



**CITY OF SUNNYVALE
REPORT
Heritage Preservation Commission**

August 6, 2008

SUBJECT: Preliminary assessment of the local historic significance of Onizuka Air Force Station.

Motion: Recommendation to the Local Redevelopment Authority (City Council) options for historic preservation of Onizuka Air Force Station in the Base Reuse Plan.

REPORT IN BRIEF

The City of Sunnyvale has been named as the Local Redevelopment Authority (LRA) for planning the redevelopment of Onizuka Air Force Station (AFS). The LRA is the lead agency for the creation of the Reuse Plan, which will serve as a guide for Onizuka AFS's closure, transfer, and reuse. The Heritage Preservation Commission's role is to make a recommendation to the LRA on the potential local historic significance of the station. It is not the Heritage Preservation Commission's role to determine future reuse or redevelopment of the base.

BACKGROUND

Onizuka AFS is located at 1080 Innovation Way, Sunnyvale, CA 94089; located off of Mathilda Avenue just north of State Route 237 and U.S. 101. Onizuka is reported by the Air Force Real Property Agency as being 20 acres of land and three acres of easement.

The base has been slated for closure by the Department of Defense, with its military mission transferring to Vandenberg Air Force Base in Lompoc (Santa Barbara County). According to Base Realignment and Closure (BRAC) statutes, September 15, 2011 is the date by which Onizuka AFS closure and realignment must be completed. Onizuka AFS property is still currently owned and operated by the Department of Defense.

On April 6, 2006 the Department of Defense (DOD), through the Office of Economic Adjustment, formally recognized the City of Sunnyvale as the LRA for planning the redevelopment of Onizuka AFS. While serving as the LRA, Sunnyvale City Council will fulfill a number of important responsibilities, including the following:

- Serve as the single community point of contact for all matters relating to the closure of the base;
- Serve as the single entity responsible for preparing the Onizuka AFS Reuse Plan;
- Serve as the primary agency for all grant/aid applications related to transition, reuse and redevelopment;
- Serve as support for the regulatory agency responsible for environmental remediation and other environmental assessments;
- Facilitate community input and involvement in decision making related to reuse and economic development at Onizuka AFS through establishment of a Citizen's Advisory Committee representing diverse stakeholders within the City and the region;
- Evaluate homeless needs in the City of Sunnyvale and balance those needs with other community development objectives during the reuse planning process;
- Negotiate the final plan for disposition of Onizuka AFS with the U.S. Air Force.

The LRA was formed in April 2006 and its first action item was to review and take a position on an expression of interest in part of the Onizuka property. Under the BRAC process, other National agencies are given an opportunity to express an interest in reusing government sites, before the property is declared surplus property to be disposed of with the assistance of the LRA. The U.S. Department of Veteran's Affairs (VA) has notified the DOD that it has an interest in using part of the Onizuka site; and on May 15, 2006, the DOD granted the VA's request (see map in Attachment B). Although the LRA has the right to comment on the VA's proposal, it has no ability to prevent the transfer of a portion of the Onizuka AFS property to the VA.

The LRA's second step was to establish the Citizen's Advisory Committee (CAC). The CAC is comprised of members of the public who represent various interested parties and stakeholders, in order to provide the broadest possible scope of comments. Public meetings have been and will continue to be held so members of the community have an opportunity to offer their suggestions as to how the site should be redeveloped.

Reuse Plan: The Reuse Plan is the primary planning document that will establish the community's vision for the conversion of the base from military to civilian use. The Reuse Plan will be prepared by the Sunnyvale City Council, serving as the LRA. By fall 2008, the LRA will have received all input from the CAC and will have developed a Reuse Plan which will be submitted to the DOD. The DOD will then have one year – until fall 2009 – to issue a formal record of decision which will describe how the base will be transferred. See Attachment A for additional BRAC facts.

As part of this Reuse Plan process, Onizuka is analyzed by the CAC for a number of issues, while the Heritage Preservation Commission's (HPC) recommendation will be focused on the potential historic significance of the property. The HPC is functioning as the historic focus group for purposes of making a recommendation to the LRA on local historic significance, or lack thereof, and possible preservation of the base. The CAC function is to make recommendation to the LRA on land use issues. The LRA may consider the HPC's and CAC's recommendations when reviewing options for the Reuse Plan but is not required to incorporate them.

The Reuse Plan will serve as an important consideration for the Air Force's Environmental Impact Statement (EIS) which will include the Department of Defense Record of Decision (ROD) describing how Onizuka AFS will be transferred. Preparation of the Reuse Plan directly impacts the disposition of the property which is the primary objective of the BRAC.

Base History: The complete history of base activities and events is not available at this time since most of the missions based at Onizuka are still classified by the Air Force. The following is a brief summary of the activities and events that have been declassified or are generally known to have occurred at the base. For a more detailed timeline, see Attachment C.

Key Dates

- 1960-1972: Discovery and Corona mission operations.
- 1960-1970: Exclusive satellite control center for all military satellites, international communications, space operations, space shuttle, and NASA communications.
- 1977: Air Force Satellite Control Facility (former name of Onizuka) command functions officially transferred to Sunnyvale AFS from Space Divisions in Los Angeles.
- 1986: Air Force Satellite Control Facility renamed to Onizuka AFS in subsequent years after Space Shuttle Challenger explosion (in honor of Lt. Ellison S. Onizuka);
- 1995: BRAC directs realignment; most but not all missions transferred to Falcon Air Force Base in Colorado.
- 2005: Onizuka Air Force Station is scheduled for closure by DOD Order (closure final by 2011); ending 36 years of space and satellite support. Duties to be transferred to Vandenberg Air Force Base in Santa Barbara County.

Declassified Significant Events

- The Onizuka team supported the first orbital flight of Space Shuttle (1981), and every Shuttle Mission to date (1980-2004 - *Prime Mission Examples: Magellan, Galileo, Ulysses, Hubble Space Telescope, Mars Pathfinder*).

- Satellite Control Facility duties included responsibility for all communications/control of space satellites. Onizuka was also responsible for network management for getting the information back from the satellite to processing centers in the U.S.
- Onizuka AFS was the primary military communications facility; no other comparable backup facility existed for 30 years.
- Corona program captured some of the first photographs providing irrefutable evidence that the Soviet Union had placed nuclear missiles in Cuba (*Cuban Missile Crisis – 1962*).
- Satellite photos (“*Keyhole*” *spy satellite*) used as evidence which led to U.S. thwarting rumored attack by Libya on the Sudan (1983).

Known Key Event: Corona Program

- First photoreconnaissance satellite
- First photos of the earth from space
- First mapping of earth from space
- First stereo-optical data from space
- First recovery of a man-made object from space
- First mid-air recovery of a vehicle returning from space
- Quantum advancements in photo-imaging from space

EXISTING POLICY

The Heritage Preservation Sub-Element

Goal 6.3B: To enhance, preserve, and protect Sunnyvale’s heritage, including natural features, the built environment, and significant artifacts.

Policy 6.3B.5: Seek out, catalog, and evaluate heritage resources which may be significant.

Action Statement 6.3B.5C: Identify trees, sites, and artifacts which should be considered for cultural resource (heritage resource) status.

DISCUSSION

Site Context: The site contains approximately 27 buildings, totaling approximately 570,000 square feet of floor area. The largest of these buildings, anecdotally referred to as the “blue cube” due to its color and shape, is visible from US 101 and Highway 237. The site also contains several large antennas (satellite dishes), which are prominent features of the site. The site activities correlate to the station’s mission of supporting military space projects. These activities are discussed further in this report.

Heritage Preservation Commission's Role: The HPC's role in the BRAC process is to make a recommendation to the LRA regarding the local historic significance of the base. The HPC's recommendation at this time is not a formal determination of local significance of Onizuka AFS, but a recommendation only. The HPC can include in the recommendation some direction to the LRA on future commemorative elements at the site such as public outdoor memorial, interpretive feature, plaque, etc., intended to acknowledge any historic significance of Onizuka's past activities. This would be suggested direction only since the HPC's role is to review existing conditions, not future redevelopment. The HPC can also include a recommendation to the LRA concerning State or National significance. The LRA will review the HPC's recommendation and make the final recommendation to the DOD on the local historic significance of Onizuka as part of the Reuse Plan.

Criteria for Evaluation of Local Historic Significance: While making a recommendation on the potential historic significance of Onizuka AFS, the City's criteria for reviewing and determining historic significance should be used. The City's Municipal Code, Title 19 (Zoning Ordinance) provides the criteria for nomination of a City Heritage Resource or Local Landmark and states the following:

Sunnyvale Municipal Code Section 19.96.050

"Any improvement, building, portion of buildings, structures, signs, features, sites, scenic areas, views, vistas, places, areas, landscapes, trees, or other natural objects or objects of scientific, aesthetic, educational, political, social, cultural, architectural, or historical significance can be designated a heritage resource by the city council and any area within the city may be designated a heritage resource district by the city council pursuant to provisions of this chapter if it meets the Criteria of the National Register of Historic Places, or one or more of the following:

- (a) It exemplifies or reflects special elements of the city's cultural, social, economic, political, aesthetic engineering, architectural, or natural history;
- (b) It is identified with persons or events significant in local, State, or National history;
- (c) It embodies distinctive characteristics of a style, type, period, or method of construction, or is a valuable example of the use of indigenous materials or craftsmanship;
- (d) It is representative of the work of a notable builder, designer, or architect;
- (e) It contributes to the significance of an historic area, being a geographically definable area possessing a concentration of historic or scenic properties or thematically related grouping of properties

- which contribute to each other and are unified aesthetically or by plan or physical development;
- (f) It has a unique location or singular physical characteristic or is a view or vista representing an established and familiar visual feature of a neighborhood, community, or the city of Sunnyvale;
 - (g) It embodies elements of architectural design, detail, materials, or craftsmanship that represents a significant structural or architectural achievement or innovation;
 - (h) It is similar to other distinctive properties, sites, areas, or objects based on a historic, cultural, or architectural motif;
 - (i) It reflects significant geographical patterns, including those associated with different eras of settlement and growth, particular transportation modes, or distinctive examples of park or community planning;
 - (j) It is one of the few remaining examples in the city, region, State, or Nation possessing distinguishing characteristics of an architectural or historic type or specimen;
 - (k) With respect to a local landmark, it is significant in that the resource materially benefits the historical character of a neighborhood or area, or the resource in its location represents an established and familiar visual feature of the community or city;
 - (l) With respect to a local landmark district, a collective high integrity of the district is essential to the sustained value of the separate individual resources;
 - (m) With respect to a designated landmark and designated landmark district, the heritage resource shall meet Criteria of the National Register of Historical Places, which are incorporated by reference into this chapter. (Ord. 2623-99 § 1 (part): prior zoning code § 19.80.060).”

Criteria for Evaluation of National and State Significance: The National Register's standards for evaluating the significance of properties were developed to recognize the accomplishments of all peoples who have made a significant contribution to our country's history and heritage. The criteria are designed to guide state and local governments, National agencies, and others in evaluating potential entries in the National Register. The criteria include the significance in American history, architecture, archeology, engineering, and culture that is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association. The State uses the same criteria listed below.

National Register's Eligibility Recommendations: These criteria are taken from National Register Bulletin 15, *How to Apply the National Register Criteria for Evaluation*.

- A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. That are associated with the lives of persons significant in our past; or
- C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction (i.e. a structure or its designers may be notable); or
- D. That have yielded or may be likely to yield, information important in prehistory or history.
- G. A property achieving significance within the past 50 years if it is of exceptional importance.

Historical Architectural Evaluation Reports: The HPC, while analyzing Onizuka under the City's criteria for determining local historic significance, may rely on two separate historic evaluation reports. These reports were prepared by qualified consultants and contain recommendations on National, State, and local significance.

In 2007, the HPC received a City staff 'Information Only' report providing background information on Onizuka AFS and the BRAC process. At that time, City staff understood that no building inventories, historic studies, or other architectural historic analysis about Onizuka existed. Based on that information, the LRA requested funding from the Office of Economic Adjustment (DOD) to complete an architectural historic analysis of the base. In 2007 this request was approved and the City retained a consulting firm (Bay Area Economics – BAE) who completed a report in 2008.

During this time, the Air Force released a previously completed Historic Building Inventory and Evaluation report completed by KAYA Associates in 2004. This report was used by BAE in 2008 as part of their analysis and recommendation.

1. 2004 KAYA Associates Report: The Air Force commissioned KAYA Associates to complete a Historic Building Inventory and Evaluation for Onizuka in 2004. The report provides a complete inventory of all buildings, structures, and landscaping at the site. It also evaluates the buildings and structures for potential inclusion in the National and State Registers. The report does not evaluate the buildings and structures for possible listing on Sunnyvale's list of Heritage Resources.

The report concludes that 24 of the 30 buildings are not eligible for National or State listing at this time, based on age, use, and architecture. The remaining six building, including the “blue cube” building 1003, were recommended as not eligible for National or State listing at this time since they are less than 50 years old. However, the report does recommend these six buildings be reevaluated for listing when they are 50 years old (2019). It is important to note this report was completed without the understanding that the base will be closing prior to 2019 and that certain buildings could potentially be demolished prior to the 50 year qualification.

The report also concludes these six buildings could be eligible for the National Register without meeting the 50 year qualification if they were found to meet the exceptional importance requirements. The exceptional importance requirements are included in both the National and State registers for potential historic building or sites which are less than 50 years old but are historically significant. The buildings could meet this requirement if information about activities that occurred there were found to be of National importance.

The KAYA report states that there is “very limited information available” at this time since the Air Force has not declassified information about missions and other activities that occurred at Onizuka. Therefore, critical information, necessary for accurately determining National and State eligibility, is not available at this time. If certain mission information was declassified, these six buildings could potentially meet the exceptional importance requirements of the National register criteria without the 50 year qualification.

2. 2008 BAE Report: This report was produced for BAE by Frederic Knapp and evaluates the base’s buildings and structures for potential inclusion in the National, State, and local (Sunnyvale) Registers. Based on the 50 year qualification, the report reaches a similar conclusion as the KAYA report and states that Onizuka buildings are not eligible for National and State listing at this time. The BAE report exceeds the KAYA report when it states that if certain activities were conclusively linked to the site, these six building would likely meet the exceptional importance requirements of the National register criteria without the 50 year qualification. Specifically the BAE report concludes the Corona Project, amongst other classified projects, was nationally significant and, if directly tied to the “blue cube” building 1003, it would make the “blue cube” eligible for the National Register. The report states:

“Determining whether or not Building 1003 was the mission control for the Corona Project is essential to determining its significance and eligibility to the California State Register. The Corona Project is a significant piece of Cold War history. Despite the fact that the Cold War events are quite recent, they are monumental in the scheme of American history. In light of this, the general rule with regard to fifty years needing to pass to

determine significance would not apply if it were determined that the Blue Cube was part of the Corona Project.” (page 4)

The BAE report also evaluated the base’s buildings and structures for potential inclusion in Sunnyvale’s Register of Heritage Resources. Using the City’s criteria for determining historic significance, the report concludes that Onizuka is eligible for listing as a Sunnyvale Heritage Landmark. The report states:

“Onizuka Air Force Station meets five of the criteria of Ordinance 2558-97, in that it:

Criterion A: “reflects special elements of the city’s ... history”

Criterion B: “is identified with ... events significant in local, state or national history”

Criterion E: “contributes to the significance of an historic area (as a thematically related grouping of properties”

Criterion F: “has a unique view or vista representing an established and familiar visual feature of the city of Sunnyvale”

Criterion L: constitutes a district; “A collective high integrity of the district is essential to the sustained value of the separate individual resources.”

Staff Analysis: In addition to the two consultant’s reports, staff consulted a number of primary and secondary sources of information relating to the history of Onizuka AFS to gain a better insight on the history of the base. These sources include: Air Force and NASA official history documents, books from past personnel of Onizuka, internet research, interviews with Air Force personnel, and two physical tours of the base. After a review of this information, staff believes that Onizuka AFS has local historic significance and may have National and State significance as well as subject to further evaluation and release of declassified information. Staff has applied the City’s criteria for Heritage Resource and Local Landmark evaluation and believes the past activities at Onizuka could qualify the base as historically significant under a number of SMC criteria. Staff concurs with the findings of the BAE report which is summarized below:

Criterion A states that a resource can be considered if “It exemplifies or reflects special elements of the city’s cultural, social, economic, political, aesthetic engineering, architectural, or natural history.”

Sunnyvale is closely associated with both the technology industry as well as the defense industry. Though a top secret facility at the peak of its operation, Onizuka AFS is an important factor in the history of Sunnyvale. Even without the declassification of the military history, the Onizuka site would be considered eligible for the local register under this criterion.

Criterion B states that the resource is considered eligible if “It is identified with persons or events significant in local, state or national history.”

Onizuka was the hub for several declassified reconnaissance missions, including Corona, Lanyard and Argon. There were also a number of other missions operated from Onizuka that are not known at this time since the information has not yet been declassified. Onizuka also was the base from which programs such as “the first mapping of Earth from space, the first midair recovery of a vehicle returning from space and the first views of denied areas from space” were launched. The location of the base in Sunnyvale is an important part of the development of military defense and high-tech sector in Silicon Valley. The cooperation between the military and Lockheed ensured that Sunnyvale would be at the forefront of national satellite defense technologies, and that the city featured one of the “world’s most modern communication hubs.”

Criterion E states that a resource is eligible if “it contributes to the significance of an historic area, being a geographically definable area possessing a concentration of historic or scenic properties or thematically related grouping of properties which contribute to each other and are unified aesthetically or by plan or physical development.”

The base is a military landscape, visually and physically separated from the civilian landscape which surrounds it. The buildings which make up Onizuka are related to each other not only by specific use and design, but by original plan.

Criterion F states that a resource is eligible as an historic resource if “(i)t has a unique location or singular physical characteristic or is a view or vista representing an established and familiar visual feature of a neighborhood, community, or the city of Sunnyvale.”

Today Onizuka is a recognizable part of the northern Sunnyvale viewscape. The “blue cube” and accompanying satellite dishes are visible from Mathilda Avenue as one travels north, and are also a striking presence at the off ramp from Highway 237.

Criterion L addresses the establishment of an historic district “with respect to a local landmark district, a collective high integrity of the district is essential to the sustained value of the separate individual resources.”

The Sunnyvale criteria state that a “scientific” or “political” potential resource can be designated a heritage resource. This threshold is considerably lower and broader than the National Register or California Register Criteria, which contain key filters based on importance and age not included in the Sunnyvale criteria. Onizuka is significant under the local ordinance as a mid-century scientific site associated with important geo-political developments of the Cold War. *Spying From*

Space describes how Onizuka became the command center for satellite tracking programs to make “satellite control and command an exclusively military operation.” The site retains integrity through the relatively unchanged individual features.

Staff also applied the criteria for National Register of Historic Places and believes Onizuka could be eligible for listing under criteria A (associated with events that have made a significant contribution to the broad patterns of our history) and G (a property achieving significance within the past 50 years if it is of exceptional importance). When information about past missions and activities at the site are declassified it can be formally resolved whether or not the base is eligible for listing on the National and State Registers.

Antennas and Other Artifacts: There are three large antenna dishes at the site that could be also considered significant visual landmarks in Sunnyvale. Preservation of at least one of these antennas could be desirable for three reasons: 1) they are visually significant and identifiable features of the base, 2) they are directly associated with the potentially significant events that occurred at the base, and 3) they are significant artifacts. Staff believes the antennas could qualify as locally significant under a number of the SMC criteria, including criteria (k) as familiar visual features of the community. Unfortunately, preservation of the dishes may not be feasible at this time. A representative of the Air Force stated that the antennas are still in full operation and will either be moved to Vandenberg AFB by 2011 or may be sold to a private party, along with other equipment on the base, prior to the base closure.

Other significant artifacts associated with the base (computers, machines, etc.) have already been removed or will be removed from the site prior to base closure.

Prehistory and Significant Persons: During the course of staff’s research it was found that Vice President Hubert Humphrey was the only person of national standing to have visited the site. The purpose of the visit is not fully known at this time, but it is believed to have been of a ceremonial nature only and not in a command capacity.

Although the Ohlone Indians were known to have settled areas throughout the Silicon Valley, there is no direct evidence at this time indicating they had a significant presence at the current site of the base.

FISCAL IMPACT

There is no fiscal impact related to the Reuse Plan at this time.

PUBLIC CONTACT

Public contact was made by posting the HPC agenda on the City's official notice bulletin board outside City Hall, in the Council Chambers lobby, in the Office of the City Clerk, at the Library, Senior Center, Community Center and Department of Public Safety; posting the agenda and report on the City's Web site; and making the report available at the Library and the Office of the City Clerk.

ENVIRONMENTAL REVIEW

The HPC's recommendation to the LRA is not considered a project under the California Environmental Quality Act. At the time the Air Force completes the Reuse Plan, a formal Environmental Impact Statement (EIS) will be completed that will make a final determination on the historic significance of the base.

ALTERNATIVES

Recommend to the LRA, based on the adopted City criteria and known key events, that:

1. The LRA acknowledges that the Onizuka AFS site is eligible for potential designation as a local Heritage Resource under the Sunnyvale Municipal Code. The LRA's Reuse Plan to the DOD should include a recommendation to further evaluate the historic significance of the buildings and site and possible preservation of a building or other appropriate measure to commemorate the site's heritage significance.
2. The LRA finds that the Onizuka AFS is not eligible for potential designation as a local Heritage Resource. No preservation measures are recommended as part of the LRA's Reuse Plan recommendation to the DOD.

RECOMMENDATION

Staff recommends Alternative 1, that the HPC recommend to the LRA, based on the adopted City criteria and known key events, that the LRA acknowledges that the Onizuka AFS site is eligible for potential designation as a local Heritage Resource. The LRA's Reuse Plan to the DOD should include a recommendation to further evaluate the historic significance of the buildings and site and possible preservation of a building or other appropriate measure to commemorate the site's heritage significance. The additional evaluation may be required as part of any required documentation per the National Environmental Protection Act (NEPA) or subsequent documentation per the California Environmental Quality Act (CEQA).

Based on a review of the 2004 KAYA Associates Report, the 2008 BAE consultant reports and the independent staff research and analysis staff finds that the site is potentially a significant local Heritage Resource. Further analysis would be required to determine significance and would be subject to review by the Heritage Preservation Commission and action by the City Council.

Reviewed by:

Hanson Hom, Director, Community Development Department

Reviewed by: Trudi Ryan, Planning Officer

Prepared by: Steve Lynch, Project Planner

Approved by:

Amy Chan
City Manager

Attachment:

- A. Onizuka AFS Fact Sheet
- B. Onizuka AFS Aerial Photo
- C. Detailed Timeline and List of Significant Missions at Onizuka
- D. Letter From Jack W. Rowe
- E. 2004 Historic Building Inventory and Evaluation by KAYA Associates
(Executive Summary Only)
- F. 2008 Historic Architectural Reports by BAE

FACT SHEET

ONIZUKA AIR FORCE STATION – Update 2

Planning for Closure and Transition to Civilian Use

Since 1960, Onizuka Air Force Station has been a military communication station which also supports mission control for NASA missions. In 2005, the Department of Defense (DOD) slated Onizuka for closure when its military mission is transferred to Vandenberg Air Force Base in 2011.

Onizuka Air Force Station Site Summary

- The approximately 23-acre site (18+ acres of developable land and almost four acres of easement) contains 507,457 square feet of space in 33 buildings.
- In 2006 the 21st Space Operations Squadron hosted Onizuka operations with nine military, 150 federal civilian and 200 contract employees. This is down from 1995 when DOD relocated the 750th Space Group and the Space and Missile Systems Center to Falcon Air Force Base in Colorado, resulting in a workforce reduction of nearly 3,000 jobs.
- Location: Mathilda Avenue just north of SR 237 and U.S. 101 in Sunnyvale.

Background

- The Department of Defense (DOD) purchased 11.4 acres of land from Lockheed for \$1 in 1960 and built the Air Force Satellite Test Center, which later became Sunnyvale Air Force Station and then was renamed Onizuka Air Force Station.
- Most operations at Onizuka are classified, but since the 1960s Onizuka has performed satellite monitoring and communications as well as NASA mission control.
- In 2005, the President's Base Realignment and Closure (BRAC) Commission recommended Onizuka AFS for closure, and the president endorsed the action. Onizuka's Air Force missions will be transferred to Vandenberg Air Force Base in Santa Barbara County.

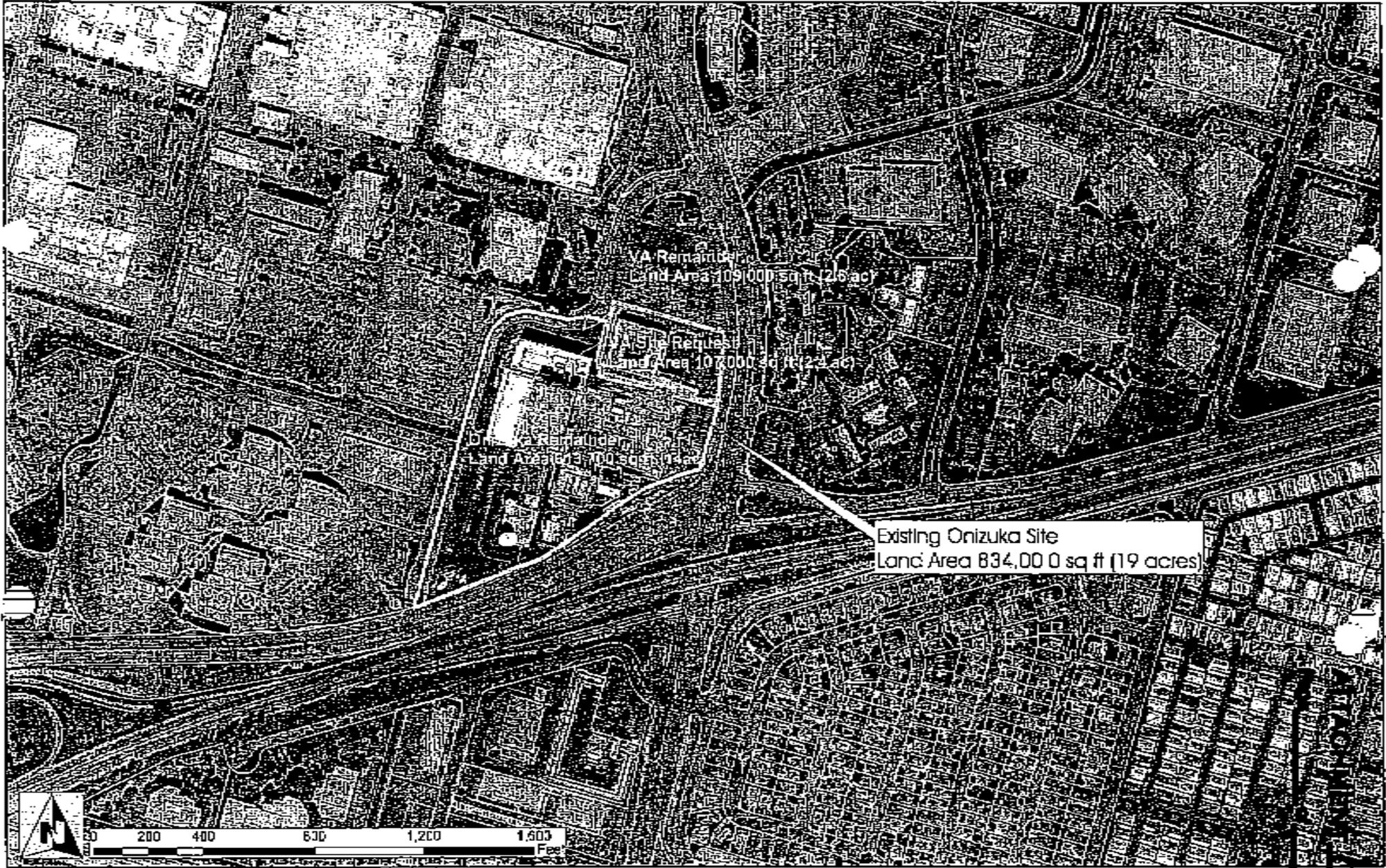
Steps in the Reuse Planning Process

- In November 2005, the BRAC Commission's closure list became law, and in 2006, DOD designated the City of Sunnyvale as the Local Redevelopment Authority (LRA) for Onizuka. In this role, the City is the primary point of contact

for all matters relating to base closure and is responsible for planning the property's transition from military to civilian use.

- As permitted by law, the Department of Veteran Affairs expressed interest in acquiring Onizuka's headquarters' offices and parking area. DOD declared the remaining Onizuka property as surplus.
- In 2006, Sunnyvale City Council formed a Citizen's Advisory Committee of 12 community stakeholders to advise Council in planning for Onizuka's civilian reuse. In compliance with federal statutes, the City began a local screening process, requesting notices of interest for reuse from public agencies and local nonprofit organizations.
- In December 2006, two nonprofit housing agencies submitted notices of interest in seven-plus acres to construct 245 housing units. These would address the need for housing for the homeless, as set forth in Sunnyvale's 2005/10 Consolidated Plan. BRAC mandates require the LRA to balance community needs for development with homeless needs for housing.
- In spring 2007, the City concluded the first phase of planning by adopting five conceptual reuse options for further analysis: low-density VA-style offices, corporate offices, hotel/conference center, auto-retail and homeless-residential.
- In fall 2007, DOD agreed to fund an independent professional analysis of the reuse options; the City subsequently selected Bay Area Economics to assist Council in choosing the preferred option(s) for the final reuse plan.
- In fall 2008, the City is scheduled to select its preferred land reuse option(s); the City's deadline for submission of the reuse plan to DOD and HUD is December 15, 2008.
- Following submission of the reuse plan, DOD has up to one year to issue a formal Record of Decision describing the process for Onizuka's disposition.
- The statutory deadline to complete Onizuka's realignment and closure is September 15, 2011.

For more information, including reports and meeting schedules, visit the City's Onizuka base transition Web pages at *Onizuka.InSunnyvale.com*, or contact Robert Switzer, the City's Onizuka AFS Project Manager at (408) 730-7512, TDD (408) 730-7501, or by e-mail at *rswitzer@ci.sunnyvale.ca.us*.



Existing Onizuka Site
Land Area 834,000 sq ft (19 acres)

0 200 400 600 1,200 1,600
Feet

11/15/00

Time Line

1960 – With the purchase of 11.4 acres of land from Lockheed for the bargain price of \$1, the 6594th TW becomes the Air Force Satellite Test Center, and what is now known as Onizuka is born.

1964 – Renamed "Air Force Satellite Control Facility".

1967 – Construction of the Blue Cube began, and was completed in 1968.

1971 – Becomes Sunnyvale Air Force Station.

1977 – Air Force Satellite Control Facility command functions officially transferred to Sunnyvale AFS from Space Divisions in Los Angeles.

1982 – AFSPC established, immediately began acquiring satellite operations previously aligned under AF Systems Command. With new command established AF Satellite Control Facility deactivated, the 2nd Space Wing formed (50 SW predecessor) as well as the 2nd Satellite Tracking Group.

1986 – Challenger explosion; Sunnyvale IUS and TDRS satellite payload onboard.

1986 – Sunnyvale is renamed Onizuka AFB on 7.24.86 in honor of Ellison S. Onizuka.

1992 – 750th Space Group activated responsible for launch and early orbit of the following missions: IUS, Shuttle, Booster Operations Communications Satellite, DSCS, GPS and DSP Satellites.

1993 – 5th Space Operations Squadron was activated; continued wide spectrum of missions under 50 SW – DSCS, IUS, NASA, Booster and NATO/SKYNET programs.

1995 – BRAC directs realignment; most but not all missions transfer.

1996 – Corona program declassified

1999 – 750th Space Group Deactivates; the 21st Space Operations Squadron hosts Onizuka AFS operations and tenant units.

Significant Missions

Most folks don't think about Onizuka when they think about space exploration, but they should. The people at Onizuka have touched many of our most important space missions.

1981 – Supported first orbital flight of Space Shuttle

Magellan – first planetary spacecraft launched by the Space Shuttle Atlantis on May 4, 1989; 15 month voyage around circled the sun 1 ½ times before arriving at Venus on August 10, 1990.

Galileo – 2.5 billion miles out to Jupiter; launched 24 hours after the Loma Prieta Earthquake.

The Hubble Space Telescope, designed to operate above the earth's turbulent and obscuring atmosphere to observe celestial objects at ultraviolet, visible and near-infrared wavelengths.

Ulysses – Launched by the shuttle Discovery to reach high solar latitudes. The spacecraft was aimed close to Jupiter so that Jupiter's large gravitational field would accelerate Ulysses out of the ecliptic plane to high latitudes.

Chandra X-Ray observatory was nearly 20 years in development and cost \$2.5 billion. It was the largest, heaviest and most powerful x-ray telescope ever launched into space. It weighs 52,000 pounds and is 45 feet long. The shuttle was commanded by Col. Eileen Collins, the first woman to command a Space Shuttle.

~~NOTE: The Onizuka team has supported every Shuttle Mission to date.~~

CORONA

Charles J. Vukotich, Jr.(SU#502), 635 Ridgefield Avenue, Pittsburgh, PA 15216-1161

This article and checklist first appeared in the *Astrophile*, a publication of the Space Topic Study Unit. It is being used here with the permission of the author and the Space Topic Study Unit.

One of the most important contributions of the space program has been imaging. This technology has contributed to weather forecasting, natural resources conservation, prospecting and a multitude of business and public interest applications. Imaging from space started with the military and the need to spy on our cold war adversaries, primarily with regard to nuclear capabilities. With the end of the cold war, imaging is still important to determine the spread of weapons of mass destruction, including chemical and biological. It also plays a role in combat reconnaissance, as witnessed in the Gulf War.

The Military developed imaging technology that went on to have significant civilian applications. Today, the military still enjoys the best technology, but space images for civilian use are of high quality, including images from French and Russian sources. This technology began with a Defense Department program called Corona.

Corona was the first operational space imaging reconnaissance satellite program, approved in February, 1958. Its' goal was to take pictures from space of the Soviet Bloc countries and return the photographic film for processing and analysis. In the 1950's, it became increasingly difficult to obtain intelligence data about soviet military capabilities, especially nuclear. Balloons carrying cameras(Genetrix) at high altitude were tried starting on January 22, 1956 but were not reliable. High altitude U-2 spy planes were used to gather intelligence, starting July 4, 1956, but were discontinued when Francis Gary Powers was shot down by a Soviet SAM May 1, 1960. Outer space became the ultimate 'high ground'.

Corona camera systems were integrated into an Agena upper stage and launched into Polar orbit by Thor booster from Van den Berg AFB, CA. Corona used an innovative constant rotating panoramic camera system, which provided a stable platform which was constantly pointed toward the Earth. The basic camera technology was a breakthrough developed as part of the Genetrix Project. Film was loaded into a recovery vehicle and returned to Earth for air recovery by USAF C-119 aircraft, while floating to Earth on a

parachute. Sea recovery was used as a backup.

