Economic Adjustment Committee

Guam Socioeconomic Project Needs Assessment (S-PNA) Worksheet

SUMMARY DATE: October 28, 2010

PROJECT CATEGORY:

- ☒ **Health Care**
- ☐ Cultural Resources
- ☐ Justice
- ☐ Education
- ☐ Emergency Services
- ☐ Environmental Protection

PROJECT TITLE: **CDC Lab and Medical Health Care Campus Master Plan**

PROJECT AT A GLANCE:

Project: To locate and build a comprehensive laboratory and to develop a master plan for health care related uses in a campus setting.

Cost:
$14.8 million

Property Ownership/Acquisition Cost:
GovGuam / Not Applicable

Location:
Old Hospital Site (Oka Point)
Village of Tamuning

Site Infrastructure Status:
Improved

Site and Facility Size:
54 acres / 8,000 square feet

Timing for Funding:
FY 2012 / 2013

DESCRIPTION OF PROJECT:

The Centers for Disease Control (CDC) Laboratory is proposed to provide the capability to test, analyze and confirm the presence of air, food and water borne contaminants that impact human health. This facility would not only relocate, but also would be a substantial upgrade to the existing laboratory from a level one to a level two (L1 to L2) to offer an on-island facility with the testing and analysis capabilities to confirm the health status of all submitted specimens for health related testing. In addition, it would also serve as the "one stop testing and confirmation hub" for the surrounding Micronesian region. The ability to test and confirm results in a short timeframe is imperative to containing and treating potentially pandemic-type diseases (i.e. Dengue Fever, SARS, Influenza) from spreading within civilian, military, guest

worker and tourist populations. As Guam is a central hub for human movement between the Far East and United States, it is critical that a high quality of health is maintained within Guam Villages, military installations and hotels serving the Island as well as travelers destined for other countries, Hawaii and/or the continental United States.

PROJECT JUSTIFICATION:

Condition and reuse of the existing building that contains the laboratory. The existing laboratory is located in the Department of Public Health and Social Services (DPHSS) building, located at 123 Chalan Kareta. The building was originally constructed in 1968 and was used as a bomb/fallout shelter to protect residents in the event the island was attacked in the future. As such, it was constructed to a high level of structural integrity and does not contain any windows. (Parenthetically, the buildings' plans were also used to construct the Simon Sanchez High School).

Existing overcapacity of the DPHSS building minimizes expansion opportunities for the lab. The existing functions of the lab are entirely contained within the DPHSS building, so any desired expansion will require the lab to be relocated, based on the overcapacity status of the building. Based on its use and the need expressed for other health care facilities on the Island, a medical health care campus is envisioned to provide an integrated environment of health care related uses that are mutually supportive. Such a campus may include the CDC Lab, DPHSS clinic and administrative facility, mental health and substance abuse facility.

The new lab will serve to confirm the presence of diseases and allow for immediate response to minimize their spread to others. The existing laboratory is antiquated and does not have the capability to analyze all the samples they test. Each must be sent either to the Centers of Disease Control facility located in Hawaii or to the San Diego Medical Research Facility. Such an effort requires-an eight or fourteen, respectively, hour flight from the Island, extending the timing for lab results to a minimum 12 hours. Such a distance inhibits a timely response to determine test results and implement measures to maintain a healthy population of residents, visitors and workers on Guam.

Significant influx of military, transient worker and permanent populations on heath care infrastructure. The military buildup will generate an escalation of off-island construction workers and dependents from approximately 9,800 in 2010, peaking at approximately 52,000 workers and dependents in 2014 and declining to approximately 8,900 workers and dependents in 2020. These off-island workers and dependents will be coming to the Island from a variety of countries that exhibit a wide range of health care services for their residents.

It is also expected that the expanded permanent and temporary populations will create an increasing level of demand in child care, substance/alcohol abuse, senior care, and teenage pregnancy services and programs.

