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EXECUTIVE SUMMARY

GUAM AND CNMI MILITARY RELOCATION DRAFT EIS / OEIS

VOLUME 6: RELATED ACTIONS - UTILITIES AND ROADWAY PROJECTS

Focus

The proposed military buildup on Guam associated with the relocation of the U.S. Marine Corps, the Navy aircraft carrier berthing, and the Army Air and Missile Defense Task Force (AMDTF) would increase the demand for power, potable water, and wastewater utilities. The buildup would also affect the remaining life of existing solid waste facilities and the demand for the new Government of Guam (GovGuam) Layon Landfill in Dandan. The proposed military actions would also require roadway improvements. The Draft Environmental Impact Statement (EIS) / Overseas Environmental Impact Statement (OEIS) analyzes the Related Actions required to improve and expand roadways and utilities for each of the Preferred Alternatives for military actions.

The Preferred Alternatives for the Related Actions are:

- **Power: Interim Alternative 1:** Recondition up to four existing permitted Guam Power Authority (GPA) combustion turbines with upgrades to appropriate transmission and distribution systems to support interim loads.
- **Potable Water: Basic Alternative 1:** Develop up to 22 new wells at Andersen AFB, interconnection with Guam Water Authority (GWA) water system, rehabilitation of existing wells, and distribution upgrades.
- **Wastewater: Basic Alternative 1a:** Combine upgrade to existing primary treatment and expansion to secondary treatment at Northern District Wastewater Treatment Plant (NDWWTP).
- **Solid Waste: Alternative 1:** Continue utilizing the Navy sanitary landfill at Apra Harbor until the new Layon Landfill is opened.
- **Roadway Projects: Alternative 2:** Implement the 49 individual projects that have been identified to support DoD Preferred Alternative 2 for the Marines Main Cantonment.

Key Actions

The key impacts and stated mitigation approaches are:

- Temporary water quality impacts on near shore waters and coral in Apra Harbor during dredging.
 - » Mitigation measures required by dredging permits, such as physical barriers to limit sediment dispersal, would reduce impacts to less than significant.
- Potential fill of wetlands and indirect wetland impacts.
 - » Mitigation measures would include creation of replacement wetlands or preservation and improvement of existing wetlands.
- Roadway noise would be a significant impact in the north and central areas of Guam.
 - » Mitigation has not been determined. Noise walls are a potential mitigation, but they have adverse impacts on views.
- Roadway construction on Guam would have a significant adverse impact on roadway use during construction.
 - » Mitigation would include a Traffic Management Plan implemented by the Federal Highway Administration that would identify measures to reduce impacts during the construction period.
- Federal acquisition of land for main cantonment, firing ranges, and roadway improvements on Guam.
 - » Mitigation would include long-term leases of the property instead of purchase.
- Impact to existing overburdened utilities infrastructure:
 - Potable Water: The projected water demand for the Guam civilian population throughout 2010-2019, not including the effects of the military buildup, exceeds the current GWA water system capacity. However, projected potable water demand would not exceed sustainable yield of the Northern Guam Lens Aquifer.
 - Projects show higher than currently permitted wastewater flow to NDWWTP. GWA would be required to upgrade the NDWWTP to secondary treatment.
 - » A suite of mitigation measures are under consideration to mitigate impacts to utilities on Guam, including adaptive management techniques to adjust construction tempo.

Interim, basic, and long-term alternatives have been developed to meet demand for utilities:

Interim alternatives would meet the immediate demand for utilities to support the military buildup on Guam and are evaluated in the Draft EIS/OEIS in a project-specific manner. For interim alternatives, no additional National Environmental Policy Act (NEPA) analysis, other than what is included in this Draft EIS/OEIS, would be conducted.

Basic alternatives would meet the demand for utilities to support the military buildup on Guam for both the near-term and long-term, and are evaluated in this DEIS in a project-specific manner. For basic alternatives, no additional NEPA analysis, other than

what is included in this DEIS, would be conducted.

