



# GTA DATA CENTERS AND GUAM

# GUAM AND GTA

## UNIQUELY POSITIONED TO SERVE NETWORK CONNECTIVITY AND DIGITAL ACCESS TO CUSTOMERS IN THE ASIA PACIFIC REGION

Guam continues to attract investments from Cable consortiums consisting of private investors and large content providers as one of the world's major network hubs between the US and Asia Pacific markets.

GTA operates Guam's only modern purpose-built Data Center that provides the capability to host content for some of the world's largest companies.

GTA IX is rapidly becoming a logical edge data center for secure US content and as a regional connectivity hub.

- The GTA IX also houses a Cable Landing Station that lands JGA-North – and is connected to GTA CLS which lands Sea -US and JGA –South cables
- A dense ecosystem of international subsea cables land in Guam, including SEA-US, JGA-N, JGA-S, AAG, AJC, TGN and PPC1. Each of these networks can be accessed via the GTA IX

There are more people living inside this circle than outside it

Guam



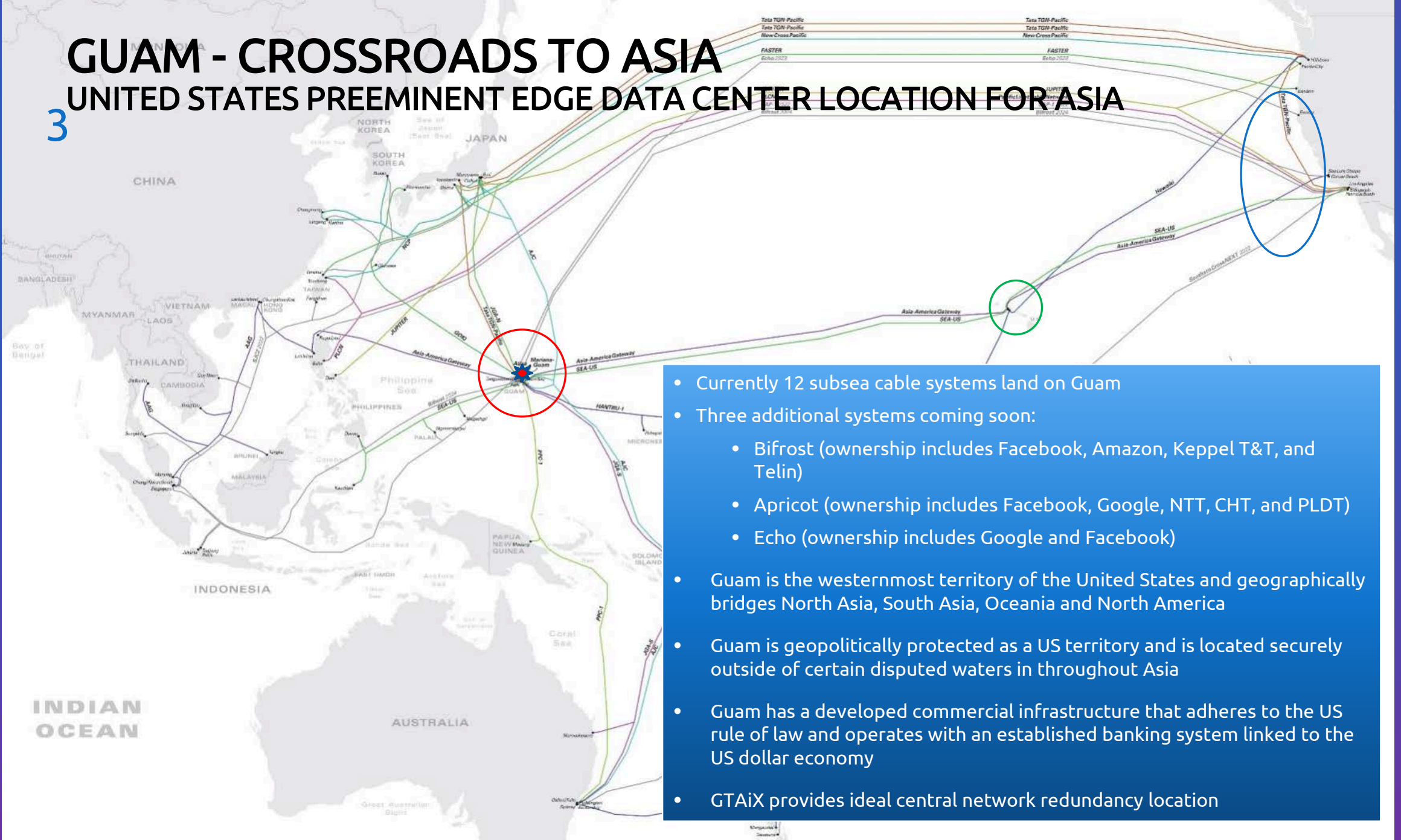
### Sources:

- [https://www.washingtonpost.com/news/worldviews/wp/2013/05/07/map-more-than-half-of-humanity-lives-within-this-circle/?utm\\_term=.ae009a738a03](https://www.washingtonpost.com/news/worldviews/wp/2013/05/07/map-more-than-half-of-humanity-lives-within-this-circle/?utm_term=.ae009a738a03)

