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# Antonio B. Won Pat International Airport Master Plan Update

Appendix A – IT Infrastructure

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# Appendix A: IT Infrastructure

## A.1 Existing Conditions

On April 8, 2022, the AECOM Airport Master Planning Services team met with A.B. Won Pat International Airport Authority, Guam (GIAA) Information Technology (IT) staff to discuss the current in-place systems that are leveraged to manage operations to better understand what improvements should be referenced in the Antonio B. Won Pat International Airport (Airport) Master Plan Update. While the existing system functionalities do support daily operations, many systems are outdated and in need of replacement due to antiquated operating systems, such as Microsoft Windows 3.1 and Microsoft XP, and vendor solutions that are no longer supported.

Modern technology offerings can introduce efficiencies into daily activities at the Airport and should be considered. For example, there is no access to Geographic Information Systems (GIS) data that could be used to simplify airfield inspections, track and manage assets, conduct maintenance activities, and monitor Airport security.

Currently, there are four GIAA IT staff members supporting the needs of more than 200 Airport employees. These employees are responsible for resolving IT tickets and managing the aging infrastructure to keep the existing network operational. Should GIAA implement updated solutions, end-users will require extensive training, and policy procedures will need to be developed in order to introduce efficiencies into daily work functions.

**Table A-1** lists the existing systems and commentaries that were voiced during the initial meeting with GIAA IT employees. The AECOM Airport Master Planning Services team recommends that GIAA conduct a thorough review of the in-place systems to develop a comprehensive understanding of all requirements.

**Table A-1. Existing GIAA IT Infrastructure**

| System | Vendor | Current Offering | GIAA Comments |
|---|---|---|---|
| Airfield Lighting System | Various | • Runs on Microsoft XP.<br>• (Supported 2001–2007) | • System is dated (24 years old); equipment for system is scarce and, in most cases, must be customized or specially made. |
| BHS | Siemens | | |
| BagLink Message Server | Collins Aerospace | • Enables baggage to be sorted and routed remotely to save time, decrease costs, and minimize errors. | |
| BMS – Air Conditioning | Johnson Control | | |
| BMS – Lighting | Honeywell | • No longer supported. | • Controls only work for the west side of the commercial passenger terminal while the east side is manual. |
| Cellular | Docomo | | • Managed by Airport Operations. |
| Document Control | | | • Issues include network drives, disorganized file repository, and no file structure.<br>• GIAA has Teams/SharePoint, but it is not used.<br>• There is a need to overhaul GIAA's scanning solution to meet automation demands. |
| Event Management | SysAid | • Ticket automation; sorts, routes, and sends tickets to the correct desk. (Task and Workflow Automation) | • Still use handwritten notes and emails with no consistent format.<br>• SysAid was procured 10 years ago but never implemented. |

| System | Vendor | Current Offering | GIAA Comments |
|---|---|---|---|
| FIDS/BIDS/GIDS | Industrial TV Systems<br>Flight Ports | | • GIAA uses a cloud-hosted solution.<br>• The FIDS/BIDS screens were installed more than 4-5 years ago and are showing fatigue.<br>• The average life of a monitor is 50,000 hrs. (approx. 5 years).<br>• May need to install much larger monitors for departure area and Heritage Hall. |
| Finance | JD Edwards<br>Airplane<br>Rockwell Collins | | • GIAA's financial database system includes Ledger, Journals, Accounts Payable, Accounts Relievable, Budgeting, Payroll, HR, Property Management, Aircraft Activities, Fixed Assets, Procurement, Inventories, and Job Cost. |
| IBM AS400 | IBM | | • All FMS-related programs from JDE to Kronos resides on the AS400.<br>• This ensures the AS400 has replaceable parts and certified technicians should the system experience any downtime issues. |
| Learning Resource Center | | | • There is a need to develop virtual learning centers. |
| MUSE | Collins Aerospace | • Shares resources to reduce operating costs. | • All common use terminal equipment but United Airlines does not use MUSE. Airlines provide info (weight, passenger weight, etc.) and Airport Operations enters information for the gate assignment. |
| Paging System | Innovative Electronics | • Runs on Windows 3.1.<br>• (Succeeded in 1995 by Windows 95) | • System was installed in 1996; however, it is not supported and difficult to receive parts. |
| Payroll Tax Table Support | Vertex | | • Vertex maintains all laws concerning the GIAA payroll process and upgrades as necessary.<br>• Tax tables are updated continuously. |
| People Movers | | | • Two existing disparate systems: Newer system used for Corridors 3 & 4 and older system still works.<br>• Otis Elevator manages the elevators. |
| Phone | | | • GIAA is planning to bid for an update. (VoIP) |
| Radio | Motorola | | • Managed by Airport Operations. |
| Safety Management System | | • Logs incidents into a database to run reports on safety concerns. | • Currently no system in place, but the FAA may require it soon. |
| SACS | Software House apC 8000/9000 | • Provides high performance and offers intelligent access control and alarm monitoring functionality.<br>• Software House apC controllers are ideal for organizations large or small.<br>• apC/8X is best suited for larger organizations, while apC/L, the two-reader version, is more suited for smaller installations such as retail outlets and apartment complexes. | • Analog cameras are currently being updated to IP cameras.<br>• Panels and card readers will require replacement because they are no longer supported.<br>• Many devices have been online anywhere from 5 to 20 years.<br>• Airport police manually track incidents. |

| System | Vendor | Current Offering | GIAA Comments |
|---|---|---|---|
| Timekeeping | NovaTime | | • Cloud hosted. |
| Wi-Fi | Ruckus Access Points | | • Devices in the commercial passenger terminal are maintained by IT, but status is not monitored.<br>• Difficult to know when there is an issue until there is a complaint.<br>More tourism than business leads to less of a need for dependable Wi-Fi. |

*Note:*

*A. Abbreviations*
*BHS = Baggage Handling System*
*BMS = Building Management System*
*FIDS = Flight Information Display System*
*BIDS = Baggage Information Display System*
*GIDS = Gate Information Display System*
*IBM = International Business Machines Corporation*
*AS = Application System*
*MUSE = Multi-User System Environment*
*SACS = Security Access Control System*
*GIAA = A.B. Won Pat International Airport Authority, Guam*
*HR = Human Resources*
*FMS = Financial Management System*
*JDE = JD Edwards*
*VoIP = Voice over Internet Protocol*
*FAA = Federal Aviation Administration*
*IP = Internet Protocol*
*IT = Information Technology*

*Sources:*

1. *AECOM*
2. *GIAA IT Staff*

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# Antonio B. Won Pat International Airport Master Plan Update

Appendix B – Facility Condition Assessment

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# Executive Summary

## Introduction

At the request of the A.B. Won Pat International Airport Authority (GIAA), AECOM conducted a facility condition assessment (FCA) of four facilities located at the Antonio B. Won Pat International Airport (Airport). Our study was two-fold: first, AECOM was tasked with evaluating the existing structures, their condition, and their general compliance with current governing codes; second, AECOM was asked to evaluate the capital investments required for the facilities for a 10-year evaluation term. The FCA and subsequent capital planning effort were conducted as part of a Master Plan Update. AECOM's general approach to the project involved a series of site visits to conduct the field assessments along with analyses and planning associated with identifying the capital investments required, both presently and for the future. The current investments were identified to return the Airport facilities to a general State of Good Repair. The facilities evaluated for this effort are detailed in the table below.

**Table ES-1: List of Facilities Evaluated**

| Facility | Facility Code | Address | Floor Area, SF[1] |
|---|---|---|---|
| Commercial Passenger Terminal | MAIN | 355 Chalan Pasaheru, Tamuning, 96913, Guam | 944,251 |
| Fueling Station | FUEL | Not Identified | 1,824[2] |
| ACI Hangar | ACIH | 3404 Neptune Ave, Barrigada, Guam | 40,392 |
| United Hangar | UNIH | Neptune Ave, Barrigada, Guam | 60,157 |

Notes:
1. Floor areas are approximate and were scaled from floor plans provided by Client.
2. Area shown reflects only the building located at the Fueling Station.

The field effort was conducted by a team from AECOM, along with our local teaming partner, E.M. Chen & Associates. The technical team was on site from Monday, February 21, 2022, through Thursday, March 3, 2022.

The Main Terminal (MAIN) was a commercial passenger terminal which was broken into five floor levels: the Baggage Level, the Apron Level, the Concourse Level, the Roof Level, and the Tower Level. In addition to operational areas such as ticketing areas, baggage claim, gates, security/customs areas, and administrative and service areas, there were also a number of third-party concession spaces—mostly on the Concourse Level. A list of the concessionaires is provided in the table below. The commercial passenger terminal was originally constructed in 1982 with a major terminal expansion completed in two phases, which were completed in 1996 and 1998, respectively.

**Table ES-2: List of Commercial Passenger Terminal Concessionaires**

| MAIN Level | Name | Floor Area, SF |
|---|---|---|
| Apron Level | Sissie Café | 791 |
| Concourse Level | Lotte Duty Free | 1,296 |
| Concourse Level | *Vacant Space* | 364 |
| Concourse Level | *Vacant Space* | 2,506 |
| Concourse Level | Kiosk Area | 550 |
| Concourse Level | *Vacant Space* | 1,836 |
| Concourse Level | *Vacant Space* | 1,303 |
| Concourse Level | Sakura Money Exchange | 72 |
| Concourse Level | West Food Court | 1,903 |
| Concourse Level | Main Food Court | 5,465 |
| Concourse Level | Big Nama | 350 |
| Concourse Level | Weinerschnitzel | 276 |
| Concourse Level | Burger King | 959 |
| Concourse Level | Golden Bowl | 268 |
| Concourse Level | Dominos | 382 |
| Concourse Level | Micronesia Munchies | 367 |
| Concourse Level | Tentakomai | 360 |
| Concourse Level | Ramen Ya Oasis | 1,150 |
| Concourse Level | Clippers | 2,878 |
| Concourse Level | Lotte Duty Free | 24,095 |

The two hangars (Aviation Concepts, Inc. [ACIH] and United [UNIH]) were facilities capable of housing commercial aircraft. The hangars included standard hangar doors. Each hangar also included office areas (some two-story spaces).

The Fueling Station was designed to hold and distribute jet fuel for the aircraft (via fuel trucks). The facility included three large storage tanks, distribution piping and pumps, and a small administrative office. The fire suppression water tank was located at this location. The site also included two support buildings, one for housing the fire pump and main electrical substation and one for housing a back-up generator.

## Scope of Work

The scope of work involved an FCA of the subject facility and was performed in an effort to provide information about the current condition of the various building systems and assets. Additionally, AECOM was tasked with evaluating the presence of potential hazardous materials. The overall result of the FCA and hazardous materials survey was to establish feasible options for returning the facility to a State of Good Repair along with the associated costs of doing so.

The focus of this report is to detail the process and results of the condition assessments. AECOM's goals for the project were:

1. Create a detailed "inventory of assets" – Defined as a register of capital assets and information about those assets.
2. Develop a condition assessment of inventoried assets – Defined as ratings of the assets' physical states; should be at a level of detail sufficient to monitor and predict performance of inventoried assets.
3. Provide capital investment projections for current and future repairs, replacements, and renovations.

In order to achieve the goals established for this project, AECOM deployed a qualified field team to the site for 9 days. Prior to deployment, AECOM developed a digital application for data collection and assessment and trained our field staff.

Data were collected using a standard Uniformat II hierarchy. The following systems were assessed as part of the site reconnaissance for the project:

- Exterior Site Elements
- Building Structure Systems
- Building Exterior Systems
- Roof Systems
- Life and Fire Safety Systems
- Mechanical Systems
- Electrical Systems
- Plumbing Systems
- Building Interior Systems
- Conveyance Systems

The assessments included a site reconnaissance, limited interviews with Airport staff and on-site personnel, and a review of available documents as provided by the GIAA. Operational testing of building systems or components was not conducted.

The recommendations within this report focus on the scope of work required to return the building to a State of Good Repair (SGR) and to establish a plan for capital projects for the next 10 years. As part of the effort, issues such as structural and shell deficiencies; heating, cooling, and ventilation deficiencies; electrical deficiencies; fire and life safety deficiencies; emergency egress requirements; and conformance with the Americans with Disabilities Act (ADA) have been considered. Site areas were generally not accessed as part of the scope.

## Conclusion

The MAIN and ACIH were in general States of Good Repair (overall SGR Rating above 3.0). Alternatively, the FUEL and UNIH were generally rated as Not in Good Repair (overall SGR Rating below 3.0). The buildings have been maintained over the years, but significant capital investments have not been dedicated for some major systems.

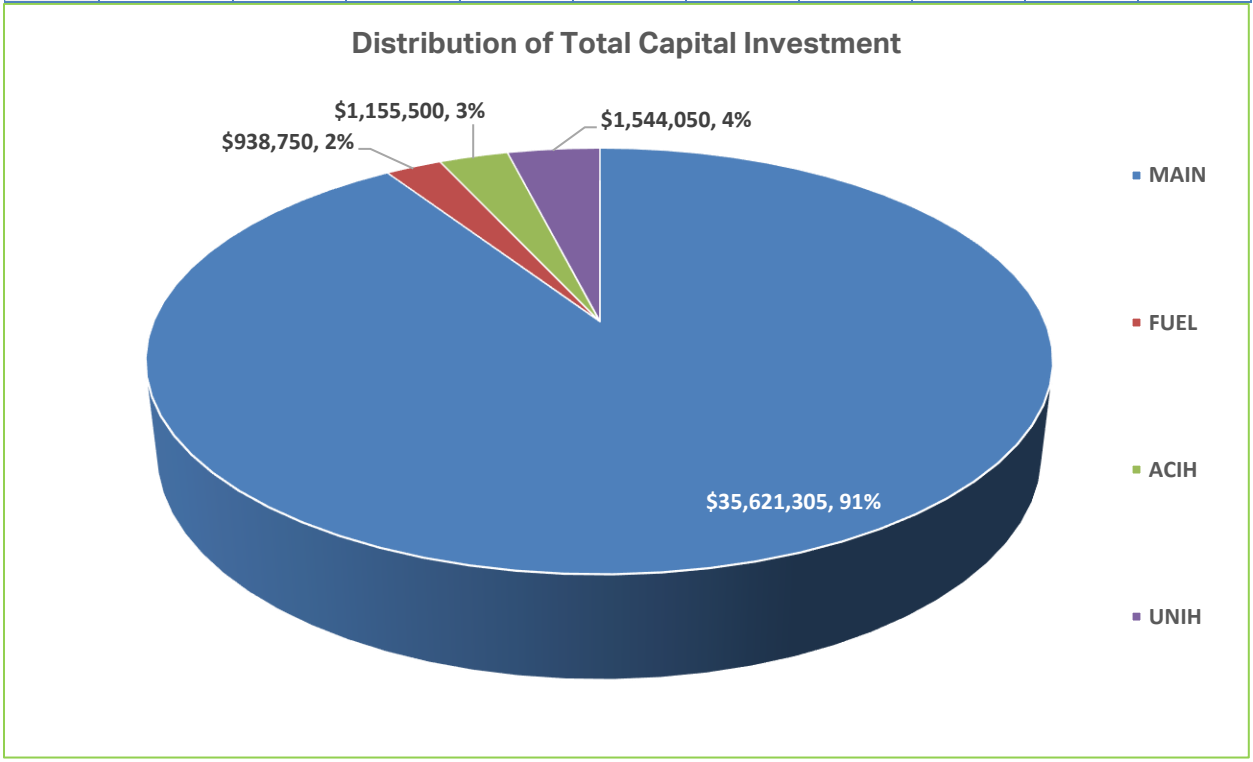
At the MAIN, the lowest rated systems were Uniformat Level I D: Services and G: Sitework; at the FUEL, the lowest rated systems were D: Services, E: Equipment and Furnishings, and G: Sitework; at the ACIH, the lowest rated system was D: Services, and at the UNIH, the lowest rated system was again D: Services.

The highest priority cost items were those that posed the highest risks if not addressed in a timely manner. In review of the field data collected, the cost items for the Airport that were rated as “Life/Safety” deficiencies were prioritized. Those deficiencies were mostly related to replacements for Uniformat Level II D40: Fire Protection. In addition, the Aqueous Film Forming Foam (AFFF) system at the UNIH was completely defunct, and the building was operating under a 24-hour fire watch.

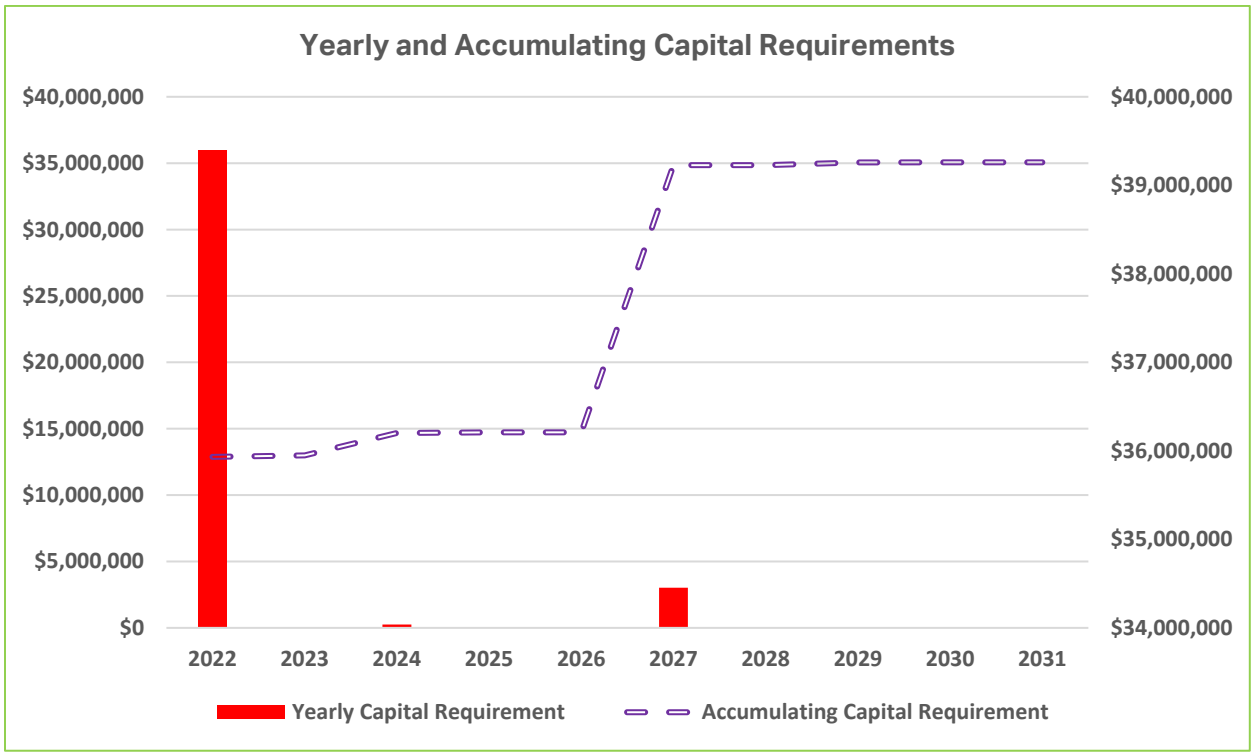
Other high-priority deficiencies were also identified for replacing security cameras, replacing propane gas lines at the commercial kitchens, replacing some exterior lighting, and addressing select structural issues.

The table and figures below show the financial results of the assessments completed. Capital Investments are shown through Year 2031. The Deferred Maintenance backlog is shown for Year 2022.

| Summary of Yearly Capital Investments | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| System | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 |
| MAIN | $32,991,115 | $7,500 | $252,500 | $0 | $0 | $2,344,990 | $0 | $25,000 | $200 | $0 |
| FUEL | $606,450 | $1,250 | $0 | $0 | $0 | $324,550 | $0 | $6,500 | $0 | $0 |
| ACIH | $964,250 | $0 | $0 | $7,500 | $0 | $183,750 | $0 | $0 | $0 | $0 |
| UNIH | $1,370,050 | $8,000 | $0 | $0 | $0 | $166,000 | $0 | $0 | $0 | $0 |
| Totals | $35,931,865 | $16,750 | $252,500 | $7,500 | $0 | $3,019,290 | $0 | $31,500 | $200 | $0 |




**Figures ES-1: INSERT TITLE**




**Figures ES-2: INSERT TITLE**

The biggest driver of the Deferred Maintenance backlog was Conveyance and Baggage Handling Systems determined to be beyond their useful service life at the MAIN. Overall, AECOM recommends that GIAA begin to establish increased capital budgets in order to address the significant backlog of deferred projects. Longer-term investments were not as significant. A prioritized capital plan will allow GIAA to strategically invest in the most critical systems while reducing the deferred backlogs over time.

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# Appendix B: Facility Condition Assessment

## B.1 Project Scope of Work

The scope of work involved FCAs of the subject facilities, which were performed in an effort to collect information about the current condition of the various building systems and assets. Additionally, AECOM was tasked with evaluating the costs expected to return the facilities to SGRs and have them remain in such a state for future years. The overall objective of the facility condition assessments is to establish a 10-year Capital Plan.

The focus of this report is to detail the scope of work, process, and results for the FCA. AECOM's goals for the project were:

1. Create a detailed "inventory of assets" – Defined as a register of capital assets and information about those assets.
2. Develop a condition assessment of inventoried assets – Defined as ratings of the assets' physical states; should be at a level of detail sufficient to monitor and predict performance of inventoried assets.
3. Provide capital investment projections for current and future repairs, replacements, and renovations.

In order to achieve the goals established for this project, AECOM deployed a qualified field team to the site for 9 days of field assessments. Prior to deployment, AECOM developed a digital application for data collection and assessment and trained our field staff. Detailed asset reports along with photographs are provided in **Attachment B2**.

Data were collected using a standard Uniformat II hierarchy. The following systems were assessed as part of the site reconnaissance for the project:

- Exterior Site Elements
- Building Structure System
- Building Exterior System
- Roof System
- Life and Fire Safety System
- Mechanical System
- Electrical System
- Plumbing System
- Building Interior System
- Conveyance System

The Uniformat II hierarchy used for data collection, data analysis, and cost estimating is provided in **Table B-1** below.

**Table B-1: Uniformat II Hierarchy**

| System Category |
|---|
| Section A: Substructure |
| Section B: Shell |
| Section C: Interior |
| Section D: Services* |
| Section E: Equipment & Furnishings |
| Section F: Special Construction & Demolition |
| Section G: Building Sitework |

* Section D includes: D10 Conveying, D20 Plumbing, D30 HVAC, D40 Fire, and D50 Electrical

The assessments included a site reconnaissance, detailed interviews with Airport staff and on-site personnel, and a review of available documents as provided by GIAA, which was responsible for the property. Operational testing of building systems or components was not conducted.

The AECOM team visually observed, assessed, and documented the physical condition of the various systems, assets, and components according to the methodology described in this document. Using the methodology and our digital application, team members were also able to rate the assets, while identifying and quantifying any observed material deficiencies and lifecycle replacements.

The typical data points collected in the field for each asset included:

- Asset Name
- General Location
- Quantity/Size
- Asset Age Rating
- Asset Condition Rating
- Asset Performance Rating
- Asset Maintenance Rating
- Useful Life Remaining
- Deficiencies identified with the following required data:
  - Deficiency location
  - Deficiency quantity
  - Potential remedial action
- Additional Notes

In addition, for each asset evaluated, the staff member identified any equipment or systems not in service or at risk of imminent failure. This collected data were populated into a data collection application which served as the foundation for this reporting.

With the results of the field assessments, AECOM developed this report, which includes findings and recommendations for improvements to achieve SGR for the facilities. This report also includes the summary of the costs required for achieving and maintaining SGR. In addition to this report and accompanying attachments, AECOM has also developed dashboards with information about the project and detailed analysis. The dashboard are presented on AECOM's plan·spend® platform.

## B.2 Project Methodology

### B.2.1 Facility Condition Assessment

Data were collected following the asset hierarchy detailed in the American Society for Testing and Materials (ASTM) Uniformat II work breakdown structure. Data were generally collected at the Uniformat II Levels 4 and 5. Using the selected hierarchy, most data collection was for individual items (referred to as a "Equipment" classification); however, some system-wide (referred to as an "Asset" classification) data were also collected. As part of our analysis, the condition ratings and remedial costs were evaluated at the Item Level (Uniformat Levels 4 and 5), Subcomponent Level (Uniformat Level 3), Component Level (Uniformat Level 2), System Level (Uniformat Level 1), and Building Levels using a series of Criticality and Weight Factors, as show in **Figure B-1**.

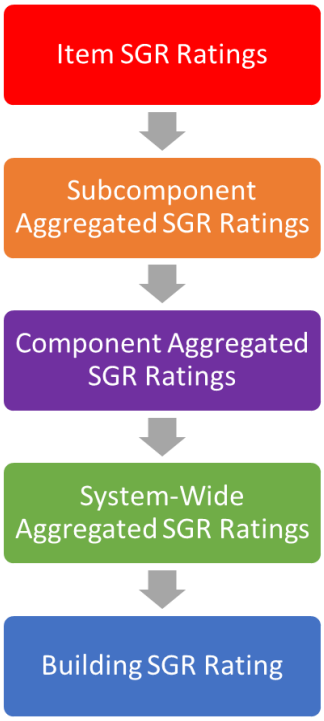



**Figure B-1: Process Flow for SGR Rating Aggregation**

Using AECOM's data application, individual SGR Ratings were assigned according to the classifications of each of four key metrics. Each asset was individually rated according to AECOM's rating scale using these metrics as shown in **Table B-2** on the following page. They key metrics were as follows:

1. Asset Age
    a) Percent of Useful Life Remaining
2. Asset Condition
    a) Asset Quality
    b) Level of Required Maintenance
3. Asset Performance
    a) Reliability
    b) Ambiance
    c) Safety
    d) Meets Industry Standards
4. Level of Maintenance
    a) Preventive Maintenance
    b) Corrective Maintenance

By using classifications based on the four metrics instead of a strict 0 through 5 rating, AECOM has attempted to approach the condition ratings in a more empirical way. These reported ratings were determined using the best judgment of the assessor based on the conditions observed during the site visit and other information provided. Opinions were rendered with consideration to the type, age, design, and location of the asset. The detailed breakdown of the classification system associated with the four metrics is presented in **Table B-2**. The overall SGR Rating for each asset was calculated as an average of the four ratings described above.

The goal of rating the assets is to establish what assets/systems are considered to be in SGR. For our analysis, items with scores equal to or above 3.0 are considered to be in Good Repair. All items with SGR

Ratings below 3.0 are considered to be Not in Good Repair. These items should be subjected to urgent remedial actions, i.e., maintenance, repairs, or replacements.

**Table B-2: Description of SGR Ratings**

| Rating | Asset Age (Percent of Useful Life Remaining) | Asset Condition (Quality, Level of Required Maintenance) | Asset Performance (Reliability, Ambiance, Safety, Meets Industry Standards) | Level of Maintenance (Level of Preventive and Corrective Maintenance [PM and CM]) |
|---|---|---|---|---|
| 5 | Asset new or nearly new<br>75% - 100% | Asset new or like new; No visible defects | Asset meets or exceeds all performance and reliability metrics, industry standards | No unfunded or deferred maintenance activities |
| 4 | Asset nearing or at its midlife point<br>50% - 75% | Asset showing minimal signs of wear; some slight defects or deterioration | Asset generally meets performance and reliability metrics, industry standards | Some temporary deferments of PM and CM; but no activities skipped completely |
| 3 | Asset has passed its midlife point<br>25% - 50% | Some moderately defective or deteriorated components; expected maintenance needs | Occasional performance and reliability issues; may be substandard in some areas | More frequent and extended deferments of PM and CM; some activities skipped until major problems surface |
| 2 | Asset near/at end of its useful life<br>0% - 25% | Increasing number of defects; deteriorating components; growing maintenance needs | Performance and reliability problems becoming more serious; substandard elements | PM and CM activities frequently delayed or skipped until major problems surface |
| 1 | Asset is past its useful life | Asset in need of replacement or restoration; may have critically damaged components | Frequent performance and reliability problems; does not meet industry standards | Significant backlog of PM and CM work due to history of deferred and skipped activities |
| 0 | Asset non-operable | Asset non-operable | Asset non-operable | Asset non-operable |

Each deficiency identified in the field was also assigned a specific Risk Factor to aid in a high-level analysis of potential risks. The Risk Factors can be used to develop prioritization for actions that could then be used by the facility operators to create a plan for addressing risks on a set schedule to avoid unnecessary impact to the mission of the building. The Risk Factors are defined in **Table B-3** below.

**Table B-3: Description of Risk Factors**

| Justification | Criticality | Definition |
|---|---|---|
| Life and Safety (LS) | Most Critical | Without repair or replacement, there is a risk of creating or worsening unsafe and/or life-threatening conditions. |
| Operational Impact (OI) | Very Critical | Without repair or replacement, there is a risk to the mission of the asset being compromised. Includes code compliance issues. |
| System Dependent (SD) | Critical | Without repair or replacement, there is a risk of negatively impacting the operation of other dependent systems. |
| Energy Efficiency (EE) | Critical | Without repair or replacement, there is a risk of inefficient energy performance of the system. |
| Life Cycle (LC) | Less Critical | Without repair or replacement, there is a risk of failure of systems due to estimation of expected useful life. |
| Aesthetic Only (AO) | Least Critical | Without repair or replacement, there is a risk of potential negative impact to the appearance of a system. |

While in the field, AECOM also looked to identify general compliance with the Americans with Disabilities Act (ADA) requirements. The ADA is a federal civil rights law that is enforceable, even for existing buildings such as those at the Airport. The intent of the ADA is to prevent discrimination against the physically disabled by establishing design requirements for the construction and alteration of facilities.

The law covers facilities in both the public and private sectors including places of public accommodation, commercial facilities, and state and local government facilities. The design standard that serves as the basis for enforcing this law is the ADA Accessibility Guidelines (ADAAG). On March 15, 2012, compliance with the 2010 edition of the ADAAG became mandatory.

The purpose of this assessment was to identify items that did not appear to be in general conformance with ADA guidelines. While opinions on how to correct noted barriers have been provided, they do not constitute a recommendation that removal of the barriers are “readily achievable” and not an “undue burden” as stated in the ADAAG.

In general our assessment evaluated the following elements:

- Accessible approach and entrance
- Access to goods and services
- Access to restrooms
- Any other measures necessary

### B.2.2 Cost Estimating Approach

Cost items for this project will fall into one of four different categories: 1) Items identified as deficient by the field assessment team; 2) Items identified as being “Not in Good Repair” (SGR Rating below 3.0); 3) Items identified as being a “Capital Replacement,” meaning the item had a Remaining Useful Life (RUL) of 5 years or less; or 4) Items identified as being recommended for modernization of the building for commercial leasing purposes. For this reporting, deficient assets as well as assets that have been determined to be Not in Good Repair are considered ***Deferred Maintenance*** costs. Deferred Maintenance costs also include items identified as past their useful lives during AECOM’s assessment. In the context of this reporting and analysis, AECOM defines Deferred Maintenance costs as: 1) Those that represent a current deficiency (observed deficiency or asset in an unsustainable condition); 2) Items rated below 3.0; and 3) Items with an estimated remaining useful life of 0 years. These items will be assumed to require immediate attention (action generally anticipated over the next few months). Because ***Capital Replacements*** can be planned into future budgets, there is some flexibility with planning and scheduling of replacements. For this project, AECOM has projected cost for 10 years (Fiscal Year [FY] 2022 through FY2031).

The opinions of cost presented herein were based on readily visible material and building system conditions and defects that might significantly affect the value of the property during the requested assessment period. These opinions were based on approximate quantities and values, and do not constitute a warranty or guarantee that all items requiring repair were included. Cost items not incorporated into this report include operational costs, such as utility (gas or electricity) usage, unpredictable (aesthetic) upgrades, or normal operation and maintenance. The availability of parts or qualified personnel for repairs or renovations is dependent on location and other factors (such as impacts from the 2019 Novel Coronavirus [COVID-19]), and those resources could be limited. Those considerations are not factored into cost estimates unless specifically stated.

Estimated costs were developed with published unit price data and industry experience. These opinions should not be interpreted as a bid or offer to perform the work. Costs for selected items were obtained from provided documentation and AECOM’s experience with buildings of similar size, construction, and geographic location.

It is important to understand that actual costs will vary depending on such factors as contractor expertise, previous contractor commitment, seasonal workload, insurance and bonding, and local labor conditions. These factors may cause wide variations in the actual costs as estimated by different bidders. In view of these limitations, the costs presented herein should be considered “order of magnitude” estimates and used for preliminary budgeting purposes only. Preparation of scopes of work and contractor bidding are recommended to forecast the actual costs.

The scope of work for each item will include new or replacement material, removal or demolition labor and equipment, installation labor, and necessary installation equipment. Any required testing of the new equipment or renovated equipment will be included in the labor hours and costs. AECOM used labor rates

based on the local Davis-Bacon prevailing wage rates and the required labor burden. AECOM also used current material pricing from the appropriate manufacturer's website.

### B.2.2.1 Cost Estimating Details

AECOM customized the cost data to the specific location by applying extensive area-specific cost factor information. Estimates are considered Association for the Advancement of Cost Engineering (AACE) Class V estimates, which carry a low expected actual cost of -50 to -20 percent and a high expected actual cost of +30 to +100 percent. AECOM's cost estimating methodology was designed to use a global mark-up factor to account for things such as:

- Quantities (economies of scale)
- Standard Mark-ups (contractor mark-up)
- Sales Tax
- Bonding
- General Conditions
- Contingency

The mark-up factors include the following:

- Contractor Mark-Up, Sales Tax, Bonding, General Conditions = 30 percent
- Contingency = 20 percent

The assumptions used to develop the cost estimates are as follows:

1. Estimates were prepared using current dollars (2022)
2. Estimates include demolition and/or site preparation as required
3. All work is assumed to be performed during normal work hours
4. Contractor Profit, Mark-Up, Bonding, and General Conditions are assumed at 30 percent
5. A 20 percent unallocated contingency was used
6. Adequate experienced craft labor is available
7. Normal productivity rates as historically experienced were used
8. Compatible trade agreements exist in the region
9. No strike impacts will be experienced by the project
10. There are sufficient experienced contractors available to perform said work
11. Guam area weather will have impacts on construction schedules
12. Existing state-of-the-art construction technology will be utilized
13. Assumes cooperation between stakeholders
14. Estimate assumes maintaining operation of the facility during construction
15. Work will be bid competitively by three or more competent contractors
16. No hazardous or contaminated material mitigation is included
17. No articles of historic significance are expected to be discovered
18. Current state-of-the-art standard heating, ventilation, and air conditioning (HVAC), electrical, plumbing, and fire protection systems

# B.3 Limiting Conditions

## B.3.1 Limitations on Scope of Work

The assessments were conducted by qualified AECOM staff. The AECOM team was supported by our local teaming partner, E.M. Chen & Associates.

AECOM generally did not assess the site features surrounding the facilities (landside or airside). AECOM also did not assess the former Rental Car Building (referred to as the Accounting Building during our visit). These areas were considered to be beyond AECOM's scope; however, select elements were documented as part of the broader assessments.

The assessors did not perform destructive exploration, conduct tests, or operate equipment.

Floor areas were taken from the plans provided by GIAA (see **Attachment B2**). AECOM did not independently verify any floor areas. Dates of construction and dates for installation were estimated using information gathered from equipment or material tags and the on-site staff. Where unknown, AECOM made its best estimates.

Within the facilities, select areas could not be accessed, and those areas have not been included in the data collected.

Tenant equipment and Airport furnishings have been excluded from the assessment. A majority of the HVAC equipment at the UNIH was owned and maintained by United Airlines. That equipment has been excluded from the assessment.

AECOM did not conduct an extensive code review as part of the scope of work. Code compliance and deficiencies have been included based on the knowledge of AECOM's qualified staff on the subject matters. This includes compliance with ADA legislation.

This report was prepared in the past tense, as it is intended to only describe observed conditions at the time of the site reconnaissance.

This report is intended to be reviewed as a complete document. Therefore, interpretations and conclusions drawn from the review of any individual section are the sole responsibility of the user.

The recommendations provided in this report were also based on the understanding that the facilities will continue to operate with a similar use and occupancy as observed on the dates of the site reconnaissance.

Not all assets/systems within the facility were fully visible for observation, mostly due to architectural finishes. Systems such as the floor slabs and back-up walls could not be observed in full.

Potentially hazardous building materials were not identified, sampled, or tested as part of this scope.

This report was prepared exclusively for GIAA. It should be noted that this report was prepared based on observations made during a specific site visit, and the report is time dependent. Conditions present at any time following the site visit date are subject to change, and as such the report is considered to have a limited shelf life.

## B.3.2 Data Gaps

The items listed below in **Table B-4** are considered to be data gaps. Given the level of details provided and the scope of work for the assessment, the data gaps are not considered to be consequential. The data gaps are viewed as limiting conditions, and AECOM has attempted to make reasonable assumptions in our descriptions and conclusions throughout this report.

**Table B-4: Data Gaps**

| Missing Data | Relevancy |
|---|---|
| As-Built Drawings | Building, site construction and layout |
| Prior Hazmat Survey Results | Nature and location of potential hazardous materials |
| Equipment Lists | HVAC equipment ages and operable conditions |
| Roof Inspection Reports | Roof ages and conditions |
| Conveyance Equipment Inspection Reports | System condition and compliance |
| BHS Inspection Reports | System condition and compliance |
| Fire Alarm Inspection Reports | System condition and compliance |
| Fire Suppression Inspection Reports | System condition and compliance |

## B.4 Reporting Definitions and Abbreviations

### B.4.1 Description of Systems Assessed

Consistent with the proposed scope of work for this project, AECOM evaluated the following systems at the Airport:

**Site Development Systems** are those that relate to geographic features of the property and surrounding area, and improvements that serve ancillary roles for the facility. While site features were generally not within the scope of this assessment, select areas, such as the equipment yards, were documented during our evaluation. Components of the observed site development systems included select pavements, fencing and retaining walls at select locations, select exterior furnishings, select landscape planters, site utility feeds, and site lighting. Operational testing of site development components was not conducted.

