



DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND MARIANAS
PSC 455, BOX 195
FPO AP 96540-2937



IN REPLY REFER TO:
5090
SER EV-17/728
Aug 01, 2017

Mr. Carl V. Dominguez
Acting Director
Guam Bureau of Statistics and Plans
P.O. Box 2950
Hagåtña, Guam 96923

Dear Mr. Dominguez:

SUBJECT: FEDERAL AGENCY COASTAL DETERMINATIONS FOR FISCAL
YEAR 2018 DEVELOPMENTS PROPOSED FOR THE MARINE CORPS
RELOCATION ON GUAM

The Department of the Navy requests the Bureau of Statistics and Plan's (BSP) review of our phased coastal determination for Fiscal Year (FY) 2018 projects as part of the 2015 Record of Decision (ROD) for the Guam Military Relocation. This phased determination includes the J-001B Utilities & Site Improvements Phase 1, the P-715 Live-Fire Training Range Complex and P-735 Machine Gun Range, and the H-279 Replace Andersen Housing Phase 1. BSP's conditional concurrence with the Navy's Programmatic Consistency Determination was formalized on 27 August 2014, which included BSP's renewed support of the phased determination process.

The Navy has assessed any reasonably foreseeable direct and indirect effects on Guam's defined coastal zone, and reviewed relevant management programs (enforceable policies) of the Guam Coastal Management Program (GCMP) in accordance with the Coastal Zone Management Act (CZMA). Based on the analyses, the subject projects would collectively have spillover (indirect and cumulative) impacts to the Guam coastal zone. There would be no direct impact to the coastal zone, as reasonably foreseeable effects are confined to land under federal jurisdiction.

Based on its assessment, the Navy finds that development under J-001B, P-715, P-735 and H-279 of the Marine Corps relocation to Guam would comply with and would be conducted (or supported) in a manner consistent with the policies of the GCMP to the maximum extent practicable. The Navy will incorporate programmatic requirements as set forth by the BSP as part of the conditional concurrence granted for the Marine Corps Relocation program on Guam. Please see enclosures for project descriptions, vicinity maps, coastal effects determinations and other supporting information. Ground disturbance associated with construction for J-001B, P-715, P-735 and H-279 is not anticipated to begin until FY2018.

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I appreciate your ongoing support. If you have any questions relating to this submission, please contact Mr. Dana Lujan, NAVFAC Marianas Conservation Manager (EV2), by telephone at (671) 333-1185 or by email at dana.lujan@fe.navy.mil.

Sincerely,



John F. Salas, P.E.
By Direction

Enclosures:

1. Effects Test and Consistency Determination for J-001B Utilities & Site Improvements Phase 1, U.S. Marine Corps Main Cantonment, Finegayan
2. Effects Test and Consistency Determination for P-715 Live-Fire Training Range Complex and P-735 Machine Gun Range, Northwest Field
3. Effects Test and Consistency Determination for H-279 Replace Andersen Housing Phase 1, Andersen Air Force Base

Copy to: NAVFAC Pacific (Ms. Karen Sumida)



EFFECTS TEST AND DETERMINATION UNDER COASTAL ZONE MANAGEMENT ACT

Project: J-001B Utilities & Site Improvements Phase 1, U.S. Marine Corps Main Cantonment	Date: 25 July 2017
Project Location: Naval Base Guam Telecommunication Site, Finegayan	Prepared By: MCAG PWD PRF5.1.2
PROJECT DESCRIPTION:	
The J-001B project shall design and provide site improvements, roads, and utility infrastructure (water, wastewater, electrical, drainage, and information technology/communications) necessary to allow construction of the U.S. Marine Corps Main Cantonment for operational, maintenance, administrative, and support facilities to conduct its mission requirements for operating out of Finegayan, Guam. This project is required for the permanent relocation of USMC forces from Okinawa to Guam in accordance with the 2009 Guam International Agreement between the United States Government and the Government of Japan (reaffirmed in the April 2012 U.S. - Japan Joint Statement). The Finegayan Main Cantonment will be the basing location for Marine Corps Base Guam. Site preparation includes clearing and grubbing involving removal of vegetation, detection and removal of Munitions of Explosive Concern/Unexploded Ordnance (MEC/UXO), stripping limestone rock, and removal and stockpiling of reusable topsoil followed by mass grading and limited fine grading. Roadways layout shall be per the "Guam Main Cantonment Conceptual Development Plan (CDP) Update" (Naval Facilities Engineering Command Pacific, 25 February 2014). Sidewalks are provided for increased walkability. Perimeter fences and temporary construction fences are provided for security. The new water distribution system shall consist of a water storage tank, water treatment building, modifications to existing wells, well water treatment building, and a distribution system including distribution pipes, valves and hydrants. Short term water supply will be from the existing on-site Finegayan well water system. Long term water supply will be from the future off-site well water system located at Andersen Air Force Base (AAFB). The water system design shall accommodate the future building construction. Stub-outs will be provided to extend the piping to future vertical construction areas outside the project boundary to prevent trenching of newly constructed roads. The new wastewater collection system shall consist of gravity and force main sanitary sewer lines with manholes installed within the new roadway system, three wastewater pump stations, and a metering manhole. Each wastewater pump station will have an emergency generator and building. The system includes connection to the existing Guam Waterworks Authority (GWA) inceptor sewer main located within Route 3. The wastewater collection system design shall accommodate future building construction. Stub-outs will be provided to extend the piping to future vertical construction areas outside the project boundary to prevent trenching of newly constructed roads. The new electrical distribution system shall consist of a new electrical substation and a primary electrical distribution system consisting of two looped circuits installed to extend power to future facilities. Stub-outs will be provided to extend the underground distribution feeders to future vertical construction areas outside the project boundary to prevent trenching of newly constructed roads. A critical facilities distribution system will be provided for the future microgrid. A Supervisory Control and Data Acquisition (SCADA) System will use instrumentation at the electrical substation to enable monitoring and controlling of power transmission and distribution systems. Separate SCADA systems will be provided for the water treatment building, well water treatment building, sewer pump stations and existing water wells. A new telecommunication conduit system shall be provided including both Department of Defense (DoD) and commercial systems for future facilities. The conduit system will also extend north of the project site to an existing manhole and south of the project site to an existing manhole. Fiber optic cabling and copper cabling will be provided to each new facility and existing wells for SCADA and Advanced Metering Infrastructure (AMI) metering. The cabling for future facilities will be installed in future projects in order to minimize splicing of the cables. Stub outs will extend from the closest manhole towards the various	

possible sites and across roadways for vertical construction for future service connections.

Perimeter ungulate fencing for a proposed 680-acre (275-hectare) forest enhancement area in North Finegayan shall also be constructed as part of the J-001B project. The total length of fence is approximately 8,335 meters (27,346 feet). Slight adjustments to the alignment of the fence may be required to minimize vegetation disturbance, and to avoid eligible historic properties and/or MEC/UXO anomalies during finalization of the location of footings.

The J-001B project location and preliminary site plan is depicted in **Figure 1-1**. The location of the proposed forest enhancement area in North Finegayan is presented in **Figure 1-2**.

PROJECT EFFECTS TEST:

Resources of Primary Coastal Concern (note that all could trigger reasonably foreseeable spillover impacts even if activities are confined to lands under federal jurisdiction):

Water Quality

Although the entire J-001B development occurs over the Northern Guam Lens Aquifer, it is not in proximity to and will not be of sufficient scale to influence any surface water conveyance or injection wells to affect coastal zone ground or surface water (marine) resources. It is unlikely that coastal zone drinking or marine habitat water quality would be affected by silt from erosion, hazardous material spills and other pollution sources that may be generated as a result of project activities. Through appropriate implementation of design and construction mitigations and/or best management practices (BMPs) committed to in the 2015 Record of Decision (ROD) for the Military Relocation, impacts to the aquifer would be minimized. Such measures include obtaining a Guam Environmental Protection Agency (EPA) Clearing and Grading Permit and coverage under the U.S. EPA Construction General Permit (CGP), which include implementing an Environmental Protection Plan as well as the CGP-required Stormwater Pollution Prevention Plan. Construction design specifications for all projects also reference the 2006 CNMI and Guam Stormwater Management Manual. A Wellhead Protection Report for J-001B was submitted to Guam EPA for this project since there are four Navy wells within the project site, plus an offsite Navy and offsite Guam Waterworks Authority water well that have their respective wellhead protection zones overlap the proposed site. This report lists specific BMPs to be implemented at the project site to ensure the continued protection of the aquifer serving these wells.

