

LORING AIR FORCE BASE  
Limestone Vicinity  
Aroostook County  
Maine

HAER No. ME-64

HAER  
ME  
2-LIME, V  
1-

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

~~PHOTOGRAPHS~~

HISTORIC AMERICAN ENGINEERING RECORD  
National Park Service  
Northeast Region  
Philadelphia Support Office  
U.S. Custom House  
200 Chestnut Street  
Philadelphia, Pennsylvania 19106

HISTORIC AMERICAN ENGINEERING RECORD  
LORING AIR FORCE BASE

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**Location:** Limestone Vicinity  
Aroostook County, Maine

USGS 7.5-minute Fort Fairfield NW Quadrangle  
Universal Transverse Mercator Coordinates  
1) 19:587117.5203693; 2) 19:584862.5196492  
3) 19:580034.5199310; 4) 19:583140.5203679

**Date(s) of Construction:** 1947-1990

**Engineer/Architect:** Various

**Present Owner(s):** United States Air Force  
Air Force Base Conversion Agency (AFBCA) – Loring  
RR 1, Box 1719  
Limestone, Maine 04750-7943

**Present Occupants:** Loring Air Force Base (AFB) closed in September 1994. Most of the facilities and areas at the installation are temporarily unoccupied. Except where noted, individual Historic American Engineering Record (HAER) records will indicate "Vacant."

**Present Use:** Most of the facilities and areas at the installation are temporarily unoccupied. Except where noted, individual HAER records will indicate "Vacant."

**Significance:** The built environment of Loring AFB demonstrates the military, technological, and economic complexity of the Cold War. Once one of the most heavily armed of the Strategic Air Command (SAC) bases, it stands as a visible representation of the policies that shaped the political, economic, and military history of the world in the last half century. The period of significance begins in November 1948 with the completion of the airfield. Although the importance of the base declined by 1964 with the advent of large numbers of aeriably refuelable B-52 bombers and a significant number of nuclear-armed intercontinental ballistic missiles (ICBMs), Loring AFB remained a significant national asset until the end of the Cold War in 1991. The specific buildings and areas on Loring AFB that display

exceptional significance on a national, state, and local level are the airfield, the Arch Hangar, the Double Cantilever Hangar, the Weapons Storage Area, and the Alert Area.

**Project Information:**

Pursuant to the recommendations of the 1990 Defense Base Closure and Realignment Commission, Loring AFB was closed in September 1994. In order to mitigate adverse effects to historic properties that may occur with conveyance of property to a non-federal agency, mitigation measures were recommended in the Loring AFB Historic Building Inventory and Evaluation. The Maine State Historic Preservation Officer (SHPO) has concurred with the Air Force's recommendation of Historic American Buildings Survey (HABS)/HAER recordation of National Register-eligible properties in lieu of nomination to the National Register.

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## **Loring Air Force Base Overview**

Loring Air Force Base (AFB) is located in the northeastern corner of Maine, in Aroostook County, approximately 5 miles west and south of the international border at New Brunswick, Canada, and 400 miles north of Boston. The on-site property totals 8,317 acres and is located 5 miles northeast of Caribou, Maine, and 18 miles north of Presque Isle, Maine. Major components of the base include the airfield, the Alert Area, and the Weapons Storage Area (WSA). The airfield is situated in the center of the base and is oriented in a north-south direction. The WSA is located east of the airfield in the northeastern portion of the base; the Alert Area is located immediately east of the airfield, at the southern end of the runway. A large industrial area, which includes the Arch Hangar and the Double Cantilever (DC) Hangar, is located immediately west of the airfield. Administrative, institutional, recreational, and residential areas are situated in the southwestern portion of the base. Pursuant to the recommendation of the 1990 Defense Base Closure and Realignment Commission, Loring AFB was closed in September 1994, and currently is in caretaker status. The Air Force Base Conversion Agency (AFBCA) – Loring and the Loring Development Authority (LDA) are located on the base.

## **The Cold War**

The period immediately following World War II marked the start of the Cold War. The term Cold War described the state of hostile relations that developed primarily between the Union of the Soviet Socialist Republics (Soviet Union) and the United States at the end of the war. Often viewed as an ideological confrontation between communist and noncommunist governments, this hostility was manifested in economic pressure, propaganda, the arms race, and other covert activities. Although varying dates for the beginning and end of the Cold War can be given, Winston Churchill's 1946 Iron Curtain speech is often considered the opening event, and the dismantling of the Berlin Wall in 1989 or the dissolution of the Soviet Union in 1991 are seen as closing events.

Tensions between the Soviet Union and the Western Allies had become evident during World War II based on differences in strategy that ultimately forced the Soviet Union to bear the brunt of German aggression. The Soviet Union, then led by Josef Stalin, emerged at the end of World War II with the most powerful army in Europe and with its borders extended farther west than had ever been achieved by Imperial Russia under any Tsar. Stalin had begun his control in the 1920s by crushing the independently-minded rural peasantry through the forced collectivization of agriculture. In the 1930s, Stalin's purge of his own party resulted in the deaths of thousands of leading Communist Party members and led to the rise of Stalinism. The desire to contain Stalinist Communism was the primary force behind the West's first involvement in the Cold War. In 1947, President Harry S Truman urged Congress to provide economic and military support to anti-communist forces in Greece and Turkey who were battling communist insurrections backed by the Soviet Union. This funding established the basis for "containment", the foreign policy that would dominate American politics for the next 40 years. In 1949, the Soviet Union detonated their first atomic device and the Tu-4 became operational in 1950. The

realization that the Soviet Union had the capability to develop and deliver nuclear weapons further fueled American fears and led the United States government to reexamine national security policy.