Corona was developed in secrecy so that targeted nations would not know what was planned. Even the existence of Corona was not acknowledged. The Corona project management structure became the National Reconnaissance Office(NRO). NRO is a supersecret agency whose exist was not even acknowledged until recently. On December 23, 1958, the government created an project, called Discoverer, with an acknowledged goal of scientific research: testing of returning vehicles to Earth for the recovery of occupants, instruments, films and other scientific payloads; development of an early warning system for the detection of enemy missiles; development of a stable platform for scientific observations. The entire Discoverer Project was a ruse. No scientific objectives were planned. Discoverer actually had a staff working on scientific instruments, including launching pods for space mice, but none were ever launched or intended to be launched. Discoverer Project staff did not know about Corona. The cover was so elaborate that scientific instruments placed on Discoverer satellites were removed before launch. Although Corona developed recovery techniques, these were never intended as research for manned space programs. The Discoverer program was publicly classified after the launch of Discoverer XXXVIII, December 12, 1961. Those involved in Discoverer went on to other projects.

We know about Corona today, because President Clinton signed an executive order on February 24, 1995, releasing more than 800,000 images of the Earth taken by the project. These will be available to the public via the National Archives and Records Administration and the USGS EROS DATA Center. NRO now has a website, and data on Corona and Corona images are on that site. Current Landsat archives provide a photo record back to 1972. These images will add coverage for the period 1960-1972, and give those studying environmental developments an extra decade of data. These images are generally consistent with Landsat data. The resolution of the first systems(KH-1) was 40'. Each model improved resolution, ultimately reaching 6 feet, with the KH-4B(stereo image). Individual pictures usually cover an area 10 x 120 miles. Additional Corona memorabilia has been donated to the National Air & Space Museum.

Efforts have been made to acknowledge the scientific breakthroughs brought forth in the Corona Program:

First photoreconnaissance satellite

First recovery of a object from space(recovery vehicle in the Smithsonian)

First mid-air recovery of a vehicle returning from space

Quantum advancements in photoimaging from space

First mapping of earth from space

First stereo-optical data from space

First multiple reentry vehicles from space

Corona made today's high resolution imaging possible. The people working on this project were honored at a May 24, 1995 ceremony at the National Air & Space Museum. A book has also been published, *Corona Between the Sun & the Earth: The First NRO Reconnaissance Eye in Space*, by the American Society for Photogrammetry and Remote Sensing, April 7, 1997.

There were three diagnostic flights to test the Thor-Agena systems. These were designated Discoverer I, II and III. These were related to, but not part of the Corona series. Discoverer I has long been thought to be the first successful polar orbit. Data released from Corona suggests that Discoverer I did not actually achieve orbit. It was reported as a success by the military based on successful initiation of second stage burn. Orbital insertion was never confirmed by telemetry. The first polar orbit was probably Discoverer II.

Corona started with mission 9001, June 25, 1959, which failed to orbit. This was publicly called Discoverer IV. The early history of Corona is replete with hardware failures. Mission 9002(8/13/59) was the first to achieve orbit, but the camera failed. The camera also failed on 9003 and 9005, Missions 9004-6-7 failed to orbit. The camera worked for the first time on mission 9008, but the RV was not recoverable. A combination of extraordinary corrective action and two diagnostic flights brought success with the first photos from mission 9009. The first corona image was a soviet bomber base at Mys Schmidta in the far east, only 400 miles from Nome, AK. By mid-1961, Corona would supply a constant stream of intelligence data. Early Corona missions lasted one day. Later missions could take sufficient film and power supplies to last 19 days. A complete list of Corona missions follows this article.

The intelligence community used two sets of terminology for the Corona series. The Air Force and CIA - program managers - used program and launch designations. Those using the Photoreconnaissance('spy photos') referred to the camera systems, Keyhole or KH. Corona missions were numbered according to camera systems. These are listed below:

Series Camera Designations Remarks

90 KH-1 - KH-4

90 "A" KH-5 ARGON missions

80 KH-6 LANYARD missions

10 KH-4A

11 KH-4B

The initial camera systems were manufactured by Fairchild Camera Co. KH-1 had a resolution of 40'. This would be easy to fool if the enemy knew its' capability, so improvement was necessary. KH-2 improved the image motion compensation system and the film(all film was the product of Kodak) to gain 25' resolution.

Itek Corporation produced all subsequent cameras. The KH-3 was an upgrade of the earlier models, incorporating a faster lens, which allowed finer grain film, and improved resolution of 12 - 25'.

The first systems were all single camera. KH-4 was the first two camera system, using two KH-3 cameras to provide a stereo image. Resolution was only slightly improved(10-25'), but the stereo image gave more useable data. The next improvement was the use of two rather than one recovery vehicle(RV) which allowed two missions from a single launch. This was made possible through the use on strap on rockets on the Thor booster, the so-called Thrust-augmented Thor or Thorad. Which gave greater lift capacity. The KH-4A was a KH-4 with an additional film RV. KH-4A also had a larger payload of film. The KH-4B provided a new generation camera and operating system which allowed lower orbits(down to 80 nm), and greater resolution, generally 6'. In some circumstances, this system provided resolution to 4.5'.

KH-5 was a specialized camera used for the ARGON program, a part of Corona. ARGON was a project to provide broad based mapping for geodetic purposes so that the strategic targets could be pinpointed. ARGON images were 300 miles square, with a resolution of 460'. The first ARGON missions flew independently, but later missions were flown alongside the Corona imaging system. The 12 ARGON missions flew from February 17, 1961 to August 21, 1964, and succeeded in mapping most of the USSR and Eastern block. ARGON launches were identified by an "A" after the Corona launch designator.

The KH-6 system was designed to provide very high resolution photos(2'). The camera was part of a project called LANYARD, another specialized part of Corona. The initial stimulus for this added resolution was suspected ABM sites around Leningrad. The best resolution achieved was 6', the same as the KH-4B, so LANYARD was discontinued

after 3 launches in 1963.

Corona used other cameras "piggyback" on the Agena vehicle. ARGON used a secondary mapping camera. KH-3, 4, 4A and 4B used horizon cameras to determine the orientation of the bird, stellar cameras to accurately determine pitch, roll and yaw during operational cycles, and index cameras for small scale photos to help mine the location of the main images

Corona proved to be very successful. The U-2 program mapped 1 million sq. mi. with 24 flights. Corona covered 510 million sq. mi. Corona was important from a technology standpoint. When the project started, no one knew if you could even take photos in space. Corona also provided highly accurate intelligence data for senior US policy makers. The recently released data shows the scope of Corona's success:

Imaged all Soviet medium-range, intermediate-range and ICBM complexes

Imaged each Soviet submarine class from deployment to operational bases

Provided inventories of Soviet bombers and fighters

Revealed the presence of Soviet missiles in Egypt protecting the Suez Canal

Identified Soviet nuclear assistance to the People's Republic of China

Monitored the SALT I treaty

Uncovered the Soviet ABM program and sites (GALOSH, HEN HOUSE, etc.)

Identified Soviet atomic weapon storage installations

Identified People's Republic of China missile launching sites

Determined precise locations of Soviet air defense missile batteries

Observed construction and deployment of the Soviet ocean surface fleet

Identified Soviet command and control installations and networks

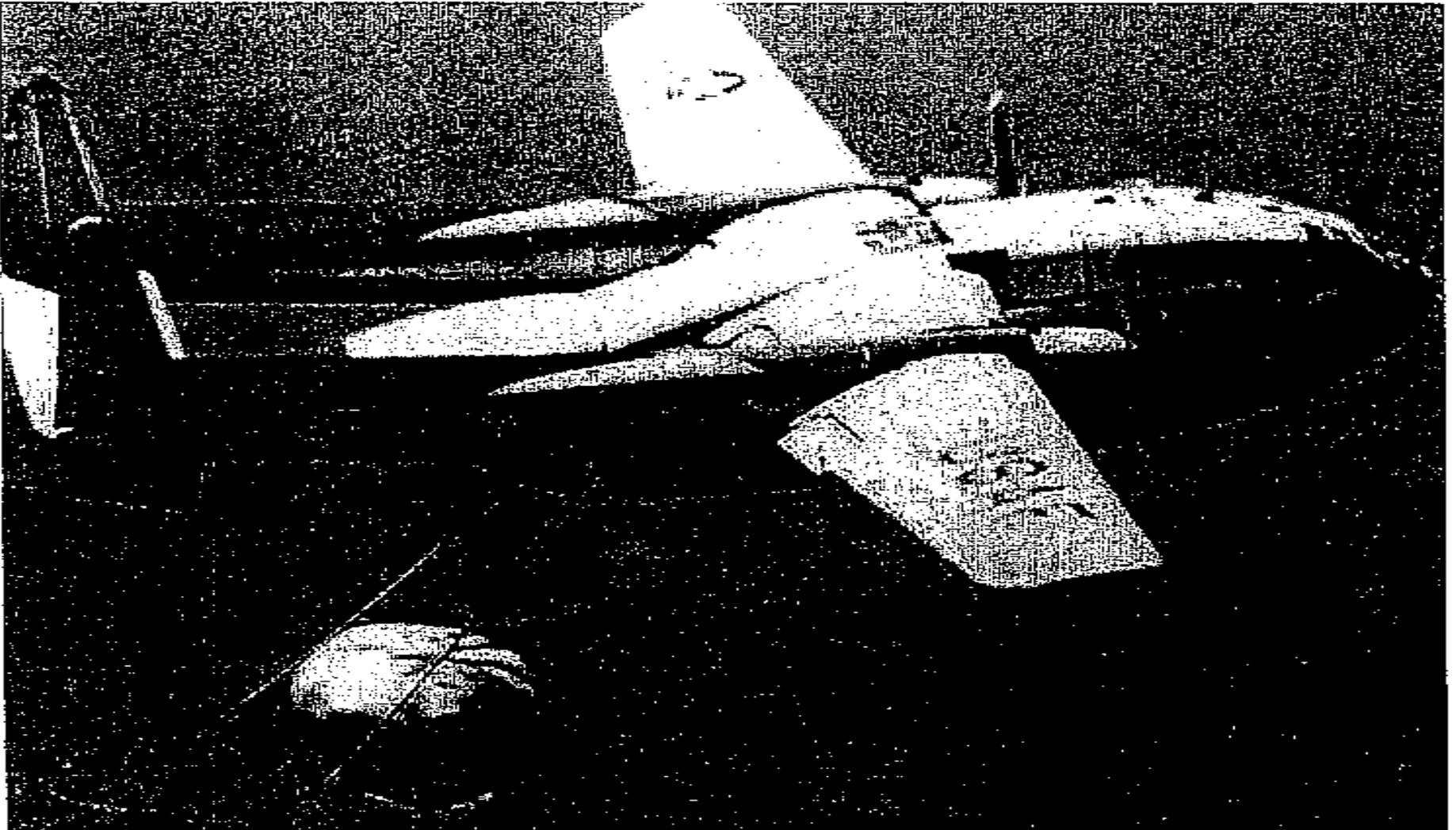
Provided mapping for Strategic Air Command targeting and bomber routes

Identified the Plesetsk Missile Test Range, north of Moscow

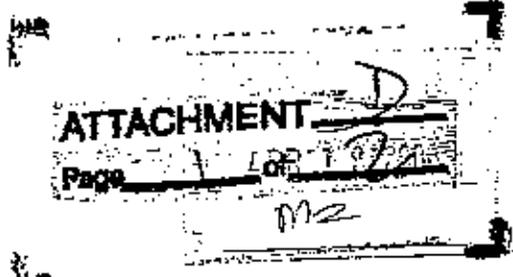
Since no one knew about Corona until now, no covers were prepared specifically for Corona launches. However, covers were prepared for Discoverer missions and "secret satellites", so covers probably exist for these launches. Horace Westbrooks, in his definitive article on the Discover series notes that Discoverer X "...is the only DISCOVERER for which no philatelic covers are known..." The existence of covers for most of the launches has been verified.

Summary of Corona Missions - Notes to Table

Dates listed in this table reflect those reported by Corona. There are some discrepancies between these dates and those which were reported to national and international authorities, and to which international designations were assigned in order to track objects in space. The US source for such data is the Goddard SFC Satellite Situation Report. These discrepancies also exist with those reported in the philatelic community, which agree entirely with the Goddard report. In many cases, the public, which includes the philatelic community, witnessed these launches, as all launches from Van den Berg are able to be observed due to the proximity of inhabited areas. Discrepancies are noted. It is likely that launches which occurred late in the day were reported the next morning, the date of launch being relatively irrelevant to Corona authorities. The Goddard dates are probably correct. Some Corona numbering is out of sequence.



CC: Eric 4/20/06



DATE: April 16, 2006
TO: Coryn Campbell, Manager
Neighborhood/Community/IGR
Office of the City Manager
City of Sunnyvale California

FROM: Jack W. Rowe, Historian
408-733-9131
1014 Michelangelo Dr.
Sunnyvale, CA 94087

RECEIVED
AUG 14 2006

PLANNING DIVISION

SUBJ: Historical Significance of the Onizuka AFB (Blue Cube)

Dear Coryn:

We spoke briefly following the City Council Meeting of 4/11/06 where you had presented an Agenda item about the BRAC issue involving Sunnyvale's Blue Cube.

In our discussion, I offered that the Blue Cube is one of the most historically significant properties/facilities in Sunnyvale. The Blue Cube was an operational Air Force facility intimately associated with many of the National Reconnaissance Office (NRO) missions. The NRO is an integration of CIA and Air Force interests and talent for the collection of intelligence by satellites. The Blue Cube was born to be, and actually was, a very major contributor in the United States' winning of the Cold War!

The NRO organization, its national security role and mission, is documented in a book titled "The Wizards of Langley" (see reviews in 1. below). The most important now known NRO program was CORONA, an implementation to photograph Soviet military buildup and capabilities during the Cold War. The Blue Cube was NRO's hi-tech tool to implement the mission controls of a worldwide network of facilities to recover photographic intelligence, by film and digital data returned from NRO designed satellites.

There were many other NRO projects of comparable intelligence value.

It is generally accepted that NRO's photographic intelligence provided the basis for our government to bluff the Soviet Union's leaders, and eventually bankrupt them, by being a threat that must be countered at any cost. The NRO and CORONA stories were deeply classified until 1992 and 1995, respectively. Many technical and operational details remain classified to this day. The Blue Cube's role was as the Satellite Test Center (STC) of the Satellite Control Facility (SCF), a worldwide network (See additional information in 2. through 6. below).

Clearly, it is historically important to recognize and display the Blue Cube's contribution in winning the cold war. It would be impractical and of little importance to retain the buildings without the now absent technical personnel and equipments that actually did the work. However, a reasonable plan would be to design and incorporate a major history monument that explains

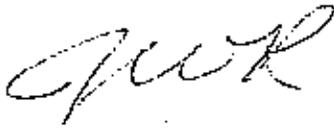
and honors the mission, equipment, personnel, and most importantly, the eventual results of the Blue Cube's tenure at its Sunnyvale site. The design should be more than a mere historical plaque. Consider it in lieu of the required public art often a part of Sunnyvale developments. I think the original government organizations would applaud, endorse and willingly contribute to such an appropriate plan.

This program was largely responsible for financing the industrial development of Sunnyvale and the entire South Bay area during the 1960-70 eras. But, that is another story!

Please share my comments and this background information about the Blue Cube's history with others that will subsequently be involved in justifying, proposing and/or implementing such a redevelopment project.

Feel free to contact me if you have any questions.

Regards, Jack



cc: Sunnyvale Historical Society, Attn.: Laura Babcock

Related links:

1. http://www.mapcruzia.com/rev_wizards_of_langley.htm
2. <http://www.nro.gov/corona/corpr.html>
3. <http://en.wikipedia.org/wiki/Image:Oafs.jpg>
4. http://en.wikipedia.org/wiki/Air_Force_Satellite_Test_Center
5. http://en.wikipedia.org/wiki/50th_Space_Wing
6. <http://en.wikipedia.org/wiki/Discoverer>

For Official Use Only—Not for Public Distribution

**HISTORIC BUILDING INVENTORY AND EVALUATION
ONIZUKA AIR FORCE STATION, CALIFORNIA
(WMSJ360497: Cold War Survey)**

DRAFT FINAL

prepared by
Paige M. Peyton
Senior Architectural Historian
KAYA Associates, Inc.
Redlands, California

prepared for
United States Air Force, Space Command
21 Space Operations Squadron
Onizuka Air Force Station, California

under subcontract to
Geo-Marine, Inc.
Plano, Texas
through
Parsons Infrastructure & Technology Group Inc.
San Antonio, Texas

December 2004

1

EXECUTIVE SUMMARY

2
3
4
5
6

This report presents the results of an inventory and evaluation of all of the buildings, structures, and landscapes at Onizuka Air Force Station, California (AFS) for possible inclusion in the National Register of Historic Places (National Register). Using the Real Property List provided by the installation, the assessment encompasses 30 individual facilities and the complex as a whole.

7

NATIONAL REGISTER ELIGIBILITY RECOMMENDATIONS

8
9
10
11
12

In accordance with National Register Bulletin 15, *How to Apply the National Register Criteria for Evaluation* (U.S. Department of Interior National Park Service 1991), for a property to qualify for listing in the National Register it must meet at least one of the National Register criteria (criteria A-D) (see Section 3.3.1 for a discussion of the criteria) by:

13
14
15
16

- Being associated with an important historic context *and*
- Retaining historic integrity of those features necessary to convey its significance.

17
18
19
20

Information about a property is based on physical examination and documentary research and is essential for evaluating the property—without that information, defensible conclusions regarding eligibility cannot be made.

21
22
23
24
25
26
27
28
29
30
31
32

Based on the below observations, it is recommended that 24 of the evaluated facilities at Onizuka AFS be considered *not eligible* for inclusion in the National Register at this time or at any time in the future (Table E-1). These facilities are all currently less than 50 years in age; are support buildings that serve ancillary functions (e.g., storage sheds, antennas, traffic check houses; or infrastructure shelters); and are typically of unremarkable corrugated metal or concrete block construction. In addition, given their function, architecture, and age, none of these buildings demonstrate the exceptional importance requirement of criteria consideration G (see Section 3.3.2 for a discussion of the National Register exceptions). Because of their function and architecture, the likelihood of these types of buildings becoming historically significant at any age is extremely remote.

33
34
35
36
37
38
39
40
41
42

It is further recommended that, given their age, architecture, and the lack of sufficient historical information, the remaining six buildings (1001, 1002, 1003, 1004, 10031, and 10032) be considered *not eligible* for inclusion in the National Register at this time, but that they be re-evaluated (as a grouping) when they reach the age of 50 years to determine if they could meet the National Register criteria. Because Building 1003 (the Blue Cube) is a central/key facility, the year of re-evaluation is proposed for 2019, unless the installation's missions are declassified or decommissioned and sufficient information to support an eligibility determination is available prior to that date.

43
44

National Register Criterion A (association with significant historical events).
Onizuka AFS is an extremely high security facility that consists of approximately 30

For Official Use Only—Not for Public Distribution

Table E-1. Buildings and Structures List
Onizuka Air Force Station

| | Building Number | Description of Facility | Date Built | Function |
|----|-----------------|--|------------|-------------|
| 1 | 1001 | Space Operations Facility | 1959 | Operations+ |
| 2 | 1002 | Headquarters/Base Engineering | 1964 | Operations+ |
| 3 | 1003 | Satellite Control Station | 1969 | Operations+ |
| 4 | 1004 | Electric Power Station Building | 1969 | Operations+ |
| 5 | 1005 | Warehouse Supply and Equipment | 1974 | Support |
| 6 | 1006 | Consolidated Open Mess | 1971 | Support |
| 7 | 1007 | Base Engineering Storage Shed | 1971 | Support |
| 8 | 1008 | Hazardous Storage Facility | 1994 | Support |
| 9 | 1009 | Antenna Support Structure | 1976 | Support |
| 10 | 1010 | Satellite Communications Ground Terminal | 1976 | Support |
| 11 | 1012 | Antenna Support Structure | 1976 | Support |
| 12 | 1013 | Satellite Communications Ground Terminal | 1976 | Support |
| 13 | 1015 | Multipurpose Recreation Facility | 1974 | Support |
| 14 | 1016 | Antenna Support Structure | 1976 | Support |
| 15 | 1018 | Exchange, Service Outlet | 1978 | Support |
| 16 | 1020 | Satellite Communications Ground Terminal | 1981 | Support |
| 17 | 1021 | Antenna Support Structure | 1979 | Support |
| 18 | 1022 | Antenna Support Structure | 1981 | Support |
| 19 | 1025 | Security Police Operations | 1984 | Support |
| 20 | 1034 | Base Engineering Administration and Storage | 1988 | Support |
| 21 | 1035 | Electric Power Station Building (Supporting) | 1997 | Support |
| 22 | 1040 | Hazardous Storage | 1988 | Support |
| 23 | 1042 | Hazardous Storage | 1988 | Support |
| 24 | 1043 | Traffic Check House | 1988 | Support |
| 25 | 1044 | Traffic Check House (Demolished) | 1988 | Support |
| 26 | 1045 | Traffic Check House | 1988 | Support |
| 27 | 1074 | Communications Equipment Support Tower | 1988 | Support |
| 28 | 1079 | Pump Station | 1988 | Support |
| 29 | 10031 | Satellite Communications Station/ Covered Parking Structure/Supply and Equipment Storage | 1985 | Operations+ |
| 30 | 10032 | Satellite Communications Station/ Covered Parking Structure/Supply and Equipment Storage | 1986 | Operations+ |

+ Re-evaluate as a grouping in the year 2019

- 1 facilities. Of these, the majority are ancillary support and infrastructure facilities that
2 support the missions that take place in Buildings 1001, 1002, 1003, 10031 and 10032.
3
4 Because of the highly classified nature of this installation only limited general historical
5 and physical information about the buildings is available. National security restrictions
6 prohibit the acquisition and publication of mission details and photography of the
7 complex was restricted and monitored during this building assessment. With minor
8 exceptions, there was only limited access to the interiors of the buildings. No interior
9 photographs were taken; however, exterior photographs were permitted and approved by
10 21 Space Operations Squadron (SOPS) security personnel.

For Official Use Only—Not for Public Distribution

1 Information provided by the Onizuka AFS Public Affairs Office and/or obtained from
2 publicly available sources indicates that Buildings 1001, 1002, 1003, and the third level
3 of Buildings 10031 and 10032 contain satellite network tracking and intelligence
4 equipment. Complex computer systems detect and report in real time, missile launches,
5 space launches, and nuclear detonations using satellites. Building 1004 is the power
6 plant built specifically for Building 1003. Except in the most general way, information
7 about exactly what takes place within these facilities is not known. While it is possible
8 that sufficient levels of information would reveal that these six buildings are historically
9 significant for their missions and activities, there is currently insufficient publicly
10 available, unclassified data to defend that conclusion.

11
12 **National Register Criterion B (association with significant persons).** From the
13 available historical data, there are no known associations between Onizuka AFS and
14 persons significant during the Cold War, the race for space, or any other notable persons
15 in American history.

16
17 **National Register Criterion C (architecture).** In general, all of the buildings at
18 Onizuka AFS are concrete, concrete block and/or corrugated metal. The buildings are
19 featureless, have few windows, and represent no true architectural style. The entire
20 complex is highly secured by fences and access is restricted. With the exception of the
21 "Blue Cube" (Building 1003,) which is light blue in color, there are no noteworthy
22 architectural or engineering features.

23
24 **National Register Criterion D (likely to yield important information in the future).**
25 Typically reserved for archaeological resources, there are no current data that would
26 support eligibility of Buildings 1001, 1002, 1003, 1004, 10031, or 10032 under National
27 Register criterion D.

28
29 **National Register Criteria Consideration G (demonstrates exceptional importance**
30 **as a property less than 50 years in age).** All of the facilities within the complex are less
31 than 50 years in age; most are between 16 and 30 years old. As described above, because
32 of their function and architecture, 24 of these facilities (one recently demolished) are not
33 likely to achieve historical significance at any age. Given the lack of specific information
34 about the missions and activities at Onizuka AFS, there is currently insufficient historical
35 data to determine if the remaining 6 buildings (1001, 1002, 1003, 1004, 10031, and
36 10032) could meet the exceptional importance requirements of National Register criteria
37 consideration G.

38
39 **Integrity.** Onizuka AFS real property records contain limited information about the
40 construction or equipment within the facilities. Externally, most of the buildings appear
41 to be well maintained; however, because of the level of security associated with the
42 complex, the exact extent and nature of any modifications that would affect historic and
43 physical integrity is not known.

44
45 **Historic District/Historic Landscape Potential.** Onizuka AFS is a small industrial-
46 appearing military facility surrounded by major roadways, very large industrial and
47 commercial buildings, and paved area; there is minimal landscaping and open space. The

For Official Use Only—Not for Public Distribution

1 30 buildings and structures within the station boundary, are utilitarian in design with no
2 true architectural style or features and all are constructed of reinforced concrete, concrete
3 block, or corrugated metal Butler-type construction. Twenty-four of the facilities are
4 support buildings or structures with little or no potential for historic significance. As a
5 result, there is very little potential for Onizuka AFS or any grouping of facilities
6 contained therein to represent a historic district or a historic landscape.

7

8 CONCLUSION

9

10 As shown in Table E-1, the 24 buildings and structures listed as support facilities (23 plus
11 one recently demolished) are recommended as *not eligible* for inclusion in the National
12 Register and no further studies or future evaluations are recommended.

13

14 Buildings 1001, 1002, 1003, 1004, 10031, and 10032 are recommended as *not eligible* for
15 inclusion in the National Register at this time. However, it is recommended that the
16 buildings be reconsidered for eligibility in the year 2019, or at such time as additional,
17 more specific information about their activities and missions becomes publicly available.

For Official Use Only—Not for Public Distribution

TABLE OF CONTENTS

| | |
|--|------|
| EXECUTIVE SUMMARY | E-1 |
| 1.0 INTRODUCTION..... | 1-1 |
| 1.1 PROJECT AREA..... | 1-1 |
| 1.1.1 Location | 1-1 |
| 1.1.2 Organization..... | 1-1 |
| 1.1.3 Mission..... | 1-1 |
| 1.2 REPORT ORGANIZATION..... | 1-5 |
| 1.3 LEGISLATIVE REQUIREMENTS..... | 1-5 |
| 1.3.1 Section 110 of the NHPA | 1-5 |
| 1.3.2 Section 106 of the NHPA | 1-5 |
| 1.3.3 Definition of a Historic Property | 1-6 |
| 2.0 HISTORIC CONTEXT..... | 2-1 |
| 2.1 BRIEF HISTORY OF ONIZUKA AIR FORCE STATION..... | 2-1 |
| 2.1.1 Background..... | 2-1 |
| 2.1.2 Establishment and Development of the Satellite Test Center, Sunnyvale, California | 2-3 |
| 3.0 METHODS..... | 3-1 |
| 3.1 OBJECTIVES OF THE INVENTORY AND EVALUATION | 3-1 |
| 3.2 METHODS AND GUIDANCE..... | 3-1 |
| 3.3 NATIONAL REGISTER CRITERIA FOR HISTORIC PROPERTY EVALUATION..... | 3-1 |
| 3.3.1 National Register Criteria A-D..... | 3-1 |
| 3.3.2 National Register Criteria Considerations A-G | 3-2 |
| 3.3.3 How Historic Landscapes/Viewsheds Relate to the National Register Criteria | 3-4 |
| 3.4 DESIGNED, RURAL, ETHNOGRAPHIC, AND MILITARY HISTORIC LANDSCAPES..... | 3-5 |
| 3.4.1 Designed Historic Landscapes..... | 3-5 |
| 3.4.2 Rural Historic Landscapes..... | 3-6 |
| 3.4.3 Ethnographic Landscapes | 3-7 |
| 3.4.4 Historic Military Landscapes..... | 3-8 |
| 3.5 AIR FORCE COLD WAR HISTORIC PROPERTY GUIDANCE..... | 3-9 |
| 3.6 MANAGEMENT OF HIGHLY TECHNICAL AND SCIENTIFIC FACILITIES | 3-10 |
| 3.7 INTEGRITY..... | 3-11 |
| 4.0 INVENTORY..... | 4-1 |
| 4.1 UNIVERSE OF PROPERTIES INVENTORIED | 4-1 |
| 4.1.1 Building 1001..... | 4-1 |
| 4.1.2 Building 1002..... | 4-4 |
| 4.1.3 Building 1003..... | 4-5 |

For Official Use Only—Not for Public Distribution

TABLE OF CONTENTS
(Continued)

| | | |
|-------------------|---|------------|
| 4.1.4 | Building 1004..... | 4-7 |
| 4.1.5 | Building 1005..... | 4-7 |
| 4.1.6 | Building 1006..... | 4-9 |
| 4.1.7 | Building 1007..... | 4-9 |
| 4.1.8 | Building 1008..... | 4-10 |
| 4.1.9 | Structure 1009..... | 4-11 |
| 4.1.10 | Building 1010..... | 4-12 |
| 4.1.11 | Structure 1012..... | 4-13 |
| 4.1.12 | Structure 1013..... | 4-14 |
| 4.1.13 | Structure 1015..... | 4-14 |
| 4.1.14 | Structure 1016..... | 4-15 |
| 4.1.15 | Building 1018..... | 4-16 |
| 4.1.16 | Building 1020..... | 4-16 |
| 4.1.17 | Structure 1021..... | 4-17 |
| 4.1.18 | Structure 1022..... | 4-17 |
| 4.1.19 | Building 1025..... | 4-19 |
| 4.1.20 | Building 1034..... | 4-19 |
| 4.1.21 | Building 1035..... | 4-20 |
| 4.1.22 | Building 1040..... | 4-21 |
| 4.1.23 | Building 1042..... | 4-22 |
| 4.1.24 | Building 1043..... | 4-22 |
| 4.1.26 | Building 1045..... | 4-23 |
| 4.1.27 | Structure 1074..... | 4-24 |
| 4.1.28 | Structure 1079..... | 4-25 |
| 4.1.29 | Building 10031..... | 4-25 |
| 4.1.30 | Building 10032..... | 4-26 |
| | | |
| 5.0 | RECOMMENDATIONS OF THE ONIZUKA AIR FORCE STATION HISTORIC BUILDING INVENTORY AND EVALUATION..... | 5-1 |
| 5.1 | NATIONAL REGISTER ELIGIBILITY RECOMMENDATIONS..... | 5-1 |
| 5.2 | CONCLUSION..... | 5-4 |
| | | |
| 6.0 | REFERENCES..... | 6-1 |
| | | |
| APPENDIX A | Building List, Onizuka Air Force Station, California | |
| | | |
| APPENDIX B | California Architectural Inventory Forms Primary Record; Location Map; and Buildings, Structure, and Object Records--Onizuka Air Force Station, California | |

For Official Use Only—Not for Public Distribution

LIST OF FIGURES

Figure 1-1. Regional Map, Onizuka Air Force Station, California..... 1-2
Figure 1-2. Aerial Photograph, Onizuka Air Force Station, California..... 1-3
Figure 1-3. Installation Layout, Onizuka Air Force Station, California..... 1-4

Figure 2-1. Onizuka Air Force Station/Air Force Base Test Capabilities 2-25
**Figure 2-2. Onizuka Air Force Station/Air Force Base Research
and Development Capabilities..... 2-25**

Figure 4-1. Onizuka Air Force Station--Installation Layout 2004..... 4-2

For Official Use Only—Not for Public Distribution

LIST OF TABLES

Table E-1. Buildings and Structures List, Onizuka Air Force Station E-2

Table 4-1. List of Onizuka Air Force Station Buildings and Structures 4-3

Table 5-1. National Register of Historic Places Eligibility, Onizuka Air Force Station 5-2

For Official Use Only—Not for Public Distribution

LIST OF PHOTOGRAPHS

| | | |
|------------------|--|------|
| Photograph 4-1. | Building 1001—Space Operations Facility (Multipurpose)..... | 4-1 |
| Photograph 4-2. | Building 1002—Headquarters/Base Engineering (Multipurpose)..... | 4-4 |
| Photograph 4-3. | Building 1002—Headquarters/Base Engineering (Multipurpose)..... | 4-4 |
| Photograph 4-4. | Building 1003—Satellite Control Station (Multipurpose)..... | 4-5 |
| Photograph 4-5. | Building 1003—Satellite Control Station (Multipurpose)..... | 4-6 |
| Photograph 4-6. | Building 1003—Satellite Control Station (Multipurpose)..... | 4-6 |
| Photograph 4-7. | Building 1004—Electric Power Station Building..... | 4-7 |
| Photograph 4-8. | Building 1005—Warehouse..... | 4-8 |
| Photograph 4-9. | Building 1005—Warehouse..... | 4-8 |
| Photograph 4-10. | Building 1006—Consolidated Open Mess ("The Space Place")..... | 4-9 |
| Photograph 4-11. | Building 1007—Base Engineering Storage Shed..... | 4-10 |
| Photograph 4-12. | Building 1008—Hazardous Storage Facility..... | 4-10 |
| Photograph 4-13. | Structure 1009—Antenna Support Structure..... | 4-11 |
| Photograph 4-14. | Building 1010—Satellite Communications Ground Terminal..... | 4-12 |
| Photograph 4-15. | Structure 1012—Antenna Support Structure..... | 4-13 |
| Photograph 4-16. | Building 1013—Satellite Communications Ground Terminal..... | 4-14 |
| Photograph 4-17. | Structure 1016—Antenna Support Structure..... | 4-15 |
| Photograph 4-18. | Building 1018—Exchange, Service Outlet..... | 4-16 |
| Photograph 4-19. | Building 1020—Satellite Communications Ground Terminal..... | 4-17 |
| Photograph 4-20. | Structure 1021—Antenna Support Structure..... | 4-18 |
| Photograph 4-21. | Structure 1022—Antenna Support Structure..... | 4-18 |
| Photograph 4-22. | Building 1034—Base Engineering Administration and Storage..... | 4-19 |
| Photograph 4-23. | Building 1035—Electric Power Station Building (Secondary)..... | 4-20 |
| Photograph 4-24. | Building 1040—Hazardous Storage Building..... | 4-21 |
| Photograph 4-25. | Building 1042—Hazardous Storage Building..... | 4-22 |
| Photograph 4-26. | Building 1043—Traffic Check House..... | 4-23 |
| Photograph 4-27. | Building 1045—Traffic Check House..... | 4-24 |
| Photograph 4-28. | Structure 1074—Communications Equipment Support Structure..... | 4-24 |
| Photograph 4-29. | Structure 10031—Satellite Communications Station/Covered Parking/Base Supply and Equipment Storage..... | 4-25 |
| Photograph 4-30. | Structure 10032—Satellite Communications Station/Covered Parking/Base Supply and Equipment Storage..... | 4-26 |

For Official Use Only—Not for Public Distribution

ACRONYMS AND ABBREVIATIONS

| | | |
|----|----------------|--|
| 1 | AFB | Air Force Base |
| 2 | | |
| 3 | AFBMD | Air Force Ballistic Missile Division |
| 4 | | |
| 5 | AFLC | Air Force Logistics Command |
| 6 | | |
| 7 | AFS | Air Force Station |
| 8 | | |
| 9 | AFSC | Air Force Systems Command |
| 10 | | |
| 11 | AFSCN | Air Force Satellite Control Network |
| 12 | | |
| 13 | AFSPC | Air Force Space Command |
| 14 | | |
| 15 | AMC | Air Materiel Command |
| 16 | | |
| 17 | BMEWS | Ballistic Missile Early Warning System |
| 18 | | |
| 19 | BRAC | Base Closure and Realignment Commission |
| 20 | | |
| 21 | C ³ | Command, Control and Communications |
| 22 | | |
| 23 | CFR | Code of Federal Regulations |
| 24 | | |
| 25 | CONUS | Continental (sometimes Contiguous) United States |
| 26 | | |
| 27 | Council | Advisory Council on Historic Preservation |
| 28 | | |
| 29 | CSOC | Space Consolidated Operations Center |
| 30 | | |
| 31 | DET | Detachment |
| 32 | | |
| 33 | DOD | Department of Defense |
| 34 | | |
| 35 | DMSP | Defense Meteorological Satellite Program |
| 36 | | |
| 37 | DSCS | Defense Satellite Communications System |
| 38 | | |
| 39 | ICBM | Intercontinental Ballistic Missile |
| 40 | | |
| 41 | MCC | Mission Control Complex |
| 42 | | |
| 43 | MIDAS | Missile Detection Alarm System |
| 44 | | |
| 45 | MOL | Manned Orbiting Laboratory |

For Official Use Only—Not for Public Distribution

| | | |
|----|-------------------|---|
| 1 | | |
| 2 | NASA | National Aeronautics and Space Administration |
| 3 | | |
| 4 | National Register | National Register of Historic Places |
| 5 | | |
| 6 | NHPA | National Historic Preservation Act |
| 7 | | |
| 8 | OAS | Office of Aerospace Research |
| 9 | | |
| 10 | OL | Operating Location |
| 11 | | |
| 12 | SHPO | State Historic Preservation Officer |
| 13 | | |
| 14 | SOPS | Space Operations Squadron |
| 15 | | |
| 16 | SPACECOM | Space Command (also AFSPC) |
| 17 | | |
| 18 | STC | Satellite Test Center |
| 19 | | |
| 20 | TAC | Tactical Air Command |
| 21 | | |
| 22 | U.S. | United States |
| 23 | | |
| 24 | WDD | Western Development Division |
| 25 | | |
| 26 | WS | Weapons System |

For Official Use Only—Not for Public Distribution

1 1.0 INTRODUCTION

2 This report presents the results of a historic building inventory and evaluation of Onizuka
3 Air Force Station (AFS), California. The effort was conducted under Section 110 of the
4 National Historic Preservation Act (NHPA) of 1966 (as amended), to support ongoing
5 and future compliance with the NHPA and the National Environmental Policy Act.
6 Fieldwork was conducted August 10-12, 2004, and was performed by Ms. Paige M.
7 Peyton, Senior Architectural Historian, Geo-Marine, Inc., Redlands, California.

