



**DEPARTMENT OF THE AIR FORCE
50TH SPACE WING (AFSPC)**

Major Marty W. Easter
Commander, Det 3, 21 SOPS
Kaena Point Satellite Tracking Station
PO Box 868
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Pua Aiu, Ph.D.
Hawai'i State Historic Preservation Division
601 Kamokila Blvd, Room 555
Kapolei, Hawaii 96707

Dear Dr. Aiu

The purpose of this letter is to initiate Section 106 Consultation in accordance with 36 CFR 800 and request your concurrence on the Air Force's Determination of "no adverse effect" for the proposed undertakings as described in Attachments 1-5 of this letter, at the U.S. Air Force's Kaena Point Satellite Tracking Station (KPSTS).

While a comprehensive evaluation of potentially historic, Cold War era properties and one known World War II Era property at KPSTS has not been completed, Building 10 was constructed in 1959, and is currently 52 years old. The USAF has also determined that the general area is a potential Historic District based on KPSTS' support of the CORONA project from 1959 to 1975, and has preliminarily concluded that properties directly associated with the Cold War mission at the Site are potentially eligible for listing on the National Register of Historic Places (NRHP). KPSTS was associated with events that may have made a significant contribution to, are directly identified with, or that may outstandingly represent, the broad national pattern of United States Cold War history and from which an understanding and appreciation of those patterns may be gained. Specifically, KPSTS played a supporting role in our Nation's first satellite reconnaissance program, "Discoverer," later dubbed "CORONA" (1959-1975).

The Air Force is planning to complete a formal evaluation of the Site and finalize the Air Force's determination of eligibility for potential listing on the NRHP. This evaluation will be completed, separate from this undertaking, as soon as possible and provided to your office for review and concurrence.

With regard to the proposed undertakings at KPSTS Building 10, the Air Force plans to:

- Replace refrigeration/chiller systems;
- Install backup air conditioning for the communication support area;
- Replace command section windows;
- Renovate an existing break room and kitchen;
- Perform exterior wall repairs;
- Install photovoltaic (PV) panels to roof.

As outlined in Atch 1, we have determined, and respectfully request your concurrence, that the proposed undertakings will have “no adverse effect” on historic cultural resources. This determination is based on Building 10’s record of extensive modifications since its original construction (Atch 4). Installation of the HVAC, windows and associated modifications would improve overall the energy efficiency of the facility. Exterior repairs are required to prevent deterioration of the building. Details of the project’s location and layout, current photographs and plans for the PV and exterior maintenance are included in Attachments 1-5. The modifications to Building 10 would not be visible from points outside the building’s immediate vicinity.

Questions should be directed to Mr. Lance Hayashi at (808) 697-4312, by email to lance.hayashi@kaenapt.af.mil or mailed to the KPSTS address indicated above.

Sincerely

A handwritten signature in black ink, appearing to read 'Marty W. Easter', with a long horizontal flourish extending to the right.

MARTY W. EASTER, Major, USAF

5 Attachments:

1. Section 106 Consultation Request
2. Project Site Location & Layout Maps
3. Photos
4. Building 10 Modification History
5. PV & Exterior Plans

ATTACHMENT 1 SECTION 106 CONSULTATION

**PROPOSED UNDERTAKING:
MULTIPLE SUSTAINMENT, RESTORATION, AND MODERNIZATION
(SRM) PROJECTS
at
KAENA POINT SATELLITE TRACKING STATION
U.S. AIR FORCE SPACE COMMAND (Proponent)
NATIONAL HISTORIC PRESERVATION ACT COMPLIANCE REQUEST
FOR SECTION 106 REVIEW AND CONCURRENCE**

SECTION I (Information from Proponent of Undertaking)

- A. TITLE OF UNDERTAKING: Building 10 at USAF Kaena Point Satellite Tracking Station (KPSTS), Multiple Sustainment, Restoration, and Modernization (SRM) Projects
- B. PROPOSED START DATE: September 1, 2011
- C. LOCATION: Tax Map Key for this undertaking is 6-9-003: 005. The project site is within and upon KPSTS Building 10.
- D. DESCRIPTION OF PROPOSED UNDERTAKINGS:

The proposed undertaking would provide for multiple SRM projects to accomplish improvements to Building 10 as outlined below (refer also to Attachments 2-5):

- Replace refrigeration/chiller plant/HVAC systems including removal/replacement of piping and mechanical equipment;
- Replace computer room air conditioning units in Room 145 with a backup air conditioning system;
- Replace command section's low-efficiency windows;
- Renovate the existing first-floor break room and kitchen;
- Renovate/repair exterior walls;
- Install photovoltaic system including roof panels.

BUILDING 10 HISTORY

Building 10 was constructed in 1959. The original purpose of the building was for communications, command and administration. Substantial re-tasking, additions and renovations have been accomplished almost continuously since the building's original construction.

Building 10 housed missions including the original radar and communications facility, communications and tracking for the Corona project. Building 10 has also been employed as a radar/communication antenna site. Currently, Building 10 contains the communications support area, administration, command and civil engineering offices.

Details of the proposed actions are outlined below:

REPLACE CHILLER PLANT (Attachment 3, Photos 1-3)

Description: Install two (2) air cooled chillers to replace four (4) existing deteriorating and

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outdated chillers (which contain refrigerant that is a Class II ozone-depleting substance):

- a. Retrofit air distribution (ductwork, terminal units) to meet load based on solar heat gain.
- b. Configure to provide redundant chilled water to system using 410A refrigerant
- c. Reuse existing pumps.
- d. Remove existing four (4) chillers and install two (2) chillers, electrical and chilled water connections, valves, meters, pipe supports. The new chiller dimensions are 89" x 93" x 79" and would be installed in the existing chiller enclosure.
- e. Reconfigure 4" chilled water return and supply lines. Remove unused exterior chilled water lines and support hangers.
- f. Remove and replace chilled water line insulation.
- g. Remove/replace properly sized ductwork, terminal units and registers.
- h. Patch and finish all wall penetrations associated with demolition work to match existing.