Soviet foreign policy remained one of expansion into the rapidly decolonizing regions of the world, while retaining control over Eastern Europe. The United States' policy during the 1950s was to maintain a retaliatory capability in the event of a Soviet attack into Western Europe. Implicit in this capability was the policy of maintaining peace by preparing for war. The Soviet threat to use nuclear force to apply pressure to Western Europe was seen as nuclear blackmail by the United States. In 1962, it was discovered that sites for offensive, nuclear-capable missiles were being constructed in Cuba that would threaten United States military installations. In response, naval blockades and air surveillance were ordered, and the Strategic Air Command's (SAC) airborne alert force was increased. SAC's capabilities were demonstrated during the crisis, and were considered a major factor in its peaceful resolution.

Motivated by the reverse suffered during the Cuban Missile Crisis, due in large part to the United States' advantage in nuclear weapons and delivery systems, the Soviet Union strove towards nuclear parity with the United States. Meanwhile, United States' military expenditures were reduced following the Vietnam Conflict and the political turmoil of Watergate. By the mid-1970s, the Soviet Union had achieved rough parity with the United States in nuclear weapons and was fielding additional weapons system. The Soviet invasion of Afghanistan in 1979 was the peak of Soviet expansionism.

In the early 1980s, the United States began to rebuild American forces and improve overall military balance. During this same time, the Soviet Union entered a period of domestic economic crisis coinciding with a rapid turnover of political leadership. Containment and deterrence had largely succeeded in checking Soviet power through several decades. Now with the arrival of new Soviet leaders and policies, steps toward resolution of the Cold War were achieved. Soviet Union President Gorbachev stated that the Soviet Union would no longer intervene in Eastern Europe to maintain its authority, and a summit between Gorbachev and President Ronald Reagan in 1985 signaled a further step toward the resolution of the Cold War. In 1989, free elections were held in Poland and communist governments were replaced in Hungary, East Germany, and Czechoslovakia. In December 1991, the Soviet Union ceased to exist as an independent nation and the Commonwealth of Independent States became its constitutional heir.

### Strategic Air Command

SAC was activated at Bolling Field on 21 March 1946 under the command of General George C. Kenney. Headquarters SAC officially opened on 21 October 1946 at Andrews Army Air Field, Maryland. SAC's mission, as proclaimed by General Carl "Tooeey" Spaaz, was:

To conduct long range offensive operations in any part of the world . . . to conduct maximum range reconnaissance over land or sea . . . to provide combat units capable of

intense and sustained combat operations employing the latest and most advanced weapons; to train units and personnel for the maintenance of the Strategic Forces in all parts of the world; to perform such special missions as the Commanding General, Army Air Force may direct (Casey and Baker n.d.:12).

General Curtis LeMay assumed command of SAC on 19 October 1948. Initially, he faced serious problems including the short range of the B-29 and B-50 bombers, poorly trained combat crews, and inadequate base facilities. In response to these problems, General LeMay acquired B-36 bombers, with a greater unrefueled flight radius than the B-29s and B-50s. The B-36s provided a means of striking targets in the Soviet Union without having to locate aircraft at vulnerable forward bases overseas. He addressed the problem of poorly trained troops by implementing more realistic training methods and developing an attack plan against the probable enemy. He also instituted the lead-crew concept, a concept where each wing placed its most highly qualified fliers together to form crews whose performance standards would become the goals for other crews. Lead crews instructed the other fliers on techniques and procedures, and were responsible for upgrading the proficiency of the entire wing.

By late 1949, General LeMay had crafted SAC into an atomic deterrence force prepared for immediate combat. This force was greatly expanded during the 1950s, as the B-47 and B-52 all-jet bombers and the KC-135 all-jet tanker came into production. Many of the practices instilled by General LeMay, such as realistic training missions and constant readiness, were used by SAC throughout the Cold War. While many things changed through the years, one factor remained constant: SAC continually maintained its readiness to respond to challenges by remaining prepared to go to war at a moment's notice.

**SAC Alert.** When SAC was first organized, it was able to station aircraft at bases within the United States, which during the late 1940s were largely immune from destruction. By the late 1950s, though, the Soviet Union had made great advances in the fields of long-range bombers and atomic weapons. The Air Force recognized the need to be prepared for an unexpected attack against SAC forces. Bomber alert began in 1958 as a means to defend against a surprise attack. During the late 1950s and early 1960s, facilities were constructed that collocated the aircraft and crews into a highly secure compound with direct access to the runway. These compounds became known as SAC Alert Facilities. Using a procedure known as Minimum Interval Takeoff (MITO), in which aircraft took off in 15 second intervals, five aircraft standing alert could become airborne and egress an area in under 3 minutes.

In 1960, as the threat from Soviet intercontinental ballistic missiles (ICBMs) became more significant, an additional bomber alert mission began. In a practice known as Airborne Alert, SAC placed armed bombers in an airborne alert status. The practice of having armed bombers airborne 24-hours a day was maintained until 1968, when it was finally phased out due to the increased capability of the ICBM alert force and the high cost of maintaining the airborne alert mission.

