



North Carolina Department of Cultural Resources  
State Historic Preservation Office

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August 29, 2006

Dr. Jay Newman  
U. S. Army Corps of Engineers  
Fort Worth District  
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Fort Worth, Texas 76102-0300

Re: Seymour Johnson Air Force Base, Determination of National Register Eligibility for Buildings:  
5015, Fighter-Inceptor Alert Hangar, Wayne County, ER 06-2062  
2130, SAC 70-Man Molehole, Wayne County, ER 06-2063  
4828, SAC Fuel Systems Maintenance Dock, Wayne County, ER 06-2064

ER 14-0824  
4/29/2014

Dear Dr. Newman:

Thank you for transmitting the architectural survey report and Determination of Eligibility, by Geo-Marine, Inc., for the above properties.

For the purpose of compliance with Section 106 of the National Historic Preservation Act, we concur that the following properties are eligible for the National Register of Historic Places:

- Building 5015 – Fighter –Inceptor Alert Hangar

8/29/2006

Factors contributing to this designation of eligibility are:

Criterion A: Building 5015 has a clear mission and activity related to the Cold War.

Criterion C: Designed by Strobel & Salzman, a prominent engineering firm associated with Cold War facilities, the exterior retains most of its integrity, displaying characteristic features that include the layout and hangar doors with counterweights and pockets that were specifically designed to accommodate the fighter aircraft associated with the fighter- inceptor alert mission. Minor changes to the interior do not detract from the buildings intended use.

Criterion G: Directly associated with the fighter-interceptor alert mission and important Cold War military strategy for both deterring and combating a Soviet Union nuclear strike, 5015 played an important role in the nation’s defensive tactics.

- Building 2130-SAC 70 Man Molehole

7/29/2006

Factors contributing to this designation of eligibility are:

Criterion A: Building 2130 has a clear and direct relationship to significant missions and activities of the Cold War.

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July 2005



## **Seymour Johnson Air Force Base**

**Historic Evaluation  
Buildings 5015, 2130, and 4828**

**United States Air Force  
Air Combat Command**

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*Global Power for America*

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# **SEYMOUR JOHNSON AIR FORCE BASE**

**HISTORIC EVALUATION  
BUILDINGS 5015, 2130, AND 4828**



**HEADQUARTERS AIR COMBAT COMMAND  
JULY 2005**

## EXECUTIVE SUMMARY

This report presents the results of a historic evaluation of three buildings at Seymour Johnson Air Force Base (AFB), North Carolina. The three buildings are:

**Building 5015**, Fighter-Interceptor Alert Hangar—constructed in 1955 from a 1951 design;

**Building 2130**, Strategic Air Command (SAC) 70-Man Molehole—adapted for Seymour Johnson in June 1958 from a design of April 1958 with construction underway in November 1958;

**Building 4828**, SAC Fuel Systems Maintenance Dock—constructed in 1962 from a design of 1961.

### BUILDING 5015—FIGHTER-INTERCEPTOR ALERT HANGAR

**Eligible.** Building 5015 is recommended as eligible for listing in the National Register under Criteria A and C, and Criterion Consideration G.

**Criterion A.** Building 5015 has a clear and direct relationship to a significant Cold War activity, the air defense alert mission conducted at Seymour Johnson AFB to defend the Washington D.C. area. Building 5015 is therefore recommended eligible for inclusion in the National Register under Criterion A.

**Criterion B.** Building 5015 has no known associations with persons (past or present) significant in the history of Seymour Johnson AFB or the Cold War at the national, state, or local levels. Therefore, the building does not meet the qualifications of Criterion B.

**Criterion C.** Although the interior of the center section of Building 5015 has been modified, the exterior retains most of its integrity, displaying characteristic features that include the layout, and hangar doors with counterweights and pockets that were specifically designed to accommodate the fighter aircraft associated with the fighter-interceptor alert mission. The building retains original door bubbles, to accommodate larger aircraft types. As a late example of this hangar type, Building 5015 was built with door bubbles, rather than having them added later. Designed

by Strobel & Salzman, a prominent engineering firm associated with Cold War facilities, Building 5015 is recommended as eligible for inclusion in the National Register under Criterion C.

**Criterion D.** There are no physical or historical characteristics of Building 5015 that would be likely to yield important historical information in the future, therefore the building does not meet the qualifications of Criterion D.

**Criteria Consideration G.** Constructed in 1957, Building 5015 is 47 years old and, thus, must demonstrate “exceptional importance” under Criterion Consideration G for properties under 50 years of age. Directly associated with the fighter-interceptor alert mission, an important Cold War military strategy for both deterring and combating a Soviet Union nuclear strike, Building 5015 played an important role in the nation’s defensive tactics. The building retains key character-defining elements that relate to the technological advances of fighter-interceptor aircraft during the Cold War as well as the alert mission, which required a quick response to enemy threats. Building 5015 is, therefore, recommended eligible for inclusion in the National Register under Criterion Consideration G.

#### **BUILDING 2130—SAC 70-MAN MOLEHOLE**

**Eligible.** Building 2130 is recommended as eligible for listing in the National Register under Criteria A and C, and Criterion Consideration G for the following reasons:

**Criterion A.** Building 2130 has a clear and direct relationship to significant missions and activities of the Cold War, specifically, the important SAC bomber and tanker alert mission conducted at Seymour Johnson AFB. Building 2130 is therefore recommended eligible for inclusion in the National Register under Criterion A.

**Criterion B.** Building 2130 has no known associations with persons (past or present) significant in the history of Seymour Johnson AFB or the Cold War at the national, state, or local levels. Therefore, the building does not meet the qualifications of Criterion B.

**Criterion C.** Building 2130 has undergone minimal modifications and, thus, retains its integrity. Key character-defining features such as the tunnel egresses, berming, and associated SAC alert properties (i.e., guard tower, nine-stub Christmas tree alert apron, fencing, and nearby buildings for the service and run-up of Hound Dog and Quail missiles) are still present and convey the urgency of Cold War responses for alert missions and attempts to increase survivability of bomber personnel. Three windows have been added to the south façade, but this is a minor detraction from the overall integrity of the building. Building 2130 is, therefore, recommended as eligible for inclusion in the National Register under Criterion C.

**Criterion D.** There are no physical or historical characteristics of Building 2130 that would be likely to yield important historical information in the future, therefore the building does not meet the qualifications of Criterion D.

**Criterion Consideration G.** Constructed in 1959, Building 2130 is 45 years old and, thus, must demonstrate “exceptional importance” under Criterion Consideration G for properties under 50 years of age. Directly associated with the bomber and tanker alert mission, an important Cold

War military strategy for both deterring and combating a Soviet Union nuclear strike, Building 2130 played an important role in the nation's offensive tactics. The building retains key character-defining elements that relate to the alert mission, which emphasized survivability and a quick response to enemy threats. Building 2130 is, therefore, recommended eligible for inclusion in the National Register under Criterion Consideration G.

#### **BUILDING 4828—SAC FUEL SYSTEMS MAINTENANCE DOCK**

**Eligible.** Building 4828 is recommended as **not** eligible for listing in the National Register.

**Criterion A.** Building 4828 has only a temporal relationship to significant missions and activities of the Cold War, specifically, the important bomber and tanker alert mission conducted at Seymour Johnson AFB. Building 4828 does not meet the qualifications of Criterion A.

**Criterion B.** Building 4828 has no known associations with persons (past or present) significant in the history of Seymour Johnson AFB or the Cold War at the national, state, or local levels. Therefore, the building does not meet the qualifications of Criterion B.

**Criterion C.** Building 4828 has been modified with the front of the building being extended outward to provide more space; the replacement of original concrete block structures at the rear of the building with a new, gable-roofed structure; and the construction of shed roofed additions along both sides of the rear extension of the building. Although these changes impact certain aspects of the building's integrity, other aspects of integrity and key defining characteristics remain intact. The building is located on its original site adjacent to a parking apron and flanked by two nose docks; the original, large, rolling, steel-framed/metal-clad, bypassing doors, designed to allow the nose and wings of the aircraft to pass into the building, remain; and the basic footprint is intact. Building 4828, therefore, does not meet the qualifications of Criterion C.

**Criterion D.** There are no physical or historical characteristics of Building 4828 that would be likely to yield important historical information in the future, therefore the building does not meet the qualifications of Criterion D.

**Criteria Consideration G.** Constructed in 1963, Building 4828 is 41 years of age and must meet the requirements of "exceptional importance" under Criterion Consideration G for properties under 50 years of age. Typically, hangars do not meet the requirement for exceptional importance. In general, they are a property type that would have existed with or without the Cold War, and like other common property types, are not directly related to an important Cold War mission. Building 4828, therefore, does not meet the qualifications of Criterion Consideration G.

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## 1.0 INTRODUCTION

This report presents the results of a historic evaluation of three Cold War-era buildings (Building Nos. 5015, 2130, and 4828) located at Seymour Johnson Air Force Base (AFB), North Carolina. The effort was conducted under Section 106 of the National Historic Preservation Act (NHPA) of 1966 (as amended), to assist Seymour Johnson AFB with ongoing and future compliance with the NHPA and the National Environmental Policy Act. Fieldwork was conducted April 26-30, 2004, and was performed by Dr. Marsha Prior, Cultural Resources Manager, Geo-Marine, Inc., Plano, Texas, and Mr. Joe Freeman, Historic Architect.

## 1.1 PROJECT AREA

### 1.1.1 Location

Seymour Johnson AFB occupies approximately 3,233 acres of fee-owned land in the southeastern portion of Goldsboro, Wayne County, North Carolina. The base lies approximately 100 miles west of the Atlantic Ocean and 60 miles southeast of Raleigh—the state capital. The base is bounded by Stoney Creek to the north, Elm Street to the east, Oak Forest Road to the south, and the Neuse River to the west. The surrounding area is characterized by gently rolling lowlands (Figures 1-1 and 1-2).

### 1.1.2 Previously Identified Historic Buildings

Two previous surveys to identify historic buildings and structures have been conducted at Seymour Johnson AFB. In 1996, Panamerican Consultants, Inc., conducted a survey of pre-World War II and World War II-era buildings and structures (Reed-Hoffman 1996). Only eight World War II-era buildings and no pre-World War II buildings were identified. None of the buildings surveyed were recommended eligible for listing in the National Register.

In 1994, Mariah Associates, Inc., conducted a survey of Cold War era resources (Lowe 1997). The survey team identified 124 resources to be inventoried and assessed. Of these 124 resources, two buildings—5015 (the Alert Hangar) and 2130 (SAC 70-Man Molehole)—were recommended as eligible for listing in the National Register.

A subsequent overview analysis of the Cold War-era resources surveyed by Mariah Associates is presented in two publications, *Cold War Infrastructure for Air Defense: The Fighter and Command Missions* and *Cold War Infrastructure for Strategic Air Command: The Bomber Mission* by Weitze (1999a and 1999b). Based on information from photographs, maps, documentation from the Mariah Associates survey, and other sources, this overview considers the potential NRHP-eligibility of several Seymour Johnson Cold War-era buildings, including the three buildings under consideration in this current effort. Following is the potential NRHP-eligibility, as noted by Weitze (1999a:148 and 1999b:174) for Buildings 5015, 2130, and 4828):

- Building 5015 (Alert Hangar)—possibly NRHP eligible;
- Building 2130 (SAC 70-Man Molehole)—strong possibility for NRHP eligibility; and
- Building 4828 (Fuel Systems Maintenance Dock)—possibly NRHP eligible.

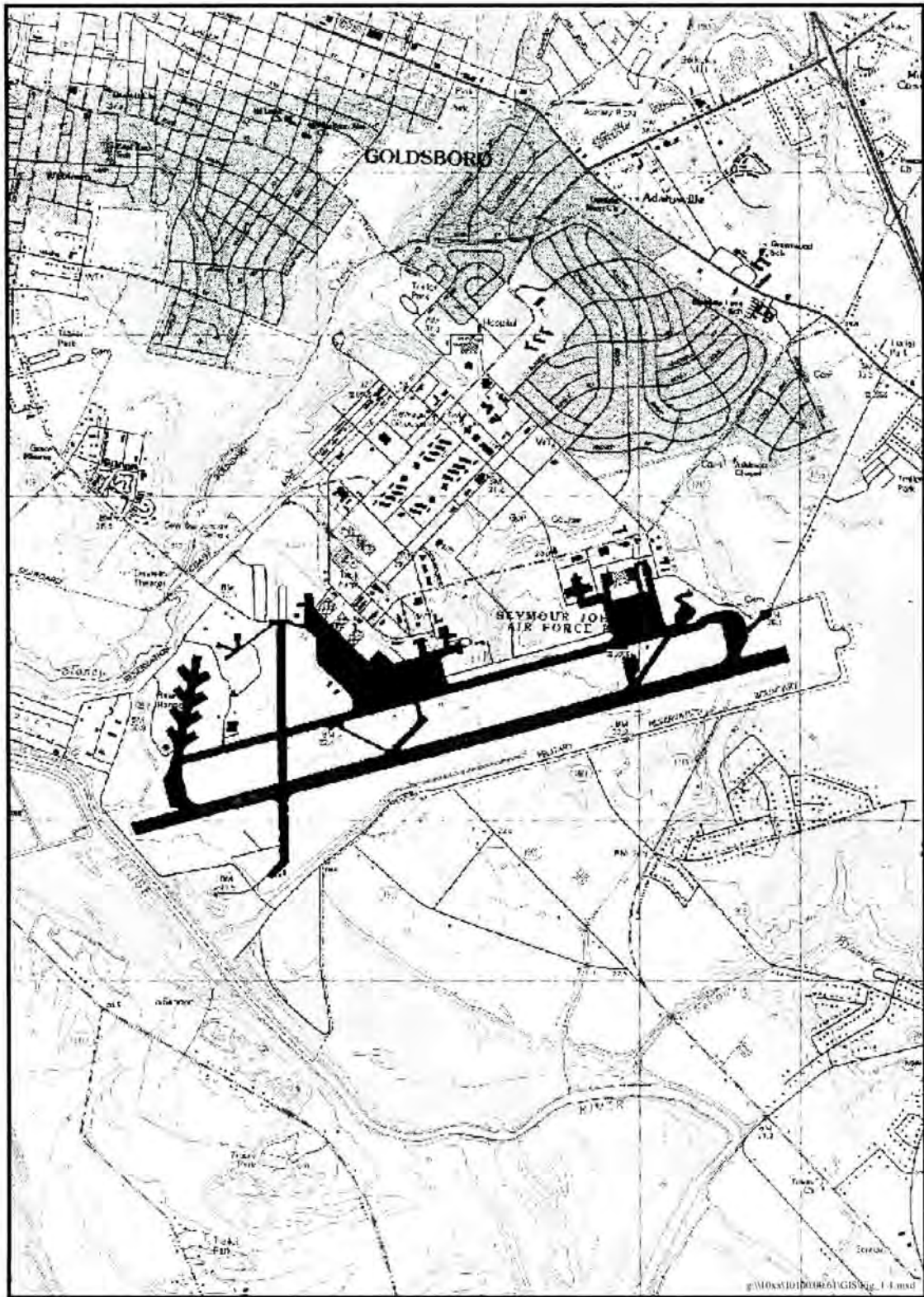


Figure 1-1. Topographic map Southeast Goldsboro, North Carolina, 7.5 Minute USGS Quadrangle Seymour Johnson Air Force Base, North Carolina.



## 2.0 HISTORIC CONTEXT

The following sections briefly describe the historic context within which Buildings 5015, 2130, and 4828 have been evaluated. The history of Seymour Johnson AFB has been adapted from several existing documents, including the baseline inventory of Cold War-era resources (Lowe 1997) and the survey of World War II resources (Reed-Hoffman 1996). The historic context presented in this report is not intended to be comprehensive; however, it is sufficiently detailed to make informed decisions about whether these three buildings are, or are not, eligible for listing in the National Register.

### 2.1 SEYMOUR JOHNSON FIELD ESTABLISHMENT AND WORLD WAR II—1940-1945

#### 2.1.1 Physical Landscape

Prior to its association with the military, the area that would eventually become Seymour Johnson AFB was slated for a municipal airport in the early 1940s. Before it was completed, however, the city of Goldsboro received word in August 1940 that the Secretary of War wished to consider the airport for military purposes. The Goldsboro airport was one of 141 throughout the state that was included in a \$19 million developmental program approved of by the House Ways & Means Committee. With that in mind, the city quickly secured options to an additional 420 acres so that the airport could be expanded for a training field. By the end of November 1940, Goldsboro voters had passed an Airport Bond Election, by a vote of 755 to 15, to provide funds for the airfield. Costs for the training field were estimated at \$253,000, but the War Department was to allocate \$68,000 and the Works Progress Administration (WPA) was to provide \$129,000. With funding secured, and with President Franklin Roosevelt's signature of approval, dated December 20, 1940, construction on the airfield was ready to commence (Lowe 1997:14).

On January 7, 1941, WPA laborers began clearing the area of woods, demolished four homes that were located in the area, and moved over 300,000 cubic yards of earth. Although still designated as a municipal airport, construction was completed in December 1941 and the field named in honor of a Goldsboro native, Lt. Seymour Johnson, a naval test pilot who had died March 5, 1941, in a plane crash (Reed-Hoffman 1996:9, Lowe 1997:14).

The War Department authorized Seymour Johnson Field as a technical school in April 1942, at which time, the city of Goldsboro leased the property to the federal government. An additional 2,226 acres were acquired and construction on three runways completed by the end of the month. In May 1942, W.P. Lourimore, a Goldsboro contractor, began construction on buildings that were necessary for the new mission (Lowe 1997:14).

Most of the buildings associated with this early time period were frame structures. Included were more than 600 housing units, mess halls, classrooms/instruction facilities, administration buildings, supply and storage buildings, warehouses, hangars, library, hospital, and chapel. The field was laid out so that buildings and structures stood to the northeast of the three intersecting runways (Figure 2-1). Streets were laid out in a grid-like pattern with numbers and letters for names. By 1996, only eight World War II era buildings or structures remained; thus, the base no longer conveys the feeling or exhibits a clear association with this era (Reed-Hoffman 1996:15-16, 37).



Figure 2-1 1945 Aerial Seymour Johnson Air Force Base, North Carolina

### 2.1.2 Operations

Seymour Johnson Field was officially activated June 12, 1942, under the Army Air Forces Technical Training Command as the Headquarters for the Technical School. The school's mission was to provide training in the inspection, maintenance, and repair of light attack aircraft and dive bombers. Over the course of World War II, additional missions were added. In June 1943, Seymour Johnson Field received orders to process and prepare officers and enlisted personnel for overseas duty. In September 1943, the 75<sup>th</sup> Training Wing, through its Aviation Cadet Pre-Training Center, began basic military training at Seymour Johnson Field. The training was designed for cadets who were preparing to become technical officers in the Army Air Corps. In January 1944, the 326<sup>th</sup> Fighter Group began training replacement pilots for the P-47 Thunderbolt. By April of that same year, basic training for P-47 pilots had become the primary mission (4<sup>th</sup> Wing History Office 1993; Reed-Hoffman 1996:10, Lowe 1997:14).

## 2.2 COLD WAR HISTORY—1946-1989

Immediately following the end of World War II, Seymour Johnson served as an Army Air Forces separation center until its deactivation in May 1946. At that time, control over the field was transferred to the War Assets Administration, which deeded the property back to the City of Goldsboro in 1949. For the next several years, Seymour Johnson, again, served as a municipal airport with many of its facilities leased to private enterprises. On January 1, 1953, the U.S. government regained control over the airfield as part of its defense expansion program. Now as an independent military service, the U.S. Air Force renamed the field Seymour Johnson Air Force Base and assigned it to Tactical Air Command (TAC). Although assigned to TAC, Air Defense Command (ADC) and Strategic Air Command (SAC) were also represented, making Seymour Johnson AFB one of the few bases where all three air combat commands were simultaneously present at one base (Lowe 1997:15-17).

### 2.2.1 The 1950s

**Physical Changes.** A large portion of the buildings at Seymour Johnson AFB today were constructed in the late 1950s during an expansion program designed to accommodate Air Force needs in fulfilling defensive, tactical, and strategic Cold War missions based on nuclear technology. When the building program at Seymour Johnson AFB commenced in 1956, all but 15 World War II buildings were moved or demolished. In addition, a warehouse and several dormitories were constructed (Lowe 1997:21).

The following year, a number of buildings were constructed for the ADC alert mission along the eastern end of the runway. Two hangars (including Building 5015—the fighter-interceptor alert facility), base operations buildings, security police operations, and a flight simulator were constructed in 1957 for the 482<sup>nd</sup> Fighter-Interceptor Squadron (482 FIS). Situated in the north central portion of the base were facilities designated for TAC and the Nineteenth Air Force. Capehart family houses, located in the northeastern portion of the base, were constructed in 1958. At the western end of the runway, facilities for the SAC alert mission, including the 70-man molehole (Building 2130), alert apron, and weapons storage buildings were constructed in 1959 (Lowe 1997:21).

By the end of the decade, the grid-like pattern associated with the Seymour Johnson World War II airfield had been dramatically altered. Evidence of the grid remained mostly in the center of the base, but the elongated east-west runway and the housing complex in the northeast portion gave the base a decidedly different look (Figures 2-2 and 2-3). Although assigned to TAC, with two other commands present (ADC and SAC), the layout for Seymour Johnson AFB deviated somewhat from the standard TAC pattern. The placement of mission-oriented buildings, taxiways, parking aprons, wing headquarters, the control tower, airman's dormitories, and support facilities, conform to a standard TAC layout. To accommodate the ADC and SAC alert missions, though, facilities that are not typically associated with TAC bases were placed along the eastern (for ADC activities) and western (for SAC activities) portions of the flight line (Lowe 1997:6-13).

**Operational Changes.** When Seymour Johnson AFB returned to U.S. government control in 1953, it was assigned to TAC, but placed on inactive status. On November 24, 1953, the base was transferred to Air Materiel Command (AMC). This assignment, however, proved to be short-lived. When AMC discovered that it could not store vehicles or equipment at the base, it was transferred back to TAC on January 6, 1954 (Lowe 1997:15).

Upon completion of its major construction program, Seymour Johnson AFB was officially reactivated April 1, 1956, with the 83<sup>rd</sup> Fighter Day Wing (83 FDW) arriving in June as host unit. The 83 FDW's primary mission was to: (1) reach operational capacity, and (2) increase its flying level and operational experience with the F-86 aircraft. The 83 FDW was inactivated in December 1957 when the 4 FDW arrived. On July 8, 1958, the 4 FDW was renamed 4<sup>th</sup> Tactical Fighter Wing (4 TFW) (Lowe 1997:16).

In addition to the 83 FDW (and subsequently the 4 FDW) as the primary unit, Headquarters, Nineteenth Air Force was also based at Seymour Johnson AFB. Under the Commander of TAC, the Nineteenth Air Force made plans, worldwide, for contingencies and exercises (Lowe 1997:16).

**Alert Missions.** During the 1950s, two alert missions, one under ADC and one under SAC, were established at Seymour Johnson AFB. Under ADC, the 482 FIS was activated at Seymour Johnson AFB in April 1956. The 482 FIS received its first F-102 aircraft in 1957 and used the alert hangar (Building 5015) situated on the eastern end of the runway. The squadron's mission was to protect U.S. airspace and it performed alert duty from January 1958 until 1965. The original building has not been moved, and in 2004, has undergone few alterations, none of which impact its character-defining features (Lowe 1997:16).

The 4241<sup>st</sup> Strategic Wing (4241 SW), under SAC, was activated at Seymour Johnson AFB on October 1, 1958. The 4241 SW relied on the B-52 *Stratofortress* and KC-135 *Stratotanker* aircraft to fulfill its mission of organizing and training "a force capable of immediate and sustained offensive bombardment and air refueling operations in any part of the world" (Lowe 1997:16-17). The 4241 SW utilized Building 2130 as a readiness crew facility (molehole) with its bomber and tanker aircraft parked nearby on a "Christmas tree" apron. The alert facility and apron are located northwest of the runway. Building 2130 has not been moved, and in 2004, remains essentially as constructed.



Figure 2-2. 1954 aerial of Seymour Johnson Air Force Base, North Carolina



Figure 2-3. 1959 aerial of Seymour Johnson Air Force Base, North Carolina.

### 2.2.2 The 1960s

**Physical Changes.** With most of the mission related facilities completed in the late 1950s, construction during the 1960s slowed. Construction during this period included a jet engine maintenance shop, situated along the taxiway, and base hospital in the northeastern portion of the base, both of which were completed in 1960. Also during this decade the base golf course was established, the weapons storage area (in the northwestern quadrant of the base) was expanded, and various maintenance docks and storage facilities were constructed along the flight line. Included in this phase of base construction was Building 4828, a fuel systems maintenance dock constructed in 1963 for the SAC mission (Figure 2-4) (Lowe 1997:21-23). Building 4828 is located on its original site. Although it has been altered, it retains key, character-defining features of its Cold War function.

**Operational Changes.** The 1960s was an active period for Seymour Johnson AFB as it provided support in such Cold War events as the Cuban Missile Crisis. During the crisis, the 4 TFW deployed combat ready crews and aircraft to McCoy AFB in Florida to standby for possible conflict. To alleviate the shortage of 4 TFW personnel and equipment at Seymour Johnson AFB, the 4520<sup>th</sup> Combat Crew Training Wing out of Nellis AFB sent crewmembers along with 22 F-105s with approximately 100,000 pounds of equipment. In 1968, the 4 TFW shipped personnel and materials for a six-month period to Korea in support of operations associated with the capture of a U.S. intelligence ship. During this decade, the 4 TFW also conducted bombing exercises at the newly developed Dare County Bombing Range in northeast North Carolina (Lowe 1997:16-17).

In April 1963, the 4241 SW was redesignated the 68<sup>th</sup> Bombardment Wing (68 BW) and continued its alert mission at Seymour Johnson AFB. The 482 FIS (occupying Building 5015) was inactivated in 1965 (Lowe 1997:16, 1999a:148).

### 2.2.3 1970s

**Physical Changes.** Although construction during the 1970s was limited, this decade marks the first time that the area south of the runway was developed and used for military operations. A grenade range, demolition range, and explosive residue area were all established to the south of the flight line along the western end. The residential area of the base was also expanded with the addition of 200 Capehart houses (Figure 2-5) (Lowe 1997:21-25).