INSTALL BACKUP AIR CONDITION SYSTEM FOR CSA, BLDG 10 (No photos)

- a. Remove two existing computer room air conditioning (CRAC) units (see Attachment 3, photos) situated in room 145, located on the west side of building 10. Isolate and cap all service connections to the CRAC units to include chilled water lines, condensate line, electrical conductors, communication lines, and unit controls.
- b. Install two new independently operated air handlers with direct heat exchange refrigerated lines. Refrigerant lines to be routed through north elevation using existing exterior wall penetrations and conduit and tie into the existing condensate line.
 - c. Install two new compressors and associated refrigerant supply and return lines, power feeds, and power disconnect panels. CRAC air handler dimensions are 43" x 24" x 78". The new compressor equipment dimensions are 13 x 31" x 50" and would be located on an existing concrete pad near Bldg 9, a newer building and the site of previous HVAC equipment.

REPLACE COMMAND SECTION WINDOWS, ROOMS 119, 121, 123

(Attachment 3, Photos 4 & 5; Attachment 4, Building History)

- a. Remove existing exterior windows to offices
- b. Existing windows consist of horizontal sliding, aluminum framed anodized with dark brown finish (Glenwood, Series 510C, Marine Grade, Fleetwood).
- c. Remove window frames
- d. Restore finishes to original as needed.
- e. Install new window frames and glazing in existing window openings.
- f. New insulated glazing specification will minimize solar heat gain from the south facing exposure, but maintain an adequate level of visible transmittance.
- g. Install new aluminum frames to match existing frame finish (anodized dark brown). Match vertical mullion layout.
- h. Seal around frame and rough opening.
- i. Caulk interior frame to abutting drywall.

I. RENOVATE KITCHEN AND BREAK ROOM, BLDG 10 (Attachment 3, Photos 6-11)

- a. Replace existing acoustical ceiling tile.
- b. Replace existing 2'X4' recessed lighting with more efficient T8 fixtures to include

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- replacement of fixtures, lamps and diffusers. Match existing diffusers.
- c. Remove and replace existing masonite wall paneling throughout kitchen.
 - d. Removal and replacement is to include masonite behind cabinets, stove, and refrigerator.
 - e. Fur-out the kitchen cabinet wall, south elevation as necessary to maintain a straight and plumb surface.
 - f. Remove framed storage cabinet located in the southwest corner of kitchen. Replace with off-the-shelf manufactured base cabinet to match existing cabinets and doors.
 - g. Repair granite countertop butt joint located near the range top.
 - h. Remove and reinstall all switch cover plates, thermostats, and conduit as necessary.
 - i. Replace rubber base as necessary to accomplish wall finish work.
 - j. Remove and reinstall existing cabinets, stove, countertops, and fire hood suppression system as necessary for removal of composite paneling. Clean and reseal cabinet doors.
 - k. Replace existing 2'x4' recessed lighting with more efficient T8 fixtures to include replacement of fixtures, lamps, and diffusers. Replace with two lamp direct/indirect style diffusers. New fixtures are to be controlled with two zones, from switches at the lanai exit door and hallway entry.
 - l. Remove existing wall paneling to include both wood laminate below chair rail and paneling above. Replace paneling with drywall textured and painted to match adjacent hallway.
 - m. Paint door casing, frames, chair rail, and wall cap.
 - n. Replace chair rail and wall caps to finish wall bump outs.
 - o. Furnish, install, and finish access panels to existing recessed electrical junction boxes and panels.
 - p. Remove and reinstall all pull stations, outlets and switch covers, and thermostats.
 - q. Replace rubber base as necessary to accomplish wall finish work.

II. PERFORM EXTERIOR REPAIRS (Attachment 3, Photos 12-24; Attachment 5 contains drawings and specifications)

- a. Remove and replace sections of stucco plaster from exterior per drawings/plans
- b. New stucco color and texture to match existing.
- a. Skim coat and/or paint remaining undamaged stucco plaster to match new.
- b. Caulk or seal all exterior wall penetrations encountered.
- c. Repair cracked and failing masonry lintel above window on south elevation, basement level.

III. INSTALL ROOF MOUNTED PHOTOVOLTAIC (PV) ARRAY

- a. New array is to be roof mounted on building 10 at the penthouse pads identified on attachment "Schematic Roof Plan".
- b. Provide PV array and power conditioning system for Building 10 in a turn-key fashion; array and inverter(s) will operate as an integrated element in the facility electrical system upon completion.
 - a. Install between 100 and 430 of rectangular (41" x 61") PV panels
 - b. Maintain minimum profile and footprint as is practicable
 - c. Install inverter(s) and disconnect(s)

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- d. Replace Penthouse Roof Pads for PV Roof Mounting System;
- e. Remove and replace existing rolled roof membrane and roof deck insulation at the penthouse pads identified in the "Schematic Roof Plan".
- f. Replace existing flashing as necessary.
- g. Furnish and install PV array mounting system to roof deck. Mounting system shall be compatible with selected panels. Mounting system shall be installed to maximize the available space of the penthouse pads and allow for array growth.
- h. Install flashing or boots to weatherproof the roof mount penetrations as necessary.

SECTION II (Information from the Environmental Planning Office)

A. IDENTIFY HISTORIC RESOURCES

1. THE ARCHITECTURAL FEATURES ARE:

Building 10 is a concrete and steel building, similar in form and function to many other such structures located around Oahu on military installations. It has been subject to additions and renovations in the past (see Attachment 4, Attachment 5).

Building 10 was constructed in 1959 according to USAF Real Property records and engineering drawings. Records of the building and discussions with knowledgeable site personnel indicate that the building was in use as a space radar and communications tracking facility for most of its life. Over its lifetime, Building 10 has been the object of multiple modifications, additions and renovations to its architecture, systems, layout, mechanical equipment and mission equipment. (Attachment 4)

THE ARCHAEOLOGICAL FEATURES ARE:

The Integrated Cultural Resource Management Plan for KPSTS (ICRMP), (International Archaeological Research Institute, Inc, September 2009), indicates no known archeological sites within the Building 10 site or project location. The project does not include significant ground disturbance and will not adversely affect any archeological sites or cultural resources.

B. DETERMINE POTENTIAL EFFECT

The area of potential effect for the proposed undertaking will be limited to Building 10. Since work on this project will be conducted within and upon Building 10, the likelihood of human remains or other archaeological materials being inadvertently discovered is negligible. If such discovery were to occur, then all work in the vicinity of the discovery will stop and the contractors and KPSTS personnel will take measures to help secure any remains, archaeological materials and associated context and the State Historic Preservation Division will be notified and consulted in accordance with the ICRMP's compliance procedures and standard operating procedures.