Difficulty in confirming pre-deployment of guest worker health care screening. While the Final Environmental Impact Statement (FEIS) identifies that all workers imported to the Island (for a period of 14 or more days) will be required to submit to a pre-deployment physical and general health care battery of tests (including tuberculosis test, chest x-ray, blood pressure, dental exam, etc.), the reality is this objective may be very difficult to administer without any additional capacity. It is expected that the Island will be responsible to function in the primary position of being vigilant for, and containing the outbreak of, potentially infectious diseases. For workers scheduled to be on the Island for less than 14 days, once on the island or contracted during transit, other communicable diseases may present themselves. Such diseases may either originate with the imported workers, or be imported by the resident or tourist population. While the provision of post pre-deployment health care screening of all workers is anticipated to be required, it will demand a local presence to manage the administration and testing, as well as the appropriate response to positive test results to minimize the spread of communicable disease.

A larger, transient population increases the potential for exposure and contraction of disease. In addition, the steady state of the military buildup in 2020 will generate a direct DOD population of nearly 25,000 personnel, including military personnel/ dependents and civilian workers/dependents. The continued deployment and return/deployment (and interface with the local population) could enhance the risk of acquiring a communicable disease among the local population on the Island. In addition, a population of nearly 9,000 indirect and induced people will be added in support of the direct military buildup, creating a total steady state population of approximately 34,000.

When on Island, the workforce housing that will provide shelter may constitute very close quarter living arrangements (based on the physical design of the units and desire to save on housing costs) for many people cohabitating under one roof. In these situations, when one person becomes ill with any communicable disease, it may be very difficult to keep it contained-especially in a humid, warm environment.

In addition, an influx of demand will also occur for the Islands' restaurants causing a demand in use and potential for new restaurant openings. This use and potential for new facilities will create a commensurate demand for permits and frequent inspections to ensure that a healthy food preparation, serving and storage environment exists for dining patrons. The increased stock of restaurants will also, in

all likelihood, increase the potential for food contamination, requiring appropriate testing, analysis and confirmation as well as monitoring and enforcement by DPHSS personnel.

The escalation and changing composition of the Island makes the requested elevated status of the laboratory from its existing role (from L1 to L2) to allow the Lab to serve as one of three L2 labs that achieves the LABNET initiative of the Pacific Public Health Surveillance Network (PPHSN) in the investigation and identification of outbreak prone disease targets. These disease targets include typhoid, cholera, influenza, dengue, leptospirosis, and measles. Additional targets from PIHOA include chlamydia, syphilis, gonorrhea, human immunodeficiency virus (HIV), tuberculosis (TB), and bioterrorism (BT) agents.

Existing gaps and redundancy in laboratory testing and facilities on-island. The existing capacity of on-Island testing and lack of facilities illustrates significant gaps in testing capacity and lack of redundancy among the four existing laboratories (i.e. Guam Public Health Lab (GPHL), Army/Navy Base Hospital Lab (ANBHL), Diagnostic Laboratory Services, Guam (DLSG), and the Guam Memorial Hospital Lab (GMHL) relative to testing, human resources, and operational space as shown below:

Regional Laboratory Testing and Resources

Laboratory	GPHL	ANBHL	DLSG	GMHL
Food and Water Analysis	No	No	No	No
Microbiology	No	Yes	Yes	Yes
Polymerase Chain Reaction (PCR)	Planned	Yes-Training Purposes	Yes-Sent to DLS Hawaii	No
Measles/Rubella	Yes	No	No	No
Human Resources:				
Lab Mgmt.	No	Yes	Yes	Yes
Operations Space:				
Lab Office Space	No	Yes	Yes	Yes
Negative Pressure Room	No	No	Yes	No

Source: A Development Paper on the Guidelines and Recommendations for the Development of Level 2 Capacity at the Central Public Health Laboratory; February 2010

Enhanced role in the provision of a regional hub for laboratory testing and analysis. The ability to augment the existing lab with additional capabilities and testing will assist in the implementation of the regional vision of the Island serving as the hub for laboratory testing within Micronesia, achieving one of the objectives identified in the Memorandum of Understanding (MOU) executed at the Micronesian Chief Executives (MCE) Summit in the Fall of 2009.