Terrestrial Habitat

The J-001B project will remove approximately 683 acres (276 hectares) of limestone forest which is habitat for federally listed threatened and/or endangered species. Work occurs within the designated Overlay Refuge. In accordance with the Endangered Species Act, the Navy has consulted with the U.S. Fish and Wildlife Service (USFWS), and this initially concluded with the issuance of the 2015 Final Biological Opinion (BO) for the Military Relocation by USFWS. The BO details conservation measures that would require minimization and offset of impacts to threatened or endangered species. As part of these conservation measures, the Navy will implement forest enhancement in Finegayan to offset the impacts of vegetation loss due to the Marine relocation to Guam. Forest enhancement shall include:

- Ungulate management consisting of exclusion fencing (of which fence construction is part of J-001B) and active control (i.e. trapping, snaring, shooting) with the goal of eradication within the fenced areas
- Non-native, invasive vegetation removal
- Propagation, planting, and establishment of native species that are characteristic of native limestone forest habitats (e.g., *A. mariannensis*, *G. mariannae*, *F. prolixa*, *M. citrifolia*, *W. elliptica*)

Other conservation measures from the 2015 BO that are applicable to J-001B include the following:

- All project contractors will receive natural resource awareness training and will implement risk reduction relative to spread of invasive species through measures applied to shipments and cargo (Hazard Analysis and Critical Control Point planning).
- Preconstruction fruit bat surveys shall be conducted prior to the onset of construction work intended to prevent, avoid, and minimize potential effects to fruit bats. If a fruit bat is present within 492 ft (150 m) of the project site, the work will be postponed until the bat has left the area.
- High-value plant species within the J-001B project footprint, such as cycads, would be salvaged to the maximum extent practicable during construction activities and translocated to suitable habitat. The

ability to salvage the plants would be dependent on the health of the plant and whether or not it would survive translocation. Plants deemed salvageable shall be transplanted into the proposed forest enhancement area at North Finegayan.

The Navy reinitiated formal consultation with USFWS in March 2017, and this consultation reviewed new information not previously considered, and anticipated effects to newly listed threatened/endangered species and their terrestrial habitat. The final 2017 BO was released by USFWS in July 2017, and this new BO amends, but does not replace, the 2015 BO. Additional conservation measures from the 2017 BO that are applicable to J-001B include the following:

- Provide educational materials regarding Mariana fruit bat appearance, behavior, and biology to all pertinent Navy personnel so that they can correctly identify any Mariana fruit bats near or within the proposed action.
- Conduct a biological survey, no less than annually, for the purpose of evaluating the use of sites where host plants with life stages of the Mariana eight spot butterfly (e.g., eggs, caterpillar, and chrysalis) were relocated onto an appropriate host plant (e.g., relocate pre-diapause larvae to *Procris pedunculata* or *Elatostema calcareum*) away from the project footprint.
- A Take Monitoring Plan for the Mariana fruit bat and the Mariana eight spot butterfly shall be prepared by the Navy in close coordination with and the approval of the Service within 60 days of the date of issuance of the 2017 BO.

All aforementioned conservation measures shall be carried out by the Navy and its contractors to comply with ESA, consistent to the maximum extent practicable with Guam's coastal policy related to fragile areas.

Cultural Resources

In accordance with the 2011 Programmatic Agreement (PA) for the Military Relocation, consultation for J-001B with the Guam State Historic Preservation Office (SHPO) for effects to historical/cultural resources has concluded, and the PA Memos for this project can be found on DoD's website:

<http://go.usa.gov/kZWG>. The Navy's proposed resolution of effect is consistent with mitigation requirements in the 2011 PA, and those applicable to J-001B include the following:

- Providing Navy escort support on an as-needed basis to facilitate visitation to historic sites within the J-001B footprint subject to the Joint Region Marianas (JRM) Public Access Plan for Historic and Cultural Sites. The Navy will coordinate with Guam SHPO and other PA Concurring Parties to contact traditional natural healers, herbal practitioners and healers, and traditional artisans and provide them an opportunity to safely collect these resources, if the plants collected are not threatened or endangered species and in accordance with the JRM access plan.
- Submittal of a mitigation plan to Guam SHPO; conducting data recovery on applicable archaeological sites within the J-001B area of potential effect, with the Navy submitting reports of archaeological data recovery projects to Guam SHPO for a 45-day review prior to being finalized.
- Preparation of a Public Education and Interpretation booklet in English and Chamorro that includes images, a summary of the information data recovered and a statement of the significance of the eight adversely affected sites to the regional culture; this booklet will be completed and posted on DoD's aforementioned cultural resources website, with up to 1,100 hardcopies of each provided to the Guam SHPO for distribution to the public.

PROJECT COASTAL CONSISTENCY DETERMINATION:

Based on prior programmatic review, the following Coastal Policies are potentially applicable to this project. The following are the project-specific assessments of applicability and consistency:

Development Policy (DP) 1 (Shore Area Development): Development does not affect the Seashore Reserve.

DP2 (Urban Development): Area not subject to designations of the Land Use Districting Map.

DP3 (Rural Development): Area not subject to designations of the Land Use Districting Map.

DP4 (Major Facility Siting): Not a major facility (e.g. utilities, fuel and transportation facilities) subject to policy.

DP5 (Hazardous Areas): Pursuant to Guam EPA Soil Erosion and Sediment Control Regulations Section 10106 F for the protection of sinkholes, and in accordance with Appendix G of the 2017 National Pollutant Discharge Elimination Permit (NPDES) General Permit for Discharges from Construction Activities, a 50-foot undisturbed natural buffer is required to be maintained around confirmed sinkholes, or supplement with or implement erosion and sediment controls to achieve the sediment load reduction equivalent to a 50-foot undisturbed natural buffer, and no earth-disturbing activities are allowed within this buffer unless a sinkhole waiver request is approved by Guam EPA. The J-001B project will construct a perimeter road and fence line through an identified sinkhole near the proposed main gate. In order to ensure that there are no adverse impact to the existing surface and groundwater hydrology, and to support the waiver request with Guam EPA, the services of a geologist will be required of the contractor; if additional sinkholes are identified this may necessitate the relocation of planned roads or structures.

DP6 (Housing): No housing development proposed for the project.

DP7 (Transportation): No major transportation roadway networks proposed.

DP8 (Erosion and Siltation): J-001B construction activities will meet requirements of Guam EPA-issued clearing and grading permits, and will comply with the 2017 NPDES General Permit for Discharges from Construction Activities. Development shall comply with the Navy's Low Impact Development (LID) policy, which sets a goal of no net increase in stormwater and sediment or nutrient loading from major renovation and construction projects; this policy is in addition to the aforementioned stormwater management program permit requirements.

Resource Policy (RP) 1 (Air Quality): No emission sources (e.g. fuel-fired emergency generators, paint booths) are proposed as part of the J-001B project that will require a construction and operating permit under the Guam Air Pollution Control Standards and Regulations. BMPs to control pollutant emissions, including fugitive dust, would be documented in the Environmental Protection Plan submitted for approval to Guam EPA prior to implementation.

RP2 (Water Quality): Reasonably foreseeable direct and indirect impacts to coastal zone water quality are not anticipated for J-001B, although the Navy will still comply with protective regulations mentioned under DP8 for the protection of aquifer water quality. Underground injection wells and conveyances to surface water are not proposed, hence a much-reduced risk for spills to have far-ranging impacts that could result in effects to coastal zone resources. The 2006 CNMI Guam Stormwater Manual and the Navy's LID policy have been referenced for the design of stormwater management BMPs, and the J-001B Wellhead Protection Report lists specific BMPs to be implemented at the project site to ensure the continued protection of the Northern Guam Lens Aquifer. Green waste processing and composting facilities will be sited outside wellhead protection areas and will implement controls and BMPs in accordance with the Guam EPA-issued Solid Waste Processing permit.

RP3 (Fragile Areas): Impacts of J-001B to wildlife habitat and limestone forest will be mitigated through implementation of conservation measures identified in the 2015 and 2017 Final BO. These BOs detail conservation measures that would require minimization and offset of impacts to threatened or endangered species. Impacts of J-001B to eligible historic properties are avoided and mitigated through compliance with 2011 PA and the plan for resolving adverse effect as described in the PA Memos for the project.

The J-001B contractor is required to mark pre-identified environmentally-sensitive sites (i.e. areas where threatened/endangered species, high-value trees, and/or eligible historic properties present) with high visibility vinyl fencing, and not disturb the sites until authorized by the Navy and mitigation actions are complete (e.g. archaeological data recovery, high-value plant salvage and translocation). Environmentally-sensitive sites within the J-001B project shall have a 33-foot (10-meter) buffer with a 5-foot (1.5-meter) clearance (i.e., a total setback of around 38 feet or 11.5 meters) in which strictly no activity shall occur until authorized. The J-001B contractor shall coordinate with the Navy regarding the scheduling of all subsurface and horizontal groundwork (grubbing, grading, trenching, etc.) around or

through these sites.