**Structural Systems** are those building components that transfer loads within a building and to the underlying ground. Loads may be the result of constant forces such as the weight of the building or other stationary objects within the building (dead loads), or variable forces such as people, operational equipment, vehicular activity, or wind (live loads). The building structure assessment included the review of available plans and drawings depicting the foundation, floor slab, and framing systems. Visual observations of exposed features were also performed when possible. The buildings were generally constructed with a mixture of steel, concrete, and masonry structural systems.

**Building Shell Systems** are composed of various systems and materials intended to serve three main purposes: (1) aesthetic appeal, (2) weather resistance, and (3) structural support. Items included in the building shell assessment included wall assemblies, glass and glazing, doors, and sealants. The typical shell systems included pre-cast concrete, metal panel, glazed curtainwalls, and masonry block. The FUEL included two pre-engineered, pre-fabricated concrete buildings.

**Roofing Systems** protect the building components and occupants from adverse moisture, temperature, collapse, and other unwanted elements. The selection, design, and installation of a roof are critical to a building's financial performance and can be one of the most expensive building systems to repair, maintain, and replace. Items included in the roof assessment include roof type, age, drainage, warranty status, ancillary roofs, and roof appurtenances and accessories. The roofing membranes were observed to be mostly multi-ply built-up bitumen systems.

**Building Interior Systems** are those that relate to the visible features of finished rooms, hallways, etc. Items included in the interior assessment are the floors, walls, and ceilings and their respective finishes. The MAIN was a commercial passenger terminal. The interior areas included typical operational airport spaces and concession spaces. The hangars included open bays and office areas (some two-story spaces). The FUEL included a small administrative office.

**Mechanical Systems** evaluated include the readily visible components of the HVAC equipment. The evaluation was intended to produce an overview of the component type, equipment capacity, and distribution methods. Operational testing of mechanical systems was not conducted. The MAIN had an extensive network of hydronic cooling equipment including chillers, cooling towers, air handling units, and distribution boxes. Additional systems included package air conditioning (A/C) units at the roof and split

systems. The other facilities were mostly unconditioned except for the office areas, which were conditioned by package A/C units and split systems.

**Electrical Systems** are related to the readily visible components of the electrical systems installed at the facility. This assessment is intended to be a general overview of the component type, equipment capacity, and distribution methods. Operational testing of electrical systems was not conducted. Items included in the electrical assessment were service distribution, transformers, switchgear, panel boards, conductors, and lighting.

**Plumbing Systems** are related to the readily visible components of the plumbing systems installed at the facility. This assessment was intended to be a general overview of the component type, system capacity, and distribution methods. Operational testing of plumbing systems was not conducted. Items included in the plumbing assessment were sanitary sewers, roof drains, domestic water supply, domestic water distribution, hot water systems, plumbing fixtures, natural gas distribution, and pipe insulation.

**Life and Fire Safety Systems** were observed to the extent that components were visually accessible. This evaluation was intended to be a general overview of the systems observed and not an opinion of safety or adequacy. Operational testing was not conducted. These systems include sprinklers and standpipes, emergency lighting, alarm and annunciation components, smoke evacuation, and fire separation.

**Conveyance Systems** include readily visible and accessible equipment installed at the facility. This evaluation was intended to be a general overview of the systems observed. No operational testing was conducted. These systems included equipment used to transport people or objects vertically or horizontally within the building. For this project, the conveyance systems included elevators, escalators, and moving walks. The MAIN also included inbound and outbound baggage conveyors.

## B.4.2 Report Terminology

For this reporting, the following definitions apply:

**Airside** – Describes the movement of the airplanes on the airports surface; areas of the Airport where planes are stored and moved.

**Landside** – How passengers arrive/depart the MAIN and move through the building to board the aircraft; areas of the Airport where passengers move outside of a plane.

**Preventive Maintenance** (PM) – The regular and routine maintenance of equipment and assets in order to keep them running and prevent any costly unplanned downtime from unexpected equipment failure.

**Service Life** – The duration throughout which an asset can be used economically. It is the measure of the durability of assets and manufactured products.

**State of Good Repair** (SGR) – The condition in which a capital asset is able to operate at a full level of performance.

## B.4.3 Abbreviations and Acronyms

Below in **Table B-5** is a list of common abbreviations and acronyms that may be referenced throughout the report.

**Table B-5: List of Common Abbreviations and Acronyms**

| Abbreviation / Acronym | Meaning |
|---|---|
| AACE | Association for the Advancement of Cost Engineering |
| A/C | Air Conditioning |
| AC | Alternating Current |
| ACI | Aviation Concepts, Inc. |
| ACIH | Aviation Concepts, Inc. Hangar |
| ACM | Asbestos-Containing Material |

| Abbreviation / Acronym | Meaning |
|---|---|
| ADA | Americans with Disabilities Act |
| ADAAG | Americans with Disabilities Act Accessibility Guidelines |
| AFFF | Aqueous Film Forming Foam |
| AHU | Air Handling Unit |
| AMU | Air Makeup Unit |
| AO | Aesthetic Only |
| ASHRAE | American Society of Heating, Refrigeration and Air Conditioning Engineers |
| AST | Aboveground Storage Tank |
| ASTM | American Society for Testing and Materials |
| ATC | Applied Technology Council |
| BHS | Baggage Handling Systems |
| BMS | Building Management System |
| BOMA | Building Owners and Managers Association International |
| BTU | British Thermal Unit (HVAC / MEP) |
| BTUH | British Thermal Unit per Hour |
| BUR | Built-Up-Roof |
| CAPEX | Capital Expenditures |
| CF | Cubic Feet |
| CFM | Cubic Feet per Minute |
| CIP | Cast Iron Pipe |
| CMP | Corrugated Metal Pipe |
| CMU | Concrete Masonry Unit |
| CRAC | Computer Room Air Conditioning |
| CY | Cubic Yard |
| DC | Direct Current |
| DCDA | Double Check Detector Assembly |
| DCVA | Double Check Valve Assembly |
| DIP | Ductile Iron Pipe |
| DM | Deferred Maintenance |
| DX | Direct Expansion (air conditioning) |
| EA | Exhaust Air |
| EE | Energy Efficiency |
| EIFS | Exterior Insulation and Finish System |
| ELO | Extra Large Orifice |
| EPA | Environmental Protection Agency |
| EPDM | Ethylene-Propylene-Diene-polymer-Monomer (“rubber” roofing) |
| ESFR | Early Suppression Fast Response |
| EUL | Expected Useful Life |
| FAA | Federal Aviation Administration |
| FACP | Fire Alarm Control Panel |
| FDC | Fire Department Connection |
| FPM | Feet per Minute |
| FRP | Fiberglass Reinforced Plastic |

| Abbreviation / Acronym | Meaning |
|---|---|
| FT | Feet |
| GC | General Contractor |
| GFI | Ground Fault Interrupter |
| GIAA | AB Won Pat (Guam) International Airport Authority |
| GIAT | Guam International Air Terminal |
| GPM | Gallons per Minute |
| GSF | Gross Square Feet |
| GUM | AB Won Pat (Guam) International Airport – Airport Code |
| HAZMAT | Hazardous Materials |
| HID | High Intensity Discharge (lighting) |
| HP | Horsepower |
| HPS | High Pressure Sodium |
| HVAC | Heating Ventilation and Air Conditioning |
| IBC | International Building Code |
| IEEE | Institute of Electrical and Electronics Engineers |
| IN | Inches |
| IR | Infrared |
| KVA | Kilo-volt Amp |
| KW | Kilo-Watt |
| LBP | Lead-Based Paint |
| LC | Life Cycle |
| LED | Light-Emitting Diode (lighting) |
| LF | Linear Feet |
| LO | Large Orifice |
| LS | Life and Safety; Lump Sum |
| MEP | Mechanical, Electrical, Plumbing |
| NEC | National Electrical Code |
| NFPA | National Fire Protection Association |
| OA | Outside Air |
| OI | Operational Impact |
| O&M | Operations and Maintenance |
| OPEX | Operating Expenditures |
| OSHA | Occupational Safety and Health Administration |
| OS&Y | Outside Stem & Yoke |
| PCB | Polychlorinated Biphenyl |
| PSI | Pounds per Square Inch |
| PTAC | Package Thermal Air Conditioner |
| PVC | Poly-Vinyl-Chloride (pipe) |
| QC | Quality Control |
| RA | Return Air |
| RCP | Reinforced Concrete Pipe |
| RPZ | Reduced Pressure Zone |
| RSF | Rentable Square Feet |

| Abbreviation / Acronym | Meaning |
|---|---|
| RUL | Remaining Useful Life |
| SD | System Dependent |
| SEER | Seasonal Energy Efficiency Ratio |
| SF | Square Feet |
| SPCC | Spill Prevention, Control, and Countermeasure |
| SY | Square Yard |
| TN | Ton (12,000 BTU cooling, HVAC) |
| TPO | Thermoplastic Polyolefin |
| UBC | Uniform Building Code |
| UH | Unit Heater |
| UNIH | United Airlines Hangar |
| UPS | Uninterruptable Power Supply |
| UST | Underground Storage Tank |
| UV | Ultraviolet |
| VAV | Variable Air Volume |
| VCT | Vinyl Composition Tile |
| VFD | Variable Frequency Drive |
| VRF | Variable Refrigerant Flow |
| VSD | Variable Speed Drive |

## B.5 Project Information

### B.5.1 Site Details

The Airport was an international airport. The MAIN was a commercial passenger terminal. The facility was located at 355 Chalan Pasaheru in Tamuning, 96913, Guam, and covered a reported 944,251 gross square feet. The Airport was broken into five floor levels: the Baggage Level, the Apron Level, the Concourse Level, the Roof Level, and the Tower Level. In addition to operational areas such as ticketing areas, baggage claims, gates, security/customs areas, and administrative and service areas, there were also a number of third-party concession spaces, mostly at the Concourse Level.

The two hangars (ACIH and UNIH) were facilities capable of housing commercial airplanes. The hangars included standard hangar doors. Each hangar also included office areas (some two-story spaces). The ACIH was located at 3404 Neptune Avenue in Barrigada, Guam. The hangar had a reported floor area of 40,392 gross square feet. The UNIH was also located on Neptune Avenue in Barrigada, but the exact street address could not be determined. This hangar covered a reported 60,157 gross square feet.

The FUEL was designed to hold and distribute jet fuel for the aircraft (via fuel trucks). The facility included three large storage tanks, distribution piping and pumps, and a small administrative office. The exact street address for this property was not identified. The administrative office covered a reported 1,824 gross square feet. The fire suppression water tank was located at this location. The site also included two support buildings, one for housing the fire pump and main electrical substation and one for housing a back-up generator.

### B.5.2 Reconnaissance Details

The site reconnaissance portion of the FCA was performed from Monday, February 21, 2022, through Thursday, March 3, 2022, on behalf of AECOM by the staff listed in **Table B-6**.

**Table B-6: Site Visit Staff**

| Name | Scope Covered |
|---|---|
| Alan Chen, RA (E.M. Chen) | Architecture/Structural Systems |
| Lider Delgado, PE (AECOM) | Conveyance Systems/BHS |
| Omar Aldarraji, PE (AECOM) | HVAC Systems |
| Ryan Tecne (E.M. Chen) | Electrical Systems |
| Cato Walthour, PE (AECOM) | Fire & Life Safety Systems |
| Scott C. Dunbar (AECOM) | Technical Lead |

Weather conditions during the site reconnaissance were as shown in **Table B-7**.

**Table B-7: Site Visit Ambient Conditions**

| On-site Date | Weather Description | Average Temp. |
|---|---|---|
| Monday, February 21, 2022 | Partly Cloudy | 80º F |
| Tuesday, February 22, 2022 | Partly Cloudy / Showers | 79º F |
| Wednesday, February 23, 2022 | Partly Cloudy | 82º F |
| Thursday, February 24, 2022 | Partly Cloudy | 83º F |
| Friday, February 25, 2022 | Partly Cloudy | 79º F |
| Monday, February 28, 2022 | Partly Cloudy / Showers | 83º F |
| Tuesday, March 1, 2022 | Partly Cloudy / Showers | 83º F |
| Wednesday, March 2, 2022 | Partly Cloudy / Showers | 85º F |
| Thursday, March 3, 2022 | Partly Cloudy | 85º F |

AECOM was escorted by GIAA staff, tenants, and select service contractors during our site visit. In addition, interviews were conducted with personnel familiar with the facilities to obtain information relative to the condition of the various building systems. Information obtained during the interviews has been incorporated into this report in the applicable sections. The following persons were the key staff interviewed as part of the evaluation:

- Juan S.A. Reyes, A.C.E., Air Terminal Manager, GIAA, (671) 642-4450, juan.reyes@guamairport.net
- Victor J. Cruz, GIAA Engineering, (671) 486-4428, victorc@guamairport.net

## B.5.3 Site History and Utilization

The original Airport was built by the Japanese Navy circa 1943. After the island was recaptured by American forces in 1944, the military Airport was renamed Agana Airfield. The U.S. military used the airfield as a strategic base during the remainder of World War II. Following the war, the base continued to be used by the U.S. Air Force and eventually the U.S. Navy for strategic operations in the South Pacific.

Travel to Guam was restricted to military personnel with a security clearance until 1962. During these early years, a single Quonset hut served as Guam's air terminal. The travel restrictions were eventually lifted to allow civilian travel, and the Guam International Air Terminal (GIAT) opened in March 1967. Operations of the terminal were passed from the US Navy to the Government of Guam's Department of Commerce in 1969. In 1975, GIAA was created as a separate agency.

Groundbreaking and site preparation of a new GIAT began in October 1978 to meet improved passenger services and capacity objectives. Following years of construction, the new $43 million GIAT was dedicated on January 19, 1982.

In 1989, the GIAT was renamed the “Antonio B. Won Pat Guam International Air Terminal” in honor of Guam’s first elected Delegate to the U.S. House of Representatives.

The light aircraft commuter terminal became operational in August 1991, introducing three new loading bridges and parking aprons.

In September 1996, the first phase of the major commercial passenger terminal expansion project was completed. The completed phase featured an expanded terminal space of 550,000 square feet from an original 220,000 square feet, a new larger customs and immigration hall, a public parking lot with over 700 spaces, new and expanded retail/concession spaces, a new automated baggage system, and four pairs of moving walkways along the concourse.

The second phase of this expansion created the current commercial passenger terminal and was completed in September of 1998. This phase was the largest ever capital improvement project in the history of Guam.

Lotte Duty Free took occupancy and established operations at the Airport in July 2013.

Construction histories and dates for the FUEL, ACIH, and UNIH were not determined.

## B.6 Salient Information

**Table B-8: Facility Details**

| | | |
|---|---|---|
| **Property Name:** | Antonio B. Won Pat International Airport | |
| **Location/Address:** | 355 Chalan Pasaheru<br>Tamuning, Guam 96913 | |
| **Building Age:** | | |
| **Building Type:** | **MAIN:**<br>**FUEL:**<br>**ACIH:**<br>**UNIH:** | Multi-level commercial passenger terminal<br>Jet fuel storage and distribution facility<br>Commercial aircraft hangar with two-story office areas<br>Commercial aircraft hangar with two-story office areas |
| **Zoning Classification:** | M / M-1 = Industrial / Light Industrial | |
| **Building Class:** | Not Determined | |
| **Developer:** | A.B. Won Pat International Airport Authority, Guam | |
| **Building Structure (Construction Type):** | Steel, masonry, and concrete framed structures (construction types varied) – **Note:** Hangars were not actively protected by fire sprinkler systems and were on 24-hour fire watch | |
| **Occupancy:** | Occupancies varied | |
| **Reported Area:** | **MAIN:**<br>**FUEL:**<br>**ACIH:**<br>**UNIH:** | 944,251 gross square feet<br>1,824 gross square feet<br>40,392 gross square feet<br>60,157 gross square feet |
| **Location Coordinates (Latitude):**<br>**(Longitude):** | 13.4671186 North<br>144.796969 East | |
| **Site Elevation:** | 201 feet above sea level | |
| **Site Topography:** | Relatively flat with appropriate crowns for surface water drainage | |
| **Flood Zone:** | Zone X (unshaded) – Defined as an area outside the 500-year flood | |
| **Seismic Zone:** | 0.931g Peak Ground Acceleration according to the 2014 USGS National Seismic Hazard Map | |
| **Wind Zone:** | **Wind:**<br>**Tornado:** | 195 MPH Design Wind Speed (Wind-borne debris area)<br>250 MPH Design Wind Speed |

| | |
|---|---|
| **Property Name:** | Antonio B. Won Pat International Airport |
| **Sea Level Rise:** | Facilities were modeled against a 5-foot rise in sea level with no impact; considered to be a low risk |

## B.7 Condition Assessment Findings

The MAIN and ACIH were in general SGR. In contrast, the FUEL and UNIH were generally rated as Not in Good Repair. The buildings have been maintained over the years, but significant capital investments have not been dedicated for some major systems. The buildings were being utilized fully and consistently with their intended purposes. **Table B-9** below shows the overall SGR Ratings for each facility.

**Table B-9: SGR Ratings by Facility**

| Facility | SGR Rating |
|---|---|
| MAIN | 3.91 |
| FUEL | 2.86 |
| ACIH | 3.38 |
| UNIH | 2.88 |

As shown in the table, the MAIN and the ACIH were considered to be in Good Repair (SGR Rating above 3.0), while the FUEL and the UNIH were considered to not be in States of Good Repair (SGR Rating below 3.0). At the MAIN , the lowest rated systems were Uniformat Level I D: Services and G: Sitework; at the FUEL , the lowest rated systems were D: Services, E: Equipment and Furnishings, and G: Sitework; at the ACIH , the lowest rated system was D: Services; and at the UNIH, the lowest rated system was again D: Services.

Most of the low ratings for D: Services was due to outdated conveyance systems, baggage handling systems, and HVAC equipment.

The highest priority cost items were those that posed the highest risks if not addressed in a timely manner. In review of the field data collected, the cost items for the Airport that were rated as “Life / Safety” deficiencies were prioritized. Those deficiencies were mostly related to Uniformat Level II D40: Fire Protection and included replacements of fire alarm panels, fire alerting devices, smoke/heat detectors, old or non-functioning emergency lights and exit signs, fire extinguishers, wet-pipe fire risers, special hazard suppression systems, and sprinkler heads. In addition, the AFFF system at the UNIH was completely defunct, and the building was operating under a 24-hour fire watch.

Other high-priority deficiencies were also identified for replacing security cameras, replacing propane gas lines at the commercial kitchens, replacing some exterior lighting, and addressing select structural issues.

AECOM recommends more aggressive preventive maintenance for the major systems. AECOM also recommends that GIAA begin to establish increased capital budgets in order to address the significant backlog of deferred projects. If not addressed, these issues can create opportunities for critical failures at inopportune times. Additionally, with the high-risk items, there is also the possibility of impacts to passenger and staff safety. Longer-term investments were not as significant. A prioritized capital plan will allow GIAA to strategically invest in the most critical systems while reducing the deferred backlogs over time.

**Table B-10** through **Table B-13** show the full capital investment requirements based on the results of the assessments completed. The investments are broken down by year and by system.

**Table B-10: Yearly Capital Investments by System: MAIN**

| System | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 |
|---|---|---|---|---|---|---|---|---|---|---|
| A | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| B | $15,400 | $0 | $0 | $0 | $0 | $222,400 | $0 | $0 | $0 | $0 |
| C | $25,390 | $0 | $0 | $0 | $0 | $1,500 | $0 | $0 | $0 | $0 |
| D10 | $22,405,000 | $0 | $0 | $0 | $0 | $1,000,000 | $0 | $0 | $0 | $0 |
| D20 | $43,220 | $0 | $2,000 | $0 | $0 | $56,390 | $0 | $0 | $0 | $0 |
| D30 | $7,766,655 | $0 | $500 | $0 | $0 | $171,000 | $0 | $25,000 | $0 | $0 |
| D40 | $1,941,850 | $7,500 | $0 | $0 | $0 | $660,900 | $0 | $0 | $200 | $0 |
| D50 | $226,250 | $0 | $250,000 | $0 | $0 | $226,800 | $0 | $0 | $0 | $0 |
| E | $10,000 | $0 | $0 | $0 | $0 | $6,000 | $0 | $0 | $0 | $0 |
| F | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| G | $557,350 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| Totals | $32,991,115 | $7,500 | $252,500 | $0 | $0 | $2,344,990 | $0 | $25,000 | $200 | $0 |

For the MAIN, the Deferred Maintenance backlog was $32,991,115 and the total Capital Investment for the next 10 years was $35,621,305.

**Table B-11: Yearly Capital Investments by System: FUEL**

| System | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 |
|---|---|---|---|---|---|---|---|---|---|---|
| A | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| B | $13,800 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| C | $0 | $0 | $0 | $0 | $0 | $50,000 | $0 | $6,500 | $0 | $0 |
| D10 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| D20 | $163,850 | $0 | $0 | $0 | $0 | $6,700 | $0 | $0 | $0 | $0 |
| D30 | $16,200 | $0 | $0 | $0 | $0 | $20,000 | $0 | $0 | $0 | $0 |
| D40 | $359,200 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| D50 | $11,900 | $1,250 | $0 | $0 | $0 | $247,850 | $0 | $0 | $0 | $0 |
| E | $8,000 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| F | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| G | $33,500 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| Totals | $606,450 | $1,250 | $0 | $0 | $0 | $324,550 | $0 | $6,500 | $0 | $0 |

For the FUEL, the Deferred Maintenance backlog was $606,450 and the total Capital Investment for the next 10 years was $938,750.

**Table B-12: Yearly Capital Investments by System: ACIH**

| System | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 |
|---|---|---|---|---|---|---|---|---|---|---|
| A | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| B | $490,000 | $0 | $0 | $0 | $0 | $14,400 | $0 | $0 | $0 | $0 |
| C | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| D10 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| D20 | $10,250 | $0 | $0 | $0 | $0 | $1,500 | $0 | $0 | $0 | $0 |
| D30 | $431,800 | $0 | $0 | $7,500 | $0 | $82,500 | $0 | $0 | $0 | $0 |
| D40 | $21,200 | $0 | $0 | $0 | $0 | $700 | $0 | $0 | $0 | $0 |
| D50 | $11,000 | $0 | $0 | $0 | $0 | $84,650 | $0 | $0 | $0 | $0 |
| E | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| F | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| G | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| Totals | $964,250 | $0 | $0 | $7,500 | $0 | $183,750 | $0 | $0 | $0 | $0 |

For the ACIH, the Deferred Maintenance backlog was $964,250 and the total Capital Investment for the next 10 years was $1,155,500.

**Table B-13: Yearly Capital Investments by System: UNIH**

| System | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 |
|---|---|---|---|---|---|---|---|---|---|---|
| A | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| B | $878,900 | $0 | $0 | $0 | $0 | $14,400 | $0 | $0 | $0 | $0 |
| C | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| D10 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| D20 | $39,250 | $0 | $0 | $0 | $0 | $1,500 | $0 | $0 | $0 | $0 |
| D30 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| D40 | $430,600 | $0 | $0 | $0 | $0 | $4,200 | $0 | $0 | $0 | $0 |
| D50 | $21,300 | $8,000 | $0 | $0 | $0 | $145,900 | $0 | $0 | $0 | $0 |
| E | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| F | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| G | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| Totals | $1,370,050 | $8,000 | $0 | $0 | $0 | $166,000 | $0 | $0 | $0 | $0 |

For the UNIH, the Deferred Maintenance backlog was $1,370,050 and the total Capital Investment for the next 10 years was $1,544,050.

**Figure B-2** through **Figure B-5** show the system-level distributions of the Deferred Maintenance backlogs for each facility and **Figure B-6** through **Figure B-9** show the system-level distributions of the Capital Investments (minus Deferred Maintenance costs) for each facility.

