APPENDIX D

NHPA Section 106 Consultation Supporting Documentation

Section 106 Consultation Request Letter
February 1, 2012

DEPARTMENT OF THE AIR FORCE
PACIFIC AIR FORCES

FEB 0 1 2012

MEMORANDUM FOR MR. JOHN PALACIOS
HISTORIC PRESERVATION OFFICER
DIVISION OF HISTORIC PRESERVATION
DEPARTMENT OF COMMUNITY AND CULTURAL AFFAIRS
PO BOX 500090 CK OR CALLER BOX 10007
SAIPAN, MP 96950

FROM: HQ PACAF/A7
25 E Street, Suite D-306
JBPH-H, HI 96853

SUBJECT: Environmental Impact Statement and Section 106 Consultation for Improvements Related to U.S. Air Force (USAF), Pacific Air Forces (PACAF), Divert Activities and Exercises, Francisco C. Ada/Saipan International Airport, Saipan and Tinian International Airport, Tinian, Commonwealth of the Northern Mariana Islands

1. My office is preparing an Environmental Impact Statement (EIS) under the National Environmental Policy Act (NEPA) to evaluate possible infrastructure improvements at Francisco C. Ada/Saipan International Airport (GSN) and/or Tinian International Airport (TNI). These improvements would facilitate proposed USAF use of one or both airfields. This NEPA evaluation will comply with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800. USAF will conduct Section 106 consultation concurrently with development of the EIS as recommended by NEPA's implementing regulations, Title 40 Code of Federal Regulations (CFR) Part 1502.25(a). In accordance with 36 CFR Part 800.3(c), this letter initiates our Section 106 coordination for this undertaking.

2. We are still in the planning stages. Given the potential for impact to important cultural resources, USAF seeks consultation with the Commonwealth Historic Preservation Office (HPO) and other interested parties so concerns can be identified early in project planning. USAF seeks consultation on determining the Area of Potential Effect (APE) for cultural resources at both GSN and TNI. We also seek input for designing appropriate cultural resources survey strategies to catalog historic properties in the APE.

3. The proposed improvements involve construction of facilities and infrastructure to support cargo, fighter, and tanker aircraft and associated support personnel for periodic divert landings, joint military exercises, and humanitarian assistance. The undertaking is needed since there is no airfield on U.S. territory in proximity of the Philippine Sea designed and designated to provide strategic capabilities when needed and humanitarian airlift for natural disasters. USAF is considering two action alternatives for the undertaking to include improvements at GSN and TNI. Existing capabilities at each of these airfields will play a major role in determining what improvements need to be made and thus the extent of the undertaking. USAF may also choose to employ some combination of the proposed action elements at both airfields to meet the objective.

4. HDR Inc. has been contracted to support development of the EIS. HDR Inc. archaeologists and architectural historians found Isley Field Historic District listed on the National Register of Historic Places. Isley Field Historic District encompasses numerous architectural and engineering features within and near the modern boundaries of GSN on Saipan. While most of the contributing elements to the district are visible, well-documented, and, therefore, easily avoided by construction and implementation activities, secondary impacts are possible.

5. Pursuant to 36 CFR 800.5, the USAF will consult with HPO to determine if the undertaking will have adverse effects to historic properties in the APEs. If the parties agree that historic properties will suffer adverse effects, the USAF will consult the Advisory Council on Historic Preservation (ACHP) as prescribed in 36 CFR 800.6 with the goal of entering into a Programmatic Agreement (PA) to address these issues and any others that might arise through the Section 106 consultation process. If the parties agree the undertaking has no effect or no adverse effect on historic properties, the USAF will notify ACHP of the finding and conclude Section 106 consultations. A proposed schedule for this Section 106 consultation is attached.

6. If you have any questions regarding this consultation, please contact my Cultural Resources Manager, Mr. William Grannis at (808) 449-4049, or by email at william.grannis@us.af.mil.

KARL S. BOSWORTH, Colonel, USAF
Director, Installations and Mission Support

cc: Barbara Alberti, National Park Service, Superintendent War in the Pacific National Historical Park, Guam, and American Memorial Park, CNMI

Attachment:
Proposed Schedule

Attachment 1: Proposed Schedule for Divert Activities and Exercises Section 106 Consultation

1. USAF provides HPO information describing conceptual project plans in Feb 2012.
2. Once HPO has had an opportunity to review the conceptual project plans, the USAF will work with HPO to determine appropriate APEs for the Saipan (GSN) and Tinian (TNI) project alternatives. USAF proposes 30 days for completion of negotiations. Our anticipated completion date is 15 Mar 2012.
3. USAF will prepare and submit a draft cultural resources report to HPO for review. USAF proposes a 30 day review period for HPO. Our anticipated submittal date is 30 Mar 12. Upon receipt of comments from HPO, USAF will prepare and submit a final draft, scheduled for no later than 30 Jun 2012.
4. If the USAF, in consultation with HPO, determines the undertaking will have adverse effects on historic properties, USAF will invite the ACHP to join in the Section 106 consultations with the goal of entering into a PA by 28 Sep 2012.

Conceptual Project Plans for Section 106 Consultation,
February 28, 2012

From:	Grannis, William E Civ USAF PACAF PACAF/A7AV [william.grannis@us.af.mil]
Sent:	Tuesday, February 28, 2012 9:15 PM
To:	MLof65@gmail.com; barbara.alberti@nps.gov
Cc:	'Michael.Jennings@hdrinc.com'; 'James.Gallison@hdrinc.com'; 'Benjamin.Fischer@hdrinc.com'; Pyle, Stephen G; Hokanson, Jeffrey H; Lynch, Edward J; Edwards, Matthew; mtkani@cmnihpo.net; Petersen, Mark K Civ USAF PACAF PACAF/A7PI; Hong, Julie Y CTR USAF PACAF PACAF/A7PI
Subject:	Section 106 Consultation for Divert; Conceptual Project Plans
Attachments:	Divert Conceptual Project Plans.pdf
Signed By:	william.grannis@us.af.mil
Follow Up Flag:	Follow up
Flag Status:	Flagged

Ms. Mertie Kani and Ms. Alberti,

As indicated in the previously provided 1 Feb 12 memo from our Director, Installations and Mission Support, attached are the preliminary "conceptual project plans" for Air Force divert activities and exercises proposed for either the Saipan International Airport (GSN) or the Tinian International Airport (TNI). We hope this will assist in our forthcoming discussions to determine the appropriate Area of Potential Effect and evaluate any effects on cultural resources.

Please call or email me if you have any questions or concerns. I would greatly appreciate confirmation that you have received this email and attached information.

Respectfully,

Bill

William Grannis
Environmental Program Manager
HQ PACAF/A7AV
DSN 449-4049
Commercial (808) 449-4049

This conceptual plan presents concepts for proposed alternatives being considered in an Environmental Impact Statement (EIS) currently being conducted in support of potential divert activities and exercises in Guam and CNMI.

The purpose of the undertaking is to achieve and maintain USAF readiness by establishing additional divert capabilities, supporting and conducting joint military exercises, and establishing additional humanitarian response capability, while ensuring the capability to meet mission requirements in the event that access to Andersen AFB or other western Pacific locations is limited or denied.

The Proposed Action undergoing NEPA evaluation is to improve an existing airport or airports and associated infrastructure in support of expanding mission requirements in the western Pacific. Under this action, the USAF proposes to construct facilities and infrastructure at an existing airport or airports to support a combination of cargo, fighter, and tanker aircraft and associated support personnel for periodic divert landings, joint military exercises, and humanitarian assistance and disaster relief efforts. Saipan International Airport (GSN) and Tinian International Airport (TNI) are being considered as alternatives for the Proposed Action.

The general concept being evaluated under NEPA and concurrent Section 106 consultation is the same for both GSN and TNI. The difference is the locations of proposed elements that would need to be constructed. See **Figures 1 through 4** for the conceptual plans of the proposed facilities and infrastructure at GSN and TNI. Under either alternative, the airport environment would be improved to an airfield design that could accommodate 12 KC-135 aircraft to meet the purpose and need. During the Construction Phase (described below) the USAF would develop and construct facilities and infrastructure at GSN or TNI consistent with the Proposed Action. During the Implementation Phase (also described below), for either alternative, the improved facilities and infrastructure would support a combination of cargo, fighter, and tanker aircraft and associated support personnel for periodic exercises and unplanned divert landings and humanitarian assistance and disaster relief in the western Pacific.

The airfield design would also accommodate other military logistics and tactical aircraft. The airfield design assumes that the KC-135 aircraft represents large logistics (or heavy lift cargo) aircraft and it is assumed that the space to accommodate a KC-135 is roughly twice as large as the space to accommodate most tactical or fighter aircraft. A size ratio of 2 to 1 is assumed for heavy lift cargo aircraft to fighter and tactical aircraft; therefore, 24 fighter or tactical aircraft could be diverted to or exercised from the airfield simultaneously for any element of the Proposed Action, not to exceed the capabilities of the proposed design. Finally, it is also assumed that a mix of fighter, tactical, and large logistics aircraft (e.g., 10 large logistics aircraft and 4 fighters), could be diverted to or exercised from the airfield simultaneously for any element of the Proposed Action as long as the mix does not exceed airfield design capabilities. The temporary support personnel population accompanying the aircraft would not exceed 700, regardless of what mix of aircraft is diverted to or exercised from the airfield.

Components of the conceptual plan are as follows:

Summary

1. **Construction Phase**. The KC-135 Stratotanker (KC-135) aircraft is indicative of tanker or cargo aircraft used by the USAF in the western Pacific. The KC-135 aircraft is being used as the design aircraft for cargo and tanker aircraft in the EIS. The following elements would be designed and then constructed or improved at the selected airport or airports:

    a. Runway - Potential extension of the runway up to 10,000 feet in order to meet optimal KC-135 requirements as identified by PACAF A5U. Options that would expand the

runway to less than 10,000 feet, or not at all, are also analyzed.

b. Parking apron - The parking aprons at the airport selected for expansion would need to meet design requirements for KC-135 aircraft.

c. Associated pavement markings, lighting, and navigational aids- All pavement markings, lighting, and navigational aids would be installed, upgraded, or relocated, as appropriate.

d. Temporary munitions storage area- The temporary munitions storage area would mainly be used to store munitions safely from diverted aircraft until the aircraft could return to its place of origin, or planned destination.

e. Hazardous cargo pad and arm/disarm pad- The hazardous cargo pad would mainly be used to safely handle munitions or other hazardous cargo from diverted aircraft until the aircraft could return to its place of origin, or planned destination. The arm/disarm pad would be used to perform final safety checks on aircraft before takeoff by aircraft maintenance personnel. The arm/disarm pad would also be used to perform initial safety checks on aircraft after landing. The hazardous cargo pad could be designed and constructed to double as an arm/disarm pad.

f. Aircraft hangar- The hangar would be a closed structure to store aircraft awaiting maintenance or being repaired.

g. Maintenance facility – The maintenance facility would be used as an Aircraft Maintenance Unit/Aircraft Spares Management and for storage to assist aircraft at the proposed airfield

h. Jet fuel receiving, storage, and distribution infrastructure- USAF proposes to maintain a 30-day supply of jet fuel to be able to provide fuel to aircraft through a hydrant system. In order to maintain the 30-day supply of jet fuel, a combination of fuel tanks including bulk storage and smaller operating tanks would be required. The ability to receive jet fuel on the island and ability to transfer it to the airfield would also be required.

i. Billeting- Temporary billeting, including medical, transportation, and dining services, would be required for the personnel supporting aircraft operations.

2. **Implementation Phase.** It is assumed that any mix of joint fighter, cargo, and tanker aircraft, not to exceed the design capabilities of the airport, could be diverted to or exercised from the airport or airports selected for improvements. KC-135s would remain the design aircraft for the implementation phase. The following activities would occur at the selected airport or airports:

   a. Unscheduled/unplanned divert landings- Unscheduled aircraft landings, also known as "divert" landings would occur; divert landings would occur at these airports if other locations in the western Pacific, for example Andersen AFB, are unavailable for landing, such as during emergencies or natural disasters.

   b. Unscheduled/unplanned humanitarian airlift staging- Humanitarian airlift staging, including NEOs, would also occur at the airport or airports proposed for improvements in the event of an emergency or disaster.

   c. Military exercises- A limited number of scheduled joint, combined, and unit-level

military training activities and exercises, as described and analyzed in the MIRC EIS, for which a ROD was issued on July 20, 2010, would occur. It is assumed that both unit-level training and joint military exercises would each take place annually for a combined total of 60 days per year at the airport or airports selected for improvement. This EIS addresses only the ground movements and immediate approaches and departures at the airport or airports selected for development (e.g., take-offs and landings) during unit-level training and exercises. Actual air warfare and air logistics training (i.e., above 10,000 feet) are addressed by the MIRC EIS.

d. Jet fuel receiving, storage, and distribution- A fuel delivery system, jet fuel storage, and means of fuel resupply would be required for the airport or airports selected for improvements. The ability to store fuel and transfer fuel from the receiving port to the airfield would be developed.

e. Billeting- Temporary billeting, including medical, transportation, and dining services, would be required for the personnel supporting aircraft operations.

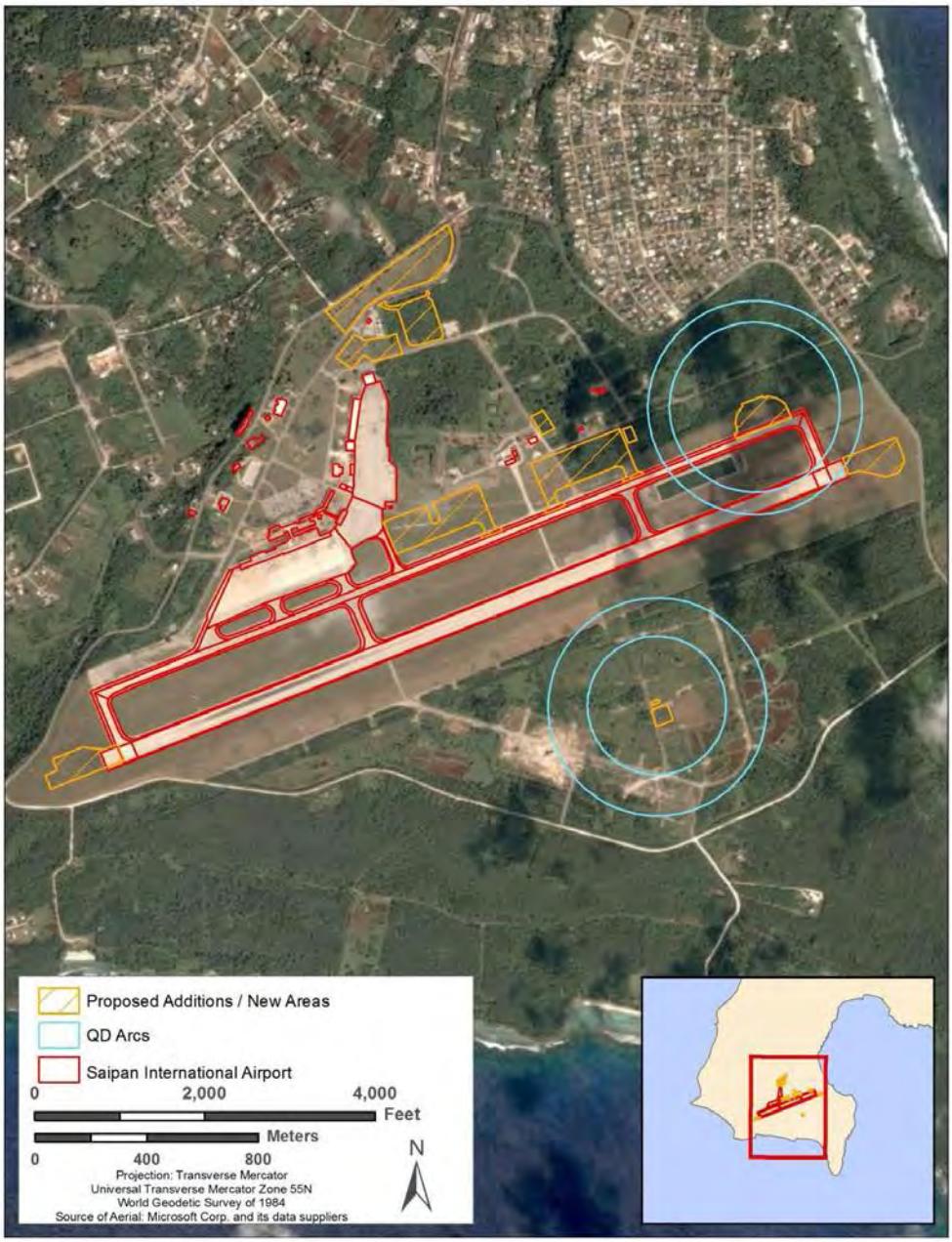


Figure 2. Overview of Proposed Action Areas at GSN

Figure 3. Overview of Proposed Action Areas at Port of Saipan

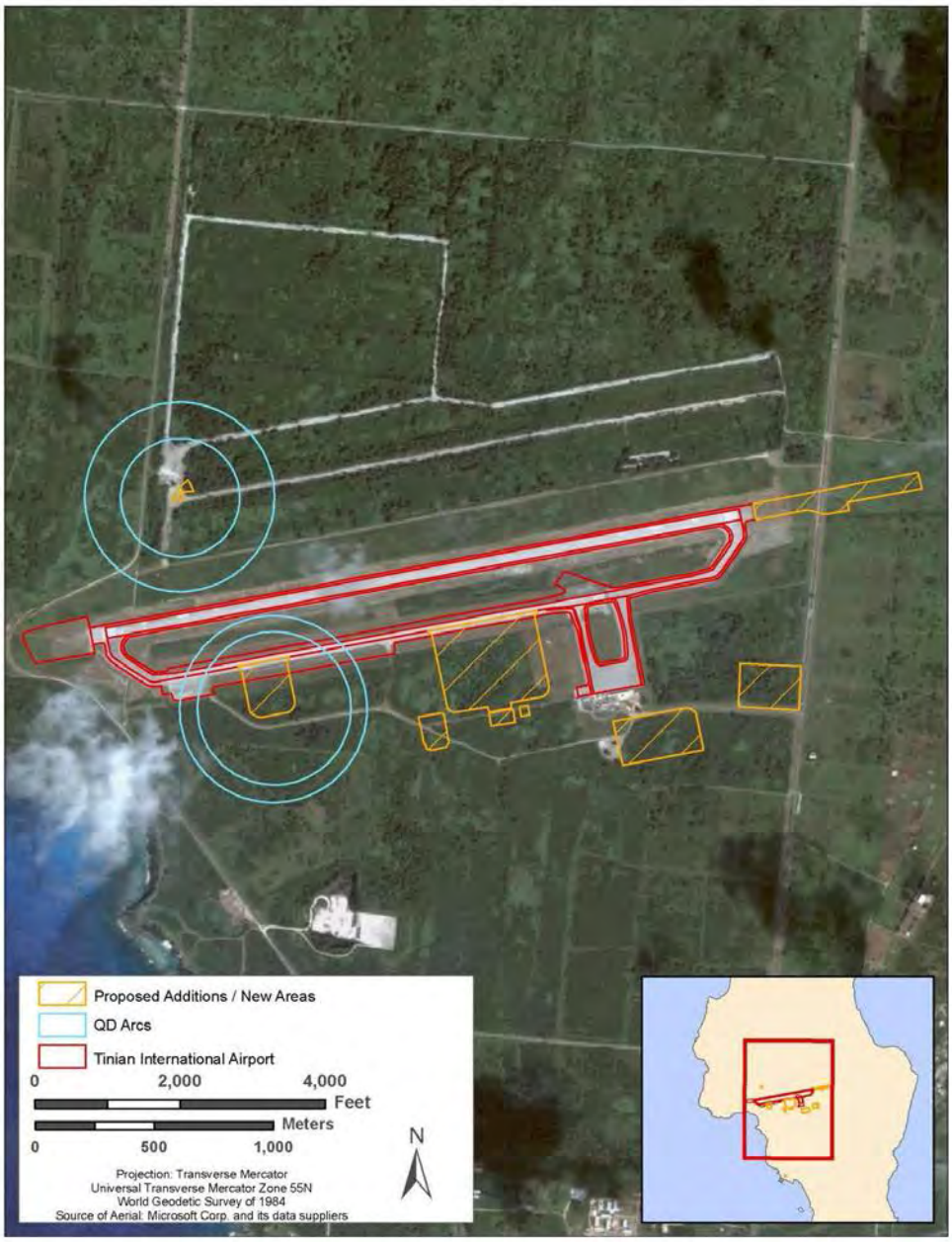


Figure 3. Overview of the Proposed Action at Tinian.

Figure 4. Overview of Proposed Action at Port of Tinian.

Request for HPO and NPS Review of Draft Phase I Cultural Resources Report
April 16, 2012

DEPARTMENT OF THE AIR FORCE
PACIFIC AIR FORCES

16 APR 2012

MEMORANDUM FOR MS. MERTIE KANI
HPO ACTING DIRECTOR
DIVISION OF HISTORIC PRESERVATION
DEPARTMENT OF COMMUNITY AND CULTURAL AFFAIRS
SAIPAN, MP 96950

FROM: HQ PACAF/A7AV
25 E Street, Suite B-206
Joint Base Pearl Harbor-Hickam HI 96853-5420

SUBJECT: Request for Review of Draft Phase I Cultural Resources Survey Supporting the Environmental Impact Statement for Divert Activities and Exercises on Saipan Commonwealth of the Northern Mariana Islands

1. As indicated in the previously provided memo from our Director, Installations and Mission Support, dated 1 Feb 12, the US Air Force is preparing an Environmental Impact Statement (EIS) for Divert Activities and Exercises. The Francisco C. Ada/Saipan International Airport is one of the alternatives being considered in the EIS. To address data gaps related to this alternative, the Air Force has conducted a survey of historic resources and is pleased to submit the subject draft survey report for your review.

2. The study area is contained within the boundaries of the NRHP-listed Isley Field Historic District (NRIS No.: 81000667), which itself is included in the Saipan Landing Beaches, Aslito/Isley Field and Marpi Point National Historic Landmark (NHLS No.: 85001789). As such, the U.S. Air Force evaluated these resources according to whether or not they constitute contributing elements of the Historic District/National Historic Landmark. Results of this evaluation are provided in the attached report.

3. Request your comments or concurrence by 20 May 12. Should you have any questions or concerns, please contact me at (808) 449-4049, or by email at william.grannis@us.af.mil.

WILLIAM GRANNIS
Environmental Program Manager,
HQ PACAF/A7AV

Attachment: Draft Phase I Cultural Resources Survey Report

cc:
Barbara Alberti, National Park Service, Superintendent, War in the Pacific National Historical Park, Guam, and American Memorial Park, CNMI
Katry Harris, Program Analyst, Advisory Council on Historic Preservation

Request for Review of Phase I Cultural Resources Survey,
May 25, 2012

DEPARTMENT OF THE AIR FORCE
PACIFIC AIR FORCES

25 MAY 2012

MEMORANDUM FOR ELAINE JACKSON-RETONDO
ACTING HISTORY PROGRAM COORDINATOR
NATIONAL PARK SERVICE
PACIFIC WEST REGION
333 BUSH STREET, SUITE 500
SAN FRANCISCO, CA 94104-2828

FROM: HQ PACAF/A7AV
25 E Street, Suite B-206
Joint Base Pearl Harbor-Hickam HI 96853-5420

SUBJECT: Request for Review of Draft Phase I Cultural Resources Survey Supporting the Environmental Impact Statement for Divert Activities and Exercises on Saipan Commonwealth of the Northern Mariana Islands

1. The US Air Force is preparing an Environmental Impact Statement (EIS) for Divert Activities and Exercises. The Francisco C. Ada/Saipan International Airport is one of the alternatives being considered in the EIS. To address data gaps related to this alternative, the Air Force has conducted a survey of historic resources and is pleased to submit the subject draft survey report (Atch 1) for your review. The Air Force chose to conduct a cultural resources survey of the Saipan alternative in the EIS because of the potential impact to the National Historic Landmark and other NR-listed properties on Saipan.

2. The enclosed report presents the results of the cultural resources survey of 66.5 hectares (164.3 acres) at Saipan International Airport. The survey strategy was developed by our contractor, HDR, in consultation with John Palacios and Juan Diego C. Camacho from the Saipan Historic Preservation Office. The goal was to identify cultural resources in the area where proposed improvements to the airport would occur should the Saipan-based alternative be selected. The survey area encompassed the areas that may be part of the undertaking, including potential extensions to an existing runway and the footprints of a proposed hot cargo pad and arm/de-arm pad, two aprons and ramps, a maintenance facility, a hangar, magazines (one earth covered magazine and one multi-cube magazine), two fuel sites (bulk storage and operational tanks with hydrant system), and a Basic Expeditionary Airfield Resources (BEAR) kit site.

3. During the survey, three isolated occurrences were identified that date to the pre-contact period and consist of Latte phase ceramics and a sling stone. As isolated finds they may be useful in supplementing overall spatial analysis of the area, but individually and collectively do not provide additional information potential and lack sufficient integrity to be eligible for listing in the National Register of Historic Places (NRHP). The U.S. Air Force has therefore determined these resources as not eligible for nomination to the NRHP. Also identified were eleven newly recorded historic features that related either to the Japanese occupation or the American occupation. The features are shown on report figure 7-1 (provided separately at Atch 2) and include a concrete water tower (Feature 1), three concrete foundations with drains (Features 2, 3 and 4), three concrete foundations or pads (Features 5, 9, and 11), a Japanese

bunker (Feature 6), two water catchment features (Features 7 and 8), and a bottle dump (Feature 10). B-29 hardstands and taxiways, some portion of which were previously but imprecisely recorded, were also recorded evaluated during survey. Finally, eight previously recorded Japanese bunkers were revisited during survey (Features AB1 to AB8).

4. As described in the attached report, the study area is contained within the boundaries of the NRHP-listed Isley Field Historic District (NRIS No.: 81000667), which itself is included in the Saipan Landing Beaches, Aslito/Isley Field, and Marpi Point National Historic Landmark (NHLS No.: 85001789). As such, the U.S. Air Force evaluated these resources according to whether or not they constitute contributing elements of the Historic District/National Historic Landmark (NHL).

5. All of the historic features recorded during the survey date to either the Japanese or American occupations of the airfield during WWII and served a military purpose; they therefore meet Criterion A as contributing elements to the District's association with events that have made a significant contribution to the broad patterns of American history, WWII in this case. Some of the features also have information potential and therefore meet Criterion D. However, the inquiry does not end with the determination that the criteria are met; the resources must also retain sufficient qualities or aspects of integrity: location, design, setting, materials, workmanship, feeling, and association. Most of the WWII-related sites, buildings, or structures documented in the survey meet the criteria and possess sufficient integrity and therefore do contribute to the District (see the enclosed Report). However, some of the features documented, though they lie within the boundaries of the Historic District/NHL and do meet Criteria A and D, lack sufficient integrity to be considered contributing elements (though they still would be non-contributing elements). Those elements are as follows:

- Feature 1, a concrete water tower dating to the Japanese occupation that is in poor condition and in a compromised setting; this feature lacks several aspects of integrity, including setting, workmanship, feeling and location.
- Feature 3, a concrete foundation with drain dating to the American occupation that is compromised by its isolated location relative to other WWII-era features in the area (and thus lacks several of the qualities of integrity, including location, setting, feeling, and association).
- Feature 5, a concrete slab dating to the American occupation that is in very poor condition, lacking the qualities of setting, workmanship, feeling, and association.
- Feature 9, a concrete foundation dating to the American occupation that is in very poor condition, lacking the qualities of setting, workmanship, feeling, and association.
- Feature 11, a concrete pad dating to the Japanese or American occupation that is in very poor condition and lacks integrity of setting, workmanship, feeling, and location.
- B-29 hardstands and taxiways, which due to decay, vegetation growth, and recent development of the airport, lack intergrity of setting, feeling, workmanship and association.

6. The remaining identified features are determined eligible for nomination to the NRHP and as contributing elements to the District. Note that the eight previously recorded Japanese bunkers (Features AB1 to AB8) have previously been determined to be eligible for listing on the NRHP and to be contributing elements in the Isley Field Historic District.

- Feature 2, a concrete foundation with drain dating to the American occupation.
- Feature 4, a concrete foundation with drain dating to the American occupation.
- Feature 6, a Japanese bunker.
- Feature 7, a water catchment feature dating to the American occupation.
- Feature 8, a water catchment feature dating to the American occupation.
- Feature 10, a bottle dump dating to the American occupation.

7. Because the project is within the boundaries of the Historic District/NHL, the U.S. Air Force respectfully requests that the National Park Service evaluate and provide comments on these findings of eligibility provided in Chapter 9 of this survey report. Please note that once the NRHP eligibility of the identified resources is agreed upon, the U.S. Air Force will make a Determination of Effect and again ask NPS for comments. We believe this two-step approach is a good approach for a unique project such as this.

8. Request your comments by 13 Jun 12. Should you have any questions or concerns, please contact me at (808) 449-4049, or by email at william.grannis@us.af.mil.

WILLIAM GRANNIS
Environmental Program Manager,
HQ PACAF/A7AV

2 Attachments:
1. Draft Phase I Cultural Resources Survey Report
2. Report Figure 7-1, Map of Spatially Isolated Historic Feasures and Artifacts in the Project Area.

cc:
Barbara Alberti, National Park Service, Superintendent, War in the Pacific National Historical Park, Guam, and American Memorial Park, CNMI
Katry Harris, Program Analyst, Advisory Council on Historic Preservation
Mertie Kani, HPO Acting Director, Division of Historic Preservation, Department of Community and Cultural Affairs, Saipan
David Louter, PhD, Chief, Cultural Resources Program, Pacific West Region, National Park Service

Section 106 Review and Comments Letter from CNMI HPO
May 31, 2012

Commonwealth of the Northern Mariana Islands
Division of Historic Preservation
Department of Community & Cultural Affairs
P.O. Box 500090 CK, Airport Road
Saipan, MP 96950

TEL: 664-2120-25
FAX: 664-2139

May 31, 2012
Serial: HP-28510
File: Section 106/ FY'12/Dept. of Air Force

Mr. William E. Grannis, GS13
Environmental Program Manager
HQ PACAF/A7AV
25 E Street, Suite B-206
Joint Base Pearl Harbor-Hickam HI 96853-5420

Subject: Section 106 Review and Comments, Phase 1 Cultural Resources Survey Supporting the Environmental Impact Statement for Divert Activities and Exercises Commonwealth of the Northern Mariana Islands.

Dear Mr. Grannis:

We have reviewed the report of the above subject archaeological investigation and have the following comments.

The report is very well prepared and which followed most of the requirements in our guidelines and standards for archaeological documentation within the Commonwealth of the Northern Mariana Islands (CNMI). These include presentation and discussions of background research containing environmental overview, results of previous investigations, historic and land-use activities, discussion of site expectations based on the background research, research design, field methods, field results, national register eligibility determinations, and recommendations.

The archaeological investigation and its subsequent reporting of the results served its purpose well.

With regards to the National Register eligibility criteria, we agree with your opinion that Feature 1 to 11 are eligible for listing in the National Register under criterion A with the exception of Features 2, 4, 6, 7, 8 and 10, which are eligible under both criteria A & D. Features 1 to 11 include: A concrete water tower, three concrete foundations with drains, a concrete slab, a Japanese Bunker, two water catchment features, a concrete foundation, a bottle dump, and a concrete pad. We also agree that Hardstands, concrete roads and parking aprons for B-29 are eligible for the National Register under criterion A. We further agree the Features 1, 3, 5, 9, 11 and the hardstands are not eligible as contributing resources to the National Historic Landmark due to their compromised integrity.

For the Isolated Occurrences 1 to 3 which include one body sherd, a body sherd and a sling stone, and five body sherds and a rim sherd respectively, we agree with your evaluation that none of the Isolated Occurrence meets the National Register eligibility criteria due to their lack of integrity.

While the report is a good one, there are some submission standards that need to be mentioned. First, the final report must indicate "Final Report" in the front cover. Secondly, four copies of the final report must be submitted to the CNMI office of the Division of Historic Preservation, one copy to the CNMI Museum of History and Culture, one to the Archives at the Northern Marianas College, and one to the Micronesian Area Research Center at the University of Guam. In addition, one complete, and legible set of field notes, including a photo log shall be submitted to the CNMI Museum of History and Culture at the time the final report is submitted. Finally, there should be an acknowledgement section of the report.

If you have any questions, please do not hesitate to contact us at 664-2120/5. Please keep a copy of this letter in your files as evidence of your compliance with Section 106 process.

Sincerely,

Melvin L. O. Faisao
State Historic Preservation Officer

cc. Elaine Jackson-Retondo, NPS Coordinator
Katry Harris, Program Analyst for Advisory Council
David Louter, PhD, Chief, Cultural Resources Program, NPS
Barbara Alberti, NPS Superintendent

Response to Request for Review of Phase I Cultural Resources Survey Letter, June 25, 2012

United States Department of the Interior

NATIONAL PARK SERVICE
Pacific West Region
909 First Avenue, Fifth Floor
Seattle, Washington 98104-1060

H3417 (PWR-CR)

June 25, 2012

William Grannis, Environmental Program Manager
Department of the Air Force
HQ PACAF/A7AV
25 E Street, Suite B-206
Joint Base Pearl Harbor-Hickam, HI 96853-5420

RE: Request for NPS Review of Draft Phase I Cultural Resources Survey Supporting the Environmental Impact Statement for Divert Activities and Exercises on Saipan Commonwealth of the Northern Mariana Islands

Dear Mr. Grannis:

Thank you for the invitation to review the Draft Phase I Cultural Resources Survey Supporting the Environmental Impact Statement for Divert Activities and Exercises on Saipan Commonwealth of the Northern Mariana (the Survey).

The National Park Service (NPS) is delegated monitoring and technical assistance responsibilities by Congress to ensure that National Historic Landmarks (NHL) retain the highest level of integrity. Our responsibilities include review and formal comment on individual proposed actions within National Historic Landmarks as well as the cumulative effect of changes through time on NHL properties. The NPS also prepares, reviews, and provides technical assistance in the preparation NHL nominations. It is our understanding that your request for NPS review is not part of a NHPA Section 106 consultation; rather it is a request for technical assistance prior to your development of alternatives under NEPA and prior to your assessment of effects. It is in the capacity of providing technical assistance that we have reviewed and are offering comments on the Survey. Specifically, the Air Force has requested NPS to evaluate and provide comments on the findings of eligibility presented in Chapter 9 of the Survey.

To best address the findings of the Survey, NPS comments are focused on a broader discussion about the Landing Beaches Aslito/Isley Field, Marpi Point National Historic Landmark District (NHLD), as well as the method and process for identifying additional contributors and for determining when previously identified contributors no longer contribute to a NHLD. We believe this discussion will prove beneficial for this and other projects involving NHLs.

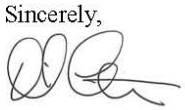
As noted in May 25, 2012 cover letter and in the Survey, the study area for the proposed undertaking is located within the boundary of the Aslito/Isley Field portion of the NHLD. It appears that in the field survey individual properties located within the NHL boundary were identified and the eligibility of each resource assessed individually for listing in the National Register of Historic Places, which serves one aspect of identification and evaluation; however, it does not adequately address these same resources as contributors to the NHLD. Within the Aslito/Isley Field portion of the NHLD, the NHL nomination specifically identifies two large sites, a Japanese building and other Japanese concrete structures as part of the NHL; only one building and two vehicular/aircraft parking areas were identified as noncontributing. The following excerpt from the NHL nomination provides more specific information:

> *Recommended as part of a national historic landmark is the general area formerly known as Aslito Field and Isley Field to include: the site of the two B-29 runways, taxiways, and hardstands; the site of the Seventy-third Bombardment Wing's administrative area; the Japanese blockhouse on the beach at Unai Opyan; and the concrete Japanese structures associated with Aslito Field. Exempted are the modern air terminal, its vehicle parking lot, and its concrete aircraft parking area in front.*

An assessment of whether these properties still contribute to the NHLD would require an evaluation of the integrity relative to the state of the properties at the time of designation. If the assessment were that contributors had lost a significant degree of integrity since designation, they would not become non contributors unless an update to the NHL nomination was prepared and accepted. The process for changing the boundary, period of significance or deeming contributors as non contributors starts with the NHL program. Based upon an update to the NHL nomination, the NHL program would make a recommendation to the NHL Committee of the NPS Advisory Board, which in turn would make a recommendation to the full Board followed by a recommendation to the Secretary of the Interior. Those determinations are not made by the SHPO. It is also important to note that the integrity of a historic site as a category of historic property is assessed slightly differently than that of a historic building or structure. Reference pages 40-41 of the National Register of Historic Places Bulletin, "How to Prepare a NHL Nomination" for additional information about sites.

As our comments indicate, assessing the eligibility of resources within a NHL requires a different process than employed in the Survey. However, the information provided in the Survey, specifically the identification of features and structures within the NHLD, could serve as a good start to a much needed update to the NHL nomination for Landing Beaches Aslito/Isley Field, Marpi Point National Historic Landmark District. If you have further questions, please do not hesitate to call or email Dr. Elaine Jackson-Retondo at 415 623 2368 or elaine_jackson-retondo@nps.gov.

Sincerely,



David Louter,
Chief, Cultural Resources Program
Pacific West Region

USAF News Release regarding historical sites at GSN and TNI
September 2, 2012

U.S. AIR FORCE

News Release

Headquarters Pacific Air Forces Public Affairs
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Release No. 010912 Sep. 2, 2012

Air Force seeks input on historic sites
Pacific Air Forces Public Affairs

JOINT BASE PEARL HARBOR-HICKAM, Hawaii – The U.S. Air Force is asking those with interest in the historical sites related to Francisco C. Ada (Saipan International) Airport, Tinian International Airport and the seaports of both islands, to provide information that they wish to be considered by the Air Force as part of its ongoing assessment of potential effects related to a planned Exercises and Divert Activities airfield improvement project.

The Air Force is considering the Saipan and Tinian airports as possible sites for future training exercises and missions related to overall emergency preparedness in the Pacific. The Air Force is proposing improvements to an existing airport that would involve construction of facilities and infrastructure to support a combination of military cargo, fighter, and tanker aircraft and associated support personnel for periodic divert landings, joint military exercises, and joint and combined humanitarian assistance and disaster relief efforts.

Existing capabilities at each of these airports and seaports will play an important role in determining what improvements need to be made, and which site is ultimately chosen for the proposed project. The Air Force could also choose to employ some combination of both airports to meet its objectives.

Saipan and Tinian were the sites of intense fighting in World War II as the U.S. sought to wrest control of the islands from Japanese forces. After a massive loss of life to the forces of both nations, the U.S. captured Japan's main airfield on the island, known as Aslito Field, on June 18, 1944.

The capture of Aslito Field proved decisive for the U.S. in the battle for Saipan. U.S. forces immediately began using the airfield for airstrikes, supply runs, and aerial photography missions that allowed for accurate mapping of Japanese positions, bunkers, and trench lines as well as Saipan's rugged terrain.

On July 24, 1944, two weeks after capturing Saipan, U.S. forces invaded Tinian. The island was secured on Aug. 1, 1944, after a loss of 8,010 Japanese lives. American casualties included 328 dead and 1,571 wounded.

American troops immediately began work repairing and expanding Gurguan Airfield, today the site of the international airport, and Ushi Point Airfield, which was transformed into the North Field, the largest airbase in the Pacific.

A year later, North Field became one of the most significant airfields in history when it served as the deployment point for the atomic bombing missions by Enola Gay to Hiroshima on Aug. 6, 1945, and Bockscar to Nagasaki on Aug. 9, 1945. These missions, the only wartime use of nuclear weapons in history, were a critical factor in Japan's surrender on Sept. 2, 1945.

Today, the landing beaches on Saipan used by U.S. forces, as well as Marpi Point, are part of the same National Historic Landmark as Aslito/Isley Field. North Field on Tinian is now a national historic district and part of the Tinian Landing Beaches, Ushi Point, and North Fields National Historic Landmark.

According to the National Park Service, national historic landmarks are buildings, sites, districts, structures, and objects that have been determined by the Secretary of the Interior to be nationally significant in U.S. history and culture. Designated national historic landmarks include some of the most historic properties in the U.S. and its territories. Many national historic landmarks still serve modern needs. North Field is part of the Exclusive Military Use Area military training area.

Not only is the consideration of potential effects of actions on historic properties required under various laws, but an understanding is essential to design and operation of the airfield improvements to fully evaluate the environmental impacts from the proposed action. The Air Force is in the process of preparing an Environmental Impact Statement, or EIS, for the proposed training exercises and missions.

The public has participated in these processes during Air Force sponsored EIS scoping meetings held on Guam, Saipan, Tinian, and Rota last September and during public hearings in Saipan and Tinian in July 2012, as required by the National Environmental Policy Act. The Air Force is also working with agencies charged with management of historic resources including the CNMI Historic Preservation Office, National Park Service, and Advisory Council on Historic Preservation to properly evaluate and avoid, minimize, or mitigate any effects to historic properties.

This article is intended to solicit public involvement in the effort to identify and protect historic resources that could be impacted by the proposed action. In addition to recognizing the rich World War II history of the CNMI, particularly Saipan and Tinian, the Air Force is also interested in gathering information pertinent to the area's history and use before European contact and its possible role in traditional beliefs and customs of native islanders and other communities today.

Those with interests and information pertaining to the historical attributes of the area are encouraged to submit their comments to PACAF/PA, 25 E Street, Suite G-108, Joint Base Pearl Harbor-Hickam, HI 96853, ATTN: PACAF Divert Marianas, or by email at pacaf.paops@us.af.mil.

The Air Force has also set up a Web site at http://www.pacafdivertmarianaseis.com, which houses important information about the proposed project and alternatives, including the Draft EIS and all related documents the Air Force has released for public review. Interested parties may also submit comments relating to the historic properties pursuant to Section 106 of the National Historic Preservation Act via this Web site.

Section 106 Consultation Initiation Letter
September 11, 2012

DEPARTMENT OF THE AIR FORCE
AIR FORCE CENTER FOR ENGINEERING AND THE ENVIRONMENT
LACKLAND AIR FORCE BASE, TEXAS

11 Sep 12

MEMORANDUM FOR MELVIN FAISAO, HISTORIC PRESERVATION OFFICER
DEPARTMENT OF COMMUNITY AND CULTURAL AFFAIRS
COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS
P.O. BOX 500090, SAIPAN, MP96950

FROM: AFCEE/CMP

SUBJECT: Consultation Initiation per Section 106 of the National Historic Preservation Act

1. In support of USAF/s effort to conduct a National Environmental Policy Act (NEPA) Environmental Impact Statement (EIS) titled *Divert Activities and Exercises, Guam and the Commonwealth of the Northern Mariana Islands*, the Air Force Center for Engineering and the Environment (AFCEE) respectfully submits the attached distribution list (Attachment 1), along with the *Request for Consultation Initiation and Findings of Effect to Historic Properties* (Attachment 2).

2. The attached request for consultation also includes two enclosures containing both the figures showing direct and indirect Areas of Potential Effects (APE) for each alternative, and the Section 106 (NHPA) findings and determinations for Divert Activities and Exercises EIS.

3. We appreciate your attention to this Divert Activities and Exercises consultation initiation request. If you have any questions, please contact Mr. William Grannis by email at william.grannis@us.af.mil or by telephone at (808) 449-4049.

DAVID A. KAWECK, Colonel
Chief, AFCEE Pacific RMO

2 Attachments:
1. Distribution List
2. Request for Consultation

cc:
HQ PACAF/A7P
AFCEE/TDX

ATTACHMENT 1

Distribution List for Consultation Initiation per Section 106, NHPA

Ms. Barbara Alberti, National Park Service

Ms. Michelle Cruz, Federal Aviation Administration, Western Service Center

Mr. Melvin Faisao, CNMI Department of Community and Cultural Affairs

Mr. Don Farrell

Mr. Walt Goodridge, Destination Saipan

Ms. Katry Harris, Advisory Council on Historic Preservation

Mr. Robert Hunter, CNMI Museum of History and Culture

Ms. Elaine Jackson-Retondo, National Park Service, Pacific West Regional Office

Ms. Mertie Kani, CNMI Dept. of Community & Cultural Affairs, Div. of Historic Preservation

Mr. Andre Kozej

Mr. Tom Linden, Military Integration Management Committee

Ms. MaryAnn Lizama, Commonwealth Ports Authority

Mr. Gordon Marciano, PDI Tour Agency

Mr. John Powell, Military Historical Tours, Inc.

Mr. Scott Russell

Ms. Carmen Sanchez, Tinian, CNMI Department of Community and Cultural Affairs

Ms. Ruth Tighe

Mr. Brad Wallis, Pacific Historic Parks

Mr. O. Warren Wiedhahn, Military Historical Tours, Inc.

ATTACHMENT 2

Request for Consultation Initiation and Findings of Effect to Historic Properties
Prepared in accordance with Section 106, National Historic Preservation Act (NHPA) of 1966
U.S. Air Force (USAF), Pacific Air Forces (PACAF), Divert Activities and Exercises,
Francisco C. Ada/Saipan International Airport, Saipan; and Tinian International Airport, Tinian,
Commonwealth of the Northern Mariana Islands

1. INTRODUCTION

On 1 February 2012, the Pacific Air Forces (PACAF), Director, Installations and Mission Support provided a notification letter to your office(s) to advise you that the USAF is preparing an Environmental Impact Statement (EIS) for Divert Activities and Exercises (the Undertaking) and requesting data related to determining the Area of Potential Effect (APE), as well as discussing cultural resource survey strategies to catalog historic properties within the APE. Alternatives being evaluated under Section 106 of the NHPA of 1966, in conjunction with the EIS, include use of the existing FAA-regulated airports on Saipan (GSN) and Tinian (TNI) and fuel storage facilities at their respective ports. USAF's determinations of the APE, identification of Historic Properties within the APE, and Finding of Effects are summarized in the attached APE maps (Enclosure 1) and Section 106 Findings and Determinations (Enclosure 2). These determinations were developed in accordance with Section 106 of the NHPA and its implementing regulations posted in 36 Code of Federal Regulations, Part 800 (36 CFR 800). The PACAF project planning team for the NEPA action is now seeking additional advice and comment regarding its obligation to consult, determine effects, and resolve any adverse effects, per the requirements of the NHPA and regulations.

2. DESCRIPTION OF THE UNDERTAKING

On 29 February 2012, Mr. Grannis, HQ PACAF/A7AV, provided a Conceptual Project Plan that describes the undertaking via email to the Saipan Historic Preservation Office (HPO) and National Park Service, Superintendent, War in the Pacific NHP, Guam, American Memorial Park, Saipan. This Plan was subsequently provided via email to the Tinian HPO on March 06, 2012. Additional description of the Undertaking may be found in the Draft Environmental Impact Statement at http://www.pacafdivertmarianaseis.com/docs.html and in Enclosure 2. To summarize, the Undertaking is to determine the location to improve an existing airport or airports and associated infrastructure in support of expanding mission requirements in the western Pacific. Under this action, the USAF proposes to construct facilities and infrastructure at an existing airport or airports and necessary fueling facilities at a port to support a combination of cargo, fighter, and tanker aircraft and associated support personnel for periodic divert landings, joint military exercises, and humanitarian assistance and disaster relief efforts.

3. DESCRIPTION OF AREA OF POTENTIAL EFFECT (APE)

As defined in 36 CFR 800.16(d), the APE "…means the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking." Because the Undertaking involves multiple alternative project areas and phases,

USAF has defined eight APEs reflecting potential effects on the selected location, project phase, and potential direct, or indirect effects. These APEs are illustrated and described in Enclosures 1-2 and include:

a. Saipan Construction Phase Area of Potential Effect – Direct
b. Saipan Construction Phase Area of Potential Effect – Indirect
c. Saipan Implementation Phase Area of Potential Effect – Direct
d. Saipan Implementation Phase Area of Potential Effect – Indirect
e. Tinian Construction Phase Area of Potential Effect – Direct
f. Tinian Construction Phase Area of Potential Effect – Indirect
g. Tinian Implementation Phase Area of Potential Effect – Direct
h. Tinian Implementation Phase Area of Potential Effect – Indirect

4. IDENTIFICATION OF HISTORIC PROPERTIES IN THE AREA(S) OF POTENTIAL EFFECT (APE)

Historic properties include "…any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion on the National Register (16 U.S.C. Section 470(w)(5))." As described in greater detail in Enclosure 2, the following historic properties have been identified on Saipan and Tinian, within the APE, that may be affected by construction and/or implementation, whether direct or indirect:

a. Saipan Construction Phase Area of Potential Effect - Direct
    - Aslito/Isley Field National Historic District portion of the Landing Beaches, Aslito/Isley Field, and Marpi Point National Historic Landmark (NHL)
    - Newly recorded eligible structures, sites, and features at Aslito/Isley Field that date to the period of significance for the NHL and *may* contribute to its significance
    - Newly recorded pre-contact isolated occurrences that do not contribute to the NHL
    - Additional undiscovered or unanticipated eligible resources
b. Saipan Construction Phase Area of Potential Effect – Indirect
    - All of the above **plus** the Japanese hospital and Campaneyan Kristo Rai in Garapan
c. Saipan Implementation Phase Area of Potential Effect - Direct
    - All of the above
d. Saipan Implementation Phase Area of Potential Effect - Indirect
    - All of the above **plus** Saipan Landing Beaches portion of the Landing Beaches, Aslito/Isley Field and Marpi Point NHL and the Tinian Landing Beaches, Ushi Point Field, and North Field NHL
e. Tinian Construction and Implementation Phase Areas of Potential Effect - Direct and Indirect
    - US anti-aircraft artillery site near TNI
    - House of Taga (San Jose)
    - Nanyo Kohatsu Kabushiki Kaisha Ice Storage Building (San Jose)

- Additional undiscovered or unanticipated resources

5. DETERMINATION OF POTENTIAL EFFECT

As discussed in Enclosure 2, the Undertaking could have adverse direct and indirect effects to historic properties. The extent of adverse effects will be determined by the actual facilities constructed and the actual operations conducted at either location. Since Congressional authorization is required for each facility, and military operational and readiness concerns determine the type and extent of military training required at the location, the resultant actual effects could be fewer and less adverse than those discussed here and in Enclosure 2.

6. REQUEST FOR CONCURRENCE IN FINDINGS

We invite your comments on the definition of the APE, the adequacy of the efforts to identify historic properties potentially affected by the Undertaking, and the finding of effect. We are especially interested in identifying whether resources related to indigenous and/or traditional use or belief exist within the APE that qualify as traditional cultural properties (TCP) as outlined in 36 CFR 60.4. Based on our determination that the Undertaking may result in adverse effects to historic properties, we propose to resolve adverse effects to historic properties through development of an agreement, in consultation with your office and any other interested parties. Per 36 CFR 800.3(f), we are seeking to identify any other consulting parties. We welcome your recommendations on any parties to include in an invitation to consult on this project. Please indicate your concurrence with the above findings and proposal to develop an agreement within 30 days of receipt of this memo. If you have any questions or comments, or require any additional information, please contact Mr. William Grannis at (808) 449-4049, or by email at william.grannis@us.af.mil.