The lab is a catalyst for a health care campus of similar uses. The identification and confirmation of the CDC Lab, Mental Health Facility, DPHSS Facility and Central Health Care Clinic offers a viable opportunity to combine these uses on a site that offers a one stop shop for health care on the Island. The consideration of the Old Hospital site (Oka Point) offers a potential location where all or a portion of these uses could be considered upon the conduct of more detailed studies. While the Old Hospital site may exhibit areas where the existing topography, access and utilities could be challenging, it also could offer an opportunity to creatively site these uses and their parking requirements in a functionally and visually appealing manner. A master planning process is the logical step to accommodate the uses, understand the site opportunities and constraints and the provision and timing of necessary infrastructure investments to match the incremental phasing of health care related uses. In this manner, the value, sustainability and function of the property can be enhanced through its integrated planning and design.

A Medical Health Care Campus Master Plan can be the blueprint for a coordinated and cohesive approach for co-location of similar uses. The intent is to develop a medical health care master plan which would provide a centralized center of public health services for Guam at Oka Point over the next 20-30 years. Consisting of more than 50 acres, the site has an adequate land base to locate many interrelated functions, including health care, specialty medical treatment centers, advanced teaching programs and state-of the art research facilities. The site also offers the potential to allocate future expansion in a manner that maintains the integrity of the master plan design and the functionality of campus tenants. The initial uses to be programmed potentially could include the components of the Guam Memorial Hospital, Public Health and Social Services, Mental Health and Substance Abuse, CDC Lab with additional availability for compatible private healthcare providers, and academic related components. Part of the strategy for this project is to attract a clinical faculty component to Guam with the intent of addressing the existing specialty physician shortage and increasing the Islands' physician retention rate. With more space for advanced research laboratories, UPH will attract world-renowned researchers as well as national funding and support to more significantly impact the future of healthcare.

The plan will address the overall land use, vehicular and pedestrian circulation and parking, utilities, and urban design components. The functional component includes the phasing plan, marketing plan, and identity branding for the campus. The resulting master plan will ensure a logical and efficient program to enhance the value of all sites within the entire campus, as well as providing the critical healthcare capacity for the people of Guam today, with a very cogent plan to enhance medical/health care needs over the next 20-30 years. Additionally, cost elements have also been included for this proposed project component that would initiate the NEPA process for Environmental Studies where appropriate.

PROJECT "NEXUS":

A significant increase in population, from off-island will increase the risk of infectious disease susceptibility and transmission. The military buildup will generate at its peak in 2014, a total of 56,000 workers and dependents expected to emigrate from off the Island, many of whom will originate from countries where the level of health care may not be commensurate with the US standard. The potential exposure of Island and US originating workers to workers from other countries has the potential to create an environment where infectious and communicable disease (i.e. tuberculosis) may become an issue. It is imperative to staff and administer a comprehensive laboratory on Island that minimizes the existing lag in analysis and confirmation for testing of potential disease. It also will serve to confirm the presence or lack of communicable diseases on the Island and to allow for immediate efforts to minimize their spread to others when confirmed.

The existing Central Public Health Laboratory is located on Mangilao, and has been operating since the 1970's. The Lab operates with 15 staff and administers testing in the areas of clinical chemistry, hematology, immuniohematology, infectious disease serology, mycobacteriology culture and anti-mycobacteriology susceptibility testing and outbreak investigations. The Lab has experienced a loss of several critical staff positions which do not allow it to conduct microbiology and food borne pathogen investigations. The Lab is also a Clinical Laboratory Improvement and Amendment (CLIA) regulated facility, providing capacity as a reference laboratory to other US Affiliated Pacific Islands (USAPI) Laboratories.

