

Summer 2012



La Peninsula

The Journal of the San Mateo County Historical Association, Volume xli, No. 1



The Nike Missile Areas
at Milagra and Sweeney Ridges

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Address correspondence to: Editor, *La Peninsula*, San Mateo County Historical Association, 2200 Broadway, Redwood City, CA 94063 or lapeninsula@historysmc.org.

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Front Cover: Launch Area at Milagra Ridge (SF 51 L).

Our Vision

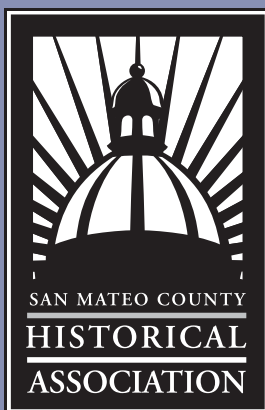
To discover the past and
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Our Mission

To enrich, excite and
educate through
understanding, preserving
and interpreting the history
of San Mateo County.

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SF 51: The Nike Missile Areas

at Milagra and Sweeney Ridges

by Mitchell P. Postel



This idyllic view of Sweeney Ridge does not hint at the military presence in the area.

I. Introduction

In 1770, Spanish explorer Pedro Fages became the first European to see the “Golden Gate,” the entrance to the San Francisco Bay, from the Bay’s eastern shore. From that historic moment, it became increasingly clear that this portal was a strategically important place in *Alta California*. In 1772, Fages, with Franciscan Juan Crespi, in a failed attempt to get around the Bay, made the further discoveries of the Suisun Bay and the Sacramento-San Joaquin River Delta. This gave more significance to guarding the Bay since it was now coming to be understood that this was the key for navigating and controlling the interior of *Alta California*. In 1775, Juan Ayala, aboard the *San Carlos*, proved the Golden Gate could be sailed through. Juan Bautista de Anza sited the mission and presidio at San Francisco the next year, 1776, and a military presence stood guard over the Golden Gate for nearly two centuries thereafter.

San Mateo County’s Milagra Ridge’s and Sweeney Ridge’s place in this story comes at its very end. As weapons became more sophisticated through the decades, their range increased dramatically, and therefore so did the geographical area that needed to be covered by seacoast defenses. As the United States entered World War II, preparations included anti-aircraft guns and radars at Milagra Ridge plus heavy armament for engaging ships at sea and landing forces. The

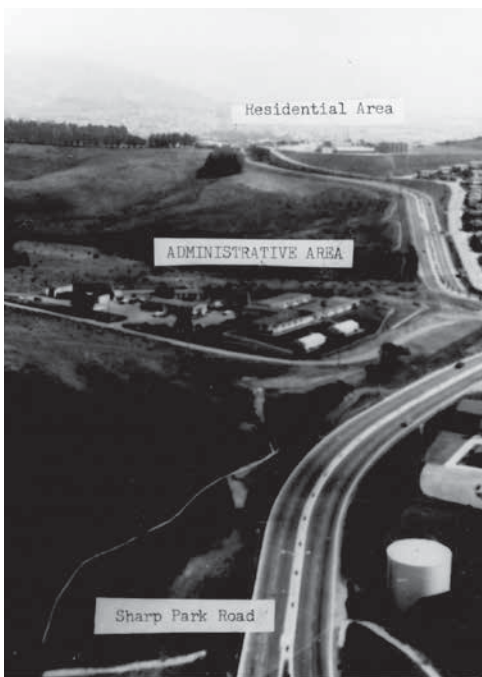
Mitchell P. Postel

Mitchell P. Postel has been the Executive Director/President of the San Mateo County Historical Association since 1984. He has taught history at the College of San Mateo, and is a frequent speaker on San Mateo County history. Postel is a member of the San Mateo County Historic Resources Advisory Board and the Board of the San Mateo County Visitors and Convention Bureau. He is the author of seven books on local history, including *San Mateo County: A Sesquicentennial History*.

Editor’s Notes

The Golden Gate National Recreation Area (GGNRA) commissioned the San Mateo County Historical Association to create histories of its properties in San Mateo County. Among these properties are Sweeney Ridge and Milagra Ridge. This article expands on the research on the Nike Missile Areas done originally for the GGNRA study.

Historic maps of Sweeney Ridge and Milagra Ridge have been used throughout this issue. The Publications Committee recognizes that the details of the maps are difficult to read at the size printed. Full-size prints are at the San Mateo County Historical Association’s Archives in Redwood City.



Milagra SF 51 Administration Area at Milagra Ridge, c. 1958.



San Pedro y San Pablo was an agricultural outpost for Mision San Francisco de Asis. From a painting by Mary Breshahan.

Coast Guard built a radio station on Sweeney Ridge. During the Cold War, the weaponry on the ridges featured a Nike guided missile system as defense against aerial attack.

II. SF 51 L (Launcher Area) and A (Administration) at Milagra Ridge.

A. The Place

Today Milagra Ridge is part of the National Park Service's Golden Gate National Recreation Area (GGNRA). This 249-acre parcel of land lies on the northern flank of Sweeney Ridge.¹ At an elevation of 640 feet, it possesses impressive views of the Pacific Ocean, the Farallon Islands, Point Reyes, San Pedro Mountain, Montara Mountain, Mussel Rock, Mori Rock, San Pedro Point and the Pacifica City shoreline.² It is hard for today's visitors to imagine that 38 years ago this beautiful place possessed deadly weaponry of the Cold War era.

B. Early People

Before the Spanish arrived, Milagra Ridge was grassland, as people of the local tribe, the Aramai, periodically burned the hillsides in this area. They did so, as other Ohlones did, to encourage grasses for grazing animals that were valuable to the people as a food source. They also collected grass seed for consumption.³ Although no "formal archeological surveys have been conducted,"⁴ there is little evidence to suggest that Milagra was the site of an Indian village.

During Spanish times, an agricultural outpost was established in the San Pedro Valley. The hills to the outpost's east, including Milagra Ridge, were used for grazing cattle.

In 1835, during the Mexican period of California history, the land east of the Ridge, *Rancho Buri Buri*, was granted to Jose Sanchez. Milagra Ridge itself was given to Jose's son, Francisco Sanchez, in 1839, as part of his *Rancho San Pedro*. For a dozen or more years it is likely that the herds from both *ranchos* used Milagra for feeding.

Francisco Sanchez held on to his land into the American era. After his death in 1862, his family gradually sold off the *rancho* properties. Milagra Ridge remained in agricultural use. The Sneath family used it for grazing their dairy cattle, and farmers grew crops there until World War II.

How Milagra Ridge got its name is a murky subject. Back in 1866, a Spanish-language lease for land in the gulch to the west of the Ridge was named *potrero del Milagro* (miracle field). The Coast survey of 1868 describes a Milagra Valley.⁵ The "Official" San Mateo County map of that same year shows a "W" shaped parcel in the area, labeled *Milagro*, of 223.74 acres.⁶ Local historians have suspected that a Milagro family

must have lived here, but neither the 1870 census nor the 1879 Great Register of San Mateo County reveal anybody of that name.

The United States Geological Survey continued to show Milagra Valley in 1892, but in another location (closer to today's Sharp Park Road).⁷ After 1900, the Fahey Ranch was in this location, and what had originally been known as Milagra Valley took the name Fahey's Gulch for a while. Finally, in 1957, the commanding officer at the Nike missile base called the hill east of the valley Milagra Ridge, and the name has stuck.

C. Defending San Francisco Bay

The story of defending the San Francisco Bay begins at the southern edge of the Golden Gate, where the world-renowned bridge touches down on San Francisco today. Building of a *presidio* and a mission together were of utmost importance to the Spanish. This was, at the time, Spain's northernmost outpost on the North American continent. The San Francisco *Presidio* represented Spain's physical commitment to maintaining a permanent military presence. It protected its claim of lands north of Mexico and marked its hegemony of the San Francisco Bay and, indeed, *Alta* California on the whole.⁸

During the early American era, in its plan of 1850, the United States military decided to place batteries close to the water at Fort Point and Alcatraz. A cross fire would be achieved by placing similar works at Point San Jose and on Angel Island.

As the Civil War began, the United States Army started planning how to defend the Bay Area. A strategy evolved centered on holding a line of defense from San Bruno Mountain to Lake Merced. This basic scheme remained the cornerstone of army preparations for an attack on the San Francisco Bay through to the World War II era.

With war clouds gathering in the 1930s, defense of the San Francisco Bay remained the highest priority on the Pacific Coast of the continental United States. Among extensive plans proposed in 1937 were two batteries of pairs of 6-inch guns with overhead cover: one at Fort Miley in San Francisco and the second at Milagra Ridge to the south. Both were eventually completed, as was an expanded system of observation stations that included installations at Devil's Slide and Pillar Point.⁹

The Army purchased both the promontory at Devil's Slide (9.61 acres from Hibernia Bank) and the promontory at Pillar Point (13.7 acres also referred to as Gray Whale Cove Promontory) to create fire control stations. Fire control stations were necessary in order to increase the accuracy of the newer long-range artillery pieces being installed. The

David Bridgman

Guardsman Dave Bridgman worked in the motor pool for SF 51 and helped to shut down the installation in 1974. He was born in 1954 and was raised in San Bruno. He went to South San Francisco High School and joined the California National Guard in 1973.