8 1.1 PROJECT AREA

9 1.1.1 Location

10 Onizuka AFS is located in Sunnyvale, California, approximately 44 miles south of San
11 Francisco (Figures 1-1 through 1-3). Located in Santa Clara County, Sunnyvale has a
12 population of over 120,000 people and is home to numerous semiconductor and other
13 high technology industries.

14
15 Surrounded by heavily developed industrial areas and major roadways, Onizuka AFS
16 encompasses 23 acres. Approximately half of the area is covered by buildings and
17 structures; the remaining area is paved for parking personnel and government vehicles.
18 Landscaping is minimal (approximately 0.2 acres) and is found at the main entrance, the
19 south side of Building 1001, and east of Building 1013 (Onizuka Air Force Station 2004).

20 1.1.2 Organization

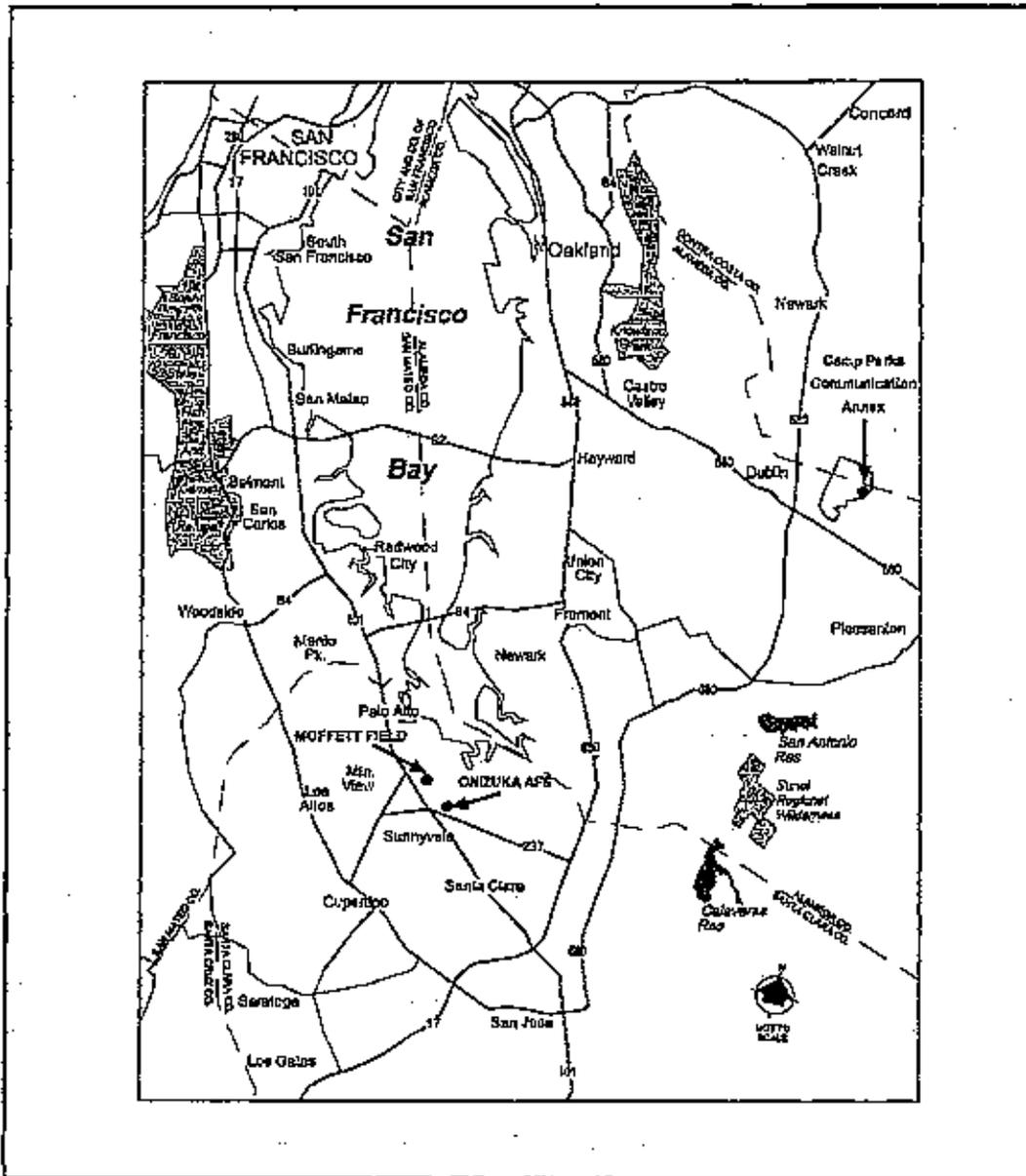
21 Originally established in 1960, as the Satellite Test Center for the U.S. Air Force 6594th
22 Test Wing, Onizuka AFS was re-designated Sunnyvale AFS in 1970. In 1986, its name
23 was changed to Onizuka AFS in honor of Space Shuttle Challenger astronaut Colonel
24 Ellison S. Onizuka. In 1987, as part of an Air Force-wide organizational change, the
25 installation was renamed Onizuka Air Force Base (AFB), and in 1994, the name was
26 changed to Onizuka Air Station. In 1999 the facility was renamed Onizuka AFS
27 (Onizuka Air Force Station 2004).

28
29 On October 1, 1987, Air Force Space Command (AFSPC) became the major command
30 host. On January 30, 1992, the 750th Space Group (750 SG), a subordinate unit of the
31 50th Space Wing (50 SW) based at Schriever AFB, Colorado became the host unit.
32 Upon deactivation of 750 SG in June 1999, 21 SOPS became the host unit. Currently the
33 installation employs approximately 1,800 contractor/civilian and military personnel
34 (Onizuka Air Force Station 2004).

35 1.1.3 Mission

36 Onizuka AFS tracks, tests, operates, and controls a variety of multi-functional defense
37 satellites, supports non-military space vehicle activities, evaluates procedures and
38 prototype equipment for the entire satellite and control network, and disseminates
39 information to affected agencies (Onizuka Air Force Station 2004).

For Official Use Only—Not for Public Distribution



Source: Onizuka Air Force Station 2004

Figure 1-1

Regional Map
Onizuka Air Force Station, California

For Official Use Only—Not for Public Distribution

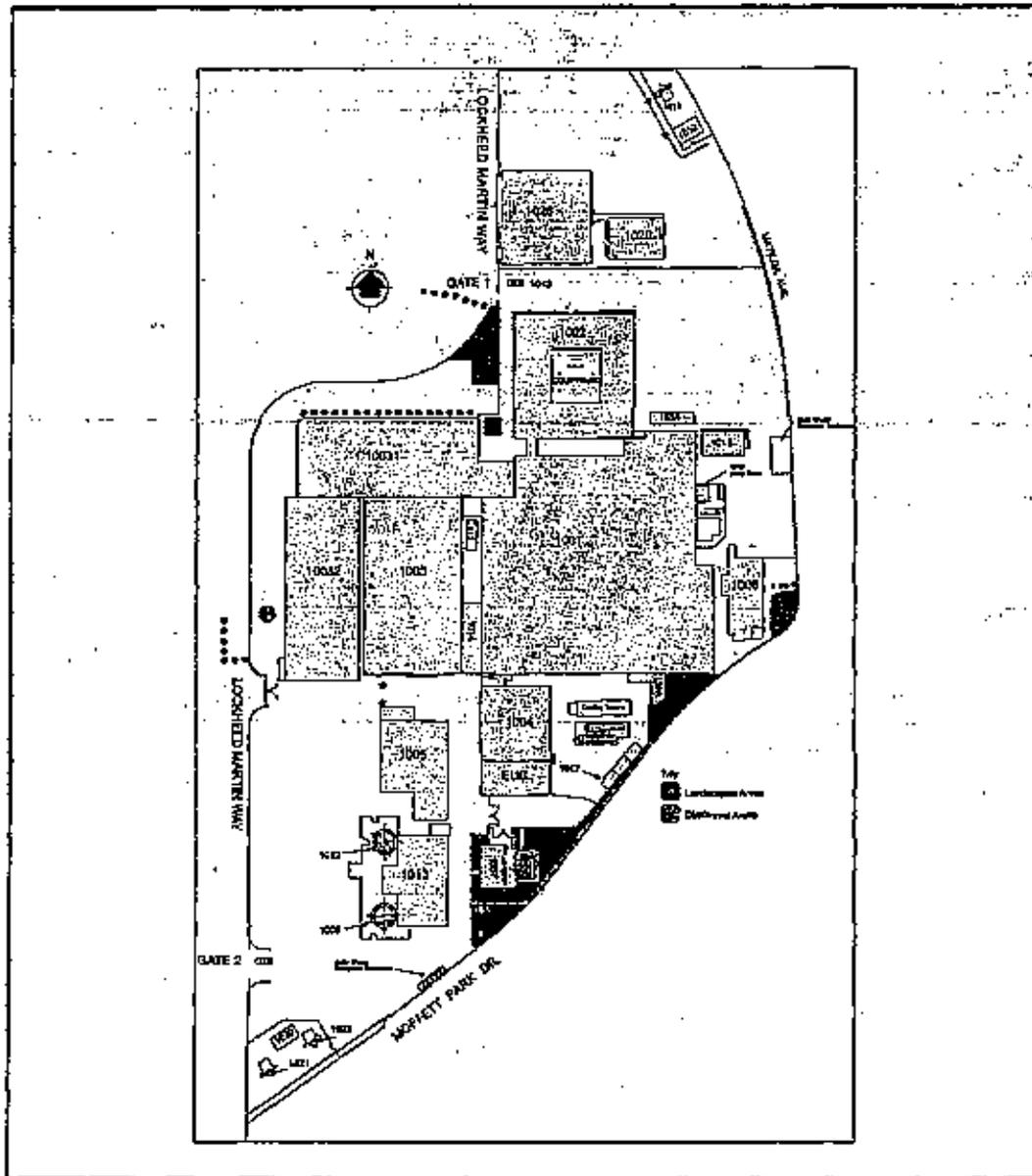


Source: Onizuka Air Force Station 2004

Figure 1-2

**Aerial Photograph
Onizuka Air Force Station, California**

For Official Use Only—Not for Public Distribution



Source: Onizuka Air Force Station 2004

Figure 1-3

Installation Layout
Onizuka Air Force Station

For Official Use Only—Not for Public Distribution

1.2 REPORT ORGANIZATION

Chapter 1.0 of this report provides an overview of the project and its scope and presents the legislative requirements that mandate the report's preparation. Chapter 2.0, *Historic Context*, provides a brief historical overview of Onizuka AFS. Chapter 3.0, *Research Design*, details the objectives of the evaluation and the methods used to evaluate the properties, including a discussion of the National Register process and its associated elements. Chapter 4.0 provides the inventory and evaluation of Onizuka AFS properties, Chapter 5.0 presents the results of the evaluation, and Chapter 6.0 is a comprehensive list of all references used to prepare the report. Appendix A is the list of properties evaluated and Appendix B is a set of architectural inventory forms required by the California Office of Historic Preservation.

1.3 LEGISLATIVE REQUIREMENTS

Numerous laws and regulations require federal agencies and organizations, including Onizuka AFS, to consider the effects of their activities on significant cultural resources (archaeological, architectural, and native cultures districts, sites, objects, etc.). As defined by the legislation, significant cultural resources of any type are known as *historic properties* (see Section 1.3.3). The laws and regulations stipulate a process for compliance, define the responsibilities of federal agencies, and prescribe the relationships among other involved agencies (e.g., the pertinent SHPO and the Advisory Council on Historic Preservation [Council]). The primary law governing the treatment of cultural resources is the NHPA. Several sections of the NHPA support the preparation of this evaluation; however, the two most pertinent sections are Sections 110 and 106.

1.3.1 Section 110 of the NHPA

Section 110 of the NHPA mandates that a federal agency inventory and evaluate properties that are owned or under the control of that agency. This section of the statute also stipulates that the agency must nominate historic properties to the National Register of Historic Places (National Register), and develop and implement preservation strategies for maintaining and managing properties in a way that preserves their historic, architectural, or cultural values. Section 110 also mandates that if a historic property is to be demolished, or substantially altered, the property be appropriately recorded to Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) standards.

1.3.2 Section 106 of the NHPA

Section 106 of the NHPA requires a federal agency to examine the effects of a proposed undertaking (e.g., demolition, substantial alteration, transfer of ownership) on historic properties under its jurisdiction. Compliance with the requirements of Section 106 typically involves five steps:

- Identification of any cultural resources that could be affected by the implementation of an undertaking

For Official Use Only—Not for Public Distribution

- 1 • A determination of significance of any cultural resources identified within
- 2 the area of potential effect (APE)
- 3
- 4 • Assessment of the impacts or effects of the undertaking on any existing
- 5 cultural resources within the APE
- 6
- 7 • SHPO and public comment (and in some instances Council comment)
- 8
- 9 • Development and implementation of mitigation measures to avoid,
- 10 minimize, or mitigate adverse effects.
- 11

12 1.3.3 Definition of a Historic Property

13
14 In accordance with the federal regulations implementing Section 106 of the NHPA (36
15 Code of Federal Regulations [CFR] Part 800.16) historic properties are defined as:

16
17 ...any prehistoric or historic district, site, building, structure, or object
18 included in, or eligible for inclusion in, the National Register of Historic
19 Places maintained by the Secretary of the Interior. This term includes
20 artifacts, records, and remains that are related to and located within such
21 properties....

22
23 Once a building, structure, site, or object has been determined eligible for inclusion in the
24 National Register (i.e., designated an historic property), that property becomes subject
25 (under the NHPA) to protection by the responsible federal agency. Buildings, structures,
26 sites, and objects determined to be not eligible require no further consideration by the
27 agency.

28
29 A discussion of the National Park Service criteria that assist in the determination of
30 whether properties are, or are not historic, as well as how those criteria relate to the
31 Onizuka AFS building evaluation, is provided in Chapter 3.0.

For Official Use Only—Not for Public Distribution

1 2.0 HISTORIC CONTEXT

2 The following sections briefly and generally describe the historic context within which
3 the Onizuka AFS buildings and structures have been evaluated. Because of the extremely
4 high security associated with the missions and physical features of this installation, very
5 limited information is available. A comprehensive history has not yet been written and
6 the brief history contained herein has been pieced together from a few documents
7 provided by the installation; several newspaper articles written between 1965 and 1991
8 located in the Onizuka AFS Public Affairs Office; and available Internet sources. While
9 the following history generally describes the support Onizuka AFS has provided (and
10 continues to provide) to a variety of space exploration operations, specific details about
11 how that support is/was provided and which buildings were specifically involved is
12 lacking.

13 2.1 BRIEF HISTORY OF ONIZUKA AIR FORCE STATION

14 2.1.1 Background

15 In July 1954, Lt Gen Thomas Power, Commander, U.S. Air Force, Air Research and
16 Development Command (ARDC) ordered the development of a Western Development
17 Division (WDD) under the command of Brig Gen Bernard Schriever at Inglewood,
18 California. Under Lt Gen Power's command, responsibility for advanced satellite
19 systems (also known as Weapon System [WS] 117L) was placed under the WDD
20 (Chronology 1983).

21
22 By 1957, the WDD (renamed the Air Force Ballistic Missile Division [AFBMD] in June
23 of the same year) had begun feasibility studies for a missile detection alarm system
24 (MIDAS) satellite designed to provide early warning of hostile missile launches. When
25 the Soviet Union placed the first artificial satellite (Sputnik I) (Photograph 2-1) into orbit
26 in October 1957, AFBMD accelerated its early warning system development and initiated
27 plans for the development of a man-carrying vehicle system for space operations.

28
29 It [Sputnik I] was 500 miles up, traveling at 18,000 miles an hour,
30 and it circled the globe every 96 minutes. It flew over the U.S.
31 seven times a day. And the sound of its incessant beeping
32 fascinated and disturbed the nation.

33
34 At first, nobody except its creators knew what it looked like or
35 what it was doing. All that was clear was that the Soviet Union had
36 ushered in a new era and had taken a technological leap ahead of
37 the U.S. (New York Times 1957)

38
39 In early 1958, President Dwight Eisenhower directed the highest and equal national
40 priority for several missile systems including the Atlas, Titan, Thor, and Jupiter and WS
41 117L. The new focus also included the Ballistic Missile Early Warning System
42 (BMEWS) (Chronology 1983).

For Official Use Only—Not for Public Distribution



Photograph 2-1. Sputnik I

Source: <http://www.hq.nasa.gov/office/pao/History/sputnik/sputnik1.jpg>

- 1 Within weeks of President Eisenhower's announcement, the Advanced Research Projects
- 2 Agency (ARPA) was activated and placed in charge of all Department of Defense (DOD)
- 3 space programs. Reconnaissance aspects of WS 117L were cancelled and AFBMD was
- 4 ordered to proceed with development of a new system to satisfy research flight
- 5 requirements (the Blue Scout system). Lockheed Missile and Space Division was
- 6 directed to develop a recoverable capsule that would accommodate a life support system
- 7 and General Schriever (now Maj Gen) initiated development of a full-scale manned
- 8 military space systems program. The ultimate objective of this new program was a
- 9 manned flight to the moon (Chronology 1983).
- 10
- 11 In July 1958, ARDC was directed to establish a unit capable of operating nine C-199J
- 12 aircraft for aerial recovery of capsules from orbit with the Tactical Air Command (TAC)
- 13 to provide the appropriate personnel. The newly formed recovery unit was designated the

For Official Use Only—Not for Public Distribution

1 6593rd Test Squadron (Special) and was assigned to Hickam AFB, Hawaii. Operational
2 and administrative control was attached to AFBMD. Unit activation, training, equipping,
3 etc, was known as Operation "Hot Hand". The C-119 aircraft were crewed by personnel
4 trained at Edwards AFB, California, and then reassigned to Hickam AFB (Chronology
5 1983).

6
7 In July 1958, the National Aeronautics and Space Administration (NASA) was formed as
8 the civilian agency designated to control peaceful exploitation of space. Except for
9 programs with specific military requirements, NASA assumed control of all space
10 programs.

11
12 In mid August 1958, AFBMD activated a field office manned by 20 persons at Palo Alto,
13 California. The office was responsible for program development and testing associated
14 with achieving an early orbital capability using a Thor booster, and for supporting
15 Lockheed's development of a life support system for the new "Man-in-Space program".
16

17 In October 1958, the United States successfully launched Pioneer (Explorer) I
18 (Photograph 2-2), the first space probe. The probe set a new altitude record (70,000
19 statute miles above the earth) and by the end of the year, the DOD had released plans for
20 "Project Discoverer" a series of polar orbiting satellites developed by Lockheed under
21 AFBMD program management (Chronology 1983).

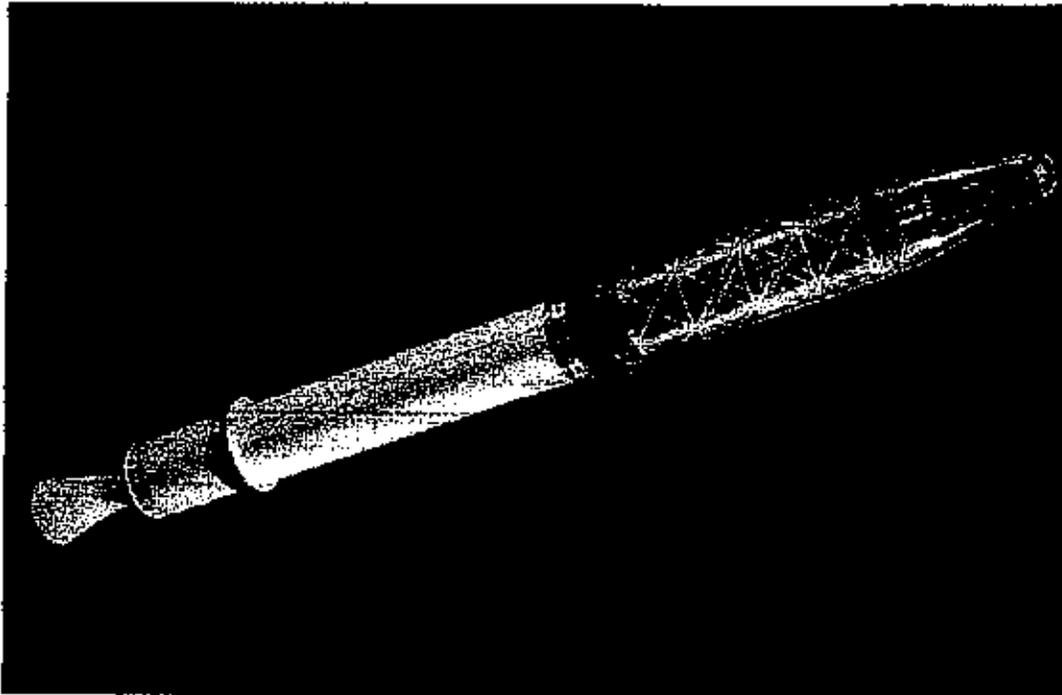
22
23 On December 18, 1958, an Atlas missile 10B with a communications repeater satellite
24 onboard was placed into orbit. President Eisenhower broadcast a Christmas message
25 from the satellite, marking the first time a human voice was beamed from space. The
26 technology demonstrated the practical operation of a satellite radio-relay system with
27 intercontinental capabilities (Chronology 1983).

28 2.1.2 Establishment and Development of the Satellite Test Center, Sunnyvale, 29 California

30 In April 1959, ARDC activated the 6594th Test Wing—the first U.S. military unit
31 charged with military satellite operations. The new wing had three operating locations
32 (OLs): OL-1 at Edwards AFB, California; OL-2 at Chiniak, Point Kodiak, Alaska (later
33 moved to Shemya Island, Alaska); and OL-3 at Annette Island, Alaska (Chronology
34 1983).

35
36 By June, the 6594th Launch Squadron was organized at Vandenberg AFB, California,
37 and assigned to the 6594th Test Wing. The field office in Palo Alto was disestablished
38 and all personnel transferred to the Test Wing. One month later, the 6594th Data
39 Processing Squadron was organized at Lowry AFB, Colorado, and the 6594th
40 Instrumentation Squadron established at Vandenberg AFB. Plans were also underway to

For Official Use Only—Not for Public Distribution



Photograph 2-2. Pioneer I Space Probe

Source: http://nssdc.gsfc.nasa.gov/image/spacecraft/explorer_1.gif

- 1 add tracking stations at Grenier Field, New Hampshire; Otumwa, Iowa; and Fort
2 Stevens, Oregon (Chronology 1983).
3
4 **Sunnyvale Satellite Test Center—1959.** In November 1959, the Air Force purchased
5 11,423 acres of land in Sunnyvale, California, from the Lockheed Aircraft Corporation.
6 The acquisition included Building 1001, which had been previously used by Lockheed as
7 administrative space. On December 2, 1959, ARDC activated the Sunnyvale STC and
8 Building 1001 was used as the temporary satellite operations control room. At the time
9 of establishment, the facility served as a satellite control center and as headquarters of the
10 6594th Test Wing, which transferred from Palo Alto (Chronology 1983). The first
11 multiple satellite operations were conducted from the new control center in February
12 1961 (Chronology 1983).
13
14 **Sunnyvale Satellite Test Annex—1960.** On July 7, 1960, the facility name was changed
15 to Sunnyvale Satellite Test Annex (STA) (Chronology 1983).
16
17 In April 1961, a major Air Force reorganization created three new commands from the
18 former ARDC and Air Material Command (AMC). These included:
19
- Air Force Systems Command (AFSC)

For Official Use Only—Not for Public Distribution

- 1 • Air Force Logistics Command (FALL)
- 2 • Office of Aerospace Research (OAR)

3
4 From former elements of ARDC and AMC, two new divisions were also created—the
5 Space Systems Division (SSD) and the Ballistic Systems Division (BSD). The
6 Sunnyvale STA was assigned to SSD.

7
8 Flight test support operations were transferred from the Palo Alto computer facility to
9 Sunnyvale in September 1961 and all remaining Palo Alto computer equipment was
10 transferred to Sunnyvale the following month (Chronology 1983).

11
12 Facilities in the STA were upgraded between 1961 and 1962 to support multi-satellite
13 operations (Photograph 2-3); however, a lack of sufficient qualified operators limited the
14 use of the new equipment to 16 hours a day. Upgrades included extensive modifications
15 to Building 1002 (previously added on to Building 1001) and addition of a 150-ton air
16 conditioning system (Chronology 1983). A computer Operations Magnetic Tape Library
17 was established to account for, control, test, and ensure the quality of all tapes used on
18 STA computers. By the end of 1962, a 4,000 square foot addition was placed on the east
19 side of Building 1001 and the STA was supporting up to three orbiting space vehicles.
20 Another large STA administrative addition (approximately 25,000 square feet) was
21 authorized in early 1963 and in September various interior modifications (e.g., acoustical
22 and modernization) were completed in several of the buildings (Chronology 1983).

23
24 A secure circuit between the STA and the Pentagon was activated in February 1963 and
25 the first microwave link between Vandenberg AFB and the STA was placed in service by
26 June of that same year. By the end of June, the STA had five large computers and six
27 remote printers capable of supporting multiple satellite hook-ups. During 1963, the STA
28 supported six satellite programs while working on a plan to standardize the overall
29 network system. Tracking and telemetry data began to arrive at the STA via teletype
30 during the first half of 1964 and in June, a high-frequency, high-power radio station was
31 constructed (Chronology 1983).

32
33 In 1965, the STA suffered a series of power failures that affected the computer systems.
34 As a result two emergency OLS were established—one at Palo Alto, the other in Santa
35 Monica, California.

36
37 Stand-by authority for a police escort has been requested by the
38 Air Force Satellite Test Center here, public safety officers said last
39 week. Police would escort a bus-load of computer specialists to
40 the Control Data Corp. at Palo Alto if a power failure, disaster or
41 other problem put the Air Force's own computer complex out of
42 commission.

For Official Use Only—Not for Public Distribution



Photograph 2-3. Master Control Room, Sunnyvale Satellite Test Center, 1961

Source: <http://www.losangeles.af.mil/SMC/HO>

1 The Palo Alto facility has a large computer installation that the Air
2 Force could use in emergencies

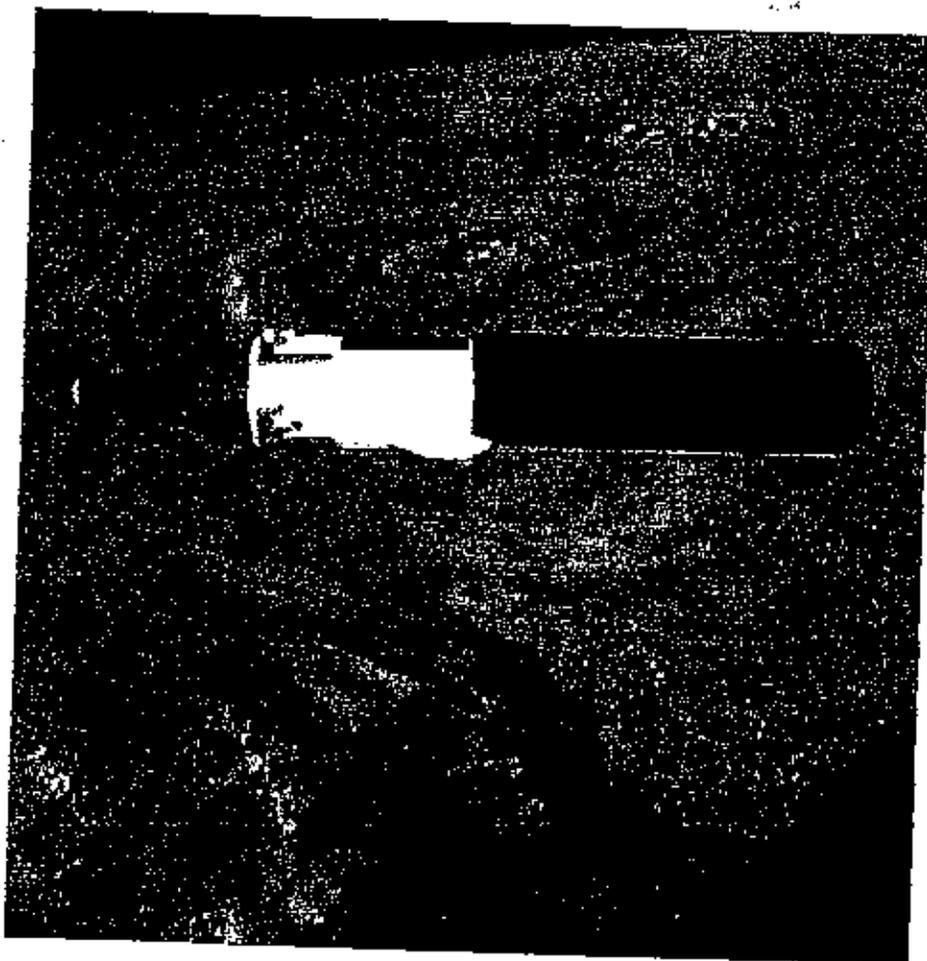
3
4 The Satellite Test Center is responsible for ground control and
5 tracking of military space satellites, including classified
6 reconnaissance craft. Computer calculations are an essential role
7 of the center in determining trajectories of satellites and analysis of
8 data received from space (*San Jose Mercury* 1965a)

9
10 This was particularly critical so that the STA could effectively support the new Manned
11 Orbiting Laboratory (MOL) (Photograph 2-4) program.

12
13 An Air Force spokesman confirmed Thursday future flights of the
14 new Manned Orbiting Laboratory (MOL) will be masterminded
15 from the Satellite Test Center complex here.

16
17 This means the eyes of the world will be focused on the space
18 command post as the two MOL astronauts circle earth for as long
19 as 30 days (*San Jose Mercury* 1965b and *Sunnyvale Daily*
20 *Standard* 1965).

For Official Use Only—Not for Public Distribution



Photograph 2-4. Manned Orbiting Laboratory
The MOL as photographed from Gemini. The program was cancelled in 1969.
Source: <http://www.astronauts.com/craft/mol.htm>

1 Santa Clara Valley is almost certain to become one of four
2 keystones of America's space program.
3

4 Unless there are unexpected changes, the Air Force's Satellite Test
5 Center at Sunnyvale will be the ground command post for all
6 flights of the new Manned Orbiting Laboratory. It will be the
7 nerve center of a vast undertaking designed to experiment and
8 evaluate men who perform military duties from outer space.
9

10 It will assume the same function as the NASA control center at
11 Houston, Texas, from where NASA's manned flights are
12 controlled.

For Official Use Only—Not for Public Distribution

1 With Houston, Cape Kennedy and Vandenberg Air Force Base,
2 Sunnyvale will complete the complex of the nation's key space
3 centers.

4
5 Expansion of the facility, located on government land adjacent to
6 the Lockheed plant, is pending. A major addition will be
7 necessary to get it ready for controlling the manned space flights.
8 The center now has four "mission control" and one "systems
9 control" room. When expanded, it will have 18 mission control
10 centers, two main control centers, a major computer installation,
11 and a big communications center. The Navy Public Works Bureau
12 at San Bruno is designing a high power electrical generating
13 system for the complex (*San Jose Mercury* 1967i) The MOL's
14 first flight is scheduled for 1968.

15
16 For the first time, officers will be thrust into space with purely
17 military objectives.

18
19 Two astronauts will orbit each for as long as a month,
20 photographing Iron Curtain sites and conducting electronic spying
21 missions. It also will be sort of a "traffic cop" in space to chase
22 down and inspect Russian satellites—the closest approach yet to
23 the "space wars" of Buck Rogers." (*San Jose News* 1965b)

24
25 In July 1965, AFSC established the Air Force Satellite Control Facility with headquarters
26 at Los Angeles AFS. AFSC Detachment 1 (Det-1) along with the 6594 Support Group
27 were organized at the STA in Sunnyvale. The 6594 Test Wing and the former Det-1 at
28 Donnely Flats, Alaska, were discontinued. The reorganization was designed to create an
29 efficient, flexible organization capable of performing all satellite control functions.
30 Because of the reorganization and other changing missions, some consideration was
31 given to moving the STA to another location; however, by the end of 1965 the Air Force
32 had decided to expand the STA rather than relocate the facility. Modifications included
33 extensive renovation of the operations building, standardization of mission control
34 complex (MCC) layouts, and an increase in the switching capacity or added output
35 display devices.

36
37 Throughout 1966, the STA supported the first of NASA's new series of orbital
38 menageries called "Biosatellites" (Photograph 2-5) to measure the effect of space flight
39 on living things. These included a variety of plant and animal life including fruit flies
40 and wild flowers. The STA's role in the Biosatellite program was focused on directing
41 operations of the Aircraft Recovery Group which was (by 1965) using C-130 aircraft
42 (Photograph 2-6).

