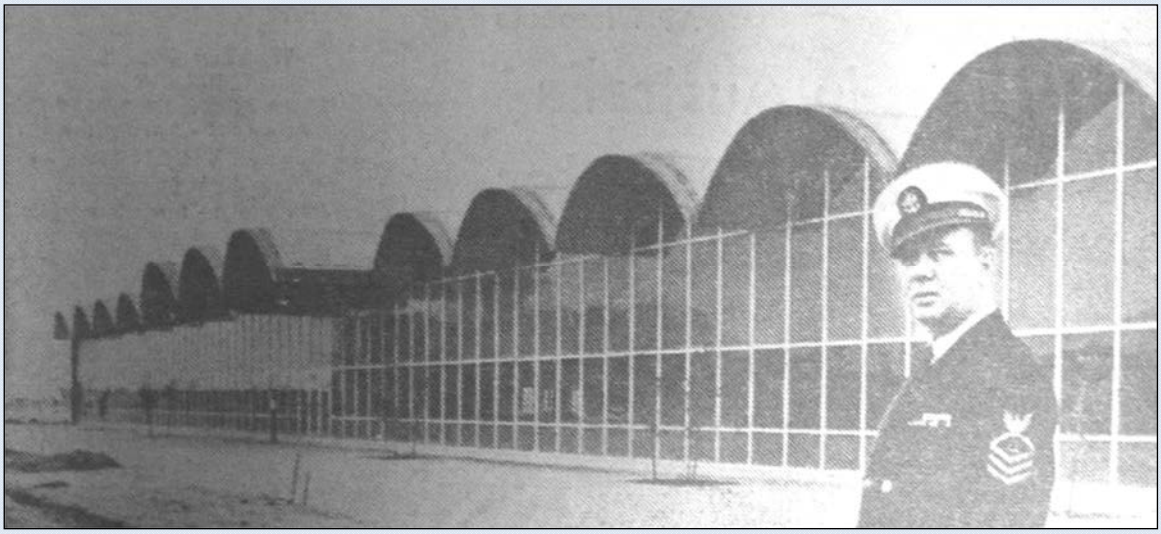

Figure 39: NAS Lemoore mess hall, with the distinctive fluted roof and wall of windows (photo: Taylor 1960).

Analysis

The Pflueger and Brayton designed buildings at NAS Lemoore are not the best works of the architects, who were not generally recognized as important figures in Modernist architecture. In the vast world of post-World War II architecture, neither Brayton nor Pflueger rose to the prominence afforded those considered master architects, either within their local communities or nationally. They did not receive many awards or honors for their architectural work during their lifetimes, were not widely featured in trade journals and magazines, and have not been recognized by architectural historians reviewing their body of work since their careers ended. Pflueger was generally overshadowed by his older brother, whose work throughout the San Francisco Bay Area has been widely praised. Several of Timothy Pflueger's buildings are listed on local, state, and national registers. Only one of Milton Pflueger's designs, the Richmond Civic Center, has been recognized as important for its architecture. None of buildings Brayton chiefly designed have been considered significant for their architecture. Even if the architects were considered masters, the designs they prepared for NAS Lemoore are not important representations of a particular phase or aspect in their careers, or a theme of their craft. Instead, the designs were among many projects the architects worked on during the 1950s and 1960s, and were generally modest in execution. For the most part, the buildings represented slightly stylized utilitarian buildings. A select number of the buildings, including most prominently the buildings in the Welfare and Recreation Center, featured more elaborate elements, such as the vaulted roof, extensive windows, and shadow block walls. Yet, despite these aesthetic flourishes, the buildings are rather modest within their architectural styles and with the careers of the architects.

5.3 Architecturally Significant Buildings by Master Architects

5.3.1 NSA Monterey – Walter Netsch; Skidmore, Owings and Merrill

Walter Netsch

- Architect
- Firm: Skidmore, Owings and Merrill
- Years Active: 1947 – 1979
- Styles Preferred: Modern, Neo-Expressionism, Brutalism
- Building Types: Educational, military, commercial, religious
- Best Known For: Cadet Chapel at US Air Force Academy, Colorado Springs, CO; Northwestern University Library, Evanston, IL; Inland Steel Building, Chicago, IL; University of Illinois, Chicago campus buildings; east wing of Art Institute of Chicago

In 1951, the Navy initiated plans for new permanent buildings on the main campus of the Naval Postgraduate School (NPS) at Naval Support Activity (NSA) Monterey, California. It awarded a $4 million dollar construction contract to the architectural firm of Skidmore, Owings, and Merrill (SOM) for designing a comprehensive campus plan and the first five permanent buildings on the west side of the property for the Engineering School. SOM was a leading firm in the development of modern architecture, designing buildings for corporations and government agencies with offices throughout the country. SOM worked on federal government projects before NPS including designing the town layout and house designs for Oak Ridge, Tennessee, a production site for the Manhattan Project. SOM associate architect Walter A. Netsch Jr. designed the plans for the Engineering School in Monterey (**Figure 40**).[85] In 2004, the Navy surveyed and recorded the Naval Postgraduate School Historic District, and found it eligible for listing in the NRHP at the state level under Criterion A for its contributions to the course of the Cold War and Criterion C for its exceptional architecture and association with Walter Netsch of SOM. California SHPO concurred with the conclusions and the district was determined eligible for listing in the NRHP.[86] The Netsch-designed Naval Postgraduate School represents architecturally significant buildings designed by nationally known architects who meet the definition of master for Criterion C. It also illustrates that even architecturally significant buildings must be shown to be important within a master architect's career.

[85] Detlef Mertins, "Walter Netsch Inteviewed by Detlef Mertins," from Skidmore, Owings and Merrill website at http://www.som.com/content.cfm/walter_netsch_interview; William R. Manley, "Naval Postgraduate Engineering School Historic District," California Department of Parks and Recreation 523 Form, May 2004.

[86] JRP Historical Consulting, LLC, "Historic Survey and Evaluation Report, Naval Support Activity Monterey, Monterey, California," Navy Contract N62473-11-D-220, prepared for Naval Facilities Engineering Command Southwest, September 2013, 1-2; Skidmore, Owings & Merrill, U.S. Naval School, School of Engineering, n.d., on file at Dudley Knox Special Collection, Naval Postgraduate School.

Figure 40: Netsch rendering of Naval Postgraduate School at NSA Monterey (image source: Skidmore, Owings & Merrill).

Biography

Born in Chicago in 1920, Netsch had a fascination for geometric shapes and patterns found in nature from a very early age, dreaming of being an artist. His parents indulged his proclivities and enrolled him in drawing classes at the Art Institute of Chicago. At Hyde Park High School, he showed a great interest in art and music and excelled in college-entry math and science coursework. As a junior, Netsch hoped to study architecture at Princeton and wrote a paper titled "What is Modern Architecture?"discussing Le Corbusier, Alvar Aalto, and Frank Lloyd Wright. Living in Chicago exposed him to Wright's Robie House and Blossom House, Louis Sullivan's Carson Pirie Scott & Co. building and to Sullivan and Dankmar Adler's Auditorium Building, all pillars of early Modern American architecture. Netsch enrolled in Massachusetts Institute of Technology (MIT) where the architecture program was transitioning from the traditional Beaux-Arts orientation to a more Modern direction. While attending MIT, Netsch encountered architects Philip Johnson, Walter Gropius, and Alvar Aalto. Upon graduating in early 1943, Netsch joined the US Army as part of the Corps of Engineers.[87]

Following his years in the Army, Netsch worked for about a year in the offices of Chicago-based architect L. Morgan Yost before joining SOM in 1947. On one of the first projects at SOM Netsch was assigned was to the Oak Ridge development for the Manhattan Project. John Merrill, one of the firm's founders, had directed original design for the layout of the townsite as well its buildings. By the late 1940s, the secrecy of Oak Ridge had been removed and the work on nuclear matters had transferred to the US Atomic Energy Commission. Netsch's contributions

[87] Russell Clement, "Walter Netsch: A Biography," in *Walter A. Netsch, FAIA: A Critical Appreciation and Sourcebook,* (Northwestern University Library: Evanston, IL, 2008), 27-30.

were additive; he helped turn what was a closed, wartime city into a civilian city with typical amenities. After Oak Ridge, he was assigned to the San Francisco office to work on the Naval Postgraduate School. While at the San Francisco office, Netsch prepared designs for several buildings that went largely unnoticed by contemporaneous reviews, including shopping centers, a service garage for the Greyhound bus company in San Francisco and buildings at military bases in Japan. In contrast, Netsch's experience with the naval campus in Monterey and the connections he made there set the stage for SOM to win the contract for the Air Force Academy in Colorado, one of the largest architectural projects in the United States in the 1950s.[88]

By the time he completed his work at Monterey, Netsch had begun developing an overarching aesthetic that would influence the rest of his career. Borrowed from behavioral sciences, his idea of Field Theory attempted to use geometric organization to plan the relationships between the building, its functional and material components, and the surrounding environment. In 1954, Netsch returned to SOM's Chicago office where, based on his successes, he was made partner. In Chicago, he refined his Field Theory aesthetic with two major projects: the Cadet Chapel at the Air Force Academy and the Library at Northwestern University in Illinois. In designing Northwestern University's library building, Netsch began by assessing the functionality of the building. He developed his design around the idea that library fundamentally created a public and social center for reading and studying rather than a traditional reading room with a separate book storage areas. His library design featured "three research towers, or mini-libraries, that were designed around radial vectors emanating from social spaces in the exact center of each tower." He designed squares around the social centers, referred to as "squaring the circle," to order the main structural grid.[89]

The highlight of his career was the design of the Air Force Academy in Colorado Springs. It was the first major building credited to a single architect within SOM, which was contrary to the firm's traditional policy of crediting projects to teams or the firm itself. Netsch received recognition for the design of the chapel, which forms the focal point of the cadet area at the Air Force Academy. It features 17 150-foot-tall spires set against the peaks of the Rampart Mountain Range and forming an almost A-frame building reminiscent of a jet standing upright (**Figure 41**). In 2004, the US Air Force Academy was listed as a National Historic Landmark for its Modernist design.[90]

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[88] Nauman, "Netsch and the US Air Force Academy," 49-50; *Walter A. Netsch, FAIA: A Critical Appreciation and Sourcebook,* 15.

[89] Felsen and Dunn, "Field Theory: Walter Netsch's Design Methodology," in *Walter A. Netsch, FAIA: A Critical Appreciation and Sourcebook*, 77.

[90] Northwestern University Library, "Walter Netsch Biography," http://exhibits.library.northwestern.edu/walternetsch/netschbiography.html accessed April 2016; Koyl, ed., *American Architects Directory*, Second Edition, 511; NRHP, "USAF Academy, Cadet Area," National Historic Landmark Nomination 4000484, listed April 1, 2004; Clement, "Walter Netsch: A Biography," 32-34; Robert Allen Nauman, "Netsch and the US Air Force Academy," in

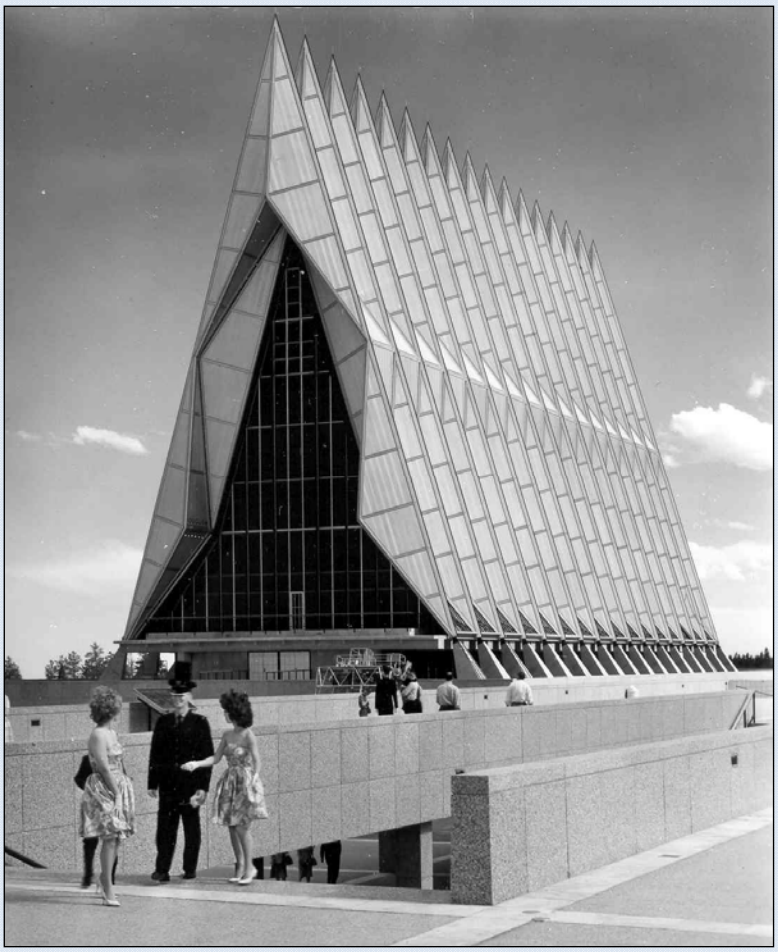

Figure 41: Cadet Chapel at US Air Force Academy was Netsch's most prominent design, and considered by many as his greatest achievement in architecture (photo: National Archives).

Netsch continued to advance within SOM, and was promoted from associate partner to Partner of Design in 1955. Although he established his own design studio in Chicago in 1956, he continued to work as a partner at SOM until he retired in 1979. Netsch designed many university and college buildings including Paul V. Galvin Library at Illinois Institute of Technology, Chicago in 1962; Louis Jefferson Long Library at Wells College, Aurora, New York in 1968; the Lindheimer Astrophysical Research Center in 1966 at Northwestern University; O.T. Hogan Biological Sciences building in 1971 at Northwestern University; and several others. Hospitals and clinics formed another type within Netsch's portfolio at SOM. These projects

Walter A. Netsch, FAIA, 49; Martin Felsen and Sarah Dunn, "Field Theory: Walter Netsch's Design Methodology," in *Walter A. Netsch, FAIA,*73; "Cadet Chapel, U.S. Air Force Academy, Colorado Springs, Colorado," [image], 1962, Record Group 461, National Archives and Records Administration (NARA), accessed at www.archives.com on April 2016.

included the Eye Clinic at Chicago's Rush-Presbyterian-St. Luke's Medical Center and the Baldwin Building at the Mayo Clinic in Rochester, Minnesota.

Among the many awards for his designs throughout his lifetime, Netsch received several for the Cadet Chapel including the R.S. Reynold Memorial award in 1964, a silver medal for design and craftsmanship from the New York chapter of the AIA for the colored-glass windows in 1965, and the AIA Twenty-Five Year Award in 1996. Additionally, it was listed in the NRHP in 2004. His other accomplishments include being recognized as a fellow by the American Institute of Architects in 1967, and receiving several honorary doctorates from universities such as the Lawrence University in Appleton, Wisconsin, Miami University in Oxford, Ohio, and University of Illinois at Chicago. Furthermore, his work has been featured in several architectural exhibits.[91]

The Naval Postgraduate School in Monterey is an early and telling example of Netsch's design work. The school buildings proved to be a vital point in his career within SOM and demonstrated the development of his particular architectural aesthetic. The project included eight buildings, and, although not originally part of the scope, a master plan for the site. The master plan aided in respecting and taking advantage of the natural environment of the site, a goal set by SOM and Netsch. The integration of buildings with the existing landscape became one of the guiding principles of his Field Theory. The Netsch-designed Engineering School in Monterey consisted of Spanagel Hall (Facility No. 232) for electronics, physics, chemistry, metallurgy and aerology instruction; Bullard Hall (Facility No. 233) housing electrical engineering; Halligan Hall (Building 234) the mechanical and aeronautical engineering building; Root Hall (Facility No. 235), a general classroom and office building; and King Hall (Facility No. 237), a lecture auditorium. Netsch also designed two utility buildings to support the new classroom and lab facilities, the Central Heating Plant (Facility No. 236) and Electrical Equipment Building (Facility No. 243), both built in 1954.[92]

Netsch laid out Spanagel, Bullard, Halligan and Root halls around a 1,200 foot by 500 foot quadrangle. King Hall was located on the south side of Spanagel Hall, outside of the quadrangle (**Figures 42** and **43**). All were International-style buildings constructed of reinforced concrete with exposed structural elements, ribbon windows, and simple rectilinear forms ranging from one to five stories in height. For Netsch the designs represented modern architecture as an expression of progress and applied an "innovative, scientifically-oriented design program for the modern campus that was distinct from local, historically oriented architectural traditions." The *Architectural Record* described the buildings in terms suggestive of the Field Theory he was at that time formulating: "Although each building maintains its own individual character, relation to other buildings and to site unifies the group as a single design expression."[93]

[91] *Walter A. Netsch, FAIA: A Critical Appreciation and Sourcebook,* 15-20, 33-44, 49-50, 75-76.
[92] US Navy, "Internet Naval Facilities Assets Data Store" (iNFADS), 2012.
[93] JRP "Historic Survey and Evaluation Report, Naval Support Activity Monterey, Monterey, California," 41.

Figure 42: Five-story tall Spanagel Hall (Facility 232) features distinctive cantilevered canopies sheltering grouped windows filling most of the space between concrete structural columns (photo: JRP).

Figure 43: Halligan Hall (Facility 234) is defined by its grid-style design with flush window walls separated by structural concrete columns (photo: JRP).

Analysis

Netsch is widely considered a master architect. His contributions to the world of postwar design have been well documented and widely praised. Between the 1950s and 1970s he was one of the key designers at SOM, one of the nation's best regarded architectural firms of the postwar era. His major works include the Northwestern University Library, Inland Steel Building, buildings at University of Illinois, Chicago, and the Regenstein Library at the University of Chicago. His most celebrated work was the iconic Cadet Chapel at the US Air Force Academy, a unique and soaring design that has helped define Cold War military architecture. His designs of the Naval Postgraduate School at NSA Monterey are important early representations of his work, signaling the direction of his future work. The buildings are an adaptation of the International Style — which had become widely popular in the mid-twentieth century — blended with organizational elements that gesture toward his later Field Theory. If Netsch's early career can be divided into two temporal categories, that division would likely would be marked by the Cadet Chapel and Northwestern University Library, were he refined his Field Theory ideas and rose to national stature. The Naval Postgraduate School buildings, then, would be his most successful and important designs in the era before that division. His other work — on buildings like a service garage for the Greyhound bus company and at Oak Ridge, Tennessee — went generally unnoticed by critics. In contrast, the Naval Postgraduate School was generally lauded. In comparison to Netsch's other military type buildings, the Naval Postgraduate School is second only to the Cadet Chapel in importance. The buildings therefore represent both important early designs in his career and designs of military buildings.

For these reasons, the Navy has determined the Netsch-designed Naval Postgraduate Engineering School Historic District at NSA Monterey is eligible for listing in the NRHP as the work of a master architect. The district includes six contributing buildings, all designed in the early 1950s by Netsch. The Navy has also determined that two additional buildings designed by Netsch do not contribute to the historic district because they are not important reflections of his career. As prosaic utility buildings, they do not exhibit the level of architectural sophistication of his other designs (**Figure 44**). Indeed, they are largely utilitarian in design, and used standard materials and construction methods. They are reflective, instead, of how routine or prosaic buildings designed by master architects are likely not important representatives of the architect's work.

Figure 44: The Electrical Equipment Building (Facility 243) designed by Netsch as part of the Naval Postgraduate School is a utilitarian concrete facility not representative of his other designs at NSA Monterey (photo: JRP).

5.3.2 Camp Pendleton – Myron Hunt; Hunt and Chambers

Myron Hunt and his architectural firm Hunt and Chambers designed Building 1133 at Marine Corps Base Camp Pendleton. The building, a headquarters for the 1st Marine Division and completed in 1943, was adapted from standardized military plans for the build-up of Marine facilities during World War II. Myron Hunt (**Figure 45**) had emerged in the early twentieth century as one of Southern California's most important architects. His contributions to several archtectural styles, including Mission Revival, Spanish Colonial Revival, and Craftsman, were considered extraordinary and highly influential. By the start of World War II, when Building 1133 was designed, he had cemented his status as a forerunner of design in the profession. In the early 1940s, Hunt and Chambers were among a growing number of archtiects who sought out military commissions. Their reputation helped secure design work for hundreds of buildings on five military camps.

MYRON HUNT

- Architect
- Years Active: 1896-1947
- Styles Preferred: Mission Revival, Spanish Colonial Revival, Craftsman, Streamline Moderne
- Building Types: Residential, commercial, educational, libraries, hospitals, military
- Best Known For: Huntington Residence and Library, San Marion, CA; Mission Inn, Riverside, CA; Ambassador Hotel, Los Angeles, CA; Rose Bowl, Pasadena, CA; First Congregational Church, Riverside, CA; Pasadena Memorial Hospital, Pasadena, CA

Figure 45: Myron Hunt in about 1905 (photo: *The Architectural Record* 1905).

