

Draft

# ENVIRONMENTAL IMPACT STATEMENT

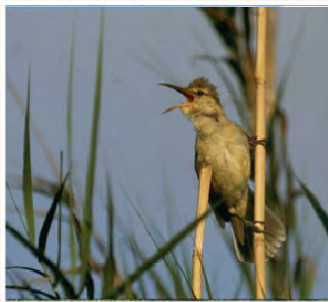
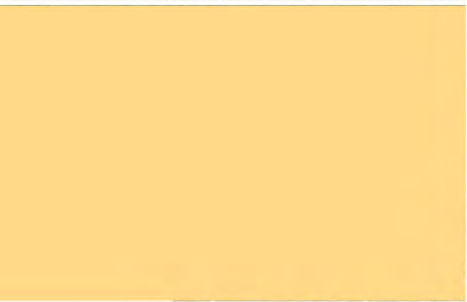
FOR

DIVERT ACTIVITIES AND EXERCISES,

GUAM AND COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS



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



JUNE 2012



### **Privacy Advisory**

Public comments on this Draft EIS are requested pursuant to the National Environmental Policy Act (42 U.S.C. 4321 et seq.). All comments received during the comment period will be made available to the public and considered during Final EIS preparation. The provision of private address information with your comment is voluntary. However, this information is used to compile the mailing list for Final EIS distribution, and failure to provide such information will result in your name not being included on the list. Private address information will not be released for any other purpose unless required by law.

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1 **COVER SHEET**

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3 **ENVIRONMENTAL IMPACT STATEMENT FOR PROPOSED DIVERT ACTIVITIES AND EXERCISES,**  
4 **GUAM AND COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS (CNMI)**

5 **Responsible Agencies:** **Lead Agency** - U.S. Air Force (USAF)  
6 **Cooperating Agencies** - U.S. Navy, U.S. Marine Corps (USMC),  
7 Federal Aviation Administration (FAA).

8 **Affected Location:** Mariana Islands Region.

9 **Proposed Action:** The USAF proposes to improve an existing airport or airports and associated  
10 infrastructure in the Mariana Islands in support of expanding mission requirements and to achieve divert  
11 capabilities in the western Pacific.

12 **Report Designation:** Draft Environmental Impact Statement (EIS)

13 **Abstract:** The USAF proposes to improve an existing airport or airports and associated infrastructure in  
14 support of expanding mission requirements in the western Pacific. Under this action, the USAF proposes  
15 to construct facilities and infrastructure at an existing airport or airports to support a combination of  
16 cargo, fighter, and tanker aircraft and associated support personnel for divert landings, periodic exercises,  
17 and humanitarian assistance and disaster relief. Unplanned divert landings and humanitarian assistance  
18 and disaster relief would occur at the airport or airports proposed for improvements as required. The  
19 purpose of the Proposed Action is to establish additional divert capabilities to support and conduct  
20 current, emerging, and future training activities, while ensuring the capability to meet mission  
21 requirements in the event that access to Andersen Air Force Base (AFB) or other western Pacific  
22 locations is limited or denied. The Proposed Action is needed because there is not an existing divert or  
23 contingency airfield on U.S. territory in the western Pacific that is designed and designated to provide  
24 strategic operational and exercise capabilities for U.S. forces when needed and humanitarian airlift and  
25 disaster relief in times of natural or man-made disasters.

26 The USAF has determined that an EIS is required for this proposal. The EIS was prepared pursuant to the  
27 Council on Environmental Quality (CEQ) Regulations (Title 40, Code of Federal Regulations [CFR]  
28 Parts 1500–1508) for Implementing the Procedural Provisions of the National Environmental Policy Act  
29 (NEPA) and USAF Procedures for Implementing NEPA (32 CFR Part 989). According to the CEQ  
30 regulations, the purpose of an EIS “is to serve as an action-forcing device to insure that the policies and  
31 goals defined in the Act are infused into the ongoing programs and actions of the federal government. It  
32 shall provide full and fair discussion of significant environmental impacts and shall inform  
33 decisionmakers and the public of the reasonable alternatives which would avoid or minimize adverse  
34 impacts or enhance the quality of the human environment.”

35 Topics considered in the impacts analysis are those determined, through both the internal and public  
36 scoping processes, to be relevant to the Proposed Action, and include noise; air quality; airspace  
37 management and airport operations, and bird/wildlife aircraft strike hazard; geological resources and  
38 soils; water resources; terrestrial biological resources; marine biological resources; cultural resources;  
39 recreation; land use; transportation; hazardous materials and waste management; infrastructure and  
40 utilities; socioeconomics and environmental justice; and human health and safety.

1 The Draft EIS was made available to the public for a 45-day public review and comment period  
2 calculated from the publication date of the Notice of Availability in the Federal Register. Comments  
3 received from the public and agencies will be considered in preparing the Final EIS, and responded to as  
4 appropriate.

5 Inquiries regarding this document should be sent to Capt. Rebecca Heyse, PACAF/PA, 25 E Street,  
6 Suite G-108, Joint Base Pearl Harbor-Hickam, HI 96853, ATTN: PACAF Divert Marianas EIS.

**DRAFT**

**ENVIRONMENTAL IMPACT STATEMENT**

**FOR**

**DIVERT ACTIVITIES AND EXERCISES**

**GUAM AND COMMONWEALTH OF THE NORTHERN**

**MARIANA ISLANDS (CNMI)**



**HEADQUARTERS PACIFIC AIR FORCES (PACAF)**  
**JOINT BASE PEARL HARBOR-HICKAM, HAWAI'I 96853-5233**

**JUNE 2012**





# Executive Summary

## ES 1. Introduction

The U.S. Air Force (USAF) seeks 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 U.S. territories of Guam and Commonwealth of the Northern Mariana Islands (CNMI) (including Saipan, Rota, and Tinian) are located to the east of the Philippine Sea (see **Figure ES-1**) and make up the southern portion of the Mariana Islands. The Philippine Sea is a section of the western North Pacific Ocean, located east and north of the Philippines. Pacific Air Forces (PACAF) is a USAF major command (MAJCOM), and is headquartered at Joint Base Pearl Harbor-Hickam, O‘ahu, Hawai‘i. PACAF is designated by the USAF as the executive agent to develop this Environmental Impact Statement (EIS).

The lead agency for this EIS is the Department of the Air Force. The EIS was prepared in compliance with the National Environmental Policy Act (NEPA) of 1969 (42 United States Code [U.S.C.] Section [§] 4321 et seq.); the Council on Environmental Quality [CEQ] Regulations for Implementing the Procedural Provisions of NEPA (Title 40 Code of Federal Regulations [CFR] §§ 1500–1508). Cooperating agencies include the U.S. Navy, U.S. Marine Corps (USMC), and the Federal Aviation Administration (FAA). As cooperating agencies, PACAF coordinates with the U.S. Navy, USMC, and FAA throughout the EIS development process. Additionally, FAA must approve the airport layout plan (ALP) before the proposed action can be implemented.

The 2012 DOD Strategic Guidance places increased emphasis on the Asia-Pacific region (DOD 2012). Relationships with Asian allies and key partners are critical to the future stability and growth of this region to maintain regional access and the ability to operate freely. PACAF’s primary mission is to provide ready air and space power to promote U.S. interests in the Asia-Pacific region during peacetime, through crisis, and in war (PACAF undated b). PACAF maintains a forward presence to help ensure stability in the region (PACAF undated b). In order to successfully fulfill its mission in the region, PACAF must continually anticipate future needs and adapt to an ever-evolving geopolitical setting.

The area of focus for potential implementation of the Proposed Action is the Mariana Islands Archipelago (see **Figure ES-1**). For the purposes of this EIS, the Study Area includes existing airports in the Marianas region, existing seaports, and surrounding areas including easements or routes needed to transport petroleum products. The Mariana Islands Archipelago straddles the Pacific Ocean and the Philippine Sea and hosts the U.S. military’s westernmost training complex on U.S. soil, the Mariana Islands Range Complex (MIRC). The MIRC consists of special use airspace (SUA), the Farrallon de Medinilla (FDM) live-fire bombing range, and other land training areas. The MIRC includes land ranges and training areas and facilities on Guam, Rota, Tinian, and Saipan, and encompasses 85 square miles (mi<sup>2</sup>) (220 square kilometers [km<sup>2</sup>]) of land. SUA consisting of Warning Area 517 (W-517), restricted airspace over FDM (R-7201), and Air Traffic Control Assigned Airspace (ATCAA) encompass 63,000 square nautical miles (NM<sup>2</sup>) (216,000 km<sup>2</sup>) of airspace. Not within, but to the north and east of the Study Area, are portions of the Marianas Trench Marine National Monument, which was established in January 2009 by Presidential Proclamation under the authority of the Antiquities Act (16 U.S.C. 431).



Source: ESRI StreetMap USA 2007

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**Figure ES 1. Location of the Philippine Sea, Guam, and CNMI Region**

## 1 ES 2. Purpose of and Need for the Proposed Action

2 The purpose of the Proposed Action is to establish additional divert capabilities to support and conduct  
 3 current, emerging, and future exercises, while ensuring the capability to meet mission requirements in the  
 4 event that access to Andersen Air Force Base (AFB) or other western Pacific locations is limited or  
 5 denied. For example, the need for humanitarian assistance can arise suddenly and without warning, such  
 6 as disaster response to Japan during the 2011 earthquake and tsunami. If this were to occur during  
 7 scheduled training exercises at Andersen AFB, then either training or response efforts might be delayed or  
 8 impeded. Furthermore, natural or man-made disasters could impact Andersen AFB's missions, requiring  
 9 reliance on designed and designated divert airfield capabilities. Because of the proximity to  
 10 forward-deployed forces in the western Pacific, the Marianas provides the best economic alternative for  
 11 forward-deployed U.S. forces to train on U.S. lands and to develop the proposed additional divert  
 12 capabilities.

13 The Proposed Action would develop critical enhancements to an existing airport or airports and  
 14 associated infrastructure in the Marianas to increase operational and divert capabilities needed by the  
 15 USAF, especially in humanitarian relief and joint exercises. These enhancements are required if the  
 16 USAF is to maintain a state of military readiness commensurate with the national defense and  
 17 humanitarian relief missions.

18 The Proposed Action is driven by the USAF need to achieve its mission mandated by Title 10  
 19 U.S.C. § 8062 in the event of a disruption of operational capabilities at Andersen AFB or other western  
 20 Pacific locations. The need for the Proposed Action is derived from the following operational  
 21 requirements that are necessary to successfully support the PACAF mission:

- 22 • Ensure airfield accessibility if access to Andersen AFB or other western Pacific airfields is  
 23 limited or denied
- 24 • Provide for contingency operations to include humanitarian relief efforts
- 25 • Accommodate future increases in operational tempo and associated training
- 26 • Achieve and sustain readiness.

27 In summary, the Proposed Action is needed because there is not an existing divert or contingency airfield  
 28 on U.S. territory in the western Pacific that is designed and designated to provide strategic operational and  
 29 exercise capabilities for U.S. forces when needed and humanitarian airlift and disaster relief in times of  
 30 natural or man-made disasters. Implementation of the Proposed Action would support the PACAF  
 31 mission to provide ready air and space power to promote U.S. interests in the Asia-Pacific region during  
 32 peacetime, through crisis, and in war.

## 33 ES 3. Scope and Content of the EIS

### 34 ES 3.1 NEPA

35 This EIS provides an analysis of environmental effects associated with the proposed action. The  
 36 following summarizes the formal NEPA process followed by the USAF for this proposal and  
 37 opportunities for public involvement and input into the EIS process:

38 ***Pre-Notice of Intent Briefings.*** Prior to issuing the Notice of Intent (NOI) that formally started the EIS  
 39 process, PACAF and U.S. Pacific Fleet, representing the cooperating agency the U.S. Navy, provided  
 40 pre-NOI briefings to senior-level stakeholders in Guam and CNMI concerning this and other ongoing

1 military-sponsored environmental impact studies in the region. The briefing team conducted pre-NOI  
2 briefings and question and answer sessions to provide early information about the Proposed Action and  
3 alternatives to regional political leadership. The pre-NOI briefings included briefings in Guam to the  
4 Guam legislature and Governor's office and to the office of the Guam Congressional Delegate. Briefings  
5 in Saipan, CNMI, were presented to the Military Integration Management Committee (MIMC) (which  
6 consists of the Governor; members of Legislature; and Mayors of Tinian, Rota and Saipan) and to the  
7 office of the CNMI Congressional Delegate. One briefing was presented in Honolulu, Hawai'i, to the  
8 USFWS.

9 **Scoping.** Formal public scoping began with the issuance of an NOI in the *Federal Register* on September  
10 27, 2011. PACAF also issued notices in local media on September 28, October 3, October 10,  
11 October 11, October 12, October 14, October 17, and October 18, 2011, that announced schedules and  
12 locations for public scoping meetings. PACAF welcomed public comments on the Proposed Action and  
13 alternatives during the open public scoping period, which began with publication of the NOI. Comments  
14 were accepted at two public scoping meetings in Guam, one public scoping meeting in Saipan, one public  
15 scoping meeting in Tinian, and one public scoping meeting in Rota. Comments were also accepted via  
16 the project Web site (<http://www.PACAFDivertMarianasEIS.com>), postal service, and telephone  
17 recording system. Once the scoping period was completed, the scoping comments received were  
18 summarized in a scoping comment report, and comments were considered during the development of the  
19 Draft EIS.

20 **Post-NOI Briefings.** During the public scoping period, PACAF project team members provided  
21 post-NOI briefings to senior-level stakeholders in Guam and CNMI. The briefings were an updated and  
22 expanded version of the pre-NOI briefings, and were offered to a wider audience of stakeholders. The  
23 purpose of the briefings was to provide ongoing communication with local stakeholders, and to inform  
24 the stakeholders of up-to-date information regarding the Proposed Action and alternatives. The post-NOI  
25 briefings were conducted to coincide with public scoping meetings.

26 **Draft EIS Public Review.** This Draft EIS is the first public version of the EIS. This Draft EIS was  
27 distributed to selected Federal, state, territory, commonwealth, regional, and local agencies; private  
28 citizens; and organizations that requested copies. The Draft EIS was also made available at 10 different  
29 information repositories and on the project Web site (<http://www.PACAFDivertMarianasEIS.com>).  
30 USAF provided a 45-day public review period for the Draft EIS (40 CFR 1506.10). The public review  
31 period was initiated through the publication of a Notice of Availability (NOA) in the *Federal Register* on  
32 June 8, 2012, and was also advertised in local media. The USAF requested public input on the Draft EIS,  
33 including the Proposed Action, potential environmental impacts, and alternatives for the Proposed Action.  
34 Comments on the Draft EIS were accepted at the public hearings, on the project Web site  
35 (<http://www.PACAFDivertMarianasEIS.com>), via postal service, or via telephone recording system.  
36 Details about how to make comments were advertised in notices published in local media. Comments  
37 received on the Draft EIS during the 45-day public review period will be considered in preparation of the  
38 Final EIS and responded to appropriately.

39 **Post-NOA Briefings.** During the public review period for the Draft EIS, PACAF project team members  
40 will provide post-NOA briefings to senior-level stakeholders in Guam and CNMI. The briefings will be  
41 an updated version of the post-NOI briefings, and will be offered to an audience of stakeholders within  
42 the region of the Proposed Action and affiliated with the alternative locations. The purpose of the  
43 briefings is to provide ongoing communication with local stakeholders, and to inform the stakeholders of  
44 up-to-date information regarding the Proposed Action and alternatives. The post-NOA briefings will be  
45 conducted to coincide with public hearings.

1 **Final EIS and Record of Decision Public Review.** Prior to implementing any proposed action described  
2 in the EIS, a FEIS NOA will be issued in the *Federal Register*. USAF will issue A Record of Decision  
3 (ROD) no sooner than 30 days after the NOA for the FEIS has been released. Public outreach efforts will  
4 include issuance of an NOA of the Final EIS in the *Federal Register*, advertising the NOA in local  
5 newspapers, mailing a notice to individuals and groups that commented on the Draft EIS, and posting  
6 notification on the project Web site. The signed ROD will be posted on the project Web site. An NOA  
7 for the ROD will also be published in the *Federal Register* and local newspapers.

## 8 ES 3.2 Other Environmental Requirements Considered

9 The USAF must comply with a variety of other Federal environmental requirements. These include  
10 (among other applicable laws and regulations) the following:

- 11 • Marine Mammal Protection Act (MMPA)
- 12 • Endangered Species Act (ESA)
- 13 • Migratory Bird Treaty Act (MBTA)
- 14 • Coastal Zone Management Act (CZMA)
- 15 • Clean Air Act (CAA)
- 16 • Federal Water Pollution Control Act (Clean Water Act [CWA])
- 17 • National Historic Preservation Act (NHPA)
- 18 • Resource Conservation and Recovery Act (RCRA)
- 19 • Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority  
20 Populations and Low-Income Populations
- 21 • EO 13045, Environmental Health and Safety Risks to Children
- 22 • EO 13112, Invasive Species.

23 In addition, laws and regulations of the CNMI that are applicable to military actions are identified and  
24 addressed in this EIS.

## 25 ES 4. Description of the Proposed Action and Alternatives

### 26 ES 4.1 Proposed Action

27 The Proposed Action is to improve an existing airport or airports and associated infrastructure in support  
28 of expanding mission requirements in the western Pacific. Under this action, the USAF proposes to  
29 construct facilities and infrastructure at an existing airport or airports to support a combination of cargo,  
30 fighter, and tanker aircraft and associated support personnel for divert landings, periodic exercises, and  
31 humanitarian assistance and disaster relief. Unplanned divert landings and humanitarian assistance and  
32 disaster relief would occur at the airport or airports proposed for improvements as required. Saipan  
33 International Airport (FAA airport code GSN) in Saipan and Tinian International Airport (FAA airport  
34 code TNI) in Tinian are being considered as alternatives for the Proposed Action. A summary of the  
35 Proposed Action is provided below.

## 1 Summary of the Proposed Action

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

6 a. *Runway* - Potential extension of the runway up to 10,000 feet in order to meet optimal  
 7 KC-135 requirements as identified by PACAF Strategy, Policy and Requirements  
 8 Division (A5U). Options that would expand the runway to less than 10,000 feet, or not at  
 9 all, are also analyzed.

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

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

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

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

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

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

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

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

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

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

- 1           b. *Unscheduled/unplanned humanitarian airlift staging* - Humanitarian airlift staging,  
2 including non-combatant evacuation operation (NEOs), would also occur at the airport or  
3 airports proposed for improvements in the event of an emergency or disaster.
- 4           c. *Military exercises* - A limited number of scheduled joint, combined, and unit-level  
5 military training activities and exercises, as described and analyzed in the MIRC EIS, for  
6 which a ROD was issued on July 20, 2010, would occur (DON 2010 a). Both unit-level  
7 training and joint military exercises would each take place annually for a maximum  
8 combined total of 60 days per year at the airport or airports selected for improvements.  
9 This EIS addresses only the ground movements and immediate approaches and  
10 departures at the airport or airports selected for improvement (e.g., take-offs and  
11 landings) during unit-level training and exercises. Actual air warfare and air logistics  
12 training (i.e., above 10,000 feet) are addressed by the MIRC EIS, for which a ROD was  
13 issued on July 20, 2010 (DON 2010a). Copies of the MIRC EIS can be reviewed at  
14 <http://www.PACAFDivertMarianasEIS.com>.
- 15           d. *Jet fuel receiving, storage, and distribution* - A fuel delivery system, jet fuel storage, and  
16 means of fuel resupply would be required for the airport or airports selected for  
17 improvements. The ability to store fuel and transfer fuel from the receiving port to the  
18 airfield would also occur.
- 19           e. *Billeting* - Temporary billeting, including medical, transportation, and dining services,  
20 would be required for the personnel supporting aircraft operations.

## 21 ES 4.2 Evaluation and Selection of Alternatives

22 Considering alternatives helps to avoid unnecessary impacts and allows for an analysis of reasonable  
23 ways to achieve the stated purpose. To warrant detailed evaluation, an alternative must be reasonable. To  
24 be considered reasonable, an alternative must be suitable for decisionmaking, capable of implementation,  
25 and sufficiently satisfactory with respect to meeting the purpose of and need for the action. CEQ  
26 regulations define reasonable alternatives as those that are economically and technically feasible, and that  
27 show evidence of common sense. During the scoping process for this EIS, PACAF considered several  
28 existing FAA-regulated airports in the Marianas for developments and improvements to meet expanding  
29 mission requirements in the western Pacific. GSN, Saipan; TNI, Tinian; and Rota International Airport  
30 (GRO), Rota, in CNMI; and GUM, Guam, were identified during scoping as potential locations for the  
31 airport improvements because of their location in the western Pacific and proximity to the Philippine Sea.

32 Certain facility, operational, and mission requirements must be present or reasonably attainable to meet  
33 the purpose of and need for the Proposed Action. There are many potential divert airfield locations across  
34 the Pacific Rim, but they all fall too far outside USAF-established selection standards for consideration in  
35 this EIS. For this reason, the following locations were considered and dismissed from analysis during the  
36 development of the Proposed Action and will not be addressed in this EIS: Kwajalein Atoll, Midway,  
37 Hawai'i, Wake Island Airfield, and the Aleutian Islands.

38 The following selection standards were developed based on USAF operational requirements for proposed  
39 airfield improvements and flight operations. The selection standards were then applied to the possible site  
40 alternatives identified during scoping to select those alternatives considered reasonable for implementing  
41 the Proposed Action and carried forward for detailed analysis in this EIS. Following are the selection  
42 standards required for the airfield:

- 43           • Be located in a U.S. territory

- 1 • Not be located within the average diameter of the eye of a typhoon having damaging winds
- 2 affecting Andersen AFB (storm radius)
- 3 • Provide existing land and infrastructure with expansion capabilities
- 4 • Be located within the MIRC training area
- 5 • Provide existing fuel-receiving capabilities at the port of debarkation.

6 The evaluation of possible site alternatives identified only two site alternatives that meet, or have the  
 7 ability to meet, each selection standard. Accordingly, TNI and GSN are able to meet the purpose of and  
 8 need for the Proposed Action and will be considered in the analysis as alternatives. A potential site  
 9 alternative that does not meet the selection standard, shown with red in **Table ES-1**, cannot meet the  
 10 stated purpose and need, and will not be considered in detail in the EIS. **Table ES-1** provides a summary  
 11 of each site alternative evaluated against the selection standards.

12 **Table ES-1. Evaluation of Alternatives Against Selection Standards**

Selection Standard	GUM	GRO	TNI	GSN
U.S. Territory				
Storm radius				
Adequate land and existing infrastructure with expansion potential to satisfy Proposed Action requirements				
Provide a secondary airfield within MIRC (average approximate 30-minute flight time)				
Access to fuel vessels				

Key:

Green = meets selection standard

Yellow = limited capability to meet selection standard, or can be brought to standard

Red = does not meet selection standard

13 **ES 4.3 Alternative 1 – GSN**

14 Under Alternative 1, GSN would be improved to an airfield design that could accommodate 12 KC-135  
 15 aircraft to meet the purpose of and need for the Proposed Action. During the Construction Phase under  
 16 Alternative 1, the USAF would develop and construct facilities and infrastructure at GSN consistent with  
 17 the facilities and infrastructure described under the Proposed Action. During the Implementation Phase at  
 18 GSN, the improved facilities and infrastructure would support a combination of cargo, fighter, and tanker  
 19 aircraft and associated support personnel for periodic exercises, unplanned divert landings, and  
 20 humanitarian assistance and disaster relief in the western Pacific, as described under the Proposed Action.

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



1 potential numbers of aircraft represent the highest or “worst-case” scenario under the Proposed Action.  
2 The temporary support personnel population accompanying the aircraft under Alternative 1 would not  
3 exceed 700, regardless of what mix of aircraft is diverted to or exercised from GSN.

#### 4 ES 4.4 Alternative 2 – TNI

5 Under Alternative 2, TNI would be improved to an airfield design that could accommodate 12 KC-135  
6 aircraft to meet the purpose of and need for the Proposed Action. During the Construction Phase under  
7 Alternative 2, the USAF would develop and construct facilities and infrastructure at TNI consistent with  
8 the facilities and infrastructure described under the Proposed Action. During the Implementation Phase at  
9 TNI, the improved facilities and infrastructure would support a combination of cargo, fighter, and tanker  
10 aircraft and associated support personnel for periodic exercises, unplanned divert landings, and  
11 humanitarian assistance and disaster relief in the western Pacific, as described under the Proposed Action.

12 The airfield design would also accommodate other military logistics and tactical aircraft. The airfield  
13 design assumes that the KC-135 aircraft represents large logistics (or heavy lift cargo) aircraft and it is  
14 assumed that the space to accommodate a KC-135 is roughly twice as large as the space to accommodate  
15 most tactical or fighter aircraft. A size ratio of 1 to 2 is assumed for heavy lift cargo aircraft to fighter and  
16 tactical aircraft; therefore, 24 fighter or tactical aircraft could be diverted to or exercised from TNI  
17 simultaneously for any element of the Proposed Action, not to exceed the capabilities of the proposed  
18 design. Finally, it is also assumed that a mix of fighter, tactical, and large logistics aircraft (e.g., 10 large  
19 logistics aircraft and 4 fighters), aircraft could be diverted to or exercised from TNI simultaneously for  
20 any element of the Proposed Action as long as the mix does not exceed airfield design capabilities. The  
21 potential numbers of aircraft represent the highest or “worst-case” scenario under the Proposed Action.  
22 The temporary support personnel population accompanying the aircraft under Alternative 2 would not  
23 exceed 700, regardless of what mix of aircraft is diverted to or exercised from TNI.

#### 24 ES 4.5 No Action Alternative

25 CEQ regulations require consideration of the No Action Alternative. The No Action Alternative serves as  
26 a baseline against which the impacts of the Proposed Action and other potential action alternatives can be  
27 evaluated. Under the No Action Alternative, the USAF would not develop or construct facilities and  
28 infrastructure at an existing airport or airports to support a combination of cargo, fighter, and tanker  
29 aircraft and associated support personnel for periodic exercises, unplanned divert landings, and  
30 humanitarian assistance and disaster relief in the western Pacific.

31 ***Divert Landings.*** Currently in the Mariana Islands, emergency divert landings occur at GUM, Guam;  
32 GSN, Saipan; and GRO, Rota, in accordance with *36<sup>th</sup> Wing Instruction 13-204, Airfield Operations*  
33 *Instructions*. Under the No Action Alternative, emergency divert landings would continue to occur at  
34 these locations.

35 ***Joint Military Exercises.*** Currently, planned joint military exercises occur within the MIRC and Mariana  
36 Islands. Under the No Action Alternative, these planned exercises would continue to take place, using  
37 Andersen AFB and surrounding airspace and range area. However, under the No Action Alternative, an  
38 additional designed and designated divert airfield would not be developed.

39 ***Humanitarian Airlift Staging.*** Currently, humanitarian airlift staging can occur at Andersen AFB or  
40 GUM, Guam, to support natural disaster and humanitarian assistance response in the western Pacific.  
41 However, humanitarian efforts from these locations are limited due to lack of infrastructure such as  
42 parking areas, refueling capabilities, and billeting. Under the No Action Alternative, USAF humanitarian

1 response in the western Pacific would likely use existing fully functional airfields, such as Andersen AFB  
2 or GUM, Guam.

### 3 ES 5. Preferred Alternative

4 According to CEQ guidelines, an agency's preferred alternative is the alternative which the agency  
5 believes would fulfill its statutory mission and responsibilities, giving consideration to economic,  
6 environmental, technical, and other factors (CEQ 1981). CEQ regulations require the section of the EIS  
7 on alternatives to "identify the agency's preferred alternative or alternatives if one or more exists, in the  
8 draft statement, and identify such alternative in the final statement..." This means that if the agency has a  
9 preferred alternative at the Draft EIS stage, that alternative must be labeled or identified as such in the  
10 Draft EIS (CEQ 1981).

11 The USAF preferred alternative would be to implement the Proposed Action under Alternative 1 - GSN,  
12 as described in **Section ES 4.3**. Under the preferred alternative, there are two proposed runway extension  
13 scenarios that are considered in the analysis of impacts in this Draft EIS, and one scenario in which the  
14 runway would not be extended. No determination has been made regarding which of these three options  
15 would be the preferred option at this time. The analysis of impacts in the DEIS also includes the  
16 alternative of implementing the Proposed Action on the Island of Tinian as outlined in **Section ES 4.4**,  
17 and the No Action Alternative as described in **Section ES 4.5**. The USAF is identifying the preferred  
18 alternative at this time pursuant to 40 CFR § 1502.14(e); however, no final decision selecting a particular  
19 alternative for implementation has been made. Upon completion of the EIS, the USAF decisionmaker  
20 will use the EIS to support the decision about how best to satisfy the stated purpose and need within  
21 mission constraints. The final decision will be documented in the ROD.

### 22 ES 6. Summary of Environmental Impacts

23 **Chapter 3** of this EIS describes existing environmental conditions and **Chapter 4** describes  
24 environmental consequences for resources potentially affected by the Proposed Action and Alternatives  
25 described in **Chapter 2**. The affected environment and environmental consequences are described and  
26 analyzed according to categories of resources.

27 Environmental impacts which might result from the implementation of the USAF's Proposed Action  
28 alternatives and the No Action Alternative have been summarized in **Table ES-2**. A detailed analysis of  
29 effects is provided in **Chapter 4**.

### 30 ES 7. Cumulative Effects

31 CEQ defines cumulative impacts as "the impact on the environment which results from the incremental  
32 impact of the action when added to other past, present, and reasonably foreseeable future actions  
33 regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative  
34 impacts can result from individually minor but collectively significant actions taking place over a period  
35 of time." Informed decisionmaking is served by consideration of cumulative impacts resulting from  
36 projects that are proposed, under construction, recently completed, or anticipated to be implemented in  
37 the reasonably foreseeable future.

38 CEQ guidance in considering cumulative effects states that the first steps in assessing cumulative effects  
39 involve defining the scope of the other actions and their interrelationship with a proposed action. The  
40 scope must consider other projects that coincide with the location and timetable of a proposed action and

1 other actions. Cumulative effects analyses must also evaluate the nature of interactions among these  
2 actions (CEQ 1997).

3 A cumulative project list was developed to identify projects on Saipan, Tinian, or in the region in general,  
4 based on readily available information. The most substantial projects from the cumulative projects list  
5 include the Establishment and Operation of an Intelligence, Surveillance, Reconnaissance, and Strike  
6 (ISR/Strike) Capability Project on Andersen AFB; the Guam and MIRC improvements; the Guam and  
7 CNMI Military Relocation; the Mariana Islands Training and Testing (MITT); improvements at GSN,  
8 TNI, and Tinian harbor; and other local development projects on each island. A summary of cumulative  
9 effects is provided in **Table ES-3**.

## 10 **ES 8. Mitigation Measures**

11 The proposed project has the potential to result in adverse environmental impacts. The proposed project  
12 would include best management practices (BMPs), mitigation and conservation measures, and design  
13 concepts to avoid adverse impacts to the extent practicable and are described in **Section 4** as applicable.  
14 Unavoidable impacts would be minimized or compensated for to the extent practicable. In accordance  
15 with Council on Environmental Quality regulations, mitigation measures are considered for adverse  
16 environmental impacts.

**Table ES-2. Summary of Environmental Impacts**

<b>Resource</b>	<b>Alternative</b>	<b>Summary of Environmental Impacts</b>
<b>Noise (Sections 3.1 and 4.1)</b>	Alternative 1 – GSN	<b>Construction Phase.</b> Short-term, minor, direct, adverse impacts from construction noise and construction-related traffic from construction activities associated with Alternative 1.
		<b>Implementation Phase.</b> Periodic, direct, moderate to major, adverse impacts on the noise environment would be expected from the implementation of the High Scenario, which models 12 F-16 and 12 F-22 aircraft operating from GSN. This represents a significant impact on noise sensitive receptors. Impacts would be less in the Low Scenario (12 KC-135) and Medium Scenario (6 KC-135, 9 F-16, and 3 F-22) which model aircraft with lower noise levels. Short-term and periodic, direct, negligible, adverse impacts on noise would be expected from an increase in vehicle traffic from implementation of Alternative 1.
	Alternative 2 – TNI	<b>Construction Phase.</b> Short-term, minor, direct, adverse impacts from construction noise and construction-related traffic from construction activities associated with Alternative 2.
		<b>Implementation Phase.</b> Periodic, direct, moderate to major, adverse effects on the noise environment would be expected from the implementation of the High Scenario, which models 12 F-16 and 12 F-22 aircraft operating from TNI. Impacts would be less in the Low Scenario (12 KC-135) and Medium Scenario (6 KC-135, 9 F-16, and 3 F-22) which model aircraft with lower noise levels. Short-term and periodic, direct, negligible to minor, adverse impacts on noise would be expected from an increase in vehicle traffic from implementation of Alternative 2.
	No Action Alternative	No impacts on noise would be expected from implementation of the No Action Alternative.
	<b>Air Quality (Sections 3.2 and 4.2)</b>	Alternative 1 – GSN
<b>Implementation Phase.</b> Periodic, minor, adverse impacts would be expected from all activities associated with the implementation phase of Alternative 1.		
Alternative 2 – TNI		<b>Construction Phase.</b> Short-term, direct, minor, adverse impacts would be expected from construction emissions and land disturbance.
		<b>Implementation Phase.</b> Periodic, minor, adverse impacts would be expected from all activities associated with the implementation phase of Alternative 2.
No Action Alternative		No impacts on air quality would be expected from implementation of the No Action Alternative.