# GUAM - CROSSROADS TO ASIA

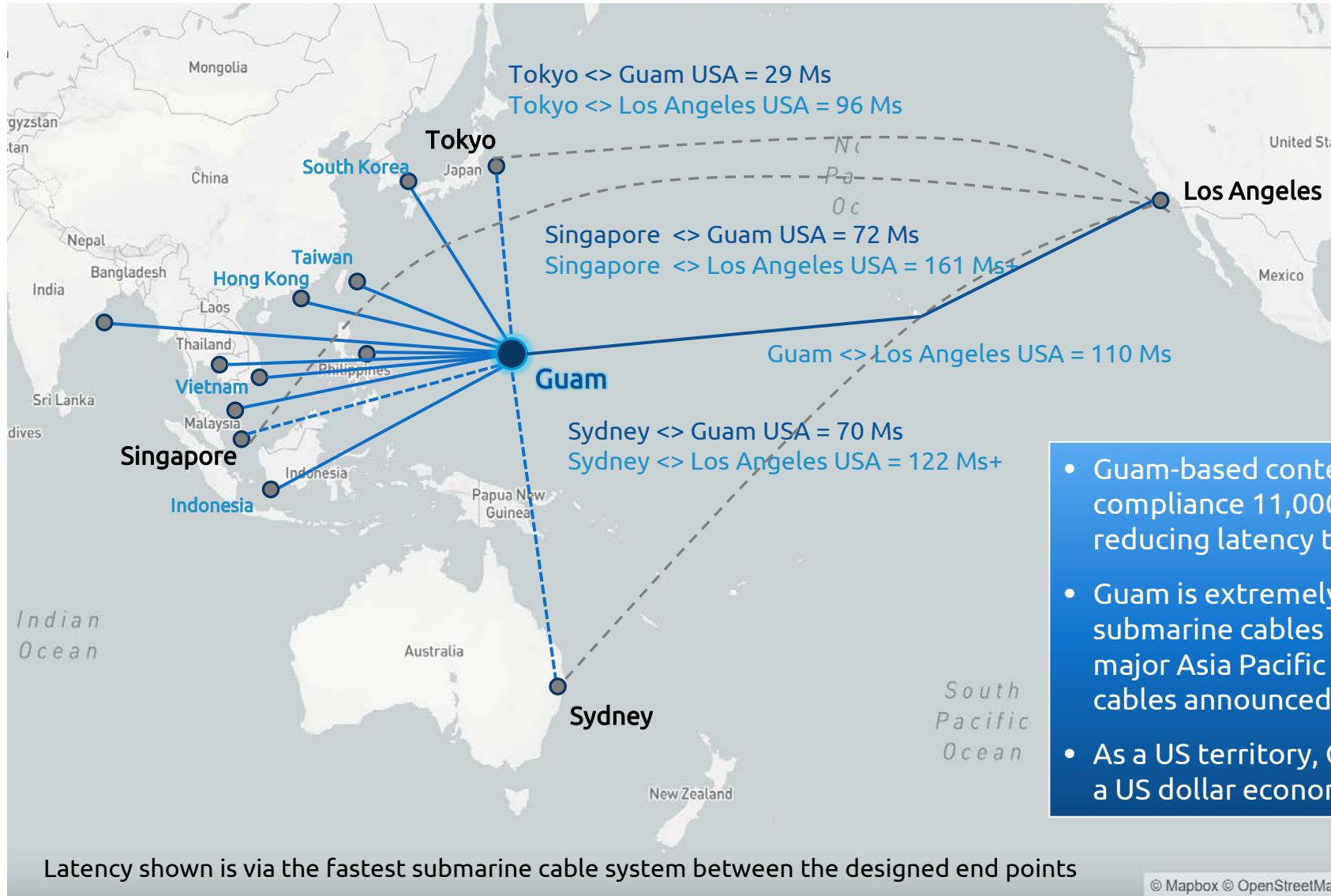
## UNITED STATES PREEMINENT EDGE DATA CENTER LOCATION FOR ASIA

3



- Currently 12 subsea cable systems land on Guam
- Three additional systems coming soon:
  - Bifrost (ownership includes Facebook, Amazon, Keppel T&T, and Telin)
  - Apricot (ownership includes Facebook, Google, NTT, CHT, and PLDT)
  - Echo (ownership includes Google and Facebook)
- Guam is the westernmost territory of the United States and geographically bridges North Asia, South Asia, Oceania and North America
- Guam is geopolitically protected as a US territory and is located securely outside of certain disputed waters in throughout Asia
- Guam has a developed commercial infrastructure that adheres to the US rule of law and operates with an established banking system linked to the US dollar economy
- GTAiX provides ideal central network redundancy location

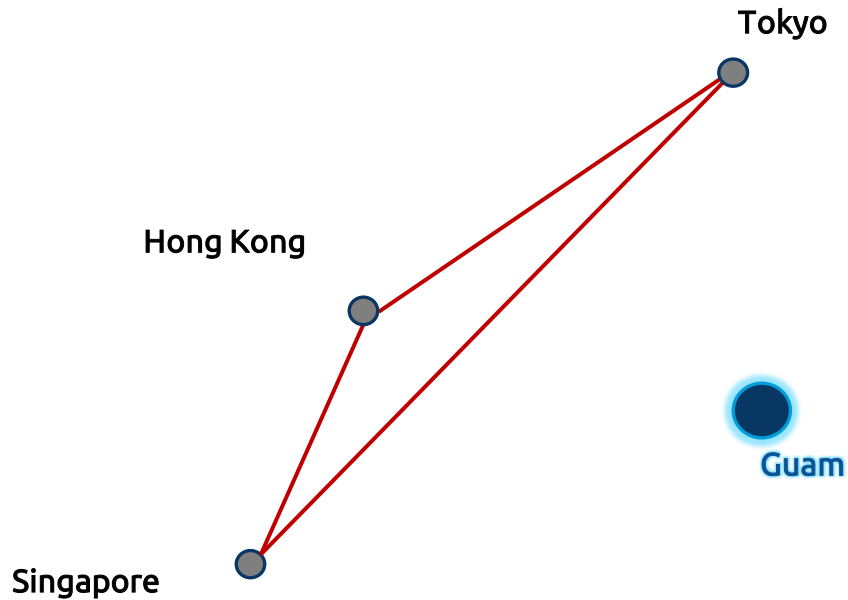
# GTA can be the ultimate edge Data Center for the US