In 2000, Building 1133 was evaluated as eligible for listing in the NRHP under Criterion A and under Criterion C, as an important work of a master architect because it is an outstanding example of Hunt's long history of public service, and as a rare surviving example of his World War II military designs. As such, the building represented an important aspect of his work and and a phase of his career. An update evaluation of the building in 2016 confirmed the original finding. Building 1133 is an unusual example of a master architect designed building adopted from standardized military plans and provides a good case study in this regard.[94]

[94] JRP Historical Consulting Services, "Inventory and Evaluation of National Register Eligibility for Buildings and Structures at Maine Corps Base, Camp Joseph H. Pendleton, San Diego, California," prepared for U.S. Army Corps of Engineers and AC/S Environmental Security, Marine Corps Base, Camp Pendleton, April 2000, 208-215; HDR, Inc., "Historic Resource Survey and Evaluation, Marine Corps Base, Camp Pendleton," prepared for Naval Facilities Engineering Command Southwest, February 2016.

Biography

Hunt and Chambers formed in 1920 as the partnership between Myron Hunt and H.C. Chambers. It was Hunt's second formal partnership in the profession, but one that lasted until the end of his career in 1947. Born in Massachusetts in 1868, Hunt moved with his family to Chicago during his high school years. He attended Northwestern University before transferring to Massachusetts Institute of Technology, where he graduated with a degree in architecture in 1893. Following graduation, Hunt moved to Europe where he studied that region's numerous architectural landmarks, and, at the time, a traditional path for aspiring artists and architects in the US. He returned to Chicago in 1896, working for the firm Shepley, Rutan, and Coolidge where he applied his formal training in designing expensive suburban houses, specializing in the emerging stylistic trends of the Prairie School (**Figure 46**). He quickly earned praise among local architects for his design work, but relocated to Pasadena, California, in 1903 to help treat his wife Harriet's worsening tuberculosis.[95]

Figure 46: Hunt's Sweet Residence in Evanston, Illinois, demonstrates his development in the Prairie School style during the early days of his career in Chicago (photo: *Inland Architect and News Record* 1899).

His reputation and success in Chicago helped secure him early positive notice in Southern California, where he quickly found an audience for his designs. Hunt took long horse-riding

[95] JRP Historical Consulting Services, "Inventory and Evaluation of National Register Eligibility for Buildings and Structures at Maine Corps Base, Camp Joseph H. Pendleton, San Diego, California," 33-34; "Three Houses of Myron Hunt," *The Architectural Record*, Vol. 17, no 2 (February 1905), 157; "Residence for Mrs. Frances M. Sweet, Evanston, Illinois," *Inland Architect and News Record*, Vol 34, no 4 (1899).

adventures throughout the region to acclimate himself to the area's geography and built environment. He developed a habit of riding with a friend and fellow Midwest transplant and architect, Elmer Grey, every Sunday. Grey had moved to Monrovia from Wisconsin to improve his ailing health. Like Hunt, he had attracted interest for his innovative designs, including his own summer house overlooking Lake Michigan. In 1904, the two formed the architectural firm Hunt and Grey, which spanned six prolific years and during which both architects became well-known and widely respected. Both shared an interest in the details of architecture and planning; but they took different approaches in their presentation. Grey had a flare for subtlety, which one historian described as "poetry," whereas Hunt preferred a bold and emphatic aesthetic. Their commissions included several iconic early twentieth century Southern California designs, such as the Beaux Arts mansion for railroad tycoon Henry Huntington that later became a centerpiece of the Huntington Library; the Mission Revival style Wattles Mansion in Hollywood (**Figure 47**); the Throop Polytechnic Institute, later known as the California Institute of Technology; and various palatial primary and winter homes for local luminaries. By the time Hunt and Grey dissolved in 1910, in part because of Grey's deteriorating health but also because their styles had grown too far apart, both were considered among the region's premier architects.[96]

Figure 47: Hunt's early Mission Revival work included the Wattles Mansion in Hollywood, built in 1907 (photo: *The Architectural Record* 1913).

As Grey took a leave from work to recuperate, Hunt plowed ahead in his professional life, despite his personal travails. Hunt's aesthetic and business matured during the 1910s, spurred by Southern California's rapid population growth and the development of new technologies,

[96] Therese T. Hanafin, "The Eclectic Architecture of Myron Hunt," MA Thesis, San Diego State University, October 1969, 81, 136; "Some Recent California Architecture," *The Architectural Record*, Vol. 34, no 6 (December 1913), 557, 559; JRP, "Inventory and Evaluation of National Register Eligibility for Buildings and Structures at Maine Corps Base, Camp Joseph H. Pendleton, San Diego, California," 34.

such as concrete construction. He became an expert in the use of Craftsman, Mission Revival, and Spanish Colonial Revival styles, and began experimenting with Italian Revival, Colonial Revival and other eclectic styles of architecture. His key contributions during the 1910s were the Mission Revival style Spanish Wing of the Mission Inn in Riverside (1914), Spanish Colonial Revival style First Congregational Church of Riverside (1913; **Figure 48**) located across the street from the Mission Inn, the Ambassador Hotel in Los Angeles (1919-1921) featuring a Mediterranean Revival style, and Huntington Library on Huntington's San Marino estate (1919). In contrast with his success in the profession, his beloved Harriet continued to suffer from tuberculosis, finally succumbing in 1913. During these dark days, Hunt found solace in his work. In 1915, he married Virginia Pease, the founder and first principal of the Polytechnic Institute in Pasadena, a private grammar school that was associated with the former Throop Polytechnic Institute.[97]

Figure 48: First Congregational Church in Riverside is an example of Hunt's mastery of the Spanish Colonial Revival style (photo: Tearnen and Bricker 1997).

The latter portion of Hunt's career was spent in partnership with a young architect, H.C. Chambers, who had risen through the ranks of his firm. Together they continued to expand on

[97] Hanafin, "The Eclectic Architecture of Myron Hunt," 139; JRP, "Inventory and Evaluation of National Register Eligibility for Buildings and Structures at Maine Corps Base, Camp Joseph H. Pendleton, San Diego, California," 34; Janet Tearnen and Lauren Weiss Bricker, National Register of Historic Places – Registration Form, First Congregational Church, Riverside, CA, January 1997.

Hunt's earlier aesthetic preferences and professional successes, and opened up the firm to different elements of the craft and business, in part by designing new building types.

Chambers came to the firm Hunt and Grey after graduating in 1909 from Armour Art Institute and remained with Hunt after the dissolution of the firm. Over time he gained Hunt's confidence and friendship and the two agreed to form Hunt and Chambers in 1920. During the early 1920s, Hunt and Chambers collaborated on the 1922 Hollywood Bowl and the 1921 Rose Bowl (**Figure 49**), both of which helped define the region's design of large-scale entertainment facilities, and both examples of building types on which Hunt had not previously worked. Their work continued through the 1920s, designing several libraries, residences, and commercial buildings throughout the region. During the Great Depression, however, Hunt and Chambers were far less active as the construction industry slowed significantly. The firm maintained a smaller operation during the late 1920s and 1930s, and adjusted to the downturn by turning to other types of work, such as seismic safety consulting. Hunt helped start a local, privately funded program to help unemployed construction laborers get back to work.[98]

Figure 49: The main entrance to the Rose Bowl in Pasadena by Hunt and Chambers. The iconic signage was a later addition, but the scoreboard on which it is located was part of the Hunt and Chambers design (photo: Charleton 1984).

As the Great Depression wound down, Hunt focused on improving hospital designs, visiting many of the nation's top health centers. He used his research and new theories on hospital planning to prepare designs for the Pasadena Community Hospital (now Huntington Memorial Hospital, 1940) and White Memorial Hospital in Los Angeles (1937). During the lead up to World War II, Hunt and Chambers recognized the need for architects to design additional government and military buildings, and, as the private building industry constricted, offered their services to the government. The firm was hired to design five military camps during the war, including the facilities at Camp Pendleton. This appears to be part of an effort on the part

[98] Hanafin, "The Eclectic Architecture of Myron Hunt," 218-224; JRP, "Inventory and Evaluation of National Register Eligibility for Buildings and Structures at Maine Corps Base, Camp Joseph H. Pendleton, San Diego, California," 34; James H. Charleton, National Register of Historic Places – Nomination Form, The Rose Bowl, Pasadena, CA, October 1984.

of Hunt and Chambers to continue their civic engagement, but it was also one of the few areas of growth in the construction industry. During this period Hunt accumulated a number of awards and honors. The Southern California AIA bestowed upon him the Honor Award for "merit achievement won only by years of consistent effort and advancement in Professional practice." He also became more involved in civic and professional organizations. He was president of Southern California AIA and awarded Pasadena's Noble Civic Award for his engagement in the community.[99]

From a stylistic standpoint, Hunt's career is not easily categorized. During his early period he became intimately involved in the Prairie School style, which he modified when he moved to Southern California to fit the popular Craftsman style. He also succeeded in applying the emerging revival styles that were becoming increasingly popular in the early twentieth century. His work in Mission Revival and Spanish Colonial Revival was widely lauded. He also worked in Neoclassical and Beaux Arts architecture, while his later works veered toward the popular Streamline Moderne style.[100]

Analysis

Myron Hunt was a seminal California architect in the first half of the twentieth century. He was considered a leader in the profession for his intricate and commanding designs of numerous high-profile building's throughout greater Los Angeles. Many critics and fellow architects praised him for his dedication to his work, civic engagement, and unique ability to perfect the artistry of the architectural styles he utilized. He received numerous awards for his buildings, and many have been placed on national, state, and local registers of historic buildings. For his achievements in his craft and praise among his peers and historians, Hunt is a master for the purposes of NRHP Criterion C. His partner, H.C. Chambers, does not appear to have been considered a master architect. Hunt appears to have received much of the attention and praise, and likely led much of the important design direction. However, history has yet to assess the level of involvement Chambers had in many of the buildings for which the firm is recognized. He was an architect chosen by Hunt to be his partner, suggesting Hunt saw a high degree of expertise in the craft; but at this point, it does not appear he received the wide recognition for his skill required under NRHP Criterion C to qualify as a master.

The 2000 study of Camp Pendleton concluded that Building 1133, the 1st Marine Division Headquarters (**Figure 50**), is an important example of Hunt's work. Despite being adopted from standardized plans, the building features a gracefully stylized exterior and plan intricately adapted to the surrounding terrain.

[99] William Blair, editor, *Pasadena Community Book* (Pasadena, CA: Arthur H. Cawston, 1940), 575-576; Hanafin, "The Eclectic Architecture of Myron Hunt," 219.
[100] JRP, "Inventory and Evaluation of National Register Eligibility for Buildings and Structures at Maine Corps Base, Camp Joseph H. Pendleton, San Diego, California," 35.

Building 1133 does not compare to Hunt's numerous highly stylized and praised architectural masterpieces, but it does represent an important phase of his career and an aspect of his work. Designing hundreds of building for the military during the building-up to and early years of World War II came at a time when the firm and many in the profession were scrambling to find work. Hunt and Chambers recognized the opportunity available as the military sought to rapidly increase its building stock to house and support training American troops. They completed designs for five military camps, including Camp Pendleton. The buildings were designed to be temporary, and many were demolished after the war. Building 1133 is one of the best and last remaining examples of Hunt's World War II military designs. It also represents an aspect that weaved throughout his long career: his dedication to public service. At the time, serving one's country was considered the best way to engage in public service. Many joined the military to fight, while others used offered services related to their training and expertise. Hunt and Chambers prepared designs for hundreds of buildings to help build up the military's preparedness at a rapid pace. As such, Building 1133 does more than most of his other designs to demonstrate his service to the public.[101]

Figure 50: Main façade, Building 1133, Camp Pendleton, showing the stylized design of Myron Hunt (photo: Marine Corps Base Camp Pendleton).

[101] Marine Corps Base Camp Pendleton, "1st Marine Division Headquarters Exterior," Photo Gallery, accessed online at http://www.pendleton.marines.mil/ on May 2016.

5.4 Assessing Exceptional Significance under Criteria Consideration G

5.4.1 Camp Pendleton – William Pereira

WILLIAM PEREIRA

- Architect
- Years Active: 1930 – 1983
- Styles Preferred: Futurist; International
- Building Types: Commercial, educational, industrial; aeronautical
- Best Known For: Theme Building, Los Angeles International Airport, CA; Geilsel Library, University of California, San Diego, CA; Transamerica Pyramid, San Francisco, CA

In 1952, the Marine Corps announced plans for $3.5 million project at Camp Pendleton to be designed by the Los Angeles architectural firm Pereira & Luckman. Camp Pendleton was the world's largest Marine Corps training base, but the earlier World War II-era construction had consisted entirely of temporary barracks and utility buildings. Adapting to the realities of the Korean conflict and the Cold War, the Marine Corps intended to add permanent troop areas that were loosely modeled on the Army's infantry training base at Fort Benning, Georgia. The plans for the first development, named Area 22, called for ten barracks, a mess hall, headquarters, a recreation hall, and several storage and boiler buildings (**Figure 51**). The project was tightly budgeted and had to comply with the DoD's austerity program, meaning that most of the structural walls, concrete floors, and roof slabs would be left exposed. Nonetheless, the architect William Pereira insisted that the buildings be stylish as well as functional.[102]

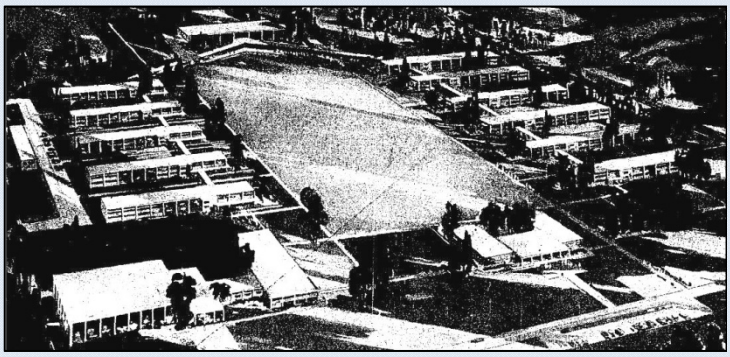

Figure 51: Plans for Area 22 at Camp Pendleton show the campus-like arrangement with ten barracks flanking the parade field and administrative building at the far end of the field (photo: *Los Angeles Times* 1952).

Area 22 was evaluated for NRHP eligibility in 1998 before the buildings had reached 50 years of age. As such they were found not to possess exceptional significance under Criteria Consideration G, although it was noted that the properties merited evaluation once they passed the 50-year mark, with possible significance under Criterion C as the work of a master. In 2016, the buildings were evaluated under standard significance criteria and found that, while Pereira could be considered a master for his recognized greatness, the buildings at Camp Pendleton are not notable examples of his work

[102] "Large Marine Project Set: Plans are Prepared for Most Extensive Such Base in World," *Los Angeles Times*, Jan 20, 1952, E1; "Camp Pendleton Opens New $3,635,000 Unit," *Los Angeles Times*, Aug 1, 1954, E10.

and lack historic integrity to be considered as such. The original evaluation of this case study, nevertheless, offers an example of how Criteria Consideration G is applied to buildings that have yet reached 50 years of age.[103]

Biography

William Pereira was born April 25, 1909, in Chicago, the son of a printing business owner. He studied architecture and physics at the University of Illinois, and though he graduated straight into the Depression, in June 1930, the economic catastrophe did seemingly little to slow his assent. His first job at the Chicago firm of Holabird & Root involved assisting with the master plan for the 1933 Chicago World Fair, but when Pereira learned that design competitions would be held for the individual fair buildings, he promptly quit the job and opened his own office. Entering the contests for 25 buildings, he won 22 of them. A college background in set design then led him to seek work from movie theaters. He soon earned a major client in the Balaban & Katz theater chain and began designing movie houses throughout the Midwest, including the Esquire Theater in Chicago, one of the city's best examples of Art Moderne style (**Figure 52**). By the time he reached his 25th birthday, Pereira had completed projects in 26 states. A one-off project, the Lake County Tuberculosis Sanatorium in Waukegan, Illinois, which he co-designed with college classmate William Ganster, brought him further recognition when it was featured in the Museum of Modern Art's exhibition "Built in USA—1932 – 1944" (**Figure 53**).[104]

In 1938, Paramount studios lured Pereira to California, launching him into a second quick-ascent career in Hollywood. His first task was to design a new film studio for Paramount and he prepared for the project by immersing himself in background research about movie production. He mastered the fundamentals so rapidly that the studio executives decided his talents were being wasted on mere buildings and promoted him to chief art director. Three years later, he shared an Academy Award for special effects directing in Cecil B. DeMille's *Reap the Wild Wind*. He later served as design director and lead producer for several movies from RKO Pictures. During World War II, his production talents were turned towards the war effort when the Army employed him as a civilian camouflage expert. Flying up and down the West Coast to evaluate the security of defense plants, Pereira gained early insights into the challenges of planning for the boom communities that emerged with the war. All the while, he continued to work as an

[103] JRP, "Inventory and Evaluation of National Register Eligibility for Buildings and Structures at Marine Corps Base, Camp Joseph H. Pendleton, San Diego County, California"; HDR, Inc., "Historic Resource Survey and Evaluation, Marine Corps Base, Camp Pendleton," prepared for Naval Facilities Engineering Command Southwest, February 2016.

[104] Pereira has been the subject of one full-length book: James Steele, ed., *William Pereira* (Los Angeles: USC Guild Press, 2002). Other sources consulted include his obituaries: "Pereira, Architect Whose Works Typify L.A., Dies," *Los Angeles Times,* Nov 14, 1985, 26; "Pereira Gave County Shape – and a Vision," *Los Angeles Times*, Orange County Edition, Nov 17, 1985, A1; "The Land: The Man with the Plan," *Time* 82:10, Sep 6, 1963, 69-72; Gane, ed., *American Architects Directory*; Koyl, ed., *American Architects Directory*, First Edition; Koyl, ed., *American Architects Directory*, Second Edition; "The Esquire Theater, Chicago, Ill," *Architectural Forum* Vol 68 no. 4 (April 1938), 471-480; Museum of Modern Art, *Built in USA, 1932-1944* (New York: MoMA, 1944).

independent architect, winning awards for such buildings as the Pan Pacific Theatre in Los Angeles and the Motion Picture Country House and Hospital in Woodland Hills.[105]

Figure 52: The Esquire Theater was named Building of the Year by *Architectural Forum* in 1938 (photo: *Architectural Forum* 1938).

Figure 53: Lake County Tuberculosis Sanatorium, as depicted in the exhibition catalog for the Museum of Modern Art's "Built in USA" (photo: Museum of Modern Art 1944).

Following the war, Pereira left Hollywood behind to focus on architecture. In typical fashion, however, he pursued a two-pronged career. He continued to maintain an independent office, designing department stores, medical buildings, and test facilities at Muroc (now Edwards) Air Force Base, but he also entered academia, joining USC as a professor of architecture from 1949 to 1959. In 1950, Pereira expanded his business by forming a partnership with his University of Illinois classmate, Charles Luckman. Also trained in architecture, Luckman had taken employment after graduation as a draftsman in the advertising department of the Colgate-Palmolive-Peet Company. He had rapidly ascended the corporate ladder, rising to sales manager and later president for Lever Brothers. Like Pereira, he had been featured on the cover of *Time* magazine, his moment coming in 1937, at age 27, in a story that labeled him the "Boy Wonder of American Industry." As president of Lever, Luckman masterminded the company's Park Avenue headquarters. Designed by SOM's Gordon Bunshaft, the seminal Lever House adopted the International Style glass box to corporate architecture, helping to initiate the trend towards curtain-walled skyscrapers. The success of that project inspired Luckman to return to architecture, and Pereira's thriving, even glamorous, business seemed to offer the perfect fit.[106]

Pereira & Luckman experienced extraordinary success in the expansive environment of 1950's Los Angeles. On his own, Pereira had employed a dozen architects and designed around $15 million worth of work annually. After Luckman joined the business, the firm expanded to 400

[105] Steele, *William Pereira*; "The Land: The Man with the Plan," *Time*.
[106] "Charles Luckman, Architect Who Designed Penn Station's Replacement, Dies at 89," *New York Times* Jan 28, 1999.

employees and took on a case load that frequently exceeded a half-billion dollars in value.[107] The company did a great deal of corporate work in the Los Angeles area, designing, among many others, the Robinson's department store in Beverly Hills, an industrial plant for Lear Jet in Santa Monica, and the headquarters for Aeronutronics Systems in Newport Beach (**Figure 54**). A large part of their portfolio consisted of master planning facilities, including such university campuses as Caltech, University of Southern California, and University of California, Santa Barbara (**Figure 55**), as well as such military bases as Camp Pendleton, Luke and Williams Air Force Bases in Arizona, and the American military installations in Cadiz, Spain. All of these involved pronounced modernist designs adapted for institutional clients. As Stuart Leslie, a professor of science and technology, has written, "Pereira scaled up the residential version of Californian modernism perfected by Richard Neutra to industrial proportions."[108]

Figure 54: The Aeronutronics Systems building on left employed one of Pereira touchstone effects by seeming to float the building on a pool of water (photo: Steele 2002).