Resource	Alternative	Summary of Environmental Impacts
<b>Airspace Management and Airfield Operations (Sections 3.3 and 4.3)</b>	Alternative 1 – GSN	<b>Construction Phase.</b> Long- and short-term, direct and indirect, minor to moderate, adverse impacts would be expected on airport operations from construction activities associated with Alternative 1.
		<b>Implementation Phase.</b> Short-term and periodic, direct, moderate, adverse impacts would be expected on the immediate airspace and airfield operations from the implementation of Alternative 1. Long-term, direct, moderate, beneficial, impacts on the airspace and airfield would be expected from implementation of the jet fuel receiving, storage, and distribution system.
	Alternative 2 – TNI	<b>Construction Phase.</b> Long-term and short-term, direct and indirect, minor to moderate, adverse impacts would be expected on airport operations from construction at TNI under Alternative 2.
		<b>Implementation Phase.</b> Short-term and periodic, direct, moderate, adverse impacts would be expected on the immediate airspace and airfield operations from the implementation of Alternative 2. Long-term, direct, moderate, beneficial, impacts on the airspace and airfield would be expected from implementation of the jet fuel receiving, storage, and distribution system.
No Action Alternative	Short-term, direct, moderate, adverse, impacts on airspace and airport operations -would be expected from emergency divert landings under the No Action Alternative.	
<b>Geological Resources and Soils (Sections 3.4 and 4.4)</b>	Alternative 1 – GSN	<b>Construction Phase.</b> Short- and long-term, direct, minor to moderate, adverse impacts on soils would be expected as a result of runway extension Options A and B.
		<b>Implementation Phase.</b> Long-term, direct, minor to moderate, adverse impacts on geology and topography would be expected from the potential removal of surface rock and alteration in topography from grading activities.
	Alternative 2 – TNI	<b>Construction Phase.</b> Short- and long-term, direct, moderate, adverse impacts on soils would be expected from implementing Alternative 2. Impacts would be similar but greater than those described for Alternative 1.
		<b>Implementation Phase.</b> Long-term, minor to moderate, adverse impacts on geology and soil would be anticipated under the implementation phase for Alternative 2. Impacts would be similar to those described for Alternative 1.
No Action Alternative	No impacts on geology and soils would be expected from implementation of the No Action Alternative.	

Resource	Alternative	Summary of Environmental Impacts
<b>Water Resources (Sections 3.5 and 4.5)</b>	Alternative 1 – GSN	<p><b>Construction Phase.</b> Short-term, direct, minor, adverse impacts on water quality would be expected from construction activities associated with Alternative 1.</p> <p>No flood zones occur within the proposed GSN or Port of Saipan fuel site project sites; therefore, no impacts on flood zones would be expected under Alternative 1.</p>
		<p><b>Implementation Phase.</b> Long-term, direct, minor to major, adverse impacts on groundwater quality as a result of sheet runoff or petroleum spills would be expected from implementing Alternative 1.</p>
	Alternative 2 – TNI	<p><b>Construction Phase.</b> Long-term, direct, moderate, adverse impacts on local hydrologic conditions from the increases in impervious surfaces under Alternative 2 would be similar to, but greater than, Alternative 1.</p>
	No Action Alternative	<p>No impacts on hydrologic conditions would be expected from implementation of the No Action Alternative.</p>
<b>Terrestrial Biological Resources (Sections 3.6 and 4.6)</b>	Alternative 1 – GSN	<p><b>Construction Phase.</b> Short-term, minor, direct, adverse impacts on vegetation and wildlife and short- to long-term, direct and indirect, adverse impacts on threatened and endangered species would be expected from construction activities associated with Alternative 1. Based on the site investigations, there are no wetlands in the Project Area; therefore, no impacts on wetlands are expected from construction activities.</p>
		<p><b>Implementation Phase.</b> Short-term and periodic, direct, minor, adverse impacts on vegetation and short- and long-term, direct, minor, adverse impacts on wildlife would be expected from noise generated by implementation of Alternative 1.</p> <p>Long-term, minor, indirect, adverse impacts on threatened and endangered species would be expected from the noise generated during the implementation of Alternative 1.</p> <p>Based on the site investigations there are no wetlands in the Project Area; therefore, no impacts on wetlands are expected from construction activities.</p>

Resource	Alternative	Summary of Environmental Impacts
<b>Terrestrial Biological Resources (Section 3.6 and 4.6) (continued)</b>	Alternative 2 – TNI	<p><b>Construction Phase.</b> Short-term, minor, direct, adverse impacts on vegetation and wildlife and would be expected from construction activities associated with Alternative 2.</p> <p>No impacts on threatened and endangered species are expected from construction activities associated with Alternative 2.</p> <p>Based on the site investigations there are no wetlands in the Project Area; therefore, no impacts on wetlands are expected from construction activities.</p>
		<p><b>Implementation Phase.</b> Short-term and periodic, direct, minor, adverse impacts on vegetation and short- and long-term direct minor adverse impacts on wildlife would be expected from noise generated by implementation of Alternative 2.</p> <p>Long-term, indirect, negligible, adverse impacts on threatened and endangered species would be expected from the implementation of Alternative 2.</p> <p>Based on the site investigations there are no wetlands in the Project Area; therefore, no impacts on wetlands are expected from construction activities.</p>
	No Action Alternative	No impacts on terrestrial biological resources would be expected from implementation of the No Action Alternative.
<b>Marine Biological Resources (Sections 3.7 and 4.7)</b>	Alternative 1 – GSN	<p><b>Construction Phase.</b> No impacts on marine biological resources would occur as a result of the construction phase of Alternative 1.</p>
		<p><b>Implementation Phase.</b> Short-term and periodic, direct, minor, adverse impacts on sea turtles and marine mammals could occur from the implementation of Alternative 1. However, Alternative 1 is not likely to adversely affect green sea turtles and marine mammals. Any impacts would be discountable because the impacts would not be sufficient to harm or harass sea turtles.</p>
	Alternative 2 – TNI	<p><b>Construction Phase.</b> No impacts on marine biological resources would occur as a result of the construction phase of Alternative 2.</p> <p><b>Implementation Phase.</b> Short-term and periodic, direct, minor, adverse impacts on sea turtles and marine mammals could occur from the implementation of Alternative 2. However, Alternative 2 is not likely to adversely affect green sea turtles and marine mammals. Any impacts would be discountable because the impacts would not be sufficient to harm or harass sea turtles.</p>
No Action Alternative	No impacts on marine biological resources would be expected from implementation of the No Action Alternative.	

Resource	Alternative	Summary of Environmental Impacts
<b>Cultural Resources (Section 3.8 and 4.8)</b>	Alternative 1 – GSN	<p><b>Construction Phase.</b> Major, direct and indirect, adverse impacts on the contributing historic fabric of the Aslito/Isley Field National Historic Landmark and NRHP-listed District could occur during the construction phase under Alternative 1.</p> <p>Possible major, direct and indirect, adverse impacts on cultural resources could occur during the construction phase under Alternative 1.</p>
		<p><b>Implementation Phase.</b> Direct and indirect adverse impacts on the contributing historic fabric of the Aslito/Isley Field National Historic Landmark and NRHP-listed District could occur during the implementation phase under Alternative 1.</p> <p>Minor to major, direct and indirect, adverse impacts on cultural resources during the implementation phase could occur under Alternative 1.</p>
	Alternative 2 – TNI	<p><b>Construction Phase.</b> Possible moderate to major, direct and indirect, adverse impacts on cultural resources could occur during the construction phase under Alternative 2.</p>
		<p><b>Implementation Phase.</b> Minor to major, direct and indirect, adverse impacts on cultural resources during the implementation phase could occur under Alternative 2.</p>
	No Action Alternative	No impacts on cultural resources would be expected from implementation of the No Action Alternative.
	<b>Recreation (Sections 3.9 and 4.9)</b>	Alternative 1 – GSN
<p><b>Implementation Phase.</b> Long-term, direct, minor to moderate, and adverse impacts on recreational resources would be expected from the implementation of Alternative 1.</p>		
Alternative 2 – TNI		<p><b>Construction Phase.</b> Short-term, indirect, negligible to minor, adverse impacts on recreational resources would be expected from construction activities associated with Alternative 2. Impacts from Alternative 2 would be similar to, but greater than, Alternative 1.</p>
		<p><b>Implementation Phase.</b> Long-term, direct, negligible to minor, adverse impacts on recreational resources would be expected from the implementation of Alternative 2. Impacts from Alternative 2 are expected to be similar to, but less extensive, than those described in Alternative 1.</p>
No Action Alternative		No impacts on recreational resources would be expected from implementation of the No Action Alternative.



Resource	Alternative	Summary of Environmental Impacts
<b>Land Use (Sections 3.10 and 4.10)</b>	Alternative 1 – GSN	<b>Construction Phase.</b> No impacts on land use or land ownership would be expected from construction activities associated with Alternative 1. Potential negligible adverse impacts on Areas of Particular Concern (APC) would be expected from construction activities associated with Alternative 1.
		<b>Implementation Phase.</b> No impacts on land use or land ownership would be expected from the implementation of Alternative 1.
	Alternative 2 – TNI	<b>Construction Phase.</b> No impacts on land use or land ownership would be expected from construction activities associated with Alternative 2.
		<b>Implementation Phase.</b> No impacts on land use or land ownership would be expected from the implementation of Alternative 2.
	No Action Alternative	No impacts on land use would be expected from implementation of the No Action Alternative.
	<b>Transportation (Sections 3.11 and 4.11)</b>	Alternative 1 – GSN
<b>Implementation Phase.</b> Long-term, direct, minor, adverse impacts would be expected on the local transportation network in Saipan from the implementation of Alternative 1.		
Alternative 2 – TNI		<b>Construction Phase.</b> Short-term, direct, minor, adverse impacts would be expected on the local transportation network in Tinian from construction activities associated with Alternative 2.
		<b>Implementation Phase.</b> Long-term, direct, minor, adverse impacts would be expected on the local transportation network in Tinian from the implementation of Alternative 2.
No Action Alternative		No impacts on ground transportation would be expected from implementation of the No Action Alternative.

Resource	Alternative	Summary of Environmental Impacts
<b>Hazardous Materials and Wastes (Sections 3.12 and 4.12)</b>	Alternative 1 – GSN	<p><b>Construction Phase.</b> Short-term, direct, minor, adverse impacts associated with hazardous materials and hazardous wastes, petroleum products, existing contamination areas, asbestos-containing materials (ACMs), and lead-based paint (LBP) would be expected from construction activities associated with Alternative 1. Short-term, direct, negligible, adverse impacts associated with PCBs would be expected from construction activities associated with Alternative 1. No impacts are expected on pesticides or radon.</p>
		<p><b>Implementation Phase.</b> Long-term, direct, minor, adverse impacts associated with hazardous materials and hazardous wastes would be expected from the implementation of Alternative 1.</p> <p>Long-term, direct, minor to moderate, adverse impacts from petroleum products would be expected due to the implementation of Alternative 1.</p> <p>Long-term, direct, negligible to minor, adverse impacts associated with radon could be encountered during the implementation of Alternative 1.</p> <p>No impacts on existing contamination areas, ACMs, LBP, polychlorinated biphenyls (PCBs), or pesticides would be expected.</p>
	Alternative 2 – TNI	<p><b>Construction Phase.</b> Short-term, direct, minor, adverse impacts associated with hazardous materials and hazardous wastes, petroleum products, existing contamination areas, ACMs, and LBP would be expected from construction activities associated with Alternative 2. Short-term, direct, negligible, adverse impacts associated with PCBs would be expected from construction activities associated with Alternative 2. No impacts are expected on pesticides or radon.</p>
		<p><b>Implementation Phase.</b> Long-term, direct, minor, adverse impacts associated with hazardous materials and hazardous wastes would be expected from the implementation of Alternative 2.</p> <p>Long-term, direct, minor to moderate, adverse impacts from petroleum products would be expected due to the implementation of Alternative 2.</p> <p>Long-term, direct, negligible to minor, adverse impacts associated with radon could be encountered during the implementation of Alternative 2.</p> <p>No impacts on existing contamination areas, ACMs, LBP, PCBs, or pesticides would be expected.</p>
	No Action Alternative	<p>No impacts associated with hazardous materials and wastes would be expected from implementation of the No Action Alternative.</p>

Resource	Alternative	Summary of Environmental Impacts
<b>Infrastructure and Utilities (Sections 3.13 and 4.13)</b>	Alternative 1 – GSN	<p><b>Construction Phase.</b> Short-term, direct, negligible to moderate, adverse impacts on the airfield, the Saipan Port, liquid fuel supply, water supply, existing electrical system, communications systems, storm water management system, sewer system, and solid waste management would be expected from construction activities associated with Alternative 1. Long-term, direct, minor, beneficial impacts would also be expected from the proposed upgrades and additions to the existing communications.</p> <p>No impacts would be expected on heating or cooling systems or natural gas supply.</p> <p>Long-term, direct, moderate to major, beneficial impacts on the airfield, water supply, and capacity to receive, store and distribute aviation fuel would be expected from construction activities associated with Alternative 1.</p>
		<p><b>Implementation Phase.</b> Long-term, direct and indirect, negligible to minor, adverse impacts on the airfield, electrical supply, liquid fuel supply, water supply, sanitary sewer and wastewater treatment, storm water, and solid waste would be expected from implementation of the Proposed Action under Alternative 1.</p> <p>No impacts would be expected to port infrastructure, central heating or cooling, or natural gas supply.</p> <p>Long-term, direct and indirect, moderate, beneficial impacts on communication systems would be expected from implementation of the Proposed Action under Alternative 1.</p>
	Alternative 2 – TNI	<p><b>Construction Phase.</b> Short-term, direct, negligible to moderate, adverse impacts on the airfield, the Tinian Port, liquid fuel supply, water supply, existing electrical system, communications systems, storm water management system, and solid waste management would be expected from construction activities associated with Alternative 2.</p> <p>No impacts would be expected on heating or cooling systems, sewer systems, or natural gas supply.</p> <p>Long-term, direct, moderate to major, beneficial impacts on the airfield, water supply, and capacity to receive, store and distribute aviation fuel would be expected from construction activities associated with Alternative 2.</p> <p><b>Implementation Phase.</b> Long-term, direct and indirect, negligible to minor, adverse impacts on the airfield, electrical supply, liquid fuel supply, water supply, storm water, and solid waste would be expected from implementation of the Proposed Action under Alternative 2.</p> <p>No impacts would be expected to port infrastructure, central heating or cooling, natural gas supply, sanitary sewer and wastewater treatment.</p> <p>Long-term, direct and indirect, moderate, beneficial impacts on communication systems.</p>
	No Action Alternative	No impacts on infrastructure and utilities would be expected from implementation of the No Action Alternative.

Resource	Alternative	Summary of Environmental Impacts
<b>Socioeconomics and Environmental Justice (Sections 3.14 and 4.14)</b>	Alternative 1 – GSN	<p><b>Construction Phase.</b> Short-term, direct and indirect, minor to moderate, adverse impacts on the population of Saipan, housing and public services would be expected from construction activities associated with Alternative 1.</p> <p>Short-term, direct and indirect, minor, adverse and short-term, direct and indirect, negligible to moderate, beneficial impacts on the Saipan economy would be expected from construction of Alternative 1.</p> <p>Short-term, direct, negligible to minor, adverse sociocultural issues would be expected under Alternative 1 from the potential of removing land from local use during construction activities.</p> <p><b>Implementation Phase.</b> Long-term, negligible to moderate, adverse impacts on Saipan’s population, housing, public services and sociocultural issues would be expected as a result of implementation of Alternative 1. These impacts would be continuing from the construction phase if land were permanently removed from use by local CNMI residents.</p> <p>Long-term, negligible to minor, direct, adverse and long-term, negligible to minor, direct and indirect, beneficial impacts on the CNMI and Saipan economy would be expected from implementation of Alternative 1.</p> <p>There is potential for impacts on minority or low-income populations under Alternative 1 to be disproportionately high and adverse based on increased noise levels.</p>
	Alternative 2 – TNI	<p><b>Construction Phase.</b> Short-term, minor to major, adverse impacts on the population of Tinian, housing, public services and sociocultural issues would be expected from construction of Alternative 2.</p> <p>Short-term, minor to moderate, direct and indirect, adverse and short-term, moderate to major, direct and indirect, beneficial impacts on economies of Tinian and the CNMI would be expected from construction activities associated with Alternative 2.</p> <p><b>Implementation Phase.</b> Long-term, negligible to moderate, adverse impacts on Tinian’s population, public services, sociocultural issues, and environmental justice would be expected from implementation of Alternative 2.</p> <p>Long-term, negligible to moderate, direct, adverse and long-term, negligible to minor, direct and indirect, beneficial impacts on the CNMI and Tinian economy would be expected from implementation of Alternative 2.</p> <p>No impacts on housing would be expected from the implementation of Alternative 2.</p> <p>Impacts on minority or low-income populations under Alternative 2 are not expected to be disproportionately high and adverse based on increased noise levels.</p>
	No Action Alternative	No impacts on socioeconomics and environmental justice would be expected from implementation of the No Action Alternative.

Resource	Alternative	Summary of Environmental Impacts
<b>Human Health and Safety (Sections 3.15 and 4.15)</b>	Alternative 1 – GSN	<p><b>Construction Phase.</b> Short-term, direct, minor, adverse impacts on the health and safety of construction and airfield personnel would be expected from construction activities associated with Alternative 1. No impacts on the health and safety of military personnel or the public would be expected.</p>
		<p><b>Implementation Phase.</b> Long-term, direct, negligible, adverse impacts on the health and safety of construction personnel and the public would be expected during implementation of Alternative 1. Long-term, minor, beneficial effects on the health and safety of military and airfield personnel would be expected implementation of Alternative 1.</p>
	Alternative 2 – TNI	<p><b>Construction Phase.</b> Short-term, direct, minor, adverse impacts on the health and safety of construction and airfield personnel would be expected from construction activities associated with Alternative 2. No impacts on the health and safety of military personnel or the public would be expected.</p>
		<p><b>Implementation Phase.</b> Long-term, direct, negligible to minor, adverse impacts on the health and safety of construction personnel and the public would be expected during implementation of Alternative 2. Long-term, minor, beneficial effects on the health and safety of military and airfield personnel would be expected from implementation of Alternative 2.</p>
	No Action Alternative	<p>Adverse impacts on human health and safety would continue to be expected as a result of the potential for planes to overrun the runway and the inability to handle munitions safely during emergency landings.</p>

1

**Table ES-3. Summary of Cumulative Impacts**

<b>Resource</b>	<b>Alternative</b>	<b>Summary of Cumulative Impacts</b>
<b>Noise</b>	Alternative 1 – GSN	<ul style="list-style-type: none"> <li>• Short-term, minor to moderate, adverse, cumulative impacts could occur from temporary increases in construction and vehicle traffic noise under Alternative 1 and numerous other construction projects on Saipan.</li> </ul>
	Alternative 2 – TNI	<ul style="list-style-type: none"> <li>• Short-term, minor to moderate, adverse, cumulative impacts could occur from temporary increases in construction and vehicle traffic noise under Alternative 2 and numerous other construction projects on Tinian.</li> <li>• Periodic, long-term, moderate, adverse cumulative impacts could occur from the increase in aircraft operations under Alternative 2 combined with the increase in other military operations on Tinian.</li> </ul>
<b>Air Quality</b>	Alternative 1 – GSN	<ul style="list-style-type: none"> <li>• Short-term, minor, adverse, cumulative impacts on air quality could occur due to the generation of criteria air pollutant emissions from Alternative 1 and other construction activities in the region.</li> <li>• Periodic, minor, adverse, cumulative impacts on air quality would be expected due to the introduction of new sources of air emissions in Saipan anticipated from Alternative 1 and other reasonably foreseeable projects.</li> </ul>
	Alternative 2 – TNI	<ul style="list-style-type: none"> <li>• Short-term, minor, adverse, cumulative impacts on air quality could occur due to the generation of criteria air pollutant emissions from Alternative 2 and other construction activities in the region.</li> <li>• Periodic, minor, adverse, cumulative impacts on air quality would be expected due to the introduction of new sources of air emissions in Tinian anticipated from Alternative 2 and other reasonably foreseeable projects.</li> </ul>
<b>Airspace Management and Airport Operations</b>	Alternative 1 – GSN	<ul style="list-style-type: none"> <li>• Long-term, direct, moderate, beneficial impacts on the airspace and airfield would be expected from implementation of the jet fuel receiving, storage, and distribution system.</li> <li>• Short- and long-term, direct, minor to moderate, adverse cumulative impacts on airspace and airfield operations would be expected from construction and increased military air traffic in the region.</li> </ul>
	Alternative 2 – TNI	<ul style="list-style-type: none"> <li>• Long-term, direct, moderate, beneficial impacts on the airspace and airfield would be expected from implementation of the jet fuel receiving, storage, and distribution system.</li> <li>• Short-term direct, minor to moderate, adverse cumulative impacts on airspace and airfield operations would be expected from construction and increased military air traffic in the region.</li> </ul>

Resource	Alternative	Summary of Cumulative Impacts
<b>Geological Resources and Soils</b>	Alternative 1 – GSN	<ul style="list-style-type: none"> <li>• Short-term, minor to moderate, adverse, cumulative impacts on soils would be expected from vegetation removal, compaction of surrounding soils, and increased soil erosion and sedimentation caused by Alternative 1 and other construction projects on Saipan.</li> <li>• Long-term, minor to moderate, adverse, cumulative impacts would be expected from development under Alternative 1 and other construction projects on Saipan due to an irreversible and irretrievable conversion of natural soils to urban land.</li> </ul>
	Alternative 2 – TNI	<ul style="list-style-type: none"> <li>• Short-term, minor to moderate, adverse cumulative impacts on soils would be expected from vegetation removal, compaction of surrounding soils, and increased soil erosion and sedimentation caused by Alternative 2 and other construction projects on Tinian.</li> <li>• Long-term, minor to moderate, adverse, cumulative impacts would be expected from development under Alternative 2 and other construction projects on Tinian due to grading, compaction, and an irreversible and irretrievable conversion of natural soils to urban land.</li> </ul>
<b>Water Resources</b>	Alternative 1 – GSN	<ul style="list-style-type: none"> <li>• Short-term, minor, adverse, cumulative impacts on the water resources of Saipan could occur from earth-disturbing construction activities from Alternative 1 and other construction activities.</li> <li>• Long-term, minor to moderate, cumulative, adverse impacts on groundwater could occur from the overall increases in impervious surfaces on Saipan from Alternative 1 and other development projects.</li> </ul>
	Alternative 2 – TNI	<ul style="list-style-type: none"> <li>• Short-term, minor, adverse, cumulative impacts on water resources at Tinian could occur from earth-disturbing construction activities from Alternative 2 and other construction activities.</li> <li>• Long-term, moderate, cumulative, adverse impacts on groundwater could occur from the overall increases in impervious surfaces on Tinian from Alternative 2 and other development projects.</li> </ul>

Resource	Alternative	Summary of Cumulative Impacts
<b>Terrestrial Biological Resources</b>	Alternative 1 – GSN	<ul style="list-style-type: none"> <li>• No cumulative impacts on vegetation would be expected.</li> <li>• Short-term, minor, adverse, cumulative impacts on wildlife and threatened and endangered species could occur due to increases in ambient noise levels from Alternative 1 combined with other construction activities in the vicinity.</li> <li>• Long-term, minor, adverse, cumulative impacts on wildlife and threatened and endangered species could occur from permanent displacement and loss of habitat.</li> </ul>
	Alternative 2 – TNI	<ul style="list-style-type: none"> <li>• No cumulative impacts on vegetation or threatened and endangered species would be expected.</li> <li>• Short-term, minor, adverse, cumulative impacts on wildlife species could occur due to increases in ambient noise levels from Alternative 1 combined with other construction activities in the vicinity.</li> <li>• Long-term, minor, adverse, cumulative impacts on wildlife could occur from permanent displacement and loss of habitat.</li> </ul>
<b>Marine Biological Resources</b>	Alternative 1 – GSN	<ul style="list-style-type: none"> <li>• Periodic, short-term, negligible, adverse, cumulative impacts on sea turtles and marine mammals could occur due to increases in noise from take-offs and landings under Alternative 1 combined with increases in noise from other military training activities in the region (e.g., MIRC, operation of ISR/Strike Capability, and MITT activities).</li> </ul>
	Alternative 2 – TNI	<ul style="list-style-type: none"> <li>• Periodic, short-term, negligible, adverse, cumulative impacts on sea turtles and marine mammals could occur due to increases in noise from take-offs and landings under Alternative 2 combined with increases in noise from other military training activities in the region (e.g., MIRC, operation of ISR/Strike Capability, and MITT activities) and Tinian seaport redevelopment and dredging.</li> </ul>
<b>Cultural Resources</b>	Alternative 1 – GSN	<ul style="list-style-type: none"> <li>• Cumulative impacts on prehistoric archaeological sites would not be expected. Long-term, indirect, adverse cumulative impacts on historical resources could occur from vibration-related deterioration due to heavy aircraft traffic, increased vehicle traffic, and personnel presence. Long-term, adverse, cumulative impacts on the historic district could occur due to loss of overall cohesiveness from Alternative 1 combined with other development in the region.</li> </ul>
	Alternative 2 – TNI	<ul style="list-style-type: none"> <li>• Long-term, direct and indirect, adverse, cumulative impacts on historic and archeological resources could occur due vibrations from increased heavy vehicle traffic, depending on the proximity of the supply truck routes to historic structures. If the vibrations are minor, or if the historic structures are sufficient distance from the truck routes to result in no adverse impacts, there would be no cumulative impacts on historic structures in San Jose under Alternative 2.</li> <li>• Long-term, minor, adverse, cumulative impacts on unrecorded archaeological sites and historic structures could occur due to military use of TNI.</li> </ul>



Resource	Alternative	Summary of Cumulative Impacts
<b>Recreation</b>	Alternative 1 – GSN	<ul style="list-style-type: none"> <li>• Short-term, minor, adverse, cumulative impacts could occur from construction activities under Alternative 1 combined with other projects due to increased travel times to recreational resources.</li> <li>• Long-term, minor to moderate, beneficial, cumulative impacts on recreational resources would be expected from Alternative 1 and the future GSN fuel facility project due to an increased fuel capacity at GSN, allowing an increase in international air service and tourism.</li> </ul>
	Alternative 2 – TNI	<ul style="list-style-type: none"> <li>• Short-term, minor, adverse, cumulative impacts could occur from construction activities under Alternative 2 combined with other projects due to increased travel times to recreational resources.</li> <li>• Long-term, minor to moderate, beneficial, cumulative impacts on recreational resources would be expected from Alternative 2 and the future TNI airport fuel farm due to an increased fuel capacity at TNI, allowing an increase in international air service and tourism.</li> <li>• Periodic, long-term, minor to moderate, adverse, cumulative impacts on recreational resources would be expected from Alternative 2 combined with other military exercises on Tinian due to access restrictions and increases in noise associated with those activities.</li> </ul>
<b>Land Use</b>	Alternative 1 – GSN	<ul style="list-style-type: none"> <li>• No cumulative impacts on land use would be expected. Alternative 1 would be consistent with the Saipan Zoning Law of 2008.</li> </ul>
	Alternative 2 – TNI	<ul style="list-style-type: none"> <li>• No cumulative impacts on land use would be expected. Alternative 2 would be consistent with the CNMI Department of Public Lands (DPL) land use designations.</li> </ul>
<b>Ground Transportation</b>	Alternative 1 – GSN	<ul style="list-style-type: none"> <li>• Short-term, minor to moderate, adverse, cumulative impacts on ground transportation in Saipan would be expected due to increased traffic congestion from construction-related traffic under Alternative 1 and other construction activities, in addition to other road maintenance and construction projects in the region.</li> </ul>
	Alternative 2 – TNI	<ul style="list-style-type: none"> <li>• Short-term, minor to moderate, adverse, cumulative impacts on ground transportation in Tinian would be expected due to increased traffic congestion from construction-related traffic under Alternative 2 and other construction activities, in addition to other road maintenance and construction projects in the region.</li> </ul>
<b>Hazardous Materials and Wastes</b>	Alternative 1 – GSN	<ul style="list-style-type: none"> <li>• Short- and long-term, minor, adverse, cumulative impacts associated with hazardous materials, hazardous wastes, and petroleum products would be expected from Alternative 1 combined with other development projects due to increased quantities of hazardous materials and petroleum products to be delivered, stored, and used on Saipan on a short-term basis during construction and on a long-term basis during facility operations.</li> </ul>
	Alternative 2 – TNI	<ul style="list-style-type: none"> <li>• Short- and long-term, minor, adverse, cumulative impacts associated with hazardous materials, hazardous wastes, and petroleum products would be expected from Alternative 2 combined with other development projects due to increased quantities of hazardous materials and petroleum products to be delivered, stored, and used on Tinian on a short-term basis during construction and on a long-term basis during facility operations.</li> </ul>

Resource	Alternative	Summary of Cumulative Impacts
<b>Infrastructure and Utilities</b>	Alternative 1 – GSN	<ul style="list-style-type: none"> <li>• Periodic, short-term, minor, adverse, cumulative impacts on utilities could occur due to utility interconnections during construction activities under Alternative 1 and other development projects.</li> <li>• Long-term, minor to moderate, beneficial, cumulative impacts on several infrastructure resources would be expected due to improvements to infrastructure systems under Alternative 1 and other proposed utility upgrade projects.</li> <li>• Short- and long-term, minor, adverse cumulative impacts on the solid waste system would be expected from waste generated by Alternative 1 combined with other ongoing or future development projects.</li> </ul>
	Alternative 2 – TNI	<ul style="list-style-type: none"> <li>• Implementation of Alternative 2 and other ongoing and reasonably foreseeable projects would contribute to long-term, moderate, beneficial, cumulative impacts on TNI and seaport, airport communication system, and aviation fuel supply and refueling capability.</li> <li>• Implementation of Alternative 2 and other ongoing and reasonably foreseeable projects (e.g., new casinos) would result in short- and long-term, minor, adverse cumulative impacts on the electrical, water supply, and storm water management systems.</li> <li>• Implementation of Alternative 2 and ongoing and reasonably foreseeable projects would result in short- and long-term, moderate, adverse, cumulative impacts on the solid waste system due to an increase in wastes from construction activities.</li> </ul>

Resource	Alternative	Summary of Cumulative Impacts
<b>Socioeconomics and Environmental Justice</b>	Alternative 1 – GSN	<ul style="list-style-type: none"> <li>• Short-term, adverse, cumulative impacts on population characteristics and housing supply could occur due to a temporary increase in worker population on Saipan from Alternative 1 and other development projects.</li> <li>• Short-term and long-term, beneficial, cumulative impacts on the economy of Saipan could occur due to increases in employment and spending on goods and services from Alternative 1 and other development projects.</li> <li>• Short-term, adverse, cumulative impacts on public services could occur due to short- and long-term population increases associated with Alternative 1 and other projects.</li> <li>• Negligible to minor, adverse, cumulative impacts on sociocultural issues could occur due to temporary and periodic population increases that could stress the local communities.</li> <li>• There is potential for cumulative impacts on minority or low-income populations on Saipan to be disproportionately high and adverse due to increased noise levels.</li> </ul>
	Alternative 2 – TNI	<ul style="list-style-type: none"> <li>• Short-term, adverse, cumulative impacts on population characteristics and housing supply could occur due to a temporary increase in worker population on Tinian from Alternative 2 and other development projects.</li> <li>• Short-term and long-term, beneficial, cumulative impacts on the economy of Tinian could occur due to increases in employment and spending on goods and services from Alternative 2 and other development projects.</li> <li>• Short-term and long-term, adverse, cumulative impacts on the economy could occur due to potential airport disruptions and displacement of local ranchers under Alternative 2 combined with displacement of persons and land restrictions caused by other military training activities.</li> <li>• Short-term, adverse, cumulative impacts on public services could occur due to short- and long-term population increases associated with Alternative 2 and other projects.</li> <li>• Negligible to minor, adverse, cumulative impacts on sociocultural issues could occur due to temporary and periodic population increases that could stress the local communities.</li> <li>• There is potential for cumulative impacts on minority or low-income populations on Tinian to be disproportionately high and adverse due to increased noise levels.</li> </ul>

Resource	Alternative	Summary of Cumulative Impacts
<p><b>Human Health and Safety</b></p>	<p>Alternative 1 – GSN</p>	<ul style="list-style-type: none"> <li>• Short-term, minor, adverse, cumulative impacts on health and safety could occur during construction activities under Alternative 1 and other development projects due to increased contractor exposure to hazardous work environments and hazardous materials, and increased local construction traffic accessing sites.</li> <li>• Long-term, negligible, adverse, cumulative impacts on contractor health and safety, public health and safety, and explosive safety could occur from Alternative 1 and other development and military training activities.</li> <li>• Long-term, adverse and beneficial, cumulative impacts on health and safety would be expected from the operational activities associated with Alternative 1.</li> <li>• Long-term, minor, beneficial, cumulative impacts on military health and safety and airfield safety would be expected from improvements at the airfield, including communications enhancements.</li> </ul>
	<p>Alternative 2 – TNI</p>	<ul style="list-style-type: none"> <li>• Short-term, minor, adverse, cumulative impacts on health and safety could occur during construction activities under Alternative 2 and other development projects due to increased contractor exposure to hazardous work environments and hazardous materials, and increased local construction traffic accessing sites.</li> <li>• Long-term, negligible, adverse, cumulative impacts on contractor health and safety and explosive safety could occur from Alternative 1 and other development and military training activities.</li> <li>• Long-term, minor, beneficial, cumulative impacts on military health and safety and airfield safety would be expected from improvements at the airfield, including communications enhancements.</li> <li>• Long-term, minor, adverse, cumulative impacts on public health and safety and airfield safety would primarily be associated with the increased air traffic.</li> </ul>

**DRAFT**  
**ENVIRONMENTAL IMPACT STATEMENT**  
**DIVERT ACTIVITIES AND EXERCISES**  
**GUAM AND COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS (CNMI)**  
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# 1. Purpose of and Need for the Proposed Action

This Environmental Impact Statement (EIS) has been prepared to describe the U.S. Air Force's (USAF) proposal to improve an existing airport or airports, in support of expanding mission requirements. This section presents an introduction to important issues relevant to the project, the purpose of and need for the Proposed Action, the project location, a summary of key environmental compliance requirements and public and stakeholder outreach, and an overview of the organization of the EIS.

