

Final

Guam Training Ranges Review and Analysis (TRRA)

Public Version

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Washington, DC

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July 2015

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Acronyms and Abbreviations

AAFB	Andersen Air Force Base	NAVFAC	Naval Facilities Engineering Command
APE	Area of Potential Effects	NAVMAG	Naval Magazine
ACHP	Advisory Council on Historic Preservation	NDAA	National Defense Authorization Act
ADNL	A-weighted DNL	NHPA	National Historic Preservation Act
CFR	Code of Federal Regulations	NOI	Notice of Intent
CNMI	Commonwealth of the Northern Mariana Islands	NRHP	National Register of Historic Places
dB	Decibels	NWF	Northwest Field
DoD	Department of Defense	NWR	National Wildlife Refuge
DON	Department of the Navy	PA	Programmatic Agreement
EIS	Environmental Impact Statement	PDIA	Potential Direct Impacted Area
ESA	Endangered Species Act	PIIA	Potential Indirect Impacted Area
ESS	Explosives Safety Submission	RMP	Range Mitigation Plan
FR	Federal Register	ROD	Record of Decision
FY	Fiscal Year	SDZ	Surface Danger Zone
GHPI	Guam Historic Properties Inventory	SEIS	Supplemental Environmental Impact Statement
GovGuam	Government of Guam	SHPO	State Historic Preservation Officer
Ha	Hectares	TCP	Traditional Cultural Property
HG	Hand Grenade	TRRA	Training Ranges Review and Analysis
JGPO	Joint Guam Program Office	USAR	United States Army
JRM	Joint Region Marianas	USFWS	U.S. Fish and Wildlife Service
LFTRC	Live Fire Training Range Complex	WWII	World War II
MEC	Munitions and Explosives of Concern		
MPMG	Multi-Purpose Machine Gun		
MPPEH	Material Potentially Presenting an Explosive Hazard		

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1 INTRODUCTION

The U.S. Department of the Navy (DON) prepared this document, “Guam Training Ranges Review and Analysis (TRRA),” to present information on the development of alternatives and potential adverse effects to historic properties within each of the alternatives the DON analyzed as a potential location for the Marine Corps Live Fire Training Range Complex (LFTRC) on Guam in the Guam and Commonwealth of the Northern Mariana Islands Military Relocation (2012 Roadmap Adjustments) Supplemental Environmental Impact Statement (SEIS). Preparation, consultation, and distribution of this TRRA were conducted in compliance with Stipulation V.C of the *Programmatic Agreement among the Department of Defense, the Advisory Council on Historic Preservation, the Guam State Historic Preservation Officer, and the Commonwealth of the Northern Mariana Islands State Historic Preservation Officer Regarding the Military Relocation to the Islands of Guam and Tinian* (2011 PA). The Final SEIS (FSEIS) can be accessed at <http://guambuildupeis.us>.

Following completion of this TRRA, a Range Mitigation Plan (RMP) will identify measures to avoid, minimize, and mitigate adverse effects to historic properties and impacts to natural resources of cultural importance. The RMP will be subject to additional consultation with the Signatories, invited Signatories, and Concurring Parties that have elected to sign the 2011 PA (PA Parties), consistent with Stipulation V.C.4 of the 2011 PA.

1.1 Organization of the TRRA

Section 2 provides the background on the 2012 Roadmap Adjustments and development of LFTRC alternatives. Section 3 presents an overview of the 2011 PA, with emphasis on its provisions for the LFTRC decision. Section 4 summarizes the process and methodology used for the cultural resources review and assessment of the each of the five LFTRC alternatives. Sections 5 through 9 provide an assessment of adverse effects and impacts associated with each alternative. Section 10 provides additional discussion of Alternative 5, which was identified as the preferred alternative in the FSEIS. Should a different alternative be selected in the Record of Decision (ROD), this TRRA will be modified, as necessary.

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2 BACKGROUND

In September 2010, the DON signed an ROD (77 Federal Register [FR] 60438, September 30, 2010) regarding the 2010 FEIS for the Guam and Commonwealth of the Northern Mariana Islands (CNMI) Military Relocation; Relocating Marines from Okinawa, Visiting Aircraft Carrier Berthing, and Army Air and Missile Defense Task Force (DON 2010). The 2010 ROD documented the DON's decision to implement the preferred alternatives identified in the 2010 FEIS for the main base (cantonment), aviation, and waterfront operations to support relocation of approximately 8,600 Marines and approximately 9,000 dependents from Okinawa to Guam. The ROD deferred a decision on the development of the LFTRC on Guam.

In the months following the issuance of the ROD, the DON committed to the Government of Guam (GovGuam) that, if the Route 15A area were selected for the LFTRC, the DON would ensure access 24 hours a day and 7 days a week to the Pãgat Village and Pãgat Cave cultural sites, including the existing trail from Route 15A leading to both locations (DON 2011, Department of Defense [DoD] 2011). Accordingly, the DON applied more precise modeling methods to determine the size of the surface danger zone (SDZ) associated with the proposed Multi-Purpose Machine Gun (MPMG) Range, which requires the largest SDZ in the LFTRC. Application of this additional modeling reduced the size of the overall footprint for the LFTRC SDZs (Appendix B). Based on the reduced SDZ footprint, the DON was able to identify several additional LFTRC preliminary alternatives and elected to prepare an SEIS to evaluate potential impacts associated with the location, construction, and operation of an LFTRC on Guam for the new alternatives. The DON issued a Notice of Intent (NOI) to prepare the LFTRC SEIS in February 2012 (77 FR 6787, February 9, 2012) and held public scoping meetings on Guam in March 2012.

2.1 2012 Roadmap Adjustments and the SEIS

On April 27, 2012, the U.S. Japan Security Consultative Committee issued a joint statement announcing its decision to adjust the plans outlined in the May 2006 Roadmap for Realignment Implementation. In accordance with these 2012 Roadmap Adjustments, the DoD adopted a new force posture in the Pacific providing for a smaller and reconfigured force on Guam. In conjunction with changes in the mix of personnel involved in the relocation, the adjustments reduced the originally planned relocation of approximately 8,600 Marines with approximately 9,000 dependents to relocation of a force of approximately 5,000 Marines with approximately 1,300 dependents. This decision prompted the DON's review of the actions previously planned for Guam and approved in the September 2010 ROD. This review concluded that, while some actions remained unchanged, others, such as the size and location of the cantonment and family housing areas, could significantly change because of the force modification.

As a result, in October 2012, the DON published an NOI (77 FR 61746, October 11, 2012) to amend the scope of the LFTRC SEIS to address those relocation actions that materially changed due to the new force posture. The DON conducted additional public scoping meetings on Guam for this expanded SEIS in November 2012. Input received from the public, available cultural resources data, and operational requirements were incorporated throughout the planning process to maximize opportunities to avoid adverse effects to historic properties and to support meaningful consultation on the alternatives.

2.2 Development of LFTRC Alternatives

The FSEIS documents a methodology for identifying and evaluating LFTRC alternatives based initially on a search for land areas on Guam large enough to accommodate the LFTRC and application of preliminary screening criteria reflecting the essential training requirements of the relocating forces. In the initial

review of LFTRC alternatives, the DON applied preliminary screening criteria to seven possible LFTRC site alternatives (FSEIS [2015], Section 2.5.2: Evaluation of Preliminary Alternatives for Live-Fire Training Range Complex). The initial screening criterion for the LFTRC was focused on the availability of sufficient area, including land, sea, and airspace, to conduct the training mission of the LFTRC. For each alternative, the total area includes the space for the range facilities (including firing points, berms, and impact areas) and associated SDZs. Due to variations in site topography and conditions, there was no singular land acreage requirement for the LFTRC. The evaluation also included considerations of grading and other earthwork expected to be required during facility construction at any of the alternative sites. All screening criteria are described in detail in the FSEIS (2015), Section 2.3: Alternatives Development Methodology.

Using the initial screening criteria described above, the DON evaluated the seven preliminary LFTRC site alternatives. Based on the evaluation, the DON determined that five LFTRC alternatives were sufficiently aligned with the screening criteria and the Marine Corps Guiding Principles to be carried forward for impacts analysis in the FSEIS. Following are the five LFTRC Alternatives analyzed in the FSEIS (2015):

- Route 15 (Alternative 1)
- Naval Magazine (NAVMAG) - East/West (Alternative 2)
- NAVMAG - North/South (Alternative 3)
- NAVMAG - L-Shaped (Alternative 4)
- Northwest Field (NWF) (Alternative 5)

Appendix A of this TRRA includes maps for each of the five LFTRC alternatives. Appendix C includes a table that compares cultural resources impacts for each LFTRC alternative.

3 2011 PROGRAMMATIC AGREEMENT

Consultation under Section 106 of the National Historic Preservation Act (NHPA) for the Military Relocation to Guam (2010 FEIS) resulted in execution of the 2011 PA, a formal agreement establishing a program alternative to accomplish Section 106 compliance for the overall relocation action. Consistent with 36 Code of Federal Regulations (CFR) § 800.14(b) (3), the DON developed the 2011 PA in consultation with Joint-Region Marianas (JRM), United States Marine Corps, Department of Transportation, United States Army (USAR), United States Air Force, the Advisory Council on Historic Preservation (ACHP), State Historic Preservation Officers (SHPOs) from Guam and the CNMI, the National Park Service, interested groups, and the public.

The 2011 PA incorporates procedures to account for the size, complexity, duration, and as-yet undetermined aspects of the relocation action, or Section 106 undertaking. The PA is a process-based agreement designed to incorporate meaningful reviews and stakeholder participation as the projects that make up the undertaking are defined over time. The PA establishes procedures for reviewing projects associated with the relocation action as they are developed and for considering the views of the public and the PA Parties to determine mitigation measures when historic properties and culturally important natural resources may be affected.

3.1 Stipulation on the Guam Training Ranges

For the LFTRC, the 2011 PA incorporates a process for consulting with the PA Parties and considering the views of the public to address the potential effects associated with a decision on the LFTRC. This was necessary because when the 2011 PA was signed, a decision had not yet been made for the LFTRC. Accordingly, Stipulation V.C of the 2011 PA, entitled “Guam Training Ranges,” sets forth a requirement to conduct focused reviews and consultation with the PA Parties and to involve the public in reviewing potential effects associated with the location, orientation, design, and operation of the ranges within any area that may be selected in the ROD for the LFTRC. The process includes consultation with the PA Parties and measures to seek public input to review and assess potential direct and indirect effects to historic properties, consistent with the documentation standards defined under 2011 PA Stipulation IV.E.

Accordingly, this TRRA provides information on historic properties for each of the five LFTRC alternatives analyzed in the SEIS. Because LFTRC Alternative 5, NWF, is identified in the FSEIS as the preferred alternative, that alternative is analyzed in greater detail. Should a different alternative be selected in the ROD for the FSEIS, this TRRA will be modified accordingly.

3.2 Public Participation

Throughout the development of the LFTRC alternatives, the DON worked to support meaningful public participation and coordinate reviews under the National Environmental Policy Act and NHPA.

The DON conducted two SEIS public scoping periods, the first time for the LFTRC SEIS in February–April 2012, and the second time in October–December 2012 after the scope of the SEIS was expanded. The public input from the scoping periods was taken into consideration in the planning efforts and the development of the SEIS. Similar to the public scoping meetings held on Guam in March 2012, three public scoping meetings were held on Guam between November 8 through 12, 2012. During the scoping meetings, the DON cultural resources subject matter experts were on hand to explain how the 2011 PA supports NHPA requirements for the revised relocation action and to discuss the public’s concerns about cultural resource issues.

A 75-day public comment period, which commenced with the release of the Draft SEIS to the public, took place from April–July 2014. The Draft SEIS was distributed to federal, state, and local agencies; elected officials; and other interested individuals and organizations to provide opportunities for those involved to learn about the proposed action and express their views. Three public meetings were held on Guam between May 17 through 20, 2014. Each meeting began with a two-hour open house session that provided the opportunity for project team members and subject matter experts to talk to the public about the proposed action and potential environmental impacts, and to receive comments. A poster station provided cultural resources information related to the Draft SEIS. Cultural resources subject matter experts also communicated to the public that the 2011 PA remains in place to fulfill the requirements under Section 106 of the NHPA for the revised action described in the Draft SEIS. They also explained how the 2011 PA would be applied to engage the public and the PA Parties in the project review process, as projects are developed for the revised action and answered questions and discussed concerns with members of the public. Public hearings followed each open house session to provide the public with a forum to communicate views about the proposed action to the DON and fellow members of the public.

During the public comment period for the Draft SEIS, individuals from GovGuam agencies, federal agencies, non-governmental organizations, and the public commented on cultural resources issues related to the LFTRC. Comments collected during the Draft SEIS review period were taken into account as part of the DON's consideration of the proposed action.

On October 22, 2014, the DON made the Draft TRRA available for a 45-day comment period to the public and those United States and Guam agencies and non-governmental organizations that participated in the 2011 PA consultations. The review period ended on December 9, 2014, Chamorro Standard Time.

To initiate the Draft TRRA review period, the DON emailed copies to the PA Parties, and a public version was made available via Naval Facilities Engineering Command (NAVFAC) Pacific's Cultural Resource Information and JRM websites. The DON also provided hard copies of the public version of the Draft TRRA to the Guam SHPO office for dissemination to the interested public. The availability of the Draft TRRA and the reminder of the review period timelines were announced in the NAVFAC public service announcements.

During the Draft TRRA review period, the DON held three consultation meetings/calls with the 2011 PA Parties to identify the Parties' key issues and concerns with the Draft TRRA. The PA Parties provided their comments during the meetings/calls and followed up with written comments. The DON received written comments from four PA Parties: USAR, Guam SHPO, ACHP, and the Guam Preservation Trust. The DON also received comments from 11 public commenters via NAVFAC Pacific's cultural resource information website.

The DON reviewed and addressed the comments on the Draft TRRA as it finalized this TRRA. As noted in Section 1, consultations on the TRRA will contribute to the development of an RMP for historic properties in the LFTRC alternative selected in the ROD. The Draft TRRA comment response matrices are provided in Appendix D.

4 CULTURAL RESOURCES REVIEW AND ASSESSMENT FOR THE FIVE LFTRC ALTERNATIVES

For each LFTRC alternative location carried forward for analysis in the FSEIS, the DON conducted focused planning-level reviews to identify historic properties that could be affected. Each LFTRC alternative includes both the footprints of the ranges (direct effects) and the SDZs associated with each range (indirect effects). The DON used different inventory methodologies for the direct effects and indirect effects areas. This differentiation of inventory methods is consistent with the standards included in Stipulation IV.F of the 2011 PA and 36 CFR § 800.4(b) (1), as well as with guidance from the ACHP. Specifically, in its publication “Meeting the Reasonable and Good Faith Identification Standard in Section 106 Review,” the ACHP advises agencies to determine appropriate identification efforts based on: past planning, research, and studies; the magnitude and nature of the undertaking and the degree of federal involvement; the nature and extent of potential effects on historic properties; and the likely nature and location of historic properties within areas that may be affected (ACHP 2007).

4.1 Cultural Resources Investigations

Consistent with the 2011 PA, in preparation for the cultural resources investigations, the DON developed work plans summarizing the background and describing the methods to be followed and submitted them to the Guam SHPO for review and comment. As noted, the study areas addressed two major categories of potential effects: areas where proposed actions could directly affect historic properties and those where proposed actions could indirectly affect historic properties. For cultural resources planning analysis these categories are referred to as the “Potential Direct Impacted Area” (PDIA) and the “Potential Indirect Impacted Area” (PIIA), and have been defined comparably to the Area of Potential Effects (APE) under NHPA. PDIA is those areas proposed for range, road, or cantonment construction and utility (electric, water, communication) improvements. PIIAs are those areas proposed for SDZs and adjacent areas within the 65-decibel (dB) noise contour, where ground disturbance and construction are not proposed. The proposed cultural resources investigations were presented to the Guam SHPO in two work plans (Dixon *et al.* 2013a, 2013b).

In addition to detailing the essential components of the in-fill surveys (a survey of previously unsurveyed areas), the work plans presented the approach, methodology, personnel, and schedule for accomplishing the studies. The work plans also included historic contexts, summaries of previous archaeological research, and examinations of historic maps of the areas.

During the inventory efforts in both PDIA and PIIAs, the beginning and ending transect coordinates were recorded with sub-meter accuracy, using a survey-grade Trimble GeoXH GeoExplorer 2008 Series Global Positioning System (GPS) unit, to ensure the survey area was completely covered. Transect orientation was determined by terrain and access. Additionally, terrain in either area that could not be surveyed for safety reasons, such as areas for which access was prohibited, areas too steep to safely navigate on foot, or areas covered in standing water were marked on a map. Explanations for why certain areas were not surveyed are provided in the results section of respective chapters in the cultural resources technical reports.

Results of the in-fill surveys for the PDIA and the PIIAs are summarized in technical reports detailing a review of previous surveys, methods, site and structure descriptions, National Register of Historic Place (NRHP) evaluations (for resources identified in the PDIA), and possible effects of the proposed action. Draft reports were submitted to the Guam SHPO for review, summaries were discussed during the

annual PA meeting in May 2014, and several consultation meetings/conference calls were held to discuss the reports and Guam SHPO comments. Guam SHPO comments were considered in preparation of the pre-final PDIA and PIIA reports, which were submitted to the Guam SHPO in December 2014 (Dixon *et al.* 2014a, 2014b). The reports were finalized in June 2015 (Dixon *et al.* 2015a, 2015b).

Utility improvement corridors were analyzed using an in-depth literature review of previous studies and primary source archival/historic documents to establish a chronology of pre-contact and post-contact activity and land-use patterns to support assessments of potential sensitivity for historic properties.

Methodologies for the PDIA, PIIA, and utility improvement corridors are described in detail in the FSEIS (2015), Section 3.10.3.1: Methodology.

4.2 PDIA Reviews

As described in the work plans, the DON surveyed all portions of the PDIA that had not been previously surveyed. For these areas, pedestrian surveys were conducted using pedestrian survey transects spaced no more than 5 meters (m) (16.4 feet [ft]) apart. When a site was identified in a PDIA, it was recorded in terms of its horizontal and vertical dimensions, number and type of associated features, morphology, function, presence of surface artifacts, cultural affiliation or occupation period, vegetation, and ground surface visibility. The field teams prepared detailed maps, site descriptions, and photo-documented all archaeological resources identified during the in-fill surveys of the PDIA, with the goal of collecting sufficient data to complete NRHP evaluations of these sites. In-fill surveys in PDIA also included subsurface testing (shovel test pits or controlled test units) for the purpose of determining presence or absence of intact subsurface cultural deposits judged to have potential for intact buried deposits.

Architectural properties in the in-fill survey areas within the PDIA were recorded through detailed descriptions of construction techniques, existing conditions, character-defining features, and alterations. Some built properties in the PDIA are covered by *Program Comments* executed by the ACHP, which resolve Section 106 responsibilities for certain DoD facilities (FSEIS [2015], Section 3.10.2 Regulatory Framework). For architectural properties in the PDIA that were constructed between 1946 and 1991, the DoD Cold War Context for Guam and the Northern Mariana Islands (Aaron 2011) provided a primary analytical basis for NRHP evaluation. The context supported consideration of NRHP eligibility and for identifying properties with a potential for meeting the higher threshold of exceptional significance for properties less than 50 years old (Criteria Consideration G). Architectural properties were photographed and evaluated using the NRHP criteria, and Guam Historic Properties Inventory (GHPI) forms were completed. Additional measures will be undertaken for those unevaluated architectural properties that fall under the LFTRC alternative selected in the ROD. Consistent with the 2011 PA, final determinations of eligibility and assessments of effect of any unevaluated architectural properties would be completed in conjunction with project-specific reviews.

4.3 PIIA Reviews

For the inventories of the PIIA, information collected from literature reviews was supplemented with pedestrian surveys of in-fill areas. As documented in the study plans, pedestrian surveys in these areas occurred in transects spaced at intervals not greater than 10 m (32.8 ft) apart. Site recordation included sketch maps and collection of one GPS point at the center of each site. The difference in survey methodology between the PDIA and the PIIA is consistent with the ACHP's guidance on reasonable level of effort (ACHP 2007), discussed above. No new eligibility determinations were made for the sites identified in the PIIA. Therefore, GHPI data forms were not completed for sites identified in the PIIA, nor were sites in the PIIA subject to subsurface testing. Architectural properties within the PIIA were

described and photographed but were not evaluated for NRHP eligibility. Eligibility evaluations indicated in the summary tables in Sections 5 through 8 for previously recorded sites and architectural properties were derived from previous surveys. Architectural properties and archaeological sites in the PIIAs not previously evaluated for NRHP eligibility or addressed in a *Program Comment* are included for purposes of evaluating the effects of the alternatives.

In some instances the boundaries of an historic property may occur within both the PDIA and PIIA. For these instances, properties may appear more than once in discussions regarding impacts.

4.4 Common Characteristics of the LFTRC Alternatives

For the LFTRC alternative selected in the ROD, the DON proposes to conduct geotechnical work in advance of construction to support project design efforts for future improvements and vertical construction projects. Geotechnical work will require clearing vegetation to access specific study locations, placement of geotechnical borings (via auger), and mechanized excavations to facilitate sample collection. Generally, geotechnical work entails use of a truck-mounted drill rig using 8-inch diameter augers or pipe casings with water or air rotary drilling. Boring depths vary, but generally range from 5 ft to a maximum of 110 ft.

All LFTRC alternatives are located within areas designated as having a moderate likelihood for encountering Munitions and Explosives of Concern (MEC) and/or Material Potentially Presenting an Explosive Hazard (MPPEH). At munitions response sites, no site operations may begin unless Naval Ordnance Safety and Security Activity and the DoD Explosive Safety Board have reviewed and approved the Explosives Safety Submittal (ESS). Preparation of an ESS is required when conducting ground-disturbing or other intrusive activities in areas known or suspected to contain MEC and/or MPPEH. The ESS outlines specific measures to ensure the safety of workers and the public. ESS documentation has been prepared for activities proposed on Guam. Therefore, all intrusive activities, including archaeological testing, will follow procedures described in the Joint Region Marianas Explosives Safety Submittal (JRM ESS), Amendment 5, Correction 1, Section 6.1.5 Anomaly Avoidance Part 1. Anomaly avoidance techniques will be employed during all excavations.

Each LFTRC alternative would include an MPMG Range, Modified Record of Fire Range, Known Distance Pistol Range, Known Distance Rifle Range, Non-standard Small Arms Range, and a range maintenance building.

Additionally, all five LFTRC alternatives include a Hand Grenade (HG) Range, which would be located in the central part of Andersen South for each alternative. The HG Range would encompass a land area of 24 acres (10 hectares [ha]), which includes the range, practice area, access road, parking area, and utility installation. An additional 1.0-acre (0.4-ha) training area would be developed adjacent to the HG Range. No adverse effects to NRHP-eligible or listed properties are anticipated from the projected construction or operation of the HG Range. The proposed HG Range is illustrated in Appendix A of this TRRA. Details about the HG Range are provided in FSEIS (2015), Section 2.2.3.

Each alternative would require utility improvement corridors to connect power, potable water, wastewater, and solid waste disposal lines to the range, as well as information technology and communications utility lines. Underground electrical lines would be in conduit buried up to approximately 3.5 ft (1.0 m) deep in a dedicated trench, and water and wastewater lines would be buried at least 3.0 ft (0.9 m) deep and not more than approximately 5.0 ft (1.5 m) deep, with approximately 10.0 ft (3.0 m) of separation between their respective trenches. A maximum potential impact corridor of 50.0 ft (15.2 m) wide is assumed for the utility improvement trenches.

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5 ALTERNATIVE 1: ROUTE 15

Alternative 1, the Route 15 LFTRC Alternative, would consist of approximately 3,762 acres (1,522 ha) (not including the stand-alone HG Range at Andersen South) and would require land acquisition of an estimated 872 acres (353 ha) of Chamorro Land Trust Commission, Guam Ancestral Lands Commission, and GovGuam lands. Alternative 1 would be sited as a complex adjacent to Andersen South Air Force Compound, Yigo Municipality. Access to the range complex would be via Route 1 through the existing Andersen South entry control point. Appendix A of this TRRA provides a map of Alternative 1.

There are 10 known archaeological sites located within the Alternative 1 PDIA on Andersen South and the area south of Route 15 (FSEIS [2015], Table 5.1.10-1, and TRRA, Table 1). Three of these sites, all Pre-Contact/Latte Period ceramic scatters, are eligible for listing in the NRHP. The seven remaining sites are considered ineligible for listing in the NRHP.

Portions of the Alternative 1 PDIA are located in Andersen South, where architectural properties are present. The majority of the 222 buildings and structures in Andersen South have been assessed for NRHP eligibility (Mason 2004, SEARCH 2015, Welch 2010, Yoklavich *et al.* 1996). Among the evaluated architectural properties are family housing and support facilities built between 1945 and 1990. None have been recommended as eligible for listing in the NRHP.

Within the Alternative 1 PDIA, there are 53 architectural properties (FSEIS [2015], Table 5.1.10-4, and TRRA, Table 2). Forty-two of these buildings and structures are part of the Andersen South Housing Development built in 1948 and 1978; none are considered eligible for listing on the NRHP. The remaining architectural resources within the Alternative 1 PDIA include two gatehouses built in 1990 and nine water support facilities that are all considered ineligible for listing in the NRHP. No traditional cultural properties (TCPs) have been identified in the PDIA for Alternative 1. Culturally important natural resources may occur in the PDIA.

There are eight known archaeological sites located within the Alternative 1 PDIA (FSEIS [2015], Table 5.1.10-5, and TRRA, Table 1). Of these, six are eligible for listing in the NRHP and include two ceramic scatters, two caves/rock alignments, and two potential TCPs that include a latte village and an agricultural complex (Griffin *et al.* 2010). Of the remaining two sites, one artifact scatter is ineligible for listing in the NRHP, and one site with cobble alignments has not been evaluated.

Table 1. Known Archaeological Sites within the PDIA and PIIA for Alternative 1

<i>GHPI Number¹</i>	<i>Temporary Site Number/ Map Number*</i>	<i>Site Type</i>	<i>Period**</i>	<i>NRHP Eligible?</i>	<i>Criteria</i>	<i>Reference</i>	<i>Location/ Potential Effect Type (Potential Action)</i>
66-04-0020	MaGY-8	Cave/stone platforms, stone walls	Pre-Contact/Latte	Yes	D	Reinman 1977	PIIA/ Indirect (Access)
66-04-0021	MaGY-9	Agricultural complex/potential TCP	Pre-Contact/Latte	Yes	A, D	Reinman 1977	PIIA/ Indirect (Access, Noise)
66-04-1869	GRP 1	Ceramic scatter and rock alignment	Pre-Contact/Latte	No	NA	Moore 1987	PDIA/ Direct (Range Construction)
66-04-2104	PBI 1, PBI 4	Ceramic scatter	Pre-Contact/Latte	Yes	D	Moore <i>et al.</i> 2007	PDIA/ Direct (Range Construction); PIIA/ Indirect (Access, Noise)
66-04-2265	PBI 2	Rock alignment	Pre-Contact/Latte	Yes	D	Moore <i>et al.</i> 2007	PIIA/ Indirect (Access, Noise)
66-04-2324	AS-T-2007-07	Ceramic scatter	Pre-Contact/Latte	Yes	D	Welch 2010	PDIA/ Direct (Range Construction)
	AS-2007-T-1/1066*	Concrete pads, roads, other remains	Post-WWII/Second American Territorial	No	NA	Welch 2010	PDIA/ Direct (Range Construction)
	AS-T-2008-01	Ceramic scatter	Pre-Contact/Latte	Yes	D	Dixon <i>et al.</i> 2011a	PDIA/ Direct (Range Construction)
	AS-T-2008-04	Ceramic scatter	Pre-Contact/Latte	Yes	D	Dixon <i>et al.</i> 2011a	PIIA/ Indirect (Access, Noise)
	GRP 2	Artifact scatter	Pre-Contact/Latte	No	NA	Moore <i>et al.</i> 2002	PDIA/ Direct (Range Construction)
	GRP 3	Artifact scatter	Spanish Missionization/ Chamorro Spanish Wars	No	NA	Moore <i>et al.</i> 2002	PDIA/ Direct (Range Construction)
	GRP 4	Artifact scatter	Pre-Contact/Latte	No	NA	Moore <i>et al.</i> 2002	PDIA/ Direct (Range Construction); PIIA/ Indirect (Access)
	GRP 5	Artifact scatter	Pre-Contact/Latte	No	NA	Moore <i>et al.</i> 2002	PDIA/ Direct (Range Construction)
	PBI 3	Pottery scatter	Pre-Contact/Latte	No	NA	Moore <i>et al.</i> 2007	PDIA/ Direct (Range Construction)

Table 1. Known Archaeological Sites within the PDIA and PIIA for Alternative 1

<i>GHPI Number¹</i>	<i>Temporary Site Number/ Map Number*</i>	<i>Site Type</i>	<i>Period**</i>	<i>NRHP Eligible?</i>	<i>Criteria</i>	<i>Reference</i>	<i>Location/ Potential Effect Type (Potential Action)</i>
66-04-2757	T-15-001	Cobble alignments	Pre-Contact/Latte	^	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access)
66-04-0022		Latte village/potential TCP	Pre-contact/Latte	Yes	A, D	Dixon et al. 2011a	PIIA/ Indirect (visual, pedestrian traffic increase)

Legend:

GHPI = Guam Historic Properties Inventory; NRHP = National Register of Historic Places; NA=not applicable. NRHP criterion A = eligible because they are associated with events that have made a significant contribution to the broad pattern of history, criterion D = eligible for potential to yield information important in prehistory or history.

Notes:

¹Not all sites recorded within the project areas have received official GHPI numbers, although they have been documented as part of previous surveys and submitted to SHPO.

* Map number from Welch 2010.

** Revised to match GHPI forms dated May 28, 2014.

^ Architectural properties and archaeological sites in the PIIAs not previously evaluated for NRHP eligibility or addressed in a Program Comment are included for purposes of evaluating the effects of the alternatives.