2 Enclosures:
1. Figures showing Direct and Indirect Areas of Potential Effects (APE) for Each Alternative
2. Section 106 (NHPA) Findings and Determinations for Divert Activities and Exercises

Enclosure 1: Figures showing Direct and Indirect Areas of Potential Effects (APE) for Each Alternative

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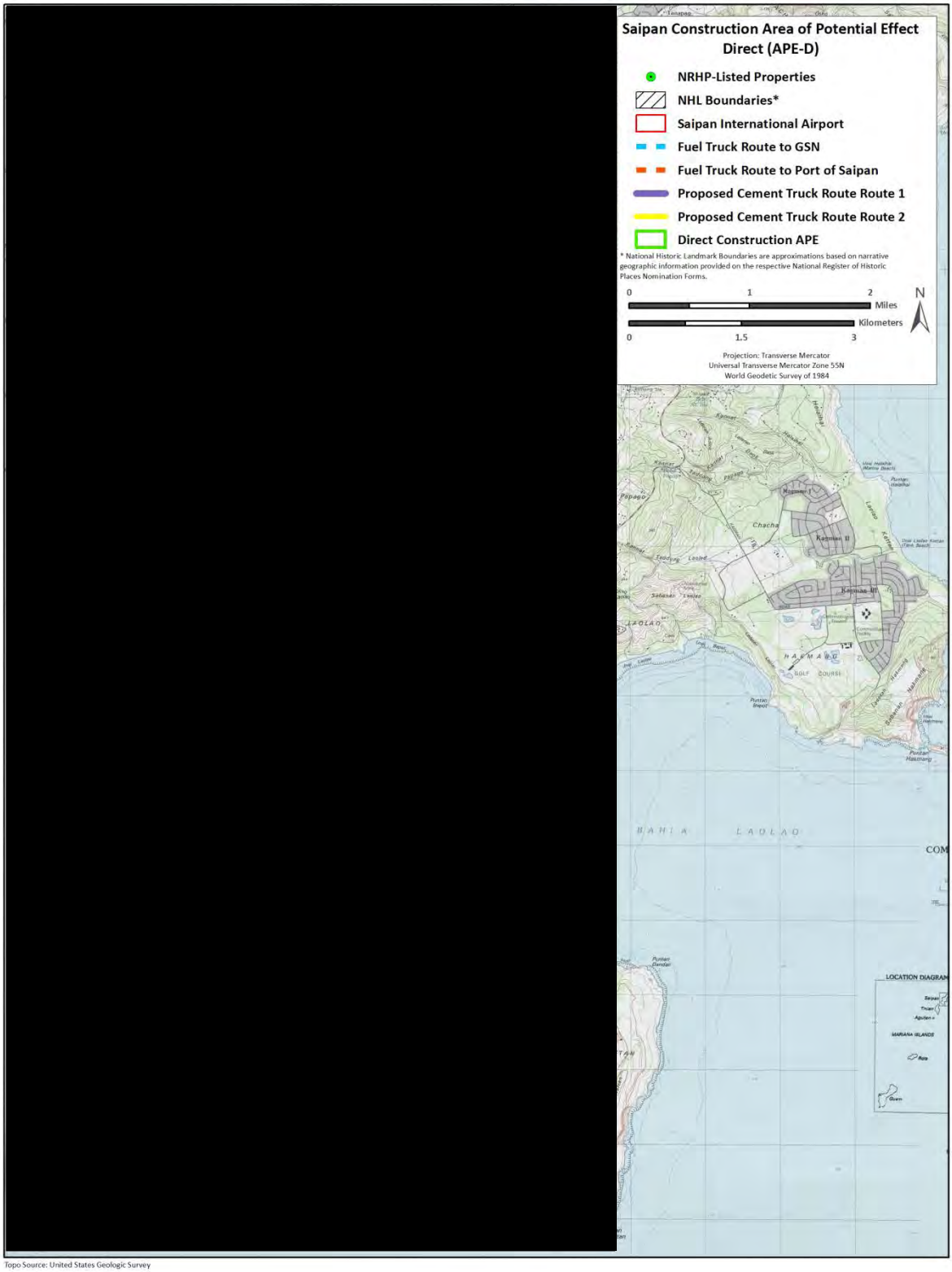

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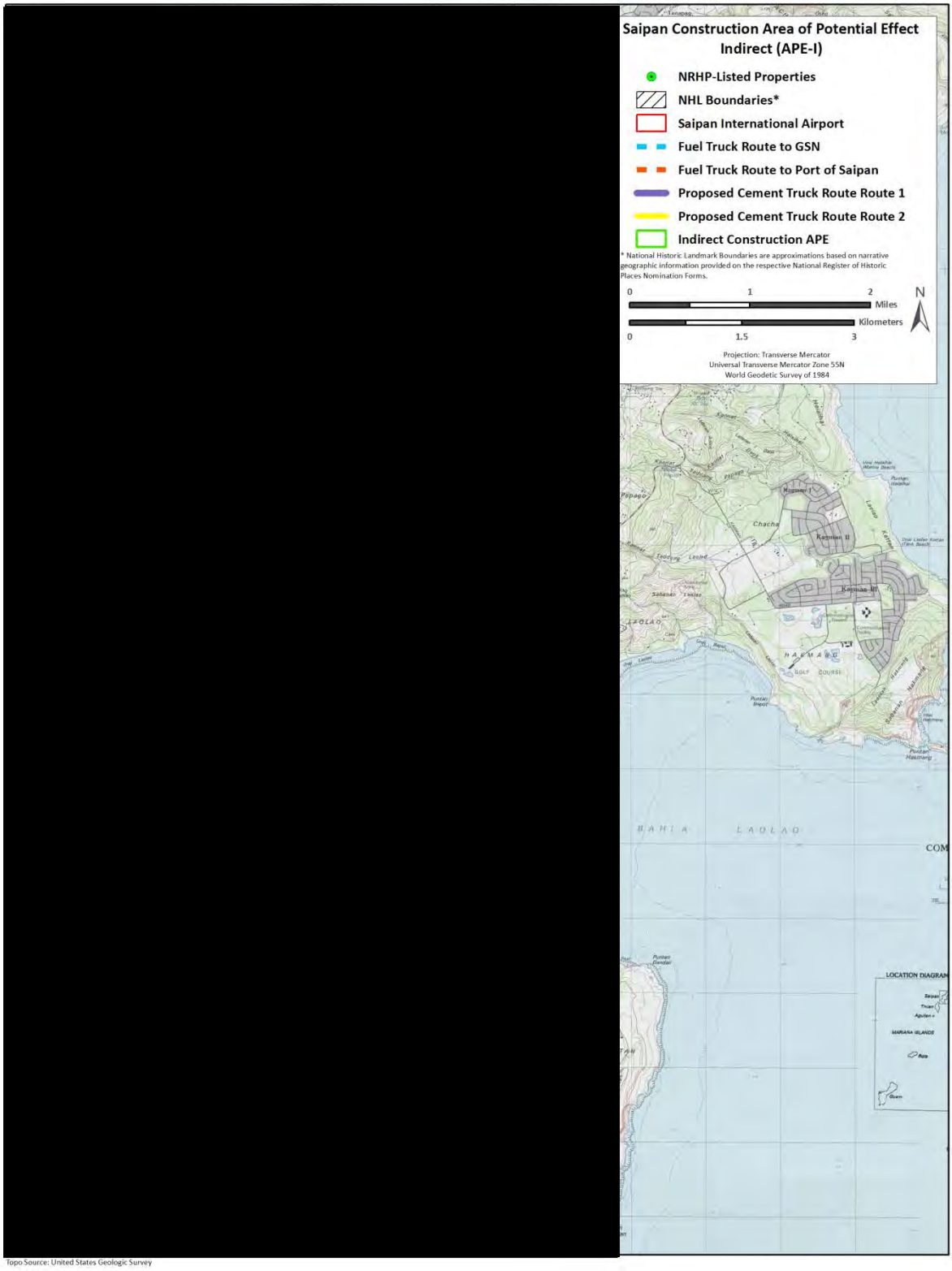

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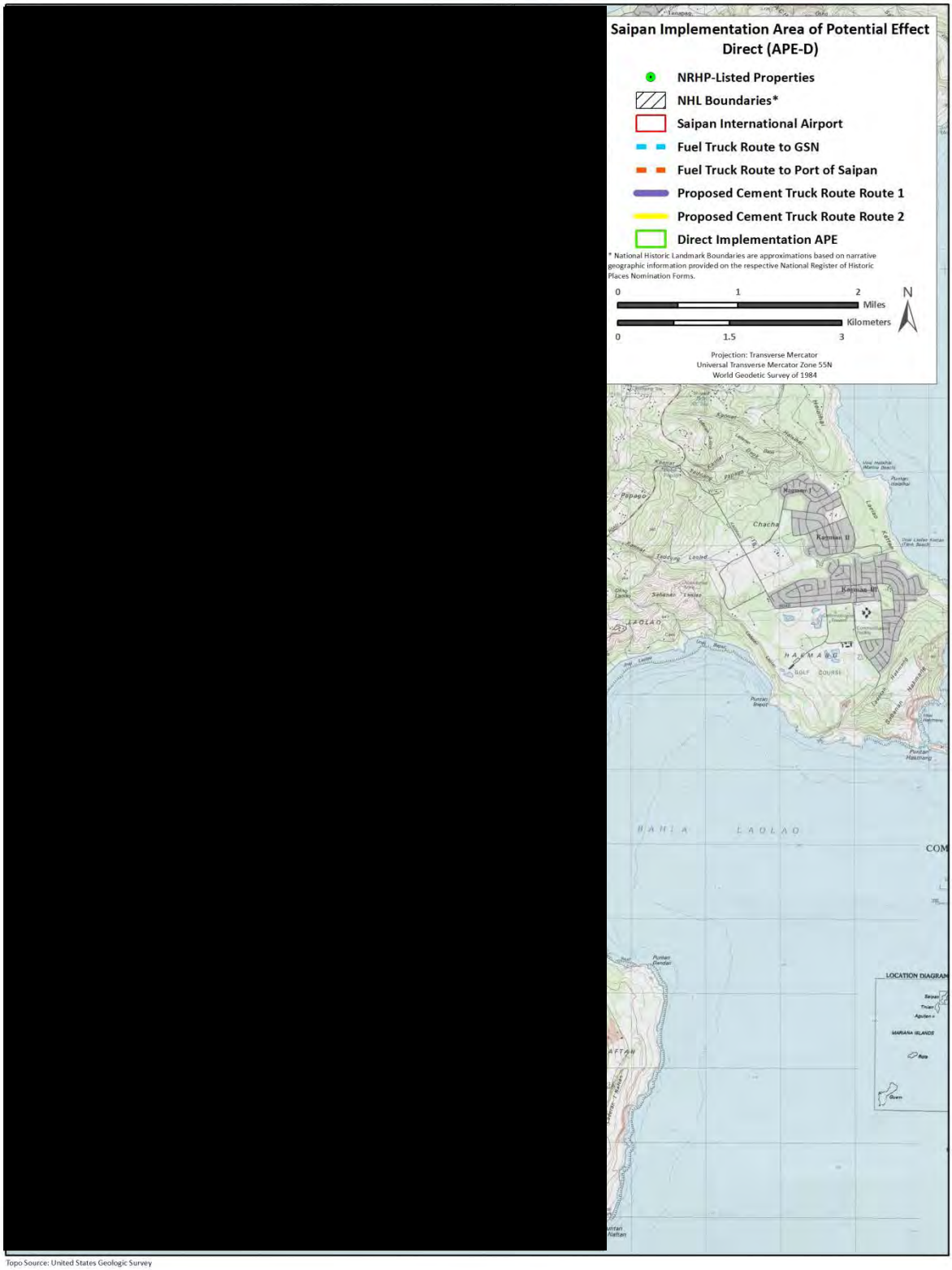

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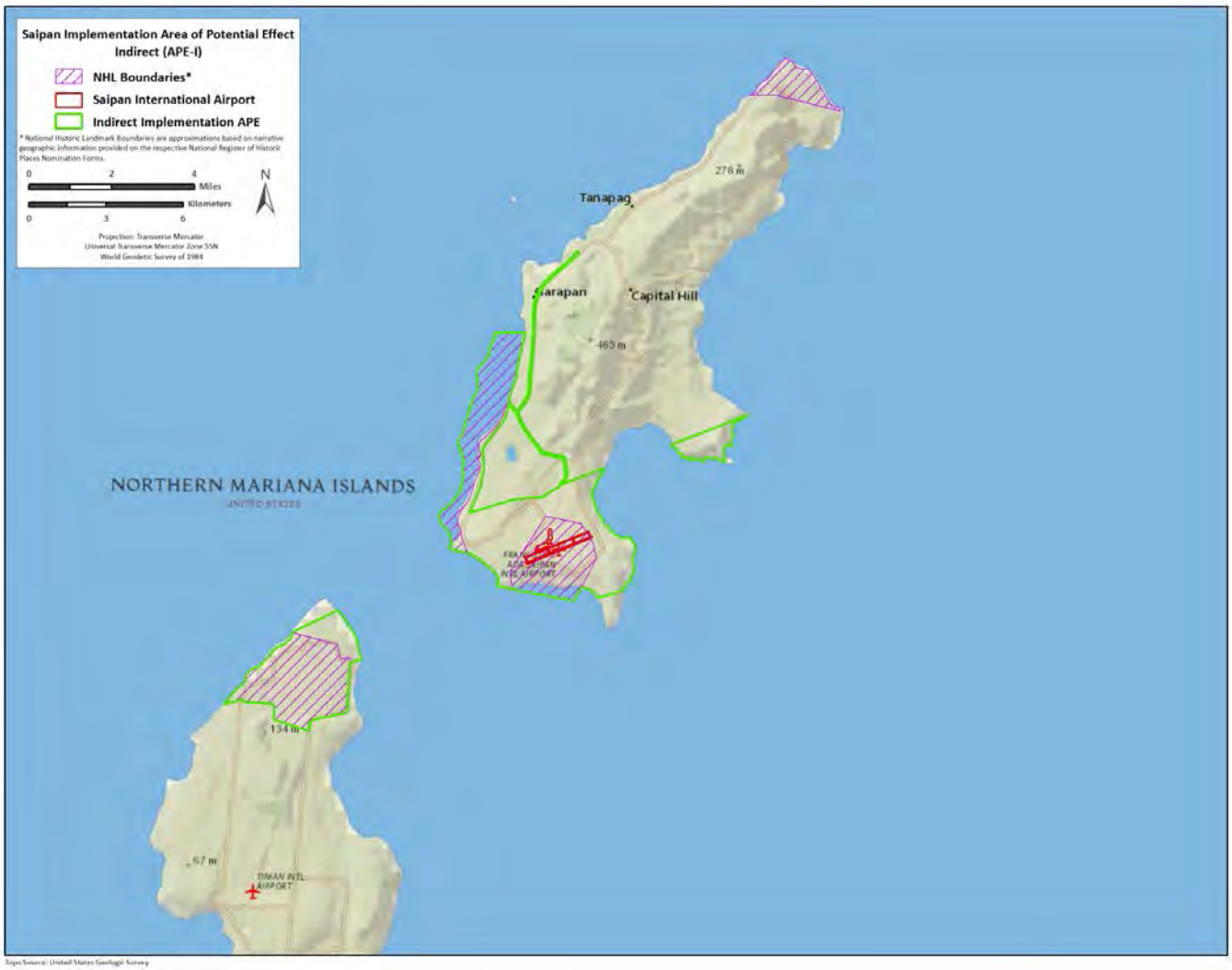

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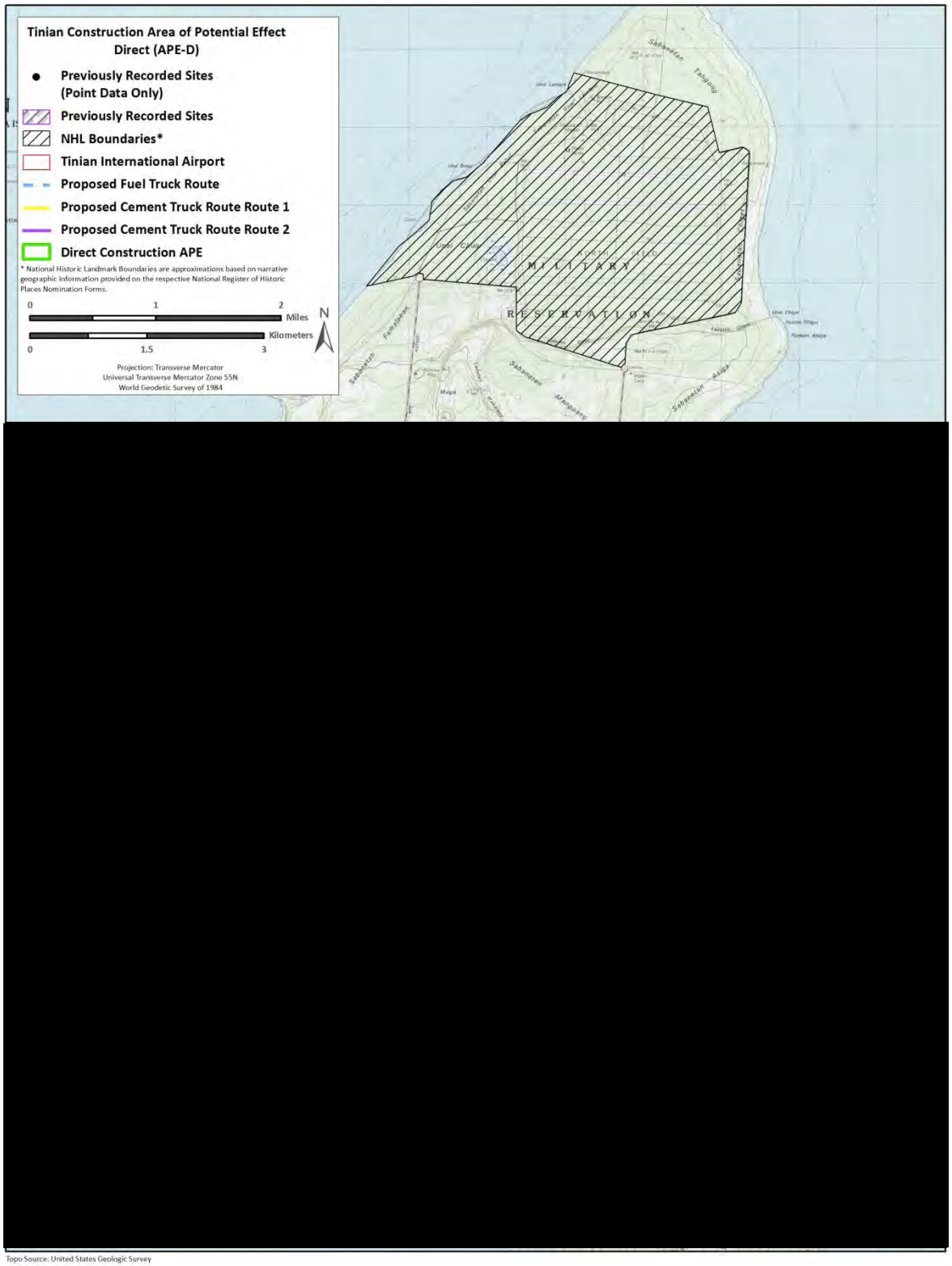

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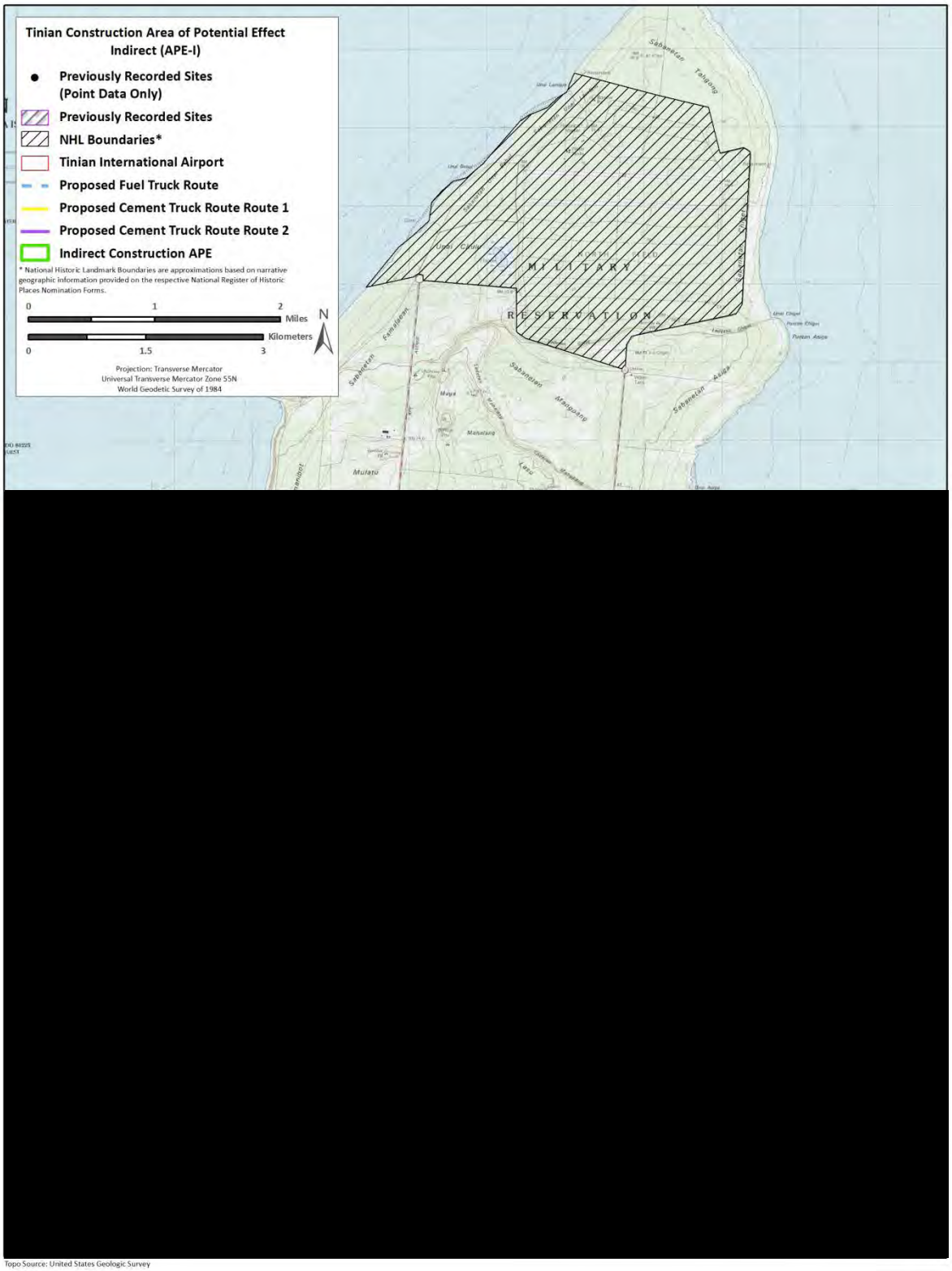

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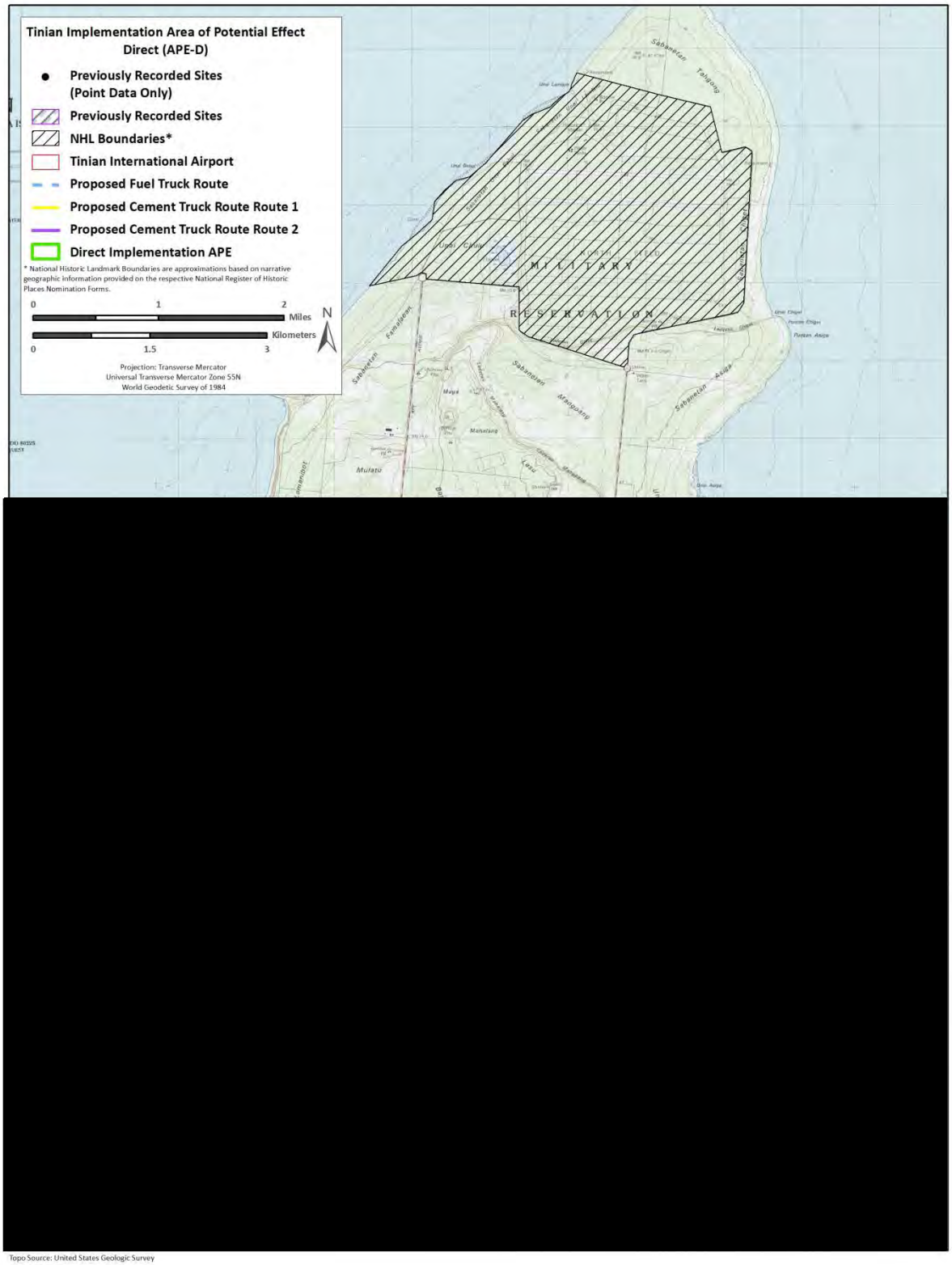

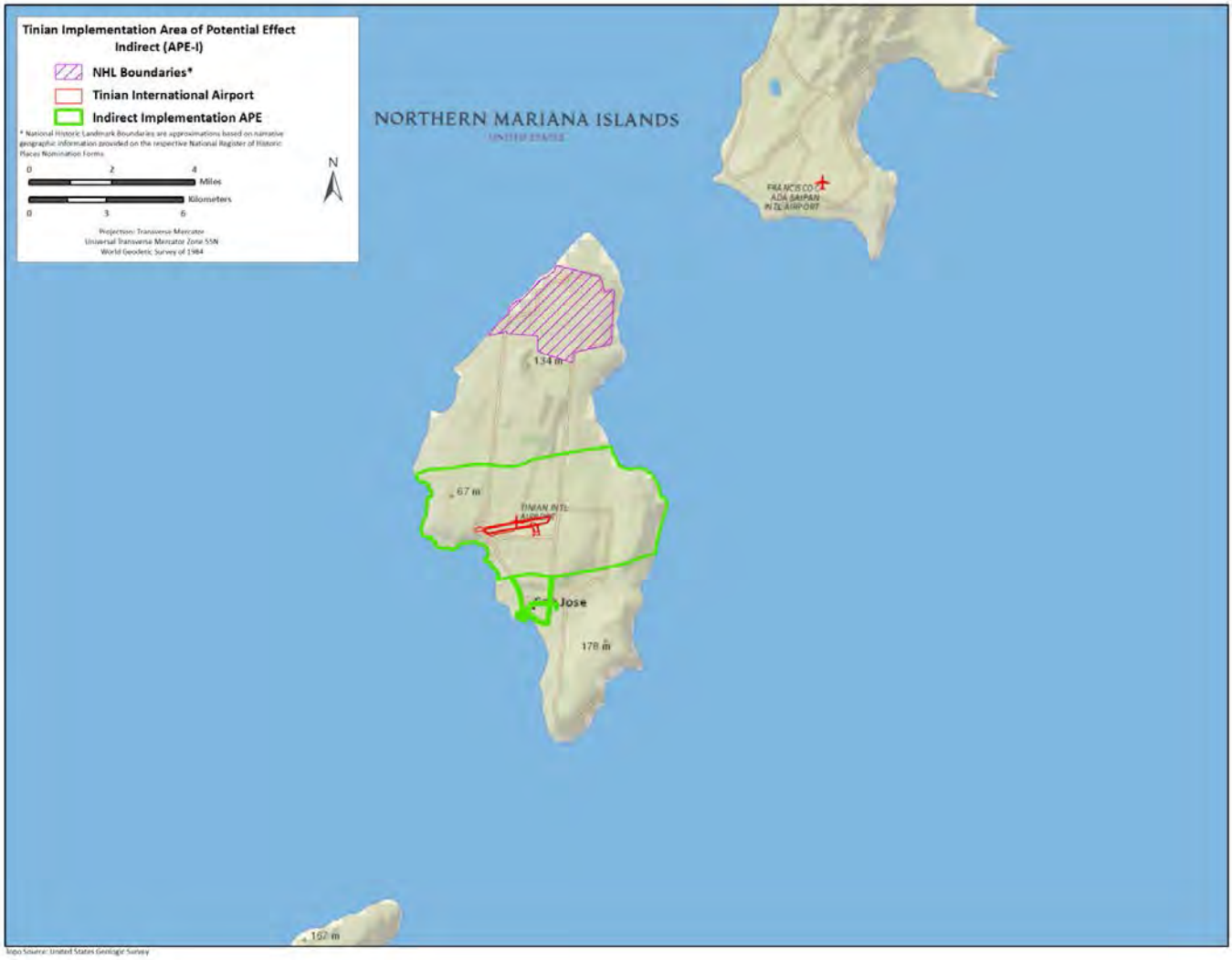
Tinian Implementation Area of Potential Effect
Indirect (APE-I)
NHL Boundaries*
Tinian International Airport
Indirect Implementation APE
* National Historic Landmark Boundaries are approximations based on narrative geographic information provided on the respective National Register of Historic Places Nomination Forms
0 2 4
Miles
0 3 6
Kilometers
N
Projection: Transverse Mercator
Universal Transverse Mercator Zone 55N
World Geodetic Survey of 1984
NORTHERN MARIANA ISLANDS
134 m
67 m
TINIAN INTL AIRPORT
San Jose
178 m
167 m
Topo Source: United States Geologic Survey

1. Introduction

This document presents a detailed description of the Area of Potential Effect (APE), historic properties in the APE, and the effects to those resources from the proposed U.S. Air Force (USAF), Pacific Air Forces (PACAF), Divert Activities and Exercises (Divert). The Divert action would improve an existing airport or airports and associated infrastructure in support of expanding mission requirements in the western Pacific. Under the Divert action, the USAF proposes to construct facilities and infrastructure at an existing airport or airports and necessary fueling facilities at a port to support a combination of cargo, fighter, and tanker aircraft and associated support personnel for periodic divert landings, joint military exercises, and humanitarian assistance and disaster relief efforts. Two alternative project areas in the Commonwealth of the Northern Mariana Islands (CNMI) for the Divert action are under consideration. The project itself will involve two phases: construction and implementation. Pursuant to 36 CFR 800.4, this document details the Areas of Potential Effects (APE) for both the Saipan and Tinian locations during both phases of the project and identified historic properties within the APE. Having defined the APE an identified potentially affected historic properties, an analysis of the potential for adverse effects is presented pursuant to 36 CFR 800.5.

2. Determination of the Area of Potential Effects

As defined in 36 CFR 800.16 (d), the APE "…means the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking." Because the Divert action involves multiple alternative project areas and phases, PACAF has defined eight APE's reflecting potential effects on the selected location, project phase, and whether effects are expected to be direct or indirect and include:

1. Saipan Construction Phase Area of Potential Effect – Direct (APE-SC-D)
2. Saipan Construction Phase Area of Potential Effect – Indirect (APE-SC-I)
3. Saipan Implementation Phase Area of Potential Effect – Direct (APE-SI-D)
4. Saipan Implementation Phase Area of Potential Effect – Indirect (APE-SI-I)
5. Tinian Construction Phase Area of Potential Effect – Direct (APE-TC-D)
6. Tinian Construction Phase Area of Potential Effect – Indirect (APE-TC-I)
7. Tinian Implementation Phase Area of Potential Effect – Direct (APE-TC-D)
8. Tinian Implementation Phase Area of Potential Effect – Indirect (APE-TC-I)

These APE's are illustrated in the cover maps and are described below.

2.1 Saipan

The modern Francisco C. Ada/Saipan International Airport (GSN) is completely contained within the boundaries of the Isley Historic District portion of the Landing Beaches, Aslito/Isley Field, and Marpi Point National Historic Landmark (NHL). Because of this landmark status, the historic property merits special consideration under 36 CFR 800.10. This document considers that an effect on any *contiguous* part of the NHL, or National Historic Landmark District (NHLD), to be an effect to the entire NHLD, though not necessarily the entire NHL. For instance, in the current analysis, PACAF finds potential direct and indirect effects to the Aslito/Isley Field NHLD, potential indirect effects to the Saipan Landing Beaches, and no effect to Marpi Point.

The proposed activity would also involve construction of new parking apron space. The project would build two separate parking aprons on the north side of the existing runway. The parking aprons would be constructed as two separate aprons instead of one area to avoid cultural resources, specifically, two Japanese air raid shelters. The total footprint of the proposed parking aprons would measure 963,744 square feet.

Temporary Munitions Storage Area

The proposed activity would also include the construction of a temporary munitions storage area approximately 1,750 feet south of the centerline of the runway at Saipan International Airport. The temporary munitions storage area would consist of an earth covered magazine (ECM) measuring approximately 3,264 square feet and an adjacent multi-cube magazine measuring 40,392 square feet, for a total footprint of approximately 43,656 square feet.

Hazardous Cargo and Arm/Disarm Pad

Construction of a hazardous cargo and arm/disarm pad would take place at the eastern portion of the taxiway and would measure approximately 194,534 square feet.

Aircraft Hangar

To store aircraft awaiting maintenance or repair, one aircraft hangar measuring approximately 180 by 195 feet would be constructed to the east of the eastern portion of the new parking ramp and apron. The hangar's total footprint would be approximately 35,100 square feet.

Maintenance Facility

The Divert action would also include construction of a new maintenance facility north of the new parking apron measuring approximately 6,000 square feet.

Fuel Receiving, Storage, and Distribution

To provide for jet fuel receiving, storage, and distribution needs, the Divert action would entail construction of a new aboveground storage tank at Saipan International Airport, as well as two aboveground storage tanks at the Port of Saipan next to the U.S. Army Reserve Center inland from the existing commercial fuel storage area. Between the airport and the port, the fuel system would occupy a total of approximately 582,653 square feet.

Because effects to specific properties that make up the entire Asltio/Isley Field NHLD are possible during the Construction Phase, the entire NHLD is included in the APE. It is important to note that there is a difference between the boundary presented for the Isley Field National Historic District in its nomination and the boundary for the Aslito/Isley Field portion of the NHL as presented in the landmark nomination. The landmark boundary cuts off some portions of the B-29 hardstand system that was included in the district boundary (Figure 2). Therefore, for the purposes of this consultation, PACAF considers the APE to include the maximum extent of the combined boundaries.

The construction of the two aboveground storage tanks at the Port of Saipan next to the U.S. Army Reserve Center is also included in the Construction Phase APE for Direct Effects.

2.1.2 Construction Phase – APE for Indirect Effects

In addition to these specific construction projects, the USAF plans to ship Divert-related construction material between the Port of Saipan and these locations at the airport using existing roads. However, a study conducted by the California Department of Transportation (Caltrans) in 2002 found that earthborn

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2.1.1 Construction Phase – APE for Direct Effects

The APE for the Saipan alternative for the proposed Divert action includes a total construction footprint of approximately 2,748,947 square feet (63.1 acres). Nearly all of the proposed facilities and infrastructure would be constructed at GSN, with a small portion of the project to be built at the port of Saipan. The proposed construction is split into several discrete elements, which are detailed below (Figure 1).

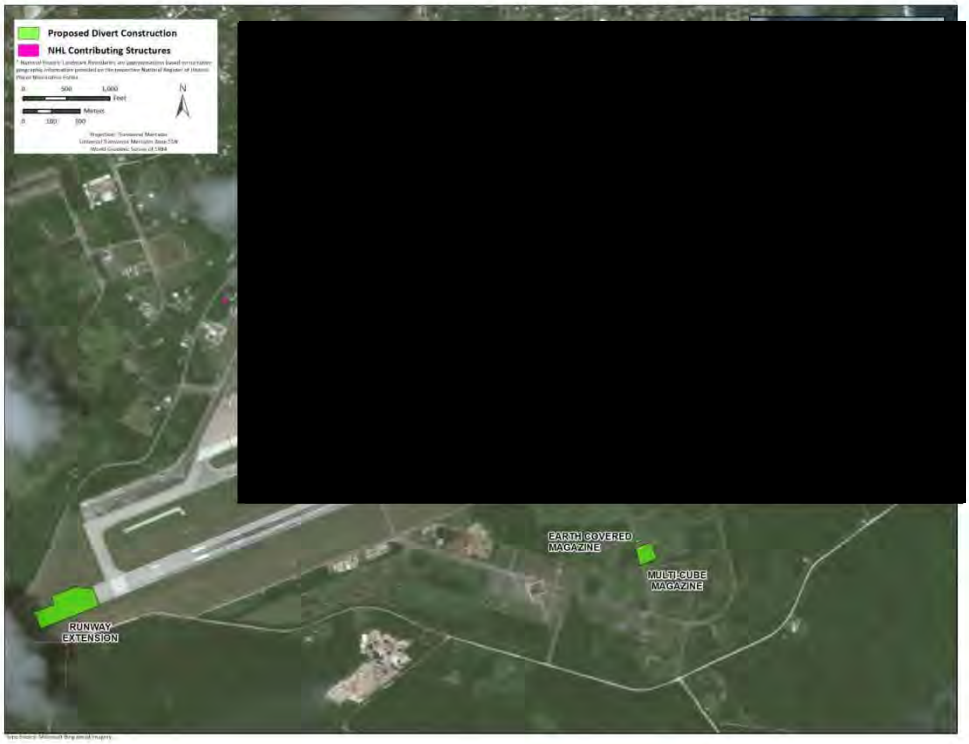


Figure 1. Proposed Divert Construction, Saipan Alternative

Runway and Parking Apron

Three options are under consideration for modifications to the existing runway and parking apron. Under Option A, Runway 07 (the southern runway) would be extended by 1,375 feet. Of that total, a portion 725 feet long and 150 feet wide plus 50 feet of paved shoulders would be built on the west end of the runway. The remaining portion measuring 650 feet long and 150 feet wide plus 50 feet of paved shoulders would be built on the east end of the runway. Under Option B, the runway would be expanded only on the east end with the addition of an expansion measuring 650 feet long and 150 feet wide plus 50 feet of paved shoulder. Under Option C, the runway would not be expanded. The proposed action would also upgrade pavement markings, lighting, and navigational aids. The total footprint of the runway expansion, including turnarounds, under Option A would be approximately 388,952 square feet.

Enclosure 2: Section 106 (NHPA) Findings and Determinations
Divert Activities and Exercises, Guam and Commonwealth of the Northern Mariana Islands

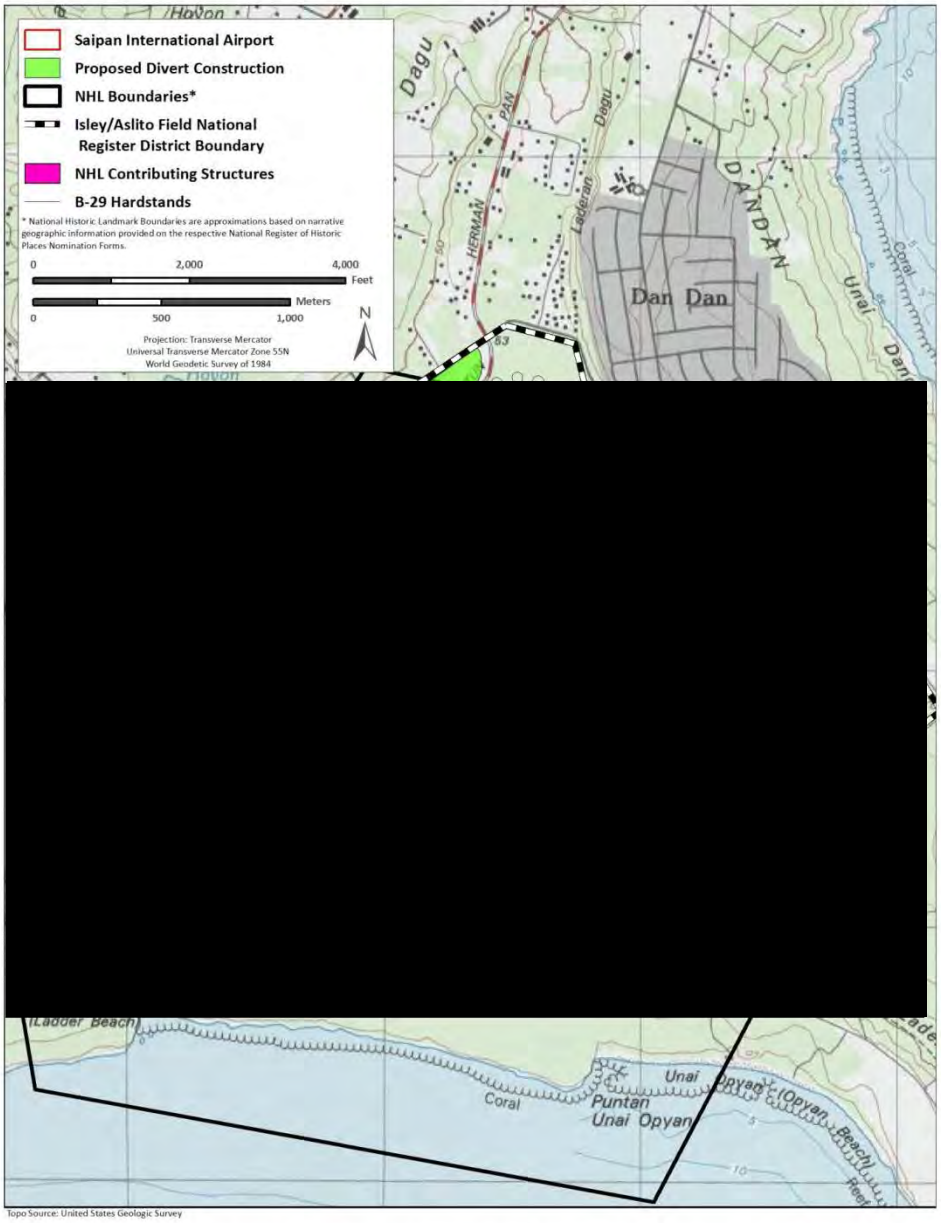


Figure 2. Aslito/Isley Field National Historic District portion of the Landing Beaches, Aslito/Isley Field, and Marpi Point NHLD.

vibration from transportation along existing paved roads has virtually no impact on historic buildings located more than 5 meters away and that, in fact, such vibrations drop below the perception threshold beyond 45 meters. The study was very conservative, considering heavy trucks as the vehicular source of vibration (similar to the construction trucks likely to be used during Divert construction) and assuming wood framed historic structures. As a result, Divert transportation routes during construction are only considered here for their potential to cause indirect adverse effects due to vibration within the 45-meter threshold of perception. Therefore, the Construction Phase APE for Indirect Effects includes the Aslito/Isley Field NHLD and the construction area for fuel tanks at the Port of Saipan plus a 45-meter buffer around the proposed routes for cement truck traffic during construction.

2.1.3 Implementation Phase – APE for Direct Effects

In addition to use of the new facilities built during the Construction Phase, temporary billeting of personnel will occur during Divert training exercises and missions. Normally this would involve the use of local commercial lodging. However, in some circumstances, a Basic Expeditionary Airfield Resources (BEAR) kit may be used. The BEAR kit would occupy approximately 12.3 acres (534,308 square feet) in a soccer field near the entrance to the airport. Infrastructure to the field would be improved to support the BEAR kit. Billeting for Divert-related personnel under the Saipan alternative would be temporary. Because this area is also within the boundaries of the Aslito/Isley Field NHLD, the Implementation APE for Direct Effects includes the Aslito/Isley Field NHLD and the construction area for fuel tanks at the Port of Saipan.

2.1.4 Implementation Phase – APE for Indirect Effects

Existing roads will also be used during implementation to ship fuel from the port to the airfield. However, as mentioned earlier, earthborn vibration from transportation along existing paved roads drops below perceptible levels at a distance 45 meters. As a result, Divert transportation routes during implementation are only considered here for their potential to cause indirect adverse effects due to vibration within the 45-meter threshold of perception.

The implementation phase of the Divert project could also have indirect adverse effects on historic properties in the form of increased aircraft noise. Under 36 CFR 800.5, effects include the introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features. On Saipan, increased aircraft noise would constitute an indirect adverse impact on the integrity of feeling of the Saipan Landing Beaches and Aslito/Isley Field portions of the Saipan Landing Beaches, Aslito/Isley Field, and Marpi Point NHL. Increased aircraft noise would also have an indirect adverse impact on the integrity of feeling of the Tinian Landing Beaches, Ushi Point Field, and North Field NHL on Tinian.

Therefore, the Implementation Phase APE for Indirect Effects includes all land areas under noise contour lines as they are currently drawn for the Divert exercises and missions. As mentioned above for the Aslito/Isley Field NHLD, where these effects contact historic districts, as with the Saipan Landing Beaches portion of the Landing Beaches, Aslito/Isley Field, and Marpi Point NHL and Tinian Landing Beaches, Ushi Point Field, and North Field NHL on Tinian, the entire district is included in the APE. The Implementation Phase APE for Indirect Effects on Saipan also includes a 45-meter buffer around the proposed routes for fuel trucks between GSN and the Port of Saipan during implementation as well as the port itself.

Note: Culturally sensitive information has been redacted from this page.

2.2 Tinian

2.2.1 Construction Phase – APE for Direct Effects

The APE for the Tinian alternative for the Divert action includes a total construction footprint of approximately 4,182,517 square feet (96.0 acres), all but approximately 41,300 square feet of which would be at the Tinian International Airport with the remainder at the port of Tinian (Figure 3). The proposed construction is split into several discrete elements, which are detailed below.

Figure 3. Proposed Divert construction, Tinian alternative.

Runway and Parking Apron

Two options are under consideration for expansion of the runway at Tinian International Airport. Under Option A, the runway would be extended to a total of 10,000 feet long by adding a segment 1,400 feet long by 150 feet wide plus 50 feet of paved shoulders, plus a 1,000 foot long Runway Safety Area. The extension would be to the eastern end of the runway, and Broadway Road would therefore be rerouted to the east of its current position. The total footprint of Option A would be approximately 539,748 square feet. Under Option B, the runway would not be extended.

To accommodate Divert aircraft, a parking apron at Tinian International Airport would be constructed to approximately 1,660,000 square feet.

Temporary Munitions Storage Area

The Tinian alternative would also include the construction of a temporary munitions storage area north of the airport consisting of an earth covered magazine (ECM) and an adjacent multi-cube magazine have a total footprint of approximately 37,062 square feet.

Hazardous Cargo and Arm/Disarm Pad

A combination hazardous cargo pad and arm/disarm pad would be built at the southeastern side of the runway have a total footprint of approximately 454,719 square feet.

Aircraft Hangar

The project would also involve the construction of an aircraft hangar south of the runway measuring approximately 180 by 195 feet, for a total footprint of approximately 35,100 square feet.

Maintenance Facility

A maintenance facility measuring approximately 6,000 square feet would be built adjacent to the proposed hanger and south of the proposed parking apron.

Fuel Receiving, Storage, and Distribution

As part of the Tinian alternative for the Divert project, jet fuel receiving, storage, and distribution facilities would be constructed at the airport and at the Port of Tinian. In total, between the airport and the port, the fuel system would occupy approximately 679,808 square feet. Approximately 41,300 square feet of that total would be at the port of Tinian.

The Construction Phase APE for Direct Effects includes these construction footprints at TNI and the Port of Tinian.

2.2.2 Construction Phase – APE for Indirect Effects

In addition to these specific construction projects, the USAF plans to ship Divert-related construction material between the Port of Tinian and construction locations at the airport using existing roads. Therefore, the Construction Phase APE for Indirect Effects includes the construction areas at TNI and the Port of Tinian plus a 45-meter buffer around the proposed routes for cement truck traffic during construction (see previous discussion).

2.2.3 Implementation Phase – APE for Direct Effects

In addition to use of the new facilities built during the Construction Phase, temporary billeting of personnel will occur during Divert training exercises and missions. Because of the limited supply of commercial lodging on Tinian, all personnel would be housed at a BEAR kit that would occupy approximately 17.8 acres (approximately 773,303 square feet) south of TNI. Infrastructure to the parcel would be improved to support the BEAR kit. The Implementation APE for Direct Effects therefore includes the proposed facilities at TNI and the Port of Tinian plus the BEAR kit site near the airport.

2.2.4 Implementation Phase – APE for Indirect Effects

Existing roads will be used during implementation to ship fuel from the port to the airfield. Further, under the high-noise scenario for Divert activities and exercises at TNI, noise levels would increase near the airport but not in San Jose. As a result, the Implementation Phase APE for Indirect Effects includes all land areas under noise contour lines as they are currently drawn for the Divert exercises and missions, a 45-meter buffer around the proposed routes for fuel trucks between TNI and the Port of Tinian during implementation, and the port itself.

3. Identification of Historic Properties

Having identified the APE, PACAF conducted a review of existing information regarding historic properties within the APE and has sought, or is seeking, additional information from consulting parties pursuant to 36 CFR 800.4 (a)(2)&(3). Although no Federally recognized Indian tribes or Native Hawaiian organizations exist in the CNMI pursuant to 36 CFR 800.4(a)(4), PACAF is also reaching out to Chamorro and Carolinian representatives. PACAF also contracted a cultural resources consulting firm, HDR, to perform a Phase I cultural resources survey and inventory of the proposed construction sites near GSN. The following tables and discussion are based on findings from these efforts and represent PACAF's good faith effort to identify historic properties within the APE pursuant to 36 CFR 800.4 (b).