Based on information gathered from archival documents, old maps, building plans and KPSTS' ICRMP, the building has been modified and added-on over the years, and no longer has any mission equipment that would contribute to the significance of the Site and potentially warrant preservation.

ATTACHMENT 1 SECTION 106 CONSULTATION

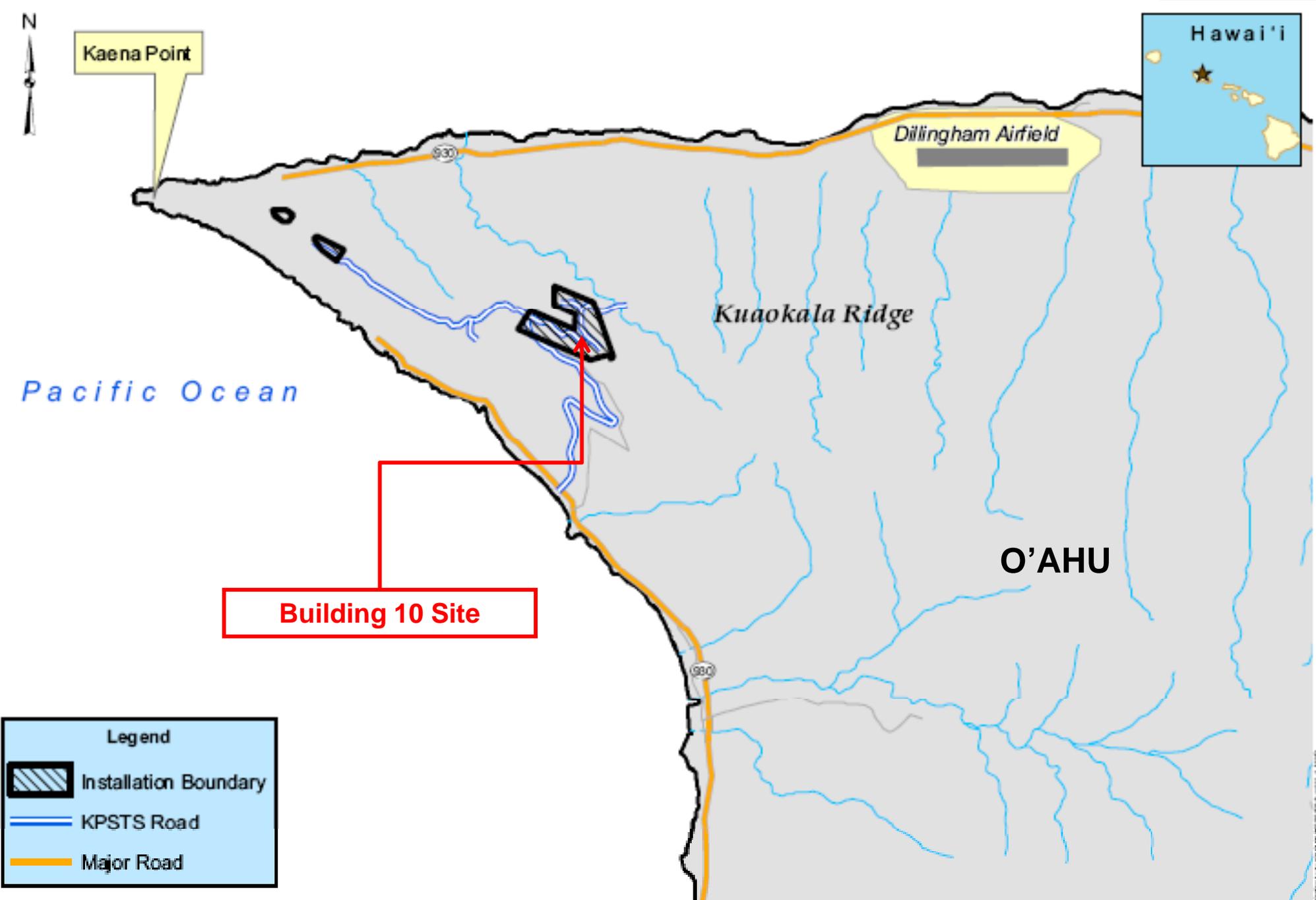
We have determined, and respectfully request your concurrence pursuant to 36 Code of Federal Regulations §800.4 (d) (1), that the proposed undertaking will have "no adverse effect" on potentially historic cultural resources because it would not have an adverse effect on archeological resources, other Native Hawaiian traditional resources, or potentially historic aspects of the Site, as it would not alter any characteristics that potentially qualify the property for listing on the NRHP.

SECTION III Contact Information

For further information you may contact Mr. Lance Hayashi at 697-4312 or via email lance.hayashi@kaenapt.af.mil.