43
44 The unit was established in 1958 to begin practicing retrieval of
45 capsules from the Air Force's Discoverer satellites. Pilots began

For Official Use Only—Not for Public Distribution



Photograph 2-5. Biosatellite I, 1966

Source: <http://www.astronautix.com/craft/mol.htm>



Photograph 2-6. Aircraft Recovery Group "Catch of Capsule"

Source: *San Jose Mercury-News*, 1966

For Official Use Only—Not for Public Distribution

1 trying to catch capsules from the Lockheed-built satellites in 1959
2 and finally made history's first recover of a man-made object from
3 orbit in July 1960.

4
5 ... When NASA began its "Biosatellite" program, it turned to the
6 Air Force for the aerial recovery. (*San Jose Mercury-News* 1966).

7
8 In January 1967, plans were announced for an extensive expansion of the STA:

9
10 The Air Force's Satellite Test Center computer facility here—
11 already one of the world's largest—will be updated in a project
12 expected to cost more than \$40 million, it was learned Monday.

13
14 The Army Corps of Engineers has been authorized to buy 8.5 acres
15 for a major enlargement of the control center, from which flights of
16 the Air Force's Manned Orbiting Laboratory (MOL) will be
17 commanded. ... Extensive overhauling of the road network at the
18 Lockheed plant will be required.

19
20 The project is under tight security wraps and little information is
21 available publicly. Except for a few details which have been made
22 public, operations of the control center are smothered in secrecy.
23 The STC's primary responsibilities is operation of politically
24 sensitive reconnaissance satellites which observe foreign nations.

25
26 The STC's extensive computer center is used for a variety of high
27 speed calculating jobs, including determining the path of satellites,
28 predicting future trajectories, and otherwise keeping track of an
29 controlling the military satellites as they streak through space at
30 five miles a second. (*San Jose Mercury* 1967a and b).

31 By 1967, Cold War activities were extremely intense. More than 100 American
32 reconnaissance satellites had been launched and tracked by the STA and the Soviet Union
33 was actively trying to develop an anti-ballistic missile defense system:

34
35 President Johnson is able to offer Russia a treaty banning history's
36 most costly weapon—an anti-missile system—because of the
37 success of a secret space-spying operation at Sunnyvale.

38
39 ...the United States now has a capability to police such an
40 agreement from space with a high degree of confidence.

41
42 And it is this ability—to inspect the Soviet Union from space—
43 which is behind the Johnson Administration's current offer to
44 Russia saying, in effect, "if you don't build a defense against
45 missiles, we won't."

For Official Use Only—Not for Public Distribution

1 Resistance to ground inspection has been a traditional roadblock to
2 arms control agreements with the Russians.

3
4 Satellites, which can scan the huge nation at high speed with out
5 setting foot on Soviet soil, negate the need for on-site inspection or
6 limits it to perhaps rare occasions to check out suspicious events
7 seen by the satellites.

8
9 Space cameras controlled from the Air Force Satellite Test Center
10 have been spinning over the Soviet Union for more than five years.

11
12 Operations of the Air Force center are blanketed by intensive
13 secrecy. ... It has not been verified officially, but one Air Force
14 source told *The Mercury* all Soviet ICBM sites have been
15 pinpointed by the space cameras.

16
17 Negotiations are proceeding at a high diplomatic level. The only
18 public Soviet reply so far was a negative, opposition to the scheme
19 voiced by one Russian writer. However, there seems to be a
20 relatively good chance the Soviets could accept the scheme. (*San*
21 *Jose Mercury*, 1967c)

22
23 During 1967, the STA also supported the Air Force's U2 aircraft reconnaissance program
24 (Photograph 2-7):

25
26 High flying U2 planes are "spying" on U.S. missile launches here
27 [Vandenberg AFB]. An average of one every three days, an ICBM
28 or satellite booster lunges into space from this coastal space port.

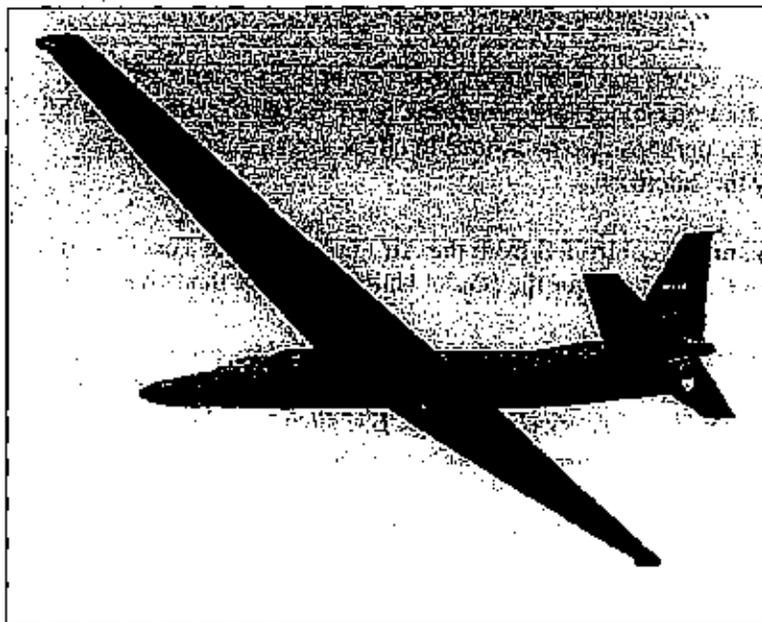
29
30 And high above each fiery lift-off in air so thin a man would die in
31 seconds if he had no oxygen, a black U2 hovers like a moth over a
32 glowing light.

33
34 The "spy plane," it was learned this week, carries experimental
35 infra-red sensors to detect heat of the missiles rocket engines.

36
37 What's it all about? To help America learn how to detect the
38 launches of enemy missiles.

39
40 If successful, the nation could double its warning time of an
41 attack—from a present 15 minutes by radar detection to a half
42 hour.

For Official Use Only—Not for Public Distribution



Photograph 2-7. U-2 (Dragon Lady) Aircraft

Source: http://www.globalaircraft.org/planes/u-2_dragon_lady.pl

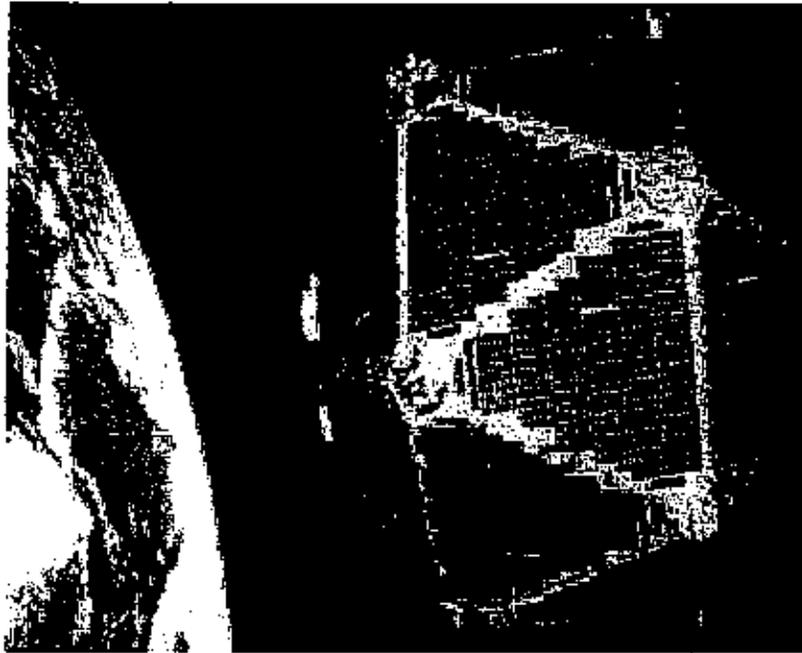
1 The effort is centered at the Air Force's Sunnyvale Satellite Test
2 Center. (*San Jose Mercury* 1967h)

3
4 Two Vela Nuclear Detection Satellites (Photograph 2-8) and three octa-hedral research
5 satellites were placed into orbit from Cape Kennedy in May 1967. Capable of detecting a
6 nuclear explosion in space at distances greater than 10,000,000 miles from earth, the twin
7 satellites orbiting at opposite sides of the earth were tracked and controlled by the STA
8 (*Astro News* 1967; *San Jose Mercury* 1967j; *San Jose Mercury-News* 1967b).

9
10 In June 1967, the functions and personnel of SSD and the Ballistic Missile Division were
11 combined to form the Space and Missile Systems Organization (SAMSO). AFSC was
12 reassigned to the new organization.

13
14 On September 16, 1967, the Air Force announced plans to build a four-story, 150,000
15 square-foot addition adjacent to the existing STC (within the STA). The new facility was
16 designed to control flights of the MOL and was the final step in a four-year program to
17 bring operating capability of the Air Force's world wide satellite tracking and control
18 network into line with state of the art development in communications, electronics, and
19 applications of computer technology (*San Jose Mercury* 1967L). Nicknamed the "Blue
20 Cube," the building (Building 1003) was completed in 1969; a 9,750 kilovolt gas turbine
21 generator system to power an extensive new computer system was planned as part

For Official Use Only—Not for Public Distribution



Photograph 2-8. Vela Nuclear Detection Satellite
Source: <http://nuclearweaponarchive.org/Safrica/Vela.html>

1 of the new construction (ultimately Building 1004) (*San Jose Mercury* 1967 and 1968a;
2 Chronology 1983) (Photographs 2-9 and 2-11).

3
4 Work is now underway to erect a massive, windowless annex to
5 the Air Force facility. Among other things, it will ready the
6 complex to control the Air Force's Manned Orbiting Laboratory
7 spy craft. This expansion is costing more than \$6 million, plus an
8 estimated \$40 million worth of new computers and electronic
9 equipment. (*San Jose Mercury* 1968e)

10
11 This facility, when it is completed next July, will rank among the
12 strangest examples of architecture in Santa Clara Valley. It will be
13 a huge, elongated cube, rising 104 feet high—but without a
14 window in it. Almost 200 piles were drilled 45 to 60 feet deep into
15 the soggy, bay-side soil for the project. The building will have
16 164,000 square feet of floor space on four stories and a mezzanine.
17 Each floor is extra tall—20 to 30 feet high, and the building will
18 have extensive corridors for the mounting of electronic wiring and
19 equipment. (*San Jose Mercury* 1968e)

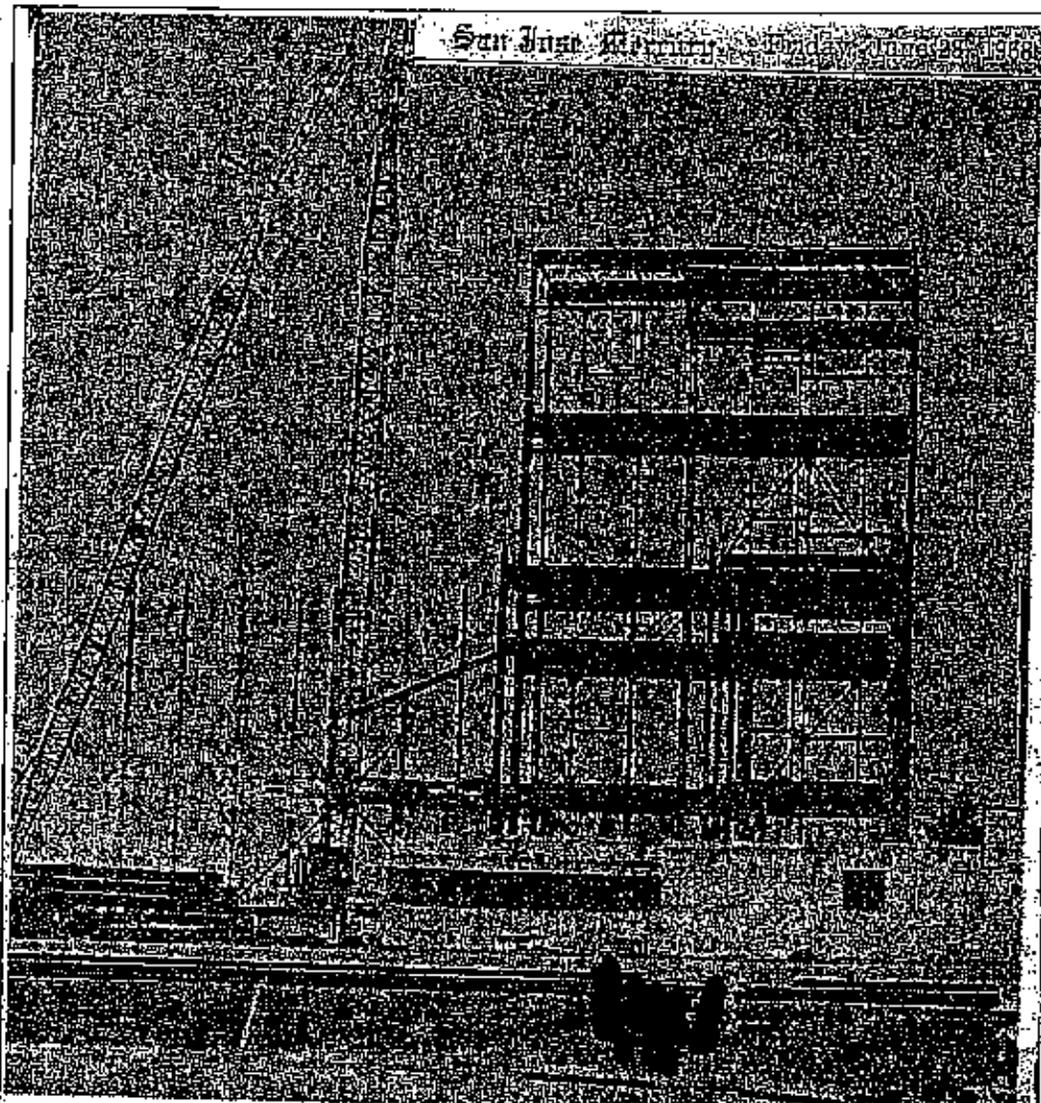


| | | |
|---|--|---|
| EXPANDING — Site preparation and paving has begun for a major expansion of the Air Force Satellite Test | Center at Sunnyvale, which is the command post for U.S. military satellite flights. After many delays, approval was given this week to | call for bids on a \$9 million-plus addition which will include a powerful gas turbine electrical generating plant. |
|---|--|---|

Photograph 2-9. Building 1003, The Blue Cube, under construction 1968

Source: <http://www.losangeles.af.mil/SMC/HO>

For Official Use Only—Not for Public Distribution



GOING UP.— Construction is moving fast on big addition to the U.S. Air Force Satellite Test Center at Sunnyvale, which serves as the nerve center for operations of U.S. military

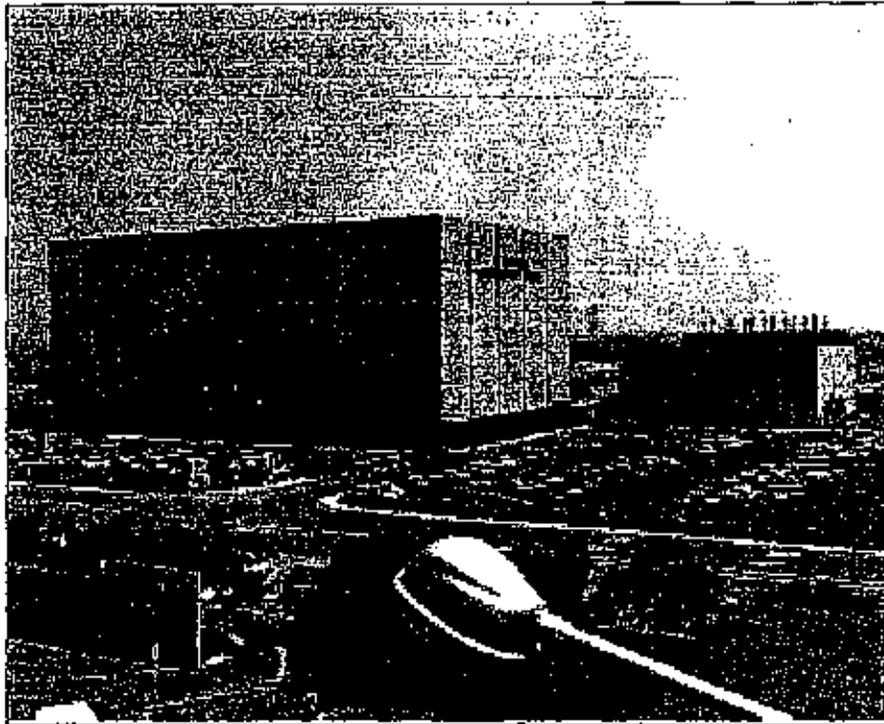
space satellites. Located adjacent to the Lockheed aerospace plant, the STC is being expanded so it can control operations of more unmanned satellites plus the upcoming

Manned Orbiting Laboratory (MOL), a two-man Air Force spacecraft. Included in the current expansion is construction of a \$4 million electric power generation system.

Photograph 2-10. Building 1003, The Blue Cube, under construction 1968

Source: *San Jose Mercury* 1968d

For Official Use Only—Not for Public Distribution



Photograph 2-11. Building 1003, (the Blue Cube) and it's power plant (Building 1004), ca late 1960s

Source: <http://www.losangeles.af.mil/SMC/HO>

1 On the third floor of the building, there will be a large, theater-like
2 room with electronic consoles, large display screens and other
3 gear. Similar to another system control room in the present STC,
4 this is a command post from which Air Force space controllers,
5 sending orders through ground radio stations around the world,
6 will, as one Officer put it, "drive the unmanned satellites as if they
7 were pilots in a cockpit." (*San Jose Mercury* 1968e)

8
9 The STC is headquarters for a world-wide string of tracking
10 stations which communicate with satellites soaring through space.
11 (*San Jose Mercury* 1968c)

12
13 America's nerve center for watching foreign countries from space
14 will get its own electricity plant. The Air Force will build a 22,400
15 square-foot building here to house an electrical generation plant for
16 its Satellite Test Center located near the Lockheed space plant.
17 The two-story solar Saturn gas turbine plant will produce some
18 9,000 kilowatts of electricity to make the STC invulnerable to local
19 power failures.

For Official Use Only—Not for Public Distribution

1
2 The power plant will be erected near a huge new addition to the
3 STC now under construction [Building 1003].
4

5 During 1968, controversy arose over the use of military satellites for peaceful tasks:
6

7 A heated, so far unpublicized, battle is raging at high levels of the
8 U.S. Government over the use of "sky spy" satellites for peaceful
9 tasks.
10

11 A possible compromise is to limit the "resolution"—the size of
12 features on the ground which cameras can see—to no less than 100
13 feet for resource satellites.
14

15 The battle has not been made public yet, principally because the
16 Air Force cloaks its Sunnyvale headquartered satellite spying in
17 tight secrecy.
18

19 So intense is security imposed at the Sunnyvale Air Force Satellite
20 Test Center, which operates and recovers information from the
21 "spy" satellites, when Vice President Hubert Humphrey visited the
22 nearby Lockheed plant recently, he was at first banned from
23 admission to the satellite center. (*San Jose Mercury-News* 1968).
24

25 In early June, 1969, six months prior to completion of the "Blue Cube," the Secretary of
26 Defense announced the cancellation of the MOL program due to a continuing need to
27 reduce federal defense spending and advances in automated techniques for unmanned
28 satellite systems. After the announcement, all contracts associated with the MOL were
29 either cancelled or underwent extensive analysis (Chronology 1983). Space Launch
30 Complex 6, just completed at Vandenberg AFB to support the MOL launch program was
31 put into caretaker status (*San Jose News* 1969a) and the fate of the soon-to-be-completed
32 "Blue Cube" was uncertain (*San Jose Mercury* 1969b). Within a month; however the
33 new facility was being considered for support of a new "space shuttle" program
34 (originally known as the Shuttle Transportation System [STS] and later, the Space Shuttle
35 Orbiter program) (*San Jose News* 1969b).
36

37 This town may become the home for a military space shuttle
38 command post.
39

40 According to reports, the Air Force is anxious to manage a multi-
41 billion dollar program for a hybrid rocket-plane which will ferry
42 men from earth to space and back.

43 And they are saying that the Satellite Test Center here, which
44 handles orbiting spy satellites, would be a logical place to handle
45 ground control of shuttle tests. The center is nearing the end of a

For Official Use Only—Not for Public Distribution

1 major expansion, with construction of a monolithic blue building
2 next to Lockheed Missiles & Space Co.

3
4 Military men want to use the shuttle to inspect and destroy enemy
5 satellites, service our own, and carry others into orbit. NASA is
6 eyeing the shuttle for carrying men and cargo to a space base
7 which will be built in the next decade or so.

8
9 Whether the Air Force or NASA ends up managing the shuttle, the
10 craft will play the same role in space transport that modern
11 airliners have played in the growth of aviation. (*San Jose News*
12 1969b)

13
14 At the end of June, the first primate mission Biosatellite was launched and on July 16-20,
15 Neil Armstrong became the first of 12 men to eventually walk on the moon. All of these
16 events were tracked and controlled by the STC/STA.

17
18 In October 1969, the Air Force began moving into it's new command center (the Blue
19 Cube).

20
21 ...the building is about 95 percent finished and personnel already
22 have begun setting up shop there. It is a most unique shop. The
23 windowless blue building clearly visible from the Bayshore
24 freeway, is an \$8 million addition to the Air Force Satellite Test
25 Center, whose operations are shrouded in secrecy. From this site
26 next to Lockheed Missiles & space Co., the Air Force commands
27 and controls a myriad of clandestine spacecraft.

28
29 ...a new generation of bigger satellites is in the works, and that
30 probably explains why the Air Force is so anxious to move into the
31 new complex. The older complex next door also is reportedly
32 becoming overcrowded, as American space intelligence gathering
33 continues to expand.

34
35 Until June of this year, the annex was to have been a mission
36 control center for the Manned Orbiting Laboratory, a modified
37 Gemini capsule linked to a trailer-sized "workshop" where men
38 could perform selective reconnaissance.

39
40 That program was eliminated abruptly by the Pentagon, and for a
41 short time the annex became a building without a mission. Official
42 announcements merely declared that "other activities" would
43 replace the MOL in the sky-blue building, but they declined to
44 specify what those activities were.

For Official Use Only—Not for Public Distribution

1 Work was halted on the building for about two weeks following
2 the MOL decision, then resumed by the Navy whose "Scabees" are
3 in charge of construction. The pace resumed, a coat of Air Force
4 paint was put on the annex, and powerful solar Saturn gas turbine
5 generators to provide independent electricity were completed
6 (Photograph 2-12).
7

8 The center has 14 mission control complexes, 164,000 square feet
9 of floor space and room for a pair of new computation and
10 electronics systems. Sources say the annex was quite specialized
11 to handle the MOL, and that new missions would require
12 considerable reconfiguration. (*San Jose Mercury* 1969c).
13

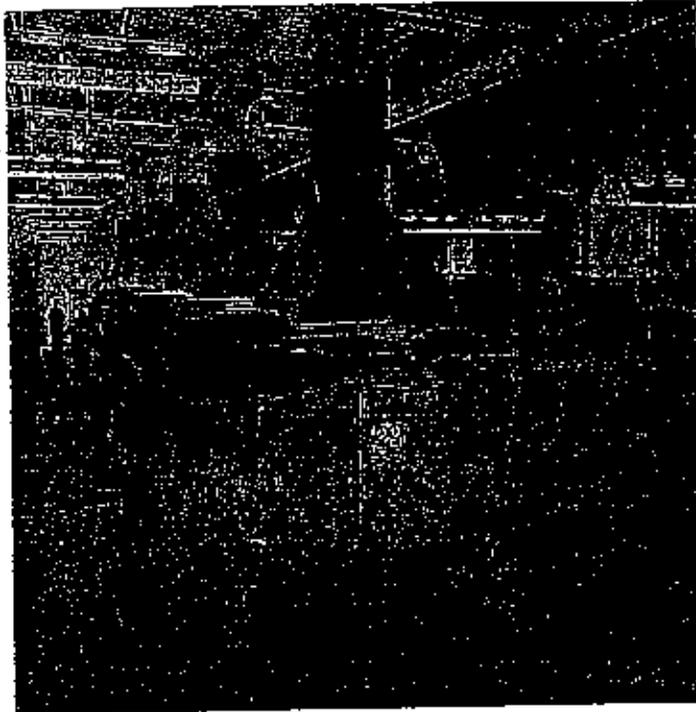
14 **Sunnyvale Air Force Station—1971.** On January 1, 1971, AFSC redesignated the STA
15 as Sunnyvale AFS (Chronology 1983) (Photograph 2-13). Communications circuits were
16 relocated from Building 1001 to Building 1003 during summer of that year, permitting
17 additional operator space and generally improving working and security conditions. By
18 November, a pair of Defense Satellite Communications System (DSCS) II advanced
19 communications satellites had been launched to handle voice, teletype, computerized
20 digital data, and video transmissions. The satellites were tracked and controlled by the
21 new Sunnyvale AFS command center (Chronology 1983).
22

23 In early January 1972, President Richard Nixon announced that NASA would manage the
24 STS program as "the workhorse of future U.S. space efforts and as a replacement for all
25 existing launch vehicles (except the smallest and the largest)(Chronology 1983). The
26 Kennedy Space Center, Florida, would become the operational base for the STS program.
27 Research and Development and civilian shuttle launches would be made from the Cape—
28 military launches would occur from Vandenberg AFB. The Sunnyvale AFS complex
29 began supporting the STS program from the onset and has supported every shuttle
30 mission to the present.
31

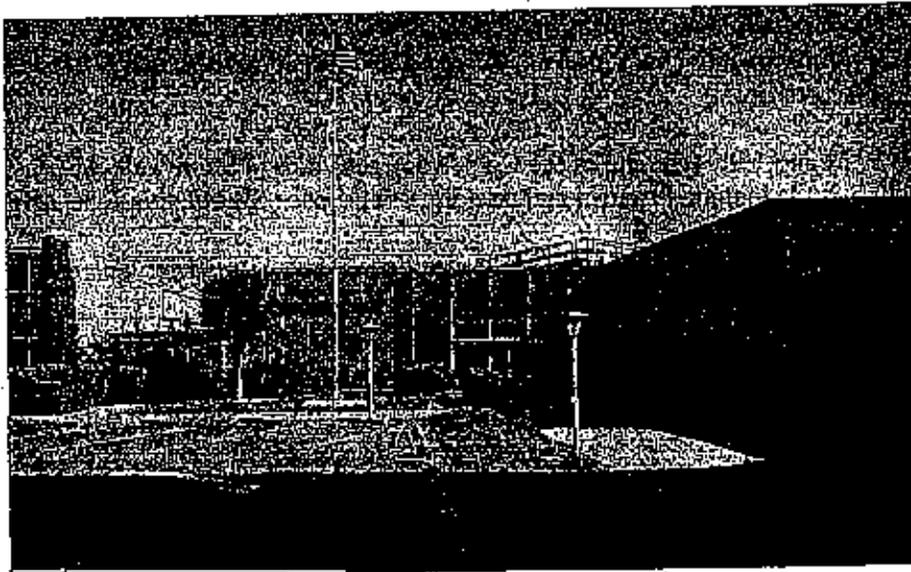
32 Between 1973 and 1989 (the end of the Cold War), activities at Sunnyvale AFS
33 (Photograph 2-14) included control and tracking of all Space Shuttle missions, as well as:
34

- 35 • Two additional launches of DSCS II satellites into synchronous equatorial orbit
- 36 • Launch of a Skynet IIA and B
- 37 • Launch of a Westar-A (the first NASA commercial domestic satellite)
- 38 • Aerial recovery of a sounding rocket payload for the HAVE JEEP II program
- 39 • The last Apollo program launch (Apollo-Soyuz), which linked up with a Soviet
40 spaceship
- 41 • Launch of the NATO III-A and -B satellites

For Official Use Only—Not for Public Distribution



Photograph 2-12. New Sunnyvale AFS Solar Saturn Gas Turbine Power Plant
Solar Saturn gas turbine-powered generators provide electrical power for the computers
in the Sunnyvale command center.
Source: *Energy Spectrum* 1969



Photograph 2-13. Original Entrance to Sunnyvale Air Force Station, ca. 1972
Source: Onizuka Air Force Station Public Affairs Office

For Official Use Only—Not for Public Distribution



Photograph 2-14. Sunnyvale AFS 1976

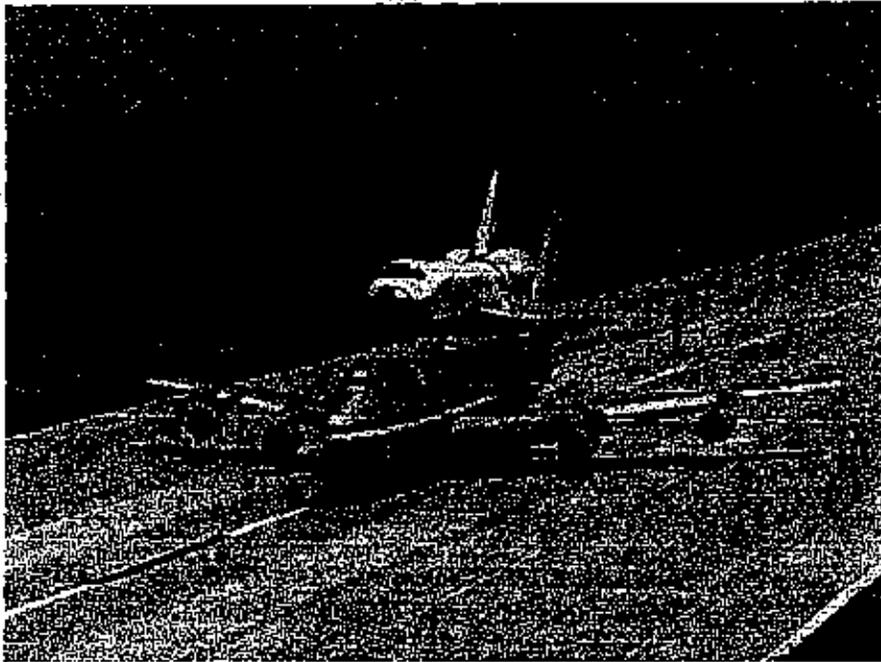
Source: Onizuka Air Force Station Public Affairs Office

- 1 • The first free flight of the Space Shuttle orbiter after being carried aloft by a
- 2 modified Boeing 747 aircraft (Photograph 2-15)
- 3 • Launch of 5 NAVStar GPS satellites
- 4 • Launch of the NASA Geostationary Operational Environmental Satellite (GOES)
- 5 used for weather data gathering
- 6 • The first spaceflight of the Space Shuttle (the Columbia) carrying Astronauts John
- 7 Young and Robert Crippen (April 1981)
- 8 • STS-4 launch, which carried the first DOD military payload
- 9 • The first Titan 34D-Inertial Upper Stage combination launch
- 10 • STS-5 launch, which deployed the first satellite from a shuttle orbiter using a
- 11 Payload Assist Module
- 12 • The first Block 5D-2 satellite launch of the Defense Meteorological Satellite
- 13 Program (DMSP)
- 14 • STS-6 launch, carrying the first NASA tracking and data relay satellite into space.

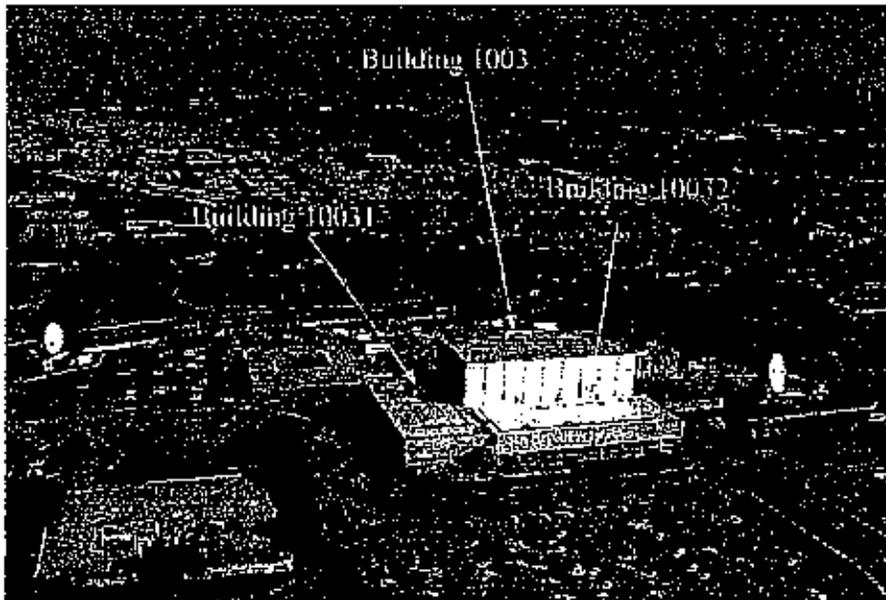
15
16 In addition, in 1982, a new satellite program support structure was constructed at the
17 installation (Buildings 10031 and 10032). The two new buildings wrapped around the
18 north and west sides of Building 1003 (Photograph 2-16 and see Figure 1-3). The first
19 two floors consisted of covered parking and the third floor was designed as operations
20 space. Construction of a new Data System Modernization facility began in June 1983.

21
22 Space Command (SPACECOM) was established in September 1982 as a new Air Force
23 Major Command. The new Command consolidated many operational space activities
24 and was headquartered in Colorado Springs.

For Official Use Only—Not for Public Distribution



Photograph 2-15. Space Shuttle Transported by Modified Boeing 747
Source: <http://www-personal.sr.umich.edu/~traigle/spaceshuttle.html>



Photograph 2-16. Onizuka Air Force Station, 2003
Buildings 10031 and 10032 wrapped around Building 1003 (Blue Cube)
Source: Onizuka Air Force Station Public Affairs Office

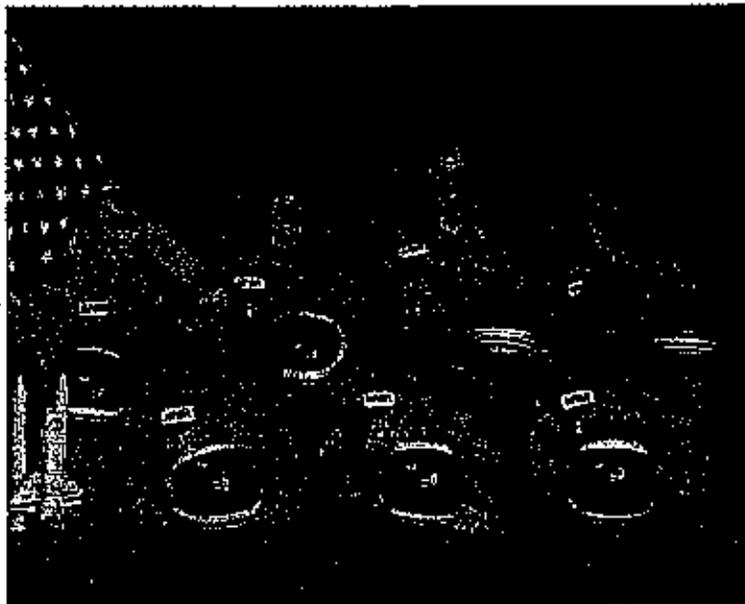
For Official Use Only—Not for Public Distribution

1 Onizuka Air Force Station/Onizuka Air Force Base—1986/1987. In 1986, Sunnyvale
2 AFS was renamed Onizuka AFS in honor of Space Shuttle Challenger astronaut Lt Col
3 Ellison S. Onizuka; however, as a part of an Air Force-wide organization, the installation
4 was renamed Onizuka AFB in 1987. That same year Air Force Space Command
5 (AFSPC) became the major command host.