PROGRAM COST ***TOTAL PROGRAM COST FOR A CENTERS FOR DISEASE CONTROL LABORATORY RANGES FROM $12.7-$14.8 MILLION AND COST FOR A MEDICAL HEALTH CARE CAMPUS MASTER PLAN AND NEPA IS $940 THOUSAND***

CDC LABORATORY					
DESCRIPTION				**CONSTRUCTION COSTS**	
	DoD Facility Code (*1)	QUANTITY	UNITS	UNIT COST	TOTAL COST
General Administrative Building	6100	3,000	SF	$ 204.70	$614,100
Medical Research Laboratory	5302	5,000	SF	$ 303.03	$1,515,150
Site Development		4	AC	$ 175,000.00	$700,000
Vehicle Parking, Surfaced	8521	9,373	SY	$ 29.16	$273,326
Stand-By/Emergency Power	8112	100	KW	$ 252.46	$25,246
Bulk Liquid Fuel Storage	4111	4,000	GAL	$ 1.90	$7,600
Medical Health Care Campus Master Plan		1	EA		$0
TOTAL GROSS BUILDING AREA		8,000	SF	$ 391.93	
SUBTOTAL					**$3,135,422**
Area Cost Adjustment Delta					$5,142,093
SUBTOTAL using Area Cost Factor					**$8,277,515**
SIOH					$538,038
Contingency					$2,644,666
TOTAL CONSTRUCTION COST (*2)					**$11,460,220**
Planning and Design					$802,215
TOTAL FACILITY COST (*3)					**$12,262,435**
Escalation Rate (FY2012) Delta					$803,189
TOTAL ADJUSTED COST (*4) using Escalation Rate					**$13,065,625**

DESCRIPTION				FURNISHING & EQUIPMENT COSTS	
		QUANTITY	UNITS	UNIT COST	TOTAL COST
		1	EA	$ 250,000.00	$250,000
SUBTOTAL					**$250,000**
Escalation Rate (FY2012) Delta					$16,375
TOTAL ADJUSTED COST (*4) using Escalation Rate					**$266,375**
TOTAL PROGRAM COST (*5)					**$13,332,000**

(*1) Costs from *Unified Facilities Criteria (UFC) DOD Facilities Pricing Guide*, UFC 3-701-09, 15 September 2009
(*2) Total Construction Cost derived by applying Cost Adjustment Factors 1 - 3 from table below.
(*3) Total Facility Cost derived by applying Cost Adjustment Factor 4 from table below.
(*4) Total Adjusted Cost derived by applying Cost Adjustment Factor 5 from table below.
(*5) Total Program Cost is the sum of construction and furnishing & equipment costs and is inclusive of Area Cost Factor, SIOH, Contingency, Planning and Design, and Escalation Rate.

COST ADJUSTMENT FACTORS	FACTOR
1. Area Cost Factor	2.640
2. Supervision, Inspection and Overhead (SIOH) Factor (%)	6.500
3. Contingency Factor (%)	30.000
4. Planning and Design Factor (%)	7.000
5. Escalation Rate (FY2012)	1.0655
5. Escalation Rate (FY2013)	1.0847
5. Escalation Rate (FY2014)	1.1042

Source of Cost Estimates:

- Unified Facilities Criteria DOD Facilities Pricing Guide UFC 3-701-09, September 15, 2009
- RS Means Cost Works – Cost Estimating 2009

Estimated Start and Completion Dates:

- Assuming funds are available – Program Year: **FY2012**
- Estimated Program Year for construction/implementation start date- PY+1: **FY2013**
- Estimated Program Year for project/construction period/completion date- PY+2: **FY2014**
- Estimated Program Year for Equipment delivery - PY+1: **FY2013**

Project Costs Allocated by Fiscal Year:

Category	Project Element Title	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17
Study / Plan	Heath Care Master Plan		$900K						
Design	CDC			$855K					
Construction	CDC				$12.2M				
Procurement					$266K				
Program Management			$36K	$178K	$178K	$178K			

Proposed Implementation Plan:

The ability to site and size the Public Laboratory will be based on the preparation of the Medical Health Care Campus Master Plan. The funding for this project is to be allocated in FY 2011 to initiate and prepare a master plan that sets the stage for the proposed public laboratory and other medical facility components anticipated to be located on the Oka Point site.