**Operational Changes.** Seymour Johnson AFB involvement in the Vietnam War began in earnest in 1972 when squadrons from the 4 TFW, and the 68 BW, were deployed to Southeast Asia. The 4 TFW was responsible for providing support to air and ground forces with the delivery of nuclear and conventional tactical weapons. The 68 BW was ordered to deploy its B-52 aircraft and personnel to support bombing missions over Vietnam. Squadrons from both the 4 TFW and the 68 BW returned to Seymour Johnson AFB in 1973 (Lowe 1997:18).

The fighter alert facility (Building 5015) was assigned to the 4<sup>th</sup> Wing in 1976. In 1979, Seymour Johnson AFB took on a new responsibility in its capacity as a back-up to Andrews AFB during adverse weather conditions. Under the National Emergency Airborne Command Post, EB-4 aircraft were directed to Seymour Johnson AFB whenever weather conditions prohibited flight operations at Andrews AFB. Also in 1979, the 191<sup>st</sup> Fighter-Interceptor Group (191 FIG), an Air National Guard unit, took over the Air Defense alert mission (Lowe 1997:18-19).



Figure 2-4. 1965 aerial of Seymour Johnson Air Force Base, North Carolina





Figure 2-5. 1978 aerial of Seymour Johnson Air Force Base, North Carolina.

#### 2.2.4 The 1980s

**Physical Changes.** New construction during this time period was limited to maintenance docks for small aircraft, storage facilities, corrosion control facilities, and munitions maintenance buildings—all located on the flight line (between the alert apron and Base Operations). In 1989, two engine test cells were constructed east of the northern end of the SAC alert apron, and nearby, a federal prison complex was completed. The federal prison is a separate entity from Seymour Johnson AFB, though it is located on base property (Lowe 1997:9, 23).

**Operational Changes.** The 68 BW was inactivated and the 68<sup>th</sup> Air Refueling Group (AREFG) activated on September 30, 1982. The 68 AREFG was then consolidated with the 68<sup>th</sup> Bombardment Wing, Heavy on October 1, 1982 to form a single organization. Until October 1, 1986, the 68<sup>th</sup> Group flew KC-135 tankers. At that time, the KC-135s were being replaced with the larger, more versatile KC-10 tanker, and the 68<sup>th</sup> Group was redesignated the 68<sup>th</sup> Refueling Wing, Heavy. During the last years of the Cold War, the wing's mission was to "develop and maintain the operational capability to project power through enhanced global mobility." This was accomplished through the wing's ability to provide, simultaneously, "air refueling and airlift requirements for long-range deployment of tactical fighter forces, support for air refueling requirements of strategic airlift aircraft, and augmentation of airlift forces between aerial ports" (68<sup>th</sup> Air Refueling Wing n.d.).

By the end of the Cold War, the 4 TFW was carrying out its mission to execute tactical fighter missions with the F-15E Strike Eagle. The 4 TFW was the first unit to receive the F-15E in 1988, which enhanced the wing's ability to destroy enemy forces, supplies, equipment, and installations with either nuclear or conventional weapons (Lowe 1997:19-20).

### 2.3 SEYMOUR JOHNSON AFB TODAY

One of the more considerable changes to occur after the Cold War was the 1991 Air Force reorganization that consolidated TAC and SAC under Air Combat Command (ACC). At Seymour Johnson AFB, the 4 TFW was renamed the 4<sup>th</sup> Wing; the 68<sup>th</sup> Air Refueling Wing was inactivated and its resources assumed by the 4<sup>th</sup> Wing. Living up to its motto, "fourth but first," which it earned during World War II, this illustrious wing became the Air Force's first composite wing, employing both the F-15E and KC-10A for operational missions. This designation was lost, however, in 1994 when the KC-10 aircraft, crews, and support personnel were transferred to Air Mobility Command. Throughout the 1990s, the 4<sup>th</sup> Wing has been deployed to several countries (Kuwait, Saudi Arabia, Turkey), as well as Southwest Asia, in support of various military operations (4<sup>th</sup> Wing History Office 1993:1; Seymour Johnson AFB n.d. a; Lowe 1997:20).

Other notable occurrences at Seymour Johnson include the presence of National Airborne Operations Center (NAOC), which began utilizing the former SAC alert facility (Building 2130) for monthly training exercises.

Today, the 4<sup>th</sup> Wing continues as host unit at Seymour Johnson AFB, utilizing F-15E aircraft to achieve its mission in maintaining operational capability for strategic warfare. The wing is comprised of four fighter squadrons—two of which are operational units that provide the combat power and are capable of responding immediately anywhere in the world. The other two squadrons train F-15E crews (Global Security 2000).

With the majority of Seymour Johnson AFB buildings, structures, and infrastructure built during and after the Cold War, and with few World War II buildings intact, the base carries a very modern look, both in architectural style and layout. Vestiges of the base's Cold War experience under three Air Force commands (TAC, ADC, and SAC) are still evident in the built environment and landscape.

## **3.0 RESEARCH DESIGN**

### **3.1 OBJECTIVES OF THE EVALUATION**

The primary objective of this report is to provide Seymour Johnson AFB with a historic building evaluation of three specific Cold War-era buildings (Buildings 5015, 2130, and 4828) to support current and future compliance with the NHPA (most specifically Sections 110 and 106) and the NEPA. Having this inventory will facilitate consultation among installation personnel, the North Carolina SHPO, and the Council (as appropriate), and will enable Seymour Johnson AFB to better integrate the management of Buildings 5015, 2130, and 4828 into its overall mission and day-to-day operations.

### **3.2 METHODS AND GUIDANCE**

The evaluation of the three potentially historic buildings at Seymour Johnson AFB included archival research, discussions with individuals having knowledge of the facilities, and an on-site inspection, including photography. Data collected from this effort have been used to prepare facility descriptions and contextual statements, develop a historic overview of the installation and correlate that history to important national, state, and local themes, and to formulate informed conclusions about whether the evaluated resources at Seymour Johnson AFB would, or would not, meet the NPS criteria applied to properties eligible for inclusion in the National Register.

Research into the history and construction of the buildings was conducted at the following locations:

- Seymour Johnson AFB Civil Engineering Office
- Seymour Johnson AFB 4<sup>th</sup> Wing History Office
- Seymour Johnson AFB Real Property Office
- Wayne County Public Library, Goldsboro, NC
- News-Argus, Goldsboro, NC (local newspaper office)

### **3.3 NATIONAL REGISTER CRITERIA FOR HISTORIC PROPERTY EVALUATION**

The criteria used to evaluate potential historic properties are stated in 36 CFR Part 60.4 and in various National Register bulletins. The guidance is re-stated herein to provide readers who are less familiar with the National Register guidelines with background about how the process was applied to Seymour Johnson AFB.

#### **3.3.1 National Register Criteria A-D**

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association. All properties that are determined eligible for inclusion in the National Register must meet at least one of the four primary National Register criteria (U.S. Department of the Interior, National Park Service 1997). The criteria are focused on properties:

- A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. That are associated with the lives of persons significant in our past; or
- C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual direction; or
- D. That have yielded, or may be likely to yield, information important in prehistory or history.

### **3.3.2 National Register Criteria Considerations A-G**

Ordinarily, cemeteries, birthplaces, or graves of historical figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, reconstructed historic buildings, properties primarily commemorative in nature, and properties that have achieved significance within the past 50 years are not considered eligible for inclusion in the National Register. However, these types of properties will qualify if they are integral parts of districts that do meet the criteria, or if they fall within the following categories (U.S. Department of the Interior, National Park Service 1997):

- A. A religious property deriving primary significance from architectural or artistic distinction or historical importance; or
- B. A building or structure removed from its original location but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with a historic person or event; or
- C. A birthplace or grave of a historical figure of outstanding importance if there is no appropriate site or building directly associated with his productive life; or
- D. A cemetery that derives its primary significance from graves of persons of transcendent importance from age, from distinctive design features, or from association with historic events; or
- E. A reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same associate has survived; or
- F. A property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own exceptional significance; or
- G. A property achieving significance within the past 50 years if it is of **exceptional importance**.

Of particular pertinence to this evaluation is Criterion Consideration G, properties *that are less than 50 years in age*.

**Criterion Consideration G.** The critical evaluative element of Criterion Consideration G is that a property must demonstrate “**exceptional importance**.” This principle safeguards against listing properties that are of only contemporary or faddish value and ensures that the National Register is a register of truly historic places.

**The 50-Year Rule.** As a general rule, properties that have achieved significance within the last 50 years are not eligible for inclusion in the National Register. This is because the Register is intrinsically a compilation of historic resources that have withstood the passage of time. The passage of time is generally necessary in order to apply the adjective “historic” and to ensure adequate perspective.

Fifty years was chosen by the formulators of the NHPA as a reasonable and perhaps popularly understood span of time that makes evaluation of historical value somewhat feasible. However, 50 years is not the only length of time that defines “historic” or makes an informed, dispassionate judgment of historic significance possible. Rather it is an arbitrary span of time, selected as a filter to ensure that enough time has passed (as appropriate to circumstances) to evaluate a property within its historic context. The 50-year rule has become particularly important in light of recent world events (i.e., the end of the Cold War; interplanetary exploration, Man-in-Space) that have required agencies to consider the historic significance of a wide range of highly scientific and technological facilities.

**Exceptional Importance.** The National Register guidance does not define “**exceptional**,” however, National Register Bulletin 22 (U.S. Department of the Interior, National Park Service 1996) discusses this element of Criterion Consideration G as follows:

Exceptional, by its own definition, cannot be fully catalogued or anticipated. It may reflect the extraordinary impact of a political or social event. It may apply to an entire category of resources so fragile that survivors of any age are unusual. It may be the function of the relative age of a community and its perceptions of old and new. It may be represented by a building or structure whose developmental or design value is quickly recognized as historically significant by the architectural or engineering profession. It may be reflected in a range of resources for which a community has an unusually strong associative attachment. Thus, a complete list of exceptionally significant resources cannot be prepared or precise indicators of exceptional value prescribed.

Detailed information about the application of Criterion Consideration G to historic properties can be found in *National Register Bulletin 22* (U.S. Department of the Interior, National Park Service 1996).

### 3.4 INTEGRITY

Integrity is the ability of a property to convey its significance. To be eligible for inclusion in the National Register, a property must not only be shown to be significant under the National Register criteria, but it must also have integrity. There are seven aspects of integrity: location, design, setting, materials, workmanship, feeling, and association. To retain historic integrity, properties will always possess several, and usually most, of the seven aspects. Ultimately, the question of integrity is answered by whether or not a property retains the identity for which it is significant.

### **3.5 AIR FORCE COLD WAR HISTORIC PROPERTY GUIDANCE**

At the end of the Cold War (1989) the U.S. Department of Defense recognized the need to identify and properly manage Cold War-era materials so that future generations would understand the Cold War, its origins, and its repercussions (U.S. Department of Defense 1994). To achieve these goals, a task force was established to oversee the process. The task force initiated a number of theme and context studies and, recognizing that Cold War-era properties would need to demonstrate exceptional importance because of their age, established some general guidelines for identifying potentially significant Cold War-era property types. U.S. Air Force property types identified were:

- Operational and Support Installations
  - Air Force bases, including Command Centers
  - Missile Stations
  - Launch Complexes
- Combat Weapons Systems and Combat Support Systems
  - Missiles
  - Aircraft (Fixed Wing and Rotary)
  - Ground Vehicles and Equipment
- Training Facilities
  - Warfighting, Combat Support, and Intelligence Schools
  - Launch Complexes
  - Combat Training Ranges
  - Impact Areas; Targets
  - Prisoner of War Training Camps
- Material Development Facilities
  - Research Laboratories
  - Manufacturing Sites
  - Test Sites
  - Proving Grounds
- Intelligence Facilities
  - Radar Sites
  - Listening Posts

Of these property types, the three Seymour Johnson AFB buildings being reassessed (Building 5015 [fighter alert facility], Building 2130 [SAC 70-man molehole], and Building 4828 [fuel systems maintenance dock]), would be most closely associated with Air Force bases; and aircraft, fixed wing.

## 4.0 EVALUATION OF BUILDINGS 5015, 2130, AND 4828

The following sections describe the design, construction details, and historical significance of buildings 5015, 2130, and 4828. The physical relationship between these buildings to the overall base can be seen in Figure 4-1.

### 4.1 BUILDING 5015—FIGHTER-INTERCEPTOR ALERT HANGAR

#### 4.1.1 Design

Building 5015 is a 22,753 square foot rigid-frame fighter-interceptor alert aircraft hangar. The building was based on standardized drawing No. 39-01-38 (*Hangar, Alert, Fighter A/C, 303 X 69*) prepared by Strobel and Salzman, Engineers, New York, New York in 1951, for the Department of the Army, Office of the Chief Engineers, Military Construction Engineering Division, Washington D.C. As-built record drawings are dated February 11, 1957, Specifications No. 39-01-38-51-CE. Original drawings were revised for Seymour Johnson AFB and are dated March 29, 1956. The drawings were revised for use by Six Associates, Architects & Engineers of Asheville, North Carolina.

The Strobel and Salzman standardized drawings set consists of 23 individual sheets; the most pertinent of which are provided in Section 4.1.2 of this report along with location plans, record drawings for Building 5014—a guard house associated with Building 5015, and door modification plans (Figures 4-2–4-8). The remaining record drawings, which largely pertain to electrical, mechanical, and plumbing elements of the construction, are housed in the Civil Engineering office at Seymour Johnson AFB.

The building has four aircraft pockets or bays, two on either side of a central alert crew quarters. The aircraft bays each hold one fighter aircraft, and have large doors at the front and rear. The alert crew quarters is two stories tall, with a projecting observation or control room on the front.

#### 4.1.2 Construction Details

**Exterior.** Building 5015 was completed in April 1957 at a cost of \$316,280.84 (Seymour Johnson AFB Real Property n.d.). The building has a flat roof and is steel-framed set on below grade concrete footings that support concrete piers. The piers rise to grade and support steel H-columns. The H-columns, in turn, support steel trusses and purlins. The walls are braced with diagonal angles and purlins. A concrete floor slab was set just below joint between the piers and the H-columns. The overall length of the building is 302 feet 8 inches; depth is 68 feet 10 inches. Clad in corrugated metal siding, Building 5015 has front and rear, overhead, corrugated metal-clad doors at each bay, or pocket. The two-story center section of Building 5015 is 29 feet 5 ½ inches by 76 feet with 3,370 square feet. This section currently houses a kitchen, conference rooms, and meeting spaces. The building's rear side is currently fenced and secured with a gate, guardhouse (Building 5014), and turnstile. Historic and current photographs of Building 5015 are presented in Figures 4-9–4-31.



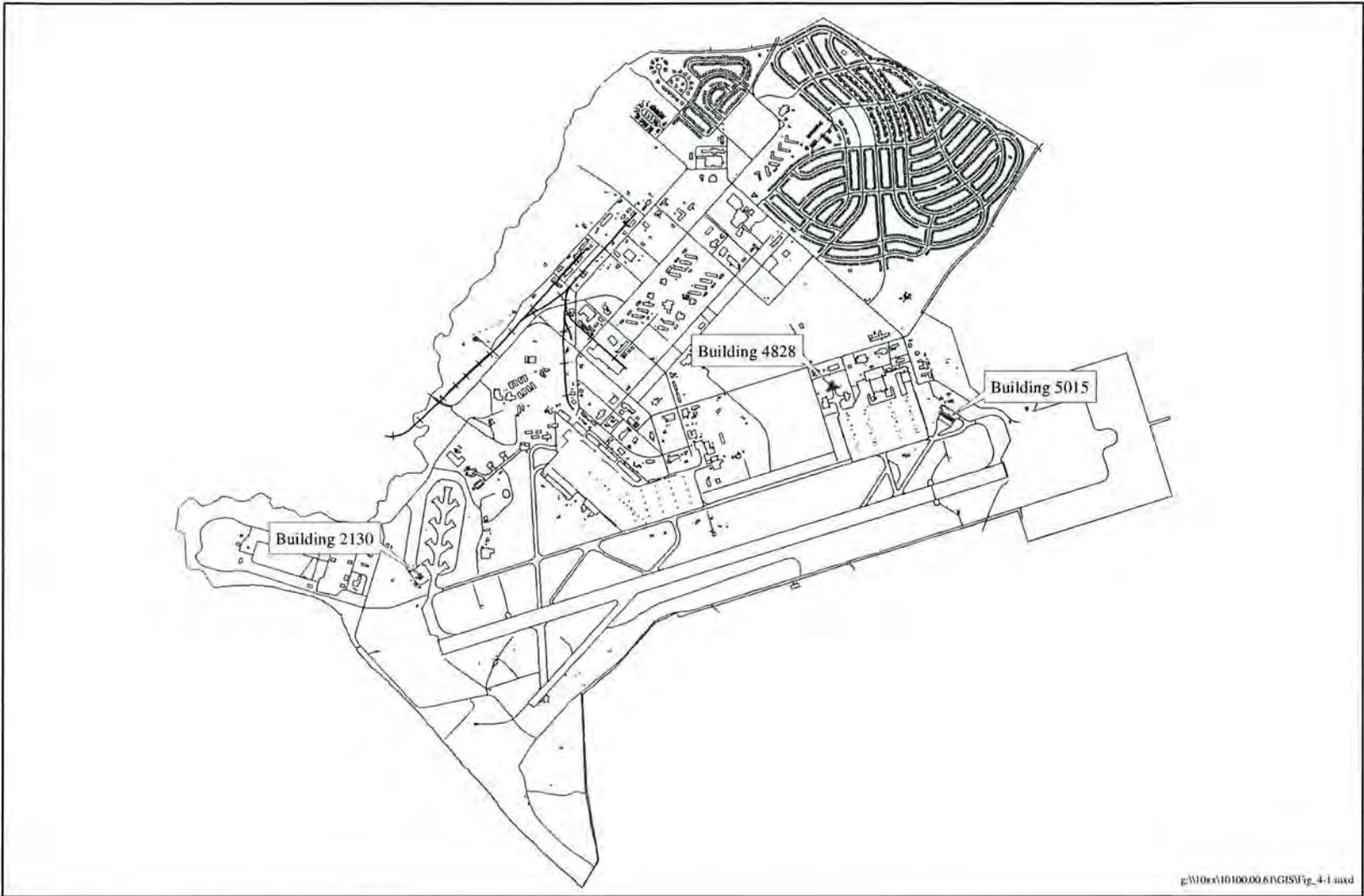


Figure 4-1. Base map and location of Buildings 5015, 2130, and 4828 (Source: Seymour Johnson Air Force Base, North Carolina).

# HANGAR, ALERT FIGHTER A/C 303 X 69

### DRAWING SCHEDULE

SCALE	SHEET NO.	TITLE
AS SHOWN	1	SITE PLAN
AS SHOWN	2	TITLE SHEET
ARCHITECTURAL		
AS SHOWN	3	FLOOR PLANS & ROOF PLAN
AS SHOWN	4	ELEVATIONS & SECTIONS
AS SHOWN	5	WALL SECTIONS
AS SHOWN	6	ROOFING & DETAILS
AS SHOWN	7	MECHANICAL PLANS & DETAILS
STRUCTURAL		
AS SHOWN	8	FOUNDATION PLAN & DETAILS
AS SHOWN	9	FOUNDATIONS & DETAILS
AS SHOWN	10	ROOF FRAMING PLAN (AS SHOWN)
AS SHOWN	11	ROOF FRAMING PLAN (20 FEET SPACED)
AS SHOWN	12	ROOF FRAMING PLAN (40 FEET SPACED)
AS SHOWN	13	BOTTOM JOIST BRACING
AS SHOWN	14	FRAMING ELEVATIONS
AS SHOWN	15	SECTIONS & DETAILS
AS SHOWN	16	TRANSFER JOIST BRACING & SUPPORT PLAN & ELEVATIONS
AS SHOWN	17	HANGAR DOOR BRACING & SUPPORT DETAILS
AS SHOWN	18	HANGAR DOOR DETAILS
MECHANICAL		
AS SHOWN	19	HEATING PLAN & DETAILS
AS SHOWN	20	HEATING PLAN, RADIATORS & RADIATORS (EXC. LIGHTS)
AS SHOWN	21	VENTILATING PLAN & DETAILS
AS SHOWN	22	ELECTRICAL PLAN & DETAILS
AS SHOWN	23	SEWERAGE & PLUMBING PLAN & DETAILS

ABBREVIATIONS	MATERIAL INDICATIONS	HEATING & VENTILATING SYMBOLS	ELECTRICAL SYMBOLS
A AC AD AF AG AH AI AJ AK AL AM AN AO AP AQ AR AS AT AU AV AW AX AY AZ BA BB BC BD BE BF BG BH BI BJ BK BL BM BN BO BP BQ BR BS BT BU BV BW BX BY BZ CA CB CC CD CE CF CG CH CI CJ CK CL CM CN CO CP CQ CR CS CT CU CV CW CX CY CZ DA DB DC DD DE DF DG DH DI DJ DK DL DM DN DO DP DQ DR DS DT DU DV DW DX DY DZ EA EB EC ED EE EF EG EH EI EJ EK EL EM EN EO EP EQ ER ES ET EU EV EW EX EY EZ FA FB FC FD FE FF FG FH FI FJ FK FL FM FN FO FP FQ FR FS FT FU FV FW FX FY FZ GA GB GC GD GE GF GG GH GI GJ GK GL GM GN GO GP GQ GR GS GT GU GV GW GX GY GZ HA HB HC HD HE HF HG HH HI HJ HK HL HM HN HO HP HQ HR HS HT HU HV HW HX HY HZ IA IB IC ID IE IF IG IH II IJ IK IL IM IN IO IP IQ IR IS IT IU IV IW IX IY IZ JA JB JC JD JE JF JG JH JI JJ JK JL JM JN JO JP JQ JR JS JT JU JV JW JX JY JZ KA KB KC KD KE KF KG KH KI KJ KK KL KM KN KO KP KQ KR KS KT KU KV KW KX KY KZ LA LB LC LD LE LF LG LH LI LJ LK LM LN LO LP LQ LR LS LT LU LV LW LX LY LZ MA MB MC MD ME MF MG MH MI MJ MK ML MN MO MP MQ MR MS MT MU MV MW MX MY MZ NA NB NC ND NE NF NG NH NI NJ NK NL NM NO NP NQ NR NS NT NU NV NW NX NY NZ OA OB OC OD OE OF OG OH OI OJ OK OL OM ON OO OP OQ OR OS OT OU OV OW OX OY OZ PA PB PC PD PE PF PG PH PI PJ PK PL PM PN PO PP PQ PR PS PT PU PV PW PX PY PZ QA QB QC QD QE QF QG QH QI QJ QK QL QM QN QO QP QQ QR QS QT QU QV QW QX QY QZ RA RB RC RD RE RF RG RH RI RJ RK RL RM RN RO RP RQ RR RS RT RU RV RW RX RY RZ SA SB SC SD SE SF SG SH SI SJ SK SL SM SN SO SP SQ SR SS ST SU SV SW SX SY SZ TA TB TC TD TE TF TG TH TI TJ TK TL TM TN TO TP TQ TR TS TT TU TV TW TX TY TZ UA UB UC UD UE UF UG UH UI UJ UK UL UM UN UO UP UQ UR US UT UU UV UW UX UY UZ VA VB VC VD VE VF VG VH VI VJ VK VL VM VN VO VP VQ VR VS VT VU VV VW VX VY VZ WA WB WC WD WE WF WG WH WI WJ WK WL WM WN WO WP WQ WR WS WT WU WV WW WX WY WZ XA XB XC XD XE XF XG XH XI XJ XK XL XM XN XO XP XQ XR XS XT XU XV XW XZ YA YB YC YD YE YF YG YH YI YJ YK YL YM YN YO YP YQ YR YS YT YU YV YW YZ ZA ZB ZC ZD ZE ZF ZG ZH ZI ZJ ZK ZL ZM ZN ZO ZP ZQ ZR ZS ZT ZU ZV ZW ZX ZY ZZ	<p>STRUCTURAL SYMBOLS</p> <p>W" WIDE FLANGE BEAM</p> <p>L LIGHT BEAM</p> <p>C CHANNEL</p> <p>P PLATE</p> <p>A AT</p> <p>S SQUARE</p> <p>H" SQUARE HORN</p> <p>E CENTER LINE</p> <p>R RADIUS IN NUMBER</p> <p>SI STEEL I-BEAM</p> <p>AL ALUMINUM BEAM</p>	<p>HEATING &amp; VENTILATING SYMBOLS</p> <p>LOW PRESSURE STEAM</p> <p>LOW PRESSURE RETURN</p> <p>HOT WATER SUPPLY</p> <p>HOT WATER RETURN</p> <p>VENT</p> <p>FUEL OIL SUPPLY</p> <p>FUEL OIL RETURN</p> <p>CONDENSATE/EXHAUST DISCHARGE</p> <p>FAN-TYPE EXHAUST</p> <p>UNIT HEATER</p> <p>DATE VALVE</p> <p>SHOWER VALVE</p> <p>SHOULDER VALVE</p> <p>AUTOMATIC VALVE</p> <p>TYPE ANCHOR</p> <p>SQUARE HEAD DOOR</p> <p>THERMOSTAT</p> <p>THERMOSTATIC TRAP</p> <p>FLOOD AND THERMOSTATIC TRAP</p> <p>STRAINER</p> <p>SHOWER LOCKING DOWN</p> <p>ICE LOCKING UP</p> <p>ICE LOCKING DOWN</p> <p>PITCH OF PIPE</p> <p>HIGH PRESSURE STEAM</p> <p>HIGH PRESSURE RETURN</p> <p>EXHAUST DUCT ROOF</p> <p>PLUMBING SYMBOLS</p> <p>SOIL OR WASTE SANITARY PIPING</p> <p>COLD WATER</p> <p>HOT WATER</p> <p>COLD WATER</p> <p>RAD</p> <p>DATE VALVE</p> <p>SHOWER VALVE</p> <p>MIXER VALVE</p> <p>PRESSURE REGULATOR</p> <p>FLOOR DRAIN</p>	<p>ELECTRICAL SYMBOLS</p> <p>CEILING FUTURE OUTLET</p> <p>WALL FUTURE OUTLET</p> <p>DUPLEX RECEPTACLE 2 1/2" ABOVE FLOOR</p> <p>3 PHASE - 4 WIRE - 300 AMPERE OUTLET 6" ABOVE FLOOR</p> <p>ANCHORING BOX - 4" SQUARE UNDER VOLTAGE</p> <p>SHIELD WIRE SWITCH 8" ABOVE FLOOR</p> <p>THREE WAY SWITCH 8" ABOVE FLOOR</p> <p>DISCONNECTING SWITCH</p> <p>AUTOMATIC THUNDERBOLT SWITCH 8" ABOVE FLOOR</p> <p>FLOOR SWITCH</p> <p>INDICATOR PANEL</p> <p>POWER PANEL</p> <p>DISTRIBUTION PANEL</p> <p>TELEPHONE OUTLET</p> <p>TRIP-OUTLET 8" ABOVE FLOOR</p> <p>ALARM BELL</p> <p>MOTOR NUMBER SWITCH HOMEOWNER</p> <p>MOTOR CONTROL 8" ABOVE FLOOR</p> <p>MOTORIZED VALVE</p> <p>PUSH BUTTON SWITCH 8" ABOVE FLOOR</p> <p>PUSH BUTTON SWITCH WITH PUSH LIGHT</p> <p>1-1/2" FITTING FOR CONDUIT OR ELECTRICAL METALLIC TUBING</p> <p>LIGHT SWITCH</p> <p>OUTLET INTERLOCK CONTACT</p> <p>HOMER RUN TO LIGHTING PANEL</p> <p>HOMER RUN TO POWER PANEL</p> <p>1/2" ELECTRICAL METALLIC TUBING CONTAINING 2 NO. 10 WIRES</p> <p>CONDUIT - CARRIES WIRES WITHOUT NUMBER OF WIRES NOTED</p> <p>CONDUIT IN FLOOR</p> <p>TELEPHONE ELECTRICAL METALLIC TUBING</p> <p>PLUMBING LIGHTING FIXTURE</p>