## 1.1 Introduction

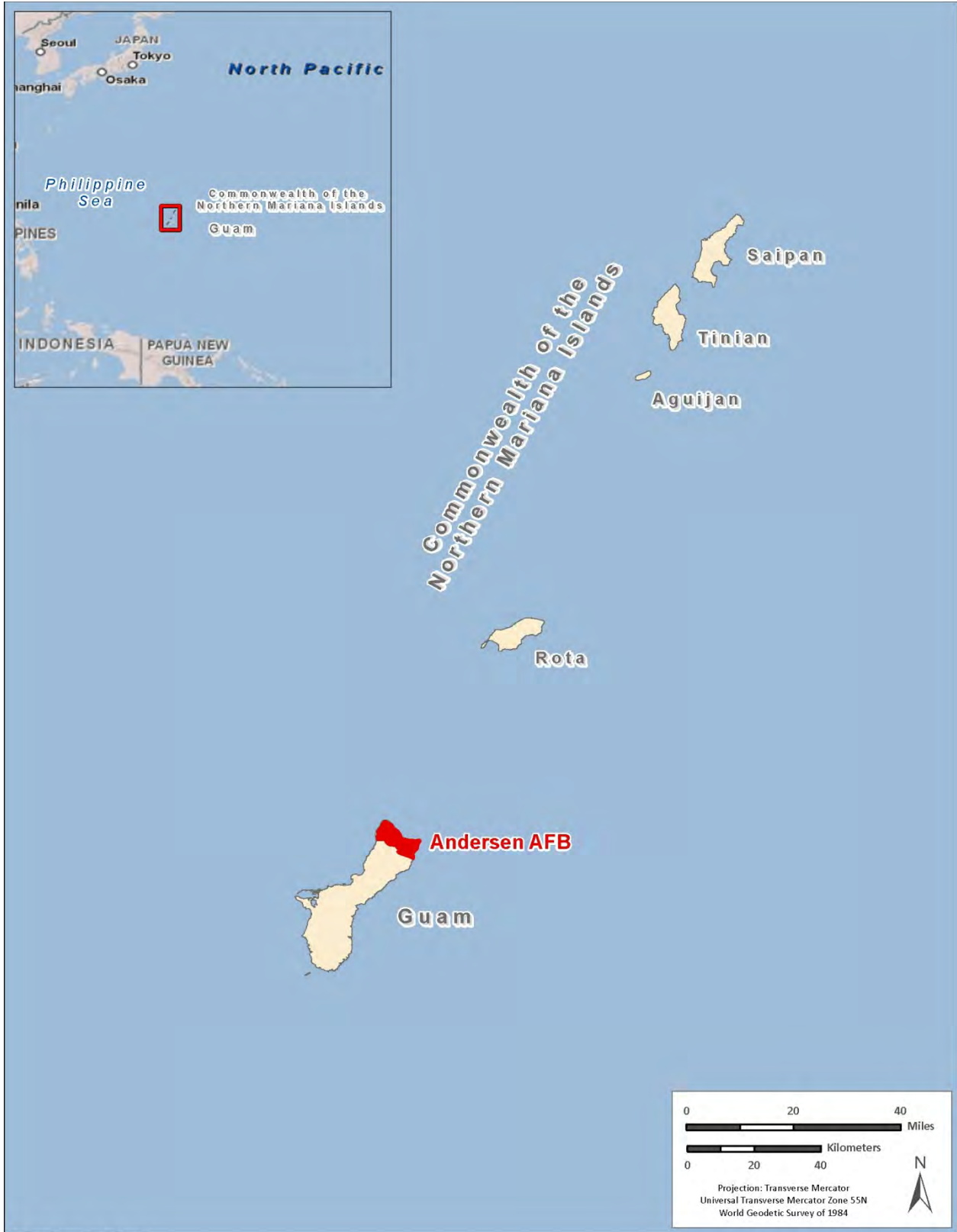
The USAF seeks to improve an existing airport or airports in the Mariana Islands in proximity to the Philippine Sea in support of expanding U.S. strategic interests and Department of Defense (DOD) mission requirements in the western Pacific. The U.S. territories of Guam and Commonwealth of the Northern Mariana Islands (CNMI) (including Saipan, Rota, and Tinian) are located to the east of the Philippine Sea (see **Figure 1.1-1**) and make up the southern portion of the Mariana Islands. The Philippine Sea is a section of the western North Pacific Ocean, located east and north of the Philippines. Pacific Air Forces (PACAF) is a USAF major command (MAJCOM), and is headquartered at Joint Base Pearl Harbor-Hickam, O'ahu, Hawai'i. PACAF is designated by the USAF as the executive agent to develop this EIS.

## 1.2 Background

The lead agency for this EIS is the Department of the Air Force. The EIS was prepared in compliance with the National Environmental Policy Act (NEPA) of 1969 (42 United States Code [U.S.C.] Section [§] 4321 et seq.); the Council on Environmental Quality [CEQ] Regulations for Implementing the Procedural Provisions of NEPA (Title 40 Code of Federal Regulations [CFR] §§ 1500–1508). Cooperating agencies include the U.S. Navy, U.S. Marine Corps (USMC), and the Federal Aviation Administration (FAA). As cooperating agencies, PACAF coordinates with the U.S. Navy, USMC, and FAA throughout the EIS development process. Additionally, FAA must approve the airport layout plan (ALP) before the proposed action can be implemented.

Throughout its history, the Mariana Islands have helped PACAF play a vital role in world events. In addition to its key combat roles in World War II and the Korean and Vietnam Wars, PACAF units fought in Desert Storm in 1991, and they continue to deploy to Afghanistan, Saudi Arabia, Turkey, and Italy for operations. PACAF provided its expertise, aircraft, personnel, and equipment to facilitate the new Expeditionary Air Force. A portion of PACAF forces transited through and were trained in the Mariana Islands en route to these world events. Following the September 11, 2001, terrorist attacks on the United States, PACAF also used and transited through the Mariana Islands when deploying units in support of operations Noble Eagle and Enduring Freedom (PACAF undated a).

Since 1944, PACAF has participated in more than 140 humanitarian operations within its area of responsibility and beyond. In these operations, PACAF personnel quickly and efficiently airlifted food, medicine, and other supplies to areas devastated by storms, floods, earthquakes, volcanic eruptions, and other natural disasters. Additionally, the command supported three of the largest evacuations ever undertaken by the USAF: the Newlife evacuation of Vietnamese in 1975; the Fiery Vigil evacuation of Clark Air Base and Subic Bay Naval Base, Philippines, after the 1991 volcanic eruption of Mount Pinatubo; and the Pacific Haven operation to support and resettle Kurdish evacuees in 1997. Recent efforts include support of tsunami relief efforts during Operation Unified Assistance in 2006 and support of earthquake and tsunami relief efforts in Japan during Operation Tomodachi in 2011 (CRS 2011).



Source: ESRI StreetMap USA 2007

1

**Figure 1.1-1. Location of the Philippine Sea, Guam, and CNMI Region**

1 PACAF established a 24/7 air operations center to organize rescue and relief flight efforts by the USAF,  
2 U.S. Navy, USMC, U.S. Coast Guard, and support services of the international community during  
3 Operation Tomodachi. In 2008, PACAF delivered supplies and food to China to help victims of China's  
4 worst winter storms in more than 50 years. PACAF also delivered 2 million pounds of relief supplies  
5 after China was hit by a devastating earthquake and assisted with Myanmar cyclone relief by preparing  
6 C-17s to transport personnel and supplies (PACAF undated a). PACAF continually prepares to bring air  
7 power quickly and decisively to the far reaches of the Pacific (PACAF undated a).

## 8 1.2.1 PACAF Mission

9 PACAF's primary mission is to provide ready air and space power to promote U.S. interests in the  
10 Asia-Pacific region during peacetime, through crisis, and in war (PACAF undated b). PACAF's vision is  
11 to be the most respected air warrior team employing the full spectrum of air and space power, with  
12 Asia-Pacific partners, to ensure peace and advance freedom. PACAF maintains a forward presence to  
13 help ensure stability in the region (PACAF undated b). In order to successfully fulfill its mission in the  
14 region, PACAF must continually anticipate future needs and adapt to an ever-evolving geopolitical  
15 setting.

16 To support the mission to provide ready air and space power to promote U.S. interests in the Asia-Pacific  
17 region, PACAF oversees approximately 43,000 military and civilian personnel serving in nine strategic  
18 locations and numerous smaller facilities, primarily in Hawai'i, Alaska, Japan, Guam, and South Korea.  
19 Approximately 340 fighter and attack aircraft are assigned to the command with about 100 deployed  
20 aircraft rotating on Guam (PACAF undated a).

## 21 1.2.2 Proposed Project Region

22 The area of focus for potential implementation of the Proposed Action is the Mariana Islands Archipelago  
23 (see **Figure 1.1-1**). For the purposes of this EIS, the Study Area includes existing airports in the  
24 Marianas region, existing seaports, and surrounding areas including easements or routes needed to  
25 transport petroleum products. The Mariana Islands Archipelago straddles the Pacific Ocean and the  
26 Philippine Sea and hosts the U.S. military's westernmost training complex on U.S. soil, the Mariana  
27 Islands Range Complex (MIRC), consisting of special use airspace (SUA), Farrallon de Medinilla (FDM)  
28 live-fire bombing range, and other land training areas. The MIRC includes land ranges and training  
29 area/facilities on Guam, Rota, Tinian, and Saipan, and encompasses 220 square kilometers (km<sup>2</sup>) of land.  
30 SUA consisting of Warning Area 517 (W-517), restricted airspace over FDM (R-7201), and Air Traffic  
31 Control Assigned Airspace (ATCAA) encompass 63,000 square nautical miles (NM<sup>2</sup>) (216,000 square  
32 kilometers [km<sup>2</sup>]) of airspace. Not within, but to the north and east of the Study Area, are portions of the  
33 Marianas Trench Marine National Monument, which was established in January 2009 by Presidential  
34 Proclamation under the authority of the Antiquities Act (16 U.S.C. 431).

## 35 1.2.3 PACAF Operations and Support in the Proposed Project Region

36 **General Operations.** Within the proposed project area, PACAF currently operates at Andersen Air Force  
37 Base (AFB) on the Island of Guam, as part of the Joint Region Marianas. Andersen AFB is located on  
38 the north end of Guam in the village of Yigo, approximately 15 miles from the capital, Hågatña.  
39 Andersen AFB is home to the 36th Wing, Air Mobility Command's 734th Air Mobility Support  
40 Squadron, and several other tenant organizations (PACAF 2007). Andersen AFB is one of four of the  
41 USAF's Bomber Forward Operating Locations (BFOLs) that provide forward support to bomber crews  
42 deploying to Europe, Southwest Asia, and in the Pacific. The mission of Andersen AFB and its host unit,  
43 the 36th Wing, is to provide a U.S.-based warfighting platform for the employment, deployment,  
44 reception, and support to transiting of air and space forces in the Asia-Pacific region (USAF undated).

1 With its huge fuel and munitions storage facilities and dual runways, Andersen AFB is an important  
2 forward-based logistics support center for contingency forces deploying throughout the southwest Pacific  
3 and Indian oceans. Andersen's ideal flying conditions, relatively unlimited airspace, and nearby  
4 air-to-ground range make this an ideal training area for the U.S. military and militaries of nearby  
5 countries (PACAF 2007).

6 **Humanitarian Support.** On December 8, 2002, Typhoon Pongsona, a super-typhoon with sustained  
7 winds of 150 miles per hour (mph), struck Guam, and left the island without power and water and only  
8 limited telephone service. Damage to Andersen AFB included loss of power and water, and major  
9 damage to structures. Several hangars on the installation sustained damage to their walls and roofs, and  
10 Hangars 2, 3, and 4 suffered extensive damage. PACAF provided support relief efforts in Guam 10 days  
11 after Typhoon Pongsona hit the island, which included the deployment of civil engineers, services  
12 personnel, medical experts, aircraft maintenance personnel, and security forces members. More than  
13 30 PACAF and Air Mobility Command (AMC) missions flew support personnel and more than  
14 1,000 tons of supplies to Guam and Andersen AFB (GlobalSecurity 2011).

15 PACAF also provided assistance and relief efforts to Guam following Typhoon Paka in 1997. Typhoon  
16 Paka made landfall on Guam on December 16, 1997, with peak wind gust speeds of 240 mph. The eye of  
17 the typhoon passed through Rota Channel and over the northern portion of the island where Andersen  
18 AFB is located. A.B. Won Pat International Airport (GUM) in Guam was closed for several days due to  
19 the typhoon, with airport infrastructure and facilities sustaining damage. More than 11,500 homes were  
20 damaged or destroyed by the storm, leaving approximately 5,000 people homeless on Guam. At  
21 Andersen AFB, nearly all bay doors on facilities and hangars were damaged or destroyed and building  
22 ceilings were ripped open (EQE International 1998).

### 23 1.3 Purpose and Need Background

24 The 2012 DOD Strategic Guidance places increased emphasis on the Asia-Pacific region (DOD 2012).  
25 Relationships with Asian allies and key partners are critical to the future stability and growth of this  
26 region to maintain regional access and the ability to operate freely. PACAF's primary mission is to  
27 provide ready air and space power to promote U.S. interests in the Asia-Pacific region during peacetime,  
28 through crisis, and in war (PACAF undated b). PACAF maintains a forward presence to help ensure  
29 stability in the region (PACAF undated b). In order to successfully fulfill its mission in the region,  
30 PACAF must continually anticipate future needs and adapt to an ever-evolving geopolitical setting.

31 The vital economic, political, and military interests of the United States are global in nature and scope. In  
32 many respects these interests are located across broad oceans, and to a great extent they intersect those of  
33 current and emergent regional powers. The western Pacific is where the USAF can train and operate from  
34 installations on U.S. territory and have the most influence in support of U.S. interests in Asia.  
35 Forward-deployed forces in the western Pacific are particularly well-suited to the entire range of military  
36 operations in support of national strategy. Forward-deployed forces continue the historic role of military  
37 engagement in preventative diplomacy; support U.S. policies overseas; and play a significant role in  
38 demonstrating both the intention and the capability to join allies and other friendly powers in defending  
39 shared interests, providing humanitarian relief, and ensuring stability in the region.

40 To successfully meet its mission, the USAF must be capable of responding quickly and successfully in  
41 support of theater commanders. The potential for escalation dictates that forces must be shaped and  
42 trained for missions they might encounter, but logistical planning must also be in place for follow-on  
43 personnel and materials, and for evacuation of non-combatants or humanitarian refugees out of theater.  
44 This pre-planning provides theater commanders with credible crisis-response capabilities. Building on  
45 the normally deployed forces, the USAF must plan for the follow-on forces and for the evacuation of



1 non-combatants or humanitarian refugees during a contingency crisis. To ensure a comprehensive and  
2 orderly flow of personnel and materials, the USAF must develop and train personnel at divert locations to  
3 provide the comprehensive force capable of meeting national contingency requirements. Divert locations  
4 are locations that can be used for landings on an as-needed basis either when an aircraft has  
5 malfunctioned or needs to land immediately due to an emergency; or when the scheduled or planned  
6 location for landing is no longer accessible or operational, such as during contingencies such as typhoons  
7 or other natural disasters.

8 The USAF, operating from U.S. territories, is free of the political encumbrances that sometimes inhibit  
9 and can limit the scope of land-based operations in foreign territories and countries. These considerations  
10 are a unique characteristic and advantage of the Mariana Islands, which provide flexible options including  
11 the ability to develop contingency plans rapidly, unencumbered by foreign geo-politics. The operational  
12 flexibility and responsiveness of forward bases in the Marianas is a matter of record; whether  
13 humanitarian relief for Kurdish refugees, humanitarian relief for tsunami victims in Indonesia or Japan, or  
14 the ability to flow forces forward to the Middle East, the value of the Marianas as U.S. territory in Asia is  
15 unmatched.

16 As the United States seeks to sustain and strengthen Asia-Pacific alliances and partnerships, the USAF  
17 needs to augment and adapt its forward presence to reassure allies of the U.S. commitment to their  
18 security, and provide for fast reaction to disasters in the region. Through development of additional divert  
19 capabilities and capacity, the USAF intends to meet the challenges in Asia. The vast distances of the  
20 Pacific and the low density of U.S. basing and infrastructure in the Pacific places a premium on  
21 forward-deployed U.S. forces in the Marianas. Increased capability and U.S. presence in the Marianas  
22 would build trust; increase transparency; reduce the risks of crisis or conflict; and encourage U.S. allies  
23 and partners to enhance their roles in humanitarian relief and in multilateral security cooperation by  
24 augmenting regional rapid-response abilities and increasing the capacity of Asian partners to respond  
25 more effectively to contingencies, including humanitarian crises and natural disasters. Finally, in  
26 alignment with direction provided in the 2010 Quadrennial Defense Review (QDR) Report, the USAF  
27 seeks to develop additional opportunities for joint and combined exercises in the western Pacific that  
28 respond to the need for constant readiness of U.S. forces to carry out joint operations, particularly in the  
29 areas of humanitarian assistance and disaster relief (DOD 2010a).

30 The range of potential future challenges is significant. USAF requirements to deal with such challenges  
31 include the following: supporting a national response to attacks on, or natural disasters in, the United  
32 States, its territories, and other nations; defeating aggression by adversary states; supporting and  
33 stabilizing fragile states facing threats from terrorist and insurgent groups; protecting American citizens  
34 abroad in harm's way; and preventing human suffering due to mass atrocities or large-scale natural  
35 disasters abroad.

36 These types of challenges are not necessarily distinct. Indeed, the USAF future operational environment  
37 is likely to entail complex combinations of multiple challenges at the same time, necessitating multiple  
38 venues to execute the mission. U.S. air forces in Asia must be shaped and trained to provide the  
39 maximum possible versatility for the broadest potential range of national contingencies as mandated by  
40 Title 10 U.S.C. § 8062. Readiness requires specialized locations where military personnel can learn and  
41 practice the skills necessary to successfully protect the United States and keep its territories safe. The  
42 location and environments of the Mariana Islands are important to the USAF because of the existence of  
43 Andersen AFB, but also for realistic training opportunities. The sea space and airspace designated for  
44 military use in the Marianas provide safe environments to train airmen on existing equipment in  
45 environments similar to those encountered during real-world missions.

1 **1.3.1 Purpose**

2 The purpose of the Proposed Action is to establish additional divert capabilities to support and conduct  
3 current, emerging, and future exercises, while ensuring the capability to meet mission requirements in the  
4 event that access to Andersen AFB or other western Pacific locations is limited or denied. For example,  
5 the need for humanitarian assistance can arise suddenly and without warning, such as disaster response in  
6 Japan during the 2011 earthquake and tsunami. If this were to occur during scheduled training exercises  
7 at Andersen AFB, then either training or response efforts might be delayed or impeded. Furthermore,  
8 natural or man-made disasters could impact Andersen AFB's missions, requiring reliance on designed and  
9 designated divert airfield capabilities. Because of the proximity to forward-deployed forces in the  
10 western Pacific, the Marianas provides the best economic alternative for forward-deployed U.S. forces to  
11 train on U.S.-owned lands and to develop the proposed additional divert capabilities.

12 **1.3.2 Need**

13 The USAF must achieve its mission mandated by Title 10 U.S.C. § 8062 in the event of a disruption of  
14 operational capabilities at Andersen AFB or other western Pacific locations. To more assuredly achieve  
15 this mission, the USAF must ensure that another location within the Marianas Archipelago has the  
16 capabilities to sustain its mission on a temporary basis. This location will not replace the capabilities at  
17 Andersen AFB, but will be an additional location on U.S. territory in the western Pacific that can help  
18 ensure continued military readiness should access to Andersen AFB or other western Pacific locations be  
19 limited or denied such as during a training event, humanitarian relief efforts, or natural or man-made  
20 disasters. The need for the Proposed Action is derived from the following operational requirements that  
21 are necessary to successfully support the PACAF mission:

- 22 • Ensure airfield accessibility if access to Andersen AFB or other western Pacific airfields is  
23 limited or denied
- 24 • Provide for contingency operations to include humanitarian relief efforts
- 25 • Accommodate future increases in operational tempo and associated training
- 26 • Achieve and sustain readiness.

27 Consistent with DOD Strategic Guidance which calls for mission priorities to shift to the Asia-Pacific  
28 region (DOD 2012), the Proposed Action would develop critical enhancements to an existing airport or  
29 airports and associated infrastructure in the Marianas to increase operational and divert capabilities  
30 needed by the USAF, especially in humanitarian relief and joint exercises. These enhancements are  
31 required if the USAF is to maintain a state of military readiness commensurate with the national defense  
32 and humanitarian relief missions. The Proposed Action focuses on the development and improvement of  
33 existing divert or contingency airfield capabilities and will not include the permanent deployment or  
34 "beddown" of forces in the Marianas. Hence, any military construction projects would be focused on  
35 improvements needed to increase USAF capabilities to respond to emergent needs, to ensure forces that  
36 are diverted from Andersen AFB or other western Pacific locations can continue to operate, and to train to  
37 these capabilities.

38 In summary, the Proposed Action is needed because there is not an existing divert or contingency airfield  
39 on U.S. territory in the western Pacific that is designed and designated to provide strategic operational and  
40 exercise capabilities for U.S. forces when needed and humanitarian airlift and disaster relief in times of  
41 natural or man-made disasters. Implementation of the Proposed Action would support the PACAF  
42 mission to provide ready air and space power to promote U.S. interests in the Asia-Pacific region during  
43 peacetime, through crisis, and in war.

## 1 1.4 Scope of Analysis

2 This EIS examines the potential effects of the Proposed Action and alternatives, including impacts related  
3 to or upon the following:

- 4 • Noise
- 5 • Air Quality
- 6 • Airspace Management and Airport Operations, and Bird/Wildlife Aircraft Strike Hazard
- 7 • Geological Resources and Soils
- 8 • Water Resources
- 9 • Terrestrial Biological Resources
- 10 • Marine Biological Resources
- 11 • Cultural Resources
- 12 • Recreation
- 13 • Land Use
- 14 • Transportation
- 15 • Hazardous Materials and Waste Management
- 16 • Infrastructure and Utilities
- 17 • Socioeconomics and Environmental Justice
- 18 • Human Health and Safety.

19 These topics were identified through the scoping process as being potentially relevant to the Proposed  
20 Action and alternatives, and include applicable critical elements of the human environment whose review  
21 is mandated by statute, Executive Order (EO), regulations, or policy.

## 22 1.5 Summary of Key Environmental Compliance Requirements

### 23 1.5.1 NEPA Compliance

24 NEPA (42 U.S.C. §§ 4321–4347) is a Federal statute requiring the identification and analysis of potential  
25 environmental impacts associated with proposed Federal actions before those actions are taken. The  
26 intent of NEPA is to support decisionmakers in making well-informed decisions based on an  
27 understanding of the potential environmental consequences, and taking actions to protect, restore, or  
28 enhance the environment. NEPA established the CEQ that was charged with the development of  
29 implementing regulations and ensuring Federal agency compliance with NEPA.

30 The process for implementing NEPA is codified in Title 40 CFR, Parts 1500–1508, *Regulations for*  
31 *Implementing the Procedural Provisions of the National Environmental Policy Act*. The CEQ was  
32 established under NEPA to implement and oversee Federal policy in this process. The CEQ regulations  
33 specify that an EIS be prepared when a Federal agency is proposing a major action with potential to  
34 significantly affect the quality of the human environment.

35 Air Force Policy Directive (AFPD) 32-70, *Environmental Quality*, states that the USAF will comply with  
36 applicable Federal, state, and local environmental laws and regulations, including NEPA. The USAF's  
37 implementing regulation for NEPA is its *Environmental Impact Analysis Process (EIAP)*, 32 CFR Part  
38 989, as amended. See **Table 1.5-1** for a summary of environmental compliance for the Proposed Action,  
39 including NEPA compliance.

1

**Table 1.5-1. Summary of Environmental Compliance for the Proposed Action**

<b>Plans, Policies, and Controls</b>	<b>Responsible Agency</b>	<b>Status of Compliance</b>
Clean Water Act (CWA) (33 U.S.C. §§ 1344, et seq.) and implementing regulations as required	USEPA	No permit under the CWA, whether under Section 401, 402, or 404 (b) (1), is required. Storm -water general permit for construction activities that disturb greater than one acre would be required.
Coastal Zone Management Act (CZMA) (16 CFR §§ 1451, et seq.) and implementing regulations as required	Coastal Resources Management Office - CNMI	The USAF has determined that the Proposed Action is consistent to the maximum extent practicable with the CNMI Coastal Management Plan. The Negative Determination for CNMI was submitted after the release of the Draft EIS.
Endangered Species Act (ESA) (16 U.S.C. §§ 1531, et seq.) and implementing regulations as required	USFWS	The EIS analyzes potential effects on species listed under the ESA. The USAF is consulting under Section 7 of the ESA with and USFWS on the potential that the Proposed Action could affect listed species.
Marine Mammal Protection Act (MMPA) (16 U.S.C. §§ 1431, et seq.) and implementing regulations as required	National Marine Fisheries Service (NMFS)	This EIS analyzes potential effects on marine mammals, some of which are species-listed under the ESA. MMPA take authorization will not be required.
National Historic Preservation Act (NHPA) (16 U.S.C. §§ 470, et seq.) and implementing regulations as required	CNMI Historic Preservation Office (HPO)	The USAF is consulting with the CNMI HPO and National Park Service under Section 106 of the NHPA. ACHP may also be invited to consult depending on determination of effects on the NHL under Alternative 1.
EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations	USAF	Potential high and adverse impacts on low-income or minority communities have been identified for elements of the Proposed Action. The USAF will conduct outreach to the potentially impacted communities to ensure they are engaged in the NEPA process and are part of the mitigation development process, if it is determined that mitigation is required.
EO 13045, Protection of Children from Environmental Health Risks and Safety Risks	USAF	The Proposed Action would not result in disproportionate risks to children from environmental health risks or safety risks.

Plans, Policies, and Controls	Responsible Agency	Status of Compliance
EO 13112, Invasive Species	USAF	EO 13112 requires agencies to identify actions that might affect the status of invasive species and take measures to avoid introduction and spread of those species. This EIS satisfies the requirement of EO 13112 with respect to the Proposed Action.
EO 11990, Protection of Wetlands	USAF	The Proposed Action would not have a significant impact on wetlands.
Migratory Bird Treaty Act (MBTA) (16 U.S.C. §§ 703–712) and implementing regulations as required	USFWS	The Proposed Action would not have a significant impact on migratory birds, and would comply with applicable requirements of the MBTA.
The Sikes Act of 1960 (16 U.S.C. §§ 670a–670o, as amended by the Sikes Act Improvement Act of 1997, Public Law [P.L.] No. 105-85) requires military installations with significant natural resources to prepare and implement Integrated Natural Resource Management Plans (INRMPs).	USAF	The Proposed Action would not occur on a military installation. There is no requirement for an INRMP under the Proposed Action. The USAF would prepare a natural resources management plan based on the outcome of the EIS process.
The Antiquities Act (34 Stat. 225, 16 U.S.C. 431) and implementing regulations as required	NOAA (National Oceanic and Atmospheric Administration) USFWS	The Study Area does not include any portion of the Marianas Trench Marine National Monument.

1    **1.5.2    Integration of Other Relevant Environmental Compliance Requirements**

2    To comply with NEPA, the planning and decisionmaking process for Federal agencies involves a study of  
3    other relevant environmental statutes and regulations. The NEPA process, however, does not replace  
4    procedural or substantive requirements of other environmental statutes and regulations. It addresses them  
5    collectively in the form of an EA or EIS, which enables the decisionmaker to have a comprehensive view  
6    of relevant environmental issues and requirements associated with a proposed action and its alternatives.  
7    According to CEQ regulations, the requirements of NEPA must be integrated “with other planning and  
8    environmental review procedures required by law or by agency so that all such procedures run  
9    concurrently rather than consecutively.” The environmental regulations and rules for Federal agencies are  
10   mandated and followed. See **Table 1.5-1** for a summary of environmental compliance for the Proposed  
11   Action. Environmental compliance requiring agency coordination and consultation is discussed in  
12   **Section 1.7.2.**

13   **1.5.3    Documents Incorporated by Reference**

14   According to CEQ regulations for implementing NEPA, “material relevant to an EIS may be incorporated  
15   by reference with the intent of reducing the size of the document.” Some of the programs and projects

1 within the geographical scope of this EIS have undergone environmental review and documentation  
2 to ensure NEPA compliance including the following, which are available for review at  
3 <http://www.PACAFDivertMarianasEIS.com>:

4 ***Final Environmental Impact Statement, Establishment and Operation of an Intelligence, Surveillance,***  
5 ***and Reconnaissance and Strike (ISR/Strike) Capability, Andersen Air Force Base, Guam,***  
6 ***November 2006 (USAF 2006).*** The proposed action would establish an ISR/Strike operational capability  
7 in the western Pacific over an approximate 16-year period beginning in fiscal year 2007. The ISR/Strike  
8 capability would consist of fighter, aerial refueling, bomber, unmanned aerial vehicle aircraft, and support  
9 personnel. The ISR/Strike EIS was finalized in 2006 and a Record of Decision (ROD) was issued in  
10 January 2007 (USAF 2006).

11 Andersen AFB was identified as the installation best suited to host the ISR/Strike capability. The average  
12 airfield operations would increase from 235 to 297 as a result of the action. The increase in aircraft  
13 events into and out of Andersen AFB requires improved range infrastructure to accommodate this  
14 increased training tempo, newer aircraft, and weapon systems commensurate with ISR/Strike force  
15 structure. There would be increased activity on all the current training areas supporting USAF activities.  
16 Land acquisition was not proposed.

17 As part of the ISR/Strike mitigation plan, a new Habitat Management Unit of 148 acres would be  
18 established as a mitigation measure for impacts to biological resources. This mitigation plan would  
19 include:

- 20 • Development of an ungulate control plan
- 21 • Ungulate exclusion fencing
- 22 • A full-time wildlife management specialist position would be funded
- 23 • Trees that are important to the Mariana Fruit Bat or the Marianna Crow would be planted
- 24 • A noise study would be conducted.

25 The USAF was able to address the cumulative impacts of establishing an ISR/Strike Capability in their  
26 EIS relative to a host of other cumulative projects identified (USAF 2006).