6
7 *Lt Col Ellison S. Onizuka.* Ellison Onizuka was born on the Big Island of Hawaii in
8 1946. After graduating from the University of Colorado, Onizuka joined the Air Force as
9 an aerospace flight test engineer with the Sacramento Air Logistics Center at McClellan
10 AFB, California, where he participated in flight test programs for the F-84, F-100, F-105,
11 F-111, EC-121T, T-33, T-39, T-28, and A-1 aircraft. In 1975, he was assigned to the Air
12 Force Flight Test Center at Edwards AFB, California, where he served on the Air Force
13 Test Pilot School staff as a squadron flight test engineer and, later, as chief of the
14 engineering support section in the training resources branch.

15
16 Between 1978 and 1979, Onizuka completed a one year astronaut training and evaluation
17 program and, in January 1985, he flew his first Space Shuttle mission aboard the STS-51-
18 C (the *Discovery*) responsible for primary payload activities.

19
20 Lt Col Onizuka was a mission specialist on STS-51-L (the *Challenger*), which was
21 launched from the Kennedy Space Center on January 28, 1986. The *Challenger*
22 exploded 1 minute 13 seconds after launch and the entire crew was lost (Photograph
23 2-17).



Photograph 2-17. Crew of the Space Shuttle *Challenger*
Lt Col Onizuka back row left.

Source: <http://www.jsc.nasa.gov/er/she/Onizuka.htm>

For Official Use Only—Not for Public Distribution

1 In the late 1980s, Onizuka AFB continued to support a wide variety of satellite and Space
2 Shuttle missions. According to a User's pamphlet (Onizuka Air Force Station 1987)
3 (Figures 2-1 and 2-2):
4

5 The Space Test Center (STC) is a major provider of space support
6 services. The STC has been providing mission control since the
7 early 1960s. We have evolved into an organization capable of
8 handling all aspects of spacecraft command, control, and
9 communications (C³) functions, as well as real-time and post-pass
10 mission data processing requirements.
11

12 The STC can support all aspects of a User's satellite mission life
13 cycle. These aspects include mission planning, pre-launch
14 checkout, range safety, orbit injection, orbit positioning/
15 maneuvering, bent-pipe mission data reception or direct mission
16 data processing, anomaly resolution, station keeping, and
17 reentry/recovery.
18

19 Secure communication links provide the ability to handle mission
20 C³ requirements at all security levels. Connectivity to ground
21 stations, and to agencies such as NORAD is available for data,
22 voice, teletype, fax, and video.
23

24 The STC provides diverse support for many Users. These Users
25 include:
26

- 27 • Defense Satellite Communications System
- 28 • Defense Support Program
- 29 • Geostationary Operational Environment Satellite Program
- 30 • Fleet Satellite Communications Program NATO III
- 31 • Skynet IV, Defense Meteorological Satellite Program
- 32 • Global Positioning System, OD payloads
- 33 • Ballistic Missiles
- 34 • Tracking and Data Relay Satellite System
- 35 • Space Shuttle
- 36 • Planetary Probes
- 37 • Other NASA Programs.
38

39 Support ranges from simple pre-launch pad checkout to complete
40 certification of a communication satellite.
41

42 Each Mission Control Center can be configured to operate at
43 various security levels. The STC will provide whatever security
44 measures are required by the User. If a secure dedicated MCC is
45 not needed, a payload operations room or suite can be provided.

ATTACHMENT E
Page 45 of

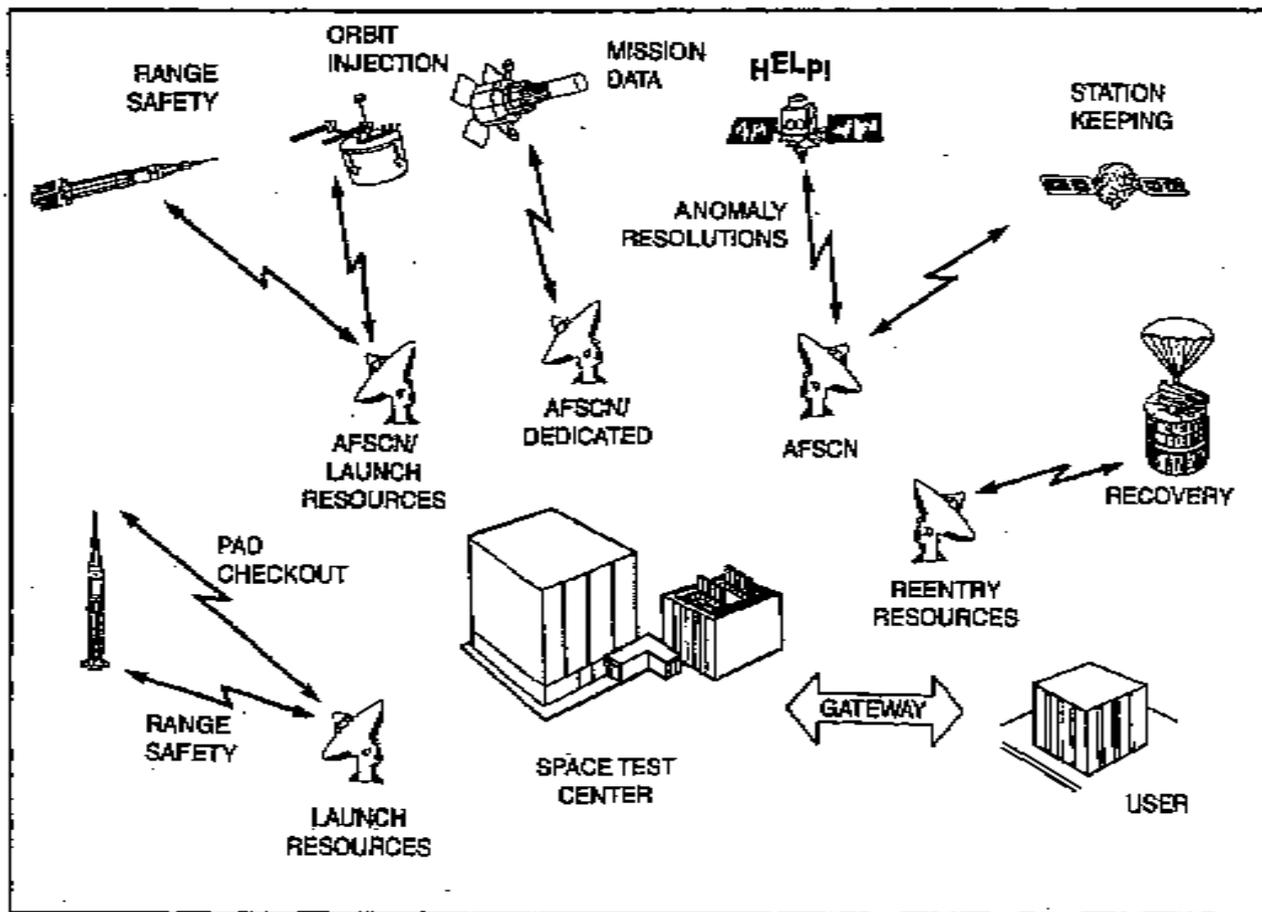


Figure 2-1. Onizuka Air Force Station/Air Force Base Test Capabilities
Source: Onizuka Air Force Station 1987

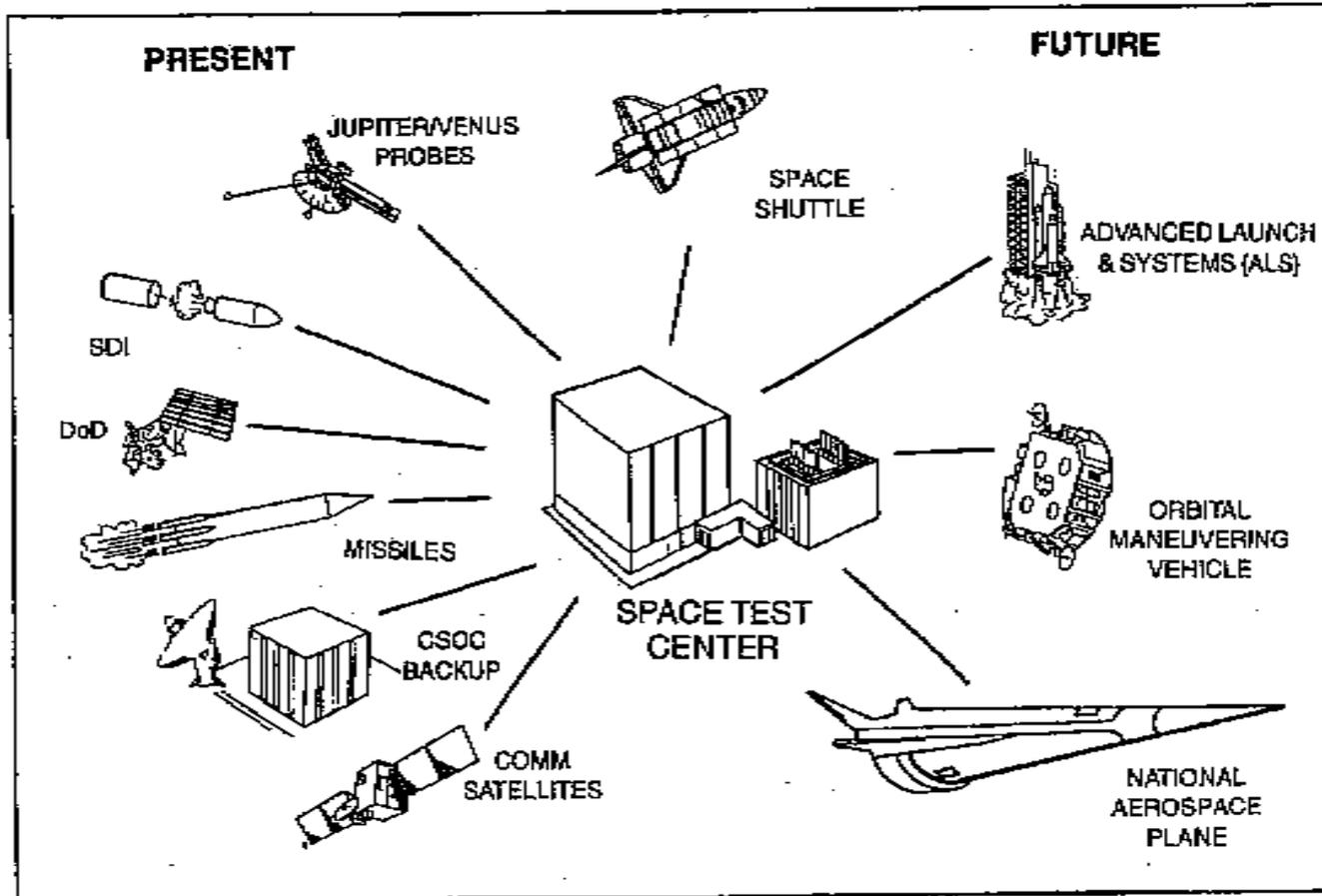


Figure 2-2. Onizuka Air Force Station/Air Force Base Research and Development Capabilities
Source: Onizuka Air Force Station 1987

For Official Use Only—Not for Public Distribution

1 **Onizuka Air Force Station 1990s to the Present.** Between the end of the Cold War
2 (1989) and the present, Onizuka AFS has continued to support every Space Shuttle
3 mission and a wide range of space exploration programs. Among these are
4 (http://www.onizuka.afa.mil/oafs_history.htm):

- 5
- 6 • Magellan—the first planetary spacecraft launched by the Shuttle *Atlantis*
- 7 • Galileo—an exploratory craft sent 2.5 billion miles to Jupiter
- 8 • Hubble Space Telescope—designed to observe celestial objects at ultraviolet,
9 visible, and near-infrared wavelengths
- 10 • Ulysses—launched by the Space Shuttle *Discovery* to reach high polar latitudes
- 11 • Chandra X-Ray Observatory—the heaviest and most powerful x-ray telescope
12 ever launched into space
- 13 • STS-44—Space Shuttle *Atlantis* deployment of a Defense Support Program
14 satellite.
- 15

16 The 750th Space Group, a subordinate unit of the 50th Space Wing based at Schriever
17 AFB, was activated in 1992 and the 5th Space Operations Squadron was activated in
18 1993. As a result of recommendations by the Base Closure and Realignment
19 Commission (BRAC), some missions were transferred from Onizuka AFB in 1995;
20 however several critical missions remained. In 1999, the 21 Space Operations Squadron
21 (SOPS) was designated host of the installation and the 750th Space Group was
22 deactivated. Currently employing approximately 1,800 contractor/civilian and military
23 personnel, the 21 SOPS has continued to host the installation since that time (Onizuka
24 Air Force Station 2004).

25
26 Between the time of it's establishment and 1993, when the Consolidated Space
27 Operations Center (CSOC) at Falcon AFB, Colorado (now Schriever AFB), the satellite
28 control complex at Sunnyvale, California was the only such facility operated by the Air
29 Force.

30
31 **21 SOPS.** As host unit for Onizuka AFS, the 21 SOPS provides resources to operate and
32 maintain the facility and to provide limited administrative and support services to base
33 units and agencies. This includes security, civil engineering and safety. The squadron
34 also provides some base support to units at Moffett Federal Airfield. The 21 SOPS
35 Commander is designated the Installation Commander for Onizuka AFS and the Onizuka
36 AFS Annex at Moffett Field (<http://www.globalsecurity.org/space/agency/21sops.htm>).

37
38 In 2004, Onizuka AFS is part of the Air Force Satellite Control Network (AFSCN),
39 which consists of two control nodes (Onizuka AFS and Schriever AFB), two scheduling
40 facilities (one at each node), eight remote tracking sites, and the associated
41 communication links. The eight tracking sites are located at
42 (<http://space.au.af.mil/factsheets/afscn-hist.htm>; <http://www.afscn.com/>):

- 43
- 44 • Vandenberg Tracking Station, Vandenberg AFB
- 45 • New Hampshire Station near New Boston

For Official Use Only—Not for Public Distribution

- 1 • Hawaii Tracking Station, Kaena Point, Oahu, Hawaii
- 2 • Thule Tracking Station, Thule, Greenland
- 3 • Guam Tracking Station, Anderson AFB, Guam
- 4 • Oakhanger Telemetry Control Station near London, United Kingdom
- 5 • Colorado Tracking Station, Schriever AFB, Colorado
- 6 • Diego Garcia Tracking Station, Diego Garcia, Indian Ocean.

1 **3.0 METHODS**

2 **3.1 OBJECTIVES OF THE INVENTORY AND EVALUATION**

3 The primary objective of this report is to provide Onizuka AFS with a baseline historic
4 building and landscape inventory and evaluation to support ongoing and future
5 compliance with the NHPA (most specifically Sections 110 and 106) and the NEPA.
6 Having this inventory will facilitate consultation among installation personnel, the
7 California SHPO, and the Council (as appropriate), and will enable Onizuka AFS to
8 better integrate the management of historic properties under its control into its overall
9 mission and day-to-day operations. To assist installation personnel tasked with the
10 management of cultural resources, findings of the inventory and evaluation will
11 ultimately be summarized in the *Onizuka AFS Cultural Resources Management Plan*.

12 **3.2 METHODS AND GUIDANCE**

13 The evaluation of potentially historic buildings and landscapes at Onizuka AFS included
14 archival research, discussions with individuals having knowledge of the history of the
15 installation and its facilities, and an on-site inspection, including photography. Data
16 collected from this effort have been used to prepare installation descriptions and
17 contextual statements, develop a historic overview of the installation and correlate that
18 history to important national, state, and local themes, and to formulate informed
19 conclusions about whether facilities and landscapes at Onizuka AFS would, or would not,
20 meet the NPS criteria applied to properties eligible for inclusion in the National Register.

21 **3.3 NATIONAL REGISTER CRITERIA FOR HISTORIC PROPERTY**
22 **EVALUATION**

23 The criteria used to evaluate potential historic properties (including historic landscapes/
24 viewsheds) are stated in 36 CFR Part 60.4 and in various National Register bulletins.
25 The guidance is re-stated herein, to provide readers that are less familiar with the
26 National Register guidelines with background about how the process was applied to
27 Onizuka AFS.

28 **3.3.1 National Register Criteria A-D**

29 The quality of significance in American history, architecture, archaeology, engineering,
30 and culture is present in districts, sites, buildings, structures, and objects that possess
31 integrity of location, design, setting, materials, workmanship, feeling, and association.
32 All properties (regardless of age) that are determined eligible for inclusion in the National
33 Register must meet at least one of the four primary National Register criteria (U.S.
34 Department of the Interior, National Park Service 1991). The criteria are focused on
35 properties:

- 36
37 A. That are associated with events that have made a significant contribution
38 to the broad patterns of our history; or
39
40 B. That are associated with the lives of persons significant in our past; or

For Official Use Only—Not for Public Distribution

- 1 C. That embody the distinctive characteristics of a type, period, or method of
2 construction, or that represent the work of a master, or that possess high
3 artistic values, or that represent a significant and distinguishable entity
4 whose components may lack individual distinction; or
5
6 D. That have yielded, or may be likely to yield, information important in
7 prehistory or history.

8 3.3.2 National Register Criteria Considerations A-G

9 Ordinarily, cemeteries, birthplaces, or graves of historical figures, properties owned by
10 religious institutions or used for religious purposes, structures that have been moved from
11 their original locations, reconstructed historic buildings, properties primarily
12 commemorative in nature, and properties that have achieved significance within the past
13 50 years are not considered eligible for inclusion in the National Register. However,
14 these types of properties will qualify if they are integral parts of districts that do meet the
15 criteria, or if they fall within the following categories (U.S. Department of the Interior,
16 National Park Service 1991):

- 17
18 A. A religious property deriving primary significance from architectural or
19 artistic distinction or historical importance; or
20
21 B. A building or structure removed from its original location but which is
22 significant primarily for architectural value, or which is the surviving
23 structure most importantly associated with a historic person or event; or
24
25 C. A birthplace or grave of a historical figure of outstanding importance if
26 there is no appropriate site or building directly associated with his
27 productive life; or
28
29 D. A cemetery that derives its primary significance from graves of persons of
30 transcendent importance from age, from distinctive design features, or
31 from association with historic events; or
32
33 E. A reconstructed building when accurately executed in a suitable
34 environment and presented in a dignified manner as part of a restoration
35 master plan, and when no other building or structure with the same
36 associate has survived; or
37
38 F. A property primarily commemorative in intent if design, age, tradition, or
symbolic value has invested it with its own exceptional significance; or
39
40 G. A property achieving significance within the past 50 years if it is of
41 *exceptional importance.*

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

For Official Use Only—Not for Public Distribution

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

5
6 **The 50-Year Rule.** As a general rule, properties that have achieved significance within
7 the last 50 years are not eligible for inclusion in the National Register. This is because
8 the Register is intrinsically a compilation of historic resources that have withstood the
9 passage of time. The passage of time is generally necessary in order to apply the adjective
10 "historic" and to ensure adequate perspective.

11
12 Fifty years was chosen by the formulators of the NHPA as a reasonable and perhaps
13 popularly understood span of time that makes evaluation of historical value somewhat
14 feasible. However, 50 years is not the only length of time that defines "historic" or
15 makes an informed, dispassionate judgment of historic significance possible. Rather it is
16 an arbitrary span of time, selected as a filter to ensure that enough time has passed (as
17 appropriate to the circumstance) to evaluate a property within its historic context. The
18 50-year rule has become particularly important in light of some world events (i.e., the end
19 of the Cold War; interplanetary exploration, Man-in-Space) that have required agencies
20 to consider the historic significance of a wide range of highly scientific and technological
21 facilities.

22
23 **Exceptional Importance.** The National Register guidance does not define "*exceptional*";
24 however, *National Register Bulletin 22* (U.S. Department of the Interior, National Park
25 Service 1996) discusses this element of Criteria Consideration G as follows:

26
27 Exceptional, by its own definition, cannot be fully catalogued or anticipated.
28 It may reflect the extraordinary impact of a political or social event. It may
29 apply to an entire category of resources so fragile that survivors of any age are
30 unusual. It may be the function of the relative age of a community and its
31 perceptions of old and new. It may be represented by a building or structure
32 whose developmental or design value is quickly recognized as historically
33 significant by the architectural or engineering profession. It may be reflected
34 in a range of resources for which a community has an unusually strong
35 associative attachment. Thus, a complete list of exceptionally significant
36 resources cannot be prepared or precise indicators of exceptional value
37 prescribed.

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

1 3.3.3 How Historic Landscapes/Viewsheds Relate to the National Register Criteria

2 Definition of a Landscape

3 A landscape is defined as the collective surface features of a place and the spatial
4 relationships among those features, including natural terrain, human affected terrain, and
5 the built environment. Unlike individual historic properties (e.g., buildings, structures,
6 objects), historic landscapes/viewsheds typically take into account multiple elements and
7 the relationships of these elements to one another within the landscape. As a result,
8 historic landscapes/viewsheds are evaluated as either sites or districts.

9 Historic Sites

10 As defined in National Register Bulletins 15, a historic site is the location of a significant
11 prehistoric or historic event, occupation, or activity. Sites do not have to be marked by
12 physical remains (e.g., battlefields); however, when the location of a historic event cannot
13 be conclusively determined because no cultural materials survive, careful evaluation to
14 determine the site's accurate location is required. In addition to battlefields, examples of
15 historic sites include cemeteries, designed landscapes, village or town sites, and natural
16 features having cultural significance (e.g., rock art sites).

17 Historic Districts

18 National Register Bulletin 15 defines a historic district as a significant concentration,
19 linkage, or continuity of sites, buildings, structures, or objects united historically or
20 aesthetically by plan or physical development. A district derives its importance from
21 being a unified entity, even though it is often composed of a wide variety of integral
22 resources. While some districts have a unified historic and/or architectural development,
23 "it is important to recognize that integral does not mean that a district must have
24 homogenous resources or significance. Districts can include diverse resources that
25 represent the area's development over time. A commercial or residential area, for
26 example, may form a unified whole, but have resources built in a variety of styles over a
27 long period of time."

28 The identity of a district results from the interrelationship of its resources, which can
29 either convey a visual sense of the overall historic environment or be an arrangement of
30 historically or functionally related properties. Districts can also include both features that
31 lack individual distinction and features that serve as focal points. A district may also
32 contain buildings, structures, objects, sites, or open spaces that do not contribute to the
33 significance of the district; but, the number of these types of features must not intrude on
34 the district to the point that it no longer conveys the feel of a historic environment.

35
36 Historic districts can be either contiguous or discontinuous. Although they are usually a
37 single geographic area of contiguous historic properties, they can also be composed of
38 two or more definable significant areas separated by non-significant areas. A
39 discontinuous district is most appropriate where elements are spatially discrete; the
40 space between the elements is not related to the significance of the district; and/or visual
41 continuity is not a factor in the significance. Discontinuous districts are *not* appropriate

For Official Use Only—Not for Public Distribution

1 if the space between features has been caused by demolition or new construction (U.S.
2 Department of the Interior, National Park Service 1991a).

3
4 Examples of historic districts include business districts, canal systems, college campuses,
5 industrial complexes, transportation networks, and estates or farms with large acreage
6 and numerous properties.

7 **3.4 DESIGNED, RURAL, ETHNOGRAPHIC, AND MILITARY HISTORIC** 8 **LANDSCAPES**

9 In addition to assessing the potential for historic buildings and structures, this evaluation
10 also considers the potential for Onizuka AFS to encompass a historic
11 landscape/viewshed. There are several types of historic landscapes, each of which is
12 briefly described in Sections 3.4.1 through 3.4.4.

13 **3.4.1 Designed Historic Landscapes**

14 **Definition of a Designed Historic Landscape**

15 As defined by the National Park Service, a landscape that has significance as a designed
16 or work of art; or consciously designed and laid out by a master gardener, landscape
17 architect, architect, or horticulturalist to a design principle; or has a historical association
18 with a significant person, trend, event, etc. in landscape gardening or landscape
19 architecture; or a significant relationship to the theory or practice of landscape
20 architecture.

21 **Characteristics of Designed Historic Landscapes**

22 To qualify listing in the National Register a designed landscape must have significance as
23 one of the following types of landscapes:
24

- 25 • Small residential grounds
- 26 • Estate or plantation grounds
- 27 • Arboreta, botanical and display gardens
- 28 • Zoological gardens and parks
- 29 • Churchyards and cemeteries
- 30 • Memorial grounds
- 31 • Plazas, squares, malls, or other public spaces
- 32 • Commercial or industrial grounds and parks
- 33 • Local, state, national parks and grounds
- 34 • Country Clubs, golf courses, bowling greens, racetracks, etc.
- 35 • Fair and Exhibition grounds
- 36 • Parkways, drives, and trails
- 37 • Bodies of water and fountains.

For Official Use Only—Not for Public Distribution

1 **Examples of a Designed Historic Landscape**

- 2 • Central Park, New York City
3 • Chanticleer, the Delaware County, Pennsylvania, suburban estate of the
4 Rosengarten family
5 • Oakmont Pennsylvania Country Club and golf course.

6
7 Detailed information about designed historic landscapes and how they are evaluated for
8 inclusion in the National Register can be found in National Register Bulletin 18 (U.S.
9 Department of the Interior, National Park Service 1992).

10 **3.4.2 Rural Historic Landscapes**

11 **Definition of a Rural Historic Landscape**

12 As defined by the NPS, rural historic landscapes are "geographical areas that have been
13 used historically by people, or shaped or modified by human activity, occupancy or
14 intervention, and that possess a significant concentration, linkage, or continuity of areas
15 of land use, vegetation, buildings, and structures, roads and waterways, and natural
16 features."

17 **Characteristics of Rural Historic Landscapes**

18 Rural historic landscapes can fall into one of several types. These include agricultural
19 (crops or grazing); industrial (e.g., mining, milling, lumbering); maritime (e.g., fishing or
20 shipbuilding); recreation (e.g., hunting or fishing camps); transportation/circulation
21 systems; migration trails; conservation (e.g., natural reserves); and ceremonial or
22 religious areas. Although somewhat different physically, all of these landscape types will
23 typically encompass open space, natural features, and substantial areas of vegetation.
24 They may also include buildings or structures, archaeological sites, or designed
25 landscapes.

26 Rural landscapes are evaluated for listing in the National Register as sites or historic
27 districts (utilizing the four primary National Register criteria) and are further evaluated
28 using 11 landscape characteristics (four process and seven physical elements) (U.S.
29 Department of the Interior, National Park Service 1991b). The criteria can be applied to
30 the property as a whole (i.e., all of Onizuka AFS) or to smaller properties within it (e.g.,
31 one of the test areas). The 11 landscape characteristics include:

- 32 • Land uses and activities (e.g., the continuous focus of Onizuka AFS on
33 space object direction and tracking)
34 • Patterns of spatial organization (e.g., clusters of technical complexes)
35 • Response to the natural environment
36 • Cultural traditions
37 • Circulation networks (e.g., road or railroad systems)
38 • Boundary demarcations
39 • Vegetation related to land use

For Official Use Only—Not for Public Distribution

- 1 • Buildings, structures and/or objects
- 2 • Clusters (e.g., groupings of features such as buildings and fences)
- 3 • Archaeological sites
- 4 • Small-scale elements (e.g., foot bridges, road signs, cattle gates, canals).

5 **Examples of a Historic Rural Landscape**

- 6 • Kehlbeck Farmstead, Cass County, Nebraska
- 7 • Dorris Ranch, Lane County, Oregon
- 8 • Lake Landing Historic District, Hyde County, North Carolina.

9
10 Additional information about rural historic landscapes and how they are evaluated for
11 inclusion in the National Register can be found in National Register Bulletin 30 (U.S.
12 Department of the Interior, National Park Service 1991b).

13 **3.4.3 Ethnographic Landscapes**

14 **Definition of an Ethnographic Landscape**

15 A landscape that contains a variety of natural and cultural resources that a specific culture
16 defines as important to their heritage or modern culture. Ethnographic landscapes are
17 also typically considered traditional cultural properties.

18 **Characteristics of an Ethnographic Landscape**

19 Ethnographic landscapes typically represent human adaptation to natural features. This
20 can be evident in the design of structures (e.g., earthworks, pithouses), construction
21 materials, circulation features (e.g., roads, trails, canals), or overall landscape
22 development. Typical features also include water sources (e.g., springs, streams, pools,
23 tanks), which can be either functional, aesthetic, or sacred; vegetation, both indigenous
24 and introduced (e.g., plant gathering areas, agricultural fields, grazing lands, forests); and
25 rock features—alignments, geoglyphs, and rock art sites.

26
27 Ethnographic landscapes can also include:

- 28 • Rural communities whose organization, buildings, and structures, or
29 patterns of land use reflect the cultural traditions valued by its long term
30 residents
- 31 • Urban neighborhoods that are the traditional home of a particular cultural
32 group and that reflect that groups beliefs and practices
- 33 • Locations where a community have traditionally carried out economic,
34 artistic, or other cultural practices important in maintaining historic
35 identity.

36 **Examples of an Ethnographic Landscape**

- 37 • Nicodemus Historic District, Nicodemus, Kansas, as representing the
38 migration of southern African Americans to the Midwest.

For Official Use Only—Not for Public Distribution

- 1 • German Village Historic District, Columbus, Ohio, as reflecting the ethnic
- 2 heritage of 19th century German immigrants
- 3 • Chinatown, Honolulu, Hawaii, as reflecting the cultural values and
- 4 traditions of its inhabitants
- 5 • Cannonball Island, Cape Alva, Washington, important to the Makah
- 6 Indian people as a navigation marker for local fishermen
- 7 • Taquitz Canyon, California, as the ancestral birthplace of the Cahuilla
- 8 Indians.

9
10 Additional information about ethnographic landscapes and traditional cultural properties
11 can be found in National Register Bulletin 38 (U.S. Department of the Interior, National
12 Park Service 1991c).

13 3.4.4 Historic Military Landscapes

14 Definition of a Historic Military Landscape

15 A military landscape is a subset of the established landscape categories routinely used by
16 the National Park Service. There are no specific National Park Service criteria for this
17 type of landscape, rather, landscapes with military features must meet the criteria for one
18 of the established National Park Service landscape types (i.e., designed, rural, or
19 ethnographic). Military landscapes are described herein because the unofficial guidance
20 is useful to this evaluation.

21 In general, military landscapes are those that have been uniquely shaped through human
22 activity in support of a single, or multiple, military missions of the U.S. Department of
23 Defense or its antecedents (U.S. Army Construction Engineering Research Laboratory
24 1996).

25 Characteristics of Military Landscapes

26 Military installations often encompass some of the most historically significant properties
27 in the American cultural landscape. Features of military landscapes are distinctive in
28 appearance and function and typically display one or more of the following
29 characteristics:

- 30 • A reflection of the military mission, expressed in a functional design.
- 31 • Siting and layout, directly related to the evolution of the mission and often
- 32 influenced by the natural environment.
- 33 • Military cultural values and traditions (e.g., hierarchy), expressed in
- 34 facility placement, landscape treatment, and architectural styles.
- 35 • Repetition of basic components and designs—both within installations and
- 36 among installations with similar missions.
- 37 • Restricted access with controlled entrances and exits.
- 38 • Clearly defined borders, created by fences, walls, sentry houses, signage
- 39 and other features.

1 Scale of Military Landscape Evaluations

2 Landscape evaluations, both military and non-military, can be conducted in a wide range
3 of scales. This ranges from an individual structure and its surrounding environment to an
4 entire installation. The scale of the evaluation is determined by the history of the entire
5 property and the significance and integrity of the individual (or clusters of) features.
6

7 In addition, the evaluation of a historic landscape, particularly a military landscape, is
8 about change as well as permanence. Understanding the relationship between the
9 changing missions of an installation and its active landscape is a key element in
10 identifying historical significance.

11 Examples of historic military landscapes include large forts, airfields, cantonment areas,
12 medical facilities, residential areas, shipyards, or entire military installations. National
13 Register-listed historic military landscapes include:

- 14 • The U.S. Military Academy at West Point, New York
- 15 • Fort Sam Houston, Texas
- 16 • Cape Canaveral Air Station, Florida
- 17 • The Presidio of San Francisco, California.

18
19 Additional information about the evaluation of historic military landscapes can be found
20 in *Guidelines for Documenting and Evaluating Historic Military Landscapes: An*
21 *Integrated Landscape Approach* (U.S. Army Construction Engineering Research
22 Laboratory 1996).

23 3.5 AIR FORCE COLD WAR HISTORIC PROPERTY GUIDANCE

24 At the end of the Cold War (1989) the U.S. Department of Defense recognized the need
25 to identify and properly manage Cold War-era materials so that future generations would
26 understand the Cold War, its origins, and its repercussions (U.S. Department of Defense
27 1994). To achieve these goals, a task force was established to oversee the process. The
28 task force initiated a number of theme and context studies and, recognizing that Cold
29 War-era properties would need to demonstrate exceptional importance because of their
30 age, established some general guidelines for identifying potentially significant Cold War-
31 era property types. Primarily focused on Air Combat Command facilities (which does
32 not necessarily encompass important facility types for other Commands), U.S. Air Force
33 property types identified were:

- 34
35 • Operational and Support Installations
 - 36 Air Force bases, including Command Centers
 - 37 Missile Stations
 - 38 Launch Complexes
- 39 • Combat Weapons Systems and Combat Support Systems
 - 40 Missiles
 - 41 Aircraft (Fixed Wing and Rotary)
 - 42 Ground Vehicles and Equipment

For Official Use Only—Not for Public Distribution

- 1 • Training Facilities
- 2 Warfighting, Combat Support, and Intelligence Schools
- 3 Launch Complexes
- 4 Combat Training Ranges
- 5 Impact Areas; Targets
- 6 Prisoner of War Training Camps
- 7 • Material Development Facilities
- 8 Research Laboratories
- 9 Manufacturing Sites
- 10 Test Sites
- 11 Proving Grounds
- 12 • Intelligence Facilities
- 13 Radar Sites
- 14 Listening Posts

15
16 At the time the guidance was prepared (1994), there were also some facilities assumed to
17 have a more ancillary role in the history of the Cold War and, therefore, not as likely to
18 demonstrate exceptional importance. These types of facilities are:

- 19
- 20 • Capehart/Wherry Housing
- 21 • Base Exchanges
- 22 • Administrative Buildings
- 23 • Garages and Motor Pools
- 24 • Maintenance Shops
- 25 • Sewage Treatment Plants.
- 26

27 The guidance is careful to state, however, that "the vast support complexes that lay
28 behind the 'frontline' units will, in due time, be inventoried for historic significance."
29 The guidance also provides "examples of Cold War historic resources" that includes
30 historic districts encompassing (U.S. Department of Defense 1994):

- 31
- 32 • Concentrations of buildings united historically or aesthetically
- 33 • Entire military bases
- 34 • Dependent housing and support facilities.