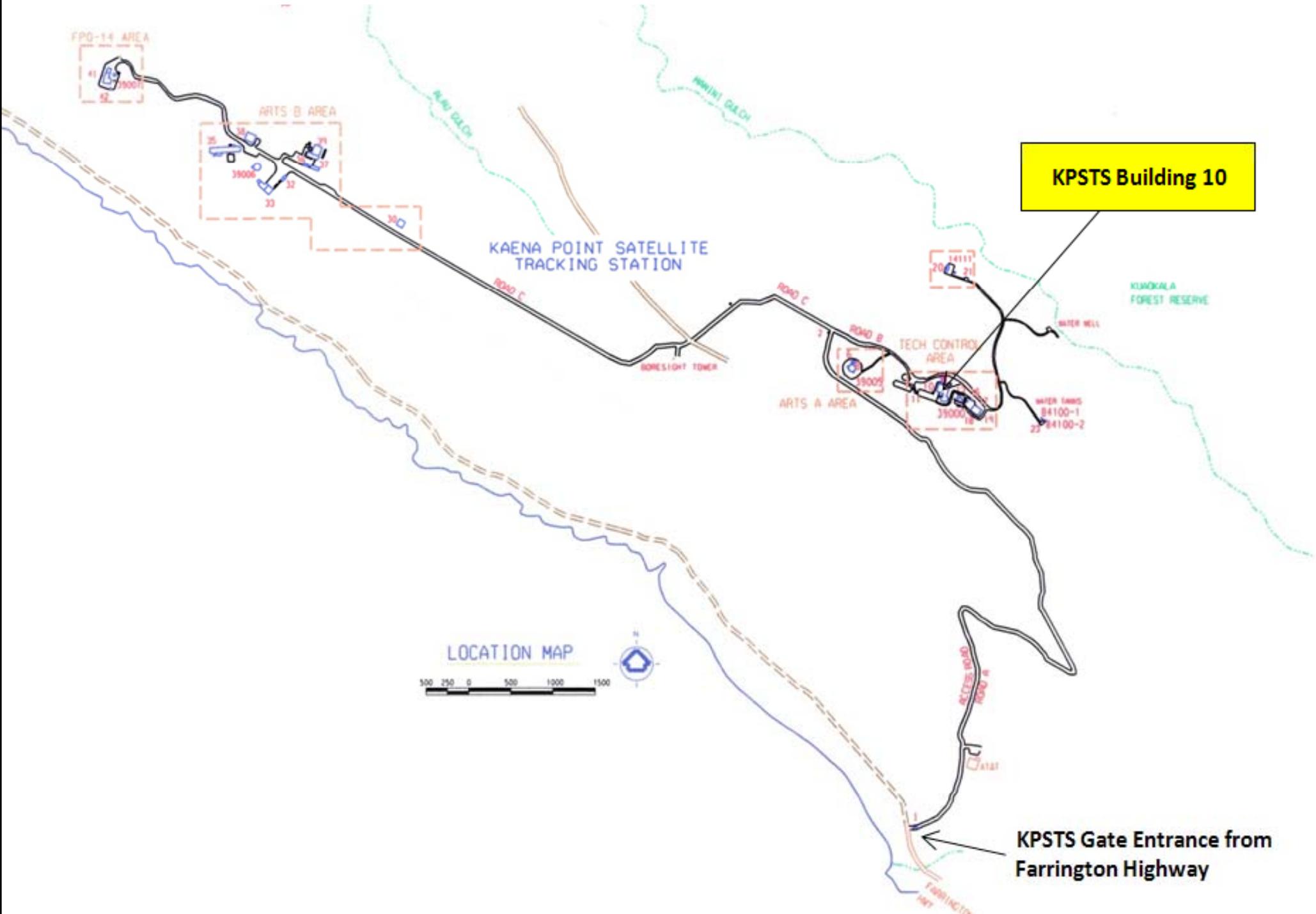
ATTACHMENT 2

PROJECT SITE LOCATION & LAYOUT



ATTACHMENT 2

PROJECT SITE LOCATION & LAYOUT



ATTACHMENT 3 – Photos BLDG 10 Exterior

Photo 1: Bldg 10, East Elevation



Chiller units & enclosure



Photo 3: Chiller 4 & E elevation; view to SW



Photo 2: Detail, No. 1 Chiller



Chiller units
& enclosure

Photo 4: South & east elevations; view is S to N



Command Section Windows

Photo 5: South elevation; view is S to N

ATTACHMENT 3 – Photos – BLDG 10 Interior – Kitchen/Break Room



Photo 6: Kitchen – view to E



Photo 7: Kitchen – view to W