Dave's experience is unique, because his father, Richard H. Bridgman, Jr., had been assigned to SF 51 in 1963. Son and father served there together in 1973 and 1974. Dave has childhood memories of visiting Sweeney Ridge with his family. Sometimes on clear days, he could look past Mount Diablo and see the Sierra Nevada. He remembers how some of the men befriended a fawn and made it a pet. On many visits he was impressed with the fog, wind and cold. There was a gate with a combination lock at the end of Sneath Lane in San Bruno, similar to the National Park's setup currently. This was the entry to the access road to the Control Area. Today's hikers on their way up to the Sweeney Ridge from this gate notice a stenciled message on the road marking the beginning of the "fog line". This white stripe runs through the middle of the road and proceeds all the way up to the Control Area. The Army had painted it for good purpose. Dave recalls that the fog was so dense that drivers would aim their vehicles on the center of the line and move slowly up the hill.

As a serviceman Dave recollects the mood at SF 51 to be more "laid back" than other military installations. The reservists were older and knew what to do. Officers could relax and trust the enlisted men. Morale was "outstanding," he recently told the San Mateo County Historical Association. Nevertheless, a few of the "weekend warriors" were less enthusiastic than the full-timers. They were younger, and some had joined the Guard to avoid going to Vietnam. However, Dave asserts even those most passionate in their anti-war beliefs had to admit that the mission of SF 51 was strictly defensive - in fact the "last line of defense".

Dave recalls closing down SF 51 as a sad time. His father had been there for 11 years and had developed many friendships. Soldiers who were not ready to retire had to move on to new duties in different locations.

Ezio Nurisio

Ezio Nurisio, a California National Guard Reservist, was a member of the two trophy winning, 100% perfect SNAP teams and then helped to shutdown SF 51, as an enlisted man (E-5). In an interview with the San Mateo County Historical Association, he suggested the National Guard troops were better suited than the regular United States Army soldiers for handling the Nikes. The Guard personnel seemed to be more motivated and had a better understanding about how they were the last line of defense against a foreign airborne threat. After all, they were protecting "home turf." The reservists at SF 51 all knew one another and became good friends. There was certainly a higher maturity level among them, as compared to the soldiers of the regular Army, who were quite a bit younger. In fact the regulars were not allowed around the nuclear weapons with the same degree of trust as was extended to the Guardsmen. Nurisio feels the "awesome responsibility" of working with the Nikes shows the National Guard at its pinnacle of importance, historically.

Moreover, as far as the Nike system was concerned, Nurisio asserts that it was "extremely safe by design." The personnel with responsibility for care and handling of the weapons were heavily screened. Backgrounds were checked. Psychological evaluations were performed. There was constant monitoring while the men worked their stations. There was also a "two-man rule." One man never worked alone around the nuclear weapons. Of course the guard dogs were called on for securing the Launcher Area at night from outside intruders. The animals were vicious. "If a dog got loose, you'd see people running." Only the handlers had control of the dogs, but even they feared a dog might turn on them. Everyone believed the dogs would kill.

Nurisio was born in 1947 and raised in South San Francisco. He graduated from South San Francisco High School and attended the College of San Mateo. He joined the regular Army in 1966, and then, in 1972, joined the reserves as a "weekend warrior."

Nurisio remembers the weather as windy and cold. The fog, at times, was so thick "you couldn't see your hand in front of your face."

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pillbox-like stations were furnished with radar equipment and high-powered telescopes to take bearings on targets. They possessed telephone connections to the plotting rooms at their assigned gun batteries.

The Milagra Ridge Military installation became the southern-most coastal defense fortification built by the U.S. Army to defend the entrance to the San Francisco Bay. While the plan to create it was adopted in 1937, it was not until 1942 that the Army acquired 330.1 acres along Milagra Ridge for construction of the 6-inch gun batteries. Construction of this Battery #244 began in March of 1943. The battery was structurally completed in 1944 and was turned over to the Army's Coast Artillery Corps in September of that year.

As World War II advanced, so did technology and an understanding about what worked and what did not. By 1945, the Army had decided that only a few of the most modern batteries, which included #244, would be necessary in the post-war era. Actually, #244 did not receive its 6-inch caliber rifled guns until 1948, well after the war ended. The guns were encased within cast-steel shields, making them resemble a warship's turrets. They were emplaced on either side of an underground works that included magazines, a power plant, plotting room and crew quarters. The Army designated T2M guns were mounted on M4 long-range barbette carriages. The guns were test fired a few times, but were removed in 1950. Battery #244 gained the distinction of possessing the last of the artillery weapons to be disarmed for purposes of defense of San Francisco Bay. While a much larger 16-inch caliber battery had been planned for Milagra Ridge, no work was ever begun. Today, the guns are gone, but visitors to the park can view their structural emplacements plus the tops of several support stations, while standing over the underground works, which are sealed to the public.¹⁰

Thus the end of an era transpired on Milagra Ridge. Since the 1700s, the concept of artillery guarding the Golden Gate, in one form or another, had guided military strategists. Their energy and resources were dedicated to defend a critical harbor within an immensely important part of North America. However, lessons learned at great cost during World War II called for different priorities. Seacoast artillery could not endure the new threat of air attack. Amphibious warfare had evolved to the point that landings around fixed seacoast defenses were possible. Finally, the atomic bomb required a complete overhaul of all past theories on warfare, resulting in little need for conventional seacoast defense.

D. Milagra Ridge and the Cold War

The euphoria of victory after World War II did not last long. A “Cold War” between the United States and the Soviet Union soon manifested itself. Within five years another shooting conflict, the Korean War, strained relations between the super-powers yet more. Defense was again on the minds of Americans, and once more the Bay Area was felt to be of crucial importance and required protection. Conventional air defense was in place, but the threat of airborne nuclear attack required more sophisticated preparations. The United States Army Antiaircraft Command eventually took over the role of the Army’s old Coast Artillery branch and was given charge of maintaining new weapons and deploying them if challenged. The advanced systems included the Nike anti-aircraft missile. In 1953, Milagra Ridge was designated as a site for launching the missiles in case of attack.

In the face of nuclear devastation, the Command’s concept for defense was to prove readiness with an antiaircraft system so effective that an enemy would see that an assault was not worth the risk. However, if this deterrent failed, the goal became to deny the enemy the ability to destroy key industrial and defensive centers. In 1957, the Command was itself made a component of the North American Air Defense Command charged with the overall defense of North America.¹¹

The Nike missile became a weapon of increasing importance within America’s antiaircraft defense arsenal. After World War II, the Army went to Bell Telephone Laboratories and asked them to plan an antiaircraft guided missile. Bell joined with Douglas Aircraft in creating the new Nike system. The Army then contracted with Western Electric to manufacture Nikes in adequate quantity. Some 6,000 suppliers helped Western Electric create the 1.5 million parts necessary to create each Nike missile.

The Nike was actually meant to be the last line of defense. In case of an aerial attack, fighter squadrons would first engage the enemy. If any bombers slipped through, the Nike system would respond. Long range radar would pick up the approach; more radars would then target the plane. The Nike would then be fired. A last radar would follow the missile, sending guidance commands it received from the fire control computer, 2.3 to 3.6 times faster than the speed of sound, precisely targeting the enemy.

In stages the Army called on the Army National Guard to man the Nike units. The Army Antiaircraft Command, established on July 1, 1950, just four days after the start of the Korean War, had 19 of its 38 battalions manned to good effect by the National Guard. These early

Ezio Nurisio (cont.)

He recalls the demeanor of the men of SF 51 to be most professional. During the 1973 Middle East War, it was “business as usual.” The occasional Soviet trawler, out at sea twelve or more miles, from time to time would engage in Cold War type games to confuse Nike radars, but it was nothing that could not be handled.

About the camaraderie of the SF 51 soldiers: it was strong. There was a certain humorous rivalry between the men assigned to the Launcher Area and those at the Integrated Fire Control Area. The Launcher men referred to the Control people as “scope dopes” as they were seemingly wed to their radar scopes. The “scope dopes” called the Launcher men “mole people” or “pit rats” because of their activity within the underground magazines. Nurisio relates that even today, the veterans kid each other. However, all agree about their service as Nike servicemen of SF 51: “Once in - - never out.”

Arsenal at Milagra by Ezio Nurisio

SF 51’s Arsenal at Milagra Ridge had two magazines that housed 10 Ajax each, during the Ajax era, and six Hercules each during that era. Typical was three magazines per site. Restricting initial factor was suitable terrain. Afterwards it was available funding. During the Ajax era sites had more magazines due to the limited performance envelope of that missile compared to that of the Hercules. The maximum number of magazines one site could handle was four. This was due to the number of automatic launcher positioning units available to the MTR. When existing sites were converted to Hercules, the elevators had to be lengthened and strengthened due to the longer and heavier missiles. It was common practice, during this conversion period, not to convert all the magazines. For example, if a site had three magazines, only two may have been converted, and the third used for storage, or simply shut down. To my knowledge this wasn’t evident in the San Francisco Defense, yet occurred in Los Angeles, as well as quite a few on the East Coast.