27 ***MIRC EIS/OEIS, May 2010 (DON 2010a).*** The MIRC EIS/OEIS proposes military training and  
28 research, development, test, and evaluation (RDT&E) training activities within the MIRC (DON 2010a).  
29 The MIRC consists of the ranges, airspace, and ocean areas surrounding the ranges that make up the  
30 Study Area. The MIRC and the Study Area are the same geographical areas. The study area described in  
31 the MIRC EIS/OEIS does not include the sovereign territory (including waters out to 12 nautical miles  
32 [NM]) of the Federated States of Micronesia.

33 The proposed action in the MIRC EIS/OEIS would result in critical enhancements to increase training  
34 capabilities (especially in the undersea and air warfare areas) that are necessary if the military services are  
35 to maintain a state of military readiness commensurate with the national defense mission. The proposed  
36 action primarily focuses on the development and improvement of existing training capabilities in the  
37 MIRC, and would not include any military construction projects. However, the proposed action does not  
38 involve extensive changes to the MIRC facilities, activities, or training capabilities, nor does it involve an  
39 expansion of the existing MIRC property or airspace requirements.

40 Governing procedures for the use of training areas, ranges, and airspace operated and controlled by the  
41 Commander U.S. Naval Forces, Marianas (such as instructions and procedures for the use of Guam,  
42 Saipan, Tinian, Rota and Farallon de Medinilla) are included in Commander Navy Region Marianas  
43 Instruction 3500.4 (Marianas Training Handbook). This guidance identifies specific land use constraints

1 to enable protection of environmental resources during military training in the MIRC. These procedures  
2 would continue to be followed. Modification and augmentations of these procedures are being discussed  
3 among stakeholders. No new types of training would be required that would warrant new procedures in  
4 the MIRC EIS/OEIS (DON 2010a).

## 5 1.6 Decisions to be Made

6 At the conclusion of the EIS process the USAF will make a decision on whether and how to support  
7 identified divert activities and exercises based on the discussion and analyses contained in this EIS. The  
8 USAF decision will be based on the EIS and will be reflected in a ROD.

## 9 1.7 Interagency and Public Involvement

10 The Intergovernmental Coordination Act and EO 12372, Intergovernmental Review of Federal Programs,  
11 require Federal agencies to cooperate with and consider state and local views in implementing a Federal  
12 proposal. Air Force Instruction (AFI) 32-7060 requires the USAF to implement a process known as  
13 Interagency and Intergovernmental Coordination for Environmental Planning (IICEP), which is used for  
14 the purpose of agency coordination and implements scoping requirements (i.e., to determine the scope of  
15 issues to be addressed in detail in a NEPA document). PACAF initiated the IICEP process by notifying  
16 relevant Federal and regional agencies, elected officials, and other key stakeholders, of the Proposed  
17 Action and alternatives considered during the scoping process, as discussed in **Section 1.7.3**. Public  
18 notification and involvement are also discussed in **Section 1.7.3**. In addition, during review of the Draft  
19 EIS, agencies and other stakeholders have 45 days to provide comments on information specific to the  
20 Proposed Action.

### 21 1.7.1 Cooperating Agencies

22 A cooperating agency means any Federal agency other than a lead agency that has jurisdiction by law or  
23 special expertise with respect to any environmental impact involved in a proposed action. According to  
24 CEQ regulations for implementing NEPA, upon request of the lead agency, any other Federal agency  
25 which has jurisdiction by law shall be a cooperating agency. In addition, any Federal agency that has  
26 special expertise with respect to any environmental issue that is addressed in the EIS may be a  
27 cooperating agency upon request of the lead agency. An agency may request the lead agency to designate  
28 it a cooperating agency.

29 The lead agency for this EIS is the Department of the Air Force. The EIS was prepared in compliance  
30 with NEPA of 1969 (42 U.S.C. § 4321 et seq.); the CEQ Regulations for Implementing the Procedural  
31 Provisions of NEPA (Title 40 CFR §§ 1500–1508). Cooperating agencies include the U.S. Navy, USMC,  
32 and the FAA.

### 33 1.7.2 Interagency Coordination and Consultation

34 The USAF has maintained oral and written communication, as required, with Divert EIS interested  
35 stakeholders and the public throughout the EIS development process. Stakeholders include Federal, state,  
36 territory, commonwealth, and local elected officials; regulatory representatives; and local  
37 nongovernmental organization stakeholder groups. Public involvement is addressed in **Section 1.7.3**.  
38 Ongoing coordination and consultation with these stakeholders is a key component in maintaining an  
39 open dialogue with interested or affected officials, agencies, or individuals. Other formal coordination  
40 and consultation that might be required during the course of the Divert EIS development process is  
41 summarized in the following paragraphs. In addition to the potentially required coordination and

1 consultations listed in the following paragraphs, USAF will also continue to coordinate with local  
2 agencies that are relevant to the Proposed Action, such as the Commonwealth Ports Authority (CPA),  
3 which has jurisdiction over the sea and airports within the CNMI. See **Table 1.5-1** for a summary of  
4 environmental compliance for the Proposed Action, including the status of coordination and  
5 consultations.

6 **Endangered Species Act.** The Endangered Species Act (ESA) of 1973 establishes a Federal program to  
7 conserve, protect, and restore threatened and endangered plants and animals and their habitats. The ESA  
8 specifically charges Federal agencies with the responsibility of using their authority to conserve  
9 threatened and endangered species. All Federal agencies must ensure any action they authorize, fund, or  
10 carry out is not likely to jeopardize the continued existence of an endangered or threatened species or  
11 result in the destruction of critical habitat for these species, unless the agency has been granted an  
12 exemption. The Secretary of the Interior, using the best available scientific data, determines which  
13 species are officially endangered or threatened, and the USFWS maintains the list, available at  
14 <http://www.fws.gov/endangered/species/us-species.html>. A list of Federal endangered species can be  
15 obtained from the Endangered Species Division, USFWS (703-358-2171). States, territories, or  
16 commonwealths might also have their own lists of threatened and endangered species which can be  
17 obtained by calling the appropriate state fish and wildlife office. Under the ESA, Federal agencies are  
18 required to provide documentation that ensures that agency actions will not adversely affect the existence  
19 of any federally threatened or endangered species. The ESA requires that all Federal agencies avoid  
20 “taking” threatened or endangered species (which includes jeopardizing threatened or endangered species  
21 habitat). Section 7 of the ESA establishes a consultation process with USFWS that ends with concurrence  
22 on a determination of the risk of jeopardy from a Federal agency project. Materials related to ESA  
23 Section 7 consultation with the USFWS are in **Appendix B**.

24 **Coastal Zone Management Act.** The Coastal Zone Management Act (CZMA) of 1972 declares a  
25 national policy to preserve, protect, and develop and, where possible, restore or enhance the resources of  
26 the nation’s coastal zone. The coastal zone refers to the coastal waters and the adjacent shorelines,  
27 including islands, transitional and intertidal areas, salt marshes, wetlands, and beaches. The CZMA  
28 encourages states to exercise their full authority over the coastal zone through the development of land  
29 and water use programs in cooperation with Federal and local governments. States may apply for grants  
30 to help develop and implement management programs to achieve wise use of the land and water resources  
31 of the coastal zone. Development projects affecting land or water use or natural resources of a coastal  
32 zone must ensure the project is, to the maximum extent practicable, consistent with the enforceable  
33 policies of the state’s coastal zone management program. PACAF will coordinate with Coastal Resource  
34 Management Offices, as appropriate, regarding CZMA compliance. Materials related to CZMA  
35 compliance are in **Appendix C**.

36 **Migratory Bird Treaty Act.** The Migratory Bird Treaty Act (MBTA) of 1918, as amended, implements  
37 treaties and conventions between the United States, Canada, Japan, Mexico, and the former Soviet Union  
38 for the protection of migratory birds. Unless otherwise permitted by regulations, the MBTA makes it  
39 unlawful to pursue, hunt, take, capture, or kill; attempt to take, capture, or kill; possess; offer to or sell,  
40 barter, purchase, or deliver; or cause to be shipped, exported, imported, transported, carried, or received  
41 any migratory bird, part, nest, egg, or product, manufactured or not. The MBTA also makes it unlawful  
42 to ship, transport, or carry from one state, territory, or district to another; or through a foreign country,  
43 any bird, part, nest, or egg that was captured, killed, taken, shipped, transported, or carried contrary to the  
44 laws from where it was obtained; and import from Canada any bird, part, nest, or egg obtained contrary to  
45 the laws of the province from which it was obtained. The U.S. Department of the Interior has authority to  
46 arrest, with or without a warrant, a person violating the MBTA. Correspondence with USFWS  
47 addressing migratory birds and the MBTA will be conducted as necessary.



1 **National Historic Preservation Act.** The National Historic Preservation Act (NHPA) of 1966 sets forth  
2 national policy to identify and preserve properties of state, local, and national significance. The NHPA  
3 establishes the Advisory Council on Historic Preservation (ACHP), State Historic Preservation Officers  
4 (SHPOs), and the National Register of Historic Places (NRHP). ACHP advises the President, Congress,  
5 and Federal agencies on historic preservation issues. Section 106 of the NHPA directs Federal agencies  
6 to take into account effects of their undertakings (actions and authorizations) on properties included in or  
7 eligible for the NRHP. Section 110 sets inventory, nomination, protection, and preservation  
8 responsibilities for federally owned cultural properties. Section 106 of the act is implemented by  
9 regulations of the ACHP, 36 CFR Part 800. Agencies should coordinate studies and documents prepared  
10 under Section 106 with NEPA where appropriate. However, NEPA and NHPA are separate statutes and  
11 compliance with one does not constitute compliance with the other. For example, actions which qualify  
12 for a categorical exclusion under NEPA might still require Section 106 review under NHPA. It is the  
13 responsibility of the agency official to identify properties in the area of potential effects, and whether they  
14 are included or eligible for inclusion in the NRHP. Section 110 of the NHPA requires Federal agencies to  
15 identify, evaluate, and nominate historic property under agency control to the NRHP.

16 As appropriate, PACAF will develop a comprehensive Section 106 agreement document with the CNMI  
17 HPO, National Park Service (NPS), and other parties as appropriate. The agreement would take the form  
18 of either a programmatic agreement (PA) or a memorandum of agreement (MOA) with a goal of  
19 streamlining the Section 106 process and providing the legal framework under which adverse effects can  
20 be assessed and avoided or mitigated. The effort shall include identifying the undertakings to be included  
21 in the agreement document, determining appropriate alternate procedures to fulfill obligations under  
22 Section 106 of the NHPA, and identifying and engaging interested and consulting parties and signatories.  
23 Materials related to NHPA Section 106 compliance are in **Appendix D**.

24 **Clean Water Act.** The Clean Water Act (CWA) of 1977 is an amendment to the Federal Water Pollution  
25 Control Act of 1972, is administered by the U.S. Environmental Protection Agency (USEPA), and sets  
26 the basic structure for regulating discharges of pollutants into U.S. waters. The CWA requires USEPA to  
27 establish water quality standards for specified contaminants in surface waters and forbids the discharge of  
28 pollutants from a point source into navigable waters without a National Pollutant Discharge Elimination  
29 System (NPDES) permit. NPDES permits are issued by USEPA or the appropriate state if it has assumed  
30 responsibility. Section 404 of the CWA establishes a Federal program to regulate the discharge of dredge  
31 and fill material into waters of the United States. Section 404 permits are issued by the U.S. Army Corps  
32 of Engineers (USACE). Waters of the United States include interstate and intrastate lakes, rivers,  
33 streams, and wetlands that are used for commerce, recreation, industry, sources of fish, and other  
34 purposes. The objective of the CWA is to restore and maintain the chemical, physical, and biological  
35 integrity of the nation's waters. Each agency should consider the impact on water quality from actions  
36 such as the discharge of dredge or fill material into U.S. waters from construction, or the discharge of  
37 pollutants as a result of facility occupation. Section 401 of the CWA requires that any Federal license or  
38 permit to conduct an activity that could result in a discharge to waters of the United States must first  
39 receive a water quality certification from the state in which the activity will occur.

40 To fulfill the requirements of Section 404 of the CWA, a jurisdictional determination would be required if  
41 there is potential to affect wetlands at the preferred alternative sites for the Proposed Action. PACAF  
42 would complete the steps necessary to identify wetlands and other aquatic resources occurring in the  
43 project areas on the alternative sites. Formal wetland and other waters of the United States delineations  
44 would be conducted and jurisdictional determinations would be obtained from the USACE Honolulu  
45 District.

46 **Airport Operations and Airspace Requirements.** Civilian airports in the United States are operated under  
14 CFR 139 certification and under a security program approved by the Transportation Security

1 Administration (TSA). When the FAA issues construction grants to civilian airports, the airport signs a  
2 grant agreement that contains standard grant assurances that becomes a binding contract between the  
3 airport authority and the U.S. Government. Several of these grant assurances are applicable to the desire  
4 of the USAF to use portions of civilian airports for military activities.

5 Space for military improvements, such as aprons, and special use areas, such as hazardous cargo pads  
6 (also referred to as “hot” cargo pads), will need to be negotiated through agreements with the authority  
7 operating the airport and might differ between airports because of existing real estate agreements.  
8 Runway or runway safety area extensions (common use areas) would be constructed under a mutual use  
9 agreement, and any additional costs for construction or ongoing maintenance to the operating authority  
10 would be addressed in the mutual use agreement.

11 For example, 14 CFR 139 requires the airport to provide Airport Rescue and Fire Fighting (ARFF). This  
12 requirement includes a certain number of fire trucks and recurrent training for personnel. The addition of  
13 USAF aircraft could change the ARFF index and increase response requirements. These increased  
14 requirements can be met through negotiated agreements between USAF and the operating authority and  
15 could include direct or financial support for additional equipment, training, or personnel.

16 Military personnel working on the airport might need to meet TSA security program requirements. A  
17 sudden influx of military personnel for an exercise or natural disaster response could easily overwhelm  
18 the existing security system. These increased requirements can be met through negotiated agreements  
19 between USAF and the operating authority and include direct or financial support for additional  
20 equipment, training, or personnel needed to support any surge of personnel.

### 21 1.7.3 Public Involvement

22 NEPA requirements also help ensure that environmental information is made available to the public  
23 during the decisionmaking process and prior to actions being taken. The premise of NEPA is that the  
24 quality of Federal decisions will be enhanced if Federal proponents of an action provide information to  
25 state and local governments and the public and involve them in the planning process. An EIS is a public  
26 document and public involvement is a vital component of the NEPA process. Guidance for implementing  
27 public involvement is codified in 40 CFR Part 1506.6, thereby ensuring that Federal agencies make a  
28 diligent effort to involve the public in preparing NEPA documents and prescribing public involvement  
29 during various stages of the environmental review process. The USAF NEPA procedures in  
30 Title 32 CFR Part 989 include guidance on the public involvement process. In addition, the CEQ  
31 Memorandum on Scoping Guidance<sup>1</sup> provides guidance for public involvement and participation.

32 For this EIS, outreach is defined as the process of communicating the military mission and Proposed  
33 Action, and developing and maintaining stakeholder partnerships. Throughout the EIS process, outreach  
34 is necessary to garner and maintain positive partnerships among the stakeholders. The USAF intends to  
35 continue involving elected officials, government and regulatory agencies, nongovernmental organizations,  
36 the general public, and the media throughout the EIS process.

37 Numerous opportunities exist for public involvement throughout the EIS development process. In  
38 addition, PACAF maintains a dedicated project Web site that provides public access to documents  
39 available for review, announces meeting dates and times, announces the availability of documents for  
40 review and comment, accepts comments during open comment periods, and provides fact sheets and other  
41 project-related information (see <http://www.PacafDivertMarianasEIS.com>).

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<sup>1</sup> CEQ. *Memorandum for General Counsels, NEPA Liaisons and Participants in Scoping*, Nicholas C. Yost, General Counsel, April 30, 1981.

1 The following summarizes the formal NEPA process-related opportunities, in compliance with CEQ  
2 regulations, for public involvement and input into the EIS process:

3 **Pre-Notice of Intent Briefings.** Prior to issuing the Notice of Intent (NOI) that formally started the EIS  
4 process, PACAF and U.S. Pacific Fleet, representing the cooperating agency the U.S. Navy, provided  
5 pre-NOI briefings to senior-level stakeholders in Guam and CNMI concerning this and other ongoing  
6 military-sponsored environmental impact studies in the region. The briefing team conducted pre-NOI  
7 briefings and question and answer sessions to provide early information about the Proposed Action and  
8 alternatives to regional political leadership. The pre-NOI briefings included briefings in Guam to the  
9 Guam legislature and Governor's office and to the office of the Guam Congressional Delegate. Briefings  
10 in Saipan, CNMI, were presented to the Military Integration Management Committee (MIMC) (which  
11 consists of the Governor; members of Legislature; and Mayors of Tinian, Rota and Saipan) and to the  
12 office of the CNMI Congressional Delegate. One briefing was presented in Honolulu, Hawai'i, to the  
13 USFWS.

14 **Scoping.** Formal public scoping began with the issuance of an NOI in the *Federal Register* on September  
15 27, 2011. PACAF also issued notices in local media on September 28, October 3, October 10, October  
16 11, October 12, October 14, October 17, and October 18, 2011, that announced schedules and locations  
17 for public scoping meetings. PACAF welcomed public comments on the Proposed Action and  
18 alternatives during the open public scoping period, which began with publication of the NOI. Comments  
19 were accepted at two public scoping meetings in Guam, one public scoping meeting in Saipan, one public  
20 scoping meeting in Tinian, and one public scoping meeting in Rota. Comments were also accepted via  
21 the project Web site (<http://www.PACAFDivertMarianasEIS.com>), postal service, and telephone  
22 recording system. Once the scoping period was completed, the scoping comments received were  
23 summarized in a scoping comment report, and comments were considered during the development of the  
24 Draft EIS.

25 **Post-NOI Briefings.** During the public scoping period, PACAF project team members provided  
26 post-NOI briefings to senior-level stakeholders in Guam and CNMI. The briefings were an updated and  
27 expanded version of the pre-NOI briefings, and were offered to a wider audience of stakeholders. The  
28 purpose of the briefings was to provide ongoing communication with local stakeholders, and to inform  
29 the stakeholders of up-to-date information regarding the Proposed Action and alternatives. The post-NOI  
30 briefings were conducted to coincide with public scoping meetings and were provided to the following  
31 stakeholder offices:

- 32 • USFWS
- 33 • U.S. Coast Guard, Marianas Sector
- 34 • FAA Center Radar Approach Control (CERAP) Guam
- 35 • FAA Facilities Honolulu
- 36 • Guam Governor
- 37 • Guam Legislature
- 38 • Guam Congressional Delegate
- 39 • Guam Mayors Council
- 40 • Guam Division of Aquatic and Wildlife Resources (DAWR)
- 41 • Guam Environmental Protection Agency (GEPA)
- 42 • Guam Chamber of Commerce
- 43 • CNMI Port Authority Board of Directors
- 44 • Tinian Mayor and Municipal Council
- 45 • Tinian Chamber of Commerce
- 46 • Rota Mayor and Rota Municipal Council

- 1 • CNMI MIMC
- 2 • CNMI Department of Environmental Quality (DEQ)
- 3 • CNMI Department of Lands and Natural Resources (DLNR)
- 4 • CNMI Division of Fish and Wildlife.

5 **Draft EIS Public Review.** This Draft EIS is the first public version of the EIS. This Draft EIS was  
 6 distributed to selected Federal, state, territory, commonwealth, regional, and local agencies; private  
 7 citizens; and organizations that requested copies. The Draft EIS was also made available at 10 different  
 8 information repositories and on the project Web site (<http://www.PACAFDivertMarianasEIS.com>).  
 9 USAF provided a 45-day public review period for the Draft EIS (40 CFR 1506.10). The public review  
 10 period was initiated through the publication of a Notice of Availability (NOA) in the *Federal Register* on  
 11 June 8, 2012, and was also advertised in local media. The USAF requested public input on the Draft EIS,  
 12 including the Proposed Action, potential environmental impacts, and alternatives for the Proposed Action.  
 13 Comments on the Draft EIS were accepted at the public hearings, on the project Web site  
 14 (<http://www.PACAFDivertMarianasEIS.com>), via postal service, or via telephone recording system.  
 15 Details about how to make comments were advertised notices published in local media. Comments  
 16 received on the Draft EIS during the 45-day public review period will be considered in preparation of the  
 17 Final EIS and responded to appropriately.

18 **Post-NOA Briefings.** During the public review period for the Draft EIS, PACAF project team members  
 19 provided post-NOA briefings to senior-level stakeholders in Guam and CNMI. The briefings were an  
 20 updated version of the post-NOI briefings, and were offered to an audience of stakeholders within the  
 21 region of the Proposed Action and affiliated with the alternative locations. The purpose of the briefings  
 22 was to provide ongoing coordination and communication with local stakeholders, and to inform the  
 23 stakeholders of up-to-date information regarding the Proposed Action and alternatives. The post-NOA  
 24 briefings were conducted to coincide with public hearings.

25 **Final EIS and Record of Decision Public Review.** Prior to implementing any proposed action described  
 26 in the EIS, a FEIS NOA will be issued in the *Federal Register*. USAF will issue A Record of Decision  
 27 (ROD) no sooner than 30 days after the NOA for the FEIS has been released. Public outreach efforts will  
 28 include the NOA *Federal Register* notice, advertising the notice in local newspapers, mailing a notice to  
 29 individuals and groups that commented on the Draft EIS, and posting notification on the project Web site.  
 30 The signed ROD will be posted on the project Web site. An NOA for the ROD will also be published in  
 31 the *Federal Register* and local newspapers.

## 32 1.8 EIS Organization

33 The EIS is organized into seven sections, plus appendices, as follows:

- 34 • **Section 1** provides the background information, project location, and purpose of and need for the  
 35 Proposed Action.
- 36 • **Section 2** contains a description of the Proposed Action and alternatives, including the No Action  
 37 Alternative.
- 38 • **Section 3** contains a description of the environmental resources and baseline conditions that  
 39 could be affected by the Proposed Action and alternatives.
- 40 • **Section 4** presents an analysis of the potential environmental consequences of implementing the  
 41 Proposed Action and alternatives, including the No Action Alternative.
- 42 • **Section 5** includes an analysis of the potential cumulative and other impacts.

- 1     • **Section 6** lists the preparers of the document.
- 2     • **Section 7** lists the references used in the preparation of the EIS.
- 3     • **Appendices:**
- 4         ○ **Appendix A** includes cooperating agency requests and acceptance letters
- 5         ○ **Appendix B** contains all materials related to ESA Section 7 Consultation.
- 6         ○ **Appendix C** contains all materials related to CZMA compliance.
- 7         ○ **Appendix D** contains all materials related to NHPA Section 106 Consultation.
- 8         ○ **Appendix E** contains air quality calculations and modeling.

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## 2. Description of the Proposed Action and Alternatives

This section describes the Proposed Action and alternatives PACAF is considering in fulfilling its purpose of and need for action. As discussed in **Section 1.5.1**, the NEPA process evaluates potential environmental consequences associated with a proposed action and considers alternative courses of action. Reasonable alternatives must satisfy the purpose of and need for a proposed action, as defined in **Section 1.3**. In addition, CEQ regulations specify the inclusion of a No Action Alternative against which potential impacts can be compared. While the No Action Alternative would not satisfy the purpose of or need for the Proposed Action, it is analyzed in detail in accordance with CEQ regulations. **Section 2.5** discusses the decisionmaking process and identification of the Preferred Alternative.

### 2.1 Proposed Action

The USAF proposes to improve an existing airport or airports and associated infrastructure in the Mariana Islands in support of expanding mission requirements and to achieve divert capabilities in the western Pacific. Under the Proposed Action, the USAF would develop and construct facilities and infrastructure to support a combination of USAF and joint cargo, fighter, and tanker aircraft and associated support personnel for divert landings, periodic exercises, and humanitarian assistance and disaster relief. Unplanned divert landings and humanitarian assistance and disaster relief would occur at the airport or airports proposed for improvements as required. The USAF proposes to exercise divert activities and humanitarian airlift staging at the airport or airports proposed for improvements; exercising to these capabilities will be analyzed in this EIS. The USAF proposes to improve these facilities either at a single airport, or a combination of airports, depending on the existing capabilities of the airports being considered. Proposed expanded facilities would be used on an as-needed basis and would not be used as a permanent full-time beddown or installation location.

In summary, the Proposed Action consists of meeting USAF divert activities requirements through development of airfield operational capabilities, exercising divert and humanitarian airlift staging capabilities, conducting joint military exercises, fueling and fuel storage, and development of billeting and other personnel support requirements for temporary support personnel. To facilitate analysis and organization in the EIS, the elements of the Proposed Action are divided into a construction phase (development of the facilities) and an implementation phase (activities related to joint military exercises). The construction phase includes the development or improvement of infrastructure to support the implementation phase of the Proposed Action. A general description of the elements of the Proposed Action is provided in **Sections 2.1.1** through **2.1.2**. Detailed descriptions of the alternatives are provided in **Section 2.3**.

#### 2.1.1 Construction Phase

The Proposed Action is based on accommodating a combination of joint military cargo, fighter, and tanker aircraft and associated support personnel. In order to accommodate these aircraft and achieve divert capabilities, supporting infrastructure would be needed to meet airfield operational requirements. Proposed infrastructure includes an expanded runway; associated pavement markings and lighting; parking aprons; a temporary munitions storage area; a hazardous cargo pad; an arm/disarm pad; an aircraft hangar; a maintenance facility; a jet fuel receiving, storage, and distribution system; and navigational aids. The projected timeline for the construction phase is 24 to 36 months. However, construction would depend on the completion of a Safety Management Plan and agreement by FAA, CPA, and commercial carriers. Specific construction requirements under the Proposed Action are outlined in **Sections 2.1.1.1** through **2.1.1.5**.

1 The KC-135 Stratotanker (KC-135) aircraft is indicative of tanker or cargo aircraft used by the USAF in  
2 the western Pacific. The KC-135 aircraft is being used as the design aircraft for cargo and tanker aircraft  
3 in this EIS; the KC-135 dimensions will be used to develop size and space requirements for facilities and  
4 infrastructure to support cargo and tanker aircraft under the Proposed Action. In addition, joint U.S. and  
5 foreign military cargo, tanker, and other multi-engine aircraft would use the improved facilities and  
6 infrastructure. These could include, but would not be limited to, the C-17 Globemaster (C-17), military  
7 chartered cargo planes, and military variations of civilian aircraft such as maritime patrol aircraft  
8 including the P-3 Orion (P-3) and P-8 Poseidon (P-8). It is assumed that the space to accommodate a  
9 KC-135 is roughly twice as large as the space to accommodate most tactical or fighter aircraft. A size  
10 ratio of 1 to 2 is assumed for heavy lift cargo aircraft to fighter and tactical aircraft. Fighter aircraft that  
11 might use the improved facilities and infrastructure include, but would not be limited to, the F-22 Raptor  
12 (F-22), the F-18 Hornet (F-18), F-16 Fighting Falcon (F-16), Japanese Defense Force (JDF) F-2, and Joint  
13 Strike Fighter (JSF) F-35.

#### 14 2.1.1.1 Runway and Parking Apron

15 **Runway.** Operational takeoff and landing requirements for a KC-135, per AFI 11-2KC-135 V.C.,  
16 indicate that an operational runway should be 10,500 feet long, and at least 150 feet wide with  
17 25-foot-wide paved shoulders. Operational takeoff and landing calculations provided by PACAF A5U  
18 indicate that the optimal runway length is 10,000 feet as runways less than this length reduce the load  
19 capability for a KC-135 aircraft. Per Unified Facilities Criteria (UFC) 3-260-01, *Airfield and Heliport*  
20 *Planning and Design*, a Class B operational runway should also be at least 150 feet wide with  
21 25-foot-wide paved shoulders, and is appropriate for the KC-135 (the design aircraft) and other potential  
22 aircraft (AFCEE/PACAF 2010).

23 Under the Proposed Action, the EIS will analyze the potential extension of the runway up to 10,000 feet  
24 at the airport or airports chosen for improvements in order to meet optimal KC-135 requirements as  
25 identified by PACAF A5U and as previously described. However, PACAF will also analyze options that  
26 would expand the runway at the airport or airports chosen for improvements to less than 10,000 feet, or  
27 not at all. Under these options, the location could still support divert, exercise, and humanitarian relief  
28 activities, but the KC-135 would operate at a reduced load capacity.

29 **Parking Apron.** The operational requirement for parking aprons is assumed to include one refueling  
30 hydrant per KC-135 parking spot (apron). Per UFC 3-260-01, the length and width of the design aircraft  
31 determine the area required for each parking spot. The length of the KC-135 is 136.2 feet and the width is  
32 130.8 feet. Under the Proposed Action, the parking aprons at the airport selected for expansion would  
33 need to meet design requirements for KC-135 aircraft.

34 **Pavement Markings, Lighting, and Navigational Aids.** Under the Proposed Action, all pavement  
35 markings, lighting, and navigational aids would be installed, upgraded, or relocated, as appropriate. All  
36 published terminal instrument and departures procedures would be updated due to changes in airfield  
37 touchdown zone and navigational aids relocation per FAA Order 8260.3B

#### 38 2.1.1.2 Temporary Munitions Storage Area

39 Ideally, one standard 7-Bar Earth Covered Magazine (ECM) capable of storing up to 500,000 pounds  
40 Net Explosive Weight (NEW) of Class/Division 1.1 (Mass-Detonating) explosives, or an equivalent  
41 munitions storage capability, would be needed at the airport or airports chosen for improvements to  
42 support airfield activities under the Proposed Action (AFCEE/PACAF 2010). The temporary munitions  
43 storage area would mainly be used to store munitions safely from diverted aircraft until the aircraft could  
44 return to its place of origin, or planned destination.



1 Per Air Force manual (AFMAN) 91-201, Explosive Safety Standards and in compliance with DOD  
2 Manual 6055.09-M, *Ammunition and Explosives Safety Standards*, the following safety Quantity-Distance  
3 (QD) standoff distances apply for a standard 7-Bar ECM storing Class/Division 1.1 explosives with a  
4 NEW of 500,000 pounds:

- 5 • Inhabited Building Distance (IBD)—3,969 feet
- 6 • Public Traffic Route (PTR)—2,381 feet.

7 IBD is the minimum distance required to protect non-explosives-related facilities and personnel. PTR is  
8 the minimum permissible distance between potential explosion sites and public highways or railroad  
9 lines. Per AFMAN 91-201, PTR distance applies to taxiways serving both DOD and commercial aircraft.  
10 When IBD or PTR distances decrease, the amount of munitions that can be stored also decreases. Only  
11 trained and designated ordnance personnel are permitted to work within the IBD arc.

### 12 2.1.1.3 Hazardous Cargo Pad

13 A hazardous cargo aircraft parking spot (hazardous cargo pad) would be required under the Proposed  
14 Action at the airport or airports selected for improvements in compliance with FAA and AMC  
15 requirements (AFCEE/PACAF 2010). The hazardous cargo pad would mainly be used to safely handle  
16 munitions or other hazardous cargo from diverted aircraft until the aircraft could return to its place of  
17 origin, or planned destination.

18 Per AFMAN 91-201, Explosive Safety Standards, the following safety QD standoffs apply for a standard  
19 hazardous cargo pad with class/Division 1.1 explosives with a NEW of 50,000 pounds:

- 20 • Aircraft standoff distance—1,842 feet
- 21 • PTR—1,105 feet.

### 22 2.1.1.4 Arm/Disarm Pad

23 An arm/disarm pad would be needed under the Proposed Action at the airport or airports selected for  
24 improvements. The arm/disarm pad would be used to perform final safety checks on aircraft before  
25 takeoff by aircraft maintenance personnel. The arm/disarm pad would also be used to perform initial  
26 safety checks on aircraft after landing. The arm/disarm pad would also be used for arming aircraft  
27 immediately before takeoff and for disarming (safing) weapons retained or not expended upon their  
28 return. The hazardous cargo pad could be designed and constructed to double as an arm/disarm pad.

### 29 2.1.1.5 Aircraft Hangar

30 One aircraft hangar would be needed for operations under the Proposed Action at the airport or airports  
31 selected for improvements. The hangar would be a closed structure to store aircraft awaiting maintenance  
32 or being repaired. The hangar would be approximately 180 feet by 195 feet.

### 33 2.1.1.6 Maintenance Facility

34 A 6,000-square-foot maintenance facility would be needed under the Proposed Action at the airport or  
35 airports selected for improvements and would be used as an Aircraft Maintenance Unit/Aircraft Spares  
36 Management and for storage to assist aircraft at the proposed airfield. When not in use, the facility would  
37 be used to store pre-positioned equipment and materials needed for maintenance of aircraft used in  
38 exercises and humanitarian relief efforts, including Aerospace Ground Equipment (AGE) and vehicles.