Table 2. Known Architectural Properties within the PDIA and PIIA for Alternative 1					
<i>Building/ Structure Type</i>	<i>Location</i>	<i>Facility Number/Map Number¹</i>	<i>Date of Construction</i>	<i>NRHP Eligible?</i>	<i>Location/ Potential Effect Type</i>
Former Barracks Buildings, Abandoned Wilson Homes, And Other Military Infrastructure	Andersen South	1052*	1947 to 1949	No	PDIA/ Direct (Range Construction)
Family Housing (Wilson Homes)	Andersen South	222, 223, 224, 225, 226, 227, 228, 229, 230, 232, 234, 236, 238, 242, 244, 246, 248, 250, 252, 290, 292	1948	No	PDIA/ Direct (Range Construction)
Family Housing Security Police Gatehouse	Andersen South	245	1990	No	PDIA/ Direct (Range Construction)
Family Housing Security Police Gatehouse	Andersen South	247	1990	No	PDIA/ Direct (Range Construction)
Family Housing	Andersen South	300, 301, 302, 303, 304, 305, 320, 322, 323, 324, 325, 326, 327, 328, 330, 331, 332, 333, 338, 340	1978	No	PDIA/ Direct (Range Construction)
Hydrologic Support Facilities	Andersen South	680, 681, 682, 683, 685, **690, 8153, shed (no facility number)	1945 to 1987	No	PDIA/ Direct (Range Construction)
Sewer Lift Station	Andersen South	1120	1949	No	PDIA/ Direct (Range Construction)

Notes:

¹ All facility numbers in the 200 series, with the exception of the two gatehouses (facility numbers 245 and 247) are Wilson Homes included within Map number 1052.

* Map number from Welch 2010 (not a facility number).

** Also within the potential indirect impact area.

5.1 Summary of Direct Adverse Effects under Alternative 1

Direct physical disturbance would potentially occur on approximately 383 acres (155 ha) of this site for the construction of the individual ranges, range support building, parking areas, range towers, range access roads, a perimeter fence, and the realignment location of Route 15. Construction of the ranges, support facilities, utilities, and relocation of Route 15 would primarily occur in the southeastern portion of Andersen South and the northeastern and central portion of the area south of Route 15 (FSEIS [2015], Figure 2.5-2, and in Appendix A of this TRRA). Approximately 3,379 acres (1,367 ha) of land within the SDZs would not be directly affected by construction or operation of the LFTRC.

Excavation and soil removal associated with the construction of Alternative 1 could adversely affect three NRHP-eligible sites, including Pre-Contact/Latte Period artifact scatters and sites containing *latte* components (TRRA, Table 3).

Construction activities associated with Alternative 1 would not affect the Pãgat Site (Site 66-04-0022), which includes Pãgat Village and Pãgat Cave. Under this alternative, the range complex would be located on the limestone plateau, west and more than 300 ft (91 m) in altitude above the Pãgat Site, and would not be visible from the site.

5.2 Summary of Indirect Adverse Effects under Alternative 1

The SDZs encompasses approximately 3,379 acres (1,367 ha). Consistent with the 2011 PA, access to Pãgat Cave, Pãgat Village, and the existing path to these sites would not be encumbered by the SDZs for the ranges, and ownership of these properties would remain with GovGuam. Operation of this alternative would not result in restricted access to the Pãgat Site (66-04-0022), which includes Pãgat Village and Pãgat Cave.

Indirect adverse effects could occur to two NRHP-eligible site/potential TCPs (TRRA, Table 3). Changes to the setting of the Pãgat Point site, an agricultural complex (66-04-0021), from auditory impacts associated with range operations could be adverse, if the property is confirmed as a TCP. An indirect adverse effect to the Pãgat Site from visual intrusions associated with Alternative 1 could result from construction of an observation tower near the cliff line on the plateau above this site. Based on the current preliminary concept plan, the tower would be visible from the Pãgat Site. Final design characteristics of the tower, including height and location, would depend on topography and other environmental conditions. Range design is based on site-specific conditions, including but not limited to topography and vegetation. Indirect adverse effects to the Pãgat Site could also occur from an increase in recreational pedestrian traffic.

Additional details about Alternative 1 are provided in the FSEIS (2015), Section 2.5.4.1, and in Appendix C of this TRRA.

Table 3. Summary of Adverse Effects Under Alternative 1

<i>GHPI Number¹</i>	<i>Temporary Site Number/ Map Number*</i>	<i>Site Type</i>	<i>Period**</i>	<i>Reference</i>	<i>Location/ Effect Type (Action)</i>
66-04-0021	MaGY-9	Agricultural complex/potential TCP	Pre-Contact/Latte	Reinman 1977	Indirect (Noise)
66-04-2104	PBI 1, PBI 4	Ceramic scatter	Pre-Contact/Latte	Moore <i>et al.</i> 2007	Direct (Range Construction)
66-04-2324	AS-T-2007-07	Ceramic scatter	Pre-Contact/Latte	Welch 2010	Direct (Range Construction)
	AS-T-2008-01	Ceramic scatter	Pre-Contact/Latte	Dixon <i>et al.</i> 2011a	Direct (Range Construction)
66-04-0022		Latte village/potential TCP	Pre-contact/Latte	Dixon et al. 2011a	Indirect (visual, pedestrian traffic increase)

Legend:

GHPI = Guam Historic Properties Inventory.

Notes:

¹ Not all sites recorded within the project areas have received official GHPI numbers, although they have been documented as part of previous surveys and submitted to SHPO.

* Map number from Welch 2010.

** Revised to match GHPI forms dated May 28, 2014.

6 ALTERNATIVE 2: NAVMAG (EAST/WEST)

Alternative 2, the NAVMAG (East/West) LFTRC Alternative, would consist of approximately 3,815 acres (1,544 ha) (not including the HG Range at Andersen South), and would require acquisition of approximately 1,894 acres (766 ha) of privately owned and GovGuam land. Under Alternative 2, the LFTRC would be located primarily on non-federal land southeast of the NAVMAG. Access to the range complex would be via a new access road from Dandan Road that would be constructed as part of the LFTRC. Approximately 5 miles (8 km) of roads would also be constructed to provide access between the individual ranges. Appendix A of this TRRA provides a map of Alternative 2.

There are 10 known archaeological sites located within the Alternative 2 PDIA (FSEIS [2015], Table 5.2.10-1, and TRRA, Table 4). They include seven artifact scatters and two sites with *latte* components, all of which are eligible for listing in the NRHP, and one small artifact scatter that is not considered eligible for listing in the NRHP. There is also a potential for NRHP-eligible archaeological sites in the 109.5 acres (44.32 ha) of unsurveyed areas within the PDIA that could not be accessed during the in-fill surveys because of standing water.

There are no known buildings or structures, nor any TCPs identified within the PDIA for Alternative 2. Culturally important natural resources may occur in the PDIA.

There are 102 known archaeological sites within the Alternative 2 PIIA (FSEIS [2015], Table 5.1.10-2, and TRRA, Table 4). Seventy-three sites are eligible for listing in the NRHP, including Pre-Contact artifact scatters, *latte* sites, and rock shelters. Twenty-nine sites, consisting of Pre-Contact artifact scatters and *latte* sites, have not been evaluated for listing in the NRHP.

There are no known buildings or structures within the PIIA for the Alternative 2.

A portion of one high-density *latte* environ (an area with a high density of archaeological sites containing *latte* stones) that has been identified as a potential TCP is located within the PIIA.

Table 4. Known Archaeological Sites within the PDIA and PIIA for Alternative 2

GHPI Number¹	Temporary Site Number/ Map Number*	Site Type	Period**	NRHP Eligible?	NRHP Criteria	Reference	Location/ Potential Effect Type
66-02-1819	767*	Rock shelter	Pre-Contact/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
66-02-1825	774*	<i>Latte</i> set	Pre-Contact/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
66-02-1826	775*	<i>Latte</i> set	Pre-Contact/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
66-02-1827	776*	Cluster of unmodified rocks	Pre-Contact (unspecified)	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
66-02-1846	797*	<i>Latte</i> element clusters	Pre-Contact/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
66-02-1847	798*	<i>Latte</i> complex	Pre-Contact/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
66-02-1850	801*	Manufacturing station	Pre-Contact/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
66-02-1852	804*	Artifact scatter	Pre-Contact/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
66-06-1848	799*	Artifact scatter	Pre-Contact/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
66-06-1849	800*	Rock shelter	Pre-Latte/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
66-08-2628***	T-TA-002	<i>Latte</i> set partial	Pre-Contact/Latte	Yes**	D	Dixon <i>et al.</i> 2014a	PDIA/ Direct (Range Construction); PIIA/Indirect (Access)
66-08-2629	T-TA-004	<i>Latte</i> sets and artifact scatter	Pre-Contact/Latte	Yes**	D	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access)
66-08-2630	T-TA-005	Artifact scatter	Pre-Contact/Latte	Yes**	D	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access)
66-08-2631***	T-TA-006	Artifact scatter	Pre-Contact/Latte	Yes**	D	Dixon <i>et al.</i> 2014a	PDIA/ Direct (Range Construction); PIIA/ Indirect (Access, Noise)
66-08-2632	T-TA-031	Artifact scatter	Pre-Contact/Latte	Yes**	D	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access)
66-08-2633***	T-TA-007	Artifact scatter	Pre-Contact/Latte	Yes**	D	Dixon <i>et al.</i> 2014a	PDIA/ Direct (Range Construction); PIIA/Indirect (Access)
66-08-2634***	T-TA-008	Artifact scatter	Pre-Contact/Latte	Yes**	D	Dixon <i>et al.</i> 2014a	PDIA/ Direct (Range Construction); PIIA/ Indirect (Access)

Table 4. Known Archaeological Sites within the PDIA and PIIA for Alternative 2

GHPI Number¹	Temporary Site Number/ Map Number*	Site Type	Period**	NRHP Eligible?	NRHP Criteria	Reference	Location/ Potential Effect Type
66-08-2635***	T-TA-009	Artifact scatter	Pre-Contact/Latte	Yes**	D	Dixon <i>et al.</i> 2014a	PDIA/ Direct (Range Construction); PIIA/ Indirect (Access)
66-08-2636	T-TA-010	Artifact scatter	Pre-Contact/Latte	Yes**	D	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access, Noise)
66-08-2637***	T-TA-011	Artifact scatter	Pre-Contact/Latte	Yes**	D	Dixon <i>et al.</i> 2014a	PDIA/ Direct (Range Construction); PIIA/ Indirect (Access)
66-08-2638***	T-TA-013	Artifact scatter	Pre-Contact/Latte	Yes**	D	Dixon <i>et al.</i> 2014a	PDIA/ Direct (Range Construction); PIIA/ Indirect (Access)
66-08-2639***	T-TA-014	Artifact scatter	Pre-Contact/Latte	Yes**	D	Dixon <i>et al.</i> 2014a	PDIA/ Direct (Range Construction); PIIA/ Indirect (Access)
66-08-2640	T-TA-015	<i>Latte</i> set partial	Pre-Contact/Latte	Yes**	D	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access, Noise)
66-08-2641	T-TA-016	<i>Latte</i> set	Pre-Contact/Latte	Yes**	D	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Noise)
66-08-2689***	T-TA-046	<i>Latte</i> set	Pre-Contact/Latte	Yes	D	Dixon <i>et al.</i> 2014a	PDIA/ Direct (Range Construction)
66-09-1823	772*	<i>Latte</i> set	Pre-Contact/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
66-09-1824	773*	Artifact scatter	Pre-Contact/ Latte; Spanish Missionization/ Chamorro Spanish Wars	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
66-09-1828	777*	Artifact scatter	Pre-Contact/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
66-09-1829	778*	<i>Latte</i> complex	Pre-Contact/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
66-09-1830	779*	Artifact scatter	Pre-Contact/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
66-09-1831	781*	<i>Latte</i> set	Pre-Contact/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
66-09-1833	783*	<i>Latte</i> set	Pre-Contact/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
66-09-1834	784*	<i>Latte</i> set	Pre-Contact/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)

Table 4. Known Archaeological Sites within the PDIA and PIIA for Alternative 2

GHPI Number¹	Temporary Site Number/ Map Number*	Site Type	Period**	NRHP Eligible?	NRHP Criteria	Reference	Location/ Potential Effect Type
66-09-1835	785*	Latte set	Pre-Contact/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
66-09-1836	786*	Latte set	Pre-Contact/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
66-09-1837	787*	Artifact scatter	First American Territorial	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
66-09-1838	788*	Latte set	Pre-Contact/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
66-09-1839	789*	Latte set	Pre-Contact/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
66-09-1840	790*	Artifact scatter	Pre-Contact/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
66-09-1841	792*	Latte element cluster	Pre-Contact/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
66-09-1842	793*	Latte set	Pre-Contact/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
66-09-1843	794*	Latte set	Pre-Contact/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
66-09-1844	795*	Rock cluster	Pre-Contact/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
66-09-1845	796*	Artifact scatter	Pre-Contact/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
66-09-2660	T-TA-003	Latte sets and artifact scatter	Pre-Contact/Latte	^	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access, Noise)
66-09-2662	T-TA-017	Artifact scatter	Pre-Contact/ Latte; Spanish Missionization/ Chamorro Spanish Wars	^	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access, Noise)
66-09-2663	T-TA-018	Artifact scatter	Pre-Contact/Latte	^	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access, Noise)
66-09-2664	T-TA-019	Artifact scatter	Pre-Contact/Latte	^	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access, Noise)
66-09-2665	T-TA-020	Artifact scatter	Pre-Latte/Latte	^	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access, Noise)
66-09-2666	T-TA-021	Artifact scatter	Pre-Contact/Latte	^	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access, Noise)

Table 4. Known Archaeological Sites within the PDIA and PIIA for Alternative 2

GHPI Number¹	Temporary Site Number/ Map Number*	Site Type	Period**	NRHP Eligible?	NRHP Criteria	Reference	Location/ Potential Effect Type
66-09-2667	T-TA-022	Artifact scatter	Pre-Contact/Latte	^	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access, Noise)
66-09-2668	T-TA-023	Artifact scatter	Pre-Contact/Latte	^	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access, Noise)
66-09-2669	T-TA-024	Artifact scatter	Pre-Contact/Latte	^	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access, Noise)
66-09-2670	T-TA-025	Artifact scatter	Pre-Contact/Latte	^	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access, Noise)
66-09-2671	T-TA-026	Latte sets	Pre-Contact/Latte	^	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access, Noise)
66-09-2672	T-TA-027	Artifact scatter	Pre-Contact/Latte	^	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access)
66-09-2673	T-TA-028	Artifact scatter	Pre-Contact/Latte	^	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access)
66-09-2674	T-TA-029	Artifact scatter	Pre-Contact/Latte	^	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access, Noise)
66-09-2675	T-TA-030	Artifact scatter	Pre-Contact/Latte	^	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access, Noise)
66-09-2676	T-TA-032	Artifact scatter	Pre-Contact/Latte	^	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access, Noise)
66-09-2677	T-TA-033	Artifact scatter	Pre-Contact/Latte	^	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access)
66-09-2678	T-TA-034	Latte components and artifact scatter	Pre-Contact/Latte	^	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access)
66-09-2679	T-TA-035	Latte components	Pre-Contact/Latte	^	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access)
66-09-2680	T-TA-036	Artifact scatter	Pre-Contact/Latte	^	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access)
66-09-2681	T-TA-037	Artifact scatter	Pre-Contact/Latte	^	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access)
66-09-2682	T-TA-038	Latte sets	Pre-Contact/Latte	^	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access)
66-09-2683	T-TA-039	Latte components and artifact scatter	Pre-Contact/Latte	^	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access)
66-09-2684	T-TA-040	Latte sets and components	Pre-Contact/Latte	^	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access)
66-09-2685	T-TA-041	Latte sets and components	Pre-Contact/Latte	^	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access)
66-09-2686	T-TA-042	Latte sets and components	Pre-Contact/Latte	^	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access)
66-09-2687	T-TA-043	Artifact scatter	Pre-Contact/Latte	^	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access, Noise)
66-09-2688	T-TA-045	Artifact scatter	Pre-Contact/Latte	^	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Noise)
	Site 49/83*	Latte set complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998a	PIIA/ Indirect (Access)
	Site 50/84*	Latte set complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998a	PIIA/ Indirect (Access)
	Site 61/91*	Latte element cluster	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 62/92*	Latte set complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 64/94*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 65/95*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 66/96*	Artifact scatter	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)

Table 4. Known Archaeological Sites within the PDIA and PIIA for Alternative 2

<i>GHPI Number¹</i>	<i>Temporary Site Number/ Map Number*</i>	<i>Site Type</i>	<i>Period**</i>	<i>NRHP Eligible?</i>	<i>NRHP Criteria</i>	<i>Reference</i>	<i>Location/ Potential Effect Type</i>
	Site 67/97*	<i>Latte set</i>	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 68/98*	<i>Latte set complex</i>	Spanish Missionization/ Chamorro Spanish Wars	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 69/99*	<i>Latte set complex/Potential TCP</i>	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 70/100*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 71/101*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 72/102*	Artifact scatter	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 73/103*	<i>Latte set complex</i>	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 74/104*	<i>Latte element cluster, artifact scatter</i>	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 75/105*	Artifact scatter	Latte, Spanish Missionization/ Chamorro Spanish Wars	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 76/106*	<i>Latte set complex</i>	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 77/107*	Artifact scatter	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 78/108*	<i>Latte element cluster</i>	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 79/109*	Chiseled steps	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 80/110*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 82/112*	Artifact scatter	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 83/113*	Artifact scatter	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 85/114*	<i>Latte set complex</i>	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 86/115*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 94/123*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 115/144*	<i>Latte set complex</i>	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 116/145*	<i>Latte set</i>	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)

Table 4. Known Archaeological Sites within the PDIA and PIIA for Alternative 2

GHPI Number¹	Temporary Site Number/ Map Number*	Site Type	Period**	NRHP Eligible?	NRHP Criteria	Reference	Location/ Potential Effect Type
	Site 117/ 146*	Latte set	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
66-08-2759***	T-TA-047	Artifact scatter	Pre-Contact/Latte	No	NA	Dixon <i>et al.</i> 2014a	PDIA/ Direct (Range Construction); PIIA/Indirect (Access)
	T-TA-001	Ceramic scatter	Pre-Contact/Latte	^	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Noise)

Legend:

GHPI = Guam Historic Properties Inventory.

Notes:

¹ Not all sites recorded within the project areas have received official GHPI numbers, although they have been documented as part of previous surveys.

* Map numbers from Welch *et al.* 2009.

** Revised to match GHPI forms dated May 28, 2014.

*** The Guam SHPO concurs with this recommendation (Guam SHPO correspondence dated August 22, 2013 [RC2013-0853]).

^ Architectural properties and archaeological sites in the PIIAs not previously evaluated for NRHP eligibility or addressed in a Program Comment are included for purposes of evaluating the effects of the alternatives.

6.1 Summary of Direct Adverse Effects under Alternative 2

Direct physical disturbance would potentially occur on approximately 275 acres (111 ha) of this site for the construction of the individual ranges, range support building, range access roads, and a perimeter fence. Construction of the ranges, support facilities, and utilities would primarily occur east of the NAVMAG (FSEIS [2015], Figure 2.5-3, and in Appendix A of this TRRA). The SDZs encompass approximately 3,433 acres (1,389 ha); these acres would not be directly impacted as a result of construction or operation of the LFTRC. Excavation and soil removal associated with the construction of Alternative 2 could adversely affect nine known NRHP-eligible archaeological properties, including Pre-Contact artifact scatters and sites containing *latte* components (TRRA, Table 5).

No NRHP-eligible or unevaluated buildings or structures would be adversely affected by construction.

6.2 Summary of Indirect Adverse Effects under Alternative 2

The SDZs encompass approximately 3,433 acres (1,389 ha). Potential indirect adverse effects could occur to two NRHP-eligible site with *latte* components and two unevaluated archaeological sites with *latte* components. Changes to the setting of a historic property from auditory impacts associated with range operations could be adverse; four historic properties could be indirectly adversely affected from small arms live fire noise (TRRA, Table 5). One potential TCP (high density *latte* environment) could also be indirectly affected by reduced accessibility.

No indirect adverse effects from visual intrusions associated with Alternative 2 are anticipated, because the ranges are within an existing military operations area, and the action would not change the visual setting.

Additional details about Alternative 2 are provided in FSEIS (2015), Section 2.5.4.2 and in Appendix C of this TRRA.

Table 5. Summary of Adverse Effects Under Alternative 2					
<i>GHP</i> <i>Number</i> ¹	<i>Temporary</i> <i>Site Number/ Map</i> <i>Number*</i>	<i>Site Type</i>	<i>Period**</i>	<i>Reference</i>	<i>Location/ Potential Effect Type</i>
66-08-2628***	T-TA-002	<i>Latte</i> set partial	Pre-Contact/ <i>Latte</i>	Dixon <i>et al.</i> 2014a	Direct (Range Construction)
66-08-2631***	T-TA-006	Artifact scatter	Pre-Contact/ <i>Latte</i>	Dixon <i>et al.</i> 2014a	Direct (Range Construction)
66-08-2633***	T-TA-007	Artifact scatter	Pre-Contact/ <i>Latte</i>	Dixon <i>et al.</i> 2014a	Direct (Range Construction)
66-08-2634***	T-TA-008	Artifact scatter	Pre-Contact/ <i>Latte</i>	Dixon <i>et al.</i> 2014a	Direct (Range Construction)
66-08-2635***	T-TA-009	Artifact scatter	Pre-Contact/ <i>Latte</i>	Dixon <i>et al.</i> 2014a	Direct (Range Construction)
66-08-2637***	T-TA-011	Artifact scatter	Pre-Contact/ <i>Latte</i>	Dixon <i>et al.</i> 2014a	Direct (Range Construction)
66-08-2638***	T-TA-013	Artifact scatter	Pre-Contact/ <i>Latte</i>	Dixon <i>et al.</i> 2014a	Direct (Range Construction)
66-08-2639***	T-TA-014	Artifact scatter	Pre-Contact/ <i>Latte</i>	Dixon <i>et al.</i> 2014a	Direct (Range Construction)
66-08-2640	T-TA-015	<i>Latte</i> set partial	Pre-Contact/ <i>Latte</i>	Dixon <i>et al.</i> 2014b	Indirect (Noise)
66-08-2641	T-TA-016	<i>Latte</i> set	Pre-Contact/ <i>Latte</i>	Dixon <i>et al.</i> 2014b	Indirect (Noise)
66-08-2689***	T-TA-046	<i>Latte</i> set	Pre-Contact/ <i>Latte</i>	Dixon <i>et al.</i> 2014a	Direct (Range Construction)
66-09-2660	T-TA-003	<i>Latte</i> sets and artifact scatter	Pre-Contact/ <i>Latte</i>	Dixon <i>et al.</i> 2014b	Indirect^ (Noise)
66-09-2671	T-TA-026	<i>Latte</i> sets	Pre-Contact/ <i>Latte</i>	Dixon <i>et al.</i> 2014b	Indirect^ (Noise)
	Site 69/99*	<i>Latte</i> set complex/Potential TCP	Pre-Contact/ <i>Latte</i>	Henry <i>et al.</i> 1998	Indirect (Access)

Legend:

GHP = Guam Historic Properties Inventory.

Notes:

¹ Not all sites recorded within the project areas have received official GHP numbers, although they have been documented as part of previous surveys.

* Map numbers from Welch *et al.* 2009.

** Revised to match GHP forms dated May 28, 2014.

*** The Guam SHPO concurs with this recommendation (Guam SHPO correspondence dated August 22, 2013 [RC2013-0853]).

^ Architectural properties and archaeological sites in the PIIAs not previously evaluated for NRHP eligibility or addressed in a Program Comment are included for purposes of evaluating the effects of the alternatives

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7 ALTERNATIVE 3: NAVMAG (NORTH/SOUTH)

Alternative 3, the NAVMAG (North/South) LFTRC, would encompass approximately 3,549 acres (1,436 ha) (not including the stand-alone HG Range at Andersen South) and would require acquisition of 252 acres (101.9 ha) of GovGuam and privately owned lands. The ranges would be configured so that they are adjacent and accessible by Marine Corps personnel via the existing main gate on Route 5. Access between the ranges would occur through a combination of existing NAVMAG roadways and approximately 3.0 miles (4.8 km) of new roads constructed as part of the LFTRC. Appendix A of this TRRA provides a map of Alternative 3.

There are 15 known archaeological sites located within the Alternative 3 PDIA (FSEIS [2015], Table 5.3.10-1, and TRRA, Table 6). Eleven of these, including sites with *latte* sets, rock shelters, WWII military sites, and artifact scatters, are eligible for listing in the NRHP. Two sites, a historic artifact scatter and a *latte* site, have not been evaluated for listing in the NRHP. Two historic WWII sites are not considered eligible for inclusion in the NRHP.

There are 24 known structures and buildings within the Alternative 3 PDIA (FSEIS [2015], Table 5.3.10-4, and TRRA, Table 7). All of these structures and buildings are covered under the 2006 *Program Comment for World War II and Cold War Era Ammunitions Storage Facilities* (ACHP 2006).

One potential TCP, Boña Springs, is located within the PDIA for Alternative 3. Culturally important natural resources may occur in the PDIA.

There are 218 known archaeological sites located within the Alternative 3 PIIA (FSEIS [2015], Table 5.3.10-3, and TRRA, Table 6). Of these, 210 are NRHP-eligible artifact scatters, *latte* sites, rock shelters, and historic military features. Three sites have not been evaluated for listing in the NRHP. The remaining five sites are not eligible for listing in the NRHP.

There are 72 architectural properties, constructed between 1944 and 1997, located within the PIIA for Alternative 3 (FSEIS [2015], Table 5.3.10-4, and TRRA, Table 7). Fifty-seven of the structures are ammunition storage facilities covered under the *Program Comment for World War II and Cold War Era Ammunition Storage Facilities* (ACHP 2006). Eleven buildings and structures greater than 50 years in age have not been evaluated. Four structures are less than 50 years old and do not meet the exceptional significance threshold required under NRHP Criteria Consideration G.

Six potential TCPs have been identified in the PIIA for Alternative 3. They include Boña Springs (which is also within the PDIA), Almagosa Springs, Dobo Springs, Almagosa Mountain, Alifan peak, and a high-density area of *latte* sites (Griffin *et al.* 2010).

Table 6. Known Archaeological Sites within the PDIA and PIIA for Alternative 3

<i>GHPI Number</i> ¹	<i>Temporary Site Number/ Map Number*</i>	<i>Site Type</i>	<i>Period**</i>	<i>NRHP Eligible?</i>	<i>NRHP Criteria</i>	<i>Reference</i>	<i>Location/ Potential Effect Type</i>
66-02-0145A	29*	Latte complex	Pre-Contact/Latte	Yes	D	Craib and Yoklavich 1997	PDIA/ Direct (Range Construction)
66-02-0145B	30*	Latte complex	Pre-Contact/Latte	Yes	D	Craib and Yoklavich 1997	PDIA/ Direct (Range Construction)
66-02-1049A	38*	Latte set complex, artifact scatter	Pre-Contact/Latte	Yes	D	Craib and Yoklavich 1997	PIIA/ Indirect (Access)
66-02-1049B	32*	Latte set complex	Pre-Contact/Latte	Yes	C, D	Welch 2010	PIIA/ Indirect (Access)
66-02-0150	24*	Latte complex	Pre-Contact (Unspecified)	Yes	D	Craib and Yoklavich 1997	PIIA/ Indirect (Access)
66-02-0151	33*	Feature complex, structure complex, quarry	Pre-Contact/Latte	Yes	C, D	Welch 2010	PIIA/ Indirect (Access)
66-02-0152	26*	Latte complex	Pre-Contact/Latte	Yes	D	Craib and Nees 1998	PIIA/ Indirect (Access, Noise)
66-02-1659	496*	Trenches and foxholes	Pre-WWII Japanese Military Occupation	Yes	D	Allen <i>et al.</i> 2002	PDIA/ Direct (Range Construction); PIIA/Indirect (Access)
66-02-1660	497*	Latte set and rock shelter complex	Pre-Contact/Latte	Yes	D	Allen <i>et al.</i> 2002	PDIA/ Direct (Range Construction); PIIA/Indirect (Access)
66-02-1661	498*	Latte set complex, artifact scatter	Pre-Contact/Latte	Yes	C, D	Allen <i>et al.</i> 2002	PIIA/ Indirect (Access)
66-02-2327	47*	Latte set	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
66-02-2328	49*	Latte set complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
66-02-2329	51*	Latte set complex	Pre-Contact/Latte, Spanish Missionization /Chamorro Spanish Wars	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access, Noise)
66-02-2330	54*	Latte set complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
66-02-2331	55*	Latte set	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
66-02-2332	57*	Latte set	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
66-02-2333	65*	Latte Set	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2334	73*	Latte set, pit	Pre-Contact/Latte, Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)

Table 6. Known Archaeological Sites within the PDIA and PIIA for Alternative 3

GHPI Number¹	Temporary Site Number/ Map Number*	Site Type	Period**	NRHP Eligible?	NRHP Criteria	Reference	Location/ Potential Effect Type
66-02-2335	Site 124/153*	Latte set complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
66-02-2336	Site 125/154*	Latte set, rock shelter, and cave complex	Pre-Contact/Latte, WWII Japanese Military Occupation	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
66-02-2337	Site 127/156*	Latte set complex	Pre-Contact/Latte, Spanish Missionization/Chamorro Spanish Wars	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
66-02-2338	Site 130/159*	Rock shelter	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
66-02-2339	Site 131/160*	Latte set and rock shelter complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
66-02-2340	Site 132/161*	Latte set complex	Pre-Contact/Latte, Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2341	Site 133/162*	Latte set complex	Pre-Contact/Latte, Spanish Missionization/Chamorro Spanish Wars	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2342	Site 134/163*	Latte set complex	Pre-Contact/Latte, Spanish Missionization/Chamorro Spanish Wars, WWII Japanese Military Occupation, Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2343	Site 135/164*	Artifact scatter	Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2344	Site 137/166*	Latte set complex	Pre-Contact/Latte	Yes	C, D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2345	Site 138/167*	Latte element cluster, artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2346	552*	Latte set complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access, Noise)
66-02-2347	554*	Latte set	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access, Noise)
66-02-2348	566*	Latte set complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access, Noise)
66-02-2349	567*	Latte set complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access, Noise)