35 3.6 MANAGEMENT OF HIGHLY TECHNICAL AND SCIENTIFIC 36 FACILITIES

37 In response to concerns by federal agencies regarding the role of historic preservation and
38 the management of scientific and technical facilities, the Council prepared a report
39 entitled *Balancing Historic Preservation Needs with the Operation of Highly Technical
40 or Scientific Facilities* (Advisory Council on Historic Preservation 1991). The intent of
41 the report was to provide observations, guidance, and recommendations allaying concerns
42 that efforts to preserve or protect historic scientific and technological resources through
43 compliance with federal historic preservation laws might impede an agencies ability to
44 stay at the forefront of research and achievement. The central issue discussed in the
45 report is how agencies whose primary missions involve active research or highly

For Official Use Only—Not for Public Distribution

1 technical operations can balance their obligations as stewards of important historic
2 resources, given their continuous need to modify or replace "historic" facilities and
3 equipment. Important observations and recommendations of the report include:
4

- 5 • Federal agencies engaged in scientific operations should continue to
6 acknowledge their responsibilities as stewards of America's scientific
7 heritage and strengthen their commitment to preserving the nation's
8 scientific legacy.
- 9 • Historic preservation issues related to scientific and technical facilities
10 can be accommodated expeditiously.
- 11 • Historic preservation review processes are flexible enough to
12 accommodate the legitimate needs of the scientific and engineering
13 communities and their activities at historic facilities.

14 Examples of Highly Scientific and Technical Facilities

- 15 • Watervliet Arsenal's (New York) Building 135, which was built during
16 World War II and is still used for the manufacture of large gun barrels
- 17 • The Cape Canaveral launch complex which continues to launch missiles,
18 including the Space Shuttle
- 19 • NASA's Mission Control Center in Houston, which was extensively
20 upgraded in 1989
- 21 • Air Force Plant 6, Marietta, Georgia.

22 3.7 INTEGRITY

23 Integrity is the ability of a property to convey its significance. To be eligible for
24 inclusion in the National Register, a property must not only be shown to be significant
25 under the National Register criteria, but it must also have integrity. There are seven
26 aspects of integrity:
27

- 28 • Location
- 29 • Design
- 30 • Setting
- 31 • Materials
- 32 • Workmanship
- 33 • Feeling
- 34 • Association.

35
36 To retain historic integrity, properties will always possess several, and usually most, of
37 the seven aspects. Ultimately, the question of integrity is answered by whether or not a
38 property retains the identity for which it is significant. Additional information about
39 historic property integrity can be found in *National Register Bulletin 15* (U.S.
40 Department of the Interior, National Park Service 1991a).

41 For a historic landscape/viewshed to retain integrity, the majority of the components that
42 comprise the landscape's historic character must possess integrity, even if they are

For Official Use Only—Not for Public Distribution

- 1 individually undistinguished. In addition, the relationships among the landscape
- 2 elements must be substantially unchanged since the Period of Significance.

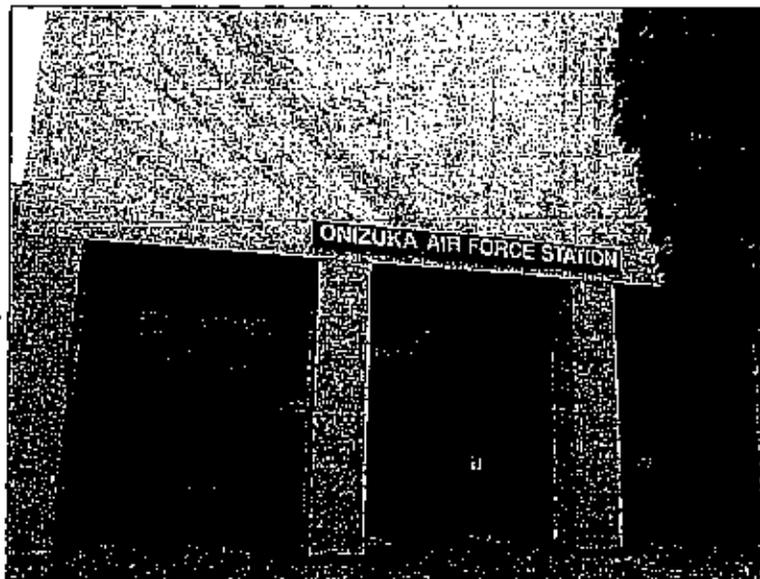
For Official Use Only—Not for Public Distribution

1 4.0 INVENTORY**2 4.1 UNIVERSE OF PROPERTIES INVENTORIED**

3 The "universe" of properties evaluated at Onizuka AFS was based on a Real Property
4 List provided by Onizuka AFS (Table 4-1, Figure 4-1, and Appendix A). Initially the list
5 encompassed 24 buildings and structures; however, at the time of the fieldwork six
6 additional properties were added to ensure that the evaluation included all properties
7 within the boundary of the installation. Facilities that were added are noted by an asterisk
8 in Table 4-1. One building (Building 1044, Traffic Check House) on the list has been
9 demolished and replaced by a pedestrian turnstile.

10
11 All of the entries in Table 4-1 were considered in this historic evaluation, regardless of
12 the description, function, age, or condition of the property. The entries encompass
13 buildings, structures (e.g., antennas), and infrastructure features (e.g., pump house).

14
15 With the exception of two buildings (Building 1008, Hazardous Storage Facility and
16 Building 1035, Electric Power Station Building) that were completed in 1994 and 1997
17 (respectively) all of the properties at Onizuka AFB were constructed during the period in
18 American history associated with the Cold War (1946-1989). According to the Onizuka
19 AFS real estate records, Building 1001 is the oldest of the properties (1959). Three
20 buildings were completed between 1964 and 1969; 11 were completed in the 1970s; and
21 13 were completed in the 1980s (see Table 4-1).

22 4.1.1 Building 1001

**Photograph 4-1. Building 1001—Space Operations Facility (Multipurpose)
Primary Entry (North Façade)**

For Official Use Only—Not for Public Distribution

ATTACHMENT *F*

Page *60* of *6*

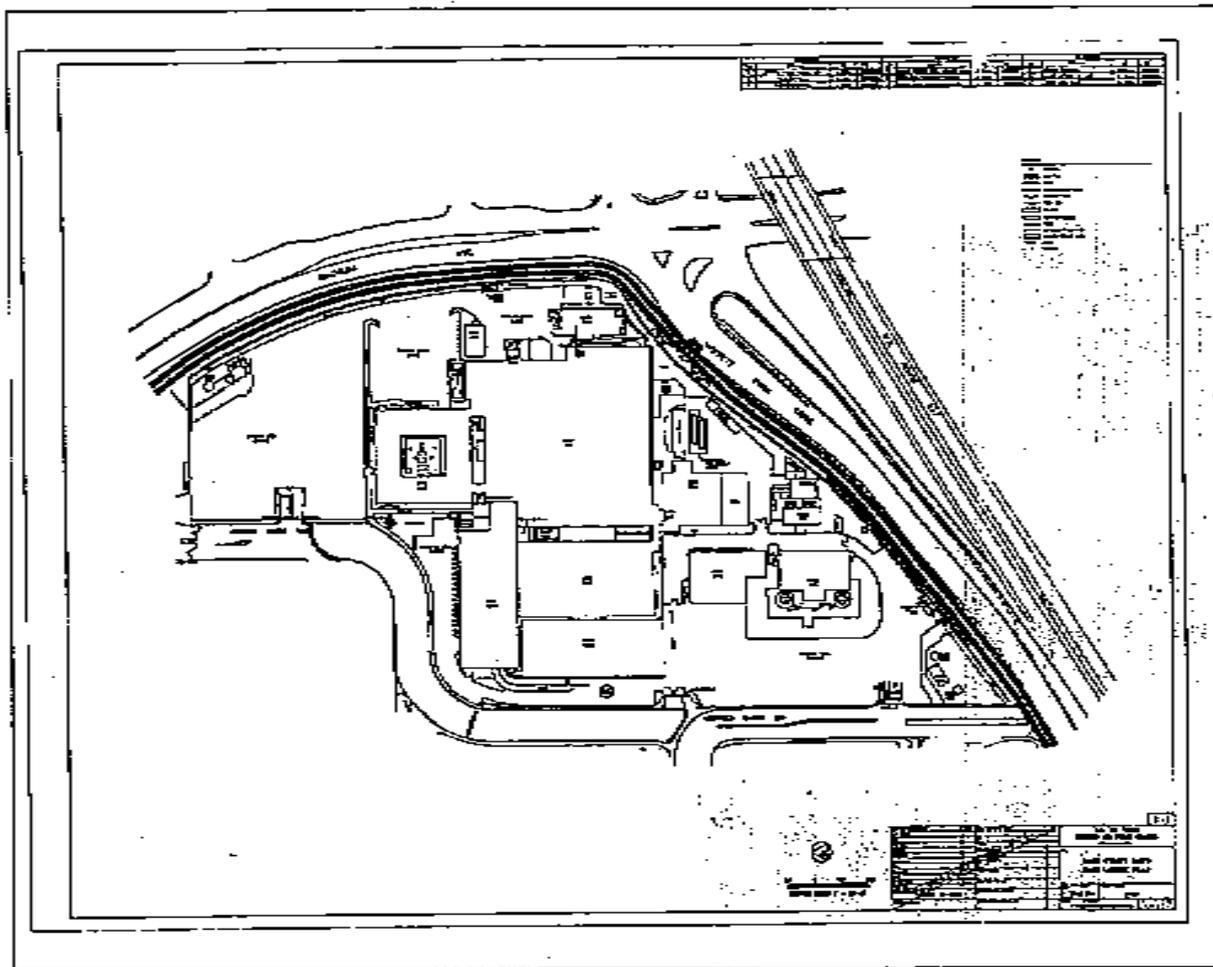


Figure 4-1. Onizuka Air Force Station—Installation Layout 2004
Source: Onizuka Air Force Station Civil Engineering

For Official Use Only—Not for Public Distribution

Table 4-1. List of Onizuka Air Force Station Buildings and Structures
(Completed between 1959 and 1997)

| | Building Number | Description of Facility | Date Built |
|----|-----------------|---|------------|
| 1 | 1001 | Space Operations Facility (Multipurpose) | 1959 |
| 2 | 1002 | Headquarters/Base Engineering | 1964 |
| 3 | 1003 | Satellite Control Station | 1969 |
| 4 | 1004 | Electric Power Station Building | 1969 |
| 5 | 1006 | Consolidated Open Mess | 1971 |
| 6 | 1007 | Base Engineering Storage Shed | 1971 |
| 7 | 1005 | Warehouse Supply and Equipment | 1974 |
| 8 | 1015 | Multipurpose Recreation Facility | 1974 |
| 9 | 1009* | Antenna Support Structure | 1976 |
| 10 | 1010 | Satellite Communications Ground Terminal | 1976 |
| 11 | 1012* | Antenna Support Structure | 1976 |
| 12 | 1013 | Satellite Communications Ground Terminal | 1976 |
| 13 | 1016* | Antenna Support Structure | 1976 |
| 14 | 1018 | Exchange, Service Outlet | 1978 |
| 15 | 1021* | Antenna Support Structure | 1979 |
| 16 | 1020 | Satellite Communications Ground Terminal | 1981 |
| 17 | 1022* | Antenna Support Structure | 1981 |
| 18 | 1025 | Security Police Operations (between 1001+1004, 410 sq ft) | 1984 |
| 19 | 10031 | Satellite Communications Station/ Covered Parking Structure/Supply and Equipment Storage | 1985 |
| 20 | 10032 | Satellite Communications Station/ Covered Parking Structure/Supply and Equipment Storage | 1986 |
| 21 | 1034 | Base Engineering Administration and Storage | 1988 |
| 22 | 1040 | Hazardous Storage | 1988 |
| 23 | 1042 | Hazardous Storage | 1988 |
| 24 | 1043 | Traffic Check House | 1988 |
| 25 | 1044** | Traffic Check House | 1988 |
| 26 | 1045 | Traffic Check House | 1988 |
| 27 | 1074* | Communications Equipment Support Tower | 1988 |
| 28 | 1079 | Pump Station (below ground vault) | 1988 |
| 29 | 1008 | Hazardous Storage Facility | 1994 |
| 30 | 1035 | Electric Power Station Building | 1997 |

* Facility added during fieldwork.

** Facility no longer exists.

- 1 History. Building 1001 is a very large multipurpose administrative and operations
2 facility. It houses a variety of operations shops, research laboratories, communications
3 centers, and support functions (e.g., the audio-visual facility). In addition, this building
4 houses the offices of the Installation Commander and Public Affairs Officer, an Air Force
5 Command Post, both Group and Center Headquarters, offices of the Base Civil Engineer,
6 Security Police Operations, a recreational area (fitness center), and a small café/snack
7 bar.
8
9 Building 1001 was already standing on the property at the time that Lockheed Aircraft
10 Corporation transferred title to the land to the Air Force in 1959 (see Section 2.1.2).

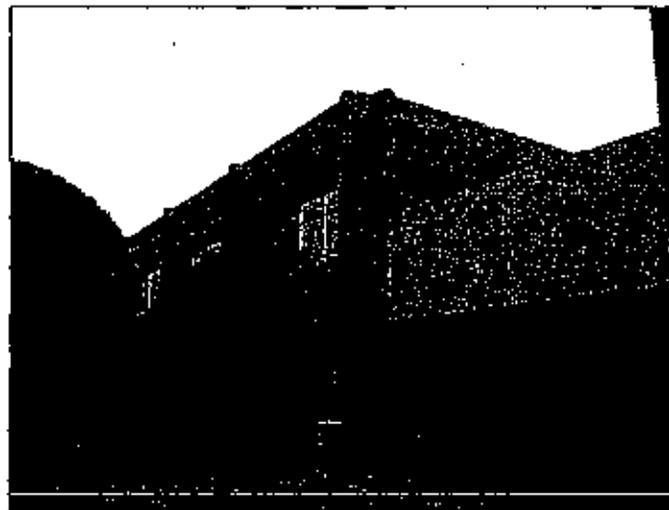
For Official Use Only—Not for Public Distribution

1 **Physical Description/Integrity.** Building 1001 is approximately square in shape and
2 110,000 square feet in size. One story in height, the windowless building is constructed
3 of steel and concrete and has a flat, 5-ply built-up roof. Since becoming Air Force
4 property, this building has experienced more than \$2.4 million in additions, interior and
5 exterior renovations, and other unspecified modifications to support changing missions
6 and evolving technologies. This building is tightly surrounded by other facilities and
7 extremely difficult to photograph.

8 **4.1.2 Building 1002**



**Photograph 4-2. Building 1002—Headquarters/Base Engineering (Multipurpose)
Primary Entry (North Façade)**



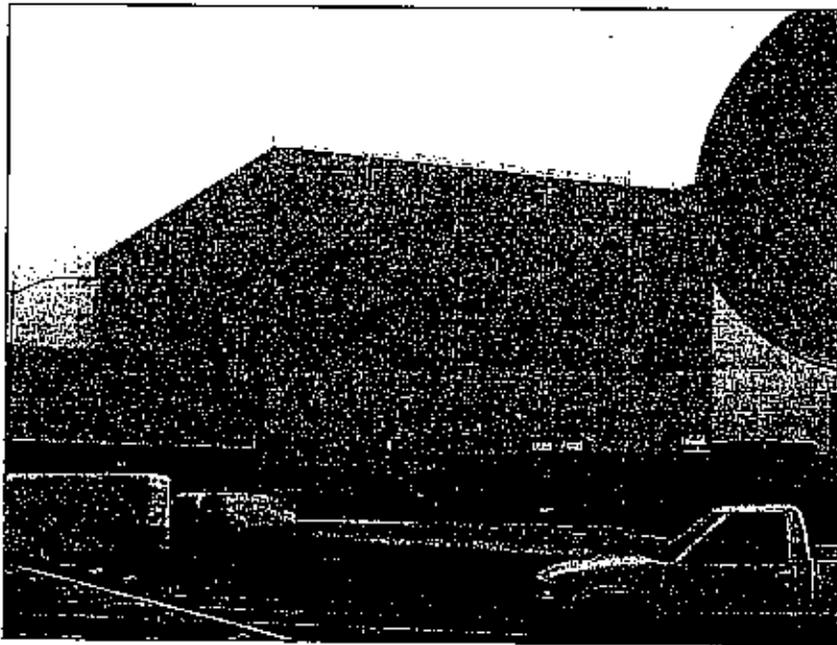
**Photograph 4-3. Building 1002—Headquarters/Base Engineering (Multipurpose)
West and South Façades (Attachment to Building 1001 to right)**

For Official Use Only—Not for Public Distribution

1 **History.** Building 1002 is a large multipurpose administrative and operations facility
2 immediately adjacent to the north façade of Building 1001. Similar to building 1001, this
3 building houses a variety of operations shops, research laboratories, communications
4 functions, and support functions.

5
6 **Physical Description/Integrity.** Building 1002 is approximately 50,000 square feet in
7 size. Two stories in height, it is constructed of steel and concrete and has a flat, built-up
8 roof. Bands of metal frame windows circle the building, which is square in shape. Since
9 completion, the building has been modernized through the addition of interior offices, the
10 demolition of some interior space, and the construction of a new finance center.

11 4.1.3 Building 1003



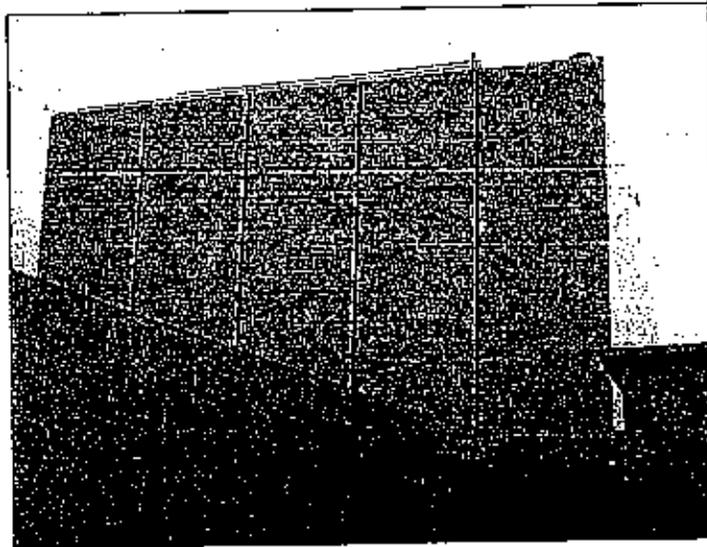
Photograph 4-4. Building 1003—Satellite Control Station (Multipurpose)
The “Blue Cube”
West and South Façades

12 **History.** Building 1003 is a large multipurpose administrative and operations facility
13 immediately adjacent to the west façade of Building 1001. Similar to buildings 1001 and
14 1002, this building houses a variety of operations shops, research laboratories,
15 communications functions, and support functions. Known as the “Blue Cube” because of
16 its light sky-blue color, this building is the primary satellite control center and contains a
17 wide array of computer consoles, video display terminals, and television screens.

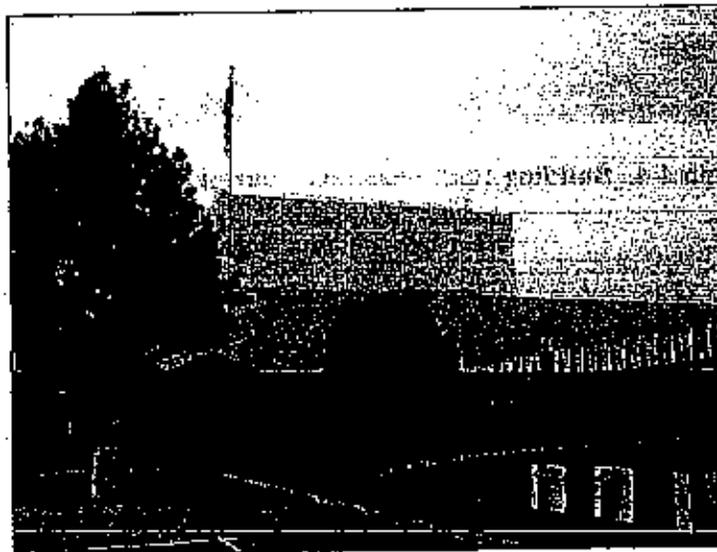
18
19 **Physical Description/Integrity.** Building 1003 is rectangular in shape and
20 approximately 170,000 square feet in size. This building is nine stories in height and is

For Official Use Only—Not for Public Distribution

- 1 constructed on a concrete pile foundation with a concrete floor and sub-floor, tilt-up
- 2 concrete panel walls, and a flat, built-up roof. The building is windowless. Since
- 3 completion in 1969, the building has experienced more than \$1.12 million in renovations,
- 4 additions, and unspecified modifications. Buildings 10031 and 10032 were completed in
- 5 1985/1986 and surround Building 1003 on the north and west sides.



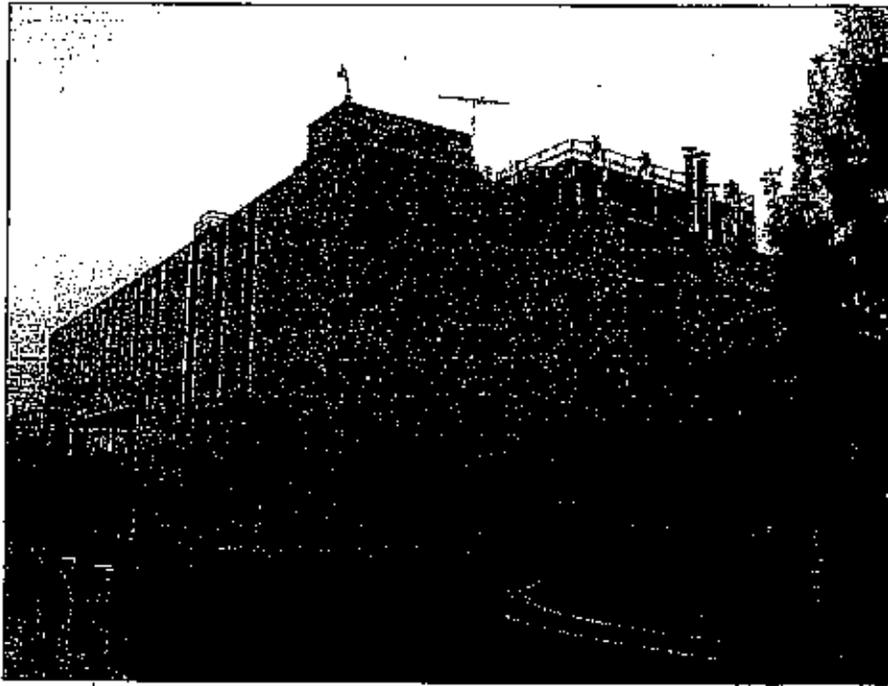
Photograph 4-5. Building 1003—Satellite Control Station (Multipurpose)
South and East Facades



Photograph 4-6. Building 1003—Satellite Control Station (Multipurpose)
North Façade—Building 10031 in foreground.

For Official Use Only—Not for Public Distribution

1 4.1.4 Building 1004

2
3
4
5
6
7
8
9
10
11
12
Photograph 4-7. Building 1004—Electric Power Station Building
West and South Facades

2 **History.** Building 1004 is the electric power station building. The building contains 12
3 each 750 kilowatt, 1,100 horsepower Solar gas turbine generators. This building was
4 completed in 1969 to power Building 1003.

5
6 **Physical Description/Integrity.** Building 1004 is rectangular in shape and
7 approximately 31,000 square feet in size. Two stories in height, this building is
8 constructed on a concrete pile foundation with a concrete floor, tilt-up concrete panel
9 walls, and a flat, built-up roof. Since completion, the building has experienced
10 approximately \$224,000 in renovations, including the installation of security and
11 emergency equipment, sound-proofing of the maintenance area on the ground floor, and
12 the installation of a monorail system.

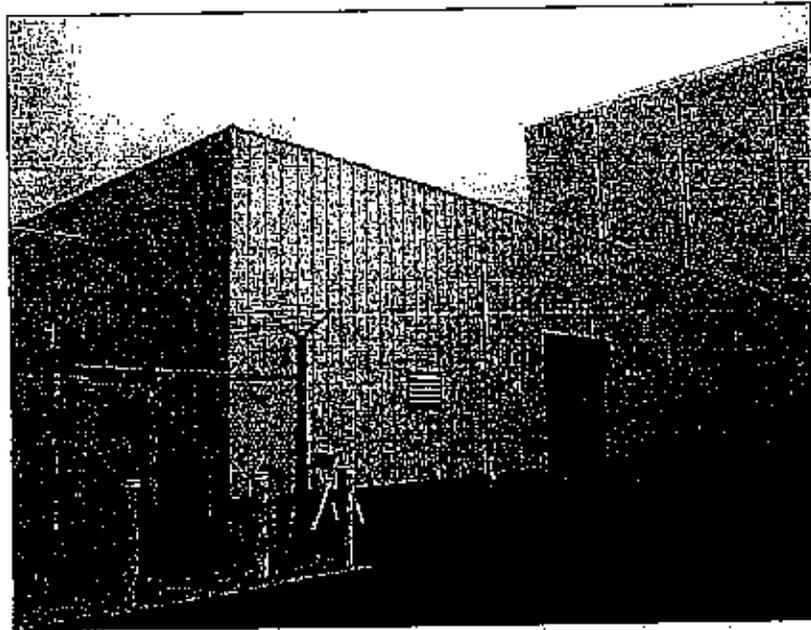
13 4.1.5 Building 1005

14 **History.** Building 1005 is a warehouse and storage facility. The facility has
15 continuously served this purpose since it was completed in 1974.

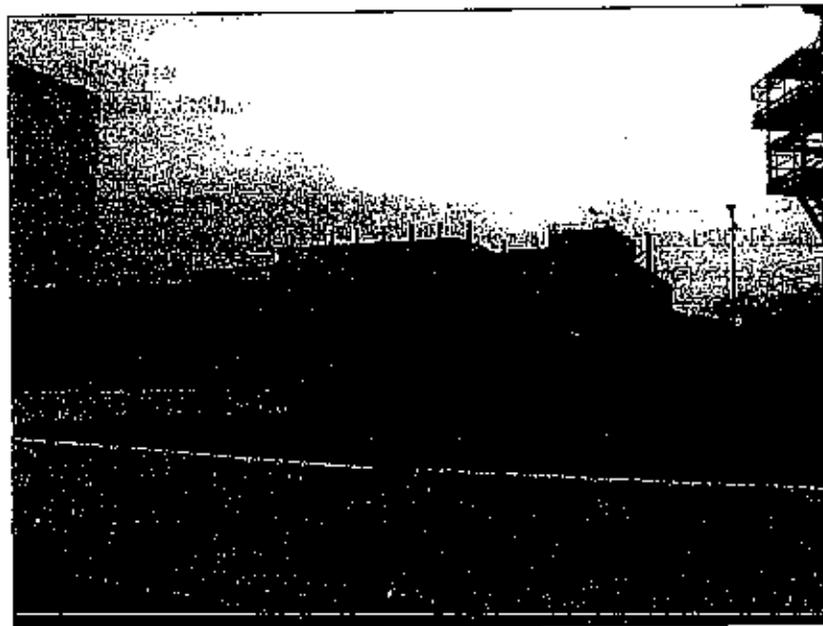
16
17 **Physical Description/Integrity.** Building 1005 is irregular in shape and approximately
18 12,400 square feet in size. The windowless building has one story, with a concrete
19 foundation, concrete/vinyl floor, structural metal siding walls, and a metal roof. Since

For Official Use Only—Not for Public Distribution

- 1 completion, the building has experienced approximately \$241,000 in renovations
- 2 including two additions (one each at the north and south facades).

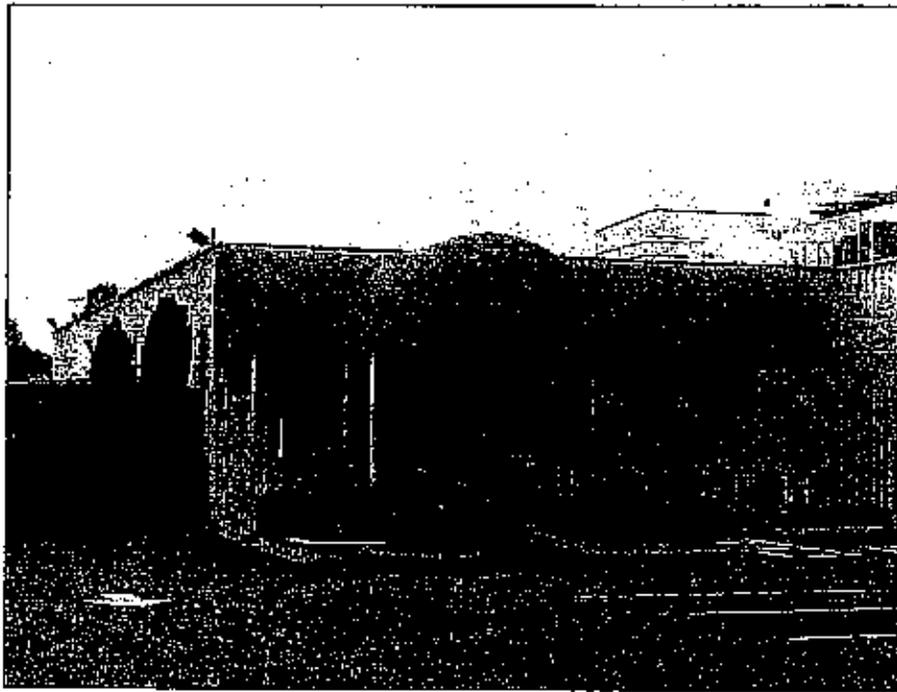


**Photograph 4-8. Building 1005—Warehouse
South and East Facades**



**Photograph 4-9. Building 1005—Warehouse
South and West Facades (Low building in foreground)**

1 4.1.6 Building 1006



Photograph 4-10. Building 1006—Consolidated Open Mess (“The Space Place”) East and North Facades

2 History. Completed in 1971, Building 1006 is known as “The Space Place” and is a
3 small dining facility.

4
5 Physical Description/Integrity. Building 1006 is irregular in shape and approximately
6 6,700 square feet in size. The building is one story in height, with a concrete foundation,
7 concrete floor, structural metal siding walls, and a flat metal roof. There are no windows.
8 The building has experienced unspecified renovations for modernization since it was
9 completed.

10 4.1.7 Building 1007

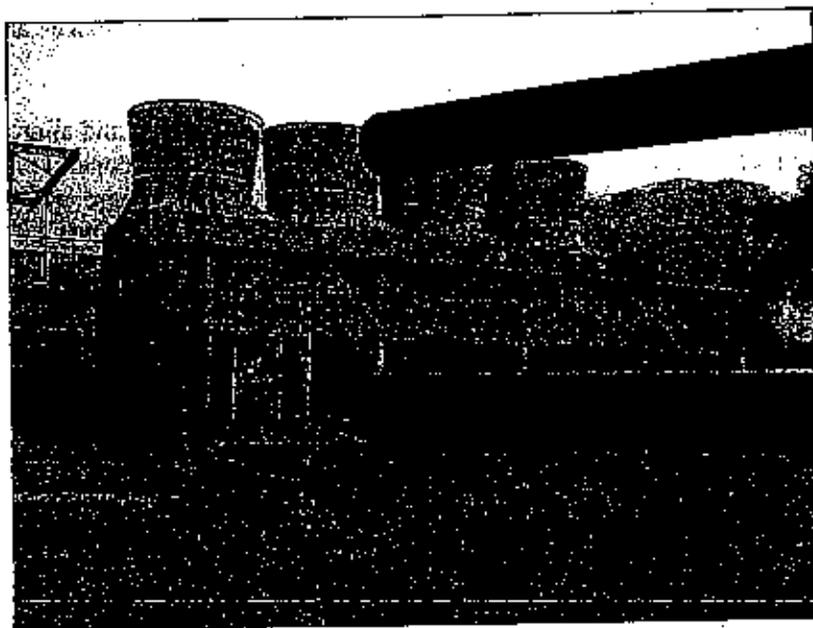
11 History. Completed in 1971, Building 1007 has served Onizuka AFS continuously as a
12 small storage shed.

13
14 Physical Description/Integrity. Building 1007 is rectangular in shape and
15 approximately 2,000 square feet in size. The building is one story in height, with a
16 concrete foundation, concrete floor, Butler-type metal siding walls, and a flat metal roof.
17 There are no windows. The building has experienced approximately \$60,000 in
18 renovations since it was completed. These include new roof ventilators and safety
19 features.