ARADCOM

United States Army Air Defense Command



ARADCOM laurel painted on the wall at Milagra Ridge.

SF 51

Milagra Ridge

SF 51 A.....Administration
SF 51 L.....Launcher

Sweeney Ridge

SF 51 C.....Integrated Fire Control

units were armed with conventional 90 and 120 mm guns.¹² In 1953, the Command initiated a program to phase out the old World War II type defenses and replace them with what was touted as the first successful, surface-to-air missile, the Ajax, the initial Nike system.

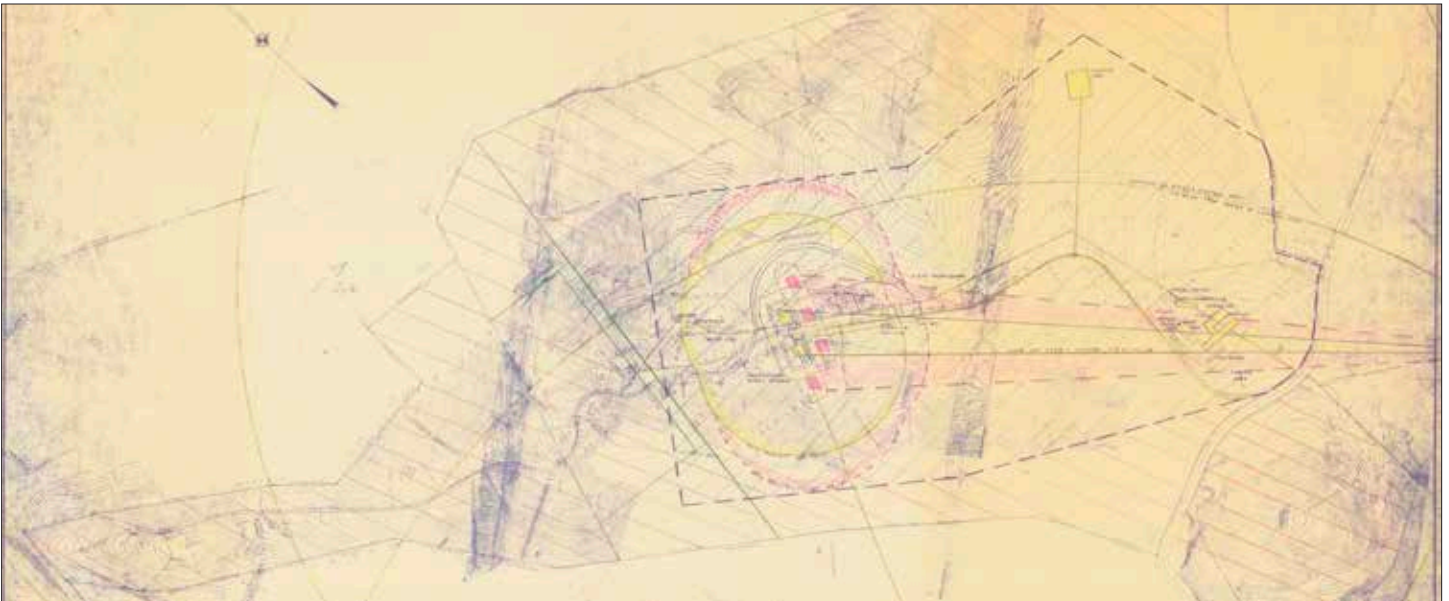
The Ajax (MIM-3A) had a gross weight of 2,455 pounds and was 34.1 feet long. It was armed with conventional warheads and had a range of 30.7 miles. It could gain 70,000 feet in altitude. Its speed was mach 2.3. Each cost the Army about \$19,000.¹³

Milagra was one of a dozen Nike sites surrounding the Bay Area to become permanent launch facilities. (They were San Pablo Ridge, Rocky Ridge, Lake Chabot and Coyote Hills in the East Bay; Milagra Ridge, Fort Winfield Scott, Fort Funston and the San Francisco Presidio, south of the Golden Gate; and Fort Cronkite, Fort Barry, Angel Island and San Rafael in the north.) The units were to receive target information from the Army Air Defense Command Post atop Mount Tamalpais in Marin County.¹⁴

All Nike sites had Control (C), Launcher (L) and Administration (A) components. As Milagra was the launch site, the control or Integrated Fire Control Area (which included the radars and control equipment) was a 3.2-acre station on Sweeney Ridge.¹⁵ Together, Milagra and Sweeney were designated Site SF 51, C, L and A (SF 51 C at Sweeney Ridge; SF 51 L at Milagra Ridge; SF 51 A at Milagra Ridge). By 1961, the Nike sites in the San Francisco Defense Area composed the sixth United States Army Air Defense Command (ARADCOM) Region.¹⁶

Planning for Milagra began in 1953,¹⁷ along with the other early Nike installations. Construction commenced with an expansive excavation to provide underground storage for the missiles.¹⁸ All the sites included three separate areas, a Launcher Area, an Integrated Fire Control Area and an Administration Area. These areas were fenced with barbed wire and patrolled by troops. SF 51 became operational in 1956.¹⁹

The Launcher Area at SF 51 was dug out south of the World War II, 6-inch gun works, within the present National Park. The administrative headquarters building, barracks and support structures were a half mile southeast of this, a site currently occupied by a condominium complex at Sharp Park Road and College Drive, on the north side of the intersection.



Army Corps of Engineers made this map of Milagra Ridge in 1957. Yellow signifies existing structures and pink signifies proposed future additions. Courtesy GGNRA Park Archives.

The above Army Corps of Engineers' map of 1957 shows the underground missile chambers (or magazines) completed, along with the ready room, missile assembly and test building and generator building on the launch site. At the administrative site the barracks, day rooms, mess hall and offices were in place. Dog kennels, southwest of the launchers were not constructed yet, but in the plans. Also shown were four more underground missile chambers that were never actually added.

The pair of underground magazines used to store the missiles included elevators and control rooms (typical of a Nike site). When the missiles were to be set for routine testing, doors would open up and the missiles would be brought to the surface. Of course no missile was ever actually launched from SF 51 L. The photo on the right of Milagra shows no evidence of a missile on site. All were stored below ground. By the time this photo was taken, the dog kennels (in the foreground) had been installed. A second photo includes the headquarters area. The motor pool and tennis courts at the top had been added.

David Bridgman, who served SF 51, as did his father Richard H. Bridgman Jr. (1928-2009), recently indicated that SF 51 had about 100 men assigned to it. At the Launcher Area men were stationed round the clock. The Control Area had a similar schedule. The administration office also had 5 to 15 working but just one shift a day.²⁰



The missiles were underground at the Milagra Ridge Launcher Area.



Milagra Ridge headquarters area. The motor pool and tennis courts are visible at the top of the photo.

William Hauger



William Hauger, #42, playing in the San Mateo High vs. Serra High game October 1, 1949. Courtesy William Hauger.

William Hauger served as Chief of the Launcher Area at SF 51 from 1962 until 1974. His responsibilities included overseeing missile assembly, disassembly and maintenance. He also acted as technical proficiency inspector for the unit. At the same time he was a member of inspection teams that visited Nike units within the region and throughout the United States.

Hauger was born at Fort Monroe, Virginia, on July 9, 1931. His father was stationed there with Army Coast Artillery. In 1946, his father was assigned to Fort Winfield Scott at the San Francisco Presidio. The family moved to San Bruno in 1948.

William enrolled at San Mateo High in his junior year. He was starting fullback and linebacker for the football team his senior year. He left school in May, 1950 and joined the California National Guard, serving for four decades. He was part of the group trained at Fort Bliss, Texas, for the transition training from the Ajax to the Hercules Nike systems.

Hauger lived in Palo Alto while stationed at SF 51 until 1974, when the Nike unit was shut down. While at SF 51, he maintained his interest in football. He was coach for Pop Warner's East Palo Alto Lions between 1962 and 1984. In 1965 he founded the Pop Warner Palo Alto Knights and was the team's head coach between 1965 and 1971.

In his last 18 months of military service, Hauger was Deputy Director of Administration for the California Army National Guard. In 1991, he retired as a Chief Warrant Officer, W 4 after 40 years, seven months and three days of military service. He lives in Sacramento today.

A property inventory of the site reveals some other details indicative of the activities and personnel at Milagra when it was an active launch site.²¹ Considering the basic needs of its all male personnel, the Barracks had 10 showers, nine urinals and one lavatory, while the ready room had two showers, one urinal and one lavatory.