3.1 Historic Properties within the APE for the Saipan Alternative

Table 1. Known Historic Properties, Saipan Alternative

HISTORIC PROPERTIES – SAIPAN ALTERNATIVE	POTENTIAL EFFECTS			
	CONSTRUCTION		IMPLEMENTATION	
	Direct	Indirect	Direct	Indirect
Saipan Landing Beaches, Aslito/Isley Field, and Marpi Point NHL, including:	P	P	P	P
Marpi Point	N	N	N	N
Saipan Landing Beaches	N	N	N	Y
Aslito/Isley Field NHLD, including:	P	Y	Y	Y
Isley Field NRHP Historic District, including:	P	Y	Y	Y
Japanese Barracks Complex[1]	N	Y	N	Y
Japanese Military Hospital[1]	N	Y	N	Y
Japanese Engineers Barracks[1]	N	Y	N	Y
Japanese Barracks Complex[1]	N	Y	N	Y
Japanese Staff Quarters[1]	N	Y	N	Y
Japanese Pyrotechnics Bldg.[1]	N	Y	N	Y
Japanese Garage[1]	N	Y	N	Y
Japanese Sentry Post[1]	N	Y	N	Y
Japanese Road[1]	N	Y	N	Y
Japanese Dispensary[1]	N	Y	N	Y
Japanese Administration Building[1]	N	Y	N	Y
Japanese Power Plant[1]	N	Y	N	Y

HISTORIC PROPERTIES* – SAIPAN ALTERNATIVE	POTENTIAL EFFECTS			
	CONSTRUCTION		IMPLEMENTATION	
	Direct	Indirect	Direct	Indirect
Japanese Oxygen Generating Building[1]	N	Y	N	Y
Japanese Repair and Maintenance Area #1[1]	N	Y	N	Y
Japanese Repair and Maintenance Area #2[1]	N	Y	N	Y
Japanese Semi Underground Bomb Storage[1]	N	Y	N	Y
Japanese Airplane Hangers[1]	N	Y	N	Y
Japanese Air Operations Building[1]	N	Y	N	Y
Japanese Gasoline Storage Bunkers[1]	N	Y	N	Y
Japanese Power Plant Building[1]	N	Y	N	Y
Japanese Unidentified Structure[1]	N	Y	N	Y
Japanese Water Supply Facility[1]	N	Y	N	Y
Japanese Gasoline Bunker[1]	N	Y	N	Y
Japanese Radio Station[1]	N	Y	N	Y
Okinawan Housing Area[1]	N	Y	N	Y
Japanese Service Apron[1]	N	Y	N	Y
U.S. North Service Apron[1]	N	Y	N	Y
U.S. Maintenance and Repair Complex[1]	N	Y	N	Y
U.S. B-29 Hardstands[1]	P	Y	P	Y
Japanese Air Raid Bunkers (11)[2]	N	Y	P	Y
Runways (2)[2]	N	Y	P	Y
Isley Field NRHP Historic District, newly recorded features,[3] recommended **contributing**:	N	Y	N	Y
Concrete foundations with drain (2)	N	Y	N	Y
Japanese bunker	N	Y	N	Y
Water catchment features (2)	N	Y	N	Y
Bottle dump	N	Y	N	Y
Isley Field NRHP Historic District, newly recorded features,[3] recommended **non-contributing**:	P	Y	N	Y
Concrete water tower	Y	Y	N	Y
Concrete foundation with drain	Y	Y	N	Y
Concrete slab	N	Y	N	Y
Concrete foundation	N	Y	N	Y
Concrete pad	Y	Y	N	Y
Latte phase isolated occurrences (3)	N	Y	N	Y
Japanese Hospital, Garapan	N	N	N	N
Camaneyan Kristo Rai (bell tower), Garapan	N	N	N	N
Japanese 20mm Cannon Blockhouse, Agingan	N	N	N	Y
Tinian Landing Beaches, Ushi Point Field, and North Field NHL	N	N	N	Y

*This list is based on current knowledge about the APE; it is possible that unrecorded or undiscovered historic properties, especially buried archaeological sites, exist in the area.

Properties listed in **Bold** are individually listed on the NRHP.

[1] These individual structures or features were identified by Denfeld and Russell (1984); some of them are combined on the NRHP nomination form.

HISTORIC PROPERTIES – SAIPAN ALTERNATIVE	POTENTIAL EFFECTS			
	CONSTRUCTION		IMPLEMENTATION	
	Direct	Indirect	Direct	Indirect

[2] These features are noted in the NRHP nomination form but were not evaluated individually by Denfeld and Russell (1984).

[3] These structures, features, and sites were recorded during a Phase I cultural resources survey of proposed construction areas within the Aslito/Isley Field NHLD and at the Saipan port in support of the Divert undertaking (HDR 2012).

POTENTIAL EFFECTS: Y = The property could be adversely affected
N = The property will not be adversely affected
P = Part of the property could be adversely affected

Numerous historic properties exist in or near the APE for the Saipan alternative (Table 1). With the exception of the aboveground storage tanks at the Port of Saipan and existing roads, all proposed Divert-related construction and implementation activities would take place within the boundaries of the Aslito/Isley Field portion of the Landing Beaches, Aslito/Isley Field, and Marpi Point NHL. Aslito/Isley Field was nominated to the National Register in 1980 as the Isley Field Historic District but was later included in a NHL recommendation for three of Saipan's World War II-era sites. The separate World War II-related properties were listed as the Saipan Landing Beaches, Aslito/Isley Field, and Marpi Point National Landmark on February 4, 1985 (National Historic Landmark System [NHLS] No.: 85001789). Because the Saipan Landing Beaches, Aslito/Isley Field, and Marpi Point NHL includes three discontinuous areas, they are considered separately in this analysis. We use the term National Historic Landmark District (NHLD) to distinguish between the NHL as a whole, and the spatially separate landing beaches, Marpi Point, and Aslito/Isley Field.

When Aslito/Isley Field was nominated as a historic district, the nomination listed the following 27 buildings and structures as contributing elements:

The operations center built and used by the Japanese and later used for similar purposes by the U.S. 73rd Bombardment Wing,
Four gas drum storage bunkers,
A power plant,
A building to house an electric generator,
A semi-subterranean bomb storage facility,
A defensive gun emplacement atop the bomb storage facility,
A semi-subterranean fuel storage facility,
Three associated fuel tanks,
A pump house,
A torpedo regulating shop,
A cold storage building,
Eleven air raid shelters,
Two runways, and
"(H)undreds of hardstands and foundations from the U.S. period."

When Aslito/Isley Field was included in the Saipan Landing Beaches, Aslito/Isley Field, and Marpi Point National Landmark on February 4, 1985, the nomination form listed the following structures as contributing elements at the airfield: the air operations building, two power plants, four gasoline storage buildings, fourteen air raid shelters (an increase of three shelters from the district nomination), an aerial bomb magazine, a partly underground structure for gasoline storage tanks, and "various structural ruins."

The nomination also lists the two runways and notes that "the nearly seven miles of B-29 taxiways and over 100 out of 181 hardstands (parking areas) around the runways may be traced in part." The nomination also lists the site of the 73rd Bombardment Wing's administrative area south of the runways. Finally, it lists the Japanese blockhouse on the beach at Unai Opyan. The nomination specifically excludes the site of Kobler Field southwest of Isley Field, which by 1985 had been converted into a large housing development and had therefore "lost the greater part of its integrity."

The Saipan Landing Beaches, Aslito/Isley Field, and Marpi Point NHL nomination form does not have a map of the landmark's boundaries, a map of the elements contributing to the landmark, or a comprehensive itemized list of those contributing elements.

The HDR survey of construction areas conducted in support of the Divert action resulted in the identification of three pre-contact (Latte phase) isolated artifact occurrences and 11 historic features. The features include a Japanese bunker, several water catchment features, concrete foundations and pads, and a bottle dump. These features and materials probably date between 1935 and 1945. The three pre-contact occurrences are comprised of light scatters of Latte period sand-tempered sherds in disturbed soils and contexts.

Several properties that are individually listed on the NRHP are located near the APE including the bell tower (Campaneyan Kristo Rai) and Japanese hospital in Garapan and a Japanese 20mm Cannon Blockhouse in Agingan.

3.2 Historic Properties within the APE for the Tinian Alternative

The vast majority of proposed Divert-related construction and ongoing activity would take place at the TNI. Previous research has recorded a large number of historic resources near the airport. The site of the pre-war Gurguan Airfield has been identified immediately west of the modern airport and appears as a long, narrow rectangle. This site has been recommended as eligible for listing on the NRHP. All of West Field, the Japanese-era airstrip as modified by U.S. forces during the Second World War and the basis of the modern airport, has also been recorded as a historic resource and has been recommended as eligible for listing on the NRHP. Pavement, hardstands, and other features associated with West Field are still visible on aerial photographs. However, background research did not find a boundary for the West Field site, and it is therefore unclear the degree to which the modern airport preserves intact Second World War-era features. The site of the WWII-era U.S. Naval Air Base HQ has been identified at the east end of the modern runway. This site has also been recommended as eligible for listing on the NRHP.

Table 2. Known Historic Properties, Tinian Alternative

HISTORIC PROPERTIES – TNI ALTERNATIVE	POTENTIAL EFFECTS			
	CONSTRUCTION		IMPLEMENTATION	
	Direct	Indirect	Direct	Indirect
House of Taga	N	P	N	P
NKK Administration Building, San Jose	N	N	N	N
Ice building, San Jose	N	N	N	P
Laboratory, San Jose	N	N	N	N
Japanese building (probable store), San Jose	N	N	N	P
Archaeological sites related to pre-WWII Japanese occupation near TNI (3)	N	N	N	Y

HISTORIC PROPERTIES – TNI ALTERNATIVE	POTENTIAL EFFECTS			
	CONSTRUCTION		IMPLEMENTATION	
	Direct	Indirect	Direct	Indirect
Gurguan Airfield	N	N	N	Y
West Field	N	N	N	Y
US Naval Air Base HQ	N	N	N	Y
US anti-aircraft artillery sites (2)	N	N	N	Y
Leposarium I & Leposarium II Latte phase sites (TN-594)	N	N	N	Y

*This list is based on current knowledge about the APE; it is possible that unrecorded or undiscovered historic properties, especially buried archaeological sites, exist in the area.

1. Properties listed in **Bold** are individually listed on the NRHP.
2. All other properties listed here have been recommended eligible listing on the NRHP.

POTENTIAL EFFECTS: Y = The property could be adversely affected
N = The property will not be adversely affected
P = Part of the property could be adversely affected

4. Assessment of Adverse Effects

According to 36 CFR 800.5(a)(1), "…(a)n adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association." The following discussion outlines PACAF's application of the criteria of adverse effect to cultural resources identified on Saipan and Tinian during both the implementation and construction phases of the project.

4.1 Potential Adverse Effects to Cultural Resources – Saipan Alternative

Divert-related construction, the shipment of Divert-related construction material, and ongoing Divert operations under the Saipan alternative would have potential direct and indirect adverse effects on cultural resources on Saipan.

4.1.1 Potential Direct Construction Phase Effects to Cultural Resources

Divert-related construction at GSN has the potential to have direct adverse effects on the Asltio/Isley Field NHLD by altering the integrity of the property's location, design, setting, materials, workmanship, feeling, or association, per 36 CFR 800.5.

All of the Divert-related construction footprints at GSN, with the exception of the extensions to the runway, would be constructed in the general vicinity of the locations of B-29 hardstands built by U.S. forces during the Second World War. Construction could therefore potentially directly affect the integrity of WWII-era hardstands that represent a contributing element to the National Historic Landmark.

Note that the Phase I Cultural Resources survey conducted in support of the project did not observe intact hardstand pavement within the proposed construction footprints of individual elements of the Divert project. The report also observed that WWII-era pavements could be very deeply buried or could have been destroyed by vegetation growth, post-war land clearance, or other forces.

The Phase I survey also found that the construction footprints of the proposed Divert-related structures at GSN would not directly impact any of the standing historic structures (listed above) that constitute contributing elements to the NHLD.

The construction of Divert-related facilities would have no direct effects to the Landing Beaches portion of the NHL, which would see no modifications as part of the proposed Divert project. Divert-related construction would also have no adverse effects (direct or indirect) to the Marpi Point portion of the NHL, which is far to the north of all proposed actions.

Divert-related construction of aboveground fuel storage tanks at the Port of Saipan would have no direct adverse effects to cultural resources at the port. Although the area of the modern port was the site of Navy Seabee activity during the war, no evidence of this remains and the project construction footprint is well inland from where these activities are thought to have taken place. The port is not part of the NHL, nor is the construction footprint on or near an NRHP-listed or NRHP-eligible archaeological or historic resource.

During construction of Divert-related facilities, construction materials would be transported by truck along existing roads from the port to the airport. Construction traffic would pass close to (within .1 miles) the NRHP-listed Japanese hospital and Campaneyan Kristo Rai in Garapan.

4.1.2 Potential Indirect Construction Phase Effects to Cultural Resources

With the exception of the aboveground storage tanks at the port of Saipan, all proposed Divert-related construction would take place within the boundaries of the Aslito/Isley Field NHLD. Specifically, the construction of new Divert-related facilities around existing historic structures at the airport would potentially alter the feeling of those historic structures that contribute to the NHLD.

4.1.3 Potential Implementation Phase Direct and Indirect Effects to Cultural Resources

The proposed BEAR kit location at GSN is immediately adjacent to two historic structures (bunkers) that are contributing elements to the Aslito/Isley Field NHLD. The billeting of personnel at the BEAR kit location during Divert activity would occur when adequate commercial billeting is limited for some reason. This temporary billeting of personnel could have potential adverse effects. However, this area has been used in the past for temporary military billeting during exercises, military personnel are briefed and educated on preservation and protection of historic structures.

Billeting of Divert personnel at the BEAR kit within the Aslito/Isley Field NHLD could have indirect adverse effects on the integrity of feeling and setting of the landmark by altering the number of visitors to the landmark and by increasing traffic at the landmark. In addition, fuel supply trucks operating as part of Divert activities could potentially have direct and indirect adverse effects to the landmark by increasing vibration effects to standing structures and by increasing traffic volumes within the landmark boundaries, although, as mentioned above, a 2002 study conducted by the Caltrans found that earthborn vibration from transportation along existing paved roads has virtually no impact on historic buildings, especially concrete buildings that withstood WWII.

The implementation phase of the Divert project would also have an indirect adverse effect on historic properties in the form of increased aircraft noise under the high-noise scenario for Divert activities and exercises, which involves F-16 and F-22 fighter aircraft use of Saipan International Airport. Under 36 CFR 800.5, effects include the introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features. On Saipan, increased aircraft noise would constitute an indirect adverse impact on the integrity of feeling of the Saipan Landing Beaches and

Aslito/Isley Field portions of the Saipan Landing Beaches, Aslito/Isley Field, and Marpi Point NHL as well as the Japanese 20mm Cannon Blockhouse on the south coast of Saipan. Increased aircraft noise would also have an indirect adverse impact on the integrity of feeling of the Tinian Landing Beaches, Ushi Point Field, and North Field NHL on Tinian.

4.2 Potential Adverse Effects to Cultural Resources – Tinian Alternative

Previous cultural resources research on Tinian suggests that Divert-related construction and ongoing Divert-related activity could potentially have direct and indirect adverse effects on historic properties. San Jose contains several NRHP-listed properties, and many historic sites have been recorded close to TNI (Figure 4).

Note that although Tinian is home to the Tinian Landing Beaches, Ushi Point Field, and North Field NHL, the landmark is well to the north of the Divert action APE and the resource is unlikely to experience any direct or indirect adverse effects as a result of the action except under the Saipan Alternative (see above).

4.2.1 Potential Direct Construction Phase Effects to Cultural Resources

Construction of fuel storage and distribution facilities at the Port of Tinian would have no known direct effects to historic resources. The port does not contain known NRHP-listed or NRHP-eligible properties.

During construction of Divert-related facilities on Tinian, construction materials would be transported by truck from the port to the airport. Construction traffic would pass close to (within .1 miles) the NRHP-listed House of Taga and the Nanyo Kohatsu Kabushiki Kaisha Ice Storage Building in San Jose (Figure 5). Construction traffic has no potential to cause adverse effects to these structures, since, as noted above for transportation routes on Saipan, earthborn vibration from transportation along existing paved roads has virtually no potential to effect historic buildings (Caltrans 2002).

4.2.2 Potential Indirect Construction Phase Effects to Cultural Resources

There are no Construction Phase, indirect effects to known historic properties for the Tinian Alternative. However, effects to unrecorded or previously undiscovered cultural resources are possible.

4.2.3 Potential Implementation Phase Direct and Indirect Effects to Cultural Resources

Because of the limited precision of the boundaries of the historic sites recorded near Tinian International Airport, it is not possible to evaluate whether use of the proposed BEAR kit location for temporary living quarters would cause adverse effects to these resources.

Divert-related fuel truck traffic from the port to the airport could also have indirect adverse effects to the NRHP-listed House of Taga, Nanyo Kohatsu Kabushiki Kaisha Ice Storage Building, and a Japanese-era structure of unknown function in San Jose. However, any effects would be short-lived and would only occur during Divert activities and exercises.

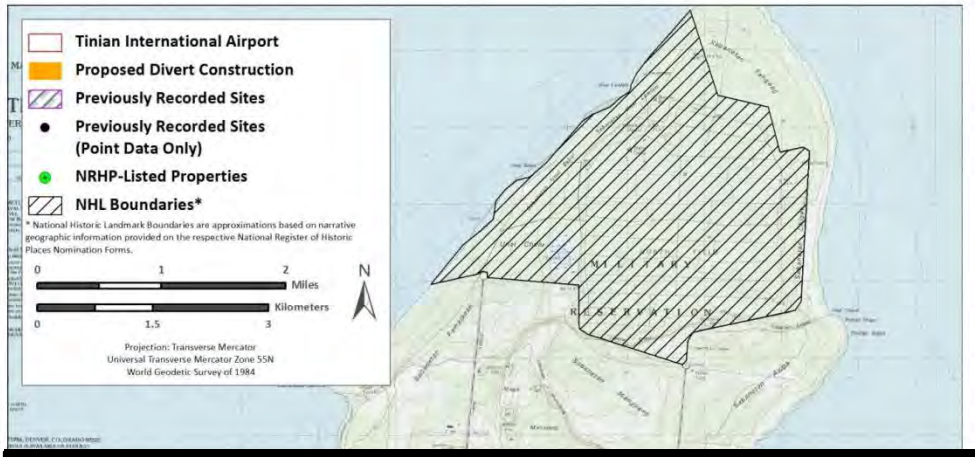
The implementation phase of the Divert project would also have an indirect adverse effect on historic properties in the form of increased aircraft noise under the high-noise scenario for Divert activities and exercises, which involves F-16 and F-22 fighter aircraft use of TNI. On Tinian, increased aircraft noise could constitute an indirect adverse impact on historic properties located near the airport including the Gurguan Airfield site and the Naval Air Base HQ site.

5. Summary

In summary, the following historic properties have been identified on Saipan and Tinian, within the APE, that may be affected by construction and/or implementation, whether direct or indirect:

1. Saipan Construction Phase Area of Potential Effect - Direct
    - Aslito/Isley Field National Historic District portion of the Landing Beaches, Aslito/Isley Field, and Marpi Point National Historic Landmark (NHL)
    - Newly recorded, potentially eligible structures, sites, and features at Aslito/Isley Field that date to the period of significance for the NHL and may contribute to its significance
    - Newly recorded pre-contact isolated occurrences that do not contribute to the NHL
    - Additional undiscovered or unanticipated recourses
2. Saipan Construction Phase Area of Potential Effect – Indirect
    - All of the above **plus** the Japanese hospital and Campaneyan Kristo Rai in Garapan
3. Saipan Implementation Phase Area of Potential Effect - Direct
    - All of the above
4. Saipan Implementation Phase Area of Potential Effect - Indirect
    - All of the above **plus** Saipan Landing Beaches portion of the Landing Beaches, Aslito/Isley Field and Marpi Point NHL and the Tinian Landing Beaches, Ushi Point Field, and North Field NHL
5. Tinian Construction and Implementation Phase Areas of Potential Effect - Direct and Indirect
    - US anti-aircraft artillery site near TNI
    - House of Taga (San Jose)
    - Nanyo Kohatsu Kabushiki Kaisha Ice Storage Building (San Jose)
    - Additional undiscovered or unanticipated recourses

Enclosure 2: Section 106 (NHPA) Findings and Determinations
Divert Activities and Exercises, Guam and Commonwealth of the Northern Mariana Islands



[redacted]

Topo Source: United States Geologic Survey

Figure 4. Cultural resources on Tinian.

Note: Culturally sensitive information has been redacted from this page.

Enclosure 2: Section 106 (NHPA) Findings and Determinations
Divert Activities and Exercises, Guam and Commonwealth of the Northern Mariana Islands

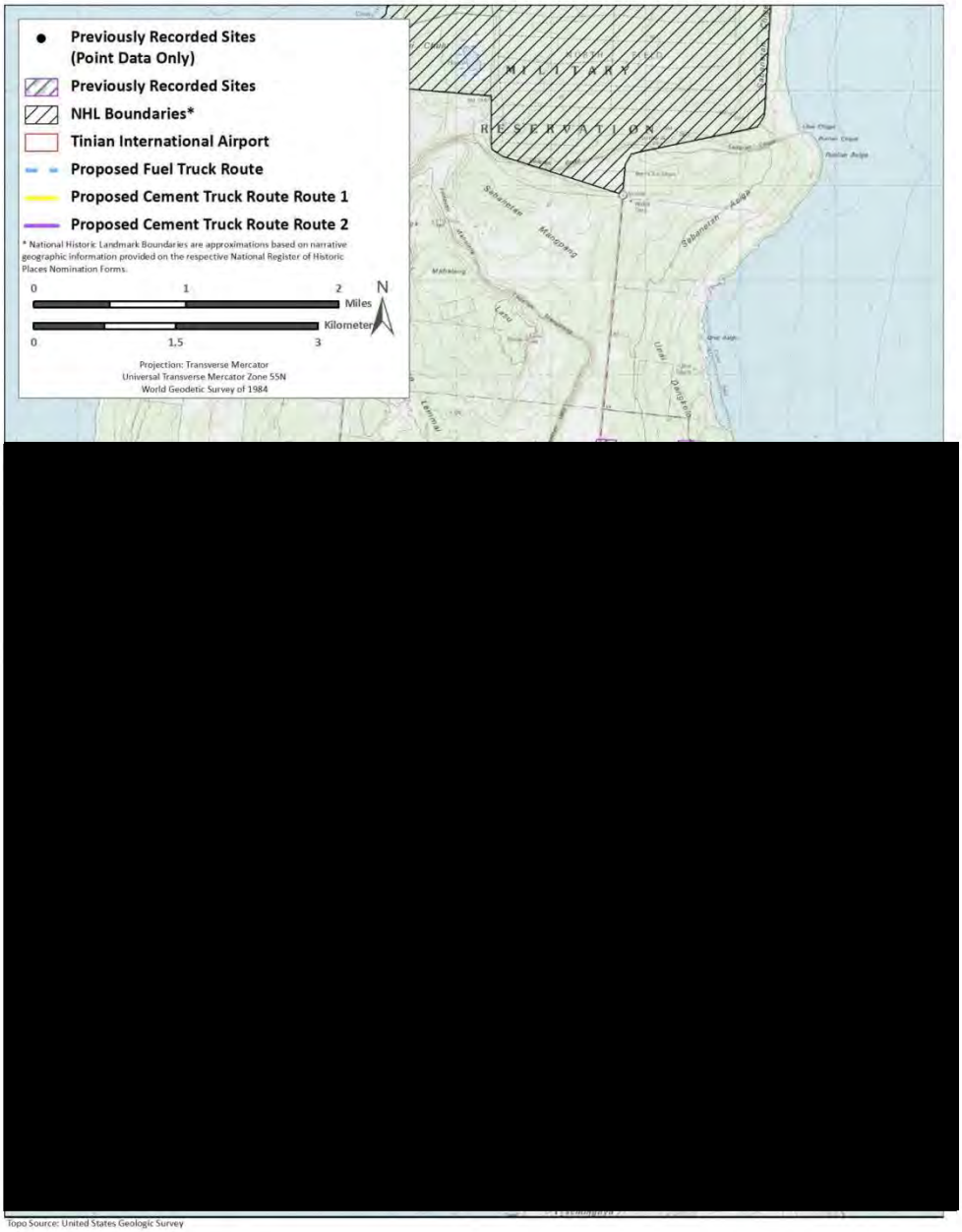


Figure 5. Divert truck routes, Tinian.

National Park Service Letter regarding Section 106 Consultation
October 10, 2012

United States Department of the Interior

NATIONAL PARK SERVICE
Pacific West Region
909 First Avenue, Fifth Floor
Seattle, Washington 98104-1060

H3417 (PWR-CR)

October 10, 2012

William Grannis, Environmental Program Manager
Department of the Air Force
HQ PACAF/A7AV
25 E Street, Suite B-206
Joint Base Pearl Harbor-Hickam, HI 96853-5420

RE: Request for NPS Review of Section 106 Initiation for the proposed undertaking – Divert Activities and Exercises, Guam and the Commonwealth of the Northern Mariana Islands

Dear Mr. Grannis:

Thank you for the invitation to review the National Historic Preservation Act (NHPA) Section 106 initiation letter and attachments for the Divert Activities and Exercise. It is appropriate for the National Park Service to participate in the NHPA Section 106 consultation for this project because of the presence of the *Landing Beaches Aslito/Isley Field, Marpi Point National Historic Landmark* (NHL) within the Saipan project area and the proximity to the *Tinian Landing Beaches, Ushi Point Field, and North Point Field NHL* on the island of Tinian. This letter contains general comments regarding the NHPA Section 106 efforts for this proposed project as well as some detailed questions and comments on the enclosures included with your letter.

As you are aware, the National Park Service (NPS) is delegated monitoring and technical assistance responsibilities by Congress to ensure that NHLs retain the highest level of integrity (36 CFR § 65.7). Our responsibilities include review and formal comment on individual proposed actions within National Historic Landmarks as well as the cumulative effect of changes through time on NHL properties.

More specifically, there are special requirements that apply to National Historic Landmarks pursuant to Section 110 of the National Historic Preservation Act and Section 800.10 of the regulations: 16 USC §470h-2(f) mandates that "[P]rior to approval of any Federal undertaking which may directly and adversely affect any National Historic Landmark, the head of the responsible Federal agency shall, to the maximum extent possible, undertake such planning and actions as may be necessary to minimize harm to such landmark." As you plan these military training activities, we encourage you to ensure that they are carried out in a manner that is consistent with this legal mandate.

TAKE PRIDE® IN AMERICA

Your memo outlines eight separate Areas of Potential Effect (APE) reflecting the potential for both direct and indirect effects on historic properties. While we understand that identifying direct and indirect effects to historic properties from the undertaking might provide easier project management, we believe these classifications obscure the overall impacts on the integrity of the NHL. All of the contributors to the NHL should be considered collectively. Otherwise, the effects on the entire NHL and its integrity could be overlooked.

On the Area of Potential Effect maps, the National Register of Historic Places properties on the Saipan maps are shown with a green circle/black center dot. On the APE maps for the Tinian alternative the same icon is on the map, but not on the legend. The legend has black dots for recorded sites only.

We suggest that you label or number the full page figures in Enclosure 1, so that they can be referred to more easily.

In Enclosure 2, Figures 1 and 2, the hardstands are not delineated as contributors to the NHL. Because the hardstands are contributors to the NHL, this should be clarified on the figures within the report.

Within Enclosure 2, Section 3.2 there is a discussion of National Register eligible properties including the historic airfield adjacent to and "under" the existing airport as not having clear boundaries. However, these sites have been recommended as eligible for the NRHP based on the aerial photograph evidence. We suggest that you create a figure that superimposes the existing airfield and proposed NRHP sites on the historic photographs to provide a sense of the overlap.

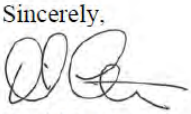
Under the Tinian Alternatives, please consider the landscape level effect of the proposed changes to Broadway. The Tinian North Field Cultural Landscape Report prepared by AECOM in Association with TEC Joint Venture, Inc. in 2010 identifies Broadway as significant to the historic character of the NHL. The southern end of Broadway is not currently part of the NHL, but as the main entrance route to the North Field area, this should be considered. The Tinian North Field Cultural Landscape Report under Views and Vistas states:

- Maintain the open linear views along Broadway to the American Memorial Hinode Shrine. Restore the focal point by replacing the shrine's vertical torii gate.
- Maintain the open linear views along Eighth Avenue to the westbound roundabout.

In closing, the National Park Service supports your finding of potential *Adverse Effects* to the NHL as defined in 36 CFR § 800.5. We look forward to continued consultation as outlined in 36 CFR § 800.6 to resolve the adverse effects through the development and evaluation of alternatives or modifications to the undertaking that could avoid, minimize or mitigate adverse effects on historic properties.

If you have further questions, please do not hesitate to call or email Cari Kreshak at 808-228-5334 or cari_kreshak@nps.gov.

Sincerely,



David Louter,
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Section 106 Consultation and Findings of Effects to Historic Properties, October 16, 2012

Commonwealth of the Northern Mariana Islands
Division of Historic Preservation
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October 16, 2012

Serial: HP-28691
Fiscal Year 2012
File: Section 106 (6.3.255 / DOAF, HQ PACAF)

Marc M. Aoyama, P.E., GS-15
Chief Program division
Directorate of Installation and Mission Support
Department of the Air Force
HQ PACAF/A7P
25 E Street, Suite D-306
Joint Base Pearl Harbor Hickam, HI 96853-5420

Subject: National Historic Preservation Act (NHPA) of 1966 Section 106 Consultation and Findings of Effects to Historic Properties Related to U.S. Air Force (USAF) Pacific Pacific Air force (PACAF), Divert Activities and Exercises, Francisco C. Ada/ Saipan International Air Port, Saipan; and Tinian International Air Port, Tinian, Commonwealth of the Northern Mariana Islands

Dear Mr. Aoyama:

First of all we would like to commend and congratulate you for a very well prepared document that describes in detail the Area (s) of Potential Effect and the determination of the Effects both the direct and indirect to known and potentially unrecorded or undiscovered historic properties within the determined Areas of Potential Effect for this undertaking.

Your determination of "No Adverse Effect" and "Areas of Potential Effect" are well justified based on existing historic/prehistoric information accordingly, we concur with both determinations. The only resolution to the Adverse Effect is through implementation of a Memorandum of Agreement and we look forward to working with you on this agreement. Although the actual effects on historic properties may be less adverse than what is presented and discussed, it is always best to anticipate for the worst.

With regards to potential Traditional Cultural Properties within the Areas of Potential Effect, that is another undertaking beyond our capabilities considering time involved in identifying and or interviewing knowledgeable individuals regarding traditional use of plants or beliefs. Therefore

we strongly recommend that the Air Force hires someone knowledgeable about survey of Traditional Cultural Properties to conduct such a study.

We have identified several groups that we think should be invited as interested public for consultation. They include Friends of Marpi, CNMI Indigenous Organization, Carolinian Indigenous Group, CNMI Community College, and Tinian Mayor's Office.

Again, thank you for a very well documented Section 106 determination and if you have any questions, please call our office at 664-2120/4 or e-mail Mertie Kani at mtkani@cnmihpo.net.

Sincerely,

Melvin Faisao
State Historic Preservation Officer

Section 106 Consultation and Notification of Adverse Effect, October 29, 2012

DEPARTMENT OF THE AIR FORCE
AIR FORCE CIVIL ENGINEER CENTER
JOINT BASE PEARL HARBOR – HICKAM HAWAII

29 Oct 2012

MEMORANDUM FOR MS. KATRY HARRIS
PROGRAM ANALYST
ADVISORY COUNCIL ON HISTORIC PRESERVATION
1100 PENNSYLVANIA AVENUE, NW, SUITE 803
OLD POST OFFICE BUILDING
WASHINGTON, D.C. 20004

FROM: AFCEC/CFP
25 E Street, Suite C317
JBPH-H, HI 96853

SUBJECT: Notification of Adverse Effect Finding under Section 106, National Historic Preservation Act (NHPA), for Divert Activities and Exercises, Guam and Commonwealth of the Northern Mariana Islands (CNMI)

1. In accordance with 36 CFR Section 800.6(a)(1) and Section 800.10(b), the U.S. Air Force (USAF) hereby requests the participation of the Advisory Council on Historic Preservation (ACHP) to join in consultation with us, the CNMI Historic Preservation Officer (HPO), the National Park Service (NPS), and others to determine how best to mitigate adverse effects to National Register of Historic Places eligible properties at the Aslito/Isley Field portion of the Saipan Landing Beaches, Alsito/Isley Field and Marpi Point National Historic Landmark as a result of the proposed Divert Activities and Exercises (Undertaking).

2. The USAF is seeking to improve an existing airport or airports in the Mariana Islands in proximity to the Philippine Sea, in support of expanding U.S. strategic interests and Department of Defense (DOD) mission requirements in the western Pacific. The USAF's intention is to establish additional divert capabilities to support and conduct current, emerging, and future exercises, while ensuring the capability to meet mission requirements in the event that access to Andersen Air Force Base (AFB) or other western Pacific locations is limited or denied. The Undertaking is needed because no divert or contingency airfield exists on U.S. territory in the western Pacific designed and designated to provide strategic operational and exercise capabilities for U.S. forces, and humanitarian airlift and disaster relief in times of natural or man-made disasters.

3. The USAF prepared a Draft Environmental Impact Statement (*Draft EIS for Divert Activities and Exercises, Guam and CNMI,* June 2012) analyzing the environmental effects of the proposed action. The analysis included public scoping and public participation carried out in a coordinated manner for purposes of the National Environmental Policy Act (NEPA) and Section 106 of the NHPA. As a result, the USAF has identified two site alternatives that meet, or have the ability to meet the purpose and need for the proposed action; Saipan International Airport (GSN as designated by FAA) and Tinian International Airport (TNI as designated by FAA). The

Draft EIS and materials prepared for Sec 106 purposes may be found at: http://www.pacafdivertmarianaseis.com/. In addition, descriptions of both alternatives are provided in the attachment to this memo.

4. The Area of Potential Effects (APE) and findings of effects were reached in consultation with the CNMI HPO, and other participating parties including the NPS. Potential effects for both alternatives are considered for purposes of Section 106 of the NHPA. In summary, we have determined that the Undertaking may adversely affect historic properties, particularly the Aslito/Isley Field portion of the National Historic Landmark that includes the Saipan Landing Beaches, Aslito/Isley Field and Marpi Point. Documentation required under 36 CFR Section 800.11(e) in support of these findings is attached. Because of its landmark status, the property merits consideration under Section 110(f) of the NHPA, and 36 CFR Section 800.10.

5. Because of this finding, and in coordination with other consulting parties, we are proposing to develop a Memorandum of Agreement (MOA) for the Undertaking, including identification of measures and actions intended to minimize harm to the NHL to the maximum extent possible. With this letter, we are inviting the ACHP to participate in development of this MOA, in accordance with 36 CFR Section 800.6(c).

6. Please notify my Environmental Program Manager, Mr. William Grannis of your decision to participate in consultation within 15 days of receipt of this invitation. If you have any questions or concerns, you may contact Mr. Grannis at (808)449-4049, or by email at william.grannis@us.af.mil.

DAVID A. KAWECK, Col, USAF
Chief, Pacific Division
Facilities Engineering Center of Excellence
Air Force Civil Engineer Center

Attachment (on CD)
36 CFR Part 800.11 Documentation

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FINAL REPORT

PHASE I CULTURAL RESOURCES SURVEY SUPPORTING THE ENVIRONMENTAL IMPACT STATEMENT FOR DIVERT ACTIVITIES AND EXERCISES ON SAIPAN COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS

HDR

October 2012

Locational information related to cultural resources has been removed from this report pursuant to the Archaeological Resources Protection Act of 1979 (16 U.S.C. 470ii) and Section 7.18 of the implementing regulations at 43 CFR Part 7.

FINAL REPORT

PHASE I CULTURAL RESOURCES SURVEY SUPPORTING THE ENVIRONMENTAL IMPACT STATEMENT FOR DIVERT ACTIVITIES AND EXERCISES COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS

By

Ben Fischer
Jim Gallison, PhD, RPA
Jeff Hokanson, MA, RPA
Michael Jennings
Matthew Edwards, MHP, PhD, RPA
And
Michael Church, PhD, RPA

Maps by

Ben Fischer

Prepared For:

Headquarter, Pacific Air Forces
Joint Base Pearl Harbor-Hickam, Hawai'i

Prepared By:

HDR Environmental, Operations and Construction, Inc.
9563 South Kingston Court
Englewood, CO 80112

October 2012

ACRONYMS AND ABBREVIATIONS

AFCEE	Air Force Center for Engineering and the Environment
az	Azimuth
BEAR	Basic Expeditionary Airfield Resources
B.P.	Before Present (radiocarbon years)
CFR	Code of Federal Regulations
CNMI	Commonwealth of the Northern Mariana Islands
cm	centimeters
EIS	Environmental Impact Statement
ENSO	El Nino/Southern Oscillation
ft	feet
FHP	Forest Health Protection
FIA	Forest Inventory and Analysis
GPS	Global Positioning System
GSN	Francisco C. Ada/Saipan International Airport
HDR	HDR Environmental, Operations and Construction, Inc.
HPO	Historic Preservation Office
IO	Isolated Occurrence
km	kilometers
km^2	square kilometers
m	meters
m^3	cubic meters
mi^2	square miles
mm	millimeters
NHL	National Historic Landmark
NHLS	National Historic Landmark System
NHPA	National Historic Preservation Act
NPS	National Park Service
NRHP	National Register of Historic Places
NRIS	National Register Inventory System
PACAF	Headquarters, Pacific Air Forces
U.N.	United Nations
USDA	United States Department of Agriculture
USGS	United States Geological Survey
WWII	World War II

ACKNOWLEDGEMENTS

The authors would like to thank the following individuals and institutions whose assistance greatly facilitated the completion of this volume: Juan Camancho at the CNMI Division of Historic Preservation, for assisting with background research in advance of the survey; security staff at Saipan International Airport for facilitating access to survey areas on airport property; Bernard Marcos with PACAF who provided us with up-to-date project planning information in the field to help direct our survey efforts; Bill Grannis with PACAF and Toni Ristau at AFCEE provided valuable advice on a draft version of the report that greatly contributed to the quality of this final version. Comments on the draft from Merti Kani and Historic Preservation Officer Melvin Faisao, also at the CNMI Division of Historic Preservation, are also appreciated. While many individuals and institutions made contributions to this volume, the authors are solely responsible for any inaccuracies that it may contain.

ABSTRACT

HDR Environmental, Operations and Construction, Inc. (HDR), was contracted by the Air Force Center for Engineering and the Environment (AFCEE) on behalf of Headquarters, Pacific Air Forces to complete a cultural resource survey pursuant to the preparation of an Environmental Impact Statement (EIS). The EIS will evaluate possible infrastructure improvements at Francisco C. Ada/Saipan International Airport (GSN), along with other alternatives. However, given the potential for impact to important cultural resources, specifically the Isley Field Historic District, which is also part of the Saipan Landing Beaches, Aslito/Isley Field, and Marpi Point National Historic Landmark, survey of the GSN Alternative was deemed prudent. This report details the approach used by HDR to identify, record, and evaluate cultural resources within the project area.

Selection of the GSN Alternative would entail extensions to an existing runway and the footprints of a proposed hot cargo pad and arm/de-arm pad, two aprons and ramps, a maintenance facility, a hangar, magazines (one earth covered magazine and one multi-cube magazine), two fuel sites (bulk storage and operational tanks with hydrant system), and a Basic Expeditionary Airfield Resources (BEAR) kit site. As part of the survey, HDR surveyed 66.5 hectares (164.3 acres) in the vicinity of the airport. The project also involves the use of fuel storage tanks and offloading facilities at the Port of Saipan.

The area that could be impacted by the selection of the GSN Alternative was surveyed by HDR cultural resources professionals who meet or exceed the Secretary of Interior's Professional Qualification Standards. During the course of the investigation, which took place September 17–29, 2011, HDR found and recorded three pre-contact isolated occurrences and 11 features associated with the Historic District/Landmark. In addition, eight previously recorded Japanese bunkers (AB1 through AB8) were found to be adjacent to the study area as were remnants of B-29 hardstands.

The three isolated occurrences date to the pre-contact period and consist of Latte phase ceramics and a sling stone. As isolated finds they are important for spatial analysis of the area but individually do not retain adequate integrity or additional information potential. They are therefore recommended as not eligible for nomination to the National Register of Historic Places (NRHP).

The 11 features are historic in age and related either to the Japanese occupation or the American occupation. The features include bottle middens, ceramic scatters, concrete foundations, water catchment features, and a previously unrecorded Japanese bunker. Features 1 and 3, the remains of water catchment or storage structures, and Features 5, 9, and 11, concrete foundation pads, do not retain significant integrity to be considered eligible for the NRHP under any criteria. The remaining newly recorded features do retain sufficient integrity to warrant inclusion as contributing elements to the Isley Field Historic District/Landmark.

Six of the previously recorded Japanese bunkers are north of the runway and can be avoided by the project as can the other two bunkers at the edge of the BEAR-kit site. The hardstand remnants exist across the project area. While they were originally included as contributing elements to the Historic District/Landmark, they no longer retain sufficient integrity to remain so.

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1. INTRODUCTION

This report details the results of the cultural resource inventory completed by HDR Environmental, Operations and Construction, Inc. (HDR). HDR was contracted by the Air Force Center for Engineering and the Environment (AFCEE) to complete the survey on behalf of Headquarters Pacific Air Forces (PACAF) pursuant to the preparation of an Environmental Impact Statement (EIS) to evaluate possible infrastructure improvements at Francisco C. Ada/Saipan International Airport (GSN), along with other alternatives. Given the potential for impact to important cultural resources, specifically the Isley Field Historic District, which is also part of the Saipan Landing Beaches, Aslito/Isley Field, and Marpi Point National Historic Landmark (NHL), survey of the GSN Alternative was deemed prudent. This report details the approach used by HDR to identify, record, and evaluate cultural resources within the study area. The inventory was completed between September 17 and September 29, 2011.

Much of the study area had been previously surveyed by Micronesian Archaeological Survey in 1980. The previous survey identified 29 features, all of which are associated with the Japanese and American occupations during World War II (WWII). In 1981 the airfield was listed on the NRHP as the Isley Field Historic District. In 1985, Isley Field was included in a discontiguous National Historic Landmark (NHL) that also includes Marpi Point on the northern tip of the island and the U.S. landing beaches along the island's western shore (Figure 1-1).

Most of the survey areas are located in and adjacent to GSN in I Fadang on the island of Saipan (Figure 1-2). This part of the island lies upon a clastic and reef limestone plateau covered by shallow soils that were leveled during activities and events related to WWII. Vegetation is generally composed of secondary growth limestone forests that include a mixture of native and introduced species, specifically Tangantangan (*Leucaena leucocephala*). A small portion of the heavily developed Port of Saipan was also surveyed (Figure 1-3).

This report has been prepared in accordance with the requirements and guidelines established by the Commonwealth of the Northern Mariana Islands (CNMI) Historic Preservation Office (HPO), in the Department of Community and Cultural Affairs. Prior to beginning fieldwork, HDR archaeologists completed background research and prepared a research design that guided all field efforts and prioritized the data that was gathered. All background research, fieldwork, and report compilation activities were supervised or performed by professionals meeting the Secretary of Interior's Professional Qualification Standards as promulgated in 36 *Code of Federal Regulations* (CFR) Part 61. These standards define minimum education and experience requirement to identify, evaluate, record, and treat cultural resources. HDR personnel involved in the survey reported here who meet these requirements for archaeology are Jeffrey Hokanson, Dr. James Gallison, Dr. Michael Church, and Dr. Matthew Edwards. Dr. Edwards also meets the professional qualification standards for architectural history. Jeffrey Hokanson served as Principal Investigator for the project.

This report presents the results of the survey of all project areas. Chapter 2 provides an overview of the natural environment and discusses local flora, fauna, geology, and climate. Chapter 3 is an overview of the cultural history of the Northern Marianas and provides the context for interpretation and evaluation of the cultural resources identified during the survey. Chapter 4 discusses previous cultural resource inventories in the area and an overview on the Isley Historic District. Chapter 5 presents the project research design. Field and lab methodology are the focus of Chapter 6. Chapter 7 discusses the results of the field investigations. Chapter 8 includes interpretation of the sites and a discussion of how the data collected relates to the research design. Management recommendations are presented in Chapter 9, and the bibliography is Chapter 10.

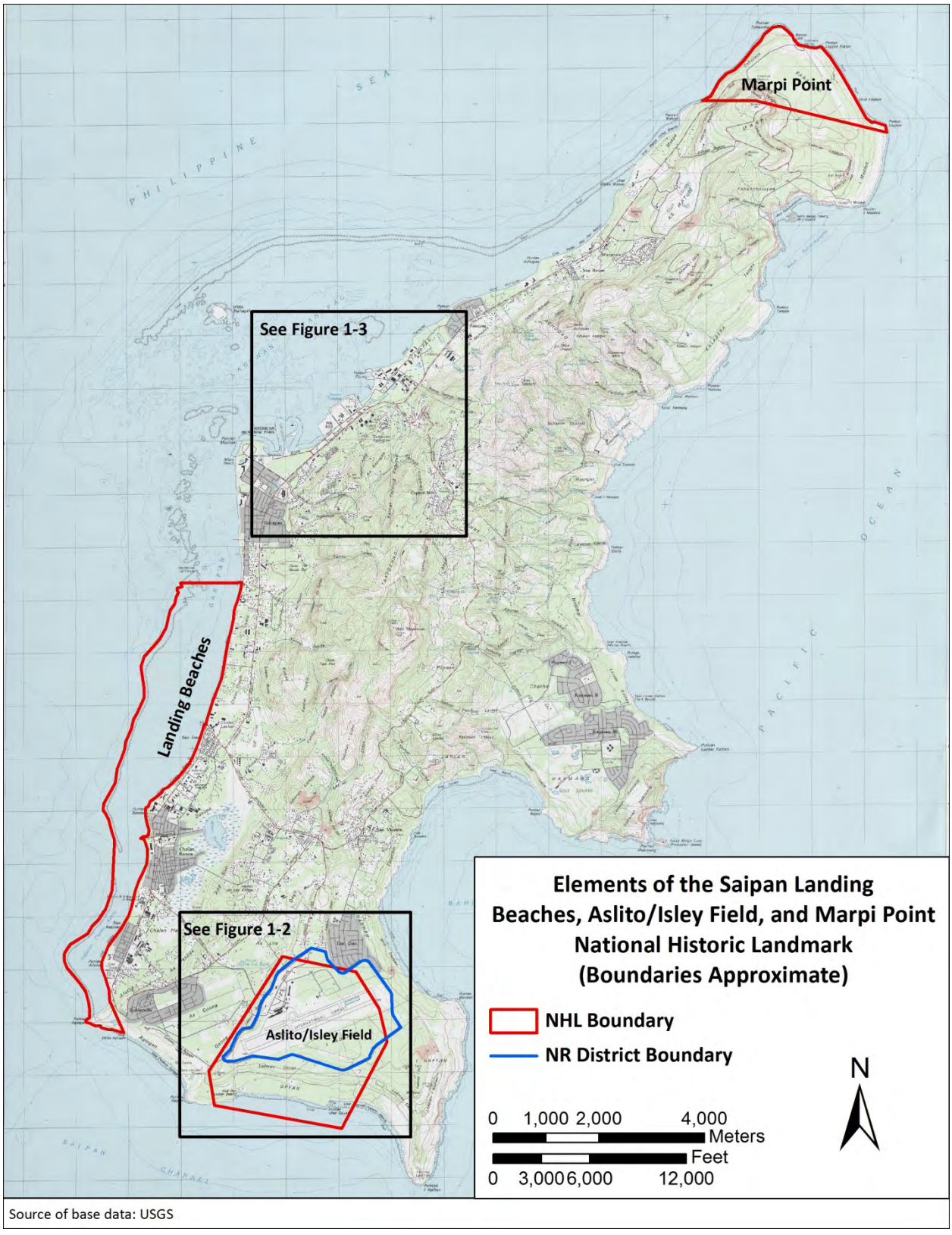


FIGURE 1-1. NATIONAL HISTORIC LANDMARK LOCATIONS.

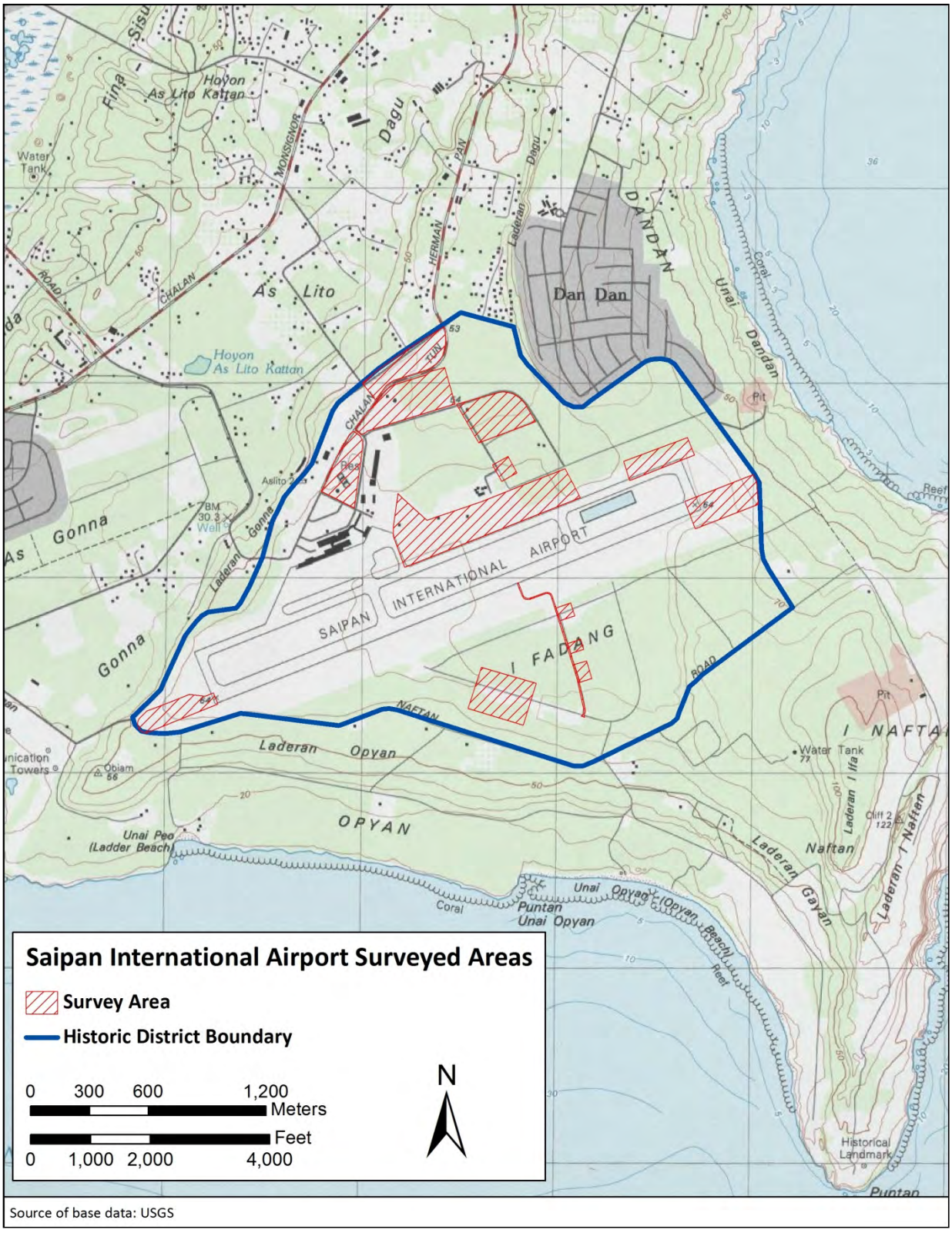


FIGURE 1-2. SURVEY AREA.

FIGURE 1-3. SURVEY AREA (CONTINUED).

2. ENVIRONMENTAL OVERVIEW

The Mariana Islands are an archipelago of 15 islands that make up the northernmost extent of Micronesia. Guam, the largest and southernmost of the Mariana Islands (not within the CNMI, but forming its own political territory within the United States) encompasses roughly 538 square kilometers (km^2) (208 square miles [mi^2]). The other 14 islands are part of the Commonwealth of the Northern Mariana Islands (CNMI). The largest islands in the CNMI are Saipan, Rota, and Tinian. Saipan is the second largest island in the Marianas after Guam and encompasses roughly 121 km^2 (47 mi^2) while Rota and Tinian are roughly 85 km^2 (33 mi^2) and 101 km^2 (39 mi^2) respectively. Of the three islands, Rota boasts the highest point of elevation, Mt. Manira at 490 meters (m) (1,612 feet [ft]). The highest point in Saipan, Mt. Tapotchau, is 472 m (1,554 ft), Guam's highest point, Mt. Lamlam, is 406 m (1,332 ft) and the highest point in Tinian, Puntan Carolinas, is just 196 m (557 ft) above sea level.

Weather in the Mariana Islands is considered tropical, generally warm and humid throughout the year with a relative humidity above 80 percent and an average annual temperature between 24° and 27° Celsius (75° and 80° Fahrenheit). Rainfall is seasonal with a typical dry season lasting from January to April and a wet season lasting from July to November with a mean annual rainfall of about 216 centimeters (cm) (85 inches).

2.1. Flora and Fauna

The native vegetation of the Mariana Islands has been drastically altered by human activity and agricultural practices. Much of the natural vegetation was utterly destroyed during WWII. Most notably, Saipan, Tinian, and Guam were the setting for major military campaigns that profoundly altered the landscape (DeBell and Whitesell 1993). Since the war, much of the remaining natural flora and fauna have given way to invasive species.