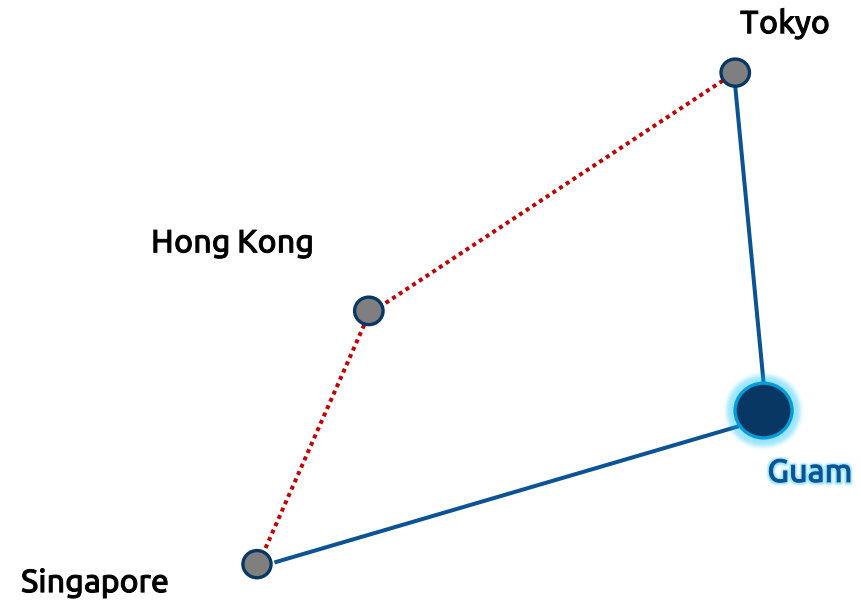
- Guam-based content shifts US Data Residency compliance 11,000 km closer to Asia, significantly reducing latency to access US-based content
- Guam is extremely well connected with 12 current submarine cables as of January 2024 that connect major Asia Pacific population centers with 3+ additional cables announced to land in the next three years
- As a US territory, Guam adheres to US rule of law and is a US dollar economy

Latency shown is via the fastest submarine cable system between the designed end points

# Redrawing the Asia Triangle

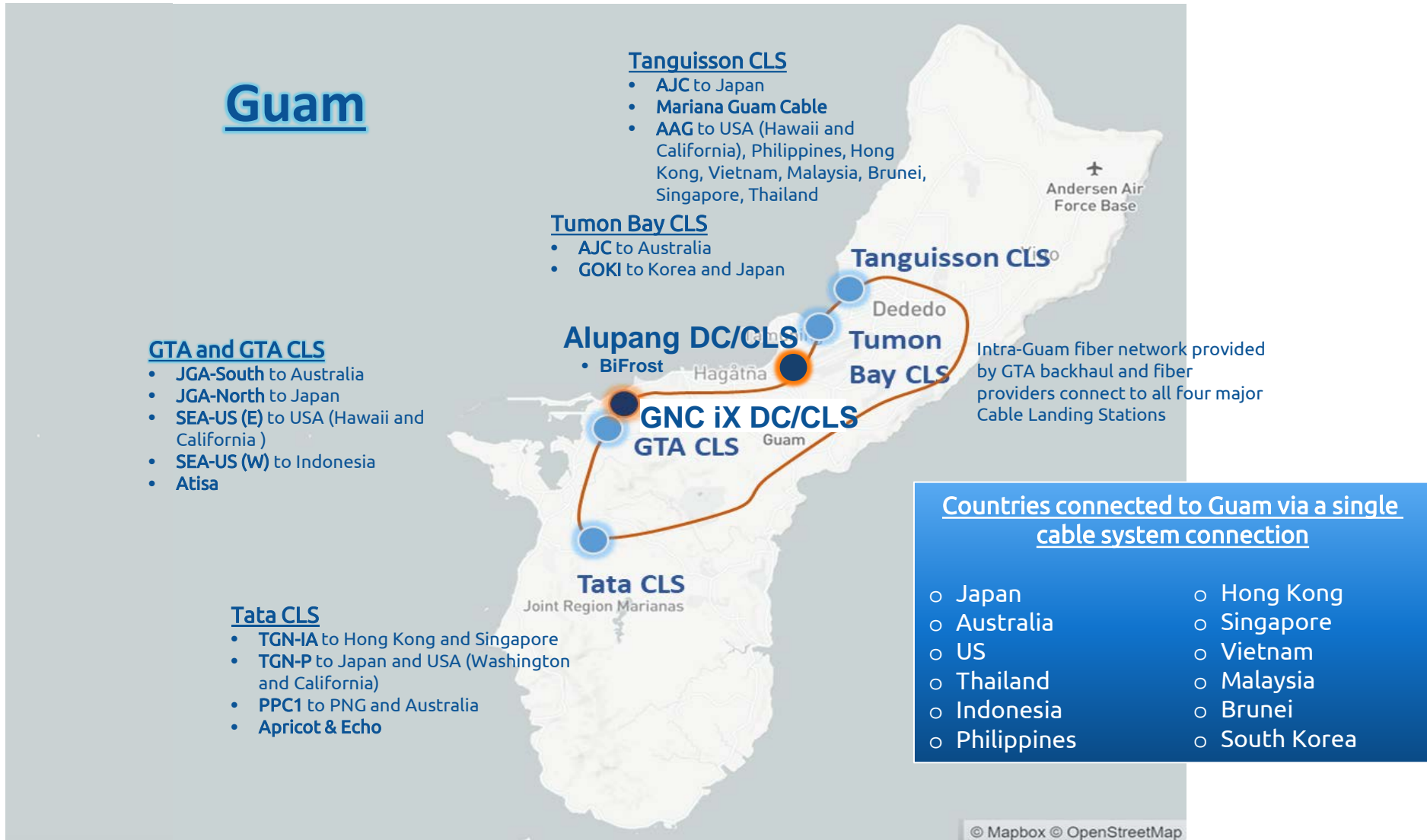


- Asia Network Triangle -- historically, defined by Tokyo, Singapore and Hong Kong (HK) with significant routing via South China Sea
- De-emphasis of HK has begun due to intensifying geopolitical issues
  - Loss of HK political independence
  - Loss of HK judicial independence
  - Increasing tension to transit thru the region
  - Permitting of critical new cables to HK has abruptly stopped



- Guam and the GTA is ideally situated outside of the contested South China Sea
- Guam is a US protected territory operating under US rule of law and utilizes US\$ currency
- Opportunity exists for GTA on Guam to off-take some of the content that is being de-emphasized in HK due to geopolitical concerns
- Content increasingly subjected to privacy concerns, data residency laws, and financial governance are prime candidates for relocation to Guam

# GTA Data Centers Provide Direct Cable Access to Global Population Centers via terrestrial fiber to all Cable Landing Stations on Guam



# GUAM'S MOST RELIABLE NETWORK

As Guam's longest serving communications provider, GTA's major investments and expertise allowed us to build a superior network infrastructure offering the best protection against harsh weather conditions.