As plans progressed to arm the Nike sites with nuclear-capable Hercules missiles in 1958, the sentry dog security program materialized. ARADCOM initiated training of dogs in November of that year. By 1961, some 500 teams had been trained. The purpose was to guard the sites against sabotage, theft, arson and trespassing. German shepherds were the preferred breed. Handlers and dogs trained as teams. Each Nike site employed at least four teams. The dogs were trained to "stop an intruder in his tracks." In order that the dog and his handler work as a highly developed team, only the dog's handler could "exercise control over him."²²

In 1958, Milagra's 740th Antiaircraft Missile Battalion received the new Nike-Hercules missiles. According to ARADCOM the Nike Hercules (MIM-14B) was the first "combat-ready surface-to-air missile with nuclear capability to enter the active air defenses of the United States."²³ Following the Ajax, the new weapon was considered "second generation" of the "Army's Nike family." Generally speaking the nuclear capability of the new system allowed for much greater defensive ability: "What Nike Ajax can do against single targets, Nike Hercules can accomplish against entire formations of aircraft..." explained ARADCOM. The Hercules could also be used against ships and submarines that might be attacking the coast.

At 10,711 pounds, the Hercules weighed nearly five times more than the Ajax. It was seven feet longer at 39.5 feet. It could obtain an altitude of 150,000 feet, more than 100% higher than Ajax. At mach 3.65, it was 37% faster. It could hit targets 85 to 100 miles away, three times the range. At \$55,200 per missile, it was nearly three times more expensive.²⁴ Douglas Aircraft Company originally developed and produced the Hercules.

According to ARADCOM, the mission of the Hercules Group in the San Francisco Bay Region was "...to maintain its nuclear capable... firing batteries in a constant state of combat readiness to protect the vital industrial, population, and military centers within the San Francisco - Travis Air Force Base area."²⁵ For reasons of financial feasibility, in 1959, the regular Army, just after it completed its conversion of some of the Nike sites from Ajax to Hercules, relieved a portion of its personnel with California National Guard crews in the San Francisco Region. After its men were trained at Fort Bliss, Texas, the National Guard completed its replacement of Army personnel at SF 51 in June of 1963.²⁶

By 1961, the surplus nature of some of the property at Milagra was

acknowledged by locals. That year San Mateo County and the City of Pacifica proposed that the old World War II bunkers and magazine be converted into a combined emergency County civil defense headquarters and a Pacifica police station. The Pacifica City Council eventually quashed the idea, citing limited access to the bunkers. However, in May of 1962, 73 acres of Milagra were disposed of and eventually were converted into residential development. In 1970, Pacifica leased underground space and sub-leased some of the square footage to the County for records storage. In January of 1971, some Oceana High School students hacksawed their way into the storage area, burned records and stole emergency civil defense equipment. Again, in March of 1972, arsonists broke in with hammer and chisel and set fires with highway flares. The fires smoldered for a full day before being discovered.²⁸ After this second incident, local officials stopped utilizing the bunkers.

SF 51 had its greatest moments in the latter part of its history (1972-1973), when its crews achieved record-breaking scores during practice competitions. Even earlier, SF 51 tested highly. In 1966, it was awarded the “newly instituted” ARADCOM Commander’s trophy “for excellence in combat proficiency,” and repeated this distinctive level of readiness in 1969, 1970 and 1971.²⁹ In fact in 1970, it was ranked the best battery in the command, and in 1971, the finest in California. However it was in 1972 that SF 51 became perfect at its business when it scored 100% during a Short Notice Annual Practice (SNAP) at McGregor Missile Range in New Mexico. Its terrific performance involved a launch using a new system. The 44 men involved served under Captain Michael V. Ivanoff and were given a “free shot”³⁰ (they were allowed to launch a second Hercules missile) as an award. Among those serving under Ivanoff were Chief Warrant Officer Richard H. Bridgman Jr. (who received the honor of initiating the second shot) and Chief Warrant Officer William L. Hauger. As if that were not enough, the next year, 1973, SF-51 went “back to back”³¹ by scoring 100% again at McGregor in this SNAP. No other firing battery in the history of ARADCOM ever equaled this record. The trophy honoring this feat is on display at the California Military Museum in Sacramento.

The emergence of the Inter Continental Ballistic Missile by the superpowers, with their tremendous range, heights and speeds, made the Nikes obsolete. In 1972 another 36 acres were declared excess at Milagra and transferred to the Department of Interior with the intention of allowing locals the opportunity to create a public park. While the federal government still held 220 acres, in May of 1974, these 36 acres

SF 51 Unit Identification ²⁷

Through various reorganizations, SF 51’s unit identification had the following designations:

Battery C/ 740th AAABn
September 1956- September 1958

Battery C, 4th Missile Battalion,
61st Artillery
September 1958-July 1959

Battery D, 2nd Missile Battalion,
51st Artillery
July 1959-June 1963

Battery A, 1st Missile Battalion,
250th Artillery*
June 1963- April 1974

* This historic unit was organized as the First Infantry Regiment of the California Militia on May 8, 1861.



Award winning crew at McGregor Missile Range. Courtesy of Barry Mion.



Competition at McGregor Missile Range. Courtesy Barry Mion



A

SF 51



A Missile at Milagra Ridge Launcher Area.

B Viewed through a fence, the road to Launcher Area at Milagra Ridge.

C Capt. Michael V. Ivanoff led 44 men from SF 51 to a perfect score during the 1972 Short Notice Annual Practice (SNAP) at McGregor Missile Range in New Mexico.

D Inspecting equipment for the sentry dog security program. The dogs, usually German shepherds, protected the site against sabotage, theft, arson and trespassing.

E Remains of Milagra Ridge Launcher Area, c. 1983.

Barry Mion



Barry Mion (right) at the McGregor Missile Range Competition. Courtesy Barry Mion.

Barry Mion was Launch Section Chief and Staff Sergeant at Milagra Ridge between 1972 and 1974. He was born October 15, 1943, and grew up in the North Beach neighborhood of San Francisco. After graduating from Galileo High School in 1961, he went into the National Guard.

In an interview with the San Mateo County Historical Association of April 23, 2012, Mion recounted what his responsibilities were as the Launch Section Chief. In summary, the missiles had to be prepared for launching in case of an attack within 15 minutes. His particular assignment was to have six Hercules missiles raised from the underground magazines (Milagra had two magazines with 12 missiles in total) onto launchers, with their nuclear warheads, ready to fire. It was his job to connect the electric firing plugs to the launchers. Without the plugs, the missiles could not be launched. He had a key for each launcher. Each key had to be turned for each of the six missiles. [These were safety keys that fit into four respective locks located in the magazine panel room. After making certain that all safety plugs had been removed and that all crewmembers were accounted for, he would insert the keys into their respective safety locks and connect the firing circuits by turning the keys.]*

Mion tells us that having the nuclear weapons at the Nike sites was kept secret. However, Milagra possessed a substantial capability. Its Hercules missiles were capable of destroying aircraft and surface targets. The Hercules at Milagra had 2 kiloton, 20 kiloton or 40 kiloton explosive power. The atomic bomb dropped on Hiroshima in 1945 was a 15 kiloton device. For each magazine, there was one missile armed with a conventional device. The other five were nuclear armed.

cont. pg. 15

were given to the City of Pacifica.

On February 4 of that same year, Secretary of Defense James R. Schlesinger announced a “planned reduction of Army Air Defense NIKE HERCULES missile batteries in the Continental United States.”³² By this time, 27 of the 48 batteries were operated by the National Guard. Among those on the initial list for decommission was SF 51. Only four batteries in Florida were retained. The Milagra and Sweeney unit was decommissioned in March. On June 20, a “Bon Voyage” party took place for the Sixth Region (San Francisco Region) Nike personnel. Among those making presentations were Colonel C. A. Miller, Commanding Officer, 13th Artillery Group and Brigadier General R.M. Mullens, Commanding General, 6th Region. Captain C. Patania, Jr. was listed as the Commander for Battery A, 1st Missile Battalion, 250th Artillery (SF 51).³³

III. SF 51C (Control) at Sweeney Ridge

A. The Place and Early People

Like Milagra Ridge, Sweeney Ridge is part of today’s GGNRA. However, during the Cold War era, the radar control portion of SF 51 was located here. For those familiar with San Mateo County History, Sweeney Ridge is a much better known place name than Milagra, because it was from here, in the fall of 1769, that Spanish Army Captain Gaspar de Portolá’s party discovered the San Francisco Bay. Of course the people who were already inhabiting the area were the Aramai of the Ohlone people, the same local tribe in the vicinity of Milagra Ridge, and, for that matter, all of present-day Pacifica.

In 1786, the Spanish *padres* of the Mission at San Francisco created an agricultural outpost in the San Pedro Valley (now the Linda Mar area of Pacifica). During Spanish times, Sweeney, like Milagra Ridge, was utilized as pasture land for cattle. In 1839, also like Milagra Ridge, Sweeney was included in the land grant to Francisco Sanchez as part of his *Rancho San Pedro*. He grazed long-horn cattle on the Ridge as did the *padres* before him.