WORK NOT INDICATED SECTION

LINEAR NOTATIONS SHEET 1 OF 1

## FLOOR DRAWING

E11N E13CA

Bldg # 5015

PROJECT AND DRAWING DEPARTMENT OF THE ARMY  
ENGINEERING CENTER  
CORPS OF ENGINEERS

**HANGAR, ALERT**  
**FIGHTER A/C 303 X 69**

**TITLE SHEET**

IN ATTN. S. J. JOHNSON  
S. J. JOHNSON  
DATE: 12-1-50  
BY: S. J. JOHNSON  
CHECKED BY: S. J. JOHNSON  
SCALE: AS SHOWN  
SHEET NO. 23

Figure 4-2. Building 5015—record drawing: title sheet, 1951 (Source: Seymour Johnson Air Force Base Civil Engineering Vault)

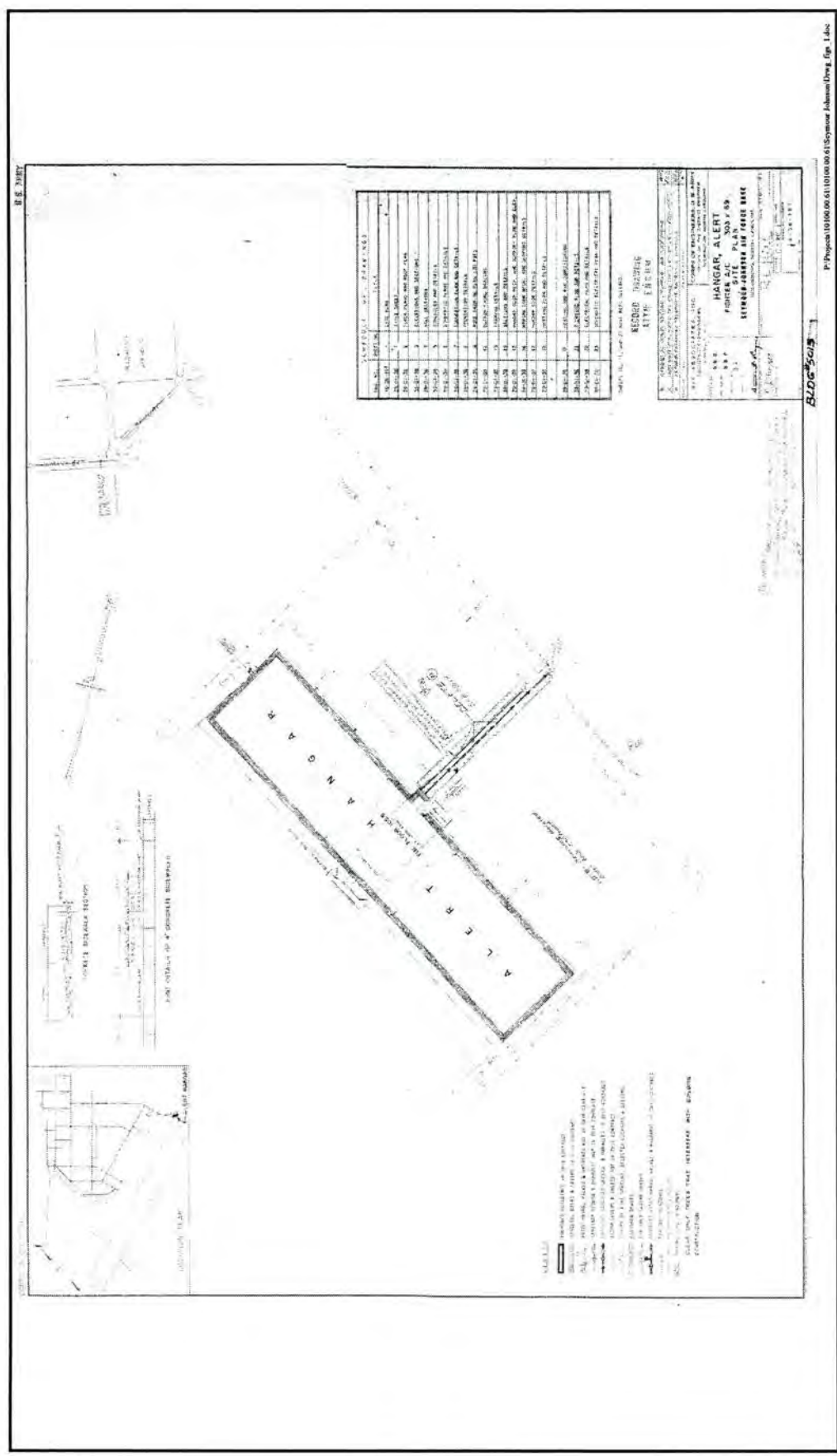


Figure 4-3. Building 5015—record drawing, site plan, 1956 (Source: Seymour Johnson Air Force Base Civil Engineering Vault)

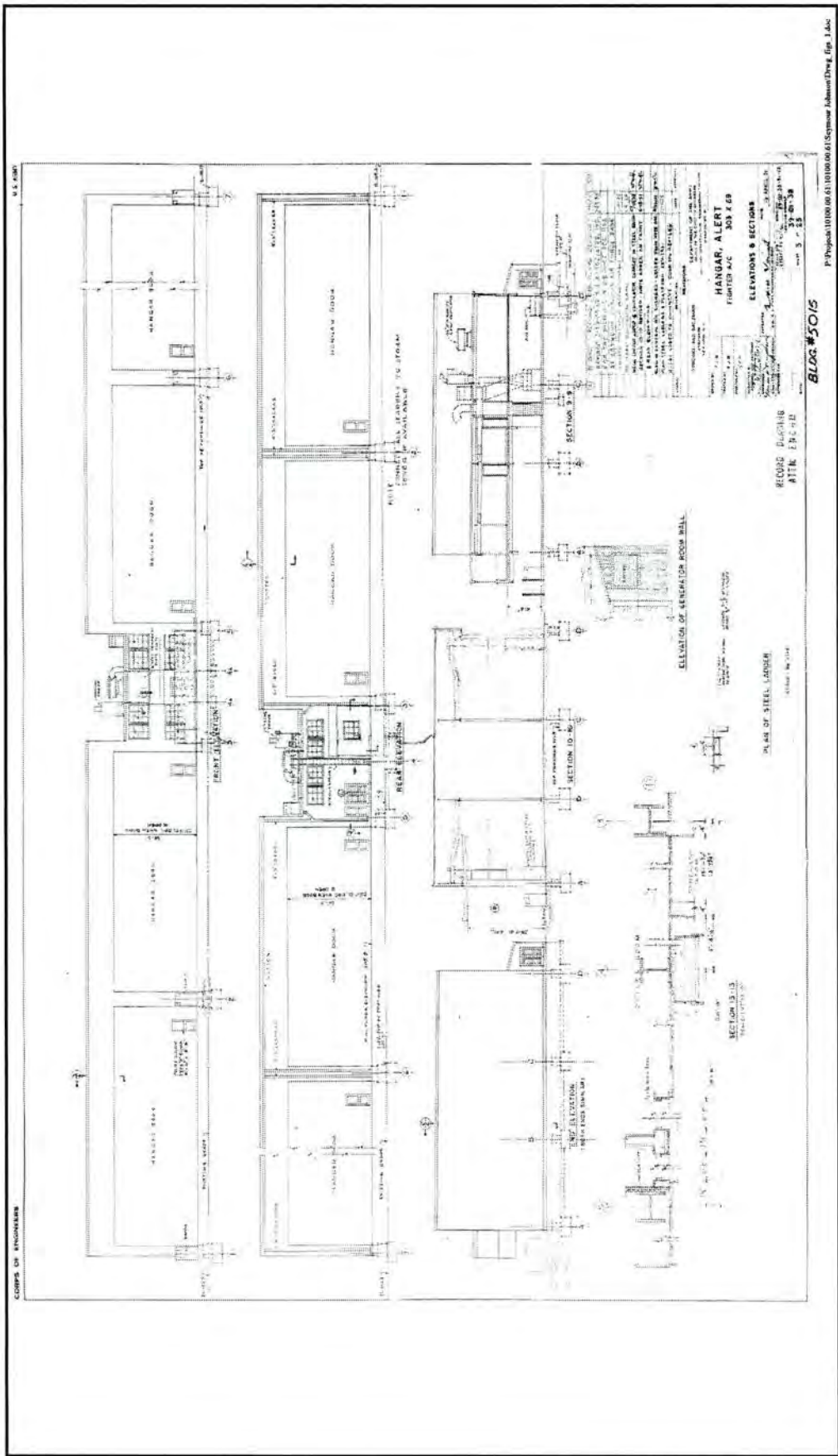


Figure 4-4. Building 5015—record drawing, elevations and sections, 1951 (Source: Seymour Johnson Air Force Base Civil Engineering Vault)

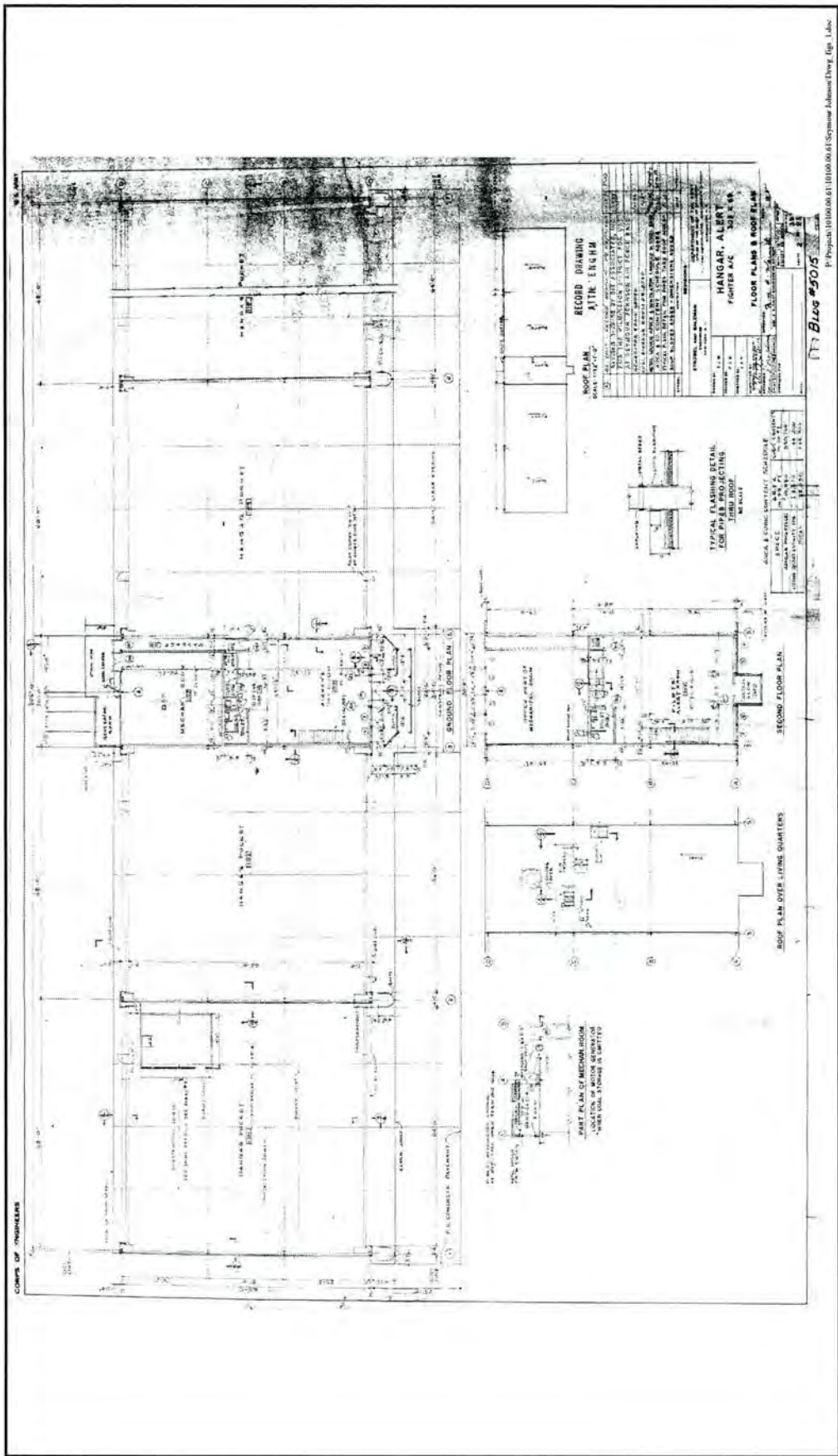


Figure 4-5. Building 5015—record drawing, floor plans and roof plan, 1951 (Source: Seymour Johnson Air Force Base Civil Engineering Vault).

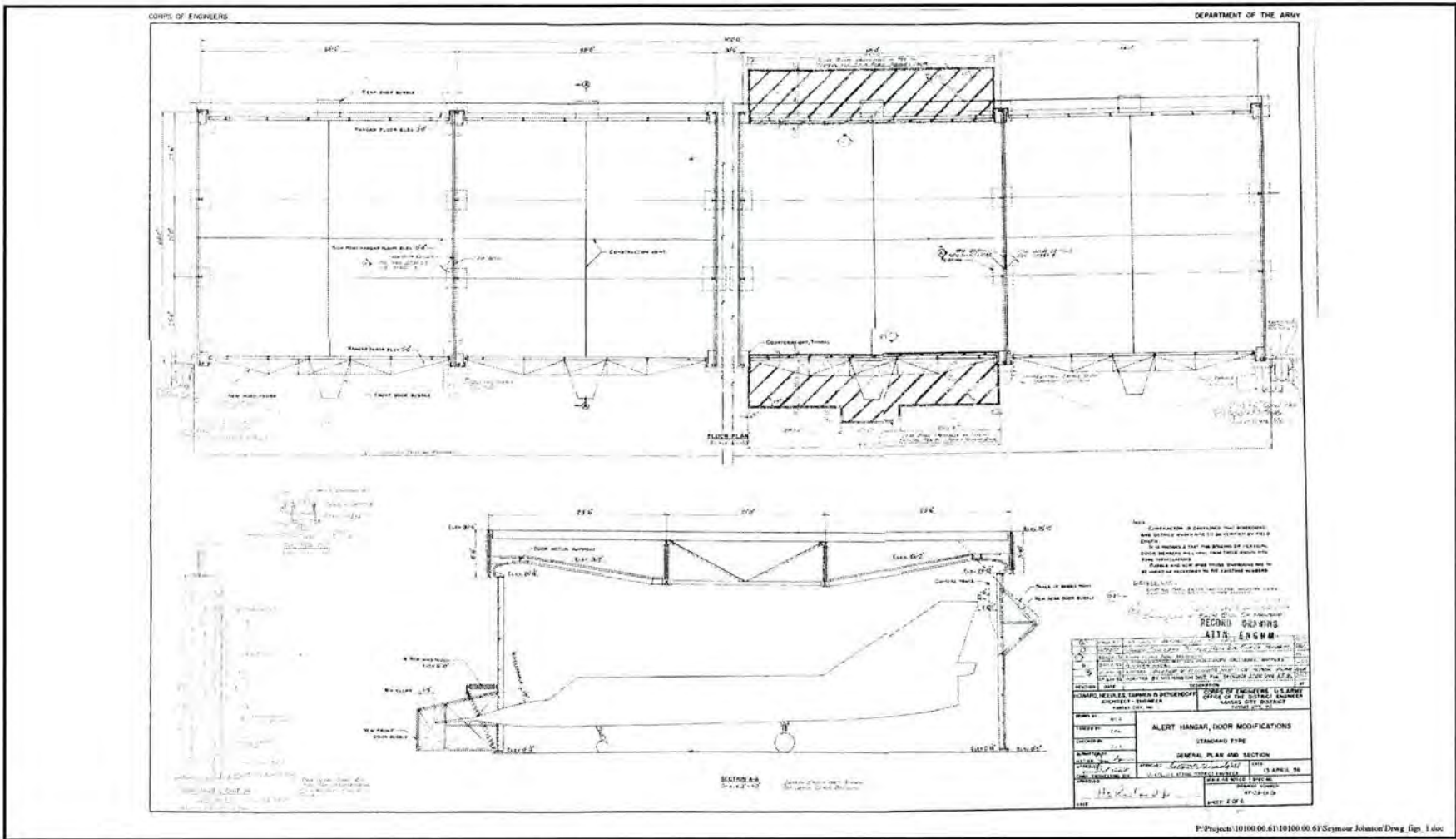


Figure 4-6 Building 5015—record drawing, alert hanger, door modifications, 1956 (Source: Seymour Johnson Air Force Base Civil Engineering Vault)

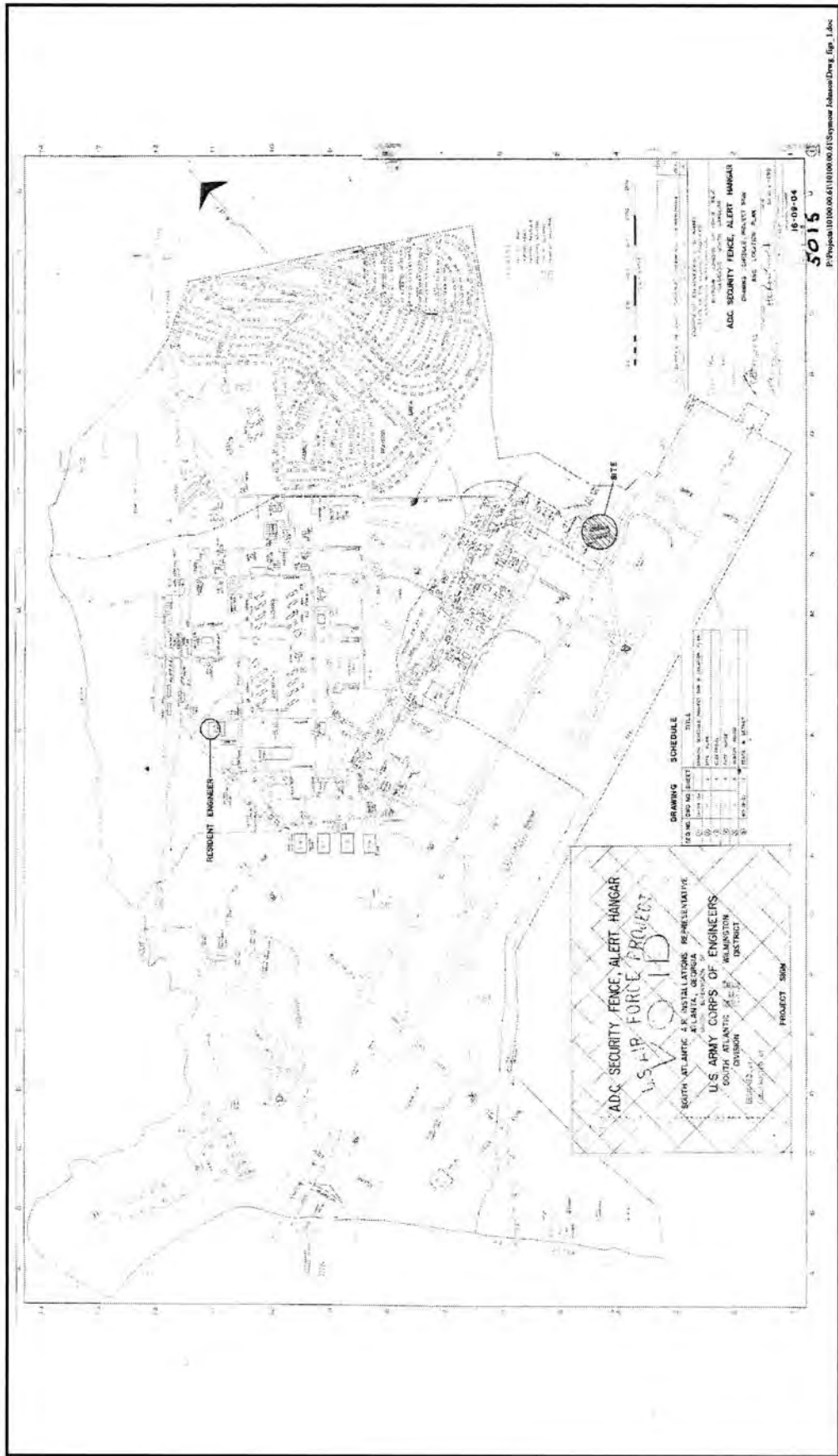


Figure 4-7. Building 5015—record drawing, A.D.C. security fence, alert hangar drawing schedule, project sign, and location plan, 1959 (Source: Seymour Johnson Air Force Base Civil Engineering Vault)

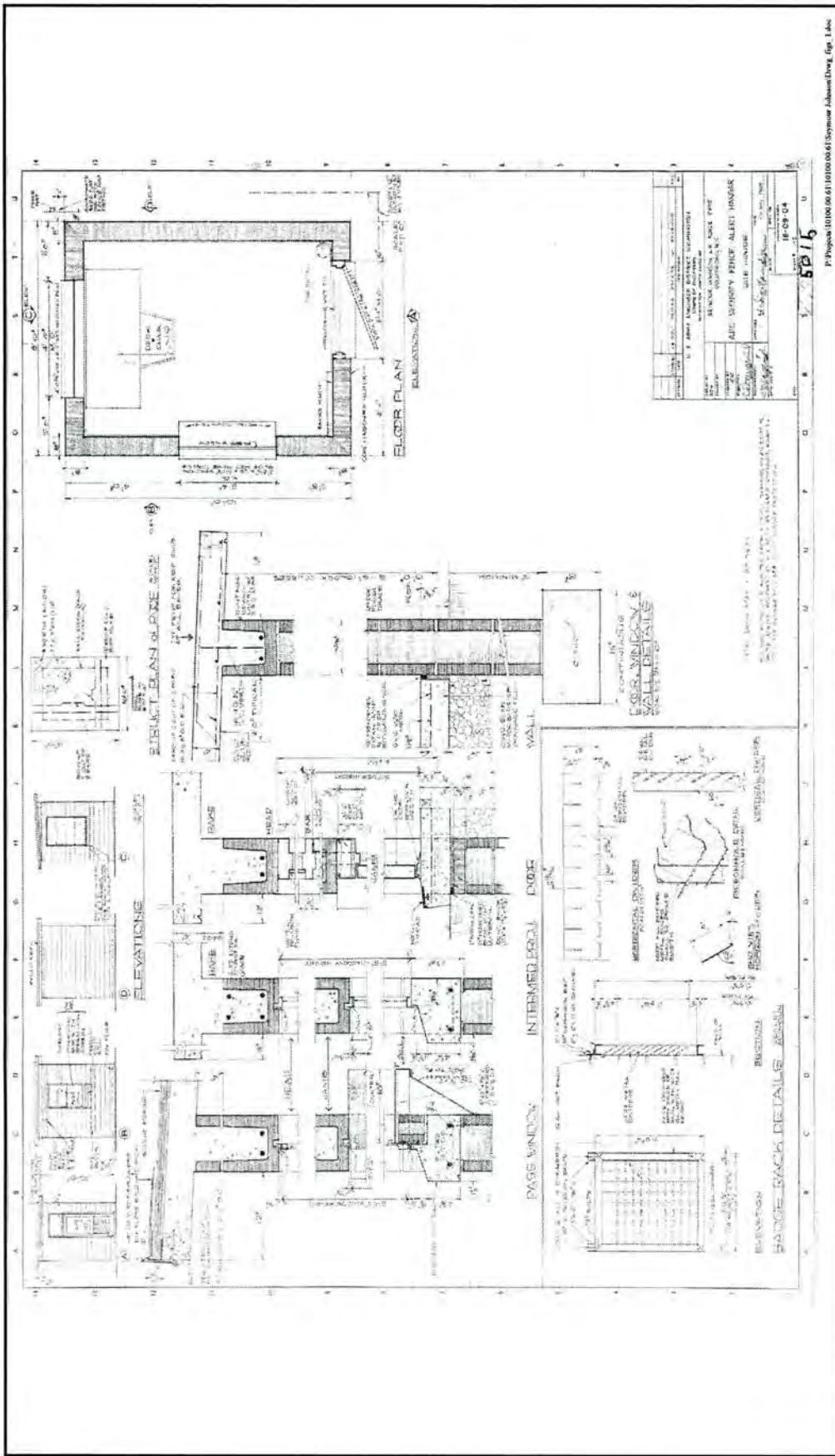


Figure 4-8. Building 5014 (gate house associated with Building 5015)—record drawing, A.D.C. security fence, alert hanger gate house, 1959 (Source: Seymour Johnson Air Force Base Civil Engineering Vault)





Figure 4-9. Building 5015, November 1958 (Source: 4<sup>th</sup> Wing History Office, Seymour Johnson Air Force Base, North Carolina).



Figure 4-10. Building 5015, November 1958 (Source: 4<sup>th</sup> Wing History Office, Seymour Johnson Air Force Base, North Carolina).



Figure 4-11. Building 5015, December 1958 (Source: 4<sup>th</sup> Wing History Office, Seymour Johnson Air Force Base, North Carolina).