- ✓ Fiber core network backbone designed by Ciena delivering up to 100G wavelengths
- ✓ Capacity Owner on the SEA-US undersea cable system connecting Guam and the U.S. mainland
- ✓ Dedicated Fiber to all cable stations, key government and commercial locations



**\$105M**

ANNUAL REVENUES

Based in Tamuning, Guam, GTA is a U.S. and locally owned company and locally managed.



**\$17M**

ANNUAL CAPEX

We are constantly investing in our network, with 40% going to our fiber infrastructure.



**475+**

EMPLOYEES

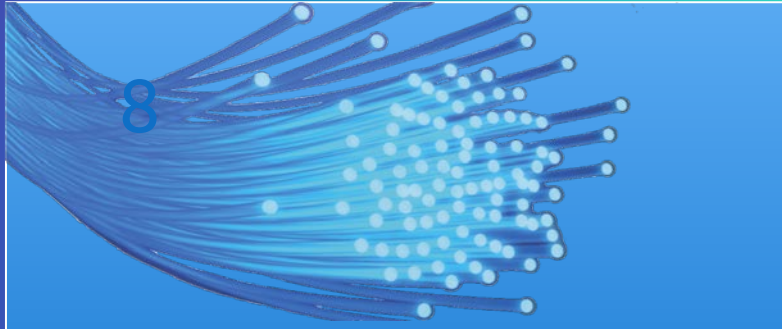
GTA employees are passionate about the company and its customers.



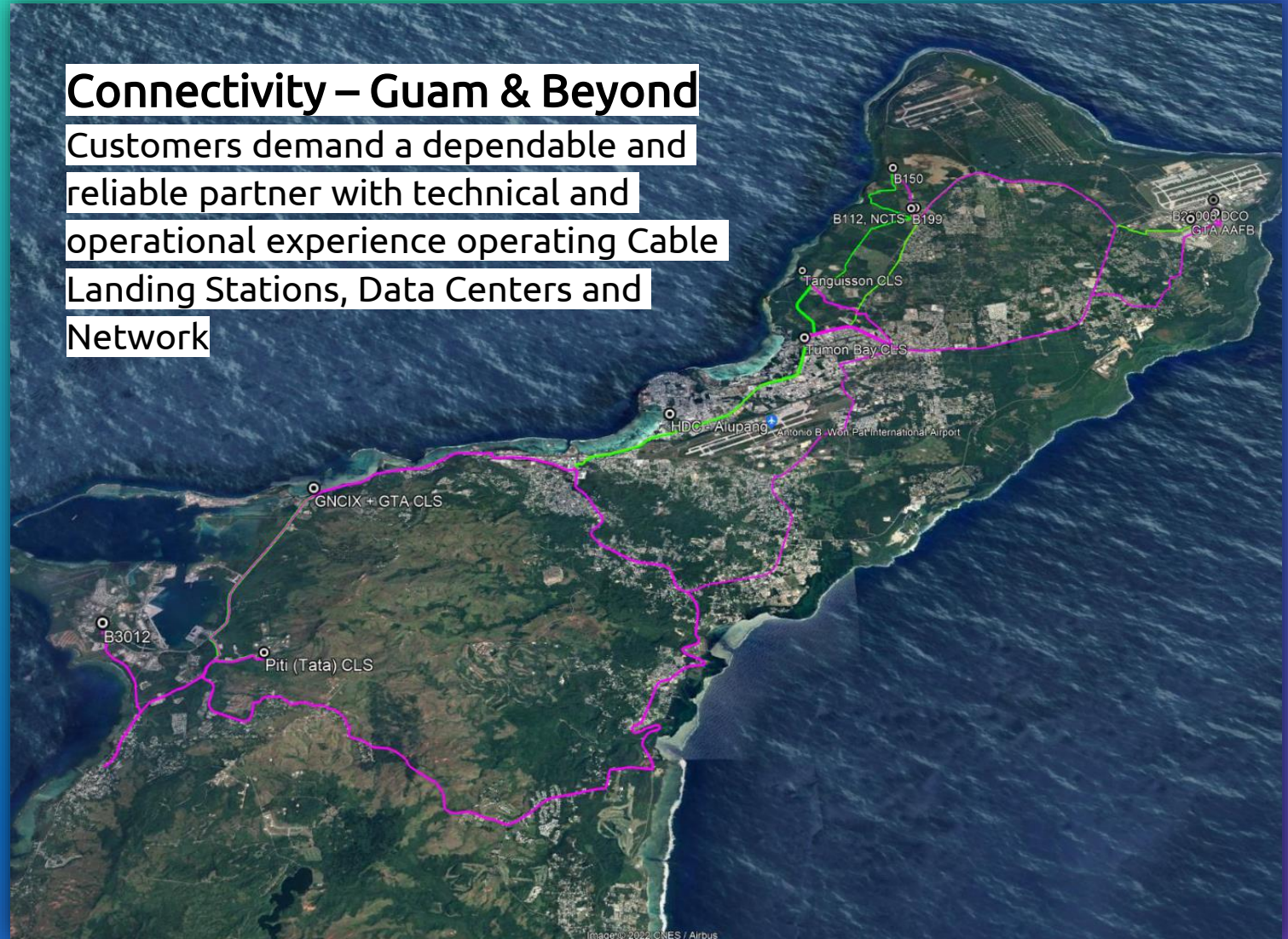
**250+**

MILES OF FIBER

Continued fiber deployment has improved GTA's network resilience and diversity.



- Extensive terrestrial fiber connecting all cable stations and key customer locations.
- Premier network supplier for Tier 1 carriers and US Intel Agencies protecting national security interests.
- Landing station operator and investor in SEA-US which extends end-end products and services to US.
- Regulatory experience and influence in local government permitting process.
- US ownership with Huntsman Family Investments. Only American owned full-service telecom and Datacenter provider on Guam.