1    **2.1.1.7     Jet Fuel Receiving, Storage, and Distribution**

2    An adequate on-island supply of jet fuel would be required as part of the Proposed Action in support of  
3    aircraft operations discussed in **Sections 2.1.2.1, 2.1.2.2, and 2.1.2.4**. The USAF proposes to maintain a  
4    30-day supply of jet fuel to be able to provide fuel to aircraft through a hydrant system. In order to  
5    maintain the 30-day supply of jet fuel, a combination of fuel tanks including bulk storage and smaller  
6    operating tanks would be required, depending on the alternative options selected. PACAF determined  
7    that in order to store and use the 30-day equivalent of fuel for proposed activities, 200,000-barrels (bbls)  
8    (8.4-million-gallons) total capacity of bulk fuel storage would be required. In addition, two 10,000-bbl  
9    (420,000-gallon) operating tanks would also be required to supply the hydrant system, for a total jet fuel  
10   capacity of 220,000 bbl (9,240,000 gallons).

11   The operational requirement would consist of one refueling hydrant for each of the proposed KC-135  
12   parking spots (see **Section 2.1.1.1**) on the apron. Fuel storage requirements are based on the aircraft fuel  
13   needs during joint military exercises. The proposed fuel delivery system would be equivalent to a  
14   standard DOD 2,400 gallons per minute (gpm) Type III Hydrant Refueling System supporting the parking  
15   apron. Connection to the existing commercial hydrant system would support the potential for the  
16   additional fuel to be utilized for commercial purposes when not needed to support the Proposed Action.  
17   Fighter jets would be fueled with tank trucks that would be filled from fill stands located near proposed  
18   operating tanks at the airport. The ability to receive jet fuel on the island and ability to transfer it to the  
19   airfield would also be required.

20   **2.1.1.8     Billeting**

21   Under the Proposed Action, temporary billeting, including medical, transportation, and dining services,  
22   would be required for the personnel supporting aircraft operations during a divert landing, humanitarian  
23   airlift, or joint military exercise event. Depending on the type of billeting selected, construction could be  
24   required.

25   **2.1.2     Implementation Phase**

26   Under the Proposed Action, aircraft would engage in ground and air activities, aircraft support activities,  
27   and other airfield ground activities. It is assumed that any mix of joint fighter, cargo, and tanker aircraft,  
28   not to exceed the design capabilities of the airport, could be diverted to or exercised from the airport or  
29   airports selected for improvements simultaneously for any element of the Proposed Action. Therefore, a  
30   mix of joint cargo, tanker, and fighter aircraft is assumed for the proposed implementation of the divert  
31   capability and exercises that might include, but not be limited to, divert landings and take-offs, joint  
32   military exercises, jet fueling and storage, humanitarian airlift staging including non-combatant  
33   evacuation operations (NEOs), and billeting. KC-135s would remain the design aircraft for the  
34   implementation phase. Specific elements of the implementation phase under the Proposed Action are  
35   outlined in **Sections 2.1.2.1 through 2.1.2.5**. Representative scenarios of possible aircraft mixes are used  
36   in Chapter 4 to analyze potential environmental consequences. While the actual type and number of  
37   aircraft would not exceed the design capabilities, the precise mixture of aircraft during implementation  
38   may vary depending upon mission requirements.

39   The Joint Region Marianas Regional Engineer (J4) staff would use existing processes to review  
40   specific actions during the planning phase to ensure the proposed use would remain within the scope of  
41   activities analyzed in this or other applicable environmental planning documents. For example, when  
42   planning for an operational activity at the selected alternative, J4 would run noise models and verify it  
43   falls within the scope of what was previously analyzed. Existing processes require Commanding  
44   Officers/Officers-in-Charge of training units to comply with the mandatory regulations and guidance,

1 when requesting and conducting training in the Mariana Islands. They must ensure operational training is  
2 conducted in full compliance with appropriate service component directives, orders, standards, and  
3 procedures.

#### 4 2.1.2.1 Divert Landings

5 Unscheduled aircraft landings, also known as “divert” landings would occur at the airport or airports  
6 selected for improvements; divert landings would occur at these airports if other locations in the western  
7 Pacific, for example Andersen AFB, are unavailable for landing, such as during emergencies or natural  
8 disasters. Two types of unscheduled landings could occur at the airport or airports selected for  
9 improvements: divers resulting from malfunctioning aircraft or similar emergency situations in the air,  
10 and divers caused by natural or man-made disasters or activities at the airfield on the ground. Emergency  
11 divert landings, in accordance with the 36th Wing Instruction 13-204, would occur on an as-needed basis  
12 when an aircraft has malfunctioned or needs to land immediately due to an emergency. Other  
13 unscheduled divers would occur when the scheduled or planned location for landing is no longer  
14 accessible or operational, such as during typhoons, earthquakes, or other natural or man-made disasters.  
15 During a divert event when the scheduled or planned location for landing is no longer accessible or  
16 operational, the aircraft could continue to operate from the divert airport for up to 30 days until a more  
17 permanent home base is established. It is assumed that aircraft conducting divert landings at the airfield  
18 at any given time would require refueling, maintenance, temporary munitions download and storage, and  
19 billeting support.

20 As stated in **Section 2.1**, this EIS analyzes joint military exercises to support divert capability. Exercises  
21 are discussed in **Section 2.1.2.3**.

#### 22 2.1.2.2 Humanitarian Airlift Staging

23 Humanitarian airlift staging, including NEOs, would also occur at the airport or airports proposed for  
24 improvements as part of the Proposed Action in the event of an emergency or disaster. Examples of this  
25 type of operation include Operation Tomodachi, the DOD relief effort implemented following the  
26 2011 earthquake and tsunami in Japan and Operation Fiery Vigil following the 1991 eruption of Mount  
27 Pinatubo in the Philippines resulting in the evacuation of 20,000 people. For Operation Tomodachi, DOD  
28 officials reported that at least 20 U.S. naval ships, 140 aircraft, and approximately 20,000 Airmen, sailors  
29 and Marines were involved in humanitarian assistance and disaster relief efforts in and around Japan. At  
30 least 227 tons of relief supplies and humanitarian supplies were delivered to Japan (CRS 2011). For  
31 Operation Fiery Vigil, Clark AFB was evacuated, and more than 20 U.S. Naval ships and their personnel  
32 sortied from Subic Bay Naval Base to evacuate more than 20,000 personnel to Andersen AFB for further  
33 transport to safe havens. This operation included around-the-clock arrivals from the Philippines,  
34 processing through U.S. Immigration screening, and around-the-clock departures to cities of safe haven.

35 Emergency responses to natural disasters of this nature require pre-planning and exercising for the  
36 potential contingency. As stated in **Section 2.1**, this EIS analyzes the joint military exercises required to  
37 execute humanitarian airlift and disaster relief missions in real world situations. Military exercises are  
38 discussed in **Section 2.1.2.3**.

#### 39 2.1.2.3 Joint Military Exercises

40 A limited number of scheduled joint, combined, and unit-level military training activities and exercises,  
41 as described and analyzed in the MIRC EIS, for which a ROD was issued on July 20, 2010, would occur  
42 under the Proposed Action at the airport or airports selected for improvements (DON 2010 a). Exercises

1 focus on real-world proficiency in sustaining joint forces and detecting, tracking, and engaging units at  
2 sea, in the air, and on land in response to a wide range of missions.

3 Joint military exercises are an important opportunity to bring together multi-service and multi-national  
4 platforms that do not always have the opportunity to train or exercise collectively. The U.S. Navy,  
5 USAF, USMC, and military from other countries operate a variety of combat and combat-support aircraft  
6 designed to meet joint and multi-national training objectives for many exercises. These joint and  
7 multi-national exercises are commonly referred to as joint-combined exercises. The United States  
8 routinely deploys forces to train in the western Pacific. Joint and combined exercises and training  
9 maintain a stabilizing presence in the region, while allowing U.S. forces and other nations to practice  
10 joint-combined skills in peacetime to prepare for success during a contingency (DON 2006). Examples of  
11 typical combined exercises include Valiant Shield and Cope North. Valiant Shield occurs biannually and  
12 usually takes place in September. This exercise involves land and maritime forces from U.S. Navy,  
13 USAF, and USMC, combined with multi-national forces, including observers from the Pacific Rim  
14 nations. Cope North occurs annually and typically takes place in mid-February and also might include  
15 multi-national forces.

16 In addition to joint military exercises, unit-level training would also occur at the airport or airports  
17 selected for improvements. Unit-level training would include exercising the capability to conduct divert  
18 landings and humanitarian airlift staging, as discussed in **Sections 2.1.2.1** and **2.1.2.2**.

19 For the purpose of analysis in this EIS, it is assumed that both unit-level training and Cope North- and  
20 Valiant Shield-type exercises would each take place annually for a combined total of 60 days per year at  
21 the airport or airports selected for improvement. This EIS addresses only the ground movements and  
22 immediate approaches and departures at the airport or airports selected for development (e.g., take-offs  
23 and landings) during unit-level training and exercises. Actual air warfare and air logistics training  
24 (i.e., above 10,000 feet) are addressed by the MIRC EIS, for which a ROD was issued on July 20, 2010  
25 (DON 2010a). In summary, this EIS does not propose or analyze increased air operations beyond what is  
26 addressed by the MIRC EIS; this EIS analyzes the shift of some of the aircraft operating during these  
27 exercises to the airport or airports proposed for improvements (DON 2010a).

#### 28 2.1.2.4 Jet Fuel Receiving, Storage, and Distribution

29 As stated in **Section 2.1.1.5**, one refueling hydrant for each KC-135 parking spot, (see **Section 2.1.1**), a  
30 fuel delivery system equivalent to a standard DOD 2,400 gpm Type III Hydrant Refueling System, jet  
31 fuel storage, and means of fuel resupply would be required for the airport or airports selected for  
32 improvements under the Proposed Action. Each proposed location has existing commercial  
33 fuel-receiving capability as part of the CPA marine ports. Therefore, it is assumed that no harbor or port  
34 improvements would be required to support jet fuel receipt ship to shore. The receipt of fuel would be  
35 through the existing CPA commercial facilities. The ability to store fuel and transfer fuel from the  
36 receiving port to the airfield would need to be developed because the existing fuel transport and storage  
37 capacity at the alternative locations is not sufficient to support the Proposed Action. Once these elements  
38 are constructed, as discussed in **Section 2.1.1.5**, they will be operated in support of divert landings,  
39 military exercises, and humanitarian relief and disaster relief efforts.

40 Fuel operations are based on the estimated aircraft fuel needs for divert activities and exercises. Divert  
41 operations under this EIS are assumed to require approximately 300,000 gallons per day for 60 days.

1    **2.1.2.5    Billeting**

2    Under the Proposed Action, temporary billeting, including medical, transportation, and dining services,  
3    would be required for the personnel supporting aircraft operations during a divert landing, humanitarian  
4    airlift, or military exercise events.

5    **2.2    Selection of Site Alternatives to the Proposed Action for the EIS**

6    Considering alternatives helps to avoid unnecessary impacts and allows for an analysis of reasonable  
7    ways to achieve the stated purpose. To warrant detailed evaluation, an alternative must be reasonable. To  
8    be considered reasonable, an alternative must be suitable for decisionmaking, capable of implementation,  
9    and sufficiently satisfactory with respect to meeting the purpose of and need for the action. CEQ  
10   regulations define reasonable alternatives as those that are economically and technically feasible, and that  
11   show evidence of common sense. During the scoping process for this EIS, PACAF considered several  
12   existing FAA-regulated airports in the Marianas for developments and improvements to support  
13   expanding mission requirements in the western Pacific. GSN, Saipan; TNI, Tinian; and Rota  
14   International Airport (GRO), Rota, in CNMI; and GUM, Guam were identified during initial scoping as  
15   potential locations for the airport improvements because of their locations in the western Pacific and  
16   proximity to the Philippine Sea. Additionally, all of these locations, with the exception of TNI, are  
17   currently listed in the 36th Air Wing Instruction (AWI) 13-204 as locations for emergency divert landings  
18   in the western Pacific.

19   **2.2.1    Selection Standards for Location Alternatives**

20   Certain facility, operational, and mission requirements must be present or reasonably attainable to meet  
21   the purpose of and need for the Proposed Action. There are many potential divert airfield locations across  
22   the Pacific Rim, but fall too far outside USAF-established selection standards for consideration in this  
23   EIS. For this reason, the following locations were considered and dismissed from analysis during the  
24   development of the Proposed Action and will not be addressed in this EIS: Kwajalein Atoll, Midway,  
25   Hawai'i, Wake Island Airfield, and the Aleutian Islands.

26   The following selection standards were developed based on USAF operational requirements for proposed  
27   airfield improvements and flight operations. The selection standards were then applied to the possible site  
28   alternatives identified during scoping to select those alternatives considered reasonable for implementing  
29   the Proposed Action and carried forward for detailed analysis in this EIS. Following are the selection  
30   standards required for the airfield:

- 31       • Be located in a U.S. territory
- 32       • Not be located within the average diameter of the eye of a typhoon having damaging winds  
33       affecting Andersen AFB (storm radius)
- 34       • Provide existing land and infrastructure with expansion capabilities
- 35       • Be located within the MIRC training area
- 36       • Provide existing fuel-receiving capabilities at the port of debarkation.

37   These selection standards are described in **Sections 2.2.1.1** through **2.2.1.5**.

38   **Section 2.2.2** provides an analysis of these alternatives screened against these selection standards.

1    **2.2.1.1    U.S. Territory**

2    The USAF, operating from U.S. territories, is free of the political encumbrances that sometimes inhibit  
3    and can limit the scope of land-based operations in foreign territories and countries. Therefore, in order  
4    to meet the need to provide strategic capabilities of U.S. forces and humanitarian airlift in times of natural  
5    disasters, the airfield selected for development must be located on U.S. territory (see **Section 1.3**, Purpose  
6    and Need).

7    **2.2.1.2    Storm Radius**

8    As described in **Section 1.3**, the purpose of the Proposed Action is to achieve and maintain USAF  
9    readiness by establishing additional divert capabilities to support and conduct current, emerging, and  
10   future training activities, while ensuring the capability to meet mission requirements should access to  
11   Andersen AFB be limited or denied, such as during Typhoon Pongsona in 2002. Additionally, the  
12   Proposed Action is needed to enable the USAF to meet the statutory responsibility to organize, train,  
13   equip, and maintain combat-ready air forces and to successfully fulfill their current and future global  
14   mission of winning wars, deterring aggression, and maintaining stability in the western Pacific even if  
15   access to Andersen AFB is limited (e.g., during a training event or humanitarian relief) or denied  
16   (e.g., due to natural or man-made disaster). This EIS focuses on ensuring that the USAF can achieve its  
17   mission mandated by Title 10 U.S.C. § 8062 in the event of a disruption of operational capabilities at  
18   Andersen AFB. In the event of a natural or man-made disaster (e.g., earthquake, typhoon) that closes  
19   Andersen AFB, it is likely that other locations in close proximity to Andersen AFB would also be  
20   affected. The average diameter of a tropical cyclone (including typhoons) is 30 to 45 NM and, therefore,  
21   the airport or airports selected for improvements should be located more than 45 NM from Andersen  
22   AFB (Joint Typhoon Warning Center 1997).

23   **2.2.1.3    Land and Infrastructure with Expansion Capabilities**

24   In order to meet the purpose of the Proposed Action to achieve and maintain USAF readiness by  
25   establishing additional divert capabilities to support and conduct current, emerging, and future training  
26   activities, while ensuring the capability to meet mission requirements, the airfield selected for  
27   development must have the capacity to expand its existing land and infrastructure. Certain airfield  
28   operational requirements must be implemented to meet the mission to conduct divert landings and future  
29   training activities that are not standard at FAA-regulated airports (e.g., hazardous cargo pad).  
30   Additionally, land and infrastructure expansion must be done within the confines of DOD Instruction  
31   4165.71 Real Property Acquisition, which limits the approvals for major land acquisitions. Therefore, the  
32   airfield selected for development must have adequate land and infrastructure with expansion capabilities  
33   to accommodate airfield operational requirements needed to conduct divert landings and exercises.

34   **2.2.1.4    Within MIRC**

35   One element of the Proposed Action is to conduct divert landings (see **Section 2.1.2.1**) and to exercise in  
36   accordance with the need to achieve and maintain USAF military readiness. The MIRC, the only  
37   U.S.-controlled training complex in the western Pacific, is the location where U.S. forces, including  
38   USAF units, train in the Marianas. The range complex includes FDM, an air-to-ground strike range, and  
39   SUA designed for military activities. The airport or airports selected for improvements should be in close  
40   proximity to these training locations in case of emergency and to provide access to divert capabilities to  
41   support and conduct current, emerging, and future training activities. An additional airfield within the  
42   existing MIRC would ensure the capability to meet mission and training requirements should access to  
43   Andersen AFB be limited (e.g., during an operational event) or denied (e.g., due to natural or man-made  
44   disaster). Therefore, the airfield selected for development should be within the MIRC.

1 Improving an additional airfield within the MIRC would provide an alternative location to Andersen  
2 AFB, within the training complex in emergency situations. The ability to have a designed and designated  
3 divert location within reasonable flying time to the air-to-ground strike range at FDM, or other air-to-air  
4 training locations within designated airspace is essential to training safety.

### 5 2.2.1.5 Fuel-Receiving Capabilities

6 The airfield selected for development must be within close proximity to a harbor or port that provides fuel  
7 tankers access to the island to replenish the supply of jet fuel in the jet fuel storage system  
8 (see **Section 2.1.2.3**). Jet fuel will be needed, as described in **Sections 2.1.1.5** and **2.1.2.3**, in support of  
9 divert landings, exercises, and humanitarian airlift staging to meet expanding mission requirements and to  
10 meet the purpose of and need for the Proposed Action. Additionally, harbors or ports currently providing  
11 access to fuel vessels would already be permitted under the Oil Pollution Act (OPA) of 1990 and the  
12 permit would require only revisions; the construction or expansion of a harbor or port to allow access of  
13 fuel vessels would require permitting under the OPA of 1990.

## 14 2.2.2 Evaluation and Selection of Alternatives

15 GSN, Saipan; TNI, Tinian; and GRO, Rota, in CNMI; and GUM, Guam, were identified during scoping  
16 as potential locations for the airport improvements because of their location in the western Pacific and  
17 proximity to the Philippine Sea. These possible alternatives were evaluated against the alternative  
18 selection standards described in **Section 2.2.1**. The detailed evaluation of each alternative is provided in  
19 **Sections 2.2.1.1** through **2.2.2.4**. A summary of the evaluation and selection of alternatives for analysis  
20 in the EIS is provided in **Section 2.2.3**.

### 21 2.2.2.1 GUM, Guam

22 **U.S. Territory.** GUM is on the Island of Guam, which is a U.S. territory. Therefore, GUM meets the  
23 requirements of the U.S. territory selection standard.

24 **Storm Radius.** GUM is approximately 10 NM from Andersen AFB; it is likely that in the event of a  
25 natural or man-made disaster that closes Andersen AFB, GUM would also be affected. Therefore, GUM  
26 does not meet the requirements of this selection standard.

27 Additionally, during the public scoping period for this EIS, comments were received concerning the  
28 proximity of GUM to Andersen AFB. Comments included, “The Guam International Airport is too close  
29 to Andersen AFB to be viable as a divert field. Any typhoon or earthquake that disables Andersen will  
30 more than likely also disable Guam International Airport. Therefore, it is desirable for the civilian airport  
31 in Guam to also have a divert field that is located on Rota, Tinian, or Saipan. We cannot rely upon  
32 Andersen to be a divert field for the Guam civilian airport.”

33 **Land and Infrastructure Expansion Capacity.** GUM has adequate capabilities but limited ability to  
34 expand existing infrastructure because of limited space; the existing parking aprons and facilities are fully  
35 used by commercial aircraft. Therefore, GUM meets the requirements of this selection standard to a  
36 limited extent.

37 **Within MIRC.** GUM is located within the MIRC. Therefore, it meets the requirements of this selection  
38 standard.

39 **Access for Fuel Vessels.** GUM is within close proximity to a harbor that currently provides access to  
40 large fuel vessels. Therefore, GUM meets the requirements of this selection standard.

1 2.2.2.2 GRO, Rota

2 **U.S. Territory.** GRO is on the Island of Rota within the CNMI, which is a U.S. territory. Therefore, it  
3 meets the requirements of this selection standard.

4 **Storm Radius.** GRO is located approximately 40 NM from Andersen AFB. Therefore, GRO is within  
5 the average diameter of a typhoon eye from Andersen AFB. Therefore it does not meet the requirements  
6 of this selection standard.

7 **Land and Infrastructure Expansion Capacity.** GRO has limited capacity to expand facilities because of  
8 topography of the island and proximity to existing critical habitat for threatened and endangered species.  
9 Therefore, GRO meets the requirements of this selection standard to a limited extent.

10 **Within MIRC.** GRO is located within the MIRC. Therefore, GRO meets the requirements of this  
11 selection standard.

12 **Access for Fuel Vessels.** The Island of Rota has two harbors with the West Harbor serving as the  
13 primary harbor. However, the West Harbor would require revetment repair, significant improvements,  
14 and maintenance dredging in order to provide access to fuel tankers to meet the fuel requirements under  
15 the Proposed Action. Therefore, there is no harbor on the Island of Rota that currently provides the  
16 required fuel vessel access, and thus Rota does not meet the requirements of this selection standard.

17 2.2.2.3 TNI, Tinian

18 **U.S. Territory.** TNI is on the Island of Tinian within the CNMI, which is a U.S. territory. Therefore, it  
19 meets the requirements of this selection standard.

20 **Storm Radius.** TNI is located on the Island of Tinian which is approximately 94 NM from Andersen  
21 AFB. Therefore, it meets the requirements of this selection standard.

22 **Land and Infrastructure Expansion Capacity.** TNI has adequate capacity to expand into existing  
23 military-leased areas to the north. However, expansion to the west of the airport is limited by island  
24 topography. Expansion to the east of the airport is limited by an existing roadway. Therefore, it meets  
25 the requirements of this selection standard to a limited extent.

26 **Within MIRC.** TNI is located within the MIRC and, therefore, TNI meets the requirements of this  
27 selection standard.

28 **Access for Fuel Vessels.** Tinian Harbor is currently in disrepair but does support limited shipping,  
29 including shallow draft (i.e., small size) cargo ships, fuel vessels, and passenger ships. Tinian has a  
30 limited capability to accept fuel shipments at the port and meets the requirements of this selection  
31 standard to a limited extent.

32 2.2.2.4 GSN, Saipan

33 **U.S. Territory.** GSN is on the Island of Saipan within the CNMI, which is a U.S. territory. Therefore, it  
34 meets the requirements of this selection standard.

35 **Storm Radius.** GSN is located 103 NM from Andersen AFB. Therefore, it meets the requirements of  
36 this selection standard.



1 **Land and Infrastructure Expansion Capacity.** GSN has limited land on which to expand its  
 2 infrastructure and capabilities because of island topography (i.e., the island is a plateau), critical habitat  
 3 (i.e., nightingale reed warbler habitat), and historic resources (i.e., World War II bunkers). Approval  
 4 from the FAA for a non-standard runway would be needed for development. Therefore, GSN meets the  
 5 requirements of this selection standard to a limited extent.

6 **Within MIRC.** GSN is located within the MIRC. Therefore, it meets the requirements of this selection  
 7 standard.

8 **Access for Vessels.** The Saipan harbor currently accepts fuel tankers and it is presumed that the same  
 9 tankers that currently supply Saipan with jet fuel would continue to do so under this alternative and no  
 10 port improvements would be needed to meet the fuel shipping requirements under the Proposed Action.  
 11 Therefore, GSN meets the requirements of this selection standard.

12 **2.2.3 Summary of Alternatives Evaluation**

13 The evaluation of possible site alternatives identified only two site alternatives that meet, or have the  
 14 ability to meet, each selection standard. Accordingly, TNI and GSN are able to meet the purpose of and  
 15 need for the Proposed Action and will be considered in the analysis as alternatives. A potential site  
 16 alternative with red in the matrix below cannot meet the stated purpose and need, and will not be  
 17 considered in detail in the EIS. See **Table 2.2-1** for a summary of each site alternative evaluated against  
 18 the selection standards.

19 **Table 2.2-1. Evaluation of Alternatives Against Selection Standards**

Selection Standard	GUM	GRO	TNI	GSN
U.S. Territory	Green	Green	Green	Green
Storm radius	Red	Red	Green	Green
Adequate land and existing infrastructure with expansion potential to satisfy Proposed Action requirements	Yellow	Yellow	Yellow	Yellow
Provide a secondary airfield within MIRC (average approximate 30-minute flight time)	Green	Green	Green	Green
Access to fuel vessels	Green	Yellow	Yellow	Green

Key:

Green = meets selection standard

Yellow = limited capability to meet selection standard, or can be brought to standard

Red = does not meet selection standard and cannot be brought or made to meet standard

20 **2.3 Alternatives to the Proposed Action Carried Forward for Analysis**

21 **2.3.1 Alternative 1 – GSN**

22 As described in **Section 2.1**, the Proposed Action includes supporting joint military cargo, fighter, and  
 23 tanker aircraft. In this EIS, the KC-135 aircraft represents the design aircraft for each element of the  
 24 Proposed Action in order to develop size and space requirements for facilities and infrastructure, and to  
 25 conduct the analysis of potential impacts. The USAF proposes to divert and exercise other USAF and  
 26 joint military aircraft including cargo, fighter, and tanker aircraft, in accordance with typical operational  
 27 scenarios.

1 Under Alternative 1, GSN would be improved to an airfield design that could accommodate 12 KC-135  
2 aircraft to meet the purpose of and need for the Proposed Action. This airfield design would also  
3 accommodate other military logistics and tactical aircraft. The airfield design assumes that the KC-135  
4 aircraft represents large logistics (or heavy lift cargo) aircraft and it is assumed that the space to  
5 accommodate a KC-135 is roughly twice as large as the space to accommodate most tactical or fighter  
6 aircraft. A size ratio of 1 to 2 is assumed for heavy lift cargo aircraft to fighter and tactical aircraft;  
7 therefore, 24 fighter or tactical aircraft could be diverted to or exercised from GSN simultaneously for  
8 any element of the Proposed Action, not to exceed the capabilities of the proposed design. Finally, it is  
9 also assumed that a mix of fighter, tactical, and large logistics aircraft (e.g., 10 large logistics aircraft and  
10 4 fighters) could be diverted to or exercised from GSN simultaneously for any element of the Proposed  
11 Action as long as the mix does not exceed airfield design capabilities. The temporary support personnel  
12 population accompanying the aircraft under Alternative 1 would not exceed 700, regardless of what mix  
13 of aircraft is diverted to or exercised from GSN. Specific elements of Alternative 1, the GSN Alternative,  
14 are described in **Sections 2.3.1.1** and **2.3.1.2**. The potential numbers of aircraft represent the highest or  
15 “worst-case” scenario under the Proposed Action.

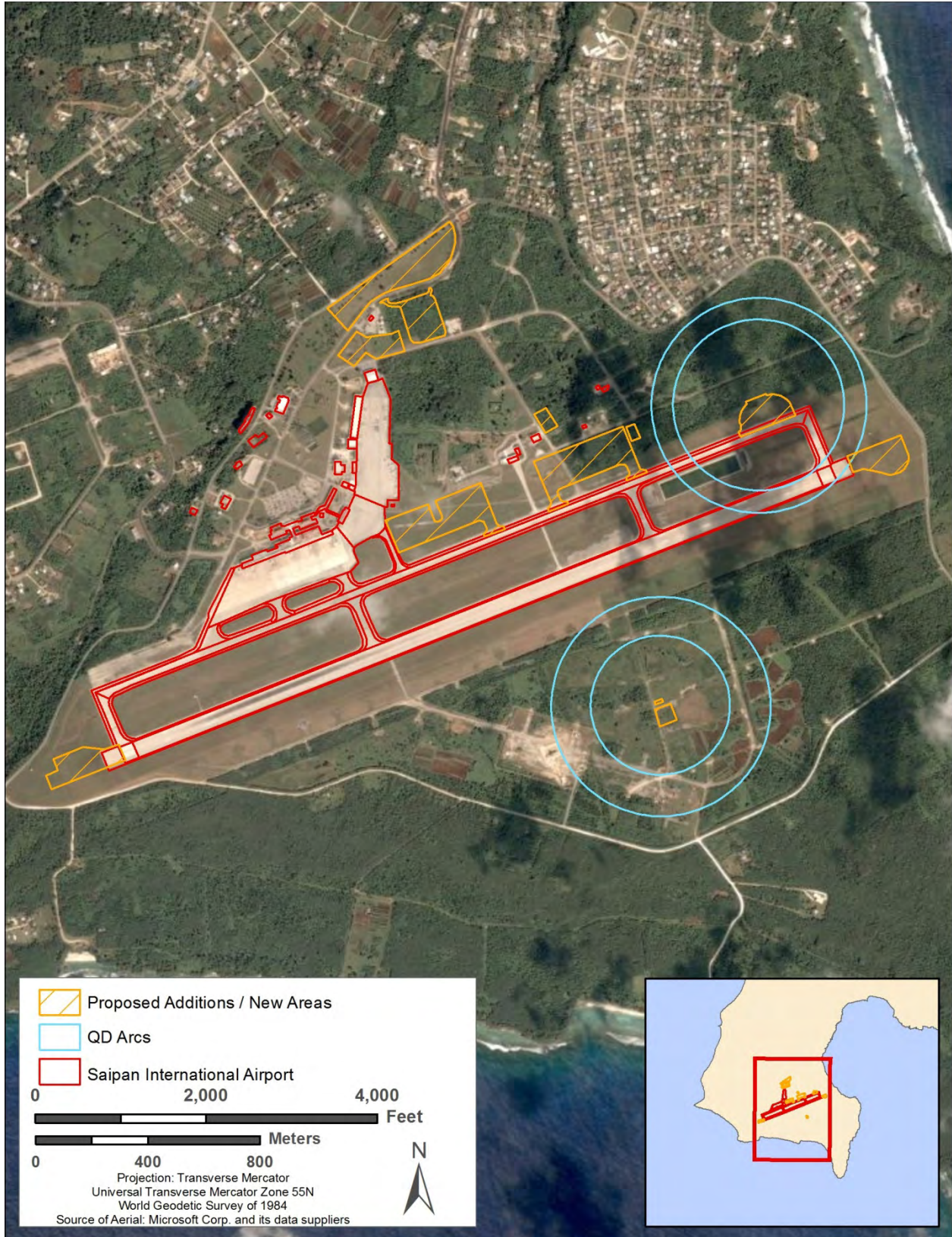
16 In order to reduce strain on existing airport and commercial facilities and infrastructure, the USAF  
17 proposes to construct and expand new facilities, rather than fully utilize existing facilities in both the  
18 Construction and Implementation Phase of Alternative 1.

### 19 2.3.1.1 Alternative 1 – Construction Phase

#### 20 Runway and Parking Apron

21 **Runway.** To meet minimum operational requirements identified by PACAF and described in  
22 **Section 2.1.1.1**, a 10,000-foot-long runway surface is required for the KC-135. Under Alternative 1, the  
23 USAF would expand the existing 8,700-foot-long GSN runway on the east and west ends to 10,075 feet  
24 long by 150 feet wide (plus 50 feet of paved shoulders); or on the east end only to 9,350 feet long by  
25 150 feet wide (plus 50 feet of paved shoulders), or would not expand the existing runway at all. The  
26 10,075-foot runway is optimal, but might not be feasible due to airport boundary constraints, and  
27 topography. **Figure 2.3-1** includes a schematic site plan of the proposed expansion for the 10,075-foot  
28 runway to the east and west. For the 9,350-foot runway option, the west end extension depicted on  
29 **Figure 2.3-1** would not be constructed. For the no extension option, neither the west end or east end  
30 extension depicted on **Figure 2.3-1** would be constructed.

31 **Option A- 10,075-foot-long Runway Option.** The existing runway is positioned roughly east to west, is  
32 8,700 feet long by 150 feet wide, and has two 25-foot paved shoulders. If the 10,075-foot-long runway  
33 was constructed under Alternative 1, the existing runway would be expanded to the east and west.  
34 Therefore, the existing runway at GSN would be extended by a total of 1,375 feet under Alternative 1. It  
35 is proposed that the west end of runway 07 would be extended by 725 feet by 150 feet wide (plus 50 feet  
36 of paved shoulders). It is also proposed that the east end of runway 07 would be extended by 650 feet by  
37 150 feet wide (plus 50 feet of paved shoulders). The runway extensions would only be used for  
38 emergency take-offs and landings and would be striped (and marked) as “unusable” by all commercial  
39 (on a daily basis) and military aircraft (during exercises). The design strength would require a 12-inch  
40 base with 14 inches of concrete. A significant amount of structural fill (approximately 655,000 cubic  
41 yards [yds<sup>3</sup>]) would be required for the runway extension; structural fill would be obtained from existing  
42 quarries or borrow pits on the island, approximately 4 miles from the airfield.