Figure 4-12. Building 5015, December 1958 (Source: 4<sup>th</sup> Wing History Office, Seymour Johnson Air Force Base, North Carolina).



Figure 4-13. Building 5015, date unknown (Source: 4<sup>th</sup> Wing History Office, Seymour Johnson Air Force Base, North Carolina).



Figure 4-14. Building 5015, date unknown (Source: 4<sup>th</sup> Wing History Office, Seymour Johnson Air Force Base, North Carolina).



Figure 4-15. Building 5015, ca. October 1976 (Source: 4<sup>th</sup> Wing History Office, Seymour Johnson Air Force Base, North Carolina).



Figure 4-16. Lt Gen James V. Hartinger (right), Ninth Air Force Commander, and Col Robert D. Russ, 4TFW Commander, prepare to cut the ribbon signaling the opening of the new quarters for 4<sup>th</sup> Wing personnel assigned to the Air Defense alert section, October 1, 1976 (Source: 4<sup>th</sup> Wing History Office, Seymour Johnson Air Force Base, North Carolina).



Figure 4-17. Col Robert D. Russ, 4TFW Commander, describes engine air start procedures at the Air Defense alert facility as Lt Gen James V. Hartinger, Ninth Air Force Commander, looks on. (L to R): Col Harvey L. Kimsey, 4TFW Deputy Commander for Operations; Maj John E. Thompson, 4TFW Alert Force Chief; Gen Hartinger; Col Russ; and Capt Marvin Esmond, the General's aide. October 1, 1976. [Note: Building 5014—guardhouse—and turnstile in background] (Source: 4<sup>th</sup> Wing History Office, Seymour Johnson Air Force Base, North Carolina).



Figure 4-18. Typical runway scene from the Air Defense Compound, October 1976 (Source: 4<sup>th</sup> Wing History Office, Seymour Johnson Air Force Base, North Carolina).



Figure 4-19. Building 5015, date unknown (Source: 4<sup>th</sup> Wing History Office, Seymour Johnson Air Force Base, North Carolina).



Figure 4-20. Building 5015, facing southeast (Photograph by Joe C. Freeman, 2004).



Figure 4-21. Building 5015, facing east (Photograph by Joe C. Freeman, 2004).



Figure 4-22. Building 5015, facing southwest (Photograph by Joe C. Freeman, 2004).



Figure 4-23. Building 5015, facing east (Photograph by Joe C. Freeman, 2004)



Figure 4-24. Building 5015, facing southeast (Photograph by Joe C. Freeman, 2004).





Figure 4-25. Building 5015, facing northwest (Photograph by Joe C. Freeman, 2004).



Figure 4-26. Building 5015, facing southeast (Photograph by Joe C. Freeman, 2004).



Figure 4-27. Building 5015, facing east (Photograph by Joe C. Freeman, 2004).



Figure 4-28. Building 5015, facing southeast (Photograph by Joe C. Freeman, 2004).

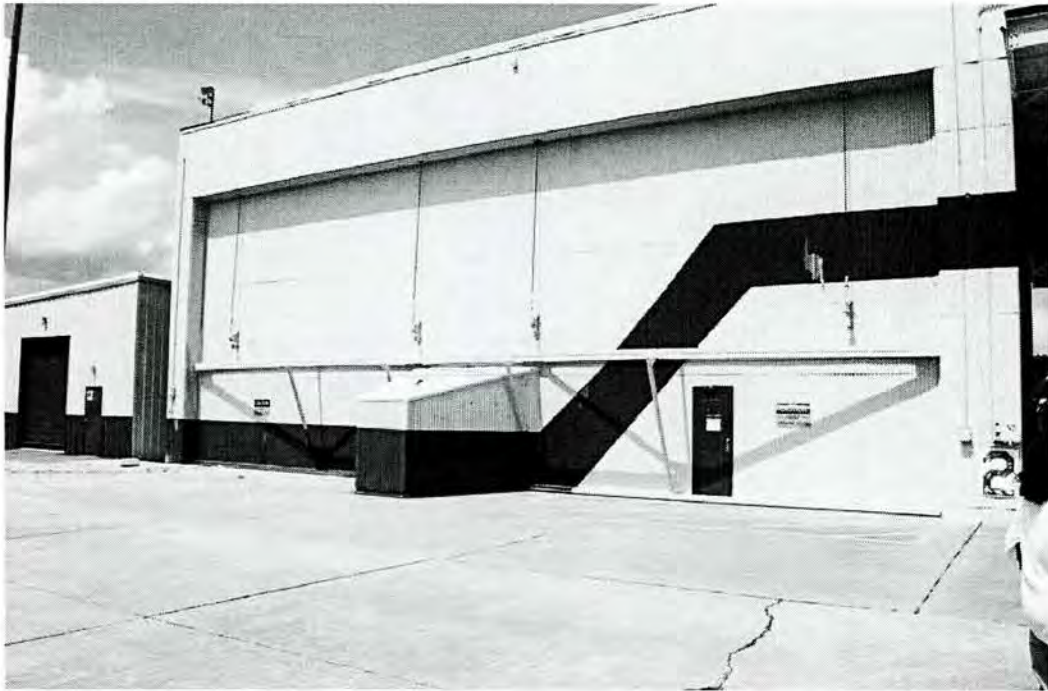


Figure 4-29. Building 5015, facing northwest (Photograph by Joe C. Freeman, 2004).



Figure 4-30. Building 5014, guardhouse and turnstile associated with ADC Alert Complex (Photograph by Joe C. Freeman, 2004)



Figure 4-31. Building 5014, guardhouse and turnstile associated with ADC Alert Complex (Photograph by Joe C. Freeman, 2004).

According to Seymour Johnson AFB real property records, Building 5015's original construction includes:

**Foundation:** Concrete

**Floor:** Concrete

**Walls:** Corrugated Metal

**Roof:** 5-Ply Composition

**Interior—Bays.** Each of the four alert hangar bays measures 68 feet by 68 feet. Each bay is an open, rigid-steel-frame with a concrete floor, and is accessible on opposing sides (east and west) with large counterweight doors. Together, the four hangar pockets total 18,800 square feet. The concrete floor slab is crowned along the length of the hangar bays, at the centerline, to allow drainage toward the front and rear of the building. Designed to house a single fighter aircraft each, the bays contain little more than the counterweight systems for doors and minimal support and emergency equipment and tools (see Figures 4-27 and 4-28).

Before Building 5015 was constructed, revisions were made to provide front and rear bubbles for each hangar door. These bubbles effectively extended the depth of the bays to accommodate larger aircraft. The bubbles on the front hangar doors (runway side) were placed at the bottom of the doors to provide space for the nose of the aircraft when the doors were closed. The rear bubbles were placed on the upper portion of the doors to provide clearance when the doors were raised (see Figures 4-6 and 4-26–4-29). With this design, the alert hangar was able to shelter each type of aircraft assigned to the fighter-interceptor alert mission at Seymour Johnson AFB during the Cold War.

**Hangar Doors.** Each of the hangar doors is specially designed with overhead tracks to accommodate bubbles, or protrusions, at each door. Wind trusses, located about  $\frac{1}{4}$  of the way up the doors, were added to the doors after initial design but before final construction due to the wind loads acting on the oversized doors (see Figure 4-6). Each hangar door is opened by an electrically-operated counterweight system; however there is also a hand crank should it be required.

**Interior—Operations/Administrative Center Section.** The center section of Building 5015 originally contained aircrew sleeping quarters, an equipment room, lounge, and latrines on both the first and second floors. There was also a debriefing room, kitchen, dining area, storage areas, and maintenance room on the first floor; and a shower, linen closet, and weather/observation room on the second floor (Figure 4-32). Sound baffles, originally located on the runway side of the crew quarters, have been removed.

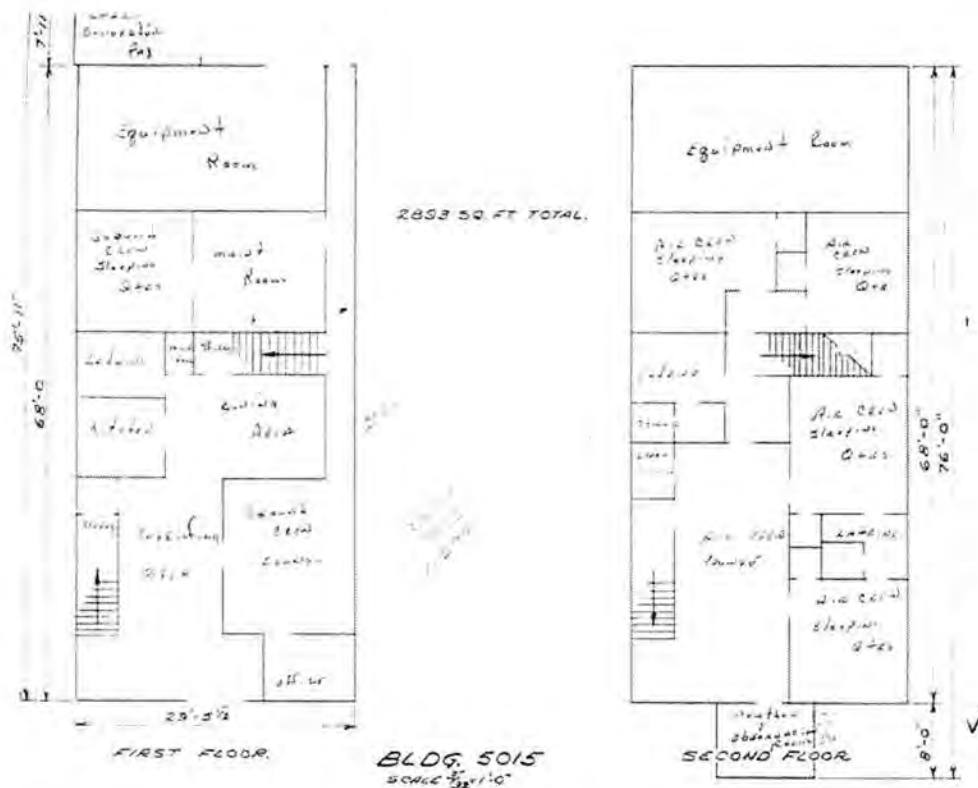


Figure 4-32. Drawing of operations/administrative center section of Building 5015.

This section of the alert hangar has been modified since its original construction; thus, it no longer retains its original layout or materials. Rooms, which have been allocated for different purposes, have been subdivided into smaller rooms and interior finishes have been upgraded. Modifications include the placement of cubicles with light fixtures, acoustic ceiling tiles, and kitchen renovations (Seymour Johnson AFB Real Property n.d.).

**Hangar/Taxiway/Apron Design.** Necessitated by requirements of the ADC alert mission for urgent, rapid response, alert hangars are typically located immediately adjacent to the end of the runway (for maximum take-off capability). The associated alert apron typically accommodates four to six aircraft and the associated taxiway is angled at 45 degrees to the runway. All of these features allow the “scrambling” aircraft to exit the alert hangar, taxi to the runway, and take off and be airborne in under 10 minutes (see Figure 4-1).

Building 5015 was built as one in a cluster of buildings that supported the ADC fighter alert mission. Other structures not covered in this report, but part of the ADC complex, include:

- Maintenance Hangar (Building 4908, now a supply and equipment warehouse)
- Readiness Crew Dormitory (Building 5006, now a flight simulator facility)
- Rocket Checkout and Assembly Building (Building 4906, now a squadron operations building)

The above buildings are labeled on a current aerial photograph (Figure 33). Another ADC-specific facility was the stall-type storage building for the MB-1 Genie guided missile (Building 2204). This building is located away from the ADC complex, in the weapons storage area.



Figure 33. Aerial photo with alert hangar (Building 5015) and several support buildings, 1993 (Source: USGS via the TerraServer web site).

**Modifications/Alterations.** According to Seymour Johnson AFB real property records, (Seymour Johnson AFB Real Property n.d.), record drawings, and observations, the following modifications or alterations have been performed on Building 5015:

- 1960—Interior renovation, including installation of acoustic ceiling tiles and hot water heater.
- 1962—Dishwasher installed.
- 1964—Eight hangar door brakes installed; lights over doors installed.
- 1969—Interior renovation, constructed 8-foot high cubicles with light fixtures.
- 1971—Interior renovation, kitchen renovated for Aero Club office.
- 1983—A/C condenser relocated.

Other modifications were observed during the site visit, but the date of implementation is unknown. These additional modifications include:

- Removal of sound baffles from runway side of crew quarters.
- Original floor slabs in hangars replaced.
- Shed-roofed, corrugated metal-clad addition to northwest end of building.
- Second-story control booth expanded to total width of central crew quarters
- Original metal windows in central section replaced with aluminum sash.
- Metal staircase and deck added to access second floor of center section at the rear of building.
- Normal and expected upgrading of mechanical (HVAC) systems.

### 4.1.3 Historical and Current Uses of Building 5015

Completed in 1957, Building 5015 is associated with the Cold War era in American history (1946-1989) and the air defense alert mission specifically. A general discussion of the history, missions, activities, and physical changes at Seymour Johnson AFB during this period is provided in Chapter 2.0. A discussion of how Building 5015 relates to that history is provided in this section.

**The American Air Defense Alert Mission.** Since 1948, just one year after being established as a separate arm of the Department of Defense, the U.S. Air Force has maintained fighter-interceptor aircraft alert status. The purpose of the alert mission is air defense/threat warning of the continental United States. This mission originally fell under the Air Force organization—ADC, one of three primary organizations (the other two were TAC and SAC) established when the Air Force became an independent military service.

During the early years of the Cold War, one of the greatest perceived threats to the nation was a Soviet Union bomber attack. To defend against such an event, ADC operated an elaborate network of radar and maintained fighter-interceptor squadrons on alert status. In 1957, when Building 5015 was completed at Seymour Johnson AFB, 51 fighter-interceptor squadrons were on alert in the continental United States (Boyne 1997:127-133; Weitze 2003:309).

As nuclear weapons technology advanced, the primary threat from the Soviet Union shifted from bombs to intercontinental ballistic missiles (ICBMs). Reflecting the more advanced era, the command's name changed from Air Defense to Aerospace Defense in 1968 (Boyne 1997:127-133).

Although the Soviet Union was decreasing its inventory of bomber aircraft and investing heavily in the development and manufacture of ICBMs, the Air Force maintained approximately 30 air defense units on continuous alert (each with its own alert hangar and support equipment) during the late 1960s. At the same time, however, the Air Force was reducing ADC's role and responsibilities. For example, many of ADC's tasks, including that of maintaining the fighter-interceptor alert mission, were transferred to Air National Guard (ANG) and TAC. With ANG and TAC responsible for carrying out the alert mission, ADC's role and importance diminished over time until the command was finally inactivated in 1980. The alert mission, however, continued until the end of the Cold War with the number of alert sites dropping to 14 in 1970, and six in 1980 (Boyne 1997:129-130; Weitze 1999a:45, 115).

### **Seymour Johnson AFB Air Defense Alert Mission**

**482 FIS/4 TFW/191 FIG.** The air defense alert mission at Seymour Johnson AFB was established in April 1956 with the assignment of the 482 FIS, under ADC. Seymour Johnson AFB was one of many installations supporting the ADC alert mission. ADC established many fighter-interceptor alert facilities in the early 1950s; Seymour Johnson was selected later than most. In late 1955 ADC created the 85<sup>th</sup> Air Division Defense Area—one of five new air defense areas created to augment the existing 11 areas, set up from 1948 to 1952. The 85<sup>th</sup> Air Division protected Washington, D.C., with its control center at Andrews AFB, Maryland. Besides Seymour Johnson AFB, fighter-interceptor alert locations under the 85 AD were at Andrews AFB, Langley AFB in Virginia, and Dover AFB in Delaware. Upon its completion in 1957, Building 5015 served as the alert hangar and crew readiness quarters for the 482 FIS alert mission. The 482 FIS remained at Seymour Johnson until 1965 when it was inactivated (Mueller 1982:524; Lowe 1997:16; Pedrotty 1999:5-4, Weitze, personal communication 2004; Willick 2004).

In 1976, the 4 TFW (assigned to Seymour Johnson AFB on December 8, 1957) accepted the fighter-interceptor alert mission. On October 1, 1976, Col Robert D. Russ, 4 TFW Commander, and Lt Gen James V. Hartinger, Ninth Air Force Commander, presided over a ribbon cutting ceremony to mark the 4 TFW occupancy of Building 5015 (see Figure 4-16). In 1979, the alert mission was assigned to the ANG's 191st Fighter-Interceptor Group—a unit from Selfridge Air National Guard Base, Michigan. The 191 FIG maintained the alert mission until 1992 (Lowe 1997:19).

Since the end of the Cold War, the 4<sup>th</sup> Wing's Maintenance Squadron has used Building 5015 for maintenance and training on F-15 aircraft. Although there is currently no standing alert mission involving this building, soon after the September 11, 2001, terrorist act, fighter aircraft were stationed at the hangar for a period of time (Bryan Henderson, personal communication 2004).

**Alert Aircraft Assigned to Seymour Johnson AFB between 1956 and the Present.** The following aircraft were assigned to the ADC alert mission at Seymour Johnson AFB during the years indicated (Western Air Defense Sector Historian, TSgt Mark Morgan, personal communication 2004; Weitze 1999a:148):



*Alert Mission Aircraft*

F-102A <i>Delta Dagger</i>	1957 - 1965
F-4E <i>Phantom II</i>	1976 - 1979
F-4C <i>Phantom II</i>	1979 - ca. 1986
F-4D <i>Phantom II</i>	ca. 1986 - 1990
F-16A <i>Fighting Falcon</i>	1990 - 1992

**4.1.4 Comparison of Building 5015 with Similar Facilities**

**Alert Hangar Construction.** Critical background information regarding alert hangar construction concepts is presented in *Cold War Infrastructure for Air Defense: The Fighter and Command Mission* (Weitze 1999a). Common characteristics of all air defense alert hangars include:

- Crew quarters with attached “barns” or pockets (two, four, or eight-pocket design). Crew quarters are typically centered between the barns, but are sometimes located at the end of the hangar
- Large front and rear opening pocket doors with counterweight mechanisms (filled with concrete or sand)
- Protruding, all glass control room/crows nest in the central crew quarters section (second floor)
- Rigid-frame construction (typical)
- Corrugated exterior siding (originally unpainted)
- Placement near the end of the primary runway for rapid take-off
- 45 degree angled taxiway for rapid access to the runway
- Concrete alert apron (typically triangular in shape) that accommodates 4-6 aircraft.

Alert hangars were designed by one of three firms: the Butler Manufacturing Company, Luria Engineering Company, or Strobel & Salzman Engineers. All are of a typical layout (two, four, or eight bays separated by a central operations/administrative area); however, the roof and pocket door styles vary. Some of the variations are representative of the manufacturer of the building (e.g., the Butler Manufacturing Company, Strobel & Salzman, the Luria Engineering Company), or represent the type of aircraft sheltered at that particular installation (height/shape of door bubbles/blisters), or the climate (or location [e.g., overseas locations that were typically doorless]) in which the hangar was constructed. The purpose for some of the design features, however, is unclear (Figures 4-34 through 4-37).

**Seymour Johnson AFB Alert Hangar.** Building 5015 is a first generation Strobel & Salzman alert hangar, one of approximately 35 constructed by this architect-engineering firm. These alert hangars were built with four pockets (two on each side of the central alert crew quarters), or in rare instances, eight pockets (with four on each side of the central alert crew quarters). The alert hangar at Seymour Johnson AFB is the more common type of hangar with four pockets. Strobel & Salzman-designed alert hangars at some locations had the doors modified with bubbles on either end of each hangar door to accommodate the nose and tail of larger aircraft. The hangar at Seymour Johnson AFB had the door bubble modification incorporated into its original



Figure 4-34. Butler Four Pocket Alert Hangar, Ellsworth Air Force Base, South Dakota (Scott D. Murdock personal collection © 2001, used with permission).



Figure 4-35. Strobel & Salzman Eight Pocket Alert Hangar, Dover Air Force Base, Delaware (Scott D. Murdock personal collection © 1997, used with permission).



Figure 4-36. Two Pocket Alert Hangar, Webb Air Force Base, Texas (Source: Scott D. Murdock personal collection © 1997, used with permission).

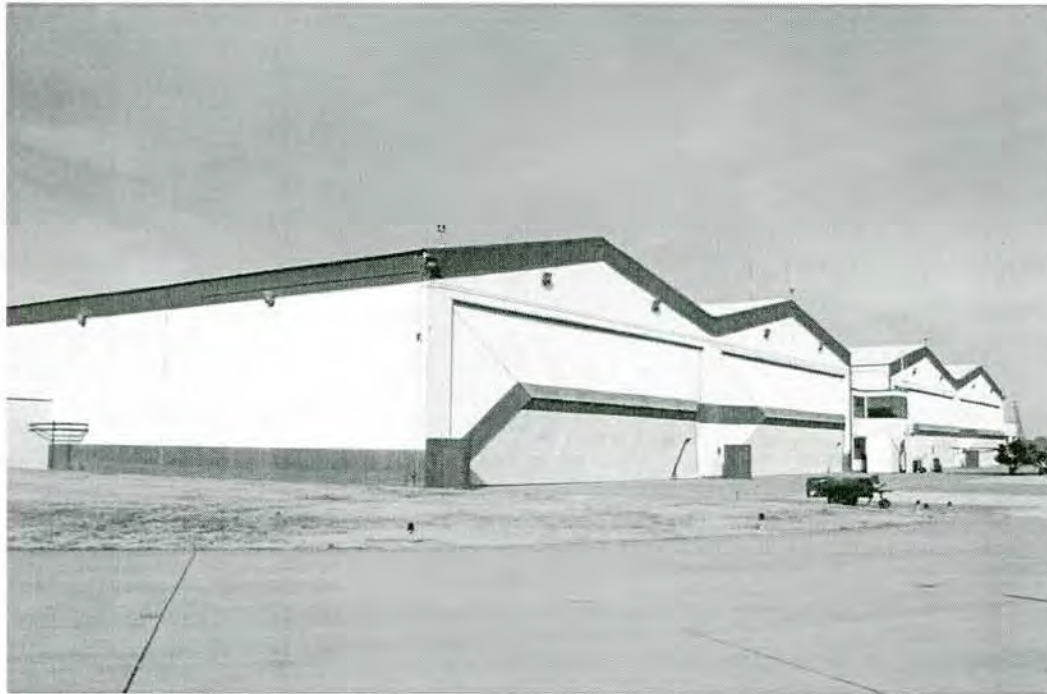


Figure 4-37. Luria Four Pocket Alert Hangar, Langley Air Force Base, Virginia (Source: Peyton 2004).

construction—preparing it from the start for the F-102 aircraft. Since not all bases were assigned the longer aircraft, not all first generation Strobel & Salzman alert hangars received door modifications; the exact number, however, is unknown at this time (Weitze 1999a:43-45).

#### **4.1.5 National Register of Historic Places Recommendation**

**Criterion A.** Building 5015 has a clear and direct relationship to a significant Cold War activity, the air defense alert mission conducted at Seymour Johnson AFB to defend the Washington D.C. area. Building 5015 is therefore recommended eligible for inclusion in the National Register under Criterion A.

**Criterion B.** Building 5015 has no known associations with persons (past or present) significant in the history of Seymour Johnson AFB or the Cold War at the national, state, or local levels. Therefore, the building does not meet the qualifications of Criterion B.

**Criterion C.** Although the interior of the center section of Building 5015 has been modified, the exterior retains most of its integrity, displaying characteristic features that include the layout, and hangar doors with counterweights and pockets that were specifically designed to accommodate the fighter aircraft associated with the fighter-interceptor alert mission. The building retains original door bubbles, to accommodate larger aircraft types. As a late example of this hangar type, Building 5015 was built with door bubbles, rather than having them added later. Designed by Strobel & Salzman, a prominent engineering firm associated with Cold War facilities, Building 5015 is recommended as eligible for inclusion in the National Register under Criterion C.

**Criterion D.** There are no physical or historical characteristics of Building 5015 that would be likely to yield important historical information in the future; therefore the building does not meet the qualifications of Criterion D.

**Criterion Consideration G.** Constructed in 1957, Building 5015 is 47 years old and, thus, must demonstrate “exceptional importance” under Criterion Consideration G for properties under 50 years of age. Directly associated with the fighter-interceptor alert mission, an important Cold War military strategy for both deterring and combating a Soviet Union nuclear strike, Building 5015 played an important role in the nation’s defensive tactics. The building retains key character-defining elements that relate to the technological advances of fighter-interceptor aircraft during the Cold War as well as the alert mission, which required a quick response to enemy threats. Building 5015 is, therefore, recommended eligible for inclusion in the National Register under Criterion Consideration G.

## **4.2 BUILDING 2130—SAC 70-MAN MOLEHOLE**

### **4.2.1 Design**

Building 2130 is a 17,933 square foot readiness crew building that was part of the SAC bomber and tanker alert complex that includes a guard/observation tower and an alert apron (Christmas tree design). Construction of the building was based on standardized drawings No. AW-30-11-12

(Readiness Crew Building—70 Men) prepared by Leo A. Daly Co., Architects—Engineers, April 10, 1958, for the Corps of Engineers, U.S. Army, Office of the District Engineer, Omaha District. Specifications: No. 25-066. Information on the title blocks indicates that the drawings were adapted specifically for construction at Seymour Johnson AFB on June 10, 1958. As-built record drawings are dated April 8, 1960.

The Leo A. Daly standardized drawings set consists of 53 individual sheets; the most pertinent of which are provided in Section 4.2.2 of this report (Figures 4-38–4-45). The remaining record drawings, which largely pertain to electrical, mechanical, and plumbing elements of the construction, are housed in the Civil Engineering office at Seymour Johnson AFB.

#### 4.2.2 Construction Details

**Exterior.** Building 2130 was completed September 18, 1959, at a cost of \$362,523.00 (Seymour Johnson AFB Real Property n.d.). This two-story, load-bearing, masonry building was constructed on a concrete foundation. The foundation consists of concrete footings at the perimeter that support cast-in-place, reinforced, concrete first floor walls. These walls act as structural beams in support of the second floor walls above. The lower floor slab was poured separately within the exterior wall beams. Interior walls at the lower level were constructed of concrete block capped with reinforced concrete lintel blocks and cast-in-place concrete beams. The second floor structural system consists of steel bar joists that rest on the perimeter and interior walls. The bar joists support a metal deck and 3" of lightweight concrete. The overall dimensions of the building are 78 feet by 108 feet.