On 24 July 1990, EC-135 "Looking Glass" operations ended after almost 30 years of continuous airborne command post operations. The SAC Alert Force was ordered to stand down on 18 September 1991, and SAC was deactivated on 1 June 1992. The majority of SAC aircraft, bases, and personnel were divided between the newly activated Air Combat Command (ACC) and Air Mobility Command (AMC).

**SAC Operations in Southeast Asia.** SAC became involved in the conflict in Vietnam in the mid-1960s. Operating out of Kadena Air Base, Okinawa, SAC KC-135A tankers began supporting Tactical Air Command (TAC) and Pacific Air Forces (PACAF) fighter bombers and Military Airlift Command (MAC) transports in South Vietnam in 1965. In February 1965, President Lyndon Johnson initiated aerial bombardment of North Vietnam, which was conducted by PACAF aircraft operating out of bases in South Vietnam and U.S. Navy aircraft based on carriers located in the South China Sea. SAC B-52s began conducting "Arc Light" missions over enemy-controlled territory in South Vietnam in June 1965. The Arc Light missions, which supported ground operations, eventually spread to Laos and Cambodia as the United States forces attempted to cut North Vietnamese infiltration routes into South Vietnam.

By 1972, President Richard Nixon had decided that the United States must disengage itself from the increasingly unpopular war in Vietnam. Negotiations between the United States and North Vietnam were conducted in order to establish a situation whereby the United States could leave North and South Vietnam nominally at peace. In order to force the North Vietnamese government to the bargaining table, Nixon initiated Operation "Bullet Shot," which utilized SAC B-52s to strike targets in North Vietnam, Cambodia, and Laos. Bullet Shot was followed by Operation "Linebacker II," which involved the use of SAC B-52s against military targets surrounding the North Vietnamese capital of Hanoi and their primary port, Haiphong. Linebacker II forced the North Vietnamese government to return to the peace negotiations. In January 1973, direct American involvement in the war in Southeast Asia was ended.

**SAC Strategic Bombers.** The progression of the Cold War necessitated continual updating of both techniques and weapons systems. Bombers and tankers were the mainstay of SAC especially during the late 1940s through the early 1960s. Although the United States had a monopoly on atomic weapons during the late 1940s, only a small number existed, and they were very large and very hard to deliver over long ranges. Between 1945 and 1948, the only aircraft capable of conducting atomic strikes was the B-29 Superfortress; however, it lacked sufficient range to strike the Soviet Union from bases in the United States. The B-36 Peacemaker, which entered active duty in 1948, was the first bomber in the Air Force inventory that was capable of conducting intercontinental atomic strikes. Bombers which followed the B-36 included the B-47 Stratojet, the B-52 Stratofortress, the F-111 fighter-bomber, the B-1B Lancer, and the B-2 Spirit. Aerial tankers in the SAC inventory, used for refueling, included the KC-97 Stratofreighter and the KC-135 Stratotanker, which entered SAC service in 1951 and 1957, respectively.

**SAC Stand-Off Weapons.** Stand-off weapons were a part of the SAC inventory. By the early 1950s, slower, lower flying bombers such as the B-29, B-50, and B-36 became increasingly vulnerable to jet-powered interceptors. Additionally, during the early part of the Cold War,

offensive aircraft weapons were unguided gravity bombs that were designed to be dropped onto targets. With the introduction of the surface-to-air missile (SAM), even high-flying, fast bombers became vulnerable to destruction as they flew over their targets. Standoff weapons, which allow a bomber to strike targets from hundreds of miles away, were developed to reduce the vulnerability of manned bombers to the SAM threat. Types of SAC stand-off weapons included ground-attack-missiles (GAMs) air-to-ground missiles (AGMs), short range attack missiles (SRAMs), air-launched cruise missiles (ALCMs), and air decoy missiles (ADMs).

**Defensive Aircraft.** Concurrent with the development of long-range strategic bombers, an air defense system was designed to defend the continental United States (CONUS) against enemy strategic aircraft. The Air Force view was that the Distant Early Warning (DEW) line and the interceptors would offer a degree of insurance that SAC's retaliatory capability would not be destroyed by a Soviet first strike. The Air Force also was convinced that the Soviets could not believe they would be allowed to attack American cities, defense facilities, or SAC bases uncontested. Fighter alert facilities, often collocated at SAC bases such as Loring AFB, were constructed to provide facilities for the interceptors and their crews. Interceptor aircraft deployed during the early 1950s were modified fighter aircraft, utilizing .50-caliber machine guns, 20-millimeter cannons, and unguided 2.75-inch rockets to attack enemy aircraft. First-generation interceptor aircraft included the F-86D Sabre, the F-84F Thunderstreak, and the F-89 Scorpion. During the late 1950s, air-to-air weapons were deployed by more advanced, second generation interceptor aircraft such as the F-101 Voodoo, F-102 Delta Dagger, and F-106 Delta Dart.