# GTA GNC IX DATA CENTER

## Piti, Guam

# GTA GNC iX Exterior View

- Reinforced concrete structure engineered to withstand extreme geological and weather events:
  - Seismic Zone 4 – (Guam is in Zone 3)
  - Storm rating of 190mph+ Category 5 hurricane
  - Withstand tsunamis and floods:
    - 10 feet raised floor for all electrical equipment
    - 22 feet from location high-water mark
- Complies with Tier 3 Data Center Standards
- Land space 20,000+ SQF



# GTA Piti Interior View and Facility Specifications

## Data Hall 1



## Data Hall 2



## Battery Room



## Generator Room



## Building / Floor Specifications

- Building floor space 11,800 SQF
  - Data Hall Total – 7,000 SQF (includes HVAC, AC/DC, IT Space)
  - Saleable space - 3,500+ SQF (IT space only)
- Floor Structure – VCT (vinyl composite tile) on reinforced concrete slab
- Ceiling Height – 14 feet at minimum

## Power Specifications

- AC Power System – Bank-A and Bank-B redundant system with Vertiv/Liebert EXM 3-phase AC UPSs
  - 1-phase 120V
  - 3 phase 208V
- DC Power System – Bank-A and Bank-B redundant system with Alpha Technologies CXPS-HK DC rectifiers
  - 48V DC
- Batteries – NorthStar or equivalent
- Backup Generators – Caterpillar C32 1MW diesel generators
  - N+1 configuration where N=2 at final
  - Fuel tanks for 6 days at full 2 MW capacity

# GTA GNC iX Data Center

- Designed to Tier 3 data center compliance standards
- Manned 7x24x365 by an expert NOC team for mission-critical support
- Carrier-neutral 2MW facility
- 11,800 total square feet of floorspace
  - 7,000 square feet of Data Hall
- Fully redundant power infrastructure design
  - 2N UPS redundancy
  - N+1 stand-by power redundancy
  - N+1 cooling redundancy
- Meets or exceeds ratings for seismic and weather-related benchmarks

- Available Colocation Configurations:
  - Secure Cabinet
    - 2 to 8 kilowatts per cabinet
  - Secure Cage / Private Suites
    - Customized cage and private suite solutions to meet your specific needs
- Support Services:
  - Structured Cabling
    - GNCiX manages all wiring from client cabinet, cage or suite to network room
    - Compliance with industry standards
  - Remote Hands
    - Skilled technicians available 24x7
  - Interconnections
    - Cross Connect within GNCiX
    - IP Bandwidth
    - Ethernet & Wavelength backhaul from 2M to 100G

# GTA GNC iX Floorplate – Second Floor Data Hall 1 and 2

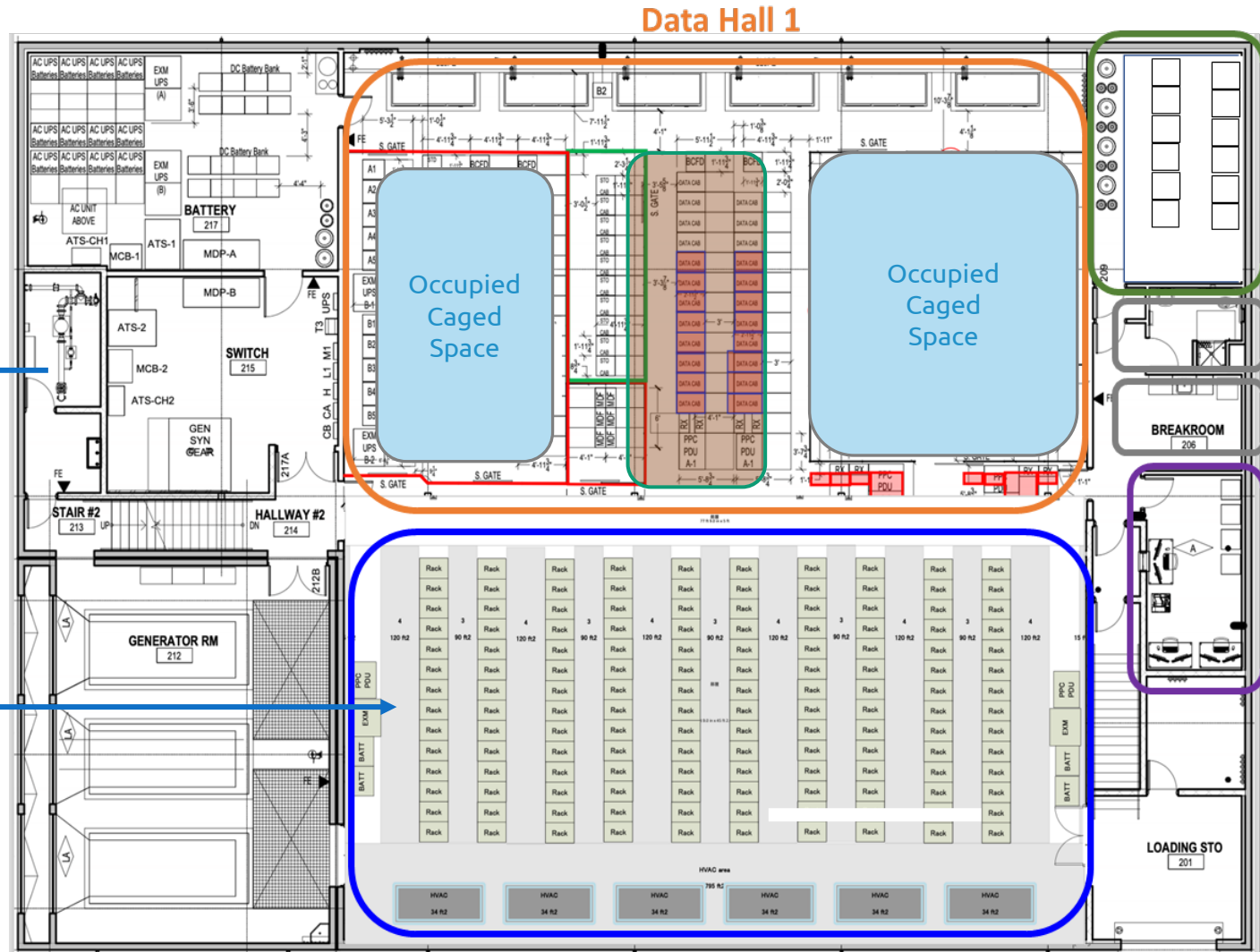
## Data Hall 1

Location of Private Cages and Common Colo Area that accommodates ~ 20 Standard Size 44 U Cabinets (24" x 36")

