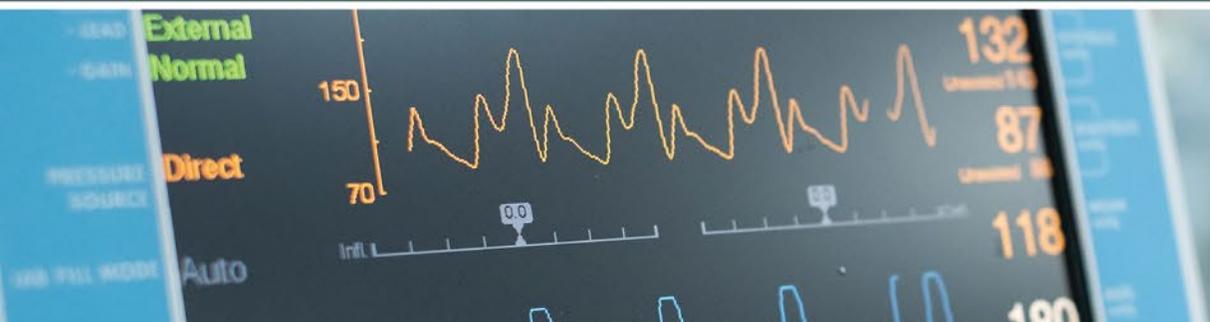




Guam Medical Campus Conceptual Plan

March 28, 2022



Medical Campus Composition

- **Guam Medical Center (Hospital)**
- **Public Health Center (DPHSS)**
- **Behavioral Wellness Center (BH&W) Outpatient**
- **Veterans Administration Medical Facility (VA) Wing**
- **Medical Campus Shared Services**
 - Lab
 - Administrative Office
 - Pharmacy
 - Helipad
 - Campus Utility Complex
- **Medical/Regional Data Center**
 - Broadband
- **Emergency Preparedness Warehouse**
- **Expeditionary Medical Facility Capability**
- **Assisted Living Facility**
- **Future Medical Growth Opportunity**