This proposed Public Laboratory involves the initial capital investment in the design and construction of a new laboratory building. The design funds are to be allocated in FY 2011 to initiate the timely design and pre-construction effort. Requests for funding of construction will follow in FY 2013. If these key milestones are met, this proposed project will provide the needed health care assets and capabilities to Guam in a timely manner- to not only meet the peak demand timeframe (projected for 2014) but also the steady state in 2020.

On-Going Operation and Maintenance / Sustainability:

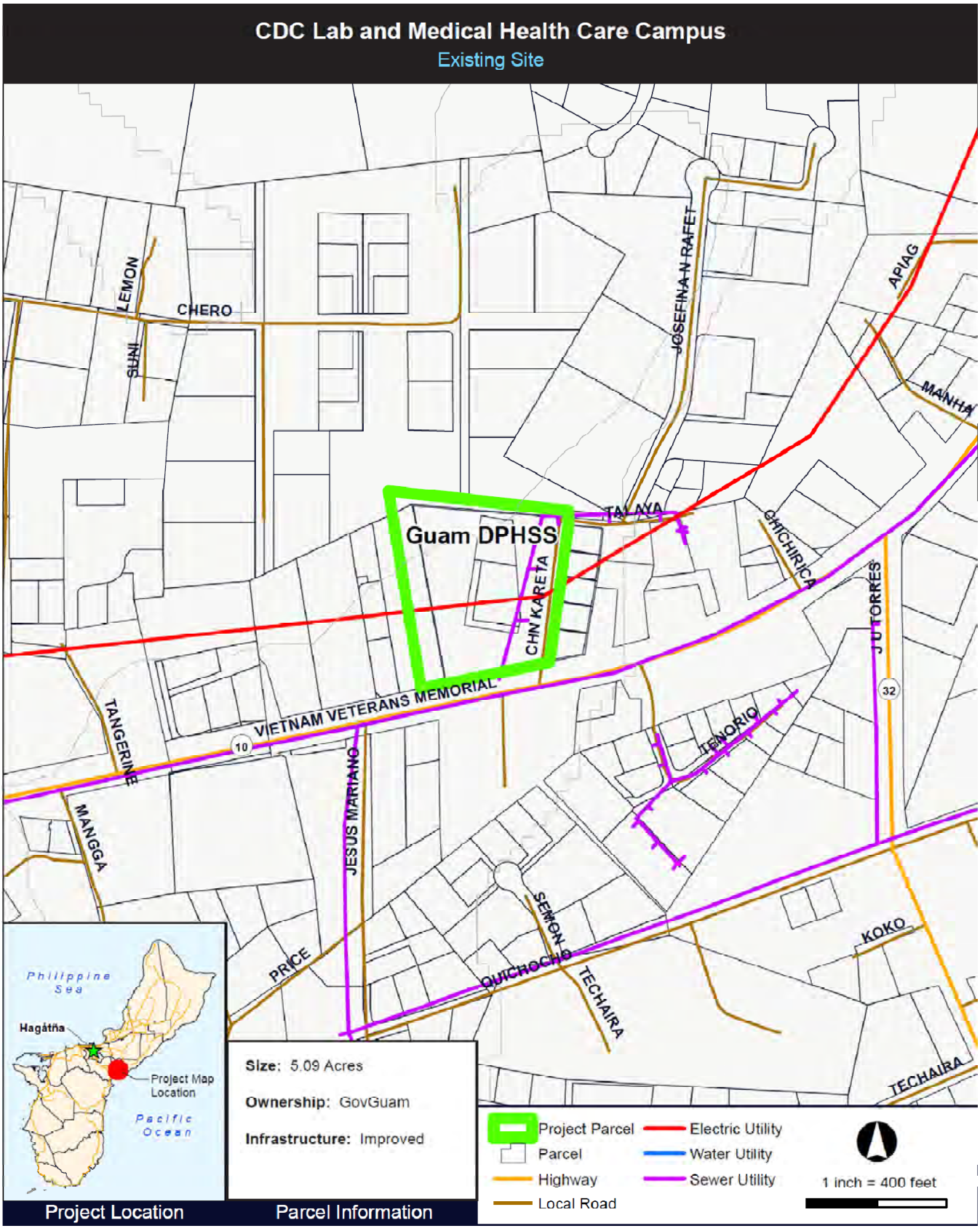
The ability of GovGuam to sustain the operations and maintenance of this enhanced capability, to improve health care services, is anticipated to be accommodated by DPHSS via GovGuam by 2014. The increases in General Fund revenues accruing from the economic activities generated by the direct, indirect and induced construction and population growth generated by the military buildup effort are expected to accommodate GovGuam's obligation for adequate operation and maintenance needs.