RP4 (Living Marine Resources): There are no anticipated direct impacts to marine resources as a result of construction activities associated with J-001B, although there would be reasonably foreseeable spillover effects to fish and coral from the likely general increase of activities such as recreational fishing, snorkeling and diving activities in waters within GovGuam jurisdiction from the new population associated with the Marine Corps relocation. To increase the awareness of military, civilian and contractor personnel associated with the Marine Corps relocation, the Navy would require education and awareness training that would emphasize the importance of coastal ecosystems, compliance with posted rules, and the proper way to interact with marine resources so as to avoid and minimize damage to reefs caused by recklessness in anchor use, reefwalking, scuba diving, snorkeling or fishing activities. Violation of Department of Agriculture regulations within GovGuam jurisdiction would be subject to penalties and/or sanction. In recreational areas within federal lands, the Navy imposes its own fishing instructions that are consistent with GovGuam regulations and does not authorize the taking of any other marine resources besides fish in authorized areas. The Navy would manage access to the Haputo Beach and Ecological Reserve Area by placing fencing at the trail entrance and could restrict such access if evidence of environmental damage is observed by Navy biologists as part of the monitoring requirements in the Joint Region Marianas Integrated Natural Resources Management Plan.

RP5 (Visual Quality): Project will not degrade views from scenic overlooks, highways or trails. The resulting view shed will be consistent with adjacent facilities once vertical construction of the Marine Corps base is completed.

RP6 (Recreation Areas): Project does not propose to develop recreational facilities.

RP7 (Public Access): In accordance with the 2011 PA, the Navy would generally meet the public access policy's intent on federal lands to the maximum extent practicable, as it would allow regular visits to or through federal lands to visit historic sites, culturally-important natural resources and traditional cultural places, subject to the JRM Public Access Plan for Historic and Cultural Sites.

The implementation of forest enhancement in North Finegayan will restrict AAFB's recreational public hunting program on the Route 3A parcel (within DoD jurisdiction). AAFB has had this program since 1964, and the program is managed by the 36th Civil Engineering Squadron, Environmental Flight, with support from 50+ Volunteer Conservation Officers (VCOs), to manage feral game animals at levels that will prevent irreversible damage to native forests that serve as essential habitat for a number of endangered and rare species. Although the VCO group have opposed the establishment of this forest enhancement area if there are no alternatives to replace the loss of hunting opportunity, per the Sikes Act, hunting on DoD installations is a privilege that must be consistent with the DoD mission, which includes implementation of non-discretionary conservation measures such as forest enhancement from the 2015 BO.

RP8 (Agricultural Lands): No agricultural lands or activity in this area.

Coastal Determination: Consistent to the Maximum Extent Practicable

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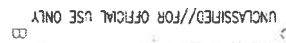
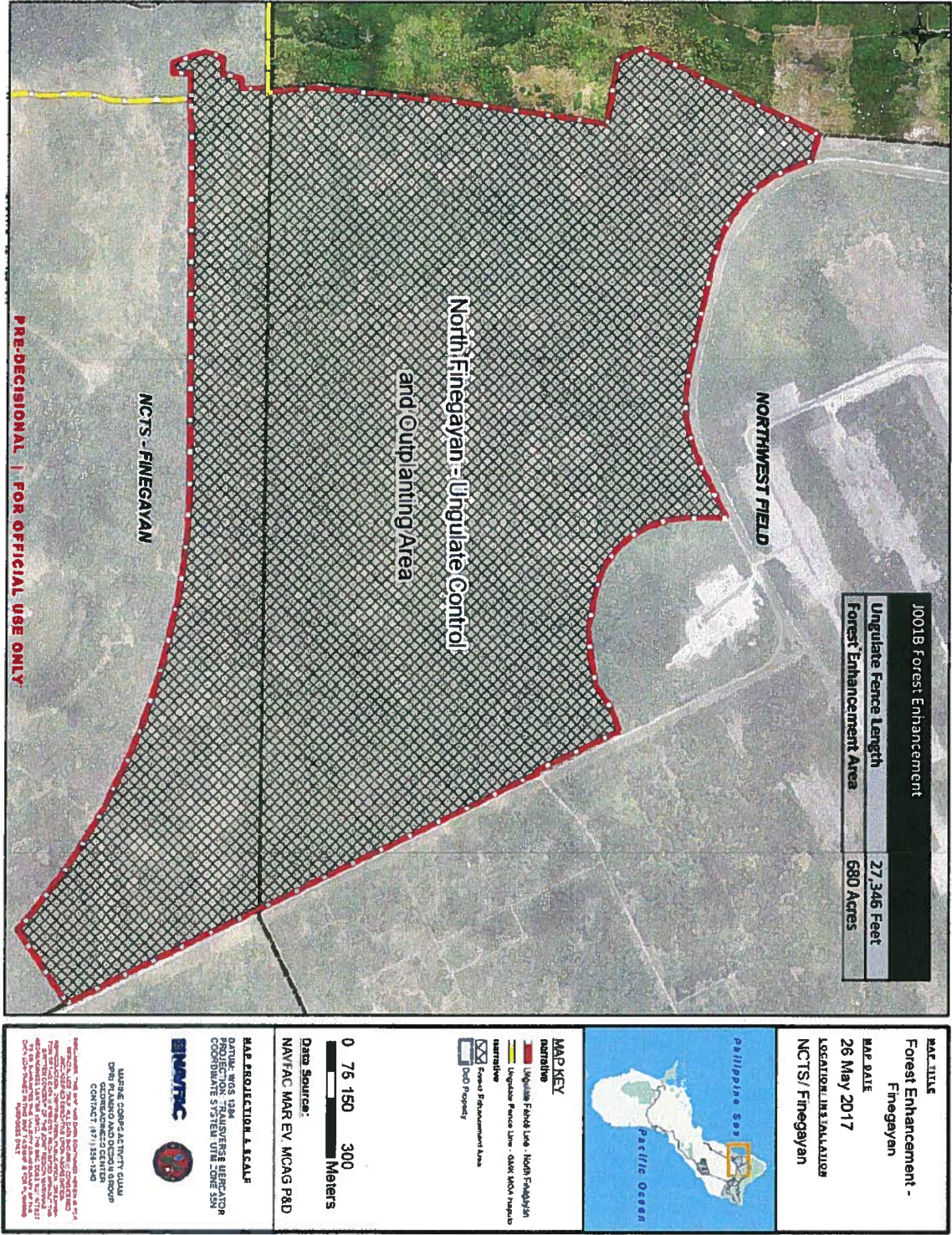


Figure 1-2 Proposed Forest Enhancement Area, North Finegayan





EFFECTS TEST AND DETERMINATION UNDER COASTAL ZONE MANAGEMENT ACT

Project: P-715 Live-Fire Training Range Complex, and P-735 Machine Gun Range	Date: 25 July 2017
Project Location: Northwest Field	Prepared By: MCAG PWD PRF5.1.2
PROJECT DESCRIPTION:	
The P-715 project shall design and construct four small arms firing ranges as part of the Live Fire Training Range Complex (LFTRC) at Northwest Field, Andersen Air Force Base (AAFB). This project consists of a Known Distance Rifle Range (KDRR), a Known Distance Pistol Range (KDPR), a Modified Record Firing Range (MRFR), and a Non-Standard Small Arms Range (NSSAR). The KDRR footprint would encompass approximately 18.5 acres (7.5 hectares), the KDPR approximately 0.4 acres (0.2 hectares), the MRFR approximately 7.9 acres (3.2 hectares), and the NSSAR approximately 1.5 acres (0.6 hectares). Supporting structures include, but are not limited to Range Maintenance Building, KD Rifle/Pistol Range Administration Building, Area Distribution Node (ADN) with Radio Frequency Communication Tower, and two (2) Surface Radar/Camera Sites west and east of the project site. Additional structures in support of the four small arms ranges include a KDRR Target Maintenance Storage Building (TSMB) and Butt House, KDRR Target Pit Control Room, KDRR Ammunition Distribution Point (ADP), KDPR Covered Firing Lanes and ADP, MRFR Control Tower and ADP, NSSAR ADP and Electrical and Communication Closet, covered bleachers with storage, and KDPR Ready Surface Locker. The Entry Control Point includes Gate House structure and supporting utility building. Site preparation under P-715 includes removal of Munitions Explosives of Concern/Unexploded Ordnance (MEC/UXO), site clearing and grading work. Site improvements include access roadways to the ranges, vehicles parking stalls on each ranges, driveway and sidewalks, protective and impact berms, bullet catchment systems, ungulate fencing, security gate and gate house, hydro-seeding, storm water drainage systems, and retention ponds, green waste facility, monitoring wells, and exterior signage. Route 3A rehabilitation and widening is included under P-715 and involves removal of existing asphalt pavement, scarifying and compaction of existing base material, stabilization of existing shoulders and new aggregate base and sub-base course. Removed existing asphalt pavement shall be re-used. Also included are widening travel lanes, shoulders, and installing appropriate roadside drainage. For P-715, electrical utilities systems consist of primary and secondary underground electrical distribution, exterior lighting, and pad mounted transformers. Also included under P-715 are construction of a communication distribution system and telecommunication station, Radio Frequency (RF) Communication Tower and Area Distribution Node (ADN) building. Information systems for P-715 include basic telephone, computer network, fiber optic and security and fire alarm infrastructure. Mechanical utilities for P-715 consist of domestic and fire protection water distribution and sanitary sewer system, including a septic tank and effluent disposal basin. An ungulate exclusion fence to exclude feral ungulates from the LFTRC shall also be constructed as part of the P-715 project. The total length of fence is approximately 3.69 kilometers (2.3 miles) in length and would tie-in to topographic barriers (i.e. cliffs) on each end. Existing forest ungulate fencing at Ritidian will also be removed during construction for P-715. The P-735 project shall design and construct an Automated Multi-Purpose Machine Gun (MPMG) Range as part of the LFTRC, and will consist of a multi-lane machine gun range with multiple target emplacements in each lane. Targets will be a mix of the following: single Stationary Infantry Targets (SIT) emplacements, double SIT emplacements, Moving Infantry Target (MIT) emplacements, and Stationary Armored Target (SAT) emplacements. Additional structures include a Range Control Tower, an enclosed/covered Bleacher area, and trash enclosure. Supporting facilities include a gravel maintenance road, two (2) monitoring wells (including gravel access road to each), mechanical utilities, electrical utilities, and telecommunication utilities. No sanitary sewer infrastructure is anticipated for this project.	