### History of Loring Air Force Base

**Strategic Locations and Limestone, Maine.** In selecting strategic locations for the new SAC bases, special consideration was given to the fact that technological advances made the route over the Arctic Circle the shortest one from America to the majority of strategic targets in the Soviet Union for long-range aircraft and missiles. As a result, sites were chosen along America's northern tier, with the northeastern United States closer to targets in the European portion of the Soviet Union than any other part of the continental United States. In 1947, the New England Division of the U.S. Army Corps of Engineers (USACE) chose a site in northeastern Aroostook County, Maine, in the northwestern part of Limestone Township extending into the southwestern part of the Caswell Plantation, as the location for a new SAC bomber base. Limestone Army Air Field (AAF) was the Division's largest project. Limestone AAF was redesignated as Limestone AFB when the Air Force was established as an independent agency in September 1947. In 1954, the base was renamed Loring AFB in honor of Charles J. Loring, Jr., a Portland, Maine, native, who died during the Korean War as a result of deliberately diving his damaged aircraft into an enemy artillery installation and destroying it.

The Aroostook County site was an undeveloped area of dense forest, shallow marshes, and wild blueberry bogs (*Engineering News Record* 1957:40), situated on rolling hills with virtually no obstacles to construction. A slight plateau provided distance from the farming areas below and was practically free of fog. Only a small portion of the area was capable of supporting

agriculture, so construction would not impact productive land necessary for Aroostook County's potato industry.

There were nearby sources of hard bedrock and limestone to support construction of the runways, taxiways, and parking aprons. This was much less expensive than transporting tons of such materials from distant areas. However, the single most important factor in selecting the site was that Aroostook County was 300 miles closer to potential enemy targets in the Soviet Union than any other part of the United States.

**Aroostook County.** The region is dominated by the St. John River and its many tributaries. For centuries, these water ways have served as the defining aspect of the county, providing routes for transportation, subsistence, settlement, communication, and economic growth.

Although European explorers and traders had not yet entered the remote areas of northern Maine by the 1600s, demand for beaver furs preceded them. The native population of Maliseets trapped and traded fur with the Europeans, altering their way of life and relationship to the natural environment. Upper Maine is also noted for its extensive deciduous and coniferous forests, and by the next century, the value of lumbering was discovered by European settlers.

The timber industry began with saw mills erected in the remote, forested region. In 1846, General Mark Trafton and B.D. Eastman constructed a mill for the manufacture of clapboards in the wilderness area known as Letter E, Range 1 Township (Wiggin 1922:197). By 1869, the incorporated town of Limestone had developed around the mill, the settlement named for the limestone deposits in the region. The town of Caribou arose around the mill of Alexander Cochran, a Protestant from Northern Ireland who traveled up the St. John and Aroostook rivers in 1829 in search of a mill site. Cochran chose the uninhabited Letter H, Range 2 Township and built a farm, a log cabin, a dam, and a grist mill on Caribou Stream. The town of Caribou was originally incorporated under the name Lyndon in 1859. The name was changed to Caribou in 1877 and the city of Caribou was incorporated in 1968. Presque Isle was first settled in 1828 by Dennis Fairbanks, who ventured up the Aroostook River into the Letter F, Range 2 Township. Fairbanks secured the mill rights to the area, and constructed a grist mill and a very primitive saw mill on Presque Isle Stream (Wiggin 1922:91). Centrally located between the Aroostook River and Presque Isle Stream, the town of Presque Isle, French for "almost an island," was incorporated in 1859. In 1940, Presque Isle became the first city in Aroostook County.

The profits to be made from Aroostook County's abundant timber resulted in an increase in the amount of cleared acreage available in the county. Additional settlements were established in the cleared land and, together with the timber, the settlements turned to agriculture for subsistence. The region's principle cash crop was potatoes. The potato was introduced to the region by the Scots-Irish, and was possibly first planted in the county by Joseph Houlton in June 1807 (Rhodes 1989:9). Aroostook County has since become one of the nation's primary growers and exporters of potatoes.

Beginning in the 1870s, railroads into the area opened the lumber and agricultural industries to more commercial markets. A narrow gauge railroad entered Caribou in 1876, and the Bangor and Aroostook Railroad constructed a direct line to Presque Isle in 1895 and to Limestone in 1897.

The Great Depression saw a decline in Aroostook County's potato industry. To counteract the problems associated with decreasing potato sales, the Presque Isle Merchant's Association promoted air service for the town. Two hundred acres of farmland were purchased, and in 1930 runways and a hangar were constructed (Clark 1984:39). Prior to 1940, the airstrip was used for commercial air service. With the approach of World War II, the field was chosen in 1940 as a site for a U.S. Army Air Corps (USAAC) base. The airstrip was used by the USAAC in 1941 as a staging point for American bombers traveling across the Atlantic Ocean to England. With expansions and extensions, Presque Isle became one of the largest military airstrips in America.

In 1940, the nineteenth-century army base at the town of Houlton, established in 1840 to deal with the tensions that arose as a result of the Bloodless Aroostook War, was reevaluated by the U.S. Army and considered a prime location for the construction of an Army airfield. Houlton, like Presque Isle, became a western terminal of the North Atlantic route of the Air Transport Command. Although Presque Isle was the primary point of departure for American aircraft journeying over the Atlantic to Britain, Houlton gained importance as an alternate landing field (Parkman 1978:134). The Houlton and Presque Isle airfields, as well as the Dow AAF at Bangor, all contributed to the later expansion of Loring AFB. In 1950 the Presque Isle base was reactivated as a component of the Air Defense Command (ADC). The 2262nd Base Complement Squadron was stationed at the redesignated jet interceptor base to protect the newly constructed Loring AFB at Limestone. In 1957, the mission of the Presque Isle AFB was converted to a guided missile launching platform under SAC.