Photo 8: Break Rm – view to W

ATTACHMENT 3 – Photos – BLDG 10 Interior – Kitchen/Break Room



Photo 10: Break Rm – view to E

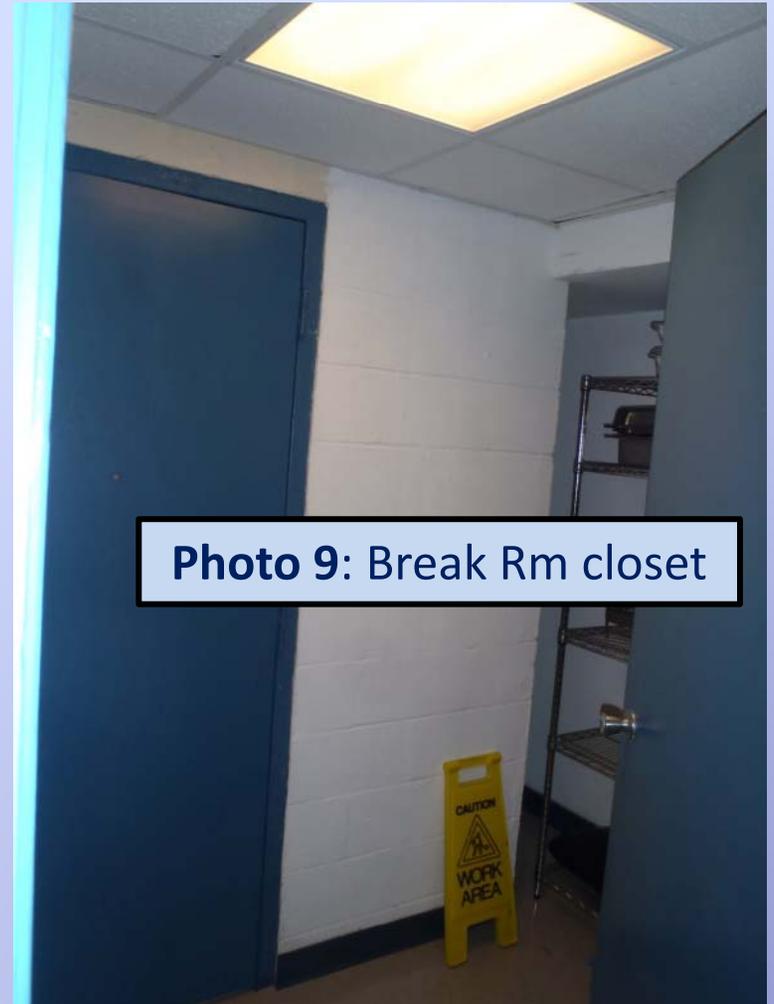


Photo 9: Break Rm closet



Photo 11: Break Rm – view to NE

ATTACHMENT 3 – Photos BLDG 10 Exterior

North & East elevation views

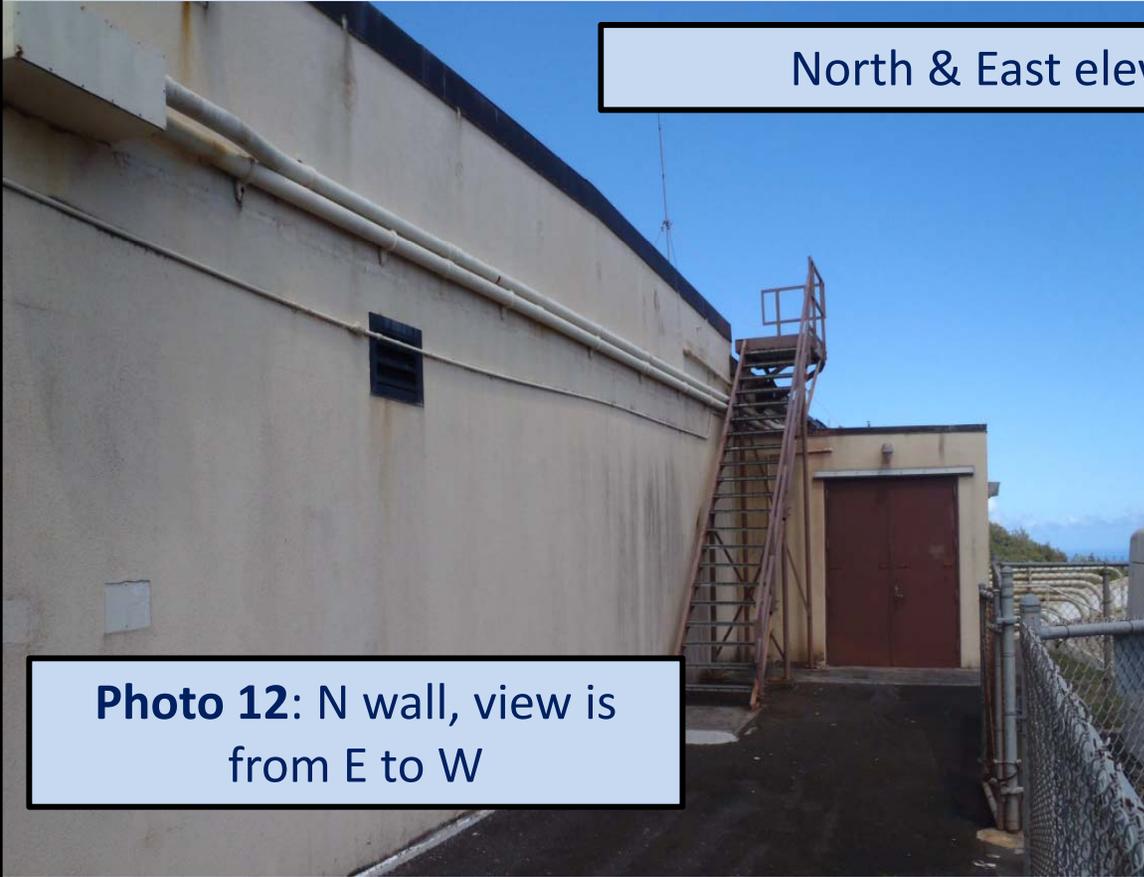


Photo 12: N wall, view is from E to W



Photo 13: E wall, view is from NE to SW

ATTACHMENT 3 – Photos – BLDG 10 Exterior – damaged stucco/doors

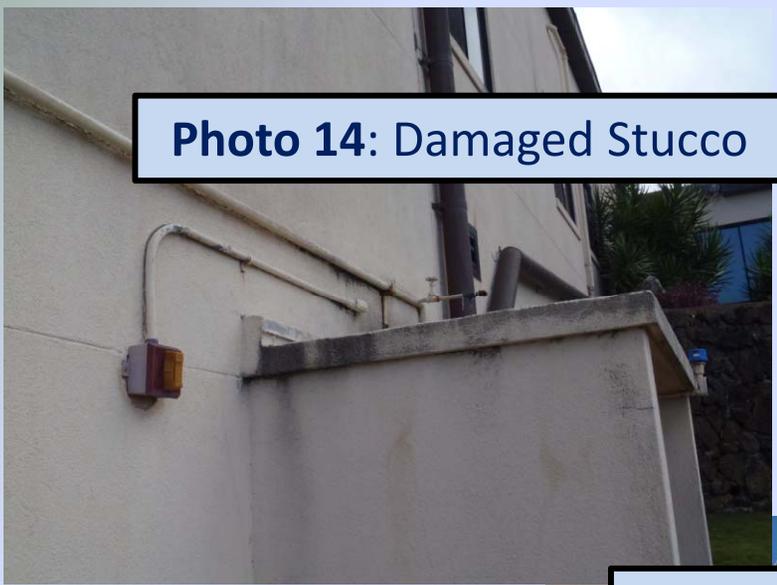


Photo 14: Damaged Stucco



Photo 15: Damaged Stucco