1

**Figure 2.3-1. Overview of Proposed Action Areas at GSN**

1 **Option B- 9,350-foot-long Runway Option.** The USAF could also lengthen the existing GSN runway to  
2 9,350 feet instead of 10,075 feet; the shorter runway under this option would result in a reduced load  
3 capability for a KC-135 aircraft but could still support basic exercise, divert, and humanitarian activities.  
4 Construction of the 9,350 feet or less runway would result in a total maximum addition to the existing  
5 GSN runway of 650 feet. Under this option, it is proposed that only the east end of runway 07 would be  
6 extended by 650 feet by 150 feet wide (plus 50 feet of paved shoulders). The design strength would  
7 require a 12-inch base with 14 inches of concrete. A significant amount of structural fill (approximately  
8 315,000 yds<sup>3</sup>) would be required for the runway extension; structural fill would be obtained from existing  
9 quarries or borrow pits on the island approximately 4 miles from the airfield.

10 **Option C- No Extension Option.** The USAF could also decide not to lengthen the existing GSN runway;  
11 the shorter existing runway of 8,700 feet long under this option would result in a reduced load capability  
12 for a KC-135 aircraft, but could still support basic exercise, divert, and humanitarian activities. No  
13 structural fill would be required under this option.

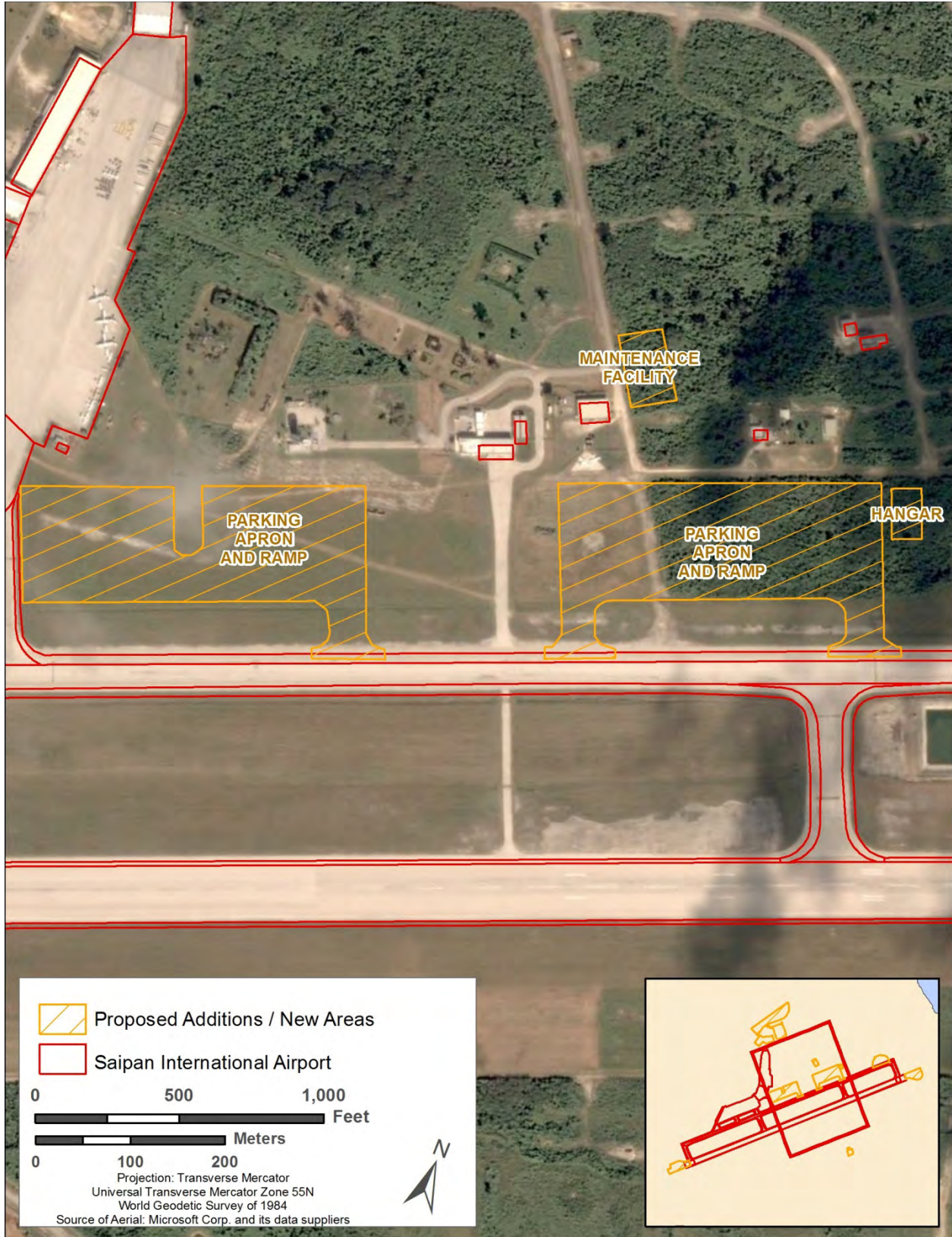
14 **Pavement Markings, Lighting, and Navigational Aids.** To accommodate the proposed runway  
15 extension, the existing Medium Intensity Approach Lighting System with Runway Alignment Indicator  
16 Lights (MALSR) would be replaced with a 2,400-foot approach lighting system with sequenced  
17 flashing- (ALSF) 1 on the runway 07 west end per UFC 3-260-01. It is proposed that the distance  
18 remaining markers and Runway End Identifier Lights (REIL) systems all be replaced. The middle marker  
19 and nondirectional beacon might need to be relocated as well. In addition, the glideslope and localizer  
20 would be relocated if the threshold locations were changed. The existing runway edge lights are proposed  
21 to be extended the length of the proposed runway addition. All proposed lighting system improvements  
22 are in accordance with UFC 3-535-01 Visual Air Navigation Facilities.

23 **Parking Aprons.** To meet operational requirements, ramp area is required for 12 KC-135 aircraft under  
24 Alternative 1. Under Alternative 1, the proposed new parking apron would be constructed along the  
25 existing GSN runway.

26 In order to avoid existing cultural resources on the GSN property, two separate parking aprons would be  
27 constructed adjacent to each other on the north side of the existing runway, with up to six KC-135 parking  
28 spots each. The total area of the proposed new apron area is approximately 17.07 acres, or  
29 899,547 square feet (ft<sup>2</sup>). The design strength would require a 12-inch base with 14 inches of concrete for  
30 the entire ramp expansion. Ballfield-type lighting is proposed on the northeastern boundary to provide  
31 adequate security and operational lighting for night operations. Airfield lighting systems would include  
32 only the lighting facilities required for support of aircraft operational areas. Controls and equipment vault  
33 facilities would be included as necessary to provide a complete and usable system. Design and equipment  
34 would conform to criteria contained in UFC 3-535-01. **Figure 2.3-2** presents proposed parking apron  
35 areas.

## 36 Temporary Munitions Storage Area

37 Under Alternative 1, the ECM would be sited approximately 1,750 feet south of the centerline of the  
38 runway and approximately 1,160 feet east of the Aircraft Rescue Training Area (ARTA). To adhere to  
39 minimum safety criteria and standoff distances in compliance with DOD Manual 6055.09-M, *Ammunition  
40 and Explosives Safety Standards*, and based on the limitation of the 1,750-foot distance between the  
41 proposed ECM location and the IBD (considered to be the runway centerline), the maximum NEW,  
42 1.1 Mass-Detonating quantity that could be stored in the ECM would be approximately 83,000 pounds  
43 NEW. The standoff distances limit the potential location of the ECM to the south of the existing runway.



1 **Figure 2.3-2. Proposed Parking Aprons, Hangar and Maintenance Facility at GSN**

1 For the primary munitions hauling route, the existing road infrastructure that connects the ARTA to the  
2 runway would be used. No inhabited facilities are within the IBD 1,750-foot QD standoff distance at this  
3 location. A multi-cube magazine would also be constructed as part of the temporary munitions storage  
4 area under Alternative 1. The magazine would be collocated with the ECM and would be covered by the  
5 QD arc for the ECM. The total storage capacity of these proposed munitions storage facilities would not  
6 exceed 83,000 pounds NEW.

7 The ECM would be approximately 95 feet by 35 feet and the multi-cube would be adjacent to the ECM  
8 with a size of approximately 205 feet by 207 feet. **Figure 2.3-3** includes a schematic site plan for the  
9 temporary munitions storage area.

## 10 Hazardous Cargo Pad and Arm/Disarm Pad

11 To meet operational requirements and to adhere to minimum safety criteria and standoff distances in  
12 compliance with DOD Manual 6055.09-M, DOD Ammunition and Explosives Safety Standards, the  
13 hazardous cargo pad under Alternative 1 would be located on the eastern portion of the taxiway  
14 connecting back into the runway. The proposed layout is a flow-through horseshoe design that would  
15 allow aircraft to taxi onto the hazardous cargo pad and then taxi off the pad and connect back to the  
16 taxiway and runway. The hazardous cargo pad would be approximately 670 feet by 370 feet. The  
17 hazardous cargo pad was previously a drive-through taxi lane and would be filled with concrete to create  
18 the hazardous cargo pad. The design strength would require a 12-inch base with 14 inches of concrete.  
19 The concrete filled hazardous cargo pad would also function as an arm/disarm pad. The proposed  
20 location complies with all airfield criteria. The maximum NEW for the joint hazardous cargo pad and  
21 arm/disarm pad is based on the distance to the centerline of runway, which is the closest object that needs  
22 to meet an IBD. The distance to the joint hazardous cargo pad and arm/disarm pad is 913 feet; therefore  
23 the maximum NEW of class/Division 1.1 explosives for the joint hazardous cargo pad and arm/disarm  
24 pad is 11,891 NEW. No inhabited facilities or aircraft are within the standoff distance at this location.

25 **Figure 2.3-4** includes a schematic site plan for the arm/disarm pad and hazardous cargo pad.

## 26 Aircraft Hangar

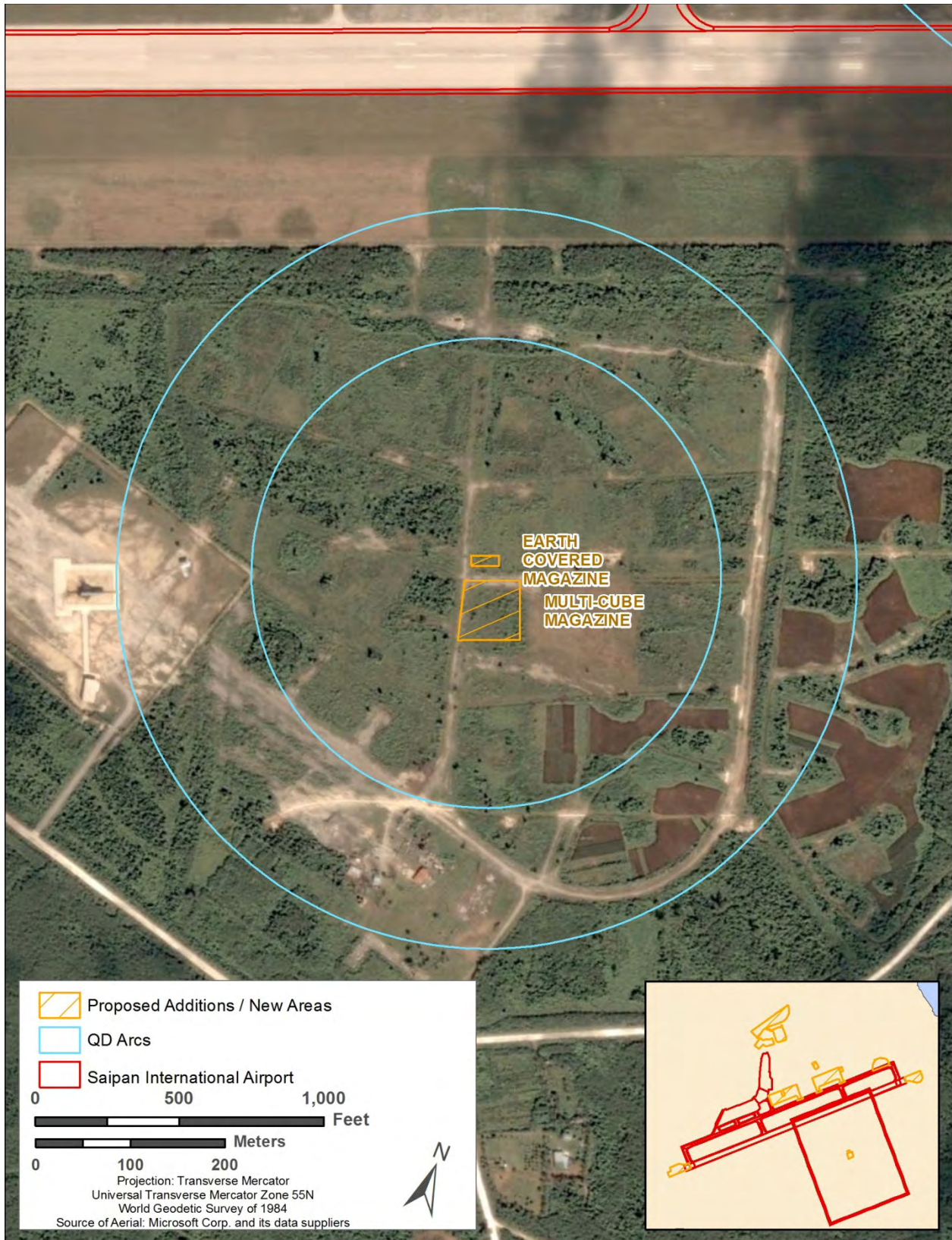
27 Under Alternative 1, one aircraft hangar would be constructed at GSN. The hangar would be  
28 approximately 180 feet by 195 feet, or approximately 35,100 ft<sup>2</sup>, and would be located adjacent to the  
29 parking ramp and apron. **Figure 2.3-2** includes a schematic site plan for the hangar.

## 30 Maintenance Facility

31 A maintenance facility would be constructed north of the apron near the pre-engineered building last used  
32 for commercial skydiving under Alternative 1. The maintenance facility would be approximately  
33 6,000 ft<sup>2</sup>. **Figure 2.3-5** includes a schematic site plan for the maintenance facility.

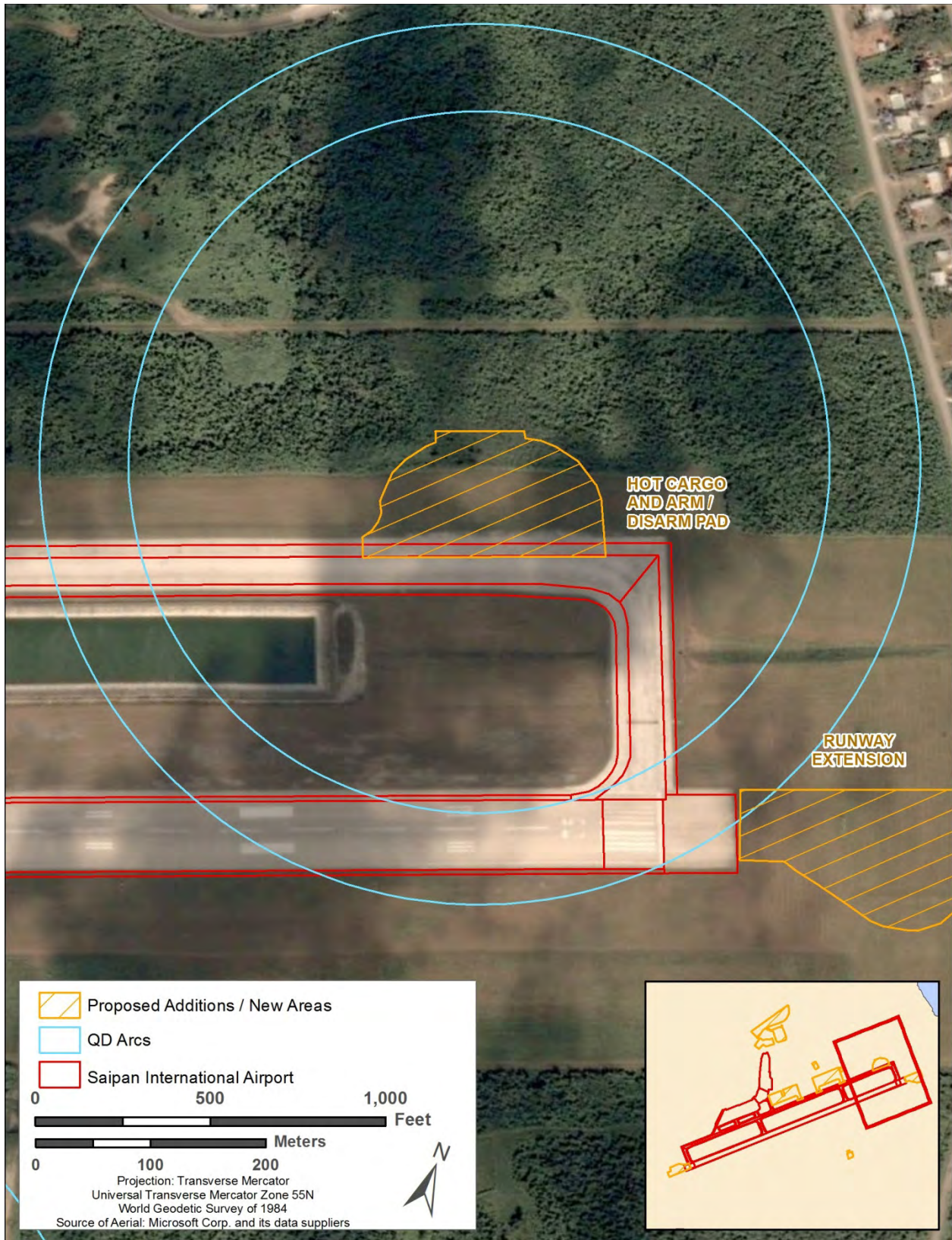
## 34 Jet Fuel Receiving, Storage, and Distribution

35 Due to the geographic location and current limited jet fuel receipt, storage, and dispensing capability on  
36 Saipan, it was determined that fuel support under the Proposed Action would be impossible to sustain  
37 without infrastructure investments. In order to sustain fuel operations under Alternative 1, fuel tanks  
38 would be installed at GSN and at the seaport on Saipan (AFCEE/PACAF 2010).



1

**Figure 2.3-3. Schematic Site Plan for Temporary Munitions Storage Area**



1 **Figure 2.3-4. Schematic Site Plan for Hazardous Cargo Pad and Arm/Disarm Pad**





1

Figure 2.3-5. Schematic Site Plan for Maintenance Facility

1 Under Alternative 1, jet aircraft refueling capability would be provided at the airport by using a  
2 combination of current capability and installing a standard DOD-designed 2,400 gpm Type III Hydrant  
3 Refueling System adjacent to the new ramp that would be constructed. This refueling system would also  
4 tie into the existing parking ramp (with minimum disruption to commercial aircraft operations during  
5 construction periods) and the proposed parking apron expansion. This option would include constructing  
6 two 10,000-bbl, aboveground operating tanks that would be located near the new 100,000-bbl bulk  
7 storage tank. Additional fuels related infrastructure would include two truck fill tanks, an emergency  
8 generator, transfer pumphouse, pumps, piping, filtration, valves, and a Pantograph/Hydrant Servicing  
9 Vehicle (HSV) Test Station. This option would meet PACAF's operational need to support 12 primary  
10 assigned aircraft parking/refueling requirement. Special considerations were given to ensure current  
11 capability would be maximized to reduce fueling infrastructure costs. In order to sustain potential aircraft  
12 activity on the island, it was determined that one DOD Standard Design 100,000-bbl (4.2-million-gallon),  
13 aboveground tank would be required for aviation fuel bulk storage capability and located on airport  
14 property. This system would include tanks, pumps, valves, filtration systems, emergency generator, and  
15 concrete work. In addition, two aboveground 50,000-bbl (2.1-million-gallon) tanks with pump, filter,  
16 issue fillstand with two positions, and associated piping would be constructed near the seaport on existing  
17 federally leased land. The proposed location is adjacent to the U.S. Army Reserve Center between Beach  
18 Road and Middle Road, inland from the existing commercial fuel storage area.

19 **Figures 2.3-6 and 2.3-7** include schematic site plans for one bulk fuel tank and two operational tanks at  
20 the airport, and two bulk fuel tanks at the seaport, respectively.

## 21 **Billeting**

22 Under Alternative 1, temporary billeting would be required for up to 700 personnel at GSN that would  
23 support aircraft operations during a divert landing, humanitarian airlift, or military exercise event. The  
24 USAF proposes to accommodate support personnel either by using commercial lodging on the Island of  
25 Saipan or a Basic Expeditionary Airfield Resources (BEAR) 550 Initial Housekeeping Set (XFB1H) kit  
26 (BEAR kit).

27 **Commercial Lodging Option.** If the USAF were to use commercial lodging, no additional construction  
28 or improvements at GSN would be needed.

29 **BEAR Kit Option.** If the USAF were to use a BEAR kit for billeting, the BEAR kit would be established  
30 at GSN in accordance with Air Force Handbook (AFH) 10-222 Volume 2 *Guide to Bare Base Assets*.  
31 The proposed area for the BEAR kit is approximately 12.3 acres and would require minimal vegetation  
32 clearing as it is located in a previously cleared and disturbed field. Electricity would be supplied from the  
33 local grid by tying into existing electrical lines that are already on site. **Figure 2.3-6** shows the location  
34 of the proposed BEAR kit area.

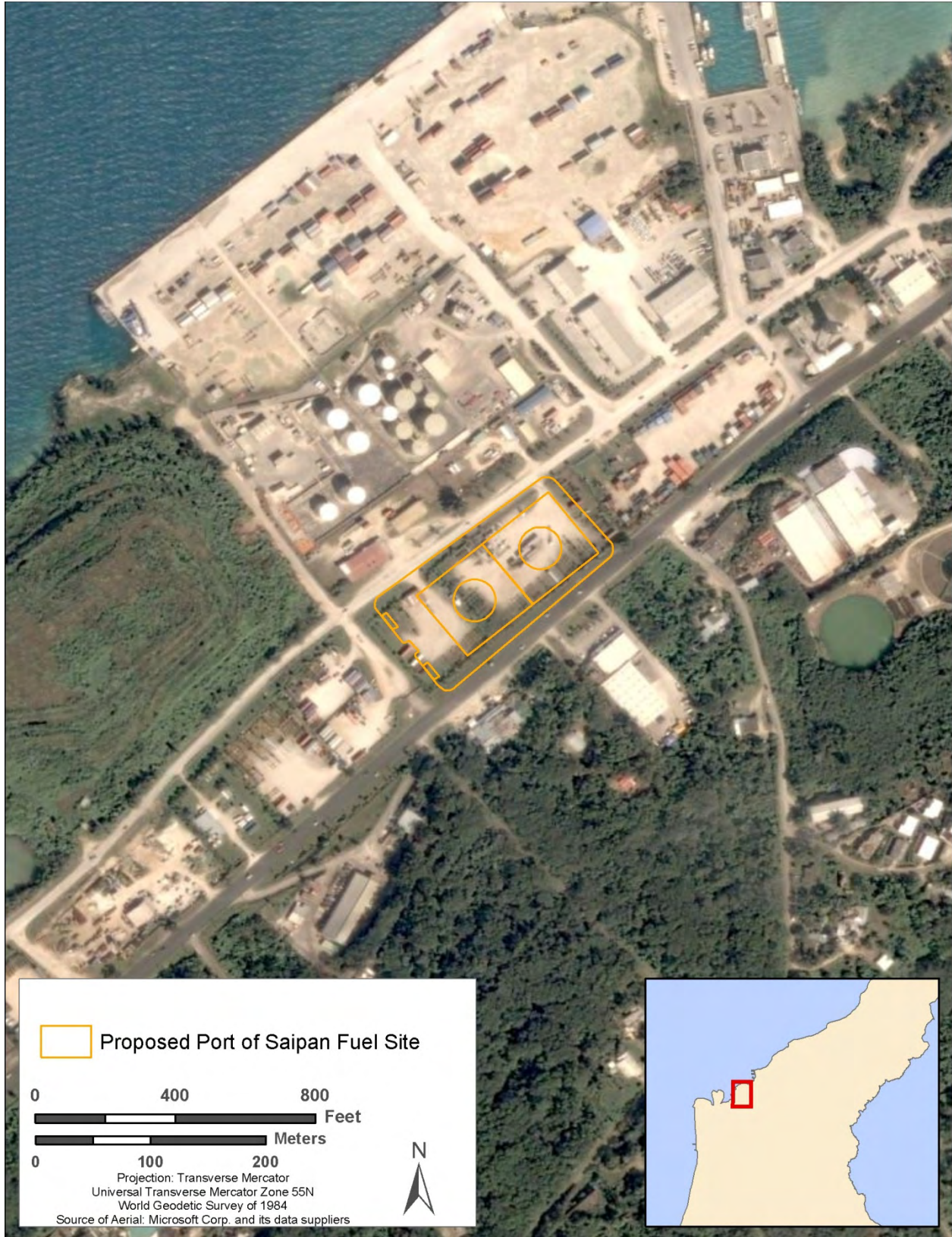
## 35 **Construction Materials**

36 In order to construct the elements proposed under the construction phases of Alternative 1, concrete  
37 would be needed. Under Alternative 1, concrete would be mixed at existing locally contracted  
38 commercial facilities which operate concrete batch plants. Dry cement would be barged to Saipan using  
39 the supplier's existing supply chain, and then trucked from the Port of Saipan to the commercial concrete  
40 facility where the concrete would be mixed. Mixed concrete would be trucked from the commercial  
41 concrete batch facility to GSN. Assumptions are based on total volume of concrete needed for  
42 construction, phased over 3 years. **Figure 2.3-8** shows the proposed cement and concrete truck routes on  
43 Saipan.



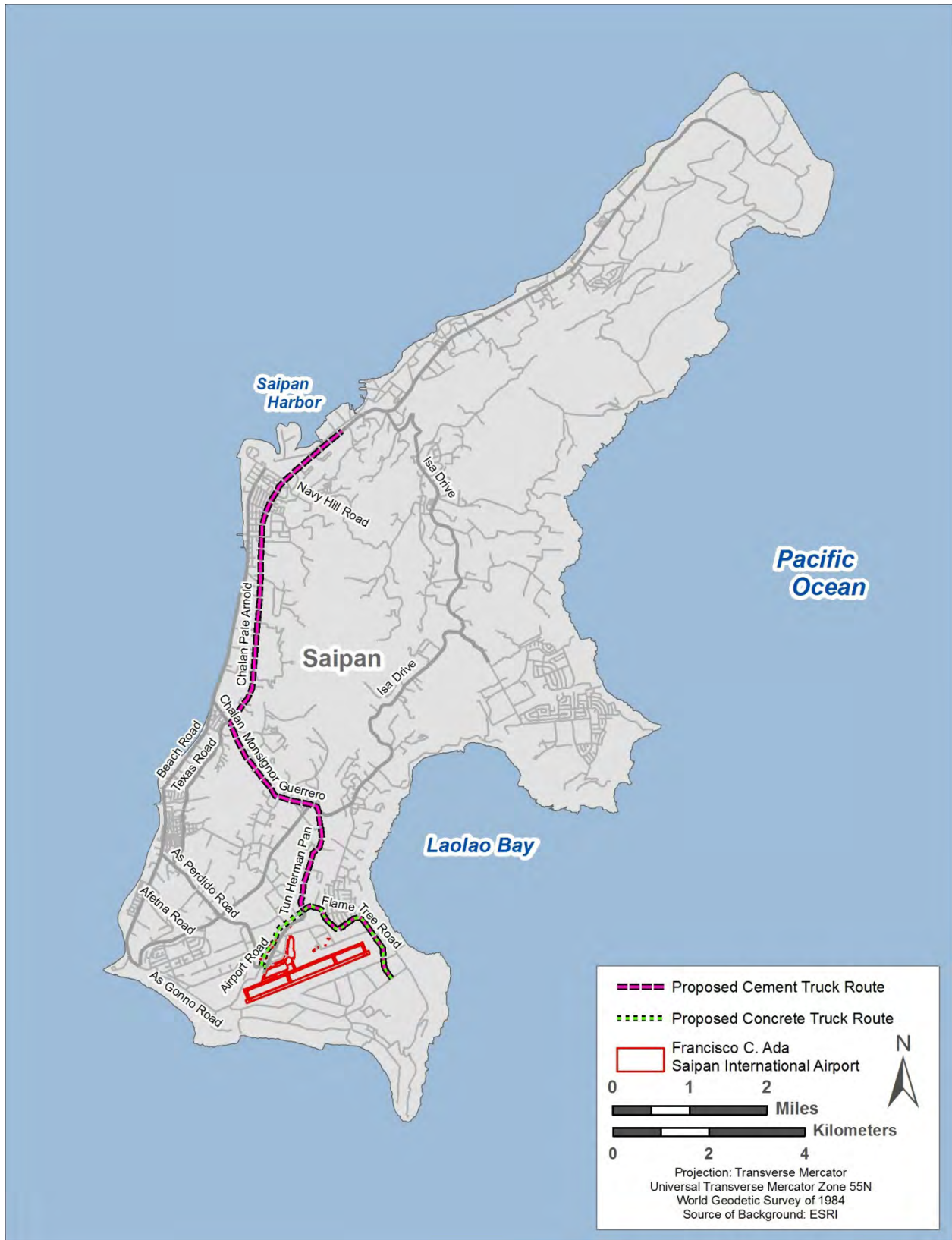
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**Figure 2.3-6. Schematic Site Plan for Fuel Tanks and BEAR Site at GSN**



1

Figure 2.3-7. Site Plan for Two Fuel Tanks at the Port of Saipan



1

Figure 2.3-8. Proposed Cement and Concrete Truck Routes on Saipan

1 **Cement Trucking from the Port of Saipan to Commercial Concrete Supply Company.** Dry cement  
 2 would be trucked in dump trucks from the Port of Saipan to the commercial concrete supply company in  
 3 Obyan, Saipan, a distance of approximately 7 miles. The trucks would likely travel on Chalan Pale  
 4 Arnold, Chalan Monsignor Guerrero, Airport Road, and Flame Tree Road. Due to construction phasing  
 5 over 3 years, a total of 1,674 yd<sup>3</sup> of cement per year would need to be trucked from the Port of Saipan to  
 6 the commercial concrete supply company. This equates to 5 dump trucks, making 3 trips per day from  
 7 the Port of Saipan to the commercial concrete supply company, 10 days per year; or 150 total truck trips  
 8 per year.

9 **Concrete Trucking from Commercial Concrete Supply Company to GSN.** Concrete would be mixed at  
 10 the commercial concrete supply company and trucked in a cement mixer from the commercial concrete  
 11 supply company in Obyan, Saipan, to GSN, a distance of approximately 2 miles. The trucks would likely  
 12 travel mainly on Flame Tree Road. Due to construction phasing over 3 years, a total of 26,797 yd<sup>3</sup> of  
 13 concrete per year would need to be trucked from the commercial concrete supply company to GSN. This  
 14 equates to 10 cement mixer trucks, making 5 trips per day from the commercial concrete supply company  
 15 to GSN, 54 days per year; or a total of 2,679 trips per year. A negligible percentage of the overall  
 16 concrete would be trucked from the commercial concrete supply company to the harbor for fuel  
 17 tank-related construction.

## 18 Summary

19 In summary, implementing the construction phase under Alternative 1 at GSN would result in an increase  
 20 of impervious surface by 2,392,200 ft<sup>2</sup>. **Table-2.3-1** provides a summary of each construction element  
 21 and proposed square footage.

22 **Table 2.3-1. Summary of Construction Elements under the GSN Alternative**

Construction Element	Approximate Size (ft <sup>2</sup> )	Increase in Impervious Surface (ft <sup>2</sup> )
Maximum Runway Extension*	275,000	275,000
Parking Apron	900,000	900,000
Temporary Munitions Storage Area (ECM and Multi-cube)	43,700	43,700
Hazardous Cargo Pad and Arm/Disarm Pad	195,000	195,000
Aircraft Hangar	35,100	35,100
Maintenance Facility	6,000	6,000
Jet Fuel System (Operational, Bulk, and at the Port of Saipan)	400,400	400,400
Billeting†	537,000	537,000
<b>Total</b>	<b>2,392,200</b>	<b>2,392,200</b>

Notes:

\* Runway extension size and impervious surface is based on Option A and is considered the “worst-case” scenario.