## Data Hall 2

Flexible Colo Area can accommodate a wide range of Cabinet, Cage or Suite configurations:

- Up to 140 individual Cabinets
- Up to 12 150 SQF Cages (supports 6 cabinets)
- Up to 6 300 SQF Cages (supports 13 cabinets)
- Up to 3 480 SQF Cages (supports 26 cabinets)
- Combinations of any of the above



Data Hall 1

Data Hall 2

Secure  
Climate-  
Controlled  
On-Site  
Storage

Restroom

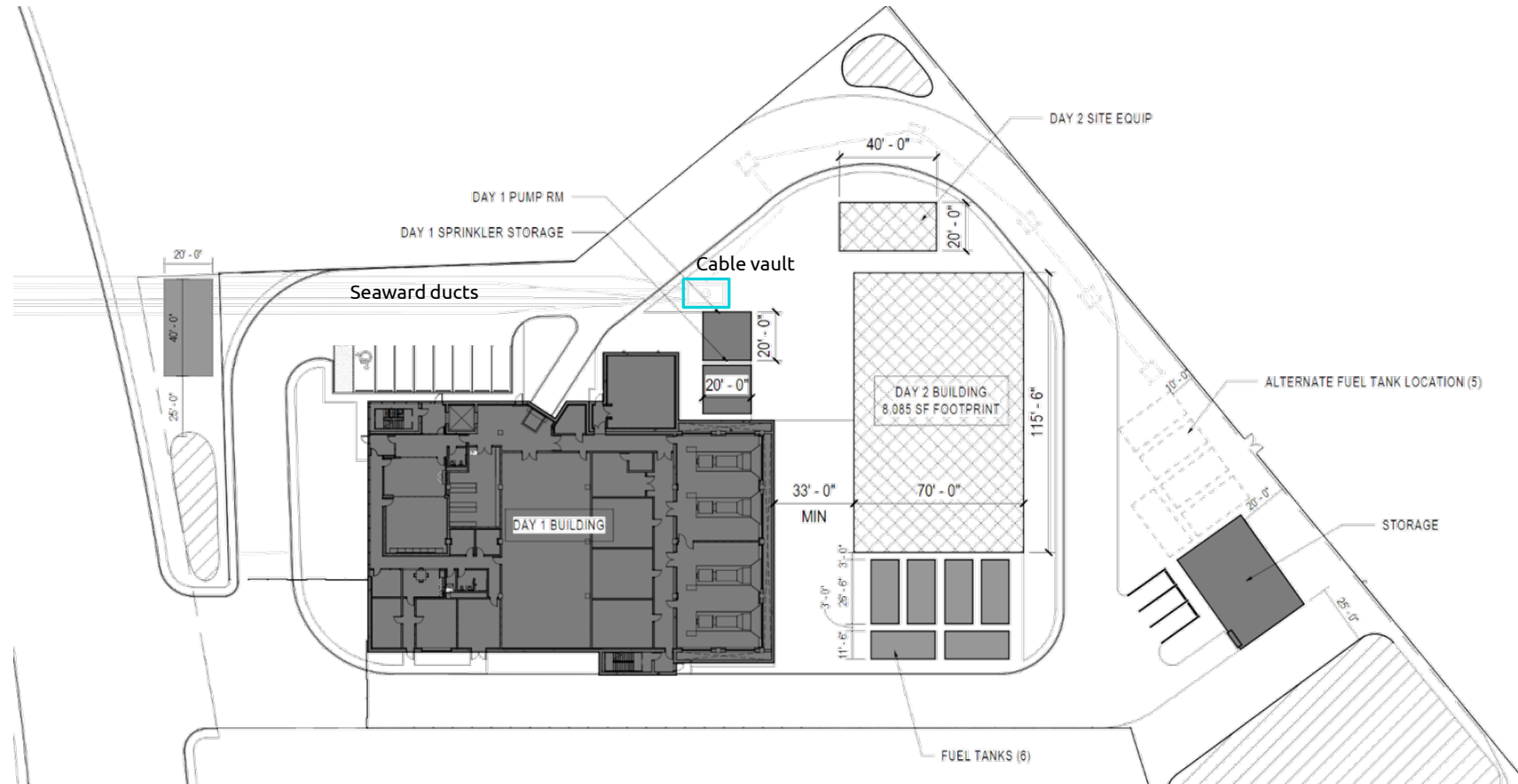
Breakroom

NOC



COMING SOON  
GTA ALUPANG DATA CENTER  
Q1 2025 OCCUPANCY

# GTA Alupang Data Center – Site Layout



# ALUPANG BUILDING OVERVIEW LEVEL 1

## Ready for Equipment: Q1 2025

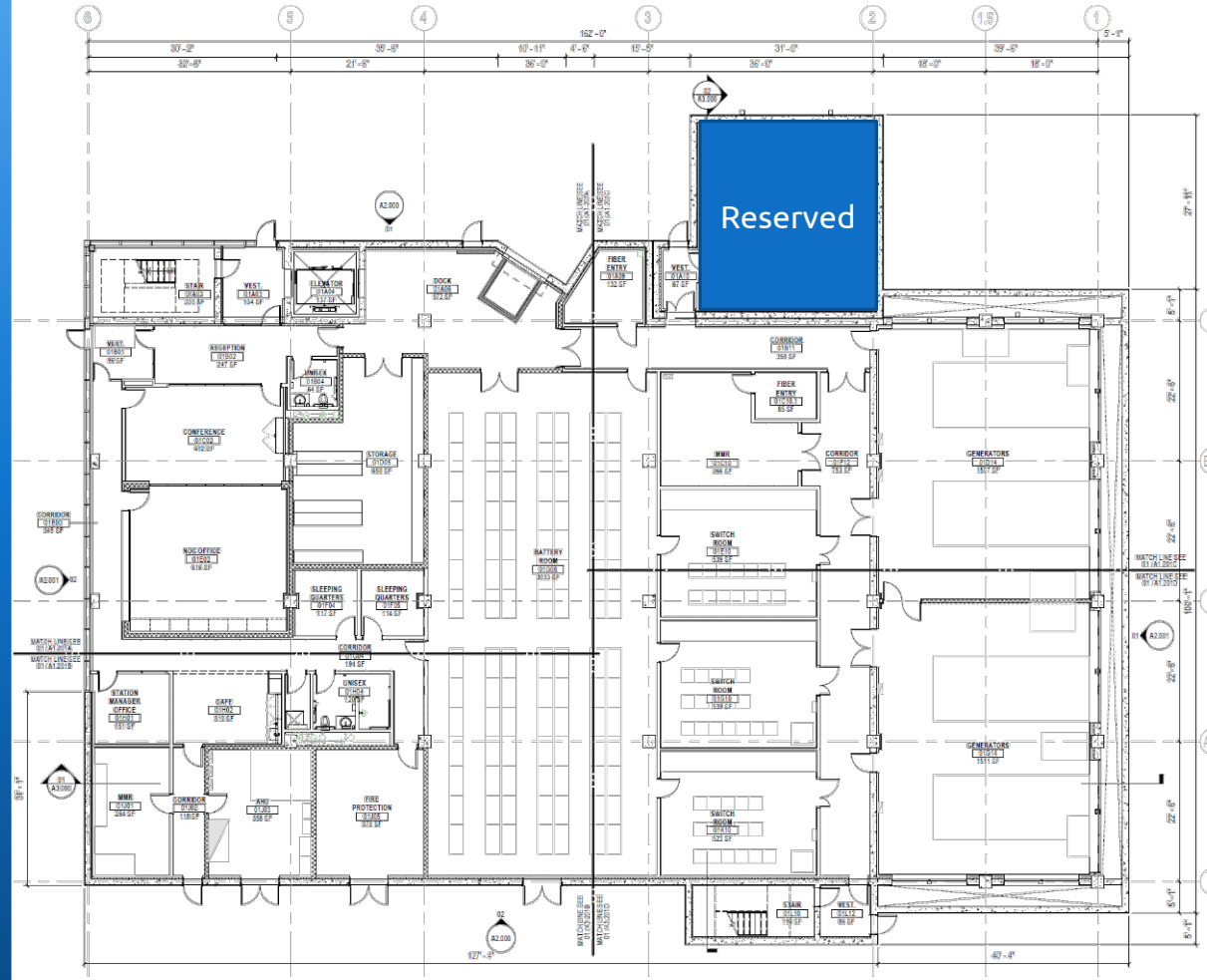
- 24x7 NOC onsite
- 24x7 Hands & Feet
- Ability to expand facilities with Day 2 build

## Building / Floor Specifications

- Data Hall IT Space – 807sqm/8,688sqft (excludes HVAC, CRAC and AC/DC)
- Ceiling Height – 14 feet at minimum

## Power Specifications

- AC Power System – A+B redundant system with 3-phase AC UPS
  - 1-phase 120V
  - 3 phase 208V
- DC Power System – A+B redundant system DC rectifiers
  - 48V DC
- Batteries – ENERSYS
- Backup Generators – 2.4MW diesel generators
  - N+N+1 configuration
  - Fuel tanks for 5 days (120 hours) at full DC capacity