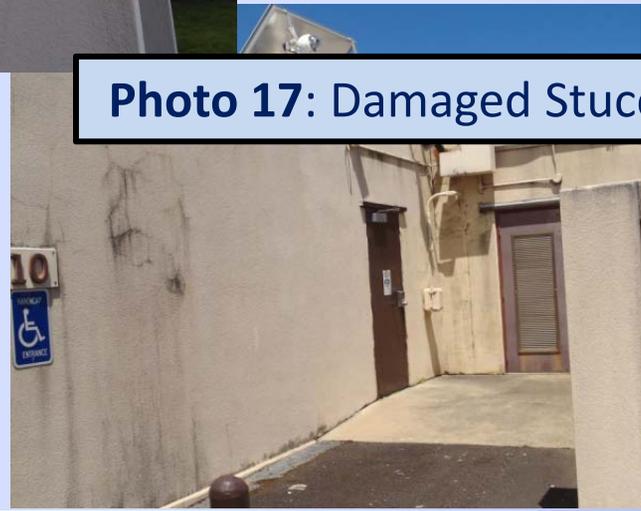


Photo 17: Damaged Stucco



Photo 16: Damaged Stucco

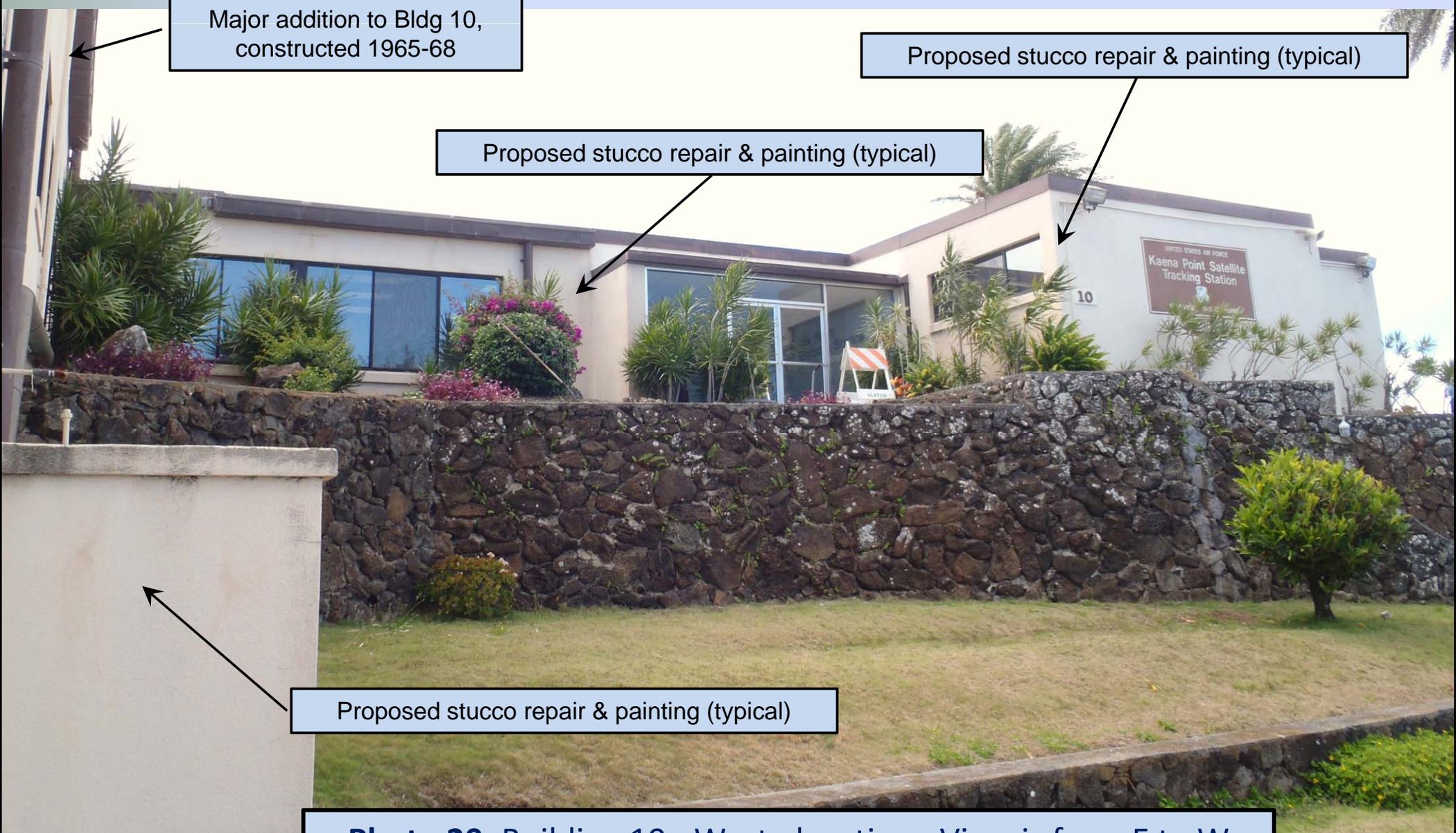


Photo 18: Break Rm. Door



Photo 19: NW Door Corrosion

ATTACHMENT 3 – Photos: Bldg 10 - Exterior



Major addition to Bldg 10, constructed 1965-68

Proposed stucco repair & painting (typical)

Proposed stucco repair & painting (typical)

Proposed stucco repair & painting (typical)

Photo 20: Building 10 - West elevation. View is from E to W

ATTACHMENT 3 – Photos BLDG 10 Exterior



Major additions to Bldg 10,
constructed 1965-68

Proposed stucco repair & painting (typical)