Table 6. Known Archaeological Sites within the PDIA and PIIA for Alternative 3

<i>GHPI Number</i>¹	<i>Temporary Site Number/ Map Number*</i>	<i>Site Type</i>	<i>Period**</i>	<i>NRHP Eligible?</i>	<i>NRHP Criteria</i>	<i>Reference</i>	<i>Location/ Potential Effect Type</i>
66-02-2350	569*	<i>Latte set complex</i>	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access, Noise)
66-02-2351	570*	<i>Latte set</i>	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access, Noise)
66-02-2352	574*	<i>Latte set complex</i>	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access, Noise)
66-02-2353	577*	<i>Latte set complex</i>	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access, Noise)
66-02-2354	578*	<i>Latte element cluster</i>	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access, Noise)
66-02-2355	581*	<i>Latte set complex</i>	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access, Noise)
66-02-2356	586*	<i>Latte set</i>	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access, Noise)
66-02-2357	606*	Rock shelter and cave complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2358	607*	<i>Latte set, artifact scatter, culverts</i>	Pre-Contact/Latte, WWII Japanese Military Occupation, Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2359	610*	<i>Latte set</i>	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2360	611*	<i>Latte set</i>	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2361	613*	<i>Latte set complex</i>	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2362	615*	<i>Latte set complex</i>	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2363	623*	<i>Latte set</i>	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2364	640*	<i>Latte set complex</i>	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2365	641*	<i>Latte set complex</i>	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2367	1067*	<i>Latte set</i>	Pre-Contact/Latte	Yes	D	Welch 2010	PIIA/ Indirect (Access)
66-02-2368	1068*	<i>Latte set</i>	Pre-Contact/Latte	Yes	D	Welch 2010	PIIA/ Indirect (Access)

Table 6. Known Archaeological Sites within the PDIA and PIIA for Alternative 3

GHPI Number¹	Temporary Site Number/ Map Number*	Site Type	Period**	NRHP Eligible?	NRHP Criteria	Reference	Location/ Potential Effect Type
66-02-2369	1069*	Latte set	Pre-Contact/Latte	Yes	D	Welch 2010	PIIA/ Indirect (Access)
66-02-2370	1070*	Latte set complex	Pre-Contact/Latte	Yes	D	Welch 2010	PIIA/ Indirect (Access)
66-02-2371	1071*	Latte element cluster	Pre-Contact/Latte	Yes	D	Welch 2010	PIIA/ Indirect (Access)
66-02-2372	1072*	Latte element cluster	Pre-Contact/Latte	Yes	D	Welch 2010	PIIA/ Indirect (Access)
	T-NMS-001	Latte set	Pre-Contact/Latte	^	N/A	Dixon <i>et al.</i> 2014a	PDIA/ Direct (Range Construction); PIIA/Indirect (Access)
66-09-2626	T-NMS-002	Artifact scatter	Post-WWII/Second American Territorial, Organic Act/Home Rule/Economic Development	No	N/A	Dixon <i>et al.</i> 2014a	PDIA/ Direct (Range Construction); PIIA/Indirect (Access)
	22*	Airplane wreckage	Post-WWII/Second American Territorial	No	N/A	Lauter-Reinman 1997, Welch 2010	PIIA/ Indirect (Noise)
	23*	Defensive site	WWII Japanese Military Occupation	Yes	D	Craib and Yoklavich 1997	PIIA/ Indirect (Access)
	Site 5/48*	Latte set	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 7/50*	Artifact scatter	Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 9/52*	Artifact scatter	Pre-Contact/Latte, Spanish Missionization/Chamorro Spanish Wars, Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 10/53*	Rock shelter complex	Pre-Contact/Latte, WWII Japanese Military Occupation	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 13/56*	Rock shelter	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 15/58*	Rock shelter	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 16/59*	Cave	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 17/60*	Cave	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 18/61*	Latte set	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 19/62*	Rock shelter	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 20/63*	Rock shelter	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 21/64*	Latte set	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 23/66*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 24/67*	Artifact scatter	Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)

Table 6. Known Archaeological Sites within the PDIA and PIIA for Alternative 3

<i>GHPI Number</i> ¹	<i>Temporary Site Number/ Map Number*</i>	<i>Site Type</i>	<i>Period**</i>	<i>NRHP Eligible?</i>	<i>NRHP Criteria</i>	<i>Reference</i>	<i>Location/ Potential Effect Type</i>
	Site 25/68*	Rock shelter	Pre-Contact/Latte, WWII Japanese Military Occupation	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 26/69*	Rock shelter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 27/70*	Rock shelter and cave complex	Pre-Contact/Latte, Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 28/71*	<i>Latte</i> set	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
	Site 29/72*	Artifact scatter	Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 32/74*	Artifact scatter	Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 33/75*	Rock shelter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	39/78*	<i>Latte</i> complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	42/79*	<i>Latte</i> complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	43/80*	<i>Latte</i> complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 44/81*	<i>Latte</i> set complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 48/82*	Cave	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 49/83*	<i>Latte</i> set complex	Pre-Contact/Latte, Spanish Missionization/Chamorro Spanish Wars	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 50/84*	<i>Latte</i> set complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 51/85*	Rock shelter and cave complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 52/86*	Rock shelter and cave complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 55/87*	Cave	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 56/88*	Rock shelter complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 58/89*	Cave	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 60/90*	Rock shelter	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 61/91*	<i>Latte</i> element cluster	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 62/92*	<i>Latte</i> set complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 65/95*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 66/96*	Artifact scatter	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 74/104*	<i>Latte</i> element cluster, artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)

Table 6. Known Archaeological Sites within the PDIA and PIIA for Alternative 3

GHPI Number¹	Temporary Site Number/ Map Number*	Site Type	Period**	NRHP Eligible?	NRHP Criteria	Reference	Location/ Potential Effect Type
	Site 75/105*	Artifact scatter	Pre-Contact/Latte, Spanish Missionization/Chamorro Spanish Wars	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 76/106*	Latte set complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 77/107*	Artifact scatter	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 81/111*	Latte set complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 87/116*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 88/117*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 89/118*	Artifact scatter	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 90/119*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 91/120*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 92/121*	Artifact scatter, cultural deposit	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 93/122*	Overhang	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 95/124*	Artifact scatter, cultural deposit	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 96/125*	Rock shelter complex	Pre-Contact (unspecified), Spanish Missionization/ Chamorro Spanish Wars	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 98/127*	Latte set	Pre-Contact/Latte, Spanish Missionization/Chamorro Spanish Wars	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 99/128*	Latte set complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 100/129*	Rock shelter	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 101/130*	Latte set	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 102/131*	Latte set	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 103/132*	Cave complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 104/133*	Rock shelter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 105/134*	Crevice	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 106/135*	Rock shelter, cultural deposit	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 107/136*	Rock shelter, cultural deposit	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 108/137*	Rock shelter	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 109/138*	Rock shelter	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 110/139*	Rock shelter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)

Table 6. Known Archaeological Sites within the PDIA and PIIA for Alternative 3

<i>GHPI Number¹</i>	<i>Temporary Site Number/ Map Number*</i>	<i>Site Type</i>	<i>Period**</i>	<i>NRHP Eligible?</i>	<i>NRHP Criteria</i>	<i>Reference</i>	<i>Location/ Potential Effect Type</i>
	Site 111/140*	Rock shelter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 112/141*	Cave	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 113/142*	Rock shelter and cave complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 114/143*	Rock shelter	WWII Japanese Military Occupation	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 115/144*	<i>Latte</i> set complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 116/145*	<i>Latte</i> set	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 117/146*	<i>Latte</i> set	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 118/147*	Rock shelter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 119/148*	Rock shelter complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 120/149*	Rock shelter and cave complex	Pre-Contact/Latte, WWII Japanese Military Occupation	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 121/150*	Rock shelter	Pre-Contact/Latte, WWII Japanese Military Occupation	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 122/151*	Rock shelter and cave complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 123/152*	Cave, pictograph panel	Pre-Contact/Latte	Yes	C, D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 126/155*	Rock shelter	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 128/157*	Rock shelter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 129/158*	Rock shelter	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 136/165*	Rock shelter	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 139/168*	<i>Latte</i> set complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 1/527*	Artifact scatter	Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Noise)
	Site 3/528*	Artifact scatter	Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 9/534*	Enclosure	First American Territorial	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Noise)
	Site 12/537*	Rock shelter and cave complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Noise)
	Site 13/538*	Cave	WWII Japanese Military Occupation	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Noise)
	Site 14/539*	<i>Latte</i> set complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)

Table 6. Known Archaeological Sites within the PDIA and PIIA for Alternative 3

<i>GHPI Number</i>¹	<i>Temporary Site Number/ Map Number*</i>	<i>Site Type</i>	<i>Period**</i>	<i>NRHP Eligible?</i>	<i>NRHP Criteria</i>	<i>Reference</i>	<i>Location/ Potential Effect Type</i>
	Site 15/540*	Overhang	Pre-Contact/Latte, WWII Japanese Military Occupation	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Noise)
	Site 16/541*	Artifact scatter	Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Noise)
	Site 17/542*	Rock shelter complex	Pre-Contact/Latte, WWII Japanese Military Occupation	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Noise)
	Site 19/544*	Rock shelter and cave complex	Pre-Contact/Latte, WWII Japanese Military Occupation	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Noise)
	Site 20/545*	<i>Latte</i> Cluster	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access, Noise)
	Site 21/546*	<i>Latte</i> set complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 23/548*	Cave	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access, Noise)
	Site 24/549*	Rock shelter and cave complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Noise)
	Site 28/553*	Tunnel complex	WWII Japanese Military Occupation, Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 31/555*	Foxhole, cave	WWII Japanese Military Occupation	Yes	D	Henry <i>et al.</i> 1999	PDIA/ Direct (Range Construction); PIIA/Indirect (Access)
	Site 32/556*	Rock shelter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PDIA/ Direct (Range Construction); PIIA/Indirect (Access)
	Site 66/587*	<i>Latte</i> cluster	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PDIA/ Direct (Range Construction)
	Site 69/589*	<i>Latte</i> Set	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PDIA/ Direct(Range Construction); PIIA/Indirect (Access)
	Site 78/598*	Artifact scatter	WWII Japanese Military Occupation	Yes	D	Henry <i>et al.</i> 1999	PDIA/ Direct (Range Construction); PIIA/Indirect (Access)
	Site 79/599*	Enclosure	WWII Japanese Military Occupation	Yes	D	Henry <i>et al.</i> 1999	PDIA/ Direct (Range Construction); PIIA/Indirect (Access)

Table 6. Known Archaeological Sites within the PDIA and PIIA for Alternative 3

GHPI Number¹	Temporary Site Number/ Map Number*	Site Type	Period**	NRHP Eligible?	NRHP Criteria	Reference	Location/ Potential Effect Type
	Site 80/600*	Overhang	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PDIA/ Direct (Range Construction); PIIA/Indirect (Access)
	Site 114/633*	Artifact scatter	Post-WWII/Second American Territorial	^	NA	Henry <i>et al.</i> 1999, Welch 2009	PDIA/ Direct (Range Construction); PIIA/Indirect (Access)
	OA-8/808*	Concrete slab	Post-WWII/Second American Territorial	No	N/A	Hunter-Anderson and Moore 2002	PDIA/ Direct (Range Construction); PIIA/Indirect (Access)
	Site 36/560*	Artifact scatter	Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 37/561*	Rock shelter complex	Pre-Contact/Latte, WWII Japanese Military Occupation, Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 39/563*	Rock shelter	WWII Japanese Military Occupation	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 40/564*	Rock shelter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 41/565*	Rock shelter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 44/568*	<i>Latte</i> element cluster	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 48/572*	<i>Latte</i> complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Noise)
	Site 52/575*	<i>Latte</i> element cluster	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 53/576*	Concrete blocks	Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 6 /582*	<i>Latte</i> set complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 63/584*	Crevice	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 65/585*	<i>Latte</i> set	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 67/587*	<i>Latte</i> element cluster	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site70/590*	<i>Latte</i> set complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 71/591*	<i>Latte</i> set	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Noise)
	Site72/592*	<i>Latte</i> element cluster	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 73/593*	Cave and rock shelter complex	Pre-Contact/Latte, WWII Japanese Military Occupation	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Noise)
	Site 74/594*	Concrete slab (foundations)	Post-WWII/Second American Territorial	No	NA	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)

Table 6. Known Archaeological Sites within the PDIA and PIIA for Alternative 3

GHPI Number¹	Temporary Site Number/ Map Number*	Site Type	Period**	NRHP Eligible?	NRHP Criteria	Reference	Location/ Potential Effect Type
	Site 75/595*	Rock shelter complex	Pre-Contact/Latte, WWII Japanese Military Occupation	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Noise)
	Site 85/605*	Artifact scatter, buried fuel drums, water catchment box	Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 89/608*	<i>Latte</i> element cluster	Pre-Contact/Latte, Post-WWII Second American Territorial	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 90/609*	<i>Latte</i> element cluster	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 93/612*	<i>Latte</i> element cluster, artifact scatter, culvert	Pre-Contact/Latte, Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 95/614*	Artifact scatter	WWII Japanese Military Occupation	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 97/616*	Artifact scatter, <i>latte</i> element cluster	Pre-Contact/Latte, Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 98/617*	<i>Latte</i> set	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 102/621*	<i>Latte</i> set	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 103/622*	Artifact scatter	WWII Japanese Military Occupation	^	NA	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 106/625*	<i>Latte</i> element cluster	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 110/629*	<i>Latte</i> set	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 111/630*	Mortars	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 112/631*	<i>Latte</i> set complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 113/632*	Artifact scatter	Post-WWII/ Second American Territorial	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Noise)
	Site 116/635*	Cave	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 126/645*	Overhang	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Noise)
	Site 127/646*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 128/647*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 129/648*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 130/649*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 131/650*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 132/651*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 133/652*	Rock shelter	Pre-Contact/Latte, WWII Japanese Military Occupation	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)

Table 6. Known Archaeological Sites within the PDIA and PIIA for Alternative 3

GHPI Number¹	Temporary Site Number/Map Number*	Site Type	Period**	NRHP Eligible?	NRHP Criteria	Reference	Location/ Potential Effect Type
	Site 134/653*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 135/654*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 136/655*	Artifact scatter, mortar	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 137/656*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 138/657*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 139/658*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 140/659*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 141/660*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 166/681*	Rock shelter complex	Pre-Contact/Latte, WWII Japanese Military Occupation	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 167/682*	Rock shelter complex	Pre-Contact/Latte, Post-WII/ Second American Territorial	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 168/ 683*	<i>Latte</i> element cluster	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 4/686*	Cave complex	WWII Japanese Military Occupation	Yes	D	Henry <i>et al.</i> 1998b, Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	OA-8/808*	Concrete slab	Post-WWII/ Second American Territorial	No	NA	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
		<i>Alamagosa Springs/Potential landscape TCP</i>	Pre-Contact/Latte, Post WWII/Second American Territorial, Organic Act/Home Rule/Economic Development	^	A	Griffin <i>et al.</i> 2010	PIIA/ Indirect (Access)
		<i>Boña Springs/Potential landscape TCP</i>	Pre-Contact/Latte, Post WWII/Second American Territorial, Organic Act/Home Rule/Economic Development	^	A	Griffin <i>et al.</i> 2010	PDIA/ Direct (Range Construction); PIIA/Indirect (Noise, Access)
		<i>Dobo Springs/Potential landscape TCP</i>	Pre-Contact/Latte, Post WWII/Second American Territorial, Organic Act/Home Rule/Economic Development	^	A	Griffin <i>et al.</i> 2010	PIIA/ Indirect (Access)
		<i>Almagosa Mtn/Potential landscape TCP</i>	Pre-Contact/Latte, Post WWII/Second American Territorial, Organic Act/Home Rule/Economic Development	^	A	Griffin <i>et al.</i> 2010	PIIA/ Indirect (Access)

Table 6. Known Archaeological Sites within the PDIA and PIIA for Alternative 3

<i>GHPI Number¹</i>	<i>Temporary Site Number/Map Number*</i>	<i>Site Type</i>	<i>Period**</i>	<i>NRHP Eligible?</i>	<i>NRHP Criteria</i>	<i>Reference</i>	<i>Location/ Potential Effect Type</i>
		<i>Alifan Peak/Potential landscape TCP</i>	Post-WWII/Second American Territorial, Organic Act/Home Rule/Economic Development	^	A	Griffin <i>et al.</i> 2010	PIIA/ Indirect (Noise, Access)
		<i>High Density latte sites/Potential TCP</i>	Pre-Contact/Latte, Organic Act/Home Rule/Economic Development	^	A, D	Griffin <i>et al.</i> 2010	PIIA/ Indirect (Access)

Legend:

GHPI = Guam Historic Properties Inventory, NRHP = National Register of Historic Places; NRHP criterion D = eligible for potential to yield information important in prehistory or history.

Notes:

¹ Not all sites recorded within the project areas have received official GHPI numbers, although they have been documented as part of previous surveys.

* Map numbers from Welch *et al.* 2009.

** Revised to match GHPI forms dated May 28, 2014.

^ Architectural properties and archaeological sites in the PIIAs not previously evaluated for NRHP eligibility or addressed in a Program Comment are included for purposes of evaluating the effects of the alternatives.

Table 7. Known Architectural Properties within the PDIA and PIIA for LFTRC Alternative 3

<i>Building/ Structure Type</i>	<i>Location</i>	<i>Temporary Site Number/ Map Number*</i>	<i>Facility Number</i>	<i>Date of Construction</i>	<i>NRHP Eligible?</i>	<i>Location/ Potential Effect Type</i>
ARMCO Buildings	NAVMAG	21*	1, 10, 14, 15, 17, 23, 112, 113, 114, 120	1944-1945	Covered Under Program Comment	PDIA/Direct (Range Construction); PIIA/Indirect (Access)
Revetments	NAVMAG	Site 35/559*, Site 38/562*, Site 58/579*, Site 59/580*, Site 81/601*, Site 115/634*, Site 123/642*, Site 161/678*	NA	1944-1945	Covered Under Program Comment	PDIA/Direct (Range Construction)
ARMCO Buildings	NAVMAG	Site 158/675*, Site 160/677*	NA	1944-1945	Covered Under Program Comment	PDIA/Direct (Range Construction)
Quonset Hut Style Magazine	NAVMAG	Site OA-6/806*	NA	Post-1946	Covered Under Program Comment	PDIA/Direct (Range Construction)
Inert Storehouse	NAVMAG	†22-02-2627/37*	310NM	1949	Covered Under Program Comment	PDIA/Direct (Range Construction); PIIA/Indirect (Access)
Magazine Fuse Detonator	NAVMAG	NA	454NM	1952	Covered Under Program Comment	PDIA/Direct (Range Construction); PIIA/Indirect (Access)
Ammunition Rework/Overhaul	NAVMAG	NA	465NM	1955	Covered Under Program Comment	PDIA/Direct (Range Construction)
Explosive Truck Holding Yard	NAVMAG	34*	629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639	1944-1945	^	PIIA/Indirect (Access)
Inert Storehouse	NAVMAG	37*	309NM	1949	Covered Under Program Comment	PIIA/Indirect (Access)
Open storage areas, revetments	NAVMAG	43*	612, 614, 616, 617, 618, 619, 622, 621, 623, 624, 628	1944-1945	Covered Under Program Comment	PIIA/Indirect (Access)
Revetments	NAVMAG	Site 18/543*, Site 22/547*, Site 105/624*, Site 115/634*, Site 117/636*, Site 120/639*, Site 149/667*, Site 151/668*, Site 152/669*, Site 153/670*, Site 154/671*, Site 155/672*, Site 156/673*, Site 157/674*, Site 159/676*, Site 169/684*, Site 170/685*	NA	1944-1945	Covered Under Program Comment	PIIA/Indirect (Access)

Table 7. Known Architectural Properties within the PDIA and PIIA for LFTRC Alternative 3

<i>Building/ Structure Type</i>	<i>Location</i>	<i>Temporary Site Number/ Map Number*</i>	<i>Facility Number</i>	<i>Date of Construction</i>	<i>NRHP Eligible?</i>	<i>Location/ Potential Effect Type</i>
Revetment	NAVMAG	Site 25/551*	NA	1944-1945	Covered Under Program Comment	PIIA/Indirect (Access)
Revetment	NAVMAG	Site 162/679*, Site 107/626*	620, 626	1944-1945	Covered Under Program Comment	PIIA/Indirect (Access)
ARMCO Building	NAVMAG	Site 148/666*	188	1944-1945	Covered Under Program Comment	PIIA/Indirect (Access)
ARMCO Buildings	NAVMAG	Site 33/557*, Site 34/558*, Site 50/573*, Site 83/603*, Site 158/675*, Site 165/680*	NA	1944-1945	Covered Under Program Comment	PIIA/Indirect (Access)
ARMCO Buildings	NAVMAG	Site 82/602*, Site 84/604*	NA	1944-1945	Covered Under Program Comment	PIIA/Indirect (Access)
High Explosive Magazines	NAVMAG	1053*	434, 435, 436, 437	1952	Covered Under Program Comment	PIIA/Indirect (Access)
Close Quarter Battle Breach Training	NAVMAG	NA	640NM	1997	No	PIIA/Indirect (Access)
Ammunition Rework/Overhaul	NAVMAG	NA	779NM	1965	No	PIIA/Indirect (Access)
Utility Building	NAVMAG	NA	840NM	1969	No	PIIA/Indirect (Access)
EOD Crew Blast Shelter	NAVMAG	NA	862NM	1976	No	PIIA/Indirect (Access)

Notes:

*Map numbers from Welch 2010.

^ Architectural properties and archaeological sites in the PIIAs not previously evaluated for NRHP eligibility or addressed in a Program Comment are included for purposes of evaluating the effects of the alternatives.

7.1 Summary of Direct Adverse Effects under Alternative 3

Direct physical disturbance would potentially occur on approximately 370 acres (150 ha) of this site for the construction of the proposed range facilities. Construction of the ranges, support facilities, relocated magazine, and utilities would occur in the NAVMAG (FSEIS, [2015], Figure 2.5-4, and in Appendix A of this TRRA). The SDZs encompass approximately 3,179 acres (1,286 ha); these acres would not be directly impacted as a result of construction or operation of the LFTRC. Excavation and soil removal associated with the construction of Alternative 3 could adversely affect 11 known historic properties, including Pre-Contact artifact scatters, sites containing *latte* components, rock shelters, and WWII military sites (TRRA, Table 8). Construction could also affect two unevaluated sites in the 48 acres (19.4 ha) that could not be accessed during the in-fill surveys because of standing water, and one potential TCP (Boña Springs). Based on an examination of previous investigations and predictive modeling, there is a low potential for NRHP-eligible sites in the unsurveyed areas under direct effect.

Construction activities associated with Alternative 3 may also require the demolition of 24 architectural properties. All of the buildings and structures are covered under the *Program Comment for World War II and Cold War Era (1939-1974) Ammunition Storage Facilities* (ACHP 2006), which resolves NHPA Section 106 requirements for demolition of these buildings.

7.2 Summary of Indirect Adverse Effects under Alternative 3

The SDZs encompass approximately 3,179 acres (1,286 ha). Changes to the setting of the 25 NRHP-eligible sites with *latte* components from auditory impacts associated with range operations could be adverse (TRRA, Table 8). There may also be an effect on two potential TCPs (Boña Springs and Alifan Peak). Five potential TCPs (Boña Springs, Almagosa Springs, Dobo Springs, Almagosa Mountain, and a high-density area of *latte* sites) could also be indirectly affected due to restricted public access. No indirect adverse effects from visual intrusions associated with Alternative 3 are anticipated because the ranges are within an existing military operations area, and the action would not change the visual setting.

Additional details about Alternative 3 are provided in the FSEIS [2015], Section 2.5.4.3, and in Appendix C of this TRRA.

Table 8. Summary of Adverse Effects Under Alternative 3

GHPI Number¹	Temporary Site Number/Map Number*	Site Type	Period**	Reference	Location/ Potential Effect Type
66-02-0145A	29*	Latte complex	Pre-Contact/Latte	Craib and Yoklavich 1997	Direct (Range Construction)
66-02-0145B	30*	Latte complex	Pre-Contact/Latte	Craib and Yoklavich 1997	Direct (Range Construction)
66-02-0152	26*	Latte complex	Pre-Contact/Latte	Craib and Nees 1998	Indirect (Noise)
66-02-1659	496*	Trenches and foxholes	Pre-WWII Japanese Military Occupation	Allen <i>et al.</i> 2002	Direct (Range Construction)
66-02-1660	497*	Latte set and rock shelter complex	Pre-Contact/Latte	Allen <i>et al.</i> 2002	Direct (Range Construction)
66-02-2329	51*	Latte set complex	Pre-Contact/Latte, Spanish Missionization/Chamorro Spanish Wars	Henry <i>et al.</i> 1998	Indirect (Noise)
66-02-2346	552*	Latte set complex	Pre-Contact/Latte	Henry <i>et al.</i> 1998, Welch 2010	Indirect (Noise)
66-02-2347	554*	Latte set	Pre-Contact/Latte	Henry <i>et al.</i> 1998, Welch 2010	Indirect (Noise)
66-02-2348	566*	Latte set complex	Pre-Contact/Latte	Henry <i>et al.</i> 1998, Welch 2010	Indirect (Noise)
66-02-2349	567*	Latte set complex	Pre-Contact/Latte	Henry <i>et al.</i> 1998, Welch 2010	Indirect (Noise)
66-02-2350	569*	Latte set complex	Pre-Contact/Latte	Henry <i>et al.</i> 1998, Welch 2010	Indirect (Noise)
66-02-2351	570*	Latte set	Pre-Contact/Latte	Henry <i>et al.</i> 1998, Welch 2010	Indirect (Noise)
66-02-2352	574*	Latte set complex	Pre-Contact/Latte	Henry <i>et al.</i> 1998, Welch 2010	Indirect (Noise)
66-02-2353	577*	Latte set complex	Pre-Contact/Latte	Henry <i>et al.</i> 1998, Welch 2010	Indirect (Noise)
66-02-2354	578*	Latte element cluster	Pre-Contact/Latte	Henry <i>et al.</i> 1998, Welch 2010	Indirect (Noise)
66-02-2355	581*	Latte set complex	Pre-Contact/Latte	Henry <i>et al.</i> 1998, Welch 2010	Indirect (Noise)
66-02-2356	586*	Latte set	Pre-Contact/Latte	Henry <i>et al.</i> 1998, Welch 2010	Indirect (Noise)
	T-NMS-001	Latte set	Pre-Contact/Latte	Dixon <i>et al.</i> 2014a	Direct^ (Range Construction)
	Site 14/539*	Latte set complex	Pre-Contact/Latte	Henry <i>et al.</i> 1999	Indirect (Noise)
	Site 20/545*	Latte Cluster	Pre-Contact/Latte	Henry <i>et al.</i> 1998	Indirect (Noise)
	Site 21/546*	Latte set complex	Pre-Contact/Latte	Henry <i>et al.</i> 1999	Indirect (Noise)
	Site 31/555*	Foxhole, cave	WWII Japanese Military Occupation	Henry <i>et al.</i> 1999	Direct (Range Construction)
	Site 32/556*	Rock shelter	Pre-Contact/Latte	Henry <i>et al.</i> 1999	Direct (Range Construction)
	Site 66/587*	Latte cluster	Pre-Contact/Latte	Henry <i>et al.</i> 1999	Direct (Range Construction)
	Site 69/589*	Latte Set	Pre-Contact/Latte	Henry <i>et al.</i> 1999	Direct (Range Construction)
	Site 78/598*	Artifact scatter	WWII Japanese Military Occupation	Henry <i>et al.</i> 1999	Direct (Range Construction)
	Site 79/599*	Enclosure	WWII Japanese Military Occupation	Henry <i>et al.</i> 1999	Direct (Range Construction)
	Site 80/600*	Overhang	Pre-Contact/Latte	Henry <i>et al.</i> 1999	Direct (Range Construction)
	Site 114/633*	Artifact scatter	Post-WWII/Second American Territorial	Henry <i>et al.</i> 1999, Welch 2009	Direct (Range Construction)
	OA-8/808*	Concrete slab	Post-WWII/Second American Territorial	Hunter-Anderson and Moore 2002	Direct (Range Construction)
	Site 44/568*	Latte element cluster	Pre-Contact/Latte	Henry <i>et al.</i> 1999	Indirect (Noise)

Table 8. Summary of Adverse Effects Under Alternative 3

GHPI Number¹	Temporary Site Number/Map Number*	Site Type	Period**	Reference	Location/ Potential Effect Type
	Site 48/572*	Latte complex	Pre-Contact/Latte	Henry <i>et al.</i> 1999	Indirect (Noise)
	Site 6/582*	Latte set complex	Pre-Contact/Latte	Henry <i>et al.</i> 1999	Indirect (Noise)
	Site 65/585*	Latte set	Pre-Contact/Latte	Henry <i>et al.</i> 1999	Indirect (Noise)
	Site 70/590*	Latte set complex	Pre-Contact/Latte	Henry <i>et al.</i> 1999	Indirect (Noise)
	Site 71/591*	Latte set	Pre-Contact/Latte	Henry <i>et al.</i> 1999	Indirect (Noise)
	Site 72/592*	Latte element cluster	Pre-Contact/Latte	Henry <i>et al.</i> 1999	Indirect (Noise)
	Site 112/631*	Latte set complex	Pre-Contact/Latte	Henry <i>et al.</i> 1999	Indirect (Noise)
	Site 168/683*	Latte element cluster	Pre-Contact/Latte	Henry <i>et al.</i> 1999	Indirect (Noise)
		<i>Alamagosa Springs/Potential landscape TCP</i>	Pre-Contact/Latte, Post WWII/Second American Territorial, Organic Act/Home Rule/Economic Development	Griffin <i>et al.</i> 2010	Indirect^ (Access)
		<i>Boña Springs/Potential landscape TCP</i>	Pre-Contact/Latte, Post WWII/Second American Territorial, Organic Act/Home Rule/Economic Development	Griffin <i>et al.</i> 2010	Direct^ (Range Construction); PIIA/Indirect (Noise, Access)
		<i>Dobo Springs/Potential landscape TCP</i>	Pre-Contact/Latte, Post WWII/Second American Territorial, Organic Act/Home Rule/Economic Development	Griffin <i>et al.</i> 2010	Indirect^ (Access)
		<i>Almagosa Mtn/Potential landscape TCP</i>	Pre-Contact/Latte, Post WWII/Second American Territorial, Organic Act/Home Rule/Economic Development	Griffin <i>et al.</i> 2010	Indirect^ (Access)
		<i>Alifan Peak/Potential landscape TCP</i>	Post-WWII/Second American Territorial, Organic Act/Home Rule/Economic Development	Griffin <i>et al.</i> 2010	Indirect^ (Noise, Access)
		<i>High Density latte sites/Potential TCP</i>	Pre-Contact/Latte, Organic Act/Home Rule/Economic Development	Griffin <i>et al.</i> 2010	Indirect^ (Access)

Legend:

GHPI = Guam Historic Properties Inventory.

Notes:

¹ Not all sites recorded within the project areas have received official GHPI numbers, although they have been documented as part of previous surveys.

* Map numbers from Welch *et al.* 2009.

** Revised to match GHPI forms dated May 28, 2014.

^ Eligibility of these resources has not been fully evaluated. They are included here for the purpose of evaluating effects.