After the Sanchez family began selling off parcels of the land grant, portions of it on the Ridge were purchased by livestock businessman Edward Sweeney in September of 1874.³⁴ Less than a year later, he sold the property to the Spring Valley Water Company; somehow the name Sweeney stuck to the Ridge.

In 1869, Richard George Sneath began purchasing property in San Mateo County for the purpose of establishing a dairy business. He called his ranch Jersey Farm. It eventually included a good portion

of today's San Bruno west of El Camino and some parts of Pacifica, including Sweeney Ridge. In 1887, famed California author John S. Hittell claimed it "the largest fresh milk dairy on the globe."³⁵ Sneath established three separate grazing areas. Ranch No. 3 was also known as the Sweeney Ridge Ranch. It was at the highest elevation of the Jersey Farm (about 1,300 feet) and was used for spring pasturage. By 1894, a road wound its way up the Ridge from the Farm's headquarters area near El Camino Real, where the Golden Gate National Cemetery is today. During the 1930s, the Sneath family began divesting itself of its San Mateo County properties. In 1932, they sold about 250 acres to San Francisco for the purpose of building a county jail. In 1938, they sold 162 acres to the U.S. government in order to create the National Cemetery.

B. Sweeney Ridge during World War II

When Sweeney Ridge visitors stroll north from the San Francisco Bay Discovery site markers, they come across buildings formerly occupied by the United States military from the 1940s through to the 1970s. These military preparations began more than a year before America's entry into World War II. On October 11, 1940, the United States Coast Guard was authorized to initiate negotiations with the City and County of San Francisco to acquire Sweeney Ridge property directly west of San Francisco County Jail for the purpose of creating a radio station. At the same time the Coast Guard gained authority to inquire of the Jersey Farm Company its willingness to sell a right-of-way for purposes of constructing a road.³⁶ The Sweeney Ridge installation was to replace the San Francisco radio station at Fort Funston. It had been commissioned on February 1, 1937. This station's building was a former lifeboat house on the beach about a mile south of the zoo at Golden Gate Park.³⁷

On July 29, 1941, the Jersey Farm Company formally offered the sale of the road right-of-way for \$1,000, and on August 6, 1941, the U.S. Attorney General's Office agreed with the terms of the deal.³⁸ The Attorney General then consented to the expenditure of \$8,750 for purchasing the San Francisco Jail property on November 27, 1941.³⁹

The Coast Guard characterized its new land holding as "rough, elevated land, varying from approximately 650 ft. to 950 ft. in elevation."⁴⁰ On March 31, 1944, exclusive jurisdiction over the property was accepted by the Secretary of the Navy as the Coast Guard had become part of the Navy's efforts during the War. Today most of this

Mion (Cont.)

Mion spoke of his closest call. It did not occur during an international crisis, but instead was an incident when a commercial airliner had gotten way off track and its IFF transponder** had become inoperable. It appeared as if an enemy plane was approaching for an attack. The missiles came up, and "the plugs were in" before Mion learned of this being a false alarm - - that a commercial airliner had "a bad box." "We went through a lot of toilet paper that day."

Most days were, of course, not harrowing. Mion remembers the weather as nearly "always foggy." Rust was a huge maintenance problem which constantly had to be addressed. Sump pumps were necessary in the magazines to keep water out during Pacific storms.

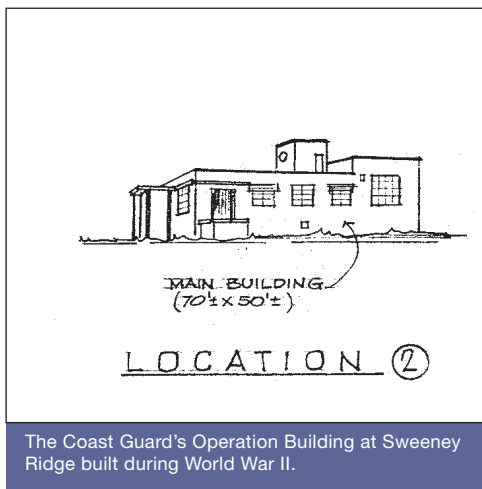
Mion speaks of the camaraderie of the men at SF 51 as "great." Of its some 100 soldiers, 40 were on the unit's bowling team. At off-duty parties at individuals' homes or at picnics at places like Coyote Point, nearly everyone attended. SF 51 veterans frequently participate in the California missile site reunions which occur every other year in Nevada.

After 1974, Mion served with the infantry, military police, transportation, combat engineers, medical units and military intelligence. He retired from the Guard eight years ago as a Master Sergeant and lives in Oakland today.

* Bracketed comments added by Ezio Nurisio.

** Commercial aircraft all carry an IFF transponder. IFF stands for Identification Friend or Foe. Military radars are equipped with IFF antennas. A radar operator can challenge any aircraft by initiating an IFF challenge. Once the aircraft's IFF transponder receives a challenge it sends out a coded response. This coded response appears over the challenged aircraft's blip on the radar scope. The coded response appears as a series of thin and thick lines. During the Cold War the IFF codes were changed daily. (The Soviets, of course, did not have the codes.) If an aircraft was challenged and it "squawked the wrong or no code, it was immediately declared hostile. Fighters from Hamilton Field would then be sent up to make a visual identification. If the aircraft could not be found and properly identified the plan was for the Nikes to be fired upon it. This type of incident was a common occurrence throughout the United States, but the system worked, and aircraft were always properly identified.

These situations were taken very seriously since it was a Soviet tactic to try and penetrate air defense systems by posing as a commercial "off course" aircraft.

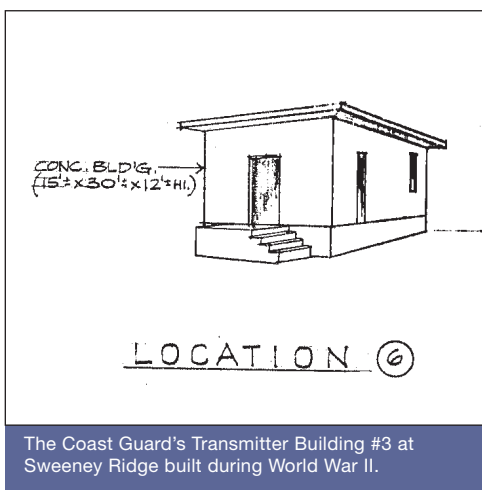


86 acres is the portion of the GGNRA that lies south of Skyline College and north of the “notch,” the cut that separates the old Coast Guard parcel from the former Nike radar site. South of the Nike site is the San Francisco Bay Discovery site and south of that, remnants of the buildings of Sneath’s Ranch No. 3.

Surveys and plans for the radio station were completed about February, 1942. A bid from contractor J.H. Pomoroy and Co. was accepted February 26. A fixed fee for the contract was signed on March 18, and the construction was completed on June 23, 1943.

The Coast Guard’s roads hooked around the property, beginning at a parking lot to the east which is probably the San Francisco Jail’s parking lot of today. The “Jersey Farm Road” led to the barracks and equipment building that, until recently, stood on Skyline College, and are now replaced by its new maintenance buildings. The present trail leading west and then south on the GGNRA is the continuation of the Coast Guard road to the ridge, then called “Radio Station Road.” As it turned south, the first edifice encountered on the ridge line was the Operations Building, now gone; however the building pad is still visible, and some debris can be detected. Next to be viewed was Transmitter Building No. 3, then Transmitter Building No. 2. Both of these structures are also gone, but building pads and debris are visible. The last in line, Transmitter Building No. 1, still stands. Other improvements that were part of the Coast Guard station include antennas, a water tank, a pump house and utility poles.

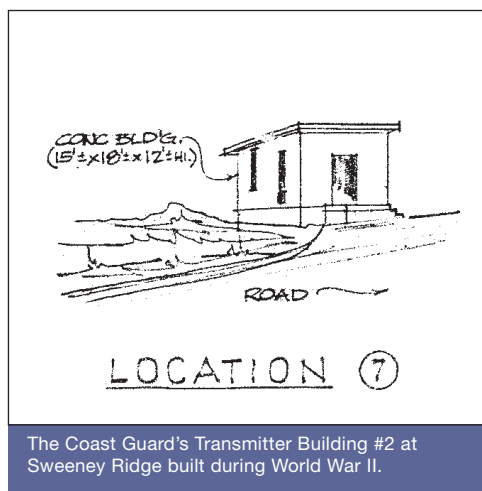
After the end of World War II, the Coast Guard returned to operate what was known as U.S. Coast Guard Radio Station San Bruno. However, in 1973, its new computerized base at Point Reyes was ready to replace the Radio Station on Sweeney Ridge. The last message was sent out on February 7 of that year.⁴¹



C. Nike Radar South of the Notch

On the south side of the “notch,” at an elevation of 1,250 feet, and about ¾ of a mile north of the present discovery site markers, the Army began installation of the guided missile Nike Integrated Fire Control Area (SF 51 C) in 1953. The map to the right refers to an original topographical study completed on October 8 of that year and shows the original improvements. The remnants of this site are now on GGNRA Sweeney Ridge lands. This property, listed by the San Mateo County Assessor as parcel number 018-170-020, was leased by the Army which never purchased it.