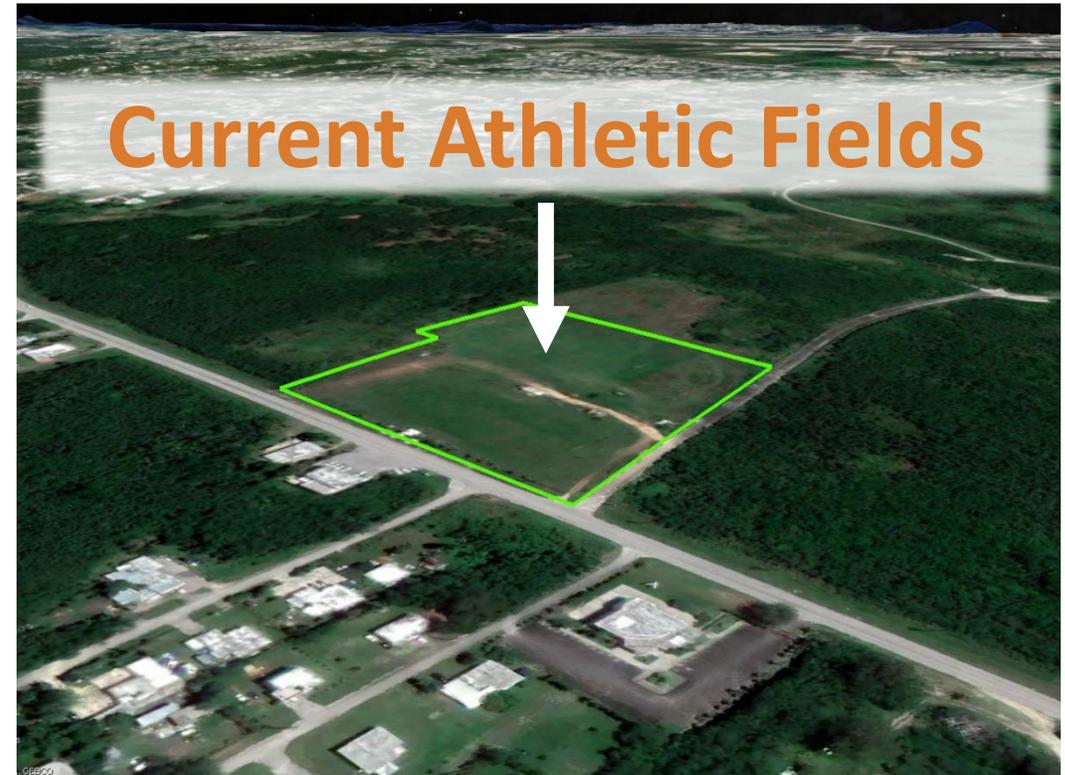
Medical Campus Site Access

- **GU-15 Roadway Improvements:** The existing GU-15 100-ft right-of-way will accommodate a buildout of five-lanes
- **Principal Campus Access:** road located opposite of Perez Park Road
- **East Campus Access Road:** located opposite Southern Cross Lane, will serve as the emergency vehicle access
- **West Campus Access Road:** serves as access to village athletic fields
- **Construct 3 Signalized Intersections:** on principal, east and west campus access roads and GU-15 (meets minimum traffic signal spacing of 800-ft between intersections)
- **Secondary Access to the Campus From GU-10:** is strongly recommended for future east west access along northern property line
 - Provides a direct connection to the emergency room/trauma center



Other Site Considerations

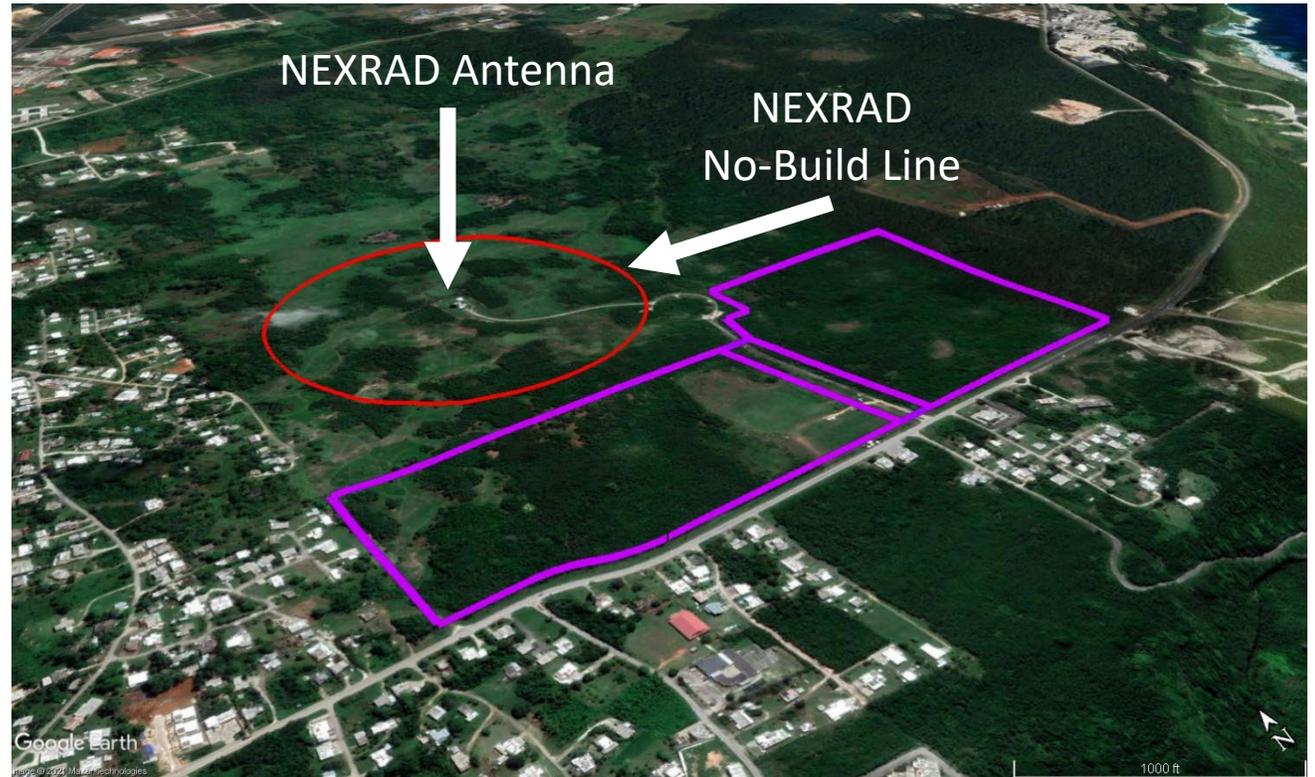
- **Athletic Fields:** Continue Village recreation opportunities on the property during phased construction
- **Natural Drainage:** Account for natural drainage on the south and west property lines (green infrastructure)
- **On-site Utilities:** On-site utilities and physical plant located close to GU-15 for cost saving utility tie-ins
- **Heliport:** Locate heliport near north and east property lines to minimize noise to residential areas (partner with DoD)