**Phase I Construction.** Limestone AAF was authorized for construction in April 1947. Limestone was the first base in the country designed and built specifically as an SAC base and incorporated the concepts of strategy and high-speed heavy aircraft, specifically the B-36 Peacemaker (Stevens and Tyson 1980:4).

The original master plan called for two parallel north-south runways, as well as a 12,000-foot east-west runway. The original design called for taxiways and aprons to accommodate more than 100 aircraft (Stevens and Tyson 1980:4,7). The entire plan never became a reality. Because the proposed project was so large and government funds were limited, construction progressed in phases. Multi-million-dollar contracts were awarded by the New England Division of the USACE to the contracting company in charge of each phase of construction.

On 23 May 1947, USACE issued a \$17-million contract to the Lane Construction Corporation of Meriden, Connecticut, and T.W. Cunningham, Inc., of Bangor, Maine, to begin the first phase of construction. This first phase included the engineering of a single north-south runway with a parallel taxiway and parking apron, an Arch Hangar, a Base Operations Building with a seven-

story control tower, an electric power generation plant, a 250-man permanent barracks (Building 6000), a water supply system, and a railroad spur.

The Arch Hangar was one of two identical structures simultaneously built as the largest monolithic arch roof structures to date in the United States. According to Parkman, the Loring AFB hangar "was one of the largest hangars in the world" (Parkman 1978:144). Allen also indicated that the Loring AFB hangar contained "several unique features from the standpoint of concrete construction" (Allen 1950:405). Important construction features included the foundation set on bedrock, the extensive column-on-pedestal-on-footing abutment construction, the intricate formwork required, the elaborate system of rails and jacks required to move the formwork, the thinness of the concrete slab roof, and the 340-foot span of the arch.

Construction of Loring AFB's runways was another elaborate feat of engineering. Special construction techniques were developed to deal with the airfield's unusual site conditions of "long winters, deep frost, rolling ground, bogs, forest and even potatoes" (*Engineering News Record* 1949:56-57). Heavy earthwork removed 2.1 million cubic yards of material. Frost damage was avoided by providing a foundation thickness of 70 inches of flexible bituminous-concrete pavement used over an impressive 10,000-foot by 300-foot area. The runway was later extended to 12,100 feet, making it one of the world's longest (*Engineering News Record* 1957:40). Phase I construction was completed on 30 June 1949.

**Completion and Mission of Loring AFB.** 15 June 1950 was set as the date for beginning limited operations at Loring AFB in response to increasing Cold War tensions. On 10 June 1950, 7 SAC officers and 78 SAC airmen, constituting a base detachment, arrived as a tenant unit during construction. The first aircraft, an Oklahoma cargo plane, was received and dispatched on 12 June. The first B-36 arrived and departed on 16 June. On 1 July, the base detachment was designated as the 4215 Base Service Squadron. In light of the escalating conflict in Korea, it was decided that the base would be permanently assigned 28 officers, 340 airmen, and 20 civilians. By August 1950, more routine transient aircraft began using the base and the first permanently assigned aircraft, a C-47, arrived. By November 1950, the base had 19 officers and 172 airmen.

The increased military funding from Congress to support South Korea resulted in the acceleration of construction at Loring AFB in 1951. Eight additional hangars were constructed at the southern end of the runway, and the runway was extended to the north. A weapons storage area was also begun at this time.

In 1951, the Department of Defense (DOD) allocated funds for the construction of an ordnance storage site at Loring AFB. The designs called for a self-sufficient "maximum security storage area for the most advanced weapons of mankind" (Stevens and Tyson 1980:27). The mission of the facility would be the protection and maintenance of the weapons used by SAC. The facility was situated in the northeast corner of the base, and construction began on 4 August 1951. In addition to 28 storage igloos and other weapons storage structures, the facility included weapons maintenance buildings, barracks, recreational facilities, a warehouse, and offices.

Though not yet complete, the weapons storage facility was partially occupied and activated on 1 November 1951. The area was then known as the Caribou Air Force Station, or East Loring. On 15 December 1951, the 3080th Aviation Depot Group was activated under the Air Materiel Command and assumed control of the area (Stevens and Tyson 1980:chronology). Construction of the facility was completed on 10 April 1952.

By the end of 1952, the base had a number of newly or nearly completed buildings including a motor pool building, a communications facility, a hospital, three barracks, a school, an officers club, a bakery, and a briefing and training building. By this time, the new Air Force design concept was becoming evident at Loring AFB. Surrounding vegetation was retained as much as possible for camouflage, and the traditional rigid military layout of roads and buildings was avoided (Stevens and Tyson 1980:27).