Information Sources:

- Guam and CNMI Military Relocation Draft Environmental Impact Statement, 2009
- Guam and CNMI Military Relocation Final Environmental Impact Statement, 2010
- GovGuam Civilian Military Task Force Report, 2008
- Interviews with DPHSS Division Managers and Staff, July 2010
- A Development Paper on the Guidelines and Recommendations for the Development of Level 2 Capacity at the Central Public Health Laboratory; Guam Department of the Public Health and Social Services, Guam; February 2010

Please see the next page.


CDC Lab and Medical Health Care Campus
Existing Site
Guam DPHSS
JOSEFINA N RAFET
TALAYA
CHN KARETA
VIETNAM VETERANS MEMORIAL
10
NAN PAI SEMON
TENORIO
Philippine Sea
Hagåtña
Project Map Location
Pacific Ocean
Project Location
Size: 5.09 Acres
Ownership: GovGuam
Infrastructure: Improved
Parcel Information
Project Parcel
Highway
Local Road
1 inch = 200 feet


CDC Lab and Medical Health Care Campus
Existing Site
Guam DPHSS
LEMON
CHERO
SUNI
JOSEFINA N RAFET
APIAG
MANHA
TAI AYA
CHN KARETA
CHICHIRICA
J U TORRES
VIETNAM VETERANS MEMORIAL
10
32
TANGERINE
MANGGA
JESUS MARIANO
TENORIO
SEMON
PRICE
QUICHOCHO
TECHAIRA
KOKO
Philippine Sea
Hagåtña
Project Map Location
Pacific Ocean
Size: 5.09 Acres
Ownership: GovGuam
Infrastructure: Improved
Project Parcel
Parcel
Highway
Local Road
Electric Utility
Water Utility
Sewer Utility
1 inch = 400 feet
Project Location
Parcel Information


CDC Lab and Health Campus Master Plan
Proposed Site
Future CDC Lab
CHN MAKAHNA
COOL
HOSPITAL
DUENAS
CHN SAN ANTONIO
STRAND
HILTON
PALE SAN VITORES
FATHER RAMON
GOV BRADLEY
GOV SKIN
FATHER SAN VITORES
FELIS
CHN SAN ANTONIO
Philippine Sea
Hagåtña
Project Map Location
Pacific Ocean
Size: 53.62 Acres
Ownership: GovGuam
Infrastructure: Improved
Project Parcel
Highway
Local Road
1 inch = 400 feet
Project Location
Parcel Information


CDC Lab and Health Campus Master Plan
Proposed Site
CHN MAKAHNA
COOL
HOSPITAL
Future CDC Lab
DUENAS
CHN SAN ANTONIO
STRAND
HILTON
PALE SAN VITORES
GOV SKIN
GOV BRADLE
FATHER RAMON
CHN SAN ANTONIO
FELIS
FATHER SAN VITORES
Philippine Sea
Hagåtña
Project Map Location
Pacific Ocean
Size: 53.62 Acres
Ownership: GovGuam
Infrastructure: Improved
Project Parcel
Parcel
Highway
Local Road
Electric Utility
Water Utility
Sewer Utility
1 inch = 400 feet
Project Location
Parcel Information

PHOTO LOG

Photo	Description
	**Former Bomb Shelter:** Central Public Health Clinic exterior
	**Overcrowding on the Site:** Temporary buildings are used to help ease the demand for space
	**Minimal Parking:** Overcrowded parking lots result in people parking on the grass

Photo	Description
	**Lack of Space:** The bacteriology lab is crowded with materials
	**Overcrowded Space:** Storage rooms are nearing their capacity