Upper floor exterior walls are concrete block with concrete filled lintel block caps. Steel roof trusses (box type) rest on the walls and support a corrugated metal deck, 2" of gypsum on ½" thick insulation board, and a five-ply, built-up, tar and gravel roof. The roof (steel deck, insulation, gypsum, and roofing ply layers) project beyond the exterior wall line to form an overhang with a heavy gravel guard and soffit.

An earthen berm extends entirely around the building and rises from finish grade to the level of the upper floor line. The berm provided noise protection, security, and limited blast protection for the sleeping crews. The berm is interrupted by concrete walled access ways that lead to doors located on the building's lower level. Concrete ramps follow the berm line and lead to second floor doors that provide access to the building's upper level. The ramps are furnished with 1 ½" diameter, steel pipe, handrails and the concrete walls of the access ways have 1 ½" diameter steel pipe, guardrails that are similarly configured.

The building is rectangular in shape; its strong horizontal lines are broken only by an incinerator chimney. The roof slopes slightly from the center ridgeline to the eaves that extend the length of the building at the long edges. Exterior doors are flush metal units, paired and with glazed upper lights. The exposed exterior concrete block walls (above the berm) are painted. The building originally had no windows; three windows now exist on the south facade.

Figures 4-46 through 4-62 are historic and current views of Building 2130 and the alert complex.

According to Seymour Johnson AFB real property records, Building 2130's original construction includes:

**Foundation:** Reinforced concrete

**Floor:** Reinforced concrete

**Walls:** Reinforce concrete (lower floor); concrete masonry (upper floor)

**Roof:** 5-Ply built up

**Interior.** Building 2130 was designed to accommodate a crew of 70 men for the SAC bomber and tanker alert mission. The building was laid out with bedrooms, restrooms, showers, and a mechanical room on the lower floor. As constructed, 13 2-man bedrooms and 14 3-man bedrooms occupied the lower floor. The upper floor included a kitchen, dining room, lounge, briefing room, library, offices, and special rooms for operations, control, training, communications, and weapons storage. Lounges and dining rooms were divided to segregate officers and enlisted airmen (see Figures 4-40 and 4-41). Interior finishes were simple, functional, and included the following:

**Floors:** Ceramic, asphalt, and vinyl-asphalt tile

**Walls:** Painted concrete block and glazed ceramic block tile

**Ceilings:** Acoustical tile and exposed structure

**Trim:** CSE (rubber or vinyl) base

The interior spaces have been modified to allow for female restrooms and shower facilities and different sized sleeping rooms. Other alterations have been minor. Some toilet rooms, shower rooms, and sleeping rooms have had an addition of gypsum board clad metal stud partition walls. On the upper floor, some rooms previously used for general purposes have been converted to bedrooms.

**Alert ramps:** One of the most distinguishing characteristics of a readiness crew building is the ramps that facilitate a quick exit from the lower level. Building 2130 has 6 ramps (two each on the north and south ends, and one each on the west and east ends) constructed of reinforced concrete. Each ramp measures six feet four inches wide and 77 feet long (see Figures 4-40 through 4-43).

**Readiness Crew Building/Guard Tower/Christmas Tree Apron Design.** The SAC bomber and tanker alert mission required a 15-minute response that was feasible, in part, due to the layout of the alert complex. Located at the west end of the main runway and immediately north of the taxiway, the complex (readiness crew building [Building 2130], guard tower [Building 2135], and Christmas tree apron), in character and by intention, is isolated and undistinguished. It was placed on a remote portion of the Air Force base at the northwestern end of the main runway. The positioning allowed for both security and ready access to the taxiway and runway.

The readiness crew building and the steel-framed observation tower are set apart in the large expanse of the paved apron and are distinctive structures in contrast to the other hangars and shops along the runway. The guard tower allowed security specialists to observe aircraft and personnel in the Christmas tree compound (see Figure 4-1).

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
1	PLUMBING	1	HEATING - VENTILATING - AIR CONDITIONING	1	ELECTRICAL	1	DESIGNATION	1	GENERAL	1	GENERAL	1	GENERAL
...	...	...	...	...	...	...	...	...	...	...	...	...	...

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
1	PLUMBING	1	HEATING - VENTILATING - AIR CONDITIONING
...	...	...	...

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
1	ELECTRICAL	1	DESIGNATION
...	...	...	...

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
1	GENERAL	1	GENERAL
...	...	...	...

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
1	GENERAL	1	GENERAL
...	...	...	...

**LEO A DALY COMPANY**

**Standard and Crew Building**

**READINESS**

7

2130

P. 1958 (1910) 6110100 61 Seymour Johnson Eng. Fig. 2.4a.

RECORD DRAWINGS

INDEX

HEADQUARTERS, CREW BUILDING

INDEX





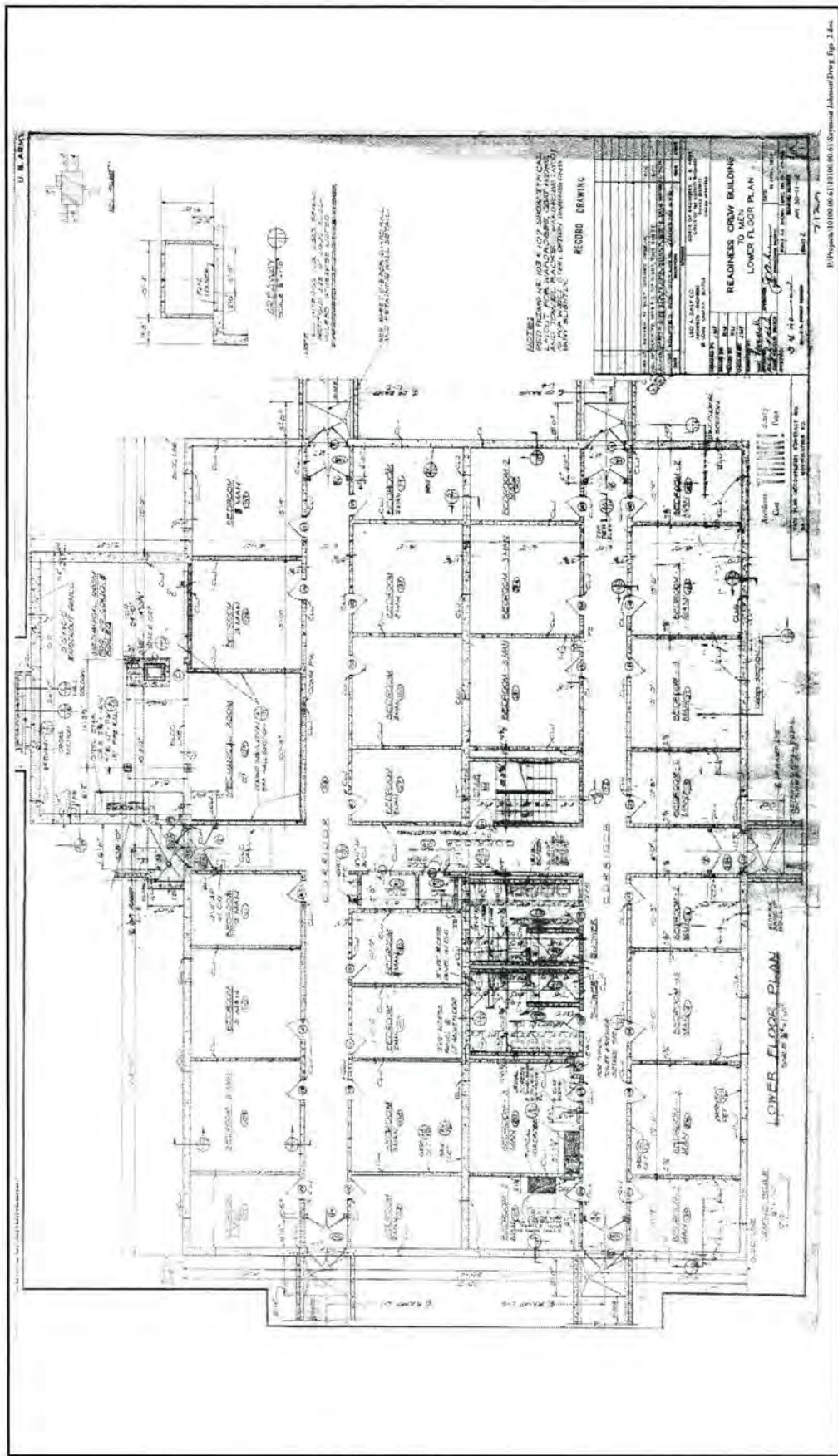


Figure 4-40. Building 2130—record drawing, lower floor plan, 1958 (Source: Seymour Johnson Air Force Base Civil Engineering Vault)









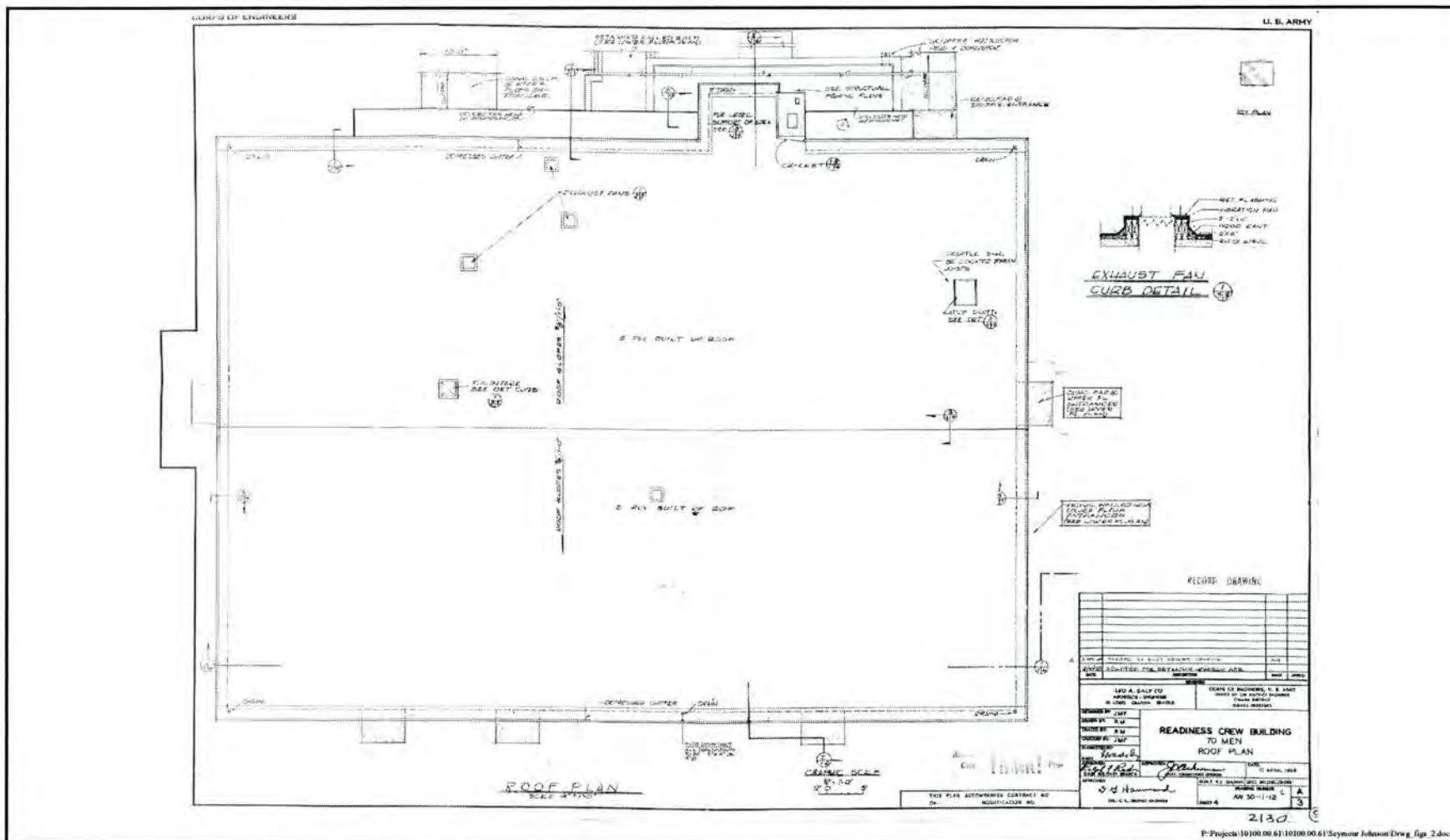


Figure 4-45. Building 2130—record drawing, roof plan, 1958 (Source: Seymour Johnson Air Force Base Civil Engineering Vault).



Figure 4-46. SAC alert complex under construction, March 19, 1959 (Source: 4<sup>th</sup> Wing History Office, Seymour Johnson Air Force Base, North Carolina).



Figure 4-47. SAC alert complex under construction, ca. 1959. Note Building 2130 in background (Source: 4<sup>th</sup> Wing History Office, Seymour Johnson Air Force Base, North Carolina).



Figure 4-48. SAC alert complex under construction, March 19, 1959. Note Building 2130 on left hand side of photograph (Source: 4<sup>th</sup> Wing History Office, Seymour Johnson Air Force Base, North Carolina).



Figure 4-49. SAC alert complex under construction, ca. 1959. Note Christmas tree apron in center and Building 2130 on left hand side of photograph (Source: 4<sup>th</sup> Wing History Office, Seymour Johnson Air Force Base, North Carolina).



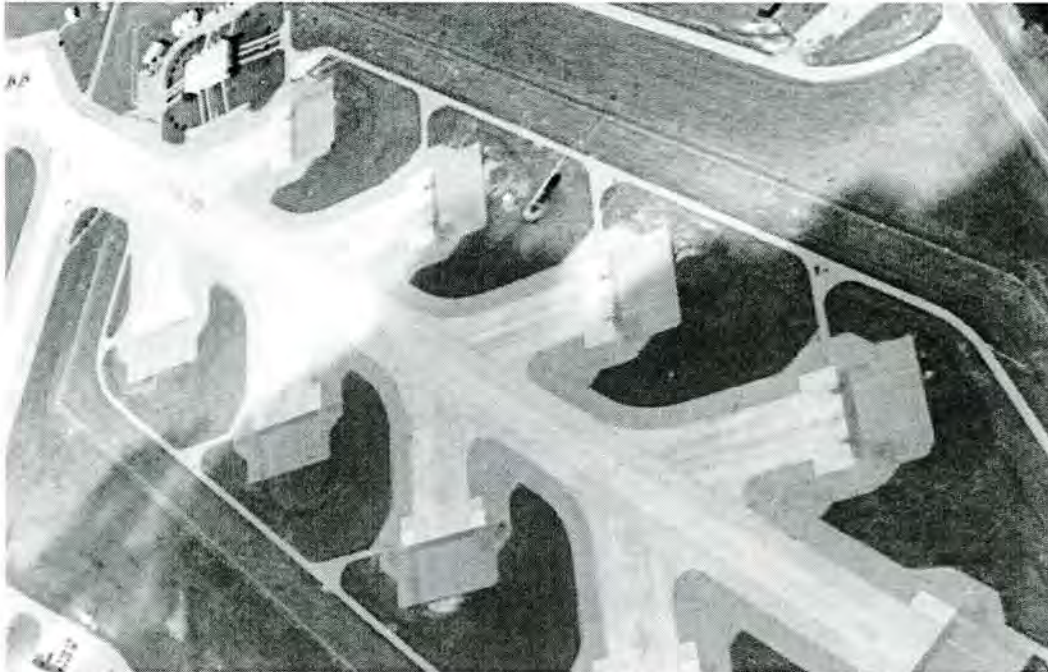


Figure 4-50. SAC alert complex under construction, ca. 1959. Christmas tree apron and Building 2130 in upper right hand corner (Source: 4<sup>th</sup> Wing History Office, Seymour Johnson Air Force Base, North Carolina).



Figure 4-51. Building 2130, facing south (Photograph by Joe C. Freeman, 2004).



Figure 4-52. Building 2130, facing southeast (Photograph by Joe C. Freeman, 2004).



Figure 4-53. Building 2130, facing east (Photograph by Joe C. Freeman, 2004).



Figure 4-54. Building 2130, facing northeast (Photograph by Joe C. Freeman, 2004).



Figure 4-55. Building 2130, facing north (Photograph by Joe C. Freeman, 2004).



Figure 4-56. Building 2130, facing northwest (Photograph by Joe C. Freeman, 2004).



Figure 4-57 Building 2130, facing west (Photograph by Joe C. Freeman, 2004).



Figure 4-58. Building 2130, facing southwest (Photograph by Joe C. Freeman, 2004).



Figure 4-59. Building 2130, interior detail of upper floor (Photograph by Joe C. Freeman, 2004).



Figure 4-60. Building 2130, interior hallway of upper floor (Photograph by Joe C. Freeman, 2004).



Figure 4-61. Alert apron in foreground and Building 2130 in background, facing southwest (Photograph by Joe C. Freeman, 2004).



Figure 4-62. Building 2135, guard tower associated with alert complex, facing north (Photograph by Joe C. Freeman, 2004).

Outside of the fenced SAC alert compound, but nearby, were buildings for Hound Dog and Quail missile servicing (Building 2121) and Hound Dog and Quail missile run-up (Building 2125). These buildings, along with the molehole, Christmas tree, and guard tower, are labeled in an aerial photograph (Figure 63).

The concrete apron arranged in a Christmas tree shape accommodated nine aircraft (see Figure 4-53). The concrete apron included tie-down rings for the aircraft and asphalt expansion joints. A notable feature can be seen in the graffiti and notes written on the pavement in asphalt. The asphalt (probably from adjacent expansion joint fillers) was used by SAC personnel to write messages, dates, their initials, or their nicknames on the paved areas. One such message, taken from the 23<sup>rd</sup> Psalm reads, “though I walk through the valley of the shadow of death.” Other messages observed during the site visit read, “Mad Monk,” “Oklahoma Howard,” “8-28-67,” “RJC,” “A.W.,” “Edward,” “DC,” and “S.C.” (Figures 4-64 and 4-65).

**Mechanical and Electrical Systems.** Mechanical systems, which include heating, ventilating, and air conditioning systems, and plumbing systems, are conventional, institution-grade systems. The HVAC system feeds tempered air through out the building by means of metal ducts above the suspended ceiling and through vertical chases. A boiler/chiller is located in a mechanical areaway on the south side of the building and an air handler is located in an adjacent, first floor, mechanical room. Electrical systems are also conventional, institution-grade systems that include an electrical service entrance (with meter and disconnect), electrical panels and load centers, an electrical distribution system (wire in conduit), and a lighting system coordinated with the suspended ceiling.



Figure 4-63. Aerial photo with SAC alert compound and missile servicing buildings (Source: USGS via the TerraServer web site).





Figure 4-64. Graffiti on Christmas tree apron (Photograph by Joe C. Freeman, 2004).



Figure 4-65. Graffiti on Christmas tree apron (Photograph by Joe C. Freeman, 2004).

**Modifications/Alterations.** According to Seymour Johnson AFB real property records, (Seymour Johnson AFB Real Property n.d.), record drawings, and observations, the following modifications or alterations have been performed on Building 2130:

- 1964—Outside floodlights installed.
- 1967—Sewer line installed.
- 1968—Emergency lights installed.
- 1969—Interior renovation, 9 bedrooms paneled.
- 1969—Humidity unit installed.

Other modifications were observed during the site visit, but the date of implementation is unknown. These other modifications include:

- Three windows were added to the south façade.
- Addition of gypsum board clad metal stud partition walls has affected some toilet rooms, shower rooms, and sleeping rooms.
- On upper floor, some rooms previously used for general purposes have been converted to bedrooms.
- Most changes have been related to converting some toilet and shower rooms for female use.

#### **4.2.3 Historical and Current Uses of Building 2130**

Completed in September 1959, Building 2130 is associated with the Cold War era in American history (1946-1989) and the SAC alert mission specifically. A general discussion of the history, missions, activities, and physical changes at Seymour Johnson AFB during this period is provided in Chapter 2.0. A discussion of how Building 2130 related to that history is provided in the following sections.

##### **The Bomber and Tanker Alert Mission**

The SAC bomber and tanker alert mission was first established at select bases in 1956 as part of a military strategy based on deterrence. Convinced of the need to retaliate quickly and forcefully in the event of a Soviet Union missile attack, the SAC alert mission was designed to respond to a Soviet Union attack within 15 minutes of notice. This was the estimated length of time that it would take a Soviet missile to reach a U.S. target upon launch (Edmundson 1999; Lewis 1995:75).

SAC's strategy for protecting the U.S. was a two-fold plan that took place in the 1950s in response to Soviet Union missile development. Although SAC's strategy included plans to strike back if attacked, it was also widely believed that the attack plans served to deter the Soviet Union from instigating a nuclear attack. The presumed theory, known as mutually assured destruction, (MAD), was that the Soviet Union would not launch a nuclear strike, knowing that the U.S. was capable of retaliating. The key to assuming this posture was to: (1) disperse bomber aircraft, bombs, and crewmen throughout the U.S., making it difficult for the Soviet Union to strike all targets; and (2) have both aircraft and crew members prepared to strike Soviet targets within 15

minutes of a Soviet nuclear missile launch targeted at the U.S. The bomber and tanker alert mission spawned a SAC complex that generally consisted of a hardened crew quarters (molehole) for 70 persons, 100 persons, or 150 persons; an apron off the main runway—near the crew quarters; a guard tower; and fencing (Global Security 2001; Lewis 1999b:13, 122).

SAC constructed at least 64 alert complexes (58 in the continental U.S. and 6 in Canada), and possible one in Puerto Rico. The 64 known sites were built between 1957-1960 (Weitze 1999b:155-156). The SAC bomber and tanker alert mission continued throughout the Cold War. During the mid-1970s through mid-1980s, however, some of the SAC alert complexes underwent alterations to accommodate a changing technology. Where SAC alert complexes received the Short-Range Attack Missile (SRAM) or Air-Launched Cruise Missile (ALCM), stubs were added to the alert aprons, additional support buildings were constructed nearby, and in some cases, the molehole enlarged. Post Cold War, many moleholes were altered to serve different functions, though some have remained intact with few or minor alterations (Weitze 1999b:123, 157).

The SAC alert mission also generated a need for maintenance and repair facilities for the aircraft associated with the mission. Air Force bases supporting the SAC bomber and tanker mission not only supported an alert complex (with readiness crew building, alert apron, guard tower, and fencing), but also wing hangars, typically constructed nearby. Over the course of the Cold War, several different plans evolved for accommodating the B-36, B-47, B-52 bombers and the KC-97, KC-135 tankers. Wing hangars designed during the early years of the Cold War had footprints that mimicked the design of a specific plane. Wing hangars for the B-47, for example, were shaped to accommodate the swept back wings of the aircraft. For the most part, later wing hangar designs were more generic. Emphasis was placed on building a hangar large enough to provide space for the aircraft (though the tail would still protrude as it had with the B-47 wing hangar), but without a footprint that conformed to the actual shape of the plane (Weitze 1999b:150).

### **Seymour Johnson AFB SAC Alert Mission**

#### **4241<sup>st</sup> Strategic Wing/68<sup>th</sup> Bombardment Wing/916<sup>th</sup> Air Refueling Wing**

The SAC alert mission was initiated at Seymour Johnson AFB in July 1959, under the 4241 SW. The 73 Bomb Squadron (73 BS) flew the B-52G bomber which arrived at Seymour Johnson July 17, 1959. The 911<sup>th</sup> Air Refueling Squadron (911 AREFS) flew the KC-135 tanker. Not long after the bomber alert mission was activated, the 4241 SW received the Hound Dog and Quail missiles for its B-52 aircraft. The 4241 SW was the first operational unit to receive the Hound Dog (4<sup>th</sup> Wing History Office 1993:45; Baugher 1998; Global Security 2004; Lowe 1997:16).

As the U.S. further developed its ICBM programs, military strategists became increasingly reliant upon nuclear missiles as opposed to bomber aircraft. As a result, SAC began scaling back the number of personnel assigned to its strategic wings and downsizing its fleet of B-52s in April 1963. The SAC Alert mission continued at Seymour Johnson AFB, but the 4241 SW was redesignated the 68<sup>th</sup> Bombardment Wing (BW) and the 911 AREFS was assigned to the 68 BW. The 51<sup>st</sup> Bomber Squadron (51 BS) replaced the 73 BS. Still utilizing the B-52 aircraft, the 68 BW was responsible for “organiz[ing] and train[ing] a force capable of immediate and sustained offensive bombardment and air refueling operations in any part of the world” (Baugher 1998; Global Security 2004; Lowe 1997:16-17).

The 68 BW maintained the bomber alert mission until May 1972 when the wing was ordered to deploy all B-52 aircraft and the majority of its personnel for bombing missions in Southeast Asia. A little over a year later, in July 1973, the wing was deployed as a complete unit, returning to Seymour Johnson AFB. Near this same time, the striking power of the 68 BW's B-52 aircraft was increased when the wing received the SRAM between 1973-1974 (4<sup>th</sup> Wing History Office 1993:37; Lowe 1997:17-18).

The 68 BW was inactivated on September 30, 1982, and activated as the 68<sup>th</sup> Air Refueling Group (68 AREFG) that same day. At that time, the 58 BWs B-52s were transferred and reassigned. The 68 AREFG continued its operational responsibilities and the alert mission. In October 1985, the group was in the process of transferring from KC-135 to KC-10 tankers. Due to engineering problems, though, the KC-10s were eliminated from the Seymour Johnson AFB inventory within a few short years and the KC-135s remained (Gary Tumminia, personal communication 2004). The 68 AREFG was redesignated the 68<sup>th</sup> Air Refueling Wing, Heavy, on October 1, 1986. On April 22, 1991, the wing was inactivated and its resources merged with the 4<sup>th</sup> Wing. Today, the 916<sup>th</sup> Air Refueling Wing (916 ARW), an Air Force Reserve Command tenant at Seymour Johnson AFB, is assigned 10 KC-135R *Stratotankers* (4<sup>th</sup> Wing History Office 1993:45; 68<sup>th</sup> Air Refueling Wing n.d.; strategic-air-command n.d.; Lowe 1997:19-20).

**Bomber and Tanker Aircraft Assigned to Seymour Johnson AFB between 1959-1994.** The following bomber and tanker aircraft were assigned to the Seymour Johnson AFB SAC alert mission for the years indicated (Weitze 1999b:174).