Long-term alternatives would meet the demand for utilities over the long term, in the event that interim alternatives are found to be insufficient in the future. Long-term alternatives are presented conceptually, as much of the detail related to them is yet unknown and would require substantial study, planning coordination, and budgeting. Because long-term alternatives are not ripe for detailed, project-specific environmental impact evaluation at this time, they would require additional NEPA analysis in the future should they be pursued.

A programmatic approach is taken in this DEIS for long-term alternatives. Based on available information, the potential environmental effects associated with the long-term utility projects are analyzed in the DEIS/OEIS for impacts to the utilities themselves, but not to other resource areas. If such long-term projects were to be pursued, additional NEPA documentation and resource surveys would be completed in the future when projects specific information and funding becomes available. The following long-term utilities alternatives are analyzed in a programmatic manner:

Power:

Long-Term Alternative 1 - New Power Plant at Cabras / Piti Location

Long-Term Alternative 2 - New Power Plant at Potts Junction Location

Long-Term Alternative 3 - Power supplied by GPA

Potable Water (to augment basic alternative chosen if required):

Long-Term Alternative 1 - Development of Lost River

Long-Term Alternative 2 - Desalination of Brackish Water

Long-Term Alternative 3 - Dredge Sediment from the Navy Reservoir to Increase Storage Capacity

Wastewater:

Long-Term Alternative 1 - New DoD-Only Stand-Alone Primary/Secondary Treatment Facility on DoD land at Finegayan including a New Outfall in Support of all Main Cantonment Alternatives

Some long-term solutions have not been finalized because it is anticipated that Special Purpose