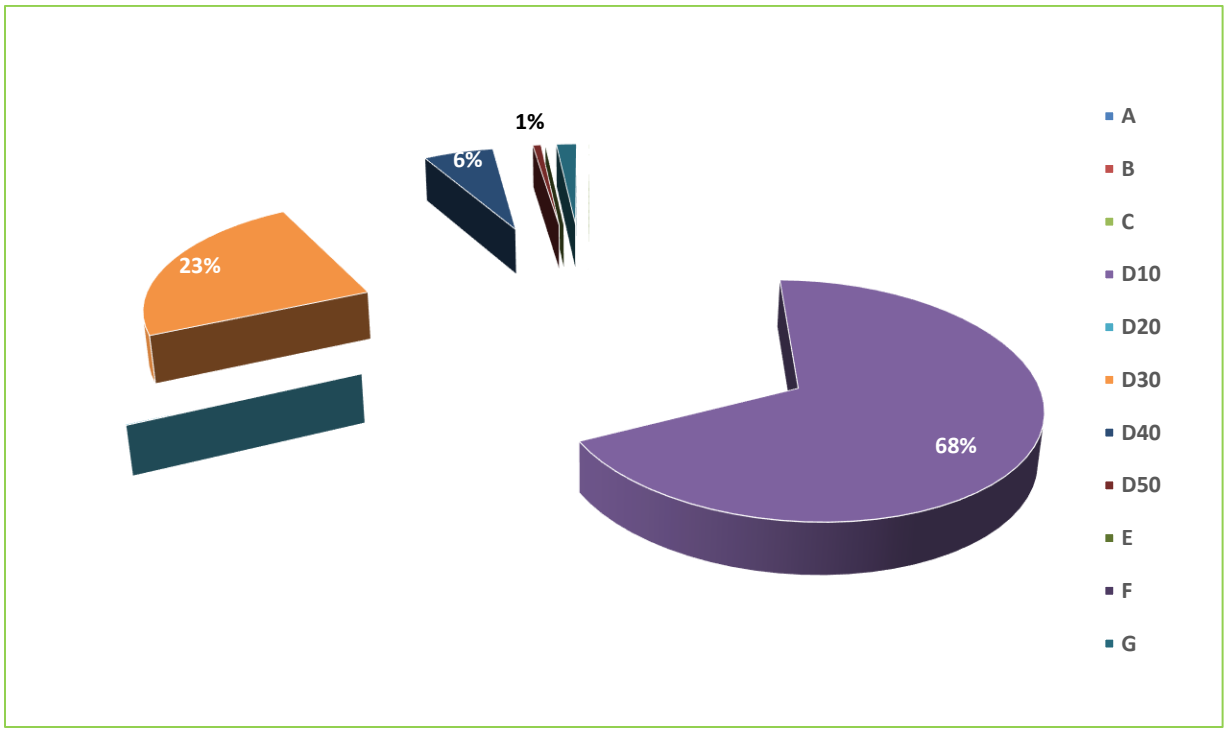



**Figure B-2: Deferred Maintenance Costs by System: MAIN**

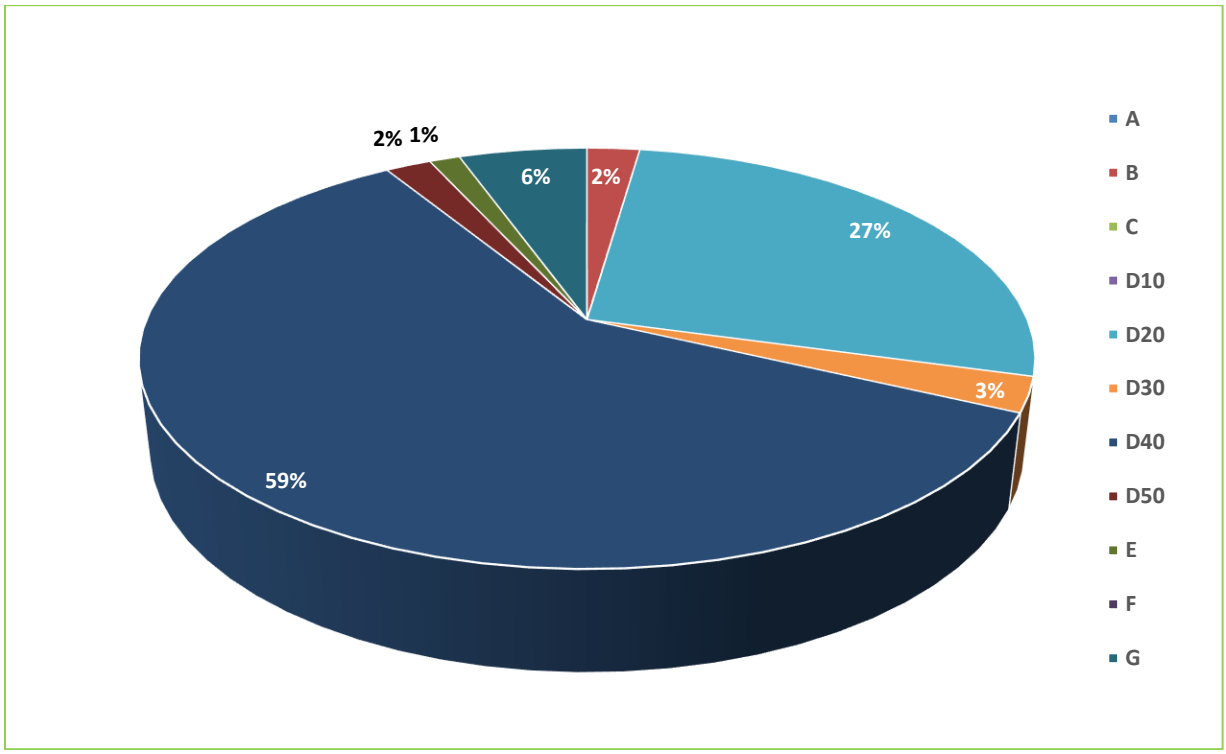



**Figure B-3: Deferred Maintenance Costs by System: FUEL**

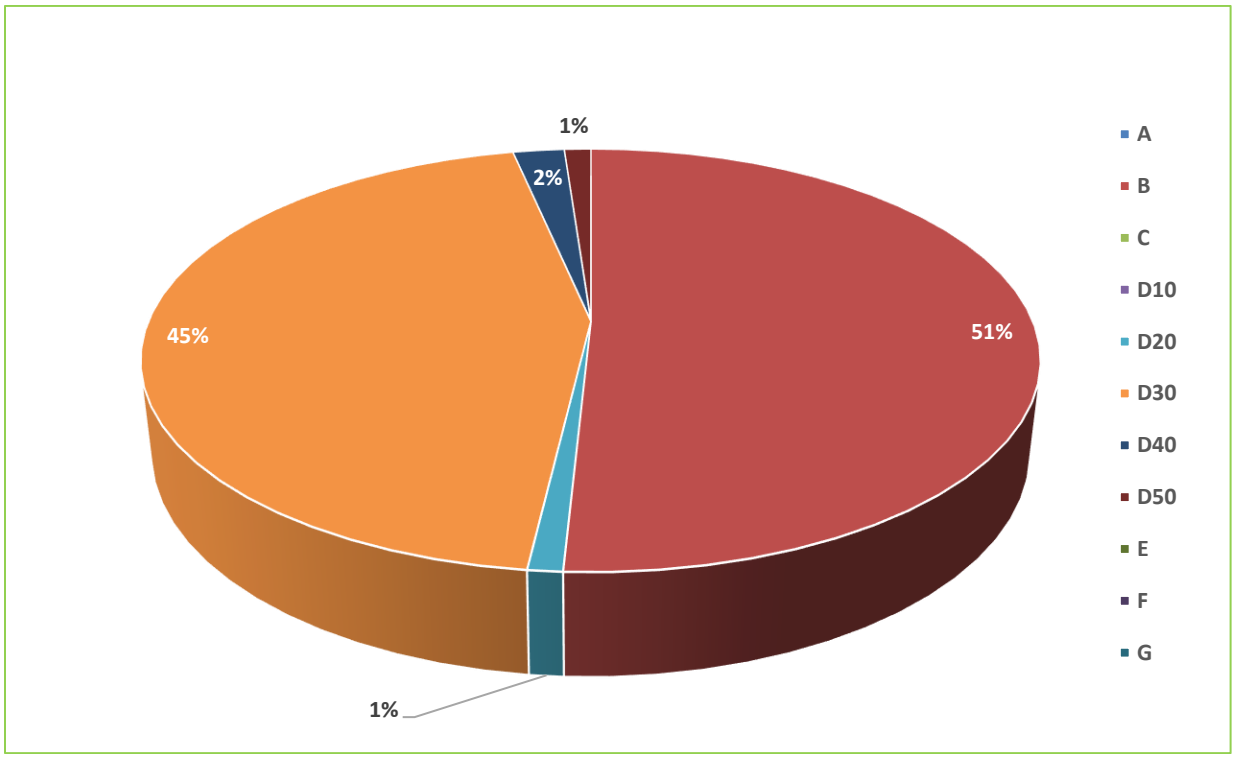



**Figure B-4: Deferred Maintenance Costs by System: ACIH**

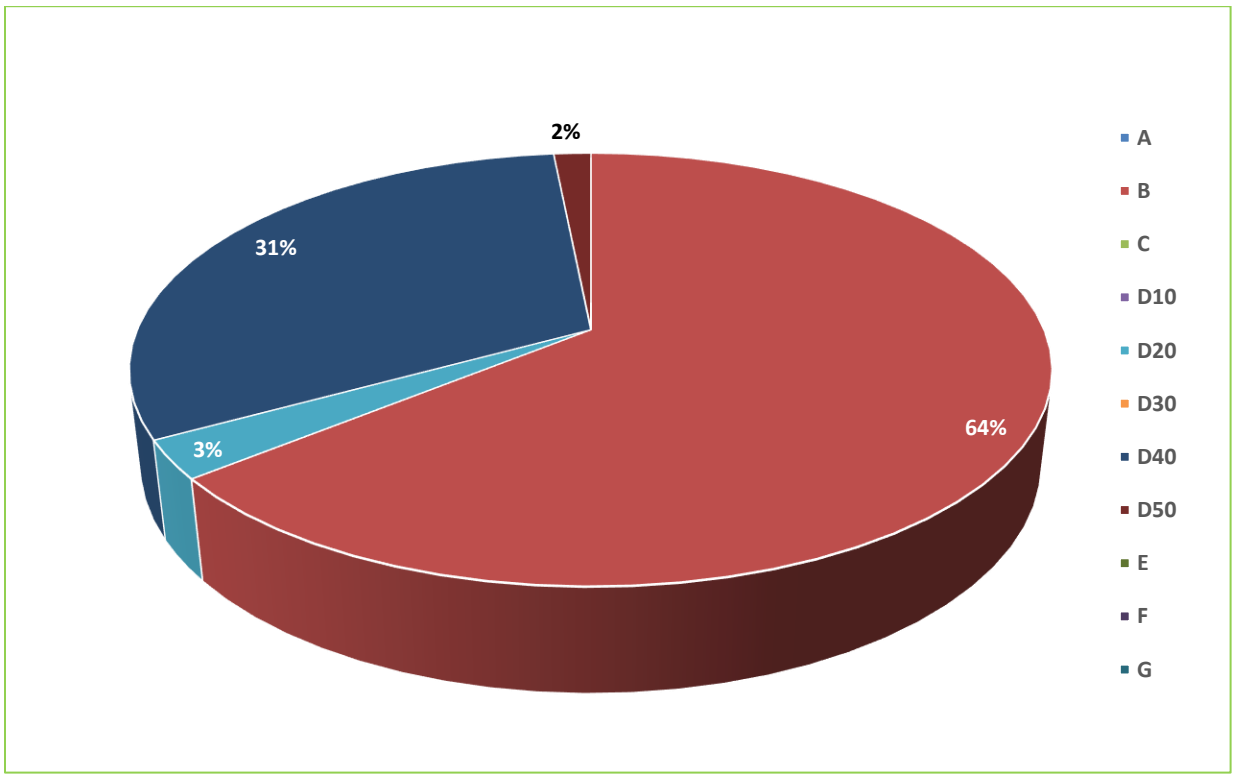



**Figure B-5: Deferred Maintenance Costs by System: UNIH**

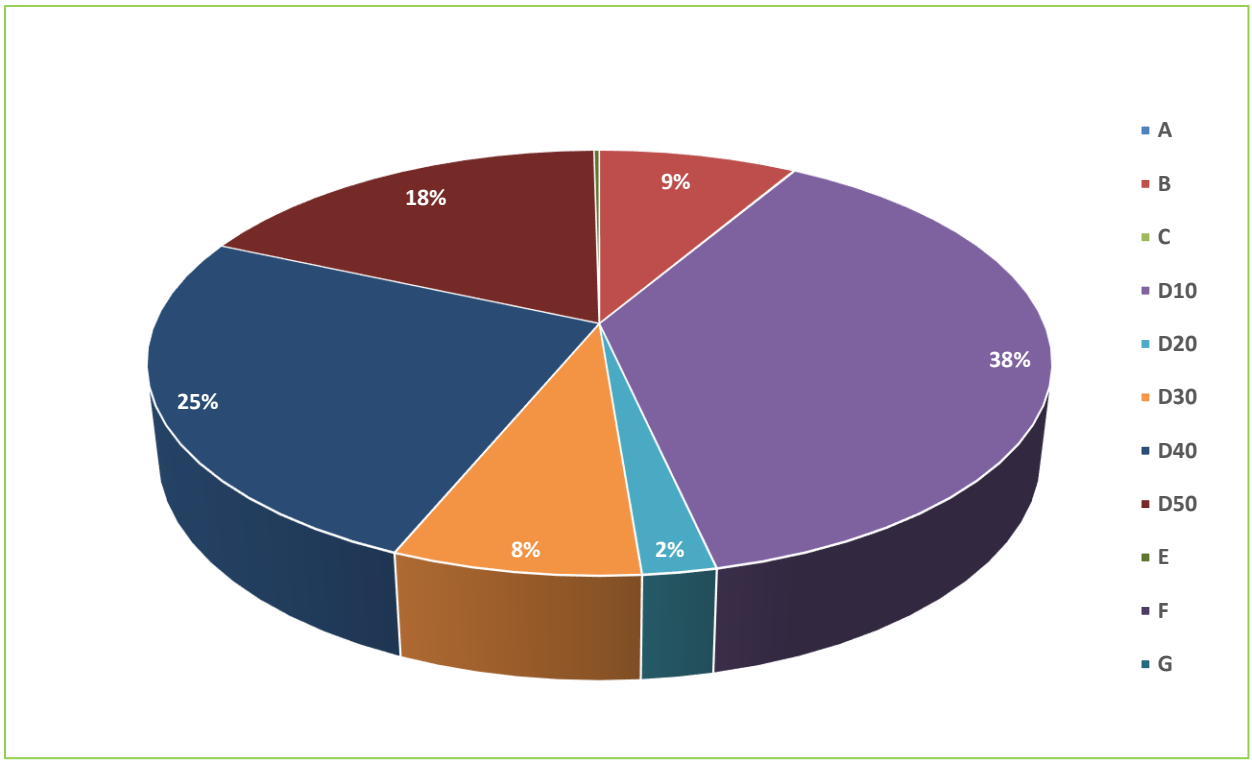



**Figure B-6: Total Capital Investment by System: MAIN**

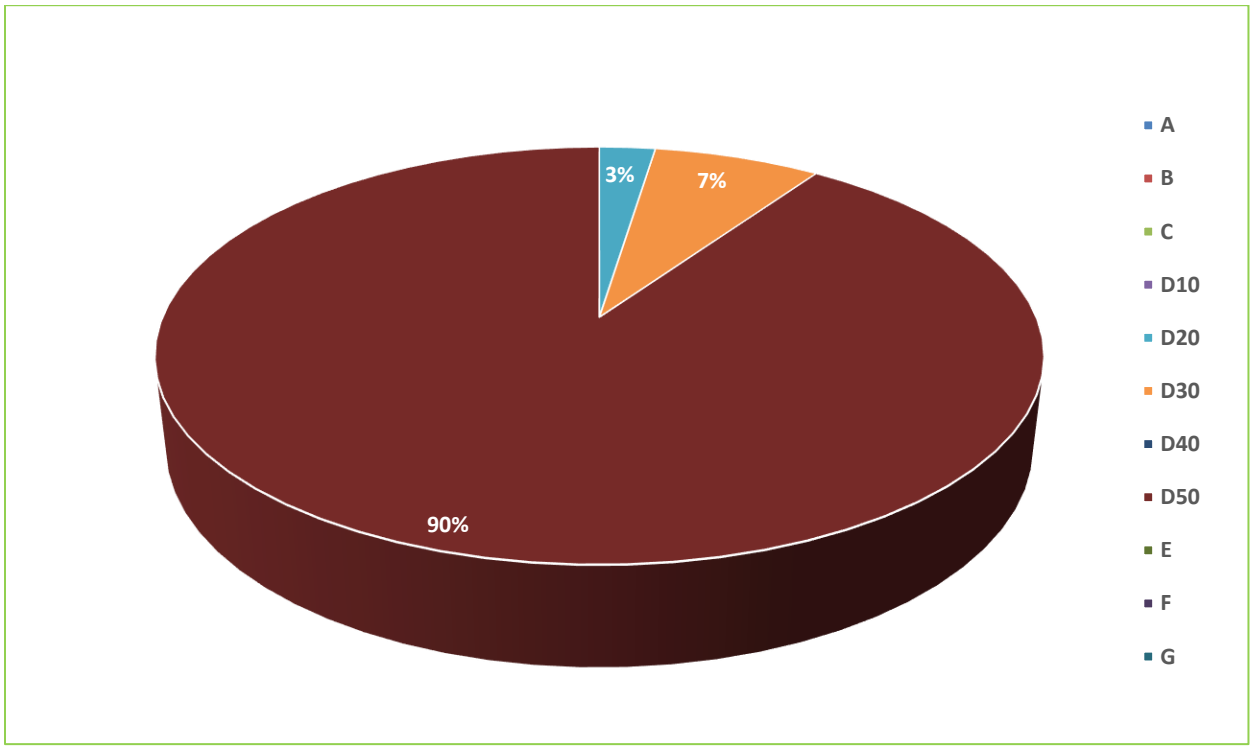



**Figure B-7: Total Capital Investment by System: FUEL**

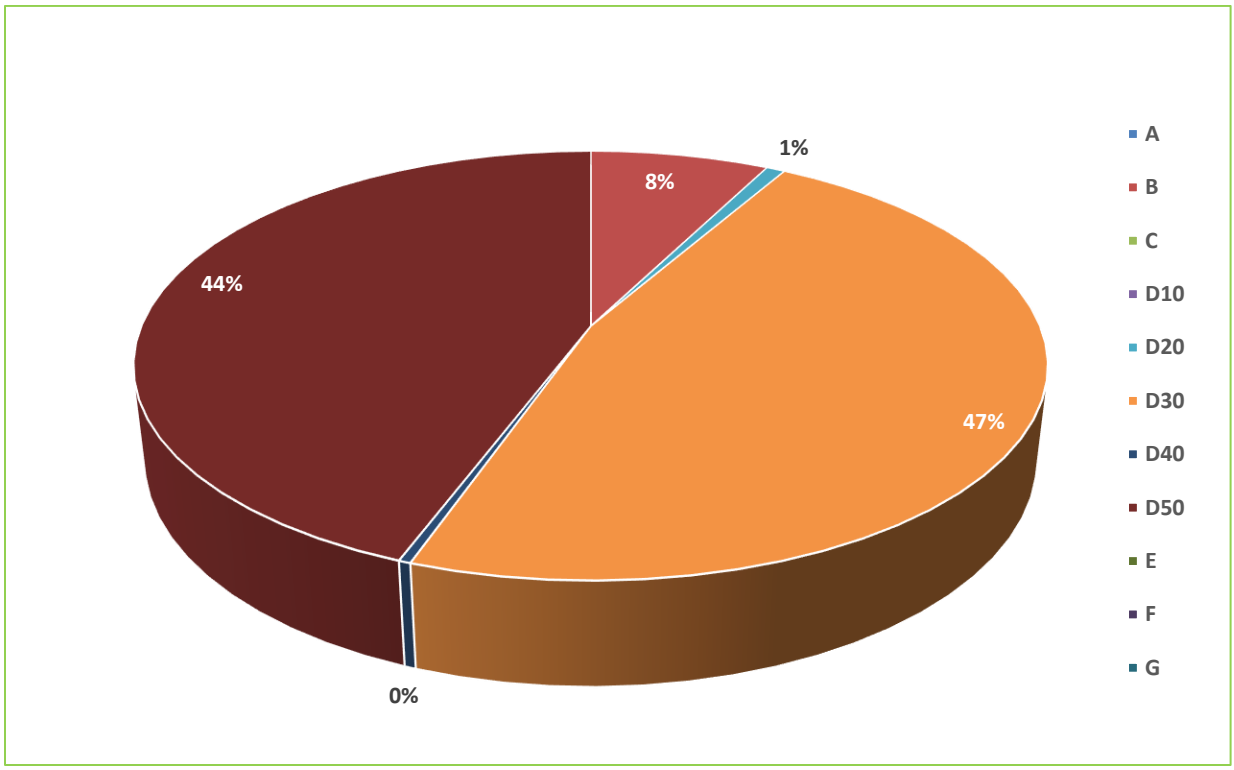



**Figure B-8: Total Capital Investment by System: ACIH**

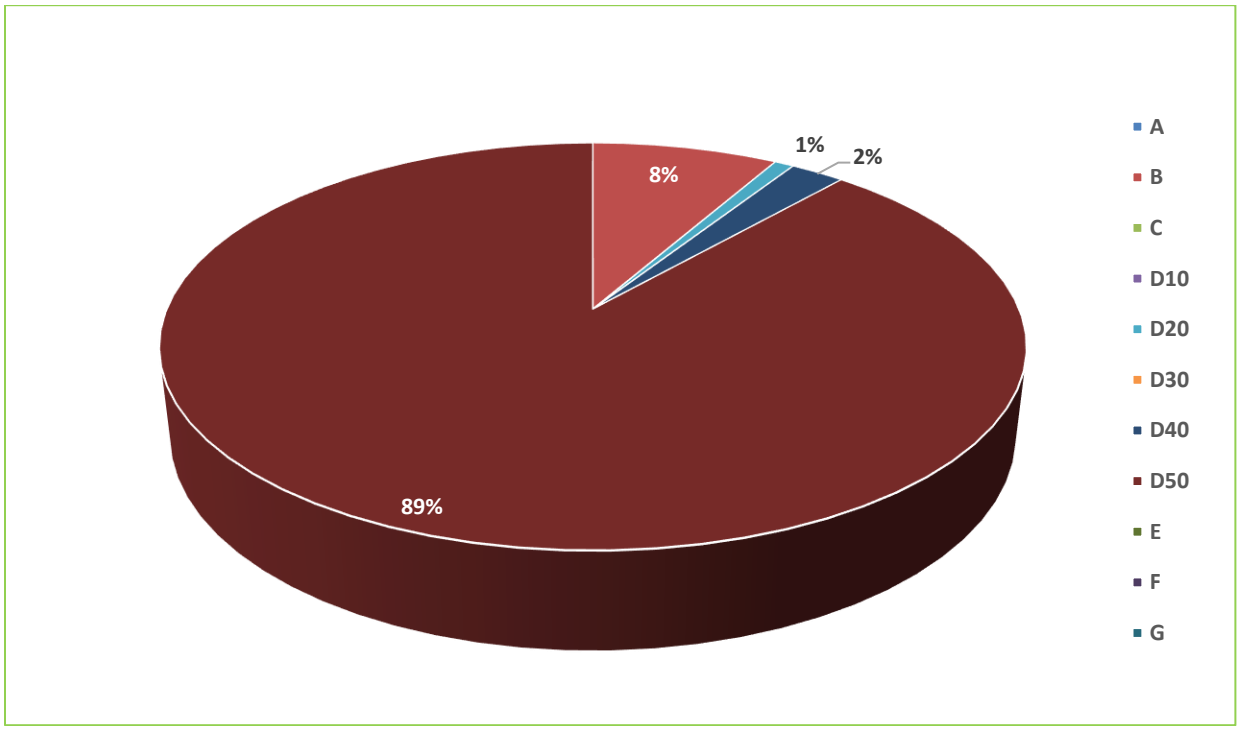



**Figure B-9: Total Capital Investment by System: UNIH**

Finally, **Figure B-10** through **Figure B-13** show the full capital forecast for each facility, inclusive of both deferred and longer-term projects.

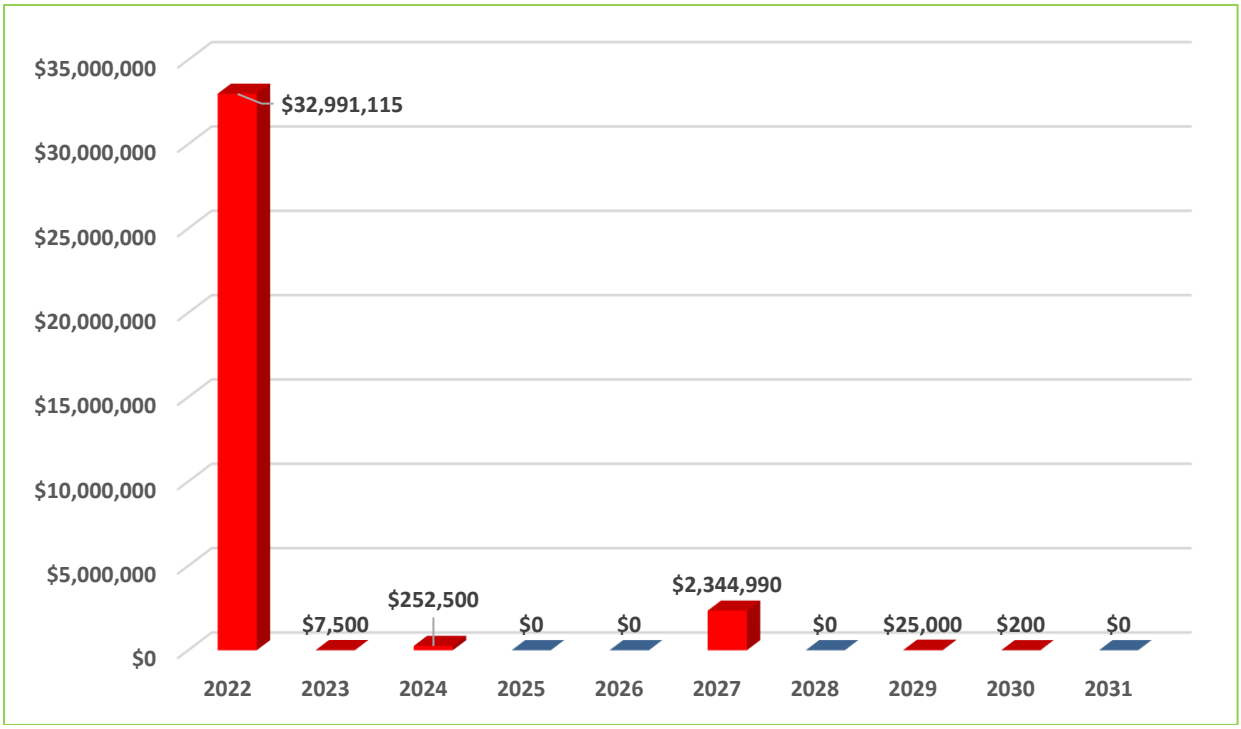



**Figure B-10: Capital Investments by Year: MAIN**

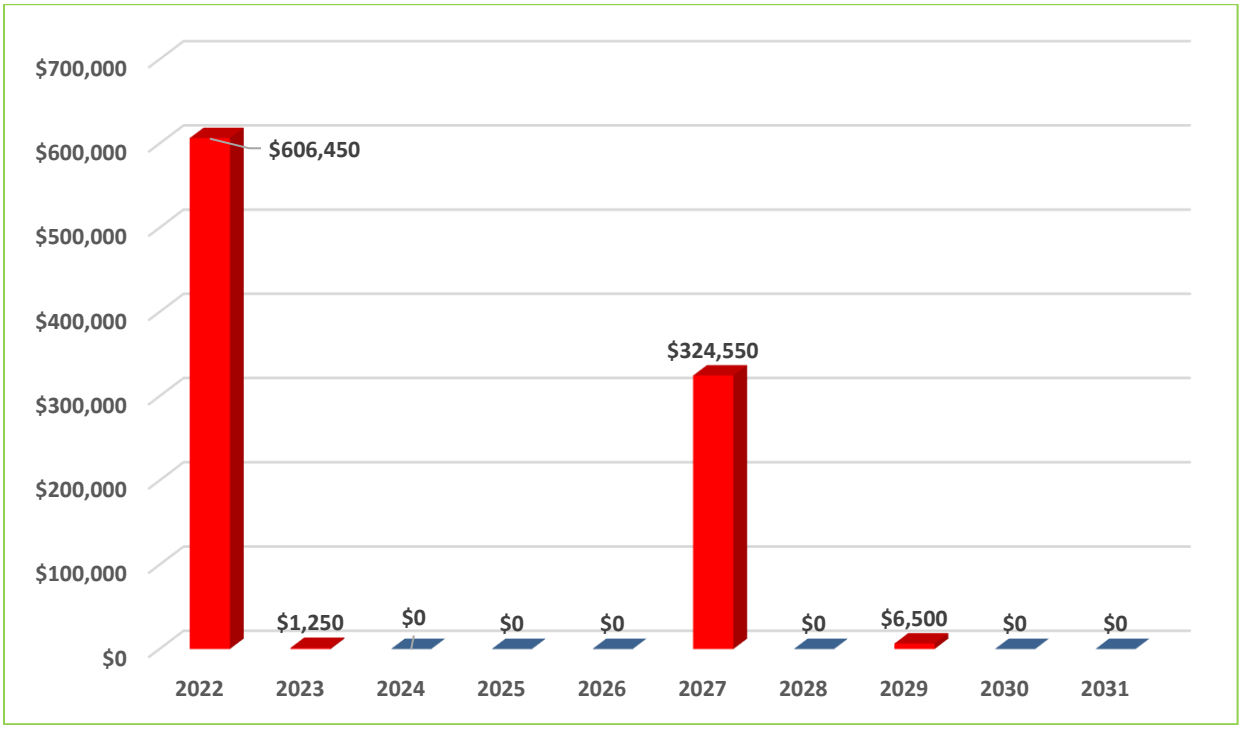



**Figure B-11: Capital Investments by Year: FUEL**

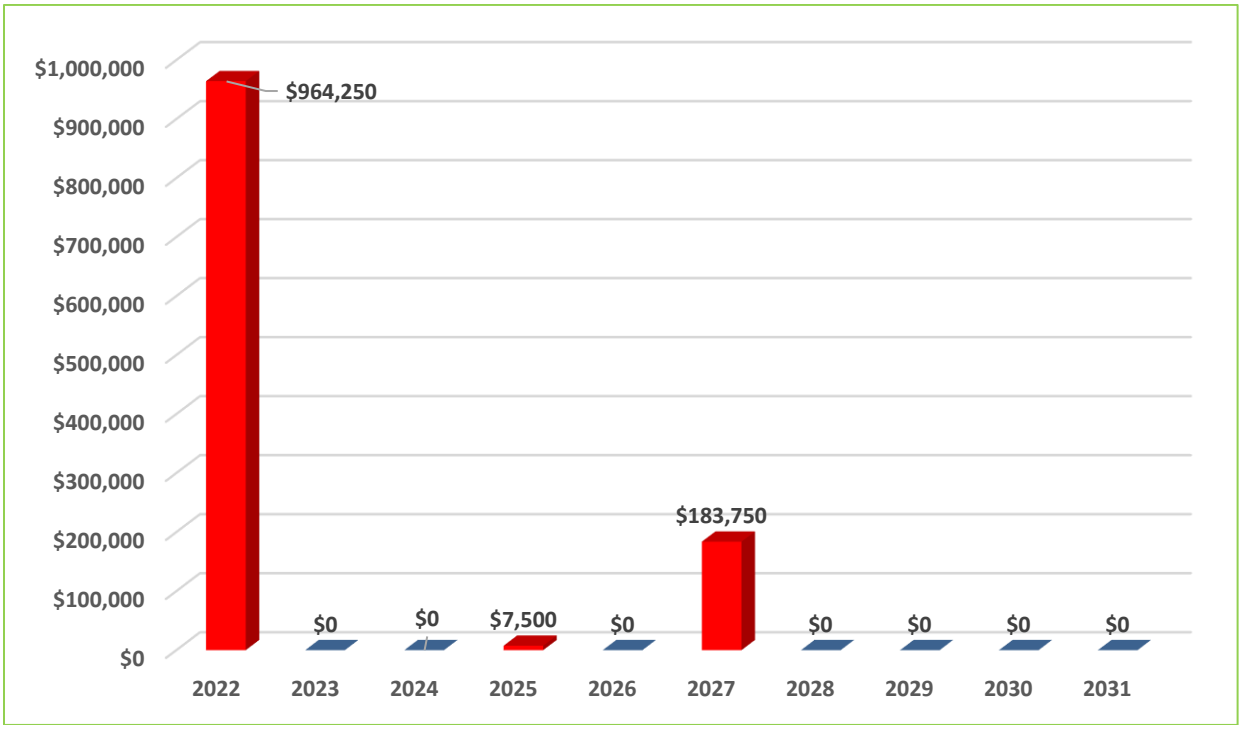



**Figure B-12: Capital Investments by Year: ACIH**

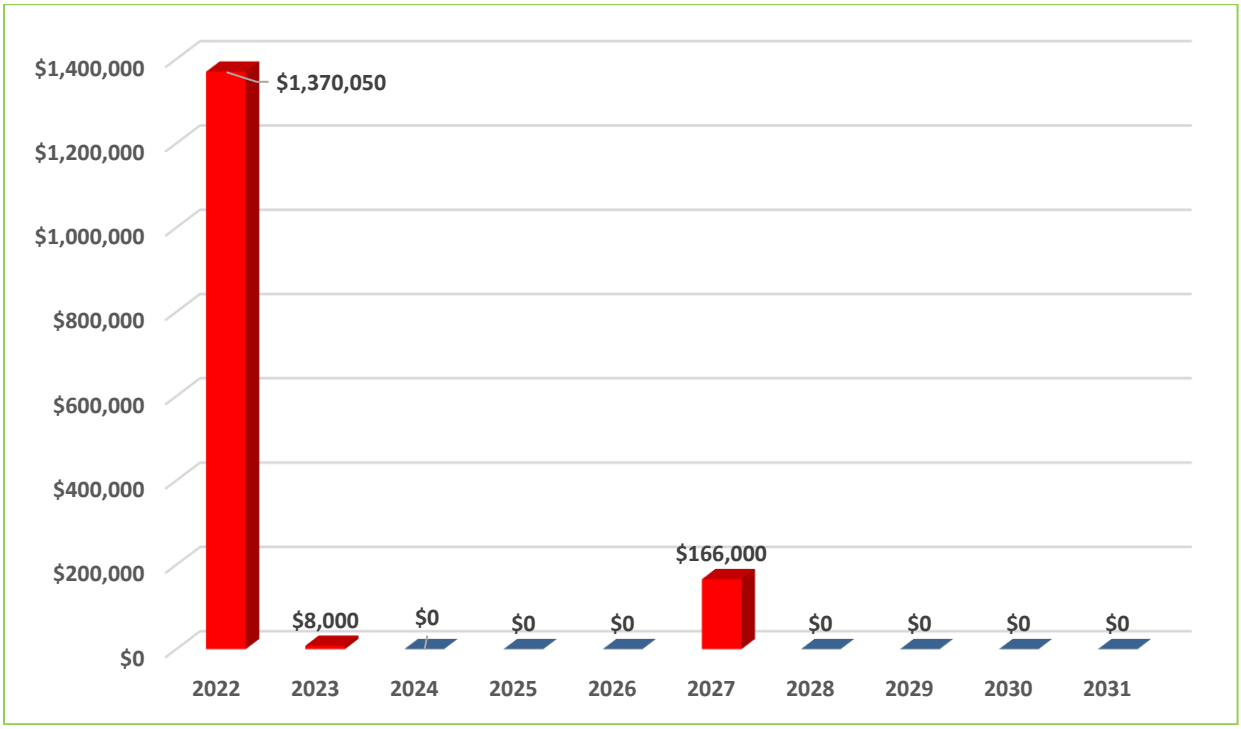



**Figure B-13: Capital Investments by Year: UNIH**

## B.8 Reference Materials

GIAA Property Map, provided by Client

Floor Plans, provided by Client

Baggage Handling System Drawings, provided by Client

Preventive Maintenance Records (Air Handlers, Chillers, and Generators), provided by Client

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- https://www.guamairport.com/corporate/about-our-airport/timeline
- https://en.wikipedia.org/wiki/Antonio_B._Won_Pat_International_Airport

AECOM

# Antonio B. Won Pat International Airport Master Plan Update

Appendix C – Runway Protection Zone Assessment

Delivering a better world

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# Appendix C: Runway Protection Zone Assessment

## C.1 Introduction

The purpose of this appendix is to define, analyze, and address any potential impacts to the existing and proposed Runway Protections Zones (RPZs) at the Antonio B. Won Pat International Airport (Airport). Currently, the existing RPZs contain land uses that are defined by Federal Aviation Administration (FAA) design standards as being incompatible with Airport operations. This report will identify and recommend one preferred RPZ alternative for all four runway ends that will be developed to achieve land use compatibility. This alternative will be incorporated into the Airports Development Plan and Airport Layout Plan (ALP) for this Master Plan Update. More information on Airport alternatives can be found in **Chapter 5:** *Airport Alternatives and Evaluation* and more information on the Airport Development Plan can be found in **Chapter 8:** *Facilities Implementation Plan*. **Figure C-1** shows the existing RPZs at the Airport.

## C.2 FAA Special Grant Assurances

When airport owners or sponsors, planning agencies, or other organizations accept funds from FAA-administered airport financial assistance programs, they must agree to certain obligations (or assurances). These obligations require the recipients to maintain and operate their facilities safely and efficiently and in accordance with specified conditions.[1]

In 2012 and 2013, the FAA approved two applications for Airport related projects that gave the Airport Sponsor (The A.B. Won Pat Guam International Airport Authority, Guam [GIAA]) grants of Federal funds for use on two Airport related projects. These projects included:

- Rehabilitate Runway 06L/24R – Phase II (Project Number: 3-66-0001-084)
- Extend Runway 06L/24R – Phase XI (Project Number: 3-66-0001-085-2013)

For both of these projects, in order to accept and use these grants appropriately, the Airport Sponsor agreed to special conditions regarding the Airport's RPZs. These special conditions stated:

"The sponsor agrees to take the following actions to maintain and/or acquire a property interest, satisfactory to the FAA, in the Runway Protection Zones:

a. Existing Fee Title Interest in the Runway Protection Zone: The Sponsor agrees to prevent the erection or creation of any structure or place of public assembly in the Runway Protection Zone, except for Navigational Aids (NAVAIDS) that are fixed by their functional purposes or any other structure approved by the FAA. Any existing structures or uses within the Runway Protection Zone will be cleared or discontinued unless approved by the FAA.

b. Existing Easement Interest in the Runway Protection Zone: The Sponsor agrees to take any and all steps necessary to ensure that the owner of the land within the designated Runway Protection Zone will not build any structure in the Runway Protection Zone that is a hazard to air navigation or which might create glare or misleading lights or lead to the construction of residences, fuel handling and storage facilities, smoke generating activities, or place of public assembly, such as churches, schools, office buildings, shopping centers, and stadiums.

c. Future Interest in the Runway Protection Zone: The Sponsor agrees that it will acquire fee title or less-than-fee-interest in the Runway Protection Zones for the runway that presently are not under its control within ten years of this Grant Agreement. Said interest shall provide the protection noted in the above Subparagraphs a and b."

[1] https://www.faa.gov/airports/aip/grant_assurances

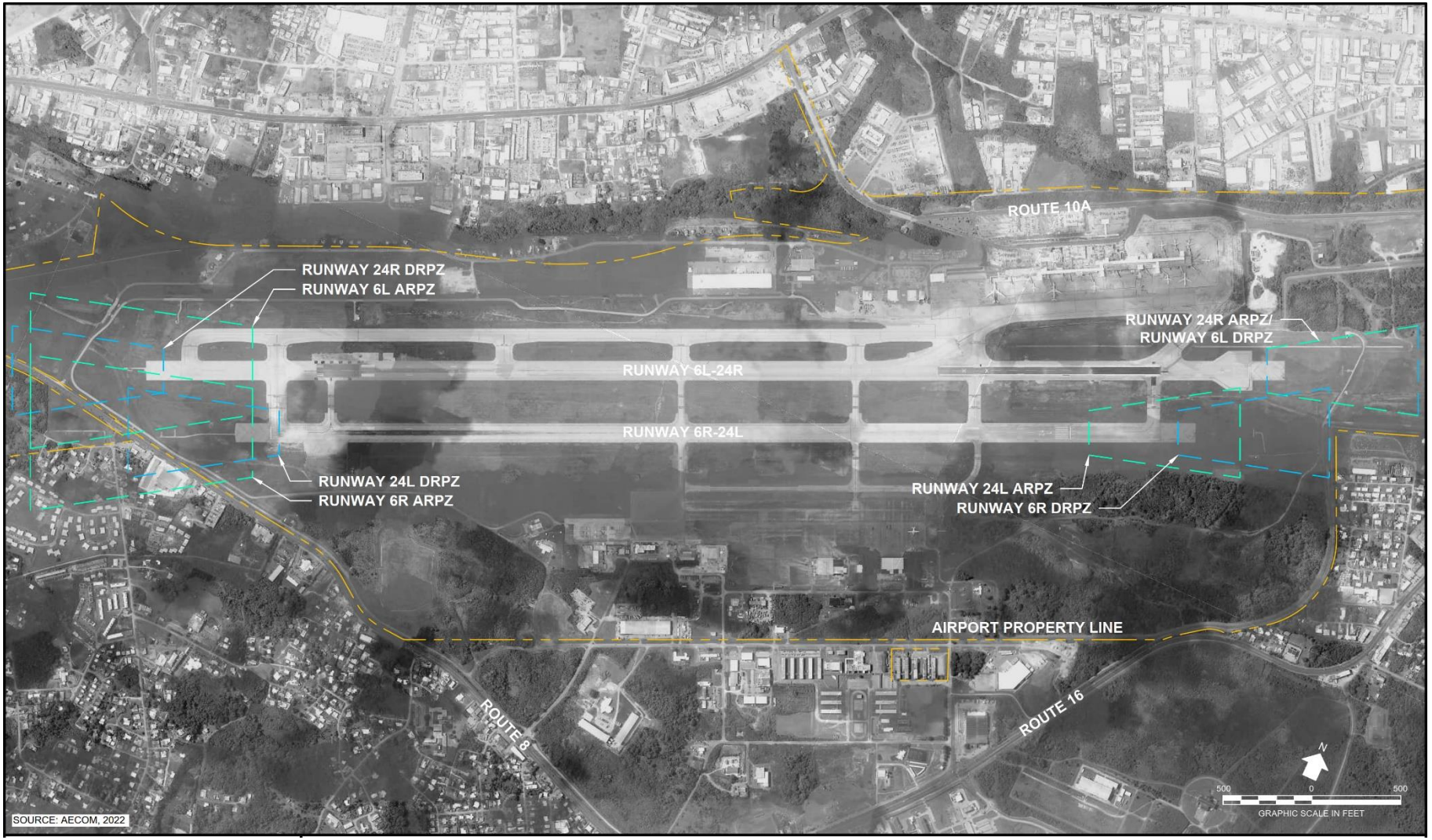



**Figure C-1. Runway Protection Zones at the Airport**

Source: AECOM

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## C.3 Runway Protection Zones

The FAA defines an RPZ in Advisory Circular (AC) 150/5300-13B, *Airport Design*, as "a protection zone that serves to enhance the safety and protection of people and property on the ground"[2]. RPZs are trapezoidal in shape, centered about the extended runway centerline, and are located on the ground prior or beyond the runway threshold or beyond the runway end.

FAA guidance specifies that that the RPZs should be cleared of incompatible objects and activities and to ensure the area within the RPZs remain clear of such objects and activities. If not currently controlled by the Airport, RPZ control can be attained through the acquisition of appropriate property interests (i.e., fee title, avigation easement) and implementing compatible land use principals to ensure the public's safety in these areas. If this cannot be accomplished, appropriate zoning ordinances could be implemented; however, this offers a lesser degree of control.

Each runway end is comprised of two RPZs: the Approach Runway Protection Zone (ARPZ) and the Departure Runway Protection Zone (DRPZ). The ARPZ extends from a point 200 feet from the runway's landing threshold while the DRPZ begins 200 feet beyond the runway end. If the Takeoff Run Available (TORA) and the runway end are not the same, the DRPZ begins 200 feet beyond the far end of the TORA. See **Section 4.2.8.2** for more information on declared distances at the Airport and **Figure C-2** for examples of RPZs from the *Airport Design* AC.

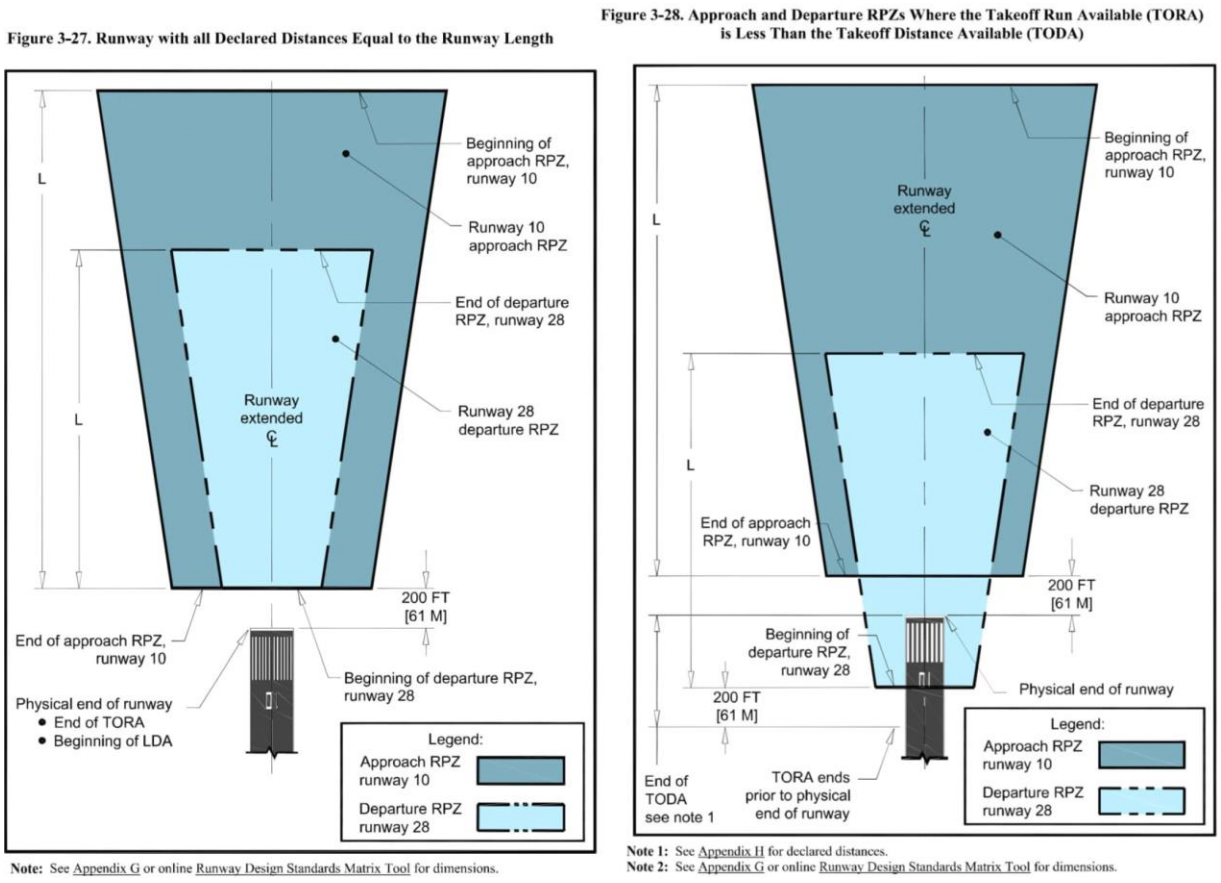



**Figure C-2. Runway Protection Zones with and without Declared Distances**

Source: FAA AC 150/5300-13B, Airport Design, Figures 3-27 and 3-28

[2] FAA AC 150/5300-13B, *Airport Design*, Paragraph 3.13

# C.4 Runways

The Airport has two parallel runways: Runway 6L/24R, which has a length of 12,014 feet and a width of 150 feet, and Runway 6R/24L which has a length of 10,014 feet and a width of 150 feet.

Runway ends 6L and 24L both contain displaced thresholds. A displacement occurs when the runway threshold does not align with the physical end of the runway. Though the reasons can vary, a threshold is typically displaced to clear obstacles near the end of the runway which reduces the distance available for landing. The Runway 6L threshold is displaced 1,000 feet and the Runway 24L threshold is displaced 1,004 feet.

## C.4.1 Declared Distances

When determining the location of a runway end's ARPZ and DRPZ, declared distances need to be analyzed. **Table C-1** identifies the four types of declared distances defined by the FAA while **Table C-2** presents the Airport's existing declared distances.

**Table C-1. Declared Distances**

| Declared Distance | Definition |
|---|---|
| Takeoff Runway Available (TORA) | The runway length declared available and suitable for satisfying takeoff run requirements. |
| Takeoff Distance Available (TODA) | The distance of the TORA plus the length of remaining runway or clearway beyond the far end of the TORA. |
| Accelerate-Stop Distance Available (ASDA) | The runway length plus the stopway length (if applicable) declared available and suitable for the acceleration and deceleration of an aircraft that must abort its takeoff. |
| Landing Distance Available (LDA) | The runway length that is declared available and suitable for satisfying aircraft landing distance requirements. |

Source: FAA AC 150-5300-13B, Airport Design, Appendix H

**Table C-2. Declared Distances at the Airport**

| Runway | | Declared Distance[A] | | | |
|---|---|---|---|---|---|
| End | Length | TORA | TODA | ASDA | LDA |
| 6L | 12,014' | 12,014' | 12,014' | 12,014' | 11,014' |
| 24R | 12,014' | 12,014' | 12,014' | 12,014' | 12,014' |
| 6R | 10,014' | 10,014' | 10,014' | 10,014' | 10,014' |
| 24L | 10,014' | 9,714' | 9,714' | 9,714' | 8,710' |

*Notes:*

*A. Declared Distances:*
*TORA = Takeoff Run Available*
*TODA = Takeoff Distance Available*
*ASDA = Accelerate-Stop Distance Available*
*LDA = Landing Distance Available*

*B. Old drainage headwalls are located beyond the Runway 6R end restricting the full length of the Runway Safety Area (RSA) beyond the runway end.*

*Source: GIAA*

## C.4.2 Runway Length Requirements

FAA AC 150/5325-4B, *Runway Length Requirements for Airport Design*, provides the standards and guidelines for determining adequate and appropriate runway length at an airport. Factors such as airport elevation above mean sea level (AMSL), temperature, wind velocity, airplane operating weights, takeoff and landing flap settings, runway surface conditions (dry or wet), effective runway gradient, and the presence of obstructions in the vicinity of the airport are key determinants for runway length analyses.

The main runway takeoff length requirements are determined using factors such as airport elevation, the mean maximum hottest month temperature, and runway high and low elevation points; higher values for each will increase the takeoff length due to aircraft performance characteristics. For the purpose of this analysis, the aircraft manufacturers' Aircraft Characteristics for Airport Planning manuals were used to identify the standard takeoff length required for an airport at sea level on a standard day (59° Fahrenheit and zero wind) with a zero runway gradient. Adjustments were then incorporated for conditions specific to the Airport which include:

- 305.0-foot Airport elevation
- 84.27° (Fahrenheit) mean maximum temperature of hottest month (June)
- 71.3-foot elevation difference between high and low points for Runway 6L-24R
    - The elevation difference between high and low points for Runway 6R-24L is 70.0 feet, so Runway 6L-24R was used to be more conservative

Of the 15 aircraft evaluated, 12 are defined by the FAA as "heavy" aircraft (aircraft capable of takeoff weights of more than 300,000 pounds), as those aircraft typically need longer runway lengths to takeoff. Eleven of these aircraft (with the exception of the Boeing 747-8) are the only heavy aircraft to have at least 300 operations at the Airport between 2014 and 2019. While not defined as "heavy" aircraft, the Boeing 737-700, Boeing 737-800, and Boeing 757-200 were also analyzed because these aircraft were the most common aircraft at the Airport. **Figure C-3** shows the MTOW of each aircraft and the runway length required for those aircraft compared to the aircraft weight at 80, 90, 95, and 100 percent takeoff weight.