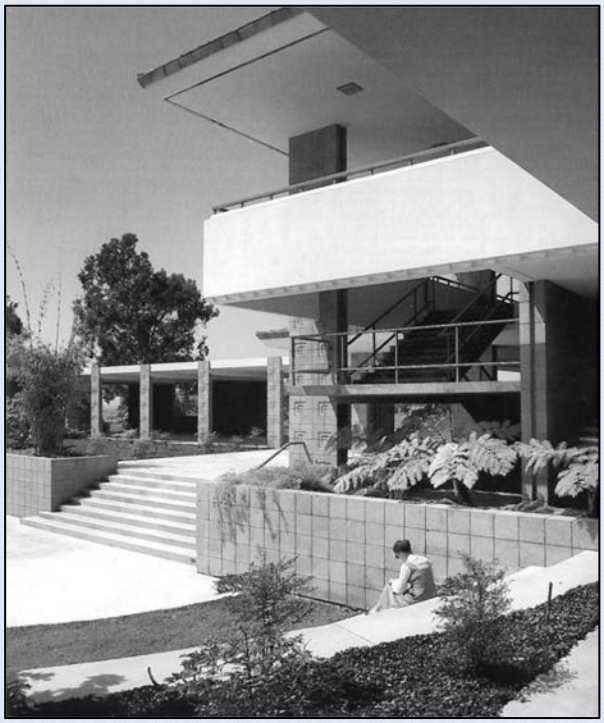

Figure 55: A Pereira & Luckman-designed building on the UC Santa Barbara campus (photo: Steele 2002).

[107] Numbers from *Time* article. Like Albert Kahn, Luckman approached architecture as more an economic than a creative concern. He once told a *New Yorker* writer, "I am firm in my belief that architecture is a business and not an art."

[108] Quoted in Will Wiles, "Los Angeles International Airport: Jet-Age Modernism," *Icon* Jan 4, 2014, accessed at http://www.iconeye.com/architecture/features/item/10132-feature-jet-age-modernism, 2016.

The firm developed a particular specialty in designing buildings for which there was little precedent. An early major commission came from CBS to create the first purpose-built television studio complex. With television just beginning to reach a mass audience, Pereira recognized that the facility would have to be expandable to accommodate unpredictable growth. The rather severe modernist headquarters thus had a demountable four-story glass curtain wall that allowed for the entire building to expand outward. Other innovations included control rooms configurations and audience seating plans that remain part of standard television studio design today.[109] By the time CBS Television City opened in 1952, Pereira & Luckman had received the contract to redesign LAX to accommodate jet travel (**Figure 56**). It was again an unprecedented project as no other major airport had yet attempted to design itself around the unique challenges of passenger jets. Luckman summed up the problem: "We were then, in 1955, planning an airport to be constructed in 1960, which was large enough for 1980."[110] Their design, for the most part, was functional, placing its emphasis on moving masses of people smoothly and efficiently through neutral spaces, and discarded the traditional transportation hub's insistence on a monumental central location. The exception to the functionalism was the Theme Building, the space-age-styled circular restaurant and observation deck that seemed to hover in the air, suspended beneath elegant parabolic arches.[111] When the *LA Times* later observed that Pereira's "stylish yet efficient architecture dominated the look of Los Angeles for more than 30 years," it was structures like the CBS studio and the LAX Theme Building that made their case.[112]

Figure 56: Theme Building at LAX (1961) (photo: Steele 2002).

The partnership between Pereira and Luckman dissolved after nine years in 1959. For Pereira, doing design work in the immense firm had started to feel "like working in a factory."[113] Bought

[109] Steele, *William Pereira*, 83-89.
[110] Quotes in Wiles, "Los Angeles International Airport."
[111] Vanessa R. Schwartz, "LAX: Designing for the Jet Age," in Wim de Wit and Christopher Alexander, eds., *Overdrive: L.A. Constructs the Future, 1940-1990* (Los Angeles: Getty Research Institute, 2013).
[112] "Pereira, Architect Whose Works Typify L.A., Dies," *Los Angeles Times,* Nov 14, 1985, 26.
[113] "The Land: The Man with the Plan," *Time* 82:10, Sep 6, 1963, 71.

out by Luckman, he returned to running a smaller firm by himself, but while the number of projects declined, their scale did not. In 1959, he began master planning the 93,000-acre Irvine Ranch development, and four years later, he was on the cover of *Time* magazine. As southern California continued to boom into the early 1960s, Pereira remained the region's most sought after architect. He captured the spirit of the era not only in his buildings, but also in his personal lifestyle. Handsome and charismatic, with a penchant for dressing in blacks and grays and traveling by Bentleys and Lear Jets, he was, in the words of Allen Temko, "Hollywood's idea of an architect."[114] Among the many projects from these years, the most influential included the General Atomic Headquarters in San Diego (1960), the Metropolitan Water District building in Los Angeles (1963), and the Los Angeles County Museum of Art (1964).

Pereira's status as one of the most sought after archtiects in California appears to have only grown through the end of his career in the early 1980s. His work continued to revolve around the themes of Futurism as he took on various projects, including large- and small-scale commercial, military, educational and office buildings. Among his most prominent during this later period of his career were the Transamerica Building and the Geisel Library at UC San Diego. Indeed, these buildings are among his most recognizeable especially for their flair for the futuristic, almost perfectly captured the brash optimism of the early aerospace era and became a key part in the near-mythical public image of golden age California (**Figure 57**). Pereira remained at the head of his firm until 1983, when declining health required him to relinquish control. He died in Los Angeles in 1985 at age 76.

Figure 57: Two iconic buildings from his time after embarking on a solo career: Transamerica Building (1973); UC San Diego's Geisel Library (1970) (photo: Steele 2002).

[114] Quoted in Scott Johnson, "William Pereira," *L.A. Forum* 7, 2010, accessed at http://laforum.org/article/william-pereira/, 2016.

Pereira received numerous honors for his designs during his lifetime. These included being named a Fellow in the American Institute of Architects, serving on the President's National Council on the Arts, and being the architect in residence at the American Academy in Rome. His designs also received 17 separate awards from the AIA for individual excellence, including a national award for the naval hospital built at Camp Pendleton between 1975 and 1977. Like any prolific architect working on so large a scale, he was not free from critical attack. To some, he seemed to defer too greatly to his corporate and institutional clients, producing work that was "correct but decidedly dull."[115] His design for the Los Angeles County Museum of Art drew particular criticism. Robert Hughes, the long-serving art critic at *Time*, described it as "probably the worst of any large museum in America," and artist Ed Ruscha famously painted the building on fire.[116] Nevertheless, even the critics acknowledged his tremendous influence and most objected to only particular portions of design, rather than to the body of work as a whole.

Analysis

The 1998 evaluation Pereira's Area 22 buildings at Camp Pendleton argued that because the buildings had yet to reach 50 years of age and they did not possess exceptional significance as defined in Criteria Consideration G, they were not eligible for listing in the NRHP. This argument is based on dual elements of evaluating the buildings under the master architect aspect for exceptional significance: whether enough context exists to properly analyze the architect's importance within the profession and to understand the importance of the building(s) within the architect's career. At the time of the 1998 survey Pereira had been retired for only 15 years and the most productive period of his career, including when he designed his most prominent and important designs, had occurred between 1952 and 1979, within 50 years of the survey date. Not only was there not sufficient context to assess Pereira's impact on the profession of architecture, it was unclear how the Camp Pendleton buildings fit within his overall career. Moreover, there was not clear evidence that exceptional significance existed, either for the architect himself or for the buildings. By then, it was understood that Pereira had an important impact on California architecture, but to what extent was not clear. As for the Camp Pendleton buildings, not only did the designs not appear exceptionally significant within the field of architecture, they also were not known to be among Pereira's most important buildings. Thus the evaluation concluded that the buildings had not met the criteria for eligibility in the NRHP.

Nearly two decades have passed since that original evaluation, and sufficient time has elapsed and context developed to assess Pereira's career. His career ended 33 years ago, and a substantial portion of his career occurred more than 50 years ago. Moreover, his biography and contributions to the profession have been detailed to a considerable degree. In this process,

[115] David Gebhard and Robert Winter quoted in "Pereira Gave County Shape – and a Vision," *Los Angeles Times,* Orange County Edition, 1986 Nov 17 (A1).
[116] William Poundstone, "Save the Pereira? Seriously?!?," *Los Angeles County Museum on Fire*, Jun 17, 2013, accessed at http://blogs.artinfo.com/lacmonfire/2013/06/17/save-the-pereira-seriously/, 2016.

historians appear to agree that his status as a master is firmly established. More than any other single architect, he was responsible for defining the jet-age aesthetic of post-war southern California. Over three decades, beginning in the 1950s, he designed a huge swath of the institutional and corporate architecture to be found between Los Angeles to San Diego. He was additionally a prolific master planner, who guided the layout and growth of numerous college campuses, military bases, corporate complexes, and municipalities throughout Southern California and beyond. In 1963, he appeared on the cover of *Time* magazine, one of only 11 architects to be so honored. Though today he is less well known than most of the others who received the cover treatment — Frank Lloyd Wright, Richard Neutra, Edward Stone, Eero Saarinen, and the like — his chief buildings have achieved iconic status in California. The Transamerica Pyramid is second only to the Golden Gate Bridge in defining the San Francisco skyline, and the Theme Building at the Los Angeles International Airport indelibly marked the city for a generation of air travelers. Pereira's flair for the futuristic — seen in such prominent works as the Convair Astronautics plant and the Geisel Library at UC San Diego — almost perfectly captured the brash optimism of the early aerospace era and became a key part in the near-mythical public image of golden age California.

The importance of the Camp Pendleton was reassessed in 2016 by HDR, Inc., which concluded that Pereira could be considered a master for the purposes of NRHP, but these buildings (**Figure 58**) do not rise the level of importance within his career. Although the Area 22 buildings at Camp Pendleton date to an early and important moment in Pereira's career, when he first started working with Luckman and started undertaking major commissions, the project was not his earliest military work, nor was it among his most celebrated projects. As new information came to light since the 1998 study, the buildings at Camp Pendleton were found to be similar in design to other military buildings, including ones at installations in Arizona, Nevada, and at North Atlantic Treaty Organization (NATO) bases overseas, and not important within Pereira's career.

Finally, the recent survey found that many alterations to the buildings and the surrounding area resulted in substantially diminished integrity to the point that the buildings do not retain historic integrity to the period of significance.

Figure 58: Building 22182 is an example of the Pereira-designed barracks at Camp Pendleton (photo: HDR 2016).

5.5 Architecturally Significant Buildings that are Not Important Examples of a Master Architect

5.5.1 Portsmouth Naval Shipyard – Alexander Parris

ALEXANDER PARRIS

- Architect
- Years Active: ca. 1800 – 1852
- Styles Preferred: Federal; Greek Revival
- Building Types: Residential, religious, military, lighthouses, commercial
- Best Known For: St. John's Church, Portsmouth, NH; John Wickham House, Richmond, VA; David Sears House, Boston, MA; Cathedral Church of St. Paul, Boston, MA; Quincy Market, Boston, MA; various lighthouses; Charleston (Boston) Navy Yard, Boston, MA; Portsmouth Naval Shipyard, Kittery, ME

Famed nineteenth century architect and engineer Alexander Parris designed a collection of buildings at Portsmouth Naval Shipyard in Kittery, Maine, that now form part of the Portsmouth Naval Shipyard Historic District. The buildings were designed late in his career, during a period of about 25 years when he was intimately involved in designing and building mostly utilitarian buildings and structures for the federal government, including the Navy. At times, he was directly employed by a government agency; but he was also commissioned for specific projects as a private architect and engineer. Unlike the vast majority of his non-military buildings, these exhibit distinctly muted architectural characteristics and relied on his experience and training in engineering. His designs for buildings and structures at Portsmouth Naval Shipyard were among the final projects he worked on before his death in 1852.[117]

Parris designed eleven extant buildings at Portsmouth Naval Shipyard in the late 1840s and early 1850s (**Figures 59** and **60**). While the buildings contribute to the Portsmouth Naval Shipyard Historic District in part for their architectural significance, they are not considered individually eligible and thus do not possess individual architectural significance. The buildings have also not been specifically identified as important examples of Parris's illustrious career. The properties were originally evaluated in 1977, prior to the development and refinement of the NRHP criteria, and thus were not evaluated at that time under the work of a master standard. It does not appear subsequent recordations of the buildings have considered this evaluation either. The buildings are part of Parris's military work, which encompassed two distinct eras of his career. During those periods he held a permanent position with the Navy. His military designs were driven in large part by their function. Many of the buildings were

[117] Frank A. Beard and Robert L. Bradley, National Register of Historic Places Inventory – Nomination Form, Portsmouth Naval Shipyard [Historic District], Kittery, Maine, April 1977; Sara Wermiel, "An Architect and Engineer in the Early Nineteenth Century: Alexander Parris's Engineering Projects," *Society for Industrial Archeology New England Chapters Newsletter* 26, no. 1 (2005): 17, 22.

architecturally unremarkable, though some feature ornamental elements of identifiable architectural styles. Engineering also played a critical role in several of his more important designs. However, those more elaborate buildings were primarily for Charleston Navy Yard in Boston, not at Portsmouth Naval Shipyard. His Portsmouth Naval Shipyard buildings appear significant as a collection of Greek Revival style military buildings, but they do not appear important within his career either as examples of his application of Greek Revival architecture or his contributions to military design.[118] This example emphasizes the importance of evaluating the buildings within the career of a recognized master.

Figure 59: Building 43, a former Timber Shed, at Portsmouth Naval Shipyard as it appeared when recorded in 1977 was designed by Parris and built in 1853 (photo: Beard and Bradley 1977).

Figure 60: Building 34, an Unloaded Shell House / Cold Storage, as recorded in 2003. This relatively unadorned Parris-designed building was constructed in 1857 (photo: The Louis Berger Group 2003).

This case study provides a look at a more complicated example of the work of a master aspect. This element of the evaluation does not rely solely on the importance of the architecture, but rather whether the buildings are important examples within the career of a master architect. There is often overlap between the two. If the buildings are architecturally significant and the work of a master, then they are often considered important within the master's career. However, that is not a foregone conclusion, as demonstrated in this case.

Biography

Born in Hebron, Maine in 1780, Parris trained as a carpenter before later teaching himself the trades of architecture and engineering. During the span of his career, architecture went from a nascent trade to an accepted and admired profession in the United States. In his early years, Parris earned his living as a housewright, overseeing the design and construction of private

[118] Beard and Bradley, National Register of Historic Places Inventory – Nomination Form, Portsmouth Naval Shipyard [Historic District], April 1977; The Louis Berger Group, Inc., "Cultural Resources Survey, Portsmouth Naval Shipyard," 2003.

residences. By 1801, Parris settled in Portland, Maine, where he took several commissions designing and building houses. His architectural preferences tended towards simple Federal designs during this period. The Federal style was adopted from the popular English Adam style, which emphasized simple but elegant characteristics, emphasizing entrances, windows and certain flourishes. The Churchill – Ingraham House (1801) and Hunnewell – Shepley House (1805) are extant examples of this period and are both listed in the NRHP in part for their significance as important examples of his early work, despite their alterations over time. The designs appear to have fit the simple designs of the style and lack of sophistication of his later work.[119]

Parris used his success in Portland to broaden his work in the late 1800s through the 1810s. As he expanded geographically to work on projects throughout the region, he also taught himself ever more about the trade of architecture through his extensive and growing library and by traveling to various towns and settlements throughout the Northeastern United States. One of the earliest examples his work outside of Maine was the St. John's Church (1807; **Figure 61**) he designed in Portsmouth, New Hampshire. The first brick church in the state, it is considered an important representative of a type of church introduced to the region in the early nineteenth century. It is listed in the NRHP, in part because it is as an important early example in a master architect's career.[120]

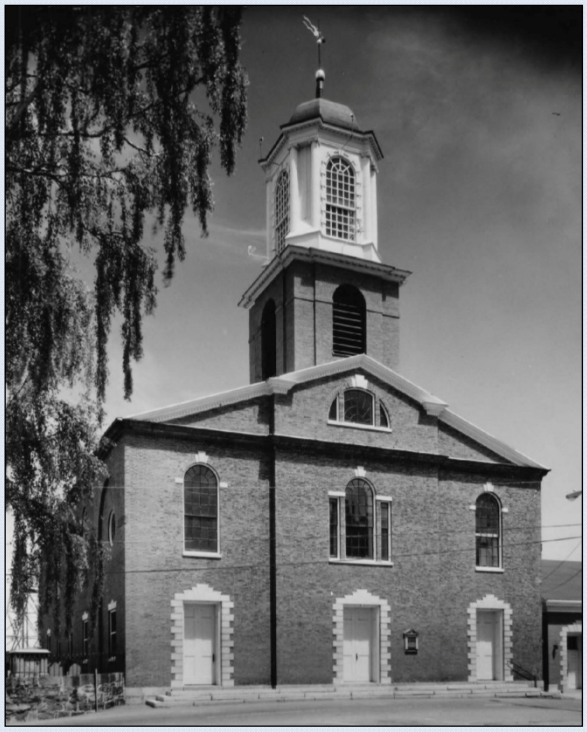

Figure 61: Parris designed New Hampshire's first brick church, the St. John's Church in Portsmouth, a distinctive early example of his religious work (photo: Foss 1975).

In his late 20s, Parris settled in Boston where he continued to hone his craft as a master

[119] Virginia Savage McAlester, *A Field Guide to American Houses* (New York: Alfred A. Knopf, 2013), 216-222; Mary-Eliza Wengren, National Register of Historic Places Inventory – Nomination Form, Churchill – Ingraham House, Portland, Maine, April 1973; Earle G. Shettleworth and Mary-Eliza Wengren, National Register of Historic Places Inventory – Nomination Form, Hunnewell – Shepley House, Portland, Maine, February 1972; Henry F. Withey and Elsie Rathburn Withey, *Biographical Dictionary of American Architects (Deceased)* (Los Angeles: Hennessey & Ingalls, Inc., 1970; republished, Detroit: Omnigraphics, 1996), 458; Wermiel, "An Architect and Engineer in the Early Nineteenth Century: Alexander Parris's Engineering Projects," 17.

[120] Wermiel, "An Architect and Engineer in the Early Nineteenth Century: Alexander Parris's Engineering Projects," 17; Gerald D. Foss, National Register of Historic Places Inventory – Nomination Form, St. John's Church, Portsmouth, New Hampshire, 1975.

builder and expand his knowledge and experience in architecture. His career rose through the early nineteenth century with the growing importance of Boston, but not before a short interlude in Richmond, Virginia, where he designed two houses considered among the most important in his transition from a builder of houses to refined and respected architect. "The crucial link between his early and mature work in New England," two architectural historians noted, "is a brief sojourn in Richmond, Virginia, which culminated in the commission for the John Wickham House" (**Figure 62**) His Richmond projects propelled him from a carpenter in the early 1800s to a "nationally recognized member of the architectural profession in the 1820s and 1830s." Along with the John Wickham House (1812), Parris designed the Executive Mansion (1813), both of which were elegant examples of the Federal style with great care given to the interior design, an aspect of his designs Parris was consciously improving.[121]

Figure 62: The John Wickham House in Richmond, Virginia, marked a maturity in Parris's architectural career during which he designed increasingly refined examples of Federalist-style buildings (photo: Morton 1971).

[121] Edward F. Zimmer and Pamela J. Scott, "Alexander Parris, B. Latrobe, and the John Wickham House in Richmond, Virginia," *Journal of the Society of Architectural Historians* 41, no. 3 (October 1982): 202; W. Brown Morton III, National Register of Historic Places Inventory – Nomination Form, Wickham – Valentine House, Richmond, Virginia, August 1971; John S. Salmon and Julie L. Vosmik, National Register of Historic Places Registration Form, Governor's Mansion – Executive Mansion, Richmond, Virginia, March 1988.