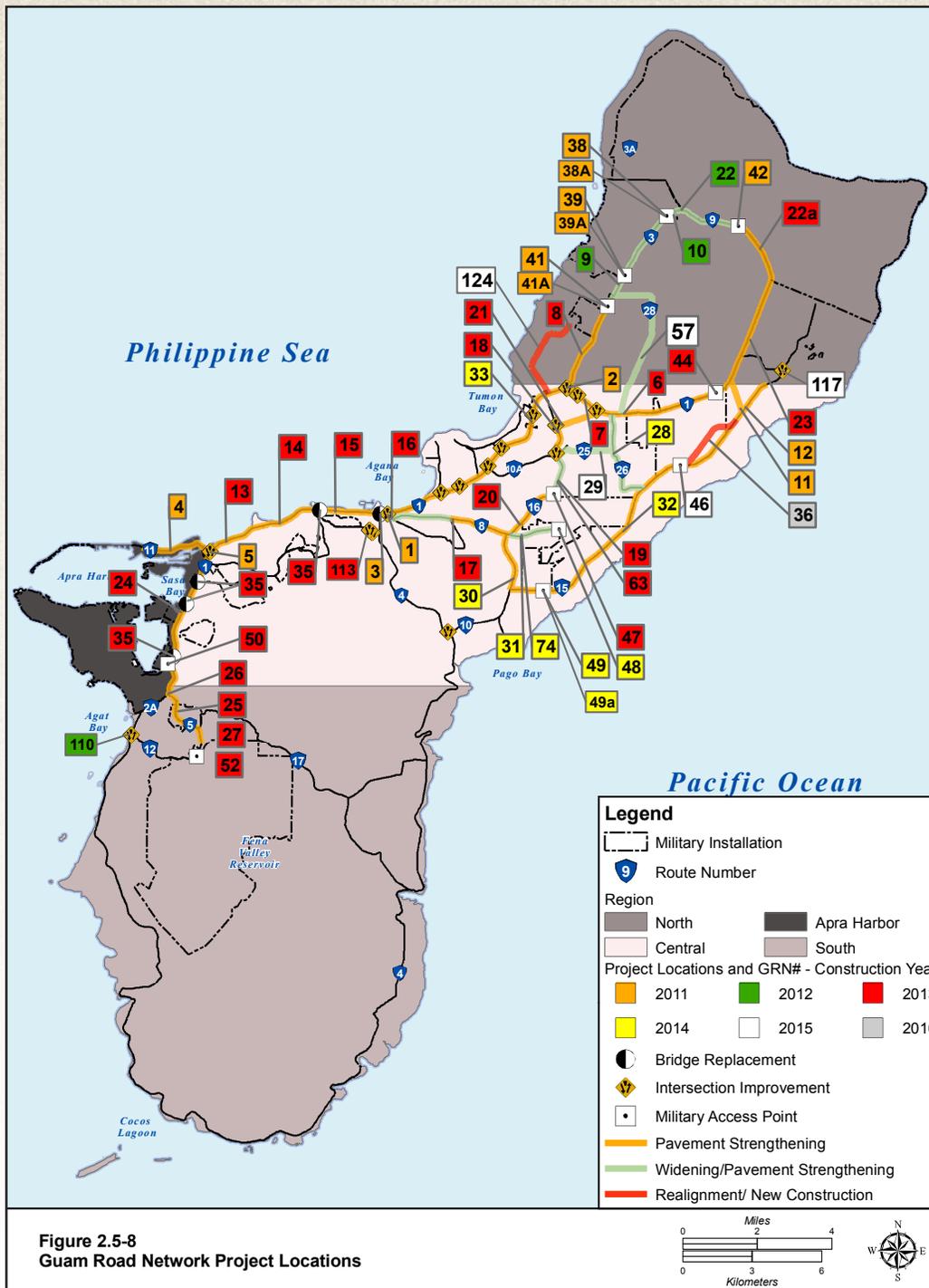


Figure 2.5-8
Guam Road Network Project Locations

Entities (SPEs) will be formed to operate, manage, upgrade or develop utility plants and associated infrastructure such as collection or distribution systems. The precise manner in which these private business entities would operate is not known but the Navy anticipates they will receive financing from the Government of Japan. The Utility SPE(s) will be private ventures that provide long-term solutions to the underlying utility needs for the realignment efforts. For example, an SPE might develop, construct and manage a power plant or a wastewater treatment plant. The U.S. government would then agree to purchase utilities from that plant as a fee that provides payback to the SPE on its investment. Given that these SPEs have yet to be formed, these long-term solutions are not currently defined in detail. Therefore, they are presented as “conceptual” alternatives and are addressed as long-term alternatives.