Current Athletic Fields are approximately 8.5 acres
Source: Google Earth, 2021

NEXRAD Radar

- NEXRAD Antenna *may* be placed on top of hospital
- No buildings or structures are permitted *within a 1,000-ft radius* of current NEXRAD facility
- Height limitation for any structure approximately *70 feet* depending on final siting



NEXRAD No-Build Radius is 1,000 ft from facility
Source: Andersen Air Force Base, 2021 & Google Earth, 2021

Guam Medical Campus Conceptual Plan

Legend

Facilities

- Hospital
- Lab
- Public Health Center (PHC)
- Administration
- Pharmacy
- Behavioral Wellness Center (BWC)
- Veterans Administration (VA) Wing
- Assisted Living
- Future Medical
- Medical Regional Data Center/
Emergency Preparedness Warehouse

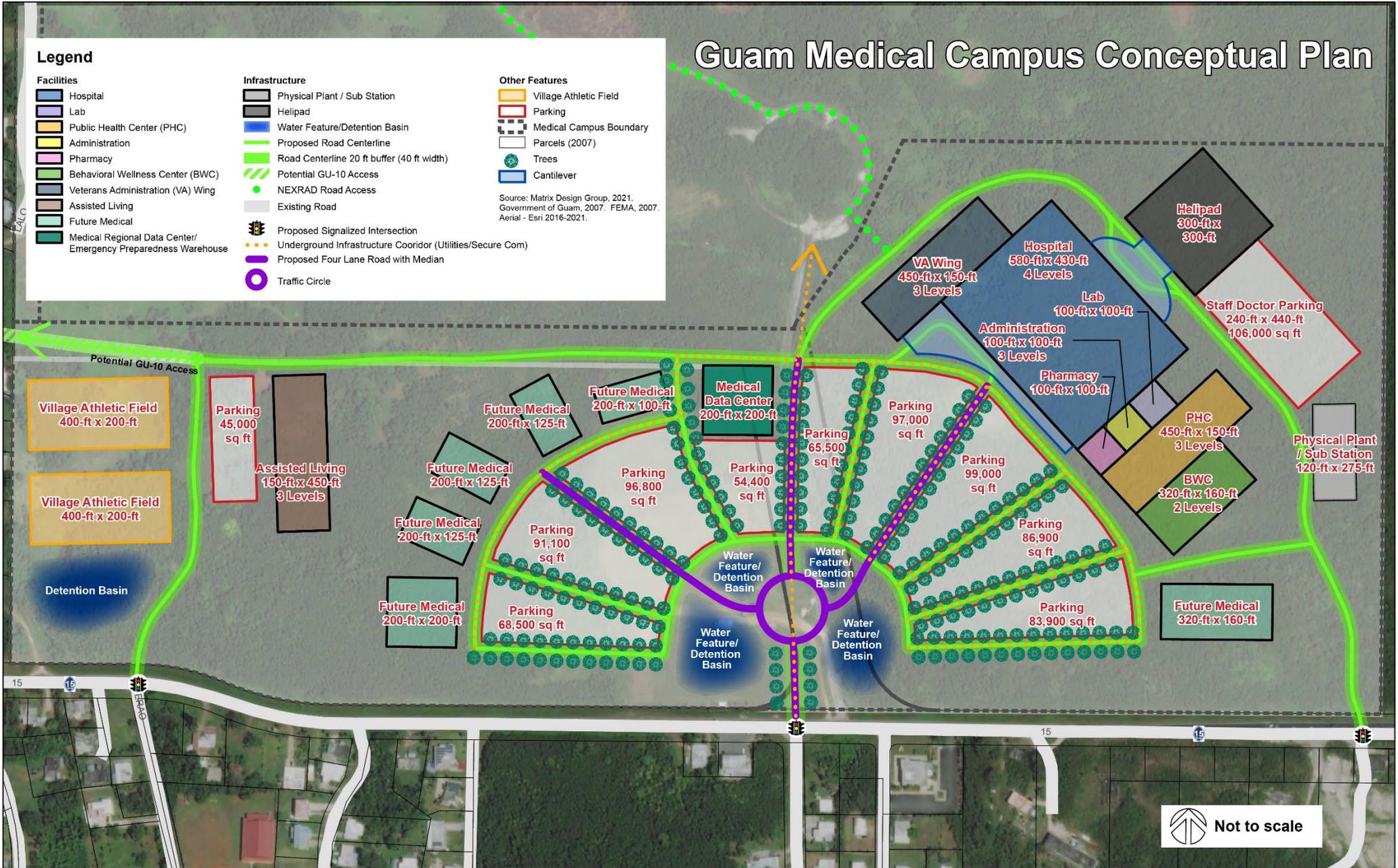
Infrastructure

- Physical Plant / Sub Station
- Helipad
- Water Feature/Detention Basin
- Proposed Road Centerline
- Road Centerline 20 ft buffer (40 ft width)
- Potential GU-10 Access
- NEXRAD Road Access
- Existing Road
- Proposed Signalized Intersection
- Underground Infrastructure Corridor (Utilities/Secure Com)
- Proposed Four Lane Road with Median
- Traffic Circle

Other Features

- Village Athletic Field
- Parking
- Medical Campus Boundary
- Parcels (2007)
- Trees
- Cantilever

Source: Matrix Design Group, 2021.
Government of Guam, 2007. FEMA, 2007.
Aerial - Esri 2016-2021.