The Federal style, which dominated Parris's early career, derived from the Adams brothers in England (and is often also called the Adam style) during mid to late eighteenth century. It follows the popular Georgian style in the United States, and is often noted as a more delicate application of many elements utilized in its predecessor style. Symmetry marked these elegant houses and fenestration, doors and roofs were often accentuated with ornament. Columned porticos or surrounds focused attention on the doors, while windows could be outfitted with shutters, balconies, and stone lintels or decorative crowns. The rise of professional architects coincided with the popularity of this style; the most prominent included Charles Bulfinch, Benjamin Latrobe, and, increasingly, Parris himself.[122]

For Parris, the 1810s marked some important firsts. It was during this period he first advertised himself as a professional architect and engineer in addition to carpenter. His experience and education rose along with the profession. He began what turned out to be a long association with the military when he served Superintendent in the Corps of Artificers during the War of 1812, providing services as an architect and engineer. However, his most important accomplishments during this period were designs for houses and other buildings in Boston, which helped launch him to national fame. Among his most notable Boston projects were the David Sears House in Boston (1819), Cathedral Church of St. Paul in Boston (1819; **Figure 63**), Appleton-Parker House in Boston (1821), Pilgrim Hall in Plymouth, Massachusetts (1824), and United First Parish Church in Quincy, Massachusetts (1828). These all remain standing and are all listed in the NRHP in part for their significant architectural designs and as important works by Parris.[123]

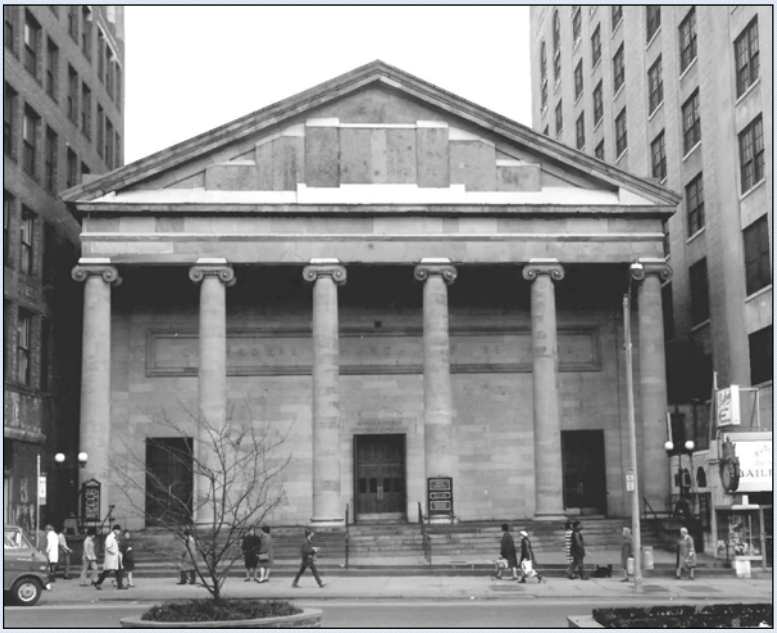

Figure 63: Parris Cathedral Church of St. Paul in Boston was the first Greek Revival style church in New England and demonstrates Parris's evolution of architectural styles (photo: Snell 1970).

[122] McAlester, *A Field Guide to American Houses*, 216-232.

[123] Zimmer and Scott, "Alexander Parris, B. Latrobe, and the John Wickham House in Richmond, Virginia," 211; Withey, *Biographical Dictionary of American Architects (Deceased)*, 458; Charles W. Snell, National Register of Historic Places Inventory – Nomination Form, Cathedral Church of St. Paul, Boston, Massachusetts, June 1970;

While his Boston work is widely recognized as important, there is one project that stands above the rest: the Quincy Market in Boston. On the city's waterfront, Parris designed three multi-story buildings surrounding legendary Faneuil Hall to serve as a major public market place. The Quincy Market Building (**Figure 64**) serves as the central building, featuring two-story granite and a Greek Revival design. It is flanked by two nearly identical four-story commercial buildings. The design was matched in sophistication by the engineering, in which Parris placed massive granite blocks on end to form structural columns. Blocks were then laid across the top of the columns to form lintels. This system created a series of bays much larger than could be accomplished using solid wall construction and permitted large storefronts. Parris also relied on internal iron columns for structural support, another innovation of the period. The buildings combined to form one of the largest public markets in the nation and became a market center for most of New England. The second floor of the main building was frequently used for fairs and exhibitions. The buildings form a National Historic Landmark, important for its historical associations, architectural design, and as an important work of master architect, Alexander Parris.[124]

Figure 64: Quincy Market in Boston is one of Parris's masterpiece designs featuring striking Greek Revival architecture and is a prominent element of Boston's commercial core; the wings on the side of the building are later additions (photo: Sampou 1988).

George R. Adams and Ralph J. Christrian, National Register of Historic Places Inventory – Nomination Form, Nathan Appleton Residence, Boston, Massachusetts, May 1977; Charles W. Snell, National Register of Historic Places Inventory – Nomination Form, David Sears House, Boston, Massachusetts, July 1970; Charles W. Snell, National Register of Historic Places Inventory – Nomination Form, United First Parish Church, Boston, Massachusetts, June 1970.

[124] Polly M. Rettig, National Register of Historic Places Inventory – Nomination Form, Faneuil Hall; Quincy Market, Boston, Massachusetts, July 1975, Leslie Sampou, Historic American Buildings Survey, Quincy Market, Dock Square, Boston, Suffolk County, Massachusetts, HABS No. MA-1166, Photographs and Written Historical and Descriptive Data, November 1988.

Nearing the end of the 1820s, as the demand for architects and engineers began to dry up, Parris's career shifted yet again. This new phase, which would dominate the majority of his remaining life and career, resulted in often more utilitarian designs for military and government agencies. In 1827, he was offered an opportunity to help noted civil engineer Loammi Baldwin, Jr. design several projects for the naval shipyards in Boston and Norfolk, Virginia. Baldwin had developed plans for Charleston (Boston) Navy Yard, and Parris was hired to design and superintend construction of the site's granite dry dock. Simultaneously, he designed the dry dock at Norfolk Navy Shipyard in Virginia, where he made frequent trips to oversee construction. The dry docks were completed in the early 1830s, and Parris was retained to design and build associated buildings featuring largely stripped-down designs. His other designs at Boston included the Chelsea Naval Hospital (1836), a ropewalk building (1834-37; **Figure 65**), storehouse (1837-40), and a structurally unique vaulted gunpowder magazine (1834-37). He also started work at Portsmouth during this period, being called on to help rebuild a stone quay wall that had collapsed unexpectedly. He was recommended for the job because of his expertise in engineering and experience with military work and his contributions were remembered in the waning years of his career when his work was again sought at the Maine shipyard.[125]

Figure 65: Alexander Parris's Ropewalk at Charleston Navy Shipyard in Boston demonstrates his engineering expertise (photo: Bradford 1960).

[125] Helen W. Davis, Edward M. Hatch and David G. Wright, "Alexander Parris: Innovator in Naval Facility Architecture," *IA: The Journal of the Society for Industrial Archeology* 2, no. 1 (1976): 3-9; Wermiel, "An Architect and Engineer in the Early Nineteenth Century: Alexander Parris's Engineering Projects," 22; Travis N. Fulk, Southeastern Archaeological Research," Literature Search for the Quay Wall Systems at the Portsmouth Naval Shipyard, Kittery, Maine," prepared for Naval Facilities Engineering Command Mid-Atlantic, May 2011, 30-34; S. S. Bradford, National Survey of Historic Sites and Buildings, Boston Naval Shipyard, Boston, Massachusetts, January 1960.

Parris's career took a slightly different direction starting in the late 1830s when he began work for the federal government on a series of lighthouses and beacons throughout the Northeastern United States. At the time, lighthouses were a rudimentary lot. Most featured wood construction or undressed stone construction and their lifespans were considerably shorter than later designs. Parris relied on dressed granite requiring greater precision in the construction process. He also was the first in the country to design and build an iron-framed light beacon on York Ledge at the York harbor in Maine. When Congress appropriated money for a major lighthouses construction bill, Parris was hired to design two of them, including Mount Desert Rock in Maine (1848) which is listed in the NRHP. Several of Parris's other lighthouses have been placed in the NRHP, including Saddleback Ledge Lighthouse in Maine (1839), Mount Desert Rock (1848), Whitehead Light Station in Tenants Harbor, ME (1848), Monhegan Island Lighthouse, Maine (1850; **Figure 66**) and Libby Light Station, Machiasport, Maine (1848). Many of these were noted for exhibiting innovative elements of engineering and architecture unique for the period.[126]

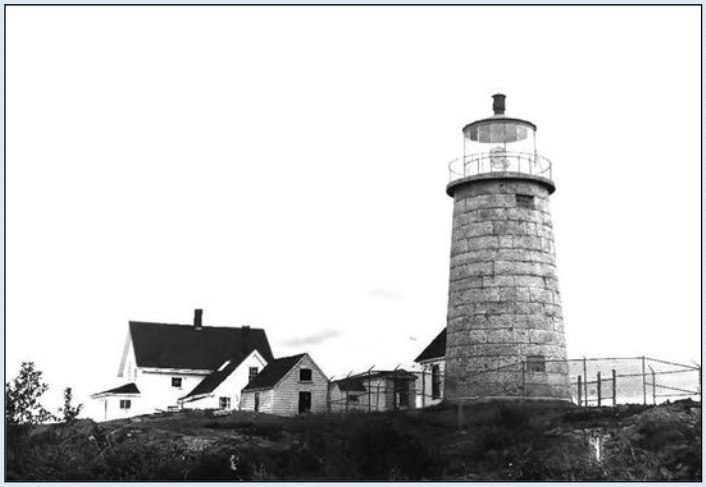

Figure 66: The Monhegan Island Lighthouse designed by Parris with stone walls (photo: Beard and Bradley 1979).

Starting in the late 1840s, the Navy hired Parris as salaried engineer for Portsmouth Navy Yard, likely based in part on his past work at the shipyard and other naval facilities. This marked a period of sustained development at the shipyard that continued well after his death in 1852. Parris oversaw construction of several projects including a stone wharf, basin for a floating dry dock, railway to haul vessels up shore, and a variety of buildings. A small collection of extant buildings and structures Parris designed at Portsmouth are included as contributors in the NRHP-listed Portsmouth Naval Shipyard Historic District, which is eligible in part for its

[126] Wermiel, "An Architect and Engineer in the Early Nineteenth Century: Alexander Parris's Engineering Projects," 19-22; National Park Service, National Register of Historic Places Focus Database, Mount Desert Light Station, March 1988; Kirk F. Mahoney, National Register of Historic Places Inventory – Nomination Form, Saddleback Ledge Light Station, Vinalhaven, Maine, October 1987; Kirk F. Mahoney, National Register of Historic Places Inventory – Nomination Form, Whitehead Light Station, Tenants Harbor, Maine, October 1987; Kirk F. Mahoney, National Register of Historic Places Inventory – Nomination Form, Matinicus Rock Light Station, Matinicus Island, Maine, October 1987; Frank A. Beard and Robert L. Bradley, National Register of Historic Places Inventory – Nomination Form, Monhegan Island Lighthouse and Quarters, Monhegan, Maine, October 1979, Michael F. Flaherty, National Register of Historic Places Inventory – Nomination Form, Libby Island Light Station, Machiasport, Maine, December 1975.

significant architectural designs (**Figure 67**). While these designs generally lacked the elaborate detail of his private residences, churches and public buildings, they comprise one of the best existing collections of his military work, which relied heavily on his engineering background more than his architectural finesse. These buildings included timber sheds, an engine house, machine shop and foundry, ordnance magazines and shell houses, lime house, and a stable. Some of these buildings featured characteristics of Greek Revival architecture, especially in the use of emphasized cornice lines, and cornice returns or pediments on gable ends. However, these buildings often lacked the more elaborate porches, columns and entries, illustrating the conservative budgets Parris worked with and the mostly utilitarian purpose of the buildings.[127]

Figure 67: Building 14 is one of the more elaborate Parris-designed contributors to the Portsmouth Naval Shipyard Historic District. This Greek Revival style three-and-a-half story building originally functioned as the marine railway Head House and Engine House (photo: Beard and Bradley 1977).

[127] Wermiel, "An Architect and Engineer in the Early Nineteenth Century: Alexander Parris's Engineering Projects," 22; Frank A. Beard and Robert L. Bradley, National Register of Historic Places Inventory – Nomination Form, Portsmouth Naval Shipyard [Historic District], Kittery, Maine, April 1977.

Analysis

Alexander Parris is widely recognized as a master in the field of architecture. More than a dozen buildings he designed are listed in the NRHP for their architecture and many for their association with Parris as a master architect. He is recognized with a small group of contemporaries who helped spawn the profession of architecture in the United States in the early nineteenth century and popularize Federal and Greek Revival styles.

Parris's eleven extant buildings at Portsmouth Naval Shipyard contribute to the Portsmouth Naval Shipyard Historic District in part for their architectural significance. However, the previous evaluations have not identified the buildings as important examples of Parris's career. As indicated in *National Register Bulletin 15* and discussed at length in Chapter 4, not every building by a master architect meets the criteria for an important work of a master architect. This applied even if the building is recognized for architectural significance. This would often be the case if an architect is among the most widely known and recognized for their mastery in the craft. While a building by Frank Lloyd Wright might be architecturally significant, it also might not have been especially distinctive within his career of copious architecturally significant designs. This is the case with Parris. Many of his existing buildings are recognized as important works of architecture. However, not every work was important within his career. For this reason, it is imperative to compare the buildings to similar designs.

The Portsmouth Naval Shipyard buildings are examples of Parris's military work and Greek Revival style architecture. Overall, his military buildings feature more restrained designs intended primarily for functionality. Many of the buildings were architecturally unremarkable. His designs for Charleston Navy Yard in Boston were generally more architecturally elaborate than the designs he prepared for Portsmouth Naval Shipyard and required substantially greater engineering expertise. Therefore, the buildings at Charleston Navy Yard, not at Portsmouth Naval Shipyard, are the best representation of Parris's contributions to military design and engineering. As examples of Greek Revival architecture within Parris's career, the buildings at Portsmouth Naval Shipyard pale in comparison to his work on Quincy Market and the Cathedral Church of St. Paul, both in Boston and both landmarks of the style. The conclusion, therefore, is that the buildings do not appear important within the career of a recognized master architect, despite being considered architecturally important.

5.6 Prosaic or Routine Works by Master Architects

5.6.1 Naval Facilities Pacific Beach – Bassetti & Morse

The Navy hired the Seattle-based architectural firm Bassetti & Morse to prepare designs for 30 Capehart housing units at Naval Facilities Pacific Beach, which is located on the Pacific Coast northwest of Olympia, Washington (**Figure 68**). Plans for the units were completed in 1959 and construction ended three years later. The buildings were recently included in an NRHP evaluation of the facility. The study concluded that they fall under the Program Comment for Wherry and Capehart Housing. As such the buildings do not require consideration for Section 106 purposes. However, the study also concluded that because the buildings represent an important Cold War military neighborhood and are good representations of the facility and its significance during that time, they should be treated for planning purposes as if they were contributors to a NRHP-eligible historic district. Nonetheless, the properties were not found to contain importance for their architectural style or as important examples of a master architect.

Bassetti & Morse

- Architecture Firm
- Key Personnel: Fred Bassetti and John Morse
- Years Active: 1947-1962
- Styles Preferred: Pacific Northwest Modernism; Mid-Century Modernism
- Building Types: Residential; Educational
- Best Known For: Walter F. Isaacs Residence; Marshall Forest Residence; G.J. Ambruster Residence; Gamma Rho Apartment; Ridgeway Dormitories at Western Washington; and Norwood Village

The architects were well-known and widely recognized as important within the Northwest Modern movement, but because these houses represented a limited number of basic designs that lacked the aesthetic qualities of many of their works, they are not considered important within their careers. This case study provides an excellent example of architects considered masters in their field designing routine or prosaic building types based on standardized plans.[128]

Figure 68: A Bassetti and Morse Capehart house at Naval Facility Pacific Beach (photo: Sackett 2012).

[128] Russell Sacket, NAVFAC Northwest, "Inventory and Evaluation: The Navy's Pacific Beach Facilities, Pacific Beach, Washington," May 2012.

Capehart Program

The Capehart program developed as an effort to address the severe family housing shortage in the military during the early Cold War Years. Passed in 1955, the Capehart Act followed on the heels of the successful Wherry program and established guidelines for funding, designing and constructing family housing units on military installations. Integral to the streamlined process was a public-private partnership between the military branches, the Federal Housing Administration, architectural and engineering firms, and construction companies. The military established requirements for the units including, among other things, square footage, number of rooms, parking, and amenities. The military hired architects through a bidding process to design a limited number of house plans that would be used in repetition to construct an entire family housing neighborhood. The design goals were twofold: create single-family and duplex housing units that reflected the popular trends in residential neighborhoods to create a feeling of suburban living; and rapidly and efficiently increase military family housing to address the shortage. These two goals favored design and construction techniques made popular in the post-war era for developing large residential tracts. As such, Capehart and Wherry projects often featured a limited array of house plans, prefabrication methods, and factory-like construction. While builders frequently hired relatively unknown architects to design residential tracts in civilian neighborhoods, the military preferred architectural firms with a record of success in developing residential tracts. This often meant well-known local or national firms received the contracts. For example, influential architect Richard Neutra and his firm were awarded a number of Capehart housing projects on military bases across the western United States.[129]

Biography

By the time the Navy hired Bassetti & Morse to design Capehart housing units at Naval Facility Pacific Beach in the late 1950s, the architectural firm had established itself as a successful and sought-after modernist firm in the Seattle area. The collaboration between Fred Bassetti and John Morse began in 1947 after the young Bassetti rented space in the office of Morse's architectural company. A Seattle native born in 1917, Bassetti graduated from the University of Washington (1942) before studying under renowned architects Walter Gropius and Marcel Breuer at Harvard University. Prior to joining with Morse, Bassetti worked for a few different firms, including Alvar Aalto in 1946 and Seattle modernist Paul Thiry. Six years his elder, Morse was born in Brookline, Massachusetts, received his degree in architecture from Harvard, and

[129] Sacket, "Inventory and Evaluation: The Navy's Pacific Beach Facilities, Pacific Beach, Washington," 22-23; Kirsten Peeler, et al., "Housing an Air Force and a Navy: The Wherry and Capehart Era Solutions to the Postwar Family House Shortage (1949-1962), Frederick, MD: R. Christopher Goodwin & Associates, Inc., prepared for United States Department of the Air Force and United States Department of the Navy, June 2007, 69-70, 83-84, 87-89.

subsequently moved to Washington and worked for several small architecture firms. Morse started his own architecture firm in 1945 and was joined by Bassetti two years later.[130]

Bassetti & Morse remained a relatively small company through its early years, but quickly became known for many of its larger projects. By 1953, the company employed one designer and two draftsmen, in addition to the two partners and administrative staff. But the small staff did not prevent the firm from completing a range of substantial projects, from apartment buildings and a housing village to public housing projects and an administration building for a local utility district. It also maintained steady work on private residences, many of which received local and national awards and recognition. Almost every year between 1951 and 1963, the firm received an award from either the local and national branches of the AIA. It was recognized in architectural magazines and local and national award competitions. As a sign of the firm's reputation, it often worked with Eckbo, Royston and Williams, one of the preeminent landscape architecture firms in the country.[131]

The architectural style preferred by Bassetti & Morse from the late 1940s through the early 1960s was a regional modernist movement known as Pacific Northwest Modernism. This style appeared similar in many respects to the popular trends in Modernism throughout the country, but tended to emphasize a few key characteristics. Residences often featured typical Mid-Century Modern elements, such as low-pitch or flat roofs with wide eaves, and large windows. They also placed particular importance on connecting the living space with the natural outside world either by bringing natural materials into the house or by facilitating easy access to the outdoors through window walls and large sliding or folding glass doors. The connection with the natural world was particularly important within Pacific Northwest Modernism, which took its inspiration from the region's abundant forests, ocean, and weather, which created unique challenges. The climate of much of the Northwest is frequently dark and rainy. Architects designing for this weather emphasize protection from the elements and ways to increase light. Wide eaves and covered walkways helped shelter from the rain, but also blocked light. Northwest Modernism addressed this in a variety of ways, including window walls, skylights, clerestory windows, and windowed gable walls.[132]

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[130] Jim Brunner, "Architect Fred Bassetti Dies; He Leaves Indelible Mark on Seattle," *Seattle Times*, 5 December 2013; Joel Connelly and Aubrey Cohen, "Fred Bassetti, Architect and Shaper of Seattle: An Appreciation," *Seattle Post-Intelligencer*, 6 December 2013; AIA Seattle, "John Morse FAIA: AIA Seattle Medal 1996," accessed at www.aiaseattle.org on February 2016; Fred Bassetti, FAIA, Oral History, interviewed by Steve Inge, 30 April 2003, Special Collections Oral History Program, Western Washington University Libraries; Moore, Edgington and Payne, "A Guide to Architecture and Engineering Firms of the Cold War Era," 39.

[131] Bassetti & Morse, "Architects' Roster Questionnaire," January 1953, American Institute of Architects Archives; AIA Seattle, "Honor Awards," accessed at www.aiaseattle.org/awards/honor-awards/ on February 2016.

[132] Erin Lodi, "Northwest Modernism: A Style for the Elements," *Columns Magazine*, March 2010; City of Olympia Heritage Commission, "Mid-Twentieth Century Olympia: A Context Statement on Local History and Modern Architecture," April 2008, 70.

Among the architects' commissions were private residences in wealthy suburban neighborhoods surrounding Seattle. These often represented some of the best examples of the architects' design aesthetics and won them numerous awards. The Walter F. Isaacs Residence (1953) and the Marshall Forest Residence (1953) won the AIA National Merit Award, while the G.J. Ambruster Residence (1951; **Figure 69**), Gerald Martin Residence (1954), John O'Brien Residence (1954), and Theo Caldwell Residence (1955) each won separate AIA honor awards. These houses were characterized by the Pacific Northwest Modernism and featured low-pitch or flat roofs with exposed wood beams, wood siding, large windows and glass doors, and clerestory windows [133]

Figure 69: Ambruster Residence built in 1951 with parallel low-pitch gable roofs, clerestory windows, and exposed natural materials (photo: Dearborn-Massar).