Clearing, grubbing, and earthwork (cut and fill) for P-735 encompasses an area roughly 101 acres (41 hectares). Vegetation clearing of the main footprint of the MPMG range shall be accomplished separate from and in advance of the P-735 project, and will be funded as part of the ongoing J-200 North Ramp Utilities and Site Improvements project.

The P-715 project location and the preliminary site plan are depicted in **Figures 2-1 and 2-2**, respectively, and the P-735 project location and preliminary site plan are depicted in **Figure 2-3**.

PROJECT EFFECTS TEST:

Resources of Primary Coastal Concern (note that all could trigger reasonably foreseeable spillover impacts even if activities are confined to lands under federal jurisdiction):

Water Quality

Although the entire LFTRC development occurs over the Northern Guam Lens Aquifer, it is not in proximity to and will not be of sufficient scale to influence any surface water conveyance or injection wells to affect coastal zone ground or surface water (marine) resources. It is unlikely that coastal zone drinking or marine habitat water quality would be affected by silt from erosion, hazardous material spills and other pollution sources that may be generated as a result of project activities. Through appropriate implementation of design and construction mitigations and/or best management practices (BMPs) committed to in the 2015 Record of Decision for the Military Relocation, impacts to the aquifer would be minimized. Such measures include obtaining a Guam Environmental Protection Agency (EPA) Clearing and Grading Permit and coverage under the U.S. EPA Construction General Permit (CGP), which include implementing an Environmental Protection Plan as well as the CGP-required Stormwater Pollution Prevention Plan. Construction design specifications for all projects also reference the 2006 CNMI and Guam Stormwater Management Manual.

The P-715 wastewater system shall include a septic tank, an effluent disposal basin and two monitoring wells. The development and construction of these features shall be in accordance with the Guam EPA *Individual Wastewater Disposal System* and the *Water Resources Development and Operating* regulations, and shall be coordinated with Guam EPA for their approval and permitting.

Because the aquifer is used as a source of drinking water, prior to the operation of the LFTRC, both a site inspection and a site assessment, as well as actual munitions loading data, would be provided to the Marine Corps' Range Environmental Vulnerability Assessment (REVA) and Operational Range Clearance (ORC) programs. Under the REVA Program, site specific data would be used to evaluate the potential for munitions constituents (MCs) to reach potential receptors. This would allow the REVA program to determine whether follow-on actions would be required (e.g., sampling, additional studies) and the frequency of any further evaluations. The REVA assessment would use conservative assumptions and available site specific information to determine if modeling can be performed for lead and/or explosive components. Monitoring of the ranges for MCs migrating off-range would be based on the outcome of the REVA assessment. REVA assessments would begin in the first year of operation and would then be conducted at a minimum every 5 years. The ORC program would not only consider the site-specific and REVA data but also safety and sustainability considerations in its assessment to determine the required frequency of range clearance.

Terrestrial Habitat

Construction of the entire LFTRC will remove approximately 79 acres (32 hectares) of limestone forest which is habitat for federally listed threatened and/or endangered species. Work occurs within the designated Overlay Refuge. In accordance with the Endangered Species Act, the Navy has consulted with the U.S. Fish and Wildlife Service (USFWS), and this initially concluded with the issuance of the 2015 Final Biological Opinion (BO) for the Military Relocation by USFWS. The BO details conservation measures that would require minimization and offset of impacts to threatened or endangered species. Included in these conservation measures and as part of the P-715 project, the Navy shall construct ungulate control fence at Northwest Field, to compensate for the eventual removal of existing ungulate fencing at Ritidian due to construction of the LFTRC. Other conservation measures from the 2015 BO include the following:

- All project contractors will receive natural resource awareness training and will implement risk reduction

relative to spread of invasive species through measures applied to shipments and cargo (Hazard Analysis and Critical Control Point planning).

- Preconstruction fruit bat surveys shall be conducted prior to the onset of construction work intended to prevent, avoid, and minimize potential effects to fruit bats. If a fruit bat is present within 492 ft (150 m) of the project site, the work will be postponed until the bat has left the area.
- High-value plant species within the LFTRC footprint, such as cycads, would be salvaged to the maximum extent practicable during construction activities and translocated to suitable habitat. The ability to salvage the plants would be dependent on the health of the plant and whether or not it would survive translocation. Plants deemed salvageable shall be transplanted into the proposed forest enhancement area at North Finegayan.

The Navy reinitiated formal consultation with USFWS in March 2017, and this consultation reviewed new information not previously considered, and anticipated effects to newly listed threatened/endangered species and their terrestrial habitat. The final 2017 BO was released by USFWS in July 2017, and this new BO amends, but does not replace, the 2015 BO. Additional conservation measures from the 2017 BO that are applicable to the LFTRC include the following:

- Provide educational materials regarding Mariana fruit bat appearance, behavior, and biology to all pertinent Navy personnel so that they can correctly identify any Mariana fruit bats near or within the proposed action. If a Mariana fruit bat is sighted down range, in the line of fire, during operation of the LFTRC, all use of the range shall cease until the Mariana fruit bat has left the area of its own accord.
- Implement systematic searches for Mariana fruit bat maternity colonies, on a semi-annual basis, in all areas of suitable habitat that could be affected by the proposed action, including all Mariana fruit bat habitat within the 65-decibel (dB) noise contour surrounding the LFTRC. Searches shall begin one year prior to the operation of the LFTRC and one year prior to the proposed overflight increases. Surveys shall proceed on a semi-annual bases for the first five years, then conducted annually for the length of the project. If a Mariana fruit bat maternity colony is found USFWS shall be notified within one week of the finding.
- Monitor all known Mariana fruit bat roost sites, in all areas that could be affected by the proposed action, including all Mariana fruit bat habitat within the 65 dB noise contour surrounding the LFTRC, during all years in which operation of the LFTRC is active.
- Conduct a noise study at the GNWR and at Ritidian Point upon operation of the MPMG range at the LFTRC. The noise study shall occur during the first year of operation of the LFTRC. Noise monitoring shall occur during day and night activities over multiple days (minimum of 10 days) at least once a quarter to address seasonal and climatic changes. Results of the after-action noise study, combined with Mariana fruit bat survey data, will continue to inform analyses of noise effects on Mariana fruit bats and assist in refinement of minimization measures, if needed.
- Conduct a biological survey, no less than annually, for the purpose of evaluating the use of sites where host plants with life stages of the Mariana eight spot butterfly (e.g., eggs, caterpillar, and chrysalis) were relocated onto an appropriate host plant (e.g., relocate pre-diapause larvae to *Procris pedunculata* or *Elatostema calcareum*) away from the project footprint.
- The Navy shall complete the Northwest Field Ungulate Control Fence within two years of awarding P-715 (i.e. the portion of LFTRC that removes the existing Ritidian Ungulate Fence), and the Navy shall remove all ungulates from the Ungulate Control Area within six months after completing this fence.
- A Take Monitoring Plan for the Mariana fruit bat and the Mariana eight spot butterfly shall be prepared by the Navy in close coordination with and the approval of the Service within 60 days of the date of issuance of the 2017 BO.