Researchers Jerry Crow and Therese Smith reviewed County records



on this issue. They found the Sneath Family's Jersey Farm Company owned the parcel in 1950. Later in that decade Consumers Ice, a holding company for the Sneaths, owned it. The lease was evidently all the Army intended, as no move toward acquisition of the site was revealed by these researchers in their perusal of County records between 1947 and 1957.

David Bridgman and his father, Richard H. Bridgman, Jr. were stationed at Sweeney when it was manned as a radar site by the National Guard. David has volunteered considerable time to this study in order that we understand how the missile system functioned, at least in a general way.⁴² By 1959, after the conversion of the Ajax missiles to the Hercules system had begun, the radars on Sweeney worked in the following manner:*

High Power Acquisition Radar (HIPAR) - - worked scanning 200 miles out for possible enemy attack. It could detect individual planes as well as planes in a mass formation. It could also pick-up missiles launched from submarines. As targets got closer tracking could be handed to Low Power Acquisition Radar for further tracking.

Low Power Acquisition Radar (LOPAR) - - used in a fire mission. It electronically designated a target's location to the Target Tracking Radar. It was linked to the overall system and received symbology from the Command Post on Mount Tamalpais. Its video was also sent to the Command Post for monitoring purposes.

Target Tracking Radar (TTR) and Target Ranging Radar (TRR) - - locked in the path of the enemy aircraft, giving its range, elevation, azimuth and speed.

Two Vans RC and BC - - assimilated all this information to tell the missile set to be launched about the flight of the target(s). RC meant radar control. This van housed the controls for the tracking radars. BC meant battery control. It housed the fire control computer and the battery control console containing the switch for launch.

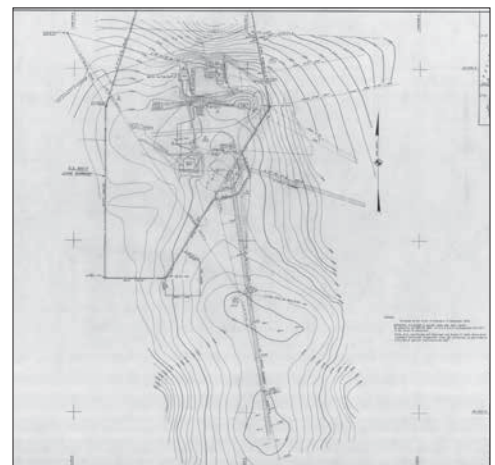
Missile Tracking Radar (MTR) - - guided the launched missile to the intercept point, via commands from the fire control computer. It then triggered a conventional or nuclear explosion which would hit above and in front of the target(s), knocking it (them) out of the sky.

Endnotes

¹ Leo R. Barker, "Archaeological Management Assessment: San Mateo Trails Study including: Phleger Estate, Milagra Ridge, Cattle Hill, Mori Point, Sweeney Ridge," Golden Gate National Recreation Area, San Francisco, CA, 2006, p. 8.

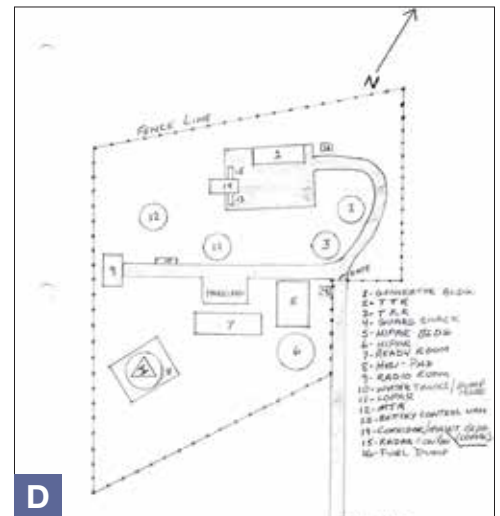
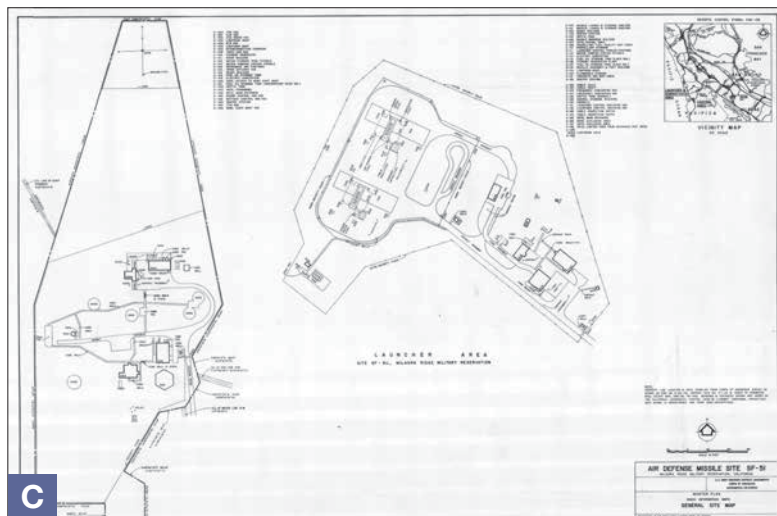
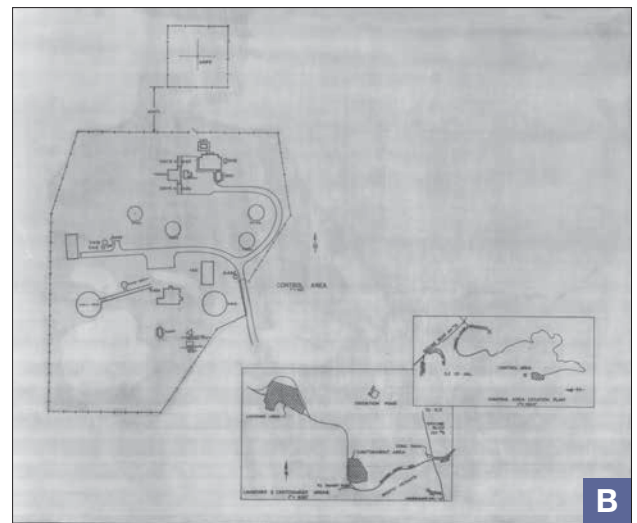
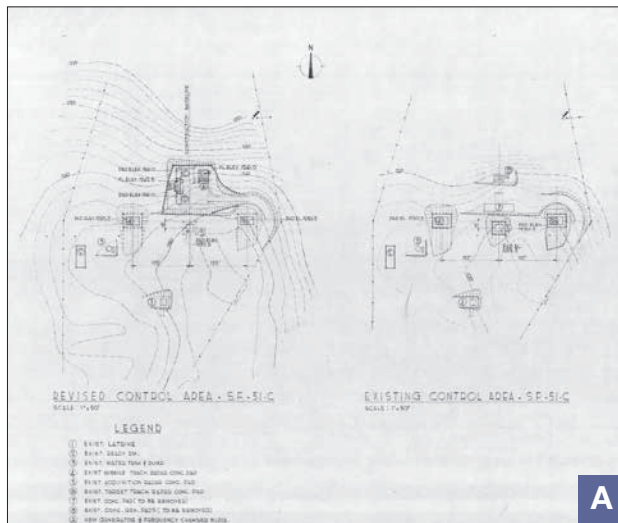
² Tom Stienstra, "Gaze Out Over the Pacific Horizon," *San Francisco Examiner*, May 5, 1990.

³ Frank M. Stanger, *Who Discovered the Golden Gate?* San Mateo County Historical Association, San Mateo, CA, 1969, p. 100. Randall Milliken, Laurence H. Shoup, and Beverly Ortiz, *Ohlone/Costanoan Indians of the San Francisco Peninsula and their Neighbors, Yesterday and Today*, prepared by Archaeological and Historical Consultants, Oakland, California for the National Park Service, Golden Gate National Recreation Area, San Francisco, California, June, 2009, pp. 87 and 89.



Army Corp of Engineers' map of the Nike Integrated Fire Control Area in 1953. Courtesy GGNRA Park Archives.

* SF 51 and all the launch and control sites in the Bay Area were not independent but directed in operations by the Army Air Defense Command Post on Mount Tamalpais, with its huge radars and support equipment.