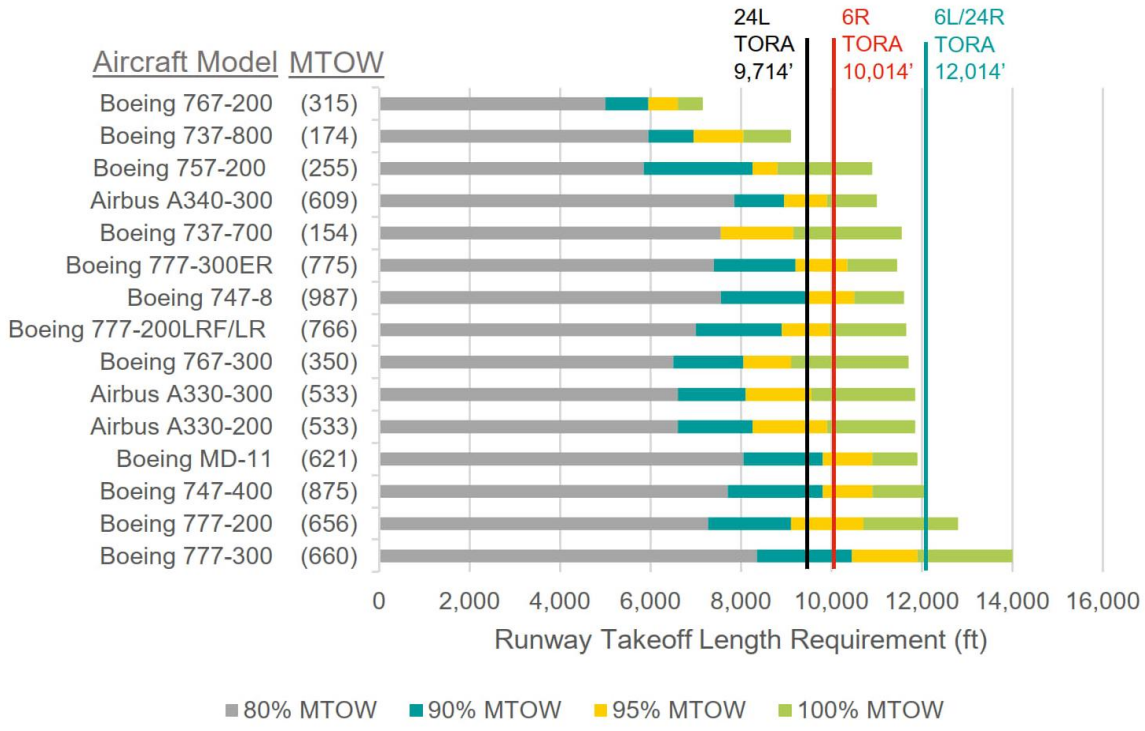



**Figure C-3. Runway Takeoff Length Requirements**

*Notes:*

*A. MTOW is measured in thousands.*
*B. Abbreviations*
*MTOW = Maximum Takeoff Weight*
*TORA = Takeoff Run Available*

*Sources:*

1. *Primary Fleet Mix for Heavy Aircraft*
2. *Manufactures' Airport Planning Manuals (APM)*

### C.4.3 Runway Landing Length Requirements

Landing length requirements were calculated for both wet and dry runway conditions at the Maximum Landing Weight (MLW) for the same aircraft analyzed in the runway takeoff length requirement and are presented in **Figure C-4**. These operating conditions provide a conservative landing length for the purposes of evaluating and/or establishing runway length.

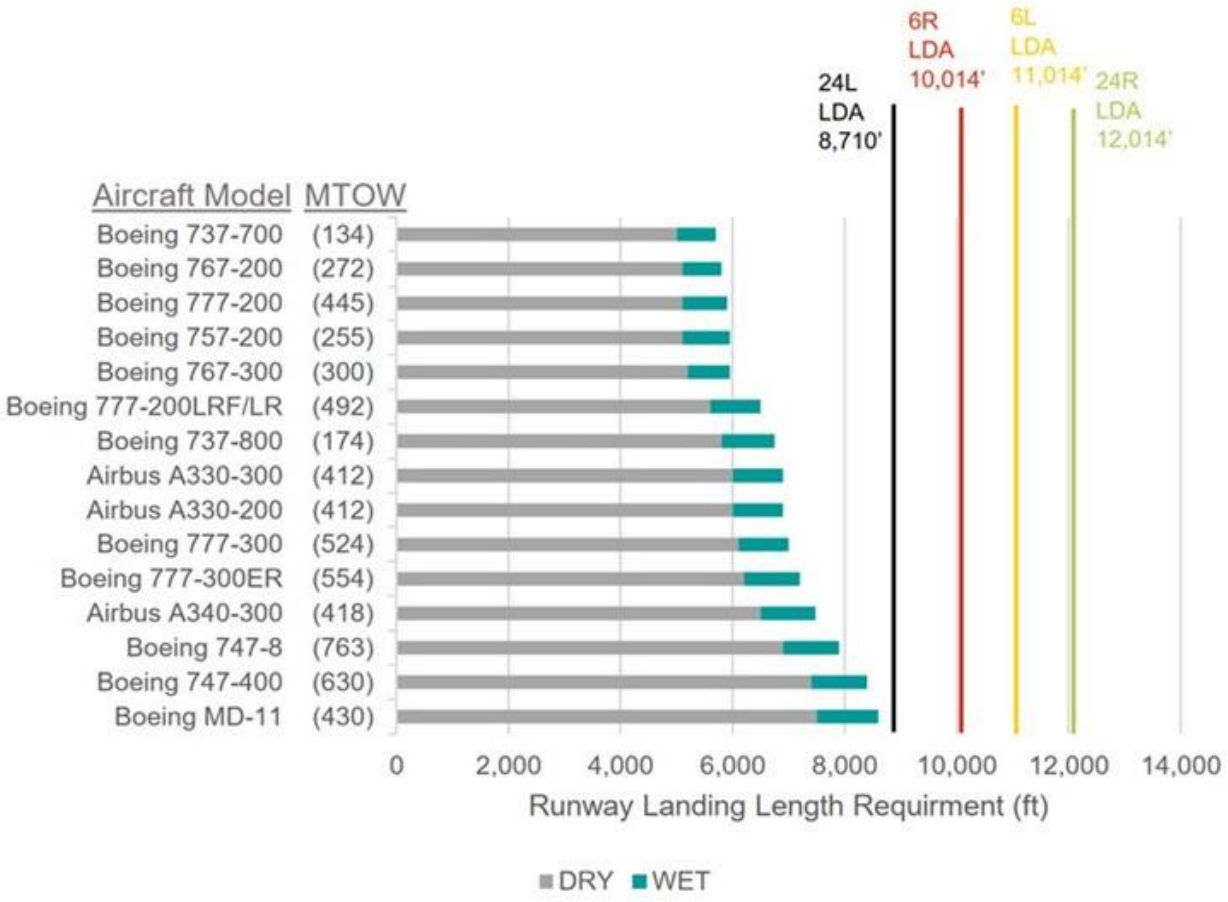



**Figure C-4. Runway Landing Length Requirement**

*Notes:*

*A. The Aircraft Performance Manual for the Airbus A330-200 and A330-300 did not provide landing performance on wet runways; therefore, the landing distances for dry runways were increased by 15 percent.*
*B. MTOW is measured in thousands.*
*C. Abbreviations*
*MTOW = Maximum Takeoff Weight*
*LDA = Landing Distance Available*

*Sources:*

*1. Primary Fleet Mix for Heavy Aircraft*
*2. Manufactures' APM*

## C.5 FAA Design Standards

RPZ dimensions are determined by the Aircraft Approach Category (AAC), Airplane Design Group (ADG), and visibility minimums for each runway end. Once established, the three components determine the Runway Design Code (RDC) which establishes the standards that apply.

The AAC, identified by a letter, is a grouping of aircraft related to aircraft approach speed, while the ADG, identified by a roman numeral, is a grouping of aircraft related to aircraft wingspan or tail height. A runway's visibility minimums are published on an instrument approach chart and expressed in Runway Visual Range (RVR) distances. See **Table C-3**, **Table C-4**, and **Table C-5** for the parameters to determine

a runway's AAC, ADG, and visibility minimums. These tables can be found in FAA AC 150/5300-13B, *Airport Design*.

**Table C-3. Aircraft Approach Category (AAC)**

| Aircraft Approach Category | Approach Speed |
|---|---|
| A | Approach speed less than 91 knots |
| B | Approach speed 91 knots or more but less than 121 knots |
| C | Approach speed 121 knots or more but less than 141 knots |
| D | Approach speed 141 knots or more but less than 166 knots |
| E | Approach speed 166 knots or more |

Source: FAA AC 150/5300-13B, Airport Design

**Table C-4. Airplane Design Group (ADG)**

| Group # | Tail Height | Wingspan |
|---|---|---|
| I | < 20 ft | < 49 ft |
| II | 20 ft to < 30 ft | 49 ft to < 79 ft |
| III | 30 ft to < 45 ft | 79 ft to < 118 ft |
| IV | 45 ft to < 60 ft | 118 ft to < 171 ft |
| V | 60 ft to < 66 ft | 171 ft to < 214 ft |
| VI | 66 ft to < 80 ft | 214 ft to < 262 ft |

Source: FAA AC 150/5300-13B, Airport Design

**Table C-5. Visibility Minimums**

| Runway Visual Range | Instrument Flight Visibility Category (Statute Mile) |
|---|---|
| 5,000 ft | Not lower than 1 mile |
| 4,000 ft | Lower than 1 mile but not lower than ¾ mile |
| 2,400 ft | Lower than ¾ mile but not lower than ½ mile |
| 1,600 ft | Lower than ½ mile but not lower than ¼ mile |
| 1,200 ft | Lower than ¼ mile |

Source: FAA AC 150/5300-13B, Airport Design

According to FAA AC 150/5000-17, *Critical Aircraft and Regular Use Determination*, an airport's critical aircraft is the most demanding aircraft type, or grouping of aircraft with similar characteristics, that make regular use of an airport. Regular use is 500 annual operations, including both itinerant and local operations but excluding touch-and-go operations.[3] The AC recommends an operations count by aircraft make and model for the most recent 12-month period be used to determine the critical aircraft. Due to the severe drop in aircraft operations in 2020 and 2021 because of the 2019 Novel Coronavirus (COVID-19) pandemic, 2019 operations were used to determine the Airport's critical aircraft using operations data from the FAA's Traffic Flow Management System Counts (TFMSC).

The FAA defines two parameters to determine an airport's critical aircraft: Airport Reference Code (ARC) and Taxiway Design Group (TDG). The ARC is determined by combining the AAC and the ADG while the TDG analyzes the cockpit to main gear dimension and the width of the main gear. The TDG is a primary design factor for taxiway/taxilane width and fillet standards and provides a basis to evaluate the ability of the design aircraft to utilize the existing taxiway structure. See **Table C-6** for aircraft that had more than 500 operations within 2019, as well as the aircraft's ARC and TDG.

[3] *FAA AC 150/5000-17, Critical Aircraft and Regular Use Determination*

**Table C-6. Operations by Aircraft of 500 or More Operations - FY2019**

| Aircraft | Aircraft Operations | Airport Reference Code (ARC) | Taxiway Design Group (TDG) |
|---|---|---|---|
| Airbus A320 (All Series) | 682 | C-III | 3 |
| Airbus A321 (All Series) | 1,721 | C-III | 2 |
| Airbus A330-300 | 655 | C-V | 5 |
| Boeing 737-700 | 2,528 | C-III | 3 |
| Boeing 737-800 | 13,096 | D-III | 3 |
| Boeing 767-300 | 1,028 | C-IV | 5 |
| Boeing 777-200 | 2,127 | C-V | 5 |
| Boeing 777-300ER | 811 | D-V | 6 |
| Cessna 208 Caravan | 1,944 | B-II | 1A |
| Piper Navajo PA-31 | 836 | A-I | 1A |

Source: TFMSC FY2019

Comparing the operations, ARC, and TDG above, the Airport's critical aircraft is a Boeing 777-300ER and is the critical aircraft for all four runway ends. All four runways have adequate TORA (see **Table C-2**) for a Boeing 777-300ER to takeoff at 95% Maximum Takeoff Weight (MTOW), as well as adequate LDA for a Boeing 777-300ER to land on a wet runway.

Lastly, Instrument Approach Procedures (IAPs) were evaluated to determine the lowest visibility minimums for each runway end. See **Table C-7** for the types of IAPs and their associated visibility minimums.

**Table C-7. Instrument Approach Procedures and Visibility Minimums**

| Runway End | Instrument Approaches – Type of Approach[A] | Instrument Approach Minimums[B] |
|---|---|---|
| 6L | CAT I ILS – PA | 590-1/2 SM |
| | LOC – NPA | 1,100-3/4 SM |
| | RNAV (RNP) – APV | 511-1/2 SM |
| | RNAV (GPS) – APV | 720-1/2 SM |
| | VOR – NPA | 760-1/2 SM |
| | TACAN – NPA | 760-1/2 SM |
| | VOR A – NPA | 880-1 SM |
| 24R | RNAV (RNP) – APV | 1,014-2 1/2 SM |
| | RNAV (GPS) – APV | 1,160-1 SM |
| | VOR – NPA | 1,180-1 SM |
| | TACAN – NPA | 1,180-1 SM |
| | NDB – NPA | 1,220 – 1 1/4 SM |
| | VOR A – NPA | 880-1 SM |
| 6R | CAT I ILS – PA | 603-3/4 SM |
| | LOC – NPA | 980-3/4 SM |
| | RNAV (RNP) – APV | 508-1/2 SM |
| | RNAV (GPS) – APV | 980-3/4 SM |
| | VOR A – NPA | 880-1 SM |
| 24L | RNAV (RNP) – APV | 1,103-2 3/4 SM |
| | RNAV (GPS) – APV | 1,180-1 1/4 SM |
| | VOR A – NPA | 880-1 SM |

*Notes:*

*A. Instrument Approach Types:*
*CAT I ILS = Category I Approach that has a Runway Visual Range (RVR) of at least 2,400'*
*LOC = Localizer*

| Runway End | Instrument Approaches – Type of Approach[A] | Instrument Approach Minimums[B] |
|---|---|---|

*RNAV (RNP) = Area Navigation (Required Navigation Performance)*
*RNAV (GPS) = Area Navigation (Global Positioning System)*
*VOR = Very High Frequency Omnidirectional Range*
*TACAN = Tactical Air Navigation*
*NDB = Non-Directional Beacon*
*PA = Precision Approach*
*APV = Approach Procedure with Vertical Guidance*
*NPA = Non-Precision Approach*

B. *Instrument Approach Minimums:*
*SM = Statute Mile*

*Source: AirNav.com*

As shown in **Table C-7**, Runways 6L and 6R have visibility minimums lower than 3/4 SM but not lower than 1/2 SM while Runways 24L and 24R have visibility minimums not lower than one mile. Using the RVR values established in **Table C-5**, the RDCs for Runway 6L and 6R are D-V-2400 and the RDCs for Runway 24L and 24R are D-V-5000. These RDCs will be used to determine the dimensions for each runway's ARPZ and DRPZ.

## C.6 Existing Runway Protection Zones

Appendix G of FAA AC 150/5300-13B, *Airport Design* is used to determine the dimensions of the existing RPZs at the Airport based on the RDCs for each runway end. Since all four runway ends have a Category 'D' AAC and a Group 'V' ADG, Table G-11 in the appendix is used. Using the runway end specific visibility minimums as well, **Table C-8** includes the dimensions for each runway's ARPZ and DRPZ and **Figure C-5** and **Figure C-6** depict the RPZs beyond the threshold ends.

**Table C-8. Existing Runway Protection Zone (RPZ) Dimensions**

| Runway | Lowest Visibility Minimums | Approach Runway Protection Zone (ARPZ) | Departure Runway Protection Zone (DRPZ) |
|---|---|---|---|
| 6L | 1/2 SM | 1,000' x 1,750' x 2,500' | 500' x 1,010' x 1,700' |
| 24R | 1 SM | 500' x 1,010' x 1,700' | 500' x 1,010' x 1,700' |
| 6R | 1/2 SM | 1,000' x 1,750' x 2,500' | 500' x 1,010' x 1,700' |
| 24L | 1 SM | 500' x 1,010' x 1,700' | 500' x 1,010' x 1,700' |

*Notes:*

A. *Distances are length of inner RPZ x length of outer RPZ x distance between inner and outer RPZ.*

B. *Abbreviation*
*SM = Statute Mile*

*Source: FAA AC 150/5300-13B, Airport Design, Table G-11. Runway Design Standards Matrix, C/D/E-V*

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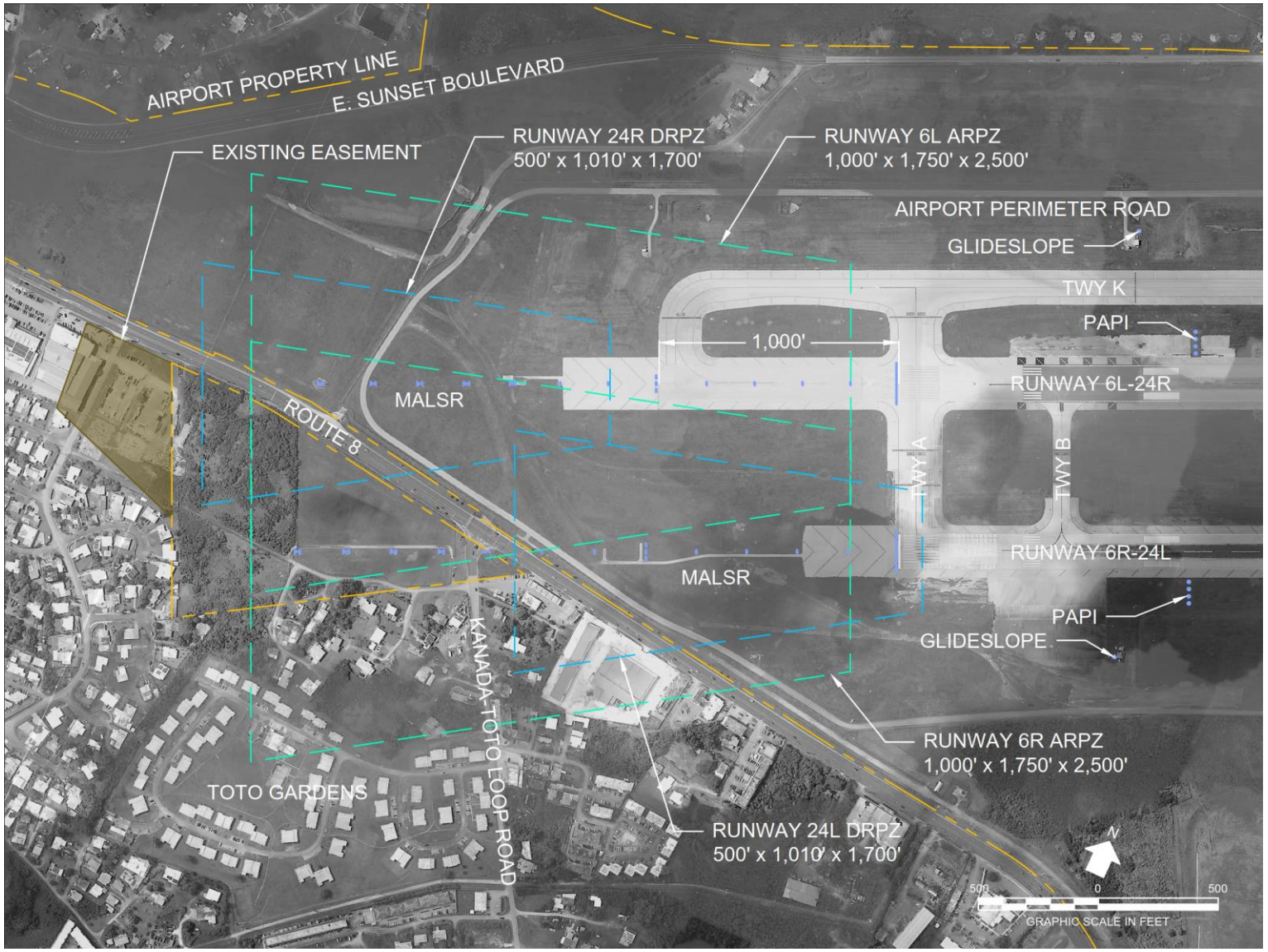



**Figure C-5. Existing RPZs - Runway 6L and 6R Ends**

Source: AECOM

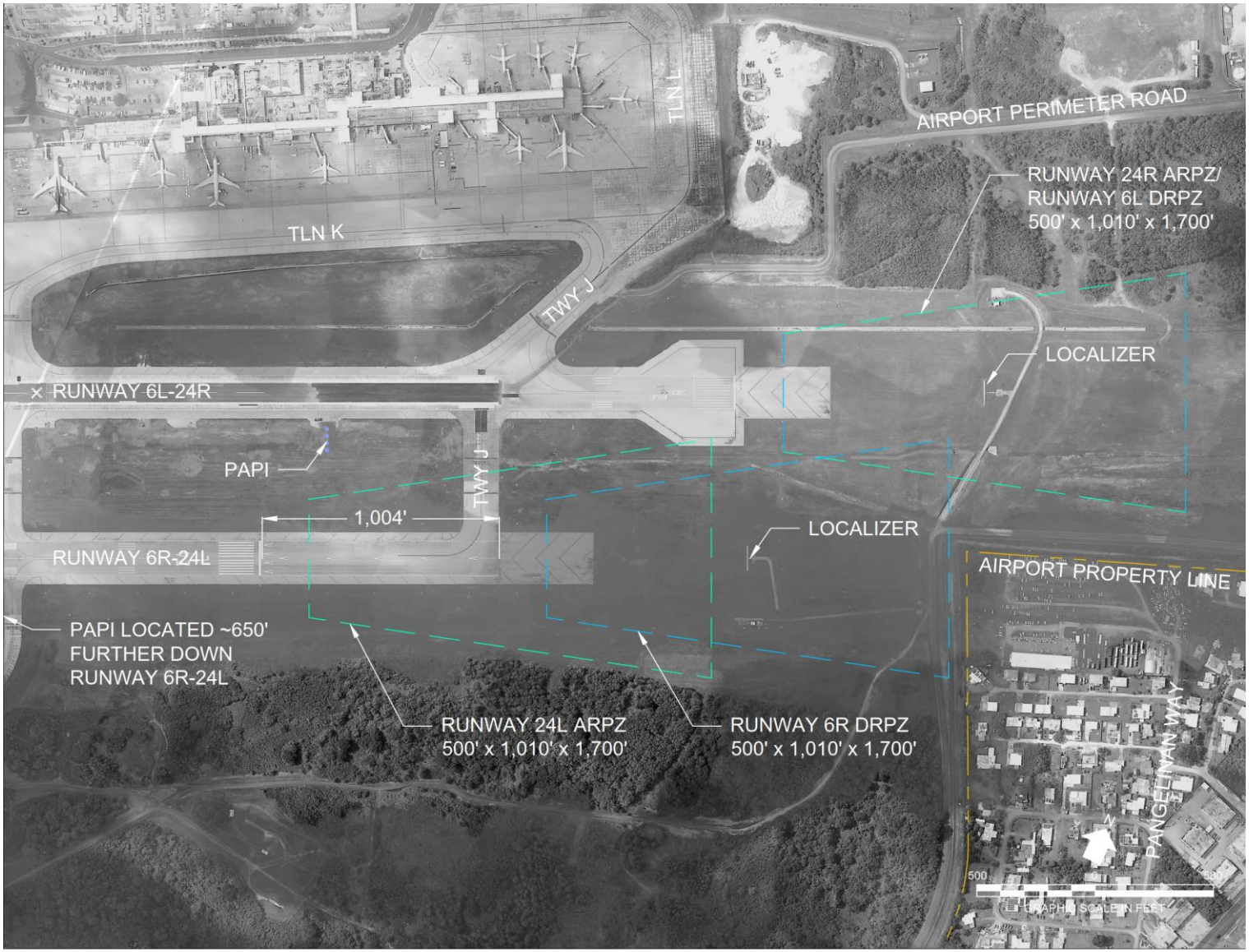



**Figure C-6. Existing RPZs - Runway 24L and 24R Ends**

Source: AECOM

## C.7 Land Use and Non-Compliant Conditions

The FAA encourages and assists airport sponsors and their community land use planning authorities with undertaking their best efforts to secure compatible planning and development within the airport environs. FAA AC 150/5190-4B, *Airport Land Use Compatibility Planning* defines compatible land use as "land uses that can coexist with a nearby airport without constraining the safe and efficient operation of the airport, or exposing people living or working nearby to significant environmental impacts" while incompatible land use is defined as "any land uses around an airport that can affect the safe and efficient operation of aircraft."[4]

In terms of land use within RPZs, it is desirable to clear all objects from the RPZ; however, some uses are permitted with conditions, while other land uses are prohibited. The FAA expects airport sponsors to seek all possible opportunities to eliminate, reduce, or mitigate existing incompatible land uses.

Additionally, in terms of ownership within RPZs, the FAA's *Interim Guidance on Land Uses Within a Runway Protection Zone* states, "Airport owner control over the RPZ land is emphasized to achieve the desired protection of people and property on the ground. Although the FAA recognizes that in certain situations the airport sponsor may not fully control land within the RPZ, the FAA expects airport sponsors to take all possible measures to protect against and remove or mitigate incompatible land uses."[5] Examples of ways the airport sponsor can help mitigate existing incompatible land uses on property that is not owned by the airport may include land acquisition, land exchanges, right-of-first-refusal to purchase, agreements with property owners on land uses, easements, or other such measures.

**Table C-9** discusses the expectations of airport sponsors for existing incompatible land uses within an airport's RPZ.

**Table C-9. Expectation of Airport Sponsors – Existing Incompatible Land Uses Within RPZs**

| Type of Land Use Control | Existing Incompatible Land Use |
|---|---|
| Airport sponsor owns the land | Establish and enforce the necessary zoning controls or lease terms to enable addressing of existing incompatible land uses |
| Property is off-airport but the airport sponsor has land use authority or local jurisdiction | Seek to establish the necessary zoning controls to enable addressing of existing incompatible land uses |
| Airport sponsor has no land use control | Actively seek opportunities to establish the necessary zoning controls to enable addressing existing incompatible land uses |

Source: FAA AC 150/5190-4B, Airport Land Use Compatibility Planning

According to the *Airport Land Use Compatibility Planning* AC, if the airport sponsor does not have full land use control over properties within an RPZ, the best ways to achieve control over these areas include:

- Ownership of the RPZ property in fee simple.
- Possessing sufficient interest in the RPZ property through easements, deed restrictions, etc.
- Possessing sufficient land use control authority to regulate land use in the jurisdiction containing the RPZ.
- Possessing and exercising the power of eminent domain over the property.
- Possessing and exercising permitting authority over proponents of development within the RPZ (e.g., where the sponsor is a State).

In terms of new, modified, or proposed land uses within RPZs, airport sponsors should try and mitigate potential incompatible land uses especially when the introduction of the incompatible land use is the result of an airport sponsor-initiated project such as an airfield project, change in critical design aircraft that increases the RPZ dimensions, or a new or revised instrument approach procedure that increases

[4] FAA AC 150/5190-4B, *Airport Land Use Compatibility Planning*, Paragraph 2.1
[5] FAA *Interim Guidance on Land Uses Within a Runway Protection Zone*, September 27, 2012

the RPZ dimensions. This could also be applied to any local development proposed within an RPZ that is not airport sponsor driven.

The FAA only permits six land uses that would not require further evaluation or coordination if new land uses are introduced to an RPZ. These include:

- Farming that meets specific airport design clearance standards
- Irrigation channels that meet specific airport design clearance standards
- Airport service roads, as long as they are not public roads and are directly controlled by the airport operator
- Underground facilities, as long as they meet other design criteria
- NAVAIDs and aviation facilities, such as equipment for airport facilities considered fixed-by-function in regard to the RPZ
- Above-ground fuel tanks associated with back-up generators for unstaffed NAVAIDs

Furthermore, for new or modified land uses within an RPZ that exclude the elements mentioned above, FAA staff must consult with the National Airport Planning and Environmental Division as certain land uses require additional coordination. These land uses include:

- Buildings and structures (such as residences, schools, churches, hospitals or other medical care facilities, and commercial/industrial buildings)
- Recreational land use (such as golf courses, sports fields, amusement parks, and other places of public assembly)
- Transportation facilities (such as rail facilities, public roads/highways, and vehicular parking facilities)
- Fuel storage facilities (above and below ground)
- Hazardous material storage (above and below ground)
- Wastewater treatment facilities
- Above-ground utility infrastructure (such as electrical substations), including any type of solar panel installations

**Table C-10** discusses the expectations of airport sponsors for new incompatible land uses within an airport's RPZ.

**Table C-10. Expectation of Airport Sponsors – New Incompatible Land Uses Within RPZs**

| Type of Land Use Control | New Incompatible Land Use |
|---|---|
| Airport sponsor owns the land | Establish all necessary protections to prevent new incompatible land uses |
| Property is off-airport but the airport sponsor has land use authority or local jurisdiction | Take all appropriate steps available to establish and exercise zoning controls necessary to prevent any new incompatible land uses |
| Airport sponsor has no land use control | Sponsor should actively pursue and consider all possible steps to secure land necessary to prevent any new incompatible land uses |

Source: FAA AC 150/5190-4B, Airport Land Use Compatibility Planning

## C.8 Existing Land Use and Non-Compliant Conditions

The Airport owns all land within the RPZs beyond the east end of Runway 24L and 24R and the only incompatible land use within these RPZs is a wind cone that is located within the Runway 24L ARPZ. The Airport has two wind cones that are both located within both Runway Object Free Areas (ROFAs). The Airport is already planning on relocating both wind cones outside of any existing and proposed runway safety areas.

The RPZs beyond the Runway 6L and 6R ends have a number of elements and some incompatible land uses within their RPZs. The elements within these RPZs can be found in **Table C-11** and some of them can be found in **Figure C-7** through **Figure C-10**.

**Table C-11. Land Uses Within RPZs Beyond the West End of Runway 6L and 6R**

| Runway 6L ARPZ | Runway 24R DRPZ | Runway 6R ARPZ | Runway 24L DRPZ |
|---|---|---|---|
| **Compatible Land Uses** | | | |
| MALSR for Runway 6L PA | MALSR for Runway 6L PA | MALSR for Runway 6L PA | MALSR for Runway 6R PA |
| MALSR for Runway 6R PA | | MALSR for Runway 6R PA | |
| NAVAID Shelter | | NAVAID Shelter | |
| Airport Perimeter Road | Airport Perimeter Road | Airport Perimeter Road | Airport Perimeter Road |
| Airport Security Fence[B] | Airport Security Fence[B] | Airport Security Fence[B] | Airport Security Fence[B] |
| **Incompatible Land Uses** | | | |
| 3.35 Acres of Land Unowned by the Airport | 2.43 Acres of Land Unowned by the Airport | 27.39 Acres of Land Unowned by the Airport | 4.37 Acres of Land Unowned by the Airport |
| Route 8 | Route 8 | Route 8 | Route 8 |
| Powerlines Along Route 8 | Powerlines Along Route 8 | Powerlines Along Route 8 | Powerlines Along Route 8 |
| Kanada-Toto Loop Road | | Kanada-Toto Loop Road | |
| Ramirez Street | | Ramirez Street | |
| Blas Lane | | Blas Lane | |
| | | Calle Paquito | |
| | | McDonalds/Mobil Gas Station | McDonalds/Mobil Gas Station |
| | | Shell Gas Station | |
| | | American Grocery and Retail Stores | American Grocery and Retail Stores |
| | | Oasis Apartment Complex | |
| | | 20 Residential Houses | 1 Residential Home |
| | | 7 Residential Houses/Buildings Associated with Toto Gardens | |

*Notes:*

*A. Abbreviations*
*ARPZ: Approach Runway Protection Zone*
*DRPZ: Departure Runway Protection Zone*
*MALSR: Medium-Intensity Approach Lighting System with Runway Alignment Indicator Lights*
*PA: Precision Approach*
*NAVAID: Navigational Aid*

*B. The Airport security fence is incompatible with the land use requirements for the Object Free Area (OFAs) for both runways.*

Source: AECOM




**Figure C-7. McDonalds, Mobil Mart Gas Station, and Route 8 Within Runway 6R ARPZ and Runway 24L DRPZ**

Source: AECOM




**Figure C-8. Shell Gas Station Within Runway 6R ARPZ**

Source: AECOM



**Figure C-9. American Grocery Within Runway 6R ARPZ and Runway 24L DRPZ**

Source: AECOM




**Figure C-10. Toto Gardens Within Runway 6R ARPZ**

Source: AECOM

## C.9 RPZ Alternatives

The alternatives analysis develops and presents potential solutions to resolve the non-compliant conditions associated with the RPZ's on the west end of the runways. Since the RPZ's on the east end of the runways are in compliance, excluding the wind cone that is proposed on be relocated, no alternatives were developed for the east end.

Five alternatives were developed for the RPZs. They include the following:

- **Alternative 1 – No Action:** No action taken.
- **Alternative 2 – Achieve Control of All Properties Within RPZs**: Acquire 53.21 acres of property or obtain avigation easements to control the land uses within the RPZ's that are not currently owned by the Airport Authority.
- **Alternative 3 – Shift RPZs and Reduce Declared Distances**: Displace the Runway 6R threshold by 2,528 feet to shift the 6R ARPZ within existing Airport property, increase the Runway 6L displaced threshold by 1,458 feet to shift the 6L ARPZ and 24R DRPZ within existing Airport property, and relocate the ALSs and associated NAVAIDs.
- **Alternative 4 – Reduce Runway Lengths**: Remove 2,458 feet of runway pavement at the west end of Runway 6L and 2,528 feet of runway pavement at the west end of 6R end to shift all RPZs within Airport property, remove Taxiways A, B, and a portion of Taxiway K, construct two new blast pads and taxiway connectors that connect to the new Runway 6L and 6R ends, and relocate the ALSs and associated NAVAIDs.
- **Alternative 5 – Re-Route Route 8**: Acquire 99.87 acres of property, demolish 1,115 square yards of existing Route 8 pavement, demolish existing structures, remove trees and vegetation, regrade the land, and re-route Route 8 nearly 6,000 feet around the existing RPZs.

See **Figure C-11** through **Figure C-15** for the five alternatives.