Not to scale

Example Medical Campus



Main Entrance from Parking Lot



Landscaped Walkway in Parking Lot



Covered Visitor Drop Off Main Entrance



Emergency Room Ambulance Drop-off

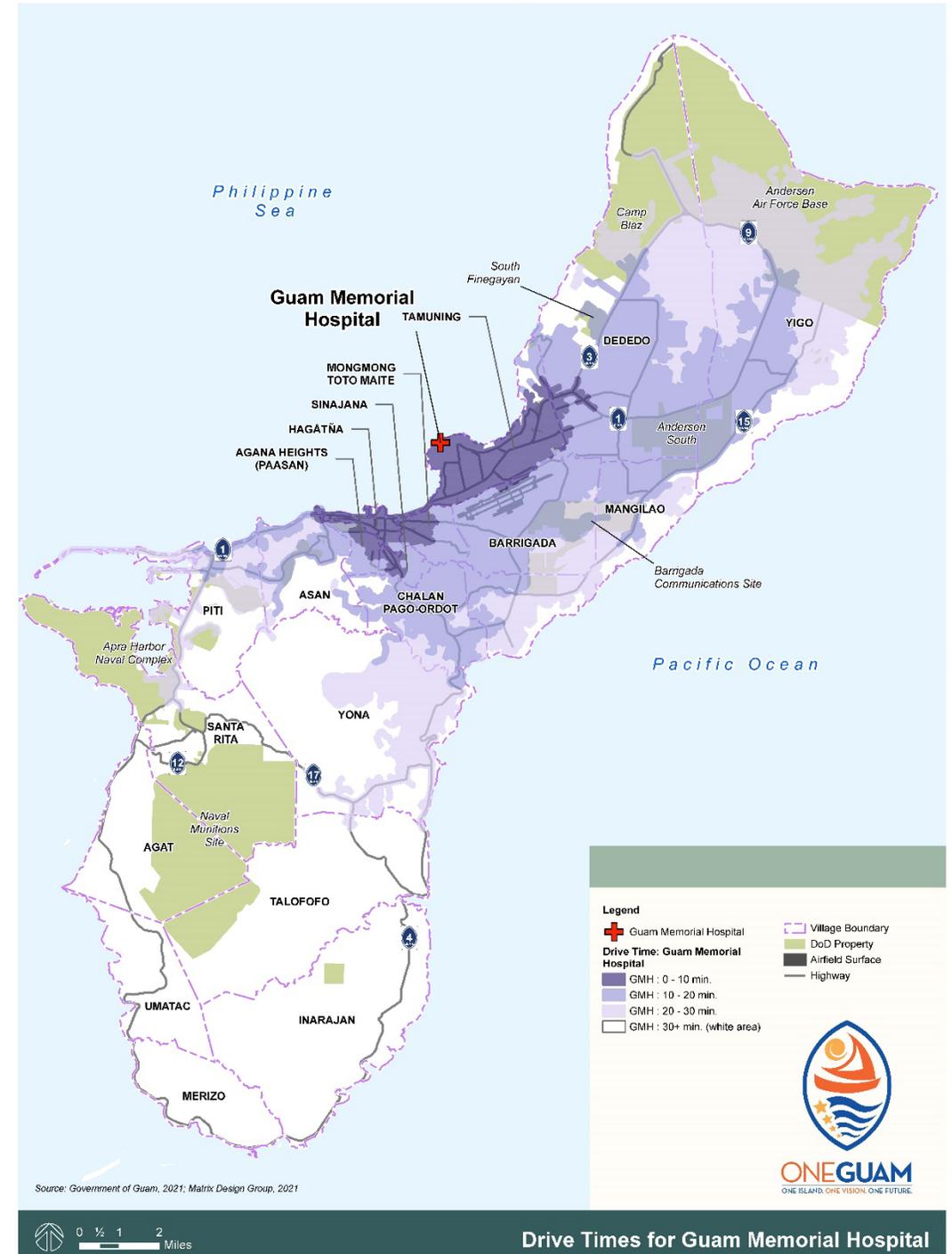


Hospital Helipad

GMH Drive Time Analysis