Several attempts have been made to categorize the vegetative communities of the CNMI. In 1980, a survey was conducted on Saipan, Rota, and Tinian by the U.S. Forest Service in partnership with the CNMI government (Liu and Fischer 2006). The survey produced vegetation maps from the interpretation of black and white aerial photographs taken in 1976. The results indicated that the native limestone forest type of vegetation environment was dominant only on Rota. Introduced tree species and secondary vegetation encompassed significant portions of Tinian and Saipan.

More recently, a vegetation survey was undertaken for the CNMI and Guam. The survey used high resolution spatial imagery and was a concerted effort by the U.S. Department of Agriculture (USDA) Forest Service Pacific Southwest Region, Forest Health Protection (FHP) and the Pacific Northwest Research Station, Forest Inventory and Analysis (FIA) programs (Liu and Fischer 2006). The survey concluded that roughly half of Guam is now covered by secondary vegetation.

The second largest island (Saipan) of the Marianas has a complicated geologic structure and topographic diversity; as well as more than 3,500 years of human history including extensive landscape augmentation (Fosberg 1960). Saipan has also undergone recent rapid growth and urban development, further fragmenting what is left of native limestone forests. The majority of the island has been disturbed at some point during the island's history, resulting in unstable vegetation patterns.

The native vegetation communities of the CNMI and the island territory of Guam are considered a primary limestone forest. Saipan was most likely forested with a mix of vegetation dominated by gulos (*Cynometra ramiflora*), acacia petit feuille *(Acacia confuse), Barringtonia,* and *Erythrina* (Mueller-Dombois and Fosberg 1998). Thatch screwpine (*Pandanus tectorius)* and screwpine (*Pandanus dubius),* grand devil's claw *(Pisonia grandis),* umbrella catchbirdtree *(Pisonia umbellifera),* fago *(Ochrosia*

oppositifolia), and sea or beach hibiscus *(Hibiscus tiliaceus)* are common species found in this type of mixed forest. Common shrubs in these forests include beach naupaka (*Scaevola sericea*), panago (*Jasminum marianum*), alahe'e (*Canthium odoratum*), and grande sultane (*Ipomea tuba*) (Fosberg 1960).

Invasive and introduced species include Japanese introduced cane plants (*Saccharum spontaneum*), invasive species of elephant grass (*Pennisetum purpureum*), and vines like the stinking passionfruit (*Passiflora foetida*) and blue morning glory (*Ipomoea indica*). Level and sloping ground areas of secondary forest commonly include mixed stands of siris tree (*Albizia lebbek* and *A. confuse*) and coast sheoak (*Casuarina equisetifola*). Along the coastlines the madras thorn (*Pithecellobium dulceis*) is common and its bark was used historically by the Spanish for tanning hides. In areas along the island that were historically rice fields, breaks of large perennial grass, *Phragmites karka*, and scrubby vegetation of *H. tiliaceus*, lodugao (*Clerodendrum inerme*), golden leather fern (*Acrostichum aureum*), scattered *Casuarina* trees, and patches of salt jointgrass (*Pasapalum vaginatum*), and para grass (*Panicum purpurascens*) are common. Areas that are described as volcanic are mostly covered by giant miscanthus (*Miscanthus floridulus*) and associated species as well as invasive coast sheoak and siris tree. In some of the more eroded areas it is common to find umbrella fern (*Gleichenia linearis*), staghorn clubmoss (*Lycopodium cernum*), golden false beardgrass (*Chrysopogon aciculatus*), black speargrass (*Heteropogon contorius*), showy pigeonpea (*Cantharospermum scarabaeoides*), *S. sericea*, and petai laut (*Desmodium umbellatum*). In the strand vegetative areas of Saipan, typically associated with the eastern coastline, the area supports *Pemphis acidula* scrub and lantern tree (*Hernandia nymphaeifolia*), portia tree (*Thespesia populnea*), and *P. grandis* (Fosberg 1960).

Large portions of the project area are home to some of the aforementioned hibiscus and mixed scrub vegetation, which consists of broad expanses of sea hibiscus *(H. tiliaceus*), tangantangan (*Leucaena leucocephala*), and other disturbance species. A vegetation map produced by the FHP and the FIA programs described the study area as having urban vegetation, *L. leucocephala,* small portions with mixed introduced forest vegetation, and areas containing other shrubs and grasses (Liu and Fischer 2006) (Figure 2-1). The Tangantangan forest is a secondary growth of introduced *L. leucocephala,* which has been on the Mariana Islands since the early 1900s. After WWII, the U.S. Navy continued to seed the tree to prevent erosion (Berger et al. 2005). Additional invasive species in the project area include the mimosa (*Mimosa diplotricha*), abas gayaba (*Mikania scandens*), and the kesengesil (*Chromalena odorata*).

The varying landscapes of Saipan, including the study area, support a variety of fauna including native forest birds, freshwater birds, sea birds, mammals, invertebrates, reptiles, and several non-native species of animals. Native forest birds of Saipan include the locally protected golden white eye (*Cleptornis marchei*), the locally protected and listed Mariana fruit dove (*Ptillinopus roseicapilla*), the endangered Mariana swiftlet (*Aerodramus bartschi*), the rare and endangered Micronesian megapode (*Megapodius laperouse*), the endangered nightingale reed-warbler (*Acrocephalus luscinia*), the locally protected rufous fantail (*Rhipidura rufifrons*), the Saipan bridled white-eye (*Zosterops concillatus saypani*), and the locally protected white-throated ground dove (*Gallicolumba xanthonura*). The only freshwater species of birds that may be in the project area is the endangered Mariana common moorhen (*Gallinula chloropus guami*), and the only sea bird that may be in the project area is the wedge-tailed shearwater (*Puffinus pacificus*). The only indigenous mammalian species on the island, though not likely within the study area, is the threatened and endangered Mariana fruit bat (*Pteropus marianus*). Invertebrates that may be within the study area include the coconut crab (*Birgus latro*) and the humped tree snail (*Partula gibba*). Reptiles within the study area include the Micronesian gecko (*Perochirus ateles*), and the rock gecko (*Matus pelagicus*) (Berger et al. 2005).

Like the flora of Saipan, several species of animals have been threatened or eradicated due to introduced species. During the Spanish era (1521–1899), ungulates were introduced and included goats (*Capra hircus*), cattle (*Bos taurus*), pigs (*Sus scofra*), and deer (*Cervus unicolor*). Today these ungulates are feral

and considered problematic. The brown tree snake (*Boiga irregularis*), an invasive species that was accidently introduced to Guam in the mid twentieth century, has also been sighted on Saipan and is considered an immediate and serious threat to the bird and reptile population (Berger et al. 2005).

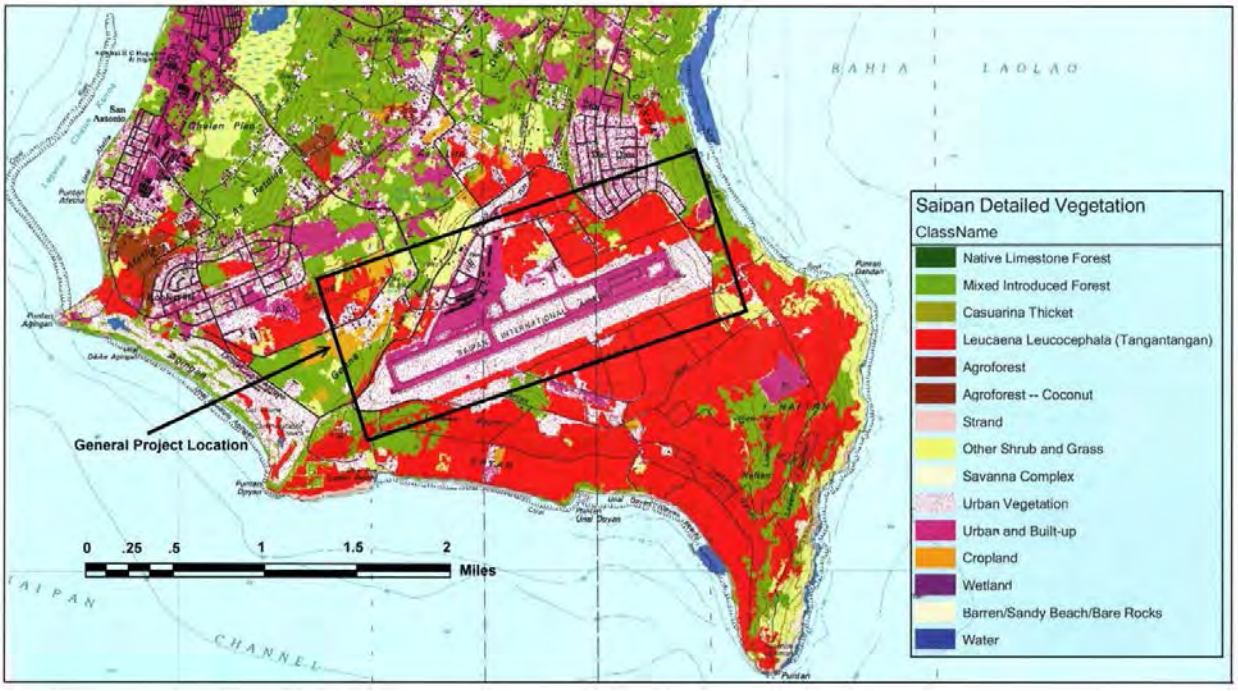


FIGURE 2-1. DETAIL VEGETATION MAP OF THE PROJECT AREA IN SAIPAN (ADAPTED FROM LIU AND FISCHER 2006).

2.2. Geology and Soils

American Samoa, Guam, and the islands of the CNMI are part of the western Pacific island chain and cover an area larger than the continental United States. The Mariana Islands are composed of 15 islands that are the exposed parts of one of two concentric island arcs along the Mariana Trench-Ridge System (Karig 1971). This paleo-volcanic chain is west and north of the Mariana Trench and is a product of the subduction of the Pacific Plate under the Philippine plate. The volcanic chain that includes the islands of Rota and Tinian formed earlier during the Late Eocene to Early Oligocene around 45 million years ago (Ma) and the islands of Guam and Saipan were continually active volcanically until as late as the mid-Miocene between 15 to 12 Ma (Dickinson 2000). These islands are mantled by later Miocene, Pliocene, Pleistocene, and Holocene limestones that can be characterized as having terrace features and are the product of the interaction between hydro-isostatic and tectonic influences.

2.3. Saipan Geology

Saipan is the second-largest island in the Mariana archipelago. The geology of Saipan is known principally from the work of Cloud et al. (1956). The island is composed of Late Eocene to Early Oligocene volcanic rocks that contain lavas and breccias. The volcanics are interbedded and capped with Tagpochau Miocene Limestone units that also contain conglomerates and sandstone interbeds. Overall, the area is Pliocene-Pleistocene Mariana Limestone composed of coral reef features (Figure 2-2). The oldest volcanic materials are the dacties found in the Sankakuyama Formation followed by andesitic material in the Hagman and Densinyama Formations. Limestone deposits cover most of the island. The

oldest are the late Eocene Matansa Formation and the Miocene Tagpochau Formation. The Pleistocene Mariana Formations cover the largest area.

A mountainous ridge extends north and south along the center length of the island and is referred to as the axial upland (Cloud et al. 1956). The core of the island consists of volcanic rock capped and bordered with limestone formations that make up five other geomorphic features. Mt. Tagpochau stands at 473 m (1,555 ft) and is composed of uplifted limestone. On the northwestern and eastern coastlines are low terrace benches. The western shoreline is referred to as the western coastal plain. Located along the eastern coastline, bordering the entrance to Bahia Laolao, are the south-eastern coastal fault ridges. Towards the center of the island is the Donni clay hills belt. The Saipan airport is on the Kagman Peninsula, a 50 to 70 m (164 to 230 ft) high area known as the southern low limestone platform. This central peninsula is composed mainly of Mariana Limestone that consists of clastic and reef limestone with argillaceous rubbly facies (Carruth 2003). The limestone is tilted upwards towards the north from faulting and erosion and is underlain by the volcanic Fina-sisu hills to the west and predominately Dandan Limestone to the east; to the north is the internally drained Dago Depression filled with late Quaternary clays (Cloud et al. 1956:30).

Uplift created a series of well-developed terraces during periods of emergence region wide. The highest and oldest uplifts are within Miocene limestone at 500 m (1,640 ft) with younger terraces in the Mariana Limestone that reach elevations of greater than 50 m (164 ft) (Dickinson 1999). The younger emergent Pleistocene-Holocene reef limestones are mapped as Tanapag Limestone (Cloud et al. 1956). The last high stand in sea levels occurred throughout the Mariana Islands around 4200 radiocarbon years Before Present (B.P.) and then declined at unknown rates to create the modern coastline (Kayanne et a1. 1993). According to Dickinson (2000), emergent reef flats and benched paleoshorelines during the post Middle Holocene were exposed to a level of 1.2 to 1.9 m (3.9 to 6.2 ft) above modern low tide. The costal plains from Tanapag Harbor to the south end of the island and along the shores of Magicienne Bay exhibit a gently sloping western coastline containing a lagoon and barrier reef system. Fringing reefs also occur along the eastern side of the island. Many of these features are the products of an expanded shoreline following mid-Holocene sea level decline.

The soils on Saipan are largely the product of weathering of the local limestone and to a lesser degree the weathering of volcanic bedrock, with some coral sand and marsh deposits (McCracken 1953; Taylor 1951). A soil map of the study area around the airport shows that this area consists of Chinen-Urban Land soils formed in limestone that are well drained and nearly level and disturbed from construction activity and the events of WWII (Young 1989). Bulldozed areas, areas of limestone gravel fill, and piles of concrete and rubble characterize these areas. Most of this disturbance in the study area is probably associated with the development of the flight line and supporting facilities at the airport. This Chinen-Urban Land soil unit makes up about 4 percent of the soils on Saipan and typically consists of gravelly sandy loam fill material to a depth of 25 cm spread over older Chinen soils. The older Chinen soils are typically 50 to 75 cm thick over jagged, irregular limestone and consist of thin, very dark grayish brown clay over a yellowish red clay loam. This unit has pockets of gravelly sand loam and local rock outcrops of limestone.

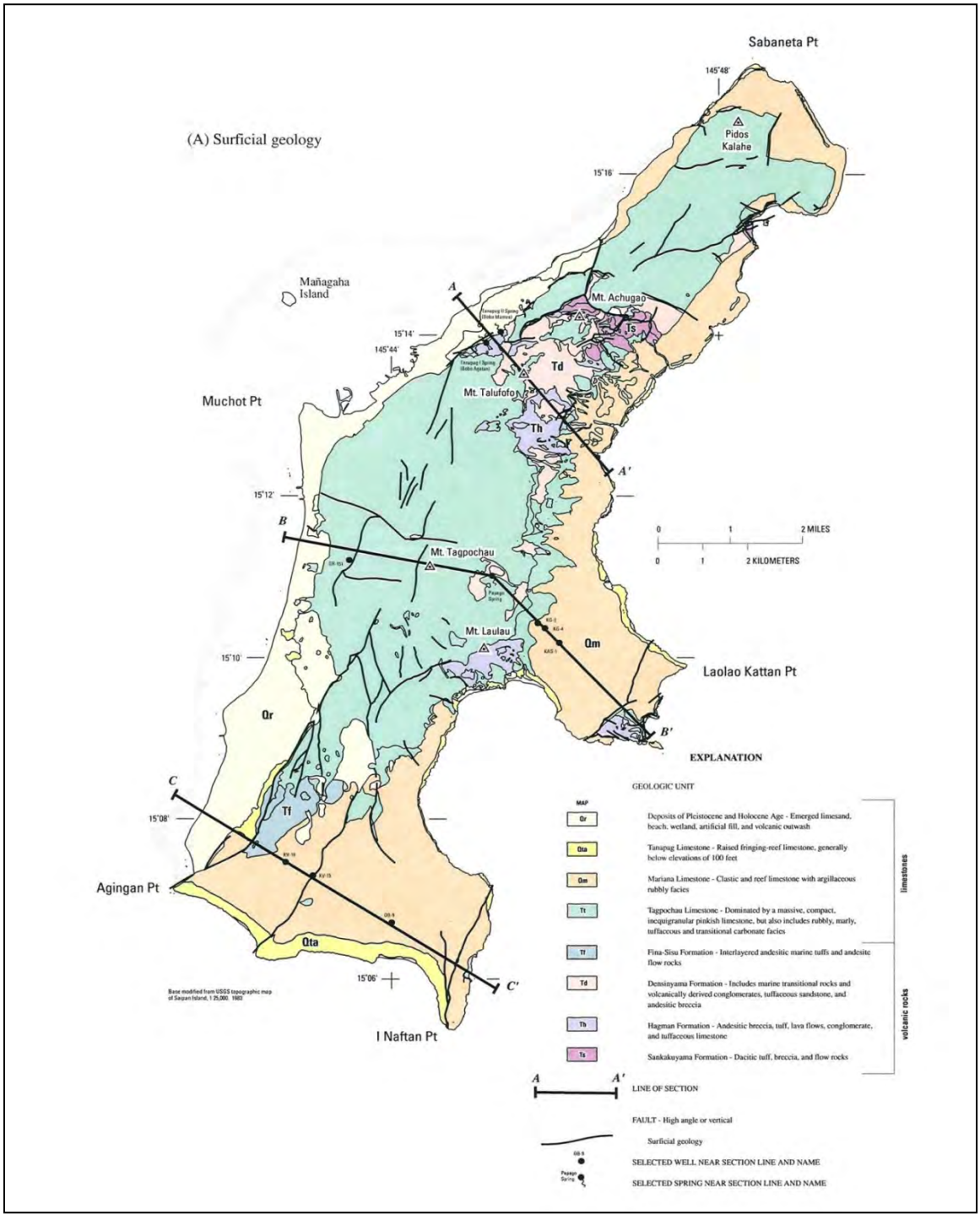


FIGURE 2-2. GENERALIZED SURFACE GEOLOGY MAP OF SAIPAN (ADAPTED FROM CLOULD ET AL. 1956).

2.4. Conclusion

The natural environment of Saipan has provided food and shelter for humans for thousands of years. Native flora and fauna and in particular marine resources were exploited by Chamorros. The island's fertile soils support various indigenous plant foods which have aided in sustaining local populations.

Vegetation in the project area is primarily a hibiscus and mixed scrub community. This vegetative community is dominated by sea hibiscus (*H. tiliaceus*, also called pago), tangantangan (*L. leucocephala*), and other disturbance species. The presence of this type of vegetation is an indicator of human disturbance as it is a non-native species. Tangantangan was planted on the island to curb the erosion that took place shortly after the bombardment of the island. The activities and developments associated with WWII have drastically altered the natural landscape within the study area. In this environment, prehistoric materials are expected to be in a secondary context. WWII-era material is more likely due to its proximity to Aslito/Isley airfield.

3. PREHISTORIC AND HISTORIC CONTEXT

The Mariana Islands have been occupied for at least 3,500 years and have been home to prehistoric Chamorro populations and much more recent settlers from Spain and its colonies, the Caroline Islands, Germany, Japan, and the United States. This chapter presents a chronological overview of the human occupation of the Marianas and describes the archaeological traces these settlers left on the islands. The islands have been the subject of archaeological research since the 1920s (Thompson and Hornbostel 1932), and the presence of the U.S. military brought considerable attention to Marianas archaeology in the mid 1940s (Osborne 1947; Reed 1954). Current understanding of Marianas prehistory is largely the work of one researcher, Alexander Spoehr, who surveyed Guam, Saipan, Rota, and Tinian in the mid 1950s and who developed the first prehistoric chronology (Spoehr 1957). Knowledge dramatically increased after 1977 with the start of the Micronesian Survey of the Office of Historic Preservation for the U.S. Trust Territories of the Pacific Islands (Craib 1983). Major themes in Marianas archaeology include the degree of socio-political complexity, the effects of colonizing populations on island ecology, and the age and timing of colonization (Kirch and Ellison 1994; Rainbird 1994).

3.1. Pre-Contact Period

The Marianas were colonized about 3500 B.P., well before other islands in Micronesia. Radiocarbon dates indicate an initial colonization by 3479 ± 200 B.P. for Saipan and 3270 ±170 B.P. for Guam (Craib 1983). Paleoenvironmental data from the Pago River Valley on Guam shows a sharp increase in charcoal around 4300 B.P. (possibly due to forest clearing by humans), a contemporaneous appearance of coconut pollen from potentially human-introduced trees, and then, slightly later, a reduction in pollen from forest trees and an increase in pollen from fire-adapted ferns (Athens et al. 2008). Another sample, from the Orote Peninsula on Guam, found evidence of human arrival at 3550 B.P. (charcoal), significant forest clearing by 2450 B.P, and significant grassland expansion by 1400 B.P.; these dates compare well with the direct archaeological evidence of colonization by about 1500 B.C. (Athens et al. 2004, 2008; Athens and Ward 2004). Colonization on Guam must have post-dated 3000 B.C., as the earliest remains from the Tarague Beach site on Guam overlie Merizo limestone that was deposited about 3000 B.C. (Kurashina and Clayshulte 1983).

A date of colonization by 3000 B.P. fits with linguistic evidence (Spriggs 1996, 1998), although linguistic data do suggest the possibility of a much earlier colonization date, between 4500 and 4000 B.P. (Spriggs 1999). Most of the colonists in Micronesia were part of the Oceanic subgroup of the Austronesian language, but the Chamorro and Palauan languages are exceptions—both belong to the Western Malayo-Polynesian subgroup that is most closely related to the Philippine-Sulawesi area and, in the case of Chamorro, possibly Formosan languages of Taiwan (Blust 2000). This southeast Asian origin for the Chamorro people is supported by craniofacial characteristics (Hanihara 1997; Ishida and Dodo 1997).

Colonization of the Marianas and other island chains may have been aided by a system in which colonists expanded slowly to new locations over long distances then used these isolated colonies to quickly spread to relatively close islands (Clark et al. 2010). This model may explain the pauses indicated by the archaeological record in the colonization of the Pacific islands (Irwin 1998). However, as they moved across the vast expanse of ocean, these colonists caused environmental changes (Kirch 2002). Over time, colonists introduced rats, which probably had a significant influence on ground nesting land and seabird populations. Colonists also introduced geckoes, skinks, gardens snails, and weeds. Once colonists started thinning and burning forest, landscape would have become dominated by fire-resistant ferns and grasses. Deforestation would have led to accelerated erosion on steep slopes, infilling and extending valley bottoms along coastal plains. In addition, increased sediment transportation in freshwater streams and rivers would have modified the inshore marine environment, changing the types of marine resources available. Humans and rats appear to have reduced bird diversity across the Pacific.

Kirch says that the big themes across the Pacific islands are pre-contact population sizes, colonization history including languages and spatial origins, intensification and specialization in agricultural practices (note that Marianas lack the really intensive terraces of other Pacific islands such as Hawai‘i) especially in regards to “social production” for status contests, and of course status and power differentiation.

3.1.1. Pre-Latte Phase (ca. 1500 B.C. – A.D. 800/1000)

The Pre-Latte phase begins with the colonization of the Marianas and is defined by two kinds of pottery: Marianas Red pottery, which has thin walls, red slips or paint, and calcareous sand-temper, and lime-filled impressed pottery, which has the same paste and calcareous sand temper and distinct impressed or incised decoration that was filled with white lime after firing. Both types are somewhat similar to the Lapita ceramics of Melanesia, and it is likely that both Marianas and Lapita ceramics are descendants of an older southeast Asian tradition (Kirch 2002; Spoehr 1957). Marianas pottery is quite similar to types recovered from the Philippines in assemblages from the early to middle second millennium B.C., and is part of the ongoing question of Taiwanese or Philippine-Sulawesi origins for the Chamorro peoples (Kirch 2002).

Pre-Latte phase pottery changed slightly over time (Moore and Hunter-Anderson 1996). The pottery made until about 500 B.C. consists of thin-walled (4–6 millimeter [mm]) ceramics with calcareous sand temper that is found in two forms, an undecorated globular jar with a restricted mouth and a small carinated bowl. Ceramics made between about 500 B.C. and A.D. 1 have less complex rim forms, decoration only on vessel lips, less lime filling of designs, and either calcareous sand or mixed calcareous and volcanic sand temper. Ceramics from 500 B.C. to A.D. 1 are usually open bowls with vertical sides. Between A.D. 1 and 1000, pottery was made as bowls with round bottoms and sometimes with suspension holes. These vessels have thinner walls and surfaces that are either untreated, polished, burnished, or striated. The researchers speculate that the change in form to flat-bottom bowls may be for use in earth ovens instead of aboveground hearths. Researchers suggest that change in form was due to increasing population density and larger food-consuming groups as people expanded from small sandy beaches to interior areas, where agriculture would have been possible.

Artifacts from Pre-Latte phase sites also include flaked stone, some of which may have been made from materials imported from other Northern Marianas Islands (Spoehr 1957). Assemblages also include shell adzes, fishhooks, fishing sinkers, and shell bracelets, beads, and other ornaments. Burials have been found but are much less common than burials associated with the Latte phase (Liston 1996).

Pre-Latte phase sites are located on the coastal lowlands, with a smaller number of sites in major river valleys, and into the uplands of the island interior. Procurement of resources depended on site location. The presence of bivalves at sites suggests that people in coastal settlements harvested resources from shallow water and lagoon areas. Occupants probably collected wild plants for food, and may have cultivated plants, although specific evidence for agriculture or horticulture is lacking (Liston 1996).

The Pre-Latte phase people used the entire island and exploited resources in both coastal and inland environments using a mix of hunting, gathering, and possibly horticulture. However, settlement focused on coastal regions. The emphasis on coastal resources meant that Pre-Latte period populations were small. Coral reefs are productive, but not enough to sustain large populations – 17 kilometers (km) of coastal zone would be needed to support 30 people (Bayliss-Smith 1975). Coastlines during the period were further inland than they are now. Carson (Carson 2011; Carson and Peterson 2011) says that sea level increased during the early Holocene, peaking at about 1.8 m higher than today between 3400 through 1050 B.C. Coral reefs were already present by 3000–2000 B.C., prior to colonization. Sea level then began to drop through A.D. 200, quickly reaching modern levels. Sea level decrease produced more coastal land, supplemented by storm surge deposits. Indeed, it is this decline in shoreline that may have made the Marianas suitable for large-scale human occupation (Dickinson 2000). These geomorphic

processes mean that Pre-Latte phase sites are poorly known. Test excavations on Guam found massive sand deposits over Pre-Latte sites, which can be 2 m below the modern surface and well inland of current shorelines (Carson and Peterson 2011).

The Pre-Latte phase is well-documented on Saipan due to excavations at Chalan Piao on the island's west coast, which was first occupied around 1700–1200 B.C. when the site area was a shallow embayment with sand bars that later became a sandy beach fronting brackish marsh. The site was first documented by Spoehr in the 1950s. Salvage excavations in 1989 excavated 4.5 cubic meters (m^3) of cultural deposits (Amesbury et al. 1996). The youngest intact deposits dated to 1396–865 B.C. (one radiocarbon dated sample), the oldest to 1731–1226 B.C. (one dated sample). Sherds from the site are Marianas Red with thin walls, red slipped or painted, calcareous sand temper; a small number were decorated with lime-filled lines. The researchers recovered 355 whole beads, as well as unfinished beads and bead-making tools. Beads became smaller over time. Shell adzes, which are common at Latte period sites but rare at Pre-Latte sites, were recovered only from the surface. Fishing gear was rare compared to Latte-period sites on Saipan, possibly indicating a change in fishing techniques. The researchers suggest that the simplification of pottery decoration and forms and the reduction in the number and size of shell ornaments may reflect an increasing use of inland plant foods and inshore marine resources and possibly social change related to this change in landscape use (Amesbury et al. 1996).

On Tinian, the early Pre-Latte phase is represented by the Unai Chulu site on the largest beach of the northwest coat of the island (Craib 1993). Although disturbed during the invasion by U.S. forces in WWII and by subsequent impacts, the site preserves two distinct cultural horizons, with the earlier horizon radiocarbon-dated to approximately 3865–3490 B.P. Cultural materials at the site include abundant pot sherds and shell beads and a very small number of lithic artifacts. Pottery at the site shows a slow transition from calcareous sand temper to a mix of calcareous sand and volcanic sand temper. The site demonstrates that Tinian was colonized at about the same time as Guam, Saipan, and Rota.

3.1.2. Latte Phase (A.D. 800/1000 – Contact)

The Latte phase is named for the stone columns found at many sites dating to after about A.D. 1000. Although deposits associated with Latte sites have been radiocarbon dated to A.D. 845 ± 145, this single early date is from a site that is dominated by a much later component, and no dates from materials directly associated with latte sets are known from before A.D. 1150 (Graves 1986). These columns, called latte, were cut from rock outcrops of limestone or basalt and consisted of two parts. The upright foundation rock is called a *haligi*, and the hemispherical cap on top of the haligi is called the *tasa*. They typically occur in two parallel rows, each row consisting of three to eight latte. Latte can be more than 2 m tall, although at archaeological sites they are usually found as fallen haligi without the attached tasa (Liston 1996). Latte may be a Marianas manifestation of hierarchical social structures common to Micronesia (Bodner 1997). Social change and the accompanying construction of latte may also be part of a Pacific-wide phenomenon of fortified constructions associated with periods of storminess and drought in the region during the Little Ice Age of 1450 to 1850 (Field and Lape 2010). Latte on the Mariana Islands range from 6 to 14 stones. The number of latte sets corresponds to the superstructure's likely size. Latte sets with 8 stones are most common; sets with 10, 12, or 14 stones are progressively less common.

Latte sets are associated with artifacts and features indicative of a wide range of domestic activities, and include prepared floors, cooking areas, fire-cracked rock, ceramic vessels, grinding tools, scrapers made of stone and shell, faunal remains, shell and stone debitage, fishing tools, and sling stones (Graves 1986). Latte sets are also associated with burials.

The latte are believed to have had several functions. Early Spanish explorers describe villages where individuals with high social status lived in dwellings raised on stone posts. Latte are believed to be the remains of these stone posts. An intensive analysis by Graves (1986) supports this interpretation,

concluding that most latte sets represent bases for the residences of high-ranking members of prehistoric Chamorro social groups. Burtchard suggests that the latte structures were used in a highly developed social system in which villages competed for resources due to population pressures, limited agricultural land, and a strain on food sources (Burtchard 1991). The competition may have led to warfare between villages and resulted in the formation of a hierarchical social system where villagers with higher social status built houses elevated on the latte foundations. Some researchers have associated latte with burial practices and others infer that latte served as territorial markers for lineages and markers of land and resources ownership (Liston 1996).

Latte are associated chronologically with dramatic changes in landscape use and climate (Nunn 2007; Nunn et al. 2007). Around A.D. 1300, the entire Pacific Basin was affected by rapid cooling and sea-level fall, and possibly increased storminess, that caused massive and enduring changes to Pacific environments relative to the warm, dry, and more stable period during the Medieval Climate Anomaly (A.D. 750–1250). As sea levels fell, fewer food resources would have been available in coastal zones, leading to persistent conflict, shifts in settlements to inland areas or small islands, and an end to long-distance ocean voyages. In the Marianas, Hunter-Anderson (2010) points out that the conditions of the Medieval Climate Anomaly would have been favorable to agriculture, with reliable harvests encouraging expansion into the uplands and increases in populations. Latte appear during this climate regime. When conditions became less predictable during the Little Ice Age (1350–1900 A.D.), prehistoric Chamorros may have moved to high-elevation locations where rainfall was more consistent, and adopted rice as a supplement to other food plants and one that could be grown at the edges of interior wetlands. Hunter-Anderson observed an increase in the number of inland storage or camp sites at sites occupied during the Little Ice Age, replacing the comparatively high proportion of inland habitation sites that were occupied during the Medieval Warm Period. She attributes the change to the shift from low return but low labor domestic crops to higher labor but higher return crops. The presence of sling stone caches suggests increased territoriality and competition for inland areas suited to agriculture.

The ceramics of the Latte phase, which actually appear about 200 years before lattes, differ from the Pre-Latte phase in vessel rim shape, temper, and decoration. The base and body of Latte-phase vessels are round and the openings are small. Rims are generally plain and usually thicker than the vessel walls. The majority of vessels are plain and undecorated, but some have wiped or combed finishes. Most ceramics have volcanic sand temper, while other vessels have a mixed sand temper. A small percentage of the vessels from Latte-phase contexts have grog (crushed sherd) temper. The round ceramic design may have been designed for boiling and storing food (Liston 1996). Latte period ceramics also show regional variation. Graves believes that the early uniform ceramic production tradition in the Marianas was altered into two traditions, one on Saipan and Tinian and one on Guam and maybe Rota, beginning by A.D. 1000 or maybe earlier (Graves et al. 1990). Compositional analysis confirms this two-tradition model: there are at least two clay sources indicated for Saipan and for Guam. These findings suggest that there was a limit to movement of pottery-making techniques that separated Guam and Saipan during the Latte period. However, he says, pottery exchange across islands increased during the Latte period, whereas Pre-Latte period pottery was mostly exchanged within islands. Graves concludes that the patterning in Latte period pottery is consistent with the other evidence (especially latte sets) indicating hierarchical social organization, aggregated settlements, and higher population density, all of which would have led to greater competition between settlements and created an atmosphere conducive to the use of pottery traditions as a way of distinguishing communities from each other.

The majority of Latte-phase habitation sites are along the coast and in fertile river valleys. Small settlements have also been found near freshwater sources and upland marshes. These inland settlements are believed to be associated with a larger population and greater reliance on agriculture (Liston 1996).

Features associated with the Latte phase include subsurface postholes, fire pits, ovens, burials, stone alignments, and support holes for haligi. Typical artifacts include ceramics, basalt mortars, pestles, sling stones, shell beads, shell fishhooks, bone fishhooks, and bone spear points. The presence of pestles, pounders, and mortars suggest a subsistence regime that included the cultivation of starchy foods.

Burials are most often found located between latte rows or on the seaward side of a latte row. When a burial is located between latte rows, skeletons are extended with feet toward the shore and oriented perpendicular to the long axis of the set of latte. When a burial is located on the ocean side of a latte row, the skeleton is oriented either perpendicular or parallel to the shoreline. Burials are usually primary interments or partial or whole secondary interments. Artifacts associated with burials include sling stones, coral rocks, and stone and shell tools. In some instances, ceramic sherds have been found near the ankles and/or wrists (Liston 1996).

The large number of Latte-phase burials has allowed for extensive research on prehistoric health and diet, especially after the completion of several large-scale cultural resources management projects in the 1990s (Hanson and Pietrusewsky 1997). The Latte-phase diet included shellfish, sea turtles, and deep water and near-shore fish such as marlin, swordfish, dolphin fish, and tuna (Ambrose et al. 1997), all of which continued to be used into historic times (Allen and Bartram 2008; Amesbury et al. 2003; Hensley and Sherwood 1993). All resources were used—for example, analysis of shellfish suggests that prehistoric Mariana Islanders did not necessarily select species with high caloric returns over species with lower caloric returns (Szabó and Amesbury 2011). The only land fauna were coconut crabs, land crabs, fruit bats, monitor lizards, and birds, several species of which may have been hunted to extinction in prehistory (Pregill and Steadman 2009; Steadman 1999a, 1999b). Pigs, dogs, and chickens, although found elsewhere in Micronesia, have not been observed archaeologically in the Marianas, but rats appear to have arrived around 800 to 1000 A.D. (Pregill and Steadman 2009; Steadman 1999b). Diets were dominated by terrestrial plant foods—marine resources made up less than 30 percent of diets (Ambrose et al. 1997). Plant foods were mostly starchy tree and root crops: breadfruit, taro, yams, bananas, sugar cane, coconuts, and rice. Minor plant foots included arrowroot, cycad seeds, pandums, fruit, and seaweed (Ambrose et al. 1997). Yam and other roots and tubers may have been cooked using pits, a historically documented technique that may have appeared about 1000 years B.P., indicating inland agriculture by that time (Moore 2005). DNA analysis indicates that the two breadfruit species on Guam originated from multiple crossings of plant strains across Micronesia, not just a single colonization spread (Zerega et al. 2004).

Although historic and linguistic sources indicate that the indigenous Mariana Islanders of Micronesia cultivated rice before initial Western contact in the early 1500s, it is not known when or why rice cultivation was adopted in these islands, the only case of rice cultivation in remote Oceania (Hunter-Anderson et al. 1995). Recent excavations in Guam have confirmed the late prehistoric presence of rice in pottery sherds, and the available evidence-from archaeology, palaeoethnobotany, linguistics, and history-suggest that labor-intensive rice agriculture may have been valuable in ceremonial exchanges (Ibid.). Early Spanish accounts of Chamorro culture report that rice was involved in rituals, feasts, exchange, and other status-related behavior (Pollock 1983).

Researchers note that the different types of mollusks in prehistoric sites are due to a change to or from mangrove habitat at specific locations (Amesbury 1996). When mangrove forest disappeared, human populations were forced to collect mollusks from coastal reefs. This change in habitat explains what would otherwise be interpreted as overexploitation of particular species of mollusks. Mollusks are therefore more useful for reconstructing past environment than reconstructing past diets (Amesbury 1996).

Diets varied slightly from island to island. Diets of individuals from Guam and Rota were fairly similar, but Saipan diets had much less protein and more sugar cane and/or seaweed (Ambrose et al. 1997). An isotopic analysis of 10 Latte-phase burials from Afetna, Saipan, indicates higher than expected open ocean food (McGovern-Wilson and Quinn 1996). However, another isotopic analysis of individuals from Saipan and Rota found that Rota's occupants ate more marine foods than those from Saipan during the Latte period, that some individuals during the Latte period had greater access than others to marine resources, and that Pre-Latte period diets consisted of both coastal and open ocean or deep water fish while Latte period diets consisted mostly of fish from coastal reefs and lagoons (Pate et al. 2009).

Remains from the Latte period site of Apurguan on Guam suggest a well-balanced and varied diet, average age at death of 43.5 years with a large number of deaths at 2 to 9 years, some prevalence of arthritis, slow population growth, and possible sex differences in the use of betel nuts (Douglas et al. 1997). Dental health was generally good, with relatively few caries or other problems, possibly due to the side effects of chewing betel nuts (increased saliva flow, cleansing due to abrasion, etc.) (Hocart and Frankhauser 1996). Yaws disease was common, affecting 21 percent of the individuals in one sample from Latte period sites in Guam (Pietrusewsky et al. 1997). The population also showed evidence of high levels of physical activity and habitual motion compared to contemporaneous Hawaiians (Pietrusewsky et al. 1997). The specific types of skeletal stress is consistent with the use of trumplines, but there is little ethnohistoric or ethnographic evidence for their use in the Marianas (Hanson and Butler 1997). However, health was not uniformly good: data from the dental remains from juvenile burials suggests that Latte-period populations were densely concentrated and subject to frequent disruptions to subsistence due to storms and drought, resulting in impaired immune systems and physiological stress (Stodder 1997). Some high-ranking individuals may have had greater access to subsistence resources and were thus better able to survive fluctuations (Ibid.)

Although researchers agree that Latte-period social structures were hierarchical, there is less agreement on the details. Thompson and Hornbostel (1932) argued for a three-tier society based mostly on a single Spanish observer's comments in the 1600s and another Spanish observer's comments from the 1800s. Cordy's (1986) analysis of social stratification across Micronesia finds that greater population density is associated with reduced social stratification, but that absolute population correlates positively with social stratification. Because the Marianas consisted of a very large number of political entities with small absolute populations, social stratification was very limited, producing only two status tiers (Cordy 1986). Cordy (1983) also cites primary documentary evidence suggesting that there were no hierarchies other than chiefs and everyone else. There may have been high-status individuals associated with chiefs, but they were not a separate class. Moreover, chiefs drew power in part from consensus and did not receive hugely different treatment. Villages only allied for special events (i.e., war) and not often enough to produce another tier of nobility.

In summary, the Latte phase is characterized by a time of population growth, a change in ceramic technology, and the use of stone architecture. The ceramic technology, the construction of fire pits and ovens, and the construction of latte suggest that people invested more time in habitation areas or settlements. This pattern indicates a less mobile lifestyle and the transition from horticulture to more intensive agriculture. Settlement took place mainly along the coastal areas where food resources were abundant, but population increase likely prompted the settlement of inland environments and a move toward agricultural subsistence to supplement wild food.

During his survey of Saipan, Spoehr (1957) observed that twentieth century plowing had disturbed archaeological materials despite shallow plow depths. He also noted that expansion of the village of Garapan and construction of a large sugar mill and an accompanying village at Chalan Kanoa had destroyed many archaeological sites. However, he said the largest source of disturbance was the invasion of the island during WWII and the construction of base facilities following the American occupation.

Local informants and previous archaeological investigations reported that most of the archaeological sites were on the western and southern coastal areas. After U.S. capture of the islands, great areas were bulldozed and then covered with crushed limestone to provide foundations for warehouses, troop quarters, and airstrips. The entire coastal terrace from Agingan to Cape Obian was transformed into a giant ammunition dump, with virtually all the topsoil bulldozed into revetments. Despite the damage, Spoehr identified six partially intact Latte sites: the Objan, Laulau, Bapot, Fanunchulujan, Chalan Kija, and Chalan Galeite sites. He excavated portions of three sites, Objan, Laulau, and Chalan Kija. He also observed several sites consisting only of ceramic artifacts, but said none of these sites had evidence of middens, houses, or other large features.

On Tinian, Spoehr found much less disturbance to prehistoric sites other than around the harbor. Most of the disturbance to archaeological sites was in the caves used as strong points by Japanese forces. Spoehr recorded 11 sites with latte sets, a latte quarry, and two large artifact scatters. One of those sites, the House of Taga, has by far the largest latte in the Marianas.

On Rota, Spoehr's less comprehensive survey recorded a large number of Latte sites, especially on the north coast. The Muchon Point site includes a 14-column latte structure. Despite disturbance, including a coastal trench system built by Japanese forces during the war, Rota's prehistoric sites were in relatively good condition, although with shallow cultural deposits.

3.2. Post Contact Context

3.2.1. The Spanish Period (1521 – 1898)

Spanish explorers first saw the Pacific Ocean in 1513 from the west coast of Panama. Six years later, five ships left Spain under the command of the Portuguese pilot Ferdinand Magellan and his mostly Spanish crew of 265 men. In March 1521, the four surviving ships and their starving crew landed on Guam. Magellan's landing site is not known. Chamorro tradition says that Magellan made landfall in Umatac Bay (Rogers and Ballendorf 1989), but the exact location is not known. Magellan named Guam and the rest of the island chain the "Ladrones," or thieves, as a comment on the residents' thefts from his ships. Magellan died in the Philippines shortly after the fleet left Guam. In 1522, 31 of the expedition's original crew returned to Spain on the *Victoria,* the fleet's single surviving vessel and the first ship to circumnavigate the globe.

In 1526, the Loyosa expedition, piloted by a veteran of the Magellan expedition Sebastian del Cano, reached the Marianas and retrieved a crew member who had deserted from the Magellan expedition and was living on Rota. However, the great distance from Spain to the western Pacific limited Spanish interest in the region. In addition, Spain ceded its rights to parts of the Pacific to Portugal; the line of demarcation was 297.5 marine leagues (about 1,500 km or 900 miles) east of Maluku in what is now Indonesia. The Philippines remained on the Spanish side. Portugal began expanding into the area, creating a trade route that extended around Africa to India and ultimately to Japan.

It was not until 1564 that Spain showed significant interest in the eastern Pacific. In November of that year, a fleet of five ships under Miguel Lopez de Legazpi left New Spain (Spain's western hemisphere possessions) seeking a shorter route to Spain's eastern Pacific territory than the route around Africa. In 1565, the expedition landed in the Marianas, the first Spanish contact with the islands since 1526, and claimed them for Spain. Legazpi then left for Cebu in the Philippines. In 1571, the Spanish presence in the Philippines shifted to Manila.

The distance between Manila and Spain meant that the Philippine colony was supplied from New Spain. Although it was a dependency of the Viceroyalty of New Spain, Manila did gain some self-government in 1583 and an autonomous Supreme Court in 1595. Over the late 1500s and 1600s, the ostensibly Spanish

city became dominated by Chinese immigrants while the Spanish population remained extremely small. Moreover, the Manila economy depended on direct financial assistance from New Spain in the form of silver from New World mines, even in the early 1800s.

The galleons that carried this silver sailed once every year, and often stopped at the Marianas for resupply during the crossing from Mexico. Roughly 100 ships stopped in the Marianas between Legazpi's visit and the mid 1600s, leading to steady but rare contact between Chamorros and Spanish sailors eager to trade iron for fresh fruits and vegetables. Some of these stops did not end peacefully—Spanish accounts include mention of combat between sailors and Chamorros. The return voyage from Manila to Mexico sailed further north and avoided the Marianas.

Spain did not have an active presence in the Marianas until 1668. In 1662, the Jesuit Diego Luis de San Vitores applied to Mariana, the queen regent of Spain, for permission to found a mission in the islands. Arriving in 1668, he renamed the islands *Los Marianas* in honor of the Queen Regent. Spanish explorers and missionaries arrived on Saipan, Rota, and Tinian in the same year.

Early Spanish accounts of the Chamorro population describes them as fishermen and farmers who used outrigger canoes, nets, spears, and hooks and lines; they also gathered shellfish from the reefs (Spoehr 1954). They raised yams, taro, bananas, breadfruit, sugar cane, coconut palms, and rice. They had no domesticated animals. The Chamorros lived in small hamlets and villages, usually located along the coast, although fertile interior areas were also occupied. Villages featured bachelors' houses where ancestors' skulls were stored. They had a hierarchical social structure and conducted frequent warfare with one another.

San Vitores composed a Chamorro-language grammar and catechism but was killed in 1672 by Chamorros in what would lead to a decade of conflict between the indigenous population and the tiny number of Spaniards on Guam. Conflict was probably the result of imposed baptism of infants, different perspectives on premarital sex and other traditional practices, and other factors. All resistance was crushed after the arrival in 1679 of Jose de Quiroga, who commanded the campaign against the Chamorro and who largely succeeded by 1685. Resistance was completely crushed by the end of the 1600s. Filipinos began settling on Guam, displacing the remnant population. Introduced disease was a major factor that decimated the indigenous population. Shell estimates the total Marianas population in 1568 at 72,000, in 1600 at 61,000, in 1638 at 42,000, in 1668 at 25,619, and in 1699 only 8,100 (Shell 1999, 2001). The Spanish responded to this demographic catastrophe by forcibly concentrating populations on Guam, Saipan, and Rota. By 1700, the remaining indigenous population was concentrated on Guam and Rota.

By 1700 agriculture consisted of native food crops as well as introduced tobacco, maize, sweet potatoes, squash, red peppers, cucumbers, tomatoes, onions, garlic, beans, eggplant, pineapple, cantaloupe, watermelon, lemons, limes, oranges, peanuts, coffee, cacao, and cassava. The Spanish also introduced water buffalo, cattle, pigs, goats, cats, dogs, horses, mules, and probably chickens, as well as deer.

During the 1700s, Tinian and Saipan were visited only occasionally. The British Commodore George Anson circumnavigated the globe between 1740 and 1744 to disrupt Spanish commerce; he spent several months on Tinian gathering food and allowing his crew to recuperate. Anson encountered only a small group of Spaniards and Chamorros who were on Tinian to hunt feral pigs and cattle. Tinian served mostly as a larder for Guam for most of the eighteenth century, but it is not known whether Saipan had a similar function.

For the Marianas as a whole, population waned again during the mid- to late-nineteenth century as waves of epidemics hit the islands. The most notable epidemics were from smallpox, measles, whooping cough, and influenza. These diseases affected the population in 1849, 1855, 1856, 1861, 1883, 1888, and 1890

and claimed the lives of thousands of people (DeFant and Leon Guerrero 2006:8). As a result of these epidemics and scant financial support from Spain and the Philippians, Guam ended the nineteenth century weak and vulnerable.

Despite continued low populations, attempts were made to settle Saipan and Agrihan, but only by tiny and transient groups. The first real attempt to resettle Saipan was by Caroline Islanders, who started making regular trading voyages to Guam by the early 1800s. In 1815, Carolinians were given government permission to settle on Saipan in exchange for transporting pork and beef from Tinian to Guam. By 1849, Caroline Islanders had founded the town of Garapan, which had 424 Carolinian and 9 Chamorro inhabitants by 1865. Chamorro population increased in the late 1800s. The two groups preserved some cultural distinctions, including matrilineal lineages and clans among Carolinians.

Meanwhile, Tinian was resettled in 1869 by H. G. Johnson, who obtained a concession giving him usufruct of Tinian for eight years and who brought approximately 230 Carolinians to the island to work. When Johnson died in 1875, these Carolinians moved to the town of Tanapag on Saipan.

Municipal government on Saipan was basically nonexistent until 1855, when the Spanish governor of the Marianas imposed municipal government and assimilation under a Spanish official. Tradition evolved where the gobernadorcillo, the third position behind the alcalde (governor) and friar-priest, would move from Agana to a northern island after he finished his term of office. The limited role of government was hampered by slow communications between the Philippines, which oversaw the Marianas, and local Marianas government in Agana—in the late 1800s, mail ships arrived at Agana only twice a year.

3.2.2. The Early Twentieth Century (1898 – 1941)

Spain ceded Guam to the United States after the end of the Spanish-American war in 1898 and sold the other Mariana Islands to Germany. Germany formally took control of the Marianas north of Guam in November 1899 after purchasing the islands from Spain in the same year and administered them as part of Germany's New Guinea Protectorate. Under Bismarck, Germany sought colonies to match other European powers and to have a presence in the Pacific. Indeed, Germany had also claimed the Caroline Islands and had captured Yap in 1885. This dispute was settled by the Papacy and Spain retained sovereignty, but Germany had freedom of trade and was allowed to establish coaling stations on the Carolines (Hezel 1983).

Although the number of Germans on the islands was never large, Germany did initiate smallpox vaccinations, provided a government doctor, and opened schools on Saipan and Rota. Germany was primarily interested in coconut production. Increasing numbers of Chamorros settled on Saipan during this period. Also, a group of Carolinians left Guam for Saipan due to dislike for American efforts to get them to wear western clothing.

On Guam, the First American Period (1898–1941) began when the United States captured Guam during the Spanish-American War. The bloodless capture of Guam began on June 20, 1898, when the USS *Charleston* under Captain Henry Glass entered Apra Harbor and fired on the long-abandoned Fort Santa Cruz. After waiting for and being disappointed by the lack of return fire, Captain Glass prepared an armed landing party. In the meantime, locals began to gather on the shore. They assumed the shelling was a salute and sent for two little antique brass cannons in order that they could return the courtesy (Rogers 1995:110). However, the cannons were of little use as there was no gunpowder on the island. This prompted the Spanish to launch a party by boat to the USS *Charleston* to apologize for not returning the salute. Upon learning that the shells represented an attack, the Spanish outpost surrendered (Wolff 1961). The U.S. flag was raised over Fort Santa Cruz on June 21, 1898. The following day, Glass and his ship withdrew to the Philippines, leaving no one behind to rule the island. The island fell into a state of

authoritative confusion which would not be resolved until the arrival of the first U.S. naval governor on August 7, 1899.

The U.S. Navy was responsible for Guam for the next 42 years. It established a naval base, started English-speaking schools, and created a public health system. During this time the population, particularly those considered "native," rebounded substantially. The naval administration's desire for economic sustainability led to the development of a system of landholding that allowed anyone to claim tracts of unused land for agricultural development. Copra (coconut) plantations became numerous, and an increasing number were owned by Japanese farmers (Liston 1996), a trend that would foreshadow future events.

Germany lost control of the Northern Marianas in October 1914 when Japan captured the islands during the First World War. In 1919, the League of Nations recognized the Japanese protectorate over the northern Marianas. Protectorate status meant that residents of the islands were considered citizens of Japan. Japanese schools were established, sugar cane became the main crop, and colonists arrived from Japan and Japanese possessions. The political separation of Guam and the Commonwealth of the Northern Mariana Islands is a result of this early twentieth century history.