8 ALTERNATIVE 4: NAVMAG (L-SHAPED)

Alternative 4, the NAVMAG (L-Shaped) LFTRC Alternative, would consist of approximately 4,895 acres (1,981 ha) (not including the HG Range at Andersen South) and would require the acquisition of approximately 914 acres (370 ha) of privately owned and GovGuam land. Alternative 4 would be divided between two locations: the MPMG Range and range maintenance facility would be located in the same locations identified in Alternative 3 (FSEIS [2015], Section 2.5.4.3: Naval Magazine (North/South) Live-Fire Training Range Complex - Alternative 3) and the other ranges would be located on adjacent non-federal property to the southeast of the NAVMAG, near the area of Alternative 2 (FSEIS [2015], Section 2.5.4.2). Although these components of the LFTRC would not be contiguous, they would all be in proximity as required by the Marine Corps Guiding Principles. Access to the ranges located east of the NAVMAG would occur via a new access road from Route 4. Access between the ranges proposed in the southeastern portion of the LFTRC would be via approximately 3.0 miles (4.8 km) of new roads constructed as part of the LFTRC. Appendix A of this TRRA provides a map of Alternative 4.

Table 9 lists 13 known archaeological sites located within the Alternative 4 PDIA. Eleven sites, including sites with *latte* sets, rock shelters, WWII military sites, and artifact scatters, are eligible for listing in the NRHP. Two sites, consisting of a WWII-era American military concrete slab and a small Latte Period artifact scatter, are not considered eligible for listing in the NRHP.

There are 11 known structures and buildings located within the Alternative 4 PDIA (FSEIS [2015], Table 5.4.10-2, and TRRA, Table 10). All of these structures and buildings are covered under the 2006 *Program Comment for World War II and Cold War Era Ammunitions Storage Facilities* (ACHP 2006).

No TCPs have been identified in the PDIA for Alternative 4. Culturally important natural resources may occur in the PDIA.

There are 248 known archaeological sites located within the Alternative 4 PIIA (FSEIS [2015], Table 5.4.10-3, and TRRA, Table 9). Of these, 219 are NRHP-eligible sites, including artifact scatters, *latte* sites, rock shelters, and historic military features. Twenty-seven sites have not been evaluated for listing in the NRHP, and two sites are considered not eligible for listing in the NRHP.

There are 56 architectural properties, constructed between 1944 and 2007, located within the PIIA for Alternative 4 (FSEIS [2015], Table 5.4.10-4, and TRRA, Table 10). Forty-one of the structures are ammunition storage facilities covered under the *Program Comment for World War II and Cold War Era Ammunition Storage Facilities* (ACHP 2006; see Chapter 3.10.3 for more information on the Program Comment). Eleven buildings and structures greater than 50 years in age have not been evaluated. Four structures are less than 50 years old and do not meet the exceptional significance threshold required under NRHP Criteria Consideration G.

Six potential TCPs have been identified in the PIIA for Alternative 4. They include Boña Springs, Alifan Peak, Almagosa Springs, Dobo Springs, Almagosa Mountain, and a high-density area of *latte* sites (Griffin *et al.* 2010).

Table 9. Known Archaeological Sites within the PDIA and PIIA for Alternative 4

<i>GHI</i> <i>Number</i> ¹	<i>Temporary</i> <i>Site Number/</i> <i>Map Number*</i>	<i>Site Type</i>	<i>Period**</i>	<i>NRHP</i> <i>Eligible?</i>	<i>NRHP</i> <i>Criteria</i>	<i>Reference</i>	<i>Location/ Potential Effect</i> <i>Type</i>
66-02-0145A	29*	<i>Latte</i> complex	Pre-Contact/ <i>Latte</i>	Yes	D	Craib and Yoklavich 1997	PDIA/ Direct (Range construction)
66-02-0145B	30*	<i>Latte</i> complex	Pre-Contact/ <i>Latte</i>	Yes	D	Craib and Yoklavich 1997	PDIA/ Direct (Range construction)
66-02-0149A	38*	<i>Latte</i> set complex, artifact scatter	Pre-Contact/ <i>Latte</i>	Yes	D	Craib and Yoklavich 1997, Craib and Nees 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-1049B	32*	<i>Latte</i> complex	Pre-Contact/ <i>Latte</i>	Yes	C, D	Welch 2010	PIIA/ Indirect (Access)
66-02-0150	24*	<i>Latte</i> complex	Pre-Contact/ <i>Latte</i>	Yes	D	Craib and Yoklavich 1997	PIIA/ Indirect (Access)
66-02-0151	33*	Feature complex, structure complex, quarry	Pre-Contact/ <i>Latte</i>	Yes	C, D	Welch 2010	PIIA/ Indirect (Access)
66-02-0152	26*	<i>Latte</i> complex	Pre-Contact/ <i>Latte</i>	Yes	D	Craib and Nees 1998	PIIA/ Indirect (Access, Noise)
66-02-1659	496*	Trenches and foxholes	WWII Japanese Military Occupation	Yes	D	Allen <i>et al.</i> 2002	PDIA/ Direct (Range construction); PIIA/Indirect (Access)
66-02-1660	497*	<i>Latte</i> set and rock shelter complex	Pre-Contact/ <i>Latte</i>	Yes	D	Allen <i>et al.</i> 2002	PDIA/ Direct (Range construction); PIIA/Indirect (Access)
66-02-1661	498*	<i>Latte</i> set complex, artifact scatter	Pre-Contact/ <i>Latte</i>	Yes	C, D	Allen <i>et al.</i> 2002, Welch 2010	PIIA/ Indirect (Access)
66-02-1819	767*	Rock shelter	Pre-Contact/ <i>Latte</i>	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
66-02-1846	797*	<i>Latte</i> element clusters	Pre-Contact/ <i>Latte</i>	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
66-02-1847	798*	<i>Latte</i> complex	Pre-Contact/ <i>Latte</i>	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
66-02-1848	799*	Artifact scatter	Pre-Contact (unspecified)	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
66-02-1849	800*	Rock shelter	Pre-Contact (unspecified)	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
66-02-1850	801*	Manufacturing station	Pre-Contact/ <i>Latte</i>	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)

Table 9. Known Archaeological Sites within the PDIA and PIIA for Alternative 4

<i>GHPI Number¹</i>	<i>Temporary Site Number/ Map Number*</i>	<i>Site Type</i>	<i>Period**</i>	<i>NRHP Eligible?</i>	<i>NRHP Criteria</i>	<i>Reference</i>	<i>Location/ Potential Effect Type</i>
66-02-2327	47*	<i>Latte set</i>	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2328	49*	<i>Latte set complex</i>	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2329	51*	<i>Latte set complex</i>	Latte, Spanish Administration	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2330	54*	<i>Latte set complex</i>	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2331	55*	<i>Latte set</i>	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2332	Site 14/57*	<i>Latte set complex</i>	Pre-Contact/Latte	Yes	D	Welch <i>et al.</i> 2009	PIIA/ Indirect (Access)
66-02-2333	65*	<i>Latte set</i>	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2334	73*	<i>Latte set, pit</i>	Pre-Contact/Latte, Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2335	Site 124/153*	<i>Latte set complex</i>	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2336	Site 125/154*	<i>Latte set, rock shelter, and cave complex</i>	Pre-Contact/Latte, WWII Japanese Military Occupation	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2337	Site 127/156*	<i>Latte set complex</i>	Pre-Contact/Latte, Spanish Missionization/ Chamorro Spanish Wars	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2338	Site 130/159*	Rock shelter	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2339	Site 131/160*	<i>Latte set and rock shelter complex</i>	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2340	Site 132/161*	<i>Latte set complex</i>	Pre-Contact/Latte, Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2341	Site 133/162*	<i>Latte set complex</i>	Pre-Contact/Latte, Spanish Missionization/ Chamorro Spanish Wars	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)

Table 9. Known Archaeological Sites within the PDIA and PIIA for Alternative 4

<i>GHPI Number¹</i>	<i>Temporary Site Number/ Map Number*</i>	<i>Site Type</i>	<i>Period**</i>	<i>NRHP Eligible?</i>	<i>NRHP Criteria</i>	<i>Reference</i>	<i>Location/ Potential Effect Type</i>
66-02-2342	Site 134/163*	<i>Latte</i> set complex	Pre-Contact/ <i>Latte</i> , Spanish Missionization/ Chamorro Spanish, WWII Japanese Military Occupation , Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2343	Site 135/164*	Artifact scatter	Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2344	Site 137/166*	<i>Latte</i> set complex	Pre-Contact/ <i>Latte</i>	Yes	C, D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2345	Site 138/167*	<i>Latte</i> element cluster, artifact scatter	Pre-Contact/ <i>Latte</i>	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2346	552*	<i>Latte</i> set complex	Pre-Contact/ <i>Latte</i>	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access, Noise)
66-02-2347	554*	<i>Latte</i> set	Pre-Contact/ <i>Latte</i>	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access, Noise)
66-02-2348	566*	<i>Latte</i> set complex	Pre-Contact/ <i>Latte</i>	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access, Noise)
66-02-2349	567*	<i>Latte</i> set complex	Pre-Contact/ <i>Latte</i>	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access, Noise)
66-02-2350	569*	<i>Latte</i> set complex	Pre-Contact/ <i>Latte</i>	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access, Noise)
66-02-2351	570*	<i>Latte</i> set	Pre-Contact/ <i>Latte</i>	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access, Noise)
66-02-2352	574*	<i>Latte</i> set complex	Pre-Contact/ <i>Latte</i>	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2353	577*	<i>Latte</i> set complex	Pre-Contact/ <i>Latte</i>	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access, Noise)
66-02-2354	578*	<i>Latte</i> element cluster	Pre-Contact/ <i>Latte</i>	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access, Noise)
66-02-2355	581*	<i>Latte</i> set complex	Pre-Contact/ <i>Latte</i>	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2356	586*	<i>Latte</i> set	Pre-Contact/ <i>Latte</i>	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)

Table 9. Known Archaeological Sites within the PDIA and PIIA for Alternative 4

<i>GHPI Number</i> ¹	<i>Temporary Site Number/ Map Number*</i>	<i>Site Type</i>	<i>Period**</i>	<i>NRHP Eligible?</i>	<i>NRHP Criteria</i>	<i>Reference</i>	<i>Location/ Potential Effect Type</i>
66-02-2357	606*	Rock shelter and cave complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2358	607*	<i>Latte</i> set, artifact scatter, culverts	Pre-Contact/Latte, WWII Japanese Military Occupation, Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2359	610*	<i>Latte</i> set	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2360	611*	<i>Latte</i> set	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2361	613*	<i>Latte</i> set complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2362	615*	<i>Latte</i> set complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2363	623*	<i>Latte</i> set	Pre-Contact/ Latte	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2364	640*	<i>Latte</i> set complex	Pre-Contact/Latte	Yes	D	Welch 2010	PIIA/ Indirect (Access)
66-02-2365	641*	<i>Latte</i> set complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
66-02-2367	1067*	<i>Latte</i> set	Pre-Contact/Latte	Yes	D	Welch 2010	PIIA/ Indirect (Access)
66-02-2368	1068*	<i>Latte</i> set	Pre-Contact/Latte	Yes	D	Welch 2010	PIIA/ Indirect (Access)
66-02-2369	1069*	<i>Latte</i> set	Pre-Contact/Latte	Yes	D	Welch 2010	PIIA/ Indirect (Access)
66-02-2370	1070*	<i>Latte</i> set complex	Pre-Contact/Latte	Yes	D	Welch 2010	PIIA/ Indirect (Access)
66-02-2371	1071*	<i>Latte</i> element cluster	Pre-Contact/Latte	Yes	D	Welch 2010	PIIA/ Indirect (Access)
66-02-2372	1072*	<i>Latte</i> element cluster	Pre-Contact/Latte	Yes	D	Welch 2010	PIIA/ Indirect (Access)
66-08-2612		<i>Latte</i> set	Pre-Contact/Latte	^	N/A	Henry <i>et al.</i> 1999	PIIA/ Indirect (Noise)
66-08-2628	T-TA-002	<i>Latte</i> set Partial	Pre-Contact/Latte	Yes	D	Dixon <i>et al.</i> 2014a	PDIA/ Direct (Range construction); PIIA/ Indirect (Access)
66-08-2629	T-TA-004	<i>Latte</i> set	Pre-Contact/Latte	Yes	D	Dixon <i>et al.</i> 2014a	PDIA/ Direct (Range construction)
66-08-2630	T-TA-005	Artifact scatter	Pre-Contact/Latte	Yes	D	Dixon <i>et al.</i> 2014a	PDIA/ Direct (Range construction); PIIA/ Indirect (Access)

Table 9. Known Archaeological Sites within the PDIA and PIIA for Alternative 4

<i>GHPI Number¹</i>	<i>Temporary Site Number/ Map Number*</i>	<i>Site Type</i>	<i>Period**</i>	<i>NRHP Eligible?</i>	<i>NRHP Criteria</i>	<i>Reference</i>	<i>Location/ Potential Effect Type</i>
66-08-2631	T-TA-006	Artifact scatter	Pre-Contact/ Latte, Spanish Missionization/ Chamorro Spanish Wars	Yes	D	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access, Noise)
66-08-2632	T-TA-031	Artifact scatter	Pre-Contact/Latte	Yes	D	Dixon <i>et al.</i> 2014a	PDIA/ Direct (Range construction); PIIA/ Indirect (Access, Noise)
66-09-1821		<i>Latte</i> set complex	Pre-Contact/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Noise)
66-09-1830	779*	Artifact scatter	Pre-Contact/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
66-09-1831	781*	<i>Latte</i> set	Pre-Contact/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
66-09-1834	784*	<i>Latte</i> set	Pre-Contact/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access, Noise)
66-09-1835	785*	<i>Latte</i> set	Pre-Contact/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access, Noise)
66-09-1836	786*	<i>Latte</i> set	Pre-Contact/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access, Noise)
66-09-1839	789*	<i>Latte</i> set	Pre-Contact/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access, Noise)
66-09-1840	790*	Artifact scatter	Pre-Contact/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
66-09-1841	792*	<i>Latte</i> element cluster	Pre-Contact/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access, Noise)
66-09-1842	793*	<i>Latte</i> set	Pre-Contact/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access, Noise)
66-09-1843	794*	<i>Latte</i> set	Pre-Contact/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
66-09-1844	795*	Rock cluster	Pre-Contact/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)
66-09-1845	796*	Artifact scatter	Pre-Contact/Latte	Yes	D	Hunter-Anderson and Moore 2002	PIIA/ Indirect (Access)

Table 9. Known Archaeological Sites within the PDIA and PIIA for Alternative 4

<i>GHPI Number¹</i>	<i>Temporary Site Number/ Map Number*</i>	<i>Site Type</i>	<i>Period**</i>	<i>NRHP Eligible?</i>	<i>NRHP Criteria</i>	<i>Reference</i>	<i>Location/ Potential Effect Type</i>
66-09-2662	T-TA-017	Artifact scatter	Pre-Contact/ Latte, Spanish Missionization/ Chamorro Spanish Wars	^	N/A	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access, Noise)
66-09-2663	T-TA-018	Artifact scatter	Pre-Contact/Latte	^	N/A	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access, Noise)
66-09-2664	T-TA-019	Artifact scatter	Pre-Contact/Latte	^	N/A	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access, Noise)
66-09-2665	T-TA-020	Artifact scatter	Pre-Contact/Latte/Latte	^	N/A	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access, Noise)
66-09-2666	T-TA-021	Artifact scatter	Pre-Contact/Latte	^	N/A	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Noise)
66-09-2667	T-TA-022	Artifact scatter	Pre-Contact/Latte	^	N/A	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Noise)
66-09-2668	T-TA-023	Artifact scatter	Pre-Contact/Latte	^	N/A	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access, Noise)
66-09-2669	T-TA-024	Artifact scatter	Pre-Contact/Latte	^	N/A	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access, Noise)
66-09-2670	T-TA-025	Artifact scatter	Pre-Contact/Latte	^	N/A	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access, Noise)
66-09-2671	T-TA-026	<i>Latte set</i>	Pre-Contact/Latte	^	N/A	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access, Noise)
66-09-2672	T-TA-027	Artifact scatter	Pre-Contact/Latte	^	N/A	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access)
66-09-2673	T-TA-028	Artifact scatter	Pre-Contact/Latte	^	N/A	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access)
66-09-2674	T-TA-029	Artifact scatter	Pre-Contact/Latte	^	N/A	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access)
66-09-2675	T-TA-030	Artifact scatter	Pre-Contact/Latte	^	N/A	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access)
66-09-2676	T-TA-032	Artifact scatter	Pre-Contact/Latte	^	N/A	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Noise)
66-09-2677	T-TA-033	Artifact scatter	Pre-Contact/Latte	^	N/A	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access, Noise)
66-09-2678	T-TA-034	<i>Latte set</i>	Pre-Contact/Latte	^	N/A	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access, Noise)
66-09-2679	T-TA-035	<i>Latte set</i>	Pre-Contact/Latte	^	N/A	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access)
66-09-2680	T-TA-036	Artifact scatter	Pre-Contact/Latte	^	N/A	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access)
66-09-2681	T-TA-037	Artifact scatter	Pre-Contact/Latte	^	N/A	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access)
66-09-2682	T-TA-038	<i>Latte sets</i>	Pre-Contact/Latte	^	N/A	Dixon <i>et al.</i> 2014b	PIIA/ Indirect ((Access, Noise)
66-09-2683	T-TA-039	<i>Latte set</i>	Pre-Contact/Latte	^	N/A	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access, Noise)

Table 9. Known Archaeological Sites within the PDIA and PIIA for Alternative 4

<i>GHPI Number¹</i>	<i>Temporary Site Number/ Map Number*</i>	<i>Site Type</i>	<i>Period**</i>	<i>NRHP Eligible?</i>	<i>NRHP Criteria</i>	<i>Reference</i>	<i>Location/ Potential Effect Type</i>
66-09-2684	T-TA-040	Latte set	Pre-Contact/Latte	^	N/A	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access)
66-09-2685	T-TA-041	Latte set	Pre-Contact/Latte	^	N/A	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access)
66-09-2686	T-TA-042	Latte set	Pre-Contact/Latte	^	N/A	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access)
66-08-2759	T-TA-047	Artifact scatter	Pre-Contact/Latte	No	NA	Dixon <i>et al.</i> 2014a	PDIA/ Direct (Range construction); PIIA/ Indirect (Access)
	23*	Defensive site	WWII Japanese Military Occupation	Yes	D	Craib and Yoklavich 1997	PIIA/ Indirect (Access, Noise)
	Site 5/48*	Latte set	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 7/50*	Artifact scatter	Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 9/52*	Artifact scatter	Pre-Contact/Latte, Spanish Missionization/ Chamorro Spanish Wars, Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 10/53*	Rock shelter complex	Pre-Contact/Latte, WWII Japanese Military Occupation	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 13/56*	Rock shelter	Pre-Contact, (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 15/58*	Rock shelter	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 16/59*	Cave	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 17/60*	Cave	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 18/61*	Latte set	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 19/62*	Rock shelter	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 20/63*	Rock shelter	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 21/64*	Latte set	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 23/66*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 24/67*	Artifact scatter	Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 25/68*	Rock shelter	Pre-Contact (unspecified), WWII Japanese Military Occupation	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 26/69*	Rock shelter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)

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	Site 27/70*	Rock shelter and cave complex	Pre-Contact/Latte, Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 28/71*	Latte set	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998, Welch 2010	PIIA/ Indirect (Access)
	Site 29/72*	Artifact scatter	Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 32/74*	Artifact scatter	Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 33/75*	Rock shelter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 39/78*	Latte complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 42/79*	Latte complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 43/80	Latte complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 44/81*	Latte set complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 48/82*	Cave	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 49/83*	Latte set complex	Pre-Contact/Latte, Spanish Missionization/ Chamorro Spanish Wars	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 50/84*	Latte set complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 51/85*	Rock shelter and cave complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 52/86*	Rock shelter and cave complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 55/87*	Cave	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 56/88*	Rock shelter complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 58/89*	Cave	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 60/90*	Rock shelter	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 61/91*	Latte element cluster	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 62/92*	Latte set complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 65/95*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 66/96*	Artifact scatter	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 67/97*	Latte set	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 68/98*	Latte set complex	Spanish Missionization/ Chamorro Spanish Wars	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 69/99*	Latte set complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 70/100*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect

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<i>GHPI Number¹</i>	<i>Temporary Site Number/ Map Number*</i>	<i>Site Type</i>	<i>Period**</i>	<i>NRHP Eligible?</i>	<i>NRHP Criteria</i>	<i>Reference</i>	<i>Location/ Potential Effect Type</i>
	Site 71/101*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 72/102*	Artifact scatter	Pre-Contact, unspecified	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 73/103*	Latte set complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 74/104*	Latte element cluster, artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 75/105*	Artifact scatter	Pre-Contact/Latte, Spanish Missionization/ Chamorro Spanish Wars	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 76/106*	Latte set complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 77/107*	Artifact scatter	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 78/108*	Latte element cluster	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 79/109*	Chiseled steps	Pre-Contact, unspecified	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 80/110*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 81/111*	Latte set complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 85/114*	Latte set complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 86/115*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 87/116*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 88/117*	Artifact scatter	Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 89/118*	Artifact scatter	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 90/119*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 91/120*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 92/121*	Artifact scatter, cultural deposit	Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 93/122*	Overhang	Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 94/123*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 95/124*	Artifact scatter, cultural deposit	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 96/125*	Rock shelter complex	Pre-Contact (unspecified), Spanish Missionization/ Chamorro Spanish Wars	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 98/127*	Latte set	Pre-Contact/Latte, Spanish Missionization/ Chamorro Spanish Wars	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 100/129*	Rock shelter	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 101/130*	Latte set	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)

Table 9. Known Archaeological Sites within the PDIA and PIIA for Alternative 4

<i>GHPI Number¹</i>	<i>Temporary Site Number/ Map Number*</i>	<i>Site Type</i>	<i>Period**</i>	<i>NRHP Eligible?</i>	<i>NRHP Criteria</i>	<i>Reference</i>	<i>Location/ Potential Effect Type</i>
	Site 102/131*	Latte set	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 103/132*	Cave complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 104/133*	Rock shelter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 105/134*	Crevice	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 106/135*	Rock shelter, cultural deposit	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 107/136*	Rock shelter, cultural deposit	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 108/137*	Rock shelter	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 109/138*	Rock shelter	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 110/139*	Rock shelter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 111/140*	Rock shelter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 112/141*	Cave	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 113/142*	Rock shelter and cave complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 114/143*	Rock shelter	WWII Japanese Military Occupation	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 115/144*	Latte set complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 116/145*	Latte set	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 117/146*	Latte set	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 118/147*	Rock shelter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 119/148*	Rock shelter complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 120/149*	Rock shelter and cave complex	Pre-Contact/Latte, WWII Japanese Military Occupation	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 121/150*	Rock shelter	Pre-Contact/Latte, WWII Japanese Military Occupation	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 122/151*	Rock shelter and cave complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 123/152*	Cave, pictograph panel	Pre-Contact/Latte	Yes	C, D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 126/155*	Rock shelter	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 128/157*	Rock shelter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)

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	Site 129/158*	Rock shelter	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 136/165*	Rock shelter	Pre-Contact (unspecified)	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 139/168*	<i>Latte</i> set complex	Pre-Contact/ <i>Latte</i>	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 14/539*	<i>Latte</i> set complex	Pre-Contact/ <i>Latte</i>	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 21/546*	<i>Latte</i> set complex	Pre-Contact/ <i>Latte</i>	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 28/553*	Tunnel complex	WWII Japanese Military Occupation , Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 31/555*	Foxhole, cave	WWII Japanese Military Occupation	Yes	D	Henry <i>et al.</i> 1999	PDIA/ Direct (Range construction); PIIA/Indirect (Access)
	Site 32/556*	Rock shelter	Pre-Contact/ <i>Latte</i>	Yes	D	Henry <i>et al.</i> 1999	PDIA/ Direct (Range construction); PIIA/Indirect (Access)
	Site 36/560*	Artifact scatter	Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 37/561*	Rock shelter complex	Pre-Contact/ <i>Latte</i> , WWII Japanese Military Occupation, Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 39/563*	Rock shelter	WWII Japanese Military Occupation	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 40/564*	Rock shelter	Pre-Contact/ <i>Latte</i>	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 41/565*	Rock shelter	Pre-Contact/ <i>Latte</i>	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 44/568*	<i>Latte</i> element cluster	Pre-Contact/ <i>Latte</i>	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 52/575*	<i>Latte</i> element cluster	Pre-Contact/ <i>Latte</i>	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 53/576*	Concrete blocks	Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 6/582	<i>Latte</i> set complex	Pre-Contact/ <i>Latte</i>	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 63/584*	Crevice	Pre-Contact/ <i>Latte</i>	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 65/585*	<i>Latte</i> set	Pre-Contact/ <i>Latte</i>	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)

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	Site 66/587*	Latte cluster	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PDIA/ Direct (Range construction)
	Site 70/590*	Latte set complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Noise)
	Site 71/591*	Latte set	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Noise)
	Site 72/592*	Latte element cluster	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Noise)
	Site 74/594*	Slab	Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 85/605*	Artifact scatter, buried fuel drums, water catchment box	Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 89/608*	Latte element cluster	Pre-Contact/Latte, Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 90/609*	Latte element cluster	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 93/612*	Latte element cluster, artifact scatter, culvert	Pre-Contact/Latte, Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 95/614*	Artifact scatter	WWII Japanese Military Occupation	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 97/616*	Artifact scatter, latte element cluster	Pre-Contact/Latte, Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 98/617*	Latte set	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 99/128*	Latte set complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1998	PIIA/ Indirect (Access)
	Site 102/621*	Latte set	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 103/622*	Artifact scatter	WWII Japanese Military Occupation	^	N/A	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 106/625*	Latte element cluster	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 110/629*	Latte set	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 111/630*	Mortars	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 112/631*	Latte set complex	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 116/635*	Cave	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 132/651*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)

Table 9. Known Archaeological Sites within the PDIA and PIIA for Alternative 4

<i>GHPI Number¹</i>	<i>Temporary Site Number/ Map Number*</i>	<i>Site Type</i>	<i>Period**</i>	<i>NRHP Eligible?</i>	<i>NRHP Criteria</i>	<i>Reference</i>	<i>Location/ Potential Effect Type</i>
	Site 133/652*	Rock shelter	Pre-Contact/Latte, WWII Japanese Military Occupation	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 134/653*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 135/654*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 136/655*	Artifact scatter, mortar	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 137/656*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 138/657*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 139/658*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 140/659*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site 141/660*	Artifact scatter	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 166/681*	Rock shelter complex	Pre-Contact/Latte, WWII Japanese Military Occupation	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 167/682*	Rock shelter complex	Pre-Contact/Latte, Post-WWII/Second American Territorial	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 168/683*	<i>Latte</i> element cluster	Pre-Contact/Latte	Yes	D	Henry <i>et al.</i> 1999	PIIA/ Indirect (Access, Noise)
	Site 4/686*	Cave complex	WWII Japanese Military Occupation	Yes	D	Henry <i>et al.</i> 1998b, Henry <i>et al.</i> 1999	PIIA/ Indirect (Access)
	Site OA-8/808*	Concrete slab	Post-WWII/Second American Territorial	No	NA	Hunter-Anderson and Moore 2002	PDIA/ Direct (Range construction)
		<i>Almagosa Springs/Potential landscape TCP</i>	Pre-Contact/Latte, Post WWII/Second American Territorial, Organic Act/Home Rule/Economic Development	^		Griffin <i>et al.</i> 2010	PIIA/ Indirect (Access)
		<i>Boña Spring/Potential landscape TCP s</i>	Pre-Contact/Latte, Post WWII/Second American Territorial, Organic Act/Home Rule/Economic Development	^		Griffin <i>et al.</i> 2010	PIIA/ Indirect (Noise, Access)

Table 9. Known Archaeological Sites within the PDIA and PIIA for Alternative 4

<i>GHPI Number¹</i>	<i>Temporary Site Number/ Map Number*</i>	<i>Site Type</i>	<i>Period**</i>	<i>NRHP Eligible?</i>	<i>NRHP Criteria</i>	<i>Reference</i>	<i>Location/ Potential Effect Type</i>
		<i>Dobo Springs/Potential landscape TCP</i>	Pre-Contact/Latte, Post WWII/Second American Territorial, Organic Act/Home Rule/Economic Development	^		Griffin <i>et al.</i> 2010	PIIA/ Indirect (Access)
		<i>Almagosa Mtn</i>	Pre-Contact/Latte, Post WWII/Second American Territorial, Organic Act/Home Rule/Economic Development	^		Griffin <i>et al.</i> 2010	PIIA/ Indirect (Access)
		<i>Alifan Peak/Potential landscape TCP</i>	Post-WWII/Second American Territorial, Organic Act/Home Rule/Economic Development	^		Griffin <i>et al.</i> 2010	PIIA/ Indirect (Noise, Access)
		<i>High Density Latte Sites/Potential landscape TCP</i>	Pre-Contact/Latte, Organic Act/Home Rule/Economic Development	^		Griffin <i>et al.</i> 2010	PIIA/ Indirect (Access)

Legend:

GHPI = Guam Historic Properties Inventory; NRHP = National Register of Historic Places; NA=not applicable; NRHP criterion D = eligible for potential to yield information important in prehistory or history.

Notes:

¹ Not all sites recorded within the project areas have received official GHPI numbers, although they have been documented as part of previous surveys and submitted to the Guam SHPO.

* Welch *et al.* 2009.

** Revised to match GHPI forms dated May 28, 2014.

*** The Guam SHPO concurs with this recommendation (Guam SHPO correspondence dated August 22, 2013 [RC2013-0853]).

^ Architectural properties and archaeological sites in the PIIAs not previously evaluated for NRHP eligibility or addressed in a Program Comment are included for purposes of evaluating the effects of the alternatives.