General Curtis E. LeMay visited Loring AFB on 8 February 1953 to review progress. He indicated that the base was ready for a bombardment wing assignment and full operations. On 15 February 1953, command of the Limestone facility was transferred from the USACE to SAC. Personnel of the 4215th base detachment were reassigned to the 42nd Bombardment Wing (BW), and the wing was activated and assigned to the 8th Air Force. The 42nd had been inactivated in May 1946 after serving in the Pacific Theater of Operations, and later as part of the American occupation force in Japan after the war. With these assignments, on 25 February 1953, Loring AFB became operational. During its early months, the Wing flew training missions and handled deployments of other units. In March and April 1953, aircraft maintenance crews began setting up full-scale B-36 operations. Ten B-36 bombers arrived in April 1953, giving the 69th Bombardment Squadron a full complement of aircraft. By 31 August, the wing had 27 B-36 bombers, 322 officers, 313 airmen, and 350 civilians. In that year, construction of a chapel, gym, commissary, photo laboratory, and headquarters building was begun.

On 7 January 1954, the 42nd BW was declared operationally capable of implementing its Emergency War Plan. On 1 October 1954, the base was renamed Loring AFB for Major Charles Joseph Loring, Jr., a native of Portland, Maine, who in 1952 dove his damaged fighter into enemy emplacements in Korea. On 8 October 1954, the 45th Air Division was activated as the primary base unit. In that month, Loring AFB was designated as the primary staging location for jet fighter aircraft flying between the United States and Europe. This action significantly increased the transient traffic at Loring AFB. By the end of 1954, Loring AFB had 63 assigned aircraft.

With additional aircraft arriving in the mid-1950s, a number of additional hangars were constructed at Loring AFB. In 1955, Loring AFB's DC Hangar, approximately 250 by 600 feet, was constructed. A product of revolutionary engineering design, it was one of the first double cantilever hangars built for the Air Force in response to SAC's demand for larger, more efficient maintenance space. The interior of the hangar consists of a network of steel arched trusses and perfectly balanced cantilevers. The hangar was the focus of Loring AFB's aircraft maintenance system. It was the first and only hangar capable of housing five B-36s (the largest aircraft ever built) or six B-52s, and far surpassed Loring AFB's other hangars in maintenance capabilities.

As such, the DC Hangar was critical to sustaining the base aircraft's peak ready condition during this period.

By 1956, 18 additional "nose-dock" hangars had been constructed northwest of the runway at Loring AFB. Each could accommodate the nose and wings of a bomber, and provided general aircraft maintenance space. Additional taxiways and parking aprons to accommodate aircraft movement to and from the new hangars were also constructed at this time.

The steady progression of the Cold War necessitated continual updating of techniques and aircraft. The first KC-97 Stratofreighter tankers arrived at Loring AFB with the activation of the 42nd Air Refueling Squadron (AREFS) at Loring AFB on 18 January 1955. Because Loring AFB's B-36 aircraft were not equipped for air refueling, the tankers assigned to the base initially supported other units. The squadron's first in-flight refueling mission was completed on 8 March 1955. Eventually, 21 tankers and 30 air crews were added to the Loring AFB inventory to accommodate the refueling mission.

By 1955, Loring AFB's composition included four bombardment squadrons (#42, 69, 70, and 75), a Field Maintenance Squadron, a Periodic Maintenance Squadron, an Armament and Electronics Maintenance Squadron, a Tactical Hospital, a U.S. Air Force Hospital, an Air Base Group, an Operations Squadron, a Supply Squadron, a Motor Vehicle Squadron, an Air Police Squadron, a Food Service Squadron, an Installation Squadron, and an Air Force Band (Kohn and Harahan 1988:101).

On 9 January 1956, the year following its introduction to the Air Force, the first B-52 Stratofortress landed at Loring AFB as part of a cold weather testing program. Loring AFB's first permanent B-52 arrived on 16 June 1956. (The main runway had been resurfaced the previous year in anticipation of its arrival.) It was christened the "State of Maine" with a bottle containing waters from both the Atlantic and Pacific Oceans, a symbol of the craft's ability to fly from ocean to ocean without refueling.

The first KC-135 Stratotanker, christened the "Aroostook Queen," arrived at Loring AFB on 16 October 1957. Its missions included electronic reconnaissance, airborne command and control, electronic warfare, military airlift, and aerial refueling of bombers under all conditions. By 6 December 1957, all KC-97 had left Loring AFB; 20 KC-135 tankers arrived by April 1958; and the 42nd Air Refueling Squadron attained combat-ready status 1 month later.

On 10 November 1956, the Soviet Union threatened to send volunteers to oust British and French troops from the Middle East. President Dwight D. Eisenhower urged the United Nations to counter any action by the Soviet Union; SAC was alerted on 15 November to support whatever action the United States committed to follow. At that time, P.D. Eldred, a reporter with Associated Press (AP), went to Castle AFB, California, to get details about the B-52. Failing to get answers to technical questions then considered to be classified information, Eldred appeared to have manufactured his own answers. His article painted a dismal picture of maintenance requirements for the new bomber.

In response, SAC planned Operation Quick Kick, a flight around the perimeter of North America to coincide with the release of the Eldred story. The operation, executed by four 93d BW B-52s from Castle AFB and four B-52s of the 42nd BW, Loring AFB, took place on 24-25 November. The longest individual flight was commanded by Lieutenant Colonel Marcus Hill of the 93d BW, whose flight lasted 31 hours 30 minutes and covered approximately 13,500 nautical miles (Hopkins and Goldberg 1986:59). Following the successful conclusion of the operation, several of the bombers landed at Baltimore International Airport and were met by television, newspaper, and newsreel reporters. The operation was given such great publicity that Eldred's story on the B-52 was buried by the headlines announcing Operation Quick Kick. The flights were hailed by the press as a warning to potential enemies and may have contributed to the Soviets quietly dropping the issue of sending volunteers to the Middle East.