Photograph 4-11. Building 1007—Base Engineering Storage Shed
South and East Facades

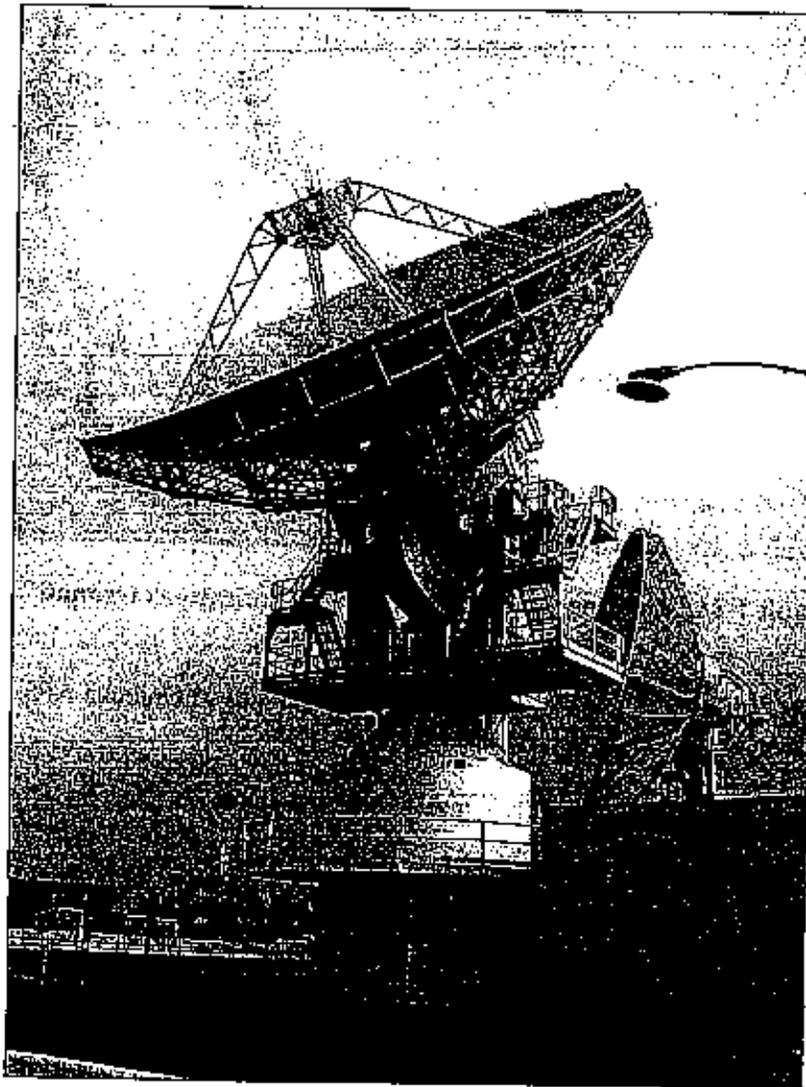
4.1.8 Building 1008



Photograph 4-12. Building 1008—Hazardous Storage Facility
West and South Facades

For Official Use Only—Not for Public Distribution

- 1 History. Completed in 1994, Building 1008 is a hazardous storage facility. It has served
2 that function since its completion.
3
- 4 Physical Description/Integrity. Building 1008 is rectangular in shape and
5 approximately 2,300 square feet in size. The building is one story in height, with a
6 concrete foundation, concrete floor, structural metal siding and concrete walls, and a
7 metal shed roof. There are no windows. The building is essentially unchanged since it
8 was constructed.
- 9 4.1.9 Structure 1009



Photograph 4-13. Structure 1009—Antenna Support Structure
View to Northwest

For Official Use Only—Not for Public Distribution

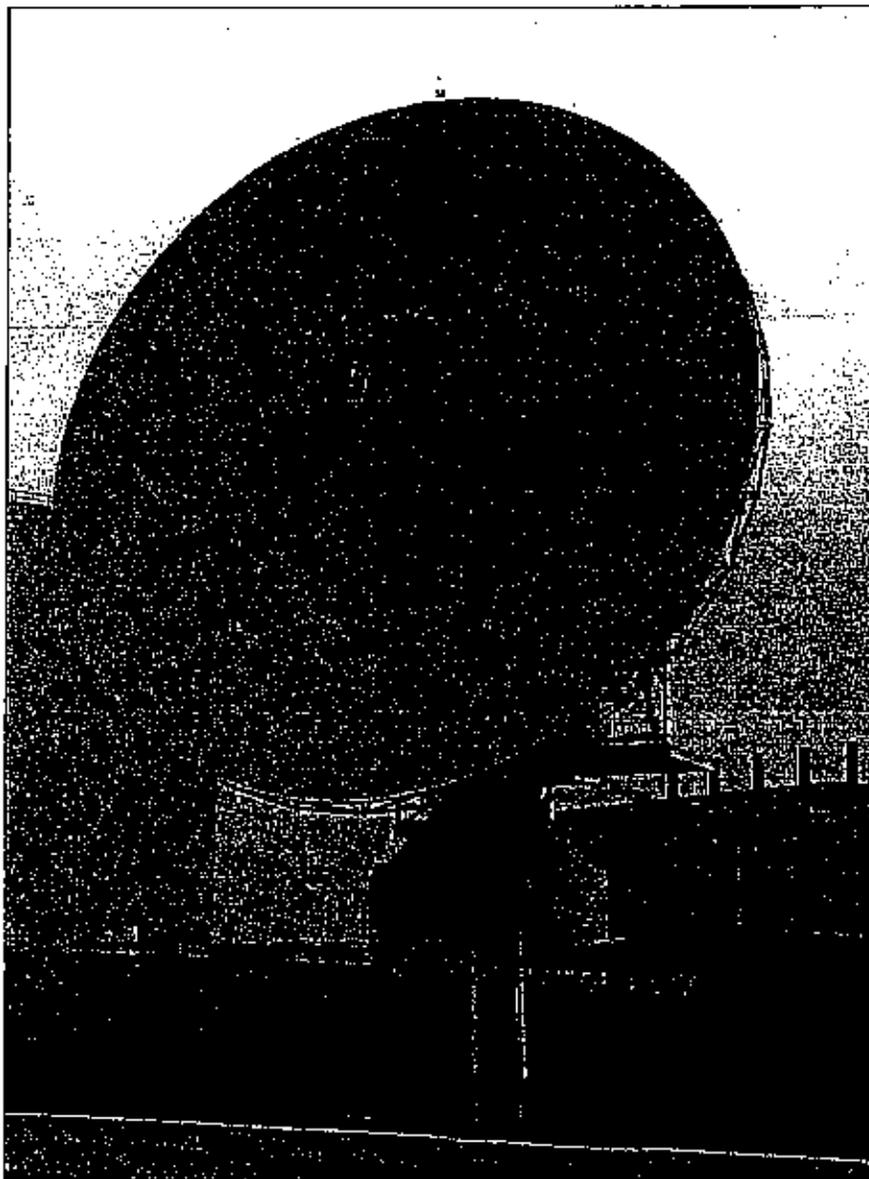
- 1 **History.** Completed in 1976, Structure 1009 is a satellite antenna.
- 2
- 3 **Physical Description/Integrity.** Structure 1009 is constructed of steel on a concrete
- 4 base. There have been no known changes to the antenna since it was constructed.
- 5 **4.1.10 Building 1010**



**Photograph 4-14. Building 1010—Satellite Communications Ground Terminal
West and South Facades**

- 6 **History.** Building 1010 was completed in 1976 and has served Onizuka AFS as a
- 7 satellite communications ground terminal since its completion.
- 8
- 9 **Physical Description/Integrity:** Building 1010 is rectangular in shape and 988 square
- 10 feet in size. The building is one story in height, with a concrete foundation, concrete
- 11 floor, concrete block walls, and a modified built-up gable roof. There are no windows.
- 12 Except for the installation of emergency lights, the building is essentially unchanged
- 13 since it was constructed.

1 4.1.11 Structure 1012

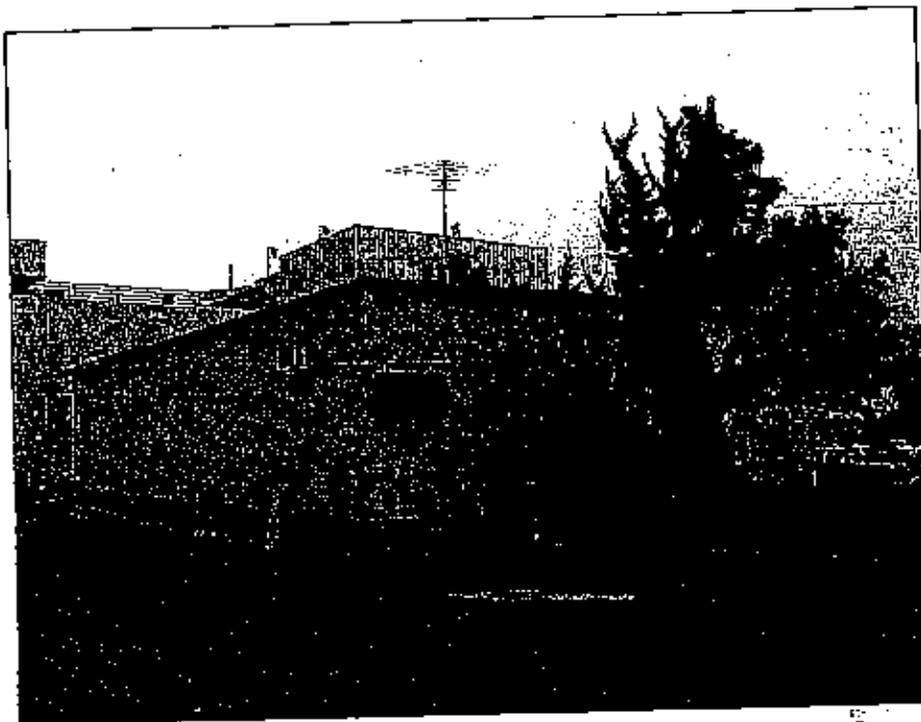


2 **Photograph 4-15. Structure 1012—Antenna Support Structure**
3 **View to Northeast**

- 2 **History.** Completed in 1976, Structure 1012 is a satellite antenna.
3
4 **Physical Description/Integrity.** Structure 1012 is constructed of steel on a concrete
5 base. There have been no known changes to the antenna since it was constructed.

For Official Use Only—Not for Public Distribution

1 4.1.15 Building 1018



Photograph 4-18. Building 1018—Exchange, Service Outlet
South and East Facades

2 **History.** Building 1018 was completed in 1978 and has served Onizuka AFS as a
3 exchange support facility since its completion.

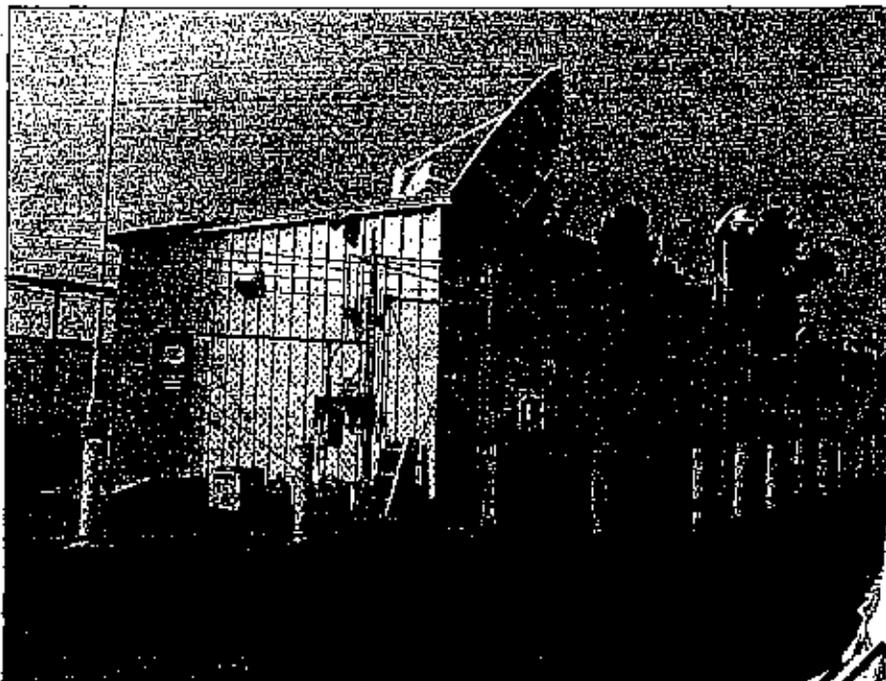
4
5 **Physical Description/Integrity.** Building 1018 is rectangular in shape and 2,200 square
6 feet in size. The building is one story in height, with a concrete foundation, a vinyl tile
7 floor, metal siding, and a flat metal roof. There are no windows. The building is
8 essentially unchanged since its original construction.

9 4.1.16 Building 1020

10 **History.** Building 1020 was completed in 1981 and has served Onizuka AFS as a
11 satellite communications ground terminal since its completion.

12
13 **Physical Description/Integrity.** Building 1020 is rectangular in shape and 600 square
14 feet in size. The building is one story in height, is built on a concrete foundation, has a
15 concrete floor, metal siding, and a flat metal roof. There are no windows. The building
16 is essentially unchanged since it was completed.

For Official Use Only—Not for Public Distribution



Photograph 4-19. Building 1020—Satellite Communications Ground Terminal
North and West Facades

1 4.1.17 Structure 1021

2 History. Completed in 1979, Structure 1021 is a satellite antenna.

3

4 Physical Description/Integrity. Structure 1021 is constructed of steel on a concrete pad.
5 There have been no known changes to the antenna since it was constructed.

6 4.1.18 Structure 1022

7 History. Completed in 1981, Structure 1022 is a satellite antenna.

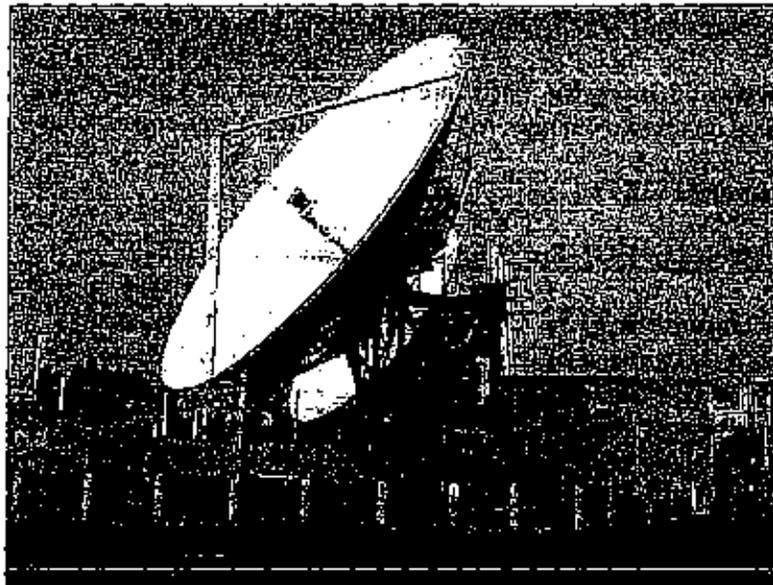
8

9 Physical Description/Integrity. Structure 1022 is constructed of steel on a concrete pad.
10 There have been no known changes to the antenna since it was constructed.

For Official Use Only—Not for Public Distribution



**Photograph 4-20. Structure 1021—Antenna Support Structure
View to Southeast**



**Photograph 4-21. Structure 1022—Antenna Support Structure
View to Southeast**

For Official Use Only—Not for Public Distribution

1 **4.1.19 Building 1025**

2 **History.** Building 1025 is a Security Police facility. The building was originally
3 constructed as a small armory.

4
5 **Physical Description/Integrity.** When originally constructed in 1984, Building 1025
6 was 290 square feet in size. In 1987 a loft was added increasing the square footage to
7 410. The small building has a concrete foundation, vinyl tile over concrete floor,
8 concrete block walls, and a built-up roof. The building is located between Buildings
9 1004 and 1001 and could not be photographed.

10 **4.1.20 Building 1034**

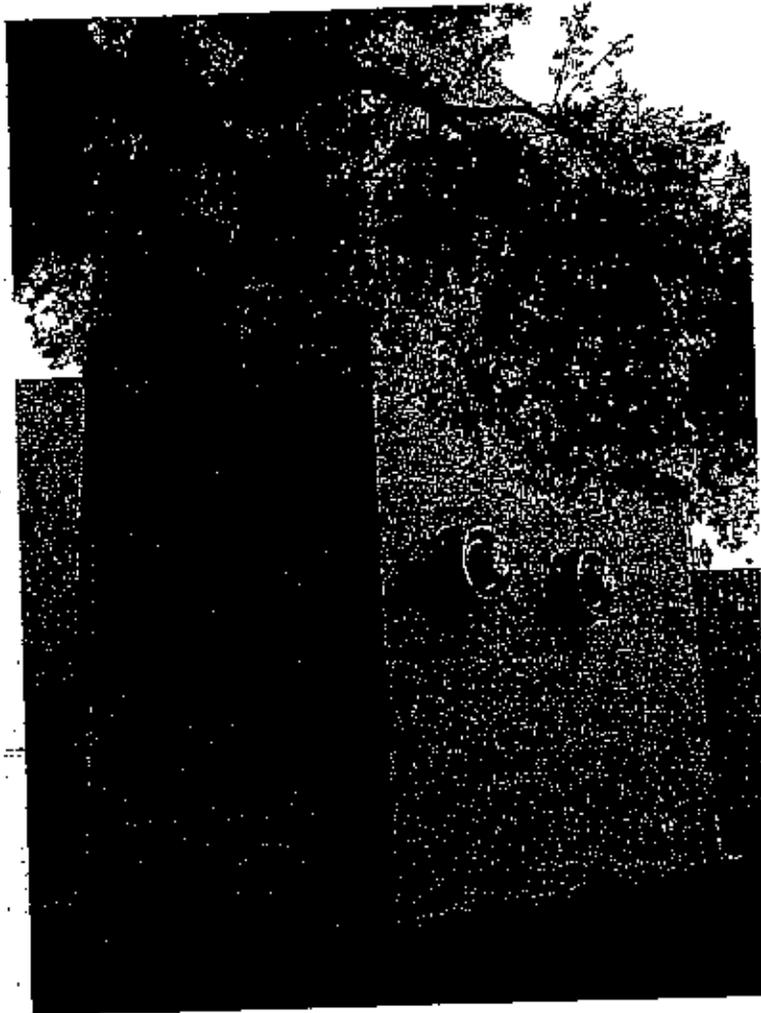
**Photograph 4-22. Building 1034—Base Engineering Administration and Storage
(Multipurpose)
View to Southwest**

11 **History.** Building 1034 is an office and storage facility. The building was originally
12 constructed as small headquarters building. It is currently used for base engineering
13 offices, a satellite control station, and for storage.

14
15 **Physical Description/Integrity.** Completed in 1988, Building 1034 is 4,205 square feet
16 in size. Rectangular in shape, the building has a concrete foundation, a concrete floor,
17 concrete and corrugated metal walls, and a flat, built-up roof. The building is essentially
18 unchanged from its original construction.

For Official Use Only—Not for Public Distribution

1 4.1.21 Building 1035



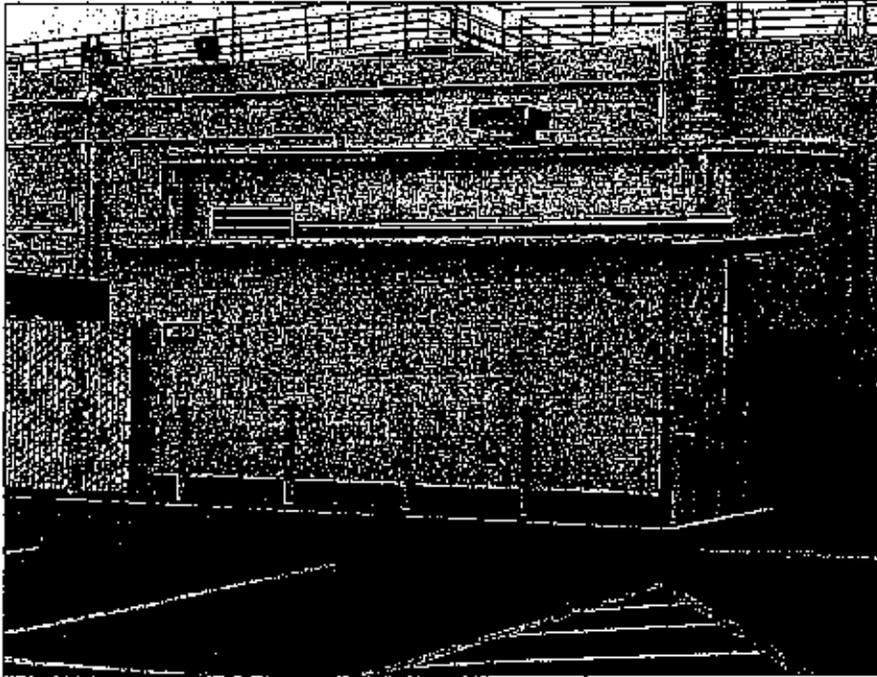
2 **Photograph 4-23. Building 1035—Electric Power Station Building (Secondary)**
3 **View to Northeast**

4 **History.** Building 1035 is secondary electric power station completed in 1997. This
5 building has served this function its original construction.

6 **Physical Description/Integrity.** Building 1035 is 4,886 square feet in size. Rectangular
7 in shape, the building has a concrete foundation, a concrete floor, corrugated metal walls,
and a flat roof. No photograph.

For Official Use Only—Not for Public Distribution

1 4.1.22 Building 1040

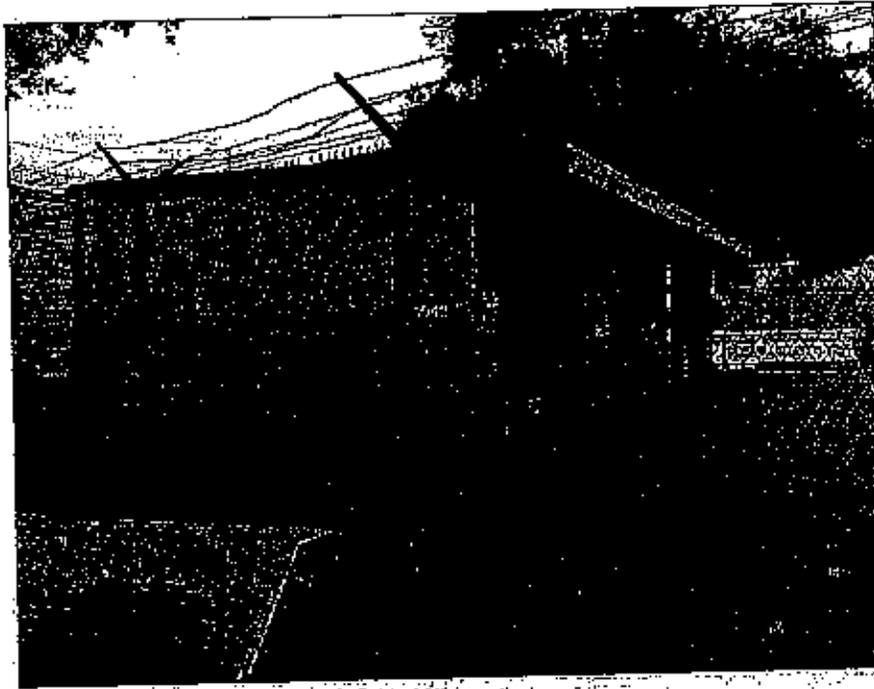


2 Photograph 4-24. Building 1040—Hazardous Storage Building
3 View to West

- 4
- 5 **History.** Building 1040 is a hazardous materials storage building completed in 1988.
6 The building has been used for storage since its completion.
7
- 8 **Physical Description/Integrity.** Building 1040 is 300 square feet in size. Rectangular
in shape, the building has a concrete foundation, a concrete floor, corrugated metal walls,
and a shed, metal roof. The building is essentially unchanged from its original
construction.

For Official Use Only—Not for Public Distribution

1 4.1.23 Building 1042



Photograph 4-25: Building 1042—Hazardous Storage Building
View to Southeast

2 **History.** Building 1042 is a hazardous materials storage building completed in 1988.
3 The building has been used for storage since its completion.

4
5 **Physical Description/Integrity.** Building 1042 is 1,100 square feet in size. Rectangular
6 in shape, the open-shed-type building has a concrete foundation, a concrete floor,
7 corrugated metal walls, and a flat metal roof. The building is essentially unchanged from
8 its original construction.

9 4.1.24 Building 1043

10 **History.** Building 1043 is a security police traffic check house. The building has been
11 used for this purpose since its completion in 1988.

12
13 **Physical Description/Integrity.** Building 1043 is 28 square feet in size. Rectangular in
14 shape, this small 4 foot by 8 foot building has a concrete foundation, a concrete floor,
15 concrete walls, and a concrete roof. There are large glass viewing windows on all four
16 sides.

For Official Use Only—Not for Public Distribution

1 4.1.25 Building 1044 (Traffic Check House *Demolished*)



Photograph 4-26. Building 1043—Traffic Check House
View to Northeast

2 4.1.26 Building 1045

3 **History.** Building 1045 is a security police traffic check house. The building has been
4 used for this purpose since its completion in 1988.

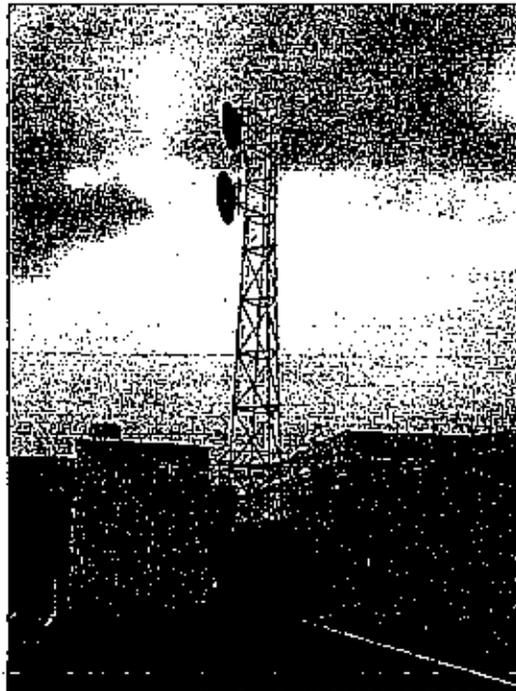
5
6 **Physical Description/Integrity.** Building 1045 is 28 square feet in size identical to
7 Building 1043. Rectangular in shape, this small 4 foot by 8 foot building has a concrete
8 foundation, a concrete floor, concrete walls, and a concrete roof. There are large glass
9 viewing windows on all four sides.

For Official Use Only—Not for Public Distribution



Photograph 4-27. Building 1045—Traffic Check House
View to Northeast

1 4.1.27 Structure 1074



Photograph 4-28. Structure 1074—Communications Equipment Support Structure
View to Northeast

For Official Use Only—Not for Public Distribution

1 **History.** Structure 1074 is a communications support tower. The tower has been used
2 for this purpose since its completion in 1988.

3
4 **Physical Description/Integrity.** Structure 1074 is a triangular-shaped, steel
5 communications equipment support tower. The tower is unchanged since it was erected.

6 **4.1.28 Structure 1079**

7 **History.** Structure 1079 is a below ground pump station. The pump station has been in
8 continuous use since it was completed in 1988.

9
10 **Physical Description/Integrity.** Structure 1079 is a concrete, below ground vault used
11 as a pump station. No photograph available due to inaccessibility of location.

12 **4.1.29 Building 10031**



**Photograph 4-29. Structure 10031—Satellite Communications Station/Covered
Parking/Base Supply and Equipment Storage
View to Northeast**

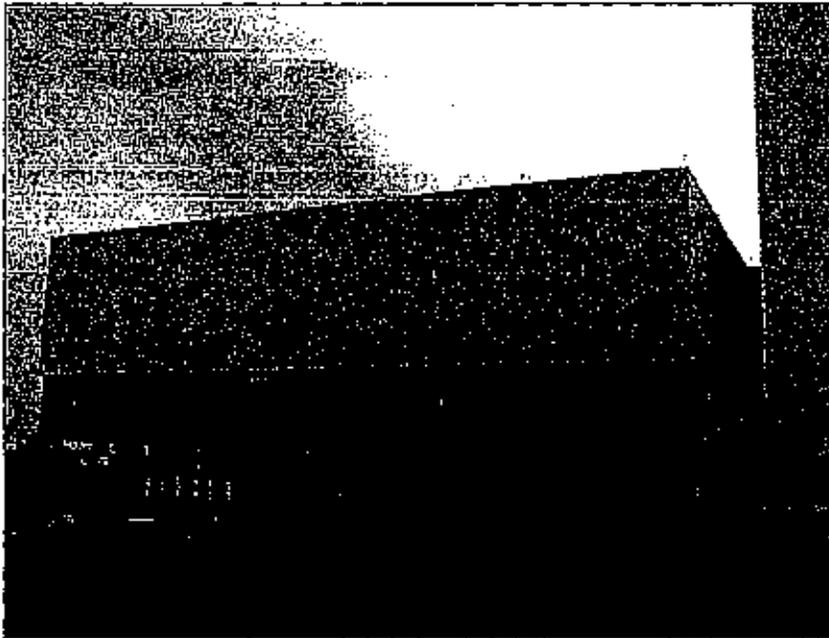
13 **History.** Building 10031 is a large multipurpose facility completed in 1985. The facility
14 consists of two levels of covered parking and a third level that contains administrative
15 space, storage areas, and a satellite control station.

16
17 **Physical Description/Integrity.** Building 10031 is 102,000 square feet in size. The
18 building has a concrete foundation, a raised concrete floor, two open concrete levels

For Official Use Only—Not for Public Distribution

1 originally used for parking, and a third level with a corrugated metal exterior and a built-
2 up roof. The building is essentially unchanged from its original construction; however,
3 the covered parking is now used for storage.

4 **4.1.30 Building 10032**



**Photograph 4-30. Structure 10032—Satellite Communications Station/Covered
Parking/Basic Supply and Equipment Storage
View to Northwest**

5 **History.** Building 10032 is a large multipurpose facility completed in 1986. The facility
6 consists of two levels of covered parking and a third level that contains administrative
7 space, storage areas, and a satellite control station.
8
9 **Physical Description/Integrity.** Building 10032 is 99,000 square feet in size. The
10 building has a concrete foundation, a raised concrete floor, two open concrete levels
11 originally used for parking, and a third level with a corrugated metal exterior and a built-
12 up roof. The building is essentially unchanged from its original construction; however,
13 the covered parking is now used for storage.

For Official Use Only—Not for Public Distribution

1 **5.0 RECOMMENDATIONS OF THE ONIZUKA AIR FORCE**
2 **STATION HISTORIC BUILDING INVENTORY AND**
3 **EVALUATION**

4 This report presents the results of an inventory and evaluation of all of the buildings,
5 structures, and landscapes at Onizuka AFS for possible inclusion in the National Register.
6 Using the Real Property List provided by the installation, the assessment encompasses 30
7 individual facilities and the complex as a whole.

8 **5.1 NATIONAL REGISTER ELIGIBILITY RECOMMENDATIONS**

9 In accordance with National Register Bulletin 15, *How to Apply the National Register*
10 *Criteria for Evaluation* (U.S. Department of Interior National Park Service 1991), for a
11 property to qualify for listing in the National Register it must meet one of the National
12 Register criteria (A-D) (see Section 3.3.1) by:

- 13
- 14 • Being associated with an important historic context *and*
- 15
- 16 • Retaining historic integrity of those features necessary to convey its significance.
- 17

18 Information about a property is based on physical examination and documentary research
19 and is essential for evaluating the property—without that information, defensible
20 conclusions regarding eligibility cannot be made.

21

22 Based on the below observations, it is recommended that 24 of the evaluated facilities at
23 Onizuka AFS be considered *not eligible* for inclusion in the National Register at this time
24 or at any time in the future (Table 5-1). These facilities are all currently less than 50
25 years in age; are support buildings that serve ancillary functions (e.g., storage sheds,
26 antennas, traffic check houses; or infrastructure shelters); and are typically of
27 unremarkable corrugated metal or concrete block construction. In addition, given their
28 function, architecture, and age, none of these buildings currently demonstrate the
29 exceptional importance requirement of criteria consideration G (see Section 3.3.2).
30 Because of their function and architecture, the likelihood of these types of buildings
31 becoming historically significant at any age is extremely remote.

32

33 It is further recommended that, given their age, architecture, and the lack of sufficient
34 historical information, the remaining six buildings (1001, 1002, 1003, 1004, 10031 and
35 10032) be considered *not eligible* for inclusion in the National Register at this time, but
36 that they be re-evaluated (as a grouping) when they reach the age of 50 years to
37 determine if they could meet the National Register criteria. Because Building 1003 (the
38 Blue Cube) is a central/key facility, the year of re-evaluation is proposed for 2019, unless
39 the installation's missions are declassified or decommissioned and sufficient information
40 to support an eligibility determination is available prior to that date.

41

42 **National Register Criterion A (association with significant historical events).** As
43 described in Chapters 2.0 and 4.0, Onizuka AFS is an extremely high security complex

For Official Use Only—Not for Public Distribution

**Table 5-1. National Register of Historic Places Eligibility
Onizuka Air Force Station**

| | Building Number | Description of Facility | Date Built | Function |
|----|-----------------|--|------------|-------------|
| 1 | 1001 | Space Operations Facility | 1959 | Operations+ |
| 2 | 1002 | Headquarters/Base Engineering | 1964 | Operations+ |
| 3 | 1003 | Satellite Control Station | 1969 | Operations+ |
| 4 | 1004 | Electric Power Station Building | 1969 | Operations+ |
| 5 | 1005 | Warehouse Supply and Equipment | 1974 | Support |
| 6 | 1006 | Consolidated Open Mess | 1971 | Support |
| 7 | 1007 | Base Engineering Storage Shed | 1971 | Support |
| 8 | 1008 | Hazardous Storage Facility | 1994 | Support |
| 9 | 1009 | Antenna Support Structure | 1976 | Support |
| 10 | 1010 | Satellite Communications Ground Terminal | 1976 | Support |
| 11 | 1012 | Antenna Support Structure | 1976 | Support |
| 12 | 1013 | Satellite Communications Ground Terminal | 1976 | Support |
| 13 | 1015 | Multipurpose Recreation Facility | 1974 | Support |
| 14 | 1016 | Antenna Support Structure | 1976 | Support |
| 15 | 1018 | Exchange, Service Outlet | 1978 | Support |
| 16 | 1020 | Satellite Communications Ground Terminal | 1981 | Support |
| 17 | 1021 | Antenna Support Structure | 1979 | Support |
| 18 | 1022 | Antenna Support Structure | 1981 | Support |
| 19 | 1025 | Security Police Operations | 1984 | Support |
| 20 | 1034 | Base Engineering Administration and Storage | 1988 | Support |
| 21 | 1035 | Electric Power Station Building (Supporting) | 1997 | Support |
| 22 | 1040 | Hazardous Storage | 1988 | Support |
| 23 | 1042 | Hazardous Storage | 1988 | Support |
| 24 | 1043 | Traffic Check House | 1988 | Support |
| 25 | 1044 | Traffic Check House (Demolished) | 1988 | Support |
| 26 | 1045 | Traffic Check House | 1988 | Support |
| 27 | 1074 | Communications Equipment Support Tower | 1988 | Support |
| 28 | 1079 | Pump Station | 1988 | Support |
| 29 | 10031 | Satellite Communications Station/ Covered Parking Structure/Supply and Equipment Storage | 1985 | Operations+ |
| 30 | 10032 | Satellite Communications Station/ Covered Parking Structure/Supply and Equipment Storage | 1986 | Operations+ |

+ Re-evaluate as a grouping in the year 2019

1 that consists of approximately 30 facilities. Of these, the majority are ancillary support
 2 and infrastructure facilities that support the missions that take place in Buildings 1001,
 3 1002, 1003, 10031 and 10032. Because of the highly classified nature of this installation
 4 only limited general historical and physical information about the buildings is available.
 5 National security restrictions prohibit the acquisition and publication of mission details
 6 and photography of the complex was severely restricted and monitored during this
 7 building assessment. With minor exceptions, there was only limited access to the
 8 interiors of the buildings. No interior photographs were taken; however, exterior
 9 photographs were permitted and approved by 21 SOPS security personnel (Photographs
 10 4-1 through 4-29).

For Official Use Only—Not for Public Distribution

1 Information provided by the Onizuka AFS Public Affairs Office and/or obtained from
2 publicly available sources indicates that Buildings 1001, 1002, 1003, and the third level
3 of Buildings 10031 and 10032 contain (or partially contain) satellite network tracking and
4 intelligence equipment. Complex computer systems detect and report in real time,
5 missile launches, space launches, and nuclear detonations using satellites. Building 1004
6 is the power plant built specifically for Building 1003. Except in the most general way,
7 information about exactly what takes place within these facilities is not known. While it
8 is possible that sufficient levels of information would reveal that these six buildings are
9 historically significant for their missions and activities, there is currently insufficient
10 publicly available, unclassified data to defend that conclusion.

11
12 **National Register Criterion B (association with significant persons).** From the
13 available historical data, there are no known associations between Onizuka AFS and
14 persons significant during the Cold War, the race for space, or any other notable persons
15 in American history.

16
17 **National Register Criterion C (architecture).** In general, all of the buildings at
18 Onizuka AFS are concrete, concrete block and/or corrugated metal. The buildings are
19 featureless, have few windows, and represent no true architectural style. The entire
20 complex is highly secured by fences and access is restricted. With the exception of the
21 "Blue Cube" (Building 1003,) which is light blue in color, there are no noteworthy
22 architectural or engineering features.

23
24 **National Register Criterion D (likely to yield important information in the future).**
25 Typically reserved for archaeological resources, there are no current data that would
26 support eligibility of Buildings 1001, 1002, 1003, 1004, 10031, or 10032 under National
27 Register criterion D.