Table 10. Known Architectural Properties within the PDIA and PIIA for Alternative 4

<i>Building/ Structure Type</i>	<i>Location</i>	<i>Temporary Site Number/ Map Number*</i>	<i>Facility Number</i>	<i>Date of Construction</i>	<i>NRHP Eligible?</i>	<i>Location/ Potential Effect Type</i>
Revetments	NAVMAG	Site 35/559*, Site 38/562*, Site 59/580*, Site 81/601*, Site 115/634*, Site 123/642*, Site 161/678*	NA	1944-1945	Covered Under Program Comment	PDIA/ Direct (Range construction)
ARMCO Buildings	NAVMAG	Site158/675*, Site 160/677*	NA	1944-1945	Covered Under Program Comment	PDIA/ Direct (Range construction)
Quonset Hut Style Magazine	NAVMAG	Site OA-6/806*	NA	Post- 1946	Covered Under Program Comment	PDIA/ Direct (Range construction)
Magazine Fuse Detonator	NAVMAG	NA	454NM	1952	Covered Under Program Comment	PDIA/ Direct (Range construction)
Explosive Truck Holding Yard	NAVMAG	34*	629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639	1944-1945	^	PIIA/ Indirect (Access)
Open storage areas, revetments	NAVMAG	43*	612, 614, 616, 617, 618, 619, 620, 621,622, 623, 624	1944-1945	Covered Under Program Comment	PIIA/ Indirect (Access)
Revetments		Site 18/543*, Site 105/624*, Site 115/634*, Site 117/636*, Site 120/639*, Site 149/667*, Site 151/668*, Site 152/669*, Site 153/670*, Site 154/671*, Site 155/672*, Site 156/673*, Site 157/674*, Site 159/676*, Site 162/679*, Site 169/684*, Site 170/685*	NA	1944-1945	Covered Under Program Comment	PIIA/ Indirect (Access)
ARMCO Buildings		Site 50/573*, Site 83/603*, Site 158/675*	NA	1944-1945	Covered under Program Comment	PIIA/ Indirect (Access)
Revetments		Site 107/626*	626, 620	1944-1945	Covered Under Program Comment	PIIA/ Indirect (Access)
Revetment		Site 25/551*	NA	1944-1945	Covered Under Program Comment	PIIA/ Indirect (Noise)
Revetments		Site 82/602*, Site 84/604*	NA	1944-1945	Covered under Program Comment	PIIA/ Indirect (Noise)
ARMCO building	NAVMAG	Site 148/666*	188	1944-1945	Covered Under Program Comment	PIIA/ Indirect (Access)
High Explosive Magazines	NAVMAG	1053*	435, 436, 437	1952	Covered Under Program Comment	PIIA/ Indirect (Access)
Inert Storehouse	NAVMAG	37*	309NM	1949	Covered Under Program Comment	PIIA/ Indirect (Access)

Table 10. Known Architectural Properties within the PDIA and PIIA for Alternative 4

<i>Building/ Structure Type</i>	<i>Location</i>	<i>Temporary Site Number/ Map Number*</i>	<i>Facility Number</i>	<i>Date of Construction</i>	<i>NRHP Eligible?</i>	<i>Location/ Potential Effect Type</i>
Inert Storehouse	NAVMAG	66-02-2627/37*	310NM	1949	Covered Under Program Comment	PIIA/ Indirect (Access)
Close Quarter Battle Breach Training	NAVMAG	NA	640NM	1997	No	PIIA/ Indirect (Access)
Ammunition Rework and Overhaul	NAVMAG	NA	779NM	1965	No	PIIA/ Indirect (Access)
Utility Building	NAVMAG	NA	840NM	1969	No	PIIA/ Indirect (Access)
EOD Crew Blast Shelter	NAVMAG	NA	862NM	1976	No	PIIA/ Indirect (Access)

Notes:

Information on type, number, and date of construction from the Internet Navy Facilities Asset Data Store.

8.1 Summary of Direct Adverse Effects under Alternative 4

Direct physical ground disturbance would potentially occur on approximately 477 acres (193 ha), which would include approximately 356 acres (144 ha) of this site for the construction of the individual ranges, range support building, internal range access roads, munitions magazine relocation area, and a perimeter fence along the western and southern edges of the LFTRC, and approximately 121 acres (49 ha) to construct an external LFTRC access road from Route 4 to the east/west facing ranges.

Construction of the ranges, support facilities, relocated magazine, and utilities would occur in NAVMAG and east of NAVMAG (FSEIS [2015], Figure 2.5-5, and in Appendix A of this TRRA). The SDZs encompass approximately 4,418 acres (1,788 ha); these acres would not be directly affected by construction or operation of the LFTRC. Excavation and soil removal associated with the construction of Alternative 4 could adversely, directly affect 11 NRHP-eligible Pre-Contact artifact scatters, sites containing *latte* components, and WWII military sites (TRRA, Table 11).

8.2 Summary of Indirect Adverse Effects under Alternative 4

The SDZs encompass approximately 4,418 acres (1,788 ha). Potential indirect adverse effects could occur to 24 NRHP-eligible archaeological sites with *latte* components (TRRA, Table 11). Undetermined effects could occur to five unevaluated archaeological sites with *latte* components and two potential TCPs (Boña Springs and Alifan Peak). Changes to the setting of the 29 sites (24 eligible for listing in the NRHP and 5 unevaluated) with *latte* components and two potential TCPs (Boña Springs and Alifan Peak) from auditory impacts associated with range operations could be adverse. Four potential TCPs (Almagosa Springs, Dobo Springs, Almagosa Mountain, and a high-density area of *latte* sites) could also be indirectly affected by reduced accessibility. No indirect adverse effects from visual intrusions associated with Alternative 4 are anticipated, because the ranges are within an existing military operations area, and the action would not change the visual setting.

Additional details about Alternative 4 are provided in FSEIS [2015], Section 2.5.4.4 and in Appendix C of this TRRA.

Table 11. Summary of Adverse Effects Under Alternative 4

<i>GHI Number</i> ¹	<i>Temporary Site Number/ Map Number</i> *	<i>Site Type</i>	<i>Period</i> **	<i>Reference</i>	<i>Location/ Potential Effect Type</i>
66-02-0145A	29*	<i>Latte</i> complex	Pre-Contact/ <i>Latte</i>	Craib and Yoklavich 1997	Direct (Range construction)
66-02-0145B	30*	<i>Latte</i> complex	Pre-Contact/ <i>Latte</i>	Craib and Yoklavich 1997	Direct (Range construction)
66-02-0152	26*	<i>Latte</i> complex	Pre-Contact/ <i>Latte</i>	Craib and Nees 1998	Indirect (Noise)
66-02-1659	496*	Trenches and foxholes	WWII Japanese Military Occupation	Allen <i>et al.</i> 2002	Direct (Range construction)
66-02-1660	497*	<i>Latte</i> set and rock shelter complex	Pre-Contact/ <i>Latte</i>	Allen <i>et al.</i> 2002	Direct (Range construction)
66-02-2346	552*	<i>Latte</i> set complex	Pre-Contact/ <i>Latte</i>	Henry <i>et al.</i> 1998, Welch 2010	Indirect (Noise)
66-02-2347	554*	<i>Latte</i> set	Pre-Contact/ <i>Latte</i>	Henry <i>et al.</i> 1998, Welch 2010	Indirect (Noise)
66-02-2348	566*	<i>Latte</i> set complex	Pre-Contact/ <i>Latte</i>	Henry <i>et al.</i> 1998, Welch 2010	Indirect (Noise)
66-02-2349	567*	<i>Latte</i> set complex	Pre-Contact/ <i>Latte</i>	Henry <i>et al.</i> 1998, Welch 2010	Indirect (Noise)
66-02-2350	569*	<i>Latte</i> set complex	Pre-Contact/ <i>Latte</i>	Henry <i>et al.</i> 1998, Welch 2010	Indirect (Noise)
66-02-2351	570*	<i>Latte</i> set	Pre-Contact/ <i>Latte</i>	Henry <i>et al.</i> 1998, Welch 2010	Indirect (Noise)
66-02-2353	577*	<i>Latte</i> set complex	Pre-Contact/ <i>Latte</i>	Henry <i>et al.</i> 1998, Welch 2010	Indirect (Noise)
66-02-2354	578*	<i>Latte</i> element cluster	Pre-Contact/ <i>Latte</i>	Henry <i>et al.</i> 1998, Welch 2010	Indirect (Noise)
66-08-2612		<i>Latte</i> set	Pre-Contact/ <i>Latte</i>	Henry <i>et al.</i> 1999	Indirect^ (Noise)
66-08-2628	T-TA-002	<i>Latte</i> set Partial	Pre-Contact/ <i>Latte</i>	Dixon <i>et al.</i> 2014a	Direct (Range construction)
66-08-2629	T-TA-004	<i>Latte</i> set	Pre-Contact/ <i>Latte</i>	Dixon <i>et al.</i> 2014a	Direct (Range construction)
66-08-2630	T-TA-005	Artifact scatter	Pre-Contact/ <i>Latte</i>	Dixon <i>et al.</i> 2014a	Direct (Range construction)
66-08-2632	T-TA-031	Artifact scatter	Pre-Contact/ <i>Latte</i>	Dixon <i>et al.</i> 2014a	Direct (Range construction)
66-09-1821		<i>Latte</i> set complex	Pre-Contact/ <i>Latte</i>	Hunter-Anderson and Moore 2002	Indirect (Noise)
66-09-1834	784*	<i>Latte</i> set	Pre-Contact/ <i>Latte</i>	Hunter-Anderson and Moore 2002	Indirect (Noise)
66-09-1835	785*	<i>Latte</i> set	Pre-Contact/ <i>Latte</i>	Hunter-Anderson and Moore 2002	Indirect (Noise)
66-09-1836	786*	<i>Latte</i> set	Pre-Contact/ <i>Latte</i>	Hunter-Anderson and Moore 2002	Indirect (Noise)
66-09-1839	789*	<i>Latte</i> set	Pre-Contact/ <i>Latte</i>	Hunter-Anderson and Moore 2002	Indirect (Noise)
66-09-1841	792*	<i>Latte</i> element cluster	Pre-Contact/ <i>Latte</i>	Hunter-Anderson and Moore 2002	Indirect (Noise)
66-09-1842	793*	<i>Latte</i> set	Pre-Contact/ <i>Latte</i>	Hunter-Anderson and Moore 2002	Indirect (Noise)
66-09-2671	T-TA-026	<i>Latte</i> set	Pre-Contact/ <i>Latte</i>	Dixon <i>et al.</i> 2014b	Indirect^ (Noise)
66-09-2678	T-TA-034	<i>Latte</i> set	Pre-Contact/ <i>Latte</i>	Dixon <i>et al.</i> 2014b	Indirect^ (Noise)
66-09-2682	T-TA-038	<i>Latte</i> sets	Pre-Contact/ <i>Latte</i>	Dixon <i>et al.</i> 2014b	Indirect^ (Noise)
66-09-2683	T-TA-039	<i>Latte</i> set	Pre-Contact/ <i>Latte</i>	Dixon <i>et al.</i> 2014b	Indirect^ (Noise)
	Site 14/539*	<i>Latte</i> set complex	Pre-Contact/ <i>Latte</i>	Henry <i>et al.</i> 1999	Indirect (Noise)

Table 11. Summary of Adverse Effects Under Alternative 4

<i>GHPI Number¹</i>	<i>Temporary Site Number/ Map Number*</i>	<i>Site Type</i>	<i>Period**</i>	<i>Reference</i>	<i>Location/ Potential Effect Type</i>
	Site 31/555*	Foxhole, cave	WWII Japanese Military Occupation	Henry <i>et al.</i> 1999	Direct (Range construction)
	Site 32/556*	Rock shelter	Pre-Contact/Latte	Henry <i>et al.</i> 1999	Direct (Range construction)
	Site 65/585*	<i>Latte</i> set	Pre-Contact/Latte	Henry <i>et al.</i> 1999	Indirect (Noise)
	Site 66/587*	<i>Latte</i> cluster	Pre-Contact/Latte	Henry <i>et al.</i> 1999	Direct (Range construction)
	Site 70/590*	<i>Latte</i> set complex	Pre-Contact/Latte	Henry <i>et al.</i> 1999	Indirect (Noise)
	Site 71/591*	<i>Latte</i> set	Pre-Contact/Latte	Henry <i>et al.</i> 1999	Indirect (Noise)
	Site 72/592*	<i>Latte</i> element cluster	Pre-Contact/Latte	Henry <i>et al.</i> 1999	Indirect (Noise)
	Site 111/630*	Mortars	Pre-Contact/Latte	Henry <i>et al.</i> 1999	Indirect (Noise)
	Site 112/631*	<i>Latte</i> set complex	Pre-Contact/Latte	Henry <i>et al.</i> 1999	Indirect (Noise)
	Site 168/683*	<i>Latte</i> element cluster	Pre-Contact/Latte	Henry <i>et al.</i> 1999	Indirect (Noise)
		<i>Almagosa Springs/Potential landscape TCP</i>	Pre-Contact/Latte, Post WWII/Second American Territorial, Organic Act/Home Rule/Economic Development	Griffin <i>et al.</i> 2010	Indirect^ (Access)
		<i>Bona Spring/Potential landscape TCP s</i>	Pre-Contact/Latte, Post WWII/Second American Territorial, Organic Act/Home Rule/Economic Development	Griffin <i>et al.</i> 2010	Indirect^ (Noise, Access)
		<i>Dobo Springs/Potential landscape TCP</i>	Pre-Contact/Latte, Post WWII/Second American Territorial, Organic Act/Home Rule/Economic Development	Griffin <i>et al.</i> 2010	Indirect^ (Access)

Table 11. Summary of Adverse Effects Under Alternative 4					
<i>GHI Number</i> ¹	<i>Temporary Site Number/ Map Number*</i>	<i>Site Type</i>	<i>Period**</i>	<i>Reference</i>	<i>Location/ Potential Effect Type</i>
		<i>Almagosa Mtn</i>	Pre-Contact/Latte, Post WWII/Second American Territorial, Organic Act/Home Rule/Economic Development	Griffin <i>et al.</i> 2010	Indirect^ (Access)
		<i>Alifan Peak/Potential landscape TCP</i>	Pre-Contact/Latte, Post WWII/Second American Territorial, Organic Act/Home Rule/Economic Development	Griffin <i>et al.</i> 2010	Indirect^ (Noise, Access)
		<i>High Density Latte Sites/Potential landscape TCP</i>	Pre-Contact/Latte, Organic Act/Home Rule/Economic Development	Griffin <i>et al.</i> 2010	Indirect^ (Access)

Legend:

GHI = Guam Historic Properties Inventory; NRHP = National Register of Historic Places; NA=not applicable; NRHP criterion D = eligible for potential to yield information important in prehistory or history.

Notes:

¹ Not all sites recorded within the project areas have received official GHI numbers, although they have been documented as part of previous surveys and submitted to the Guam SHPO.

* Welch *et al.* 2009.

** Revised to match GHI forms dated May 28, 2014.

*** The Guam SHPO concurs with this recommendation (Guam SHPO correspondence dated August 22, 2013 [RC2013-0853]).

^ Architectural properties and archaeological sites in the PIAs not previously evaluated for NRHP eligibility or addressed in a Program Comment are included for purposes of evaluating the effects of the alternatives.

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9 ALTERNATIVE 5: NORTHWEST FIELD

Alternative 5, the AAFB-NWF LFTRC¹ Alternative, would consist of approximately 4,016 acres (1,625 ha) (not including the HG Range at Andersen South) of federal land on Andersen Air Force Base (AAFB) and portions of the Ritidian Unit of the Guam National Wildlife Refuge (NWR). The Ritidian Unit of the Guam NWR is owned and managed by the United States Fish and Wildlife Service (USFWS). If Alternative 5 is selected, the DON proposes to relocate, as appropriate, the USFWS facilities within the Ritidian Unit of the Guam NWR that would be encumbered by the range SDZs, and provide alternate public access to Ritidian when the range is in use. Any decision regarding the relocation of the USFWS facilities and/or construction of an external access road is dependent upon the outcome of consultations under section 7 of the Endangered Species Act (ESA) and negotiation of the agreement authorized by section 2822 of the Fiscal Year 2015 (FY15) National Defense Authorization Act (NDAA).

Proposed entry to the LFTRC would be through a new entry control point located to the northwest of the current NWF Gate off of Route 3A. The existing road and gate would be improved to support LFTRC traffic, and an entry control point would be constructed to control access during hours of operation. Secondary access would occur via existing access roads on the NWF complex. Specific design details associated with the proposed road and gate alignments are topics of ongoing discussions between the Marine Corps, Air Force, and Navy planners. Approximately 5 miles (8 km) of roads would be improved/constructed to provide access to and between the individual ranges, to the replacement NWR facilities from the main LFTRC access road, and to the beach located northwest of the replacement NWR facilities. Appendix A of this TRRA provides a map of Alternative 5.

Table 12 of this TRRA lists 35 known archaeological sites located within the Alternative 5 PDIA on AAFB and the Ritidian Unit of the Guam NWR. Twenty of these, including artifact and ceramic scatters, a rock alignment, a rock shelter, the Ritidian Site Complex, and NWF (a historic airfield), are eligible for listing in the NRHP. Fifteen sites, consisting of disturbed Pre-Contact ceramic scatters and historic WWII sites, are not eligible for listing in the NRHP.

No TCPs have been identified in the PDIA for Alternative 5 (Welch and Prasad 2006, Griffin *et al.* 2010). Culturally important natural resources may occur in the PDIA.

Table 12 of this TRRA lists 79 known archaeological sites located within the Alternative 5 PIIA. There are 60 known NRHP-eligible sites in this area, including the Ritidian Site Complexes (GHPI Numbers 66-08-0012 and 66-08-0013), a portion of the Jinapsan site (GHPI number 66-08-0014), artifact scatters, NWF, and rock shelters. One of the Ritidian Site Complexes is also within the PDIA. The remaining 19 sites, which include a WWII-era fuel tank farm and a historic site with concrete foundations and a cobble retaining wall, are not eligible for listing in the NRHP. Three structures used by the USFWS are located within the PIIA. None of these structures is eligible for listing in the NRHP.

No TCPs have been identified in the PIIA for Alternative 5.

There are no historic properties located in the PDIA or PIIA for the proposed HG Range at Andersen South.

¹ The Alternative 5 location is north of the actual NWF airfield on AAFB, between NWF and the cliff at an area with the Chamorro place name of Tailalo. For this TRRA, "Northwest Field" is used to describe this location.

Table 12. Known Archaeological Sites within the PDIA and PIIA for Alternative 5

GHPI Number¹	Temporary Site Number	Site Type	Period**	NRHP Eligible?	Criteria	Reference	Location/ Potential Effect Type (Potential Action)
66-08-0012	T-RIT-100	Ritidian Site Complex	Pre-Contact/Latte, /Spanish Administration/ Chamorro Spanish Wars	Yes	A, D	Reinman 1977, Dixon <i>et al.</i> 2014a	PDIA/ Direct (Range Construction); PIIA/Indirect (Access, Noise)
66-08-0013	T-RIT-001	Ritidian Site Complex	Pre-Contact/Latte	Yes	D	Reinman 1977, Dixon <i>et al.</i> 2014b	PIIA/Indirect (Access, Noise)
66-08-0014		Jinapsan Complex	Pre-Contact/Latte; Post-WWII/Second American Territorial	Yes	D	Reinman 1977	PIIA/ Indirect (Noise)
66-08-1065		Airfield	Post-WWII/Second American Territorial	Yes	D	Aaron <i>et al.</i> 2007, Dixon <i>et al.</i> 2011b	PDIA/ Direct (Range construction); PIIA/Indirect (Noise)
66-08-2492	T-A3-1	Rock shelter with midden soil and marine shell	Pre-Contact/Latte	Yes	D	Dixon <i>et al.</i> 2011b	PDIA/ Direct (Range construction); PIIA/Indirect (Access)
66-08-2493	T-NW-1	Artifact scatter	Organic Act/Home Rule/Economic Development	No	NA	Dixon and Walker 2011	PDIA/ Direct (Range construction)
66-08-2494	T-NW-2	Artifact scatter	Pre-Contact/Latte	Yes	D	Dixon and Walker 2011	PDIA/ Direct (Range construction); PIIA/Indirect (Access, Noise)
66-08-2495	T-NW-3	WWII-era fuel tank farm (tanks removed)	WWII (unspecified)	No	NA	Dixon and Walker 2011	PDIA/ Direct (Range construction); PIIA/Indirect (Access)
66-08-2496	T-NW-5	Ceramic scatter	Pre-Contact/Latte	Yes	D	Dixon and Walker 2011	PDIA/ Direct (Range construction); PIIA/Indirect (Access)
66-08-2497	T-NW-6	Artifact scatter	Pre-Contact/Latte	Yes	D	Dixon and Walker 2011	PIIA/ Indirect (Access, Noise)
66-08-2498	T-NW-13	Ceramic scatter	Pre-Contact/Latte	Yes	D	Dixon and Walker 2011	PIIA/ Indirect (Access, Noise)
66-08-2499	T-NW-14	Ceramic scatter	Pre-Contact/Latte	Yes	D	Dixon and Walker 2011	PIIA/ Indirect (Access, Noise)
66-08-2500	T-NW-23	Ceramic scatter	Pre-Contact/Latte	Yes	D	Dixon and Walker 2011	PIIA/ Indirect (Access, Noise)
66-08-2501	T-NW-27	Ceramic scatter	Pre-Contact/Latte	Yes	D	Dixon and Walker 2011	PIIA/ Indirect (Access, Noise)
66-08-2502	T-NW-28	Ceramic scatter	Pre-Contact/Latte	Yes	D	Dixon and Walker 2011	PIIA/ Indirect (Access, Noise)
66-08-2503	T-M-01	Concrete pad	Post-WWII/ Second American Territorial	No	NA	Dixon <i>et al.</i> 2012	PDIA/ Direct (Range construction)
66-08-2504	T-M-02	Concrete slab, artifact scatter	Post-WWII/ Second American Territorial	No	NA	Dixon <i>et al.</i> 2012	PIIA/ Indirect (Access)
66-08-2505	T-M-03	Dump	Post-WWII/ Second American Territorial	No	NA	Dixon <i>et al.</i> 2012	PDIA/ Direct (Range construction); PIIA/Indirect (Access)

Table 12. Known Archaeological Sites within the PDIA and PIIA for Alternative 5

GHPI Number¹	Temporary Site Number	Site Type	Period**	NRHP Eligible?	Criteria	Reference	Location/ Potential Effect Type (Potential Action)
66-08-2506	T-M-04	Concrete pad and foundation	Post-WWII/ Second American Territorial	No	NA	Dixon <i>et al.</i> 2012	PDIA/ Direct (Range construction); PIIA/Indirect (Access)
66-08-2507	T-M-05	Concrete pad, wooden power poles	Post-WWII/ Second American Territorial	No	NA	Dixon <i>et al.</i> 2012	PDIA/ Direct (Range construction); PIIA/Indirect (Access)
66-08-2508	T-M-06	Cobble walls	Pre-Contact/Latte	Yes	D	Dixon <i>et al.</i> 2012	PDIA/ Direct (Range construction); PIIA/Indirect (Access)
66-08-2509	T-M-07	Ceramic scatter	Pre-Contact/Latte	Yes	D	Dixon <i>et al.</i> 2012	PIIA/ Indirect (Access, Noise)
66-08-2510	T-M-08	Ceramic scatter	Pre-Contact/Latte	Yes	D	Dixon <i>et al.</i> 2012	PIIA/ Indirect(Access, Noise)
66-08-2511	T-M-09	Ceramic scatter	Pre-Contact/Latte	Yes	D	Dixon <i>et al.</i> 2012	PIIA/ Indirect (Access, Noise)
66-08-2512	T-M-10	Military refuse/dump	Post-WWII/Second American Territorial	No	NA	Dixon <i>et al.</i> 2012	PIIA/ Indirect (Access)
66-08-2513	T-M-11	Ceramic scatter	Pre-Contact/Latte	Yes	D	Dixon <i>et al.</i> 2012	PIIA/ Indirect (Noise)
66-08-2514	T-M-12	Ceramic scatter	Pre-Contact/Latte	Yes	D	Dixon <i>et al.</i> 2012	PIIA/ Indirect (Access, Noise)
66-08-2515	T-M-13	Ceramic scatter	Pre-Contact/Latte	Yes	D	Dixon <i>et al.</i> 2012	PIIA/ Indirect (Access, Noise)
66-08-2516	T-M-14	Cobble wall	Pre-Contact/Latte	Yes	D	Dixon <i>et al.</i> 2012	PIIA/ Indirect (Access, Noise)
66-08-2517	T-M-15	Ceramic scatter	Pre-Contact/Latte	Yes	D	Dixon <i>et al.</i> 2012	PIIA/ Indirect (Access, Noise)
66-08-2518	T-M-16	Ceramic scatter	Pre-Contact/Latte	Yes	D	Dixon <i>et al.</i> 2012	PIIA/ Indirect (Access, Noise)
66-08-2519	T-M-17	Ceramic scatter	Pre-Contact/Latte	Yes	D	Dixon <i>et al.</i> 2012	PIIA/ Indirect (Access, Noise)
66-08-2520	T-M-18	Military refuse/dump	Post-WWII/ Second American Territorial	No	NA	Dixon <i>et al.</i> 2012	PIIA/ Indirect (Access)
66-08-2521	T-M-19	Road bed/tank trail	WWII (unspecified)	No	NA	Dixon <i>et al.</i> 2012	PIIA/ Indirect (Access)
66-08-2522	T-RP-01	Ceramic scatter	Pre-Contact/Latte	Yes	D	Dixon <i>et al.</i> 2012	PDIA/ Direct (Range construction); PIIA/Indirect (Access)
66-08-2523	T-RP-02	Concrete foundations and cobble retaining wall (remains of navigation facility)	WWII Japanese Military Occupation, WWII American Military, Second American Territorial	No	NA	Dixon <i>et al.</i> 2012	PDIA/Direct (Range construction); PIIA/Indirect (Access)
66-08-2524	T-RP-03	Ceramic scatter	Pre-Contact/Latte	Yes	D	Dixon <i>et al.</i> 2012	PIIA/ Indirect (Access, Noise)
66-08-2525	T-RP-04	Ceramic scatter	Pre-Contact/Latte	Yes	D	Dixon <i>et al.</i> 2012	PIIA/ Indirect (Access, Noise)
66-08-2530	T-PP-01	Artifact scatter	Pre-Contact/Latte	Yes	D	Dixon <i>et al.</i> 2012	PDIA/ Direct (Range construction); PIIA/Indirect (Access)
66-08-2531	T-PP-02	Gas masks	Post-WWII/Second American Territorial	No	NA	Dixon <i>et al.</i> 2012	PIIA/ Indirect (Noise)

Table 12. Known Archaeological Sites within the PDIA and PIIA for Alternative 5

GHPI Number¹	Temporary Site Number	Site Type	Period**	NRHP Eligible?	Criteria	Reference	Location/ Potential Effect Type (Potential Action)
66-08-2532	T-PP-03	Bottles and canteens	Post-WWII/Second American Territorial	No	NA	Dixon <i>et al.</i> 2012	PIIA/ Indirect (Noise)
66-08-2533	T-J-01	Rock shelter	Pre-Contact/Latte	Yes	D	Dixon <i>et al.</i> 2012	PIIA/ Indirect (Access, Noise)
66-08-2534	T-J-02	Rock shelter	Pre-Contact/Latte	Yes	D	Dixon <i>et al.</i> 2012	PIIA/ Indirect (Access, Noise)
66-08-2535	T-J-03	Rock shelter	Pre-Contact/Latte	Yes	D	Dixon <i>et al.</i> 2012	PIIA/ Indirect (Access, Noise)
66-08-2536	T-J-04	Cave	Latte, WWII Japanese Military Occupation	Yes	D	Dixon <i>et al.</i> 2012	PIIA/Indirect (Access, Noise)
66-08-2731	2	Concrete slab and fuel tanks	Post-WWII/Second American Territorial	Yes	D	DeFant 2014	PDIA/Direct (Range construction)
66-08-2733	4	Ceramic scatter	Latte	Yes	D	DeFant 2014	PIIA/Indirect (Noise)
66-08-2735	6	Ceramic scatter	Latte	Yes	D	DeFant 2014	PIIA/Indirect (Noise)
	FTX3-1	Artifact scatter	Pre-Contact/Latte	Yes	D	Church <i>et al.</i> 2009	PIIA/ Indirect (Noise)
	FTX3-2	Artifact scatter	Pre-Contact/Latte	Yes	D	Church <i>et al.</i> 2009	PDIA/ Direct (Range construction)
	T-NW-4	Ceramic scatter	Pre-Contact/Latte	Yes	D	Dixon and Walker 2011	PDIA/ Direct (Range construction)
	T-NW-7	Ceramic scatter	Pre-Contact	Yes	D	Dixon and Walker 2011	PIIA/ Indirect (Noise)
	T-NW-8	Ceramic scatter, Concrete pad with 1945 inscription, artifact scatter	Pre-Contact/Latte, Post-WWII/ Second American Territorial	No	NA	Dixon and Walker 2011	PIIA/ Indirect (Noise)
	T-NW-9	Artifact scatters	Pre-Contact/Latte, Post-WWII, Second American Territorial	Yes	D	Dixon and Walker 2011	PDIA/ Direct (Range construction); PIIA/Indirect (Noise)
	T-NW-10	Artifact scatter (possible helicopter components)	Organic Act/Home Rule/Economic Development	No	NA	Dixon and Walker 2011	PDIA/ Direct (Range construction)
	T-NW-11	Ceramic scatter	Pre-Contact/Latte	Yes	D	Dixon and Walker 2011	PIIA/ Indirect (Access, Noise)
	T-NW-12	Ceramic scatter	Pre-Contact	Yes	D	Dixon and Walker 2011	PIIA/ Indirect (Noise)
	T-NW-15	Ceramic scatter; Artifact scatter	Pre-Contact; Latte, Post-WWII/Second American Territorial;	Yes	D	Dixon and Walker 2011	PIIA/ Indirect (Noise)
	T-NW-16	Artifact scatter	Post-WWII/Second American Territorial	No	NA	Dixon and Walker 2011	PDIA/ Direct (Range construction)
	T-NW-18	Ceramic scatter	Pre-Contact/Latte	Yes	D	Dixon and Walker 2011	PDIA/ Direct (Range construction)
	T-NW-19	Ceramic scatter	Pre-Contact/Latte	Yes	D	Dixon and Walker 2011	PDIA/ Direct (Range construction)
	T-NW-20	Artifact scatter	Pre-Contact/Latte	Yes	D	Dixon and Walker 2011	PDIA/ Direct (Range construction); PIIA/Indirect (Access)