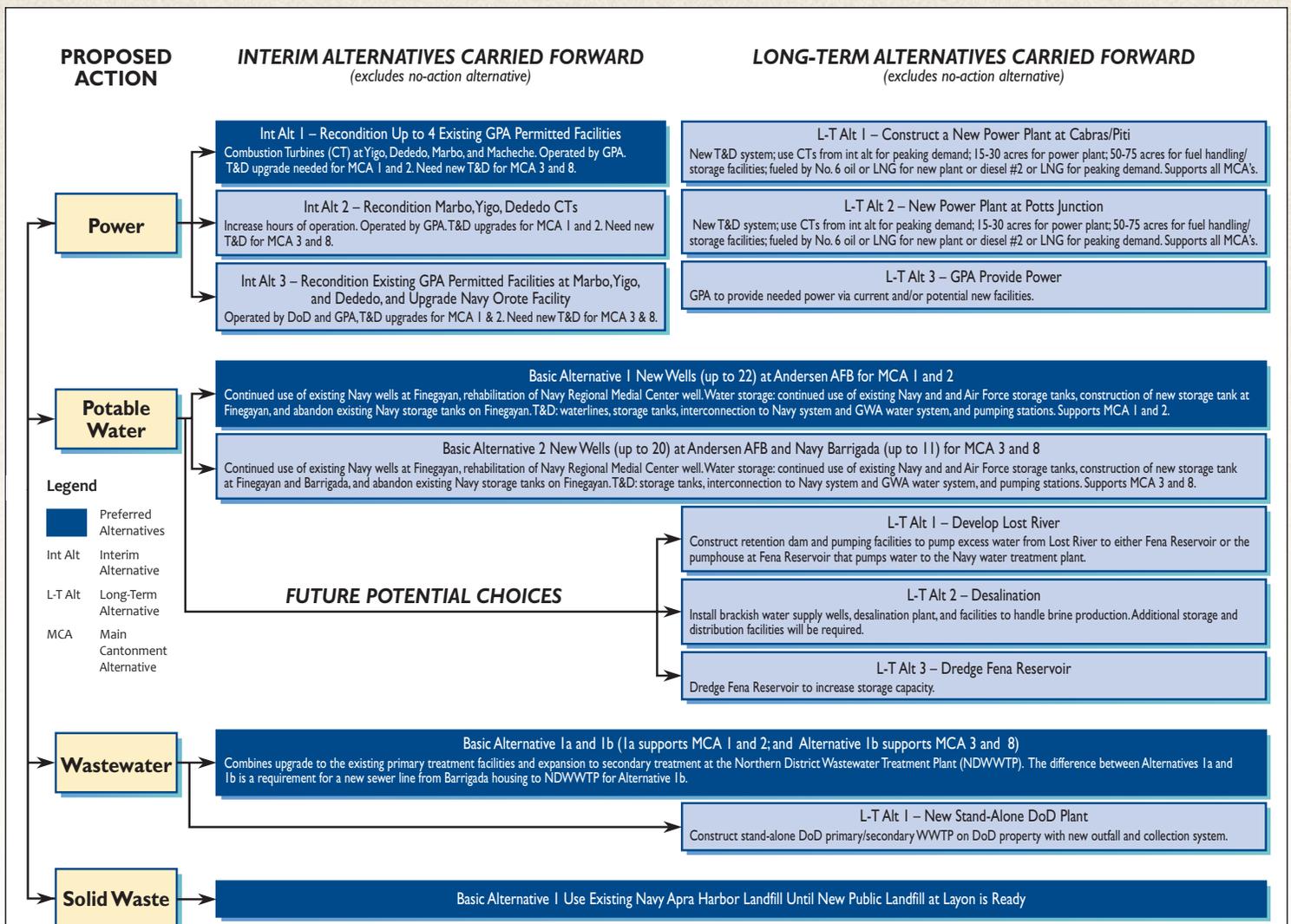
Roadway projects have been identified from recent transportation and traffic studies on the island of Guam. These consist of Guam Road Network (GRN) (off-base) projects and intersection improvement projects at military access points (MAPs) (i.e.,

gates). The GRN (off-base) projects are composed of six types of roadway improvements:

- Intersection improvement projects
- Bridge replacement projects (involving five bridges)
- Pavement strengthening (combined with roadway widening at some locations)
- Roadway relocation (Route 15)
- Roadway widening
- Construction of a new road (Finegayan Connection)

The projects cover four geographic regions on Guam: North, Central, Apra Harbor, and South. Not all projects would be implemented since only a specific combination of roadway projects support each alternative for the Marine Main Cantonment.

Main Cantonment Alternative 2 (Preferred) requires a combination of 49 GRN projects. These projects include 29 pavement strengthening, 8 roadway widening, 14 intersection improvements (includes 8 MAPs), 5 bridge replacements, 1 road relocation, and 1 new road.



Assessment

The utility and roadway studies in the DEIS / OEIS assumed that the construction workforce would reside off-base and would be served by Guam public utilities at their places of residence. Breakpoints (when utility demand would exceed capacity) were estimated to assess the potential effect on Guam public utilities of the combined DoD population increases and construction workforce increases, with specific discussion of impacts on the NDWWTP, the GWA water system, and the GPA Island-Wide Power System (IWPS).

The unknowns associated with the long-term alternatives are significant and they will have a lasting and critical impact to the residents and economy of Guam. To achieve many of the mitigation measures, the burden falls on the Government of Guam to address and to seek solutions and funding. Without these mitigation actions occurring or fully completed, the impacts of military actions rated SI-M (significant impact, but mitigable to less than significant) will remain significant and have a critical impact on the island of Guam. In assessing the buildup, there is an overwhelming bias in the DEIS / OIES that the citizens of Guam will receive beneficial impacts from this program, but the long-term alternatives and solutions are not developed to capture the impacts both positive and negative.