In 1922, the Japanese navy was replaced with the civilian South Seas Government as the manager of Micronesian islands. The same year, sugar cane production began to increase on Saipan and eventually dominated agricultural activity on the island thanks to the efforts of Haruji Matsue, a recent graduate of Louisiana State University. By 1934 Matsue was shipping 640,000 metric tons of sugar per year to Japan, and a mill, town, and narrow-gauge railroad were built at Chalan Kanoa for sugar cane production (Figure 3-1). A mill was also built on Rota. With sugar cane intensification, large numbers of Japanese workers moved to Saipan and other Marianas islands. In 1935, the Japanese withdrew from the League of Nations but claimed the islands remained part of their empire. By 1937, there were nearly 21,000 Japanese on Saipan, mostly from Okinawa. These Okinawan settlers were largely egalitarian, although archaeological evidence suggests signs of an emerging economic class structure (Dixon 2004). Garapan became a mostly Japanese town. Japan built Aslito Field on Saipan in 1934 and began fortifying the Marianas in 1935.

Chamorro and Carolinian culture remained largely intact during the early years of the Japanese period, although the Caroline Islanders considered themselves a marginalized group (Alkire 1984). Traditionally, Chamorro and Carolinian families had a village house and a farm house. As the Japanese population increased and the sugar industry increased demand for agricultural land, political and economic forces made it difficult for Chamorro and Carolinian families to retain ownership of their land. The Japanese government initially validated Chamorro and Carolinian land ownership, and Japanese farmers paid rent for sugar cane production (Petty 2002). This process made land a commodity with a cash value, not something to be developed as new rural homesteads. By 1931, Japanese were allowed to purchase private land, and by 1944 at least one third of Chamorro and Carolinian families owned no rural property (Spoehr 1954). The project area has a remnant of this period in the form of an Okinawan farm house; these formal structures probably replaced the more expedient rural houses built by the original Chamorro or Carolinian land owners.

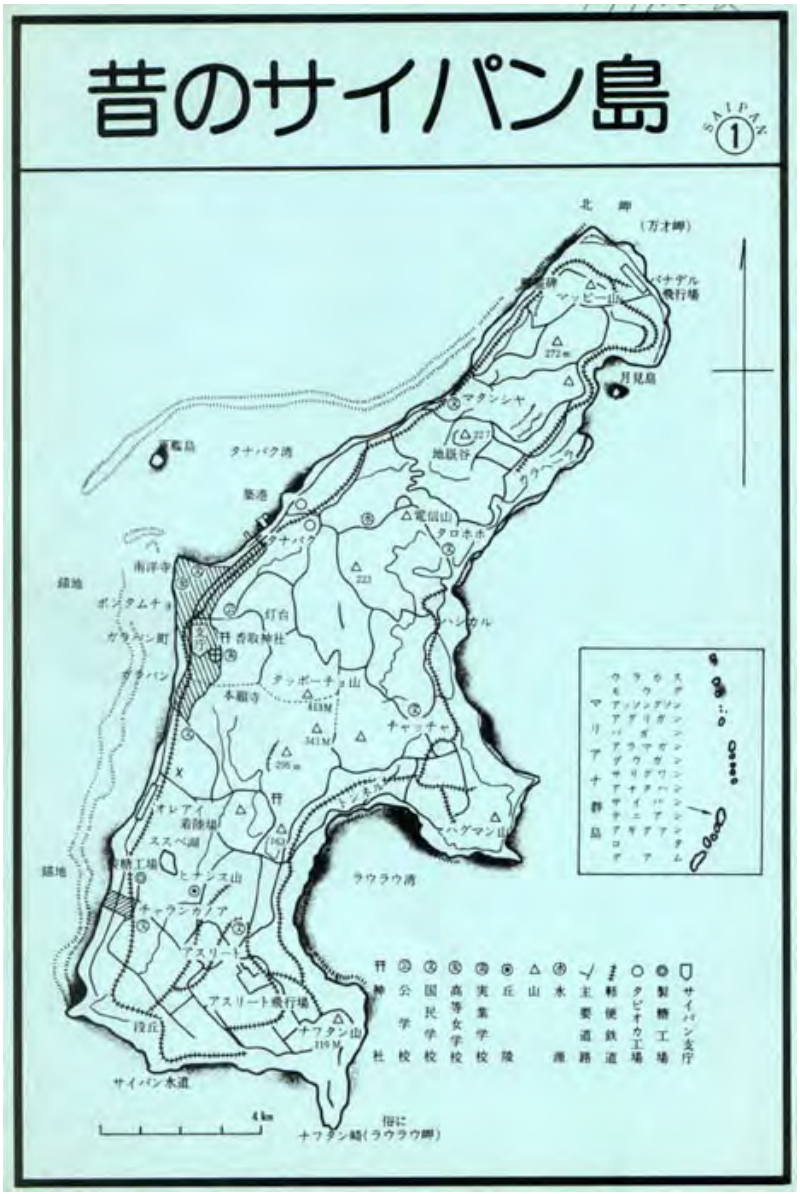


FIGURE 3-1. MAP OF RAIL LINES ON SAIPAN (SUGAR KING FOUNDATION 2011).

3.2.3. World War II (1941 – 1944)

On December 7, 1941, Japan bombed Pearl Harbor in Hawai‘i, bringing the United States into WWII. Japan bombed Guam within hours of the Pearl Harbor attack; however, due to the International Date Line it was evening on December 8, 1941. Japan invaded Guam on December 10, 1941, with a force of 5,000 men. The American naval government surrendered after a brief fight, and Japan occupied the island for the next two and a half years (Sanchez 1979). The Japanese Imperial Army fortified the island by building concrete bunkers around critical embayments and placing guns atop the natural cliffs along beachheads. The Japanese occupation was tragic for the native Chamorros: many were forced to labor for Japanese forces and were systematically executed just before American forces retook the island.

The Marianna islands of Saipan, Tinian, and Guam were indispensable strategic strongholds for the Japanese during WWII. The islands served as important defensible locations for Japan as well as outposts for bombing missions and airstrikes.

The American forces recognized the importance of these islands and surprised the Japanese with a drive across the Pacific toward the Marianas. The Japanese did not expect the United States to attack the Marianas because of its relative close proximity to Japan and its distance from Hawai‘i. The Japanese were convinced that the next target of the United States would be Palau instead (Bowers 2001[1950]). After February 1944, Japan realized that U.S. forces were likely to strike the Marianas and began to reinforce the 1,500 military personnel then on Saipan. However, U.S. submarines sank many Japanese troop carriers and cargo ships supplying the Marianas. Although many passengers survived, they often arrived in the Marianas without weapons or other equipment. The loss of equipment meant that Japanese defenses on the islands were incomplete at the time of the U.S. invasion. Although the troop complement on Saipan had increased to a total of roughly 31,000 Japanese troops (25,000 Army and 6,000 Navy personnel) and many pillboxes, blockhouses, and other fortifications had been built, many large guns were not emplaced. Aslito Field had no ground defenses and lacked provisions for demolition if threatened with enemy capture (Denfeld 1997).

On June 15, 1944, the 2nd and 4th Marine Divisions invaded Saipan. Prior to the invasion, 7 battleships and 11 destroyers shelled the islands of Saipan and Tinian for two days. The U.S. landing on June 15th was made on the west side of the island on the coastal lowlands, when 700 amphibious vehicles transported troops to the beaches on both sides of Afetna Beach. Invasion was aided by air power (Tate 1995) and by tracked landing vehicles, at least one of which still sits off the Saipan coast (Arnold 2011). The 2nd and 4th Marine Divisions were the first to make landfall marking the first time U.S. soldiers set foot on Japanese soil during the war (Bowers 2001[1950]). Over 8,000 Marines landed on that beach; 2,000 of them were killed during the first day of action.

The Japanese fighter strip on the west side of the island was the first area captured during the assault. On the night of June 16th, the second day of the invasion, a tank battle ensued. The battle involved 44 Japanese tanks, the largest such battle in the Pacific. The U.S. dominated this battle and obliterated the Japanese tank fleet on the island (Chapin 1994). On the third day of fighting, the 27th Army Division joined the battle. On June 19th, the Japanese Imperial Navy tried to destroy the U.S. Saipan invasion Naval Fleet. The air to sea battle was later dubbed The Great Marianas Turkey Shoot and ultimately resulted in the destruction of 330 Japanese aircraft (Chapin 1994). Aside from this sea battle, the effectiveness of the U.S. Naval fleets proved to be critical for the victory in Saipan. The U.S. Navy reduced the transportation of weaponry, construction materials, and troops that were destined for the defense placements on Saipan.

On June 18, 1944, during the battle of Saipan, Aslito Field renamed Conroy Field in honor of Colonel Gardiner Conroy of 165th regiment, who was killed in battle for Makin in the Gilbert Islands in November 1943. In late June 1944, the Navy renamed the field in honor of Lieutenant Commander Robert Isley, who was shot down and killed over Aslito on 13 June (Goldberg 2007)

On June 22nd, Aslito Field was taken by U.S. troops. The airfield was used almost immediately for airstrikes, supply runs, and aerial photography missions: the latter were used to mark the locations of bunkers, trench lines, and the natural contours of the island.

On July 6th in Paradise Valley, just north of Tanapag, Lieutenant General Yoshitsugu Saito gave his last order for Japanese troops to fight to the death. The order was given to surmount a final *gyokusai*, a banzai attack or suicide charge. After the order, Lt. Gen. Suito committed ritual suicide, or *hari-kari*. On July 7th the banzai attack ensued and resulted in the death of 4,311 Japanese soldiers (Chapin 1994).

The remaining soldiers killed themselves and Japanese civilians with gunfire, grenades, and hand weapons rather than allowing themselves or the civilians to surrender to American soldiers. Hundreds of Japanese civilians—men, women, and children—also committed suicide; several hundred jumped to their deaths at the northern end of the island off of the steep precipices now named Suicide and Banzai Cliffs.

On July 9th, the island of Saipan was considered secure; at final count 23,811 Japanese soldiers were known dead, 3,225 U.S. soldiers were killed in action, and an additional 326 soldiers were listed as missing in action. Five American soldiers were given a Medal of Honor commendation for their heroic actions during the war; three were awarded posthumously.

Today remnant scars of the battle of Saipan and the Japanese encampments prior to the battle remain. Within close proximity of the project area, located between the main and commuter terminals is the former Japanese and American Air Operations Building. To the north of the Air Operations Building and the current Saipan terminals, a Japanese building, water supply structure, and a bunker remain. Southwest of this network of buildings, four gasoline storage structures still stand. One of these structures currently houses the Saipan HPO. North of these structures is the former Japanese power plant, now the American Red Cross building. Along the road to the airport are remains of Japanese barracks and air raid shelters. Northeast of the airport terminal are the remains of a complex of Japanese buildings used during the war including a hospital, barracks, a refrigerated pyrotechnics building, a dispensary, a headquarters building, a power plant, an oxygen building, a maintenance building, a bomb storage facility, and hangars, as well as an American maintenance complex and 65 keyhole-shaped paved hardstands for B-29s (Lotz 1998). Beyond the immediate project area, previous archaeological survey (Denfeld 1992) recorded two 6-inch gun casemates at Aginan Point. At Aginan Beach, one circular blockhouse for four 20 mm guns still stands in a beach park at Coral Ocean Point Resort. Many caves contain artifacts from Japanese forces, which used caves as defensive positions (Taborosi and Jenson 2002). At Nafutan Point shore and Mount Nafutan are the caves used to defend against U.S. Army 27th division. On the peninsula are two guns from the 140 mm and 6 inch Whitworth Armstrong batteries.

On Rota, the Ginalagan complex of caves and associated defenses was in excellent condition in the early 1990s (Denfeld 1992). The complex consists of 1.5 km of natural caves with a 150 m parapet of stone and concrete forming a protected trench, as well as associated cisterns, gun positions, pillboxes, and other structures. The complex never came under heavy attack and therefore survived the war relatively intact.

On Tinian, Denfeld recorded several remaining Japanese defenses, including a 6-inch gun and three gun cave positions on the southern end of the island, several pillboxes on the eastern shore of the island, and pillboxes and a 140 mm defense gun at the north end of the island (Denfeld 1992). The Japanese inter-island radio station at the center of the island still stands and was used as a slaughterhouse in 1992. Although Ushi airfield was expanded by U.S. forces as North Field for B-29 Superfortress use, the airfield preserves the Japanese-built air operations building, air headquarters, bombproof power plant, air raid shelters, and underground storage bunker.

3.2.4. The Second American Period (1944 – present)

The post-war economy focused on government jobs and private industry and caused cultural changes such as a reduction in the Chamorro use of *lanchos,* which involved families living in rural areas during the weekdays to raise crops and returning to villages for church and social affairs on the weekends (Rogers 1995:202). In fact, subsistence farming nearly ceased in the post-war years. Tourism, particularly from Japan, Korea, and Taiwan, has become increasingly important to Guam's economy. Currently, the Guam government, the tourist/service industry, and U.S. military bases are the primary sources of employment for Guam's population (Liston 1996).

The U.S. role in the governance of Saipan, Rota, and Tinian differs from Guam due to differences in how the islands were acquired (Herald 1992, McKibben 1990). Spain ceded Guam to the United States after the end of the Spanish-American war in 1898. Guam's territorial status, under which it was managed by the U.S. Congress, was part of a trajectory that traditionally resulted in statehood. Guam is one of the four unincorporated territories currently held by the United States, the others being Puerto Rico, the Virgin Islands, and American Samoa. In contrast, the United States was given supervisory control of the other Mariana Islands and the rest of Japan's Micronesian possessions by the United Nations (U.N.) under the Trust Agreement. The Trust Agreement was a bilateral contract between the United States and the U.N. Security Council that made the United States responsible for providing for the islands' political, economic, and social needs and to promote the island's eventual adoption of self-government. The United States demanded that the U.N. designate the Trust territory a strategic area, a concession that gave the Security Council, not the General Assembly, authority over the Trust Agreement. This ensured that the United States could veto any decisions regarding the islands. The United States did little to develop the islands until formally criticized by the U.N. in 1961. Congress increased appropriations for the islands and in 1964 created a Congress of Micronesia. In 1969, the Marianas chose to become a separate entity from the rest of the Micronesian islands and in 1972 began negotiating commonwealth status, in part because the proximity of the Northern Marianas to Guam made them more Americanized. The resulting formation of the Commonwealth of the Northern Mariana Islands led the other Micronesian islands to separate into three political entities: the Republic of the Marshall Islands, the Federated States of Micronesia, and the Republic of Palau. Each entity negotiates its relationship with the United States separately and each has its own constitution. Under the Trustee Agreement, in contrast, the United States was to aid the Micronesian territories in becoming independent.

4. PREVIOUS RESEARCH

Prior to the beginning of fieldwork, HDR conducted a search for previous archaeological research in the project area.

4.1. Saipan

The project area was previously surveyed in 1980 in preparation for nominating Isley Field to the National Register of Historic Places (Denfeld and Russel 1984). The field was listed on the National Register of Historic Places as a Historic District in 1981 (National Register Information System [NRIS] No.: 81000667). As recorded, the district includes 27 intact structures, an Okinawan farm house foundation, two runways, hundreds of hardstands and foundations from the U.S. period, concrete and asphalt roads, and many other features and artifacts (Figure 4-1). The nomination separated Isley Field into three areas: the Japanese Aslito Field complex; the two Isley runways, taxiways, and 110 hardstands; and the 73rd Bomb Wing Headquarters and associated structures. The nomination used the airport perimeter fence as it stood in 1980 as the Isley Field site boundary. The nomination specifically identified 29 structures and other features, with all B-29 hardstands collapsed into a single data point (Table 4-1). The Isley Field nomination form strongly suggests that additional features and associated artifacts not specifically mentioned in the nomination are present at the site, and the HDR survey was expected to encounter many cultural resources associated with both the Japanese and U.S. occupations of the area. Because of the site's construction history, HDR expected that Japanese-built features would differ stylistically from U.S. features and would be less expedient in their design and construction.

FIGURE 4-1. ISLEY FIELD STRUCTURES AND FEATURES RECORDED AS PART OF THE SITE'S NRHP NOMINATION PROCESS (DENFELD AND RUSSEL 1984).

TABLE 4-1. FEATURES AND STRUCTURES RECORDED BY DENFELD AND RUSSEL (1984) AT ISLEY FIELD.

Feature or Structure Number	Description
SP-H-1	Japanese Barracks Complex
SP-H-2	Japanese Military Hospital
SP-H-3	Japanese Engineers Barracks
SP-H-4	Japanese Barracks Complex
SP-H-5	Japanese Staff Quarters
SP-H-6	Japanese Pyrotechnics Bldg.
SP-H-7	Japanese Garage
SP-H-8	Japanese Sentry Post
SP-H-9	Japanese Road
SP-H-10	Japanese Dispensary
SP-H-11	Japanese Administration Building
SP-H-12	Japanese Power Plant
SP-H-13	Japanese Oxygen Generating Building
SP-H-14	Japanese Repair and Maintenance Area #1
SP-H-15	Japanese Repair and Maintenance Area #2
SP-H-16	Japanese Semi Underground Bomb Storage
SP-H-17	Japanese Airplane Hangers
SP-H-18	Japanese Air Operations Building
SP-H-19	Japanese Gasoline Storage Bunkers
SP-H-20	Japanese Power Plant Building
SP-H-21	Japanese Unidentified Structure
SP-H-22	Japanese Water Supply Facility
SP-H-23	Japanese Gasoline Bunker
SP-H-24	Japanese Radio Station
SP-H-25	Okinawan Housing Area
SP-H-26	Japanese Service Apron
SP-H-27	U.S. North Service Apron
SP-H-28	U.S. Maintenance and Repair Complex
SP-H-29	U.S. B-29 Hardstands

4.2. Summary of National Register Status

The former Aslito/Isley Field was nominated to the NRHP as a historic district on September 16, 1980, and was included in the NRHP on June 26, 1981, as the "Isley Field Historic District" (NRIS No.: 81000667). As nominated, the district is defined by the "perimeter road," probably Flame Tree Road (on the north, west, and east) and Naftan Road (along the south), that encircles Saipan International Airport and encompasses 1,189 acres (see Figure 1-2). The condition of the historic fabric contained within the district is listed as deteriorated and altered by the modern airport. Twenty-seven buildings and structures are mentioned in the nomination as contributing to the NRHP eligibility of the property. These include:

- Operations Center. This building was built and used by the Japanese and later used for similar purposes by the U.S. 73rd Bombardment Wing. At the time of the nomination the structure had been refitted for use by the Marianas Visitors Bureau, now known as the Marianas Visitors Authority, and was called out as a "...fine example of adaptive reuse."
- Four gas drum storage bunkers
- Power plant.
- A building to house an electric generator.
- Semi-subterranean bomb storage facility. This structure was called out in the nomination as being particularly unique, representing "...the only remaining example of this type of building in Micronesia, and the structure is in excellent condition."
- Defensive gun emplacement atop the bomb storage facility.
- Semi-subterranean fuel storage facility.
- Three associated fuel tanks.
- Pump house.
- Torpedo regulating shop.
- Cold storage building.
- Eleven air raid shelters.

The nomination also briefly mentions the two runways as well as "...hundreds of hardstands and foundations from the U.S. period." The Historic Properties Database lists 27 contributing buildings (those listed above), two contributing structures (probably the runways), and zero non-contributing elements but no other details are offered.

Isley Field was later included in a National Historic Landmark (NHL) recommendation for three of Saipan's WWII-era sites (see Figure 1-1). The separate WWII-related properties were listed as Saipan Landing Beaches, Aslito/Isley Field, and Marpi Point NHL on February 4, 1985 (National Historic Landmark System [NHLS] No.: 85001789). In the landmark nomination, Isley Field's size is listed as 1,453 acres, whereas the district nomination is for 1,189 acres. No reason for the expansion is given although the NHL nomination notes a Japanese blockhouse on Unai Obyan beach (Koblerville) as a contributing element to the Aslito/Isley Field portion of the NHL that was not included in the district nomination. All of the features noted in the district nomination are recommended for inclusion in the Aslito/Isley Field portion of the landmark designation including:

- The sites of the two B-29 runways, taxiways, and hardstands.
- The 73rd Bombardment Wing's administrative area, listed as the Operations Center in the district nomination.

- All concrete structures associated with Aslito Field. This would presumably include all of the structures listed on the district nomination (above) as well as any previously undocumented Japanese structures within the district boundary such as the semi-subterranean bunker discovered during the present study and described in this report.

4.3. Conclusion

The previous research on the Marianas suggests that severely disturbed prehistoric material such as ceramic, flaked stone, and ground stone artifacts, probably from the Latte period given the rarity of inland Pre-Latte phase sites, are likely to exist in the project area. The significant amount of historic modification to the area likely impacted pre-contact sites and therefore the presence of intact features, although possible, is not likely. It is much more likely to encounter historic artifacts and features associated with the construction of Japanese Aslito Field beginning in 1934 and the U.S. expansion of the facility during WWII (at which time it was renamed Isley Field). Artifacts dating to this period may include bottle dumps, military supplies and equipment, refuse piles, and other durable metal objects. Features associated with this period, such as concrete foundations, are also likely to be encountered.

5. RESEARCH DESIGN

5.1. Prehistoric Period Research Questions

The analysis of prehistoric cultural materials will focus on obtaining information on when and how the interior of Saipan was used and how that patterning varies from previous archaeological findings. While more is known about the archaeology of the coastal areas of Saipan and the other southern Mariana Islands, the prehistoric archaeology of the interior limestone plateaus has also been studied. Extensive residential sites reflecting sedentary populations are well documented along the coast (DeFant and Leon Guerrero 2006), and past research suggests that these populations exploited all areas of the islands (Hunter-Anderson and Moore 1994). However, inland sites are not as well documented and generally consist of sherd scatters, sometimes with grinding stones and other stone tools. Latte sets are extremely uncommon at inland sites. The limited finds suggest that the upland plateaus, including the limestone plateau on which Saipan International Airport is located, were used during the Latte phase as occasionally occupied resource procurement and agricultural areas (Reinman 1977; Kurashina 1986). However, DeFant and Leon Guerrero (2006) note that the reasons for this shift are unknown. They suggest that the most plausible reasons involve population increase, environmental change, and/or the intensification of agriculture. A further issue is the actual timing of this expansion to inland areas. As Graves et al. (1990) point out, Marianas pottery is more variable than is often assumed, so ascription of Pre-Latte or Latte phase dates to artifact scatter sites may not be accurate.

The current project's research questions will aim to provide data on when, why, and how upland resources were added to the prehistoric economy of the Mariana Islands. Differences in the environmental conditions of habitats along the coastline and near shore environments and of habitats in the upland interior project area suggest that the upland limestone forest was used in response to ecological effects or changes to the structure of the island culture.

As explained in the review of the prehistory period, the prehistoric record of the larger islands in the Marianas can be summarized as consisting of the Pre-Latte phase and the Latte phase. Pre-Latte phase sites are small and are usually located on small beaches and along former lagoons. The sites were likely temporary and utilized a wide variety of environments oriented toward exploitation of fish, shellfish, and gathered plants. The artifact inventory from Pre-Latte phase sites indicate an emphasis on marine resources and little evidence for processing plant foods. The interior limestone forest may have held little interest as a food source at this time. During the early part of the Latte phase, populations increased and settlements expanded in size and number. The Latte phase is characterized by latte structures, often associated with human burials and larger villages. Tool kits were more diverse with large thick pottery and subsistence shifts from bivalve to gastropod shellfish and adoption of deep-water fishing. Dry land rice cultivation may have been introduced at this time (Hunter-Anderson et al. 1995).

This record of settlement change correlates in time with eustatic and isostatic changes in sea level, climate change, and vegetation changes. Most of the earliest settlements in the Marianas were located very near the shorelines (Hunter-Anderson and Butler 1995). Pre-Latte phase sites were located on narrow beaches recently exposed from a decline in sea level from a mid Holocene high stand of up to 3 m above modern levels (Nunn 2007). Extensive use of the near-shore resources was supplemented with inland areas that provided areas for crops or forest products as well as areas in which to hunt for birds and fruit bats or to obtain other protein sources such as coconut crabs and large monitor lizards (Carson 2011).

Interior settlement may have occurred as a result of utilizing a wide variety of habitats during this time. However, larger interior settlements were likely placed specific to certain topographic locations that provided the best soils for supporting agriculture and horticultural activities. Continuing sea level decline during the late years of the Pre-Latte phase increased beach progradation and created larger areas for settlement and more backshore area for crops (Nunn 1995). On the west coast of Saipan at the site of

Chalan Piao, these changes resulted in a shift in onshore environments from open water lagoons to mangrove swamps. As sea levels continued to fall, the coastal mangrove fringe eroded and disappeared, which changed the ecosystem. Shellfish diets changed as a result, with the larger arc clam (*Anadara antiquata*) used during the Pre-Latte phase shifting to smaller bivalves (*Tellina* and *Fragum*) and gastropods (*Strombus* sp.) from coral reefs during the Latte phase (Amesbury 2007).

The Latte phase is associated with a time when the falling sea levels in the Marianas stabilized around 2,000 years ago. This period is generally assumed to have seen an increase in population as more of the shoreline was exposed and opened for settlement (Butler 1990). Latte sites are also found in island interiors (Hunter-Anderson and Moore 1994). The increased use of the interior for farming is supported in part by studies on Guam that indicate increased slope erosion and increased levels of sedimentation with significant amounts of charcoal from burning the forest to clear areas for gardening beginning around 2000 B.P. (Athens and Ward 2004). The shift to larger settlements on the coast is accompanied by an increased use of terrestrial food relative to marine foods as indicated by stable isotope data for late prehistoric remains (Ambrose et al. 1997, McGovern-Wilson and Quinn 1966). On Saipan, isotopic analysis of collagen and apatite carbonate from prehistoric human remains indicated that sugar cane and seaweeds may have been very important dietary items (Ambrose et al. 1997). According to Moore (2005), a variety of indigenous plant foods were consumed prehistorically that included indigenous breadfruit, taro, yams, bananas, sugar cane, coconuts, and rice. The terrestrial plant diet was supplement by shellfish and mostly reef and lagoon fishes and fewer deep ocean fish species (Ambrose et al. 1997).

The establishment of more permanent settlements during the Latte period accompanied major changes in technology, and the range of cultural materials became more numerous and more diverse. As population increased so did agricultural production (Butler 1988). Latte-phase ceramic vessel forms suggest increased use of pots for boiling and storing food, and there appears to be more use of stone mortars, pounders, and pestles; both changes are consistent with increased intensification of plant food use. Meanwhile, the larger populations of the Latte phase required expansion of site locations to a wider range of island habitats. This expansion would have involved more use of the interior areas of the island with the use of small short terms camps for extracting local resources (Hunter-Anderson and Butler 1995).

The use of interior resources may have also been in response to stresses associated with food shortages from changes in climate that reduced the availability of marine resources. Saipan is affected by a variety of weather related events tied to oscillations in El Nino and La Nina phenomena and shifts in the tropical atmosphere that produce the wet season monsoons and dry season trade winds. During an El Nino year the mean sea level drops and during La Nina events the sea level is elevated above its normal value. Records from Guam, Yap, and Saipan indicate the net difference is about 0.6 m (Lander 2004). Drought cycles are also associated with El Nino/Southern Oscillation (ENSO) phenomena that can last from two to seven years (Vander Brug 1986) and some were likely as severe as the drought during the Little Ice Age in A.D. 1350–1900, which was accompanied by a decrease in sea levels of as much as 0.9 m below present levels (Nunn 1998). As Moore (2005) argues, changes in the climate that created periods of drought may have required the placement of a number of gardens in a variety of areas to offset food shortages. Costal residents would therefore have been forced to move inland to farm.

Finally, the interior may have been used in response to damage associated with typhoons. Although the coastline is generally protected from typhoon driven waves, the storms do damage resources. At higher than normal seasonal extremes, typhoon-related storm surges would increase tidal sea-level inundations and increase erosion of offshore reefs and beaches, resulting in considerable damage to inshore marine resources. These events would likely force coastal residents to seek shelter and find alternative food resources in the interior. Depending on the frequency and intensity of storms, the interior may have provided a refuge that, with time, caused changes in settlement patterns and a shift to a greater reliance on resources available in the limestone forest.

A review of the literature on the prehistoric period in the Marianas strongly suggests it is unlikely that the area near Saipan International Airport was ever densely populated or extensively utilized. The forest environment was likely used prehistorically to collect wild plant foods and hunt small animals, activities that would have left relatively little trace. The area may also have been used for agriculture or horticulture, but it lacks water and has what Young (1989) describes as very shallow and well drained Chinen-Takpochao and Chinen-lands soils. These soils are considered poorly to moderately suited to commercial and subsistence farming (Young 1988). However, the land before construction of the airport was topographically fairly level with slopes less than 5 percent and was less than 2 km from settlements along the western coast at Chalan Piao and Agingan. Access to the area was not restricted by steep slopes and required an elevation gain of less than 60 m.

The largest obstacle to finding evidence for prehistoric use of the project area is the construction of the airport. Much of the project area at the Saipan International Airport was cleared and leveled in 1934 when the Japanese built Aslito Field. The continued expansion of the airport during and since WWII has required grading activities and placement of bulldozed fill for the construction of the runways and airport facilities. It is obvious that these activities have greatly altered and modified the original landscape. Young (1988) describes the land in this area as bulldozed and disturbed with piles of rubble and debris fills. About 90 percent of the area is characterized as strongly altered by human activity with up to 25 cm of gravel materials placed over the original soils.

Despite the obvious disturbance to the project area, archaeological materials may still be present in surface and subsurface contexts. At the survey level, the goal is to document any archaeological resources and investigate areas to determine their physical features. Inspection of cut features and debris piles may find fire cracked rock, charcoal, and pottery fragments, and other artifacts that indicate the presence of subsurface cultural deposits. Even if subsurface cultural deposits are not found, disturbed surface finds will show the range of prehistoric human activity that occurred in the project area. Vegetation patterns may also help to define areas that potentially preserve buried deposits. For example, areas that support large trees may indicate areas that have not been bulldozed. In these areas, the investigation of subsurface exposures and the examination of sediment in upturned tree roots may be the best way to find evidence for buried sites.

In sum, there are three main likely causes of inland landscape use: intensification due to population increase, use of inland resources to offset loss of marine resources from short-term climate-related sea level change, and use of inland areas to offset loss of coastal resources as a result of typhoons. Archaeological survey will help to understand the degree to which these different causes were at work. The focus will be on several types of artifacts and their chronological patterning. First, ground stone artifacts and agricultural features will be treated as indicators of intensification of plant food resource use consistent with increased population as the primary causal factor in inland resource exploitation. However, evidence indicating that sites date to the periods when sea levels were increasing or decreasing rapidly will instead support inland resource use as a response to large-scale climate change, as these climate changes took place well after the Latte-phase increase in population. Finally, highly ephemeral sites may be indicative of short-term use of inland resources in response to typhoon damage.

5.2. Historic Period Research Questions

At the time of European contact, the Chamorro population on Saipan lived primarily along the coast in small villages that provided suitable farmland for cultivated plant crops and access to supplies of seafood. Ethnographic information on use of the interior portions of the island is limited. After European contact the addition of chicken, dog, and pig were added to the local diet (Steadman 1999a). However, the very small number of Spaniards on Saipan between first contact and the island's forcible depopulation in 1698 suggest that cultural materials from this period may be indistinguishable from prehistoric materials. This expectation is only reinforced by the sharp drop in the Chamorro population following contact with

European explorers. The abandonment of the island from 1698 to 1815 means that any materials from these years will be an important data point in understanding the degree to which Saipan was used during this period. Particular attention will be paid to decorated European ceramics, which may indicate very specific date ranges.

During the periods of German and Japanese control, Chamorro and Caroline Islander populations increased on Saipan. Spoehr (1954) reports that the established pattern in Chamorro society was for each family to have two residences: a larger house in a village and a second smaller structure (lancho) on a farm. Cultivated areas were small to accommodate manual slash-and-burn agriculture that was still prevalent in the 1950s. However, what is not as well documented is whether Chamorro and Caroline populations followed this pattern during the period of Japanese control of Saipan, when the island was largely turned over to sugar cane production and was home to large numbers of Japanese and Okinawan immigrants. Survey may find indications of which groups used the interior during this period. Evidence for Chamorro lancho farms and Okinawan farmhouses may be preserved in the project area as overgrown cultivated areas and groves of banana trees with agricultural field features and collapsed structures along with the outlines of oxcart trails that lead to coastal villages.

The most likely outcome of archaeological survey is artifacts and features related to WWII and the Japanese preparations for war beginning in the 1930s. Because this period is very well-documented, any artifacts or features recorded on survey will be evaluated against the documentary record to determine, for example, if particular artifacts can be assigned to particular military units. In the case of military features, particular attention will be paid to how complete they were during the war to provide additional information on the degree to which Japanese forces were able to dig in prior to the U.S. invasion.

6. METHODOLOGY

6.1. Pre-Field Investigations

Prior to fieldwork, HDR completed a thorough review of existing cultural resource reports and other documentation relevant to the project area and its immediate vicinity. Any previously recorded cultural properties (prehistoric or historic archaeological sites) in the project area were noted and their locations recorded.

6.2. Field Methods

The project area was surveyed by archaeologists walking multiple, parallel, and non-overlapping transects spaced at 10 m intervals. The survey entailed thorough surface inspection.

For this survey, sites were defined as any area that contained evidence of purposeful human activity as demonstrated by the presence of 10 artifacts (ceramics, ground stone, flaked stone) in a 10 x 10 m (or 100 m^2) area or the presence of a feature (such as a latte).

When cultural remains were encountered, a determination was made as to whether they were an isolated occurrence (IO) or a site. IOs are isolated cultural remains that do not qualify as sites and generally consist of a single artifact or an artifact scatter that is of extremely low density and widely dispersed. When an IO was encountered, all artifacts comprising the isolate were recorded and their location plotted on a map of the project area and recorded using a Global Position System (GPS).

When sites were encountered, boundaries were defined and plotted on a scaled plan view map along with prominent landscape and cultural features. Digital photographs were taken showing the site setting, features, and artifact concentrations. Sites were plotted on the site map, and the site itself was plotted on the U.S. Geological Survey (USGS) quadrangle map. Further, the site locations were recorded using a GPS.

6.3. Artifact Recording

Ceramics and ground stone are expected to be the most common artifact classes encountered in the project areas. Proper analysis of these artifact classes is important for addressing the research issues presented above. Therefore, robust analytical methods have been devised to record and extract useful data about these artifacts.

6.3.1. Ceramic Analysis

Each sherd was examined and placed in the current ceramic typology. The main attributes recorded in the field were Type of Temper, Temper Size and Density, Surface Treatment, Vessel Form, and Thickness. All pertinent data was collected in the field and therefore surface collection was not necessary. Note that particular attention was paid to the attributes that best correlated with the island of manufacture—temper type and sherd thickness (Graves et al. 1990).

Temper type was determined by examining the consistency of the temper and determining its composition. Temper types included sand, volcanic, and calcareous sand. Temper size was determined by measuring the largest clast visible in the cross-section of a sherd. Temper density estimates were achieved by counting the total number of pieces of tempering material visible in the profile and on the surface of each sherd.

Surface treatment was determined with the aid of a magnifying glass. Evidence for surface treatment was recorded as a qualitative variable and included textured or smooth. Texture was further refined into incised, lime-impressed, or random marked.

Vessel form was determined by examining sherd characteristics including thickness and circumference. Form was recorded as simple bowl, simple jar, complex bowl, or complex jar. Simple forms have little evidence of finishing such as polishing or rim modification. Complex forms show signs of smudging, interior smoothing, and/or highly modified rims. Rims were recorded in terms of rim eversion or inversion, thickness, and decoration or surface treatment.

Thickness was measured using standard calipers. Measurements included thickness to the nearest mm and when possible, 1/10 mm.

6.3.2. Ground Stone

Ground stone artifacts identified during the survey will be analyzed to address issues relating to food processing strategies, tool use, and technology. Attributes recorded included raw material type, artifact size, form, number of facets, and the presence of pecking.

Raw materials will be recorded as the type of material from which the grinding implement was made. Basalt and limestone are expected to be the most common.

Artifact size will be measured in centimeters. Measurements of maximum length, maximum width, maximum thickness, and depth or basis will be collected. Ground stone form will be recorded as flat, shallow mortar/basin, or deep mortar. The number of identifiable facets will be counted for all ground stone and recorded as an integer. Finally, the presence of pecking or rejuvenation will be recorded as either present or absent.

6.3.3. Metal, Concrete, and Glass

Metal and glass artifacts along with concrete features encountered were from the historic period. Metal artifacts were measured, markings and manufacturing technology noted, and function determined (when possible).

Like ceramics, concrete is composed of paste and temper. Variation in temper (e.g., crushed rock, natural gravel, or sand) varied with manufacturing preferences both geographically and through time, and thus allowed for relative dating (when possible). Observations on temper included type, size, and density.

Attributes recorded for glass artifacts included color, size, markings, and frequency. Color was recorded as clear, amber (brown), green, and clear. Size was recorded in terms of container size. Markings, exterior textures, and embossing on the sides and bases were also recorded. Special attention was paid to the basal markings which were used to determine where a bottle was made and when it was made. Analysis of the markings on bottles can often determine when and where the bottles were made and thus when they may have been deposited. Examination of bottle size and the associated artifacts was used to infer the activities associated with the creation of a historic site.

6.4. Other Artifacts and Features

All other artifacts were noted and their physical properties recorded. Attributes included type of material from which the artifact was made, type, size, and evidence of use or damage. Features were measured and their manufacturing style recorded. Presence of feature fill, datable material, or additional information potential was also noted.

6.5. Evaluation Standards: National Register of Historic Places Eligibility Criteria

Upon completion of the fieldwork, data from site recording was assembled and organized, and a recommendation was made for each site based upon the NRHP eligibility criteria.

The development of NRHP eligibility recommendations follows the guidelines set forth under the National Historic Preservation Act (NHPA), Section 106 guidelines. All cultural resources were evaluated for significance using the NRHP criteria in 36 CFR 60.4. To be listed in or considered eligible for the NRHP, a cultural resource must meet at least one of the four following criteria:

A. The resource is associated with events that have made a significant contribution to the broad pattern of history.
B. The resource is associated with the lives of people significant in the past.
C. The resource embodies distinctive characteristics of a type, period, or method of construction; represents the work of a master; possesses high artistic value; or represents a significant and distinguishable entity whose components may lack individual distinction.
D. The resource has yielded, or may be likely to yield, information important in prehistory or history.

A step-by-step process for applying the criteria of 36 CFR 60.4 is described in detail in National Register Bulletin 15, *How to Apply the National Register Criteria for Evaluation* (National Park Service [NPS] 2002):

- *Categorize the property.* A property must be classified as a district, site, building, structure, or object for inclusion in the NRHP.
- *Determine which prehistoric or historic context(s) the property represents.* A property must possess significance in American history, architecture, archaeology, engineering, or culture when evaluated within the historic context of a relevant geographic area.
- *Determine whether the property is significant under the NRHP criteria.* This is done by identifying the links to important events or persons, design, or construction features, or information potential that make the property important.
- *Determine if the property represents a type usually excluded from the NRHP*. If so, determine if it meets any of the criteria considerations.
- *Determine whether the property retains integrity.* Evaluate the aspects of location, design, setting, workmanship, materials, feeling, and association that the property must retain to convey its historic significance.

In addition to meeting at least one of the above criteria, a cultural resource must also possess the majority, if not all, of the aspects of integrity: location, design, setting, materials, workmanship, feeling, and association. Integrity is defined as the authenticity of a property's historic identity, as evidenced by the survival of physical characteristics it possessed in the past, and its capacity to convey information about a culture or people, historic patterns, or architectural or engineering design or technology.

Location refers to the place where an event occurred or a property was constructed. Design considers elements such as plan, form, and style of a property. Setting is the physical environment of the property. Materials refer to the physical elements used to construct the property. Workmanship refers to the craftsmanship of the creators of a property. Feeling is the property's ability to convey its historic time and place. Association refers to the link between the property and a historic event or person.

As described in Chapter 4, the former Aslito/Isley Field, Saipan International Airport, is listed on the NRHP as an historic district for its association with the Battle of Saipan and the War of the Pacific during WWII as the "Isley Field Historic District" (NRIS No.: 81000667). For the purposes of the NRHP, a District "…possesses a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development (NPS 1993:10)."

Not every site, building, structure, or object within the boundaries of a NRHP-eligible district contribute to the district's overall eligibility. In order to be a contributing resource, each site, building, structure, or object within the district must be evaluated as to whether it possesses the following characteristics (NPS 1993:11):

- It was present during the period of time that the property achieved its significance.
- It relates to the documented significance of the property.
- It possesses historical integrity or is capable of yielding important information relevant to the significance of the property.

Districts may also be discontiguous, as when several historically-related sites or buildings are fragmented by modern development (NPS 1993:11). Additional guidance in dealing with districts associated with a historic battle is also relevant for evaluating Aslito/Isley Field. Because the historic event, the battle, is itself both destructive and temporary, the location, setting, feeling, and association aspects of integrity are weighted more heavily in evaluating the historic integrity of a property than for properties associated with other types of historical events. A NRHP Bulletin devoted to the evaluation of historic battlefields offers a basic test of integrity by asking whether a participant in the battle would recognize the property as it exists today (NSP 1999).

6.6. Conclusion

Following these methods ensured that the project area was thoroughly investigated and that all cultural resources comprehensively recorded. The specific data requirements for the presented research questions were collected and new data concerning the use of the area was developed. Finally, all sites found during the course of the project were evaluated pursuant to the NRHP criteria thereby guaranteeing that important sites or sites with additional information potential can be identified prior to any undertaking.

7. SURVEY RESULTS

The survey resulted in the identification of three pre-contact IOs and 10 historic features (Figure 7-1). The features include a Japanese bunker, several water catchment features, and a bottle dump. These features and materials probably date between 1935 and 1945. The three pre-contact IOs are comprised of Latte period sand-tempered sherds. IO2 consisted of a Latte period pottery sherd and a sling stone.

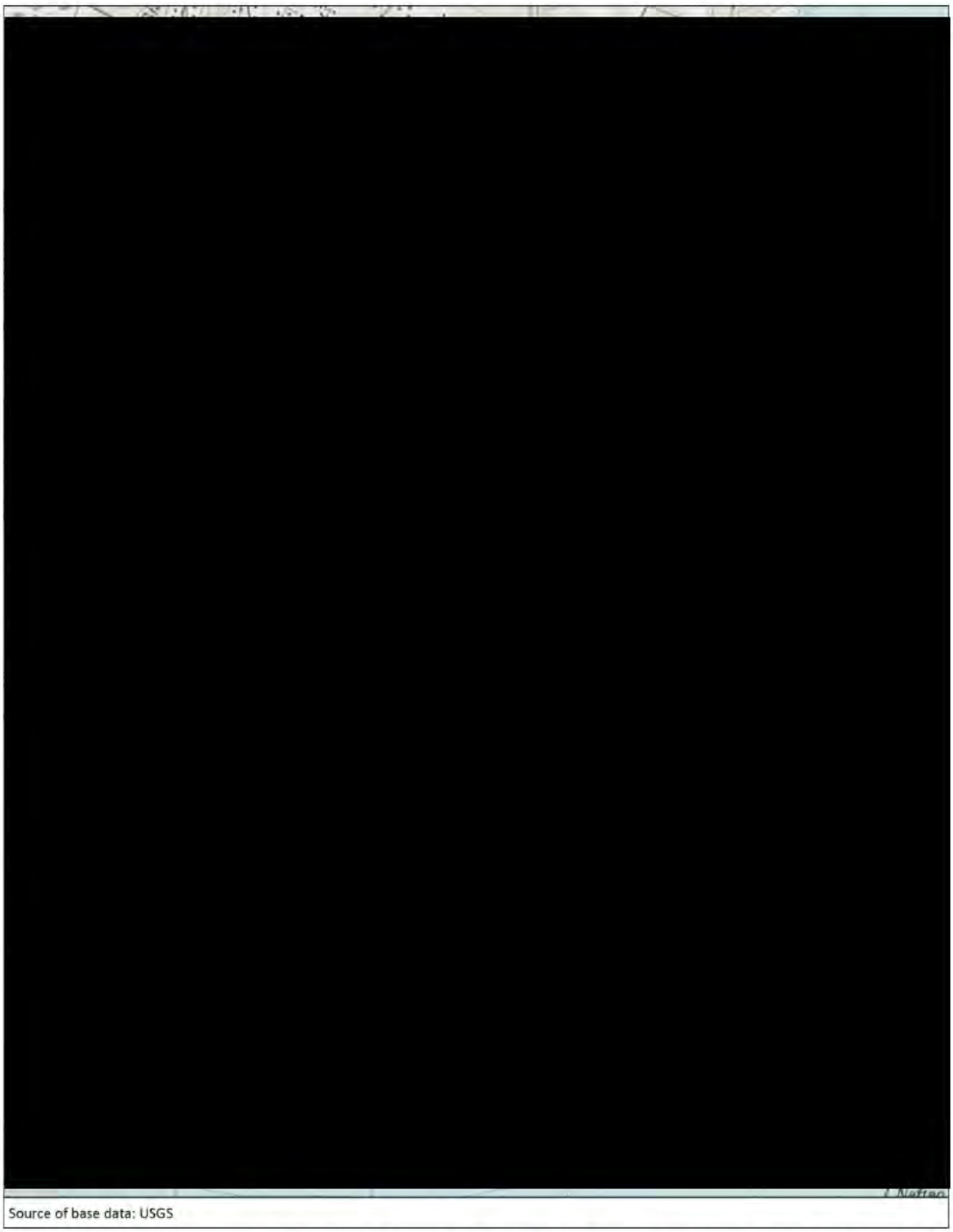


FIGURE 7-1. MAP OF SPATIALLY ISOLATED HISTORIC FEATURES AND ARTIFACTS IN THE PROJECT AREA.

7.1. Isolated Occurrences

Survey recorded three pre-contact IOs consisting of eight Latte-period sherds and one sling stone (Table 7-1). These artifacts were found within approximately 230 m of one another.

TABLE 7-1. PRE-CONTACT IOS RECORDED DURING SURVEY.

IO No.	Description	Cultural/Temporal Affiliation
IO1	1 Latte phase plainware body sherd	Latte phase
IO2	1 Latte phase plainware body sherd and 1 sling stone	Latte phase
IO3	6 Latte phase plainware sherds (5 body, 1 rim)	Latte phase

IO1 is a single Latte-phase plainware body sherd with sand temper that measures 1 x 1 x 0.5 cm [redacted]. IO2, [redacted] consists of one Latte phase ceramic sherd and one sling stone. The sherd is a plainware sand tempered sherd that measures 3 x 1.5 x 1 cm (Figure 7-2). The sling stone is 3 x 2.5 cm with rounded ends and made of igneous material with pecking evident throughout (Figure 7-3). These artifacts were in a disturbed area atop a bulldozer push pile.

FIGURE 7-2. IO2 PLAINWARE CERAMIC SHERD.

FIGURE 7-3. IO2 SLING STONE.

IO3 [redacted] consists of six Latte phase sherds including five body sherds and one rim sherd. The ceramic sherds are all sand tempered. A total of five body sherds and one rim sherd were identified. The rim sherd is trapezoidal in shape and is 5 x 4 x 3 x 4.5 cm and >0.5 cm thick (Figure 7-4).

FIGURE 7-4. IO3 PLAINWARE CERAMIC RIM SHERD.

The sherds observed during survey are consistent with Marianas-wide pottery technology. During the Latte phase, potters used a range of temper, including volcanic sand, calcareous sand, a mix of the two, crushed sherd temper, or no temper at all (Dickinson et al. 2001). Quartz sand or crystal temper occurs only in ceramics made on Saipan (Graves et al. 1990). Quartz sand-tempered pottery was exported throughout the islands (Dickinson et al. 2001). Saipan and Tinian ceramics are dominated by sherds with plain (unmodified and scraped) surfaces, while assemblages from Guam and possibly Rota are more mixed and have only a slight majority of one treatment (wiped or brushed surfaces) (Graves 1990). Sherds from Saipan and Tinian are considerably thicker than sherds from Guam and Rota (approximately 12 mm vs. approximately 8 mm) (Ibid.).

The sherds recorded during survey have a mix of calcareous sand and weathered volcanic sand temper, making identification of a specific island of manufacture impossible. The sherds range in thickness from 0.5 cm to 1.0 cm thick, suggesting that some may be from pots made on Guam or Rota, but this conclusion is by no means certain given that Graves' work found considerable variation in sherd thickness even on artifacts of known origin.

None of the prehistoric IOs (IO1, IO2, IO3) are recommended as eligible for listing in the NRHP under any criteria. They retain minimal information potential, most of which was exhausted through field recording, and they were located in disturbed contexts.

7.2. New Features to Isley Field Historic District

Survey recorded a large number of features and artifacts associated with the Japanese and U.S. occupations of Aslito/Isley Field between the field's construction in 1934 through the years immediately following WWII (Table 7-2).

TABLE 7-2. NEWLY IDENTIFIED ISLEY FIELD HISTORIC DISTRICT FEATURES

Feature or Artifact Number	Cultural Material	Temporal Association
Feature 1	Concrete water tower	Japanese Occupation (1934–1944)
Feature 2	Concrete foundation with drain with one Japanese porcelain sherd	Japanese Occupation (1934–1944) American Occupation (1944–1945)
Feature 3	Concrete foundation with drain	Japanese Occupation (1934–1944) American Occupation (1944–1945)
Feature 4	Concrete foundation with drain	Japanese Occupation (1934–1944) American Occupation (1944–1945)
Feature 5	Concrete slab	Japanese Occupation (1934–1944) American Occupation (1944–1945)
Feature 6	Japanese bunker	Japanese Occupation (1934–1944)
Feature 7	Water catchment feature	American Occupation (1944–1945)
Feature 8	Water catchment feature	American Occupation (1944–1945)
Feature 9	Concrete foundation	American Occupation (1944–1945)
Feature 10	Bottle dump	American Occupation (1944–1945)

Survey recorded 5 spatially isolated historic features. These features include three (Feature 2, Feature 3, Feature 4) identical 4 x 4 ft (1.2 x 1.2m) concrete structures that appear to be water catchment devices, one water retention tower (Feature 1), and one concrete foundation (Feature 5).

7.2.1. Feature 1

Feature 1 is [redacted] The feature is a circular concrete water retention structure. The feature is 6 ft (1.8 m) tall and 8 ft (2.4 m) in diameter with 12 inch (30.5 cm) thick walls (Figure 7-5). The feature has no roof or cap. Standing water is visible inside the feature.

FIGURE 7-5. VIEW SOUTH OF WATER RETENTION STRUCTURE (FEATURE 1).

7.2.2. Features 2, 3 and 4

Features 2, 3, and 4 are square cement foundations that measure 4 x 4 ft (1.2 x 1.2 m) (Figure 7-6). Each foundation is roughly 18 inches deep and has 1 foot wide cutouts on each side covered with wire screen (Figure 7-7). Centered in the foundations are 6-inch diameter drains (Figure 7-8). Feature 2 [redacted] includes one Japanese porcelain sherd located adjacent to the cement foundation. The sherd lacks maker's marks or other identifying features, but is assumed to date to the period of Japanese construction and occupation of Aslito Field. [redacted] The fact that the dimensions correspond to English measurements strongly suggest these three features were built by U.S. forces.

FIGURE 7-6. OVERVIEW OF FEATURE 3 (TYPICAL OF FEATURES 2, 3, AND 4).

FIGURE 7-7. FEATURE 3 DETAIL OF CONCRETE PIT EAST WALL.

FIGURE 7-8. FEATURE 3 DRAIN CENTERED FEATURES 2, 3, AND 4.

7.2.3. Feature 5

Feature 5 is [redacted] a rectangular cement foundation with a 20 ft north-south (6.1 m) by 40 ft east-west (12.19 m) footprint. No identifying marks or attributes were observed during the investigation. The intended use of this feature is unclear although the size is comparable to the foundations used for 20 by 40 ft Quonset huts.