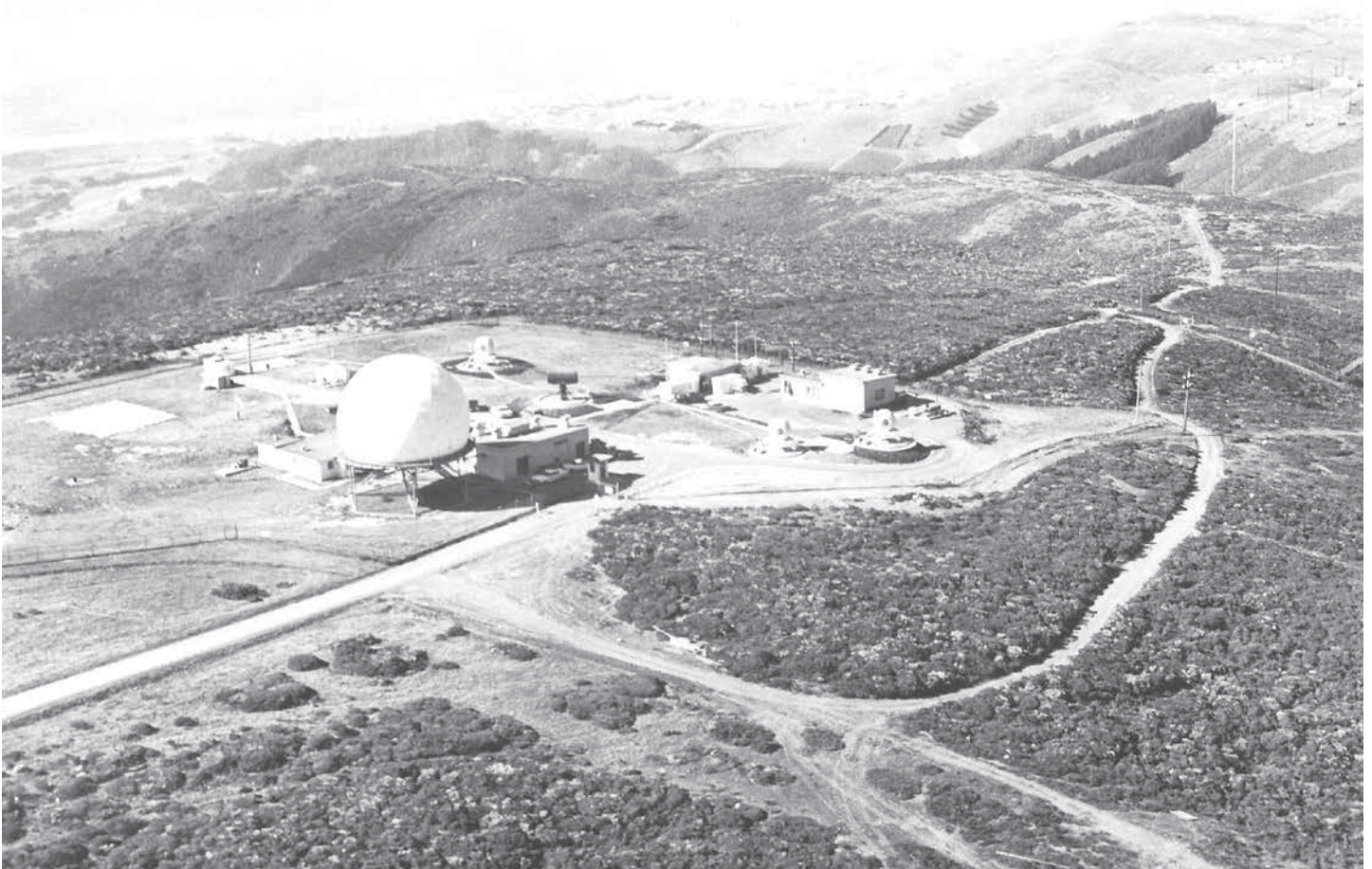
A SF 51 C showing improvements in 1956. Courtesy GGNRA Park Archives.
B After improvements in July 1967. Courtesy GGNRA Park Archives.
C Sweeney and Milagra in final form. Courtesy GGNRA Park Archives.
D David Bridgeman map of Sweeney's final appearance.

Endnotes (cont.)

- ⁴ Barker, "Archaeological," p. 9.
- ⁵ Alan K. Brown, *Place Names of San Mateo County*, San Mateo County Historical Association, San Mateo, CA, 1975, p. 33.
- ⁶ A.S. Easton, Surveyor, *Official Map of the County of San Mateo*, 1868.
- ⁷ Brown, *Place Names*, p. 58.
- ⁸ John A. Martini and Stephen A. Haller, "Seacoast Fortifications National Historic Landmark Nomination Form Draft of April, 2010."

A variety of improvements were made to SF 51 C for better performance of the Ajax and eventual deployment of the Hercules. Map A shows improvements made in 1956. In place already were systems for the Target Tracking and Low Power Acquisition radars. Just added on the north side were the generator building and corridor building (both still standing) plus new pads for the Battery Control and the Radar Control vans. After this construction, Map B, July 18, 1967, shows the final improvements. Most notably, to the south High Power Acquisition radar has been installed, along with a Target Ranging radar. This map also shows the road to the control area, from San Bruno; today it is used as a trail for hikers visiting this GGNRA park. Also shown is the road to the launch area at Milagra.

Map C displays both Sweeney and Milagra in their final form as a fully functioning missile battery capable of launching nuclear armed Hercules missiles. Map D was recently drawn by David Bridgeman, which reveals Sweeney's final appearance.



Sweeney Ridge SF 51 C with massive HIPAR radome.

The above photograph shows in the foreground the massive HIPAR radome. Nothing is left of it today. Even its pad is covered by vegetation. To its left is the ready room, which still exists, and to its left is the helicopter pad now also covered by vegetation. To the right of the helicopter pad was the communications building, now gone. The small radome just to the right of the HIPAR unit is the MTR. Its pad has disappeared under the brush. To its right, the T-shaped radar is the LOPAR. Its pad can be seen. The Interconnecting Corridor Building and generator building are to its right. The TTR and the TRR are just in front of the generator building. Their pads still exist. In the background are some interesting features as well. At the top right is Milagra Ridge. Some of its improvements are visible in this shot. Lower, on the right, are municipal water tanks and to the right of those are the Coast Guard's improvements, including its antennae farm and, on the far right, the Coast Guard's main building.

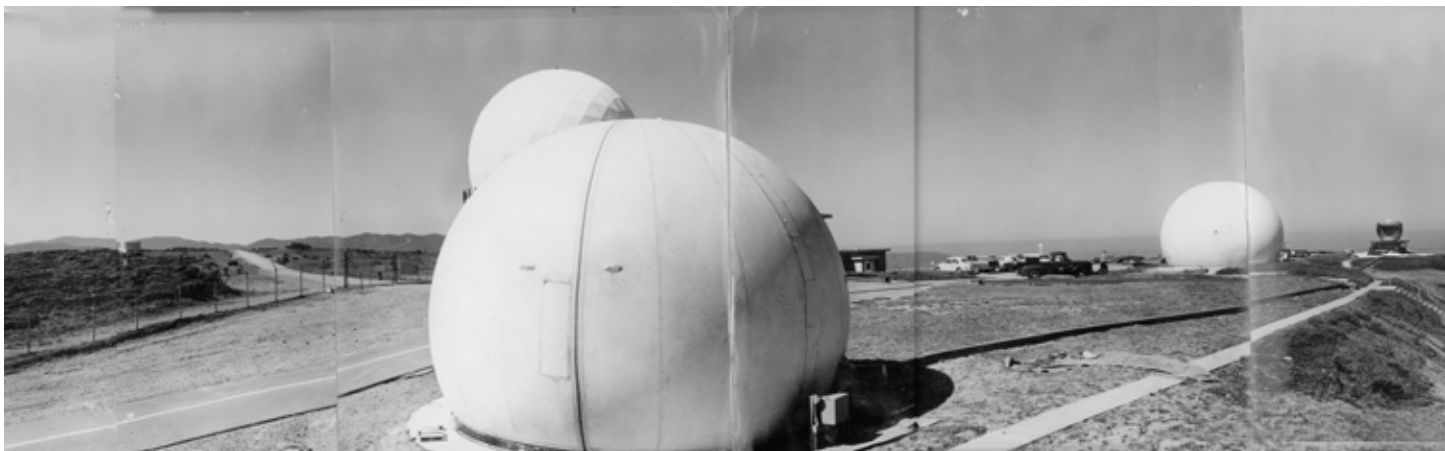
Endnotes (cont.)

⁹ United States General Services Administration, *Installation Survey Report: Milagra Ridge Reservation*, E.O. 11508, GSA, OSD, CONARC, March, 1972, p. 1.

¹⁰ California State Military Museum website for Milagra Military Reservation <http://www.militarymuseum.org/MilagraRidgeMilRes.html>.

¹¹ United States Army Air Defense Command, "Fact Sheet," August, 1962, p. 1., Colonel Stephen P. Moeller, "Vigilant and Invincible," originally appeared in *ADA Magazine*, May – June, 1995, now online <http://www.fas.org/nuke/guide/usa/airdef/vigilant.htm>, Chapter 2, page 1, accessed April 2, 2012. Ezio Nurisio interviewed by Mitch Postel, Redwood City, CA, April 9, 2012.

¹² United States Army, "Fact," August, 1962, p. 2.



Part A of panoramic image of Sweeney Ridge, courtesy of David Bridgman.

Endnotes (cont.)

¹³ Mark L. Morgan and Mark K. Berhow, *Rings of Supersonic Steel - Air Defenses of the United States Army 1950-1979*, Fort MacArthur Military Press, Bodega Bay, CA, Second Edition, 2002, p. 17.