All aforementioned conservation measures shall be carried out by the Navy and its contractors to comply with ESA, consistent to the maximum extent practicable with Guam's coastal policy related to fragile areas.

Cultural Resources

In accordance with the 2011 Programmatic Agreement (PA) for the Military Relocation, the Navy prepared a Guam Training Ranges Review and Analysis (TRRA) document, consulted with the parties to the 2011 PA and the public regarding potential adverse effects to historic properties associated with the proposed construction and operation of the LFTRC on Guam, and incorporated applicable feedback into a final TRRA, which was completed in July 2015 and can be found on DoD's website: <http://go.usa.gov/kZWG>. Following completion of this TRRA and the signing of the Record of Decision (which decided upon the

location of the LFTRC at Northwest Field), a Range Mitigation Plan (RMP) was developed that stipulates measures to avoid, minimize, and mitigate adverse effects to historic properties and impacts to culturally important natural resources, and applies to all construction and operations associated with the LFTRC, Surface Danger Zones (SDZs) that overlay federal and submerged land at Ritidian Point, and the proposed Hand Grenade range at Anderson South. The Guam State Historic Preservation Office provided concurrence with the RMP on September 2015. Mitigation measures from this RMP shall be implemented as part of P-715 and P-735 and are consistent with the 2011 PA, and those applicable to P-715 and P-735 include the following:

- The Navy will provide escort support on an as-needed basis to facilitate visitation to historic sites within the P-715 and P-735 footprint subject to the Joint Region Marianas (JRM) Public Access Plan for Historic and Cultural Sites. The Navy will coordinate with Guam SHPO and other PA Concurring Parties to contact traditional natural healers, herbal practitioners and healers, and traditional artisans and provide them an opportunity to safely collect these resources, if the plants collected are not threatened or endangered species and in accordance with the JRM access plan.
- Data recovery of directly affected archaeological resources will be conducted sufficient to characterize the nature and probable age of the deposits, document stratigraphy; and recover appropriate samples for answering research questions presented in a research design that is consulted on with Guam SHPO.
- Prior to vegetation clearing activities associated with construction of the LFTRC, the Navy will coordinate with the PA parties to contact cultural practitioners and provide them an opportunity to safely collect culturally important natural resources, consistent with applicable Navy and installation security instructions, other safety related guidelines, and in compliance with the 2015 BO.
- The Navy will coordinate with USFWS to facilitate and accommodate public access, as well as academic research and education when the LFTRC is not in operation.
- Approximately 300 linear feet of dense vegetation will be retained at the closest location between the firing range and the sensitive historic properties in the SDZs, as mitigation for auditory impacts associated with weapons firing.
- For the first two years of LFTRC operations, the Navy will conduct annual inspections of the condition of representative historic properties located in the LFTRC.

PROJECT COASTAL CONSISTENCY DETERMINATION:

Based on prior programmatic review, the following Coastal Policies are potentially applicable to this project. The following are the project-specific assessments of applicability and consistency:

Development Policy (DP) 1 (Shore Area Development): Development does not affect the Seashore Reserve.

DP2 (Urban Development): Area not subject to designations of the Land Use Districting Map.

DP3 (Rural Development): Area not subject to designations of the Land Use Districting Map.

DP4 (Major Facility Siting): Not a major facility (e.g. utilities, fuel and transportation facilities) subject to policy. Development occurs adjacent to an existing military airfield area (AAFB Northwest Field).

DP5 (Hazardous Areas): The project does not develop within flood plains or upon major fault lines. The entire proposed LFTRC site at Northwest Field was evaluated for sinkholes, and while there are numerous closed contour depressions on the project site, the only confirmed sinkhole in the area is outside of the LFTRC limit of disturbance.

The proposed LFTRC would create a Surface Danger Zone (SDZ) when the range is active that would require periodic restriction of public access to the area (both land and sea access) as a precaution and would also require a Special Use Airspace designation by FAA to advise air traffic on modified flight rules/procedures for safe air navigation. Notice to Mariners will be provided by the US Coast Guard ahead of training events to advise vessels of range usage and areas affected by the Surface Danger Zone. The LFTRC includes two range observation towers that would be erected to provide surveillance of the nearshore SDZ. The live-fire training would cease if watercraft inadvertently enters the SDZ and would resume once the watercraft has left the SDZ.

The LFTRC small arms training would generate impulse noise above 55 dB A-weighted day-night average levels (ADNL) off-base within a relatively small area of the northern tip of the Urunao private lands and approximately half of the area of the Jinapsan parcel comes close to but does not exceed the compatibility planning threshold of noise greater than 75 db ADNL. It would be reasonably foreseeable for landowners and their families to visit and intermittently reside in these areas and are considered receptors. With the sound energy reduced by deflection at the cliff edge and acoustic interference by vegetation providing additional attenuation of up to 5-15 dB sound reduction, the Navy anticipates that the sound in affected private lands would be reduced to levels that would not normally be incompatible in residential areas (the private lands affected are Hotel-zoned under the Government of Guam's land use plans).

There is a limited likelihood that significant effects could occur during LFTRC operations that the Navy's noise models could not account for due to model limitations. In cases of unforeseen issues, the Joint Region Marianas Community Plans and Liaisons Officer would be available to engage with landowners and/or their government representatives to identify mutually-agreeable solutions to noise issues.

The SDZ and the small-arms ADNL noise zones for the LFTRC are depicted in **Figures 2-4 and 2-5**, respectively.

DP6 (Housing): No housing development is proposed for the LFTRC.

DP7 (Transportation): No major transportation roadway networks proposed. Improvements to an existing publicly-accessible roadway (Route 3A) are included in the P-715 project.

DP8 (Erosion and Siltation): All construction activities will meet requirements of Guam EPA-issued clearing and grading permits, and will comply with the 2017 NPDES General Permit for Discharges from Construction Activities. LFTRC development shall comply with the Navy's Low Impact Development (LID) policy, which sets a goal of no net increase in stormwater and sediment or nutrient loading from major renovation and construction projects; this policy is in addition to the aforementioned stormwater management program permit requirements.

Resource Policy (RP) 1 (Air Quality): No emission sources (e.g. fuel-fired emergency generators, paint booths) are proposed as part of the P-715 or P-735 projects that will require a construction and operating permit under the Guam Air Pollution Control Standards and Regulations. BMPs to control pollutant emissions, including fugitive dust, would be documented in the Environmental Protection Plan submitted for approval to Guam EPA prior to implementation.

RP2 (Water Quality): Reasonably foreseeable direct and indirect impacts to coastal zone water quality are not anticipated for the LFTRC, although the Navy will still comply with protective regulations mentioned under DP8 for the protection of aquifer water quality. Underground injection wells and conveyances to surface water are not proposed, hence a much-reduced risk for spills to have far-ranging impacts that could result in effects to coastal zone resources. The 2006 CNMI Guam Stormwater Manual and the Navy's LID policy have been referenced for the design of stormwater management BMPs. Green waste processing and composting facilities will be sited outside wellhead protection areas and will implement controls and BMPs in accordance with the Guam EPA-issued Solid Waste Processing permit.

RP3 (Fragile Areas): Impacts of the LFTRC to wildlife habitat and limestone forest will be mitigated through implementation of conservation measures identified in the 2015 and 2017 Final BO. These BOs detail conservation measures that would require minimization and offset of impacts to threatened or endangered species. Impacts of the LFTRC to eligible historic properties are avoided and mitigated through compliance with 2011 PA and the actions described in the Range Mitigation Plan.

P-715 and P-735 contractors shall be required to mark pre-identified environmentally-sensitive sites (i.e. areas where threatened/endangered species, high-value trees, and/or eligible historic properties present) with high visibility vinyl fencing, and not disturb the sites until authorized by the Navy and mitigation actions are complete (e.g. archaeological data recovery, high-value plant salvage and translocation). Environmentally-sensitive sites within the LFTRC footprint shall have a 33-foot (10-meter) buffer with a 5-

foot (1.5-meter) clearance (i.e., a total setback of around 38 feet or 11.5 meters) in which strictly no activity shall occur until authorized. Contractors shall coordinate scheduling of all subsurface and horizontal groundwork (grubbing, grading, trenching, etc.) around or through these sites with the Navy.

RP4 (Living Marine Resources): There are no anticipated direct impacts to marine resources as a result of construction of the LFTRC.

During operation of the LFTRC, no explosive projectiles are proposed for use and all projectiles are expected to be contained within the range footprint by bullet traps or backstops, with the exception of ricochets, which would be contained within the SDZs, according to statistical analysis provided in the 2010 Final Environmental Impact Statement (EIS) for the Military Relocation. In addition, spent munitions containment strategies would be implemented, and munitions and residue from range construction or use would remain on ranges to be treated and managed. Such munitions and residue would be treated and managed according to applicable Department of Defense Directives and Unified Facilities Criteria requirements.