Table 12. Known Archaeological Sites within the PDIA and PIIA for Alternative 5

GHPI Number¹	Temporary Site Number	Site Type	Period**	NRHP Eligible?	Criteria	Reference	Location/ Potential Effect Type (Potential Action)
	T-NW-21	Ceramic scatter	Pre-Contact/Latte	Yes	D	Dixon and Walker 2011	PDIA/ Direct (Range construction); PIIA/Indirect (Access)
	T-NW-22	Ceramic scatter	Pre-Contact/Latte	Yes	D	Dixon and Walker 2011	PIIA/ Indirect (Noise, Access)
	T-NW-24	Ceramic scatter	Pre-Contact/Latte	Yes	D	Dixon and Walker 2011	PDIA/ Direct (Range construction)
	T-NW-25	Artifact scatter	Post-WWII/Second American Territorial	No	NA	Dixon and Walker 2011	PDIA/ Direct (Range construction); PIIA/Indirect (Access)
	T-NW-26	Ceramic scatter	Pre-Contact/Latte	Yes	D	Dixon and Walker 2011	PDIA/ Direct (Range construction); PIIA/Indirect (Access)
	T-NW-29	Ceramic scatter	Pre-Contact/Latte	Yes	D	Dixon and Walker 2011	PIIA/ Indirect (Access, Noise)
	T-NW-32	Firing range embankment	WWII (unspecified)	No	NA	Dixon and Walker 2011	PIIA/ Indirect (Access)
	T-NW-34	Ceramic scatter	Pre-Contact/Latte	Yes	D	Dixon and Walker 2011	PIIA/ Indirect (Noise)
	T-NW-36	Ceramic scatter	Pre-Contact/Latte	Yes	D	Dixon and Walker 2011	PIIA/ Indirect (Noise)
	T-NW-37	Artifact scatter	Post-WWII/Second American Territorial	No	NA	Dixon and Walker 2011	PIIA/ Indirect (Access)
	T-NW-38	Artifact scatter	WWII (unspecified)	No	NA	Dixon and Walker 2011	PIIA/ Indirect (Access)
	T-NW-39	Ceramic scatter	Pre-Contact/Latte	Yes	D	Dixon and Walker 2011	PDIA/ Direct (Range construction); PIIA/Indirect (Access)
	T-NW-40	Ceramic scatter	Pre-Contact/Latte	Yes	D	Dixon and Walker 2011	PDIA/ Direct (Range construction); PIIA/Indirect (Access)
66-08-2736	T-NWF-001a	Road bed	Post-WWII/Second American Territorial	No	NA	Dixon <i>et al.</i> 2014a	PDIA/ Direct (Range construction)
66-08-2737	T-NWF-001b	Bottle dumps	Post-WWII/Second American Territorial	No***	NA	Dixon <i>et al.</i> 2014a	PDIA/Direct (Range construction)
66-08-2738	T-NWF-002	Artifact scatter	Pre-Contact/Latte	No	NA	Dixon <i>et al.</i> 2014a	PDIA/ Direct (Range construction)
66-08-2742	T-NWF-006	Artifact scatter	Post-WWII/Second American Territorial	Yes^	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Noise)
66-08-2657	T-RIT-002	Antenna base	Post-WWII/ Second American Territorial	No***	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access)
66-08-2744	T-RIT-105	Ceramic scatter	Pre-Contact/Latte	No	NA	Dixon <i>et al.</i> 2014a	PDIA/ Direct (Range construction)
66-08-2745	T-RIT-108	Ceramic scatter	Pre-Contact/Latte	^	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access)
66-08-2746	T-RIT-109	Ceramic scatter	Pre-Contact/Latte	^	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access)
66-08-2747	T-RIT-110	Rock shelter	Pre-Contact/Latte	Yes***	D	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Noise)
66-08-2748	T-RIT-111	Rock shelter	Pre-Contact/Latte	^	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access)
66-08-2749	T-RIT-112	Rock shelter	Pre-Contact/Latte	^	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access)
66-08-2750	T-RIT-113	Ceramic scatter	Pre-Contact/Latte	^	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Access)

Table 12. Known Archaeological Sites within the PDIA and PIIA for Alternative 5

<i>GHPI Number¹</i>	<i>Temporary Site Number</i>	<i>Site Type</i>	<i>Period**</i>	<i>NRHP Eligible?</i>	<i>Criteria</i>	<i>Reference</i>	<i>Location/ Potential Effect Type (Potential Action)</i>
66-08-2751	T-RIT-114	Ceramic scatter	Pre-Contact/Latte	No***	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Noise)
66-08-2752	T-RIT-115	Ceramic scatter	Pre-Contact/Latte	No	NA	Dixon <i>et al.</i> 2014b	PIIA/ Indirect (Noise)
66-08-2753	T-RIT-120	Ceramic scatter	Pre-Contact/Latte	No	NA	Dixon <i>et al.</i> 2014a	PDIA/ Direct (Range construction)
	T-SP-1	Japanese defensive position	WWII Japanese Military Occupation	Yes	D	Dixon and Walker 2011	PIIA/ Indirect (Noise)
	T-SP-2	Japanese defensive position	WWII Japanese Military Occupation	Yes	D	Dixon and Walker 2011	PIIA/ Indirect (Noise)
	T-SP-3	Japanese defensive position	WWII Japanese Military Occupation	Yes	D	Dixon and Walker 2011	PIIA/ Indirect (Noise)
	T-SP-4	Ceramic scatter	Pre-Contact/Latte	Yes	D	Dixon and Walker 2011	PIIA/ Indirect (Noise)

Legend:

GHPI = Guam Historic Properties Inventory; NRHP = National Register of Historic Places; NA=not applicable. NRHP criterion D = eligible for potential to yield information important in prehistory or history.

Notes:

¹Not all sites recorded within the project areas have received official GHPI numbers, although they have been documented as part of previous surveys.

** Revised to match GHPI forms dated May 28, 2014.

*** The Guam SHPO concurs with this recommendation (Guam SHPO correspondence dated August 12, 2014 [RC2013-0904]).

^ Architectural properties and archaeological sites in the PIIAs not previously evaluated for NRHP eligibility or addressed in a Program Comment are included for purposes of evaluating the effects of the alternatives.

9.1 Summary of Direct Adverse Effects under Alternative 5

Direct physical disturbance would potentially occur on approximately 315 acres (128 ha) of land, including 256 acres (104 ha) for the construction of the individual ranges, range support building, range towers, internal range access roads, a perimeter fence (all within federally controlled land at NWF), and the relocation of the USFWS facilities within the Ritidian Unit of the Guam NWR that would be encumbered by the range SDZs. The remaining approximately 59 acres (24 ha) of disturbed area would be required for construction to improve existing roadways from the intersection of Routes 3, 3A, and 9 to the Ritidian Unit of the Guam NWR. The SDZs would encompass approximately 267 acres (108 ha) of the Ritidian Unit of the Guam NWR and 3,434 acres (1,390 ha) of the submerged lands of the Philippine Sea (total of 3,701 acres [1,498 ha]). These lands and submerged lands would not be directly impacted as a result of construction or operation of the LFTRC. Excavation and soil removal associated with the construction of Alternative 5 would adversely affect 20 known archaeological sites eligible for NRHP listing (TRRA, Table 13), including Pre-Contact artifact scatters and sites containing *latte* components. In addition, culturally important natural resources could be directly impacted due to removal of limestone forest.

9.2 Summary of Indirect Adverse Effects under Alternative 5

Under Alternative 5, the SDZs would encompass approximately 267 acres (108 ha) of the Ritidian Unit of the Guam NWR and 3,434 acres (1,390 ha) of the submerged lands of the Philippine Sea (total of 3,701 acres [1,498 ha]). Under the alternative, three potentially noise-sensitive NRHP-eligible sites with *latte* components and cave sites with pictographs could be indirectly adversely affected by substantial changes in the audible environment from small arms live-fire noise (TRRA, Table 13). Indirect adverse effects from visual intrusions associated with Alternative 5 would be minimal, because the ranges are within an existing military operations area, and the action would not involve a change in visual setting.

Access to lands and submerged lands within the SDZs would be restricted during range operations. Cultural sites located on AAFB currently have limited access due to operations. Portions of the Ritidian Unit of the Guam NWR are currently open to the public. Portions of two NRHP-eligible archaeological sites, the Ritidian Site Complexes (66-08-0012 and 66-08-0013), are located within the SDZs that overlay portions of the Ritidian Unit. Portions of these sites are accessible to the public through tours and public education programs and are part of ongoing scientific research programs. Under Alternative 5, access to these sites would be restricted while the ranges are in use. Restricted access associated with operation of Alternative 5 would be a significant impact. If Alternative 5 is selected, the DON proposes to relocate, as appropriate, the USFWS facilities within the Ritidian Unit of the Guam NWR that would be encumbered by the range SDZs, and provide alternate public access to Ritidian when the range is in use. Any decision regarding the relocation of the USFWS facilities and/or construction of an external access road is dependent upon the outcome of consultations under section 7 of the ESA and negotiation of the agreement authorized by section 2822 of the FY15 NDAA.

There are no historic properties located in the areas directly or indirectly affected for the proposed HG Range at Andersen South. Therefore, no adverse effects to historic properties are anticipated for the HG Range.

Additional details about Alternative 5 are provided in FSEIS [2015], Section 2.5.4.5, and in Appendix C of this TRRA.

Table 13. Summary of Adverse Effects Under Alternative 5

GHPI Number¹	Temporary Site Number	Site Type	Period**	Reference	Location/ Potential Effect Type (Potential Action)
66-08-0012	T-RIT-100	Ritidian Site Complex	Pre-Contact/Latte, /Spanish Administration/ Chamorro Spanish Wars	Reinman 1977, Dixon <i>et al.</i> 2014a	Direct (Range Construction); Indirect (Access, Noise)
66-08-0013	T-RIT-001	Ritidian Site Complex	Pre-Contact/Latte	Reinman 1977, Dixon <i>et al.</i> 2014b	Indirect (Access, Noise)
66-08-0014		Jinapsan Complex	Pre-Contact/Latte; Post-WWII/Second American Territorial	Reinman 1977	Indirect (Noise)
66-08-1065		Airfield	Post-WWII/Second American Territorial	Aaron <i>et al.</i> 2007, Dixon <i>et al.</i> 2011b	Direct (Range construction)
66-08-2492	T-A3-1	Rock shelter with midden soil and marine shell	Pre-Contact/Latte	Dixon <i>et al.</i> 2011b	Direct (Range construction)
66-08-2494	T-NW-2	Artifact scatter	Pre-Contact/Latte	Dixon and Walker 2011	Direct (Range construction)
66-08-2496	T-NW-5	Ceramic scatter	Pre-Contact/Latte	Dixon and Walker 2011	Direct (Range construction)
66-08-2508	T-M-06	Cobble walls	Pre-Contact/Latte	Dixon <i>et al.</i> 2012	Direct (Range construction)
66-08-2522	T-RP-01	Ceramic scatter	Pre-Contact/Latte	Dixon <i>et al.</i> 2012	Direct (Range construction)
66-08-2530	T-PP-01	Artifact scatter	Pre-Contact/Latte	Dixon <i>et al.</i> 2012	Direct (Range construction))
66-08-2731	3	Ceramic scatter, bottle dump	Pre-Contact/Latte, Post-WWII/Second American Territorial	DeFant 2014	Direct (Range construction)
	FTX3-2	Artifact scatter	Pre-Contact/Latte	Church <i>et al.</i> 2009	Direct (Range construction)
	T-NW-4	Ceramic scatter	Pre-Contact/Latte	Dixon and Walker 2011	Direct (Range construction)
	T-NW-9	Artifact scatters	Pre-Contact/Latte, Post-WWII, Second American Territorial	Dixon and Walker 2011	Direct (Range construction)
	T-NW-18	Ceramic scatter	Pre-Contact/Latte	Dixon and Walker 2011	Direct (Range construction)
	T-NW-19	Ceramic scatter	Pre-Contact/Latte	Dixon and Walker 2011	Direct (Range construction)
	T-NW-20	Artifact scatter	Pre-Contact/Latte	Dixon and Walker 2011	Direct (Range construction)
	T-NW-21	Ceramic scatter	Pre-Contact/Latte	Dixon and Walker 2011	Direct (Range construction)
	T-NW-24	Ceramic scatter	Pre-Contact/Latte	Dixon and Walker 2011	Direct (Range construction)
	T-NW-26	Ceramic scatter	Pre-Contact/Latte	Dixon and Walker 2011	Direct (Range construction)
	T-NW-39	Ceramic scatter	Pre-Contact/Latte	Dixon and Walker 2011	Direct (Range construction)
	T-NW-40	Ceramic scatter	Pre-Contact/Latte	Dixon and Walker 2011	Direct (Range construction)

Legend:

GHPI = Guam Historic Properties Inventory.

Notes:

¹Not all sites recorded within the project areas have received official GHPI numbers, although they have been documented as part of previous surveys.

** Revised to match GHPI forms dated May 28, 2014.

*** The Guam SHPO concurs with this recommendation (Guam SHPO correspondence dated August 12, 2014 [RC2013-0904]).

^ Architectural properties and archaeological sites in the PIIAs not previously evaluated for NRHP eligibility or addressed in a Program Comment are included for purposes of evaluating the effects of the alternatives.

10 SUMMARY OF THE PREFERRED LFTRC ALTERNATIVE (ALTERNATIVE 5, NWF)

10.1 Construction

Construction of the ranges, support facilities, utilities, and road construction would primarily occur in the NWF area of AAFB. However, the construction of an access road and a vehicle access gate would occur on the Ritidian Unit of the Guam NWR and could adversely affect site 66-08-0012. Given the substantial development anticipated in the area directly affected, it is assumed for purposes of this analysis that 100% of the area would be disturbed. Nevertheless, design alternatives to avoid and minimize adverse effects would be considered in the RMP should this alternative be selected in the ROD. No construction is proposed in the area indirectly affected. Excavation and soil removal associated with the construction of Alternative 5 could adversely affect 20 known historic properties, including Pre-Contact artifact scatters and sites containing *latte* components.

Under Alternative 5, the Guam NWR administrative offices are proposed to be relocated to the southwest. The existing Guam NWR buildings, which are not considered eligible for listing in the NRHP, would be left in place.

Construction activities associated with Alternative 5 have the potential to directly impact culturally important natural resources. The project would require the removal of limestone forest where culturally important natural resources, including traditional plants, may be present. The 2011 PA contains measures for coordinating with the SHPO and concurring parties to contact traditional natural healers, herbal practitioners, and traditional artisans regarding identification and disposition of these important resources prior to construction.

No impacts to historic properties or culturally important natural resources are anticipated in conjunction with utility upgrades that would be associated with Alternative 5. The modification or replacement of existing overhead electrical lines under Alternative 5 would not affect any historic properties. Water and wastewater utilities would be placed along Perimeter Road and on a new access road. There are no known NRHP-eligible sites or structures located in the areas planned for water or wastewater utility upgrades. No adverse effects to historic properties are anticipated in conjunction with these utility upgrades.

10.2 Operation

The potential for direct effects within the SDZs would be limited to the risk of strikes from stray rounds during Alternative 5 operations. The risk of such effects occurring is extremely low. Each range would be designed to contain live fire inside the range boundary to minimize the probability of rounds landing in the SDZs. The natural terrain would also serve to prevent direct effects in the SDZs, because the culturally sensitive areas within the Alternative 5 SDZs are substantially lower in elevation than the site of the range. Additionally, if a stray round were to escape the range, the chance of it hitting a historic property is remote, given the size of the SDZs and dispersal of historic properties. For these reasons, the potential for direct adverse effects as a result of range operations is minimal FSEIS [2015].

Indirect adverse effects to certain types of NRHP-eligible archaeological sites could result from the operation of Alternative 5 through changes affecting site integrity. For many types of archaeological sites (e.g., ceramic scatters, rock alignments), auditory impacts associated with live-fire operations would not affect characteristics that qualify them for listing in the NRHP. An increase in noise associated

with live-fire operations may affect historic properties for which solitude, quiet, or contemplation contributes to or defines their significance. The present analysis includes NRHP-eligible sites with *latte* components and cave sites with pictographs as potentially noise-sensitive historic properties.

Three such noise-sensitive sites have been identified as potentially indirectly affected by substantial changes in the audible environment, as a result of range operations under Alternative 5 (see Table 13).

As indicated in FSEIS [2015], Section 5.5.11, indirect adverse effects from visual intrusions associated with Alternative 5 would be minimal, because the ranges are within an existing military operations area, and the action would not involve a change in visual setting.

Access to historic properties within the SDZs would be restricted during range operations. Historic properties located on AAFB currently have limited access due to operations. Portions of the Ritidian Unit of the Guam NWR are currently open to the public. Portions of two NRHP-eligible archaeological sites, the Ritidian Site Complexes (66-08-0012 and 66-08-0013), are located within the SDZs that overlay portions of the Ritidian Unit. Portions of these sites are accessible to the public through tours and public education programs and are part of ongoing scientific research programs. Under Alternative 5, access to these sites would be restricted while the ranges are in use. Restricted access associated with operation of Alternative 5 would be a significant impact. If Alternative 5 is selected, the DON proposes to relocate, as appropriate, the USFWS facilities within the Ritidian Unit of the Guam NWR that would be encumbered by the range SDZs, and provide alternative public access to Ritidian when the range is in use. Any decision regarding the relocation of the USFWS facilities and/or construction of an external access road is dependent upon the outcome of consultations under section 7 of the ESA and negotiation of the agreement authorized by section 2822 of the FY15 NDAA.

Throughout the design process, to the degree practicable, additional consideration will be made to avoid and minimize adverse effects to historic properties and impacts to natural resources of cultural significance. The RMP will stipulate additional measures to avoid and minimize such impacts, as well as measures to mitigate adverse effects that cannot be avoided.

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Final

Guam Training Ranges Review and Analysis (TRRA)

Public Version - Appendices

Prepared for:

Joint Guam Program Office
Washington, DC

Prepared by:

Naval Facilities Engineering Command Pacific
Pearl Harbor, HI

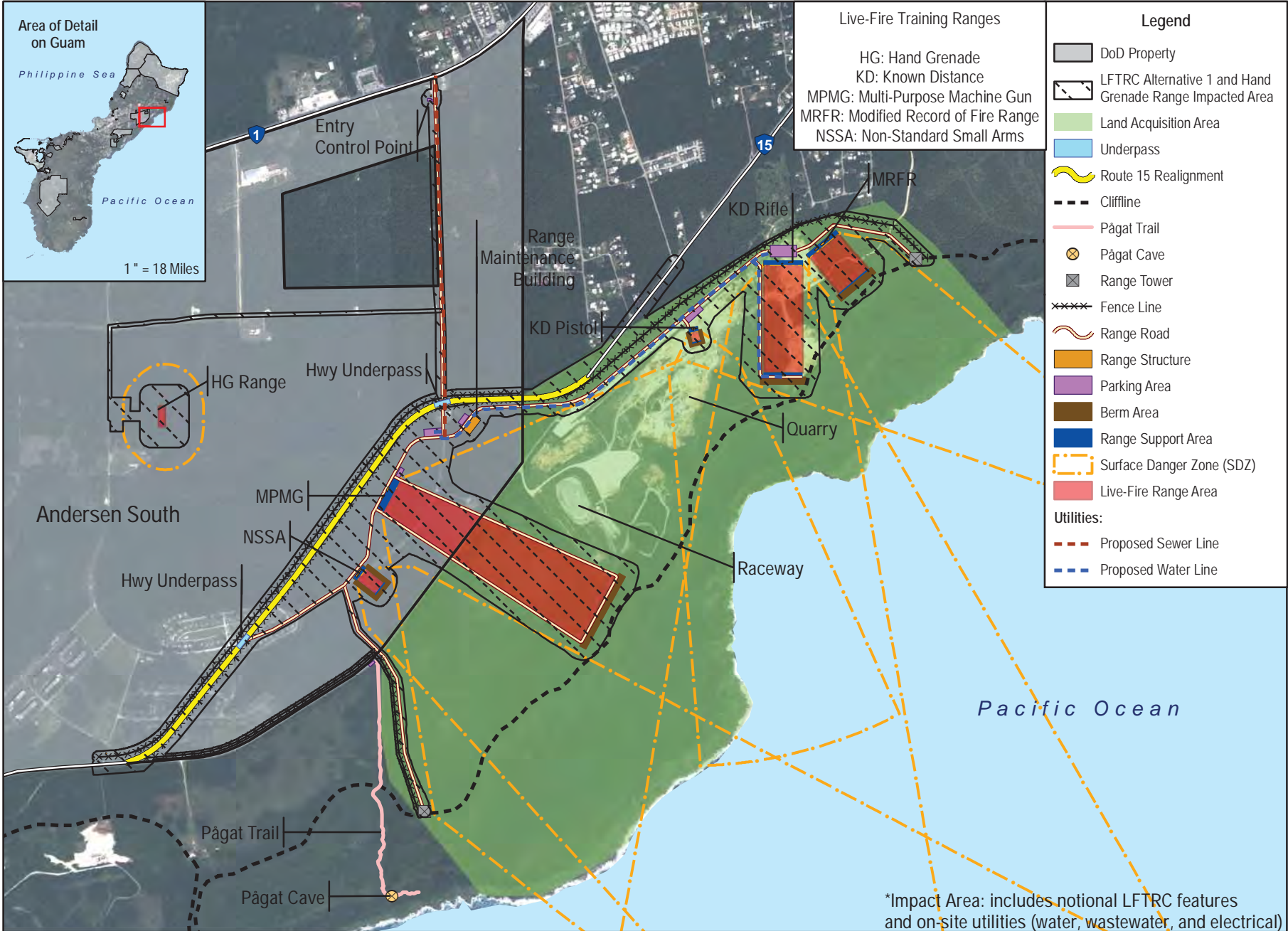
July 2015

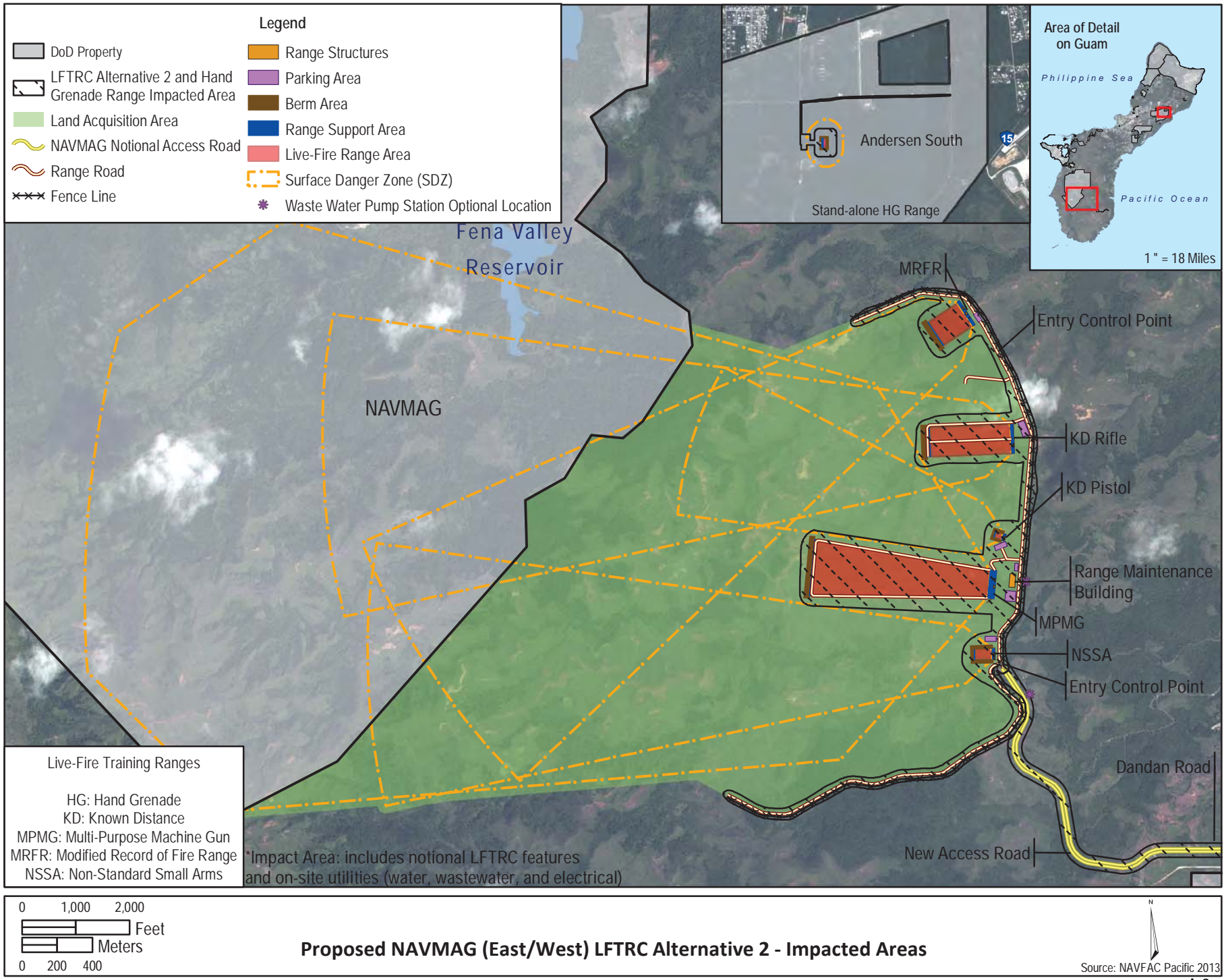
Appendices

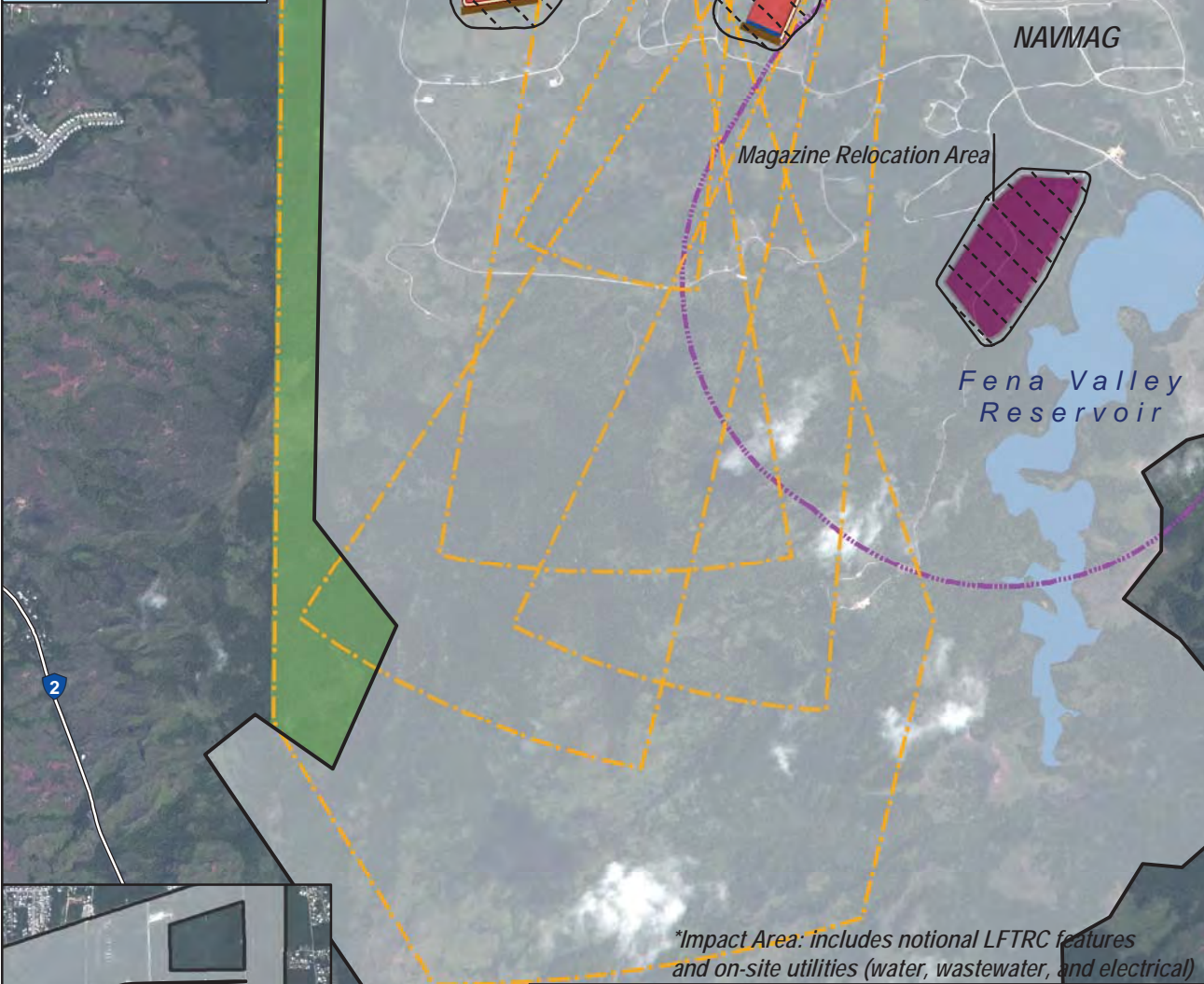
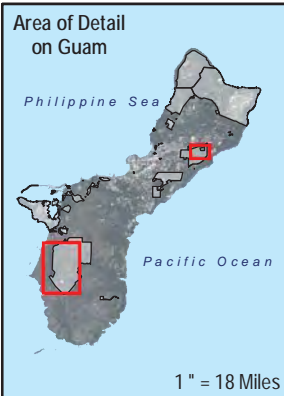
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Alternative 3: NAVMAG North/South	A-4
Alternative 4: NAVMAG L-Shaped	A-5
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Appendix A:

Figures







**Impact Area: includes notional LFTRC features and on-site utilities (water, wastewater, and electrical)*

Andersen South 15

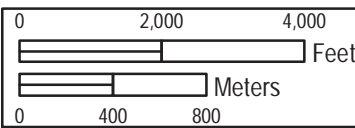
Stand-alone HG Range

Live-Fire Training Ranges

HG: Hand Grenade
 KD: Known Distance
 MPMG: Multi-Purpose Machine Gun
 MRFR: Modified Record of Fire Range
 NSSA: Non-Standard Small Arms

Legend

DoD Property	Berm Area
LFTRC Alternative 3 and Hand Grenade Range Impacted Area	Range Support Area
Land Acquisition Area	Surface Danger Zone (SDZ)
Range Road	Live-Fire Range Area
Range Structure	Munitions Magazine Relocation Area
Parking Area	Proposed Magazines ESQD Arc