#### *SAC Alert Mission Aircraft*

B-52G <i>Stratofortress</i>	1959-1982
KC-135 <i>Stratotanker</i>	1959-1985
KC-10 <i>Extender</i>	1985-1994

#### **4.2.4 Comparison of Building 2130 with Similar Facilities**

**Readiness Crew Building Construction.** Critical background information regarding Readiness Crew building construction concepts and alert apron configurations, is presented in *Cold War Infrastructure for Strategic Air Command: The Bomber Mission* (Weitze 1999b). The extensive information in this report was researched and prepared by Dr. Karen Weitze and comprehensively describes the process by which this type of distinctive military crew quarters and apron were conceived and constructed. Common characteristics of all SAC alert facilities include:

- an alert apron configured for between four and ten bombers (B-47s, B-58s, and B-52s);
- a taxiway angled at 45 degrees from the end of the primary (longest) runway;
- and a molehole of 18,000, 22,500, or 31,000 square feet.

Character-defining features of the crew readiness quarters (molehole) include:

- two-story height, with the lower story either fully below ground, or bermed aboveground;
- egress tunnels from the underground story sheathed in corrugated metal with single-pane, wood-frame windows per tunnel and blast-framed doors;
- and simple 1950s design detailing, including a nearly flat gable roof and windowless walls.

Readiness Crew buildings were designed by Leo A. Daly, but vary in size (i.e., 70-man, 100-man, or 150-man quarters). The majority of moleholes were built with the lower floor underground, though a few, probably due to local water table conditions, were built entirely aboveground with an earthen berm surrounding the lower floor. The tunnel egresses also vary; some moleholes had entranceways to both stories covered in corrugated metal tunnels, some had a combination of tunnels and open ramps, and some had all open ramps (Figures 4-66 through 4-69) (Weitze, personal communication 2004).



Figure 4-66. 70-man Readiness Crew Building, Ellsworth Air Force Base, South Dakota, 1987 (Source: Prior and Peter 2002).

**Seymour Johnson AFB Readiness Crew Building.** Building 2130 is a 70-man readiness crew building designed by Leo A. Daly, and is one of 58 moleholes constructed in the continental U.S. The majority (38) of these readiness crew buildings were the smaller, 70-man facilities. Only ten 100-man and ten 150-man moleholes were built in the continental U.S. (Weitze 1999b:156). Although the molehole at Seymour Johnson is one of the more common 70-man facilities, it is one of the fewer moleholes built aboveground with the lower floor bermed and with tunnel egresses that lack the corrugated metal covering.

#### 4.2.5 National Register of Historic Places Recommendation

**Criterion A.** Building 2130 has a clear and direct relationship to significant missions and activities of the Cold War, specifically, the important bomber and tanker alert mission conducted at Seymour Johnson AFB by the Strategic Air Command. Seymour Johnson AFB was one of



Figure 4-67. 100-man Readiness Crew Building (modified), Little Rock Air Force Base, Arkansas, 2002 (Source: Salo et al. 2002).



Figure 4-68. 70-man Readiness Crew Building, Columbus Air Force Base, Mississippi, 2003 (Source: Salo and Prior 2003).



Figure 4-69. Tunnel egress for Readiness Crew Building, Castle Air Force Base, California (Source: Weitze 1999b).

only 14 out of 65 SAC bases that used both Hound Dog and Quail missiles on its B-52 bombers. Building 2130 is therefore recommended eligible for inclusion in the National Register under Criterion A.

**Criterion B.** Building 2130 has no known associations with persons (past or present) significant in the history of Seymour Johnson AFB or the Cold War at the national, state, or local levels. Therefore, the building is not recommended as eligible for inclusion in the National Register under Criterion B.

**Criterion C.** Building 2130 has undergone minimal modifications and, thus, retains its integrity. Key character-defining features such as the tunnel egresses, berming, and associated SAC alert properties (i.e., guard tower, nine-stub Christmas tree alert apron, fencing, and nearby buildings for the service and run-up of Hound Dog and Quail missiles) are still present and convey the urgency of Cold War responses for alert missions and attempts to increase survivability of bomber personnel. Three windows have been added to the south façade, but this is a minor detraction from the overall integrity of the building. Building 2130 is, therefore, recommended as eligible for inclusion in the National Register under Criterion C.

**Criterion D.** There are no physical or historical characteristics of Building 2130 that would be likely to yield important historical information in the future, therefore the building is not recommended as eligible for inclusion in the National Register under Criterion D.

**Criterion Consideration G.** Constructed in 1959, Building 2130 is 45 years old and, thus, must demonstrate “exceptional importance” under Criterion Consideration G for properties under 50 years of age. Directly associated with the SAC alert mission, an important Cold War military strategy for both deterring and combating a Soviet Union nuclear strike, Building 2130 played an important role in the nation’s offensive tactics. The building retains key character-defining elements that relate to the alert mission, which emphasized survivability and a quick response to enemy threats. Building 2130 is, therefore, recommended eligible for inclusion in the National Register under Criterion Consideration G.

### **4.3 BUILDING 4828—FUEL SYSTEMS MAINTENANCE DOCK**

#### **4.3.1 Design**

Building 4828 is an 18,282 square foot dock, or wing hangar, that was associated with the SAC bomber and tanker alert mission at Seymour Johnson AFB. Construction of the building was based on standardized drawing No. AW-39-01-13 (Dock, A/C Fuel System Maintenance—Large A/C with Admin. Area & Latrine), prepared by Hudgins Thompson Ball & Associates—Architect-Engineers, Oklahoma City, for the Department of the Air Force, Headquarters United States Air Force. The drawings are stamped, “Drawing Site Adapted by Carl V. Carlson & Assoc.,” and further noted on the title block of the adapted drawings as Carl V. Carlson & Associates, Architects – Engineers – Designers, 1 E. Wilson St., Batavia, Illinois. The standardized drawings are dated January 12, 1961; they were adapted and approved for use March 12, 1962. The adapted drawings by Carlson’s firm listed the client as the United States Air Force, Headquarters, Air Force Logistics Command, Maintenance Dock Section Construction Agency.

The Hudgins Thompson Ball & Associates standardized drawings set consists of 45 individual sheets; the most pertinent of which are provided in Section 4.3.2 of this report (Figures 4-70 through 4-84). The remaining record drawings, which largely pertain to electrical, mechanical, and plumbing elements of the construction, are housed in the Civil Engineering office at Seymour Johnson AFB.

#### **4.3.2 Construction Details**

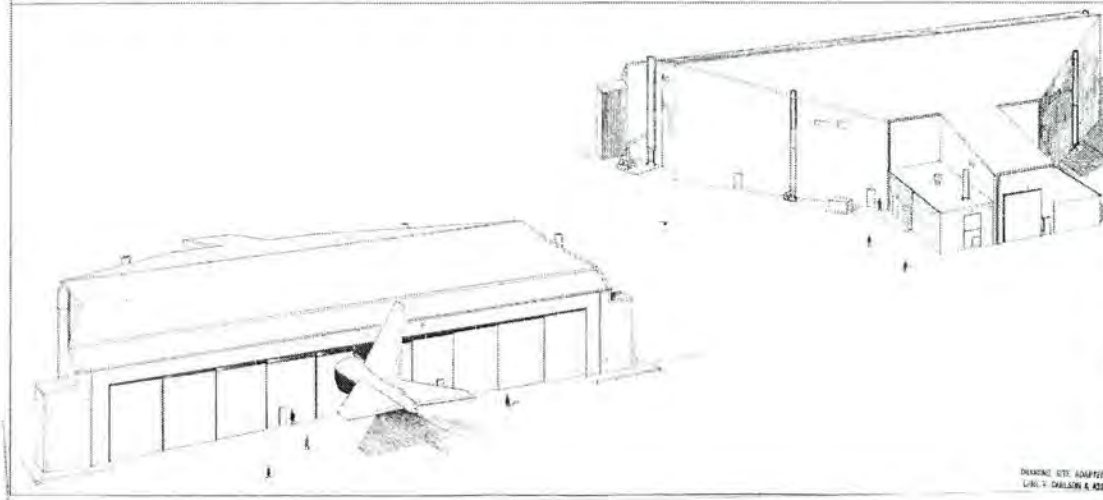
**Exterior.** Building 4828 was completed September 6, 1963, at a cost of \$307,870.34 (Seymour Johnson AFB Real Property n.d.). This steel-framed building, clad in corrugated metal, was built on a concrete foundation that included integrally cast concrete drainage trenches and equipment pits and mounts. The exterior walls and roof structures are supported by H-columns, I-beams, and purlins. Concrete that supported directly the weight of a stationary aircraft was 17” thick, heavy duty concrete. Corrugated metal siding and roofing were installed over 1” thick rigid insulation board. The corrugated metal was lapped two corrugations and the overlapping was in the direction of the prevailing wind in order to minimize exposure of joints to wind forces. The structural system uses complex cantilevered roof trusses to provide a clear-span maintenance area. Aircraft access to the hangar is from the flight line by means of large, rolling, steel-framed/metal-clad, bypassing doors designed to allow the nose and wings of the aircraft to pass into the building. The two central doors on the apron are designed to close around and accommodate the shape of the fuselage of the airplane between the wings and the tail.



# DOCK, A/C FUEL SYSTEM MAINTENANCE

## LARGE A/C with ADMIN. AREA & LATRINE

S E Y M O U R - J O H N S O N   A . F . B .   N . C .



DRAWING SCHEDULE DRAWING NUMBER 35-01-13	
SHEET NO.	TITLE
T-1	TITLE SHEET
DE-1	GENERAL SITE PLAN
DE-2	SITE PLAN
DE-3	SECTION & SOIL BORING
ARCHITECTURAL	
A-1	GENERAL PLAN
A-2	FLOOR PLAN, FAULTURES
A-3	SCHEDULES, FINISH, DOOR
A-4	FRONT, REAR & LEFT ELEVATIONS
A-5	RIGHT ELEVATIONS & DOOR DETAILS
A-6	SECTION
A-7	ROOFING & ROOFING DETAILS
STRUCTURAL	
S-1	FOUNDATION PLAN
S-2	FOUNDATION DETAILS & SECTIONS
S-3	SLAB PLAN
S-4	SLAB SECTIONS
S-5	WALLED STEEL PLAN
S-6	BASE PLATE & ANCHOR BOLT DETAILS
S-7	ROOF FRAMING PLAN
S-8	BOTTOM CHORD FRAMING PLAN & LATERAL TRUSS ELEVATION
S-9	MAIN TRUSS
S-10	CROSS SECTION - TRUSS T
S-11	DIAGON SECTION - TRUSS T
S-12	CHORD SECTION - TRUSS T
S-13	FRONT & SIDE ELEVATIONS
S-14	REAR ELEVATION - PLAN OF DOOR CLOSURE & DOOR HALL
S-15	DOOR GUIDE ASSEMBLY & DETAILS
S-16	DOOR PLAN & DOOR DETAILS
S-17	DOOR DETAILS
S-18	CENTER DOOR DETAIL (REINFORCED)
S-19	TIE ROD FOR MAIN TRUSS
S-20	STEEL COLUMN & BEAM JOINT
S-21	MECHANICAL EQUIPMENT SUPPORTS
MECHANICAL	
M-1	FLOOR PLAN - HEATING & VENTILATING
M-2	UNDERFLOOR PLAN - HEATING & VENTILATING
M-3	HEATING & VENTILATING - EQUIPMENT ROOM & OUTSIDE
M-4	HEATING & VENTILATING CONTROL DIAGRAMS
M-5	FLOOR PLAN - PLUMBING
M-6	PLUMBING DETAILS
M-7	FLOOR PLAN - COMPRESSED AIR
M-8	FLOOR PLAN - VAPOR DET SYSTEM & FIRE EXTINGUISHERS
ELECTRICAL	
E-1	ELECTRICAL SYMBOLS & LIGHTING PLAN
E-2	POWER DIAGRAMS, FIRE ALARM & COMMUNICATIONS PLAN
E-3	BUSING DIAGRAMS & DETAILS
E-4	BUSING DIAGRAMS
E-5	ELECTRICAL DETAILS

DESIGNED BY: LARRY W. DALLON & ASSOC.

**DEPARTMENT OF THE AIR FORCE**  
HEADQUARTERS UNITED STATES AIR FORCE

BASE AERONAUTICAL SYSTEMS CENTER      WRIGHT-PATTERSON AIR & SPACE DEVELOPMENT CENTER  
CINCINNATI, OHIO      DAYTON, OHIO

**DOCK, A/C FUEL SYSTEM  
MAINTENANCE**  
LARGE A/C with ADMIN. AREA & LATRINE  
TITLE SHEET

SEYMOUR-JOHNSON AFB      NORTH CAROLINA      35-01-13  
APR 30 1961

Figure 4-70 Building 4828—record drawing, title sheet, 1961 (Source: Seymour Johnson Air Force Base Civil Engineering Vault).

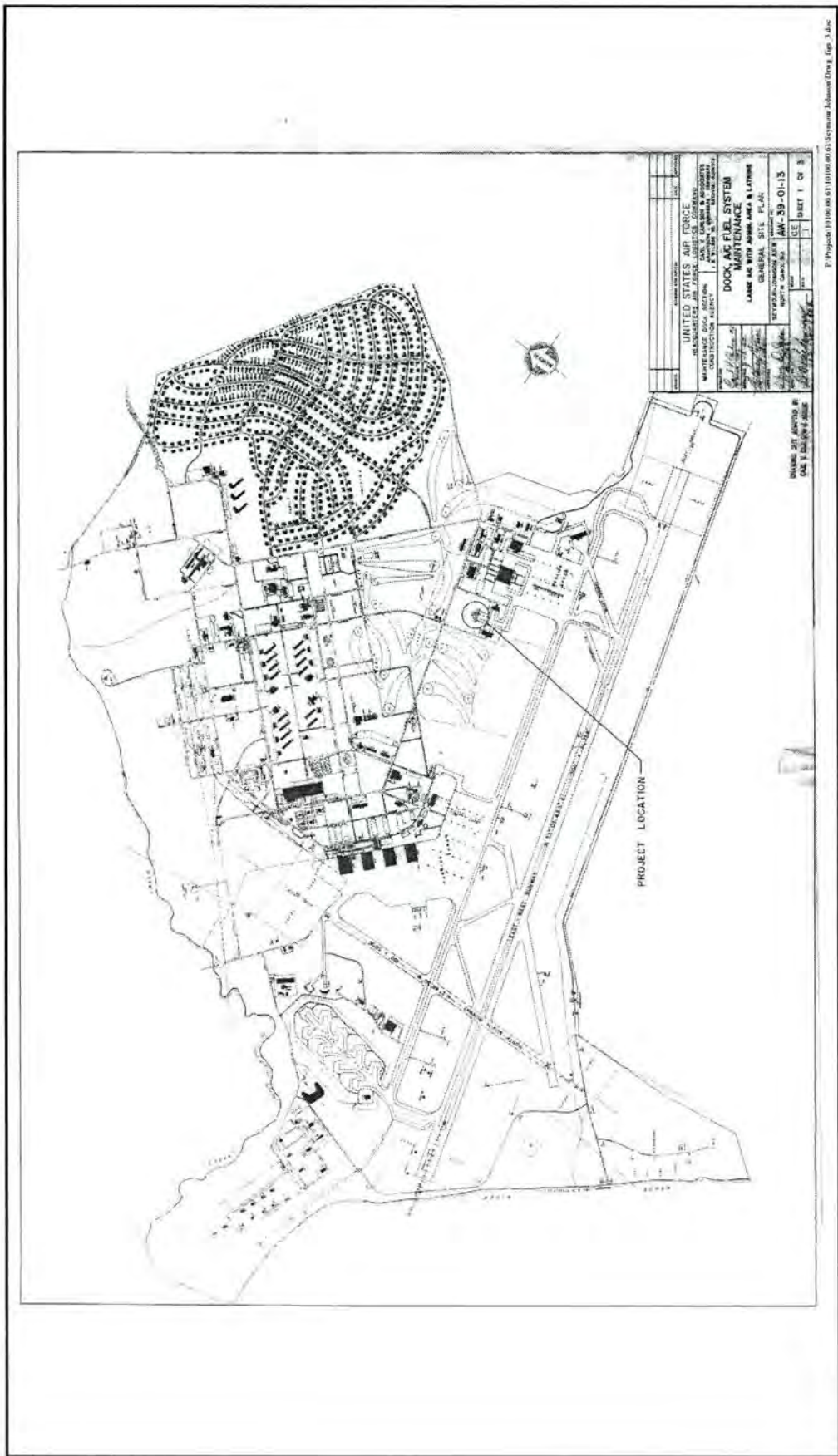


Figure 4-71. Building 4828—record drawing, general site plan, 1961 (Source: Seymour Johnson Air Force Base Civil Engineering Vault).



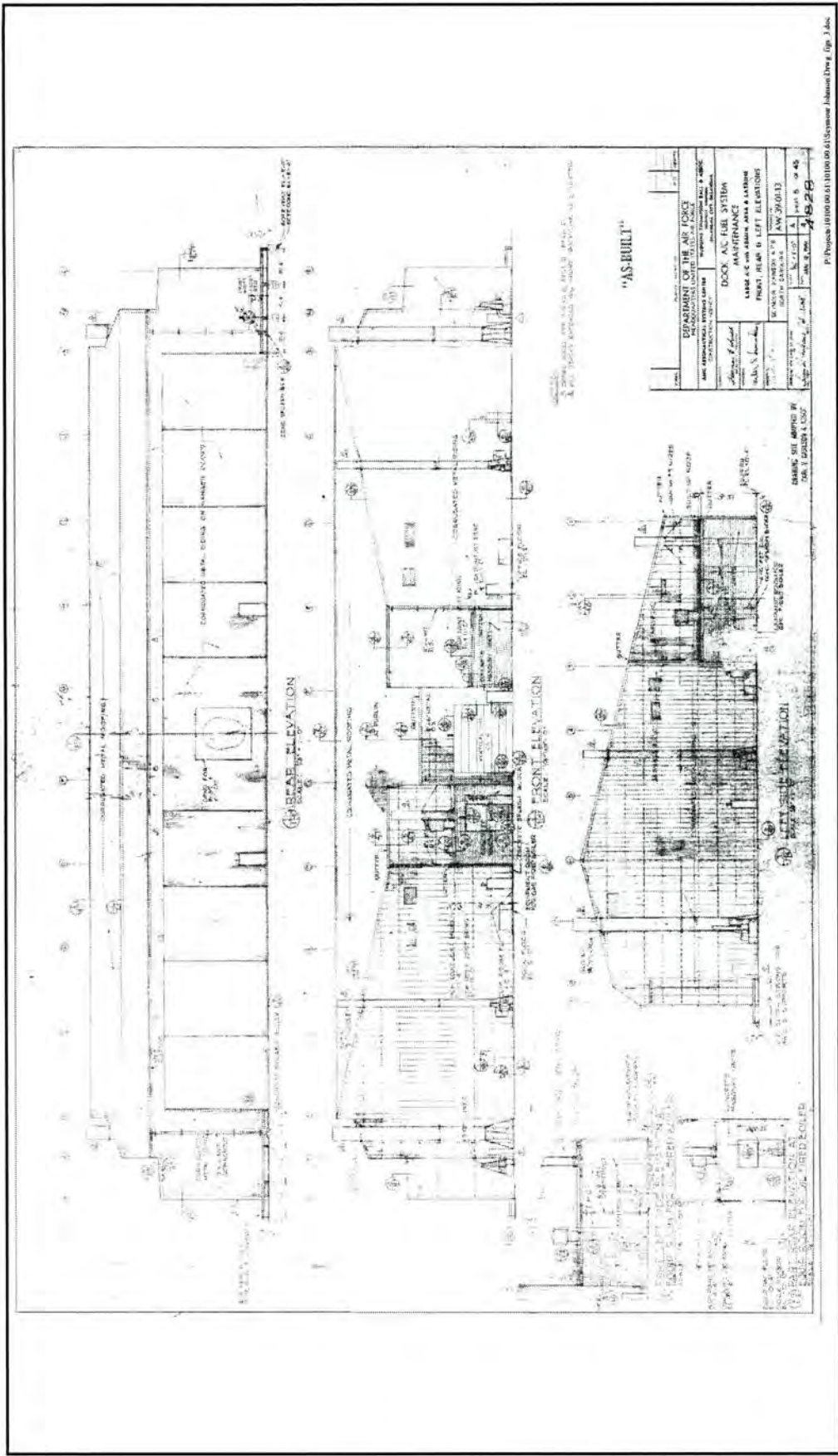


Figure 4-73. Building 4828—record drawing, front, rear, and left elevations, 1961 (Source: Seymour Johnson Air Force Base Civil Engineering Vault)

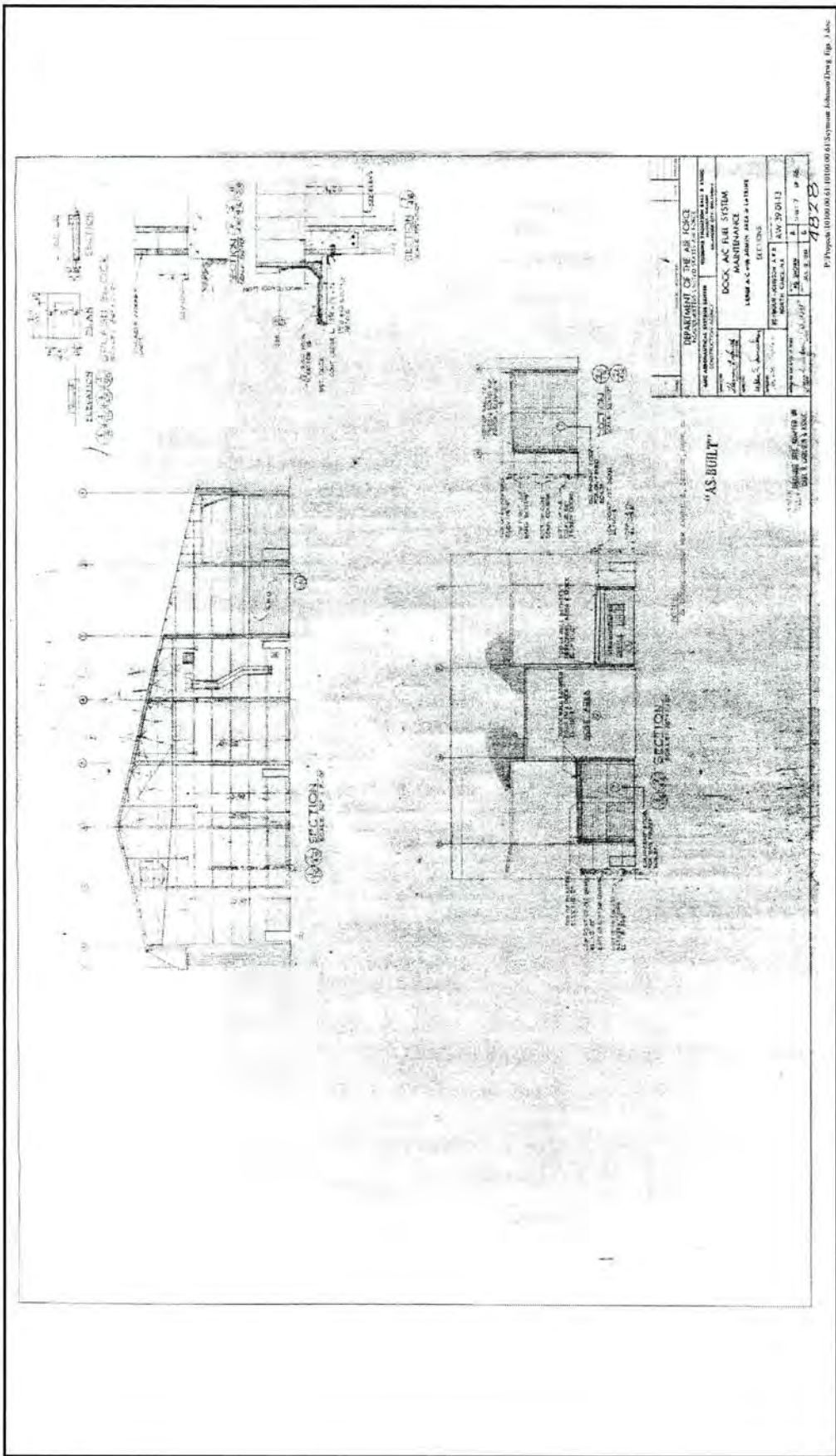


Figure 4-74. Building 4828—record drawing, sections, 1961 (Source: Seymour Johnson Air Force Base Civil Engineering Vault)

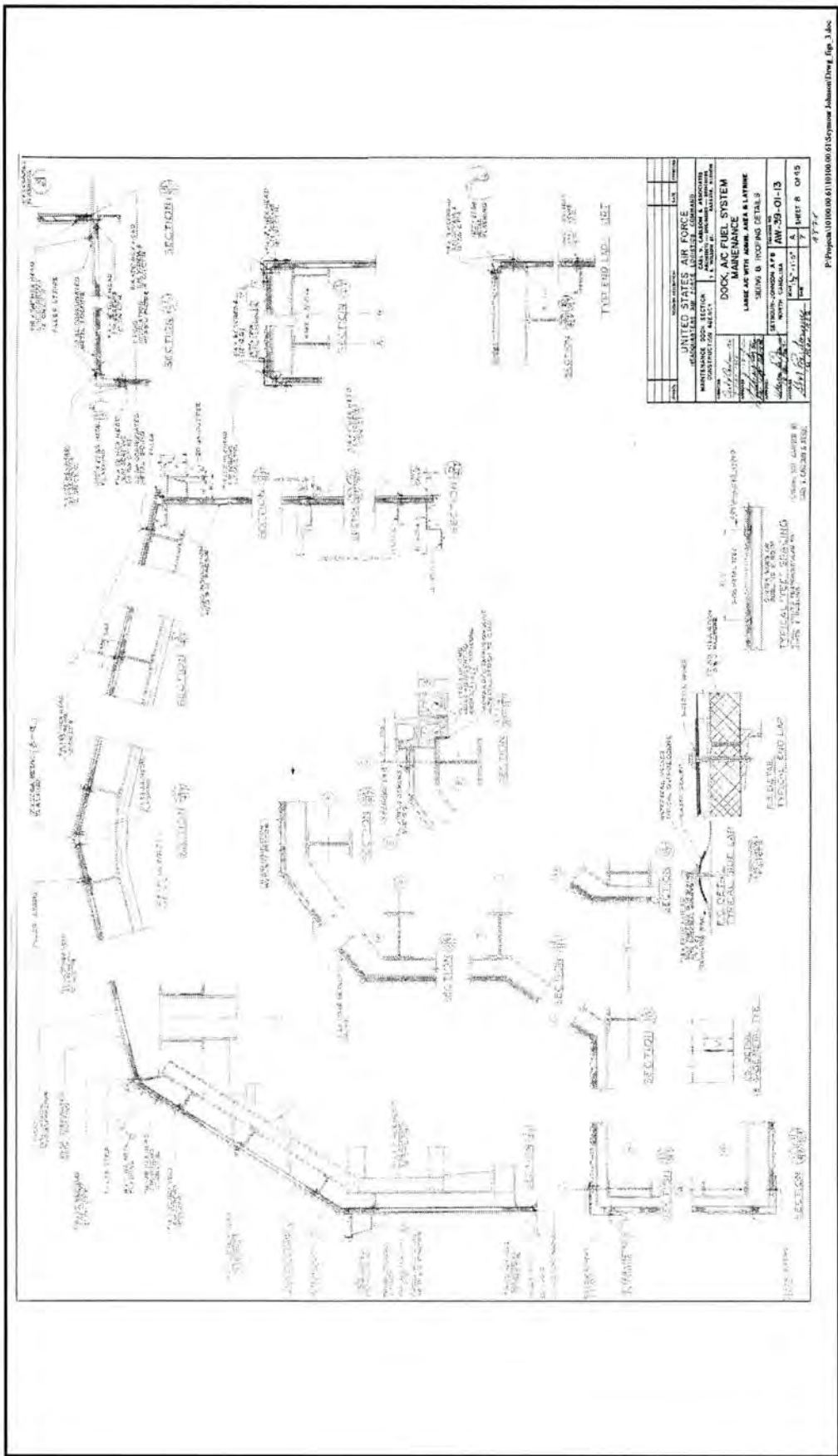


Figure 4-75 Building 4828—record drawing, siding and roofing details, 1961 (Source: Seymour Johnson Air Force Base Civil Engineering Vault).