Nuriso, "interview," April 9, 2012.

¹⁴ Joe C. Freeman, Stephen A. Haller, David M. Hansen, John A. Martini, Karen J. Weitze, *Seacoast Fortifications Preservation Manual, Chapter 2: Historical context for the seacoast fortifications of San Francisco Bay*, National Park Service and KEA Environmental, 1999, Golden Gate National Recreation Area, San Francisco, CA. Online book at: <http://www.nps.gov/goga/history/seaforts/chapter2/chapter2.htm>. (accessed 7/10/06). Ezio Nuriso, letter to Mitch Postel, April 11, 2012.

¹⁵ Barker, "Archaeological," p. 13.

¹⁶ *Ibid.*, p. 21.

¹⁷ U.S. Army Corps of Engineers, (map), "Milagra Ridge Military Reservation, Topography," May 27, 1957. This map shows the 1953 plans.

¹⁸ "Pacifica is a Hikers Paradise," *Pacifica Tribune*, June 25, 1997.

¹⁹ William Hauger, CW4, USA (Ret.), a retired Chief Warrant Officer 4, who served at SF 51 and presented his historical notes to the GGNRA in 2010.

²⁰ David Bridgman interviewed by Mitch Postel, Redwood City, CA, August 8, 2010. Nuriso, "interview," April 9, 2012.

The 360° panoramic photograph is lent to this project by David Bridgman. Taken about 1968 from the east side of SF 51 C, from left to right at first we are looking south. In the foreground on the left (Part A) is the TRR radome. Behind it is the 47' diameter radome of the HIPAR. Note that the HIPAR support building is obscured in this photo. Inside this building were the electronics necessary to operate this radar. The vacuum tubes of electronic components, before the days of the silicon chip, made it so hot within the building that a massive air-conditioning system was a crucial component of its operation. The HIPAR building and the next building, the ready room (barely visible to the right in front of the Volkswagen), still exist. Next, to the southwest, is the radome covering the LOPAR. To its right is the MTR. The photo shows this radome is deflated and the radar is visible. Now looking west to the right of the MTR, down the steps and behind the Volkswagen (Part B), is the Battery Control Van and the Interconnecting Corridor Building. It, too, had essential air-conditioning, and it, too, still exists. To its right, behind the station wagon, is the Radar Control Van. To the northwest is the generator building, which housed three diesel generators for back-up power supply. We are now looking north. All three of the Coast Guard's transmitter buildings are visible, as is its main building. Also note the various Coast Guard antennas. To the northeast San Francisco County Jail can be seen and then San Bruno Mountain. The paved road to the site can be seen to the southeast along with San Andreas Lake behind it (Parts C and D).⁴³

The surviving buildings were diagramed as the National Guard prepared for decommissioning SF 51. The resulting drawings were collected by the San Mateo County Parks and Recreation Department



Part B of panoramic image of Sweeney Ridge, courtesy of David Bridgman.



Part C of panoramic image of Sweeney Ridge, courtesy of David Bridgman.



Part D of panoramic image of Sweeney Ridge, courtesy of David Bridgman.

Editor's Note

The original 360° panoramic photograph is 77" long and 7" high. Some of the details are difficult to see at this reduced print size. The original can be viewed at the San Mateo County Historical Association's Archives in Redwood City.

Endnotes (cont.)

²¹ James Jones, LT., Battery Commander, Btry A/1st Msl Bn 250 Arty, "Engineer Real and Installed Property, Milagra and Sweeney Ridge, Site C & L," undated, archives of the San Mateo County History Museum.

²² U.S. Army Air Defense Command, "Fact Sheet, Sentry Dogs and Site Security," February, 1961, p. 1.

²³ U.S. Army Air Defense Command, "Fact Sheet, NIKE Hercules," September, 1962, p. 1.

²⁴ Morgan, *Rings*, p. 17.

²⁵ U.S. Army Air Defense Command, "Welcome to the 13th Artillery Group," undated.

Endnotes (cont.)

- ²⁶ California National Guard, "Fact Sheet," No. 3, January, 1972, pp. 1-3.
David Bridgman interviewed by Mitch Postel, Redwood City, CA, September 3, 2010.
Nurisio, "interview," April 9, 2012.
David Bridgman, letter to Mitch Postel, April 25, 2012.
- ²⁷ Morgs, *Rings*, p. 156.
- ²⁸ "A Mystery Arson Blaze in Bunker Burns Up Police Files," *Pacifica Tribune*, April 5, 1972.
- ²⁹ California National Guard, "Fact," pp. 3-4.
- ³⁰ United States Army Air Defense Command, *Argus*, "Guard battery joins rank of Units with 100% in ASP," Vol. 15, No. 4, April, 1972.
- ³¹ Hauger, "Notes," 2010.
- ³² "United States Army Command Information Unit," Army News Feature," press release, February 4, 1974.
- ³³ Sixth Region Army Defense Command, "Bon Voyage," program, June 20, 1974.
- ³⁴ San Mateo County Record of Land Purchases by "Sweeney" between 1868 and 1908, San Mateo County Assessor's Office, Redwood City, CA.
- ³⁵ John S. Hittell, *The Commerce and Industries of the Pacific Coast of North America*, Bancroft and Co., San Francisco, CA, 1882, pp. 261-262.
- ³⁶ U.S. Coast Guard, "U.S. Coast Guard Radio Station, San Bruno, San Mateo Co., California," memorandum, July 28, 1943.
- ³⁷ Coast Guard CW Operators Association, "Memorabilia," Coast Guard CW Operators Assn. ZUT-CW Forever, accessed July 20, 2010.
- ³⁸ R.B. McMillan, Assistant United States Attorney, memorandum, Lands Division, Title Section, Department of Justice, Washington, D.C. August 6, 1941.
- ³⁹ Frank J. Hennessy, United States Attorney, memorandum, Lands Division, Title Section, Department of Justice, Washington D.C., November 27, 1941.
- ⁴⁰ U.S. Coast Guard, "U.S.," July 28, 1943.
- ⁴¹ "Last Words Through Pacifica Skies from Coast Guard Radio," *Pacifica Tribune*, February 7, 1973.
- ⁴² Bridgman's account is augmented by Nurisio's letter of April 11, 2012.
- ⁴³ Bridgman, letter, April 25, 2012.
- ⁴⁴ John A. Martin, *Nike Missile Site SF88L, Fort Berry: Self-Guided Tour, Golden Gate National Recreation Area*, 1987, p. 7.

and then given to the San Mateo County Historical Association. From them we have determined that the generator building was about 1,400 square feet. The High Power building was close to 1,600 square feet with a large space for its air-conditioning unit. The air-conditioner alone took up some 225 square feet. The Interconnecting Corridor Building was smaller with about 900 square feet. The ready room included bunks, kitchen and toilet facilities. It was less than 1,450 square feet. The tiny guard house was forty square feet.

SF 51 C was decommissioned along with SF 51 L in 1974.

IV. Legacy

All that had been the Nike installation on Milagra Ridge, which mostly existed south of the World War II bunkers, was destroyed. The buildings were demolished, the elevators and missile storage areas were buried. Even the asphalt was removed. The structures at Milagra's Administration area were razed in 1983 to make room for the still present condominium complex. As described, much more is left of SF 51's control site. Fortunately for anyone who wishes to see what one of the missile launch sites looked like and, actually, how they operated, they can visit the GGNRA's Fort Barry in Marin County. It has a restored launching complex, felt to be the best historical presentation of such a weapons system in the United States.

Sweeney Ridge became part of the GGNRA in 1984 and Milagra Ridge in 1987.

Whether at Milagra Ridge or Fort Barry, or other Nike sites, the historic meaning of these places speaks to the concern of Americans during the Cold War over nuclear attack. Readiness became a part of life, and the Nike sites, so close to residential neighborhoods throughout the Bay Area, were a constant reminder that the ultimate in devastating warfare was a possibility.

During this era, the Nike missile system became an integral part of America's defense strategy. The Nikes were deployed in greater numbers and were located in more areas (300 sites) than any other missile system. The Nike system was the most expensive ever placed on alert and stayed operable longer than any other (between 1954 and 1974 in the Bay Area, and 1954 through 1979 nationally).

From a local perspective, the Bay Area's Nikes represented the end of the line for fixed defenses for the Golden Gate and San Francisco Bay.⁴⁴ For nearly two hundred years, guarding them, and the people residing here, had represented a significant concern and manifested itself as an integral part of the human experience of living in this region.

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SAN MATEO COUNTY HISTORICAL ASSOCIATION



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Journey to Work Grand Exhibit Reopening



A century ago, El Camino Real was a dirt road. In 1912, the first section of road in the California State Highway system was paved at El Camino Real in San Bruno.

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- Celebrate the 100th Anniversary of the paving of the California Highway System.
- Special salute to important museum sponsors: the Welch Family.

Sunday, October 7, 2012

from 2-4 p.m.

Special Free Admission Day