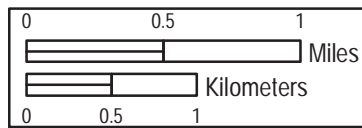
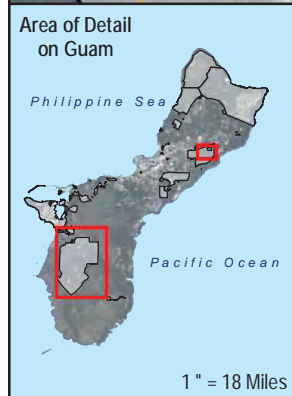
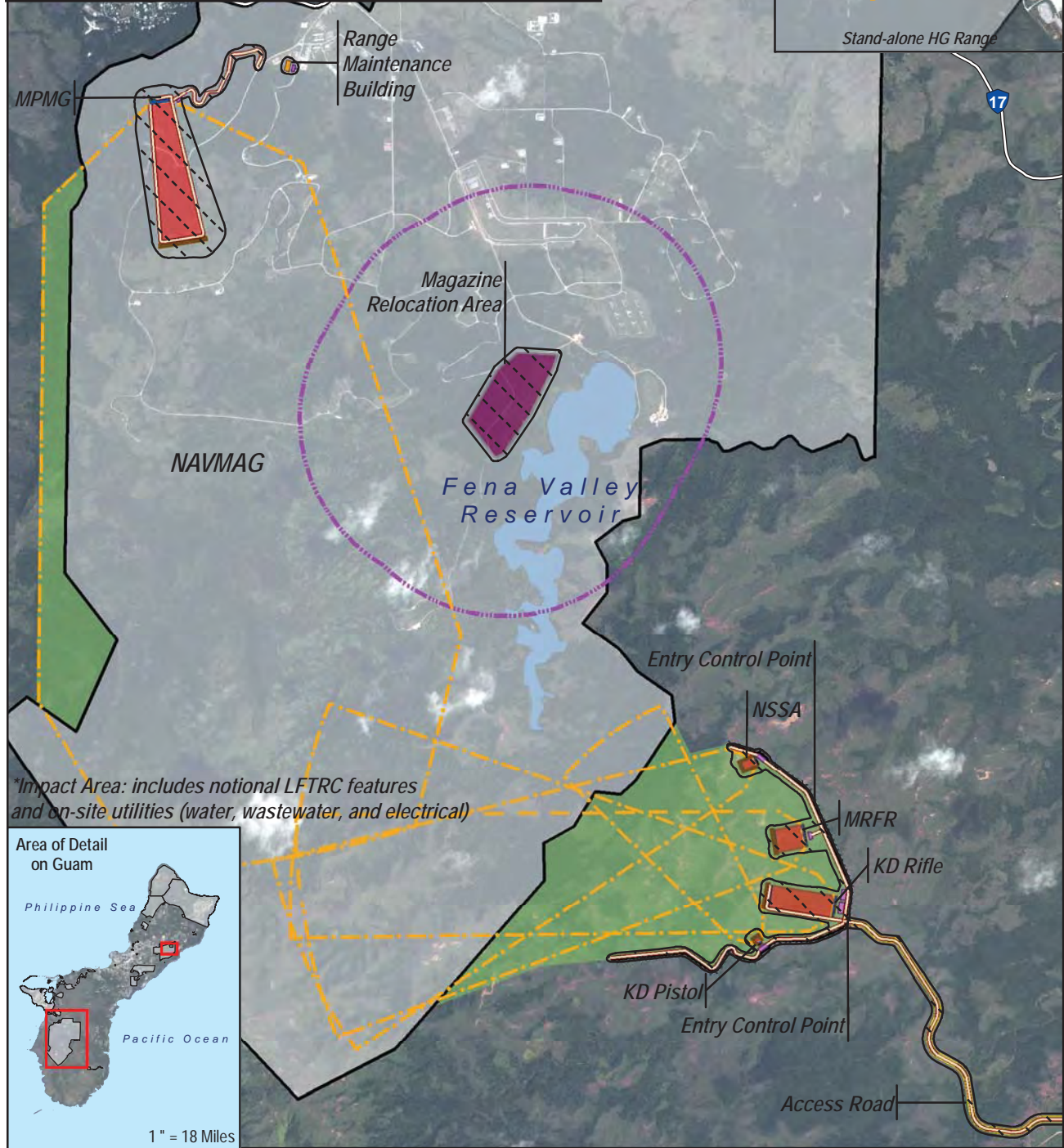
Proposed NAVMAG (North/South) LFTRC Alternative 3 - Impacted Areas

Legend

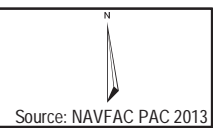
DoD Property	Parking Area
LFTRC Alternative 4 and Hand Grenade Range Impacted Area	Berm Area
Land Acquisition Area	Range Support Area
Fence Line	Surface Danger Zone (SDZ)
NAVMAG Notional Access Road	Live-Fire Range Area
Range Road	Proposed Magazines ESQD Arc
Range Structures	Munitions Magazine Relocation Area

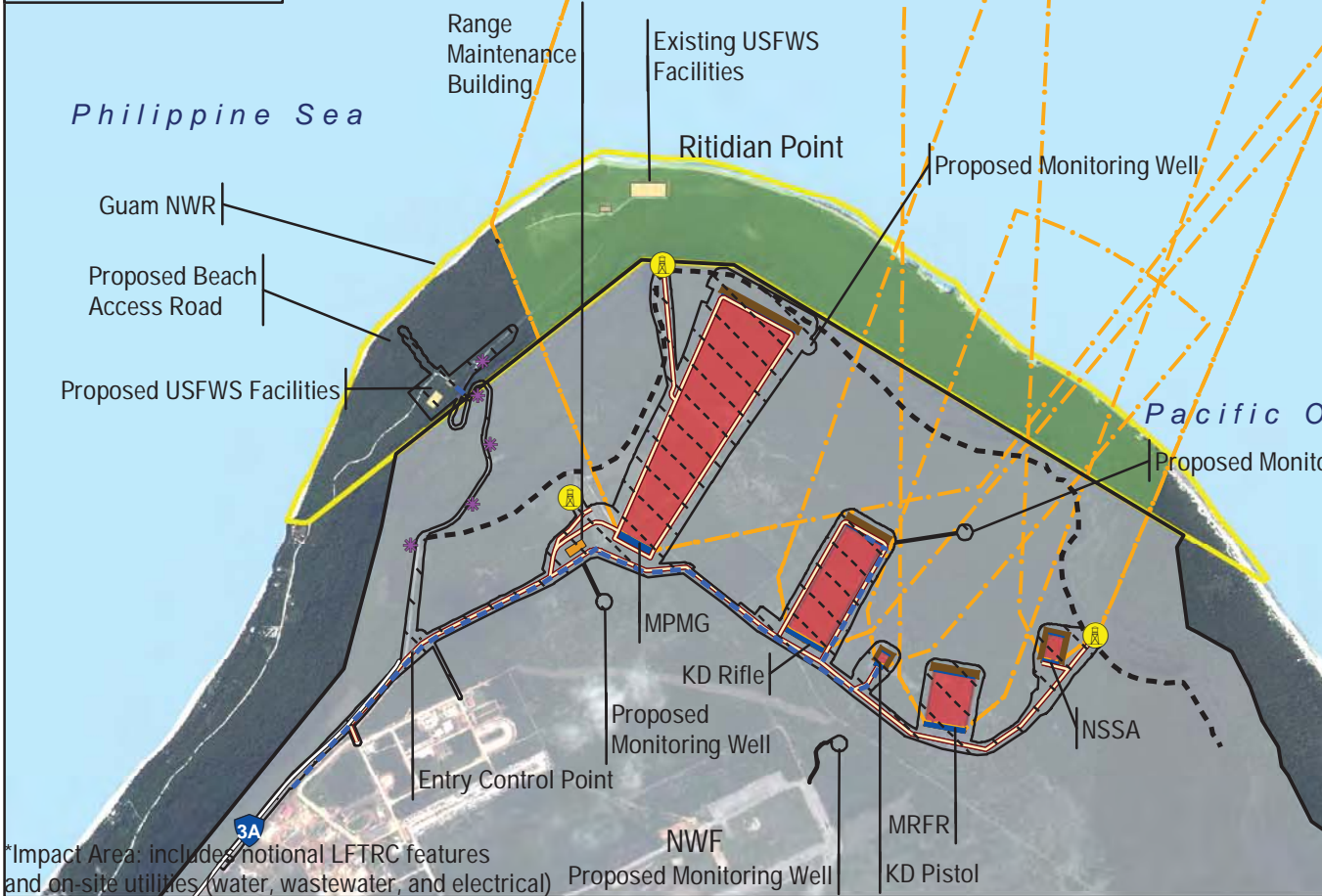
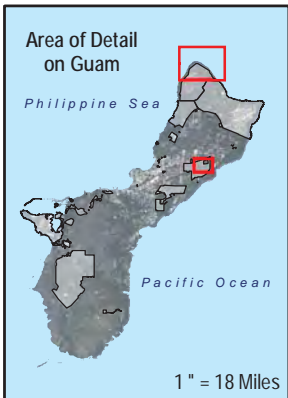
Live-Fire Training Ranges

HG: Hand Grenade
 KD: Known Distance
 MPMG: Multi-Purpose Machine Gun
 MRFR: Modified Record of Fire Range
 NSSA: Non-Standard Small Arms



**Proposed NAVMAG (L-Shaped)
 LFTRC Alternative 4 - Impacted Areas**





Legend

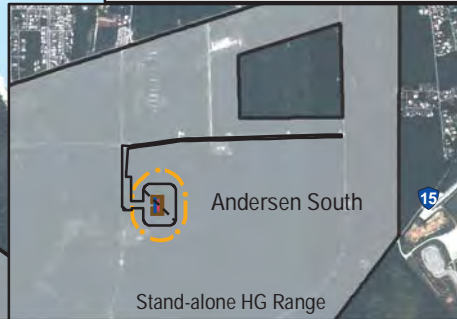
- DoD Property
- LFTRC Alternative 5 and Hand Grenade Range Impacted Area
- Ritidian Unit within SDZ
- Guam NWR
- Range Observation Tower Location
- Cliffline
- Range Road
- Range Structures
- Parking
- Range Support Area
- Berm Area
- Surface Danger Zone (SDZ)
- Live-Fire Range Area

Utilities:

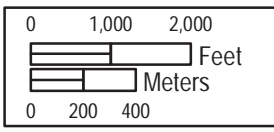
- Proposed Water Line
- Waste Water Pump Station Optional Location

Live-Fire Training Ranges

- HG: Hand Grenade
- KD: Known Distance
- MPMG: Multi-Purpose Machine Gun
- MRFR: Modified Record of Fire Range
- NSSA: Non-Standard Small Arms



*Impact Area: includes notional LFTRC features and on-site utilities (water, wastewater, and electrical)



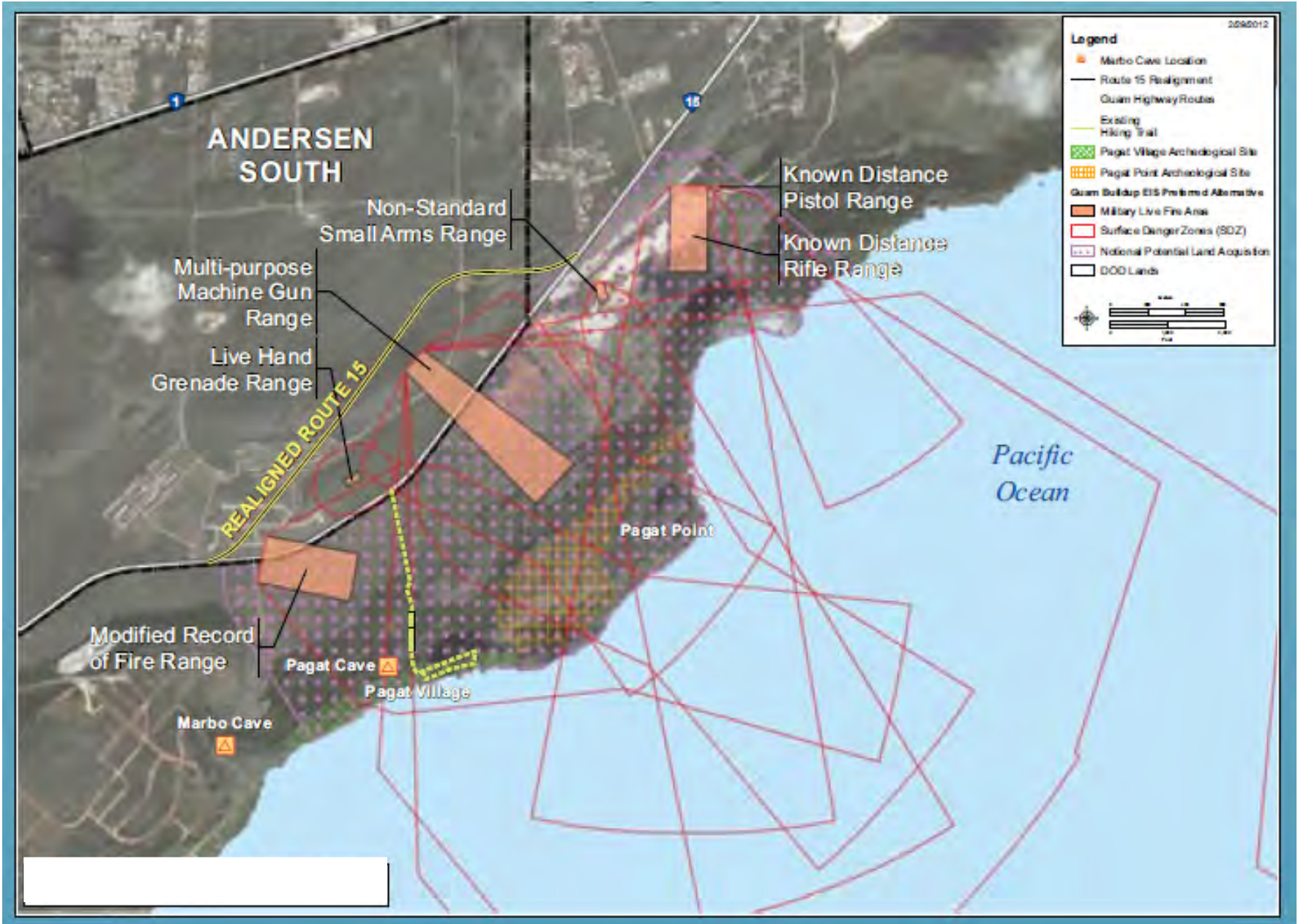
Proposed NWF LFTRC Alternative 5 - Impacted Areas

Appendix B:

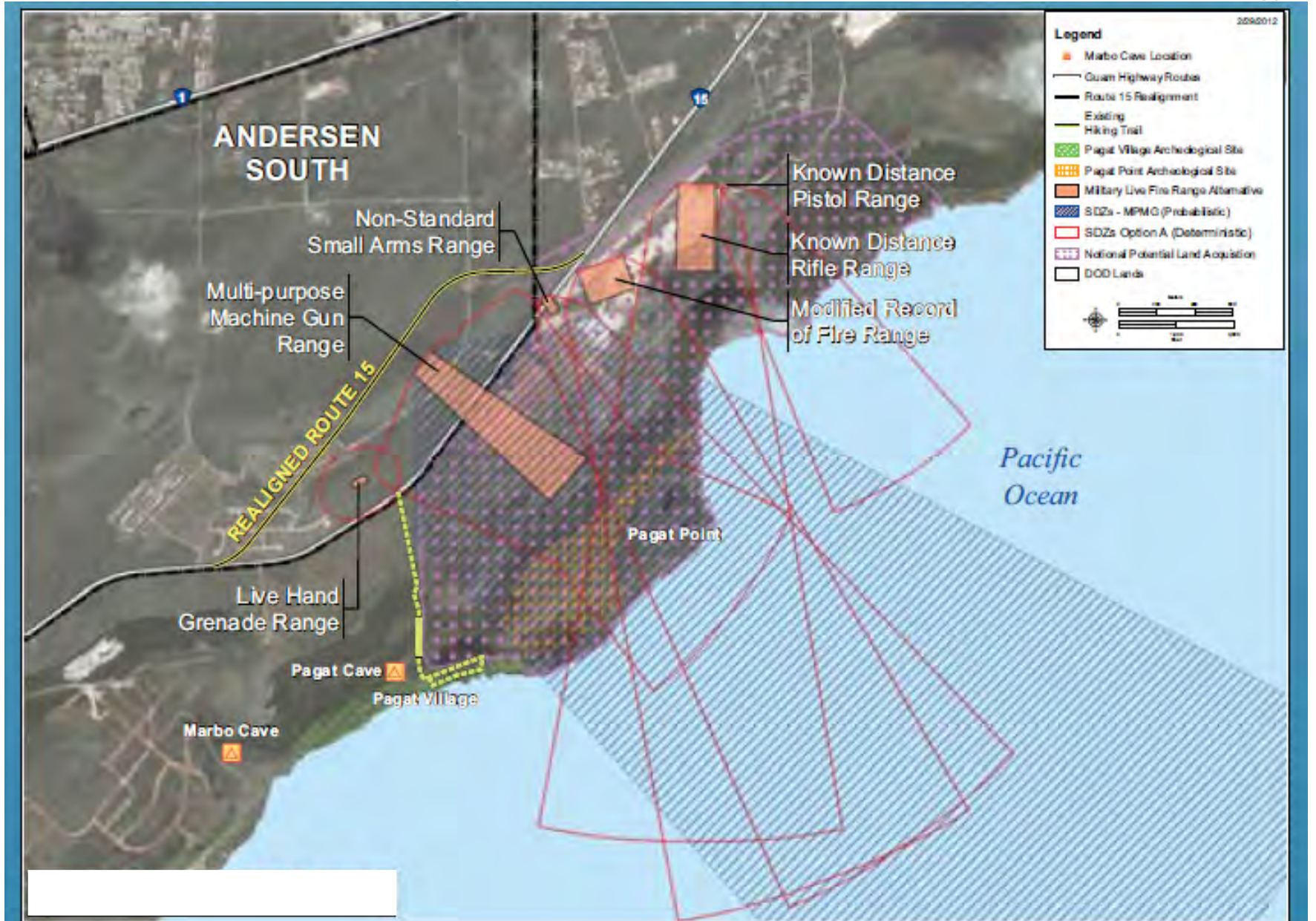
Surface Danger Zone Models

LFTRC Alternative 1

Multi-Purpose Machine Gun Range Before Application of More Precise Probabilistic Methodology



Multi-Purpose Machine Gun Range After Application of More Precise Probabilistic Methodology



Appendix C:

Summary of Impacts

Summary of Cultural Resources Impacts for the LFTRC Alternatives

<i>Route 15 (Alternative 1)</i>	<i>NAVMAG East/West (Alternative 2)</i>	<i>NAVMAG North/South (Alternative 3)</i>	<i>NAVMAG L-Shaped (Alternative 4)</i>	<i>NWF (Alternative 5)</i>
Construction Impacts	Construction Impacts	Construction Impacts	Construction Impacts	Construction Impacts
<p>SI-M</p> <p>Potential direct adverse effects to 3 historic properties from excavation and soil removal. Potential impacts to culturally important natural resources from vegetation removal.</p>	<p>SI-M</p> <p>Potential direct adverse effects to 9 historic properties. Potential impacts to culturally important natural resources from vegetation removal.</p>	<p>SI-M</p> <p>Potential direct adverse effects to 11 historic properties from excavation and soil removal. Undetermined effects to 2 unevaluated sites and 1 potential TCP from excavation and soil removal. Potential impacts to culturally important natural resources from vegetation removal.</p>	<p>SI-M</p> <p>Potential direct adverse effects to 11 historic properties from excavation and soil removal. Potential impacts to culturally important natural resources from vegetation removal.</p>	<p>SI-M</p> <p>Potential direct adverse effects to 20 historic properties. Potential impacts to culturally important natural resources from vegetation removal.</p>
Operation Impacts	Operation Impacts	Operation Impacts	Operation Impacts	Operation Impacts
<p>SI-M</p> <p>Potential indirect adverse effects to 1 NRHP-eligible site/potential TCP from changes in use that degrade site integrity. Potential indirect adverse effects to 1 NRHP-eligible archaeological site/potential TCP from recreational and visual uses.</p>	<p>SI-M</p> <p>Potential indirect adverse effects to 2 NRHP-eligible sites from changes in use that degrade site integrity. Undetermined effects to 2 unevaluated sites from changes in use that degrade site integrity. Potential indirect effects to 1 potential TCP from restricted access.</p>	<p>SI-M</p> <p>Potential indirect adverse effects to 25 NRHP-eligible sites and indirect effects to 2 potential TCPs from changes in use that degrade site effects to 5 potential TCPs from restricted access.</p>	<p>SI-M</p> <p>Potential indirect adverse effects to 24 historic properties from changes in use that degrade site integrity. Potential indirect effects to 4 potential TCPs from restricted access. Undetermined effects to five unevaluated sites and two potential TCPs from changes in use that degrade site integrity.</p>	<p>SI</p> <p>Potential adverse impacts to 2 NRHP-eligible archaeological sites from restricted access.</p> <p>SI-M</p> <p>Potential indirect adverse effects to 3 NRHP-eligible sites from changes in use that degrade site integrity.</p>

Legend: **SI** = significant impact; **SI-M** = significant impact-mitigable; **LSI** = less than significant impact; **NI** = no impact; **BI** = beneficial impact.

Appendix D:

Draft TRRA Comment Response Matrix

Draft Guam Training Ranges Review and Analysis

PA Parties Review Comment/Response Matrix

Comment ID #	Organization	Comment	Response to Public
PA Parties: 1A	Guam State Historic Preservation Office, Department of Parks and Recreation, Government of Guam	As stated in the text, information and graphics for the preferred option provide levels of detail (sites listing and spatial facilities setting) that are diminished for the remaining alternatives. At the outset, this complicates a straight-up comparison of the preferred setting with the alternatives. The schematic map showing the proposed facilities varies among the alternative areas (as stated, likely in response to topographic variation) in ways that again preclude a direct comparison of the alternatives.	Thank you for your comment. Figures with additional details on the LFTRC alternatives, including the proposed layout of the individual ranges and their Surface Danger Zones (SDZs), have been added to the TRRA.
PA Parties: 1B	Guam State Historic Preservation Office, Department of Parks and Recreation, Government of Guam	[T]he footprint of the 'Multi-Purpose Machine Gun Range' (MPMG) which is fairly consistent on the base maps for Alternatives 1, 2, and 3 has an extension to accommodate the observation tower in Alternative 5, and seems to be in two different places in Alternative 4. The MPMG range, which has a distinct footprint, is missing from the site plans on Appendix pages 35-44. The narrow linear area of direct impact on Alternative 1 that is roughly parallel with the trail to the Pãgat site is possibly for the range observation tower. If this is the case, then it stands to reason that it will have a visual impact on the Pãgat Site that will diminish its integrity. This feature needs to be moved further to the north to a point where it is outside of the view-scape of the site.	Thank you for your comment. Range design is based on site-specific conditions, including but not limited to, topography, vegetation, etc. If Alternative 1 is selected in the Record of Decision, the DON would consult in more detail, on designs and potential effects on historic properties, to include design considerations to avoid and minimize adverse effects, in developing a Range Mitigation Plan for the selected alternative.
PA Parties: 1C	Guam State Historic Preservation Office, Department of Parks and Recreation, Government of Guam	We do appreciate the attempt to divide project impacts into those directly related to clearing, grading and construction and those not. It appears that the bulk of the indirect impacts are attributed to disruptions of the prevailing soundscape associated with recurring weapons discharges, while some few are related to periodic access/visitation restrictions. What is not adequately explained is the curious predicament of some sites which simultaneously experience direct and indirect impacts (e.g. Alternative 3, ARMCO Buildings, site 21; Alternative 5, 66-08-2522 and 66-05-2523) [...] If a site is to be bull-dozed to create a firing line it makes little difference to us if that location is also within the sound-sphere of an adjacent facility. The direct impact is clearly the more problematic.	Thank you for your comment. The final TRRA has been modified to more clearly identify sites that fall within both the direct and indirect project impact areas. Additionally, the Range Mitigation Plan will address treatment of both direct and indirect effects.
PA Parties: 1D	Guam State Historic Preservation Office, Department of Parks and Recreation, Government of Guam	Solely based upon the above criteria the Route 15 alternative is our preferred option and the Northwest Field alternative is the least favored. This is not to say that the Route 15 alternative is without difficulties. As discussed above, the position of the observation tower is a problem for Pãgat. The realignment of Route 15 also is a problem for people visiting Pãgat and there needs to be an accommodation of these visitors with a new parking area and path to the site outside of military control. If we only consider direct impacts then Alternatives 1 and 2 are equal. Taking into account the potential interference with Pãgat that is associated with Alternative 1, and elevating this interference to a position of importance due to the cultural connection people voice with Pãgat, Alternative 2 might become the more suitable option. Also, if we consider the requirement for additional lands to be taken by DOD as a negative, and we used this as a conditioning factor, then Alternative 3 might switch places in the table with Alternative 4	If Alternative 1 is selected in the Record of Decision, the DON would consult on more-detailed design considerations and measures to avoid and minimize adverse effects and access in the Range Mitigation Plan development process. If selected, consultation on this alternative would consider concerns such as parking and access to the site from an area outside the range complex.

Comment ID #	Organization	Comment	Response to Public
PA Parties: 1E	Guam State Historic Preservation Office, Department of Parks and Recreation, Government of Guam	Alternative 2 shows Site 115/144 as a Latte set complex and then places it in the Pre-Latte Period (also observed at several places in Alternative 3 tables). This seems incorrect. Alternative 3, 66-02-0151 has Dobo Spring Feature Complex as a Site Type; similarly, 66-02-0152 and 66-02-0150. Site names are mistakenly being used in the place of Site Types. The use of the term WWII Japanese Administration is not acceptable as a period on Guam, and it should be replaced by the term WWII 2/3 Japanese Military Occupation.	The TRRA was revised in response to these comments.
PA Parties: 1F	Guam State Historic Preservation Office, Department of Parks and Recreation, Government of Guam	We are also aware of problems associated with the GHPI numbers used for sites within the Naval Magazine, many of which appear in the site tables for the alternatives proposed for the Magazine. Hopefully this issue can be remedied before too long.	Thank you for your comment. We look forward to continue working with the Guam SHPO to correct any problems with site numbering.
PA Parties: 2A	Advisory Council on Historic Preservation	[I]t is critical that the document provide parity for all of the proposed alternatives regarding the Safety Danger Zone (SDZ) models (Appendix B) and the Preliminary Designs(Appendix D). The SDZ models and Preliminary Designs will be significantly different for each of the proposed alternatives and should be expanded providing that information for each of the alternatives. We recommend that the final draft of the reference document be more inclusive to include this information.	The final TRRA has been revised to include figures with additional details on the LFTRC alternatives, including the proposed layout of the individual ranges and their SDZs.
PA Parties: 3A	Guam Preservation Trust	As the purpose of the TRRA is to provide information on historic properties and other cultural resources for each of the five alternatives for the LFTRC, to begin our review, GPT respectfully requests a copy of the draft Range Mitigation Plan circulated at the May 2014 Cultural Resources Meeting as we were not made party to the 2011 PA until August of this year and we understand that the elements of the draft TRRA were taken from the draft Range Mitigation Plan.	The DON appreciates that, in response to the DON's August 2014 re-invitation to become a concurring party to the 2011 PA, the Guam Preservation Trust has elected to sign the 2011 PA and became a concurring party in Aug 2014. The DON will share with the Guam Preservation Trust a copy of the Draft Range Mitigation Plan, the updated version of the preliminary Draft Range Mitigation Plan that was shared with the PA Parties in April/May 2014.
PA Parties: 3A	Guam Preservation Trust	On the TRRA itself on page 6, second sentence, after submitting the findings to the Guam Historic Research Division (GHRD) for review on May 21, 2013 and April 12, 2014 was there any response from their office of their concerns?	Thank you for your comment. The TRRA has been revised to reflect that Guam SHPO reviewed and provided comments on the Draft Cultural Resources Technical Reports, and the DON took the Guam SHPO's comments into account in preparing the final reports.
PA Parties: 3B	Guam Preservation Trust	On page 7 regarding the analysis on Alternative 1, GPT commends the DON in that the TRRA remains consistent that access to the historical properties in Pãgat was acknowledged and documented. In particular, we respect the attention to the spelling of Pãgat. Continuing with page 7, it states there are indirect impacts that will affect the solitude and significance of the Pãgat area when it is deemed a traditional cultural property and that continues to be a point of concern.	Thank you for your comment. The DON will carefully consider potential direct and indirect effects in the decision-making process.

Comment ID #	Organization	Comment	Response to Public
PA Parties: 3C	Guam Preservation Trust	As a matter of clarification and transparency, we are requesting the segregation of identified acreage for the NWF LFTRC alternative. Page 9 states that 3,981 overall acres of AAFB and portions of USFWS property will be utilized. Page 10 identifies 142 acres for the USFWS property without identifying how many acres of this property are actually included in the 3,981 accrued acreage. We believe there is a discrepancy in the sum of acreage presented and would like a clear number in this document as to the amount of land being utilized for this alternative.	The acreages have been updated in the TRRA.
PA Parties: 4A	Army: Force Management, 94th Army Air and Missile Defense Command	The official 94th AAMDC position on the TRRA is that the command fully supports the Department of Navy's efforts to improve the training facilities and opportunities for US military personnel assigned to the Joint Region Marianas and the construction of a Live Fire Training Range Complex. With the possible construction of a Live Fire Training Range Complex near a 94th AAMDC subordinate unit, the command is comfortable that all reasonable efforts will be taken to protect service members and their equipment while ensuring that both entities (TF Talon & the LFTRC) will be allowed to execute their assigned mission with no adverse effects or degraded mission capabilities.	Thank you for your comment.