An Alert Force was established at Loring AFB in October 1957. The wing began supporting the alert force with six B-52s in January 1958. In response to a conflict in Lebanon, the Alert Force was expanded to include the entire bombardment wing in July 1958, when the SAC bomber force went to full alert status. SAC's overall one-third goal was achieved in 1960.

A special area was typically designated on an Air Force base to meet the specific requirements of the Alert Force while on duty. A high-security component of the base, the Alert Area was the vital nucleus of the Alert Force mission. It provided special accommodations for bombers and tankers on alert, and for the alert crews whose activities were restricted while on duty. In many cases, the Alert Area was also the hub for much of the strategic planning and tactical intelligence related to alert missions.

At Loring AFB, the largest feature of the Alert Area is the parking apron, referred to as the "Christmas tree" or the "crow's foot" because of the distinctive configuration of five branching parking spaces. The main building in the area is the Alert Crew Readiness Building, which accommodates living, sleeping, working, and recreational space for the alert crews on duty. A large, sprawling structure, its distinctive exterior feature is a number of tunnels that project from the basement and ground levels to give clear access to bombers on the apron once the alert klaxon has been sounded. Security-related structures in the area include a surveillance tower, an entry control building, and a surrounding fence.

At Loring AFB, the decade of the 1970s was a period of uncertainty. On 11 March 1976, Headquarters SAC announced that the 42nd BW would be inactivated; the decision was reversed in 1979. The strategic value of the location of Loring AFB reportedly played a major role in the reversal of the decision. During the 1980s, Loring AFB became a non-nuclear base and its bombers were equipped to carry conventional bombs. Increased funding during this period allowed the completion of a second fully capable runway and a number of major renovations.

With the disestablishment of SAC in 1992, Loring AFB was transferred to the ACC. On 16 November 1993 the last B-52 departed Loring AFB. Flying missions for the 42nd BW came to a close with ceremonies held on 4 February 1994 to commemorate the role of the refuelers in Loring AFB's history. KC-135s flew missions through 22 February 1994. The last tanker departed Loring AFB on 2 March 1994. Loring AFB was closed in September 1994.

## SOURCES OF INFORMATION

### A. Historic Views

Historic photographs and maps are kept on file at the Air Force Base Conversion Agency at Loring Air Force Base. Upon conveyance of base property, the photographs and maps will be kept on file at the Loring Development Authority or at the U.S. Fish and Wildlife Service office, both located at 5100 Texas Road, Limestone, Maine.

### B. Bibliography

Allen, J.E.

1950 "Construction of Long-Span Concrete Arch Hangar at Limestone AFB." *Journal of the American Concrete Institute*. Vol. 21, February.

Borowski, H.R.

1982 *A Hollow Threat: Strategic Air Power and Containment Before Korea*. Greenwood Press, Westport, Connecticut.

Casey, D., and B. Baker

n.d. *Fuel Aloft: A Brief History of Aerial Refueling*. Office of Air Force History, United States Air Force, Washington, DC.

Central Intelligence Agency

1994 *The Secret Cuban Missile Crisis Documents*. Brassey's, McLean, Virginia.

Clark, M.G.

1984 "Presque Isle -- Historical Overview." *City of Presque Isle 125<sup>th</sup> Historical Booklet 1859-1984*. City of Presque Isle Booklet Committee, Presque Isle, Maine. Copy in vertical files, Mark and Emily Turner Memorial Library, Presque Isle, Maine.

De Jonge, A.

1986 *Stalin and the Shaping of the Soviet Union*. William Morrow and Company, New York, New York.

*Engineering News Record*

1949 "A Postwar Bomber Base Emerges," 3 February.

1957 "Two Bases for the Biggest Strategic Bombers," 28 February.

Holloway, D.

1994 *Stalin and the Bomb: The Soviet Union and Atomic Energy 1939-1956*. Yale University Press, New Haven Connecticut.

Hopkins, J.C., and S.A. Goldberg

1986 *The Development of Strategic Air Command 1946-1986*. Office of the Historian, Headquarters Strategic Air Command, United States Air Force, Offutt Air Force Base, Nebraska.

Kohn, R.H., and J.P. Harahan (eds.)

1988 *Strategic Air Warfare, An Interview with Generals Curtis E. LeMay, Leon W. Johnson, David A. Burchinal, and Jack J. Catton*. USAF Warrior Studies. Office of Air Force History, Washington, DC.

Parkman, A.

1978 *Army Engineers in New England: The Military and Civil Work of the Corps of Engineers in New England 1775-1975*. U.S. Army Corps of Engineers, New England Division, Waltham, Massachusetts.

Polmar, N., and T. Laur

1990 *Strategic Air Command*. The Nautical and Aviation Publishing Company of America, Baltimore, Maryland.

Rhodes, D.

1989 "There Are Many Stories of How Potatoes Began in Aroostook." *Bangor Daily News*, 29-30 April.

Schaffel, K.

1991 *The Emerging Shield: The Air Force and the Evolution of Continental Air Defense 1945-1960*. Office of Air Force History, United States Air Force, Washington, DC.