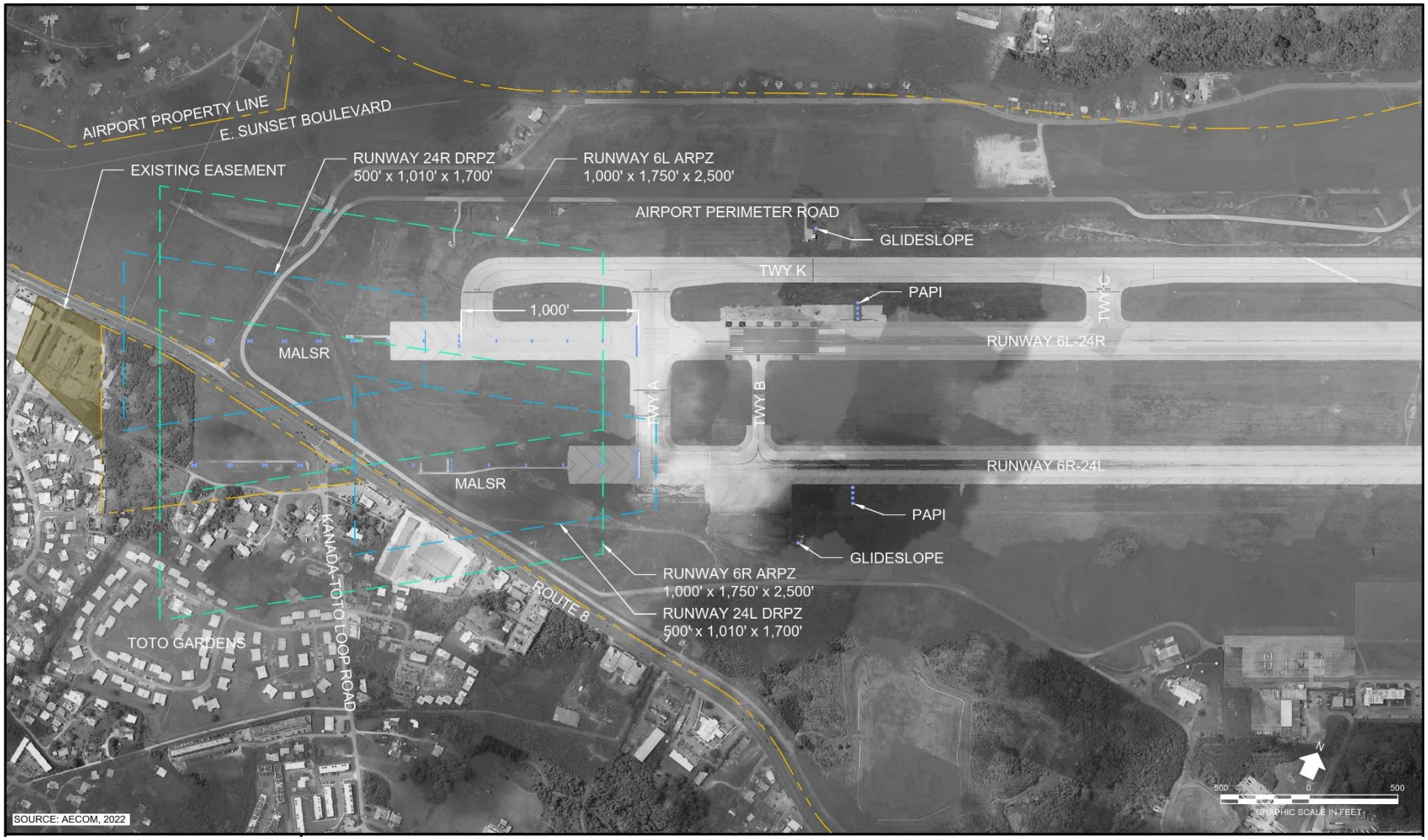



**Figure C-11. Alternative 1 – No Action**

Source: AECOM

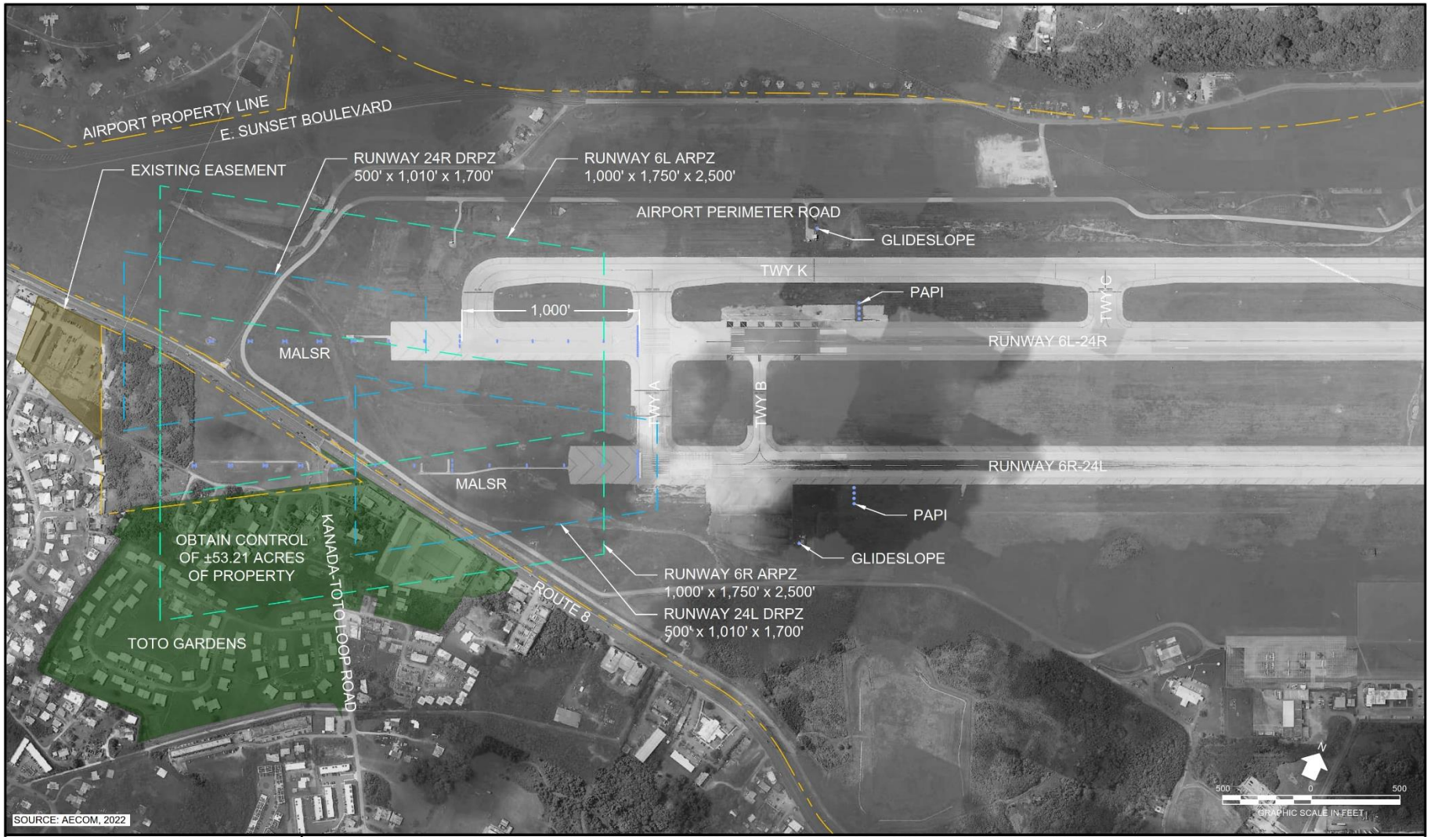



**Figure C-12. Alternative 2 – Achieve Control of All Properties Within RPZs**

Source: AECOM

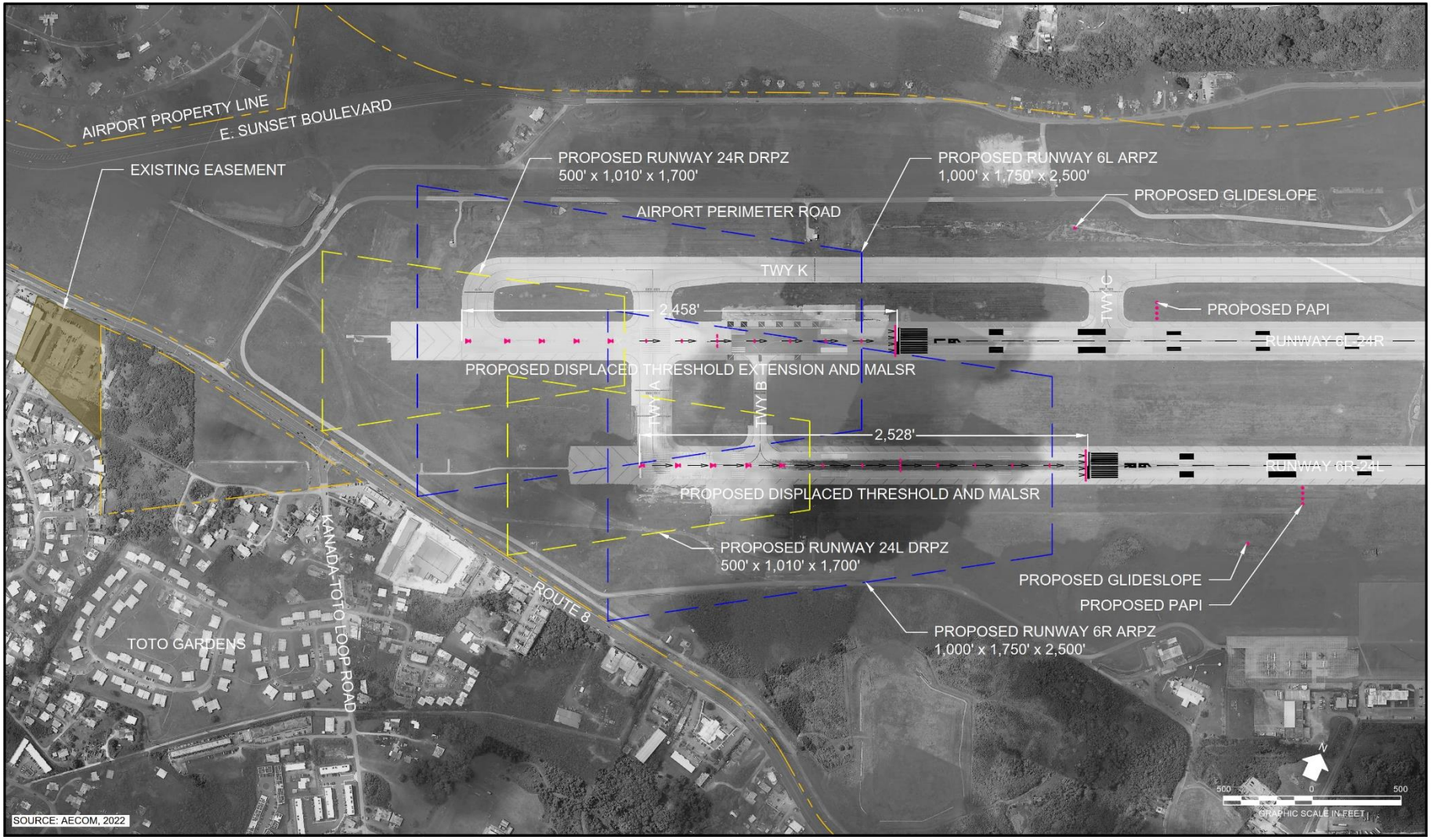



**Figure C-13. Alternative 3 – Shift RPZs and Reduce Declared Distances**

Source: AECOM

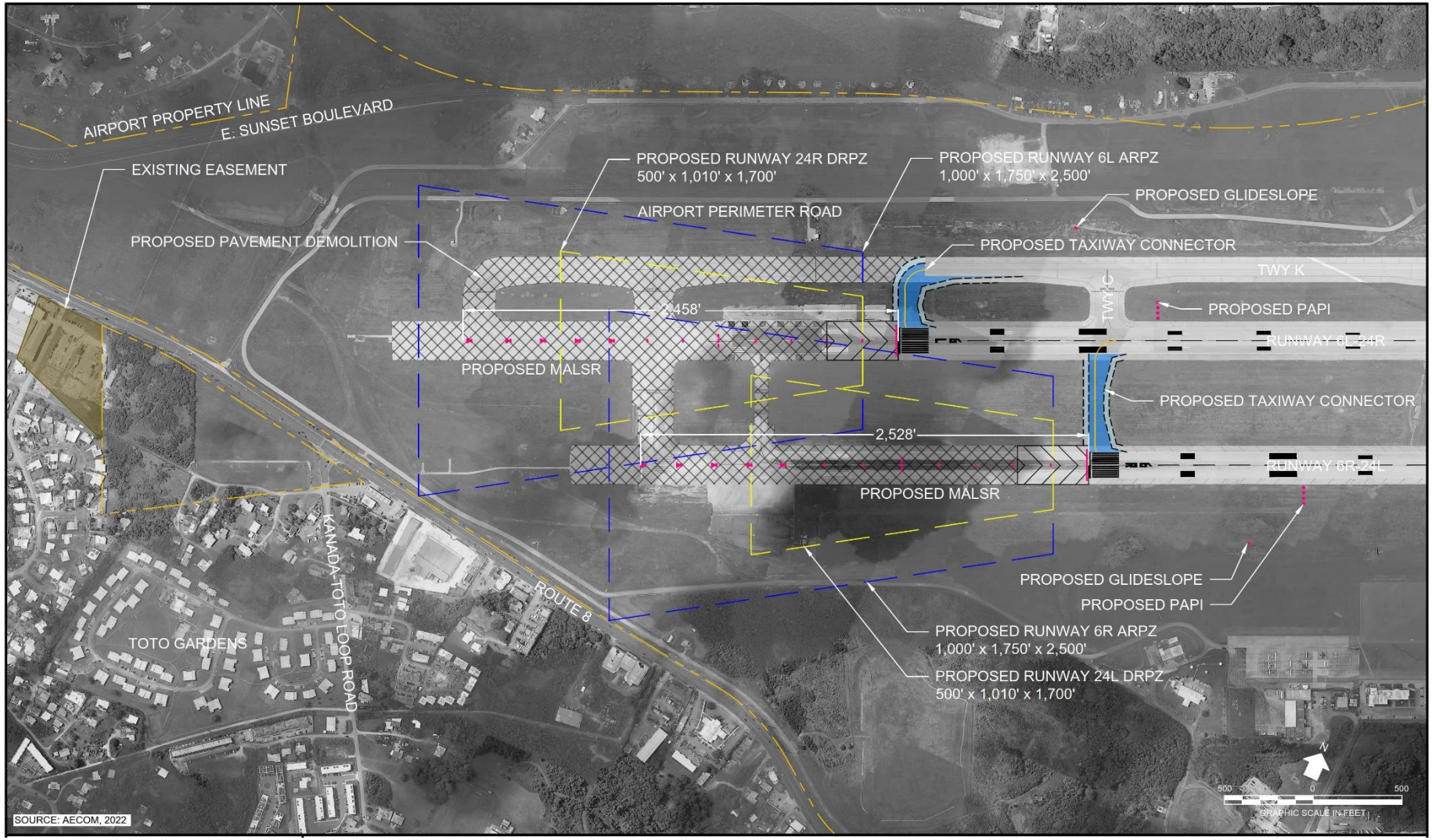



**Figure C-14. Alternative 4 – Reduce Runway Lengths**

Source: AECOM

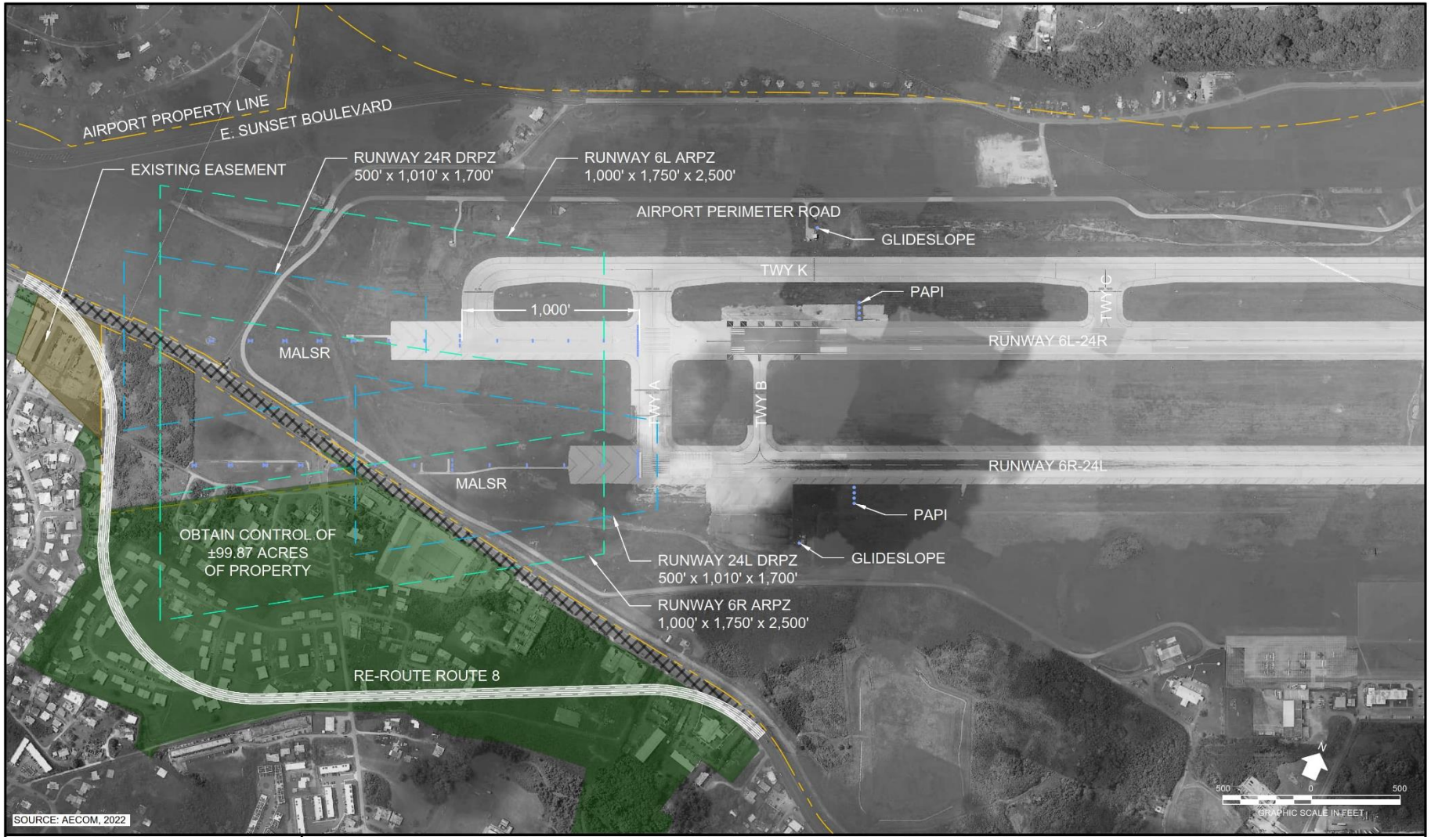



**Figure C-15. Alternative 5 – Re-Route Route 8**

Source: AECOM

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## C.10 RPZ Alternatives Analysis

An evaluation matrix was created for the five alternatives based on both quantitative and qualitative development criteria. See **Table C-12** for the alternatives evaluation matrix.

**Table C-12. Runway Protection Zone Alternatives Matrix**

| Criteria | Alternative 1 (No Action) | Alternative 2 (Acquire Control) | Alternative 3 (Shift RPZs) | Alternative 4 (Shorten Runways) | Alternative 5 (Route 8) |
|---|---|---|---|---|---|
| Achieves Land Use Compliance | 🔴 | 🟢 | 🟢 | 🟢 | 🟢 |
| Airside Operational Efficiency | 🟡 | 🟢 | 🟡 | 🔴 | 🟢 |
| Cost Impacts | 🟡 | 🔴 | 🟢 | 🔴 | 🔴 |
| Ease of Implementation | 🟡 | 🟢 | 🟡 | 🔴 | 🔴 |
| Pavement Demolition | 🟡 | 🟢 | 🟢 | 🔴 | 🔴 |
| Environmental Impact | 🟡 | 🔴 | 🟡 | 🔴 | 🔴 |
| Off-Airport Impacts | 🟡 | 🔴 | 🟢 | 🟢 | 🔴 |

*Note: Red = Unfavorable, Yellow = Neutral, Green = Favorable*
*Source: AECOM*

Alternative 1, the No Action alternative, does not resolve the existing incompatible land uses and still leaves the Airport without control of almost 28 acres of land within the RPZs; therefore, it is not recommended as the preferred alternative.

Alternative 2 is a good alternative from an airside operational efficiency standpoint as it would not have any impact on the current operations, declared distances, NAVAIDS, or airfield pavement lengths. No new airfield pavement, markings, or pavement demolition would be required; however, this alternative requires purchasing multiple properties within the RPZs. This may be difficult to achieve, as approximately 6.23 acres of Route 8 that runs through the RPZs is owned and operated by the Guam Department of Public Works.

Additionally, though only 2.15 acres of land within Toto Gardens lies within the Runway 6R ARPZ, the Airport may need to purchase or gain control over the much larger parcel that incorporates the entire living community, which totals 26.64 acres. In all, there are 62 buildings located on the Toto Gardens parcel (composed of houses and offices) and along with the other 20 residential houses located within the Runway 6R ARPZ, acquiring the rights of these parcels and properties could result in the relocation of these residents. According to FAA AC 150/5100-17, *Land Acquisition and Relocation Assistance for Airport Improvement Program (AIP) Assisted Projects*, under the Uniform Relocation Act, the sponsor must provide an adequate relocation assistance program, ensuring prompt and equitable relocation and reestablishment of persons displaced as a result of its federally-assisted airport projects.

Similar to Alternative 2, Alternative 3 does not require any new airfield pavement or pavement demolition; however, this alternative does increase the displacement of the existing threshold for Runway 6L and proposes one for Runway 6R, resulting in new airfield markings and signage, runway and taxiway edge lights, and a shift of the MALSRs, GSs, and Precision Approach Path Indicator (PAPI) boxes.

Declared distances are the main impact of this alternative as the LDA for Runways 6L and 6R would decrease by 1,458 feet (6L) and 2,528 feet (6R), and the TORA for Runways 24L and 24R would decrease by 857 feet (24L) and 1,916 feet (24R). Additionally, based on these proposed declared distances and the declared distances proposed in Alternative 4, new ILS instrument procedures for Runways 6L and 6R would be required.

Alternative 4 presents the biggest impact to the airside operational efficiency as it removes more than 2,450 feet of runway for Runway 6L/24R and more than 2,500 feet of runway for Runway 6R/24L leaving

the Airport with 9,556-foot and 7,486-foot long runways. In this alternative, the declared distances would match their respective runway lengths except for the LDA for Runway 24L, which would be 6,482 feet due to the existing displaced threshold.

For this alternative, the proposed takeoff and landing length requirements for Runway 6L/24R would suffice for the existing and future aircraft fleet mix. All frequently operating aircraft would be able to land on a wet runway and almost all frequently operating aircraft would be able to takeoff at 90 percent MTOW. However, if Runway 6L/24R were to be closed for maintenance, construction, or repair, the proposed declared distances for Runway 6R/24L, particularly landing 24L and taking off in both directions, may not be adequate to accommodate the most demanding aircraft types without payload restrictions.

Similar to Alternatives 1 and 2, Alternative 5 is a good alternative from an airside operational efficiency standpoint as it would not have any impact on the current operations, declared distances, NAVAIDS, or airfield pavement lengths. This alternative proposes re-routing Route 8 around the existing RPZs which would require the acquisition of parcels, relocation of residents, and clearing of more than 100 acres of property.

## C.11 RPZ Alternatives Cost Estimates

Rough order of magnitude (ROM) cost estimates were developed for the five RPZ alternatives. Elements such as new airfield pavement, new airfield markings, pavement demolition, NAVAID relocation, property acquisition, and property clearing were all evaluated in these estimates. Estimates were prepared in 2023 dollars and multiplied by a location factor of 2.6 when compared to the U.S. national average. See **Table C-13** for a summary of the RPZ alternatives cost estimates.

**Table C-13. RPZ Alternatives Cost Estimates**

| RPZ Alternative | Estimated Total Cost |
|---|---|
| Alternative 1 – No Action | $0 |
| Alternative 2 – Achieve Control of All Properties Within RPZs | $49,161,000[A] |
| Alternative 3 – Shift RPZs and Reduce Declared Distances | $6,040,000 |
| Alternative 4 – Reduce Runway Lengths | $26,693,000 |
| Alternative 5 – Re-Route Route 8 | $102,330,000 [A] |

*Note:*
*A. Cost estimates do not include resident relocation costs.*
*Source: AECOM*

## C.12 Preferred RPZ Alternative

Based on discussions with GIAA staff and Airport operations, Alternative 3 is recommended as the preferred RPZ alternative. Highlights of this alternative include:

- Eliminates existing incompatible land uses within RPZs.
- Shifts all RPZs onto existing Airport property.
- Only elements within the resulting RPZs would be NAVAIDs, NAVAID shelters, the Airport perimeter road, and the Airport security fence, all of which would not require additional FAA evaluation or coordination.
- Does not impact Route 8 or any other off-Airport land uses.
- Does not result in any additional pavement or pavement demolition.

- Supports most commercial aircraft types taking off at 80 percent MTOW for all runway ends and 90 percent MTOW for almost all frequently operating aircraft taking off at 90 percent for all runway ends, except 24L.
- Supports most commercial aircraft types landing on a wet runway for all runway ends.
- Estimated cost: $8,597,000.

It is important to note that due to the declared distance impacts for the preferred RPZ alternative, particularly the resulting TORA for Runway 24L and LDA for Runway 6R, as well as the impacts of the thresholds relocations will have on the ILS approaches, coordination should be made with the FAA and airlines operating at the Airport. Additional studies may be required on an aircraft by aircraft basis.

In terms of the proposed declared distance lengths, in addition to the incompatible land uses identified within the existing RPZs, additional obstructions were identified within the Runway Object Free Areas (ROFAs) on the west end of the runways. As identified in **Chapter 5:** *Alternatives Analysis and Evaluation*, ROFA shifts for both runways were recommended, losing the standard 1,000-foot ROFA clearances beyond the runway ends, resulting in decreased ASDAs and LDAs for Runways 24L and 24R, in addition to the declared distance modifications proposed in the preferred RPZ alternative. Therefore, **Table C-14** depicts the proposed declared distances for each runway end based on the RPZ shifts and ROFA changes, **Figure C-16** and **Figure C-17** portrays the TORAs and LDAs in comparison to the takeoff and landing length requirements for most commercial aircraft types at the Airport, and **Appendix E** displays a graphic of these declared distances along the runways. Additionally, **Figure C-18** portrays the preferred RPZ alternative.

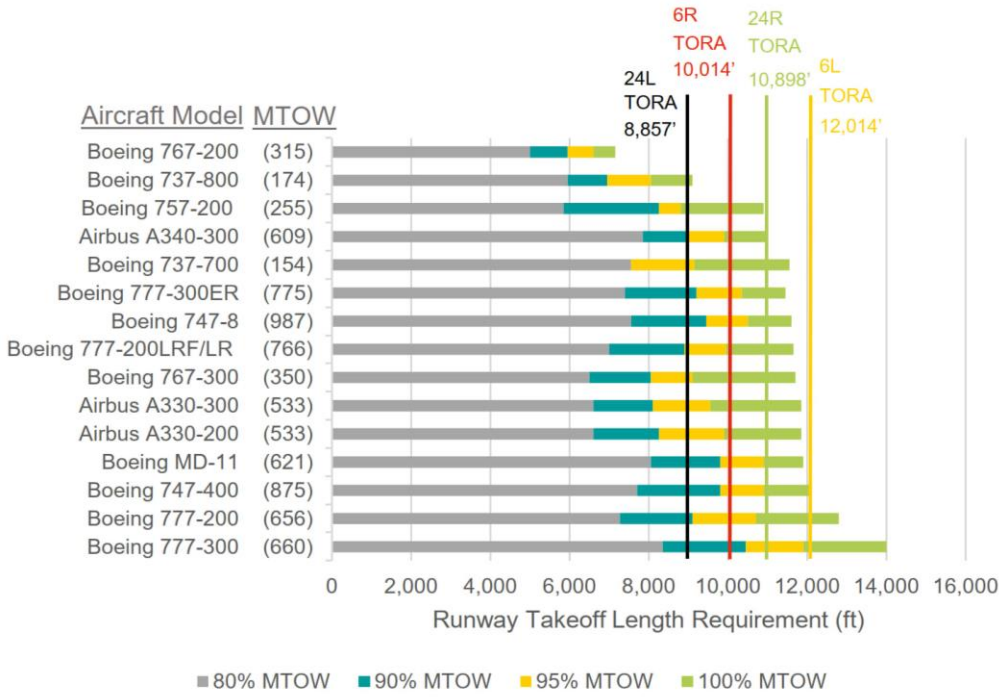



**Figure C-16. Proposed Runway Takeoff Length Requirements**

*Notes:*

*A. MTOW is measured in thousands.*
*B. Abbreviations*
*MTOW = Maximum Takeoff Weight*
*TORA = Takeoff Runway Available*

*Sources:*

*1. Primary Fleet Mix for Heavy Aircraft*
*2. Manufactures' APM*

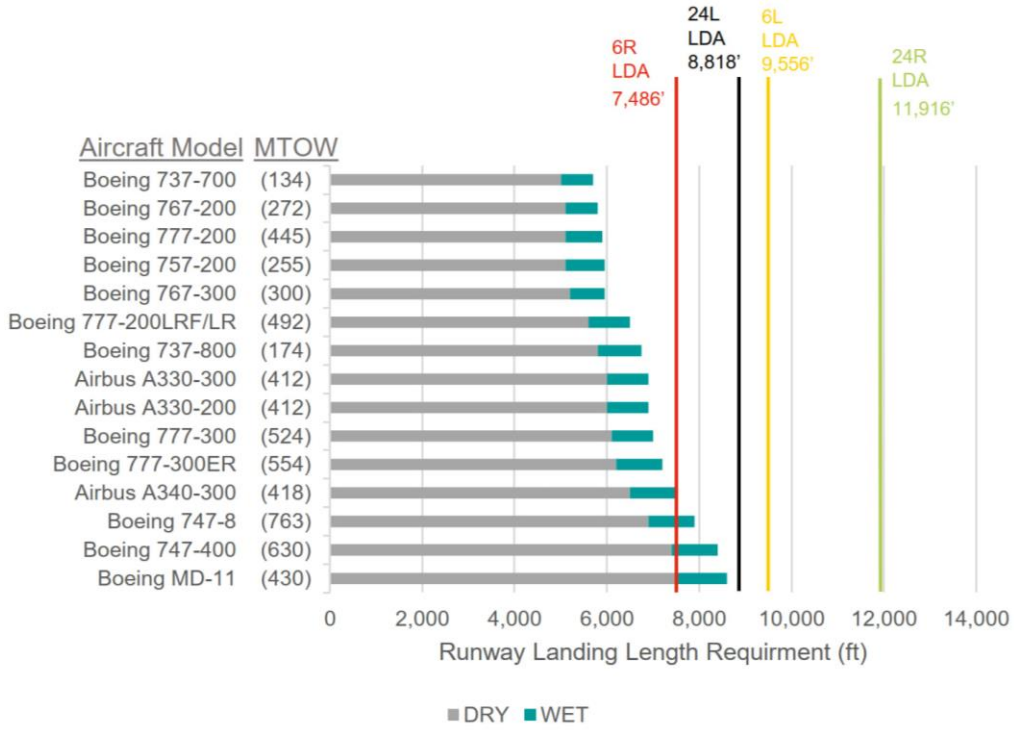



**Figure C-17. Proposed Runway Landing Length Requirement**

*Notes:*

*A. The Aircraft Performance Manual for the Airbus A330-200 and A330-300 did not provide landing performance on wet runways; therefore, the landing distances for dry runways were increased by 15 percent.*

*B. MTOW is measured in thousands.*

*C. Abbreviations*
*MTOW = Maximum Takeoff Weight*
*LDA = Landing Distance Available*

*Sources:*

*1. Primary Fleet Mix for Heavy Aircraft*

*2. Manufactures' APM*

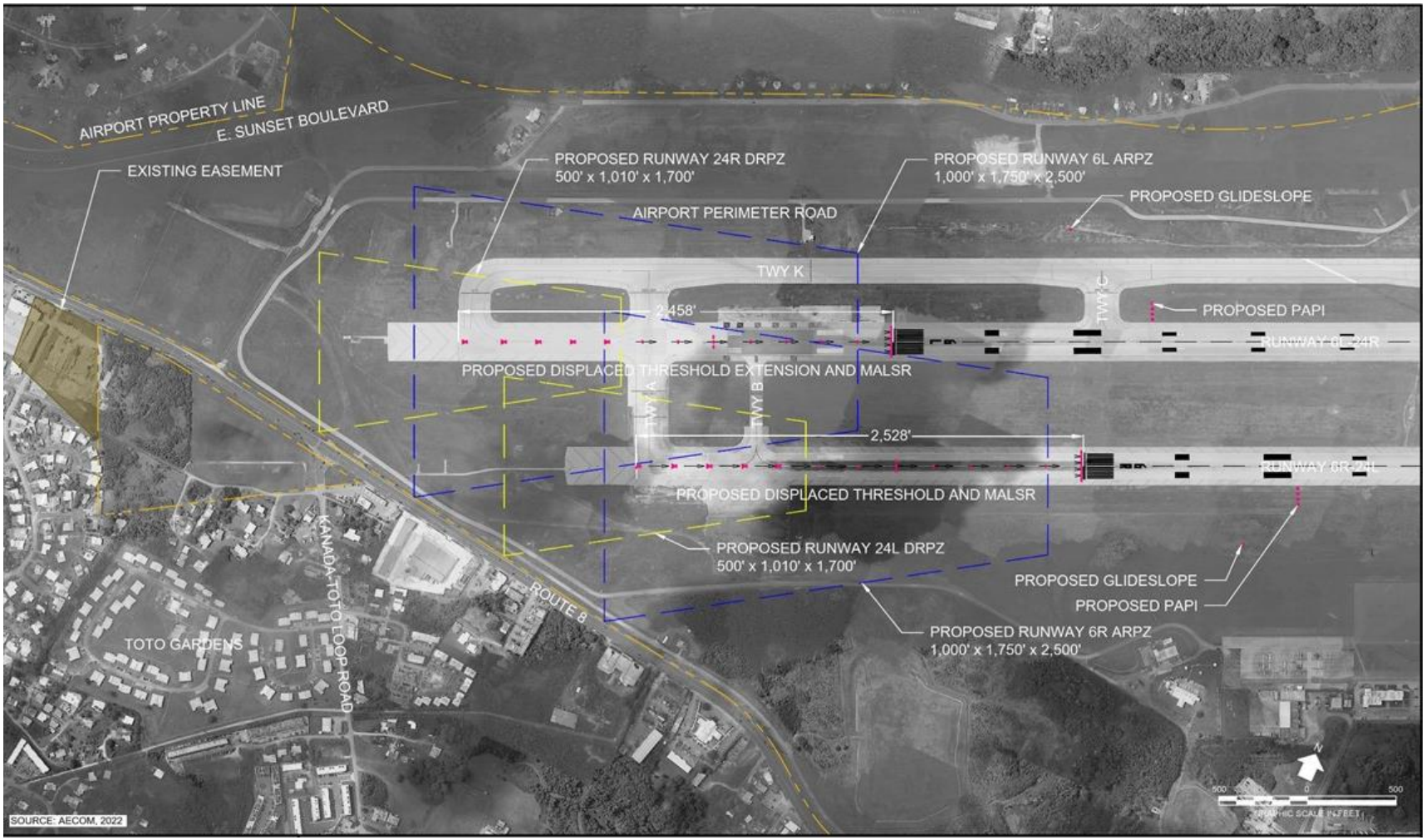



**Figure C-18. Preferred RPZ Alternative**

Source: AECOM

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AECOM

# Antonio B. Won Pat International Airport Master Plan Update

Appendix D – Alternatives Development and Evaluation Graphics

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# Appendix D: Alternatives and Development Evaluation Graphics