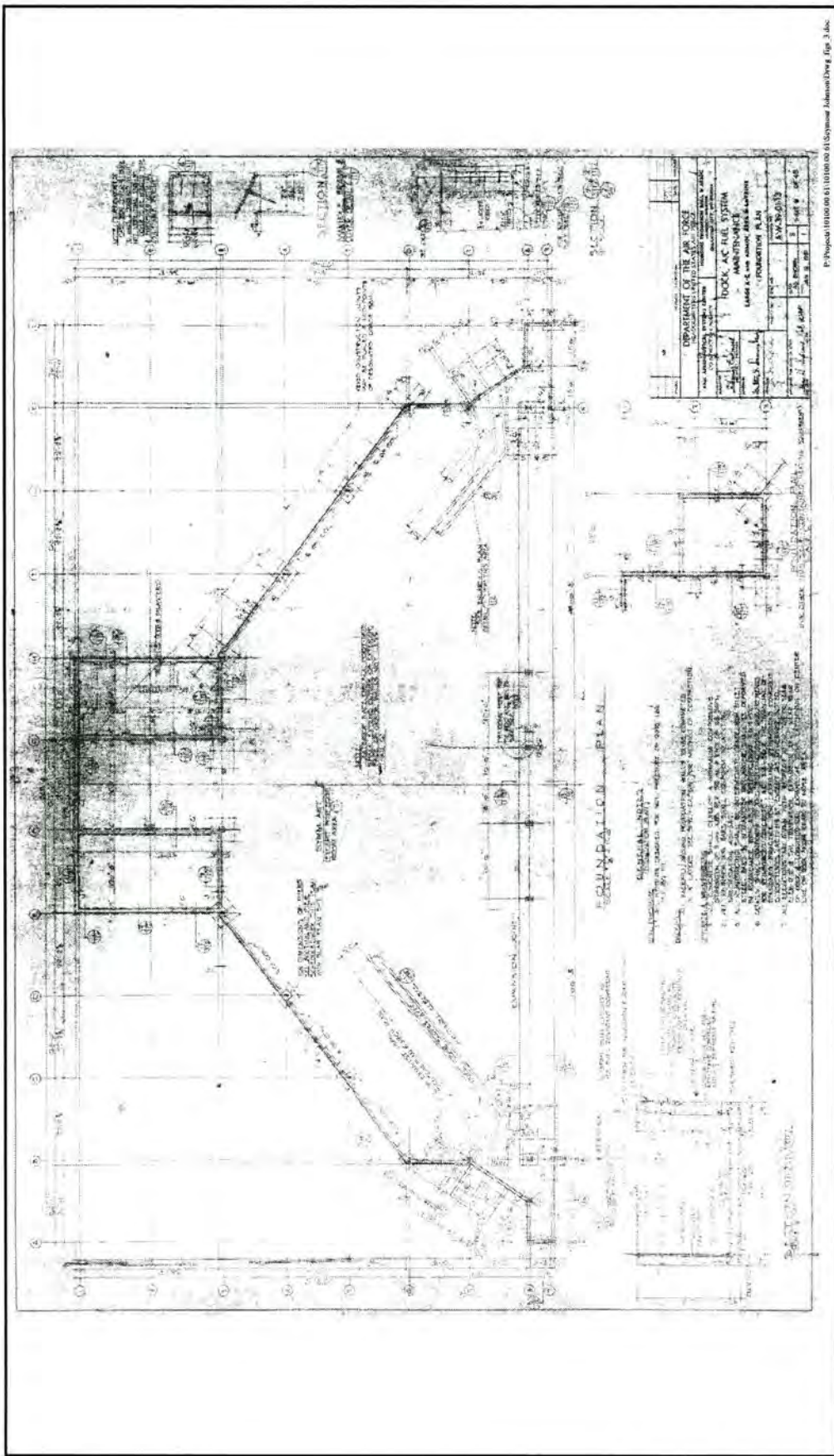


Figure 4-76. Building 4828—record drawing, foundation plan, 1961 (Source: Seymour Johnson Air Force Base Civil Engineering Vault).





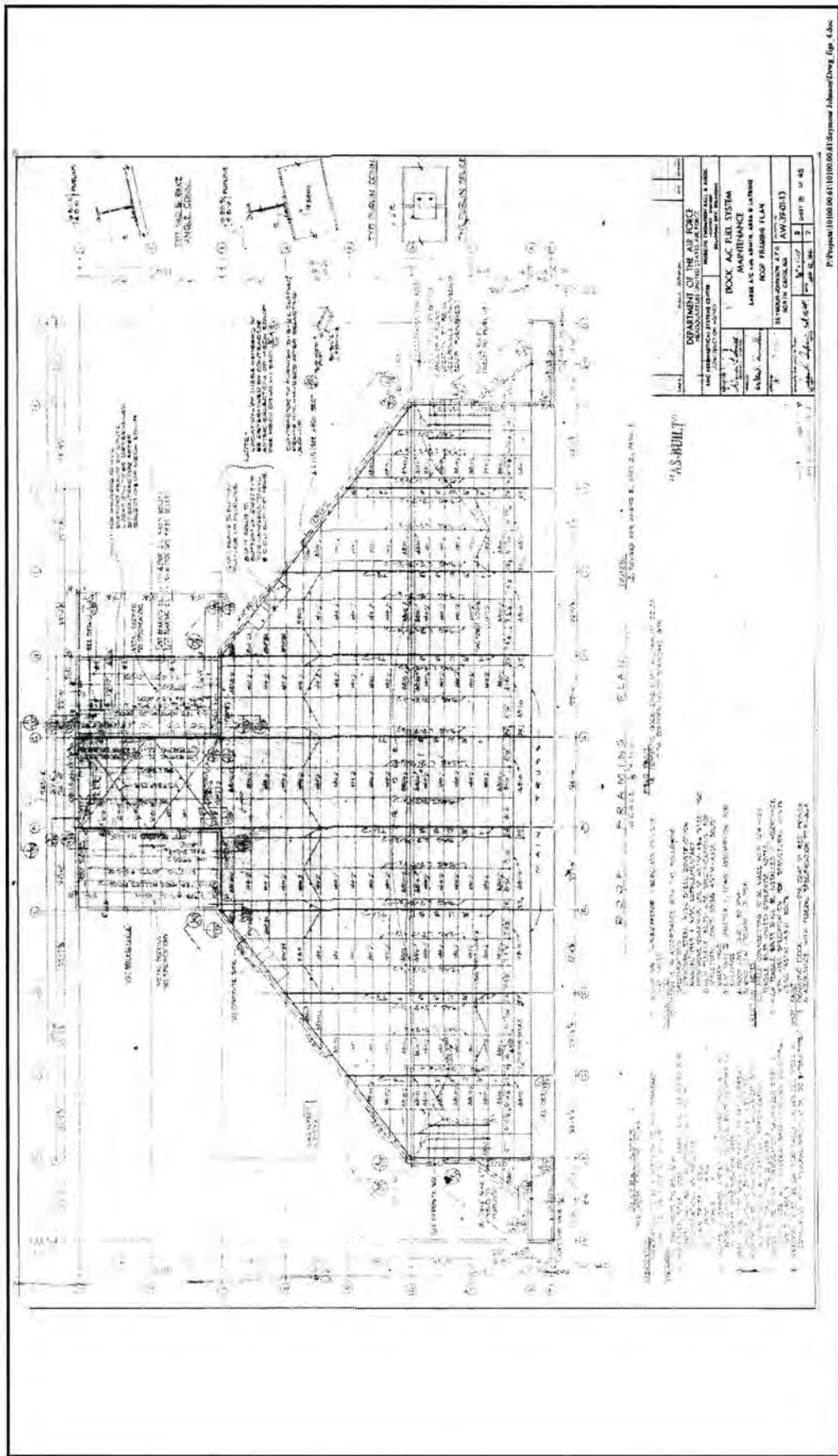


Figure 4-78. Building 4828—record drawing, roof framing plan, 1961 (Source: Seymour Johnson Air Force Base Civil Engineering Vault).

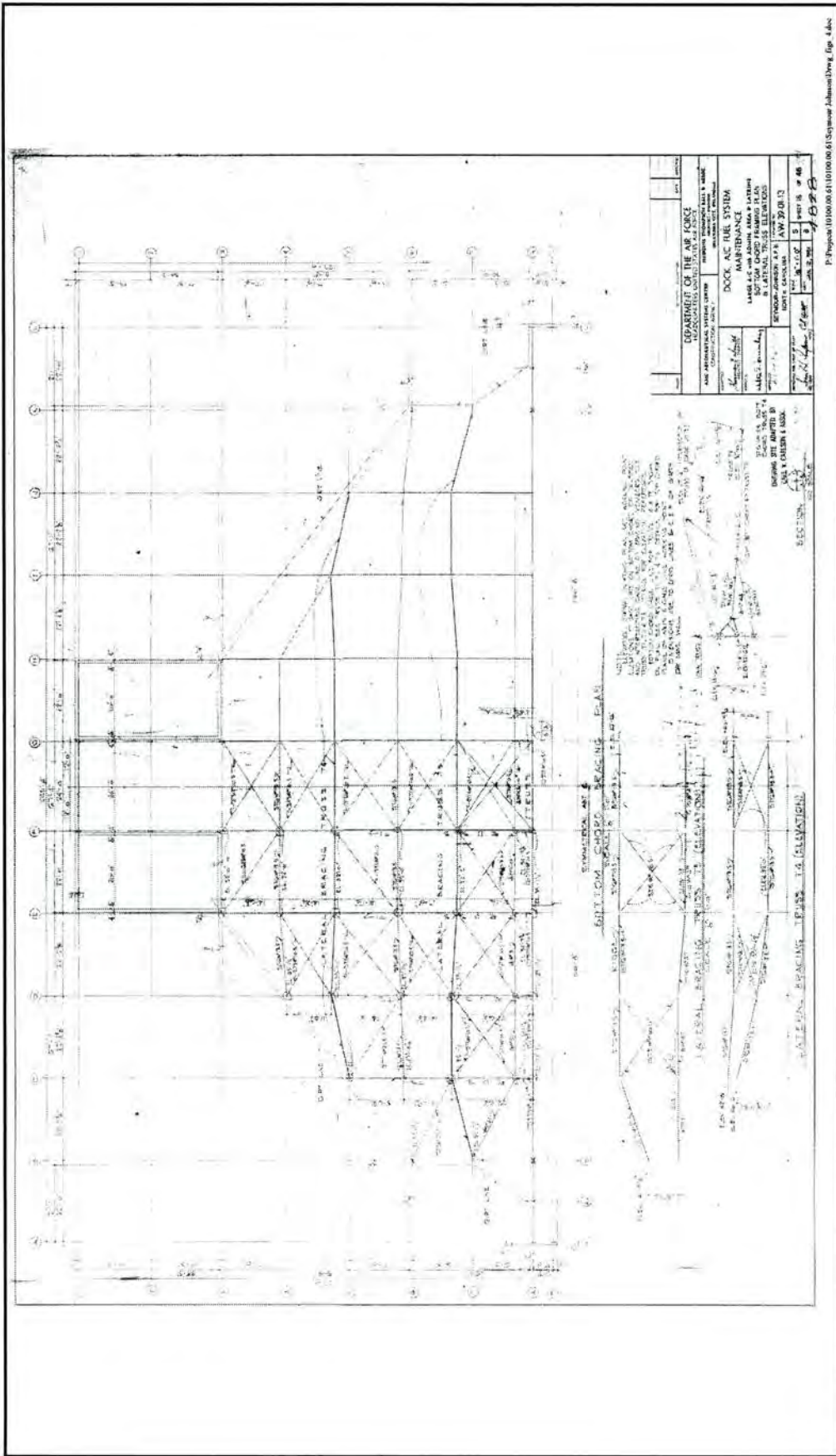


Figure 4-79. Building 4828—record drawing, bottom chord framing plan and lateral truss elevations, 1961 (Source: Seymour Johnson Air Force Base Civil Engineering Vault).

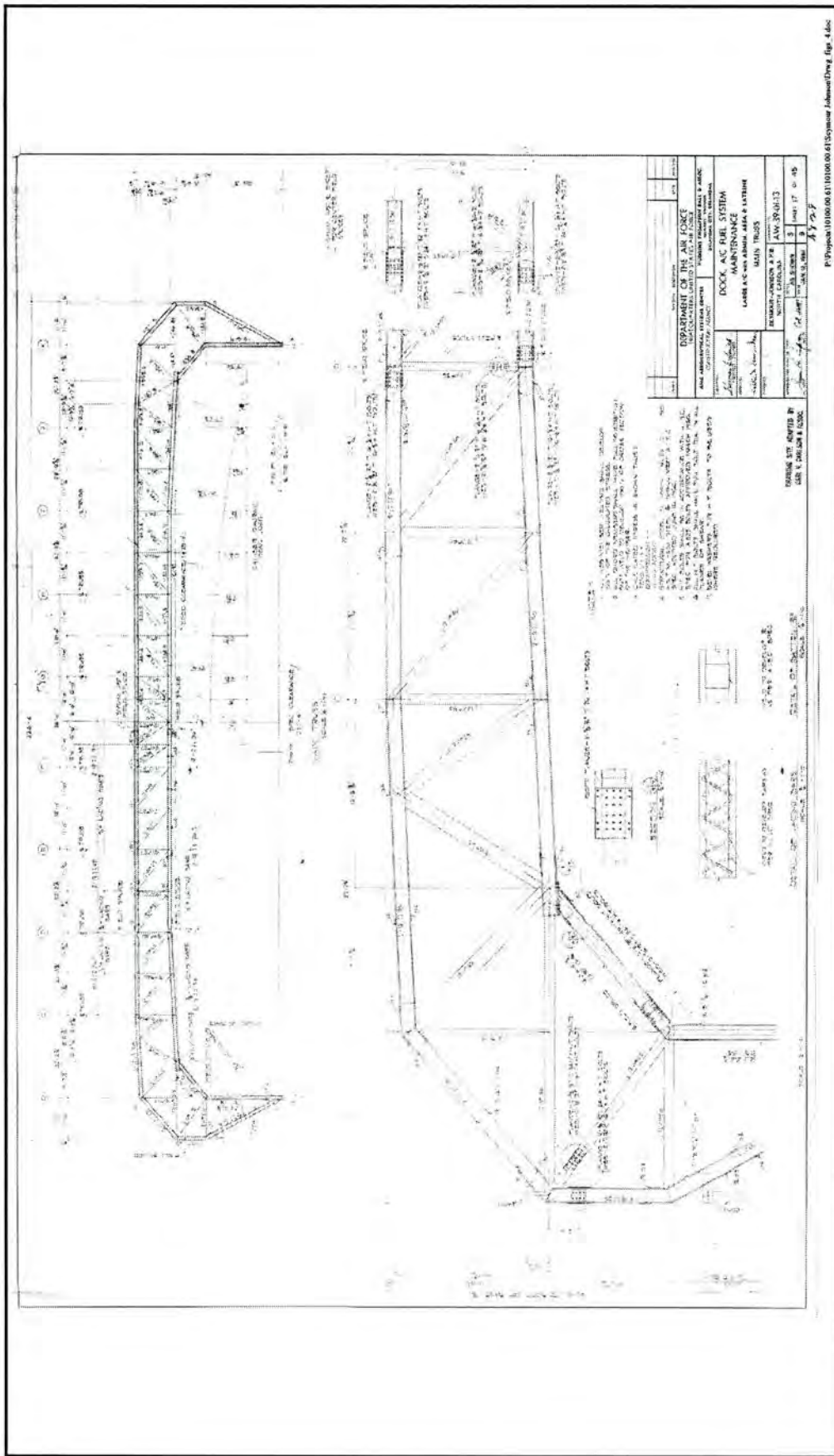


Figure 4-80. Building 4828—record drawing, main truss, 1961 (Source: Seymour Johnson Air Force Base Civil Engineering Vault).



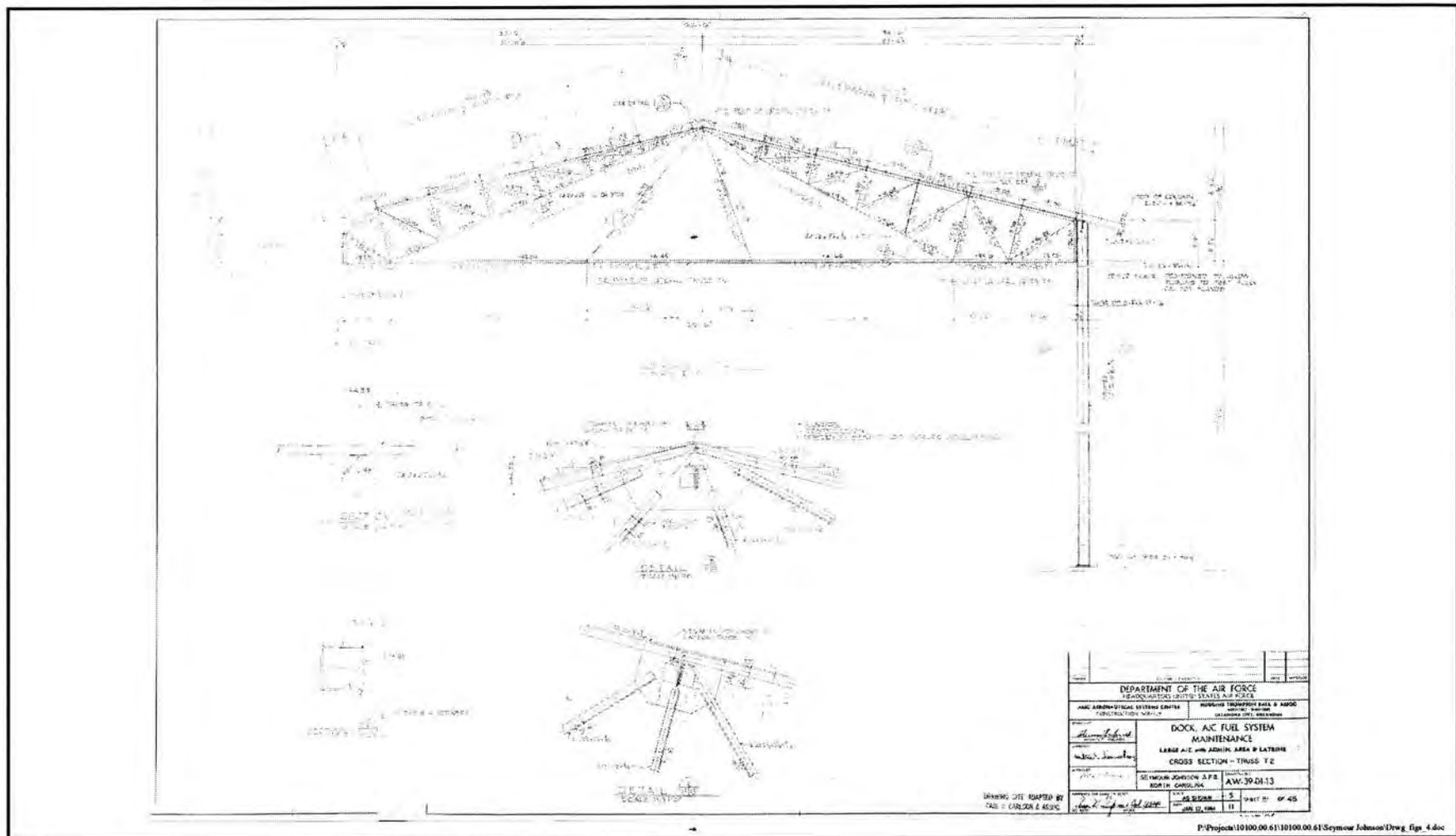


Figure 4-82. Building 4828—record drawing, cross section – truss T2, 1961 (Source: Seymour Johnson Air Force Base Civil Engineering Vault).

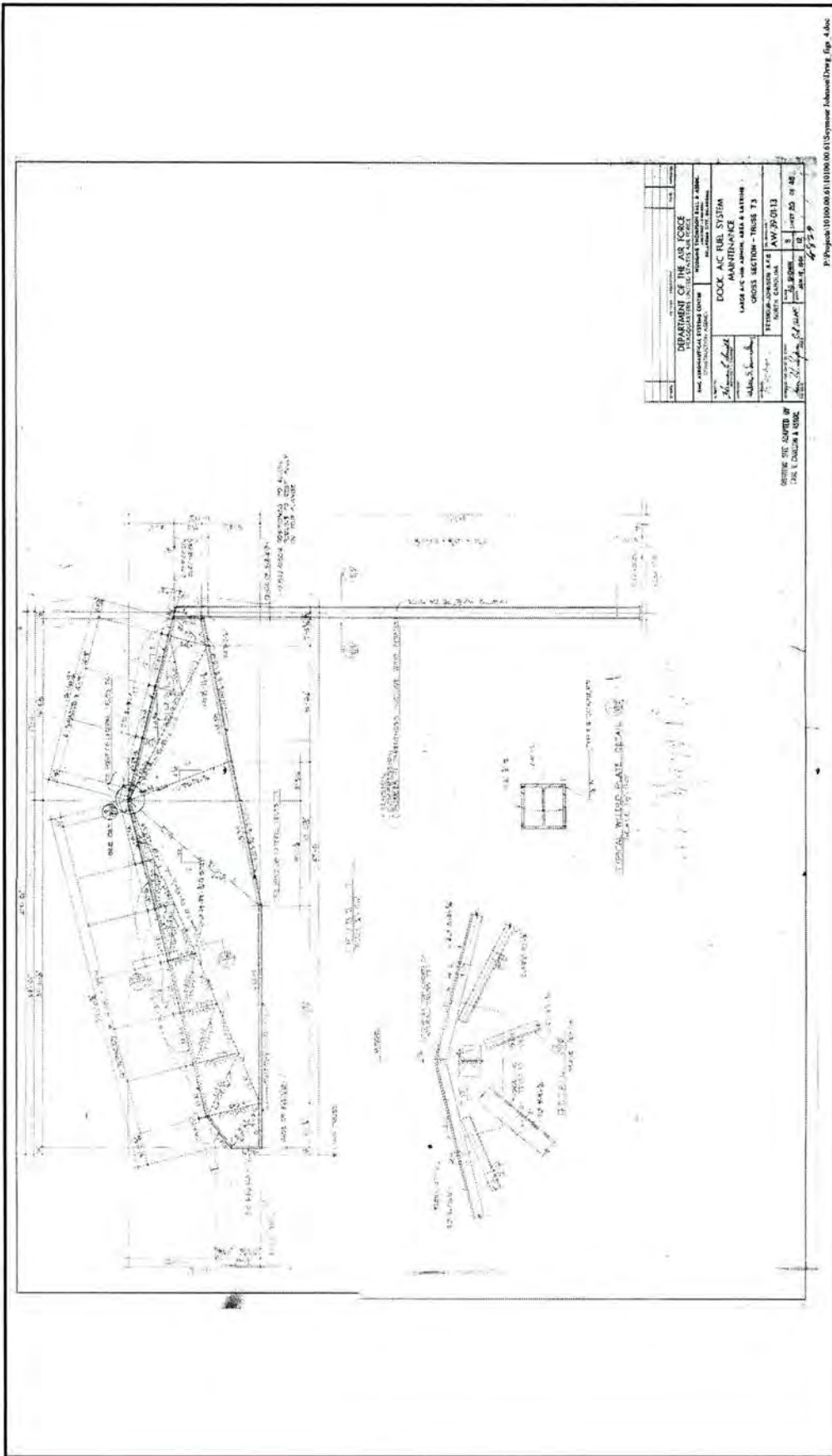


Figure 4-83. Building 4828—record drawing, cross section — truss T3, 1961 (Source: Seymour Johnson Air Force Base Civil Engineering Vault).



Figures 4-85 through 4-97 are current views of Building 4828. Research for historic photos of Building 4828 was conducted at Seymour Johnson AFB, as well as the Goldsboro public library and Goldsboro News Argus; however, no historic photos were located.



Figure 4-85. Building 4828, facing northeast (Photograph by Joe C. Freeman, 2004).

According to Seymour Johnson AFB real property records, Building 4828's original construction includes:

- Foundation:** Concrete
- Floor:** Concrete
- Walls:** Corrugated metal
- Roof:** Metal

#### **Interior**

The interior of the building is a clear span, open, maintenance space with a concrete floor and painted steel structure. The interior is functional in character. The exterior shape of the building mirrors the interior space. The visible interior elements in the open area include the complex steel structural system, the piping, ducts, and conduit, and the floor-mounted and suspended equipment and fittings. The interior elements are specific in design and related to enclosing space and dealing with the complex fuel maintenance systems needed to service the aircraft.





Figure 4-86. Building 4828, facing northeast (Photograph by Joe C. Freeman, 2004).