Photo 21: Building 10 – West & South elevations; View is from SW to NE

ATTACHMENT 3 – Photos BLDG 10 Exterior



Photo 22: View is from W to E

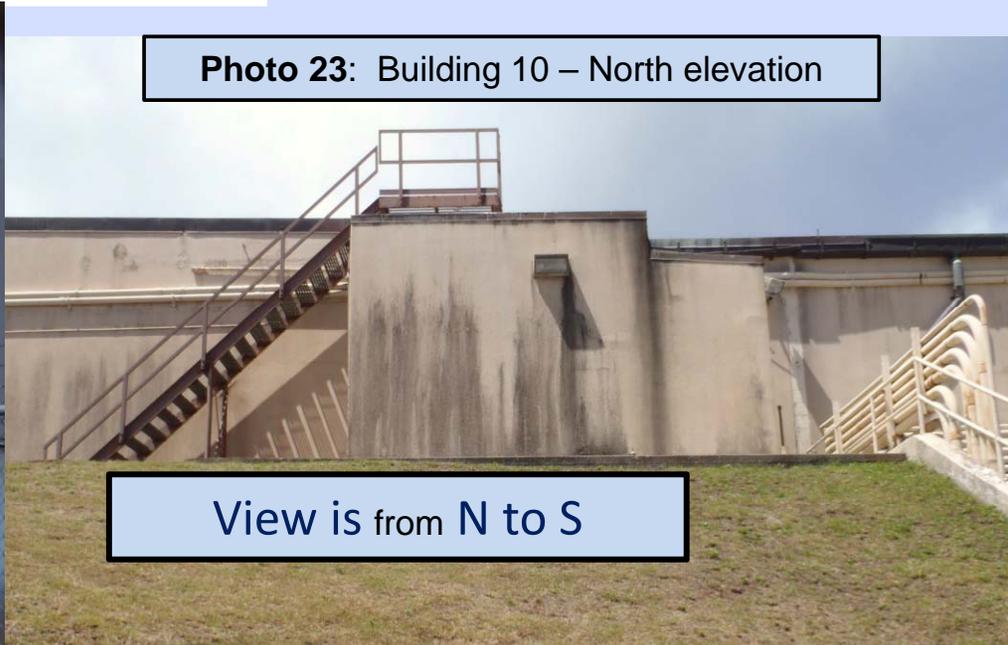


Photo 23: Building 10 – North elevation

View is from N to S

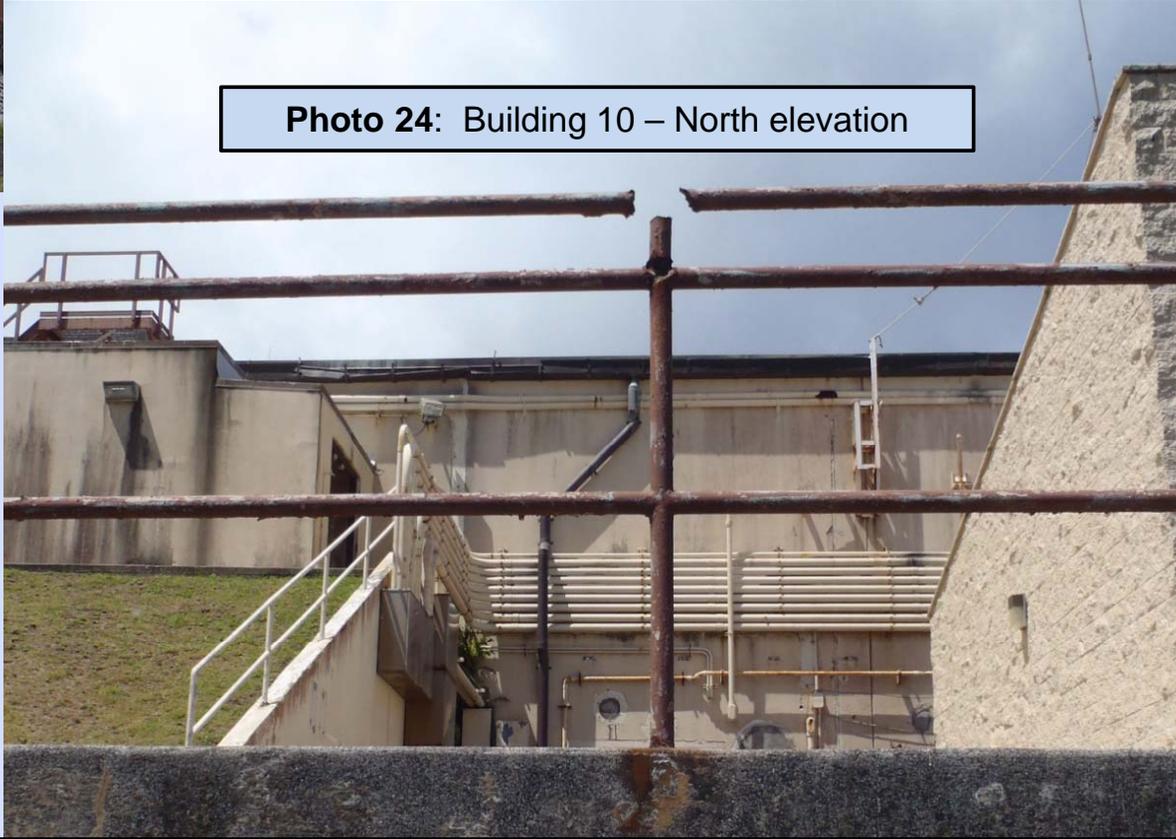


Photo 24: Building 10 – North elevation

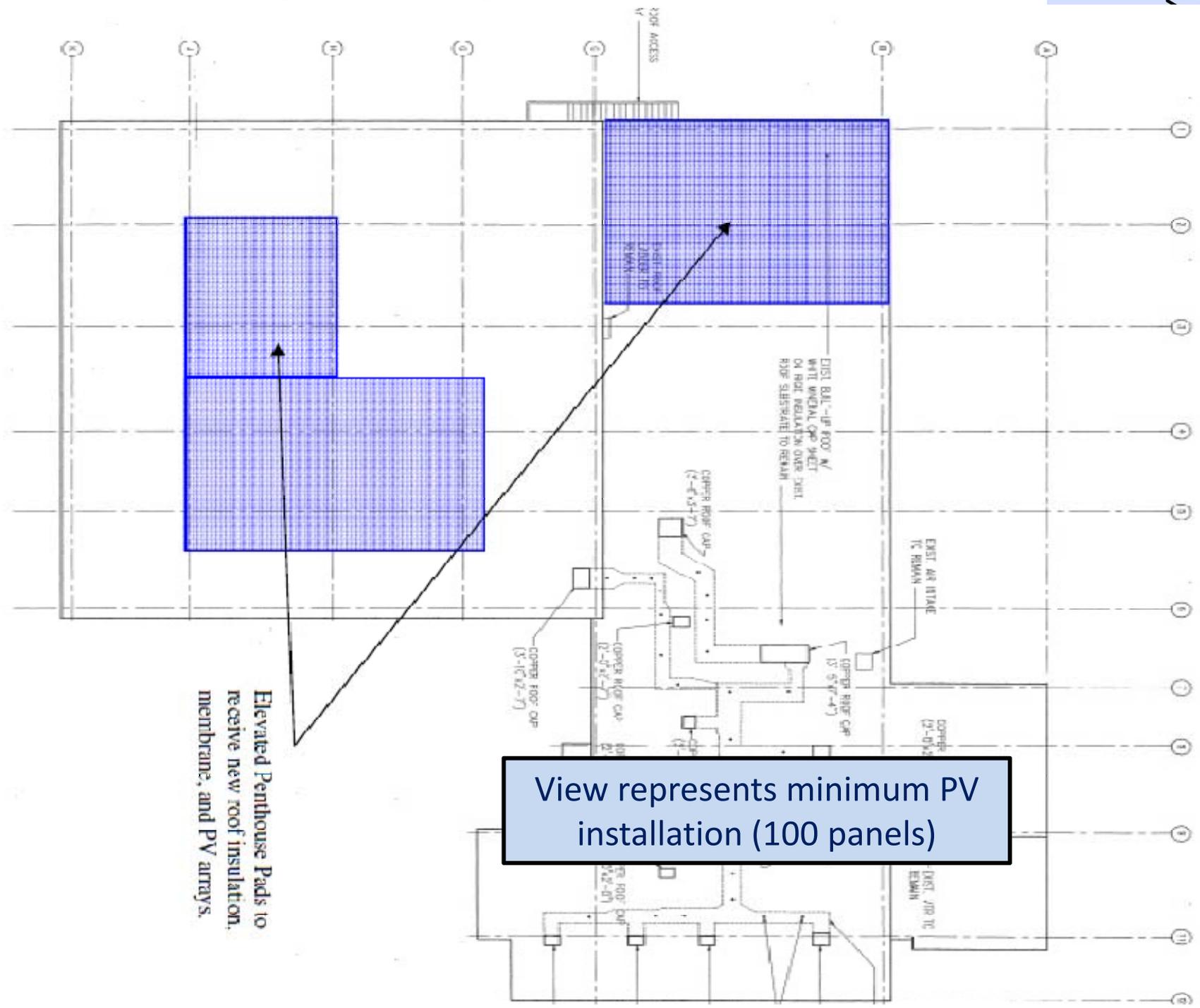
ATTACHMENT 4 – Building 10 Modification History