## D.1 Round 1 Airfield Alternatives

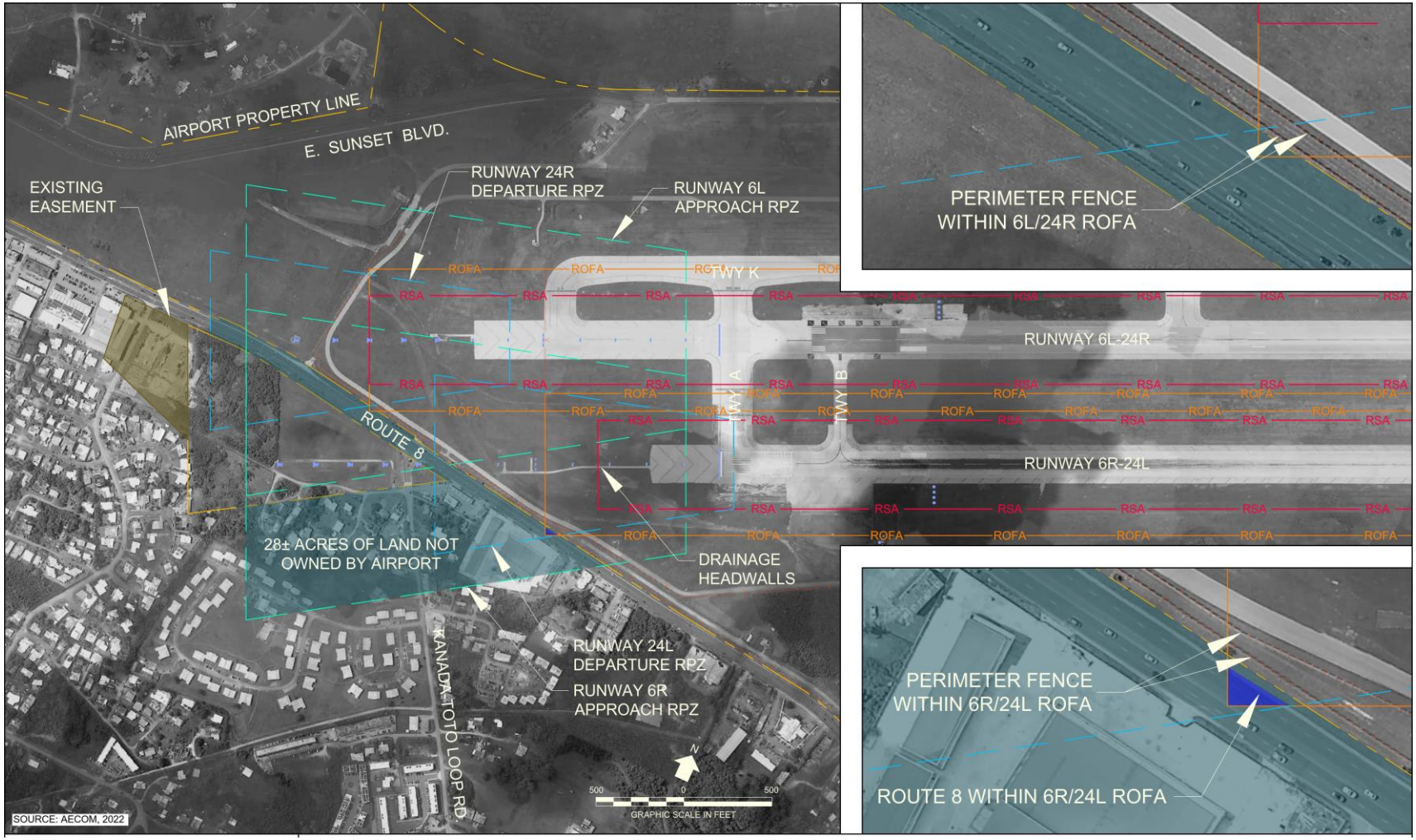



**Figure D-1. Runway 6L & 6R End Safety Areas - Alternative 1 - No Action**

Source: AECOM

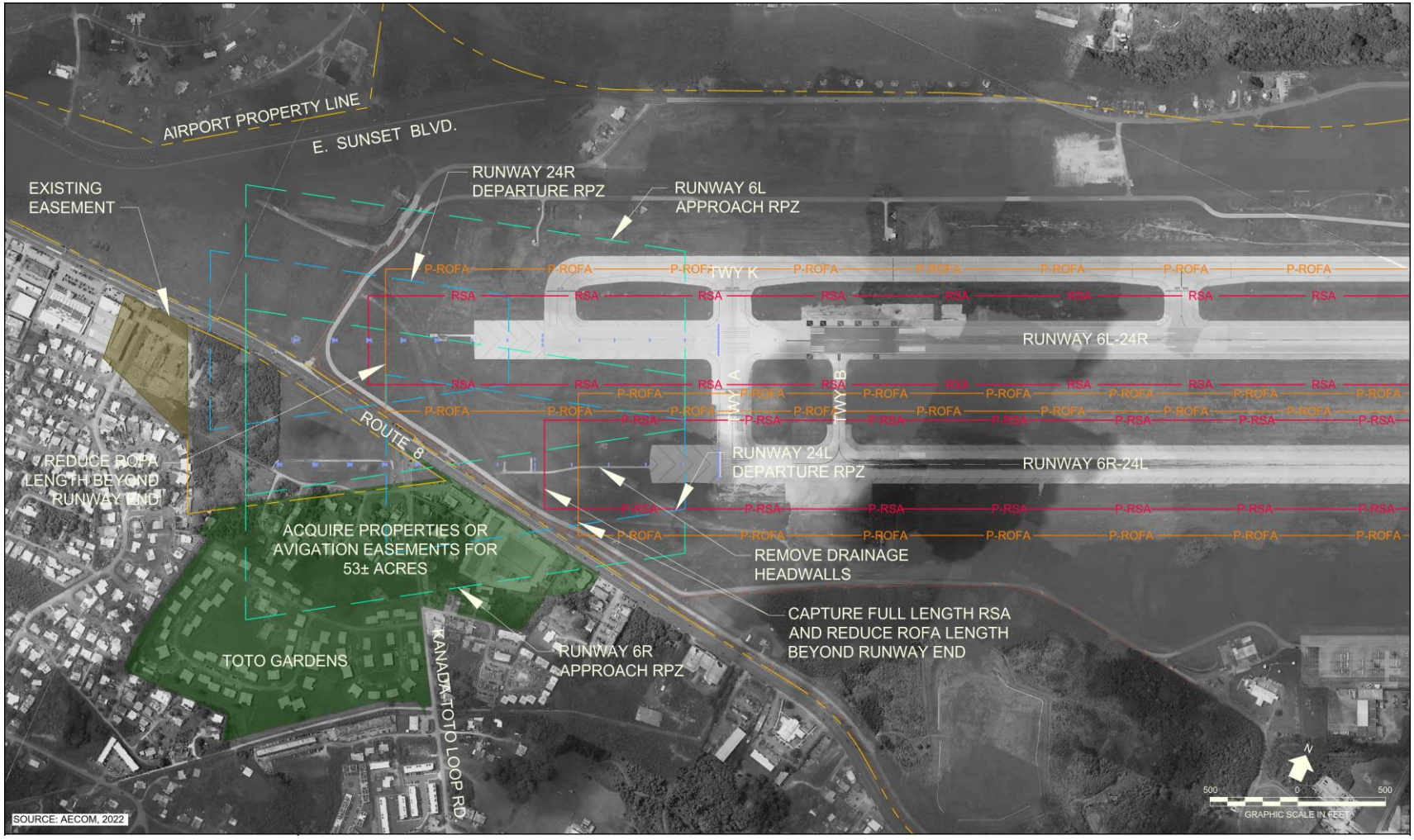



**Figure D-2. Runway 6L & 6R End Safety Areas - Alternative 2 - Reduce ROFA Length and Declared Distances**

Source: AECOM

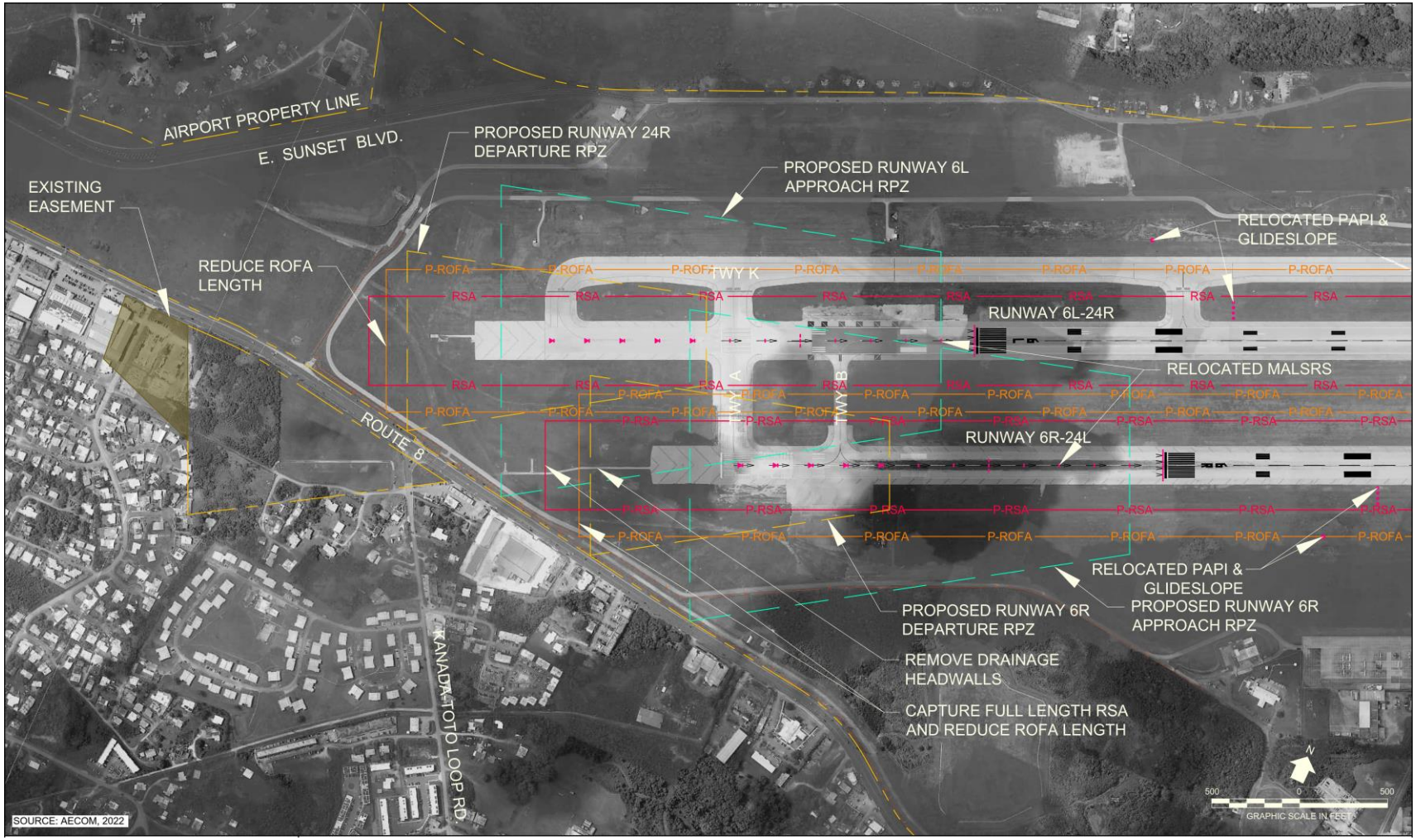



**Figure D-3. Runway 6L & 6R End Safety Areas - Alternative 3 - Shift RPZs and Reduce Declared Distances**

Source: AECOM

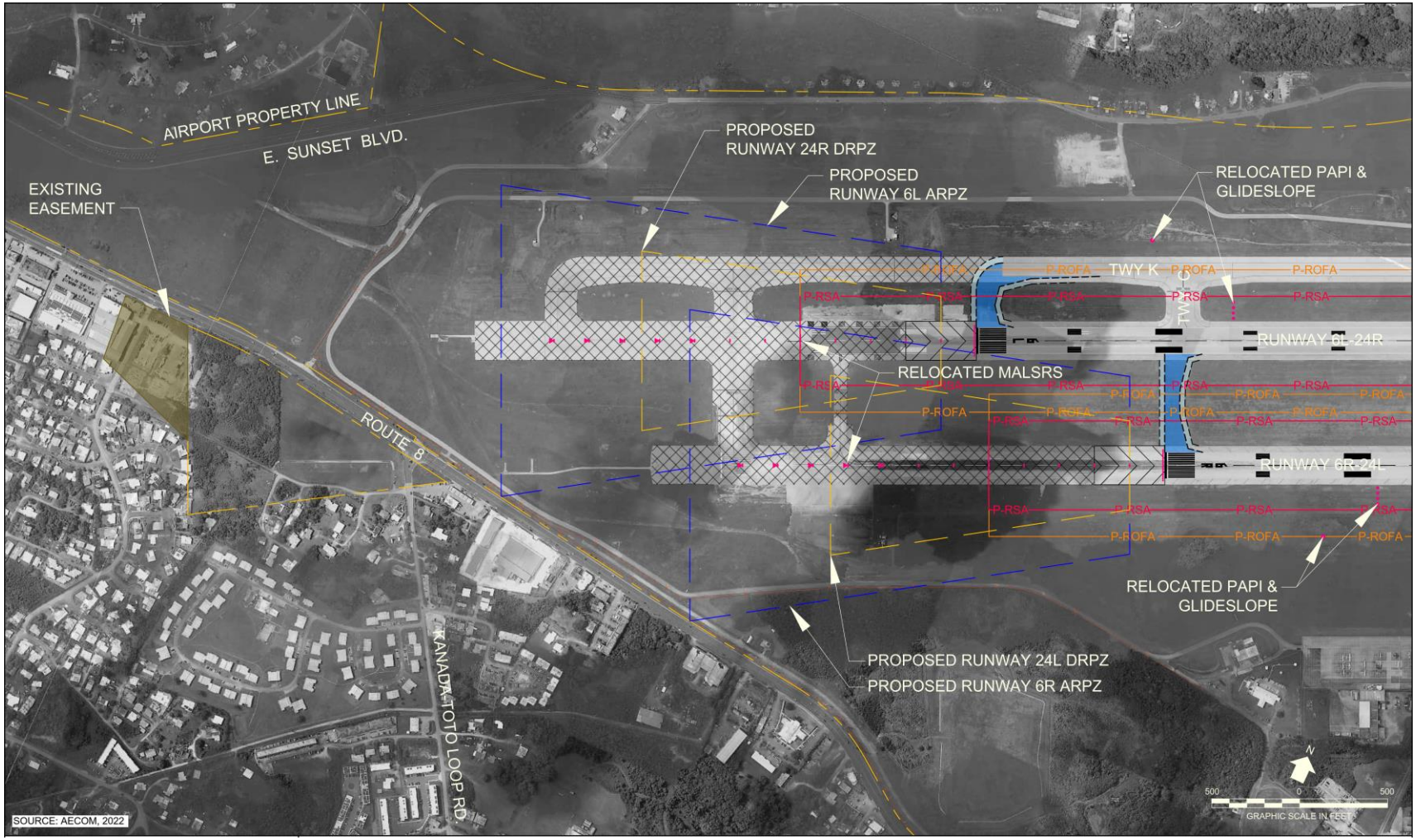



**Figure D-4. Runway 6L & 6R End Safety Areas - Alternative 4 - Reduce Runway Length**

Source: AECOM

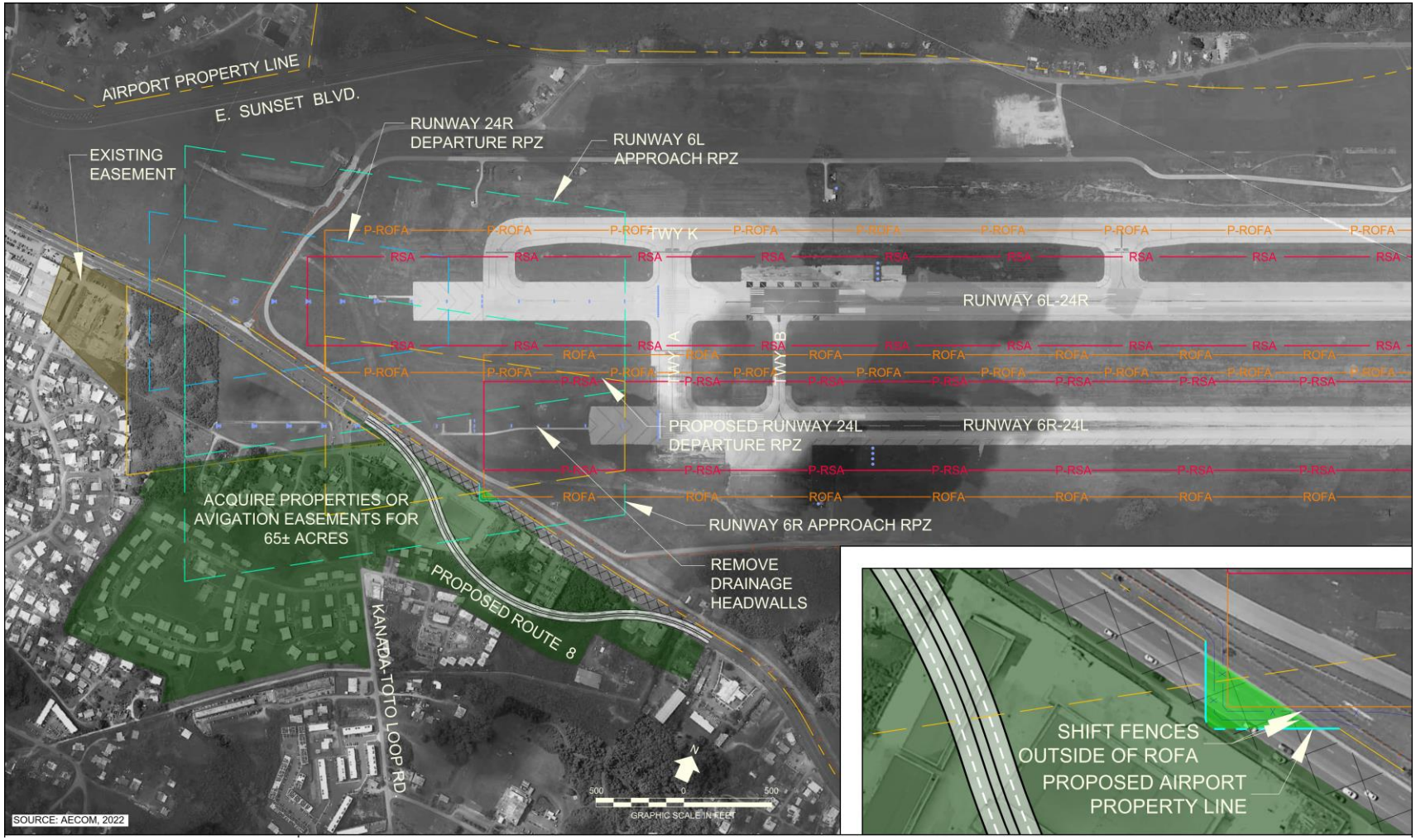



**Figure D-5. Runway 6L & 6R End Safety Areas - Alternative 5 - Realign Route 8 (A)**

Source: AECOM

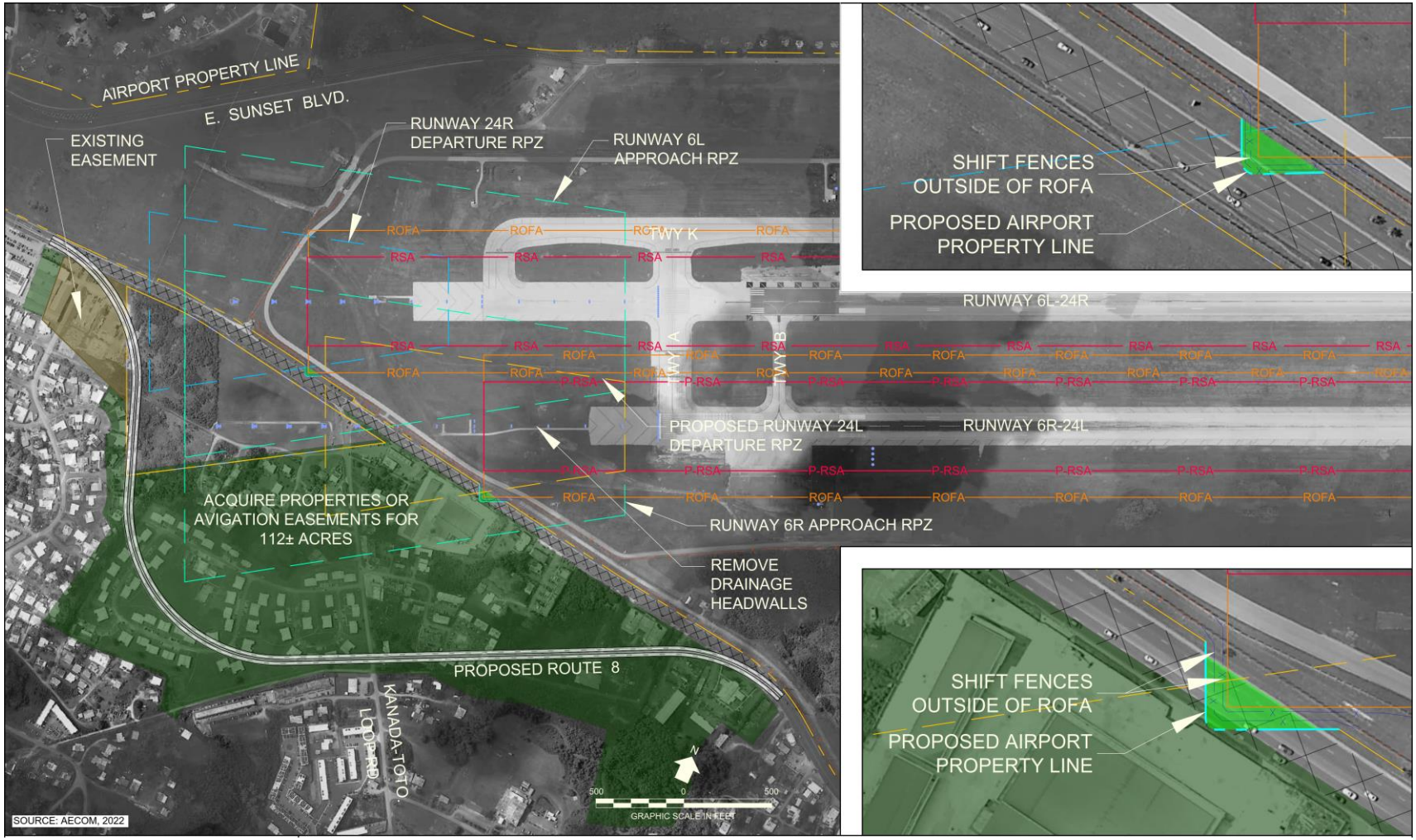



**Figure D-6. Runway 6L & 6R End Safety Areas - Alternative 6 - Realign Route 8 (B)**

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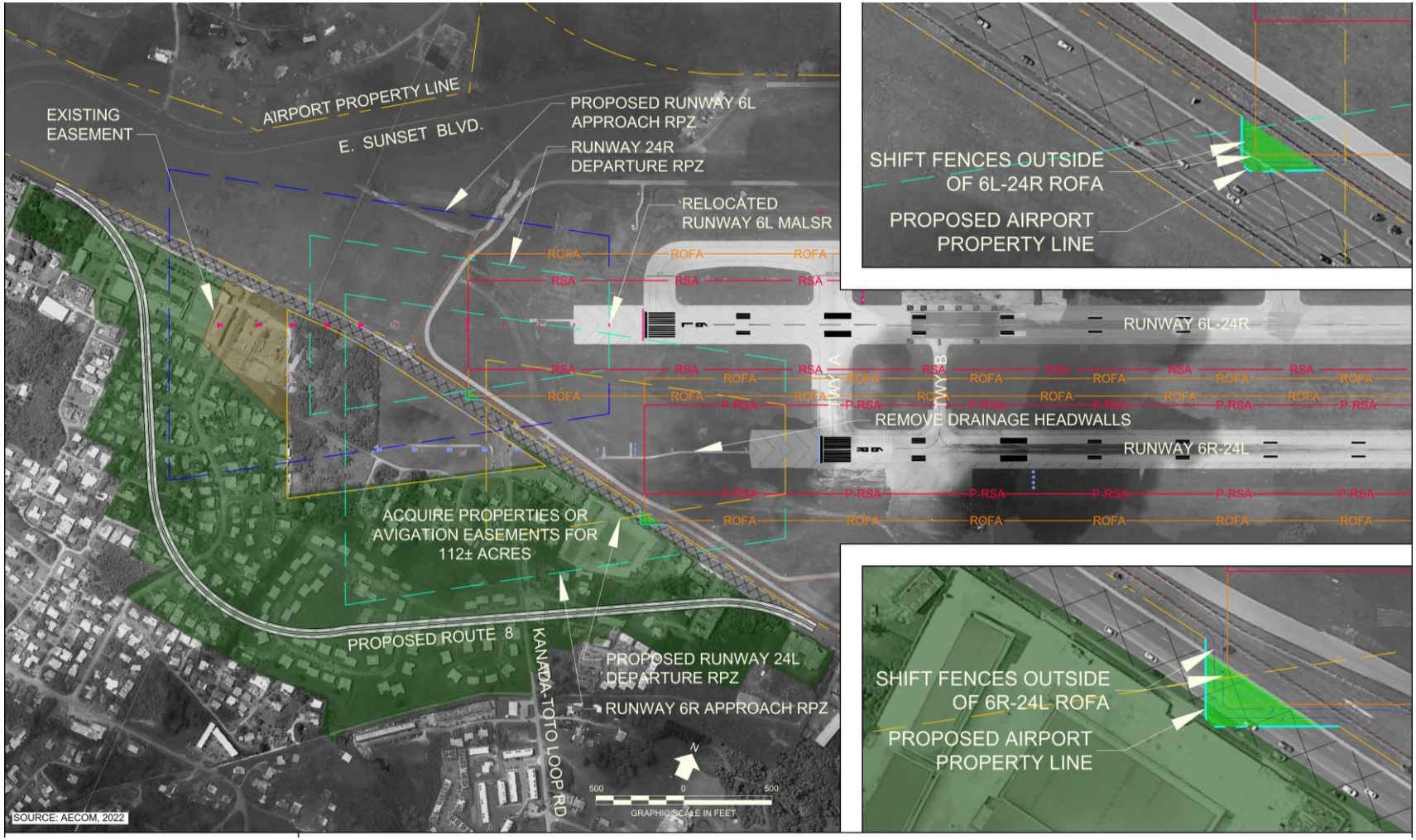