† Billeting size and impervious surface is based on the BEAR kit option and is considered the “worst-case” scenario.

1    **2.3.1.2     Alternative 1 – Implementation Phase**

2    **Divert Landings**

3    Under Alternative 1, GSN would be used as an unscheduled alternative location to operate aircraft when  
4    other locations in the western Pacific are temporarily unavailable. As stated in **Sections 2.1** and **2.1.2.1**,  
5    this EIS analyzes exercises and training to support the divert capability. Training to divert capabilities  
6    under Alternative 1 at GSN is discussed in **Section 2.3.1.2** under military exercises.

7    **Humanitarian Airlift Staging**

8    Under Alternative 1, GSN would be used for unplanned humanitarian airlift staging in response to a  
9    natural or man-made disaster, when needed. As stated in **Sections 2.1** and **2.1.2.2**, exercises and the  
10   training required to execute humanitarian airlift and disaster relief missions would occur at GSN under  
11   Alternative 1 and are analyzed in this EIS. Humanitarian airlift and disaster relief exercises are discussed  
12   in **Section 2.3.1.2** under military exercises.

13   **Military Exercises**

14   Under Alternative 1, military exercises as described under the Proposed Action would occur at GSN. It is  
15   assumed that no more than two annual joint military exercises lasting 2 weeks per exercise (a total of  
16   4 weeks of exercises) would occur at GSN with other periodic unit-level training, to include divert and  
17   humanitarian airlift staging training (an additional 4 weeks of exercises) occurring throughout the year as  
18   analyzed in the MIRC EIS; exercises would occur approximately 8 weeks per year. Aircraft operations  
19   during the approximate 8 weeks of exercises that would occur at GSN under Alternative 1 are based on  
20   aircraft operations that occurred during both Valiant Shield and Cope North as analyzed in the MIRC EIS  
21   (DON 2010a). It is assumed that each aircraft would take off and land twice each day during exercises  
22   and individual units would periodically land and take off to become familiar with the airfield while in the  
23   area of responsibility (AOR). During exercises, the normal flying window is approximately 6 to 8 hours  
24   during a 12- to 16-hour timeframe. No more than 700 personnel would participate in exercises at GSN at  
25   any given time, with a typical exercise population being a 12-ship fighter package of 145 to  
26   170 personnel.

27   **Jet Fuel Receiving, Storage, and Distribution**

28   Under the Proposed Action, operational mandates require a 30-day supply of jet fuel storage and a means  
29   of delivering the fuel to aircraft for high-volume tanker operations.

30   As described in **Section 2.3.1.1**, jet aircraft refueling capability under Alternative 1 would be provided by  
31   using a combination of current capability and installing a standard DOD-designed 2,400 gpm Type III  
32   Hydrant Refueling System adjacent to the proposed ramp to be constructed. It would provide a sustained  
33   capability of simultaneously refueling four aircraft at a flow rate of 600 gpm. Additionally, one DOD  
34   Standard Design 100,000-bbl, aboveground tank would be used for aviation fuel bulk storage capability  
35   on the airport property. This system would include tanks, pumps, valves, filtration systems, emergency  
36   generator, oil/water separator, and concrete. Two 50,000-bbl bulk fuel tanks with pumps, filters,  
37   fillstands, and associated piping would also be used in fuel operations near the seaport adjacent to the  
38   existing commercial fuel facility on existing federally leased property.

39   Jet fuel would be offloaded at the existing fuel offloading facility at the seaport from vessels that are  
40   capable of navigating the existing harbor. Fuel would be offloaded into the two 50,000-bbl bulk storage  
41   tanks adjacent to the seaport (see **Section 2.3.1.1** and **Figure 2.3-7**). In order to transfer fuel to the

1 100,000-bbl bulk storage tank at the airport, standard fuel transfer tank trucks would be used. It would  
2 take six tank trucks (10,000 gallons each) 14 days working approximately 10 hours per day to initially fill  
3 the bulk storage tank at the airport. During scheduled joint military exercises, bulk jet fuel at the airport  
4 bulk tank would be transferred to one of two operating tanks adjacent to the parking apron. The fuel  
5 would then be transferred to fuel tankers or other aircraft taking part in the exercises. In order to maintain  
6 the airport tank fuel supply for operations exceeding 14 days, fuel trucks would need to transport fuel  
7 over surface roads. It is assumed that up to six trucks operating 10 hours per day for the duration of the  
8 operation would be required. Because it is assumed that approximately 8 weeks per year of joint military  
9 or unit-level exercises could take place at the selected alternative location, it is anticipated that fuel  
10 transfer activity would also last approximately 8 weeks per year. The proposed fuel truck routes under  
11 Alternative 1 are presented in **Figures 2.3-9, 2.3-10, and 2.3-11.**

## 12 **Billeting**

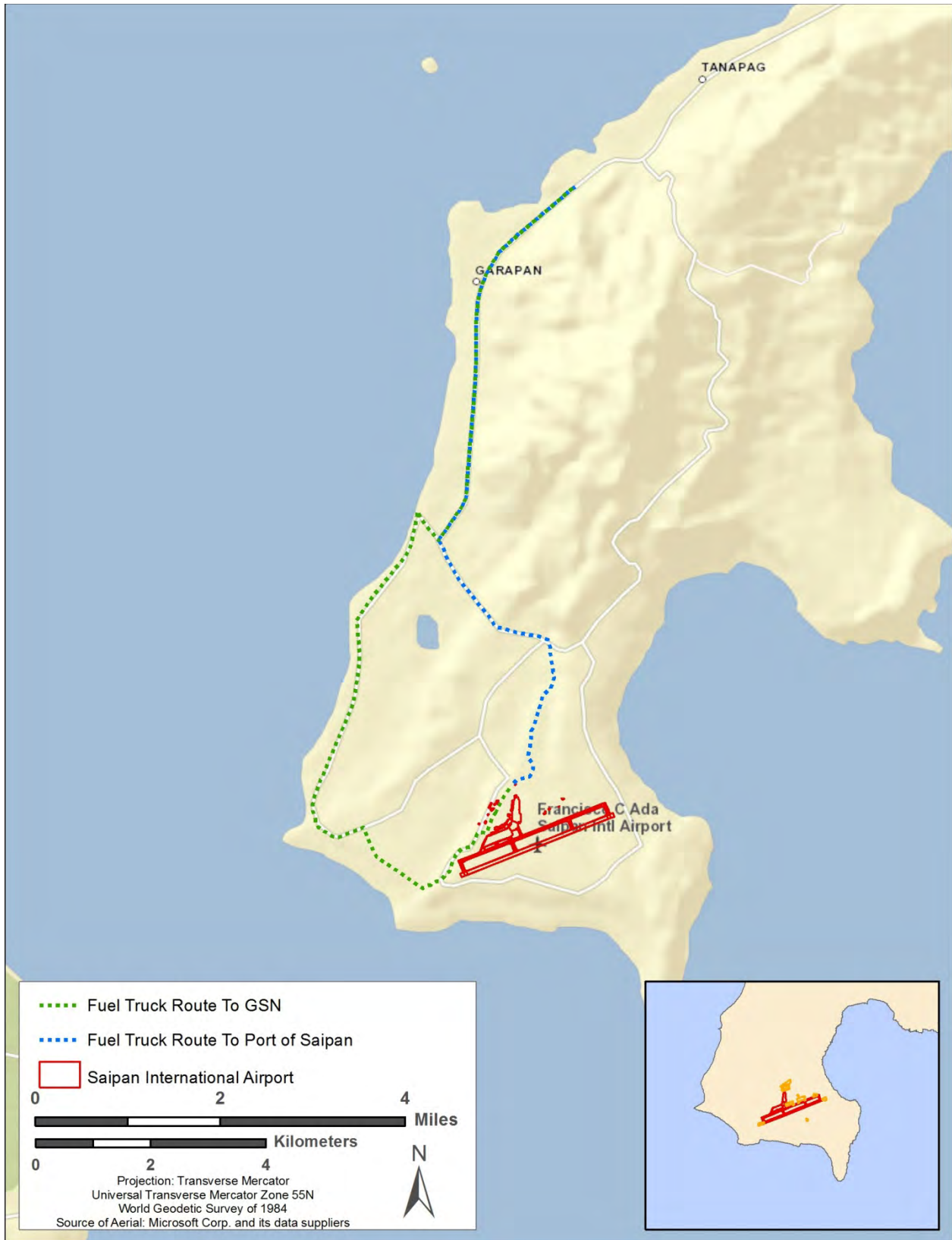
13 Under Alternative 1, temporary billeting would be required for up to 700 personnel at GSN that would  
14 support aircraft operations during a divert landing, humanitarian airlift, or military exercise event. The  
15 USAF proposes to accommodate support personnel either by using commercial lodging on the Island of  
16 Saipan or a BEAR 550 Initial Housekeeping Set (XFB1H) kit (BEAR kit).

17 **Commercial Lodging Option.** If the USAF were to use commercial lodging, the USAF and PACAF  
18 would enter into agreements with local hotels to accommodate personnel in commercial lodging during  
19 planned activities such as exercises. Medical care would continue to be provided by military personnel,  
20 and would occur at Saipan Hospital under agreement with the hospital. This would require military  
21 personnel to receive validation of their credentials before practicing at a civilian hospital. Additionally,  
22 up to 700 support personnel would use local facilities and modular trailers to conduct airfield support  
23 activities, such as administrative functions. The support personnel would be fed by food purchased from  
24 local commercial vendors on Saipan and personnel would be transported using vehicles rented from  
25 commercial retailers on Saipan. It is assumed that commercial buses would be used to transport a  
26 maximum of 700 personnel to and from commercial lodging and the airfield. Buses would transport  
27 approximately 50 personnel per bus, or approximately 56 trips per day. This equates to 14 buses making  
28 4 trips each to and from the airfield.

29 **BEAR Kit Option.** If the USAF were to use a BEAR kit for billeting, the BEAR kit would be established  
30 at GSN in accordance with AFH 10-222 Volume 2 *Guide to Bare Base Assets*. AFH 10-222 Volume 2  
31 describes the BEAR and legacy Harvest Falcon (HF) and Harvest Eagle (HE) assets that USAF civil  
32 engineers are likely to site, install, and operate in an expeditionary environment.

33 The BEAR set would include 45 billet tents, showers, latrines, 12 administrative shelters, 2 Power Pro  
34 shelters, an alert shelter, and a mortuary. A 920-kilowatt (kW) generator set and fuel bladders for the  
35 generators would also be installed (AFCEE/PACAF 2010). The BEAR kit would be installed away from  
36 the existing taxiway and the future ramp, reducing the noise level at the bare base but close enough to  
37 service and support the operation. The proposed area is approximately 12.3 acres. Access to the bare  
38 base would be through the service road used to monitor and maintain the water wells in the area. A  
39 perimeter fence with two vehicular gates and a pedestrian gate would surround the cantonment. A  
40 semi-dispersed layout of the billeting was used per AFH 10-222 Volume 2 Figure A2.15. An existing  
41 water source at the intersection of Flame Tree Road and Airport Access Road would be used. At a  
42 minimum, a 2-inch waterline would be installed to support the BEAR base from this location. An 8-inch  
43 sewer line with manholes spaced 350 feet apart would be installed from the BEAR base to the sewer main  
44 line at the intersection of Flame Tree Road and Airport Access Road. An 8-inch line would be required  
45 due to the 0.5 percent slope from the BEAR base to manhole #23.





1

**Figure 2.3-9. Fuel Truck Routes - Port of Saipan and GSN**



1

**Figure 2.3-10. Fuel Truck Routes - Port of Saipan and GSN (North)**



1

**Figure 2.3-11. Fuel Truck Routes - Port of Saipan and GSN (South)**

1 To operate the BEAR base on commercial power, a 1,200-kilovolt-ampere (kVA), 13.8-kilovolt (kV) to  
2 4.16/2.4-kV, pad-mounted transformer would be installed. Primary service to the transformer would  
3 require 3-phase, 15-kV cable from the nearest overhead utility to the pad-mounted transformer. Power  
4 distribution in the BEAR base would be provided using equipment included in the BEAR kit  
5 (AFH10-222V2, Table A3.8). The power distribution equipment in the BEAR kit would include  
6 10 Secondary Distribution Centers (SDCs) to transform 4.16-kV power to 208/120-V power, Generation  
7 Equipment, 5-kV distribution cables, secondary distribution cables, and other electric system assets to  
8 provide a complete distribution system.

9 Based on the U.S. Geological Survey (USGS) topography maps, grading would be kept to a minimum  
10 because the natural grade flows from the south to the north at less than 2 percent. Drywells would be  
11 installed at all Environmental Control Units (ECUs) to prevent muddy and unsafe working conditions  
12 around the construction tents. In addition, rain barrels, cisterns, or other collection devices would be used  
13 at the larger tents to recycle rainwater. **Figure 2.3-6** includes a site plan and proposed location for the  
14 BEAR kit.

### 15 2.3.2 Alternative 2 – TNI

16 As described in **Section 2.1**, the Proposed Action includes supporting cargo, fighter, and tanker aircraft.  
17 In this EIS, the KC-135 aircraft represents the design aircraft for each element of the Proposed Action in  
18 order to develop size and space requirements for facilities and infrastructure and perform the analysis of  
19 potential impacts. The USAF proposes to divert and exercise other USAF and joint military aircraft  
20 including cargo, fighter, and tanker aircraft, in accordance with typical operational scenarios.

21 Under Alternative 2, TNI would be improved to an airfield design that could accommodate 12 KC-135  
22 aircraft to meet the purpose of and need for the Proposed Action. This airfield design would also  
23 accommodate other military logistics and tactical aircraft. The airfield design assumes that the KC-135  
24 aircraft represents large logistics (heavy lift cargo) aircraft and it is assumed that the space to  
25 accommodate a KC-135 is roughly twice as large as the space to accommodate most tactical or fighter  
26 aircraft. A size ratio of 1 to 2 is assumed for heavy lift cargo aircraft to fighter and tactical aircraft;  
27 therefore, 24 fighter or tactical aircraft could be diverted to or exercised from TNI simultaneously for any  
28 element of the Proposed Action, not to exceed the capabilities of the proposed design. Finally, it is also  
29 assumed that a mix of fighter, tactical, and large logistics aircraft (e.g., 10 large logistics aircraft and  
30 4 fighters), could be diverted to or exercised from TNI simultaneously for any element of the Proposed  
31 Action as long as the mix does not exceed airfield design capabilities. The temporary support personnel  
32 population accompanying the aircraft under Alternative 2 would not exceed 700, regardless of what mix  
33 of aircraft is diverted to or exercised from TNI. Specific elements of Alternative 2, the TNI alternative,  
34 are described in **Sections 2.3.2.1** and **2.3.2.2**. The potential numbers of aircraft represent the highest or  
35 “worst-case” scenario under the Proposed Action.

36 In order to reduce strain on existing airport and commercial facilities and infrastructure, the USAF  
37 proposes to construct and expand new facilities, rather than fully utilize existing facilities in both the  
38 Construction and Implementation Phases of Alternative 2.

#### 39 2.3.2.1 Alternative 2 – Construction Phase

##### 40 Runway and Parking Apron

41 **Runway.** To meet minimum operational requirements identified by PACAF and described in  
42 **Section 2.1.1.1**, a 10,000-foot-long runway surface is required for the KC-135. Under Alternative 2, the  
43 USAF would expand the existing 8,600-foot-long TNI runway to 10,000 feet long by 150 feet wide (plus

1 50 feet of paved shoulders) or would not extend the runway at all. **Figure 2.3-12** includes a schematic  
 2 site plan of the proposed expansion for the 10,000-foot runway to the east. For the no extension option,  
 3 the east end extension depicted on **Figure 2.3-12** would not be constructed.

4 **Option A- 10,000-foot-long Runway Option.** The existing runway is positioned roughly east to west, is  
 5 8,600 feet long by 150 feet wide, and has two 25-foot paved shoulders. Under Alternative 2, the existing  
 6 runway would be expanded to the east by 1,400 feet to include a turnaround and a 1,000-foot Runway  
 7 Safety Area (RSA). Pavement would be extended by a total of 2,400 feet. The design strength would  
 8 require a 12-inch base with 14 inches of concrete. A significant amount of structural fill (598,000 yds<sup>3</sup>)  
 9 would be required to meet airfield slope criteria for the runway extension; structural fill would be  
 10 obtained from existing quarries or borrow pits on the island. Under this option, the full extension would  
 11 require the USAF to reroute Broadway Avenue to the east of the runway.

12 **Option B- No Extension Option.** The USAF could also decide to not lengthen the existing TNI runway;  
 13 the shorter existing runway of 8,600 feet long under this option would result in a reduced load capability  
 14 for a KC-135 aircraft but could still support basic exercise, divert, and humanitarian activities. No  
 15 structural fill would be required under this option.

16 **Parking Aprons.** To meet operational requirements for 12 KC-135s, the parking apron at TNI would be  
 17 expanded. The parking apron would be approximately 1,660,000 ft<sup>2</sup> and located south of the runway.  
 18 Ballfield-type lighting is proposed on the apron boundary to provide adequate security and operational  
 19 lighting for night operations. Airfield lighting systems would include only the lighting facilities required  
 20 for support of aircraft operational areas. Controls and equipment vault facilities would be included as  
 21 necessary to provide a complete and usable system. Design and equipment would conform to criteria  
 22 contained in UFC 3-535-01. **Figure 2.3-13** includes a schematic site plan for the TNI parking apron  
 23 design.

#### 24 Temporary Munitions Storage Area

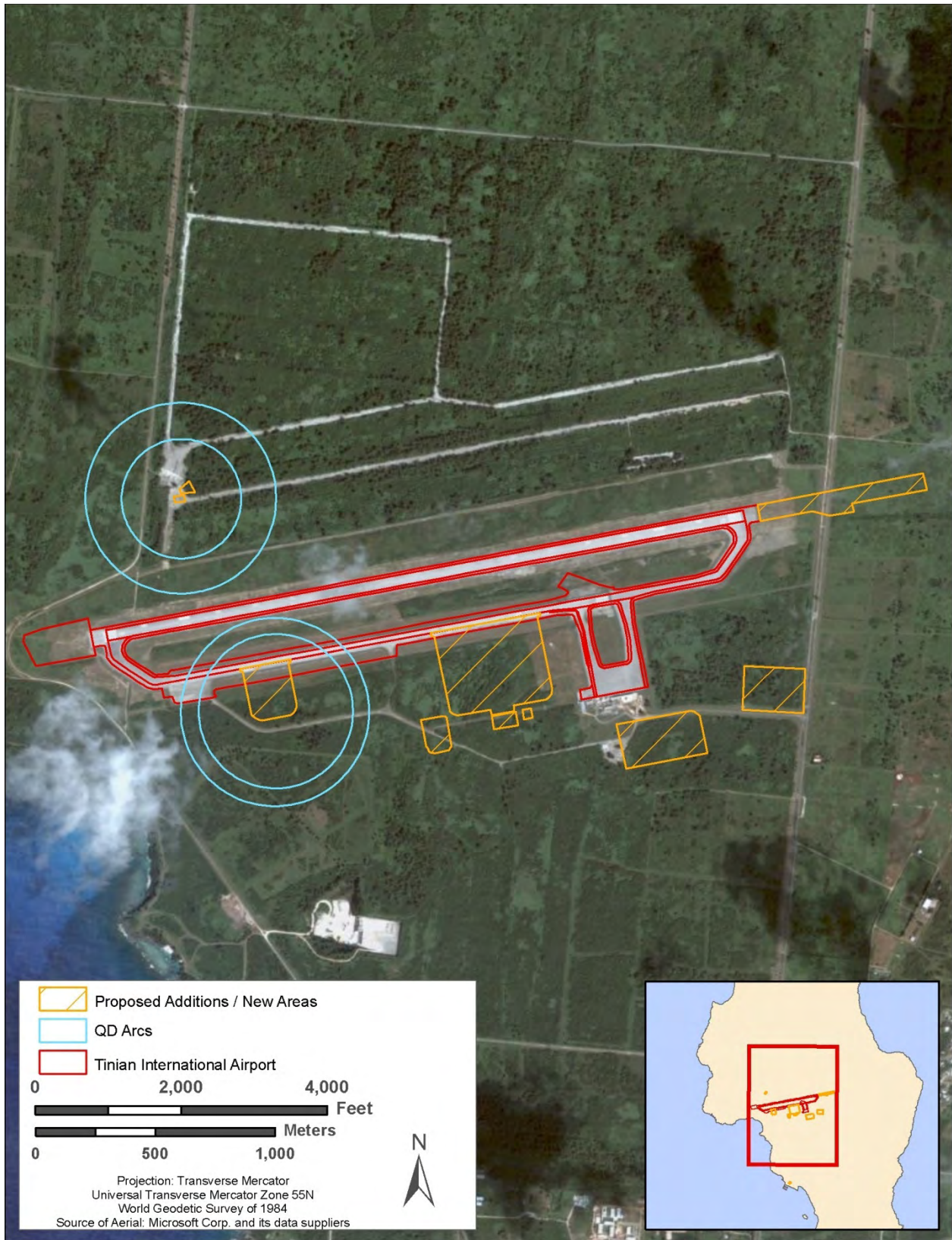
25 To meet operational requirements and to adhere to minimum safety criteria and standoff distances in  
 26 compliance with DOD Manual 6055.09-M, DOD Ammunition and Explosives Safety Standards, the  
 27 ECM under Alternative 2 at Tinian would be within the military-leased area north of the airport. Based  
 28 on the 1,550 feet distance between the proposed ECM and the IBD, the maximum NEW, 1.1 Mass  
 29 Detonating quantity for the ECM is approximately 58,000 NEW. A multi-cube magazine would also be  
 30 constructed as part of the temporary munitions storage area under Alternative 2. The magazine would be  
 31 collocated with the ECM and would be covered by the QD arc for the ECM.

32 The ECM would be approximately 140 feet by 80 feet and the multi-cube would be adjacent to the ECM  
 33 with a size of approximately 160 feet by 170 feet.

34 **Figure 2.3-14** includes a schematic site plan for the temporary munitions storage area at TNI.

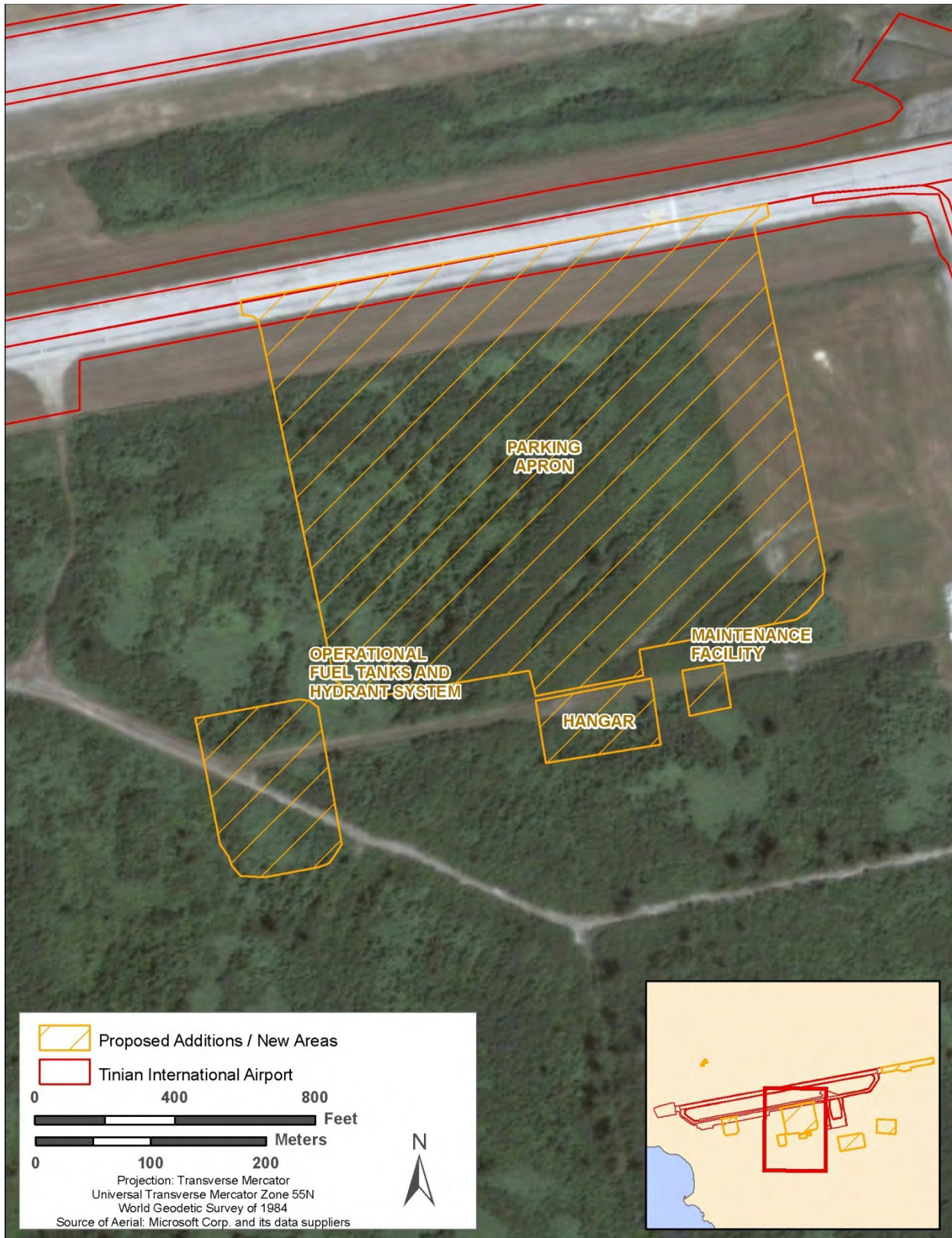
#### 35 Hazardous Cargo Pad and Arm/Disarm Pad

36 To meet operational requirements and to adhere to safety criteria and standoff distances at TNI, the  
 37 Hazardous Cargo Pad under Alternative 2 is proposed to be located on the southeast side of the runway,  
 38 with a taxiway connecting back into the runway. This design would be a flow-through horseshoe that  
 39 would allow aircraft to taxi onto the hazardous cargo pad and then taxi off the pad and connect back to the  
 40 taxiway and runway. The hazardous cargo pad would be approximately 650 feet by 750 feet. The  
 41 hazardous cargo pad would consist of a concrete surface; the design strength would require a 12-inch base



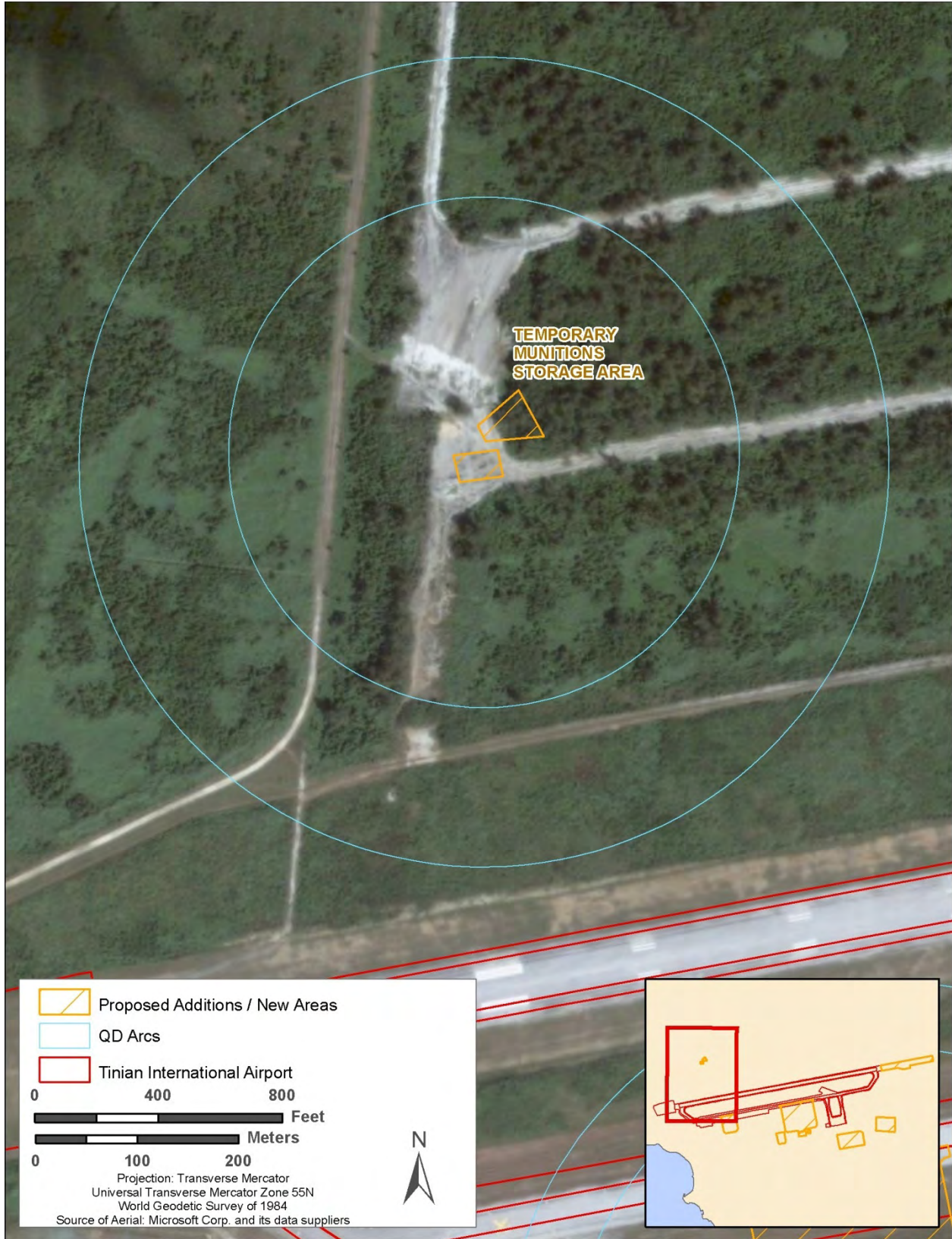
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Figure 2.3-12. Overview of Proposed Action Areas at TNI



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**Figure 2.3-13. Schematic Site Plan for Parking Apron, Hangar, Maintenance Facility, and Operational Fuel Tanks at TNI**



1 **Figure 2.3-14. Schematic Site Plan for Temporary Munitions Storage Area at TNI**



1 with 14 inches of concrete. The concrete-filled hazardous cargo pad would also function as an  
2 arm/disarm pad. The proposed location complies with all airfield criteria. The maximum NEW for the  
3 joint hazardous cargo pad and arm/disarm pad would be approximately 38,000 NEW, based on a  
4 1,350-foot IBD. No inhabited facilities or aircraft are within the standoff distance at this location.

5 **Figure 2.3-15** includes a schematic site plan for the hazardous cargo pad and arm/disarm pad at TNI.

## 6 Aircraft Hangar

7 Under Alternative 2, one aircraft hangar would be constructed at TNI. The hangar would be  
8 approximately 180 feet by 195 feet (approximately 35,100 ft<sup>2</sup>) and located south of the proposed apron.  
9 **Figure 2.3-13** includes a schematic site plan for the hangar.

## 10 Maintenance Facility

11 A maintenance facility would be constructed at TNI under Alternative 2. The maintenance facility would  
12 be approximately 6,000 ft<sup>2</sup> and would be located adjacent to the proposed hangar, south of the proposed  
13 apron. **Figure 2.3-13** includes a schematic site plan for the maintenance facility.