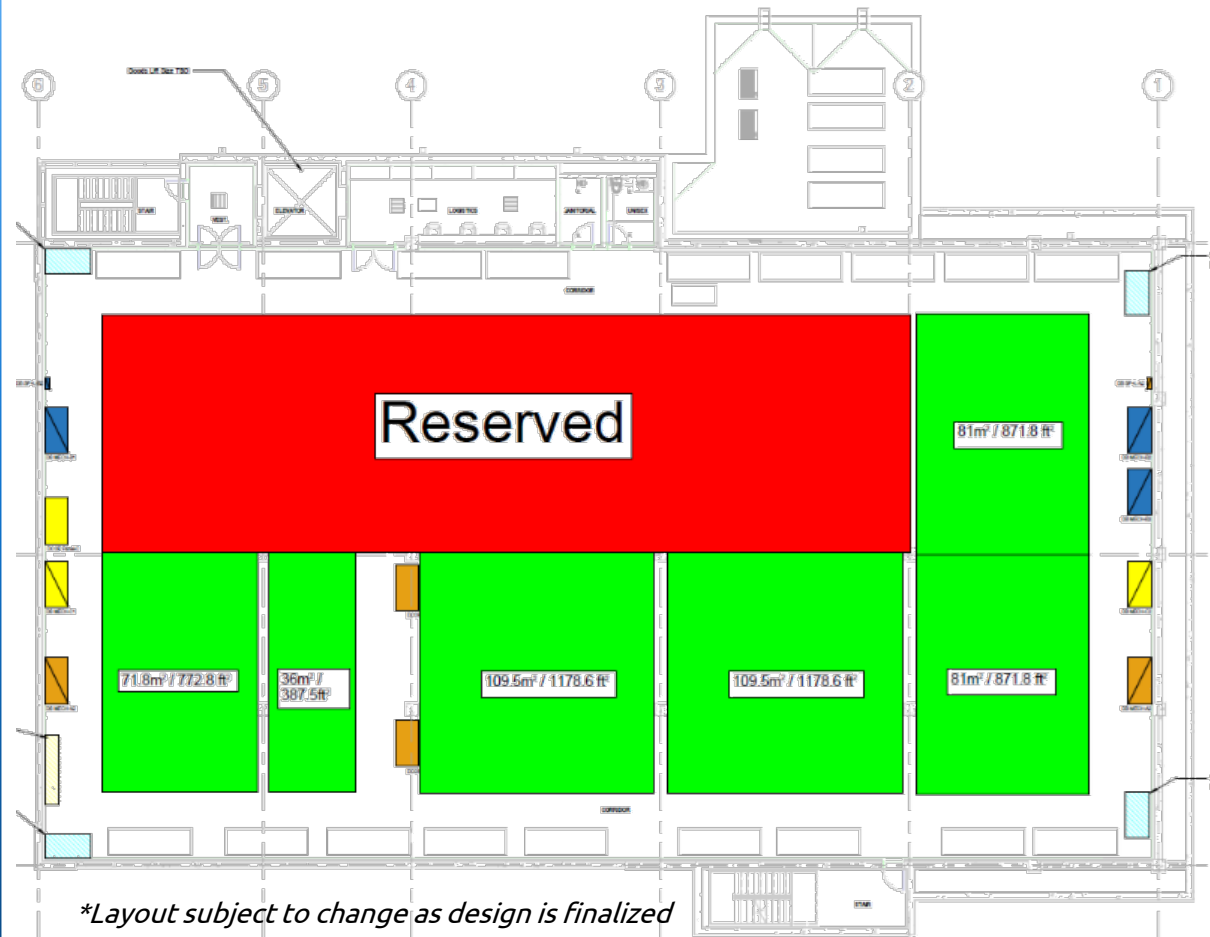




## ALUPANG BUILDING OVERVIEW LEVEL 2 - DATA HALL

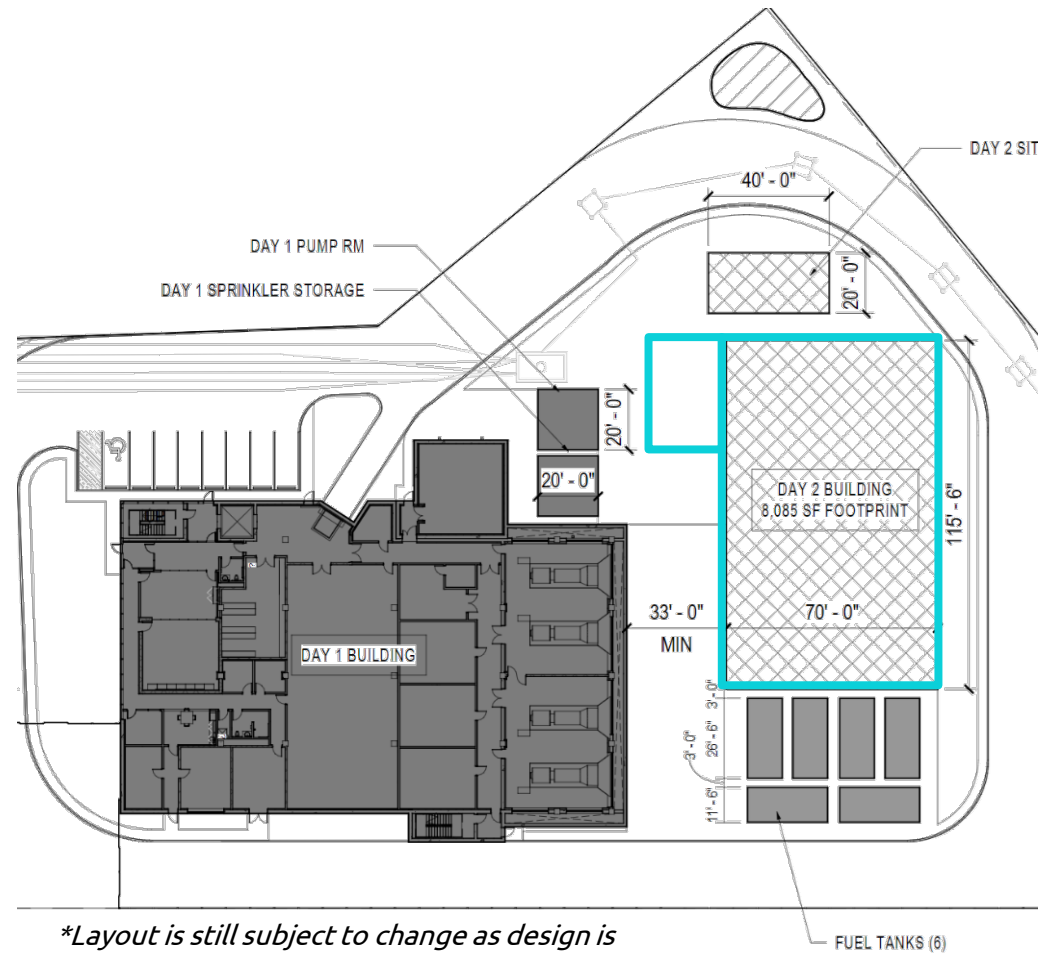
| Space            | kW           | sqm        | sqft         |
|------------------|--------------|------------|--------------|
| Data Hall        | 3,500        | 1,080      | 11,620       |
| IT space         | 2,000        | 807        | 8,650        |
| Reserved         | 950          | 314        | 3,376        |
| <b>Available</b> | <b>1,050</b> | <b>493</b> | <b>5,274</b> |

- Cage configurations are adjustable to meet needs of customer
- Additional space available with Day 2 build



# ALUPANG PHASE 2 BUILD OUT

Additional 8,085 sq ft of Data Hall Space



*\*Layout is still subject to change as design is finalized*

# ALUPANG DATACENTER M&E REQUIREMENTS

| Description                               | Build   |
|---|---|
| Main Switchgear                           | N+N   |
| Gensets                                   | N+N+1 configuration; 2.4MW gensets<br>Total Load: 3.5MW<br>IT Load: 2MW<br>Fuel run time 5 days (120 hours) at full DC capacity |
| DC Plant                                  | N+N (A+B)   |
| Battery backup for DC equipment full load | A=30min + B = 30min = 1 hour  |
| Air Cooled Chillers                       | Heat Rejection System with N+2  |
| CRAC                                      | N+2   |
| All outside M&E plant materials           | M&E plant designed to be corrosion resistant to sustain Guam's environmental conditions   |
| Mechanical and Electrical:                | Concurrently maintainable and fault tolerant  |

# CONTACT US

Learn more about GTA Data Centers at [www.gta.net/data-center](http://www.gta.net/data-center)

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