The company's projects also included multi-family residential buildings, such as the Gamma Rho Apartment building (1950; **Figure 70**), which is a Seattle Historical Site; Ridgeway Dormitories at Western Washington University (1963); and private and public residential tracts, such as Sunnyslope Homes Housing in Kennewick, Washington (1951) and Norwood Village (1950). These buildings often featured similar Pacific Northwest Modernism aesthetics, utilizing natural materials, extensive windows, and Mid-Century Modernist characteristics like flat or low-pitch roofs with wide eaves. Norwood Village has been particularly well-received by architectural critics and historians as an early example in the Seattle area of a residential tract using strikingly modern architectural elements. By the late 1950s, the firm had developed a portfolio of successful and well-received residential projects. This helped secure four military housing projects as part of the Capehart program. The earliest of these projects was completed in 1957 at McChord Air Force Base south of Tacoma, Washington and was followed by projects at Naval

[133] DOCOMOMO WEWA, Architects & Designers: Fred Bassetti and John Morse, accessed at http://www.docomomo-wewa.org/architects_gallery.php on February 2016; Koyl, ed., *American Architects Directory*, First Edition, 29, 392; Koyl, ed., *American Architects Directory*, Second Edition, 38, 498; Dearborn-Massar, "Armbruster residence front exterior and carport, Lake Stevens, Washington, circa 1947-1960," DMA1297, Dearborn Massar Photographs Photograph Collection, University of Washington Libraries, Special Collections Division.

Facilities Pacific Beach in 1959, Fairchild Air Force Base in about 1960 and Naval Air Station Whidbey Island in 1961.[134]

Figure 70: Bassetti & Morse-designed Gamma Rho Apartment building is a Seattle Historical Site (photo: Dearborn-Massar).

The modest designs Bassetti & Morse chose for the Naval Facility Pacific Beach Capehart houses featured a Pacific Northwest Modern style and appear to have reflected a standard design used at the other military installations (**Figures 71** and **72**). The houses included low-pitch gable roofs with wide overhangs. While windows were not extensive, the architects included several picture windows. The Pacific Northwest Modern features, however, did not extend much beyond that. The houses featured simple rectangular footprints with attached or semi-detached one-car garages.[135]

Figure 71: Building 325 is a modestly designed a Capehart program house at Naval Facility Pacific Beach by Bassetti & Morse featuring a Pacific Northwest Modern style aesthetic (photo: Sackett 2012).

Figure 72: This Bassetti & Morse-designed Capehart house at Naval Air Station Whidbey Island is almost identical to Building 325 at Naval Facility Pacific Beach (photo: Military OneSource).

[134] Washington State Department of Transportation, "I-405 Bellevue Nickel Improvement Project, Historic, Cultural, and Archeological Resources Discipline Report," prepared for Washington State Department of Transportation, Urban Corridors Office, and Federal Highway Administration, November 2005, 38, Appendix C; Dearborn-Massar, "Gamma Rho Apartments, exterior with patios, Seattle, circa 1950-1962," DM466, Dearborn Massar Photographs Photograph Collection, University of Washington Libraries, Special Collections Division; Koyl, ed., *American Architects Directory*, First Edition, 29, 392; Koyl, ed., *American Architects Directory*, Second Edition, 38, 498; Bassetti & Morse, "Architects' Roster Questionnaire," January 1953; Moore, Edgington and Payne, "A Guide to Architecture and Engineering Firms of the Cold War Era," 39.

[135] Military OneSource, Naval Air Station Whidbey Island Photo Gallery, Maylor Point Capehart Housing, accessed at http://www.militaryonesource.mil/ on February 2016.

Analysis

Bassetti & Morse gained widespread recognition throughout Washington among contemporaries and has been recognized as an important firm in the Pacific Northwest Modern movement. Bassetti has been singled out with praise for his designs, which continued throughout his career, and his influence on Pacific Northwest Modernism. Both architects and the firm received numerous local and national awards and honors, especially from the AIA. Fred Bassetti and likely John Morse would be considered master architects at the local level of significance for this work; the firm itself, in situations where the individual architects within the firm is not known or where it can be shown to be a collaborative effort, would also be considered a master in the field. In evaluating the Capehart housing development at Naval Facility Pacific Beach, it is important to view it within the context of the firm's overall work. It appears in some respects similar to other residential projects the firm completed, such as other Capehart housing projects at McChord Air Force Base, Fairchild Air Force Base and Naval Air Station, Whidbey Island, and the Norwood Village in the Seattle suburb of Bellevue.

For Norwood Village, completed in 1950, the architects prepared plans for five house designs that formed the basis for all of the residences erected in the tract. The designs featured post-and-beam Mid-Century Modern characteristics, with low-pitch roofs, wide eaves and exposed beams. Several buildings within the neighborhood have previously been evaluated as eligible for listing in the NRHP as contributors to a potential Norwood Village Historic District, which was significant under Criterion C for possessing distinctive characteristics of modernist housing tract in the early post-war period as well as representing the work of important local architects, Bassetti & Morse. Namely, Norwood Village is an important early representation of the small residential developments designed by Bassetti & Morse.

The Capehart projects, including the Naval Facility Pacific Beach development, do not appear important within the history of the Bassetti & Morse firm or the careers of the individual architects. The Capehart houses at Naval Facility Pacific Beach were constructed more than a decade after Norwood Village, represent more reserved Mid-Century Modern designs, and are very similar to the houses built at the three other military installations for which they designed houses. It appears the company developed a single set of designs that were repeated for each of the four military installations.

The Capehart houses at Naval Facility Pacific Beach were not important within the careers of these architects. Contemporary and recent observers are largely silent on the project. They also are not important as representations of the firm's military work. The four Capehart projects appear to be the only military designs by either architect and they do not appear to have left a sizeable impact on their careers. Thus, while the architects are likely masters at the local level, this particular project does not constitute an important and distinguishable phase or aspect of their careers.

5.6.2 NAS Fallon Spotting Towers – DeLongchamps and O'Brien

DeLongchamps and O'Brien, one of the most celebrated architecture firms in Reno, Nevada, during the early and mid twentieth century, designed 15 buildings and structures at NAS Fallon as part of upgrades to the station's test ranges used for live bombing exercises. The buildings, included spotting towers and control buildings, were developed in 1960 and were used to help naval aviators train in a variety of weapons delivery methods, including air to ground attack, bombing from various altitudes and loft bombing. Lead architect Frederic DeLongchamps has several buildings listed in the NRHP and is known for his use of a variety of architectural styles on some of the most prominent buildings in Reno, including the US Post Office, Washoe County Courthouse, and Riverside Hotel.

DELONGCHAMPS AND O'BRIEN

- Architecture Firm
- Key Personnel: Frederic DeLongchamps and George O'Brien
- Years Active: DeLongchamps: 1907 – 1965; O'Brien: ca. 1909-1965
- Styles Preferred: Beaux-Arts; Neo Classical; Art Deco; Moderne; Spanish Revival
- Property Types: Government, commercial, residential
- Best Known For: Washoe County Courthouse, Reno, NV; U.S. Post Office, Reno, NV; Heroes Memorial Building, Carson City, NV; Riverside Hotel, Reno, NV

In 2012, JRP prepared a survey and evaluation report of four of these buildings for NAS Fallon and concluded that while DeLongchamps is considered a master for the purposes of NRHP Criterion C, the buildings he and O'Brien designed at NAS Fallon do not reflect an important phase of his career, or aspect or idea of the craft. Design elements used by DeLongchamps in prominent examples of their work did not appear on these structures. Instead, the designs followed the Navy's standard requirements for such buildings and closely resemble standard plans and similar spotting towers and control buildings found on other military facilities. Despite this, the Nevada State Historic Preservation Officer disagreed with this conclusion, stating that the buildings be treated as "unevaluated" pending additional research into DeLongchamps and O'Brien's contributions to military architecture, and the status of the buildings remains undetermined.[136] This example illustrates an evaluation of military buildings designed using standardized criteria by an architect who was widely recognized as a master.

Biography

Architect Frederic J. DeLongchamps founded his company in 1907, served briefly as Nevada's only State Architect in 1919, and was eventually joined in 1935 by George L. F. O'Brien, whom

[136] JRP Historical Consulting, "NAS Fallon Technical Report No. 112 and Bureau of Land Management, Stillwater Field Office No. CRR3-2617, Volume II: Historic Resources Inventory and Evaluation Report of Buildings and Structures on Range B-16, Naval Air Station, Fallon," April 2012.

DeLongchamps had known and occasionally worked with since about 1916. DeLongchamps' storied career included hundreds of buildings, many of which were prominent commercial or government buildings that often won him overwhelming praise. Through his elaborate designs of important buildings, DeLongchamps helped define the architectural character of Reno and Northern Nevada during the first half of the twentieth century. Stylistically, his early designs tended toward Beaux-Arts and Neo-Classical architecture in which he emphasized formal massing, elaborate ornamentation, and often symmetric fenestration. By the 1930s, he shifted toward Moderne, Art Deco, and Spanish Revival architecture, which often featured formal massing and plans and resulted in elegant and stately buildings, but was stripped of some of the more traditional ornamentation of each style. His use of styles combined with his preference for stone, brick and terra cotta often led to formal and grand buildings.[137]

DeLongchamps designed courthouses for seven Nevada and two California counties, including the Neo-Classical Washoe County Courthouse (1909-1911; **Figure 73**) in Reno, as well as the Nevada Supreme Court and Library building (1937) in Carson City, Heroes Memorial Building (1921) in Carson City, the Riverside Hotel (1927) in Reno, the U.S. Post Office (1933; **Figure 74**) in Reno and buildings on the University of Nevada, Reno (UNR) campus. Nearly all of his commissions during this period received widespread acclaim. He won awards for his 1915 Nevada buildings designed for the Panama-Pacific Expositions in San Francisco and San Diego. DeLongchamps also designed at least 20 buildings in Fallon, Nevada, including the Oats Park School (1915) and the Fallon City Hall (1930-31; **Figure 75**), two of the little city's most impressive buildings. By the time he teamed up with O'Brien in the late 1930s, DeLongchamps had helped define urban built environments throughout Northern Nevada.[138]

Figure 73: DeLongchamps used Neo-Classical architecture for his design of the Washoe County Courthouse in Reno (photo: Kuranda 1986).

[137] Ronald M. James, "Nevada's Historic Architect," originally printed in *Nevada Magazine*, July / August 1994, reprinted in *The Historical Nevada Magazine*, (Carson City: Nevada Magazine, 1998), 111-116.

[138] James, "Nevada's Historic Architect," 111-116; Kathryn M. Kuranda, National Register of Historic Places Registration Form, Thematic Nomination of the Architecture of Frederick J. DeLongchamps, 12 June 1986; Bernadette Francke, National Register of Historic Places – Registration Form, Fallon City Hall, 1 July 2004; "Post Office on South Virginia," photograph, Image No. UNRS-P1988-63-199, circa 1935, Maude Swain Taylor Collection, Special Collections and University Archives Photographs, University of Nevada, Reno; Fallon City Hall, photograph,

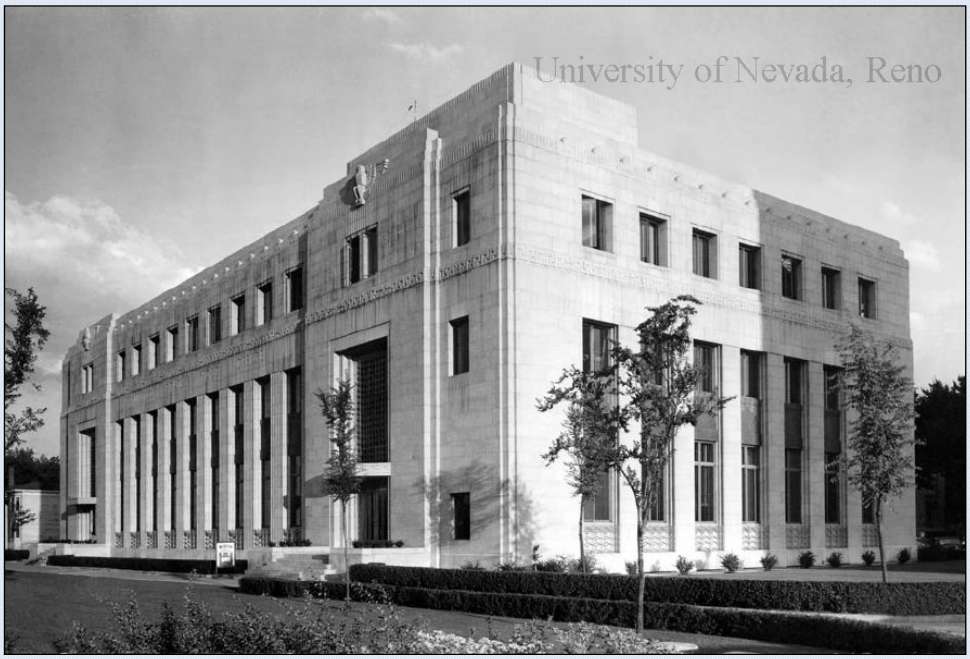

Figure 74: The Art Deco U.S. Post Office in Reno demonstrates DeLongchamps' expertise in one of a variety of architectural styles (photo: UNR).

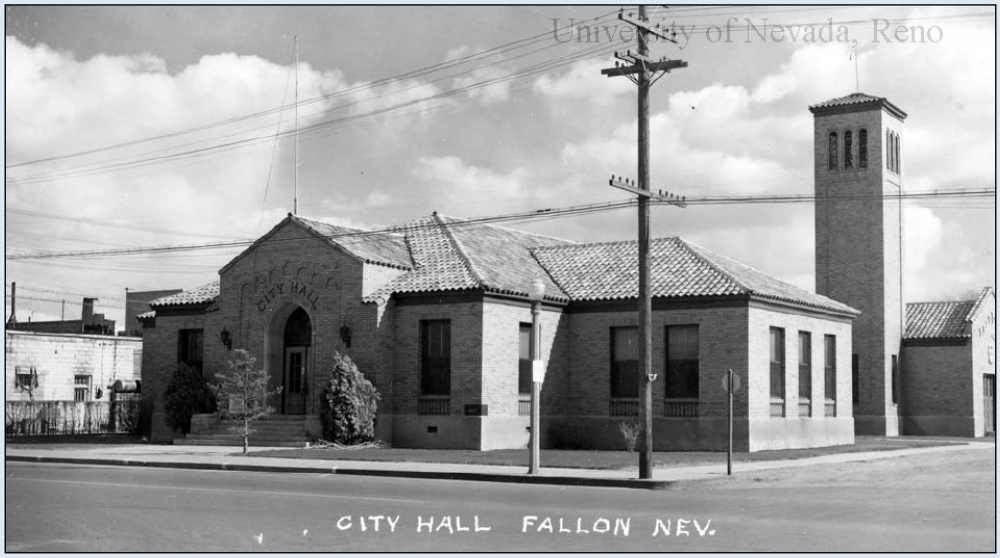

Figure 75: The Fallon City Hall was built in 1930-31 in a Spanish Revival Style and remains one of the city's most prominent buildings (photo: UNR).

DeLongchamps' career appears to have peaked in the 1920s and 1930s, and by the 1940s had suffered from the downturn in the economy from the Great Depression and near halt in the private construction sector during World War II. The partnership with architect George L.F. O'Brien appears in part to be an attempt to improve the business side of the operation. O'Brien had studied architecture in San Francisco, where he first established his firm after receiving an education at the Mark Hopkins Institute of Art and San Francisco Atelier Beaux Arts Society.

Image No. UNRS-P1995-38-28, undated, Nevada Postcards, Special Collections and University Archives Photographs, University of Nevada, Reno.

One of the first projects they worked on together, the Mary Lee Nichols School in Sparks, Nevada (1917), is listed in the NRHP in part as the work of master architect DeLongchamps. While O'Brien was known for his expertise in business, and oversaw the financial and logistical side of the firm, he also contributed to artistic elements of the firm. DeLongchamps, on the other hand, was not known for his business acumen and generally led the artistic direction on most major projects.[139]

In the years after they joined operations, DeLongchamps and O'Brien never achieved the level of success DeLongchamps had experienced in the century's first few decades. Between 1935 and their retirement three decades later, DeLongchamps and O'Brien's work included a variety of relatively minor projects, such as single-family residences, motels and minor hotels, industrial buildings, as well as a few high-profile projects and remodels of older buildings, including ones DeLongchamps originally designed. Their design of the UNR Gymnasium (1945; **Figure 76**) appears to be the most prominent project they completed during this period. It is listed in the NRHP as part of the University of Nevada Reno Historic District for its Art-Moderne design and for being the last UNR building DeLongchamps designed; the extent to which O'Brien contributed to the design of this building has not been unearthed. DeLongchamps and O'Brien also worked on remodels of the Riverside Hotel (1963), Humboldt County Courthouse (1949, 1951, and 1958), and Mackay School of Mines at UNR (1954 and 1956).[140]

Figure 76: UNR Gymnasium (now Virginia Street Gym) in about 1955. The gym is listed in the NRHP (photo: UNR).

O'Brien signed the blueprints prepared for the 15 buildings and structures for NAS Fallon that were built in 1960. While O'Brien's primary role in the firm was managing the business side of operations, he likely continued to participate in some designs, especially if they nondescript projects. However, it is more likely DeLongchamps (who was in the last years of his association with the firm), or one of the firm's other architects or draftsmen, oversaw the project's design elements. The designs were for spotting towers (**Figure 77**) and control buildings (**Figure 78**) at

[139] JRP Historical Consulting, "NAS Fallon Technical Report No. 112 and Bureau of Land Management, Stillwater Field Office No. CRR3-2617, Volume II: Historic Resources Inventory and Evaluation Report of Buildings and Structures on Range B-16, Naval Air Station, Fallon," 7-8; Mella Rothwell Harmon, National Register of Historic Places – Registration Form, Mary Lee Nichols School, Sparks, Nevada, July 2002.

[140] Frederic J. DeLongchamps Architectural Records, Special Collections, University Library, University of Nevada, Reno; Mary Beth Hamby and Nancy E. Sikes, National Register of Historic Places – Nomination Form, University of Nevada Reno Historic District, Reno, Nevada, October 1986.

three NAS Fallon bombing ranges (Ranges B-16, B-17, and B-19). The ranges were used for training naval aviators in various weapons delivery tactics, including bombing from different altitudes, air to ground attack, and loft or "over the shoulder" bombing (a technique for dropping a weapon from low altitude that allows the attacking aircraft to avoid the blast effects of the detonation).[141]

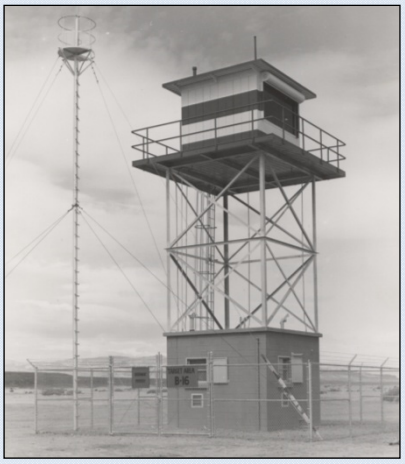

Figure 77: Spotting Tower at Range B-16 at NAS Fallon (photo: JRP 2012).

Figure 78: Building 612, Control Tower Building (right) and Building 613, Electrical Production Building at Range B-16 at NAS Fallon (photo: JRP 2012).

The range facilities, while technically advanced at the time of their construction, were the practical application of well-established training equipment and methods developed elsewhere, including NAWS China Lake, and constructed at several facilities such as Marine Corps Air Station-Yuma. These ranges typically used a combination of spotting towers, distant targets, and control rooms to operate the electronic scoring systems that provided aviators with evaluation of their practice on the range. General design criteria for spotting towers within these types of training facilities can be found in Military Handbook 1027/3B. Those design criteria and spotting towers located at NAWS China Lake are very similar in appearance to the spotting towers DeLongchamps and O'Brien designed for NAS Fallon, suggesting they relied heavily on the standardized plans (**Figures 79** and **80**). Likewise, the Air Force had similar ranges, with analogous structures for pilot evaluation, at its training bases. For example, the aerial gunnery range at Edwards Air Force Base, north of Lancaster, California, has spotting towers, targets, and other equipment similar to that found on NAS Fallon's ranges.[142]

[141] JRP Historical Consulting, "NAS Fallon Technical Report No. 112 and Bureau of Land Management, Stillwater Field Office No. CRR3-2617, Volume II: Historic Resources Inventory and Evaluation Report of Buildings and Structures on Range B-16, Naval Air Station, Fallon," 7-8.

[142] JRP Historical Consulting, "NAS Fallon Technical Report No. 112 and Bureau of Land Management, Stillwater Field Office No. CRR3-2617, Volume II: Historic Resources Inventory and Evaluation Report of Buildings and Structures on Range B-16, Naval Air Station, Fallon," 7-8.

Figure 79: Building 610, Control Tower, Range B-16, NAS Fallon (photo: JRP 2012).