In addition to the spatially isolated historic artifacts and features discussed above, survey recorded a cluster of historic features 67 m (220 ft) south of Airport Road (Figure 7-9). These features are a Japanese air raid shelter, a large cement pad or foundation, two water catchment features, and a large bottle dump. Vegetation in the area is secondary growth limestone forest with a sparse canopy and thick understory.

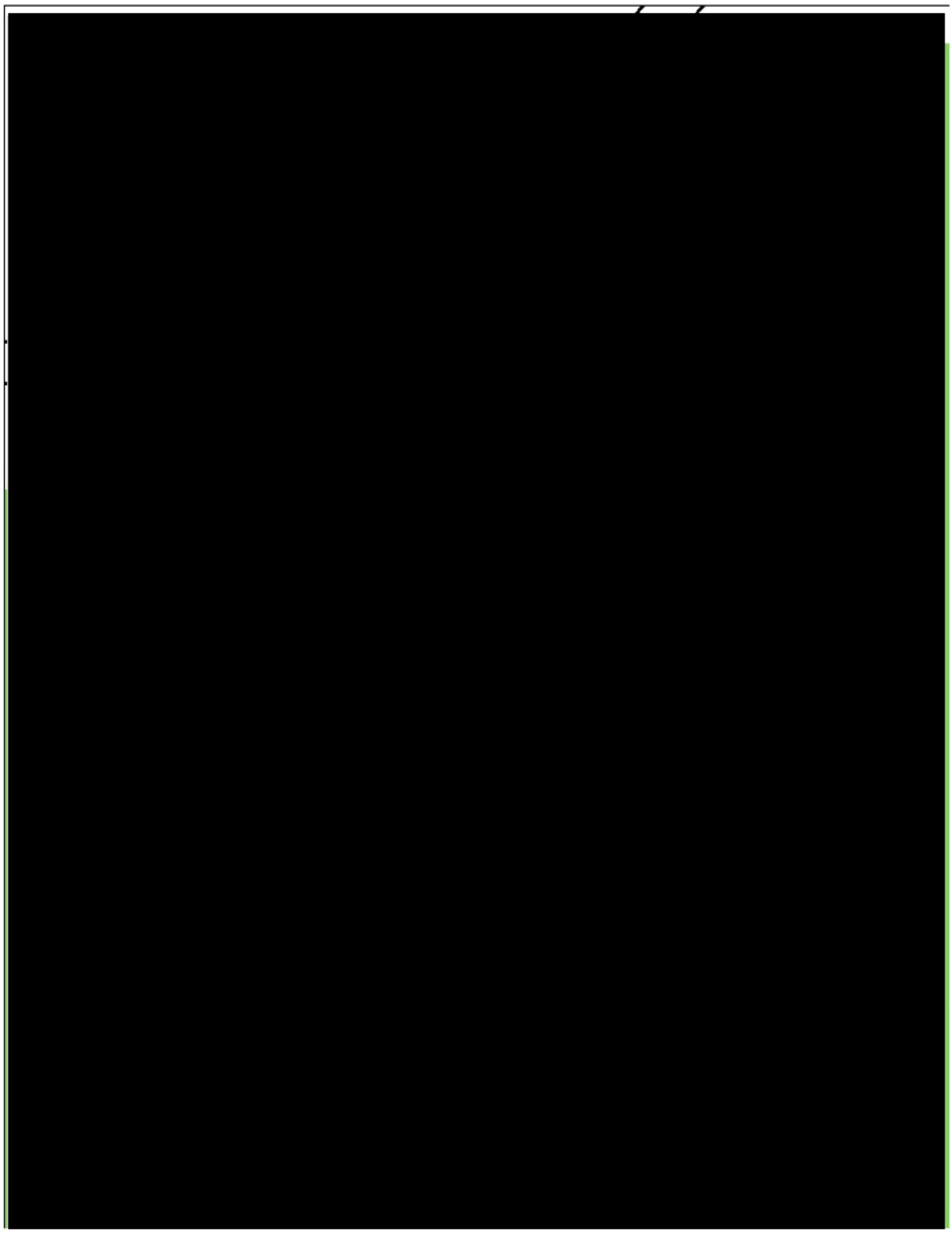


FIGURE 7-9. LOCATIONS OF FEATURES 6 THROUGH 10.

7.2.4. Feature 6

Feature 6 is a Japanese bunker constructed of concrete with entrances at both ends of its long axis (Figure 7-10 through Figure 7-13). The entire structure is covered with earth and limestone boulders that hide the structure from view. Six stairs, partially covered with sediment, lead down to the arched entrances. Although the entrances have provision for hinges, they lack hinges and doors. The faces of the bunker are 1.8 m (5.9 ft) wide including the 0.4 m (1.3 ft) thick walls on both ends. The stairway and open space of the entry are 1 m (3.3 ft) wide. The bottom of the set of stairs is 125 cm (49.2 in) below the current ground surface. The interior footprint of the bunker is 9.8 m (32.2 ft) long and 1.7 m (5.6 ft) wide. The bunker has an arched roof profile and vertical interior walls. The vertical portion of the interior wall rises 1.3 m (4.3 ft) from the floor to where the arched ceiling begins. The height at the peak of the ceiling is 1.7 m (5.6 ft). The bunker has five square air vents centered along the peak of the ceiling. The air vents measure 12 x 12 inches (30.5 x 30.5 cm) and are evenly distributed along the length of the bunker. The walls of the structure are 0.4 m (1.3 ft) thick. Seams from the bunker's construction are visible on the interior walls. Also present on the interior walls are two small holes (4 x 5 cm) near the floor on the northeast wall, and three nails protrude from the wall. Their function is unknown. The bunker is consistent with descriptions of army airfield shelters on other Pacific islands (Denfeld 1992). No defense gun emplacements or firing slits were identified in the bunker. Given the absence of gun emplacement it can be inferred that this bunker was intended only as a shelter. The absence of doors could indicate that this structure was not complete when American forces seized the area.

Several artifacts were present in the interior of the bunker. Two peeled logs are situated near the north end of the bunker. A 6-inch diameter ceramic pipe is situated on the floor in the center of the bunker. Also located on the floor is a Japanese amber glass bottle with "KOZAN" embossed on the shoulder and "KONDO/TOKYO" embossed on the heel (Figure 7-14). A date range for the bottle could not be determined. A whiteware rim sherd with hand-painted decoration and two metal hinges were found on the south end of the bunker floor. An aqua bottle fragment with a heel marking of "YAMASA SHOYU CO LTD." was found outside of the bunker atop the south entrance. This bottle is a soy sauce bottle; its age could not be determined.

FIGURE 7-10. INTERIOR OF JAPANESE BUNKER, FEATURE 6.

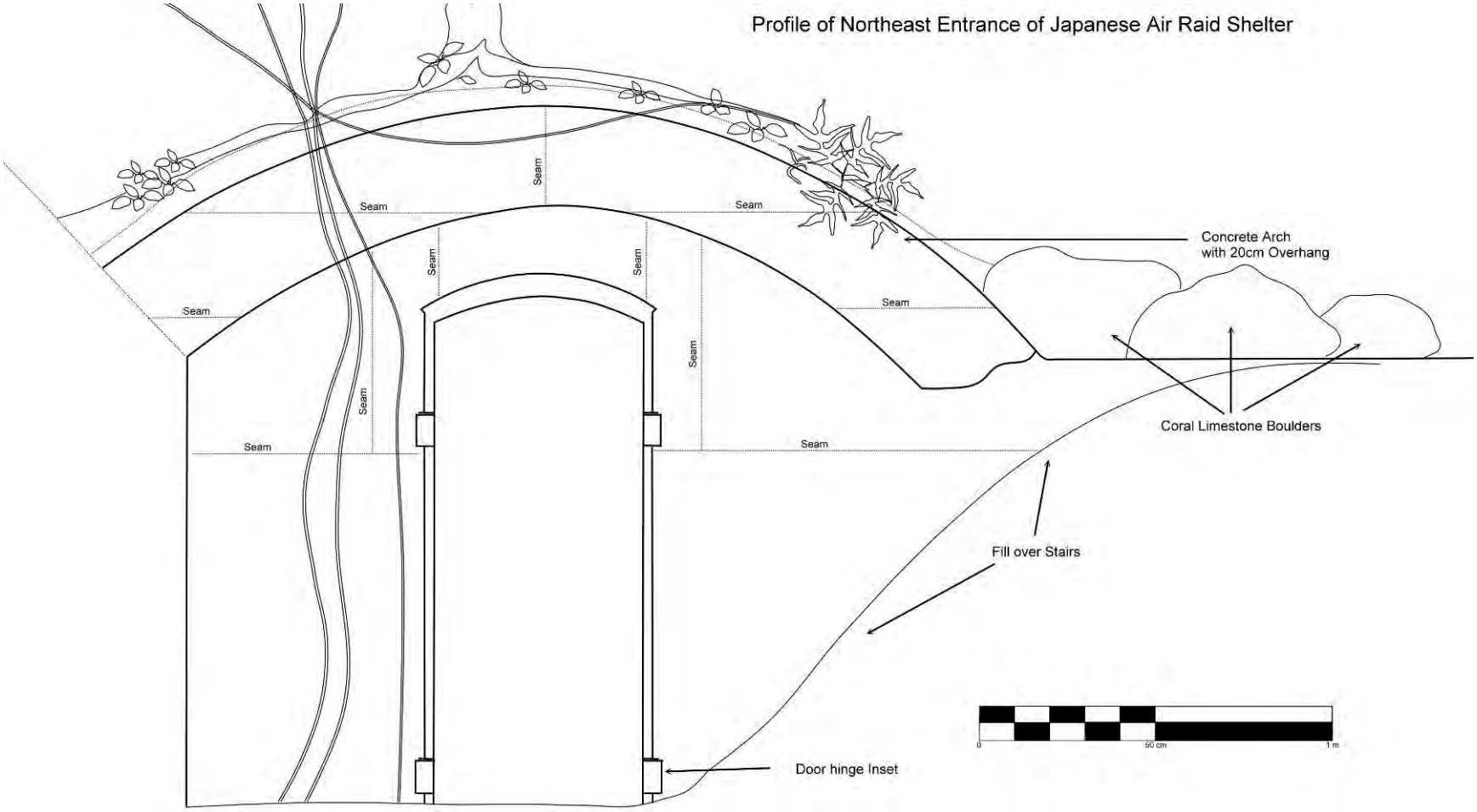


FIGURE 7-11. BUNKER ENTRANCE PROFILE.

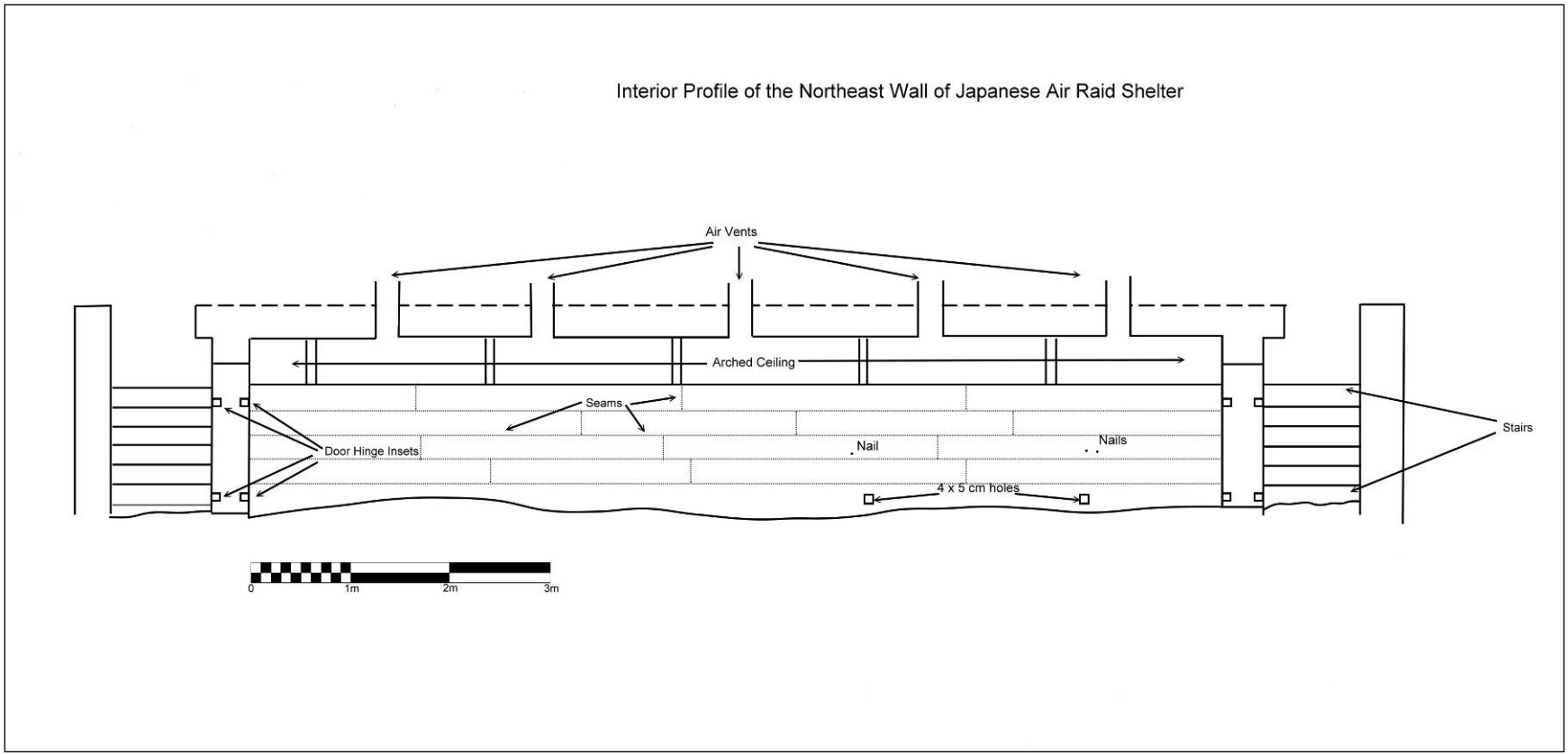


FIGURE 7-12. BUNKER INTERIOR PROFILE.

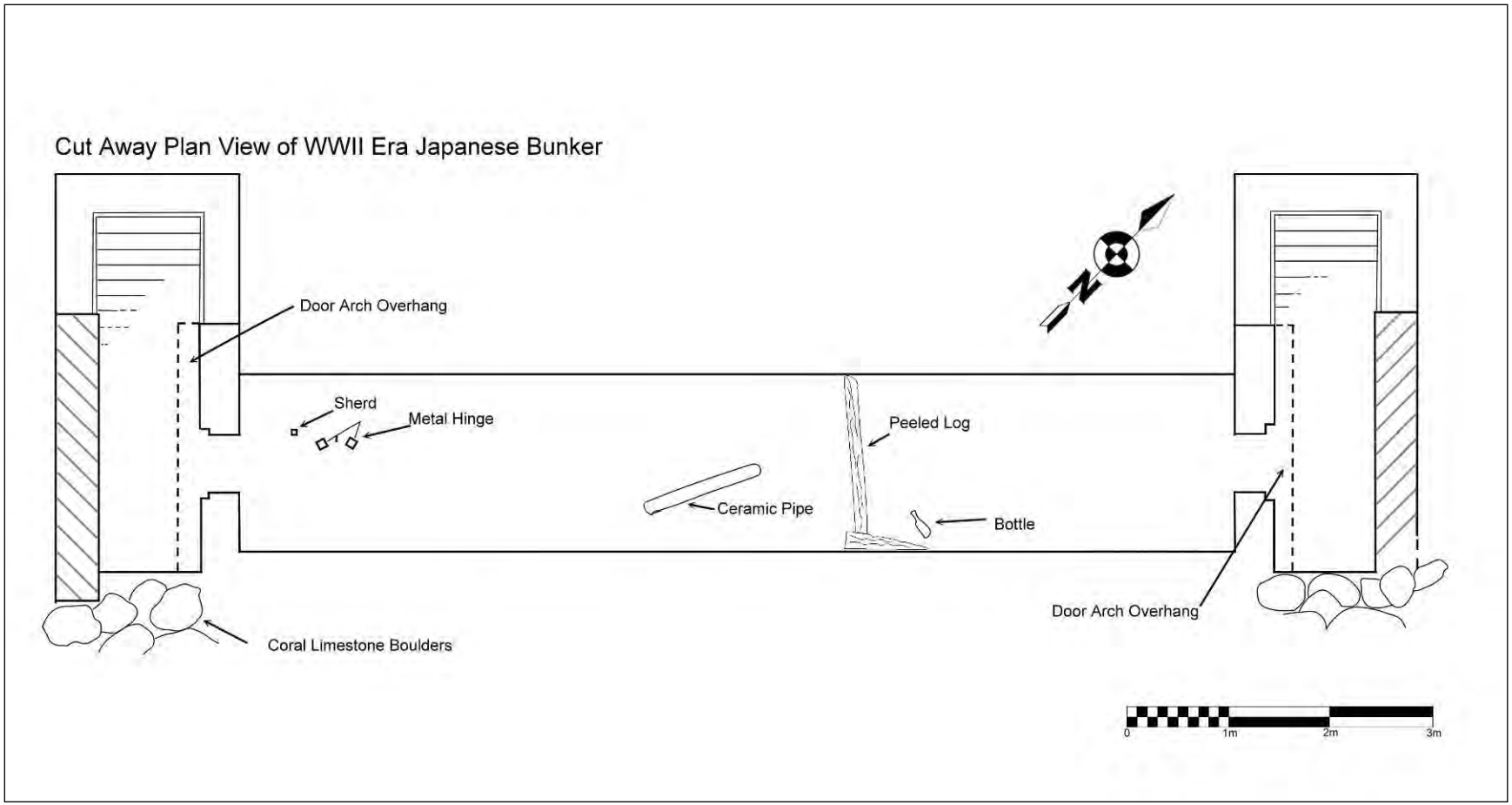


FIGURE 7-13. BUNKER PLAN VIEW.

FIGURE 7-14. JAPANESE BOTTLE INSIDE BUNKER.

7.2.5. Feature 7

Feature 7, immediately west of the bunker's west entrance, consists of four square cement pilings in a rectangular arrangement (Figure 7-15). The pilings measure 11 inches wide (27.9 cm) at ground level tapering to 9 inches (22.9 cm) at the top, and stand roughly 33 inches (83.8 cm) in height. The east-west oriented pilings are spaced 4 ft (1.2 m) apart while the north-south oriented pilings are 27 inches (68.6 cm) apart. One of the pilings retains an iron support post, while the others have corroded away. A 4 ft (1.2 m) section of 2 inch (5.1 cm) diameter hose was located on the ground surface near the pilings. The feature's function is unknown, but it likely served as a water catchment device.

FIGURE 7-15. PILINGS, FEATURE 7.

7.2.6. Feature 8

Feature 8, 15 m (49.2 ft) southwest of the bunker, consists of four cement pilings in a rectangular arrangement, a small pit, a drainage line, and a cement pad (Figure 7-16, Figure 7-17). The square pilings are 33 inches (83.8 cm) tall and taper from 9 inches (22.9 cm) at ground level to 8.5 inches (21.6 cm) at the top and are arranged in a rectangle that measures 56.5 inches (143.5 cm) east-west by 85.5 inches (217.2 cm) north-south. In the center of the pilings is a pit 20 inches (50.8 cm) deep; the western side of the pit has collapsed, exposing a concrete foundation. A roughly constructed drainage line consisting of cement and limestone cobbles begins at the northwest corner of the pit and ends at a cement pad 5.2 m west-northwest of the pilings and pit. The pad measures 8 ft (2.4 m) east-west by 6 ft (1.8 m) north-south. Feature 8 appears to be a water catchment device but its actual function is unknown. The feature's English unit measurements suggest it was built during the American occupation of the airfield.

FIGURE 7-16. PILINGS, FEATURE 8.

FIGURE 7-17. DRAINAGE LINE, FEATURE 8.

7.2.7. Feature 9

Feature 9, 30 m west of the bunker, is a concrete foundation measuring 136 ft (41.5 m) by 39 ft (11.9 m) (Figure 7-18). The foundation has a cement curb-like border around its perimeter. The cement boundary is 3 in (7.6 cm) high and 4 in (10.2 cm) wide. It is assumed that this feature is related to the American development of the airfield due to its English-unit dimensions.

FIGURE 7-18. CONCRETE PAD, FEATURE 9.

7.2.8. Feature 10

Feature 10 is a dump of approximately 364 glass bottles and other refuse (Figure 7-19). The bottles include short-neck amber beer bottles, long-neck amber beer bottles, short-neck clear beer bottles, whiskey bottles, and soda bottles. The dump measures roughly 30 m (100 ft) x 20 m (65 ft). It lies in an eroded area of deflated topsoil suggesting that the trash deposits are neither stratified nor deep and that the surface area represents its full extent. There are two distinct concentrations of bottles (concentration A and concentration B). Concentration A is 10 m (32 ft) in diameter and contains 328 bottles (Table 7-3). The concentration consists of 190 short-neck amber beer bottles, 129 short-neck clear beer bottles, 7 Coca-Cola bottles, 1 green club soda bottle, and 1 amber cork top whiskey bottle. Concentration B is 5 m (16 ft) in diameter and contains 36 bottles (Table 7-4). The bottles include 35 long-neck amber beer bottles and one clear glass Pepsi-Cola bottle. A ceramic plate and a small tire were also found in association with the bottle dump. The plate fragment in the refuse scatter was a piece of Shenango china, manufactured by the New Castle Pottery Company of New Castle, Pennsylvania (Figure 7-20). The company was in operation from 1913–1991 (Lawrence County Historical Society 2011). The maker's mark is a "fouled anchor." This type of hollowware was used by the U.S. Navy and Merchant Marines from the early 1900s to the 1970s as fine china for formal dinner service.

FIGURE 7-19. BOTTLE DUMP, FEATURE 10.

TABLE 7-3. CONCENTRATION A.

Count	Artifact Type	Description	Manufacture Date
190	Short-neck amber beer bottles	12 oz., basal mark of Armstrong Cork CO., Glass Division, Lancaster, Pennsylvania	1938–1969
129	Short-neck clear beer bottles	12oz., basal mark of Knox Glass Bottle CO., Knox, Pennsylvania	1917–1956
7	Clear glass bottles	10 oz., Coca-Cola bottles, Trademarked	1941–1960s
1	Green glass bottle	16 oz., Clicquot Club Soda bottle with Owens Illinois basal mark, plant 23, Los Angeles, California	1946
1	Amber cork top bottle	16 oz. amber whiskey bottle, basal mark of Owens Illinois	1947

TABLE 7-4. CONCENTRATION B.

Count	Artifact Type	Description	Manufacture Date
35	Long-neck amber beer bottles	12 oz., basal mark of Thatcher Manufacturing Company.	1946
1	Clear glass bottle	Pepsi-Cola	1940s

FIGURE 7-20. SHENANGO CHINA PLATE FOUND IN FEATURE 10.

7.2.9. Feature 11

Feature 11 is [redacted] Two Japanese air raid bunkers (AB7 and AB8, discussed below) are just to the north. The feature is a rectangular cement pad or foundation that measures 120 ft (36.6 m) long by 20 ft (6.1 m) wide and is oriented SW-NE. No identifying marks or attributes were observed during the investigation. The intended use of this feature is unclear.

7.2.10. Hardstands

When completed in 1944 for use during WWII, Isley Field had 181 keyhole-shaped asphalt hardstands for B-29 bombers connected by a series of taxiways (Figure 7-21). The 1980 Micronesian Archaeology Survey recorded 65 surviving hardstands (Denfeld and Russel 1984). The Micronesian Archaeological survey focused on central Isley Field, which contained the majority of the historic standing structures. The HDR survey encountered portions of B-29 hardstands. While the hardstands are technically part of the Historic District it is unclear if they are actually contributing elements. The issue resides in their integrity and whether they retain significant integrity to convey their significance. In order for a property to be eligible under NRHP criteria it must look much like it did during its period of significance. The property should retain integrity of location, setting and feeling. In the case of the hardstands the sections in the northeast and south of the main runway retain integrity of location. The hardstands near the main airport have been seriously compromised by construction of roads, airport facilities, and the like. These same impacts have significantly impaired integrity of setting and feeling. Thus, while remnants of hardstands exist in and around the project area they should not be considered contributing elements since they lack the necessary integrity.

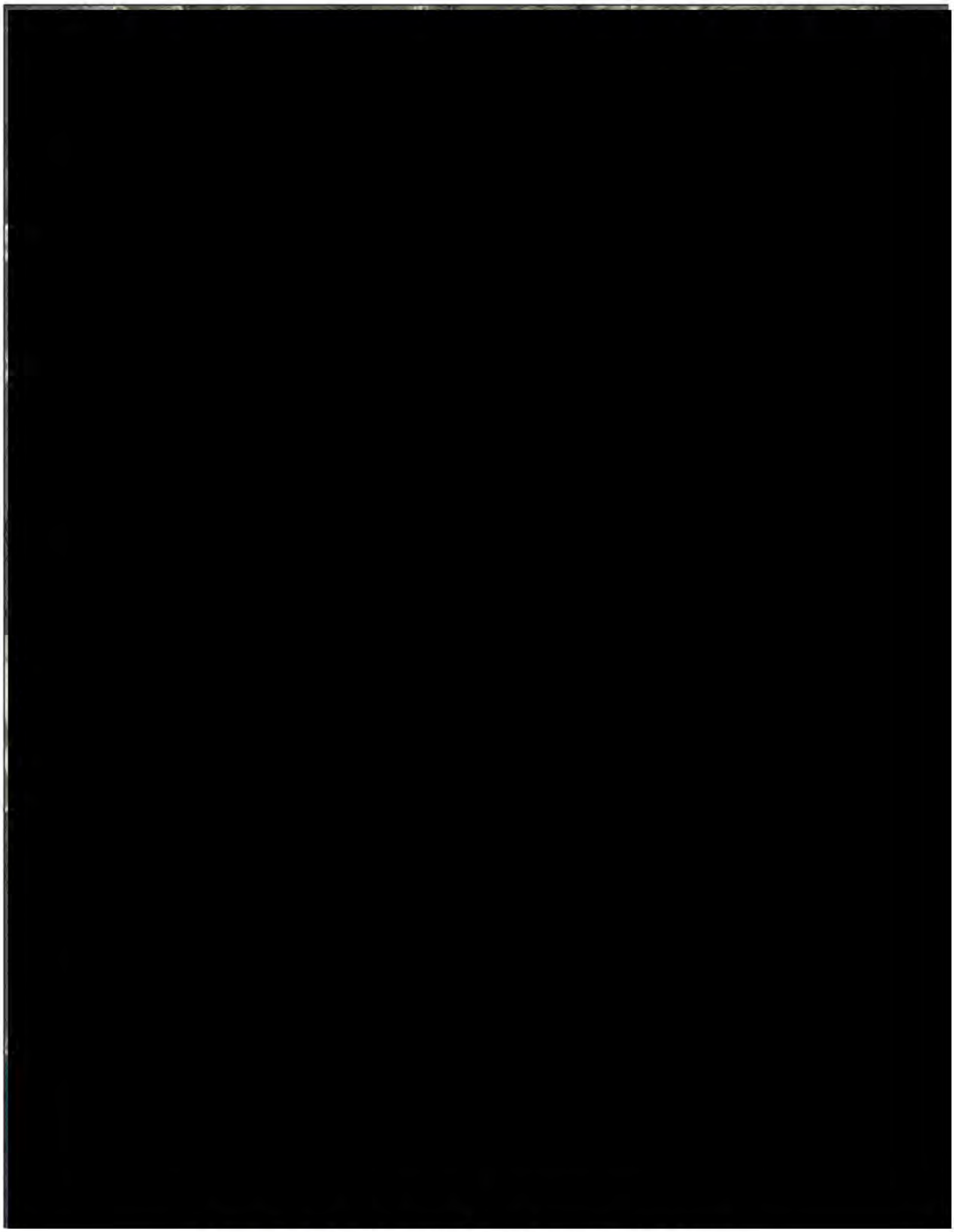


FIGURE 7-21. MAP OF HISTORIC B-29 HARDSTAND LOCATIONS.

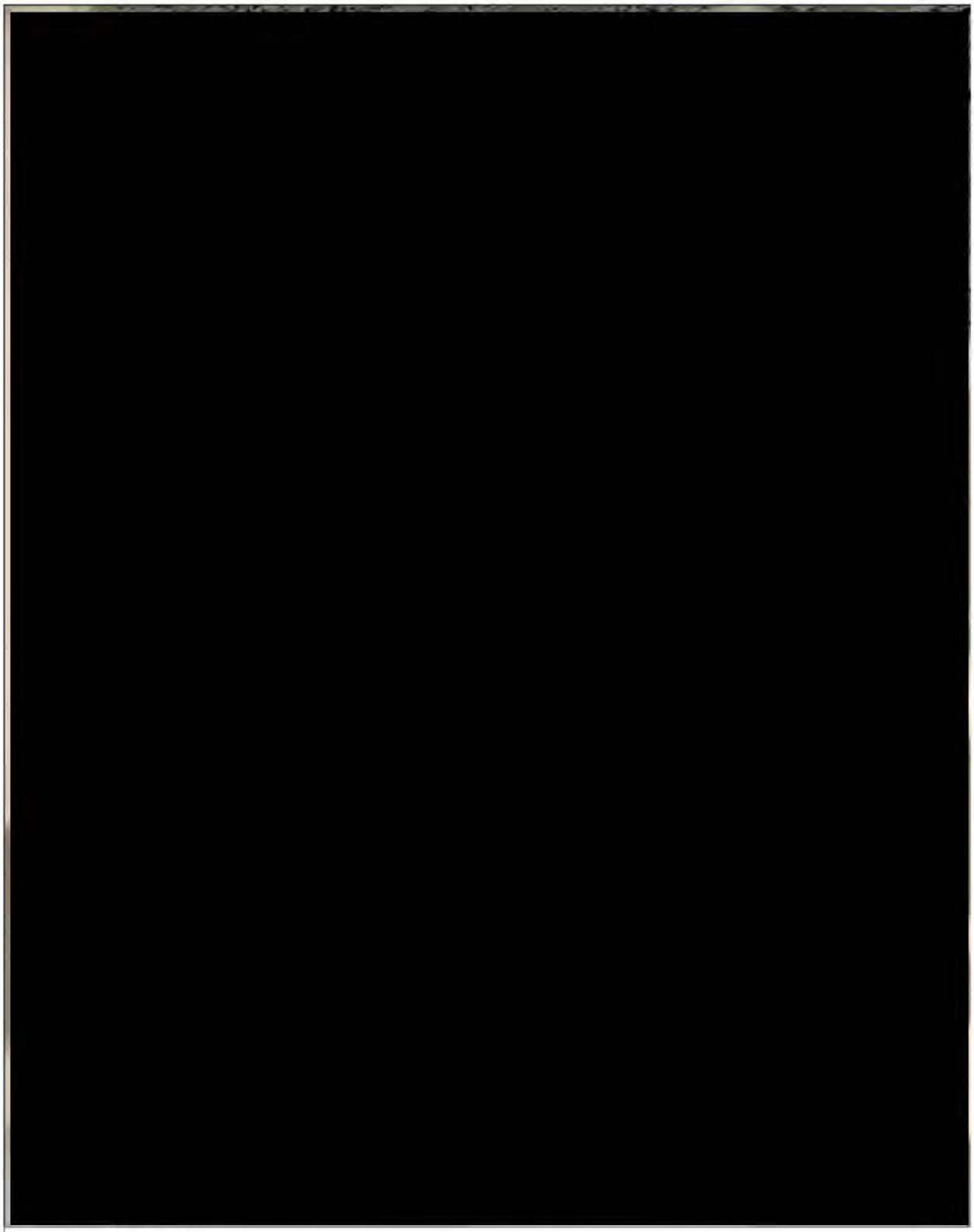
7.2.11. Japanese Bunkers at Isley Field

There are six extant Japanese bunkers [redacted] The bunkers are essentially identical in shape and construction. The evaluated bunkers measure 19 m long by 3 m wide by 2 m tall and are constructed of reinforced concrete. The bunkers consist of four vaulted bays. The main bays are long and narrow and have three openings. The fenestration pattern consists of a window:door:window pattern on one side of the structure and a door:window:door pattern on the other. The windows of the window:door:window pattern faces are usually offset from the door so that they are as far apart as possible within the structural constraints of the building, but in one case the windows are placed closer together (Bunker AB2, Figure 7-2424). This deviation from the normal pattern may have been functional or may have been due to the misplacement of precast elements during construction. The doors are fronted by wall segments that are 4 m long, 1 m thick, and 2 m tall and 0.6 m away from the doorways to form short, narrow access corridors. These walls are inferred to have been blast shields.

The asymmetry of fenestration discussed above in which one side of the structure exhibits a window:door:window pattern (two window or 2w) and the other side a door:window:door (1w) pattern gives the structures a directional aspect. In general, and viewed from a specific vantage point, each bunker can be flipped so that it faces that vantage point with either its 2w or 1w side. [redacted]

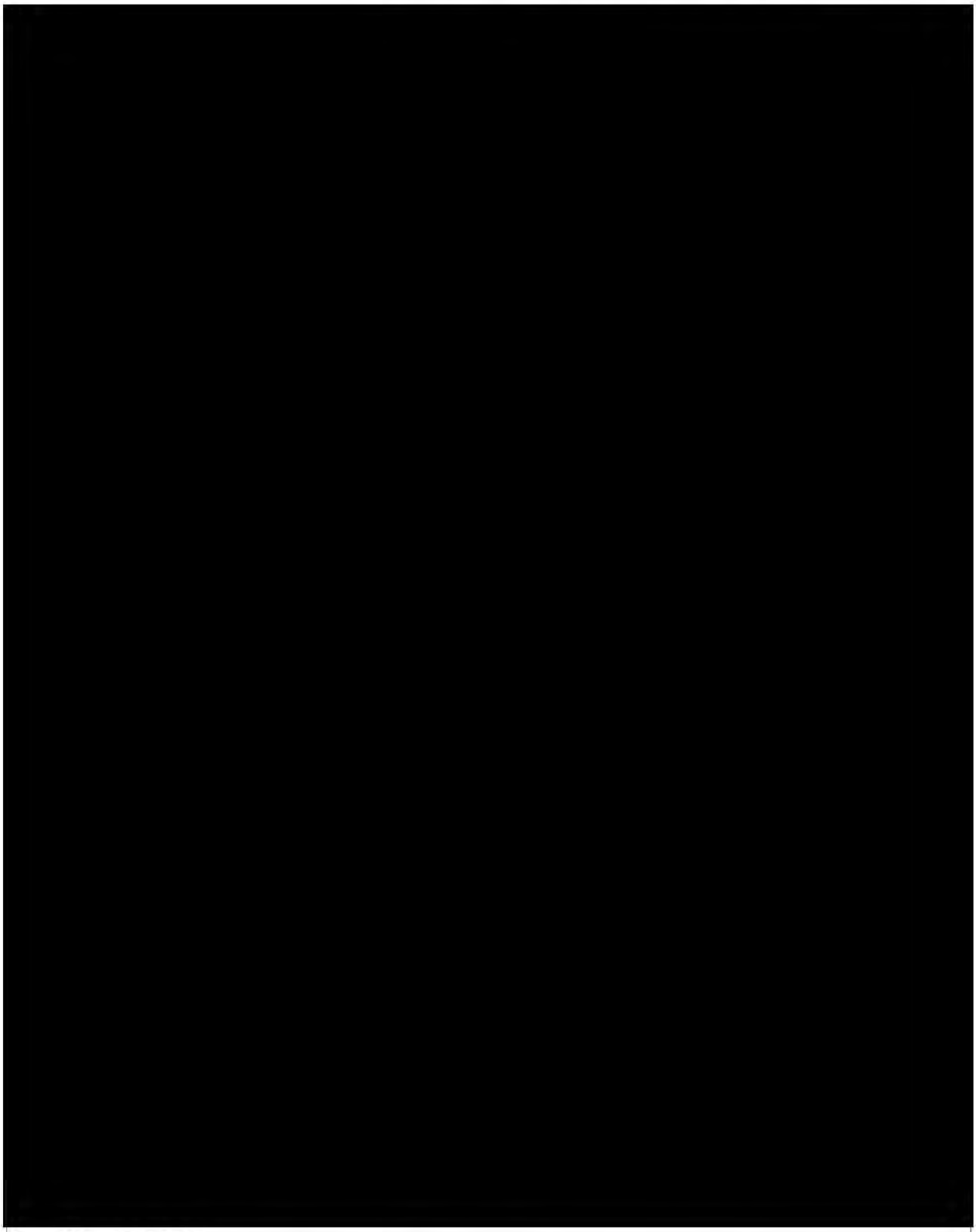
The bunkers have a standardized orientation. Structures AB1, AB2, and AB3 are oriented [redacted] at an 80º azimuth (az). AB1 is the easternmost bunker [redacted] AB2 stands 150 m away to the west-southwest (250º) and AB3 stands 180 m from AB2 at an azimuth of 260º. [redacted] The other three bunkers evaluated during this study are much closer together [redacted] These three bunkers are oriented exactly north-south. From the north AB4 stands at [redacted] and AB5 stands just 50 m south [redacted] AB6 is offset from AB4 and AB5 to the west [redacted]. It is located 40 m to the west and 10 m to the south of AB5. Modern repair sheds that abut the bunker have adversely effected AB6's conservation and it is arguably the least well preserved bunker considered here. [redacted] AB7 is the southernmost of these bunkers [redacted] These bunkers (AB7 and AB8) are the most deteriorated of those evaluated during the survey. Vandalism has adversely effected their conservation [redacted]

[1] UTM Zone 55P, datum WGS 84



Source of base data: ESRI 2011

FIGURE 7-22. MAP OF JAPANESE BUNKER LOCATIONS.



Source of base data: ESRI 2011

FIGURE 7-23. MAP OF JAPANESE BUNKER LOCATIONS (CONTINUED).

FIGURE 7-24. VIEW SOUTHEAST OF BUNKER AB2.

8. DISCUSSION

8.1. Analysis of Prehistoric Period Resources

The project's research questions for the prehistoric period involve the relationship between interior land use patterns and the greater forces that led to that landscape use. The potential causes included population pressures, competition for resources, and environmental change. During the Pre-Latte phase, populations were small and concentrated in coastal areas close to marine resources (Cunningham 1992). During the Latte phase (A.D. 800/1000–Contact) the archaeological record shows an increase in population. This increase coincides with lower sea levels and El Nino and La Nina weather patterns. Records from Guam, Yap, and Saipan indicate the net difference was about 0.6 m (Lander 2004). The change in sea level provided more inhabitable coastline which added marine food sources and thus stimulated an increase in population. Population increase would have increased demand and competition for marine resources and coastal farmland, necessitating expansion of inland hunting, gathering, and agriculture. The severity of the period's ENSO events would have reduced the reliability of coastal resource yields. An increase in typhoons and tropical storm surges associated with large-scale climate patterns would have altered coastal habitat. For example, bivalve species from Latte-phase shell middens indicate silty habitats that could have resulted from erosion caused by severe storms (Amesbury 1996); storm-related erosion could also have damaged lowland areas suited to agriculture. In addition, populations may have moved inland for shelter from frequent storms.

Although survey recorded very few prehistoric artifacts, these artifacts are consistent with increased interior landscape use. The remains of pottery are indicative of interior use for resource collection or storage. The sling stone is consistent with either hunting or with conflict over inland territory. Unfortunately, the modification of the project area by the bombardment of the island prior to the U.S. invasion and by the construction of Aslito/Isley Field destroyed any evidence that may have existed of prehistoric agricultural fields, occupation sites, or short-term activity areas, making interpretation of the prehistoric archaeological record difficult.

8.2. Analysis of Historic Period Resources

The research questions for historic-period cultural resources involved the Japanese occupation of the island prior to and during WWII. Survey recorded no historic artifacts or features that date to before the construction of Aslito Field, and the project's results therefore do not allow for evaluation of the research questions involving the effects of Japanese colonists and colonial-era landscape use on Chamorro and Carolinian population's subsistence and settlement patterns.

The project also sought to evaluate the extent to which Japanese forces were able to prepare for the U.S. invasion during WWII. Japan expected U.S. forces to attack Palau before the Marianas, and did not begin preparing facilities in the Mariana Islands for invasion until February 1944, only five months before the U.S. invasion. Aslito Field served as the principal airbase in the Marianas functioning as a fighter field and a forward maintenance facility. The field was defended by 2 medium anti-aircraft guns, and 11 medium anti-aircraft guns were located south of the field. In February 1944 Japan began reinforcing the 1,500 military personnel on Saipan, and 31,000 troops were in place when U.S. forces arrived. However, U.S. submarines took a heavy toll on Japanese vessels, severely disrupting the transport of construction equipment and military hardware from Japan to the Marianas. Although Saipan had many pillboxes, blockhouses, and other fortifications, several large guns were not emplaced, and Aslito Field had no ground defenses. In addition, the airfield had no provisions for demolition if threatened with capture, so U.S. forces were able to begin using the facility soon after the invasion.

This incomplete preparation for invasion by Japanese forces may be the reason for the incomplete state of the Japanese airfield defense bunker recorded during the current survey. Although the bunker is basically

complete and covered in earth and limestone boulders, it lacks doors. There are two likely explanations. One is that the doors were never installed because they were lost in transport from Japan due to U.S. attacks on supply ships. The alternative is that the doors were removed as scrap metal after the war, but the other six bunkers that were evaluated as part of the survey still have their doors, making this explanation less likely.

Survey also recorded several features that were probably built by U.S. forces after the capture of Aslito Field. The strategic location of the Marianas for B-29 bomber missions to Japan meant that the U.S. military began improving and expanding Aslito Field soon after the invasion. These improvements included 181 hardstands and associated taxiways but also included a large number of quickly built structures. The concrete pedestals and pads recorded during survey are probably supports for temporary buildings and provisions for water supply and wastewater removal for U.S.-built structures. Concrete slabs comparable in size to the one recorded during the current survey have been identified as Quonset hut briefing rooms (Grant et al. 2007). The bottles in the bottle dump recorded during survey were made between 1938 and 1969 but were probably left at Isley Field during the field's occupation by the U.S. military between 1944 and 1949. However, these features and artifacts do not expand in any substantive way on the history of Isley Field as preserved in the documentary record and as known through the material record of hardstands, runways, standing buildings, and other features.

9. RECOMMENDATIONS

The study area is contained within the boundaries of the NRHP-listed Isley Field Historic District (NRIS No.: 81000667), which itself is included in the Saipan Landing Beaches, Aslito/Isley Field, and Marpi Point National Landmark (NHLS No.: 85001789). The cultural resources identified during survey were evaluated first according to whether or not they are contribute to the overall eligibility of the historic district/National Historic Landmark (District). As discussed in Section 6.5, sites, buildings, structures, or objects within the District need to meet the following criteria to be considered a contributing resources:

- It must have been present during the period of time that the property achieved its significance. In this case the Japanese build-up during WWII (1934-1944), the Battle of Saipan, or the American occupation after the battle (1944-1945).

- It relates to the documented significance of the property, in this case Japanese and American military use during WWII.

- It possesses historical integrity or is capable of yielding important information relevant to the significance of the property.

Cultural resources not identified as contributing elements of the District were evaluated on their own according to the guidelines outlined in Section 6.5 (NPS 2002).

All but three cultural resources recorded by the survey date to either the Japanese or American occupations of the airfield during WWII and served a military purpose therefore meeting the first two criteria for consideration as resources that contribute to the district. Less clear, however, is the third criteria – whether or not the resource possesses historical integrity or is capable of yielding important information relevant to the significance of the property. Most of the WWII-related sites, buildings, or structures possess integrity or information potential and therefore contribute to the District, however, HDR identified five exceptions (Table 9-1). These resources are excluded due to their lack of integrity.

TABLE 9-1. FEATURES ASSOCIATED WITH THE DISTRICT'S PERIOD OF SIGNIFICANCE.

Feature or Artifact Number	Cultural Material	Temporal Association	NRHP Eligibility Criteria	Integrity							NHL Contributing Resource?
				Location	Design	Setting	Materials	Workmanship	Feeling	Association	
Feature 1	Concrete water tower	Japanese Occupation (1934-1944)	A	x	x		x				N
Feature 2	Concrete foundation with drain with one Japanese porcelain sherd	American Occupation (1944-1945)	A, D	x	x	x	x	x	x	x	Y
Feature 3	Concrete foundation with drain	American Occupation (1944-1945)	A		x		x	x			N
Feature 4	Concrete foundation with drain	American Occupation (1944-1945)	A, D	x	x	x	x	x	x	x	Y
Feature 5	Concrete slab	American Occupation (1944-1945)	A	x	x		x				N
Feature 6	Japanese bunker	Japanese Occupation (1934-1944)	A, D	x	x	x	x	x	x	x	Y
Feature 7	Water catchment feature	American Occupation (1944-1945)	A, D	x	x	x	x	x	x	x	Y
Feature 8	Water catchment feature	American Occupation (1944-1945)	A, D	x	x	x	x	x	x	x	Y
Feature 9	Concrete foundation	American Occupation (1944-1945)	A	x	x		x	x			N
Feature 10	Bottle dump	American Occupation (1944-1945)	A, D	x		x	x		x	x	Y
Feature 11	Concrete pad	Japanese Occupation (1934-1944) American Occupation (1944-1945)	A	x	x		x				N
Hardstands	Concrete roads and parking aprons for B-29s	American Occupation (1944-1945)	A	x	x		x				N
AB1	Japanese bunker	Japanese Occupation (1934-1944)	A	x	x		x	x		x	Y
AB2	Japanese bunker	Japanese Occupation (1934-1944)	A	x	x		x	x		x	Y
AB3	Japanese bunker	Japanese Occupation (1934-1944)	A	x	x		x	x		x	Y
AB4	Japanese bunker	Japanese Occupation (1934-1944)	A	x	x		x	x		x	Y
AB5	Japanese bunker	Japanese Occupation (1934-1944)	A	x	x		x	x		x	Y
AB6	Japanese bunker	Japanese Occupation (1934-1944)	A	x	x		x	x		x	Y
AB7	Japanese bunker	Japanese Occupation (1934-1944)	A	x	x		x	x		x	Y
AB8	Japanese bunker	Japanese Occupation (1934-1944)	A	x	x		x	x		x	Y

9.1. Features Found Ineligible for Inclusion to the District as Contributing Elements

9.1.1. Feature 1

This concrete water tower's function and role in military use of the airfield during WWII is clear and other than its ability to yield important information relevant to the significance of the property beyond what is already known is minimal. Although its association with WWII and, therefore, its eligibility under Criterion A is established the resource lacks three of the recommended aspects of integrity (see Chapter 6): setting, feeling, and association. The structure is in a badly decayed state and lies at the edge of fuel storage area where its setting and association is greatly compromised.

9.1.2. Feature 3

We identified three of these concrete foundations with drains during the survey, each of them identical. The other two, Features 2 and 4, are associated with one another and therefore, when taken together, could provide some information on wartime water delivery and drainage systems. Because Feature 3 is isolated from other such structures its historical integrity and information potential are compromised.

9.1.3. Features 5, 9, and 11

All three of these features are concrete pads or foundation of some kind. All lack superstructures or any other identifying characteristics. They differ in size and probably differed in original function. All are badly decayed and becoming buried by overburden and vegetation. Other than their size and location, which is already recorded in this report, they have little information to yield relevant to the significance of the District. Further, because they lack superstructures or other identifying characteristics they lack key aspects of integrity such as setting, feeling, and association. Applying the NPS's rule of thumb, would a participant in the battle recognize these features as they exist today, the answer would undoubtedly be "no".

9.1.4. Hardstands

Much the same can be said for the hardstands as can be said for the concrete pads and foundations identified as Features 5, 9, and 11 and these have been subjected to many of the same assaults due to neglect. The hardstand system has been significantly compromised by recent development and vegetation. These impacts limit the feature's ability to convey the full picture necessary to be considered a contributing element. That said, the hardstand systems, northeast and south of the runways may retain sufficient integrity and therefore may be contributing elements. However, again, vegetation growth and decay have significantly affected integrity of setting and feeling. It is recommended that a portion of the hardstands, most likely the portion northeast of the runways be preserved.

TABLE 9-2. PREHISTORIC ISOLATED OCCURANCES.

Feature or Artifact Number	Cultural Material	Temporal Association
IO1	One body sherd.	Latte phase (A.D. 800/1000-Contact)
IO2	One body sherd and one sling stone.	Latte phase (A.D. 800/1000-Contact)
IO3	Five body sherds and one rim sherd.	Latte phase (A.D. 800/1000-Contact)

9.2. Prehistoric Isolated Occurrences

The three prehistoric period IOs (IO1, IO2, and IO3) do not date to the District's period of significance and therefore are not contributing elements to the District. These resources were, therefore, evaluated for eligibility on the NRHP in their own right. Prehistoric archaeological sites and materials are generally evaluated under Criterion D, their ability to yield "…information important in prehistory or history." Under this criterion the IOs recorded during the survey are recommended as not eligible for listing on the NRHP (Table 9-2). The artifacts are spatially isolated and in extremely disturbed contexts. They do not retain integrity of location and do not have the potential to yield additional information about the prehistory of Saipan. No further management action is necessary for these resources.

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DEPARTMENT OF THE AIR FORCE
PACIFIC AIR FORCES

Brigadier General Steven L. Basham
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JUN 0 9 2015

Ms. Kate Kerr
Advisory Council on Historic Preservation
401 F Street NW, Suite 308
Washington DC 20001-2637

Dear Ms. Kerr

We are contacting you to seek your input regarding revisions to a proposed Undertaking involving infrastructure improvements on Tinian and Saipan to facilitate U.S. Air Force (USAF) use for Divert activities and exercises (Undertaking) in compliance with Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations, 36 CFR Part 800. Consultations were initiated on February 1, 2012 by Headquarters Pacific Air Forces (PACAF) with the Commonwealth of the Northern Mariana Islands (CNMI) State Historic Preservation Officer (SHPO). These consultations resulted in a draft Memorandum of Agreement (MOA) developed by the consulting parties. However, due to concerns from the newly established CNMI administration, the MOA was not finalized. Since that time, PACAF has revised the scope of the Undertaking in coordination with CNMI officials. Now, PACAF seeks to complete the Section 106 process and parallel procedures under the National Environmental Policy Act (NEPA) for an Environmental Impact Statement (EIS). Accordingly, PACAF is requesting your input on the revised Area of Potential Effects (APE) as described below and in Attachment 1.

This letter is intended to (a) formally request continued participation in Section 106 consultation, pursuant to 36 CFR 800.3; (b) provide detailed information on the current scope and scale of the revised Undertaking; (c) seek your input on the APE for the Undertaking as now defined; (d) discuss the proposed timeline for Section 106 consultation; (e) describe our plan for public involvement in finalizing the Section 106 process, and finally; (f) to seek your assistance in identifying any additional consulting parties or current consulting parties who may no longer wish or be able to participate, or whose participation is no longer warranted due to the current scale and scope of the Undertaking and resulting APE.

Revised Undertaking and Area of Potential Effects (APE): PACAF provided descriptions of the Undertaking and resulting APE determination to consulting parties on September 11, 2012. These descriptions were based on the alternatives to be considered during the NEPA process and were the basis for subsequent Section 106 consultation. Since then, through evaluation of project alternatives in the June 2012 Draft EIS (DEIS), comments provided as part of the Section 106 and NEPA processes as well as ongoing discussions between my office and CNMI officials, we

have determined it necessary to revise the Undertaking and APE to reflect modified versions of the alternatives presented in the previous DEIS. A detailed description of the revised Undertaking is provided in Attachment 1. Based on the revised Undertaking we have also revised the APE for the Divert Activities and Exercises proposal (also discussed in Attachment 1). The purpose of the Undertaking is to improve facilities and infrastructure to support divert landings, joint military exercises, and humanitarian assistance since there is not an existing divert airfield on U.S. territory in the western Pacific that is designed and designated to provide strategic operational and exercise capabilities for U.S. forces when needed and humanitarian assistance and disaster relief in times of natural or man-made disasters.