- Total service area 30 minutes or less: **133,867 people**

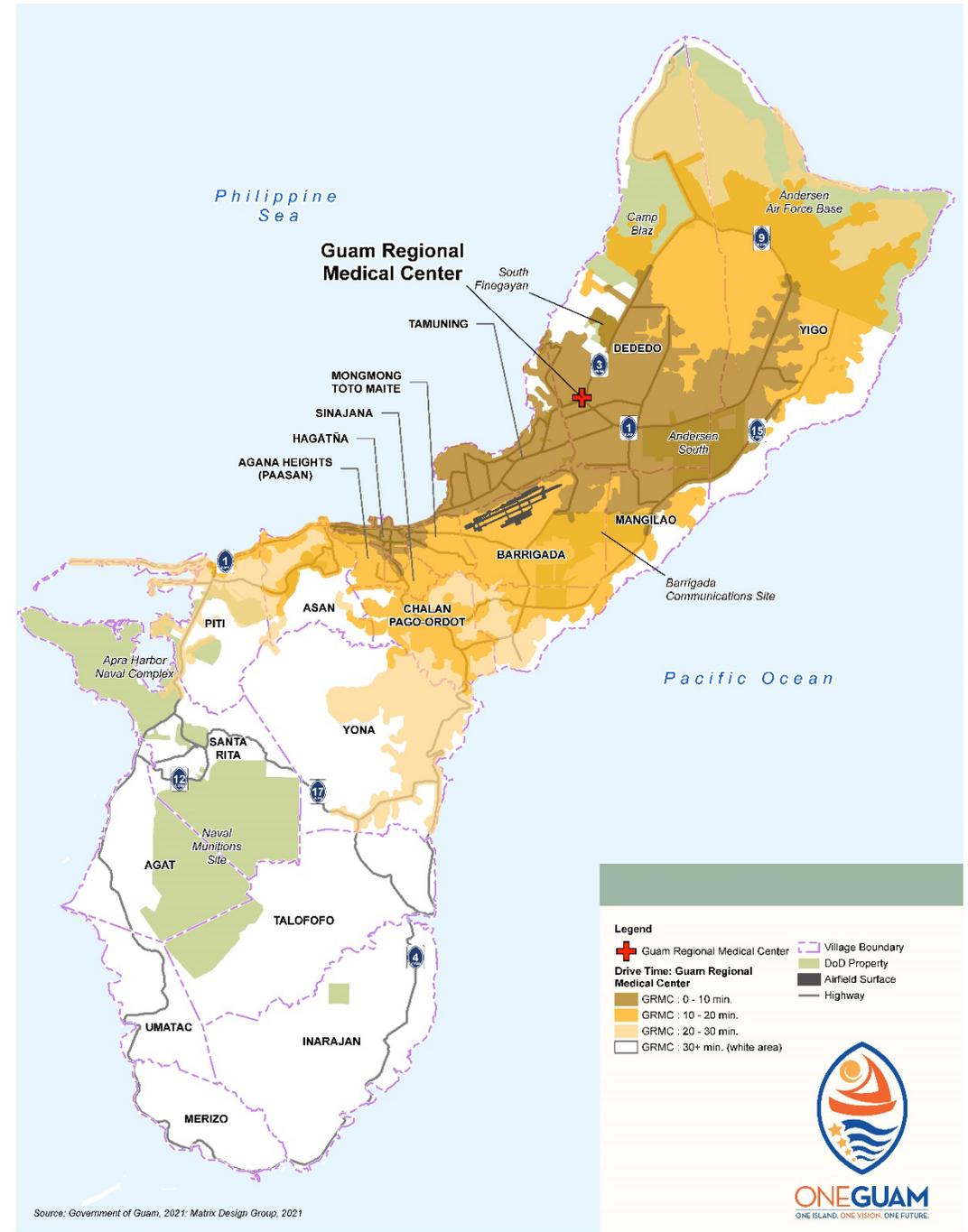
Time Period	Percent of Total Guam Population	Population	Difference from Previous Time Period
0 - 10 min	17.5%	27,898	-
0 - 20 min	62.9%	100,166	72,268
0 - 30 min	84.0%	133,867	33,701