28
29 **National Register Criteria Consideration G (demonstrates exceptional importance**
30 **as a property less than 50 years in age).** All of the facilities within the complex are less
31 than 50 years in age; most are between 16 and 30 years old. As described above, because
32 of their function and architecture, 24 of these facilities are not likely to achieve historical
33 significance at any age. Given the lack of specific information about the missions and
34 activities at Onizuka AFS, there is currently insufficient historical data to determine if
35 Buildings 1001, 1002, 1003, 1004, 10031, and 10032 could meet the exceptional
36 importance requirements of National Register criteria consideration G.

37
38 **Integrity.** Onizuka AFS real property records contain limited information about the
39 construction or equipment within the facilities. Externally, most of the buildings appear
40 to be well maintained; however, because of the level of security associated with the
41 complex, the exact extent and nature of any modifications that would affect historic and
42 physical integrity is not known.

43
44 **Historic District/Historic Landscape Potential.** Onizuka AFS is a small industrial-
45 appearing military facility surrounded by major roadways, very large industrial and
46 commercial buildings, and paved areas; there is minimal landscaping and open space.
47 The 30 buildings and structures within the station boundary, are utilitarian in design with

For Official Use Only—Not for Public Distribution

1 no true architectural style or features and all are constructed of reinforced concrete,
2 concrete block, or corrugated metal Butler-type construction. Twenty-four of the
3 facilities are support buildings or structures with little or no potential for historic
4 significance. As a result, there is currently very little potential for Onizuka AFS or any
5 grouping of facilities contained therein to represent a historic district or a historic
6 landscape.

7 5.2 CONCLUSION

8 As shown in Table 5-1, the 24 buildings and structures listed as support facilities (23 plus
9 one recently demolished) are recommended as *not eligible* for inclusion in the National
10 Register and no further studies or future evaluations are recommended.

11
12 Buildings 1001, 1002, 1003, 1004, 10031, and 10032 are recommended as *not eligible* for
13 inclusion in the National Register at this time. However, it is recommended that the
14 buildings be reconsidered for eligibility in the year 2019, or at such time as additional,
15 more specific information about their activities and missions becomes publicly available.

Historic Designation Eligibility

Onizuka Air Force Station

Sunnyvale, California

July 2008



KnappARCHITECTS

Table of Contents

Executive Summary 3
Introduction and Methodology 4
History of Onizuka Air Force Station 7
Description..... 10
California Register Eligibility 14
Sunnyvale Historic Preservation Ordinance 17
Conclusion 25

Executive Summary

At this time Onizuka Air Force Station cannot be deemed eligible to the California Register and is not a historic resource for the purposes of CEQA. Because much information about this property is classified, it could later prove eligible to the California Register – especially after the property reaches 50 years in age. Onizuka Air Force Station does appear to be eligible for listing as a Sunnyvale heritage resource under Criteria A, B, E, F and L of the Sunnyvale Historic Preservation Ordinance (Ordinance 2558-97). The property appears to be eligible also as a heritage resource district, which would encompass the entire site as well as the buildings. The local ordinance has three levels of significance (in increasing order of significance): heritage resource, designated heritage resource, and local landmark – each with a counterpart for a district. Onizuka Air Force Station appears eligible as a heritage resource and as a heritage resource district – the lowest level of significance.

Introduction and Methodology

The City of Sunnyvale hired Bay Area Economics for research and evaluation of development options for Onizuka Air Force Station. BAE engaged Design, Community and Environment to study environmental and land use issues. DCE hired Knapp Architects to research and evaluate issues relating to the historic significance of the property. This study considers the history and physical description of Onizuka Air Force Station relevant to whether it is a historic resource under the California Environmental Quality Act (CEQA) and also evaluates the property under the provisions of the Heritage Preservation chapter of the Sunnyvale Municipal Code.

To determine eligibility for both the California Register and the Sunnyvale local register, research was conducted to reevaluate existing reports as well as determine what new information, if any, was available. The Historic Building Inventory prepared in 2004 by Kaya Associates for the United States Air Force was used to reevaluate the site and establish which buildings were potentially significant. Websites for Onizuka Air Force Station, the National Reconnaissance Office, and military and space history were consulted for general histories, timelines and contact information. Publications and articles available which explored the history of reconnaissance missions during the Cold War years were also used. A single site visit to Onizuka provided current photographs and site conditions.

The site visit was hosted by Dennis Ralphs, 21 SOPS/CCX and did not include the interior of any buildings. Much of the site, including the interior of the buildings, building usage, and history of the site is classified by the United States Air Force. Because much of Onizuka's history is involved with defense and military activities, there is limited information on specific details of missions or activities. The site is associated with the United States Air Force, the National Reconnaissance Office and National Aeronautics and Space Administration. Without further declassification of the interiors, histories, and missions associated with the buildings of Onizuka Air Force Station, it is difficult to explore in depth the historical significance of the individual buildings.

The book, *Spying From Space; Constructing America's Satellite Command and Control Systems*, a history of satellite reconnaissance programs during the Cold War and especially the Corona Project and the Satellite Command Center, written by David Christopher Arnold was also consulted for general history.¹

Onizuka Air Force Station could not be determined eligible for listing in the California Register, and also could not be determined eligible for the National Register. Onizuka Air Force Station is not 50 years old, the mark for basic eligibility to the National Register. While the California Register allows some amount of flexibility with the age of a potential resource, a significant amount of information and history of the site must be available to determine significance. The amount of detailed historic information about Onizuka Air Force Station remains limited at this time because the Government has not made it public. Declassification of information about the base would likely make it clear whether the property is eligible for both registers; once the property is 50 years old, this determination may be possible without declassification.

Onizuka Air Force Station appears to be eligible for listing as a Sunnyvale historic landmark under the criteria set out in the city's Historic Preservation Ordinance. Onizuka Air Force Station meets five of the criteria of Ordinance 2558-97, in that it:

- Criterion A: "reflects special elements of the city's ... history"
- Criterion B: "is identified with...events significant in local, state or national history"
- Criterion E "contributes to the significance of an historic area...(as a) thematically related grouping of properties"
- Criterion F: "has a unique view or vista representing an established and familiar visual feature of the city of Sunnyvale"
- Criterion L: constitutes a district; "A collective high integrity of the district is essential to the sustained value of the separate individual resources."

¹ www.tamu.edu/upress/BOOKS/2005/arnold.htm

If Onizuka Air Force Station is determined to be a Sunnyvale historic landmark, Section 19.96.090 of Sunnyvale's Historic Preservation Ordinance (Ordinance 2558-97) would require a Landmark Alteration Permit for any changes or proposed demolition at the site.

History of Onizuka Air Force Station

Opening in 1960, Onizuka Air Force Station was originally known as the Air Force Satellite Test Center. The base was named three more times; in 1964 it was changed to the Air Force Satellite Control Facility, in 1971 to Sunnyvale Air Force Station, and in 1986 to Onizuka Air Force Station to honor Ellison S. Onizuka, whose life was lost in the Challenger Explosion.² For clarity, the site will be referred to as Onizuka Air Force Station in this report.

General History

Until World War II, Sunnyvale and the surrounding area was mostly agricultural. Sunnyvale has a long history with the defense industry, with the Joshua Hendy Iron Works shifting from Gold Rush equipment to military and defense equipment production and President Hoover establishing the Sunnyvale Naval Air Station (rededicated in 1933 as Moffett Field).³ Though Lockheed Corporation had moved in relatively early, the city truly began to grow as military men and their families settled into communities around military bases. After World War II, aerospace and electronics companies continued to move into Sunnyvale and the surrounding area – not only for the promising support of the Navy, but the nearby research facilities at Stanford University.⁴

The property for Onizuka was bought from Lockheed Aircraft Corporation. Lockheed had begun developing defense technologies in Sunnyvale in the mid 1950s and worked closely with the military during and after World War II.⁵ By the 1960s satellite programs dedicated for defense communication were in development under Defense Secretary Robert McNamara and President Johnson.⁶ Communication satellites led to the development of reconnaissance satellites, an important aspect of the Cold War – during which the United States and the USSR attempted to gain covert knowledge of each other's weapons systems and capabilities. The Soviets launched

² Onizuka. www.onizuka.af.mil/21sops_history.htm

³ Peterson, Kay. *Sunnyvale Collage*. Sunnyvale Historical Society. (Sunnyvale, 2000)

⁴ Ibid.

⁵ Arnold, David Christopher. *Spying From Space; Constructing America's Satellite Command and Control Systems*. (College Station: Texas A&M University Press, 2005), 5.

⁶ space.au.af.mil/books/spires/ch04.pdf

Sputnik, and in 1960 Onizuka Air Force Station became the hub for the Corona Project, the world's first photo reconnaissance program.

The main buildings of the site are Buildings 1001,1002,1003, 10031 and 10032. According to the Kaya Associates *Historic Building Inventory and Evaluation* of Onizuka prepared for the United States Air Force, these buildings could eventually be considered as a grouping eligible to the National Register.⁷ They are the only features on the base that would be considered historic in accordance with the most basic requirements of historic significance – that they will shortly be at least fifty years old, and that there is a possibility of significance due to association with historical events. The three central buildings were designed specifically to support the satellite systems operations which were based at Onizuka.⁸ Building 1003, known as the Blue Cube, was built in 1968 to serve as the command center for the Manned Orbiting Laboratory program.⁹ As the new programs and technologies outgrew buildings 1001 and 1002, the Blue Cube was slated to become the central building. The Blue Cube was also equipped with its own electric power plant, to ensure that operations at “America’s nerve center for watching foreign countries from space” were not vulnerable to power outages – either due to common problems or enemy aggression.¹⁰

In 1969, the United States Government announced that the Manned Orbiting Laboratory was no longer an active project and that a new function would need to be found for the Blue Cube.¹¹ Because the satellite program needed to move out of the older buildings which they were originally housed in, the Air Force reaffirmed that the Blue Cube would be used for “other missions” and that it would not go to waste.¹² By 1995, many of the primary missions for

⁷ Peyton, Page; Kaya Associates. *Historic Building Inventory and Evaluation, Onizuka Air Force Station; Prepared for the United States Air Force, Space Command Onizuka Air Force Station.* (Redlands, California) 2004. p. 3

⁸ Peyton, p. 3.

⁹ Arnold, p. 136.

¹⁰ http://www.onizuka.af.mil/21sops_history.htm

¹¹ Peyton, p.35.

¹²Peyton, p. 5.

Onizuka had been transferred elsewhere. Onizuka Air Force Station remains in limited operation today.¹³

¹³ http://www.onizuka.af.mil/21sops_history.htm

Description

Existing Context and Site

Much of the surrounding area has been reused in the last years for corporate site development. Portions of Lockheed, which is adjacent to Onizuka, are currently boarded up in preparation for reuse and redevelopment. Across Mathilda Avenue from Onizuka Air Force Station is a boarded up restaurant and parking lot. Slightly south of the site along Mathilda Avenue is a hotel and restaurant. North along Mathilda Avenue, multi-story corporate buildings have been built. Buildings similar to this new construction are also located to the west of the site. A light rail line runs along Mathilda Avenue from the south and continues west down Moffett Park Drive. The general area is no longer characterized only by the Onizuka site and yet the base remains visibly distinct from the surrounding build up and new construction.

Located at the northern edge of the city, the most notable features of the site are the abundance of radial satellite antennae, each which stand nearly 100 feet tall and a singular large blue building, the Blue Cube. The site is set apart from the surrounding streets by a high fence and modern security measures. The landscape of the base is characterized by its unadorned blue and white concrete buildings set among simple lawns, flowers, trees and AstroTurf safety areas.

According to the Kaya Associates *Historic Building Inventory and Evaluation*, there were six buildings and twenty four support structures which included “storage sheds, antennas, traffic check houses or infrastructure shelters.”¹⁴ Onizuka Air Force Station currently consists of about twenty seven buildings, including auxiliary buildings and satellite antennae, according to the map from the City of Sunnyvale, Onizuka Air Force Station Reuse Plan.¹⁵ The buildings are constructed of concrete block, reinforced concrete or corrugated metal, and a general color scheme of white with blue accents is featured on most buildings.¹⁶ All building usage and names

¹⁴Peyton, p. 2.

¹⁵ Dennis Ralphs, 21 SOPS/CCX. Onizuka Air Force Station. 2008.

¹⁶ Peyton, p. 5

are taken from the Kaya Associates report. It appears that since the *Historic Building Inventory and Evaluation* in 2004, some of the smaller support building have been removed.

Onizuka Air Force Station must be entered off of Innovation Way and all cars are stopped at a guard shack which is located north of all central building structures. A parking lot separates the gated entrance and guard shack from the central buildings. To the west of the central building grouping, an area which was once a two lane driveway has been covered with AstroTurf in order to establish larger physical boundaries between the buildings and roadways. This was added as a security measure after the events of September 11, 2001.¹⁷

Building Description

The northernmost building is Building 1002 – the headquarters – and the other structures and buildings are situated behind it. Building 1002 is a mid-century modern, two-story concrete building with metal-frame windows and exterior doors. Building 1002 is divided into bays with a series of simple engaged columns, but has relatively few architectural details other than its simple institutional style.

A small pathway set to the west of Building 1002 moves south towards the other central facilities of the site. This pathway is accented with simple landscape design, small trees and topiary, lawns, and flowers. This landscape design is continuous around Onizuka Air Force Station. Small trees and an abundance of flowers such as California Poppies and roses can be found in many places on the site. A low wall featuring a tile mural which depicts a shuttle and launch is located to the west of the pathway.

The only access point to Building 1001, the Space Operations Facility; Building 10031 and 10032, both combination Satellite Communications Station and parking garages; and Building 1003, the Blue Cube, is through a central glassed entrance way located between Buildings 1003

¹⁷ Dennis Ralphs, 21 SOPS/CCX. Onizuka Air Force Station. 2008

and 1001. A modern glass front entrance featuring a simple sign which reads “Onizuka Air Force Station” allows access to the buildings. Located directly south of Building 1002, Building 1001 is a low two story industrial building; the main massing of the building is not readily visible due to the close set grouping of the other buildings around it.

Building 10031 is across the central pathway from Building 1001 and backs up against the Blue Cube. Building 10031 is another simple institutional-style building, with parking on the ground floor and offices and storage facilities above. A single row of windows marks the second story offices and a blank wall is the single feature of the exterior of the third story. Directly behind and slightly west, Building 10032 is similar in features and design to Building 10031. Building 10032 faces west and is located adjacent to Building 1003.

Behind Building 10031, the Blue Cube (Building 1003) rises four stories to 104 feet. It is most notable for its lack of exterior features, with no windows or visible exterior doors. The interior was not accessible, but the building’s original concept was a “single, secure, multiroom complex, keeping track of (real time) data ...in a centralized operations room.”¹⁸ A 1968 article from the *San Jose Mercury* describes the new building as having “164,000 square feet of floor space on four stories and a mezzanine” and notes that “each floor is extra tall 20 to 30 feet high.”¹⁹ Extensive corridor systems are also mentioned in the article.

A breezeway runs along the lower portion of the building. Topiary similar to the other landscaping on site can be found here as well. Each side of the building is divided into five bays, with 21 square, and three half exterior panels making up each bay. Building 1003 is painted a uniform shade of light blue, with darker blue recessed channels marking the bays.

¹⁸ Arnold, p. 136.

¹⁹ San Jose Mercury News, 1968 as quoted in Peyton, Page; Kaya Associates. *Historic Building Inventory and Evaluation, Onizuka Air Force Station; Prepared for the United States Air Force, Space Command Onizuka Air Force Station.* (Redlands, California) 2004. p 2-33.

Building 1004 is the dedicated Power Plant for building 1003 and is located to the southwest. Like the other buildings, it is white with blue trim along the roofline. This is a slightly smaller two story building with a major ventilation system as the most notable feature. The vents are set vertically and run the entire height of the building. A system of ducts and cooling fans can be seen on either accessible side of the building.

Buildings 1005, 1007, 1013, and 1020 are support structures. These buildings are single-story industrial buildings, with corrugated metal siding. The southern tip of the site features a grouping of two satellite antennae and Building 1020, a Satellite Communications Ground Terminal. To the west of Building 1001 is Building 1006, the “Space Place” – a Consolidated Open Mess hall. Buildings 1018 and 1034 are located west and northwest of Building 1001. These buildings are listed as a Service Outlet and Base Engineering Administration respectively.

California Register Eligibility

In 2004 an *Historic Building Inventory and Evaluation* of the Onizuka Air Force Station was completed in order to determine which buildings may be eligible for inclusion in the National Register of Historic Places. A total of 30 buildings were evaluated, with 24 being recommended for exclusion from eligibility for various reasons, including the requisite fifty years not having passed for listing under normal circumstances.

Five of these buildings were recommended for reconsideration in the year 2019, since at that time, the age of the buildings would allow for them to be eligible to the National Register under its standard criteria.²⁰ Three of these buildings are the ones most closely associated with the space and satellite programs, and the Blue Cube, Building 1003 is included in this grouping.

The report, prepared by Kaya Associates for the United States Air Force, mostly uses public relations information issued by the Onizuka Air Force Station as well as several newspaper articles from the late 1960s during the construction phase of the Blue Cube. Though there is mention of the several different space and spy satellite programs based out of the Onizuka Air Force Station, there is no specific information available which establishes that certain programs were carried out within certain buildings.

However, Building 1003 – the Blue Cube – was built specifically for the expansion of the satellite programs, and the new building was meant to be the headquarters for the Manned Orbiting Laboratory.²¹ The building was also designed as a central location from which unmanned satellites could be controlled. The Blue Cube was equipped with its own electric power plant; “America’s nerve center for watching foreign countries from space will get its own

²⁰ Peyton, Page; Kaya Associates. *Historic Building Inventory and Evaluation, Onizuka Air Force Station; Prepared for the United States Air Force, Space Command Onizuka Air Force Station.* (Redlands, California) 2004. p5

²¹ Peyton, Page; Kaya Associates. *Historic Building Inventory and Evaluation, Onizuka Air Force Station; Prepared for the United States Air Force, Space Command Onizuka Air Force Station.* (Redlands, California) 2004. p32

electricity plant” to ensure that operations were not vulnerable to power outages – due either to common problems or to enemy aggression. Building 1003 was completed in 1968.²²

As noted above, by 1969 the Manned Orbital Laboratory was no longer an active project.²³ Because the satellite program needed to move out of the older buildings which they were originally housed in, the Air Force reaffirmed that the Blue Cube would be used for “other missions” and that it would not go unused.²⁴ It has been difficult to determine what exactly the Blue Cube was used for. The book *Spying From Space; Constructing America’s Satellite Command and Control Systems* by David Christopher Arnold details the development of the projects and missions at the Onizuka Air Force Station. The book explores the importance of the Satellite Command Center at Onizuka Air Force Station during the developing years of space technology.²⁵ According to *Spying From Space*, Onizuka Air Force Station was a central intelligence hub during the Cold War era, growing from a “data recovery” center to become the control and command point for all major space reconnaissance missions.

The Onizuka Air Force Station website, in the history section, lists the declassification of the Corona Project as a significant date. Though there is no specific information about whether the Blue Cube was an essential part of the mission, the building was the main operations building and it seems logical that the Corona Project would be connected to the building itself.

The Corona Project was a spy satellite program green-lit by President Eisenhower. The base of operations for the Corona Project was at Onizuka Air Force Station, and the program operated from 1960 to 1972. The Corona Project was seen as an essential part to the ending of the Cold War between the United States and the Soviet Union. The program managed photographs which were taken by satellites. The film reels were recovered during the fall from orbit. These images

²² http://www.onizuka.af.mil/21sops_history.htm

²³ Peyton, Page; Kaya Associates. *Historic Building Inventory and Evaluation, Onizuka Air Force Station; Prepared for the United States Air Force, Space Command Onizuka Air Force Station*. (Redlands, California) 2004. p35

²⁴ Ibid. p36

²⁵ Arnold, David Christopher. *Spying From Space; Constructing America’s Satellite Command and Control Systems*. (College Station: Texas A&M University Press, 2005)

provided invaluable information for the United States government about the military capacity of the USSR.²⁶ Lockheed Martin built the Corona Satellite imagery equipment and was also responsible for launching the satellites.²⁷ The final mission for the Corona Project was launched in 1972, and the project was terminated when it was established that the USSR had discovered the spy satellites and was waiting in position to capture Corona #145.²⁸ The Corona Project was declassified in 1996. However, since Onizuka Air Force Station is still in operation, there is limited access to the interior, and even though the Satellite Test Center has been deactivated, any current missions would still be classified.²⁹

The Corona Project is a significant aspect of Cold War history. Despite the fact that the Cold War events are quite recent, they are monumental in the scheme of American History. Determining whether or not Building 1003 was the mission control for the Corona Project is essential to determining the building's significance and eligibility to the California Register. In an effort to determine historic significance, our office contacted several people familiar with the Corona Project. The general consensus has been that there is an association with the Corona Project and this should itself be enough to establish historic significance of the building. No one with whom we spoke was able to share any detailed information about projects relating to specific buildings. The California Register criteria require that adequate scholarship be performed to understand the significance of a resource if it is less than 50 years old. The lack of information available at this time makes such scholarship impossible, so the property does not appear eligible to the California Register until the information becomes public or the property reaches 50 years.

²⁶ <https://www.cia.gov/library/publications/additional-publications/corona-between-the-sun-and-the-earth/index.html>

²⁷ Corona; Between the Sun and the Earth. <https://www.cia.gov/library/publications/additional-publications/corona-between-the-sun-and-the-earth/index.html>

²⁸ Corona Satellite. <http://www.nro.gov/corona/facts.html> http://en.wikipedia.org/wiki/Corona_%28satellite%29

²⁹ Historic Buildings Inventory, 2004.
<http://www.keepandshare.com/photo/view.php?u=15924>

Sunnyvale Historic Preservation Ordinance

The City of Sunnyvale's Historic Preservation Ordinance (Ordinance 2558-97) addresses cultural resource conservation. As a method by which the city can determine the significance of a resource and as a tool for planning and development, the Historic Preservation Ordinance lays the framework for development, adaptive reuse, and preservation of the heritage resources. Onizuka Air Force Station appears to be eligible for listing as a historic resource on the local register.

As noted above, our evaluation of Onizuka Air Force Station and its eligibility as a local historic resource was based on independent research, a site visit to Onizuka Air Force Station and research drawn from the 2004 *Historic Building Inventory and Evaluation, Onizuka Air Force Station* prepared for the United States Air Force by Kaya Associates.

Municipal Code Chapter 19.96

Section 19.96.050 of the Sunnyvale's Municipal Code (Ordinance 2558-97) establishes the criteria for the evaluation and nomination of historic resources. Any "improvement, building, portion of buildings, structures, signs, features, sites, scenic areas, views, vistas, places, areas, landscapes, trees, or other natural objects or objects of scientific, aesthetic, educational, political, social, cultural, architectural, or historical significance"³⁰ can be designated a historic resource by the City Council if it meets one or more of the criteria in the ordinance. Onizuka Air Force Station meets five of these criteria, in that the site:

- Criterion A: "Reflects special elements of the city's ... history;"
- Criterion B: "Is identified with ... events significant in local, state or national history;"
- Criterion E "Contributes to the significance of an historic area..(as a) thematically related grouping of properties;"

³⁰ City of Sunnyvale, Ordinance No. 2558-97. Chapter 19.96, Section 19.96.050A. www.qcode.us/codes/sunnyvale

Criterion F: “Has a unique view or vista representing an established and familiar visual feature of the city of Sunnyvale;” and

Criterion L: Constitutes a district and “A collective high integrity of the district is essential to the sustained value of the separate individual resources.”

Since Onizuka Air Force Station is a unique area which represents both the history of Sunnyvale as an important Cold War center and the national air and space defense efforts during the Cold War, the site appears eligible under Criteria A, E, F and L.

Criterion A states that a resource can be considered if “It exemplifies or reflects special elements of the city’s cultural, social, economic, political, aesthetic engineering, architectural, or natural history.”³¹ Sunnyvale is closely associated with both the technology industry as well as the defense industry. Though a top-secret United States government facility at the peak of its operation, Onizuka Air Force Station is an important factor in the history of Sunnyvale as well. Even without the declassification of the military history, the Onizuka site would be considered eligible to the local register under this criterion.

Criterion B states that the resource is considered eligible if “It is identified with persons or events significant in local, state or national history.”³² Onizuka Air Force Station was the hub for several classified reconnaissance missions, including Corona, Lanyard and Argon.³³ Onizuka also was the base from which programs such as “the first mapping of Earth from space, the first midair recovery of a vehicle returning from space and the first views of denied areas from space” were launched.³⁴ Much of the detailed history of Onizuka Air Force Station is classified, but the location of the base in Sunnyvale is an important part of military development. The cooperation between the military and Lockheed ensured that Sunnyvale would be a the forefront of national

³¹Section 19.96.050 A.

³² Section 19.96.050 B.

³³www.nro.gov/corona/corpr.html

³⁴ MilCom Monitoring Post. Capt. Tony Muro, Operating Division 4 Detachment 1. <http://mt-milcom.blogspot.com/search/label/Onizuka%20AFS>

satellite defense technologies, and that the city featured one of the “world’s most modern communication hubs.”³⁵ Though over time all associated technologies and interior features specifically associated with historical events have been removed from Buildings 1001, 1002 and 1003, the association with the top-secret military operations remains intact.³⁶

For a resource to be eligible under Criterion C, it must “Embody distinctive characteristics of a style, type, period, or method of construction, or is a valuable example of the use of indigenous materials or craftsmanship.”³⁷ Though Onizuka Air Force Station can certainly be considered an interesting and unique facet of the architectural history of the City of Sunnyvale, the buildings on the Onizuka Air Force Station are without notable features and tend to be simple mid-century institutional in style. The main structure on the site, the Blue Cube, is a large four story building without windows or notable features. A large, windowless building is not intrinsically distinctive in the sense intended by Criterion C.

To be eligible under Criterion D, the resource should be “representative of the work of a notable builder, designer or architect.”³⁸ None of the buildings which are located at Onizuka Air Force Station is eligible under this criterion. There are no building permits or construction and design information available at this time.

Criterion E states that a resource is eligible if “(i)t contributes to the significance of an historic area, being a geographically definable area possessing a concentration of historic or scenic properties or thematically related grouping of properties which contribute to each other and are unified aesthetically or by plan or physical development.”³⁹ The base is a military landscape, visually and physically separated from the civilian landscape which surrounds it. The buildings

³⁵ Arnold, p. 93.

³⁶ Dennis Ralphs 21 SOPS/CCX. Onizuka Air Force Station. 2008

³⁷ Section 19.96.050 C.

³⁸ Section 19.96.050 D.

³⁹ Section 19.96.050 E.

which make up Onizuka Air Force Station are related to each other not only by specific use and design, but by original plan.

There are two types of memorials at Onizuka Air Force Station. There is a modern memorial on site, dedicated to those who have lost their lives in space in the Columbia 3 disaster in 2003. The crew of the Columbia is remembered by a small area set off behind the Blue Cube, at the eastern edge of the site. A small rough granite bench under a wooden trellis is set in front of small wooden memorials, each with the name of a lost crewmember. The memorial is set in a Japanese-inspired, self-contained landscape, with rocks and simple plants creating a quiet place of reflection. Though the crew members were personally known by those who work at Onizuka Air Force Station, the memorial also serves to mark an important loss in the context of the national space program. The Columbia Memorial echoes the larger memorial that Onizuka Air Force Station is. Onizuka Air Force Station was renamed to honor the lives lost in the explosion of the Challenger. By honoring the significant loss of a person associated with the Air Force (Ellison S. Onizuka) Onizuka Air Force Station honors the collective loss that the nation felt in 1986 with the Challenger tragedy.

Criterion F states that a resource is eligible as an historic resource if “(i)t has a unique location or singular physical characteristic or is a view or vista representing an established and familiar visual feature of a neighborhood, community, or the city of Sunnyvale.”⁴⁰ Today Onizuka Air Force Station is a recognizable part of the northern Sunnyvale viewscape. The Blue Cube and accompanying satellite dishes are visible from Mathilda Avenue as one travels north, and are also a striking presence at the off ramp from Highway 237. Developments on what was once open space, as well as the reuse of some of Lockheed’s buildings for new high tech industry expansion have changed the surrounding landscape, but the large blue building is an unmistakable feature of the city.

⁴⁰ Section 19.96.050 F.

If a resource “embodies elements of architectural design, detail, materials, or craftsmanship that represents a significant structural or architectural achievement or innovation” then it would be eligible under Criterion G.⁴¹ Onizuka Air Force Station does not represent either structural or architectural innovation. It cannot be considered a significant example of structural or architectural achievement. The individual buildings on the site are mid-century industrial, and without architectural distinction.

Criterion H states that if “(i)t is similar to other distinctive properties, sites, areas, or objects based on a historic, cultural, or architectural motif” then a resource may be eligible.⁴² Onizuka Air Force Station is not significantly similar to other sites based on historic, cultural or architectural themes. Onizuka Air Force Station is similar in its simplicity and general functional layout of a military base. It does not reflect a distinctive type of layout or design, but instead can be seen as an example of a mid-century military and research facility.

Criterion I states that a potential resource must “reflect significant geographical patterns, including those associated with different eras of settlement and growth, particular transportation modes, or distinctive examples of park or community planning” to be considered eligible.⁴³ Onizuka Air Force Station does not embody important development patterns for the city of Sunnyvale.

Criterion J states that an eligible resource must be “one of the few remaining examples in the city, region, state, or nation possessing distinguishing characteristics of an architectural or historic type or specimen.”⁴⁴ Onizuka Air Force Station and the buildings which comprise it are not singular remaining representative examples of any historical or architectural type.

⁴¹ Section 19.96.050 G.

⁴² Section 19.96.050 H.

⁴³ Section 19.96.050 I.

⁴⁴ Section 19.96.050 J.

Criterion K states that “with respect to a local landmark, it is significant in that the resource materially benefits the historical character of a neighborhood or area, or the resource in its location represents an established and familiar visual feature of the community or city.”⁴⁵

Onizuka Air Force Station is not in a neighborhood or historic area; its role as a visual landmark is recognized in its eligibility under Criterion *F*.

Criterion L addresses the establishment of an historic district “with respect to a local landmark district, a collective high integrity of the district is essential to the sustained value of the separate individual resources.”⁴⁶ The Sunnyvale criteria state that a “scientific” or “political” potential resource can be designated a heritage resource. This threshold is considerably lower and broader than the National Register or California Register Criteria, which contain key filters based on importance and age not included in the Sunnyvale criteria. Onizuka Air Force Station is significant under the local ordinance as a mid-century scientific site associated with important geo-political developments of the Cold War. *Spying From Space* describes how Onizuka became the command center for satellite tracking programs to make “satellite control and command an exclusively military operation.”⁴⁷ The site retains integrity through the relatively unchanged individual features. Onizuka Air Force Station also meets the definition of a Heritage Resource District in Article 19.96.040 of the Municipal Code:

(g) “Heritage resource district” means any geographically definable area containing a concentration or continuity of heritage resources which are thematically related, or which contribute to each other and are unified by a special character, historical interest, aesthetic value, or which represents one or more architectural periods or styles typical to the city, and that has been designated and determined to be appropriate for preservation by the city council, pursuant to provisions of this chapter.

⁴⁵ Section 19.96.050K.

⁴⁶ Section 19.96.050L.

⁴⁷ Arnold, 5.

Criterion M addresses a resource's eligibility to the National Register, "with respect to a designated landmark and designated landmark district, the heritage resource shall meet Criteria of the National Register of Historical Places, which are incorporated by reference into this chapter."⁴⁸ The previous report prepared by Kaya Associates addresses the eligibility of Onizuka Air Force Station to the National Register. Buildings 1001 and 1002 are recommended by the 2004 Kaya Associates Historic Building Inventory for evaluation of historical significance after their histories are declassified and the requisite amount of time has passed.⁴⁹ As in the previous report, currently there is not enough information to determine eligibility to the National Register at the time. A re-evaluation of the site and buildings, should more information become available will be necessary. The Municipal Code sets three levels of significance for historic properties and districts (from lowest to highest): historic resources, designated historic resources, and local landmark. To be eligible as a designated historic resource or local landmark, a resource must meet at least one criterion of the National Register. As described above, information now available does not demonstrate that Onizuka Air Force Station is eligible to the National Register; therefore it appears eligible only as a heritage resource (and heritage resource district) under the Municipal Code.

Demolition and Mitigation

Should Onizuka Air Force Station be listed as a heritage resource or heritage resource district by the Sunnyvale City Council, any demolition or material change to the landmark would require a resource alteration permit. According to Section 19.96.095 of Sunnyvale's Historic Preservation Ordinance (Ordinance 2558-97) any changes also require a public hearing and review process as well as a landmark alteration permit.

⁴⁸ Section 19.96.050 M.

⁴⁹ Peyton, Page; Kaya Associates. *Historic Building Inventory and Evaluation, Onizuka Air Force Station; Prepared for the United States Air Force, Space Command Onizuka Air Force Station.* (Redlands, California) 2004.

In order for any changes including demolition to take place, the applicant must have “demonstrated that the action proposed is necessary to correct an unsafe or dangerous condition on the property pursuant to Section 19.96.110.”⁵⁰ Section 19.96.110 addresses the correction of generally unsafe and dangerous conditions, with any work done on landmarks or properties in landmark districts noted again to be done only as necessary.⁵¹

In order for any changes including demolition to take place, the applicant must also have “demonstrated that denial of the application will result in immediate, undue or substantial hardship pursuant to Section 19.96.120.”⁵² Section 19.96.120 allows for alteration permits if the applicant can present evidence to the Heritage Preservation Commission, at a public hearing that “failure to receive such approval will cause an immediate undue and substantial hardship.”⁵³

The local preservation ordinance does not include a mitigation provision. Possible mitigation includes creating an exhibit which depicts the history and role of Onizuka Air Force Station in the city of Sunnyvale, which could possibly be located at the new Sunnyvale Heritage Park Museum. Another alternative could be the retention of the monuments which already exist at Onizuka Air Force Station at the south end of the base, as well as retaining the distinctive antennae (or perhaps moving them) and incorporating them into any future development plans.

⁵⁰ Section 19.96.090 F3

⁵¹ Section 19.96.110

⁵² Section 19.96.090 F4

⁵³ Section 19.96.120

Conclusion

Onizuka Air Force Station presents an historic and comprehensive planned site, and appears eligible as a heritage resource and as a heritage resource district under Criteria A, B, E, F and L of Chapter 19.96 the Sunnyvale Municipal Code (Ordinance 2558-97). Declassification of information about the history and use of the site by the Air Force will resolve whether it is also eligible to the National Register, which would in turn mean it is eligible under local Criterion M.

Because the previous study used the National Register Criteria, and the current project falls under CEQA, a determination of eligibility to the California Register is needed. While the National Register Criteria require that a property less than 50 years old have “extraordinary” significance, the California Register requires that “sufficient time must have passed to obtain a scholarly perspective on the events or individuals associated with the resource” if it is less than 50 years old.

Sufficient time has not passed to determine the significance of the Blue Cube and Onizuka Air Force Station. Available information is changing, and scholarship is very much in flux with respect to the Blue Cube, clearly fitting the intent of the California Register to require a stable historical perspective before labeling resources which are less than 50 years old as historically significant. At this time, the property cannot be deemed eligible to the California Register and is not a historic resource for the purposes of CEQA.