Proposed Schedule for Continued Consultation: We are seeking input from SHPO on our proposed schedule. We will seek comments from consulting parties and the interested public on the description of the revised Divert Undertaking, revised APE, identification of historic properties, and adequacy of our efforts to assess and resolve adverse effects to historic properties. Our proposed schedule for continued consultation can be found in Attachment 2.

If you have any questions regarding this consultation, please contact Mr. William Grannis at (808) 449-4049 or by email at william.grannis@us.af.mil.

Very Respectfully

STEVEN L. BASHAM
Brigadier General, USAF
Director of Strategy, Plans & Programs

2 Attachments:
1. Description of Revised Undertaking and Area of Potential Effect (APE)
2. Proposed Schedule for Continued Section 106 Consultation

DEPARTMENT OF THE AIR FORCE
PACIFIC AIR FORCES

JUN 0 9 2015

Brigadier General Steven L. Basham
HQ PACAF A5/8
25 E Street, Suite L-213
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Chairman Pedro Jun Duenas
c/o Division of Historic Preservation, Dept. of Cultural and Community Affairs
CNMI Government
P.O. Box 500090CK
Saipan, MP 96950

Dear Mr. Duenas

We are contacting you to seek your input regarding revisions to a proposed Undertaking involving infrastructure improvements on Tinian and Saipan to facilitate U.S. Air Force (USAF) use for Divert activities and exercises (Undertaking) in compliance with Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations, 36 CFR Part 800. Consultations were initiated on February 1, 2012 by Headquarters Pacific Air Forces (PACAF) with the Commonwealth of the Northern Mariana Islands (CNMI) State Historic Preservation Officer (SHPO). These consultations resulted in a draft Memorandum of Agreement (MOA) developed by the consulting parties. However, due to concerns from the newly established CNMI administration, the MOA was not finalized. Since that time, PACAF has revised the scope of the Undertaking in coordination with CNMI officials. Now, PACAF seeks to complete the Section 106 process and parallel procedures under the National Environmental Policy Act (NEPA) for an Environmental Impact Statement (EIS). Accordingly, PACAF is requesting your input on the revised Area of Potential Effects (APE) as described below and in Attachment 1.

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Revised Undertaking and Area of Potential Effects (APE): PACAF provided descriptions of the Undertaking and resulting APE determination to consulting parties on September 11, 2012. These descriptions were based on the alternatives to be considered during the NEPA process and were the basis for subsequent Section 106 consultation. Since then, through evaluation of project alternatives in the June 2012 Draft EIS (DEIS), comments provided as part of the Section 106

and NEPA processes as well as ongoing discussions between my office and CNMI officials, we have determined it necessary to revise the Undertaking and APE to reflect modified versions of the alternatives presented in the previous DEIS. A detailed description of the revised Undertaking is provided in Attachment 1. Based on the revised Undertaking we have also revised the APE for the Divert Activities and Exercises proposal (also discussed in Attachment 1). The purpose of the Undertaking is to improve facilities and infrastructure to support divert landings, joint military exercises, and humanitarian assistance since there is not an existing divert airfield on U.S. territory in the western Pacific that is designed and designated to provide strategic operational and exercise capabilities for U.S. forces when needed and humanitarian assistance and disaster relief in times of natural or man-made disasters.

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If you have any questions regarding this consultation, please contact Mr. William Grannis at (808) 449-4049 or by email at william.grannis@us.af.mil.

Very Respectfully

STEVEN L. BASHAM
Brigadier General, USAF
Director of Strategy, Plans & Programs

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2. Proposed Schedule for Continued Section 106 Consultation

DEPARTMENT OF THE AIR FORCE
PACIFIC AIR FORCES

Brigadier General Steven L. Basham
HQ PACAF A5/8
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JUN 0 9 2015

Mr. Mark McClardy
FAA Airports Division Manager
Western-Pacific Region (AWP-600)
P.O. Box 92007
Los Angeles, CA 90009

Dear Mr. McClardy

We are contacting you to seek your input regarding revisions to a proposed Undertaking involving infrastructure improvements on Tinian and Saipan to facilitate U.S. Air Force (USAF) use for Divert activities and exercises (Undertaking) in compliance with Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations, 36 CFR Part 800. Consultations were initiated on February 1, 2012 by Headquarters Pacific Air Forces (PACAF) with the Commonwealth of the Northern Mariana Islands (CNMI) State Historic Preservation Officer (SHPO). These consultations resulted in a draft Memorandum of Agreement (MOA) developed by the consulting parties. However, due to concerns from the newly established CNMI administration, the MOA was not finalized. Since that time, PACAF has revised the scope of the Undertaking in coordination with CNMI officials. Now, PACAF seeks to complete the Section 106 process and parallel procedures under the National Environmental Policy Act (NEPA) for an Environmental Impact Statement (EIS). Accordingly, PACAF is requesting your input on the revised Area of Potential Effects (APE) as described below and in Attachment 1.

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Very Respectfully

STEVEN L. BASHAM
Brigadier General, USAF
Director of Strategy, Plans & Programs

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2. Proposed Schedule for Continued Section 106 Consultation

DEPARTMENT OF THE AIR FORCE
PACIFIC AIR FORCES

JUN 0 9 2015

Brigadier General Steven L. Basham
HQ PACAF A5/8
25 E Street, Suite L-213
JBPH-H HI 96853-5420

The Honorable Joey P. San Nicolas
Mayor of Tinian
P.O. Box 520059 San Jose,
Tinian, MP 96952

Dear Mayor San Nicolas

We are contacting you to seek your input regarding revisions to a proposed Undertaking involving infrastructure improvements on Tinian and Saipan to facilitate U.S. Air Force (USAF) use for Divert activities and exercises (Undertaking) in compliance with Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations, 36 CFR Part 800. Consultations were initiated on February 1, 2012 by Headquarters Pacific Air Forces (PACAF) with the Commonwealth of the Northern Mariana Islands (CNMI) State Historic Preservation Officer (SHPO). These consultations resulted in a draft Memorandum of Agreement (MOA) developed by the consulting parties. However, due to concerns from the newly established CNMI administration, the MOA was not finalized. Since that time, PACAF has revised the scope of the Undertaking in coordination with CNMI officials. Now, PACAF seeks to complete the Section 106 process and parallel procedures under the National Environmental Policy Act (NEPA) for an Environmental Impact Statement (EIS). Accordingly, PACAF is requesting your input on the revised Area of Potential Effects (APE) as described below and in Attachment 1.

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Revised Undertaking and Area of Potential Effects (APE): PACAF provided descriptions of the Undertaking and resulting APE determination to consulting parties on September 11, 2012. These descriptions were based on the alternatives to be considered during the NEPA process and were the basis for subsequent Section 106 consultation. Since then, through evaluation of project alternatives in the June 2012 Draft EIS (DEIS), comments provided as part of the Section 106 and NEPA processes as well as ongoing discussions between my office and CNMI officials, we

have determined it necessary to revise the Undertaking and APE to reflect modified versions of the alternatives presented in the previous DEIS. A detailed description of the revised Undertaking is provided in Attachment 1. Based on the revised Undertaking we have also revised the APE for the Divert Activities and Exercises proposal (also discussed in Attachment 1). The purpose of the Undertaking is to improve facilities and infrastructure to support divert landings, joint military exercises, and humanitarian assistance since there is not an existing divert airfield on U.S. territory in the western Pacific that is designed and designated to provide strategic operational and exercise capabilities for U.S. forces when needed and humanitarian assistance and disaster relief in times of natural or man-made disasters.

Proposed Schedule for Continued Consultation: We are seeking input from SHPO on our proposed schedule. We will seek comments from consulting parties and the interested public on the description of the revised Divert Undertaking, revised APE, identification of historic properties, and adequacy of our efforts to assess and resolve adverse effects to historic properties. Our proposed schedule for continued consultation can be found in Attachment 2.

If you have any questions regarding this consultation, please contact Mr. William Grannis at (808) 449-4049 or by email at william.grannis@us.af.mil.

Sincerely

STEVEN L. BASHAM
Brigadier General, USAF
Director of Strategy, Plans & Programs

2 Attachments:
1. Description of Revised Undertaking and Area of Potential Effect (APE)
2. Proposed Schedule for Continued Section 106 Consultation

DEPARTMENT OF THE AIR FORCE
PACIFIC AIR FORCES

Brigadier General Steven L. Basham
HQ PACAF A5/8
25 E Street, Suite L-213
JBPH-H HI 96853-5420

JUN 0 9 2015

Patricia Neubacher, Regional Director
National Park Service
333 Bush Street, Suite 500
San Francisco, CA 94104-2828

Dear Ms. Neubacher

We are contacting you to seek your input regarding revisions to a proposed Undertaking involving infrastructure improvements on Tinian and Saipan to facilitate U.S. Air Force (USAF) use for Divert activities and exercises (Undertaking) in compliance with Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations, 36 CFR Part 800. Consultations were initiated on February 1, 2012 by Headquarters Pacific Air Forces (PACAF) with the Commonwealth of the Northern Mariana Islands (CNMI) State Historic Preservation Officer (SHPO). These consultations resulted in a draft Memorandum of Agreement (MOA) developed by the consulting parties. However, due to concerns from the newly established CNMI administration, the MOA was not finalized. Since that time, PACAF has revised the scope of the Undertaking in coordination with CNMI officials. Now, PACAF seeks to complete the Section 106 process and parallel procedures under the National Environmental Policy Act (NEPA) for an Environmental Impact Statement (EIS). Accordingly, PACAF is requesting your input on the revised Area of Potential Effects (APE) as described below and in Attachment 1.

This letter is intended to (a) formally request continued participation in Section 106 consultation, pursuant to 36 CFR 800.3; (b) provide detailed information on the current scope and scale of the revised Undertaking; (c) seek your input on the APE for the Undertaking as now defined; (d) discuss the proposed timeline for Section 106 consultation; (e) describe our plan for public involvement in finalizing the Section 106 process, and finally; (f) to seek your assistance in identifying any additional consulting parties or current consulting parties who may no longer wish or be able to participate, or whose participation is no longer warranted due to the current scale and scope of the Undertaking and resulting APE.

Revised Undertaking and Area of Potential Effects (APE): PACAF provided descriptions of the Undertaking and resulting APE determination to consulting parties on September 11, 2012. These descriptions were based on the alternatives to be considered during the NEPA process and were the basis for subsequent Section 106 consultation. Since then, through evaluation of project alternatives in the June 2012 Draft EIS (DEIS), comments provided as part of the Section 106 and NEPA processes as well as ongoing discussions between my office and CNMI officials, we

have determined it necessary to revise the Undertaking and APE to reflect modified versions of the alternatives presented in the previous DEIS. A detailed description of the revised Undertaking is provided in Attachment 1. Based on the revised Undertaking we have also revised the APE for the Divert Activities and Exercises proposal (also discussed in Attachment 1). The purpose of the Undertaking is to improve facilities and infrastructure to support divert landings, joint military exercises, and humanitarian assistance since there is not an existing divert airfield on U.S. territory in the western Pacific that is designed and designated to provide strategic operational and exercise capabilities for U.S. forces when needed and humanitarian assistance and disaster relief in times of natural or man-made disasters.

Proposed Schedule for Continued Consultation: We are seeking input from SHPO on our proposed schedule. We will seek comments from consulting parties and the interested public on the description of the revised Divert Undertaking, revised APE, identification of historic properties, and adequacy of our efforts to assess and resolve adverse effects to historic properties. Our proposed schedule for continued consultation can be found in Attachment 2.

If you have any questions regarding this consultation, please contact Mr. William Grannis at (808) 449-4049 or by email at william.grannis@us.af.mil.

Very Respectfully

STEVEN L. BASHAM
Brigadier General, USAF
Director of Strategy, Plans & Programs

2 Attachments:
1. Description of Revised Undertaking and Area of Potential Effect (APE)
2. Proposed Schedule for Continued Section 106 Consultation

DEPARTMENT OF THE AIR FORCE
PACIFIC AIR FORCES

Brigadier General Steven L. Basham
HQ PACAF A5/8
25 E Street, Suite L-213
JBPH-H HI 96853-5420

JUN 0 9 2015

Rear Admiral Bette Bolivar
CDR, Joint Region Marianas
PSC 455 Box 211
FPO AP, Guam 96540

Dear Admiral Bolivar

We are contacting you to seek your input regarding revisions to a proposed Undertaking involving infrastructure improvements on Tinian and Saipan to facilitate U.S. Air Force (USAF) use for Divert activities and exercises (Undertaking) in compliance with Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations, 36 CFR Part 800. Consultations were initiated on February 1, 2012 by Headquarters Pacific Air Forces (PACAF) with the Commonwealth of the Northern Mariana Islands (CNMI) State Historic Preservation Officer (SHPO). These consultations resulted in a draft Memorandum of Agreement (MOA) developed by the consulting parties. However, due to concerns from the newly established CNMI administration, the MOA was not finalized. Since that time, PACAF has revised the scope of the Undertaking in coordination with CNMI officials. Now, PACAF seeks to complete the Section 106 process and parallel procedures under the National Environmental Policy Act (NEPA) for an Environmental Impact Statement (EIS). Accordingly, PACAF is requesting your input on the revised Area of Potential Effects (APE) as described below and in Attachment 1.

This letter is intended to (a) formally request continued participation in Section 106 consultation, pursuant to 36 CFR 800.3; (b) provide detailed information on the current scope and scale of the revised Undertaking; (c) seek your input on the APE for the Undertaking as now defined; (d) discuss the proposed timeline for Section 106 consultation; (e) describe our plan for public involvement in finalizing the Section 106 process, and finally; (f) to seek your assistance in identifying any additional consulting parties or current consulting parties who may no longer wish or be able to participate, or whose participation is no longer warranted due to the current scale and scope of the Undertaking and resulting APE.

Revised Undertaking and Area of Potential Effects (APE): PACAF provided descriptions of the Undertaking and resulting APE determination to consulting parties on September 11, 2012. These descriptions were based on the alternatives to be considered during the NEPA process and were the basis for subsequent Section 106 consultation. Since then, through evaluation of project alternatives in the June 2012 Draft EIS (DEIS), comments provided as part of the Section 106 and NEPA processes as well as ongoing discussions between my office and CNMI officials, we

have determined it necessary to revise the Undertaking and APE to reflect modified versions of the alternatives presented in the previous DEIS. A detailed description of the revised Undertaking is provided in Attachment 1. Based on the revised Undertaking we have also revised the APE for the Divert Activities and Exercises proposal (also discussed in Attachment 1). The purpose of the Undertaking is to improve facilities and infrastructure to support divert landings, joint military exercises, and humanitarian assistance since there is not an existing divert airfield on U.S. territory in the western Pacific that is designed and designated to provide strategic operational and exercise capabilities for U.S. forces when needed and humanitarian assistance and disaster relief in times of natural or man-made disasters.

Proposed Schedule for Continued Consultation: We are seeking input from SHPO on our proposed schedule. We will seek comments from consulting parties and the interested public on the description of the revised Divert Undertaking, revised APE, identification of historic properties, and adequacy of our efforts to assess and resolve adverse effects to historic properties. Our proposed schedule for continued consultation can be found in Attachment 2.

If you have any questions regarding this consultation, please contact Mr. William Grannis at (808) 449-4049 or by email at william.grannis@us.af.mil.

Sincerely

STEVEN L. BASHAM
Brigadier General, USAF
Director of Strategy, Plans & Programs

2 Attachments:
1. Description of Revised Undertaking and Area of Potential Effect (APE)
2. Proposed Schedule for Continued Section 106 Consultation

DEPARTMENT OF THE AIR FORCE
PACIFIC AIR FORCES

Brigadier General Steven L. Basham
HQ PACAF A5/8
25 E Street, Suite L-213
JBPH-H HI 96853-5420

JUN 0 9 2015

Ms. Merti Kani
State Historic Preservation Officer
Department of Community and Cultural Affairs
Commonwealth of the Northern Mariana Islands
P.O. Box 500090 CK
Saipan, MP96950

Dear Ms. Kani

On February 1, 2012 Headquarters Pacific Air Forces (PACAF) initiated consultation with your office regarding possible infrastructure improvements on Tinian and Saipan to facilitate United States Air Force (USAF) use for Divert activities and exercises (Undertaking) in compliance with Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations, 36 CFR Part 800. These consultations resulted in a draft Memorandum of Agreement (MOA) developed by the consulting parties. However, due to concerns from the newly established CNMI administration, the MOA was not finalized. Since that time, PACAF has revised the scope of the Undertaking, in coordination with CNMI officials. PACAF seeks to complete the Section 106 process and parallel procedures under the National Environmental Policy Act (NEPA) for an Environmental Impact Statement (EIS). Accordingly, PACAF is requesting input on the revised Area of Potential Effects (APE), as described below and in Attachment 1.

PACAF will also send similar input requests to other consulting parties identified earlier in the process, including: the Historic Preservation Review Board, the Advisory Council on Historic Preservation (ACHP), the Mayor of Tinian, the National Park Service (NPS), the Federal Aviation Administration (FAA), Joint Region Marianas (JRM), and community members with a demonstrated interest in the Undertaking. These letters are intended to (a) formally request continued participation in Section 106 consultation, pursuant to 36 CFR 800.3; (b) provide detailed information on the current scope and scale of the revised Undertaking; (c) seek your concurrence on the APE for the Undertaking as now defined; (d) discuss the proposed timeline for Section 106 consultation; (e) describe our plan for public involvement in finalizing the Section 106 process, and finally; (f) seek your assistance in identifying any additional consulting parties, or suggest consulting parties whose participation is no longer warranted due to the current scale and scope of the Undertaking and resulting APE.

Revised Undertaking and Area of Potential Effects (APE): PACAF provided descriptions of the Undertaking and resulting APE determination to consulting parties on September 11, 2012.

These descriptions were based on the alternatives to be considered during the NEPA process and were the basis for subsequent Section 106 consultation. Since then, through evaluation of project alternatives in the June 2012 Draft EIS (DEIS), comments provided as part of the Section 106 and NEPA processes as well as ongoing discussions between my office and CNMI officials, we have revised the Undertaking and APE to reflect modified versions of the alternatives presented in the DEIS. A detailed description of the revised Undertaking is provided in Attachment 1. Based on the revised Undertaking, we also revised the APE for the Divert Activities and Exercises proposal (also discussed in Attachment 1). The purpose of the Undertaking is to improve facilities and infrastructure to support divert landings, joint military exercises, and humanitarian assistance since there is not an existing divert airfield on U.S. territory in the western Pacific that is designed and designated to provide strategic operational and exercise capabilities for U.S. forces when needed and humanitarian assistance and disaster relief in times of natural or man-made disasters.

Proposed Schedule for Continued Consultation: We will seek comments from consulting parties and the interested public on the description of the revised Divert Undertaking, revised APE, identification of historic properties, and adequacy of our efforts to assess and resolve adverse effects to historic properties. Our proposed schedule for continued consultation can be found in Attachment 2.

If you have any questions regarding this consultation, please contact Mr. William Grannis at (808) 449-4049, or by email at william.grannis@us.af.mil.

Very Respectfully

STEVEN L. BASHAM
Brigadier General, USAF
Director of Strategy, Plans & Programs

2 Attachments:
1. Description of Revised Undertaking and Area of Potential Effect (APE)
2. Proposed Schedule for Continued Section 106 Consultation

Attachment 1: Description of Revised Divert Undertaking and Area of Potential Effect (APE)

Through evaluation of project alternatives in the June 2012 DEIS and evaluation of public, agency, and stakeholder comments as part of both the Section 106 and NEPA processes, PACAF has determined it necessary to revise the Undertaking and the resulting APE to reflect modified versions of the alternatives presented in the DEIS. The modified alternatives include a modified Saipan alternative, a modified Tinian alternative, and a hybrid modified alternative. All three modified alternatives include a reduction in proposed development and removal of fighter aircraft operations and associated munitions storage requirements. The modified alternatives represent reduced capability compared to that presented in the DEIS, but meet PACAF operational selection standards while incorporating public and consulting party input. The hybrid modified alternative combines development on both Saipan and Tinian that was previously analyzed in the June 2012 DEIS. However, the hybrid modified alternative would focus most Divert development and operations on Tinian. Also, the hybrid modified alternative would include development on either the south side of the Tinian International Airport or on the north side of the airport. All alternatives may be subject to further revisions as discussions between the USAF and CNMI continue.

1. Modified Saipan Alternative

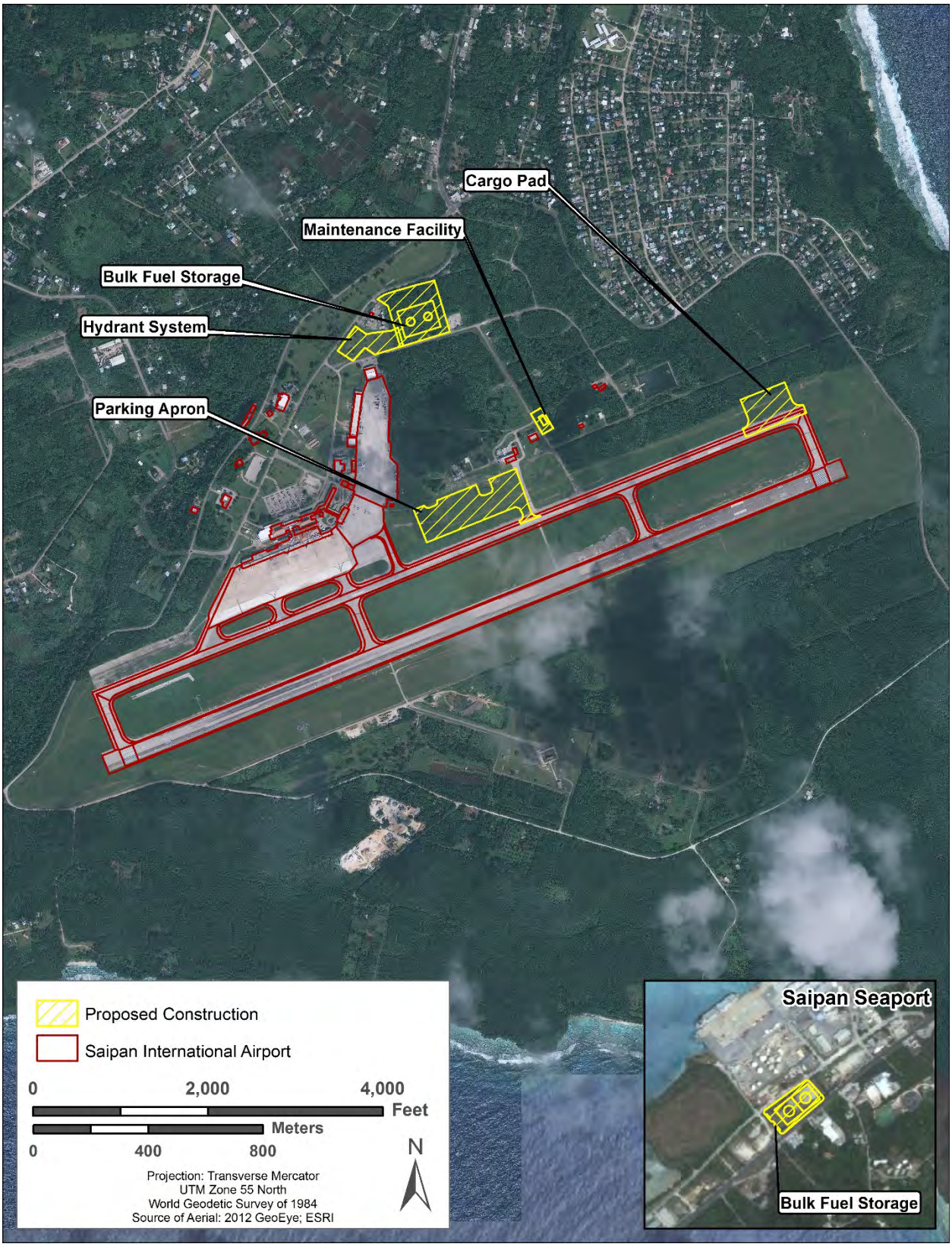
Under the Modified Saipan Alternative (**Figure 1**), the USAF would build one parking apron, one cargo pad, and one maintenance facility.

The USAF would also construct storage capacity for 220,000 barrels of fuel. The expected configuration would store approximately 100,000 barrels at the airport and 100,000 barrels at the seaport (configured using two 50,000 barrel tanks at the seaport and two 50,000 barrel tanks at the airport). Typical configurations would also include approximately 20,000 barrels in operational tanks at the airfield; connected directly to a hydrant system to facilitate pumping directly to the aircraft (configured using two 10,000 barrel operational tanks). The hydrant system would be incorporated into the parking apron. The exact size, configuration and type of storage tank will be dictated by mission requirements and allocated funding.

Fuel would initially be stored at the seaport and then transported by truck to the bulk storage tanks at the airport. Prior to use, fuel would flow to the operational tanks and hydrant system for delivery to the aircraft.

The parking apron could accommodate up to six KC-135s. The cargo pad could accommodate up to three KC-135s.

Temporary billeting, including medical, transportation, and dining services, would be required for up to 265 personnel supporting aircraft operations and would be procured on the local economy.



Note: Infrastructure footprints are approximate and subject to further revisions.

Figure 1. Proposed Construction at Saipan under the Modified Saipan Alternative

The Modified Saipan Alternative includes a reduced operational capability in terms of types of aircraft flown to and from GSN, as well as a decrease in operations during exercises described in the Draft EIS. The Modified Saipan Alternative would continue to include emergency military divert landings or emergency humanitarian assistance staging referenced in the Draft EIS. At GSN, these emergency activities (i.e., divert landings and humanitarian assistance) could also occur under the No Action Alternative in compliance with FAA Airport Sponsor Assurance C. 27, and 36th Wing Instruction 13-204, Airfield Operations Instruction.

Under the Modified Saipan Alternative, only wide-body type aircraft such as the KC-135 would participate in joint military exercises as part of divert activities and exercises. These aircraft have similar flight characteristics and noise patterns as existing commercial aircraft operating from GSN. Specific types of aircraft that could be flown to and from GSN would include, but not be limited to, the KC-135 used for aircraft refueling and airlift; the KC-46 Pegasus used for aircraft refueling; the C-130 Hercules used for airlift; the C-17 Globemaster used for airlift; and the C-5 Galaxy used for airlift. All aircraft flown to and from GSN as part of divert activities and exercises under the Modified Saipan Alternative would:

- Have the same or similar noise profile as the KC-135, which was the aircraft analyzed in the noise Low Scenario in the Draft EIS **Section 4.1**;
- Have the same or similar air emissions as the KC-135, which was the aircraft analyzed in the noise Low Scenario in the Draft EIS **Section 4.2**;
- Not transport munitions.

Under the Modified Saipan Alternative, the USAF anticipates typical exercises at GSN to include 2-4 wide-body type aircraft for up to eight weeks per year, rather than 12 aircraft for 8 weeks as originally described in the Draft EIS; therefore, reducing the overall expected number of flights to and from GSN. The USAF anticipates that under the Modified Saipan Alternative, 2-4 KC-135s would operate up to eight weeks annually (typically not on weekends). A past example of a typical exercise is Cope North, where each aircraft would take off and land twice per day, for a total of 4 operations per day, and would fly 5 days per week. Therefore, each aircraft would complete 60 operations over a three week period; and up to 4 aircraft would complete 240 operations. During another past example, Exercise Valiant Shield, each aircraft would take off and land 4 times per day, for a total of 8 operations per day, and would fly 5 days per week. Therefore, during three weeks of Valiant Shield, each aircraft would complete 120 operations; 4 aircraft would complete 480 operations. Based on the reduced operations described above, approximately 720 operations by KC-135 or similar aircraft would be completed annually under the Modified Saipan Alternative, in contrast to the 1,920 operations described under Alternative 1 in the Draft EIS. This is a reduction of more than half of the originally proposed operations, in addition to limiting the type of aircraft being flown.

As noted in our 2012 description of the Undertaking, GSN is completely contained within the boundaries of the Isley Historic District portion of the Landing Beaches, Aslito/Isley Field, and Marpi Point National Historic Landmark (NHL), or National Historic Landmark District (NHLD). Because of this landmark status, the historic property merits special consideration under 36 CFR 800.10. Despite the reduced impact at GSN in this modified Undertaking compared to the original Undertaking, we consider an effect on any *contiguous* part of the NHL to be an effect to that entire part of the NHL, or NHLD.

With the Modified Saipan Alternative, the USAF has attempted to address the comments of concerned parties provided during the Section 106 process in regards to how the proposed projects would adversely affect the NHLD and additional resources resulting in a single APE for construction and operational activities, as well as both direct and indirect effects (**Figure 2**). With the change in the APE, modifications to proposed projects and operations within the APE have been made as well. These modifications have reduced or removed some of the direct and indirect adverse effects to the NHLD.

2. Tinian Alternative (Modified)

Under the Modified Tinian Alternative (**Figure 3**), the USAF would build one parking apron, one cargo pad, and one maintenance facility. Development would occur on either the North or South side of the runway.

For the North Option, all construction would be on the North side of the runway. The USAF would build taxiways to connect the cargo and parking aprons to the runway.

For the South Option, all construction would be on the South side of the runway. No new taxiways are required.

We would also construct storage capacity for 220,000 barrels of fuel. The expected configuration would store approximately 100,000 barrels at the airport and 100,000 barrels at the seaport. Typical configurations would also include approximately 20,000 barrels in operational tanks at the airfield, connected directly to the hydrant system to facilitate pumping to the aircraft. The hydrant system would be incorporated into the parking apron. The exact size, configuration and type of storage tank will be dictated by mission requirements and allocated funding.

Fuel would initially be stored at the seaport and then transported by truck to the bulk storage tanks at the airport. Prior to use, fuel would flow to the operational tanks and hydrant system for delivery to the aircraft.

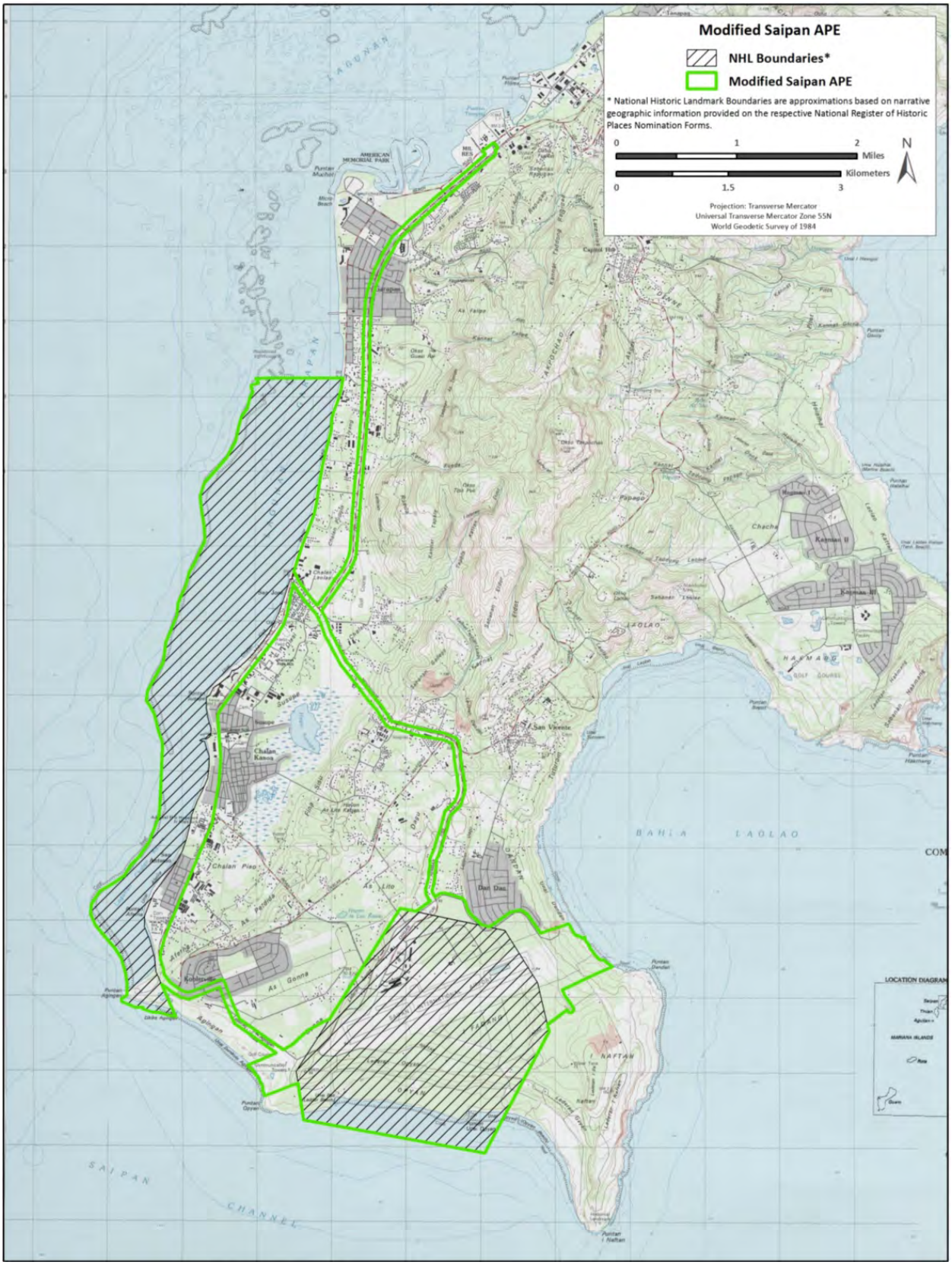
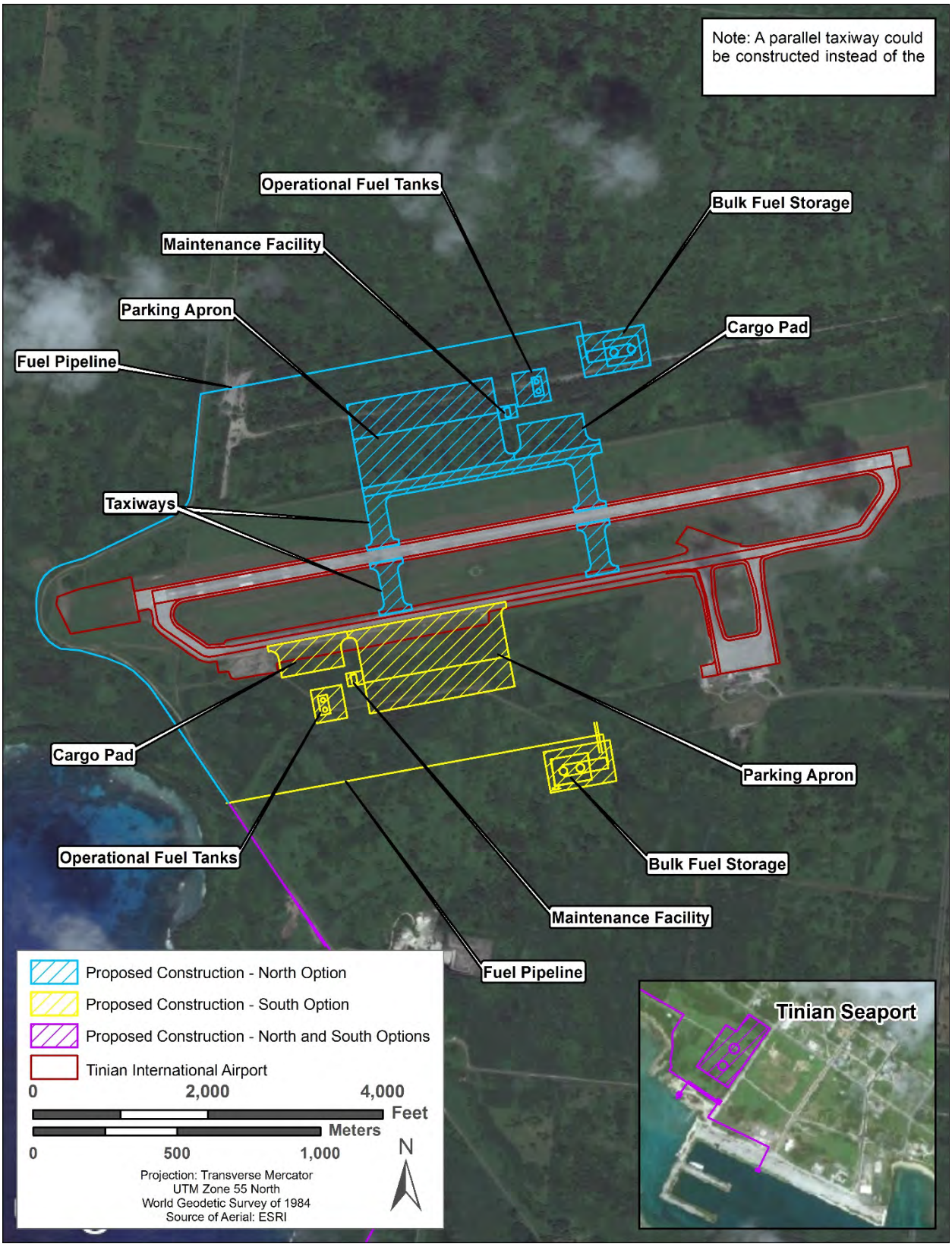


Figure 2. Modified Saipan APE under the Modified Saipan Alternative



Note: Infrastructure footprints are approximate and subject to further revisions.

Figure 3. Proposed Construction at Tinian under the Modified Tinian Alternative

An underground pipeline from the seaport to the north side or south side of the airfield at TNI would be constructed, depending on whether the Tinian North or South option is selected. The pipeline corridor would be six feet wide and the pipeline would be buried four feet deep. Constructing a pipeline would alleviate the need to use tank trucks to transport fuel from the seaport to the bulk storage tanks on the airfield. Additionally, initial consultations with Defense Logistics Agency (DLA) indicate the use of a pipeline may eliminate the requirement for seaport bulk fuel tanks. In that event, all the bulk fuel could be stored at the airfield in two 100,000 barrel tanks and two 10,000 barrel operating tanks. For either option, a total of 220,000 barrels of fuel must be readily available.

The parking apron could accommodate up to twelve KC-135s.

Temporary billeting, including medical, transportation, and dining services, would be required for up to 265 personnel supporting aircraft operations and would be procured on the local economy.

The Modified Tinian Alternative includes a reduced operational capability in terms of types of aircraft flown to and from TNI as well as a decrease in operations during exercises described in the Draft EIS. The Modified Tinian Alternative also includes emergency military divert landings or emergency humanitarian assistance staging described in the Draft EIS.

Under the Modified Tinian Alternative, TNI would not be used to support fighter aircraft during joint military exercises, and the USAF would reduce the number of operations to be flown by wide-body type aircraft, and how many wide-body type aircraft are flown from TNI during the exercises. The operations under the Modified Tinian Alternative Implementation Phase at TNI would be the same as that described for the Modified Saipan Alternative.

- Only wide-body type aircraft would be flown to and from TNI during divert exercises;
- A total of 720 operations by KC-135 or similar aircraft would be completed annually, in contrast to the 1,920 operations described under the proposed action in the Draft EIS.

3. Hybrid Modified Alternative

Under the Hybrid Modified Alternative, the USAF would divide our construction and subsequent operations among the two airfields. The total fuel requirement would be 220,000 barrels as described for the Modified Saipan Alternative and the Modified Tinian Alternative, but would be divided among the two locations with 80,000 barrels being stored at Saipan and 140,000 barrels at Tinian.

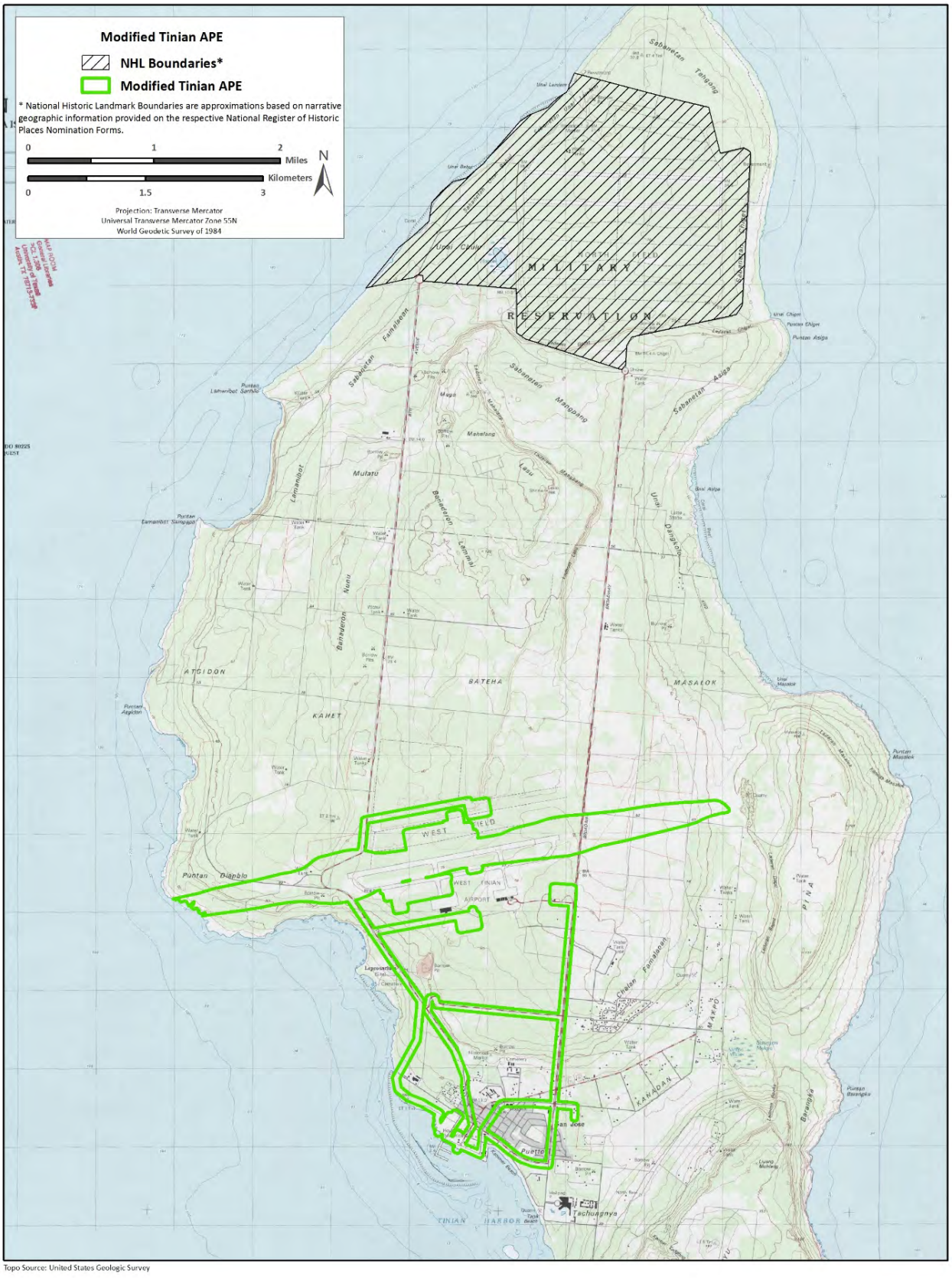


Figure 4. Modified Tinian APE under the Modified Tinian Alternative

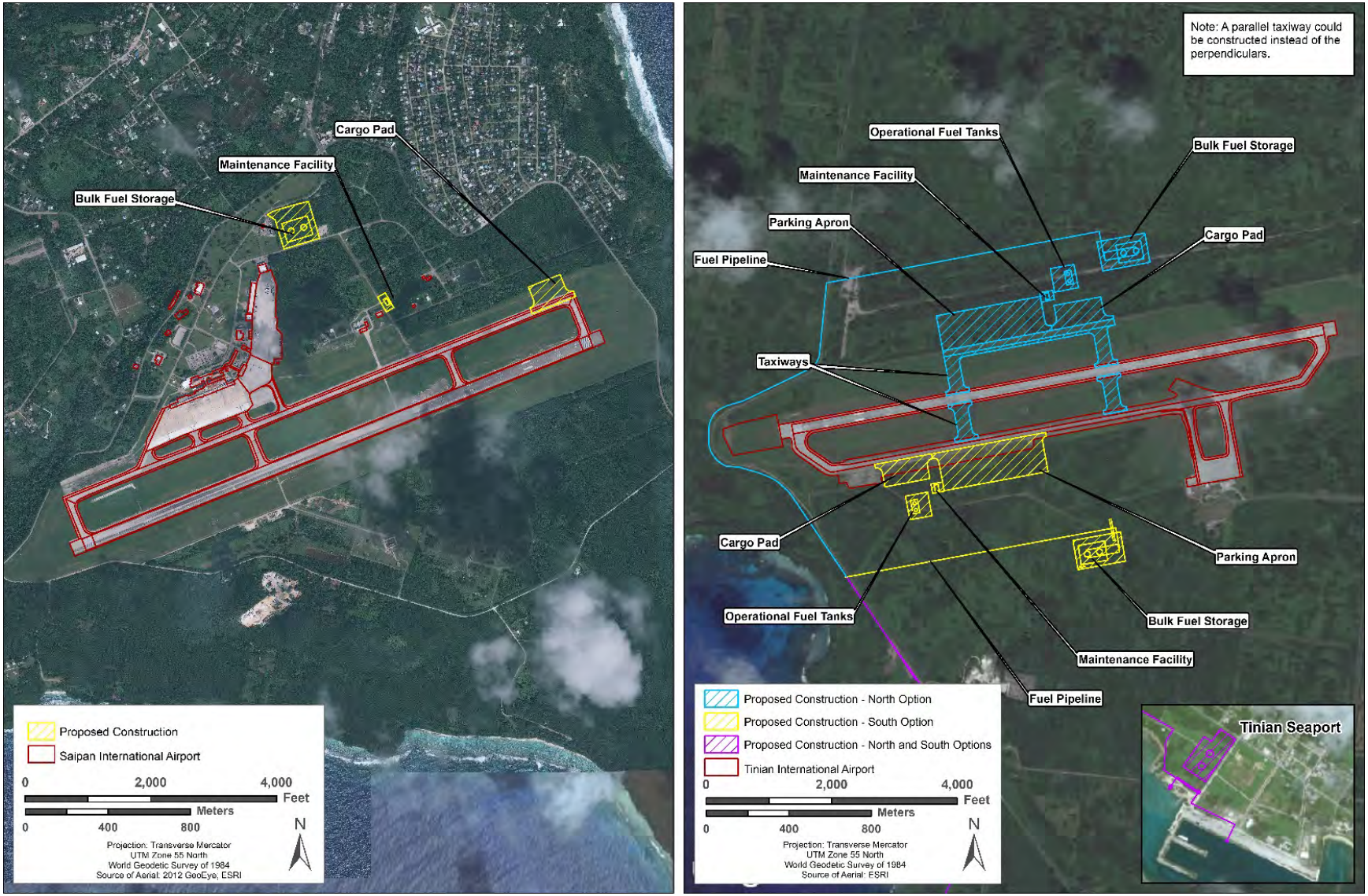
Under the Hybrid Modified Alternative at Saipan (**Figure 5**), the USAF would build a cargo pad and a maintenance facility. The USAF would also construct storage capacity for 80,000 barrels of fuel at GSN. The expected configuration would consist of two large (approximately 40,000 barrels) tanks at the airport. The exact size, configuration and type of storage tank will be dictated by mission requirements and allocated funding. Fuel reception and staging capacity at the Saipan seaport would be procured on the commercial market. No hydrant system or operational tanks would be installed at GSN under the Hybrid Modified Alternative. Fuel would be delivered from the Saipan seaport to GSN via truck. This service would be procured on the commercial market. The proposed cargo pad would accommodate up to three KC-135 aircraft. No parking apron at GSN would be constructed under this alternative. Temporary billeting on Saipan, including medical, transportation, and dining services, would be required for approximately 265 personnel supporting aircraft operations and would be procured on the local economy.

Under the Hybrid Modified Alternative at Tinian (**Figure 5**), the USAF would build a cargo pad, parking apron, and a maintenance facility. The parking apron at TNI would accommodate six KC-135 aircraft and the cargo pad would accommodate up to four KC-135 aircraft. The USAF would also construct storage capacity for 140,000 barrels of fuel on Tinian. The expected configuration would store approximately 120,000 barrels in storage tanks at TNI and 20,000 barrels in operational tanks at TNI connected directly to the hydrant system to facilitate pumping directly to the aircraft. The hydrant system would be incorporated into the parking apron. The exact size, configuration and type of storage tank will be dictated by mission requirements, and allocated funding.

An underground pipeline from the Tinian seaport to the north side or south side of the airfield at TNI would be constructed, depending on whether the Tinian North or South option is selected. The pipeline corridor would be six feet wide and the pipeline would be buried four feet deep. Constructing a pipeline would alleviate the need to use tank trucks to transport fuel from the seaport to the bulk storage tanks on the airfield. Additionally, initial consultations with Defense Logistics Agency (DLA) indicate the use of a pipeline may eliminate the requirement for seaport bulk fuel tanks. In that event, all the bulk fuel can be stored at the airfield in two large (up to 60,000 barrels) tanks and two 10,000 barrel operating tanks.

As in the Modified Tinian Alternative, development could occur on the North or South side of the runway. Development on the north side of the runway would require construction of taxiways from the cargo and parking aprons to the runway. South side development does not require any additional taxiways.

Temporary billeting on Tinian, including medical, transportation, and dining services, would be required for approximately 265 personnel supporting aircraft operations and would be procured on the local economy.



Note: Infrastructure footprints are approximate and subject to further revisions.