GRMC Drive Time Analysis

- Total service area 30 minutes or less: **133,487 people**

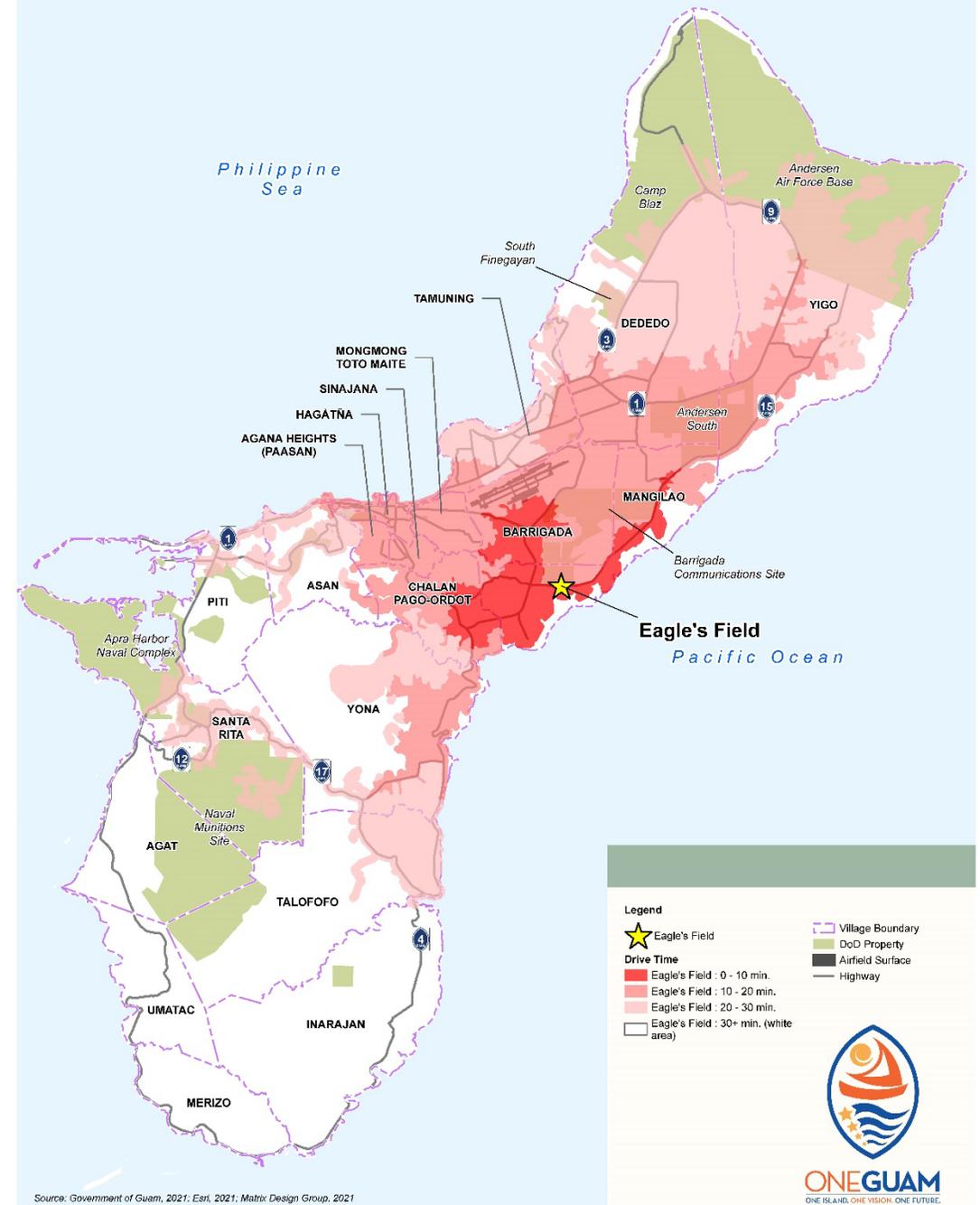
Time Period	Percent of Total Guam Population	Population	Difference from Previous Time Period
0 - 10 min	42.8%	68,128	-
0 - 20 min	74.7%	119,064	50,936
0 - 30 min	83.8%	133,487	14,423