**Figure D-7. Runway 6L & 6R End Safety Areas - Alternative 7 - Realign Route 8 (C)**

Source: AECOM

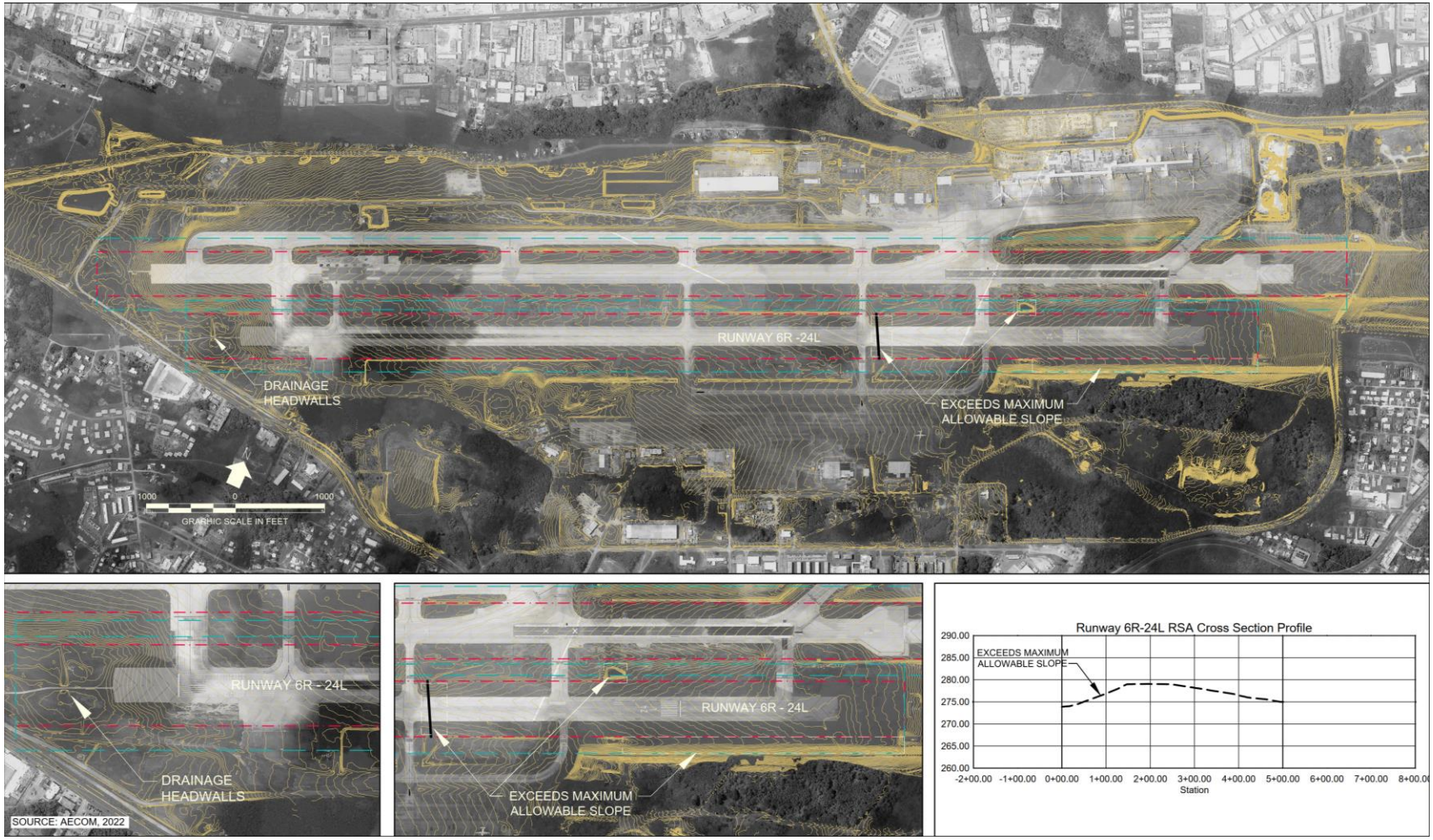



**Figure D-8. Runway 6R/24L RSA and ROFA Grading - Alternative 1 – No Action**

Source: AECOM

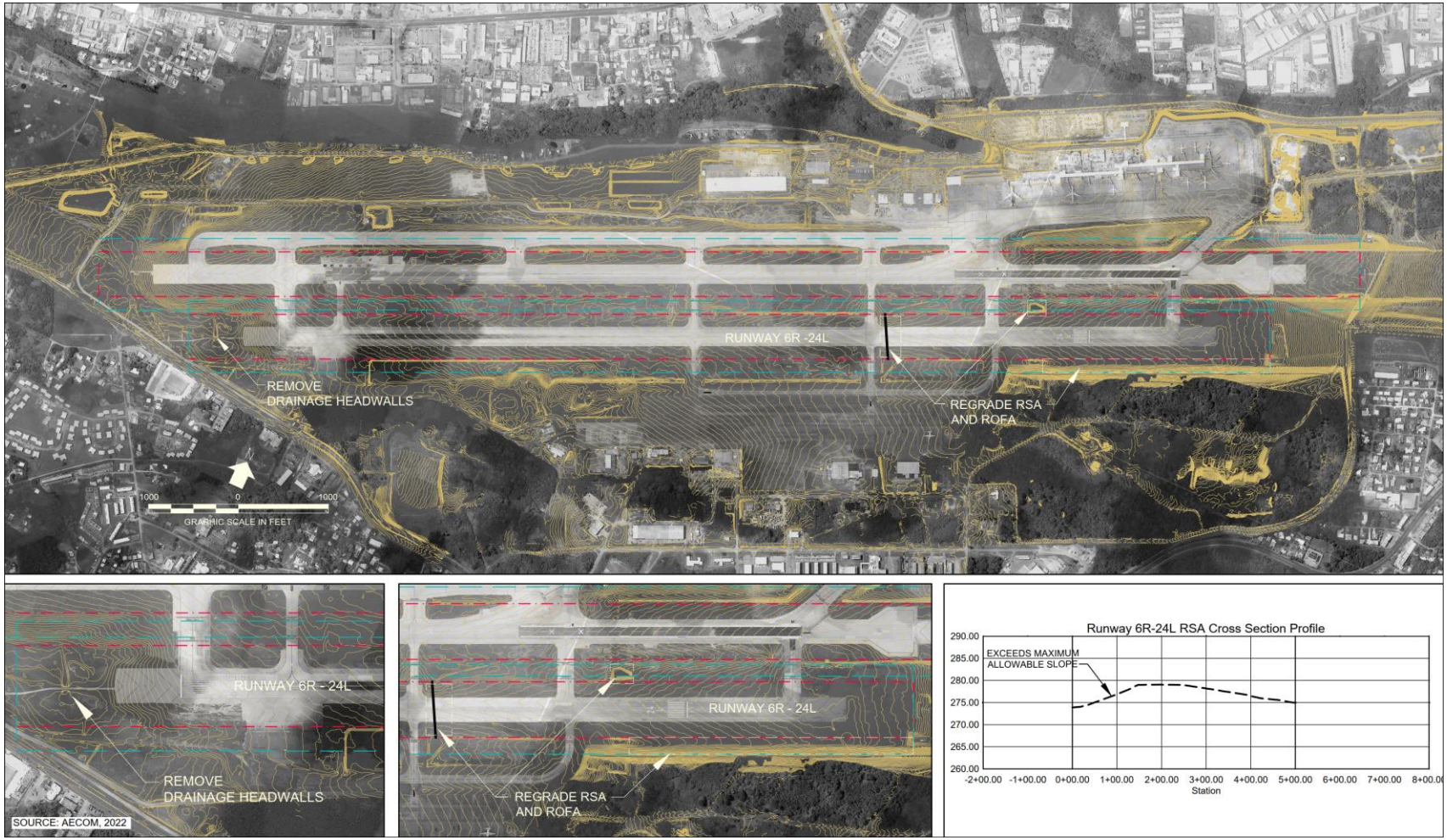



**Figure D-9. Runway 6R/24L RSA and ROFA Grading - Alternative 2 – Regrade Areas**

Source: AECOM




**Figure D-10. Taxiway Shoulders and Fillets - Alternative 1 - No Action**

Source: AECOM

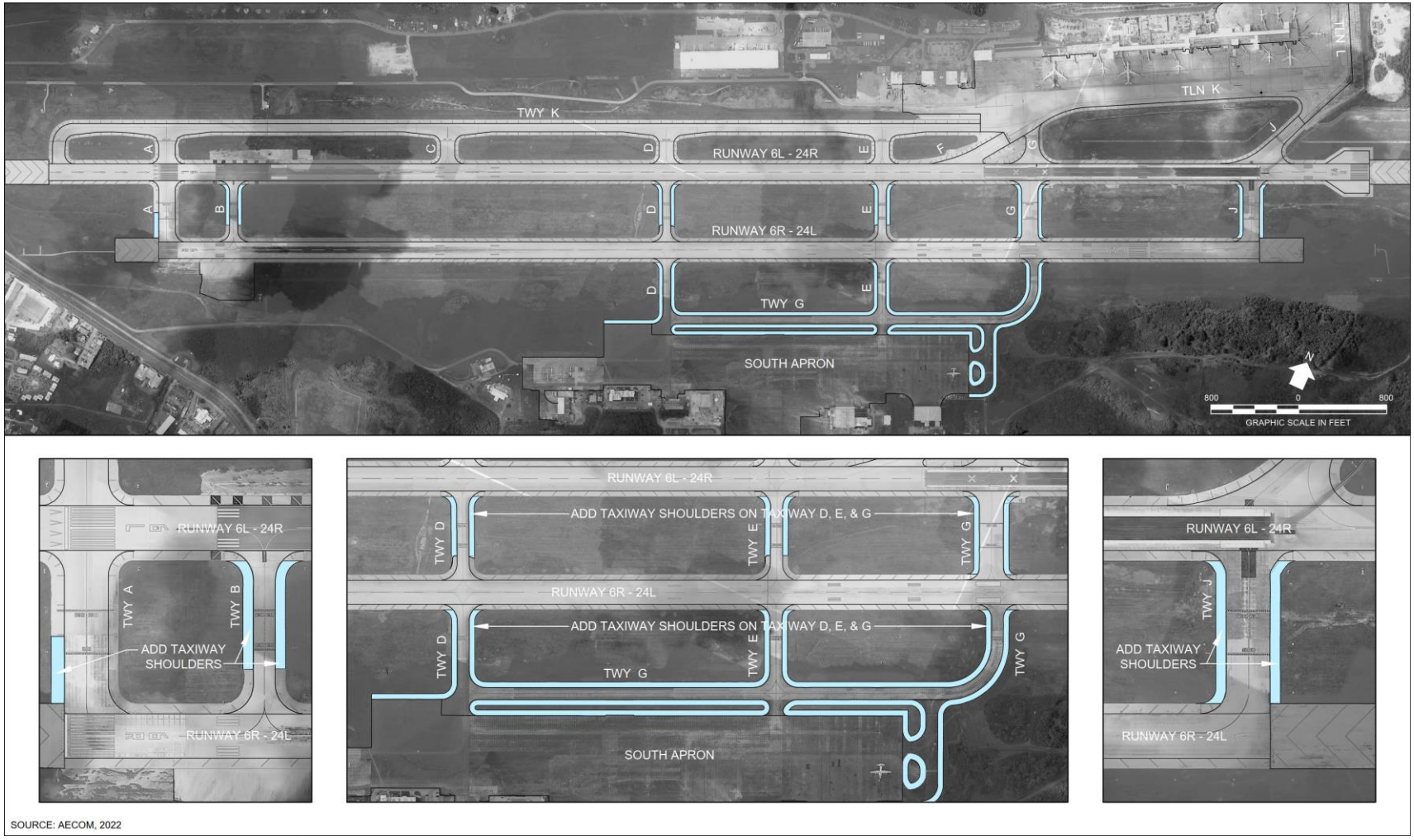



**Figure D-11. Taxiway Shoulders and Fillets - Alternative 2 - Add Taxiway Shoulders**

Source: AECOM

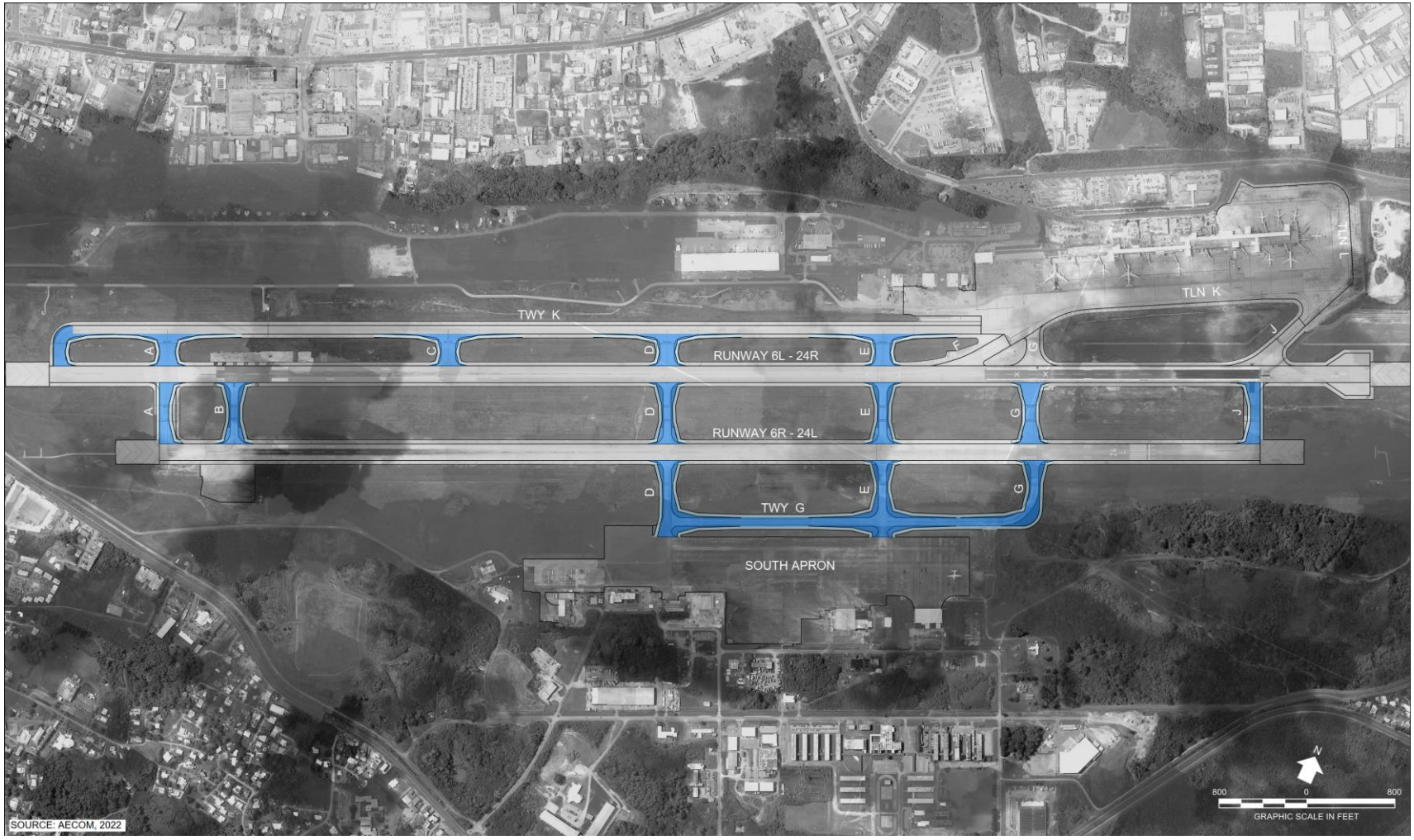



**Figure D-12. Taxiway Shoulders and Fillets - Alternative 3 - Meet FAA TDG 6 Standards**

Source: AECOM

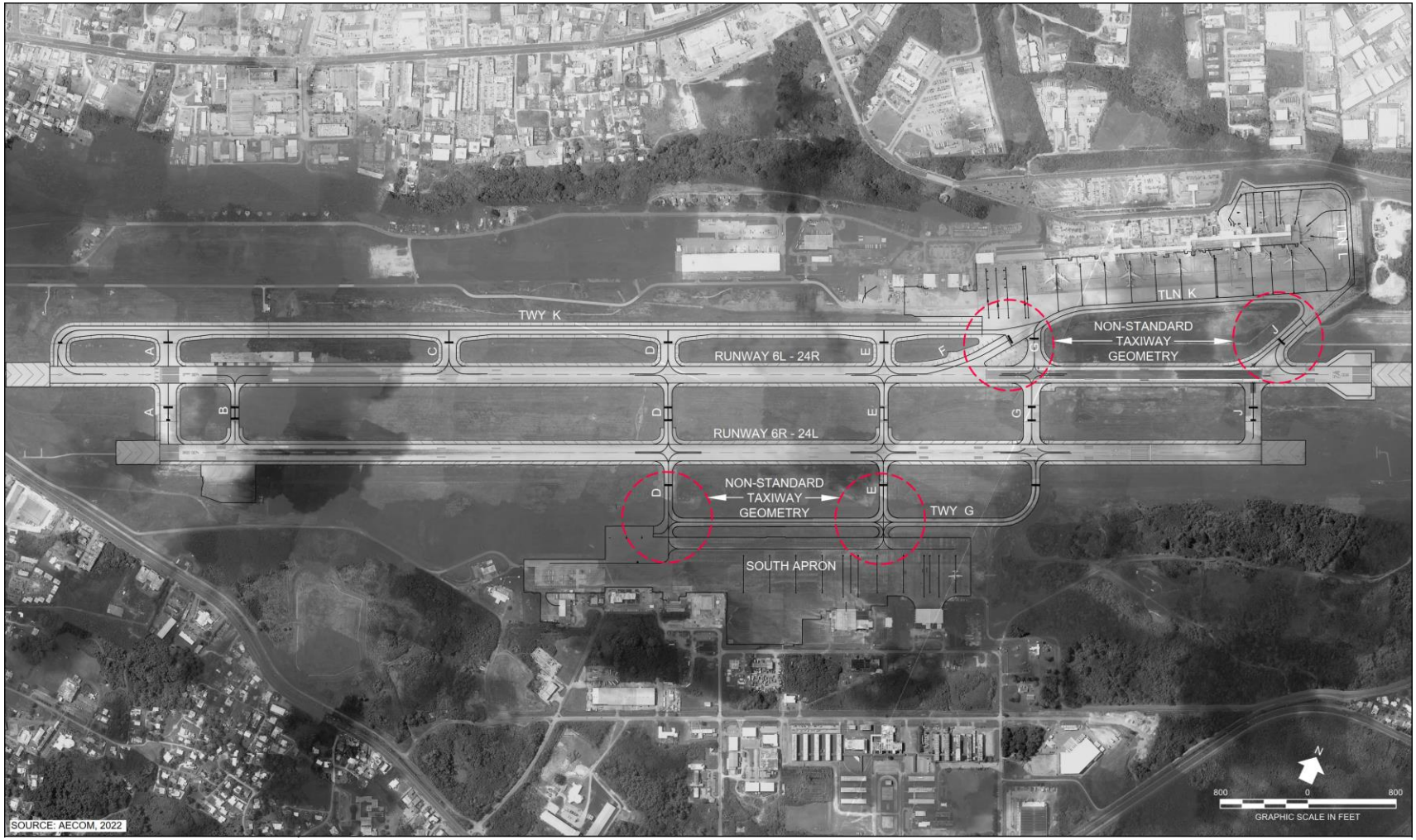



**Figure D-13. Problematic Taxiway Geometry - Alternative 1 - No Action**

Source: AECOM

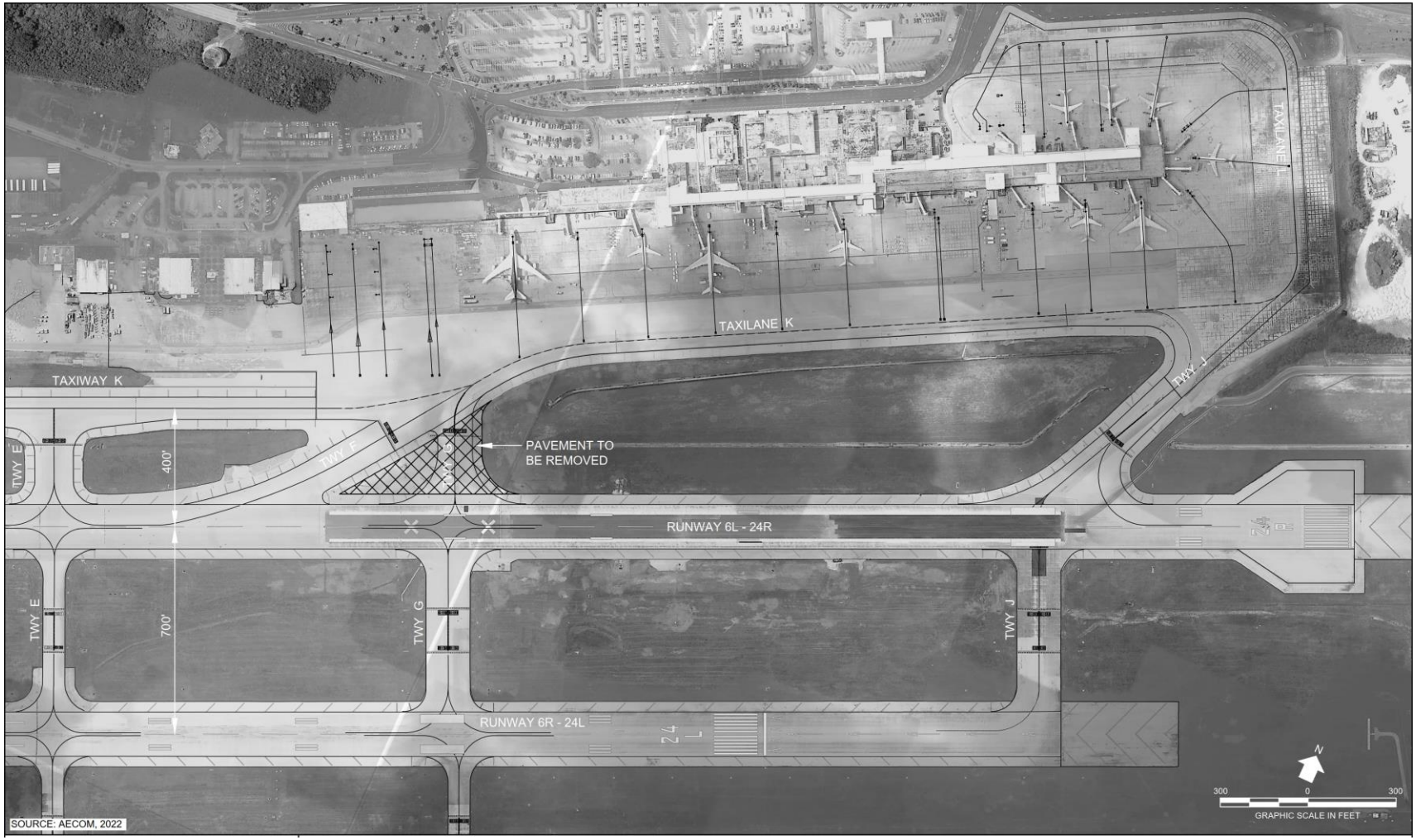



**Figure D-14. Problematic Taxiway Geometry - Alternative 2 - Remove Taxiway G**

Source: AECOM

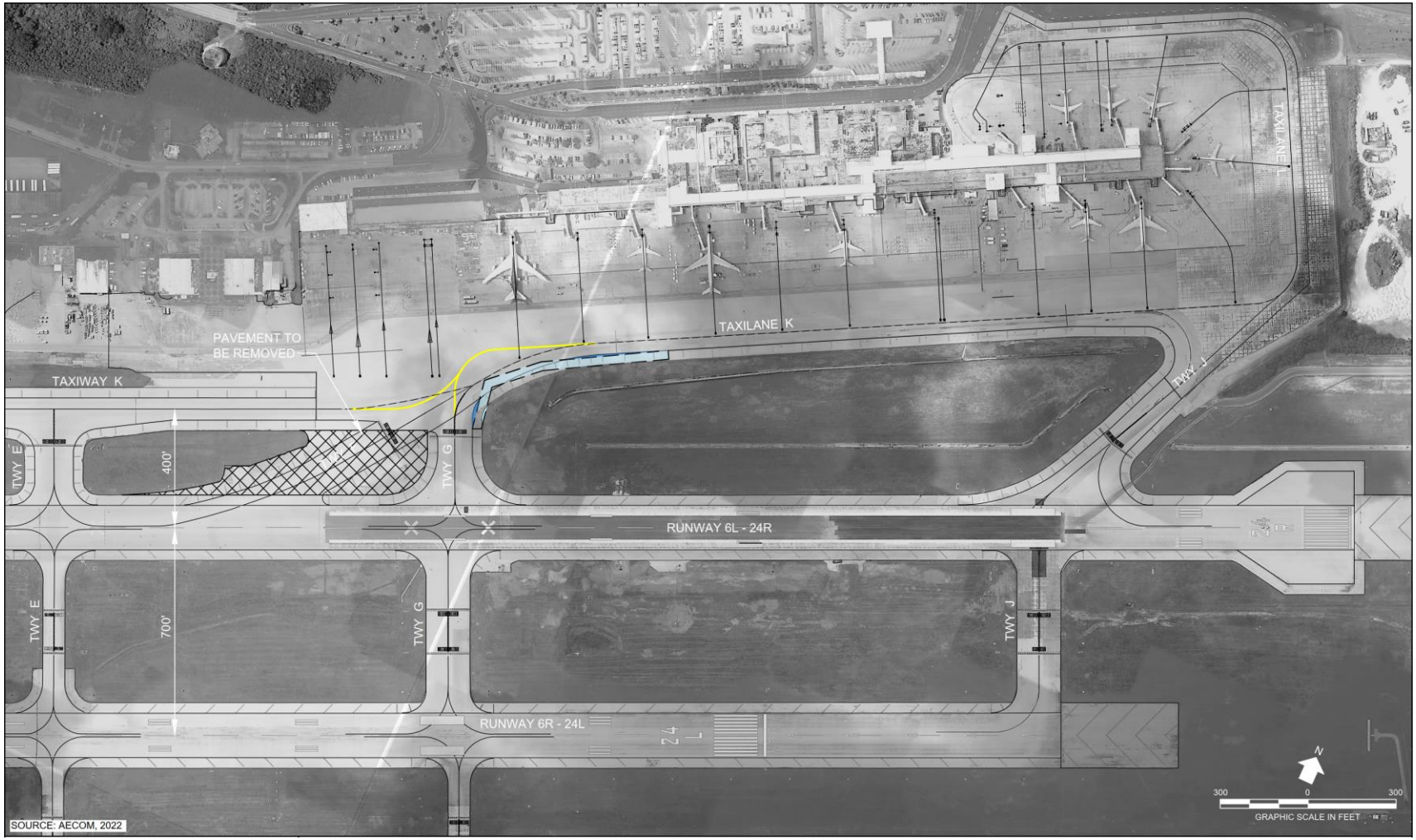



**Figure D-15. Problematic Taxiway Geometry - Alternative 3 - Remove Taxiway F**

Source: AECOM

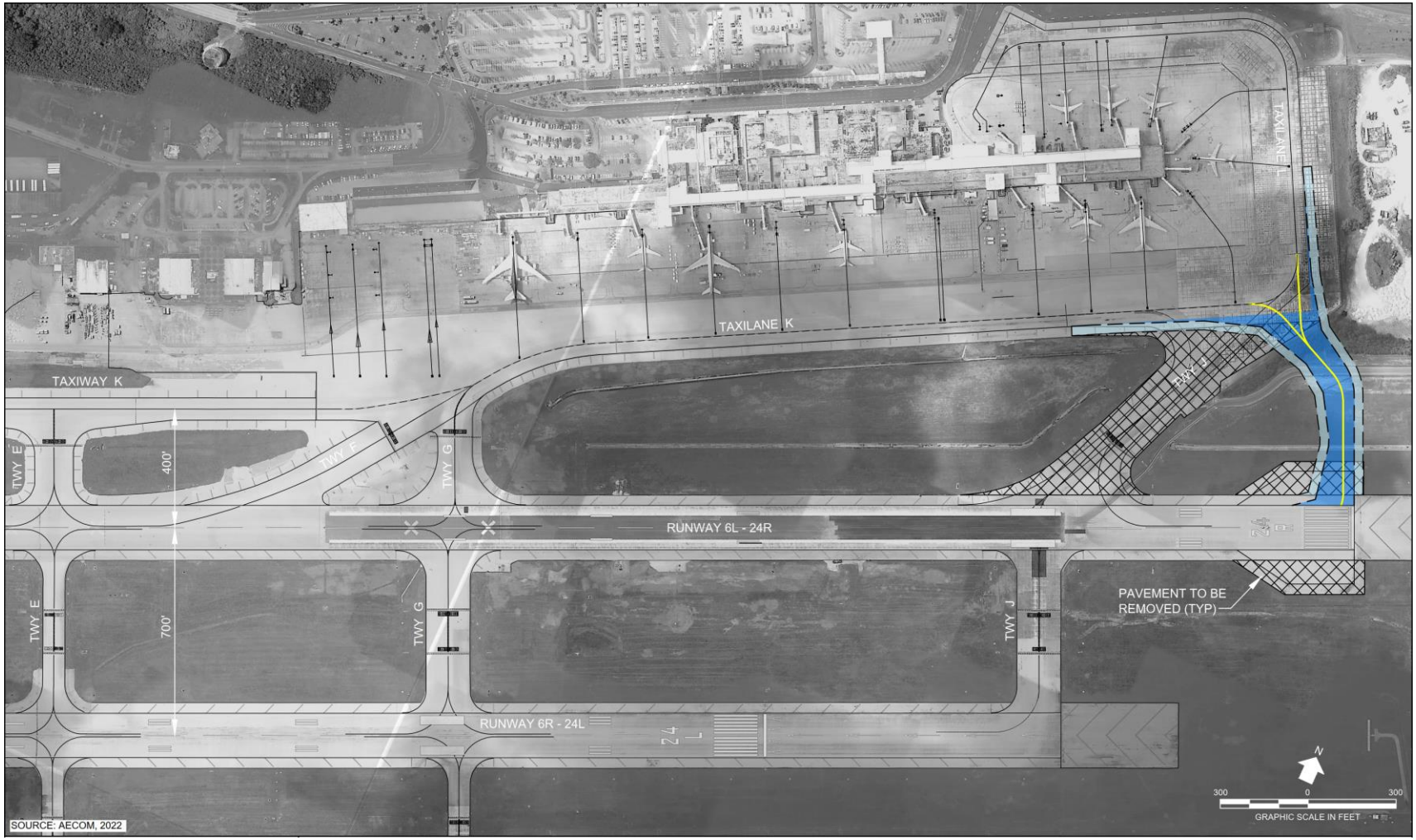



**Figure D-16. Problematic Taxiway Geometry - Alternative 4 - Reconfigure Taxiway J**

Source: AECOM

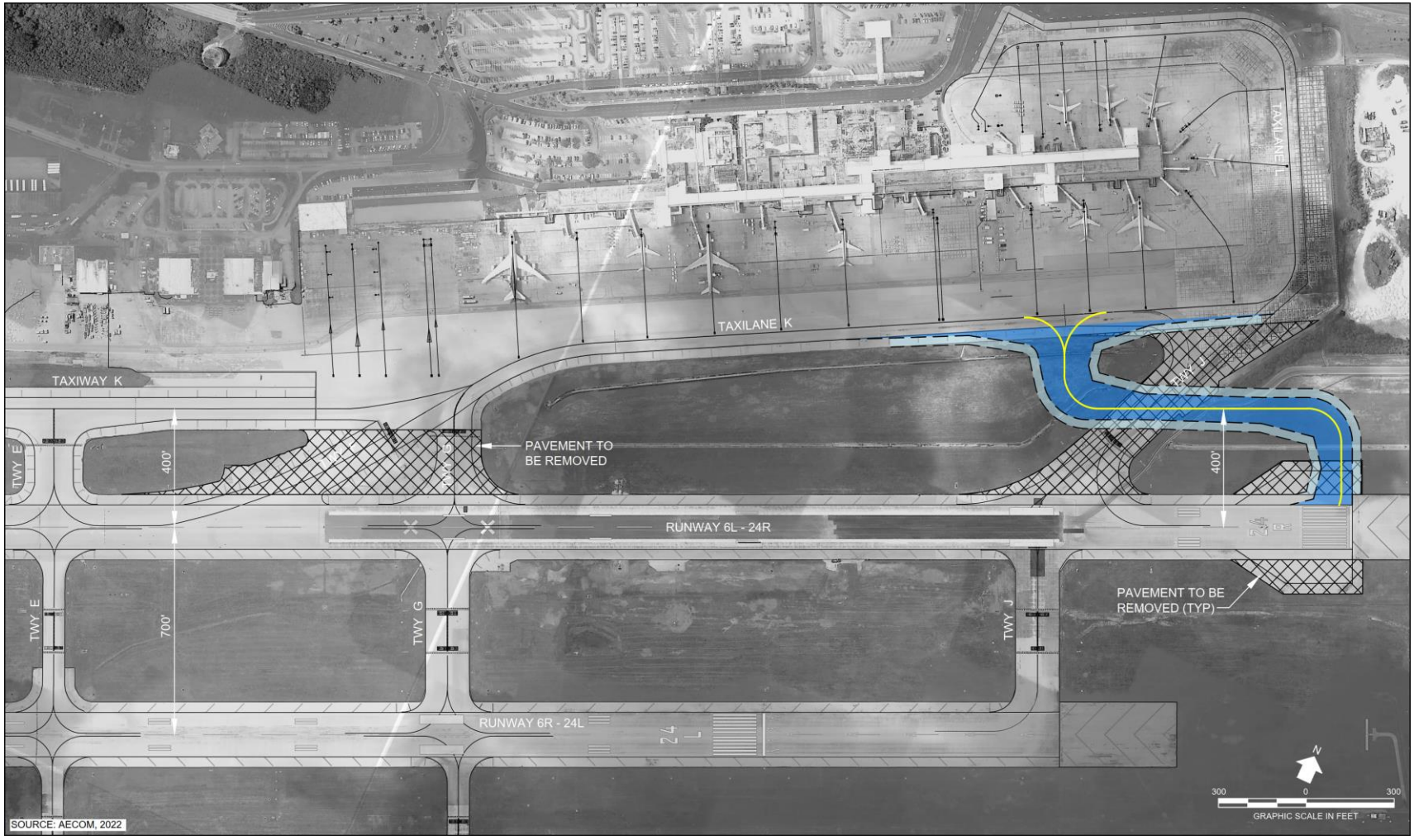



**Figure D-17. Problematic Taxiway Geometry - Alternative 5 - Reconfigure Taxiway J and Remove Taxiways F and G**

Source: AECOM

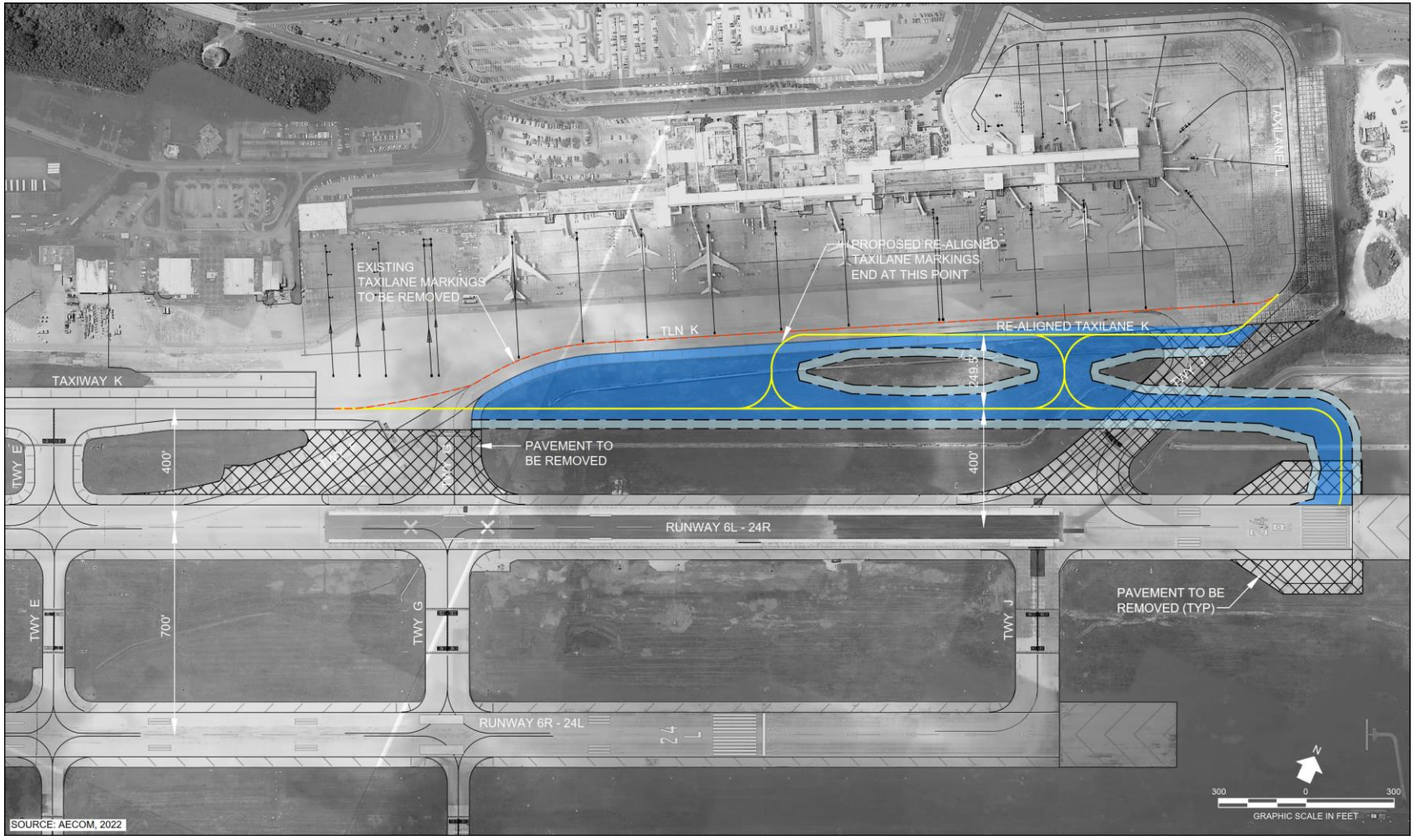



**Figure D-18. Problematic Taxiway Geometry - Alternative 6 - Full Length Parallel Taxiway K**

Source: AECOM

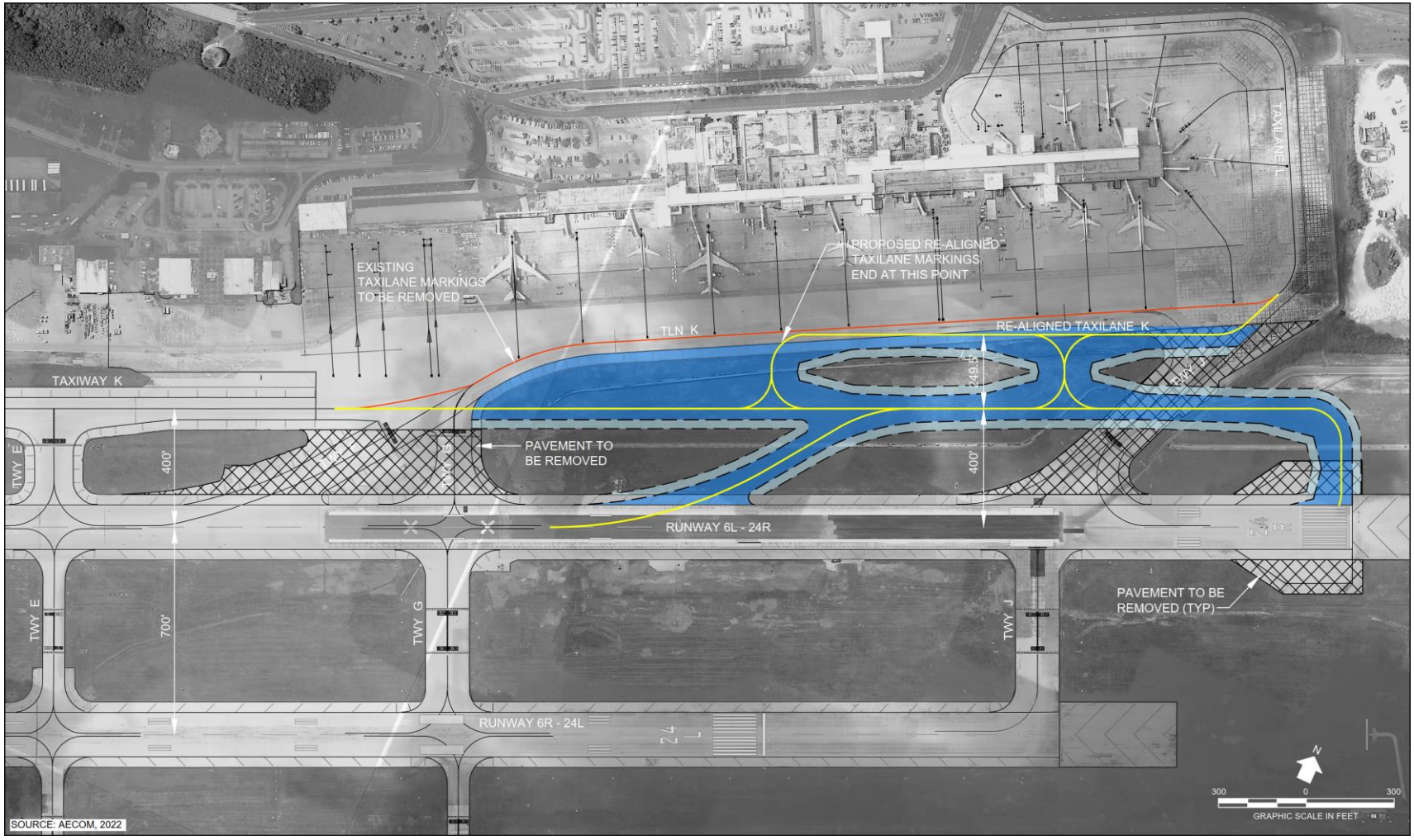



**Figure D-19. Problematic Taxiway Geometry - Alternative 7 - Full Length Parallel Taxiway K - High Speed Exit**

Source: AECOM

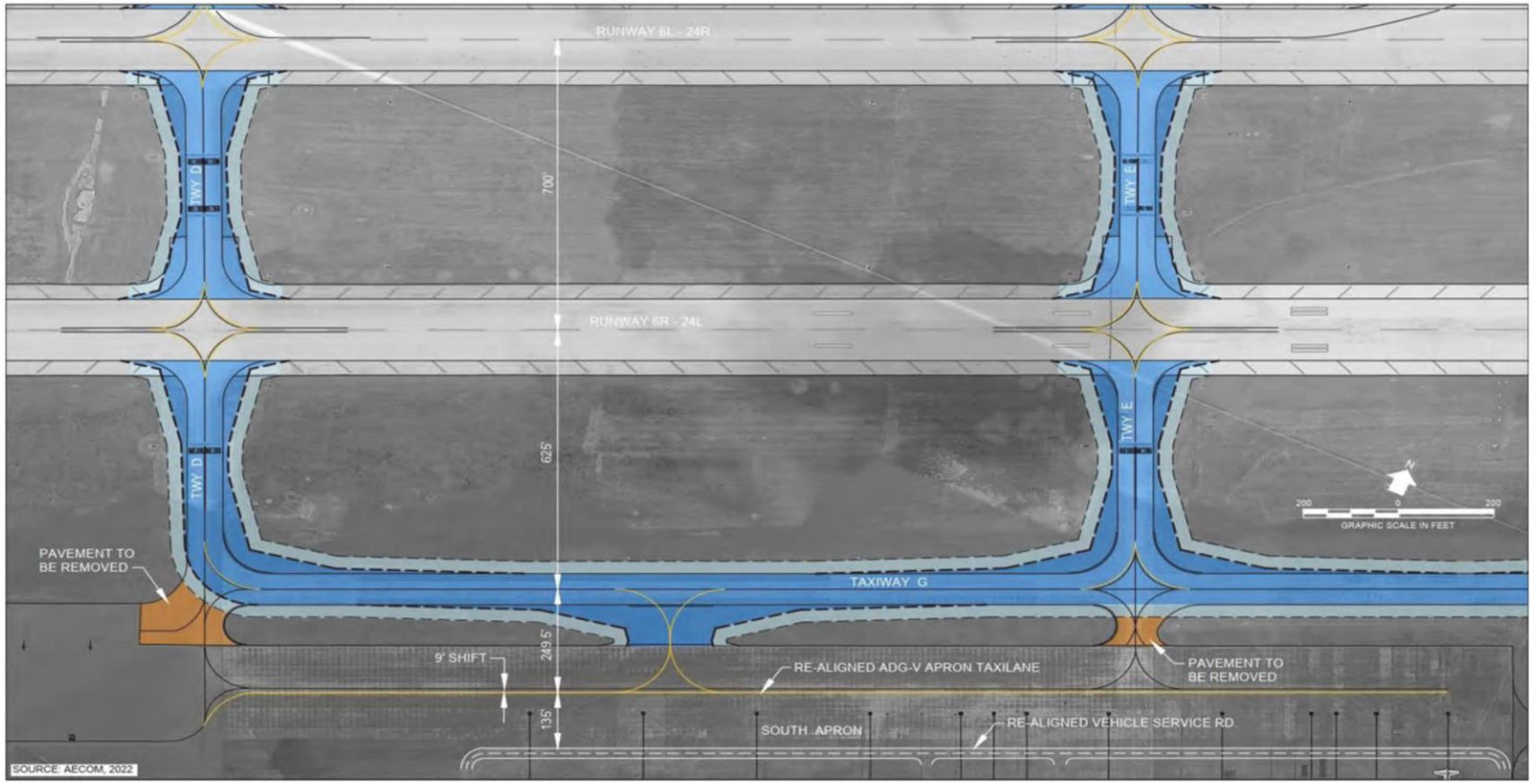



**Figure D-20. Problematic Taxiway Geometry - Alternative 8 - Eliminate South Apron Direct Access**

Source: AECOM