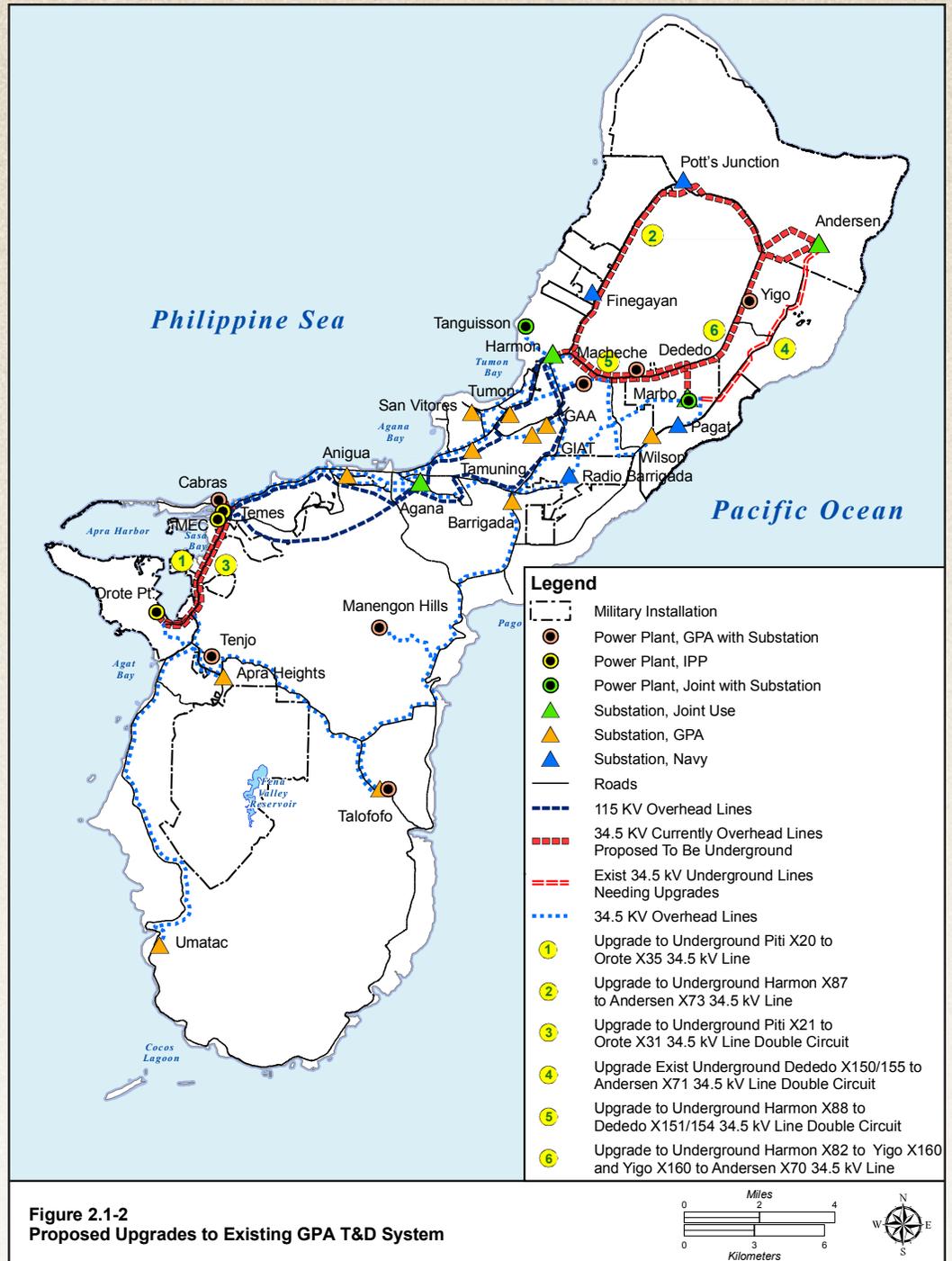


Figure 2.1-2
Proposed Upgrades to Existing GPA T&D System



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Your questions and comments are welcome.
 Please visit the website at www.one.guam.gov.

Definitions for terms and acronyms used in this and other related reports can be found in the Acronym Guide and Glossary at www.one.guam.gov.