Eagles Field Drive Time Analysis

- Total service area 30 minutes or less: **136,267 people**

Time Period	Percent of Total Guam Population	Population	Difference from Previous Time Period
0 - 10 min	10.6%	16,959	-
0 - 20 min	56.5%	89,965	73,006
0 - 30 min	85.5%	136,267	46,302



Source: Government of Guam, 2021; Esri, 2021; Matrix Design Group, 2021



Legend

- Eagle's Field
- Eagle's Field : 0 - 10 min.
- Eagle's Field : 10 - 20 min.
- Eagle's Field : 20 - 30 min.
- Eagle's Field : 30+ min. (white area)
- Village Boundary
- DoD Property
- Airfield Surface
- Highway



ONE GUAM
ONE ISLAND. ONE VISION. ONE FUTURE.

Utilities - Power

- GPA proposes building a power substation
- Requires 1 acre for infrastructure
- Trying to minimize costs
 - Total \$20 million dollars
- Duration will be 3 years
 - 1 year for design
 - 2 years for construction



Roads DPW Estimate

RT 15 Widening	\$20,000,000
RT 15 Traffic controls	\$ 1,000,000
RT 15 Intersections (3) 1-Main 2-Secondary	TBD
RT 10/RT 15 Intersection Upgrade	TBD
Internal Road System Cost per Mile	\$X,000,000
Total	\$30,000,000+

Preliminary Info by DPW

Utilities - Water

- **Hospital needs water storage tank on campus**
 - Supports domestic and fire flow water needs
- **On-site water pump and wells require 1 full acre**
- **Propose that One Guam Working Group address a potential well on Navy golf course to support medical campus**

Water GWA Estimate

Well Design & Exploration	\$20,000,000
Water Wells – 2 Wells	\$11,700,000
Water Storage – 2.5 MGals	\$7,215,000
Water Main – 6” Line	\$2,340,000
Pumping System	\$2925,000
Total	\$26,130,000

Utilities - Wastewater

- **Currently an 8-inch line near property**
- **Rehabilitated or upsized system is required for wastewater in area**
- **Sewer model has grey areas being updated by GWA**
- **Need to connect to gravity service across the street**

Wastewater GWA Estimate

RT 10 Sewer Upgrade – Pipes *	\$10,530,000
RT 10 Sewer Upgrade – Manholes *	\$585,000
Barrigada - Force Main *	\$9,177,000
Barrigada – Pump Station Upgrade	\$1,250,000
RT 1 Sewer Upgrade	\$4,500,000
RT 1 Sewer Upgrade - manholes	\$487,500
Total	\$26,469,500

Potential Cost Sharing with GWA - *

Provided By GWA

Wastewater GWA Estimate

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Potential Cost Sharing with GWA - *

Provided By GWA

Telecommunications Estimate

Fiber	\$5,000,000
Communications	\$5,000,000
Total	\$10,000,000+

- *Note: Estimate based on island wide upgrade and connection – working estimate only*

WORKING Estimate

Summary Infrastructure Costs

Power	\$20,000,000
Water	\$26,130,000
Wastewater	\$26,469,500
Roads / Highways	\$30,000,000+
Telecommunications	\$10,000,000+
Cost Factor 1.2	(\$22,519,900)
Total Estimate	\$135,119,400

Guam Medical Campus Conceptual Plan

Site Opportunities

- **Compact Development Design:** supports future hospital and medical facility expansion
- Future medical office space or educational training
Development Opportunity
- Considerable opportunity for parking (future parking structure provide additional related medical services growth)



Thank you!