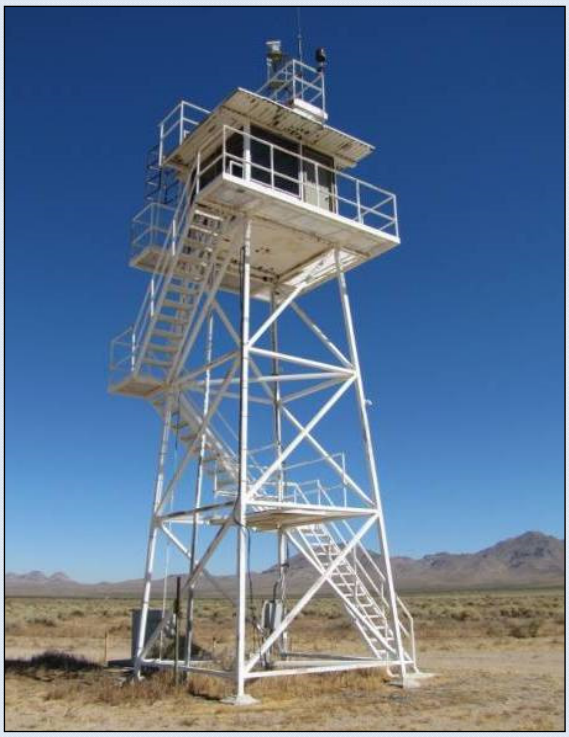

Figure 80: Spotting Tower, Naval Air Weapon Station, China Lake (photo: JRP 2012).

Analysis

The original 2012 NRHP evaluation of these buildings assessed their importance within the work of DeLongchamps and O'Brien. DeLongchamps was among the best-known and well-received architects in Nevada during the first half of the twentieth century. He began his practice in 1907 and was eventually joined by George O'Brien in 1935, forming the company responsible for the drawings of the spotting towers and control buildings at NAS Fallon. Several of DeLongchamps' buildings, including the US Post Office (1933), Washoe County Courthouse (1910), and Riverside Hotel (1927), helped define Reno's early twentieth century built environment. The architecture of DeLongchamps was the subject of a NRHP Thematic Nomination, and several of his buildings have been listed in the NRHP. In those evaluations, he has been called out as a master architect for the purposes of NRHP Criterion C. O'Brien has not been evaluated as a master architect. His work prior to 1935, when he officially partnered with DeLongchamps, is less well understood than DeLongchamps career. His design contributions to the firm after 1935 appear secondary to DeLongchamps'. If future research reveals he played a larger role in the firm and had a bigger impact on the profession, this conclusion may be changed.

Nonetheless, the buildings DeLongchamps and O'Brien designed for NAS Fallon's ranges are not important works of DeLongchamps because they feature simple architectural designs that conform to standard military requirements. For the same reasons, they are very likely not important within O'Brien's career. They are modest examples of utilitarian style architecture that lack the architectural sophistication of the firm's many other projects. They lack the architectural sophistication of DeLongchamps' lauded designs. Moreover, the buildings do not represent a particular phase in the development or an aspect of DeLongchamps' and O'Brien's careers. Instead, they represented a small project that received minimal public attention during the latter years of the architects' careers. Evidence suggests the architects prepared very few military projects and therefore military architecture represented a very small and relatively unimportant element of their careers. Consequently, the firm's military work would not be considered an important phase or aspect of their work. The buildings do not represent key elements of their craftsmanship, as they feature standardized design characteristics and appear very similar to other buildings and structures of similar functions. Thus while DeLongchamps is considered a master for the purposes of NRHP Criterion C, his and O'Brien's work at NAS Fallon does not constitute the important work of a master.[143]

[143] JRP Historical Consulting, "NAS Fallon Technical Report No. 112 and Bureau of Land Management, Stillwater Field Office No. CRR3-2617, Volume II: Historic Resources Inventory and Evaluation Report of Buildings and Structures on Range B-16, Naval Air Station, Fallon," April 2012; Francke, National Register of Historic Places – Registration Form, Fallon City Hall, 1 July 2004.

5.6.3 NAS Fallon – Ralph Casazza and E. Keith Lockard

Several NAS Fallon buildings were designed by the Reno-based architectural firm that originated in 1950 as Lockard and Casazza. The firm developed a prominent status in Northern Nevada for its mid-twentieth century designs of highly visible and architecturally unique buildings. The architects specialized in public buildings, including government and university facilities. The firm was run by and employed several noted local architects, and operated under a few variant names over the years, but the key figures in the company were its founders Ralph Casazza and E. Keith Lockard.

RALPH CASAZZA

- Architect
- Firms: Lockard and Casazza; Lockard Casazza and Parsons; Casazza, Peetz, and Associates
- Years Active: 1949-1999
- Building Types: Commercial; government; educational
- Styles Preferred: Modernism, New Formalism, Neo-expressionism
- Best Known For: Clifton Young United States Courthouse and Federal Building; Centennial Coliseum; Bruce Thompson Federal Courthouse in Carson City; Lawlor Events Center at University of Nevada, Reno

E. KEITH LOCKARD

- Architect
- Firms: Lockard and Casazza; Lockard Casazza and Parsons
- Years Active: 1916-1968
- Building Types: Commercial; government; educational
- Styles Preferred: Modernism, New Formalism
- Best Known For: Clifton Young United States Courthouse and Federal Building; Centennial Coliseum

The firm's NAS Fallon designs were mostly MWR buildings, but also included a warehouse and an operations building. The buildings were constructed at various dates between 1959 and 1989 and typically featured reserved architectural designs. They have been evaluated for the Navy and none of them were found to meet the NRHP under Criteria C, including for work of a master. This conclusion also noted that Casazza, who oversaw half of the NAS Fallon designs, should be considered a master architect at the local level for the recognition his broad and successful body of work has received. His contributions at NAS Fallon lacked the level of architectural refinement he usually employed in his other projects.[144]

Biography

Ralph Casazza was the primary architect and the company's driving force throughout much of the history of the company. The firm he started in 1950 with E. Keith Lockard remained

[144] JRP Historical Consulting, LLC, "Analysis of Military Buildings by Master Architects at Naval Air Station (NAS) Fallon," Navy Contract N62473-11-D-2220, prepared for Naval Facilities Engineering Command Southwest, October 2014, 94-95.

influential in local architecture through Casazza's retirement in 1999, with commissions for a variety of state and local government projects including educational facilities, commercial centers, churches, jails, banks, industrial complexes, casinos, and postal buildings.

Reno-native Casazza was born in 1926 and showed an early desire to pursue a life in architecture. After attending University of Nevada, Reno (UNR), he earned his Nevada state architecture license in 1949 and shortly thereafter partnered with Lockard. In 1950 Casazza was drafted into the Army and served the better part of two years in Korea as a sergeant with the 439th Construction Battalion of the Army Corps of Engineers. Casazza was the personal recipient of multiple professional awards including the Silver Medal by the Nevada American Institute of Architects (AIA), and Bradley P. Kidder Award from the Western Mountain Region of the AIA. The Silver Medal from the Nevada AIA is the highest honor for an architect, awarded in part to architects with a "significant body of work of lasting influence on the theory and practice of architecture." He was later lauded for his "lasting architectural impression."He served as president of the Nevada AIA and chairman of the Downtown Redevelopment committee of 1961, and he was active in the Reno Chamber of Commerce.[145]

Lockard was born in 1892 and graduated in 1916 with an architecture degree from University of California, Berkley. His career began in Santa Barbara but he eventually moved to San Francisco where he joined the firm Blanchard and Maher in 1942 and worked on several large Navy projects. During World War II, he prepared designs for Clearfield Naval Air Station, Utah, earning the Navy "E" award for excellent performance by a civilian. After the war, Lockard relocated to Reno and joined with Casazza. During the early years of Lockard and Casazza, the architects prepared plans for a variety of property types. The firm was commissioned to design some of Reno's motels as the resort industry grew rapidly in the early post–World War II years. They also designed residences, schools, commercial properties, and public facilities, including a new unit at Nevada State Children's Hospital. Their military work included buildings at Naval Ammunition Depot, Hawthorne, and they prepared plans for all radar stations in Nevada. Among the more architecturally prominent buildings the firm designed are the Female Ward Building at Nevada State Hospital (1961); Centennial Coliseum (1966), the Chemistry and Physics buildings at UNR (1969; **Figure 81**), Washoe County Administration Complex master plan (ca. 1970s), US Post Office in Reno (1975), Bruce Thompson Federal Courthouse in Carson City (1995), and the Lawlor Events Center at UNR (1983; **Figure 82**).[146]

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[145] "Ralph Anthony Casazza," obituary, *Reno Gazette-Journal*, 7 April 2013; Zachary F. Volkert, "Ralph Casazza Leaves Lasting Architectural Imprint on Reno," *Reno Gazette Journal* 14 April 2013; Lockard & Casazza, "Architects' Roster Questionnaire," 26 June 1953, American Institute of Architects Archives; Koyl, ed., *American Architects Directory*, First Edition, 86; Koyl, ed., *American Architects Directory*, Second Edition, 108; Gane, ed., *American Architects Directory,* Third Edition, 142.

[146] University of California, Santa Barbara, "Finding Aid for the E. Keith Lockard papers, 1914-circa 1965," accessed at http://www.oac.cdlib.org/findaid/ark:/13030/c8sx6c6g on February 11, 2014; Lockard & Casazza, "Architects' Roster Questionnaire," 26 June 1953, American Institute of Architects Archives; Untitled, [Chemistry and Physics

Figure 81: Casazza led the design for the Chemistry and Physics buildings at UNR in 1969 (photo: UNR).

Figure 82: Casazza also designed the Lawlor Events Center at UNR, 1983 (photo: UNR).

buildings at UNR], Image No. UNRA-P3425-0114, [ca. 1969], Special Collections and University Archives Photographs Collection, University of Nevada, Reno; "Night View of Lawlor Events Center," Image No. UNRA-P3601-00409, Special Collections and University Archives Photographs Collection, University of Nevada, Reno.

Starting in the late 1950s, Lockard and Casazza began to expand, hiring outside architects and engineers to help broaden the type of projects for which they competed. In 1957, architect Edward S. Parsons and civil engineer Peter Guisti were added to the firm. Guisti earned his bachelor's degree in civil engineering at UNR in 1939, while Parsons received a degree in architecture from University of Pennsylvania in 1932. In terms of the direction of the company's architectural designs, Parsons had the greater influence. While Parsons does not appear to have contributed to the designs of the NAS Fallon buildings, his collaborations with Lockard and Casazza proved important.

A native of Tonopah, Nevada, Parsons returned to his home state following his college years. Early in his career, Parsons worked in the offices of Russell Mills, another well-known Reno architect. Together, they designed the NRHP-listed J. Clarence Kind House at 751 Marsh Street in Reno (1934). Parsons worked mostly on residential projects immediately after World War II, but soon gained commissions for religious, commercial, educational, and institutional facilities. One of his major contributions was his work with UNR, where he designed the Max Fleischmann Agriculture building (1957), Sarah H. Fleischmann Home Economics building (1958), and Orvis School of Nursing building (1964). He continued a separate practice while working with Lockard and Casazza, but he made important contributions to their firm as well. Together, the trio designed the Centennial Coliseum and Convention Hall (1966). Perhaps the most lauded building designed by the Lockard, Casazza and Parsons was the Clifton Young United States Courthouse and Federal Building (1964), an eminently attractive and stately building that merges elements of New Formalism and Expressionism (**Figure 83**). In the years after his stint with Lockard and Casazza, Parsons continued his work on schools, municipal facilities, and commercial buildings.[147]

[147] Koyl, ed., *American Architects Directory*, Second Edition, 536; Gane, ed., *American Architects Directory,* Third Edition, 696; "Edward S. Parsons, Architect FAIA," Control File, Edward Parsons Collection, Special Collections, University of Nevada, Reno; "Names of Principal Projects and Clients," Control File, Edward Parsons Collection, Special Collections, University of Nevada, Reno; Edward S. Parsons, "Compendium of Historic Preservation Projects in Northern Nevada," 1979, Control File, Edward Parsons Collection, Special Collections, University of Nevada, Reno; Anne Simone and Alice Parsons, "Edward Parsons, Architect," *Footprints*, Vol. 8 No. 1 (Winter 2005); Jim Sloan, "Revered Reno Architects Dies at 83," *Reno Gazette-Journal*, 24 February 1991, 1B-2B.

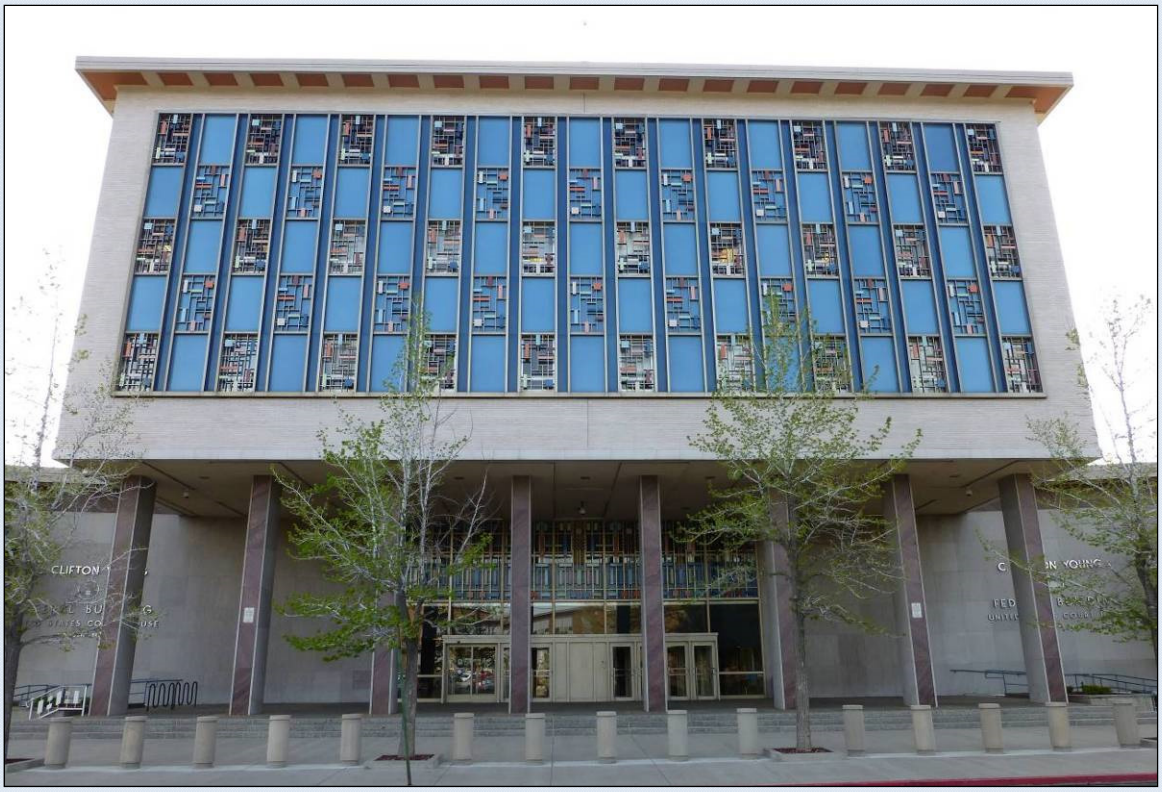


Figure 83: The Court House and Federal Office Building in Reno was designed by Lockard, Casazza & Parsons in 1961 (photo: JRP).

The firm briefly teamed with prominent Reno architect Russell Mills on a few military and civic projects in the late 1950s; however he does not appear to have contributed significantly to NAS Fallon designs. The Illinois-born Mills developed a reputation as one of the Reno's leading architects in the decades surrounding World War II. He got his start working as a draftsman for DeLongchamps and O'Brien before opening his own firm. Some of the buildings Mills designed have since been recognized for their architectural importance and listed in the NRHP, including the above-mentioned J. Clarence Kind House in Reno (1934), the Veterans Memorial School in Reno (1949), the Vocational-Agriculture Building in Lovelock, Nevada (1941), and Jobs Peak Ranch in Genoa, Nevada (1936-1937).[148]

[148] "$491,597 Bid Accepted for School Project," *Reno Evening Gazette,* 28 February 1958, 18; "Outstanding Homes to Open for Visitation," *Reno Evening Gazette,* 23 August 1960, 5; "Church of God in Christ," photograph caption, *Reno Evening Gazette,* 7 February 1959, 7; "Officially Opened," photograph caption, *Reno Evening Gazette,* 5 June 1958, 19; "Harrah's Club Will Remodel," *Architect and Engineer* 205, no. 2 (May 1956), 31; "Construction Contracts Awarded," *Architect and Engineer* 200, no. 3 (March 1955), 42; "Russell Mills Former Reno Official Dies," *Reno Evening Gazette*, 28 July 1959, 9; Barbara Malinky, National Register of Historic Places – Registration Form: J. Clarence Kind House / William Forman Home, NR# 05001121, 23 February 2005; Ronald M. James and Michelle McFadden, National Register of Historic Places – Registration Form: Vocational-Agriculture Building, NR # 91001528, 1 March 1991; Clement Spring, Michelle McFadden and Mella Rothwell Harmon, National Register of

During the 1960s, the firm's composition changed more rapidly. Collaborations with Mills ended when he died unexpectedly in 1959. Parsons returned full-time to his solo career by the mid 1960s. In 1968 company patriarch Keith Lockard died at the age of 76. Casazza continued on his own until 1971 when architect Carroll G. Peetz joined the company as partner, creating Casazza, Peetz and Associates. Peetz graduated in 1962 from the University of Oregon with a bachelor's degree in architecture. Prior to joining Casazza, Peetz worked with Raymond Hellmann, another Reno-based architect. In 1978, Ralph Casazza's son Tom joined the firm and in the 1980s the company added William Edward Hancock. Hancock had previously been a partner in the company starting in 1959 before leaving to work as the manager and secretary of the Nevada State Planning Board. The elder Casazza stayed with the business until 1999. When he retired, the company merged with HMC Architects.[149]

Despite the numerous architects and partners over time, all of the Fallon projects were managed by either Lockard or Casazza and many of the key personnel remained the same across several projects. Peetz, draftsman Wilbur A. Mathews and Parsons were among the staff dedicated to work on several of the buildings. All of the designs and drawings were checked by either Lockard or Casazza, and Peetz performed supervisory design duties on two buildings. Parsons and Mathews helped with the designs, but do not appear to have played an important role in shaping the overall architecture. Little is known about Mathews. He was educated in the Navy's draftsman school at Port Hueneme before starting a 13-year career with Lockard and Casazza. Starting in the late 1960s, he worked for Raymond Hellmann, as had Carroll Peetz.[150]

The company's NAS Fallon designs lacked the artistic expression found in other buildings by the firm's architects. They are typically plain and follow the very basic tenets of the popular architectural styles of the time. Buildings 323 and 324, for example, featured stripped-down Modernist elements, such as minimalist ornament, low-slung roofs, and larger-than-normal windows (**Figure 84**). Building 800 also had a low-slung roof and minimalist ornamentation, but had very few widow openings. These three buildings have since been substantially altered, but even in their original condition they lacked refinement or sophistication. Likewise, the firm's subsequent designs, including for Buildings 25, 309, 348, 393, and 394, were modest and unexceptional (**Figures 85** and **86**).

Historic Places – Registration Form: Veterans Memorial School, NR # 93000690, February 1995; Mella Rothwell Harmon, National Register of Historic Places – Registration Form: Jobs Peak Ranch, NR #00001639, 15 July 2000.

[149] "Ralph Anthony Casazza," obituary, *Reno Gazette-Journal*, 7 April 2013; Gane, ed., *American Architects Directory*, Third Edition: 372, 705; "Casazza, Peetz Firm is Formed in Reno," *Reno Evening Gazette*, 23 January 1971, 12.

[150] R.L. Polk & Co., *1974 Reno-Sparks (Washoe County, Nevada) City Directory* (El Monte, CA: R.L. Polk & Co., Publishers, 1974); R.L. Polk & Co., *Polk's Reno (Washoe County, Nev.) City Directory 1955* (San Francisco: R.L. Polk & Co., Publishers, 1955); Raymond Hellmann, "Letter of Proposal," 13 August 1980, Folder 95-72, Winnemucca, Nevada Convention Center Facilities Project, Box 52, Raymond Hellmann Collection, Special Collections, University of Nevada, Reno.

Figure 84: The Commissioned Officers' Club, Building 324, was among several buildings designed by the firm Lockard and Casazza. Featuring collaboration between Lockard and Mathews, it was built in 1959, but received additions and alterations in 1987 and 1997 (photo: JRP).

Figure 85: Building 25 is a modestly designed warehouse prepared by Casazza and Peetz in 1989 (photo: JRP).

Figure 86: Casazza and Peetz designed Building 393 in 1974 as the Craft Hobby Shop, but currently functions as the Pony Express Outfitters. It is similar in design to Building 394 (photo: JRP).