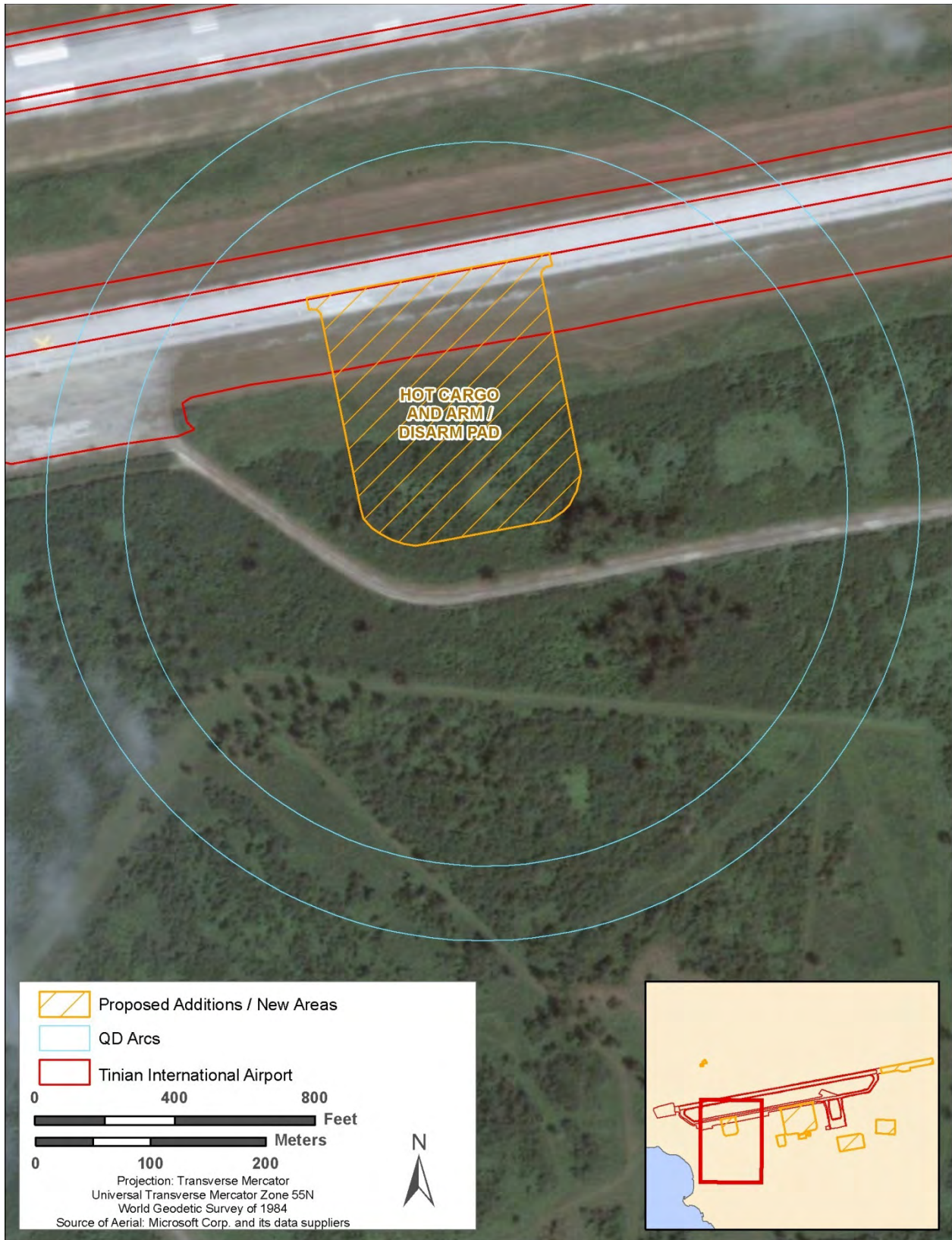
## 14 Jet Fuel Receiving, Storage, and Distribution

15 Due to the geographic location and current limited aviation fuel receipt, storage, and dispensing capability  
16 on Tinian, and no current jet fuel capability, it was determined that fuel support under the Proposed  
17 Action would be impossible to sustain without infrastructure investments. In order to sustain jet fuel  
18 operations at the island under Alternative 2, fuel tanks would be installed at TNI and at the seaport on  
19 Tinian (AFCEE/PACAF 2010).

20 Under Alternative 2, jet aircraft refueling capability would be provided at the airport by using a  
21 combination of current capability and installing a standard DOD-designed 2,400 gpm Type III Hydrant  
22 Refueling System adjacent to the new ramp that would be constructed. This refueling system would also  
23 tie into the existing parking ramp (with minimum disruption to commercial aircraft operations during  
24 construction periods) and the proposed parking apron expansion. This option would include constructing  
25 two 10,000-bbl, aboveground operating tanks that would be located near the parking apron, emergency  
26 generator, transfer pumphouse, pumps, piping, filtration, valves, and a Pantograph/ HSV Test Station.  
27 This option would meet PACAF's operational need to support a 12 primary assigned aircraft  
28 parking/refueling requirement. Special considerations were given to ensure current capability would be  
29 maximized to reduce fueling infrastructure costs. In order to sustain potential aircraft activity on the  
30 island it was determined that one DOD Standard Design 100,000-bbl, aboveground tank would be  
31 required for aviation fuel bulk storage capability, to be located on airport property. This system would  
32 include tanks, pumps, valves, filtration systems, emergency generator, and concrete work. In addition,  
33 one aboveground 100,000-bbl tank with pump, filter, issue fillstand with two positions, and associated  
34 piping would be constructed near the seaport. The proposed location for the bulk storage tank is southeast  
35 of the runway and the operational tanks are adjacent to the proposed parking apron. **Figure 2.3-13**  
36 includes the schematic site plan for the two operational tanks at the airport, **Figure 2.3-16** includes the  
37 schematic site plan for one bulk fuel tank at the airport, and **Figure 2.3-17** includes the schematic site  
38 plan for one bulk fuel tank at the seaport.

## 39 Billeting

40 Under Alternative 2, temporary billeting would be required for up to 700 personnel at TNI that would  
41 support aircraft operations during a divert landing, humanitarian airlift, or military exercise event.

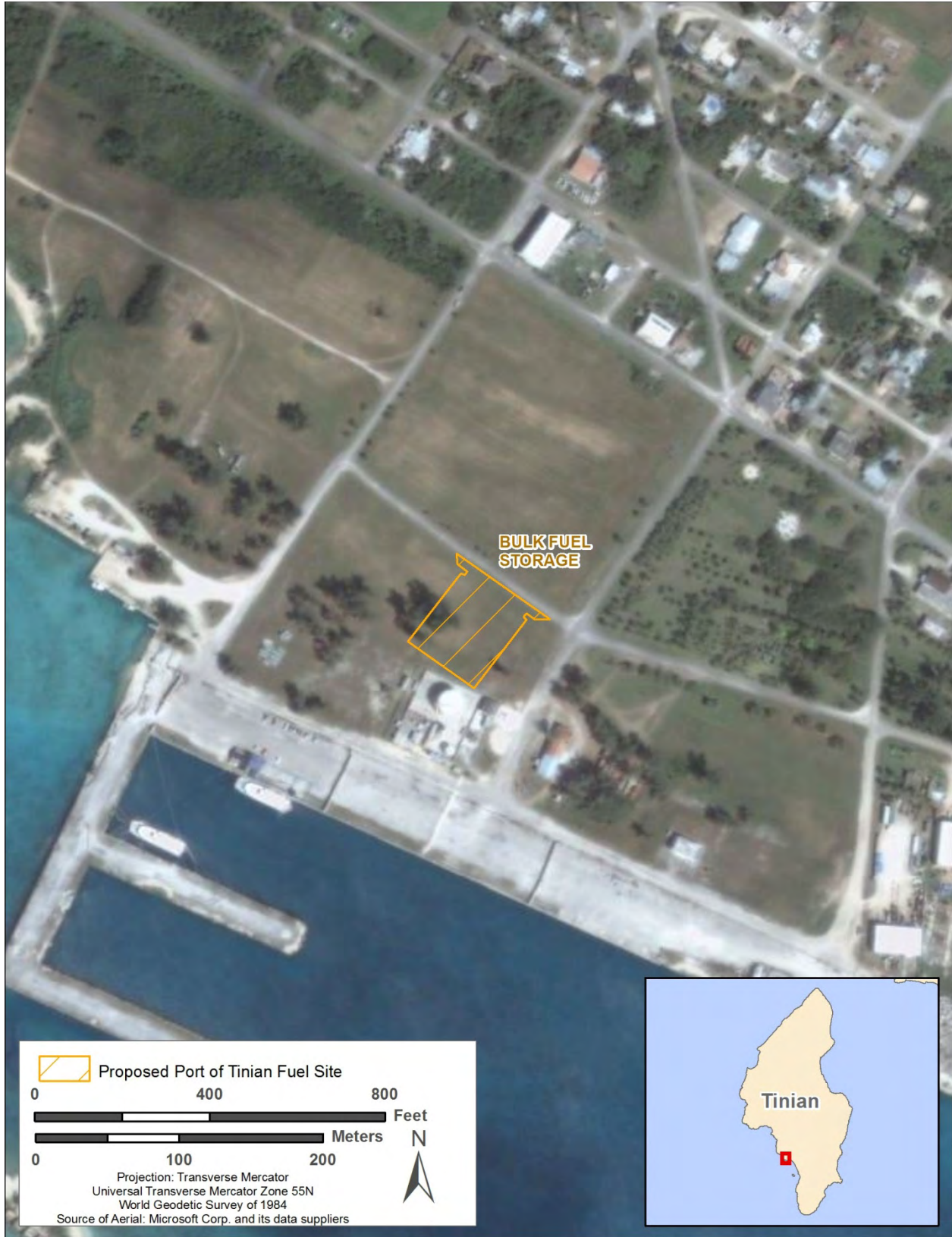


1 **Figure 2.3-15. Schematic Site Plan for Hazardous Cargo Pad and Arm/Disarm Pad at TNI**



1

Figure 2.3-16. Schematic Site Plan for Bulk Fuel Tank at TNI



1

**Figure 2.3-17. Site Plan for One Fuel Tank at the Port of Tinian**

1 Unlike on Saipan, the Island of Tinian does not have adequate commercial lodging to support the  
2 proposed 700 temporary personnel. Therefore, the USAF proposes to accommodate support personnel at  
3 TNI by using a BEAR kit. The BEAR kit would be established at TNI in accordance with AFH 10-222  
4 Volume 2 *Guide to Bare Base Assets*. AFH 10-222 Volume 2 describes the BEAR and legacy Harvest  
5 Falcon (HF) and Harvest Eagle (HE) assets that USAF civil engineers are likely to site, install, and  
6 operate in an expeditionary environment.

7 The BEAR kit would include 45 billet tents, showers, latrines, 12 administrative shelters, 2 Power Pro  
8 shelters, an alert shelter, and a mortuary. A 920-kilowatt (kW) generator set and fuel bladders for backup  
9 generators would also be installed (AFCEE/PACAF 2010). The proposed area for the BEAR kit is  
10 approximately 17.8 acres and would require vegetation clearing at TNI. **Figure 2.3-18** includes a  
11 schematic site plan for the BEAR kit site at TNI.

12 To operate the BEAR base on commercial power, a 1,200-kilovolt-ampere (kVA), 13.8-kilovolt (kV) to  
13 4.16/2.4-kV, pad-mounted transformer would be installed. Primary service to the transformer would  
14 require 3-phase, 15-kV cable from the nearest overhead utility to the pad-mounted transformer. Power  
15 distribution in the BEAR base would be provided using equipment included in the BEAR kit  
16 (AFH10-222V2, Table A3.8). The power distribution equipment in the BEAR kit would include  
17 10 Secondary Distribution Centers (SDCs) to transform 4.16-kV power to 208/120-V power, Generation  
18 Equipment, 5-kV distribution cables, secondary distribution cables, and other electric system assets to  
19 provide a complete distribution system.

## 20 Construction Materials

21 In order to construct the elements proposed under the construction phases of Alternative 2, concrete  
22 would be needed. Under Alternative 2, concrete would be mixed at existing locally contracted  
23 commercial facilities which operate concrete batch plants. Dry cement would be barged to Tinian using  
24 the supplier's existing supply chain, and then trucked from the Port of Tinian to the commercial concrete  
25 facility where the concrete would be mixed. Mixed concrete would be trucked from the commercial  
26 concrete batch facility to Tinian. Assumptions are based on total volume of concrete needed for  
27 construction, phased over 3 years. **Figure 2.3-19** shows the proposed cement and concrete truck routes  
28 on Tinian.

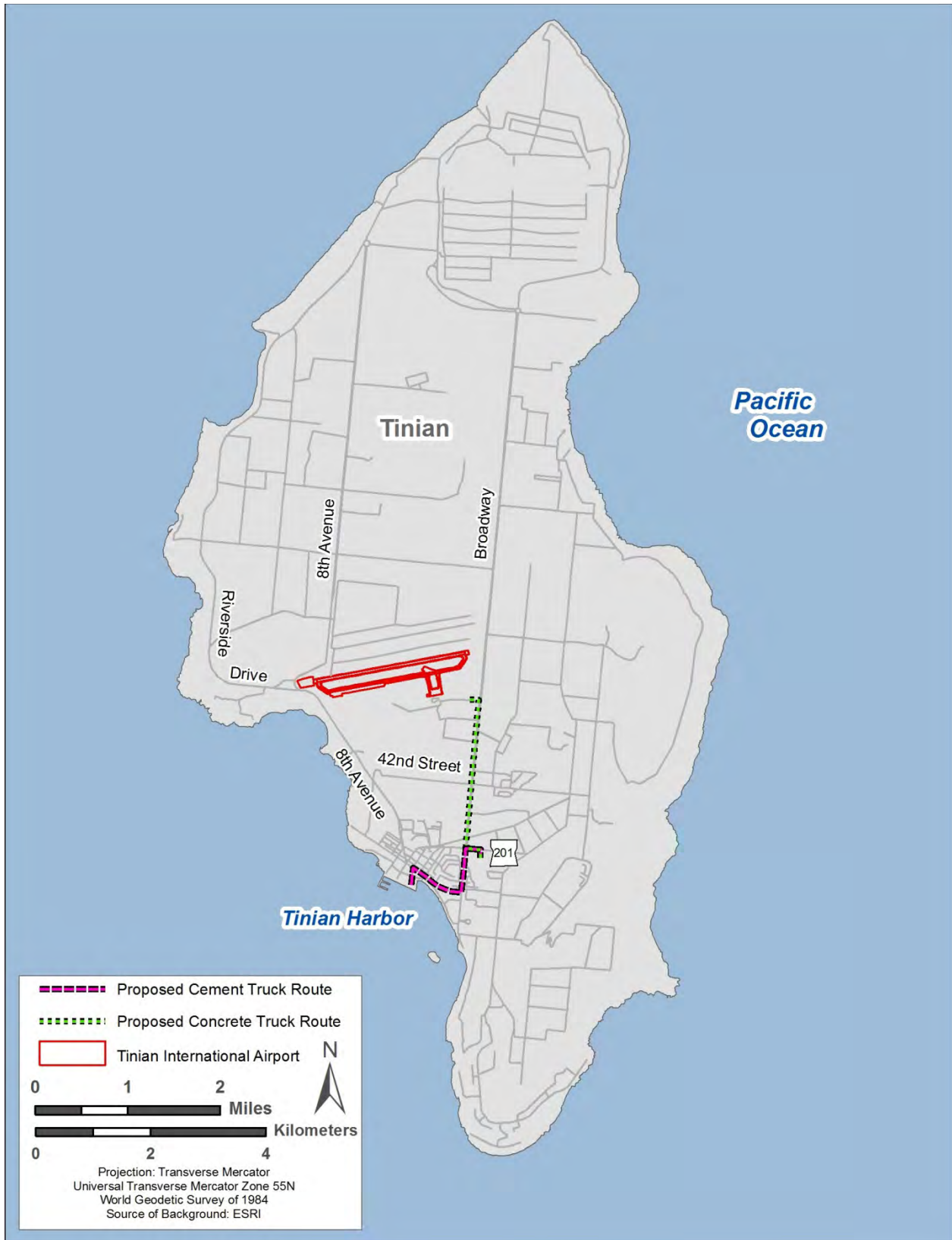
29 ***Cement Trucking from the Port of Tinian to Commercial Concrete Supply Company.*** Dry cement  
30 would be transported in dump trucks from the Port of Tinian to the commercial concrete supply company  
31 on Tinian, a distance of approximately 1.7 miles. The trucks would likely travel on 8<sup>th</sup> Avenue and  
32 Broadway. Due to construction phasing over 3 years, a total of 3,089 yd<sup>3</sup> of cement per year would need  
33 to be trucked from the Port of Tinian to the commercial concrete supply company. This equates to  
34 5 dump trucks, making 3 trips per day from the Port of Tinian to the commercial concrete supply  
35 company 19 days per year; or 280 total truck trips per year.

36 ***Concrete Trucking from Commercial Concrete Supply Company to TNI.*** Concrete would be mixed at  
37 the commercial concrete supply company and trucked in a cement mixer from the commercial a distance  
38 of approximately 2.3 miles. The trucks would likely travel mainly on Broadway. Due to construction  
39 phasing over 3 years, a total of 49,426 yd<sup>3</sup> of concrete per year would need to be trucked from the  
40 commercial concrete supply company to TNI. This equates to 10 cement mixer trucks, making 5 trips per  
41 day from the commercial concrete supply company, 99 days per year; or a total of 4,943 trips per year. A  
42 negligible percentage of the overall concrete would be trucked from the commercial concrete supply  
43 company to the harbor for fuel tank-related construction.



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Figure 2.3-18. Schematic Site Plan for BEAR Site at TNI



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**Figure 2.3-19. Proposed Cement and Concrete Truck Routes on Tinian**

1 **Summary**

2 In summary, implementing the construction phase under Alternative 2 would result in an increase in  
 3 impervious surface at TNI by a total of 4,090,800 ft<sup>2</sup>. **Table 2.3-2** provides a summary of each  
 4 construction element and proposed square footage.

5 **Table 2.3-2. Summary of Construction Elements under the TNI Alternative**

Construction Element	Approximate Size (ft <sup>2</sup> )	Increase in Impervious Surface (ft <sup>2</sup> )
Runway Extension*	555,000	555,000
Parking Apron	1,660,000	1,660,000
Temporary Munitions Storage Area (ECM and Multi-cube)	30,700	30,700
Hazardous Cargo Pad and Arm/Disarm Pad	455,000	455,000
Aircraft Hangar	35,100	35,100
Maintenance Facility	6,000	6,000
Jet Fuel System (Operational, Bulk, and at the Port of Tinian)	680,000	680,000
Billeting	669,000	669,000
<b>Total</b>	<b>4,090,800</b>	<b>4,090,800</b>

Source: HDR

Note: \*Runway extension size and impervious surface is based on Option A and is considered the “worst-case” scenario.

6 **2.3.2.2 Alternative 2 – Implementation Phase**

7 **Divert Landings**

8 Under Alternative 2, TNI would be used as an unscheduled alternative location to operate aircraft when  
 9 other locations in the western Pacific are temporarily unavailable. As stated in **Sections 2.1** and **2.1.2.1**,  
 10 this EIS analyzes exercises and training to support the divert capability. Training to divert capabilities  
 11 under Alternative 2 at TNI is discussed in **Section 2.3.2.2** under military exercises.

12 **Humanitarian Airlift Staging**

13 Under Alternative 2, TNI would be used for unplanned humanitarian airlift staging in response to a  
 14 natural or man-made disaster, when needed. As stated in **Sections 2.1** and **2.1.2.2**, exercises and the  
 15 training required to execute humanitarian airlift and disaster relief missions would occur at TNI under  
 16 Alternative 2 and are analyzed in this EIS. Humanitarian airlift and disaster relief exercises are discussed  
 17 in **Section 2.3.2.2** under military exercises.

18 **Military Exercises**

19 Under Alternative 2, military exercises as described under the Proposed Action would occur at TNI. It is  
 20 assumed that no more than two annual exercises lasting 2 weeks per exercise (a total of 4 weeks of  
 21 exercises) would occur at TNI with other periodic unit-level training, to include divert and humanitarian  
 22 airlift staging training (an additional 4 weeks of exercises) occurring throughout the year as analyzed in  
 23 the MIRC EIS; exercises would occur approximately 8 weeks per year. Aircraft operations during the  
 24 approximate 8 weeks of exercises that would occur at GSN under Alternative 1 are based on aircraft



1 operations that occurred during both Valiant Shield and Cope North as analyzed in the MIRC EIS  
2 (DON 2010a). It is assumed that each aircraft would take off and land twice a day during exercises and  
3 individual units would periodically land and take off to become familiar with the airfield while in the  
4 AOR. During exercises, the normal flying window is approximately six to eight hours during a 12- to  
5 16-hour timeframe. No more than 700 personnel would participate in exercises at TNI at any given time,  
6 with a typical exercise population being a 12-ship fighter package of 145 to 170 personnel.

## 7 Jet Fuel Receiving, Storage, and Distribution

8 Under the Proposed Action, operational mandates require a 30-day supply of jet fuel storage and a means  
9 of delivering the fuel to aircraft for high-volume tanker operations.

10 As described in **Section 2.3.2.1**, jet aircraft refueling capability under Alternative 2 would be provided by  
11 using a combination of current capability and installing a standard DOD-designed 2,400 gpm Type III  
12 Hydrant Refueling System adjacent to the proposed ramp to be constructed. It would provide a sustained  
13 capability of simultaneously refueling four aircraft at a flow rate of 600 gpm. Additionally, one DOD  
14 Standard Design 100,000-bbl, aboveground tank would be used for aviation fuel bulk storage capability  
15 on the airport property. This system would include tanks, pumps, valves, filtration systems, emergency  
16 generator, oil/water separator, and concrete. One 100,000-bbl bulk fuel tank with pumps, filters,  
17 fillstands, and associated piping would also be used in fuel operations near the seaport.

18 Jet fuel would be received at the current port in Tinian from a shallow draft tanker; shallow draft tankers  
19 currently dock at the Tinian port and it is assumed that no improvements to the harbor would need to be  
20 made. A small ocean tanker with approximately 57,000-bbl capacity, would deliver jet fuel to the port.  
21 The tanker would dock at the Tinian wharf and tie into the Tinian port valve box. Jet fuel would be  
22 delivered via a new 10-inch valve compatible with jet fuel, and piped to the new 100,000-bbl tank  
23 (see **Section 2.3.2.1** and **Figure 2.3-17**). Standard fuel transfer tank trucks would be used to transfer fuel  
24 from the Tinian port to the 100,000-bbl bulk storage tank at the airport. It would take six tank trucks  
25 (10,000 gallons each) 14 days working approximately 10 hours per day to fill the bulk storage tank at the  
26 airport.

27 During scheduled joint military exercises, bulk jet fuel at the airport bulk tank would be transferred to one  
28 of two operating tanks adjacent to the parking apron. The fuel would then be transferred to fuel tankers or  
29 other aircraft taking part in the exercises. In order to maintain the airport tank fuel supply for operations  
30 exceeding 14 days, fuel trucks will need to transport fuel over surface roads. It is assumed that up to six  
31 trucks operating 10 hours per day for the duration of the operation would be required. Because it is  
32 assumed that approximately 8 weeks per year of joint military or unit-level exercises could take place at  
33 the selected alternative location, it is anticipated that fuel transfer activity would also last approximately  
34 8 weeks per year. The proposed fuel truck routes under Alternative 2 are presented in **Figures 2.3-20** and  
35 **2.3-21**.

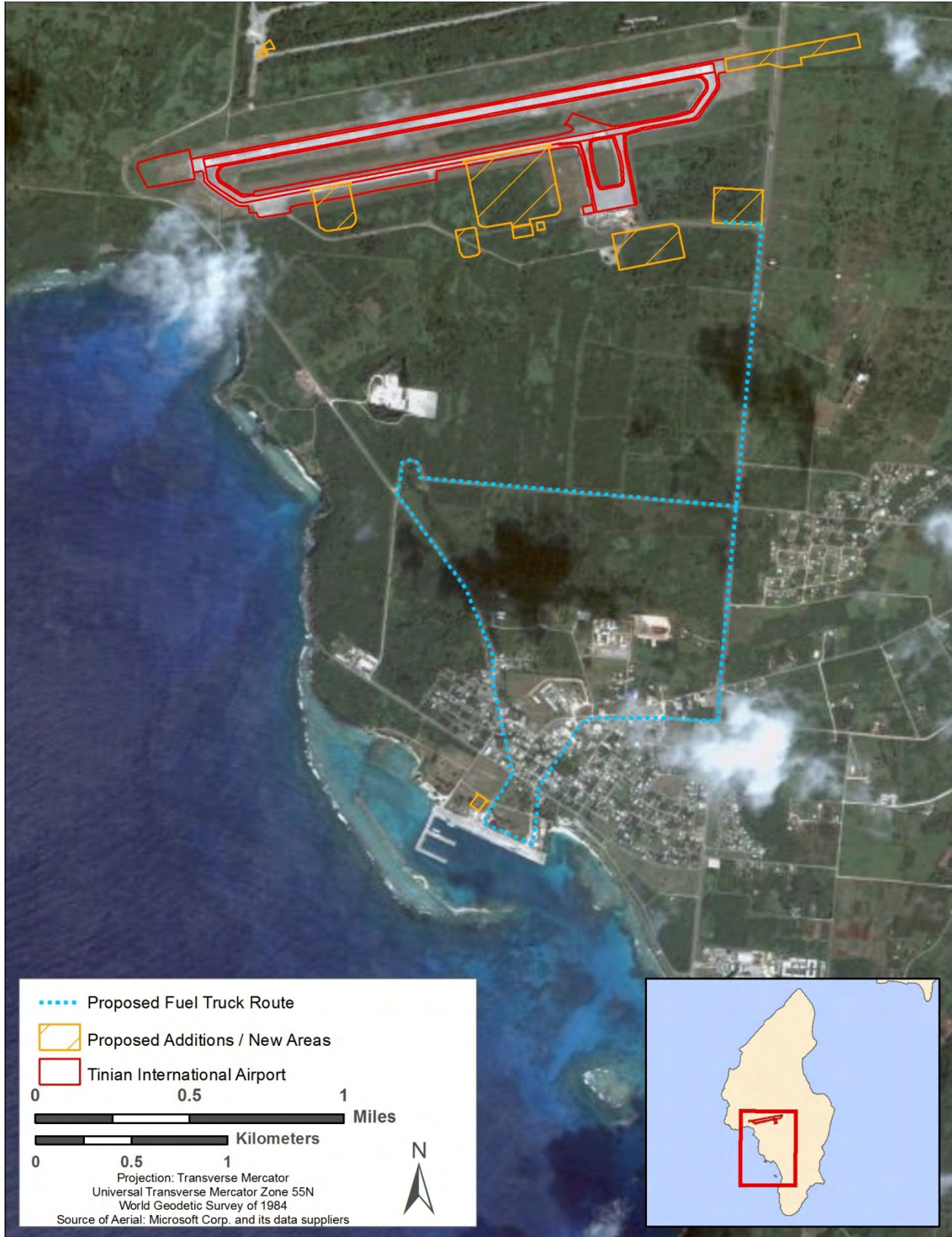
## 36 Billeting

37 Under Alternative 2, billeting would occur at TNI. Unlike on Saipan, the Island of Tinian does not have  
38 adequate commercial lodging to support the proposed 700 temporary personnel. Therefore, the  
39 700 support personnel at TNI would be accommodated using a BEAR kit as described under Alternative 1  
40 in **Section 2.3.1.2**. The BEAR kit would be established at TNI in accordance with AFH 10-222 Volume  
41 2 *Guide to Bare Base Assets*. AFH 10-222 Volume 2 describes the BEAR and legacy HF and HE assets  
42 that USAF civil engineers are likely to site, install, and operate in an expeditionary environment.



1

Figure 2.3-20. Fuel Truck Routes - Port of Tinian and TNI



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Figure 2.3-21. Fuel Truck Routes - Port of Tinian and TNI

1 The BEAR set would include 45 billet tents, showers, latrines, 12 administrative shelters, 2 Power Pro  
2 shelters, an alert shelter, and a mortuary. A 920-kW generator set and fuel bladders would also be  
3 installed (AFCEE/PACAF 2010). The BEAR kit would be installed southeast of the runway.

4 To operate the bare base on commercial power, a 1,200-kVA, 13.8-kV to 4.16/2.4-kV, pad-mounted  
5 transformer would need to be installed. Primary service to the transformer would require approximately  
6 200 feet of 3-phase, 15-kV cable. Power distribution in the BEAR base would be provided using  
7 equipment included in the BEAR 550 Initial Housekeeping Set (AFH10-222V2, Table A3.8). The power  
8 distribution equipment in the BEAR 550 Housekeeping set includes 10 SDCs to transform 4.16-kV power  
9 to 208/120-V power, Generation Equipment, 5-kV distribution cables, secondary distribution cables, and  
10 other electric system assets to provide a complete distribution system. A lack of potable water on the  
11 island will require the temporary base camp to produce potable water using potable water production  
12 facilities, or reverse osmosis purification units, (ROPU) and to dispose of any “brackish” backwash water  
13 in accordance with agreements from CNMI DEQ. Rain barrels, a cistern, or other collection devices  
14 would be used at the larger tents, along with tapping into existing wells, to provide a source for the  
15 potable water production. Because of a lack of municipal solid waste facilities, all solid waste would be  
16 collected and transported off the Island of Tinian using commercial solid waste haulers and commercial  
17 barges or ships until a permitted municipal solid waste facility was constructed. Wastewater processing  
18 would require development of a potable wastewater treatment facility to process wastewater before being  
19 discharged until a municipal wastewater treatment facility is developed and utilized.

## 20 2.4 No Action Alternative

21 The No Action Alternative serves as a baseline against which the impacts of the Proposed Action and  
22 other potential action alternatives can be evaluated. Under the No Action Alternative, the USAF would  
23 not develop or construct facilities and infrastructure at an existing airport or airports to support a  
24 combination of cargo, fighter, and tanker aircraft and associated support personnel for periodic exercises  
25 and unplanned divert landings and humanitarian assistance and disaster relief in the western Pacific.

26 ***Divert Landings.*** Currently in the Mariana Islands, emergency divert landings occur at GUM, Guam;  
27 GSN, Saipan; and GRO, Rota, in accordance with 36<sup>th</sup> Wing Instruction 13-204, *Airfield Operations*  
28 *Instructions*. Under the No Action Alternative, emergency divert landings would continue to occur at  
29 these locations as required. However, none of these facilities are currently equipped to support a  
30 combination of cargo, fighter, and tanker aircraft and associated support personnel and still remain open  
31 for commercial use. Under the No Action Alternative, PACAF’s ability to achieve and maintain military  
32 readiness for deployed military forces to conduct and support current, emerging, and future military  
33 operations would be hindered. The PACAF mission to provide ready air and space power to promote  
34 U.S. interests in the Asia-Pacific region during peacetime, through crisis, and in war might not be fully  
35 achievable.

36 ***Joint Military Exercises.*** Currently, planned joint military exercises occur within the MIRC and Mariana  
37 Islands. Under the No Action Alternative, these planned exercises would continue to take place, using  
38 Andersen AFB and surrounding airspace and range area. However, under the No Action Alternative, an  
39 additional designed and designated divert airfield would not be developed. Aircraft taking part in planned  
40 joint military exercises would continue to be confined to the same operating airfields at Andersen AFB as  
41 addressed in other NEPA documents (see **Section 1.5.3**). Should emergencies arise during military  
42 exercises, there would be no designed and designated alternative airfield to divert aircraft if needed, or to  
43 support continued operations.

44 ***Humanitarian Airlift Staging.*** Currently, humanitarian airlift staging can occur at Andersen AFB or  
45 GUM, Guam, to support natural disaster and humanitarian assistance response in the western Pacific.

1 However, humanitarian efforts from these locations are limited due to lack of infrastructure such as  
2 parking areas, refueling capabilities, and billeting. Under the No Action Alternative, USAF humanitarian  
3 response in the western Pacific would likely use existing fully functional airfields, such as Andersen AFB  
4 or GUM, Guam. However, if a natural disaster affected Andersen AFB and GUM, Guam, there would be  
5 no alternative for humanitarian airlift staging. In addition, conducting humanitarian airlift staging at  
6 Andersen AFB or GUM, Guam, could limit the ability of Andersen AFB to carry out its other missions,  
7 or limit existing commercial air traffic at GUM, Guam.

## 8 2.5 Decisionmaking Process and Identification of Preferred Alternative

9 According to CEQ guidelines, an agency's preferred alternative is the alternative which the agency  
10 believes would fulfill its statutory mission and responsibilities, giving consideration to economic,  
11 environmental, technical, and other factors (CEQ 1981). CEQ regulations require the section of the EIS  
12 on alternatives to "identify the agency's preferred alternative if one or more exists, in the draft statement,  
13 and identify such alternative in the final statement..." This means that if the agency has a preferred  
14 alternative at the Draft EIS stage, that alternative must be labeled or identified as such in the Draft EIS  
15 (CEQ 1981).

16 The USAF preferred alternative would be to implement the Proposed Action on the Island of Saipan  
17 within the CNMI, as described in **Section 2.3.1**. Under the preferred alternative, there are two proposed  
18 runway extension scenarios that are considered in the analysis of impacts in this EIS, and one scenario in  
19 which the runway would not be extended. No determination has been made regarding which of these  
20 three options would be the preferred option at this time. The analysis of impacts in the EIS also includes  
21 the alternative of implementing the Proposed Action on the Island of Tinian as outlined in **Section 2.3.2**,  
22 and the No Action Alternative as described in **Section 2.4**. The USAF is identifying the preferred  
23 alternative at this time pursuant to 40 CFR § 1502.14(e); however, no final decision selecting a particular  
24 alternative for implementation has been made. Upon completion of the EIS, the USAF decisionmaker  
25 will use the EIS to support the decision about how best to satisfy the stated purpose and need within  
26 mission constraints. The final decision will be documented in the ROD.

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