The nominal quantity of bullets that would overshoot the bermed areas to enter the marine environment and the implementation of BMPs described above would result in less than significant direct impacts to fish, essential fish habitat, or special-status species such as sea turtles, as a result of LFTRC operational activities.

The 2010 Final EIS for the Military Relocation also described an analysis conducted using a combination of Marine Corps and Army methodology to determine the probability of direct strikes to a marine mammal, which found a very low likelihood that a projectile would come in contact with a dolphin (0.08524 dolphins per year), with an even lower possibility of imparting significant injury to the animal. Should munitions land in the water, the rapid sinking rate of such munitions is expected to preclude ingestion by marine organisms.

RP5 (Visual Quality): Project will not degrade views from scenic overlooks, highways or trails. The LFTRC will be obscured from view due to its elevation relative to publicly-accessible roads/trails and retention of surrounding vegetation.

RP6 (Recreation Areas): No recreational facilities are proposed as part of the LFTRC.

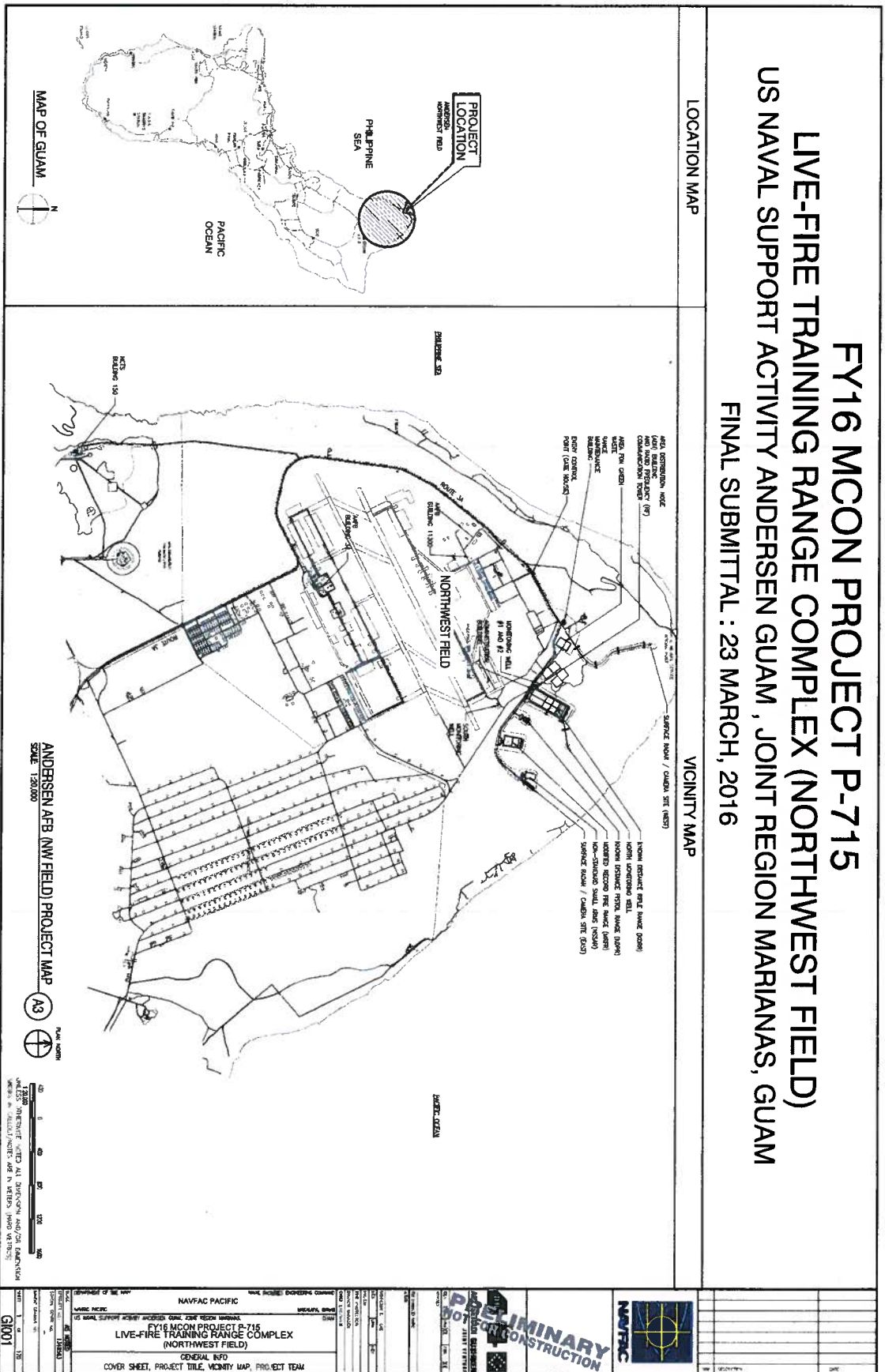
RP7 (Public Access): When ranges are in use, SDZs associated with the ranges in the LFTRC will overlay terrestrial areas of the Guam National Wildlife Refuge Ritidian Unit (lands within federal jurisdiction) where access is currently restricted by USFWS. In compliance with the Range Mitigation Plan, the Navy will coordinate with the USFWS to facilitate access for academic research and educational visits within the Ritidian Unit when the ranges are not in operation. Marine traffic access over a portion of submerged land areas would also be restricted by the SDZs associated with the ranges in the LFTRC when the ranges are in use. The restricted submerged land areas would be noted on navigation charts. The public would be allowed to access the submerged lands north of Northwest Field when the LFTRC is not in use; however, the area would be restricted when the ranges are in use. Such restrictions would be limited to the minimum SDZ area and period of use required for the LFTRC.

The Navy would generally meet the public access policy's intent on federal lands to the maximum extent practicable as it would implement the JRM Public Access Plan and Range Mitigation Plan to allow regular visits to or through federal lands to visit historic sites, culturally-important natural resources and traditional cultural places, subject to installation safety and security requirements.

RP8 (Agricultural Lands): No agricultural lands or activity in this area.

Coastal Determination: Consistent to the Maximum Extent Practicable

Figure 2-1 P-715 Project Location



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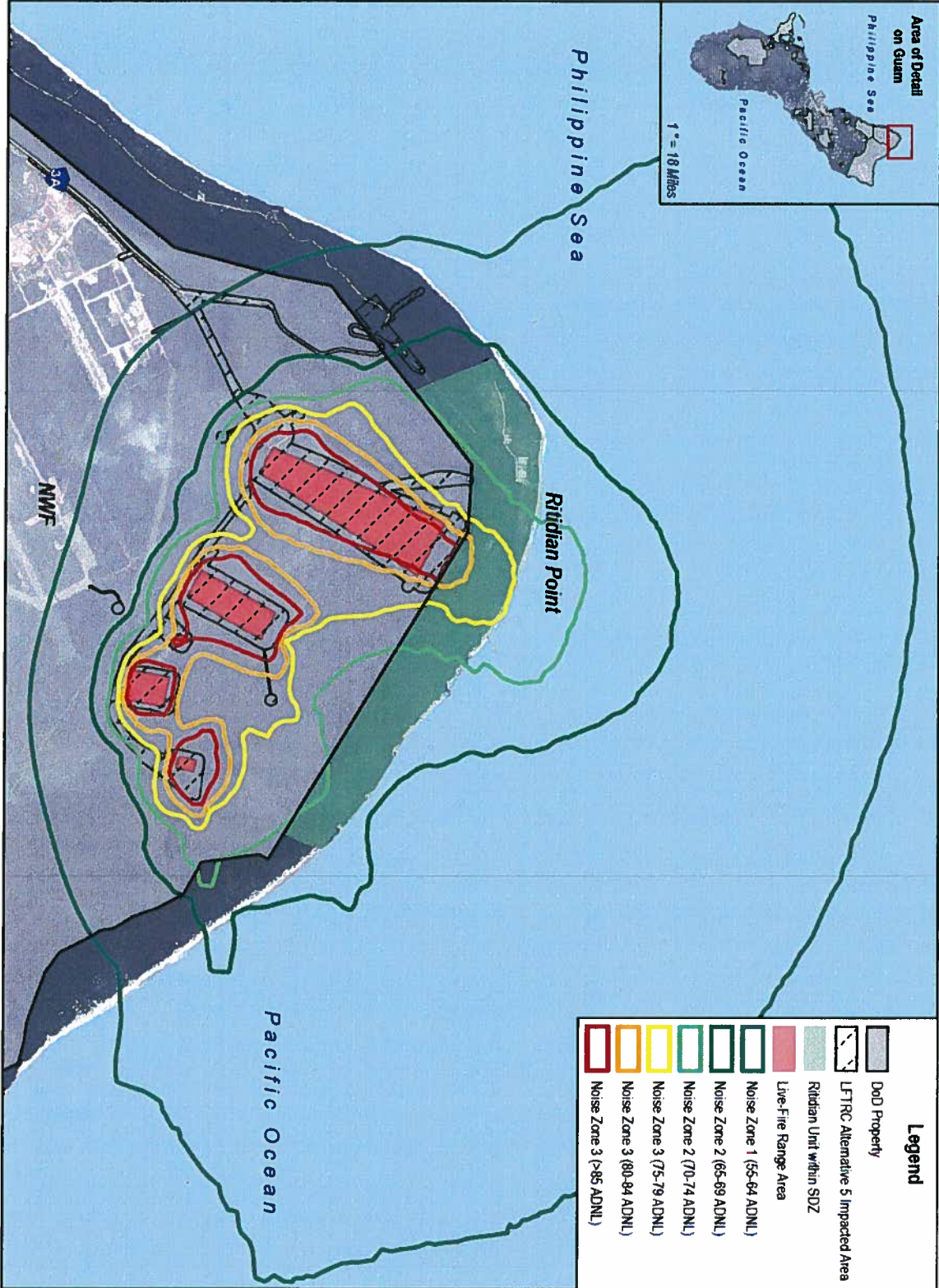
Legend:

- SDZ Safety Check Locations (Green circle with crosshair)
- Surface Danger Zones (SDZ) (Red outline)
- Guam National Wildlife Refuge (Blue hatched area)
- Department of Defense Lands (Black outline)

The map displays the island of Guam with various land management zones. The Guam National Wildlife Refuge is shown in blue hatching along the coast. Department of Defense Lands are outlined in black. Surface Danger Zones (SDZ) are indicated by red outlines. Three SDZ Safety Check Locations are marked with green circles with crosshairs. An inset map shows the location of Guam in the Pacific Ocean. A scale bar indicates distances in yards (0, 400, 800) and meters (0, 400, 800). A north arrow is also present.

Source: Esri, DigitalGlobe, GeoEye, IGN, USDA, USGS, AeroGRID, IGN, IGP, swisstopo, and the GIS User Community

Figure 2-5 Small Arms A-Weighted Day-Night Average Levels (ADNL) Noise Zones for Live-Fire Training Range Complex





EFFECTS TEST AND DETERMINATION UNDER COASTAL ZONE MANAGEMENT ACT

Project: H-279 Replace Andersen Housing Phase 1	Date: 25 July 2017
Project Location: Andersen Air Force Base	Prepared By: MCAG PWD PRF5.1.2
PROJECT DESCRIPTION:	
The H-279 project is the first phase of an eleven-year phased project scheduled to replace 588 units with a maximum of 1,242 existing family housing units at Andersen Air Force Base (AAFB). H-279 proposes to design and construct 126 family housing duplex units constructed of reinforced concrete and pre-cast reinforced concrete typhoon shelter/housing structures for Guam's hot, humid climate. There will be a total of 96 three-bedroom and 30 four-bedroom family housing units. The project site for H-279 is approximately 16.4 hectares (40.6 acres, including the disturbance area for all utilities) and is located at the east end of the AAFB Military Family Housing. H-279 is located near the existing ponding basin and bounded by Marianas Boulevard at north end. This includes house lots along Palau Loop and Mango Loop, and portions of the house lots alongside Ponape Boulevard. The new housing units are designed to be vent-less and using hot humid design principles that apply to the Guam environment. The housing unit structures are constructed of reinforced concrete foundations, concrete floors, concrete walls, and concrete sloped roofs designed for 195 mph wind speed, exposure D, to withstand Guam's frequent typhoons. The structures will meet Seismic requirements per IBC 2015. The entire building and related building element/structures including enclosures, exterior doors, windows, storm shutters, and roofing will conform to Marianas Region Architectural and Construction Standards (MRACS). Exterior building features shall include: one car garage, driveway and parking; screen patio; exterior storage; back porch and courtyard; trash enclosure; rated doors, windows, and shutters; elastomeric roof system; utility closet; vapor barrier around exterior envelope of housing unit. Interior building features shall include: certified Energy Star housing and rated appliances; A/C supplemented by dehumidifier; low-flow plumbing fixtures; generator hook-up and emergency electrical system; fire protection; telephone, internet, cable TV; ceiling fans; minimum ceiling height 9'-0"; ceramic tile flooring; paperless drywall; spray-on foam insulation; and vertical blinds. Site work features are to include: utilities for water, storm, sewer, power, cable TV, telephone and streetlights; minimum grading with roof downspouts connected to storm drainage; landscape; tot lots; grading, roads, driveways, sidewalks, curbs, gutters, ramps, street lights, signage; and one bus shelter. Environmental mitigation will address cultural and natural resource mitigation and archaeological monitoring, and munition and explosives of concern (MEC) requirements. The H-279 project location and the preliminary site plan are depicted in Figures 3-1 and 3-2, respectively,	
PROJECT EFFECTS TEST:	
Resources of Primary Coastal Concern (note that all could trigger reasonably foreseeable spillover impacts even if activities are confined to lands under federal jurisdiction): <i>Water Quality</i> The entire H-279 development occurs over the Northern Guam Lens Aquifer and will be bordering an existing ponding basin on Palau Loop. Within the ponding basin are several underground injection control (UIC) wells drilled into the karst limestone which serve to drain the basin. Because the wells are located near the coast and are not upgradient of any drinking water production wells, they will not have any impact to the aquifer. Additionally, through appropriate implementation of design and construction	

mitigations and/or best management practices (BMPs) committed to in the 2015 Record of Decision for the Military Relocation, impacts to the aquifer would be minimized. Such measures include obtaining a Guam Environmental Protection Agency (EPA) Clearing and Grading Permit and coverage under the U.S. EPA Construction General Permit (CGP), which include implementing an Environmental Protection Plan as well as the CGP-required Stormwater Pollution Prevention Plan. Construction design specifications for all projects also reference the 2006 CNMI and Guam Stormwater Management Manual.

As part of stormwater control and for water quality, rain gardens and infiltration chambers are also proposed as part of H-279; these treatment facilities are decentralized and intended to manage runoff close to its source. The raingardens are an engineered natural treatment, small in size, distributed throughout the H-279 footprint, and are intended to retain, treat and percolate roadway runoff. These raingardens are small shallow basins with plantings, underlain by layers of engineered soil, drain rock, and sand, and will receive flow via sidewalk culverts. The infiltration chambers are an engineered subsurface treatment, dedicated one per housing unit. They are intended to retain and percolate roof runoff. The infiltration chambers are cylindrical subsurface structures, similar to a manhole, with a perforated concrete ring and an open bottom. The structure is surrounded by drain rock, and will receive flow from roof downspouts piped underground.

Terrestrial Habitat

Construction of H-279 occurs entirely over previously-developed areas and outside the designated Overlay Refuge. In accordance with the Endangered Species Act, the Navy has consulted with the U.S. Fish and Wildlife Service (USFWS), and this initially concluded with the issuance of the 2015 Final Biological Opinion (BO) for the Military Relocation by USFWS. This BO details conservation measures that would require minimization and offset of impacts to threatened or endangered species. The Navy reinitiated formal consultation with USFWS in March 2017, and this consultation reviewed new information not previously considered, and anticipated effects to newly listed threatened/endangered species and their terrestrial habitat. The final 2017 BO was released by USFWS in July 2017, and this new BO amends, but does not replace, the 2015 BO. Appropriate conservation measures and any other new requirements from this 2017 BO shall be carried out by the Navy and its contractors to comply with ESA, consistent to the maximum extent practicable with Guam's coastal policy related to fragile areas.

The Micronesian starling, a Guam-listed endangered species, is present in the proposed H-279 housing area at AAFB. During proposed construction and demolition activities, some Micronesian starlings would relocate to other suitable areas on AAFB, particularly to the north and south of the proposed family housing area. To the maximum extent practicable, the mature palm trees that starlings use for nesting and roosting within the existing housing area would not be removed during the proposed construction activities. Since construction and demolition would occur in phases, the entire starling population within the existing housing area would not be impacted at one time. After construction, starlings could return to the new housing area. It is also expected that the new housing area may potentially increase the area of suitable habitat on AAFB by increasing potential nesting habitat (i.e., man-made structures, palm trees, areas with brown tree snake control). Therefore, as the loss of a portion of existing Micronesian starling habitat on AAFB would be temporary and there would be an increase in starling habitat during and after construction, there would be less than significant impacts to the Micronesian starling with implementation of proposed construction activities associated with H-279.

Cultural Resources

In accordance with the 2011 Programmatic Agreement (PA) for the Military Relocation, consultation for H-279 with the Guam State Historic Preservation Office (SHPO) for effects to historical/cultural resources has concluded with the Navy's finding of no historic properties affected. The PA Memo for this project can be found on DoD's website: <http://go.usa.gov/kZWG>.