Analysis

Of the firm that originally started as Lockard and Casazza, Ralph Casazza was the longest serving and most influential member of the architectural team. He helped establish the company in 1950 with Keith Lockard, drove many of the architectural designs, and remained a crucial factor in the success of the company until his retirement in 1999. In addition to his management of the company, he was recognized for his work by the Nevada AIA, which awarded him its highest honor, and the Western Mountain Region of the AIA. He was also recognized in the local press for his skill and contributions to local architecture. Research did not indicate that any of his buildings have yet been evaluated as significant for their architecture, but this is understandable given that many of his projects were developed within the past 50 years. His guidance and vision of buildings such as the stately, Modern-style Clifton Young United States Courthouse and Federal Building, the innovative Physics and Chemistry buildings at UNR, and the Lawlor Events Center at UNR, among many other buildings, further demonstrate that his career was filled with successful and well-received designs. It is also evident that Casazza repeatedly returned to certain stylistic trends. His use of prominent circular elements is clear in the Lawlor Events Center, Physics and Chemistry buildings, and St. Therese Church of the Little Flower. His Incline Village High School, Clifton Young Federal Building and Courthouse, and US Post Office in Reno demonstrate the use of a projecting box-like feature with New Formalist columns. On the local level, Casazza can be considered a master architect for the purposes of NRHP Criterion C.

Casazza oversaw the designs for four NAS Fallon buildings. As described above, these buildings are very modest examples of utilitarian buildings. They feature simple concrete block or stucco-clad walls, standard door and window openings and configurations, and basic roofs. They are designed with function and economy, rather than architecture, as primary goals. When compared to Casazza's best designs, like the Clifton Young United States Courthouse and Federal Building or Lawlor Events Center, the NAS Fallon buildings lack the level of architectural intrigue and sophistication for which he became known. While research indicates these are the only military buildings Casazza designed, there is no indication that they proved to be an important aspect or phase in his career. Instead, they were among a wide range of projects most architects and firms complete that do not leave a lasting or important impression on their careers or the profession. These buildings do not represent important works within Casazza's career and therefore would not be considered the important works of a master architect.

Of the other key members of the architectural firm when they worked on NAS Fallon buildings, including Lockard, Peetz, and Parsons, only Parsons appears to rise to the level of master architect. Keith Lockard was instrumental in the early success of Lockard and Casazza, but this period of his career ended with his death in the 1960s. His earlier career was marked by successful military projects, but none of them gained attention for their architectural importance. Unlike Casazza, he never received widespread recognition for his designs. Carroll

Peetz had an important role in the company from the 1970s on, helping design some of the firm's prominent buildings. However, Peetz does not appear to have been generally recognized for his greatness. His career also mostly spanned the recent past, requiring him to be considered exceptionally significant in the field of architecture, an attainment he does not appear to have achieved. Lockard and Peetz would likely not be considered master architects under this criterion. Edward Parsons should be considered a master architect at the local level, but his contributions to the NAS Fallon buildings were minimal. He performed some of the staff duties associated with the drawings, but does not appear to have had a consequential role in the overall design of the buildings. It would not be appropriate to evaluate these as his designs under NRHP Criterion C.

6. PRACTITIONER RESOURCES

6.1 SHPO Consultation Guidance

An important element of Section 106 and Section 110 projects is review and concurrence from the State Historic Preservation Officer (SHPO). To the extent possible, this section is intended to provide some advice in the SHPO consolation process. Consulting with SHPO offices varies from state to state. Each state has prepared differing levels of guidance and check lists for preparing and submitting reports, and it is important to check with the respective SHPO before preparing or submitting a survey report to ensure those guidelines and requirements are followed, whether that is for Section 106 or Section 110 purposes or other purposes.[151]

As was noted earlier, for the purposes of preparing a report, there was consensus among SHPOs interviewed for this project that a determination on whether a building is a work of a master must be supported by sufficient and concise context. The historical context lays the groundwork for the evaluation, and the evaluation discussion should make specific references to the context. In cases where SHPO offices have disagreements, it is often with the information presented. Therefore, developing a context statement that sufficiently and succinctly supports the argument is important, even if the architect is well known.

Beyond the context statement, SHPO reviewers stressed the importance of making clear arguments for or against an architect's status as a master. Some recommended providing a summary statement of the evaluation's conclusion in the beginning paragraph. The main text would then provide supporting evidence, and end with a full significance evaluation. In this way, SHPO reviewers would understand from the start what the argument is and can see if it holds true in light of the context. In other words, do not build them up just to let them down.

If it is concluded that an architect is a master, the evaluation should then adequately address the issue of the building's importance within the context of the architect's career. It should be a comparative analysis using other buildings designed by the master to demonstrate how the subject building is an important example of his or her work.

In preparing a Section 106 or Section 110 report, different states and different agencies have different approaches regarding when and how to consult with SHPO reviewers. It is always best to know what the SHPO offices in your region prefer, but it is also probably good advice to make contact with SHPO reviewers on cases that could be assumed to reasonably cause concern. These recommendations are not intended to guarantee SHPO concurrence, but should facilitate an easier dialogue.

[151] At all times the proper chain of command for agency contracts must be followed.

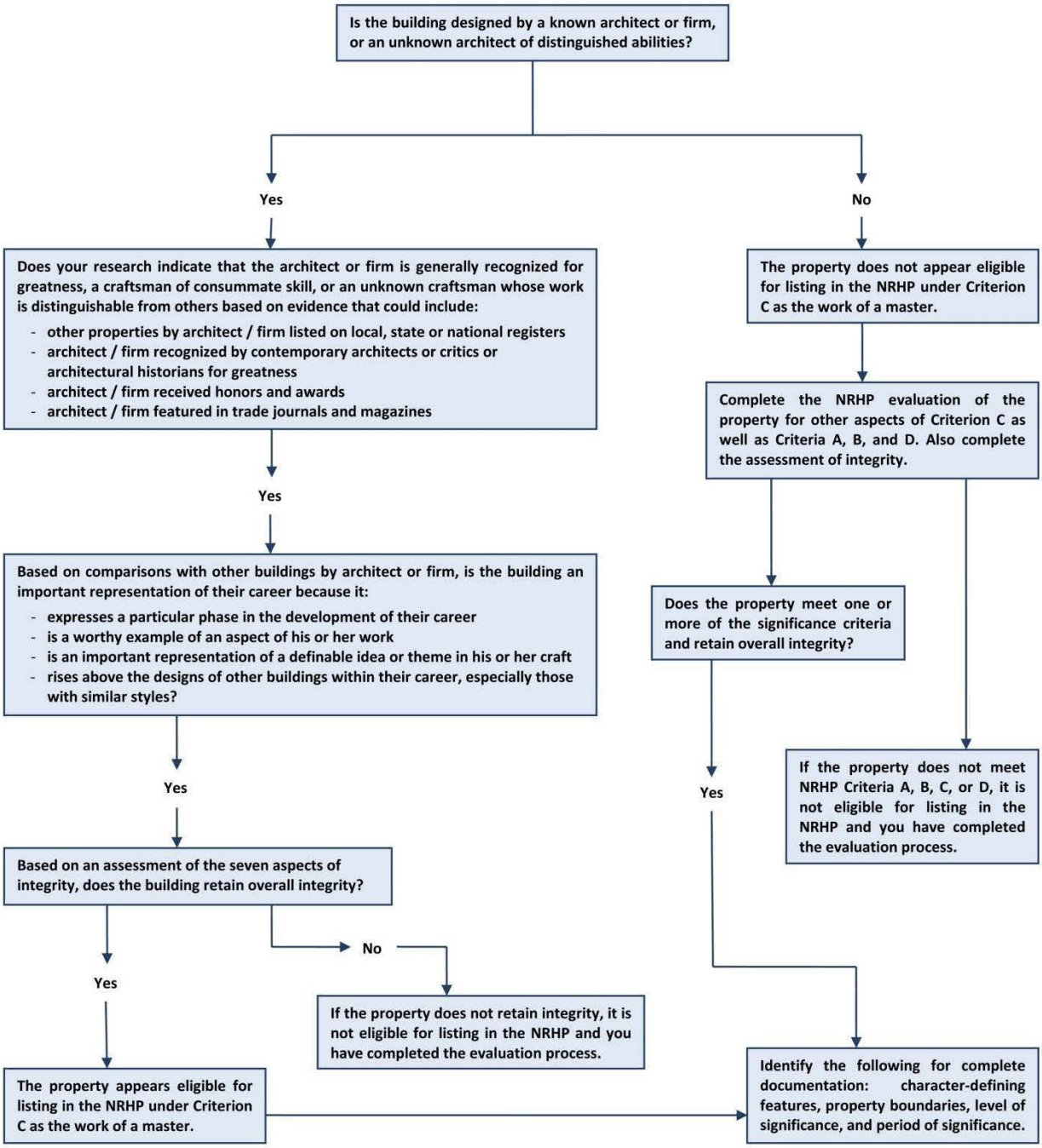
6.2 Work of a Master Checklist and Flowchart

This section includes a checklist and flowchart to be used aids to completing an evaluation under the work of a master architect aspect of NRHP Criterion C. The checklist outlines the different steps recommended in this guidance document for researching and contextualizing the architect and their body of work. The flowchart is included to assist in the evaluation of a building under the work of a master aspect of NRHP Criterion C. These two tools can be used to assist and track the progress of such an evaluation.

Work of a Master Checklist			
Activity	**Completed**		**Results/Remarks**
	Yes	**No**	
Research on architect's biography and body of work, including at: - Online research sites - Libraries and repositories - Local government building records			
Does the research reveal the following information and is it included in the context statement?	**Completed**		**Results/Remarks**
	Yes	**No**	
Phases of architect's career based on research of the architect's biography and work			
Whether the architect was considered great for their designs or a craftsman of consummate skill, based on the following sources: - Contemporary architects and/or critics who reviewed the architect and their work - Honors and awards bestowed upon the architect - Other buildings by architect listed or eligible for listing in NRHP, or state or local registers - Architect featured in trade journals or magazines			
Architectural context that places the architect and their work within the broader trends and style, specifically the styles and trends preferred by the architect			

Work of a Master Flowchart

This Work of a Master Flowchart will assist in evaluating a building under NRHP Criterion C for buildings designed by architects or firms who could be considered "masters." Any NRHP evaluation of a building must also address other aspects of NRHP Criterion C and NRHP Criteria A, B, and D. See National Register Bulletin 15 for more instructions on NRHP evaluations. This flowchart is intended to be used with the guidance presented in "Work of a Master? Addressing Evaluation of Routine or Prosaic Architecture by Famous Architects on Military Facilities," which discusses researching and evaluating buildings under the work of a master aspect of NRHP Criterion C.



6.3 List of Research Resources

This section includes a list of research starting points, sources to help survey and evaluation teams begin research on architect biographical and architectural style contexts. This list is by no means comprehensive and during the course of most inventory and evaluation projects it will likely be necessary to review other national sources as well as local and regional sources. Review of local public or university library catalogues is also recommended. These are good sources for relevant contexts and guides on architectural trends. WorldCat provides a worldwide library catalogue to search for information found on a number of formats. It can also be used to find libraries nearby, and can be accessed at www.WorldCat.org. Biographical information relating to any particular architect will vary based upon their significance, popularity, and body of work within the field of architecture.

Additionally, SHPO offices may have information on architects or architectural history, although it may be difficult to access. For example, like all states, California SHPO collects names of architects in recordation forms, but it does not currently provide access to this information; on the other hand whereas the District of Columbia does through its Architect Directory. Likewise, Virginia's Department of Historic Resources has a research archive / library containing various sources that could prove helpful for research efforts.[152] The information potential at the SHPO offices varies from state to state, so it is recommended that practitioners familiarize themselves with the sources available through SHPO offices in their regions.

6.3.1 Architect Biographical Sources

Withey, Henry and Elsie Rathburn Withey. *Biographical Dictionary of American Architects.* Los Angeles: Hennessey & Ingalls, Inc., 1970.

AIA Historical Directory is a resource guide for information about national-level architects in the United States. It provides general information about practicing architects up to 1978. It does not list any buildings. It can be accessed at http://public.aia.org/sites/hdoaa/wiki/Wiki%20Pages/What's%20here.aspx .

NRHP Focus Database provides access to buildings listed in the National Register. It is in the process of being populated with information by the National Park Service. If the files have not been digitized, copies can be requested through email. It can be accessed at http://focus.nps.gov/nrhp .

Historic American Building Survey/Historic American Engineering Record/ Historic American Landscape Survey (HABS/HAER/HALS) Database provides access to a large collection housed at the Library of Congress, which documents achievements in architecture, engineer, and

[152] Virginia Department of Historic Resources, "Archives & Library," accessed April 2016 http://dhr.virginia.gov/archives/archiv_info.htm.

landscape design in the United States. Documentation is ongoing, and can be accessed at http://www.loc.gov/pictures/collection/hh/ .

NewspaperArchives (fee site) is accessible online as part of a fee for service. Newspaper Archives provides access to newspapers worldwide. They can be searched or browsed by location and date at http://newspaperarchive.com/.

Ancestry.com (fee site) is accessible online as part of a fee for service. Ancestry provides access to many primary documents including newspapers, census data, voter registration lists, city directories, embarkation information, military draft cards, and the like. Searching can be done by name, keyword, location, etc. at http://www.ancestry.com/.

JSTOR (fee site) is a digital library of academic journals, books, and primary sources. It is accessible at www.jstor.org for a fee or through public and university library sites with library credentials.

Avery Index to Architectural Periodicals (fee site), published by the Columbia University, offers a list of journal articles published worldwide on architecture and design. It is accessible online through research databases including Proquest, EBSCOhost, and others as part of a fee for service; however, it can also be accessed through many public and university library sites with library credentials.

Art & Architecture Complete (fee site) is a research database providing full-text, index, and abstract entries for scholarly journals as well as popular periodicals on art and architecture. It is available via EBSCOhost, but like JSTOR and Avery Index, can be accessed from some public and university libraries.

Pacific Coast Architecture Database (PCAD) provides information on buildings and architects in California, Oregon, and Washington. The site may provide biographical information, photographs, building records, and citations to magazines, journals, and books. It is accessible at http://pcad.lib.washington.edu/.

Archive.org includes a growing collection of digitized sources including architectural journals such as *Pacific Coast Architect* and *Architect and Engineer of California* (later *Architect and Engineer*). The site accessible at https://archive.org/.

6.3.2 Architectural Style Contexts

Blumenson, John J. *Identifying American Architecture: A Pictorial Guide to Styles and Terms, 1600-1945.* 1981.

Curtis, William J. *Modern Architecture since 1900.* New York: Phaidon Press, 1982, 1996.

Friedman, Donald. *Historical Building Construction: Design, Materials and Technology.* 1995.

JRP Historical Consulting Services. "California Historic Military Buildings and Structures Inventory." Four volumes. Prepared for US Army Corps of Engineers, Sacramento District, Contract DACA05-97-D-0013, Task 0001, March 2000.

McAlester, Virginia and Lee. *A Field Guide to American Houses.* New York: Alfred A. Knopf, 2005.

Rifkind, Carole. *A Field Guide to Contemporary American Architecture.* New York: Penguin Group, 1998.

6.3.3 DoD Legacy Program Reports

Aaron, Jayne. "Historical and Architectural Overview of Aircraft Hangars of the Reserves and National Guard Installations form World War I through the Cold War." Prepared under the Department of Defense Legacy Resources Management Program, June 2011.

Hampton, Roy, with Maria Burkett and Christine Trebellas. "Historic Context for Evaluating Mid-Century Modern Military Buildings." Department of Defense Legacy Resource Management Program, 22 May 2012.

Michael, Michelle, Adam Smith, and Jennifer Sin. "The Architecture of the Department of Defense: A Military Style Guide." Prepared for Department of Defense Legacy Resource Management Program, December 2011.

Moore, David W. Jr, Justin B. Edgington and Emily T. Payne. "A Guide to Architecture and Engineering Firms of the Cold War Era." Department of Defense Legacy Resource Management Program, March 2010.

7. CONCLUSIONS

The aim of this document is to assist cultural resources managers in the Department of Defense and elsewhere perform compliance responsibilities with National Historic Preservation Act Sections 106 and 110, which include identification, preservation, and protection of buildings eligible for the National Register of Historic Places (NRHP). Specifically, this project emerged to address a gap in NRHP guidance literature for properties designed by master architects. This is an often overlooked but nonetheless important element of the NRHP evaluation process. Under NRHP Criterion C, a property can be eligible for listing in the NRHP as the important work of a master architect. However, a lack of emphasis and minimal guidance on the work of a master aspect of the NRHP has led to insufficient or incomplete evaluations.

Work of a master assessment is an increasingly important element of evaluations, especially in the military setting where the use of private architects and architectural firms grew substantially during and after World War II. This prevalence of private architects designing military buildings makes it increasingly likely that buildings that have recently reached 50 years of age, or will do so soon, could be considered the important work of a master architect under NRHP Criterion C. Not only is assessing the work of a master part of the compliance requirements of federal agencies, it would likely also save time and money sufficiently complete this task upfront by avoiding a reassessment of the issue at a later date.

This guidance document helps fills the gap in existing NRHP literature by presenting methods for researching and evaluating buildings as potential works of a master architect. It identifies crucial steps to developing the architect's biography, includes potential sources of information, and describes how the biography can be used in the evaluation process. The evaluation will necessarily rely on a few key elements of the biography, so it is important that research identify them. These include identifying whether peers and historians have considered the architect important and influential to the craft, whether the architect has received honors and awards for their designs, and defining the specific phases or aspects of their career. Such a biography would also delineate key architectural qualities of the master's important buildings and determine prevailing architectural styles used by the architect. This process is followed by comparatively assessing the subject building's importance within the architect's broader career.

In addition to providing guidance for performing such evaluation, this document includes case studies that apply the guidance as examples of how such evaluations could be undertaken. These case studies include a variety of different examples that could be encountered, including: prosaic buildings designed by master architects; significant buildings designed by architects not considered masters; architecturally important buildings designed by masters but not considered important within their career; and buildings less than 50 years of age assessed under NRHP Criteria Consideration G. This document also provides some resources for

practitioners, including a checklist and flowchart, list of standard sources, and guidance on consulting with State Historic Preservation Officers. Ultimately, this study is intended to both promote greater emphasis on evaluating buildings under the master architect standard of NRHP Criterion C and provide instructions on how to do so.

8. REFERENCES

Selected References

Aaron, Jayne. "Historical and Architectural Overview of Aircraft Hangars of the Reserves and National Guard Installations form World War I through the Cold War." Prepared under the Department of Defense Legacy Resources Management Program, June 2011.

Adams, George R., and Ralph J. Christrian, National Register of Historic Places Inventory – Nomination Form, Nathan Appleton Residence, Boston, Massachusetts, May 1977.

Bakenhus, R. E. "The Shore Establishment of the Navy." *Civil Engineering* 3:8 (Aug 1933): 443-446.

Beard, Frank A., and Robert L. Bradley. National Register of Historic Places Inventory – Nomination Form, Portsmouth Naval Shipyard [Historic District]. Kittery, Maine, April 1977.

_____. National Register of Historic Places Inventory – Nomination Form, Monhegan Island Lighthouse and Quarters, Monhegan, Maine, October 1979.

Blazich, Frank, Jr. "Profile: Rear Adm. Mordecai T. Endicott, CEC, USN, 1844-1926." *Seabee Online*, October 12, 2015.

Bradford, S. S. National Survey of Historic Sites and Buildings, Boston Naval Shipyard, Boston, Massachusetts, January 1960.

Brown, Elizabeth Mills. *New Haven: A Guide to Architecture and Urban Design*. New Haven: Yale University Press, 1976.

Buggeln, Gretchen. *The Suburban Church: Modernism and Community in Postwar America*. Minneapolis: University of Minnesota Press, 2015.

Carley, Rachel. *Tomorrow is Here: New Haven and the Modern Movement*. New Haven: New Haven Preservation Trust, 2008.

"Census for Construction Preparedness." *Civil Engineering* 10 (July 1940): 464-465.

Cerny, Susan Dinkelspiel. *An Architectural Guidebook to San Francisco and the Bay Area*. Layton, UT: Gibbs Smith, Publisher, 2007.

City of Olympia Heritage Commission. "Mid-Twentieth Century Olympia: A Context Statement on Local History and Modern Architecture." April 2008.

Cole, C., Fermina B. Murray, and William B. Dewey. Historic American Building Survey, Roosevelt Base, Administration and Brig Building (Building No. 1), Long Beach, Los Angeles, California. Photographs, Written Historical and Descriptive Data. HABS No. CA-2663-A. April and May 1996.

Crose, T.A. "In Review Before Pres. Taft at the Dedication of the U.S. Naval Training Station, N. Chicago, Ill., Oct. 28, 1911." Panoramic Photographs Collection, Library of Congress.

Davis, Helen W. Edward M. Hatch and David G. Wright. "Alexander Parris: Innovator in Naval Facility Architecture." *IA: The Journal of the Society for Industrial Archeology* 2, no. 1 (1976): 3-9.

De Wit, Wim, and Christopher Alexander, editors. *Overdrive: L.A. Constructs the Future, 1940-1990*. Los Angeles: Getty Research Institute, 2013.

Dean, Jeffrey M. National Register of Historic Places Inventory – Nomination Form, First Unitarian Society Meeting House, Sherwood Hills, Wisconsin. July 1972.

Decker, Julie and Chris Chiei. *Quonset Hut: Metal Living for a Modern Age*. New York: Princeton Architecture press, 2005.