Stevens, W., and P. Tyson.

1980 The Loring Episode. Copy of file, Loring Air Force Base, Limestone, Maine.

U.S. Air Force

1991 *Peace . . . Is Our Profession: Alert Operations and the Strategic Air Command, 1957-1991*. Office of the Historian, Headquarters Strategic Air Command, Offutt Air Force Base, Nebraska.

U.S. Air Force

1998 *Historic Building Inventory and Evaluation, Loring Air Force Base, Maine*.

Walker, M.

1994 *The Cold War*. Henry Holt and Company, New York, New York.

Wiggin, E.

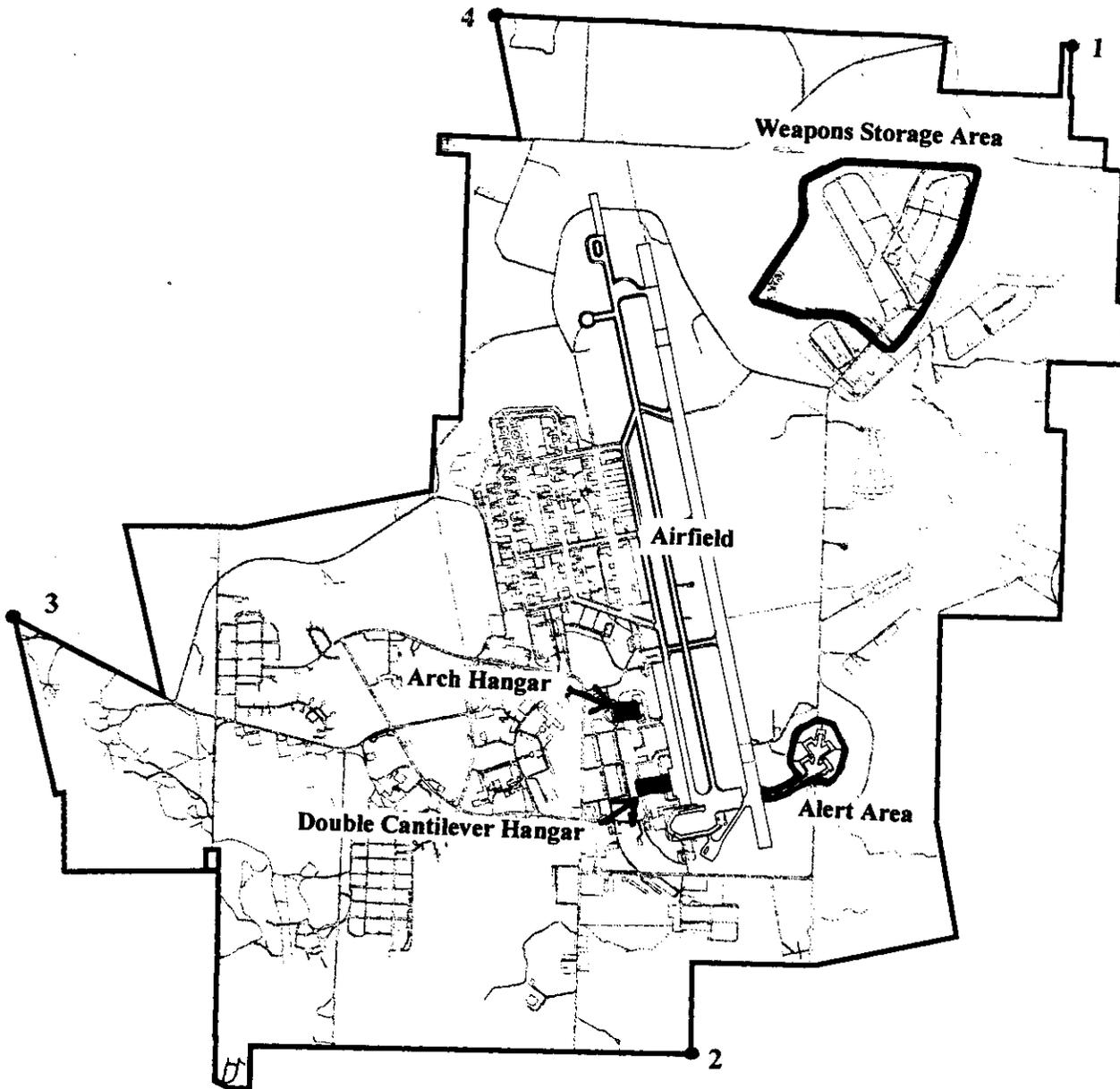
1922 *History of Aroostook*. Star Herald Press, Presque Isle, Maine. On file at Mark and Emily Turner Memorial Library, Presque Isle, Maine.

Yenne, B.

1984 *The History of the U.S. Air Force*. Exeter Books, New York, New York.

**C. Likely Sources Not Yet Investigated**

All likely national and local archival sources have been investigated.



ROADS  
BASE BOUNDARY  
AIRFIELD

500 0 500 Meters



Loring Air Force Base  
UTM Coordinate Points  
1) 19:587117.5203693  
2) 19:584862.5196492  
3) 19:580034.5199310  
4) 19:583140.5203679





**Base Master Plan**  
Source: Loring AFB Tab Map, 1993  
Located at AFBCA, Loring AFB, Maine