PROJECT COASTAL CONSISTENCY DETERMINATION:

Based on prior programmatic review, the following Coastal Policies are potentially applicable to this project. The following are the project-specific assessments of applicability and consistency:

Development Policy (DP) 1 (Shore Area Development): Development does not affect the Seashore Reserve.

DP2 (Urban Development): Area not subject to designations of the Land Use Districting Map.

DP3 (Rural Development): Area not subject to designations of the Land Use Districting Map.

DP4 (Major Facility Siting): Not a major facility (e.g. utilities, fuel and transportation facilities) subject to policy. Development occurs adjacent to an existing military airfield area (AAFB Northwest Field).

DP5 (Hazardous Areas): The project does not develop within flood plains or upon major fault lines. The existing ponding basin on Palau Loop is a sinkhole; however, the H-279 development footprint will not alter the existing drainage basin area for this sinkhole.

DP6 (Housing): H-279 does not propose housing development within lands under the Government of Guam's jurisdiction. The Navy's activities on federal lands would generally meet the policy's intent to the maximum extent practicable as actions would be implemented in conformance with efficient community design per published Navy planning criteria along with proposed improvements to off-base civilian infrastructure that would be needed to support the Marine Corps relocation.

DP7 (Transportation): No major transportation roadway networks proposed.

DP8 (Erosion and Siltation): H-279 construction activities will meet requirements of Guam EPA-issued clearing and grading permits and will comply with the 2017 NPDES General Permit for Discharges from Construction Activities. Development shall comply with the Navy's Low Impact Development (LID) policy, which sets a goal of no net increase in stormwater and sediment or nutrient loading from major renovation and construction projects; this policy is in addition to the aforementioned stormwater management program permit requirements.

Resource Policy (RP) 1 (Air Quality): No emission sources (e.g. fuel-fired emergency generators, paint booths) are proposed as part of the H-279 project that will require a construction and operating permit under the Guam Air Pollution Control Standards and Regulations. BMPs to control pollutant emissions, including fugitive dust, would be documented in the Environmental Protection Plan submitted for approval to Guam EPA prior to implementation.

RP2 (Water Quality): Reasonably foreseeable direct and indirect impacts to coastal zone water quality are not anticipated for H-279, although the Navy will still comply with protective regulations mentioned under DP8 for the protection of aquifer water quality. Although UIC wells are in the immediate vicinity of the project, implementation of applicable BMPs, compliance with applicable EPA permit requirements, and the proposed construction of rain gardens and infiltration chambers for stormwater control all contribute to a much-reduced risk for spills to have far-ranging impacts that could result in effects to coastal zone resources. The 2006 CNMI Guam Stormwater Manual and the Navy's LID policy have been referenced for the design of stormwater management BMPs. Green waste processing and composting facilities will be sited outside wellhead protection areas and will implement controls and BMPs in accordance with the Guam EPA-issued Solid Waste Processing permit.

RP3 (Fragile Areas): Impacts of H-279 to wildlife habitat will be mitigated through implementation of conservation measures identified in the 2015 and 2017 Final BO; these BOs detail conservation measures that would require minimization and offset of impacts to threatened or endangered species. No historic properties are affected by the H-279 project.

RP4 (Living Marine Resources): There are no anticipated direct impacts to marine resources as a result of construction activities associated with H-279, although there would be reasonably foreseeable spillover effects to fish and coral from the likely general increase of activities such as recreational fishing, snorkeling and diving activities in waters within GovGuam jurisdiction from the new population associated with the Marine Corps relocation. To increase the awareness of military, civilian and contractor personnel associated with the Marine Corps relocation, the Navy would require education and awareness training that would emphasize the importance of coastal ecosystems, compliance with posted rules, and the proper way to interact with marine resources so as to avoid and minimize damage to reefs caused by

recklessness in anchor use, reefwalking, scuba diving, snorkeling or fishing activities. Violation of Department of Agriculture regulations within GovGuam jurisdiction would be subject to penalties and/or sanction. In recreational areas within federal lands, the Navy imposes its own fishing instructions that are consistent with GovGuam regulations and does not authorize the taking of any other marine resources besides fish in authorized areas. The Navy would manage access to the Haputo Beach and Ecological Reserve Area by placing fencing at the trail entrance and could restrict such access if evidence of environmental damage is observed by Navy biologists as part of the monitoring requirements in the Joint Region Marianas Integrated Natural Resources Management Plan.

RP5 (Visual Quality): Project will not degrade views from scenic overlooks, highways or trails. The resulting view shed will be consistent with adjacent housing areas within AAFB after all phases of the proposed housing construction are completed.

RP6 (Recreation Areas): Project does not propose to develop recreational facilities.

RP7 (Public Access): No impacts on public access.

RP8 (Agricultural Lands): No agricultural lands or activity in this area.

Coastal Determination: Consistent to the Maximum Extent Practicable

Figure 3-1 H-279 Project Location

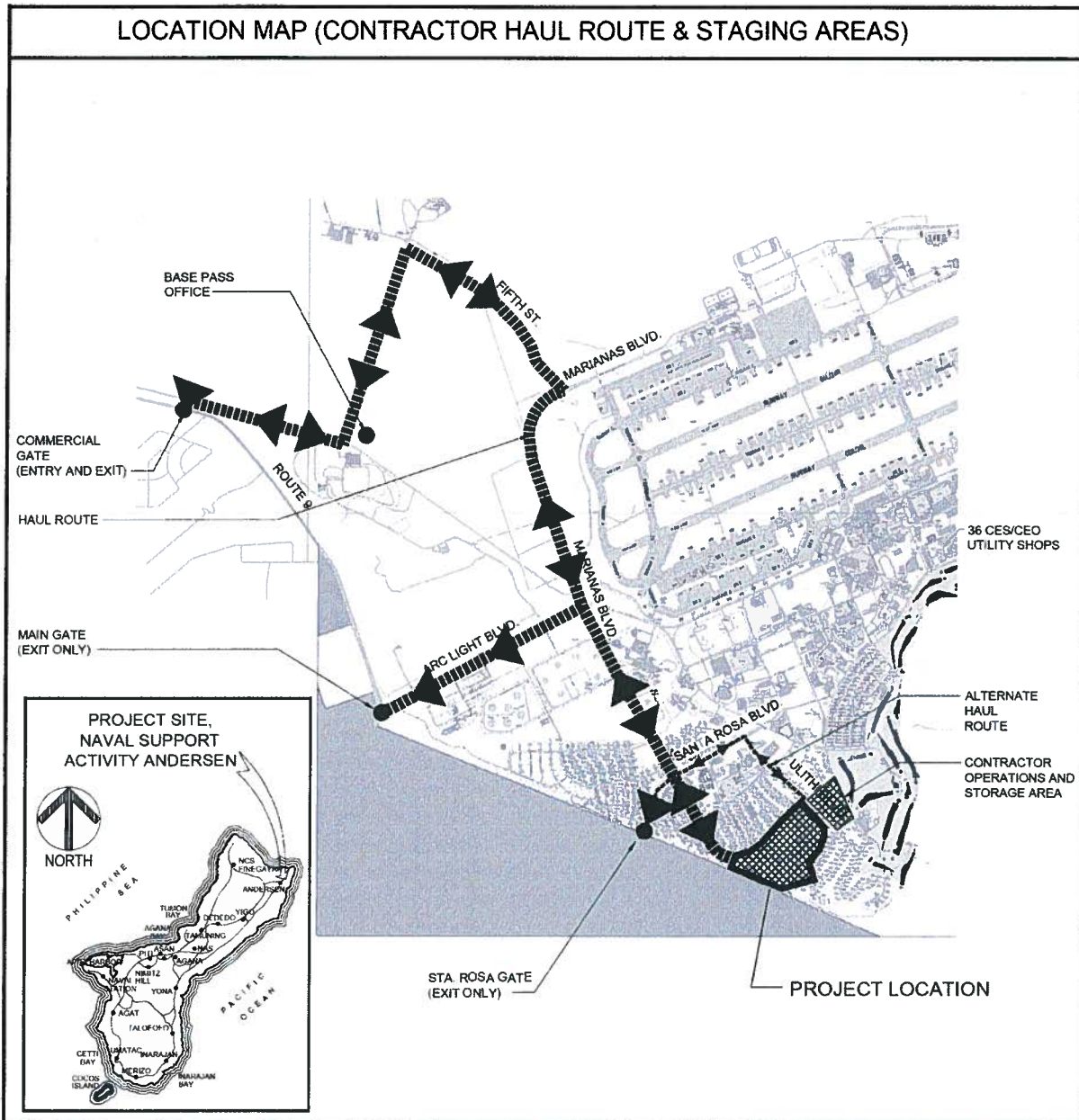


Figure 3-2 H-279 Preliminary Site Plan