Draft Guam Training Ranges Review and Analysis

Public Review Comment/Response Matrix

Comment ID #	Comment	Response to Public
Public: 1:A	I recommend that the Dept. of Defense keep all firing ranges within its footprints, especially not including the wildlife refuge, and not designating it as a safety danger zone. The wildlife refuge and the Ritidian area are rich in historical, cultural, environmental, and recreational spaces, and thus should not be designated for any firing range purpose.	<p>Thank you for your comment. The DON will carefully consider access and the important and sensitive resources within the Ritidian Unit in the decision-making process.</p> <p>If it is selected in the Record of Decision, the LFTRC Alternative 5 at Northwest Field will be designed (including the orientation of individual ranges and Surface Danger Zones [SDZs]) to minimize the area affected by limited access, and minimize impacts to physical and neighboring operational constraints while also addressing Marine Corps range operational requirements. Other locations on Andersen AFB were evaluated in the 2010 Final EIS. The use of Tarague Range at Andersen AFB (also called the Pati Point Range) as a potential site for the LFTRC was considered but did not satisfy the evaluation criteria and was not carried forward as a feasible alternative, in part because it would require a significant amount of excavation to create the range topographic profile and to reconstruct the steep access road to the Tarague Range. In addition to the potential erosion control issues associated with the extensive grading, cultural and natural resource sites would also be significantly impacted. While some reconsideration of potential LFTRC alternatives became possible in the SEIS based on a reevaluation of SDZ requirements and the size of the LFTRC footprint, such changes did not affect the determination that the Tarague Range was not a feasible location for the LFTRC. Placement of the proposed LFTRC at the current Combat Arms Training and Maintenance range site would not be compatible with the Class D airspace associated with the Andersen AFB airfield due to the size of the Marine Corps LFTRC SDZ and frequency of Marine Corps live-fire training. The current Combat Arms Training and Maintenance range has been able to coexist with the Andersen AFB airfield due to a smaller SDZ associated with current use of the Combat Arms Training and Maintenance range and less frequent operations than required for Marine Corps live-fire training. The use of the Andersen AFB golf course as a potential site for the LFTRC was also considered but did not satisfy the evaluation criteria and was not carried forward as a feasible alternative because an LFTRC at that location would be in direct conflict with the Class D airspace associated with the airfield at Andersen AFB. None of the factors that led to the preparation of the SEIS changed this fundamental determination that the Andersen AFB golf course was not a feasible alternative for placement of the LFTRC.</p>
Public: 2:A	I strongly opposed the proposed Live Fire Training Range Complex (LFTRC) at the alternative site. There are already two other firing ranges on the island. Better coordination between military branches is needed [...] It is inconsistent with, and would undermine, current federal laws including the Endangered Species Act, the National Wildlife Refuge Act, and the National Historic Preservation Act.	Thank you for your comment. The DON recognizes the importance of managing the implementation of the proposed military relocation to limit the adverse effects on the people of Guam, and historic and natural resources to the extent possible. The DON will continue to work to ensure that the short-term impacts of construction are managed effectively and that the long-term effects of the LFTRC decision reflect DoD policies to be good neighbors and responsible citizens on Guam. The DON is committed to meaningful consultation regulatory agencies at the federal and Government of Guam levels, consistent with the applicable laws and regulations.
Public: 2:B	It would undermine the role the Guam National Wildlife Refuge plays as "Ground Zero" in the efforts to contain and reverse further spread of the brown tree snake (BTS) elsewhere in the Pacific, thereby compromising the wildlife heritage of Guam.	<p>Thank you for your comment. The BTS and similar concerns are not addressed by the TRRA, which focusses on cultural resources. However, and a description of the Section 7 consultation between the DoN and USFWS is included in the Final SEIS.</p> <p>In addition to consulting on cultural resources, the DON is engaged in formal consultation with USFWS under Section 7 of the Endangered Species Act to ensure that the proposed action is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of the critical habitat of the endangered or threatened species. As part of this consultation, the DON has prepared and submitted a Biological Assessment to the USFWS. Conservation measures in the DON's Biological Assessment include measures for brown tree snake suppression. The consultation will result in the issuance of a Biological Opinion by USFWS.</p>
Public: 2:C	Ritidian is currently a wildlife preserve unit of the Guam National Wildlife Refuge (GNWR), covering 371 acres of coral reefs and 832 acres of terrestrial habitats including limestone forests. It would have adverse impacts on the operation of the Guam (NWR), which serves a critical role in conserving the natural and cultural heritage of Guam. It would undermine the Guam National Wildlife Refuge's founding mission to protect and recover nine species listed under the Endangered Species Act.	The DON would pursue an agreement with USFWS in accordance with the provisions of Section 2822 of the Fiscal Year 2015 National Defense Authorization Act to ensure that access restrictions to the Ritidian Unit are consistent with the purposes for which the Unit was established.
Public: 2:D	It is an important recreational and educational destination of over 92,000 Guam residents and tourists each year, including over 12,000 school children who come to the Guam NWR each year to learn about conservation and the island's traditional habitat.	The DON would pursue an agreement with USFWS in accordance with the provisions of Section 2822 of the Fiscal Year 2015 National Defense Authorization Act to ensure that access restrictions to the Ritidian Unit are consistent with the purposes for which the Unit was established.

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Public: 2:E	This area is the only designated critical habitat on Guam and it is home to some of the last confirmed populations of the Guam Micronesian kingfisher, Guam rail, Vanikoro swiftlet, Mariana common moorhen, native tree snails and small lizards, the endangered Marianas fruit bat, the Mariana crow, as well as to hawksbill and green sea turtles and the hayun lagu tree. The main preservation initiative involves the Serianthes nelsonii tree and is the only mature tree on Guam.	The DON is engaged in formal consultation with USFWS under Section 7 of the Endangered Species Act to ensure that the proposed action is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of the critical habitat of the endangered or threatened species. As part of this consultation, the DON has prepared and submitted a Biological Assessment to the USFWS. The consultation will result in the issuance of a Biological Opinion by the USFWS.
Public: 2:F	It would restrict public access to Guam's best public beach, the oldest known and longest-lasting ancient Chamorro settlement site [and is] archeologically important [for research] and contains an abundance of cultural resources, including latte sets, water wells, limestone mortars, cave drawings, pottery and shell artefacts.	<p>Thank you for your comment. The DON will carefully consider cultural resources and access concerns regarding the Ritidian Unit in the decision-making process. At present, the public is restricted from accessing the majority of the Ritidian Unit of the Guam National Wildlife Refuge by the USFWS. However, much of the currently publicly accessible areas of Ritidian Unit would remain outside of range SDZs; therefore, access would still be possible.</p> <p>The addition of the LFTRC under Alternative 5 would increase the amount of accessible beach by approximately 10%. Access to these areas would subject to established Refuge rules and regulations. For areas that fall within the SDZs, access may be granted at approved times such as when lands are not being used for military training. Plans concerning access to areas that may be impacted by the proposed action have not been developed. The DoD looks forward to working with stakeholders to develop plans for cultural stewardship and access that balance operational needs, public safety concerns, and the continuing public use and enjoyment of these resources.</p>
Public: 3:A	The lands that are proposed firing range locations are all sacred to the indigenous CHamoru people, nurturing us with medicinal herbs, historical spaces that connect us to our Aniti (ancestors), fishing and hunting grounds that feed us, lands for indigenous and endangered species to thrive. Every square inch of the Marianas Islands is sacred and provides a need for it's people.	Thank you for your comment. The DON will carefully consider Guam's important and sensitive resources in the decision-making process.
Public: 3:B	The long history of the United States in this area has left the people with many lands that are unaccessible, polluted, or taken illegally and have yet to be returned [...] Claiming any more land for the United States military in Guam is an injustice to the human rights of the indigenous Chamorus and people of Guam.	Thank you for your comment. The DON acknowledges that the issue of land acquisition is a complex and sensitive issue, particularly as it relates to prior acquisition of land on Guam by the federal government. Prior land acquisition policies and procedures, however, are not reflective of current laws and DoD policy and outside of the TRRA process.
Public: 4:A	Range Mitigation Plan. This has to go through the Section 106 process and should be so stated. The statement on page 3 that the 2011 PA established procedures for new information in the overall relocation does not insure that a new location for the Marine Corps Live Fire Training Range Complex (LFTRC) is processed through the Section 106 process without stating what the PA process is.	Thank you for your comment. Execution and implementation of the 2011 PA is the program alternative for compliance with the Section 106 process, consistent with 36 CFR 800.14. Accordingly, the PA identifies a process for addressing refinements to the proposed undertaking and development of the Range Mitigation Plan.
Public: 4:B	[T]he reference to technical reports under Work Plans on page 5. What are these and how can we review while they should be included in this document?	Thank you for your comment. Consistent with the requirements of Section 304b of the NHPA and the Archeological Resources Protection Act, Federal agencies protect information pertaining to the location of historic resources; therefore, technical cultural resource studies such as these are not distributed to the public but are provided to the Guam SHPO for review.
Public: 4:C	Alternative 5 for the LFTRC is not at Northwest Field. It is clearly north of Northwest Field, between the Field and cliff at an area with the Chamorro place name of Tailalo. Using the incorrect place name of Northwest Field implies asphalt and scrub vegetation and not the existing limestone forest of Tailalo. Require changing Northwest Field to Tailalo wherever used.	Thank you for your comment. The introductory paragraph for Alternative 5 has been revised to state that the Northwest Field LFTRC Alternative 5 location is north of the actual Northwest Field airfield but that "Northwest Field" is used in the TRRA to describe this location. There were no edits made to the names used in the TRRA.

Comment ID #	Comment	Response to Public
Public: 4:D	The public cannot assess the direct and indirect effects of the LFTRC because the document does not provide sufficient and complete information on the exact locations and detailed descriptions of the cultural resource sites. Furthermore, without a complete description of the sites and it's significance, we cannot appropriately comment on the eligibility for the National Register of Historic Places.	Thank you for your comment. Consistent with the requirements of Section 304b of the NHPA and the Archeological Resources Protection Act, technical cultural resource studies such as these are protected from general distribution, but are provided to the Guam SHPO for review.
Public: 4:E	[O]ne of my comments on the Draft Supplemental Environmental Impact Statement (DSEIS) was for the DON to provide public tours of the locations. This has not happened. Will it?	Thank you for your comment. Responses to comments provided on the Draft SEIS will be included in the Final SEIS.
Public: 4:F	Page 5 under PDIA Reviews discusses additional surveys and literature. It is essential for a meaningful review that this information be incorporated into this document.	Thank you for your comment. Consistent with the requirements of Section 304b of the NHPA and the Archeological Resources Protection Act, Federal agencies are obligated to withhold information pertaining to the location of historic resources, therefore, technical cultural resource studies such as these are not distributed to the public but are provided to the Guam SHPO for formal review.
Public: 4:G	Failure to provide complete site information including description, significance, and location is based upon a misuse and illegal application of 16 U.S.C. 470w unless the appropriate correspondence required in 16 U.S.C. 470w is provided as an attachment to the TRRA that would demonstrate Navy compliance. Based upon NAVFAC Pacific prior history on this subject it is doubtful that this process has been appropriately accomplished.	Thank you for your comment. Consistent with the requirements of Section 304b of the NHPA and the Archeological Resources Protection Act, Federal agencies are obligated to withhold information pertaining to the location of historic resources, therefore, technical cultural resource studies such as these are not distributed to the public but are provided to the Guam SHPO for formal review.
Public: 4:H	The initial Guam Buildup EIS did not have a complete cultural resources survey for Pãgat. Without access to the complete cultural resource survey for Pãgat, there is no assurance that it is now complete. It is unclear if the cultural resources to be impacted by the LFTRC in the Draft Supplemental Environmental Impact Statement are being evaluated via the existing Programmatic Agreement. With potential new site(s) for the LFTRC, such as Tailalo, a new Section 106 is required and should be stated clearly.	Thank you for your comment. Execution and implementation of the 2011 PA is the program alternative for compliance with the Section 106 process, consistent with 36 CFR 800.14. The 2011 PA identifies procedures for additional identification and evaluation of historic properties, should this alternative be selected in the Record of Decision
Public: 4:I	A requirement of ACHP is the determination of the Areas of Potential Effects (APE). I do not see this covered in this text nor included on the maps, even though on page 4 the ACHP document "Meeting the Reasonable and Good Faith Identification Standard in Section 106 Review" is cited which states initially the requirement to establish the APEs. The APE should include all impacts that needs to cover including visual and audio.	Thank you for your comment. Execution and implementation of the 2011 PA is the program alternative for compliance with the Section 106 process, consistent with 36 CFR 800.14. The 2011 PA substitutes a process of project review that is tailored to Guam and the Relocation action. For the LFTRC, the PA stipulates that this TRRA serves to document the equivalent of the APE.
Public: 4:J	Table 1 is titled "Archaeological Sites located within the NWF Alternative PDIA and PIIA. Why is this listed as only "Archaeological" and not all encompassing of historic and architectural?	The TRRA has been revised to include tables for archaeological and architectural resources for all alternatives.
Public: 4:K	Table 1 does not include any apparent reference to: (1) remains of previous navigation aids and lookouts at Ritidian Point and (2) the current building of the Guam National Wildlife Refuge that are the former cold war era administration and operations buildings of the formed Ritidian Point Naval Facility.	Thank you for your comment. No remains of previous navigation aids and lookout have been identified in this area. The NWR facility has been determined ineligible.
Public: 4:A	There are no tables, similar to Table 1, for the other 4 alternatives. They should be included for completeness.	Thank you for your comment. The TRRA has been revised to include tables for all alternatives.
Public: 4:A	The statement on page 18 that the NWF alternative would adversely affect historic properties is not justified due to the lack of adequate cultural resources information, discussed previously, and specifics on construction. The statement that alternatives would be considered can only be accomplished through the Section 106 process.	Thank you for your comment. Execution and implementation of the 2011 PA is the program alternative for compliance with the Section 106 process, consistent with 36 CFR 800.14. Accordingly, the TRRA provides the public with a planning-level summary of potential cultural resource impacts for the alternatives addressed in the SEIS.
Public: 4:L	Traditional Cultural Properties are not included and are required to be.	Thank you for your comment. Potential TCPs have been added to the document.

Comment ID #	Comment	Response to Public
Public: 5:A	This beautiful, priceless and all natural beauty attached are the reasons why we need Ritidian to be left to the people. Please do not change these pristine lands into a firing range, what will we tell our children? How will we explain we can't take them to these beautiful white sand beaches any longer? How can we teach them to build a better world when the world around them is destroying itself at our expense?	Thank you for your comment. The DON will carefully consider access and Guam's important and sensitive resources in the decision-making process.
Public: 6:A	No mention is made on how lead from rounds will be cleaned up when they ricochet from the various firing ranges. What actions will be taken to prevent further negative impacts from the introduction of lead and bullet casings on Guam and Tinian?	Thank you for your comment. The Marine Corps will utilize the Range Environmental Vulnerability Assessment (REVA) program to assess the potential impacts to human health and the environment from live fire training operations. REVA is outside of the scope of cultural resources addressed by the TRRA, however, and a description of the REVA program will be included in the Final SEIS.
Public: 6:B	No mention was made on how the military will clean up lead fired into the ocean areas from the machine gun firing complex. What actions will be taken to clean up the immediate ocean area that will be populated with lead from the introduction of live fire training?	Thank you for your comment. The Marine Corps will utilize the REVA program to assess the potential impacts to human health and the environment from live fire training operations. REVA is outside of the scope of cultural resources addressed by the TRRA, however, and a description of the REVA program will be included in the Final SEIS.
Public: 6:C	What has the navy done to assess how the introduction of lead will impact local invertebrate populations, fish stock populations, marine mammal populations and coral populations? What Endangered Species Act (ESA) listed marine and terrestrial species are expected to be impacted from all this live firing?	Thank you for your comment. Potential environmental impacts to marine and terrestrial species are analyzed in the SEIS.
Public: 6:D	What specific actions will be taken to remediate and restore historically listed areas from noise pollution? More specific information is needed on this topic.	An increase in noise associated with live-fire operations may adversely affect historic properties for which solitude, quiet, or contemplation contribute to or define their significance, such as TCPs. Processes to determine effects to historic properties and identify mitigation are outlined in the 2011 PA.
Public: 6:E	What specific efforts will be made to clean up lead from the area because the aquifer sits directly above AAFB? What studies have been completed by the military and non-military sources to assess how lead will further compromise Guam's only underground water source?	Thank you for your comment. The Marine Corps will utilize the REVA program to assess the potential impacts to human health and the environment from live fire training operations. REVA is outside of the scope of cultural resources addressed by the TRRA, but a description of the REVA program will be included in the Final SEIS.
Public: 6:F	How negative is a "negative impact" and what is the military going to do to remedy the destruction that will be caused to all historical sites listed in TRRA proposed areas? What kinds of toxic substances will be introduced into the immediate area and historical sites that are produced from blowing up grenades? What is the weight equivalent that will be produced from hand grenade explosions every year and what specific steps will be taken to protect historical sites?	Thank you for your comment. The Marine Corps will utilize the REVA program to assess the potential impacts to human health and the environment from live fire training operations. REVA is outside of the scope of cultural resources addressed by the TRRA, however, and a description of the REVA program will be included in the Final SEIS.
Public: 6:G	What are the weight equivalents for normal training levels and surge/combined/joint training levels on a per year basis?	Thank you for your comment. The net weight of lead that would be present at any given time on Guam cannot be determined because it would depend on the frequency of periodic range clearance operations (determined by Range Management Plans to be developed), the actual amount of range use between range clearances, the type of ammunition used, etc.

Comment ID #	Comment	Response to Public
Public: 7:A	<p>[The TRRA] was not easy to find online. The document should have been more prominent on the NAVFAC Pacific Cultural Information website, especially during the commenting period. In the future, such documents concerning how the military build-up will impact our community should also be made available on the Guam Build-Up EIS website, which is a more commonly visited site on this issue. Overall, there should have been more public engagement regarding this document. Frankly, I believe the commenting periods our community is given on documents concerning the buildup have worked to exhaust our community, and ultimately shut people out of the process. Our people are not engaged as active participants with power in the process. Instead, we read about possible destruction to our historic properties and are given no real say in truly protecting and preserving them.</p>	<p>Thank you for your recommendations. The DON appreciates your input and going forward will consider your recommendations for public involvement for the 2011 PA related documents.</p>
Public: 7:B	<p>This document made clear how each alternative for the LFTRC contains culturally rich historic properties that are important to our people. The preferred alternative, Northwest Field, with a Surface Danger Zone over Ritidian has the largest inventory of cultural resources and historic sites that will be disturbed by the ranges. In my close reading of the TRRA, I found and strongly believe that none of these alternatives are compatible with the presence of live fire training.</p>	<p>Thank you for your comment. The DON will carefully consider access and Guam's important and sensitive resources in the decision-making process.</p>
Public: 7:C	<p>The TRRA accurately points out that the noise from live fire training will impact the integrity of these sites. The use of ancestral villages and burial grounds for military purposes is culturally disrespectful and insensitive.</p> <p>Would the DON allow for Live Fire Training at the Arlington National Cemetery?</p>	<p>Thank you for your comment. The DON recognizes and respects the significance and sensitivity of the cultural resources in these locations. Consultation in development of the Range Mitigation Plan will consider measures to avoid, minimize, and mitigate potential adverse effects resulting from auditory changes in the environment.-</p>
Public: 8:A	<p>How would you address the buildup of vehicles traveling in that area?</p>	<p>Thank you for your question. Traffic increases both on-base and off-base for the various proposed action alternatives are analyzed in the SEIS. Off-base road improvements recommended by the traffic study to address potential traffic impacts of the proposed action are discussed in the SEIS. Any off-base road improvements would be implemented via Defense Access Roads funding.</p>
Public: 9:A	<p>As a local resident and young Chamorro man, (15 years old) I oppose the military buildup. I often hear stories from my grandparents, elders, and other family members about how life was before the military had taken away a huge amount of land from the locals. Every time I hear them talk about life before I always wondered "why haven't I been exposed to this?" and my answer was always because of the United States military. Many historical landmarks have been taken away already. I do not want to be the first of a generation to grow up without knowing the true way of life here on the island. Much of Guam is already Americanized.</p>	<p>Thank you for your comments. The DON acknowledges the importance of historic preservation to the people of Guam and will carefully consider Guam's important and sensitive resources in the decision-making process.</p>
Public: 9:B	<p>The federal government has already taken away too much of the land, and I do not wish to see more being taken away. Being only 15 years old I have a deep desire to learn more about the island of Guam, where I am from. PLEASE STOP TAKING LAND FROM THE LOCALS AND GIVE THE LAND BACK TO THE LOCALS. Please do not take away the land from the locals. As a Chamorro, I feel my culture and liberty left by my ancestors are fading away due to the military presence here on the island.</p>	<p>Thank you for your comment. The DON acknowledges that the issue of land acquisition is a complex and sensitive issue, particularly as it relates to prior acquisition of land on Guam by the federal government. Prior land acquisition policies and procedures, however, are not reflective of current laws and DoD policy. Additionally, prior land acquisition is outside the scope of the TRRA. An analysis of land acquisition issues is presented in the SEIS.</p>
Public: 10:A	<p>This commenter provided a number of direct quotes from articles and historical documents and those are presented below.</p>	<p>Thank you for your comment. The DON acknowledges that the issue of land acquisition is a complex and sensitive issue, particularly as it relates to prior acquisition of land on Guam by the federal government. Prior land acquisition policies and procedures, however, are not reflective of current laws and DoD policy. Additionally, prior land acquisition is outside the scope of the TRRA. An analysis of land acquisition issues is presented in the SEIS.</p>

-----Original Message-----

From: [REDACTED]
Sent: Monday, December 08, 2014 4:08 PM
To: CRIWebComment
Subject: Ritidian Point Firing Range

December 9, 2014

To whom it may concern,

My comment submission is comprised of excerpts from articles and historical documents that I have researched in trying to understand the rationale for a continued subjugation of the Chamorro people through such actions. This is an acquisition of new natural resources for military activities, which was against a promise made to our Governor.

1)

Governor to push for land return

Written by Gaynor Dumat-ol Daleno Pacific Daily News

May 22, 2014 |

"The military has promised to have less land at the end of the buildup than when it began, the governor said... "Your administration will use this (promise to use less land) to help our families who have waited decades for their ancestral land to be returned," the governor said."

2)

<http://quampedia.com/land-ownership-on-guam/>

"Testifying on behalf of the Navy Department, Commander L. J. Watson admitted that although many of the Chamorros had held fee simple title to their land dating back to the early Chamorro and Spanish times, no settlements had been made with the Chamorro people. The commander revealed that the Navy's intent was to trade money for the occupied land. At this point, Senator Millard E. Tydings pointed out that when he was on Guam, the Chamorros told him that they preferred the return of their land over money. He added that the Chamorros wanted to engage in their usual pursuits rather than be required to do jobs they did not like. He further stated:

"Mr. Chairman, the town of Agana, which is the biggest town on the island, is nothing but a wreck. There is nothing in it now. It is all mowed down. The natives there had herds of cattle and other things which were killed in the course of the fighting...

They have been intensely loyal. They have suffered like they have suffered everywhere. Their men, women and children have been killed in the course of the fighting. It is not going to cost a tremendous amount of money.

In view of the fact the Guam people are very loyal, they are good people, good wards to us, I think it is a good investment in that particular island. It is very important that we deal with them absolutely on the

square.”

Tydings said that a Chamorro judge had told him, “You have taken everything from us. We haven’t got any grazing land; we haven’t got any agricultural land, you have taken it for the Army and Navy and we have not even been paid for it.”

A few weeks later, the US Senate was informed as to how the Navy was going to keep the value of Chamorro land depressed. When asked by Senator Harry Byrd what the average value of the land was on Guam, Watson responded, “Astonishingly low.” The commander went on to concede that the reason land values were so low was because land on the island had never been sold in an over-the-counter way. “It has never been freely sold, and an analysis of recorded instruments shows that practically all exchanges of land or sales of land have been between relatives and so on,” Watson said. Rather than escalate the value of the land on Guam to a free market level, Watson said, the Navy would just value their own land at the same rates. Thus someday, when the Navy land was exchanged or returned to Chamorros it would be a fair exchange.

There are two big problems with this method of land valuation. First, the Navy never did exchange or return the occupied land to the Chamorros. Second, the US used the depressed land values resulting from this procedure to calculate the amount of land compensation paid. In doing so, they failed to take into account the fact that the money was simply a medium of exchange with no real value to the Chamorros in their non-cash economy, and was meant to be returned when the land was returned.

In January 1946, a special US Senate committee investigating the National Defense Program issued its report. The commander of US Marine Corps forces in the island summarized the Corps’ position there: “This is American territory and when we landed the people were scattered and we took what we needed, occupied it, built up the roads, and so forth, irrespective of the ownership.” One senator asked if the Chamorro land had been taken legally and got this response from a Colonel Wilson: “I wouldn’t say legally, but everything is legal in time of war.”

Admiral W. H. Smith, the Chief Planning Officer of the Navy Department, also answered questions regarding the exploitation of the Chamorros:

Mr. Grant: Have either of you gentlemen seen any of these series of articles that have been running in the New York Times about the exploitation of the natives on the island of Guam by military personnel mustered out of the service and given exclusive franchises to operate public utilities?

Smith: I am not familiar with that.

Mr. Grant: I would like to refer to a letter that I received from a naval officer who just recently returned from Guam...He says that officers attached to the military units have been discharged from the Government and upon discharge are receiving exclusive franchises from the United States command there for the operation of public utilities on the island, as for example, a Major Baker, of the Marine Corps, who was in charge of the shipping facilities and transportation system on the island, was given exclusive command of those facilities, and also had the island bus system under his control, and another such instance occurred in connection with the island ice system. I dare say there are other illustrations that could be made. I think they constitute a very serious reflection on the Navy.

The negligence inherent in the policy of the naval government was still apparent in 1951, and was succinctly pointed out in one account:

“Guam’s value to the United States was entirely strategic, a communications point on the way to the Philippines and east Asia. From this point of view, it would probably have been desirable if there had been no native population to complicate matters.”

In September 1972, the question again was raised about whether the US should pay for the Chamorro land occupied by the military after the war. B. J. Bordallo, former chairman of the Guam House of Council, spoke as a private citizen from Guam. He summarized the events that took place, leading up to and during the time of the Japanese occupation:

“When the United States recaptured Guam in 1944, the military constructed temporary wooden frame

structures to house the local people in six locations. Those people whose homes were destroyed or whose lands were taken, moved into these settlements <<http://guampedia.com/?p=1272>> with the promise that when the war is over, they will be allowed to return to their lands. When the war ended, the people requested to move back to their lands, many of which were lying idle, but the military kept delaying them.

In 1948, the military finally acted. They decided to condemn and take the fee simple title to most of the lands. The few tracts that were retained were given back to the owners without compensation in most cases for the damage caused. Lands that were once fertile farmlands were returned as abandoned airfields, the rich soil replaced by concrete pads and asphalt runways. The lands condemned showed that the military totally disregarded the interest, feelings, and welfare of the people and grossly exaggerated the defense needs at the time...

The compensation for these takings in 1948 was based on prewar values existing in 1941, without any adjustment for the inflated 1948 dollars used to pay the people. Are 1941 values a proper measure for 1948 takings? I submit that they are not.

Over and above the fact that property values increased between 1941 and 1948, another factor unique to Guam is that we had an artificially depressed land market resulting from the military's deliberate policy of isolating Guam from the rest of the world. Since Guam was ceded to the United States by Spain in 1898, the US Navy administered the internal affairs of the island...

Under such a closed-door policy, the island never had a chance to develop economically. Even our smaller neighboring islands, mandated to Japan after World War I, were enjoying a more viable and prosperous economy. Because our economy stagnated, values were depressed. Since this artificial depression was caused by the Navy's deliberate closed-door policy, is it fair that just compensation be measured by 1941 Guam values?

Fair market value is the proper measure of just compensation. Before market value can be fair, there must be a free, open and viable market. I submit that Guam did not have such a market...

The island was strictly and absolutely under the control of the Navy. Our judges were appointed by the Navy and served at the pleasure of the Navy. We did not have a jury system. We did not have sufficient attorneys. Our political status <<http://guampedia.com/?p=830>> was unknown and our rights were therefore undefined. We were not citizens of the United States nor were we aliens. We were told we were US nationals and wards of the United States, but exactly what rights we did have were never defined.

My family's property was condemned. I was offered what they said the land was worth. They never informed me that I could accept the money and still protest the value fixed by them. I was told that if I accepted the value placed, then my war claims which was an entirely different matter and overly delayed would be paid promptly. I was told by a local judge that right before he was to award \$5,000 to my aunt for 25 acres of land, the case was taken away from him and given to a man brought in from the mainland by the Navy to act as the land judge. The land judge awarded \$850. That land was bought in 1928 for \$750. The check remained uncashed and was recently returned by the court to the United States. On one parcel we owned, the Navy gave us \$200. We paid \$650 before the war for that parcel. And we can prove it at any time.

What would I have done? To whom could I turn for help? The United States was my guardian. And if I rejected the offer, wouldn't it mean I was being ungrateful for our liberation from the enemy?

The best description I can give of my feeling as well as many of the people of Guam is that we were grateful for being liberated from the enemy and yet bothered by the arbitrary and highhanded actions of the Navy and the fact that we had no recourse. In such a confused state of mind, I accepted the Navy's offer...

I have always held the deep conviction that sooner or later this matter will be raised and that the United States will undo the wrongs committed in their name."

The intentional separation of Chamorros from their land base is an unjust policy at best. At worst, this

process has had a genocidal effect on a distinct, dynamic cultural group of indigenous Pacific Islanders, the Chamorro people of Guam. For more than 400 years, the Chamorros have been a people oppressed <<http://guampedia.com/?p=828>> by policies meant to convert, acculturate, assimilate, conquer or otherwise stamp them out, promulgated by imperialist nations such as Spain, Japan and America.

Today, after approximately 4,000 years of life on Guam, and more than 400 years since being "discovered <<http://guampedia.com/ferdinand-magellan/>> " by Europeans, Chamorros on Guam are outnumbered. Forecasters say Chamorros will continue to comprise a smaller percentage of the population as the years go by. By 2020, according to one estimate, Chamorros will make up 36 percent of a population of 263,925. Filipinos will comprise the majority, making up 40 percent. Chamorros will own just more than one-third of the homes and occupy one-fourth of all rental units. And in these Chamorro homes, there will be 25 percent more people than in the non-Chamorro homes. This means that we likely will see more cases of several generations of a family, or several families, living together."

3)

The land was taken when we were not U.S. citizens and we have suffered the one-sided process. Only recently "the Obama Administration filed a brief <http://www.equalrightsnow.org/appellee_brief> before the DC Circuit arguing that Americans born in U.S. territories have no constitutional right to citizenship.

Relying on a series of controversial Supreme Court decisions known as the Insular Cases that have been compared to Plessy v. Ferguson, the Obama Administration defended a federal statute that expressly creates two classes of Americans: those who enjoy the protections of U.S. citizenship and those who do not."

(<http://www.equalrightsnow.org/obama_administration, Obama Administration: Citizenship a Privilege, Not a Right, in U.S. Territories, Posted by We the People Project 137sc on August 12, 2014)

If our colonial situation is to continue, then maybe it is time for the U.S. to grant us freedom so that we may begin to charge proper rental for the lands and natural resources utilized. While there is some comfort being associated with the U.S., the recent announcement and activities of the current administration has degraded future potential.

I reiterate what our Governor stated in a previous speech that the military buildup must be "within the existing footprint." The creation of the Firing Range at Ritidian point will not only increase the military footprint, but it will encroach and cause safety concerns to the surrounding residents and to the many local fishermen who fish to the north to put food on their table and to feed our island.

The United States became a free nation when it did not want to be under the mandate of a nation that was far-removed and subject to taxation without representation. Today, the people of Guam are under that same yoke with the taking of our land and ocean resources, the under funded and unfunded mandates imposed upon us.

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