Figure 5. Proposed Construction at Saipan and Tinian under the Hybrid Modified Alternative

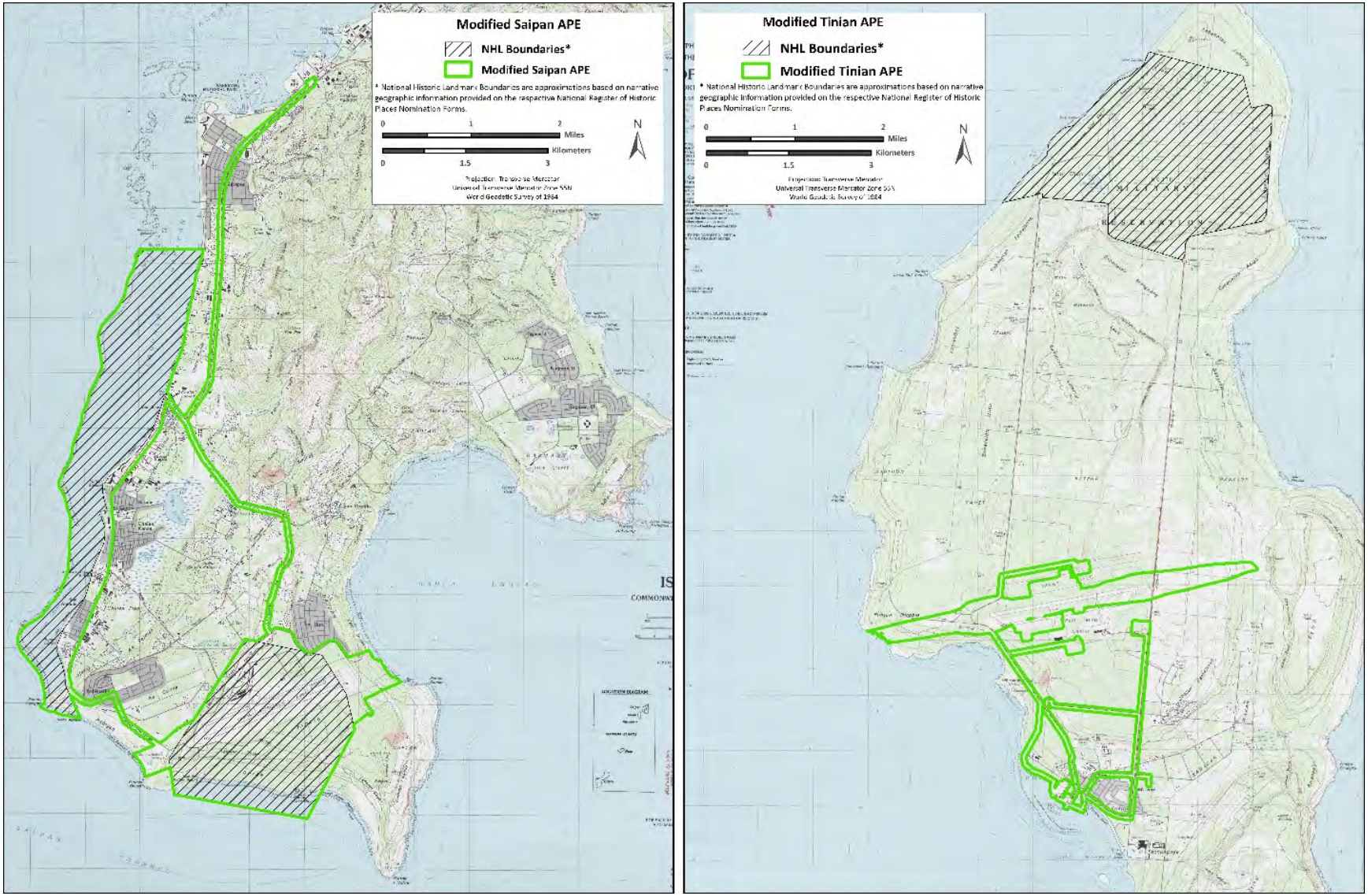


Figure 6. Modified Tinian and Saipan APE under the Hybrid Modified Alternative

The Hybrid Modified Alternative would support the same total number of expected operations by KC-135 aircraft (720 per year) as the Modified Saipan Alternative and the Modified Tinian Alternative but would distribute those operations over both GSN and TNI. TNI would be the primary divert/exercise location and would realize the majority of the development. GSN would be the secondary divert/exercise location and experience significantly less development. The specific number of aircraft expected to utilize each location would vary and will depend on mission requirements. For planning purposes, the TNI portion of this alternative, when complete, is expected to have parking capacity for 7 to 10 KC-135 or similar aircraft. The GSN portion is expected to have parking capacity for 2 to 5 KC-135 or similar aircraft. While the construction and expected operations are distributed among the two locations, environmental analysis should be performed using 720 as the number of annual operations as exercises may occur at either location. As in the alternatives described above, the KC-135 is the primary aircraft and will be the platform used for analysis.

The Hybrid Modified Alternative would also include emergency military divert landings or emergency humanitarian assistance staging at GSN and TNI described in the Draft EIS.

Attachment 2: Proposed Schedule for Continued Section 106 Consultation

PACAF seeks to have a Section 106 agreement document negotiated and signed by August 17, 2015, so that it can be included in the Final Environmental Impact Statement (EIS). In order to meet this schedule, we would implement a program of public and consulting party outreach related to Section 106. The main objective of these efforts is to seek further comment from consulting parties and the public on our historic properties identification efforts to date and the adequacy of those efforts for the modified Undertaking and APE discussed in **Attachment 1**.

The main elements of our consultation plan would include the release of a statement to the press notifying the public of the current status of the Undertaking and requesting additional public input regarding potential effects to historic properties by Divert. The press release would advertise Divert Section 106-specific public meetings to be held on both Tinian and Saipan. Our consultation plan would also include meetings with consulting parties on each island to be held in coordination with the public meetings.

Due to changes in the Undertaking resulting from the NEPA process and described in **Attachment 1**, we will reassess our previous findings relative to the scaled-back Divert scope and seek continued input from the consulting parties, including SHPO and the public. Once the analysis is complete, we will provide our finding of effect (FOE) to the consulting parties in writing. This letter will also invite the consulting parties to a conference call to discuss the FOE and propose a meeting to reach agreement on resolution of adverse effects, if needed, and to develop an agreement to resolve any adverse effects. The conference call will be scheduled about a week after receipt of the FOE.

We also propose that a week-long conference be conducted on Saipan with consulting parties to discuss modification of the existing, but not yet signed, draft Section 106 agreement. A public meeting would be held toward the end of the conference to describe the agreement and seek comment. PACAF expects that an agreement document acceptable to all the consulting parties and incorporating any final comments from the public will be ready to go out for signature by the end of the conference. And therefore, PACAF expects that a signed, final document will be ready in time for issuance of the Final EIS.

U.S. Air Force Seeks Input on Historic Properties in Revised Divert Proposal

The U.S. Air Force is asking for public comments. The Air Force requests comments on the potential effects to historic properties from the revised Divert proposal near and at Francisco C. Ada (Saipan International) Airport, Tinian International Airport, Saipan seaport, and Tinian seaport.

The Air Force previously sought input on historic properties in 2012 when it proposed to improve the Saipan and/or Tinian International Airports to accommodate training exercises and missions related to overall emergency preparedness in the Pacific. After receiving input from the CNMI government, Federal and local agencies, and community members, the Air Force has revised its proposal and is again inviting members of the public to assist in identifying potential adverse effects to historic properties.

The Air Force initially proposed building facilities and infrastructure at the Saipan and/or Tinian International Airports to support a combination of military cargo, fighter, and tanker aircraft and associated support personnel for diverted aircraft landings, joint military exercises, and humanitarian assistance and disaster relief efforts. Although the mission remains the same, the Air Force has revised its proposal to no longer include fighter aircraft; to decrease the extent of airport improvements; and to dramatically reduce the number of planned operations from 1,920 take-offs and landings to 720. As a result of these changes, the Air Force has developed three modified alternatives that include a reduced level of development at Saipan and Tinian.

With the proposed revisions to the Divert Activities and Exercises undertaking, the Air Force is revisiting the potential for adverse effects to historic properties in accordance with Section 106 of the National Historic Preservation Act. The Air Force will conduct open house public outreach meetings on Saipan and Tinian to discuss the revised undertaking and seek public input on historic property identification, traditional cultural properties, and potential effects on historic properties. The public outreach meetings will be held at the following dates, times, and locations:

- **Tinian**: Friday, July 24, 2015; 4:30-7:30pm; Tinian Elementary School, San Jose.
- **Saipan**: Saturday July 25, 2015; 1:30-4:30pm; Saipan Multipurpose Center, Susupe.

Written and verbal comments related to historic properties will be accepted at the meetings. Interested individuals may also request to join the consultation process as an interested party. Those with interest in or information pertaining to the historic properties within the areas of potential effect are encouraged to submit comments to PACAF Public Affairs (ATTN: PACAF Divert Section 106 Consultation), 25 E Street, Suite G-108, Joint Base Pearl Harbor Hickam, HI 96853, or by email at pacaf.paops@us.af.mil. Comments will also be accepted on the project website at **www.PACAFDivertMarianasEIS.com**

DEPARTMENT OF THE AIR FORCE

PACIFIC AIR FORCES

August 14, 2015

MEMORANDUM FOR COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS
HISTORIC PRESERVATION OFFICER

FROM: PACAF/A5X
25 E Street Suite L-200
JBPH-H HI 96853-5420

SUBJECT: Divert Activities and Exercises Section 106 Consultation and Findings of Effect

1. We at the Pacific Air Forces (PACAF) are keenly aware of the recent devastation inflicted on Saipan from Typhoon Soudelor. We want those consulting parties in the Commonwealth of Northern Mariana Islands (CNMI) to know that our thoughts are with you during this difficult time.

2. Your concurrence on our attached findings of effect for the U.S. Air Force's (USAF's) Divert Activities and Exercises proposed undertaking is requested, in accordance with the regulation 36 CFR 800. We are currently at a critical junction in the Section 106 consultation for the Divert undertaking where input is needed from consulting parties in CNMI. We would like to work with you and all consulting parties to find a mutually acceptable timeframe to develop an agreement to resolve adverse effects.

3. During the week of July 20, 2015 we held meetings with consulting parties and the public on Saipan and Tinian where we requested input on the Areas of Potential Effect (APEs) and identification of historic properties for the alternatives under consideration: the Modified Saipan Alternative, Modified Tinian Alternative, and Hybrid Modified Alternative. With consideration to the input we received during consultation, we have summarized the results of our identification of historic properties and findings of effect, per 36 CFR 800.5 and 36 CFR 800.11. Per 36 CFR 800.5(b), the Air Force finds the proposed action would have no direct adverse effect on contributing elements to the Aslito/Isley Field portion of the Saipan Landing Beaches, Aslito/Isley Field, and Marpi Point National Historic Landmark (NHL) or other historic properties on Saipan. However, the USAF finds that certain proposed actions in the various alternatives could have an adverse effect on the American administration-period West Field site on Tinian and possible indirect adverse effect on the setting and feeling of the Aslito/Isley Field National Historic Landmark District on Saipan.

4. We would normally expect your response to our no adverse effect finding within thirty (30) days of receipt of this letter, per 36 CFR 800.5(c). However, in recognition of the recent devastation experienced on Saipan, we will consider any responses received by October 15, 2015. Regarding the finding of effects to Tinian's West Field and Saipan's Aslito/Isley Field, we request your comments and look forward to further consultations on ways to avoid, minimize, or mitigate the effects. We also invite you to participate in a conference call concerning these findings after you return to official duty. We will send a separate invitation for this call by email that provides date, time and call-in information.

5. Thank you for your continued interest and involvement in Section 106 consultation for the Divert proposal. Please contact Mr. William Grannis at (808) 449-4049 or by email at william.grannis@us.af.mil with any questions or comments regarding the Divert proposal.

MICHAEL R. CARDOZA, Colonel, USAF
Chief, Strategy and Plans Division

Attachment:
Section 106 Findings of Effect for Divert Activities and Exercises

cc:
Commonwealth of the Northern Mariana Islands Historic Preservation Review Board
Federal Aviation Administration, Western-Pacific Region
Governor of the Commonwealth of the Northern Mariana Islands
Individual Consulting Parties: Mr. Sam McPhetres and Ms. Deborah Fleming
National Park Service, Pacific-West Region
Office of the Mayor, Tinian
Commander, Joint Region Marianas
Advisory Council on Historic Preservation

1. Introduction

This document presents the U.S. Air Force (USAF), Pacific Air Forces' (PACAF) findings regarding effects to historic properties from the proposed Divert Activities and Exercises (Divert) undertaking (Undertaking) (Figure 1). A detailed description of the Undertaking and Areas of Potential Effect (APE) (Figure 2) were presented to the consulting parties in a letter dated June 9, 2015 and during meetings with the consulting parties and the public on Saipan and Tinian during the week of July 20, 2015. PACAF has considered the input it has received so far from the consulting parties and the public in this Finding of Effect (FOE).

2. Identification of Historic Properties (36 CFR 800.4)

Having defined its Undertaking and identified the APE, PACAF conducted a review of existing information regarding historic properties within the APE and has sought, or is seeking, additional information from consulting parties pursuant to 36 CFR 800.4 (a)(2)&(3). Although no Federally recognized Indian tribes or Native Hawaiian organizations exist in the Commonwealth of the Northern Marianas Islands (CNMI) (36 CFR 800.4(a)(4)), PACAF is reaching out to Chamorro and Carolinian representatives.

In its review of existing information, PACAF has found that the majority of the APE on Tinian has been previously surveyed for cultural resources and its findings are based on the results of those studies (Figure 3). Similarly, the APE on Saipan was surveyed in 1980 in preparation for nominating Isley Field to the National Register of Historic Places (NRHP) (Denfeld and Russell 1984). PACAF also contracted a cultural resources consulting firm to perform a Phase I cultural resources survey and inventory of proposed construction sites at Saipan International Airport (FAA airport code GSN) as it is part of a National Historic Landmark (NHL).

The following discussion is based on findings from these efforts and represent PACAF's good faith effort to identify historic properties within the APE pursuant to 36 CFR 800.4 (b).

2.1 Modified Saipan Alternative

2.1.1 Previous Survey Coverage of the APE

As already mentioned, the Modified Saipan APE was surveyed for archaeological sites, historic buildings and structures, and other cultural resources in recent decades. The portion of the APE comprising the Isley Field Historic District was surveyed in 1980 in preparation for nominating Isley Field to the National Register of Historic Places (NRHP) and includes all proposed construction areas at GSN (Denfeld and Russell 1984). USAF also surveyed the proposed construction areas for the parking apron, bulk fuel storage, maintenance facility, and cargo pad at GSN as well as for the bulk fuel storage area at the Port of Saipan in support of the Section 106 process associated with an earlier version of the Divert EIS (Fischer et al. 2012). No cultural resource surveys have been performed to date along existing roads proposed for use.

2.1.2 Historic Properties within the APE

Under the Modified Saipan Alternative, the vast majority of construction and ongoing activity would take place at GSN with much less construction and activity at the seaport. With the exception of the aboveground storage tanks at the Port of Saipan and existing roads, all proposed Divert-related construction and implementation activities would take place within the boundaries of Aslito/Isley Field.

Aslito/Isley Field was nominated to the National Register in 1980 as the Isley Field Historic District but was later included in a National Historic Landmark (NHL) recommendation for three of Saipan's World War II-era sites. The three World War II-related properties were listed together as the Saipan Landing Beaches, Aslito/Isley Field, and Marpi Point National Historic Landmark (SNHL) on February 4, 1985 (National Historic Landmark System No.: 85001789). Because the SNHL consists of three discontinuous areas, they are considered separately in this analysis. We follow the SNHL nomination in using the term National Historic Landmark District (NHLD) to refer to the individual components of the NHL (the Landing Beaches, Marpi Point, and Aslito/Isley Field) rather than the NHL as a whole.

When Aslito/Isley Field was nominated as a historic district, the nomination listed the following buildings and structures as contributing elements:

- The operations center built and used by the Japanese and later used for similar purposes by the U.S. 73rd Bombardment Wing,
- Four gas drum storage bunkers,
- A power plant,
- A building to house an electric generator,
- A semi-subterranean bomb storage facility,
- A defensive gun emplacement atop the bomb storage facility,
- A semi-subterranean fuel storage facility,
- Three associated fuel tanks,
- A pump house,
- A torpedo regulating shop,
- A cold storage building,
- Eleven air raid shelters,
- Two runways, and
- "(H)undreds of hardstands and foundations from the U.S. period."

When Aslito/Isley Field was included in the SNHL, the nomination form listed the following buildings and structures as contributing elements at the airfield: the air operations building, two power plants, four gasoline storage buildings, fourteen air raid shelters (an increase of three shelters from the district nomination), an aerial bomb magazine, a partly underground structure for gasoline storage tanks, and "various structural ruins." The nomination also lists the two runways and notes that "the nearly seven miles of B-29 taxiways and over 100 out of 181 hardstands (parking areas) around the runways may be traced in part." The nomination also lists the site of the 73rd Bombardment Wing's administrative area south of the runways. Finally, it lists the Japanese blockhouse on the beach at Unai Opyan. The nomination specifically excludes the site of Kobler Field southwest of Isley Field, which by 1985 was converted into a large housing development and had therefore "lost the greater part of its integrity." Also excluded are the "modern air terminal, its vehicle parking lot, and its concrete aircraft parking area in front."

The 2012 USAF survey identified three pre-contact isolated occurrences and ten historic features within the boundaries of the Aslito/Isley Field portion of the SNHL. The features include a Japanese bunker, several water catchment features, concrete foundations and pads, and a bottle dump. These features and materials probably date between 1935 and 1945. The three pre-contact occurrences are comprised of light scatters of Latte period sand-tempered pottery fragments in disturbed soils and contexts.

2.2 Modified Tinian Alternative

2.2.1 Previous Survey Coverage of the APE

The APE for the Modified Tinian Alternative was surveyed for historic properties in recent decades (Allen and Nees 2001; Athens 2009; Dixon and Welch 2002; Franklin and Haun 1995; Gosser et al. 2001; Henry and Haun 1995; Jones 1991; More et al. 1986; Thursby 2010). Areas that have been previously surveyed include all proposed construction areas at the seaport, all proposed construction areas at Tinian International Airport (FAA airport code TNI) under both the North and South Options, and portions of the APE incorporating noise contour areas. The only areas that have not been previously surveyed include about 3.5 kilometers (2.2 miles) of existing roads in and around San Jose that would possibly serve as truck routes for construction material and fuel trucks.

In addition to archaeological and architectural surveys, a Traditional Cultural Property (TCP) study conducted on Tinian in support of a separate undertaking being considered by the U.S. Marine Corps Forces, Pacific (MARFORPAC) (Griffin et al. 2015). The study used ethnographic information from archival research, oral history interviews, and natural resource inventories to identify and evaluate potential TCPs in the Military Lease Area on the northern two-thirds of Tinian.

2.2.2 Historic Properties within the APE

Under the Modified Tinian Alternative, the vast majority of construction and ongoing activity would take place at TNI with much less construction and activity at the seaport. Previous surveys have recorded a large number of historic resources near the airport, especially to the west. Many of these sites may be associated with the pre-war Gurguan Airfield and have been recommended eligible by MARFORPAC in survey reports they have produced for their CNMI Joint Military Training (CJMT) undertaking (Dixon et al. 2014). The site of the WWII-era U.S. Naval Air Base Headquarters (HQ) has been identified at the east end of the modern runway. This site has also been recommended as eligible for listing on the NRHP. These sites lie under the noise effects portion of the APE.

All of West Field, the Japanese-era airstrip as modified by U.S. forces during the Second World War and the basis of the modern airport, has also been recorded as a historic resource and has also been recommended as eligible for listing on the NRHP (Dixon et al. 2014). Pavement, hardstands, and other features associated with West Field are still visible on aerial photographs. However, the exact location of preserved historic fabric related to the site has not been determined at this time.

2.3 Modified Hybrid Alternative

The Modified Hybrid Alternative APE is a combination of the APEs for the Modified Saipan and Tinian APEs; therefore, previous coverage of the APE and historic properties within the APE are the same as those detailed above for each alternative.

3. Assessment of Adverse Effects (36 CFR 800.5)

According to 36CFR800.5(a)(1), "…(a)n adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association." Direct effects may include actions such as ground-disturbing activity within archaeological sites and modifications to historic structures. Indirect effects may include vibrations caused by vehicle traffic and changes to the setting or view-shed of a historic

property. The following discussion outlines PACAF's application of the criteria of adverse effect to cultural resources identified on Saipan and Tinian.

3.1 Modified Saipan Alternative: Construction and Implementation

Based on the results of previous inventories, construction proposed under the Modified Saipan Alternative would have no direct adverse effects to known contributing elements of the Aslito/Isley Field portion of the SNHL or other historic properties on Saipan. The proposed construction footprints for several elements, including the proposed cargo pad, parking apron, and hydrant system are in the general vicinity of the American administration-period B-29 hardstand network identified in Denfeld and Russell (1984) as "Site 29." However, our survey identified no remains of the B-29 hardstand network in proposed construction areas. Our report observed that WWII-era pavements could be very deeply buried or could have been destroyed by vegetation growth, post-war land clearance, or other forces (Fischer et al. 2012). Furthermore, HDR concluded that construction footprints of the proposed Divert-related structures at GSN would not directly affect any of the standing historic structures (listed above) that constitute contributing elements to the NHLD.

USAF identified one feature in proposed construction areas that could sustain direct effects. However, we have recommended that this feature, an American Administration-period concrete foundation referred to as "Feature 9," does not contribute to the character defining properties of the SNHL (Fischer et al. 2012). The feature is badly decayed, lacks superstructure or other identifying characteristics, and lacks key aspects of integrity such as setting, feeling, and association. The USAF recognizes that the determination of whether the feature contributes to the NHLD is ultimately a determination made by the Secretary of Interior. Other non-contributing features are also present in areas proposed for construction; however, adverse effects to non-contributing features generally do not affect the integrity and eligibility of the larger district or NHL.

The construction of Divert-related facilities would not have direct effects to the Landing Beaches portion of the SNHL, which would see no modifications as part of the proposed Divert project. Divert-related construction would also not have adverse effects to the Marpi Point portion of the SNHL, which is north of all proposed actions and the APE.

Divert-related construction of aboveground fuel storage tanks at the Saipan seaport would not have direct adverse effects to historic properties at the port. Although the area of the modern port was the site of Navy Seabee activity during the war, no evidence of this remains and the project construction footprint is well inland from where these activities are thought to have taken place. The port is not part of the SNHL, nor is the construction footprint on or near an NRHP-listed or NRHP-eligible archaeological or architectural resource.

Under 36 CFR 800.5, adverse effects include the introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features. Construction of new Divert-related facilities around existing historic structures within the boundaries of the Aslito/Isley Field NHLD may alter the integrity of setting and feeling of contributing historic structures. Visual, atmospheric and audible elements of the implementation phase of the Divert undertaking would consist of slightly increased aircraft noise over a maximum of eight week period per year and presence of tanker aircraft parked on the parking apron or cargo pad or arriving/departing the airport, which is consistent with existing use of the airfield. The USAF has determined the increased noise and presence of tanker aircraft for a short period of time would not constitute an indirect adverse affect on the integrity of setting or feeling of the SNHL.

The Modified Saipan Alternative would involve transportation on existing roads of construction material and fuel from the Port of Saipan to the airport. This activity would have no adverse effects to historic properties. A study conducted by the California Department of Transportation in 2002 found that ground vibration from transportation along existing paved roads had virtually no effect on historic buildings located more than 5 meters away and that, in fact, such vibrations dropped below the perception threshold beyond 45 meters. The study considered heavy trucks as the vehicular source of vibration, similar to the trucks likely to be used during Divert construction or for fuel transportation, and assumed wood-framed historic buildings and structures. The standing structures in the SNHL are of stronger concrete construction and even more resistant to vibration effects.

The Modified Saipan Alternative could contribute to long-term, indirect, adverse cumulative effect on historical resources associated with the Japanese and U.S. occupations prior to, during, and immediately following WWII. Most of the historic structures in the Isley/Aslito field historic district and landmark are far enough away from the Divert activity and training exercise areas proposed under this alternative that long-term, cumulative effects on these structures are expected to be minimal to none. The district as a whole also faces increased fragmentation of its constituent parts from development. This process is already well underway from continued improvements for commercial air travel at GSN. However, affects to the district's overall cohesiveness from Divert-related construction and implementation activities are possible.

3.2 Modified Tinian Alternative: Construction and Implementation

Proposed construction under either the Tinian North Option or South Option of the Modified Tinian Alternative could have direct and/or indirect adverse effects to one archaeological site, TN-6-0030 (also sometimes referred to as Site 3005). That site is the American administration-period West Field, which has been recommended eligible for listing in the NRHP under Criteria A and D (Dixon et al. 2014). Construction under either option would potentially compromise archaeological deposits that make the site eligible under Criterion D. Construction would also introduce new elements to the landscape at TNI that could diminish integrity of setting, design, and feeling at West Field.

Under the Modified Tinian Alternative, the vast majority of construction and ongoing activity would take place at TNI with much less construction and activity at the seaport. Construction of fuel storage and distribution facilities at the Port of Tinian would have no direct effects to historic properties. The port does not contain known NRHP-listed or NRHP-eligible properties.

Although Tinian is home to the Tinian Landing Beaches, Ushi Point Field, and North Field NHL, the landmark is well to the north of the APE and the resource will not experience any direct or indirect adverse effects as a result of the undertaking, nor would any of the TCPs identified by MARFORPAC (Griffin et al. 2015).

Historic properties located near the airport such as those associated with the Gurguan Airfield site to the west and the Naval Air Base HQ site to the east of TNI lie under the noise effects portion of the APE. However, noise effects are normally assessed in terms of interference with appreciation of a property's historical feeling or setting. Since these sites are not widely accessible or interpreted for public visitation, USAF finds that noise effects to these sites are minimal and that they will not be adversely affected by the Undertaking. Further, USAF finds no adverse effect to the setting and feeling of historic properties whose period of significance dates to times when Gurguan and West fields were considerably more active than would be the case during Divert activites and exercises.

The Modified Tinian Alternative would involve transportation on existing roads of construction material and fuel from the port in San Jose to the airport. As discussed above for the Saipan alternative, this type of traffic would have no adverse effects to historic properties.

3.3 Hybrid Modified Alternative: Construction and Implementation

Direct effects from construction under the Hybrid Modified Alternative would be the combination of those discussed for the Modified Saipan Alternative and Modified Tinian Alternative. Construction would not result in direct, adverse effects to historic properties on Saipan. Although construction on Tinian would be reduced compared to the Modified Tinian Alternative, construction would still take place within West Field and thus could adversely affect that site through ground-disturbing activities potentially compromising archaeological deposits and/or structural remains.

Indirect effects from construction under the Hybrid Modified Alternative are similar to those discussed for the Modified Saipan Alternative and Modified Tinian Alternative. Construction of new Divert-related facilities at GSN and TNI would potentially alter the feeling of historic structures that contribute to the NHLD on Saipan and West Field on Tinian, although the modified hybrid alternative involving Saipan would have a much smaller construction footprint and corresponding reduced effect on the feeling of the historic structures at the Aslito/Isley Field NHLD.

Under the Hybrid Modified Alternative, the implementation phase of the proposed undertaking would divide the deployment of personnel and aircraft among the two islands. However, any given operation could take place at one island or the other, and the full number of 265 personnel and 720 operations on each island were used for the analysis. Therefore, adverse effects for the implementation phase would be the combination of those described under the Modified Saipan Alternative and Modified Tinian Alternative. These effects consist of an indirect adverse effect on the integrity of feeling of the Saipan Landing Beaches and Aslito/Isley Field portions of the SNHL and an indirect adverse effect on historic properties located at or near TNI including West Field, the Gurguan Airfield site, and the Naval Air Base HQ site.

Cumulative adverse effects on historic properties under the Hybrid Modified Alternative would be the combination of those discussed under the Modified Saipan Alternative and Modified Hybrid Alternative. These effects include fragmentation of the Aslito/Isley Field NHLD.

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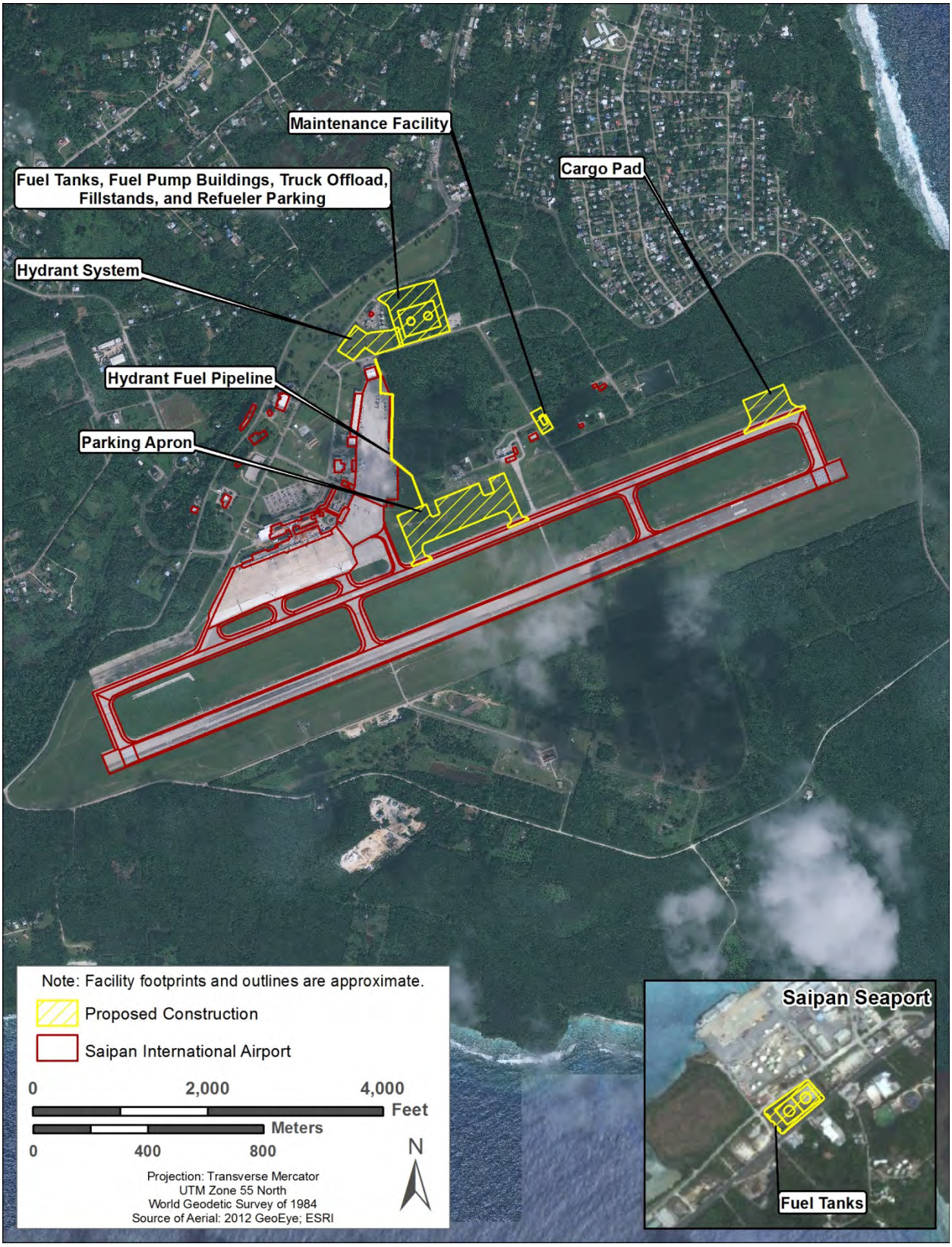
5. Figures

Figure 1. Divert Activities and Exercises Undertaking Maps


Maintenance Facility
Fuel Tanks, Fuel Pump Buildings, Truck Offload, Fillstands, and Refueler Parking
Cargo Pad
Hydrant System
Hydrant Fuel Pipeline
Parking Apron
Note: Facility footprints and outlines are approximate.
Proposed Construction
Saipan International Airport
0
2,000
4,000
Feet
Meters
0
400
800
N
Projection: Transverse Mercator
UTM Zone 55 North
World Geodetic Survey of 1984
Source of Aerial: 2012 GeoEye; ESRI
Saipan Seaport
Fuel Tanks

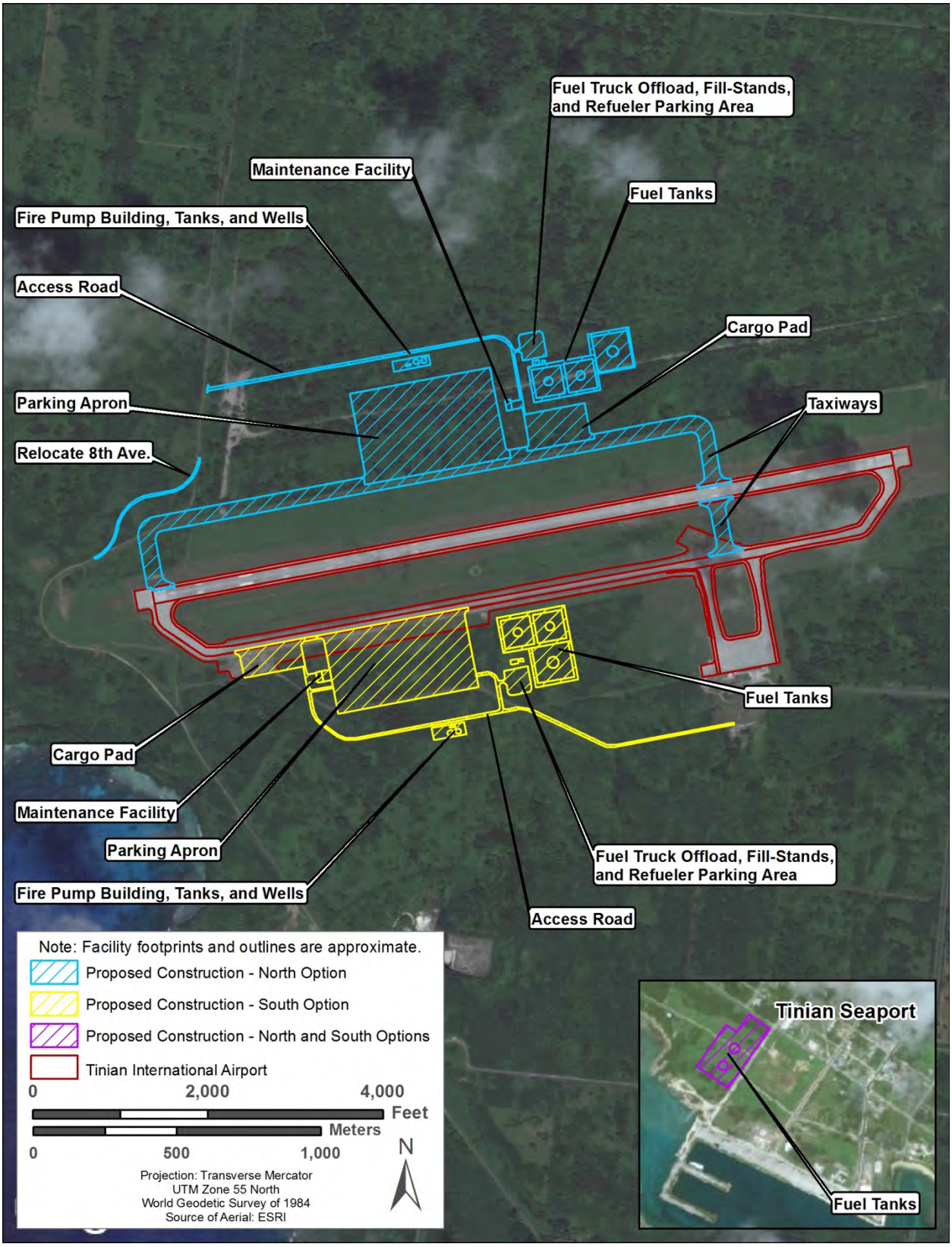
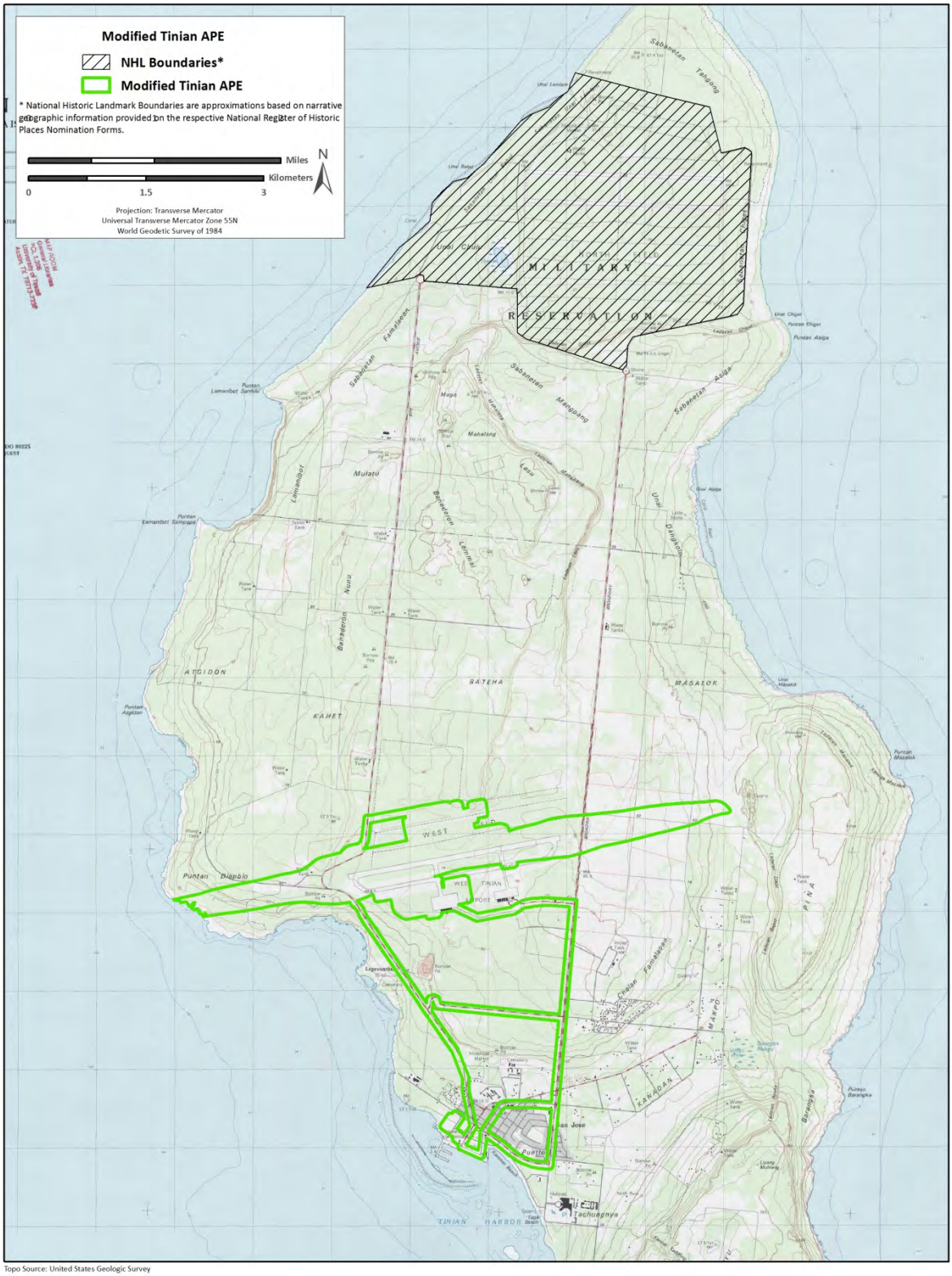
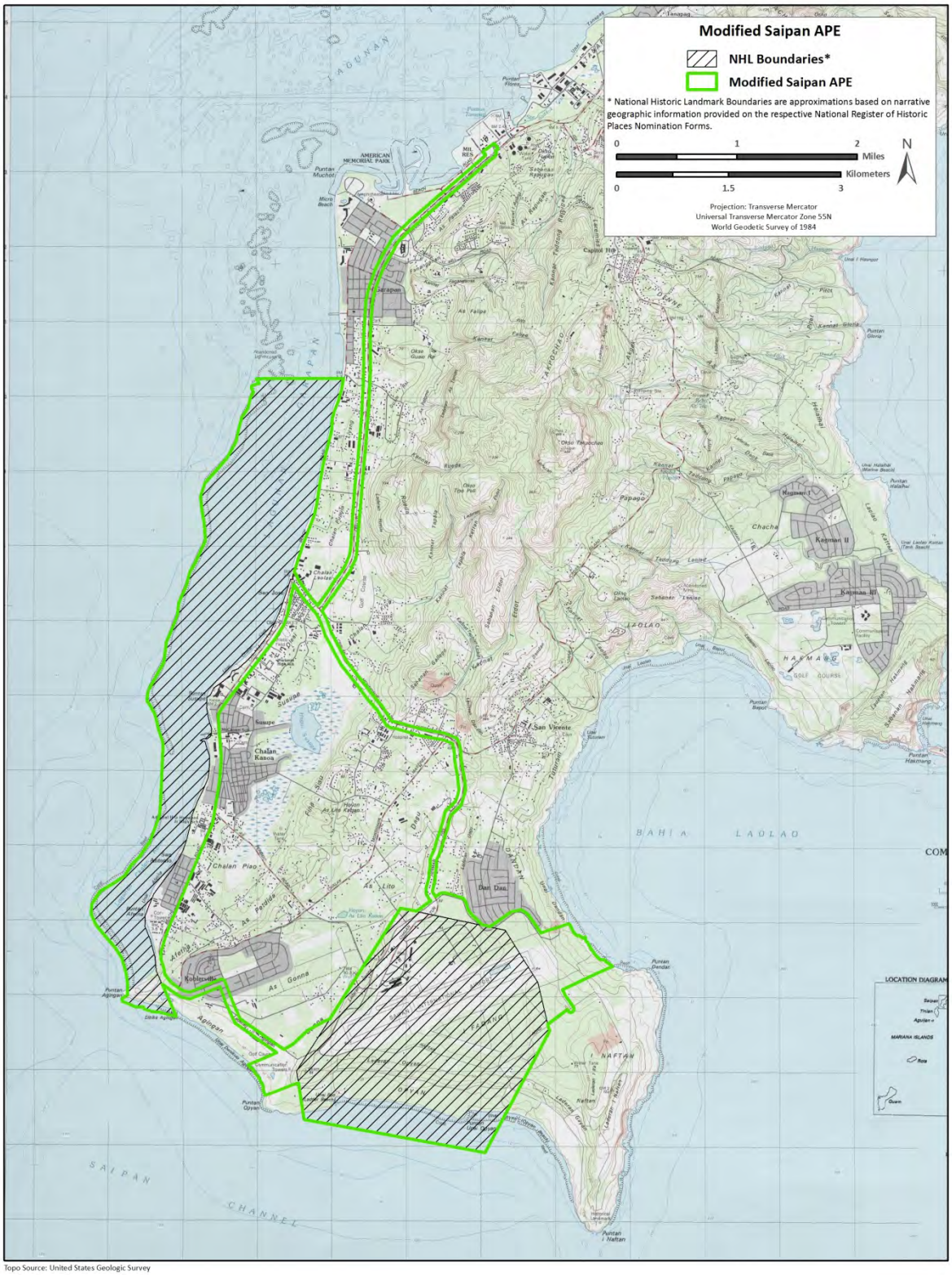

Fuel Truck Offload, Fill-Stands, and Refueler Parking Area
Maintenance Facility
Fuel Tanks
Fire Pump Building, Tanks, and Wells
Access Road
Cargo Pad
Parking Apron
Taxiways
Relocate 8th Ave.
Fuel Tanks
Cargo Pad
Maintenance Facility
Parking Apron
Fuel Truck Offload, Fill-Stands, and Refueler Parking Area
Fire Pump Building, Tanks, and Wells
Access Road
Note: Facility footprints and outlines are approximate.
Proposed Construction - North Option
Proposed Construction - South Option
Proposed Construction - North and South Options
Tinian International Airport
0
2,000
4,000
Feet
Meters
0
500
1,000
N
Projection: Transverse Mercator
UTM Zone 55 North
World Geodetic Survey of 1984
Source of Aerial: ESRI
Tinian Seaport
Fuel Tanks

Figure 2. Divert Activities and Exercises Areas of Potential Effects (APE) Maps


Modified Tinian APE
NHL Boundaries*
Modified Tinian APE
* National Historic Landmark Boundaries are approximations based on narrative geographic information provided on the respective National Register of Historic Places Nomination Forms.
Miles
Kilometers
0
1.5
3
N
Projection: Transverse Mercator
Universal Transverse Mercator Zone 55N
World Geodetic Survey of 1984
MILITARY
RESERVATION
ATIGIDON
BATEHA
MASALOK
KAHET
WEST
TINIAN
HARBOR
Puntan Diapblo
Topo Source: United States Geologic Survey


Modified Saipan APE
NHL Boundaries*
Modified Saipan APE
* National Historic Landmark Boundaries are approximations based on narrative geographic information provided on the respective National Register of Historic Places Nomination Forms.
0 1 2 Miles
0 1.5 3 Kilometers
N
Projection: Transverse Mercator
Universal Transverse Mercator Zone 55N
World Geodetic Survey of 1984
Topo Source: United States Geologic Survey

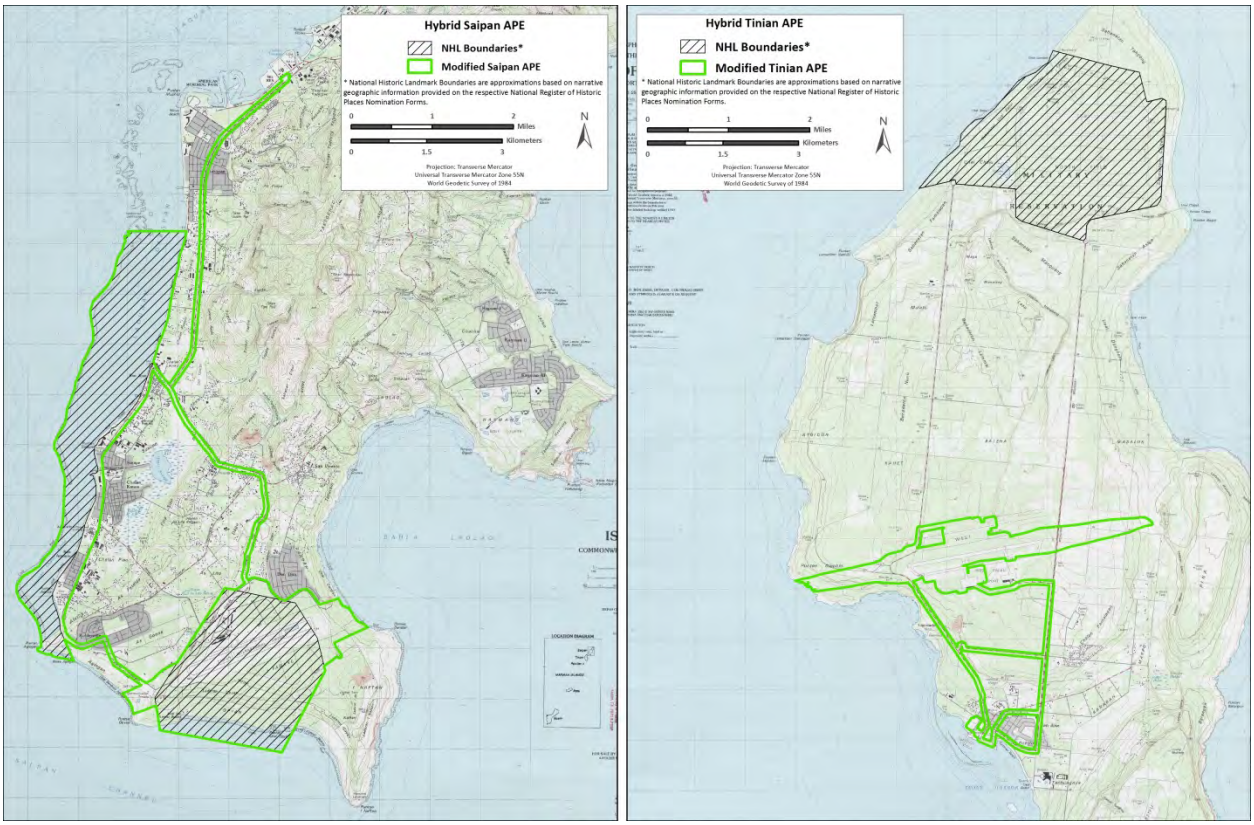
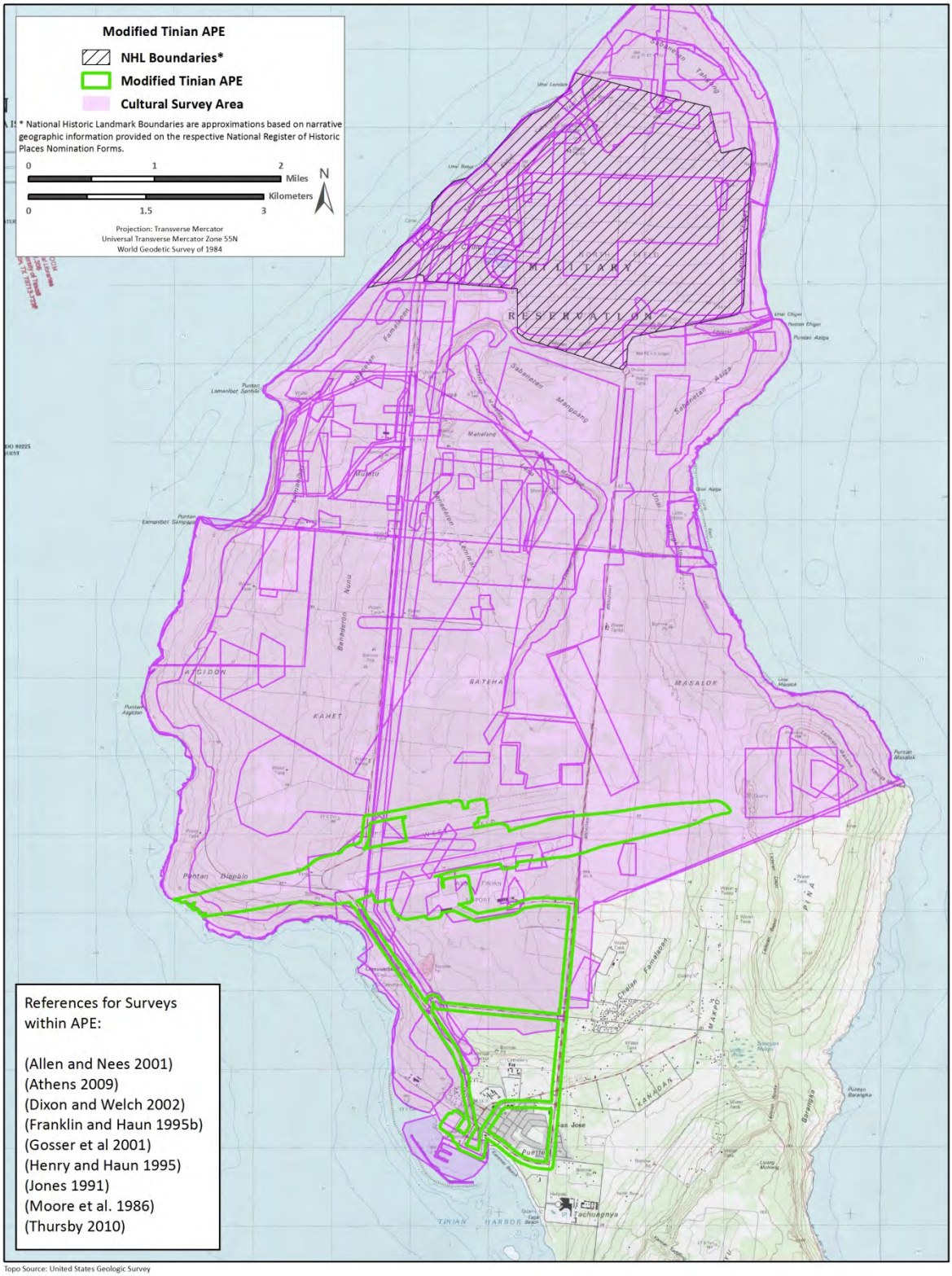

Hybrid Saipan APE
NHL Boundaries*
Modified Saipan APE
* National Historic Landmark Boundaries are approximations based on narrative geographic information provided on the respective National Register of Historic Places Nomination Forms.
0 1 2 Miles
0 1.5 3 Kilometers
N
Projection: Transverse Mercator
Universal Transverse Mercator Zone 55N
World Geodetic Survey of 1984
Hybrid Tinian APE
NHL Boundaries*
Modified Tinian APE
* National Historic Landmark Boundaries are approximations based on narrative geographic information provided on the respective National Register of Historic Places Nomination Forms.
0 1 2 Miles
0 1.5 3 Kilometers
N
Projection: Transverse Mercator
Universal Transverse Mercator Zone 55N
World Geodetic Survey of 1984

Figure 3. Previous Survey Coverage Map for Modified Tinian Alternative


Modified Tinian APE
NHL Boundaries*
Modified Tinian APE
Cultural Survey Area
* National Historic Landmark Boundaries are approximations based on narrative geographic information provided on the respective National Register of Historic Places Nomination Forms.
0 1 2 Miles
0 1.5 3 Kilometers
N
Projection: Transverse Mercator
Universal Transverse Mercator Zone 55N
World Geodetic Survey of 1984
MILITARY
RESERVATION
AGIDON
BATEHA
KAHET
MASALOK
KANADAN
TINIAN HARBOR
References for Surveys within APE:
(Allen and Nees 2001)
(Athens 2009)
(Dixon and Welch 2002)
(Franklin and Haun 1995b)
(Gosser et al 2001)
(Henry and Haun 1995)
(Jones 1991)
(Moore et al. 1986)
(Thursby 2010)
Topo Source: United States Geologic Survey