Figure 4-87. Building 4828, facing east (Photograph by Joe C. Freeman, 2004).



Figure 4-88. Building 4828, chimney vent (Photograph by Joe C. Freeman, 2004).



Figure 4-89. Building 4828, facing northeast, with one of the additions that replaced original concrete block structures (Photograph by Joe C. Freeman, 2004).



Figure 4-90. Building 4828, facing northeast, with one of the two additions placed on east and west side of building (Photograph by Joe C. Freeman, 2004).



Figure 4-91. Building 4828, facing southeast, showing gable roof addition that replaced original shed roof and concrete block structures (Photograph by Joe C. Freeman, 2004).

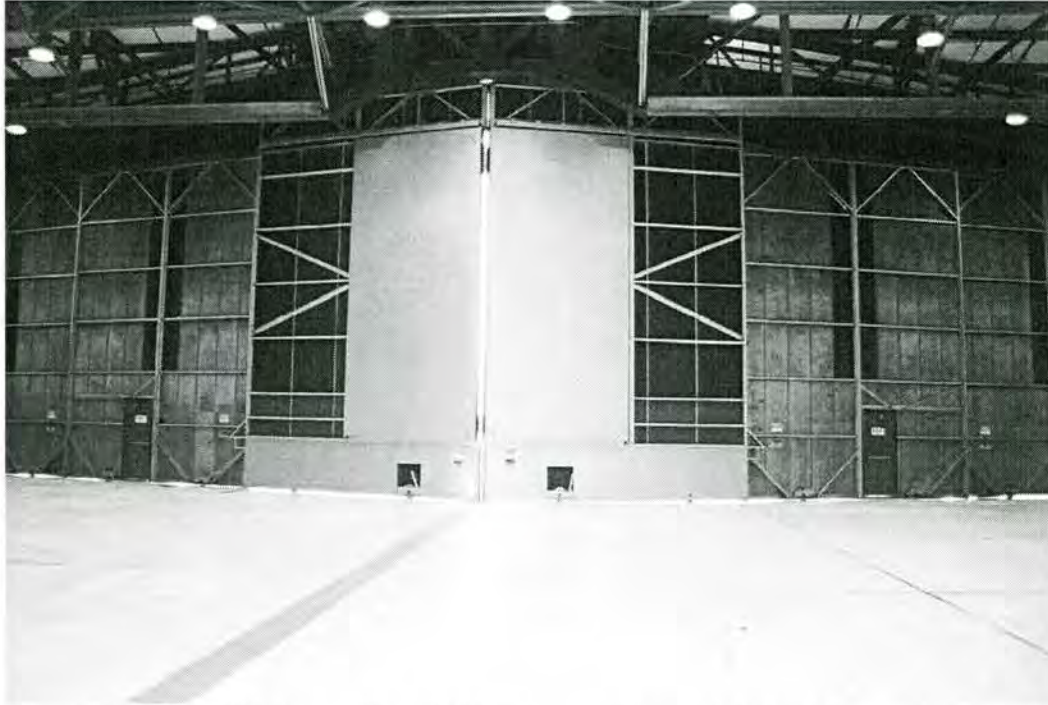


Figure 4-92. Building 4828, interior of front (flight line) entrance (Photograph by Joe C. Freeman, 2004).

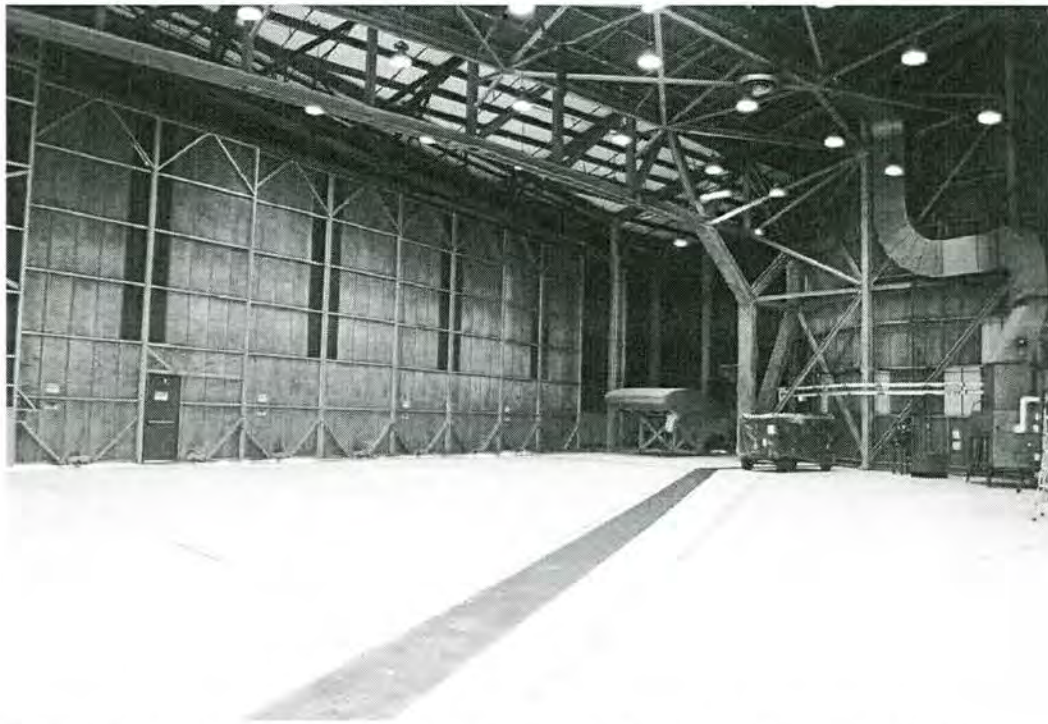


Figure 4-93. Building 4828, interior of bypassing rolling doors (Photograph by Joe C. Freeman, 2004).



Figure 4-94. Building 4828, interior of bypassing rolling doors (Photograph by Joe C. Freeman, 2004).



Figure 4-95. Building 4828, interior of bypassing rolling doors (Photograph by Joe C. Freeman, 2004).

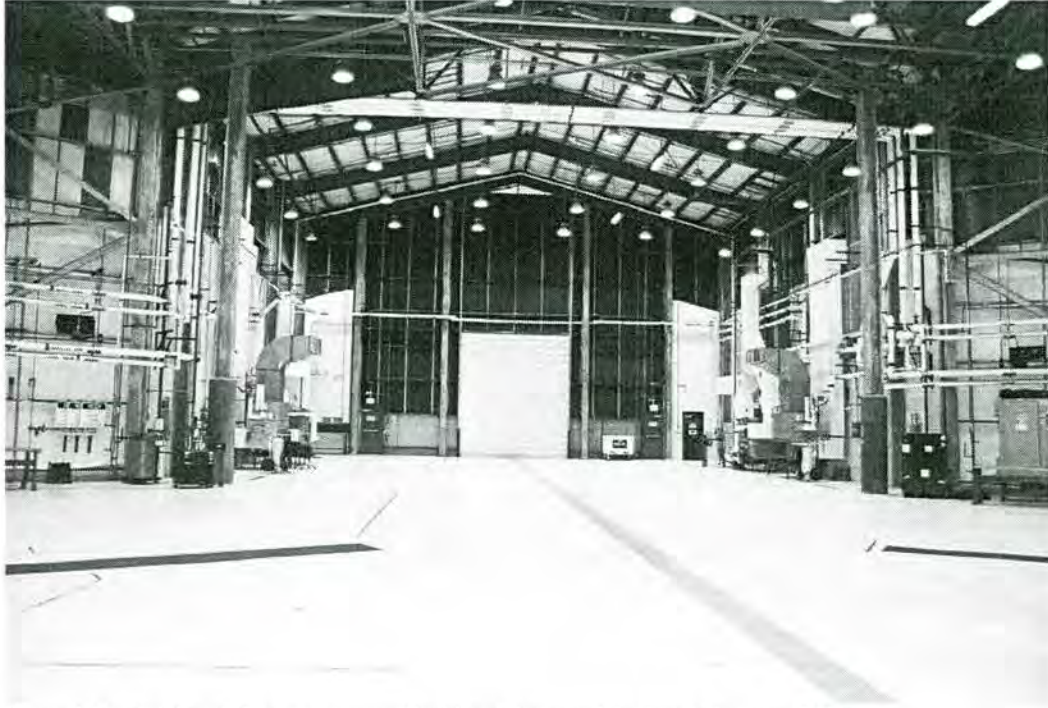


Figure 4-96. Building 4828, interior rear of building (Photograph by Joe C. Freeman, 2004).



Figure 4-97. Building 4828, truss system (Photograph by Joe C. Freeman, 2004).

**Floors:** Concrete

**Walls:** Steel structure

**Ceilings:** Exposed steel trusses and purlins, and underside of metal roofing and insulation

The interior space has been modified by the replacement of the concrete floor and lighting system.

**Wing Hangar and Apron Design.** Building 4828 has a specially designed concrete apron and approach and is flanked by a pair of “Nose Dock” maintenance hangars. These three hangars are set apart from the runway in a large maintenance complex of hangars, shops, aprons, and aircraft parking areas (see Figure 4-1).

**Mechanical and Electrical Systems.** Due to the dangers associated with the maintenance of fuel systems on aircraft, especially large aircraft such as B-52 bombers and KC-135 tankers, exhaust and ventilation systems are of particular importance. Internal drainage trenches, that might capture liquid fuel during maintenance activities, are ventilated with extraction fans that vent the trenches to exterior ventilation stacks. Equipment that might cause an ignition spark is located outside of the building, at the base of the stacks. Electrical systems and lighting are mounted in conduit and with explosion proof fittings. The entire building has a lightning suppression system and a grounding system to avoid sparks caused by static electricity.

**Modifications/Alterations.** According to Seymour Johnson AFB real property records, (Seymour Johnson AFB Real Property n.d.), record drawings, and observations, the following modifications or alterations have been performed on Building 4828:

- 1964—Floodlights installed.
- 1966—“Pull down” lighting installed.
- 1978—New lighting installed.

Other modifications, made between 1991 and 1995, were observed during the on-site visit. These modifications include:

- Entire front of building, including its complex system of bypassing rolling doors, extended outward to accommodate larger aircraft.
- One-story concrete block structures at the rear of the building (originally located on either side of the space allocated for the nose of the aircraft) were demolished. This area originally provided housing for offices, rest rooms, a tool room, and a mechanical equipment room.
- Area previously occupied by two concrete block rooms (demolished) was enclosed under a new gable roofed structure.
- Shed roofed additions added along both sides of rear extension of the building. Additions have a brick veneer exterior and red, standing seam, shed roofs and fascia.
- Interior lights changed out.
- Lightning rods replaced.
- New concrete floor.

### 4.3.3 Historical and Current Uses of Building 4828

Completed in September 1963, Building 4828 is associated with the Cold War era in American history (1946-1989) and the bomber and tanker alert mission specifically. A general discussion of the history, missions, activities, and physical changes at Seymour Johnson AFB during this period is provided in Chapter 2.0. An overall history of the bomber and tanker alert mission, the SAC alert mission at Seymour Johnson, and bomber and tanker aircraft assigned to Seymour Johnson AFB is provided in Section 4.2.3.

### 4.3.4 Comparison of Building 4828 with Similar Facilities

#### Wing Hangar Construction

Critical background information regarding wing hangars is presented in *Cold War Infrastructure for Strategic Air Command: The Bomber Mission* (Weitze 1999b). The extensive information in this report was researched and prepared by Dr. Karen Weitze and comprehensively describes the process by which this type of distinctive hangar was conceived and constructed. Common characteristics of all SAC wing hangars include:

- a steel structure, bolted to the concrete service pad;
- early configuration for the lines of the serviced bomber;
- middle configuration for multiple servicing of the B-29, B-50, B-36, B-47, and B-52;
- late standardized simplicity as an aircraft shelter;
- limited mobility (dismantling, shipping, and re-erection);
- corrugated steel exterior sheathing;
- recessing, panel doors with openings for the tail of serviced aircraft;
- standardized extensions across the fronts of the earliest wing hangars;
- and patterned clustering at the flight line, often in rows, but sometimes in small groups of four, or bracketing a large double-cantilever maintenance hangar.

Luria Engineering of New York designed and manufactured the wing hangars, starting with a design for the B-47 which displayed a footprint that followed the swept back wings of the aircraft. Subsequent wing hangars were larger, multi-purpose and more generic in design. These hangars were intended to service the B-29, B-36, B-47, B-50, and B-52. By 1957, maintenance docks, built primarily for the B-52, were in place at 16 Air Force bases. The next stage in wing hangars appears in the late 1950s to early 1960s as fuel systems docks for the B-52 (and KC-135 tankers). Unlike the previous wing hangar designed for the B-52, the fuel systems docks were designed so that the nose and fuselage were sheltered, but the tail of the aircraft protruded through an opening in the recessing, panel doors (as had been the case with the multi-purpose and the B-47 wing hangars; Figures 4-98 through 4-104) (Weitze 1999b:62-84; 150-152).

#### Seymour Johnson AFB Fuel Systems Maintenance Dock

Building 4828 is a modified example of a 1961-design, SAC Fuel Systems Maintenance Dock. This building provided a safe shelter for a B-52 or KC-135 aircraft undergoing maintenance on its fuel systems.





Figure 4-98. B-36 Wing Hangar, rear, at Ellsworth Air Force Base, South Dakota (Source: Weitze 1999b).



Figure 4-99. Multi-purpose Wing Hangar, front, designed by Luria Engineering, Ellsworth Air Force Base, South Dakota (Source: Weitze 1999b).

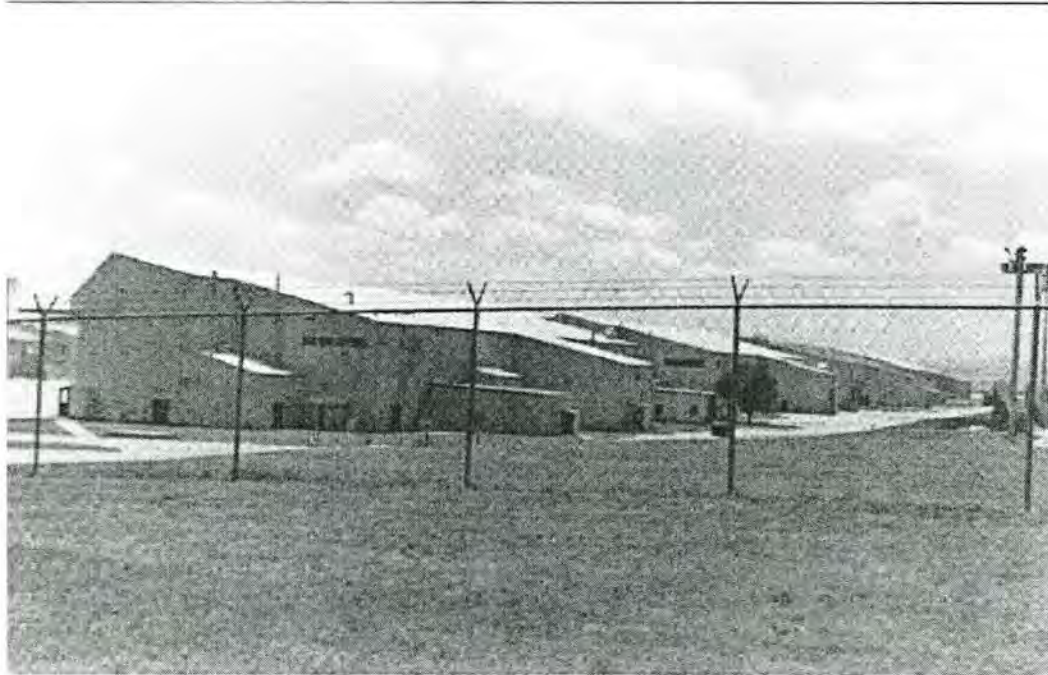


Figure 4-100. Multi-purpose Wing Hangar, rear, designed by Luria Engineering, Ellsworth Air Force Base, South Dakota (Source: Weitze 1999b).



Figure 4-101. Multi-purpose Wing Hangar, front, designed by Luria Engineering, at former Loring Air Force Base, Maine (Scott D. Murdock personal collection © 2004, used with permission).



Figure 4-102. Multi-purpose Wing Hangar, front, designed by Luria Engineering, at former Lincoln Air Force Base, Nebraska (Source: Weitze 1999b).

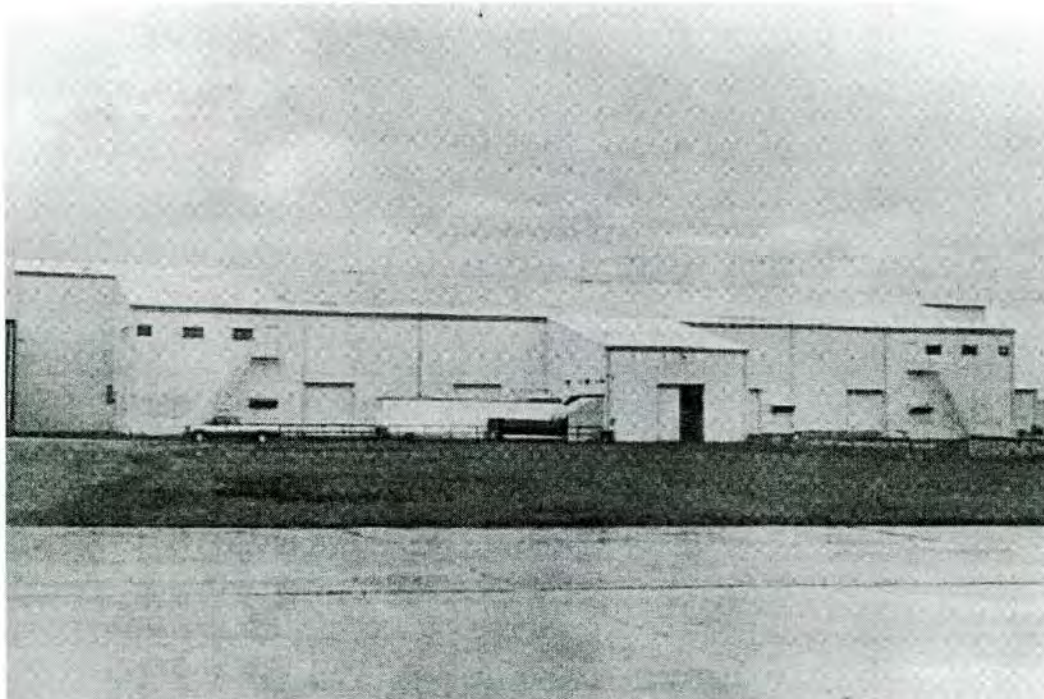


Figure 4-103. Multi-purpose Wing Hangar, rear, designed by Luria Engineering, at former Lincoln Air Force Base, Nebraska (Source: Weitze 1999b).



Figure 4-104. Multi-purpose Wing Hangar, front, designed by Luria Engineering, at former Forbes Air Force Base, Kansas (Source: Weitze 1999b).

#### 4.3.5 National Register of Historic Places Recommendation

**Criterion A.** Building 4828 has only a temporal relationship to significant missions and activities of the Cold War, specifically, the important SAC alert mission conducted at Seymour Johnson AFB. Building 4828, therefore, does not meet the qualifications of Criterion A.

**Criterion B.** Building 4828 has no known associations with persons (past or present) significant in the history of Seymour Johnson AFB or the Cold War at the national, state, or local levels. Therefore, the building does not meet the qualifications of Criterion B.

**Criterion C.** Building 4828 has been modified with the front of the building being extended outward to provide more space; the replacement of original concrete block structures at the rear of the building with a new, gable-roofed structure; and the construction of shed roofed additions along both sides of the rear extension of the building. Building 4828, therefore, does not meet the qualifications of Criterion C.

**Criterion D.** There are no physical or historical characteristics of Building 4828 that would be likely to yield important historical information in the future, therefore the building does not meet the qualifications of Criterion D.

**Criterion Consideration G.** Constructed in 1963, Building 4828 is 41 years of age and must meet the requirements of “exceptional importance” under Criterion Consideration G for properties under 50 years of age. Typically, hangars do not meet the requirement for exceptional importance. In general, they are a property type that would have existed with or without the Cold War, and like other common property types, are not directly related to an important Cold War mission. Building 4828, therefore, does not meet the qualifications of Criterion Consideration G.

## 5.0 RESULTS AND RECOMMENDATIONS

Based on archival research, personnel interview, on-site inspection, and photography, the following recommendations are made regarding the eligibility of Buildings 5015, 2130 and 4828 (see Sections 4.1.5, 4.2.5, and 4.3.5).

### 5.1 BUILDING 5015—FIGHTER-INTERCEPTOR ALERT HANGAR

**Eligible.** Building 5015 is recommended as eligible for listing in the National Register under Criteria A and C, and Criterion Consideration G.

**Criterion A.** Building 5015 has a clear and direct relationship to a significant Cold War activity, the air defense alert mission conducted at Seymour Johnson AFB to defend the Washington D.C. area. Building 5015 is therefore recommended eligible for inclusion in the National Register under Criterion A.

**Criterion B.** Building 5015 has no known associations with persons (past or present) significant in the history of Seymour Johnson AFB or the Cold War at the national, state, or local levels. Therefore, the building does not meet the qualifications of Criterion B.

**Criterion C.** Although the interior of the center section of Building 5015 has been modified, the exterior retains most of its integrity, displaying characteristic features that include the layout, and hangar doors with counterweights and pockets that were specifically designed to accommodate the fighter aircraft associated with the fighter-interceptor alert mission. The building retains original door bubbles, to accommodate larger aircraft types. As a late example of this hangar type, Building 5015 was built with door bubbles, rather than having them added later. Designed by Strobel & Salzman, a prominent engineering firm associated with Cold War facilities, Building 5015 is recommended as eligible for inclusion in the National Register under Criterion C.

**Criterion D.** There are no physical or historical characteristics of Building 5015 that would be likely to yield important historical information in the future; therefore the building does not meet the qualifications of Criterion D.

**Criterion Consideration G.** Constructed in 1957, Building 5015 is 47 years old and, thus, must demonstrate “exceptional importance” under Criterion Consideration G for properties under 50 years of age. Directly associated with the fighter-interceptor alert mission, an important Cold War military strategy for both deterring and combating a Soviet Union nuclear strike, Building 5015 played an important role in the nation’s defensive tactics. The building retains key character-defining elements that relate to the technological advances of fighter-interceptor aircraft during the Cold War as well as the alert mission, which required a quick response to enemy threats. Building 5015 is, therefore, recommended eligible for inclusion in the National Register under Criterion Consideration G.

## 5.2 BUILDING 2130—SAC 70-MAN MOLEHOLE

**Eligible.** Building 2130 is recommended as eligible for listing in the National Register under Criteria A and C, and Criterion Consideration G for the following reasons:

**Criterion A.** Building 2130 has a clear and direct relationship to significant missions and activities of the Cold War, specifically, the important SAC alert mission conducted at Seymour Johnson AFB. Building 2130 is therefore recommended eligible for inclusion in the National Register under Criterion A.

**Criterion B.** Building 2130 has no known associations with persons (past or present) significant in the history of Seymour Johnson AFB or the Cold War at the national, state, or local levels. Therefore, the building does not meet the qualifications of Criterion B.

**Criterion C.** Building 2130 has undergone minimal modifications and, thus, retains its integrity. Key character-defining features such as the tunnel egresses, berming, and associated SAC alert properties (i.e., guard tower, nine-stub Christmas tree alert apron, fencing, and nearby buildings for the service and run-up of Hound Dog and Quail missiles) are still present and convey the urgency of Cold War responses for alert missions and attempts to increase survivability of bomber personnel. Three windows have been added to the south façade, but this is a minor detraction from the overall integrity of the building. Building 2130 is, therefore, recommended as eligible for inclusion in the National Register under Criterion C.

**Criterion D.** There are no physical or historical characteristics of Building 2130 that would be likely to yield important historical information in the future, therefore the building does not meet the qualifications of Criterion D.

**Criterion Consideration G.** Constructed in 1959, Building 2130 is 45 years old and, thus, must demonstrate “exceptional importance” under Criterion Consideration G for properties under 50 years of age. Directly associated with the SAC alert mission, an important Cold War military strategy for both deterring and combating a Soviet Union nuclear strike, Building 2130 played an important role in the nation’s offensive tactics. The building retains key character-defining elements that relate to the alert mission, which emphasized survivability and a quick response to enemy threats. Building 2130 is, therefore, recommended eligible for inclusion in the National Register under Criterion Consideration G.

## 5.3 BUILDING 4828—FUEL SYSTEMS MAINTENANCE DOCK (WING HANGAR)

**Eligible.** Building 4828 is recommended as *not* eligible for listing in the National Register.

**Criterion A.** Building 4828 has only a temporal relationship to significant missions and activities of the Cold War, specifically, the important SAC bomber and tanker alert mission conducted at and for Seymour Johnson AFB and the eastern United States. Building 4828, therefore, does not meet the qualifications of Criterion A.

**Criterion B.** Building 4828 has no known associations with persons (past or present) significant in the history of Seymour Johnson AFB or the Cold War at the national, state, or local levels. Therefore, the building does not meet the qualifications of Criterion B.

**Criterion C.** Building 4828 has been modified with the front of the building being extended outward to provide more space; the replacement of original concrete block structures at the rear of the building with a new, gable-roofed structure; and the construction of shed roofed additions along both sides of the rear extension of the building. These changes impact the building's integrity, even while other characteristics remain intact. The building is located on its original site adjacent to a parking apron and flanked by two nose docks; the original, large, rolling, steel-framed/metal-clad, bypassing doors, designed to allow the nose and wings of the aircraft to pass into the building, remains; and the basic footprint, which mirrors the swept back wings of the B-52/KC-135 aircraft, is intact. Because of its extensive modifications, Building 4828 does not meet the qualifications of Criterion C.

**Criterion D.** There are no physical or historical characteristics of Building 4828 that would be likely to yield important historical information in the future, therefore the building does not meet the qualifications of Criterion D.

**Criterion Consideration G.** Constructed in 1963, Building 4828 is 41 years of age and must meet the requirements of "exceptional importance" under Criterion Consideration G for properties under 50 years of age. Typically, hangars do not meet the requirement for exceptional importance. In general, they are a property type that would have existed with or without the Cold War, and like other common property types, are not directly related to an important Cold War mission. Building 4828 does not meet the qualifications of Criterion Consideration G.

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## CONTRACT DATA

This study was prepared for  
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Fort Worth District

Contract No. DACA63-99-D-0010, Delivery Order No. 0061  
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