BUILDING 10 – MODIFICATIONS 1959-2011		
Date	Title	Description
1958-1959	VHF Telemetry Receiver Building	Original Construction
1960	Addition to Admin Bldg & VHV-TLM	Building & mission additions
1963	Install M/G Sets	Motor Generators added
1963	Mod A/C Syst Bldg 10	
1965	Maint Roof, Bldg 10	Roof repair/maintenance
1965-67	Additions to bldg 10	Phase I & II
1967	Alteration to Op. Ctrl Room	Bldg 10 Rm 106 floor, walls, doors
1970	Alter Bldg 10	Construct snack bar annex (break room)
1974	Re-Roof Bldg 10	Roof Repair/Replacement
1978	A/C System Repairs	
1980	Battery Room Bldg 10	Construct Battery Rm
1980	Construct Dayroom Lounge	Breakroom additions
1980	Repair Exhaust System Bldg 10	Kitchen improvements
1981	AC Exhaust Duct Sys in Op Intercom Rm	Rm 145 improvements
1981	Replace Existing AC Duct on Roof Bldg 10	
1983	Modification To Room 107	Floor, doors, walls
1993	Replace Bldg 10 Windows	Included command section windows
1998	Roof replacement	
2000	Replace A/C Handler Ducts	
2007	Kitchen Renovations	Renovate kitchen
2011	Roof Duct Removal	Remove roof ductwork
2011	Renovate Storefront and walkways	Renovate storefront window & walkways

ATTACHMENT 5 – Proposed Project Plans – PV Installation

N

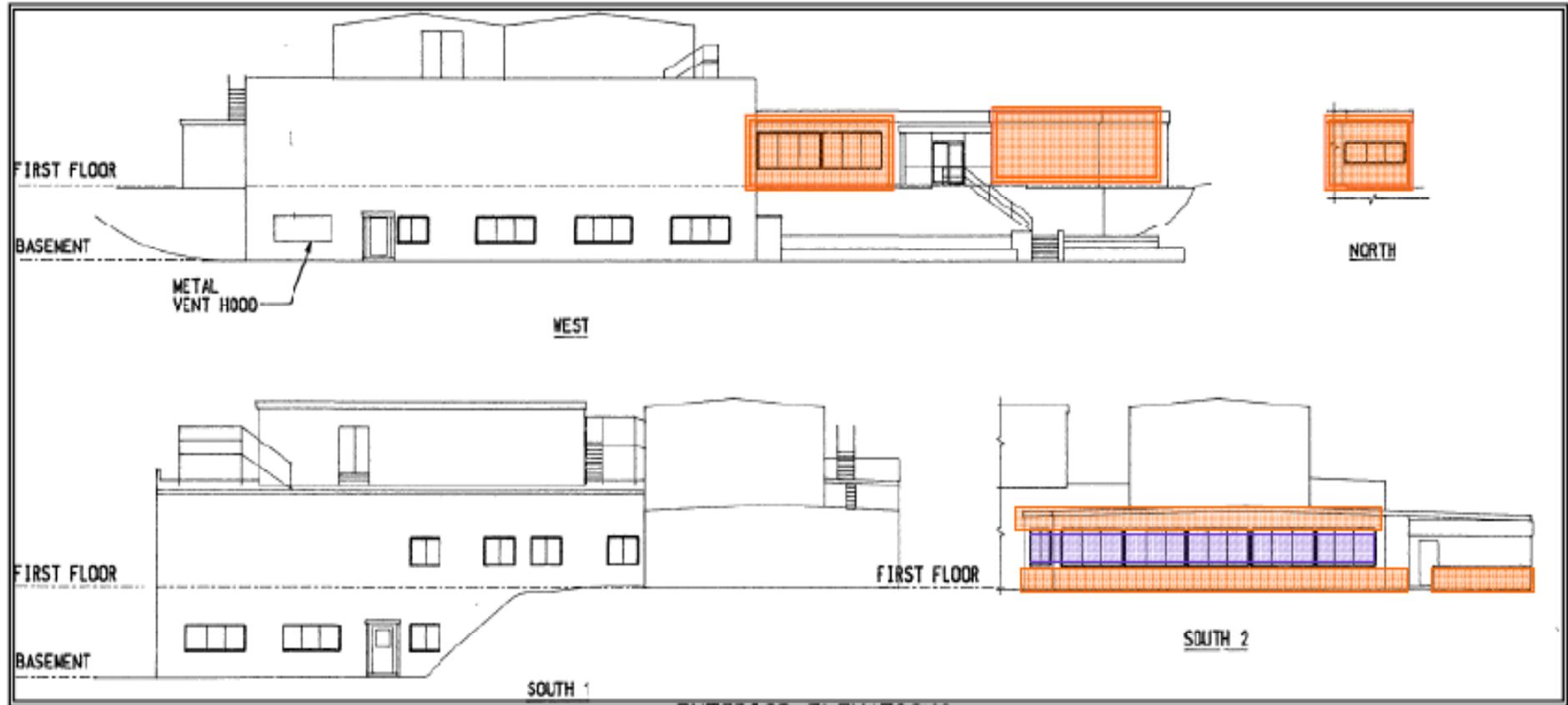
ROOF PLAN - BUILDING 10
SCALE 1/8" = 1'-0"



Elevated Penthouse Pads to receive new roof insulation, membrane, and PV arrays.

View represents minimum PV installation (100 panels)

Building 10 (Elevation Views)



-  Remove and replace stucco finish.
-  Remove and replace windows.

Repair work (examples)