Dewey, William B. Historic American Buildings Survey, Mare Island Naval Shipyard, Hospital Headquarters (Building H), Vallejo, Solano County, California. HABS No. CA-1543-BX. April 1998.

Far Western Anthropological Research Group Inc. and JRP Historical Consulting, LLC. "Naval Air Station, Fallon, Nevada Integrated Cultural Resources Management Plan for 2007-2012." Prepared for US Department of the Navy, Naval Facilities Engineering Command Southwest, and Environmental Department, NAS Fallon, March 2007.

Flaherty, Michael F. National Register of Historic Places Inventory – Nomination Form, Libby Island Light Station, Machiasport, Maine, December 1975.

Foss, Gerald D. National Register of Historic Places Inventory – Nomination Form, St. John's Church, Portsmouth, New Hampshire, 1975.

Francke, Bernadette. National Register of Historic Places Registration Form – Fallon City Hall, Fallon, Nevada. 1 July 2004.

Fulk, Travis N. "Southeastern Archaeological Research," Literature Search for the Quay Wall Systems at the Portsmouth Naval Shipyard, Kittery, Maine." Prepared for Naval Facilities Engineering Command Mid-Atlantic, May 2011.

Fung Associations, Inc. "Hawaii Modernism Context Statement." Prepared for Historic Hawaii Foundation, November 2011.

Gane, John F., editor. *American Architects Directory*. Third Edition. New York: R.R. Bowker Co., 1970.

Garner, John S. "World War II Temporary Military Buildings: A Brief History of the Architecture and Planning of Cantonments and Training Stations in the United States." USACERL Technical Report CRC-93/01, March 1993.

Gebhard David, et al. *A Guide to Architecture in San Francisco and Northern California*. Santa Barbara, CA: Peregrine Smith, Inc., 1973.

Hamilton, Esley, and Catie Myers. "Mid-Century Modern Church Survey: Religious Structures 1940-1970 in St. Louis County." Prepared for Department of Natural Resources, Missouri, 2009-2010.

Hampton, Roy, with Maria Burkett and Christine Trebellas. "Historic Context for Evaluating Mid-Century Modern Military Buildings." Prepared for the Department of Defense Legacy Resource Management Program, 22 May 2012.

Harmon, Mella Rothwell. National Register of Historic Places Registration Form – Veterans Memorial School, Reno, Nevada. February 1995.

_____. National Register of Historic Places Registration Form – Jobs Peak Ranch, Genoa, Nevada. 15 July 2000.

Hasbrouck Hunderman Architects. National Register of Historic Places Inventory -- Nomination Form, Great Lakes Naval Training Station, July 1985.

HDR, Inc. "Historic Resource Survey and Evaluation, Marine Corps Base, Camp Pendleton." Prepared for Naval Facilities Engineering Command Southwest, February 2016.

Historic American Buildings Survey, Mare Island Naval Shipyard, Vallejo, Solano County, California. Photographs, HABS No. CA-1543. n.d.

Historic American Buildings Survey. Naval Hospital Philadelphia, Main Hospital, North end of Ramp A, North of Pattison Avenue, Philadelphia, Philadelphia County, PA. Photographs. HABS No. PA-6206-A. n.d.

Historic Sites Survey, National Register of Historic Places, Inventory—Nomination Form, New Haven Green Historic District, June 1971.

Iselin, Donald. "Designing the Navy's Shore Installations." *The Military Engineer* 459 (January-February 1979): 6-10.

James, Ronald M. "Nevada's Historic Architect." In *Nevada Magazine*, July / August 1994. Reprinted in *The Historical Nevada Magazine*. Carson City: Nevada Magazine, 1998.

James, Ronald M. and Michelle McFadden. National Register of Historic Places Registration Form – Vocational-Agriculture Building, Reno, Nevada. 1 March 1991.

JRP Historical Consulting, LLC. "Analysis of Military Buildings By Master Architects at Naval Air Station (NAS) Fallon." Prepared for Naval Facilities Engineering Command Southwest, October 2014.

_____. "Base Wide Historic Buildings and Structures Survey and Evaluation at Naval Air Station (NAS) Lemoore, California." Prepared for Naval Facilities Engineering Command Southwest, September 11, 2013.

_____. "Cultural Landscape Report for Naval Air Station Alameda." Prepared for US Department of the Navy, Naval Facilities Engineering Command Southwest, April 2012.

_____. Department of Parks and Recreation (DPR) 523 Primary Record, Vandenberg Air Force Base Facility 7000. [In draft]. July 2015.

_____. "Historic Resources Inventory and Evaluation Report, Naval Facilities Centerville Beach, Humboldt County, California." Prepared for US Department of the Navy, Naval Facilities Engineering Command Southwest, Nov 2009.

_____. "Historic Survey and Evaluation Report, Naval Support Activity Monterey, Monterey, California." Prepared for Naval Facilities Engineering Command Southwest, September 2013.

_____. "NAS Fallon Technical Report No. 112 and Bureau of Land Management, Stillwater Field Office No. CRR3-2617, Volume II: Historic Resources Inventory and Evaluation Report of Buildings and Structures on Range B-16, Naval Air Station, Fallon." Prepared for US Department of the Navy, Naval Facilities Engineering Command Southwest, and Environmental Department, April 2012.

JRP Historical Consulting Services. *California Historic Military Buildings and Structures Inventory*. Four volumes. Contract DACA05-97-D-0013, Task 0001. Prepared for U.S. Army Corps of Engineers, Sacramento District. March 2000.

_____. "Inventory and Evaluation of National Register Eligibility for Buildings and Structures, Main Site, China Lake Propulsion Laboratory (CLPL), Salt Wells Propulsion Laboratory (SWPL), Armitage Field, Naval Air Weapons Station (NAWS) China Lake, California." Prepared for Engineering Field Activity, West, Naval Facilities Engineering Command, November 1996.

_____. "Inventory and Evaluation of National Register Eligibility for Buildings and Structures at Marine Corps Base, Camp Joseph H. Pendleton, San Diego County, California." Prepared for US Army Corps of Engineers and AC/S Environmental Security, Marine Corps Base, Camp Pendleton, July 1999.

_____. "Inventory and Evaluation of National Register Eligibility for Cold War-Era Buildings and Structures, Naval Air Station Fallon." Prepared for Department of the Navy, Engineering Field Activity West, Naval Facilities Engineering Command, September 1998.

_____. "Historic Context for Evaluating Buildings, Structures, Historic Archeological Sites, and Landscape Features at Mare Island, Vallejo, California." November 1995.

_____. "Maintenance-Management Guide Lighter-Than-Air Hangars, MCAS Tustin." February 1991.

_____. "Maintenance Plan for Historic Buildings and Structures, Naval Air Stations North Island, San Diego, California." Prepared for Naval Facilities Engineering Command, Southwest Division, April 1995.

_____. National Register of Historic Places Registration Form for Mare Island Historic District, Vallejo, California. January 1996.

Johnston, Judith. "Navy Public Works—1776-1976." *The Military Engineer* 443 (May-June 1976): 186-193.

Karmazinas, Lucas, The New Haven Preservation Trust. "Historic Resources Inventory – Building and Structures: Old Student Center (Southern Connecticut State University)." 20 August 2009.

Keune, Russell V. Historic American Buildings Survey, Navy Yard Main Gate, 8th and M Streets, SE, Washington Navy Yard, Washington, District of Columbia. Photographs, Written Historical and Descriptive Data. HABS DC, WASH, 74-. January 1966.

Koyl, George S. ed. *American Architects Directory*, First Edition. New York: R.R. Bowker Company, 1955.

_____. *American Architects Directory*, Second Edition. New York: R.R. Bowker Company, 1962.

Kuranda, Kathryn M. National Register of Historic Places Registration Form, Thematic Nomination of the Architecture of Frederick J. DeLongchamps, 12 June 1986.

Lamm, Michael. "The Instant Building." *Invention and Technology* 13:3 (Winter 1998): 68-70.

Lodi, Erin. "Northwest Modernism: A Style for the Elements." *Columns Magazine*, March 2010.

Mahoney Kirk F. National Register of Historic Places Inventory – Nomination Form, Matinicus Rock Light Station, Matinicus Island, Maine, October 1987.

_____. National Register of Historic Places Inventory – Nomination Form, Saddleback Ledge Light Station, Vinalhaven, Maine, October 1987.

_____. National Register of Historic Places Inventory – Nomination Form, Whitehead Light Station, Tenants Harbor, Maine, October 1987.

Malinky, Barbara. National Register of Historic Places Registration Form – J. Clarence Kind House / William Forman Home, Reno, Nevada. 23 February 2005.

Manley, William R. California Department of Parks and Recreation 523 Form, Naval Postgraduate Engineering School Historic District, May 2004.

Martin, Reinhold. "The Bunshaft Tapes: A Preliminary Report." *Journal of Architectural Education* 54, no. 2 (Nov 2000): 82.

McAlester, Virginia Savage. *A Field Guide to American Houses*. New York: Alfred A. Knopf, 2013.

McDonald, Melissa. Historic American Building Survey, Mare Island Naval Shipyard, Smithy, Building 46, Vallejo, Solano County, California. Photographs, Written Historical and Descriptive Data. HABS No. CA-1543-D. July 1983.

McGinley Kalsow & Associates. "Dry Dock 1 Historic Structure Report, Charlestown Navy Yard, Boston Historical Park." 21 June 2007.

Michael, Michelle, Adam Smith, and Jennifer Sin. "The Architecture of the Department of Defense: A Military Style Guide." Prepared for Department of Defense Legacy Resource Management Program, December 2011.

Montano, Karen S. *Parris Island*. Postcard History Series. Charleston, SC: Arcadia Publishing, 2008.

Moore, David W. Jr, Justin B. Edgington and Emily T. Payne. "A Guide to Architecture and Engineering Firms of the Cold War Era." Department of Defense Legacy Resource Management Program, March 2010.

_____. "Blueprints for the Citizen Soldier: A Nationwide Historic Context Study of United States Army Reserve Centers." Department of Defense Legacy Resource Management Program, July 2008.

Morton, W. Brown, III. National Register of Historic Places Inventory – Nomination Form, Wickham – Valentine House, Richmond, Virginia, August 1971.

Museum of Modern Art. *Built in USA, 1932-1944*. New York: MoMA, 1944.

Naval Facilities Engineering Command (NAVFAC). "A History of the Navy Civil Engineer Corps, 1867-2007." April 2007.

Norwick, Marjorie, HDR|e^{2}M, "Survey and Evaluation Report, Naval Air Station Fallon, Nevada." Prepared for Naval Air Station Fallon Environmental and Naval Facilities Engineering Command Southwest, March 2011

Pedrotty, Michael A., Julie L. Webster, Gordon L. Cohen, and Aaron R. Chmiel. "Historical and Architectural Overview of Military Aircraft Hangars: A General History, Thematic Typology, and Inventory of Aircraft Hangars Constructed on Department of Defense Installations." Prepared for United States Air Force, Headquarters, Air Combat Command. September 1999. Revised May 2001.

Preservation Pennsylvania. "Pennsylvania at Risk, 1996." *Preserving Pennsylvania* 10:1 (Spring 1966): 6.

Public Archaeology Laboratory, Inc. *Architectural Resources Survey, Cold War-Era Resources, U.S. Naval Submarine Base New London, Groton, Connecticut*. Prepared for U.S. Navy Submarine Base New London, Groton, Connecticut, September 2014.

"Public Works of the Navy." *Civil Engineering* 6:6 (Jun 1936): 359-363.

R. Christopher Goodwin and Associates, Inc. "Air Force and Navy Unaccompanied Personnel Housing During the Cold War (1946-1989)." Prepared for Naval facilities Engineering Command and United States Air Force Center for Engineering and the Environment, May 2011.

_____. "Historic Context for Department of Defense Facilities World War II Permanent Construction." Prepared for U.S. Army Corps of Engineers, Baltimore Division, May 1997.

_____. "Housing an Air Force and a Navy: The Wherry and Capehart Era Solutions to the Postwar Family Housing Shortage (1949-1962)." Prepared for Department of the Air Force and Department of the Navy. June 2007.

_____. "National Historic Context for Department of Defense Installations, 1790 – 1940." Prepared for U.S. Army Corps of Engineers, Baltimore District, August 1995.

Ransom, David. National Register of Historic Places, Inventory—Nomination Form, Granby Center Historic District, February 1985.

Raymond, D. A., D.G. Iselin, and M. R. Reilly, "Architect/Engineers and Military Construction," *The Military Engineer* 419 (May-June 1972): 166-169.

Rettig, Polly M. National Register of Historic Places Inventory – Nomination Form, Faneuil Hall; Quincy Market, Boston, Massachusetts, July 1975.

Rutlege, William and Donald Ferris. Historic American Buildings Survey, U.S. Naval Hospital, Administration Building (Bldg No. 1), Park Boulevard, Balboa Park, San Diego, San Diego County, California. Photographs, Written Historical and Descriptive Data. HABS No. CA-1548-A. n.d.

Sacco, William. Historic American Engineering Record, Winchester Repeating Arms Company: Track K Shooting Range, Rear Section of 125 Munson Street, New Haven, CT. Photographs, Written Historical and Descriptive Data, January 1986.

Sacket, Russell, NAVFAC Northwest. "Inventory and Evaluation: The Navy's Pacific Beach Facilities, Pacific Beach, Washington." May 2012.

Salmon, John S. and Julie L. Vosmik. National Register of Historic Places Registration Form, Governor's Mansion – Executive Mansion, Richmond, Virginia, March 1988.

Sampou, Leslie. Historic American Buildings Survey, Quincy Market, Dock Square, Boston, Suffolk County, Massachusetts. HABS No. MA-1166. Photographs and Written Historical and Descriptive Data. November 1988.

Schroder Walter K., and Gloria A. Emma. *Davisville and the Seabees*. Images of America Series. Charleston, SC: Arcadia Publishing, 1999.

Shettleworth Earle G. and Mary-Eliza Wengren. National Register of Historic Places Inventory – Nomination Form, Hunnewell – Shepley House, Portland, Maine, February 1972.

Smith, Adam, et al., "A History of Recreation in the Military." Department of Defense Legacy Resource Management Program, August 2011.

Snell, Charles W. National Register of Historic Places Inventory – Nomination Form, Cathedral Church of St. Paul, Boston, Massachusetts, June 1970.

_____. National Register of Historic Places Inventory – Nomination Form, David Sears House, Boston, Massachusetts, July 1970.

_____. National Register of Historic Places Inventory – Nomination Form, United First Parish Church, Boston, Massachusetts, June 1970.

Steele, James, editor. *William Pereira*. Los Angeles: USC Guild Press, 2002.

"The Esquire Theater, Chicago, Ill." *Architectural Forum* Vol 68 no. 4 (April 1938): 471-480.

"The Land: The Man with the Plan." *Time* 82:10, September 6, 1963.

The Louis Berger Group, Inc. "Cultural Resources Survey, Portsmouth Naval Shipyard," 2003.

The New Haven Preservation Trust. "Survey of Modern Architecture in New Haven, Connecticut: Phase II, Inventory of Historic Resources." June 2011.

Tulley, David H. "Engineering Aspects of Military Construction." *The Military Engineer* 318 (July-August 1955): 288-292.

United States Department of Defense. "Built on Strong Foundations: Constructing Our Nation's Military Heritage." Prepared for the Department of Defense Legacy Resource Management Program, 2004.

United States Department of the Interior, National Park Service. *National Register Bulletin: How to Apply the National Register Criteria for Evaluation*. Bulletin 15. Washington, D.C.: Government Printing Office, 1990, revised 1995.

_____. *National Register Bulletin: Guidelines for Evaluating and Nominating Properties that have Achieved Significance within the Last Fifty Years*. Bulletin 22. Washington, D.C.: Government Printing Office, 1979, revised 1996.

United States Department of the Navy, Bureau of Yards and Docks. *Building the Navy's Bases in World War II: History of the Bureau of Yards and Docks and the Civil Engineer Corps, 1940-1946*. Volume I. Washington D.C.: United States Government Printing Office, 1947.

_____. *Activities of the Bureau of Yards and Docks, Navy Department, World War 1917-1918*. Washington D.C.: Government Printing Office, 1921.

Vosbeck, R. Randall, Tony P. Wrenn, and Andrew Brodie Smith. *A Legacy of Leadership: The Presidents of the American Institute of Architects, 1857-2007*. Washington, DC: The American Institute of Architects, 2008.

Walter A. Netsch, FAIA: A Critical Appreciation and Sourcebook. Northwestern University Library: Evanston, IL, 2008.

Washington State Department of Transportation. "I-405 Bellevue Nickel Improvement Project, Historic, Cultural, and Archeological Resources Discipline Report." Prepared for Washington State Department of Transportation, Urban Corridors Office, and Federal Highway Administration, November 2005.

Webster, Julie. "Historical and Architectural Overview of Military Aircraft Hangars: A General History, Thematic Typology, and Inventory of Aircraft Hangars Constructed On Department of Defense Installations." Prepared for United States Air Force Headquarters, Air Combat Command, 1999, revised 2001.

Wengren, Mary-Eliza. National Register of Historic Places Inventory – Nomination Form, Churchill – Ingraham House, Portland, Maine, April 1973.

Wermiel, Sara. "An Architect and Engineer in the Early Nineteenth Century: Alexander Parris's Engineering Projects." *Society for Industrial Archeology New England Chapters Newsletter* 26, no. 1 (2005): 17-22.

Whiffen, Marcus. *American Architecture Since 1780: A Guide to the Styles*. Cambridge, MA: MIT Press, 1996.

Withey, Henry F. and Elsie Rathburn Withey. *Biographical Dictionary of American Architects (Deceased)*. Los Angeles: Hennessey & Ingalls, Inc., 1970. Republished, Detroit: Omnigraphics, 1996.

Williamson and Watts Architects. "The Architectural/Historical Significance of Buildings at Naval Air Station, North Island, San Diego, California." Prepared for US Navy, Naval Station North Island, May 1988.

Zimmer, Edward F. and Pamela J. Scott. "Alexander Parris, B. Latrobe, and the John Wickham House in Richmond, Virginia." *Journal of the Society of Architectural Historians* 41, no. 3 (October 1982): 202-211.

9. PREPARERS

JRP Principal Rand Herbert (MAT in History, University of California, Davis; BA in History, University of California, Berkeley) provided overall direction for this project, guided research, and edited the report. Mr. Herbert is one of the founding members of JRP and has more than 35 years of professional experience working as a consulting historian on a wide variety of historical research and cultural resource management projects as a researcher, writer, and project manager. He has managed, written, or worked on building inventory and evaluation projects for a variety of government agencies such as various branches of the Department of Defense, state transportation departments, and county and city governments. He has given numerous lectures on the topics of public history and has provided expert witness services and testimony in more than a dozen cases or administrative proceedings. From 2000 through 2012, Mr. Herbert led a graduate seminar in research required for Section 106 studies at California State University – Sacramento, in its Capital Campus Public History graduate program. Based on his level of education and experience, Mr. Herbert qualifies as a historian/architectural historian under the United States Secretary of the Interior's Professional Qualification Standards (as defined in 36 CFR Part 61).

Historian Joseph Freeman (M.A. in History, University of California, Riverside) was lead historian / architectural historian for this project. He performed data collection and management, coordinated with Navy personnel, conducted research, and oversaw preparation and wrote major sections of the report. Mr. Freeman has more than nine years of experience in a wide range of historical research, architectural survey, and cultural resources management projects for several government agencies, including the Department of Defense. Since joining JRP in 2007, he has contributed to numerous Section 106 related projects throughout the region, and has written historic resource inventory and evaluations, finding of effects, impacts analysis reports, condition assessment reports, HABS/HAER documentation, and NRHP nominations. Mr. Freeman qualifies as historian / architectural historian under the Secretary of the Interior's Professional Qualification Standards (as defined in 36 CFR Part 61).

Historian David Hickman (Ph.D. in History, University of California, Davis) assisted in researching and writing sections of this report, including the historical context and case studies. Mr. Hickman has nearly five years of experience in historical research and cultural resource management projects. He joined JRP in 2015 and qualifies as a historian / architectural historian under the Secretary of the Interior's Professional Qualification Standards (as defined in 36 CFR Part 61).

Historian Leslie Trew (MA, Public History, California State University, Sacramento) assisted in the preparation of this guidance report by conducting research, writing portions of the report, and consulting with a number of State Historic Preservation Offices. Ms. Trew has experience in

performing historical research, drafting historic contexts, and evaluating resources for architectural survey and cultural resources management projects for a variety of government agencies including branches of the Department of Defense, state transportation departments, and county and city governments. Since joining JRP in 2011, she has contributed to numerous Section 106 related projects in both California and Nevada, written historic resource inventory and evaluations, and finding of effects. Along with her education and over four years of experience, Ms. Trew qualifies as a historian / architectural historian under the Secretary of the Interior's Professional Qualification Standards (as defined in 36 CFR Part 61).

Research Assistants Heather Miller (M.A., Public History, California State University, Sacramento) and Jason Sarmiento (M.A., Public History, California State University, Sacramento) assisted in research of this report.