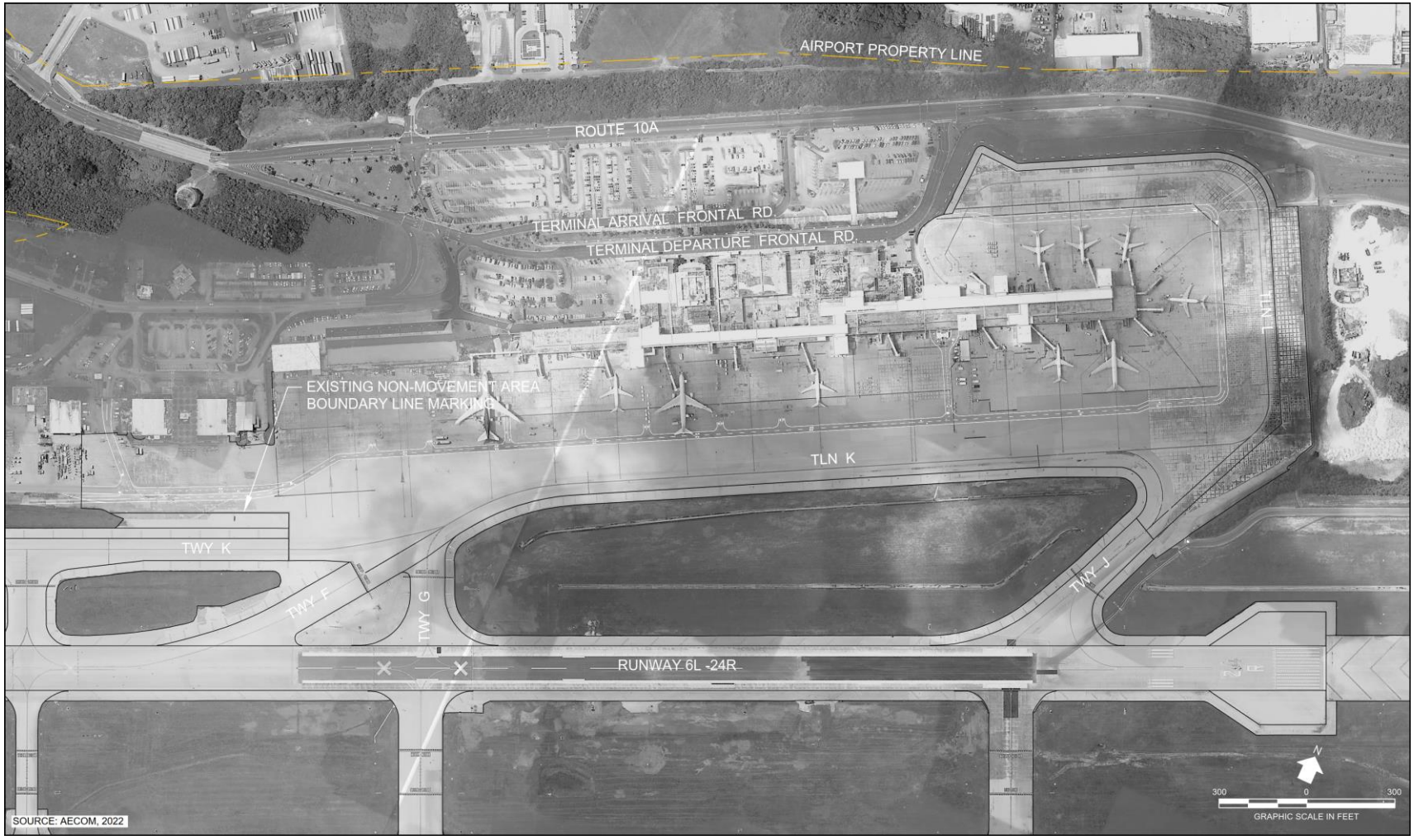



**Figure D-21. Commercial Passenger Terminal Apron - Alternative 1 - No Action**

Source: AECOM

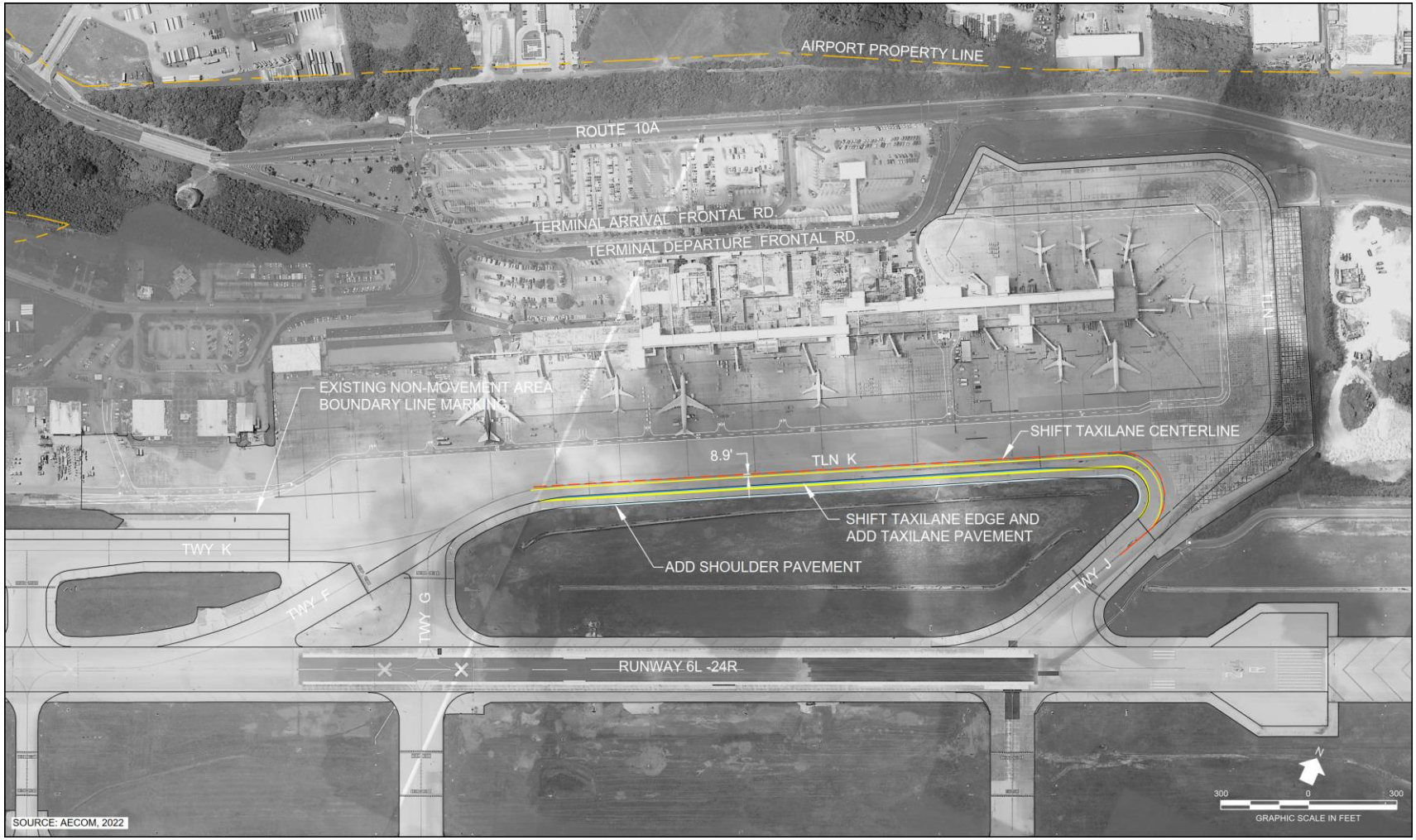



**Figure D-22. Commercial Passenger Terminal Apron - Alternative 2 - Shift Taxilane K Centerline**

Source: AECOM

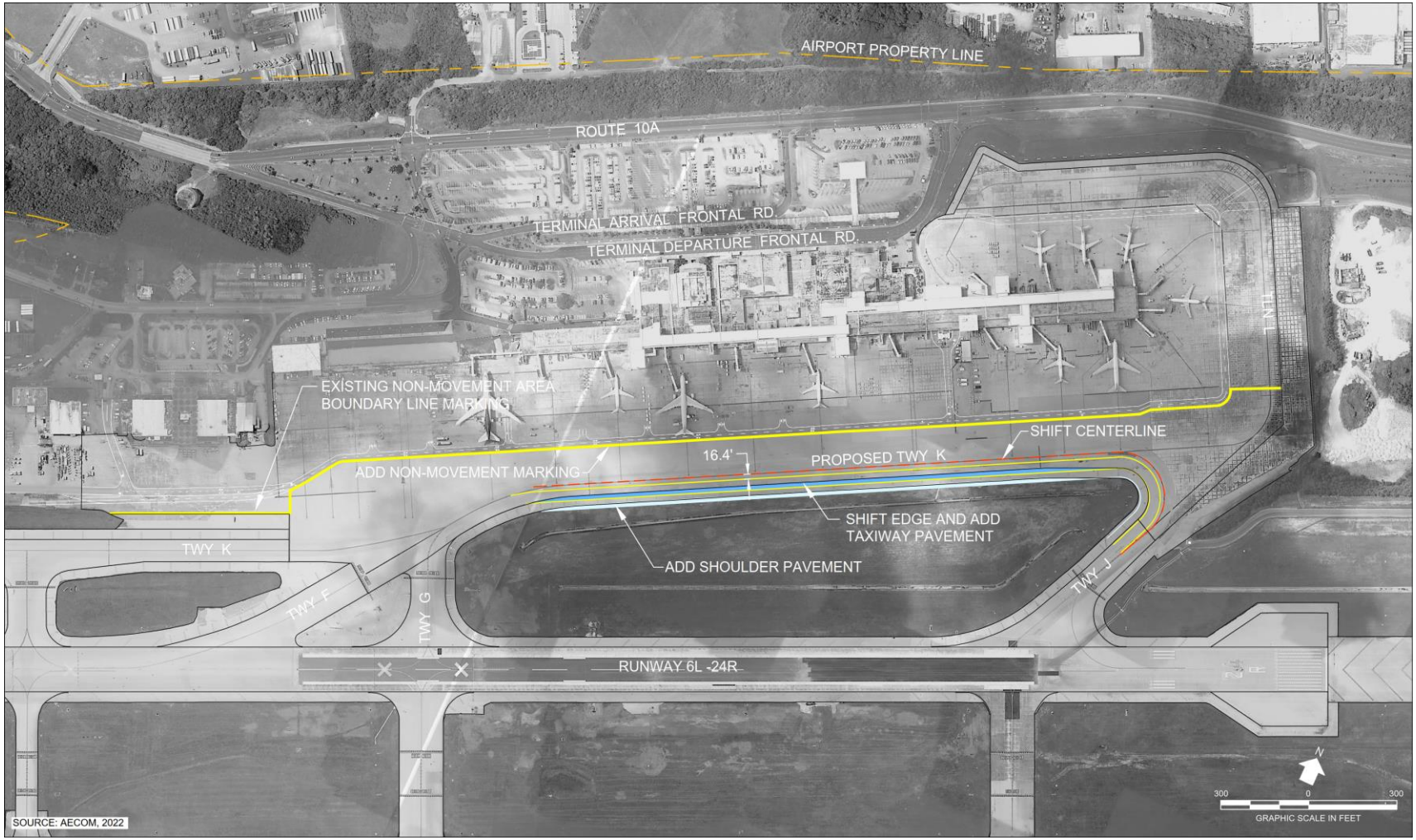



**Figure D-23. Commercial Passenger Terminal Apron - Alternative 3 - Shift Centerline and Upgrade to ADG V Taxiway**

Source: AECOM

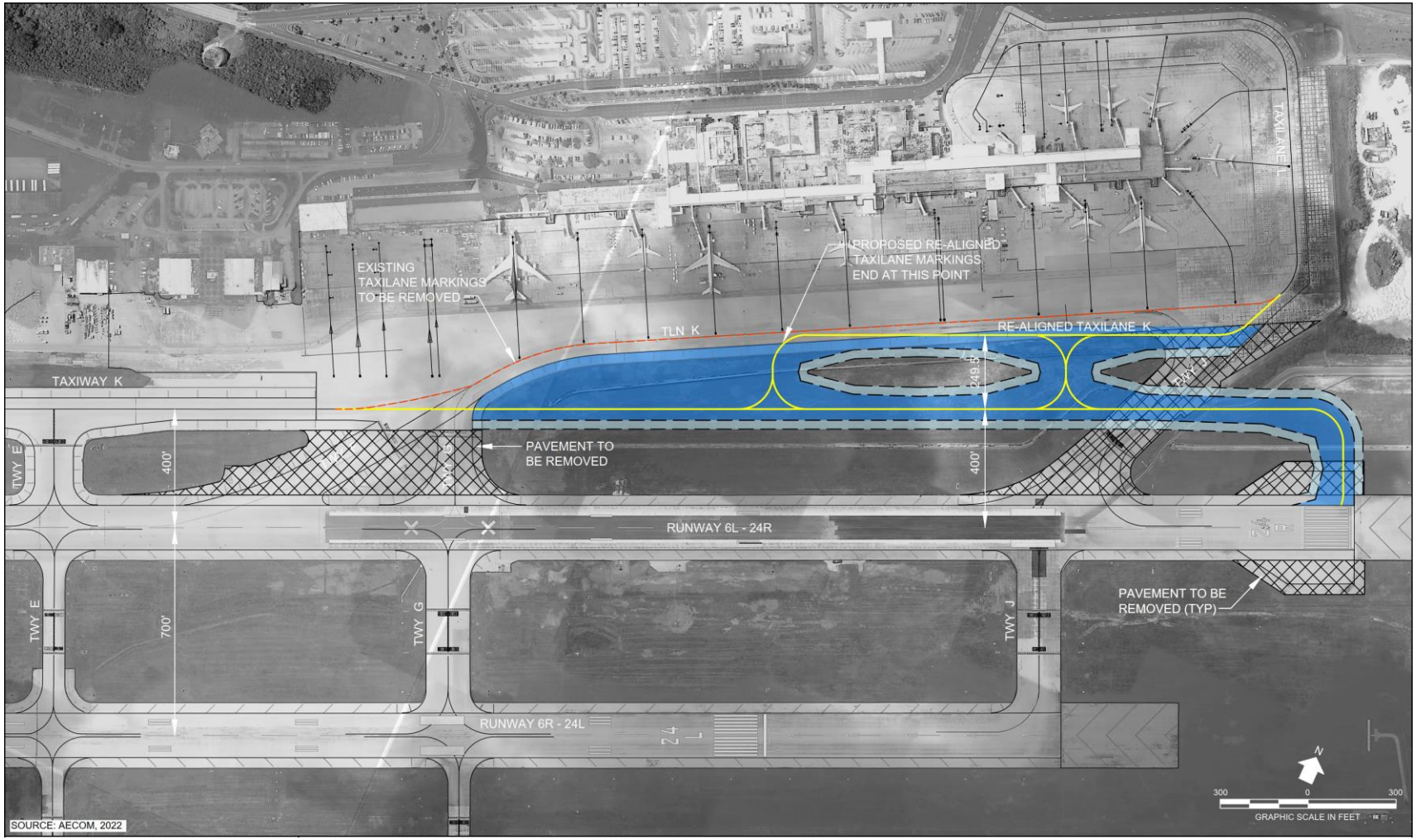



**Figure D-24. Commercial Passenger Terminal Apron - Alternative 4 - Full Length Parallel Taxiway K**

Source: AECOM




**Figure D-25. South Apron - Alternative 1 - No Action**

Source: AECOM




**Figure D-26. South Apron - Alternative 2 - Convert Taxiway G to Taxilane G**

Source: AECOM




**Figure D-27. South Apron - Alternative 3 - Shift South Apron Taxilane**

Source: AECOM

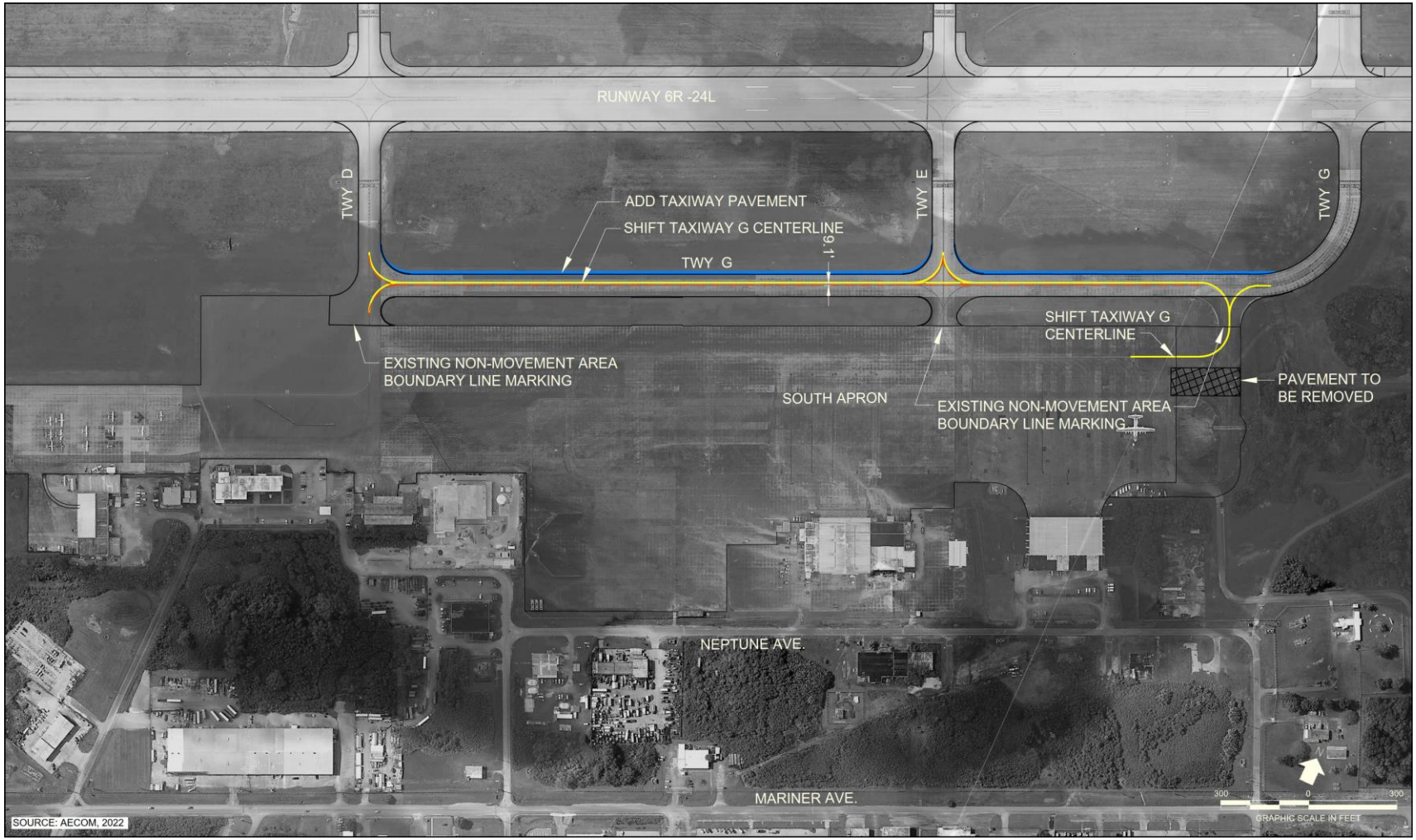



**Figure D-28. South Apron - Alternative 4 - Shift Taxiway G and Remove Excess Pavement**

Source: AECOM

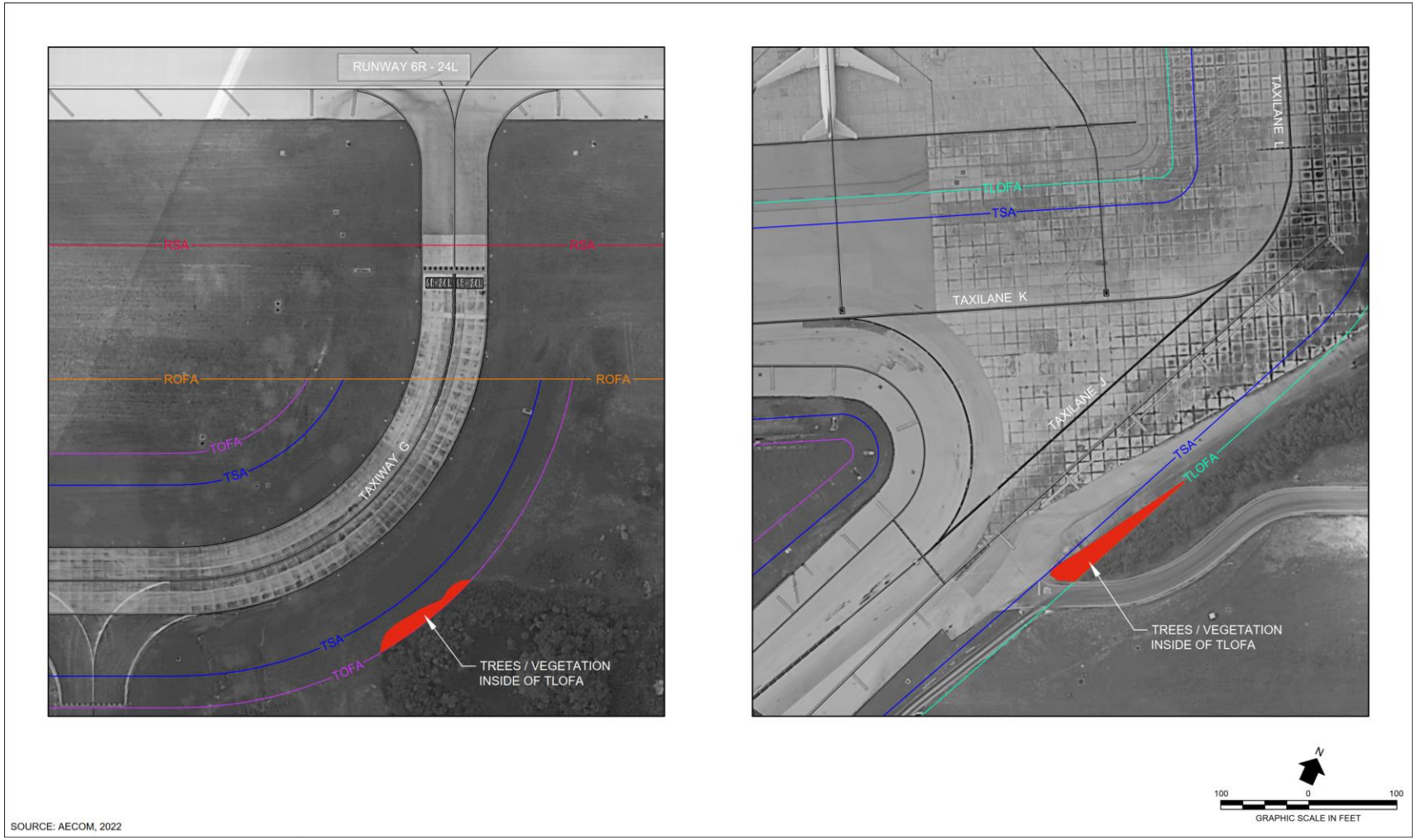



**Figure D-29. Trees and Vegetation - Alternative 1 - No Action**

Source: AECOM

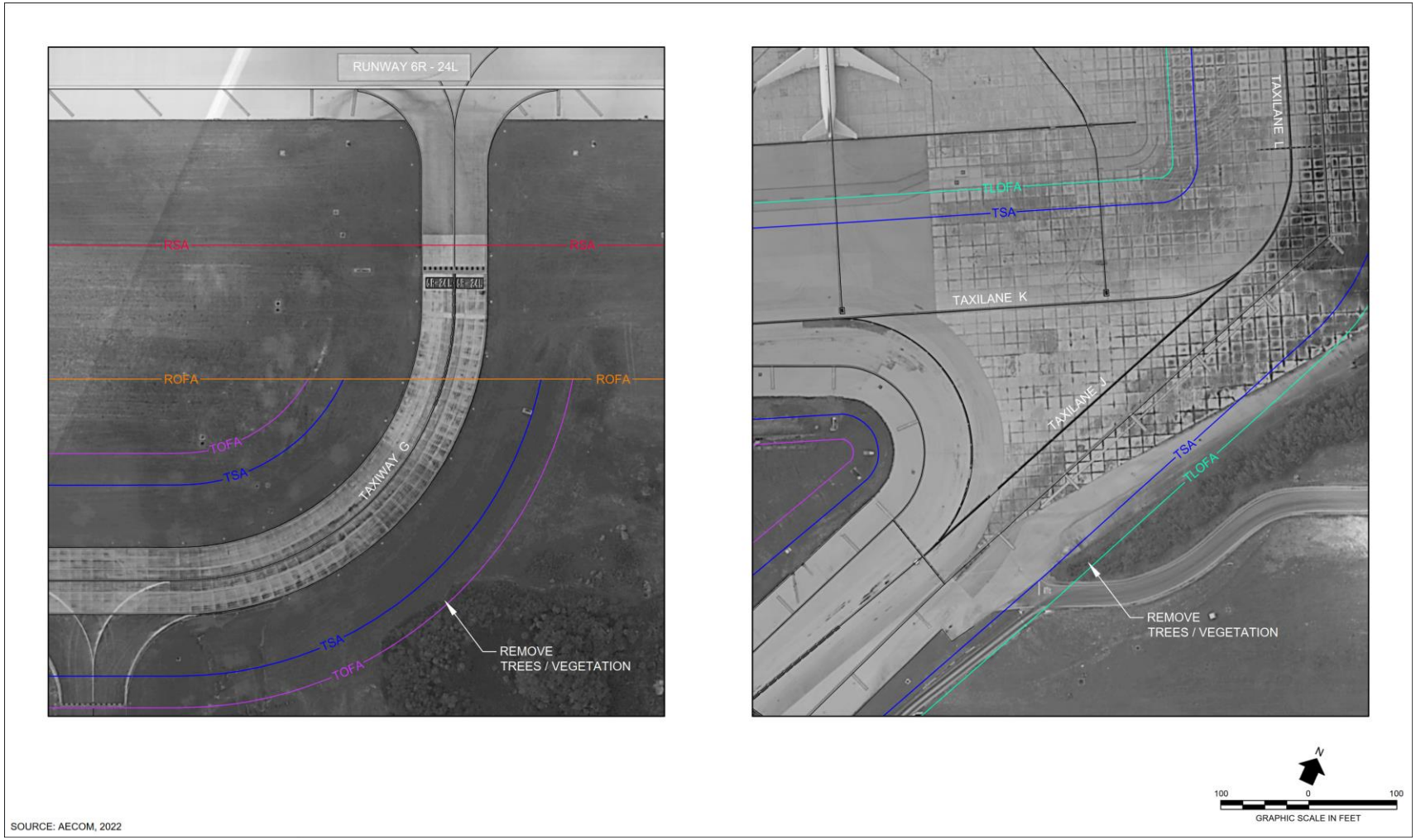



**Figure D-30. Trees and Vegetation - Alternative 2 - Remove Trees and Vegetation**

Source: AECOM

# D.2 Round 2 Airfield Alternatives

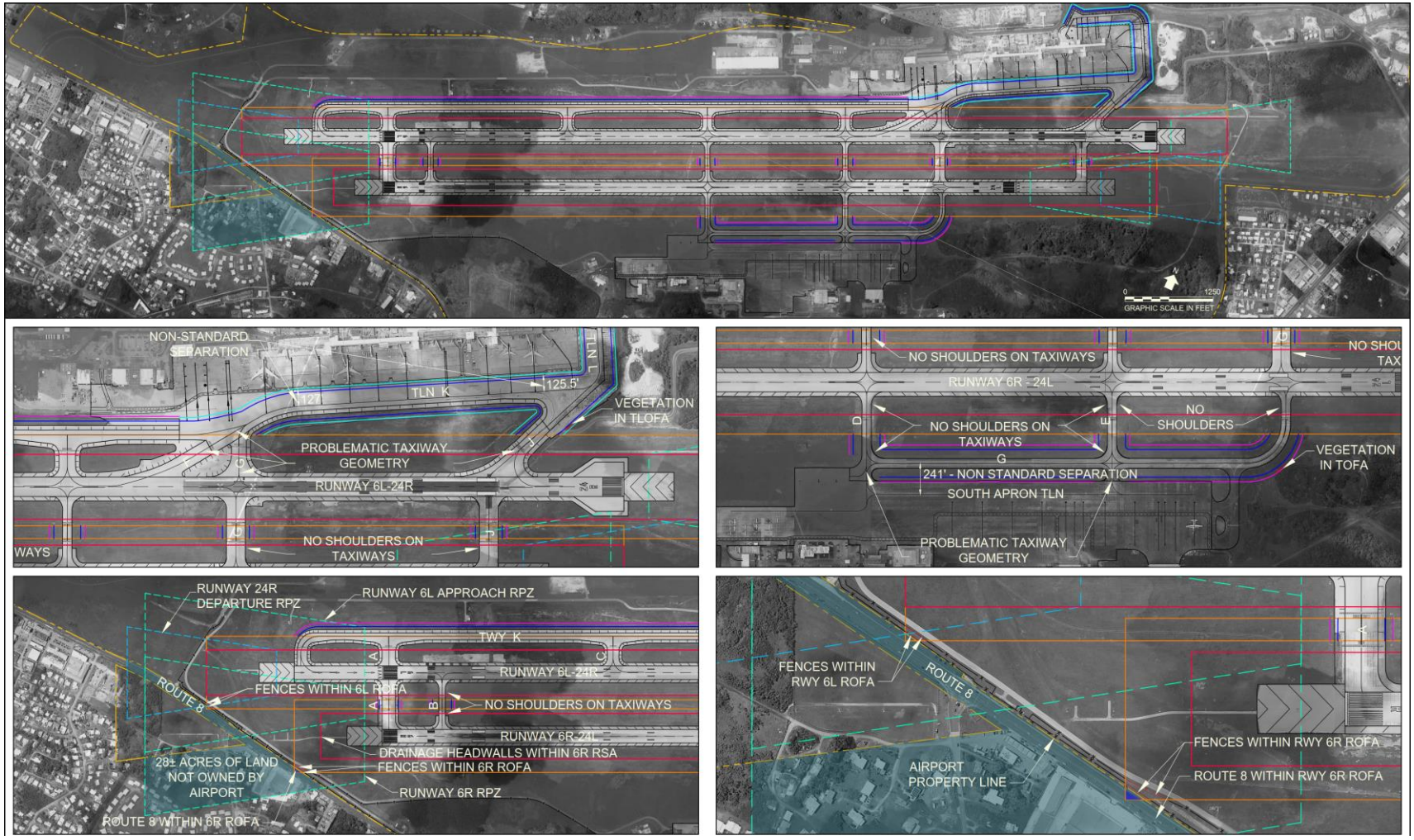



**Figure D-31. Airfield Alternatives Round 2 - Alternative 1 - No Action**

Source: AECOM

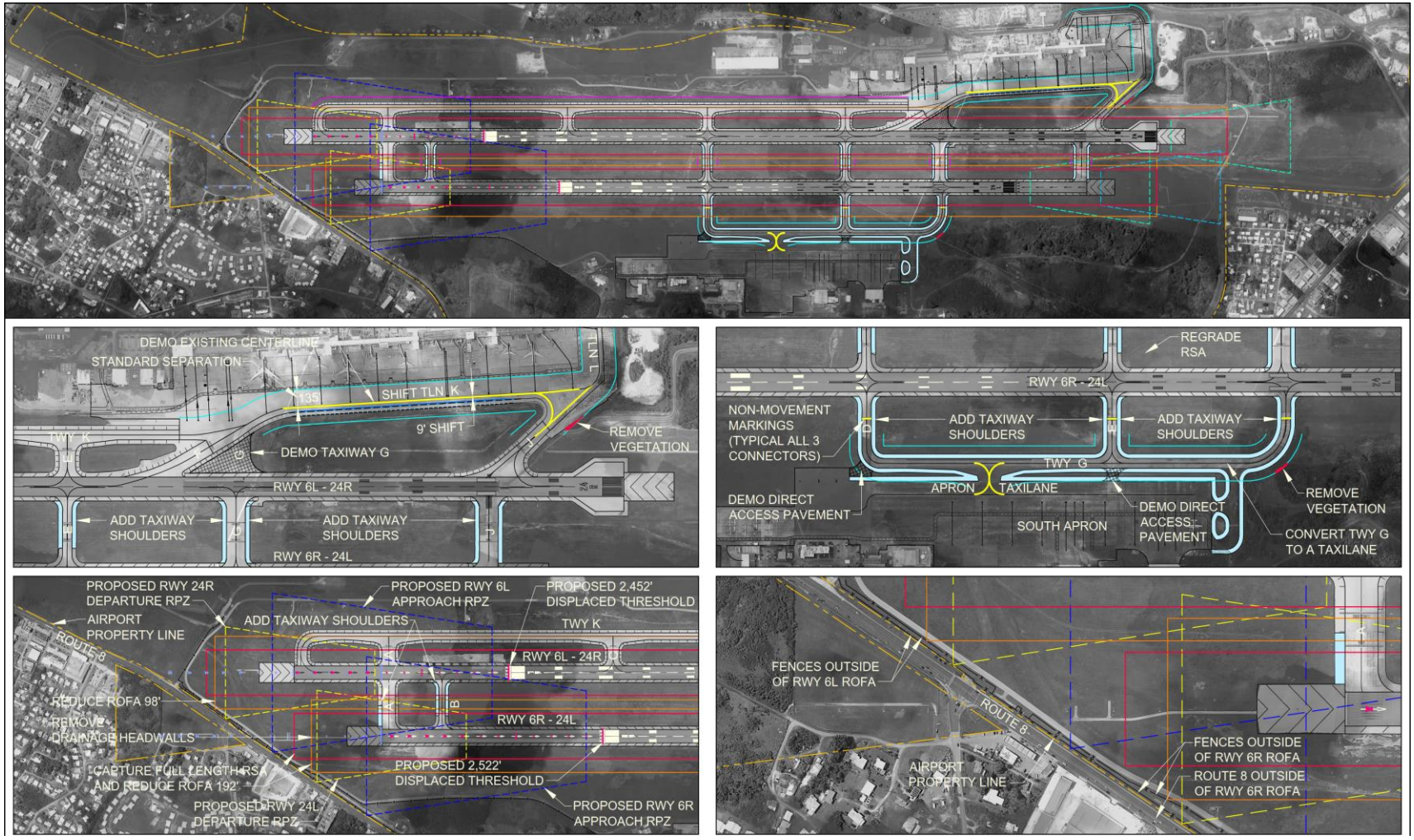



**Figure D-32. Airfield Alternatives Round 2 - Alternative 2 - Low Cost**

Source: AECOM

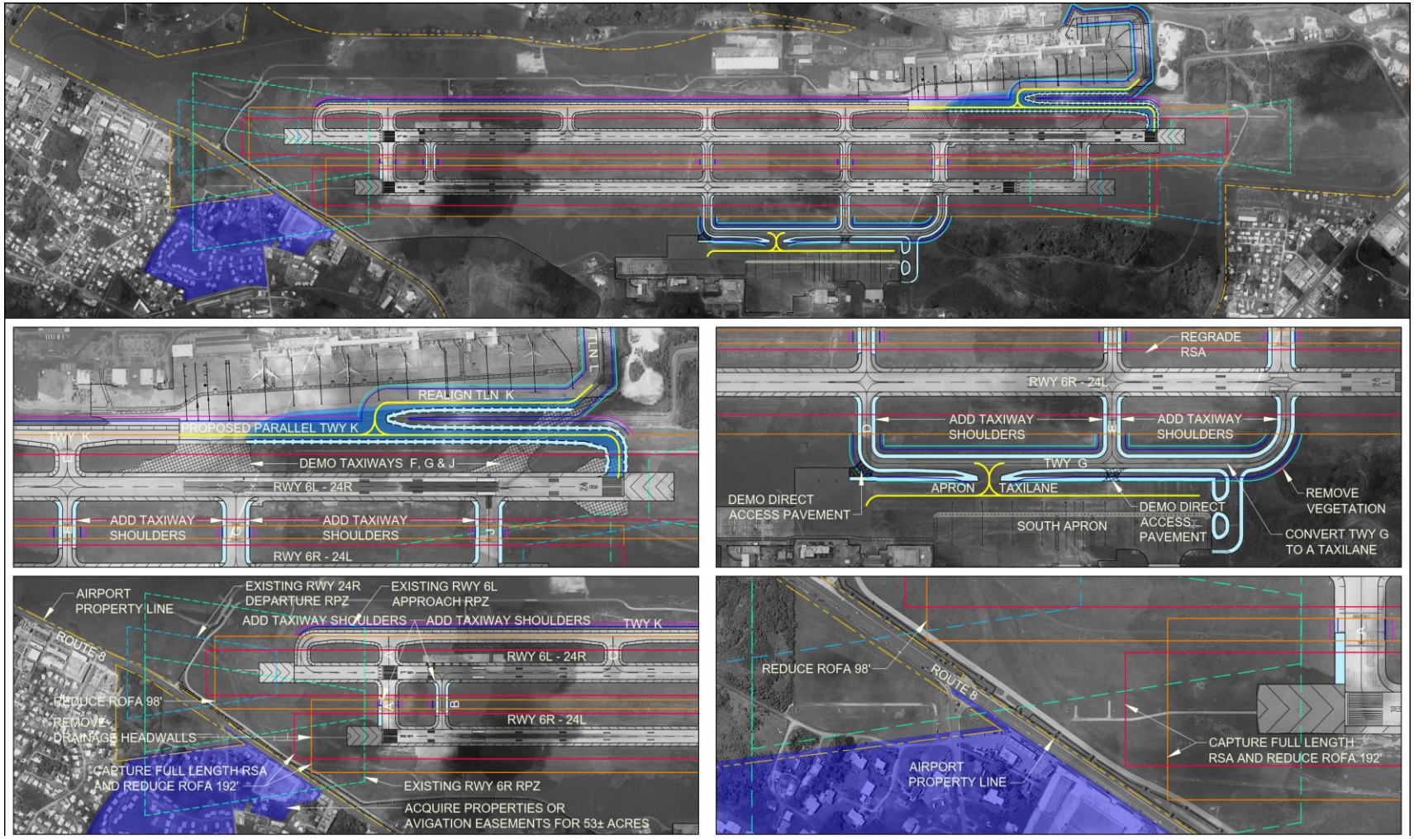



**Figure D-33. Airfield Alternatives Round 2 - Alternative 3 - Second Highest Ranked Round 1 Alternatives**

Source: AECOM

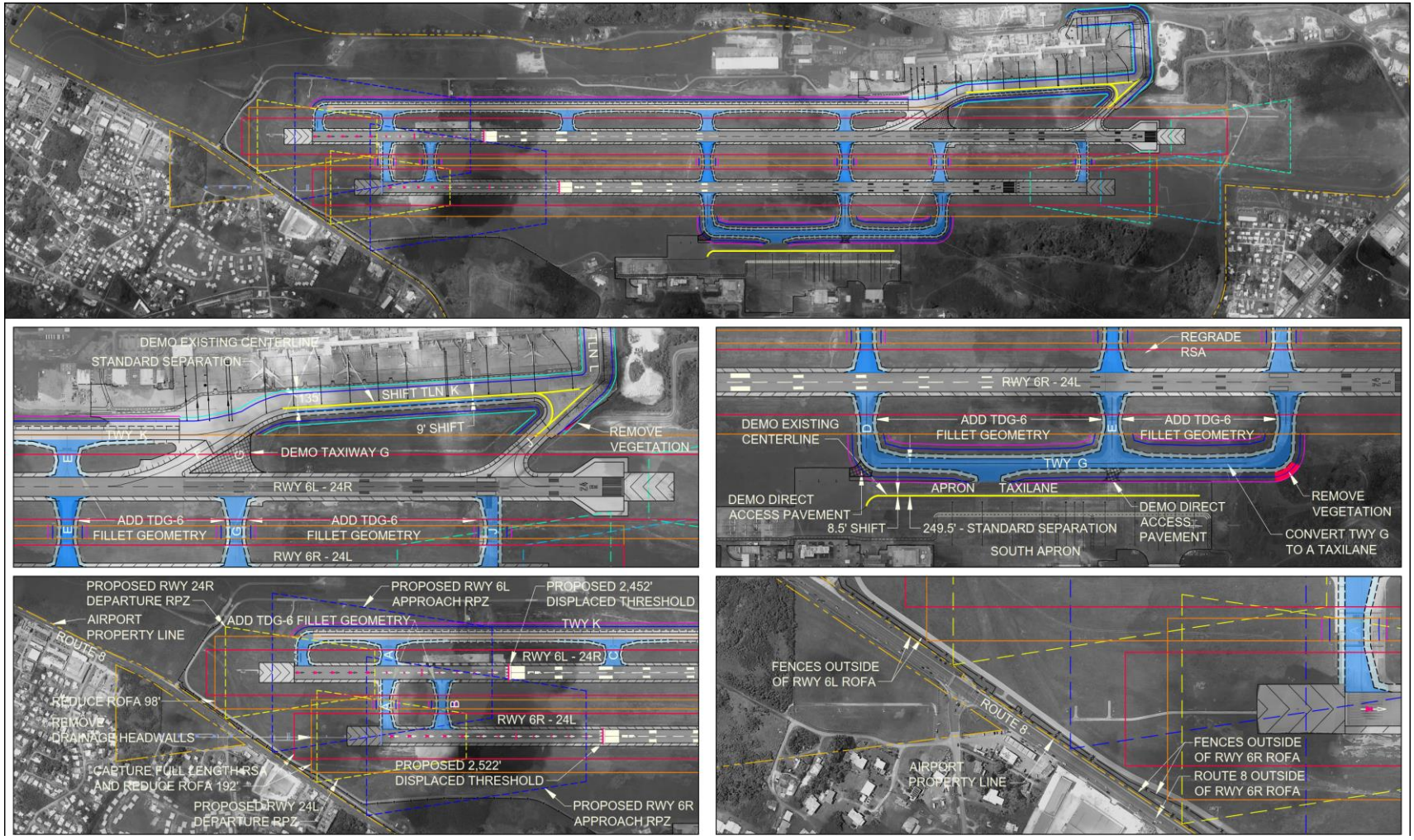



**Figure D-34. Airfield Alternatives Round 2 - Alternative 4 - Highest Ranked Round 1 Alternatives**

Source: AECOM

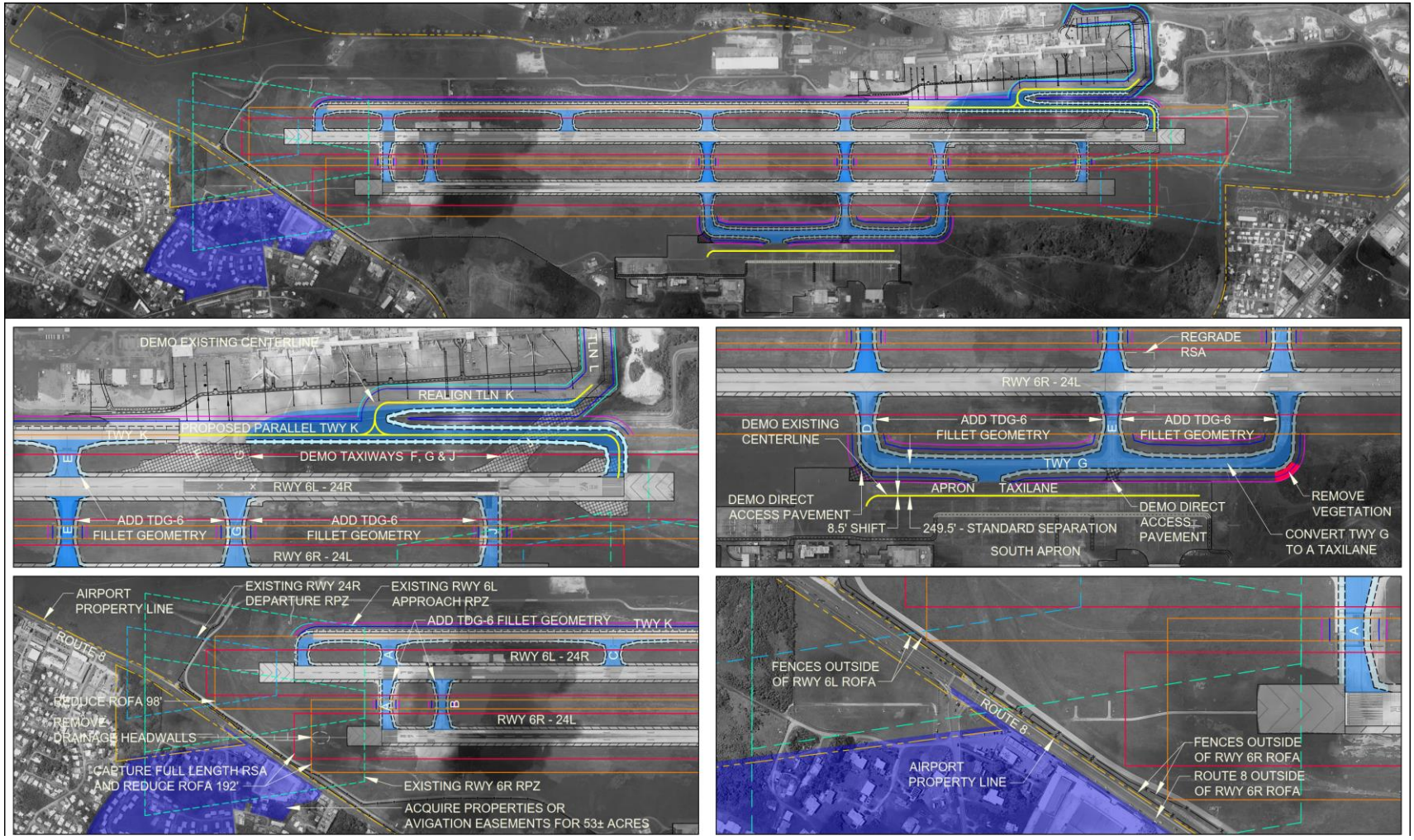
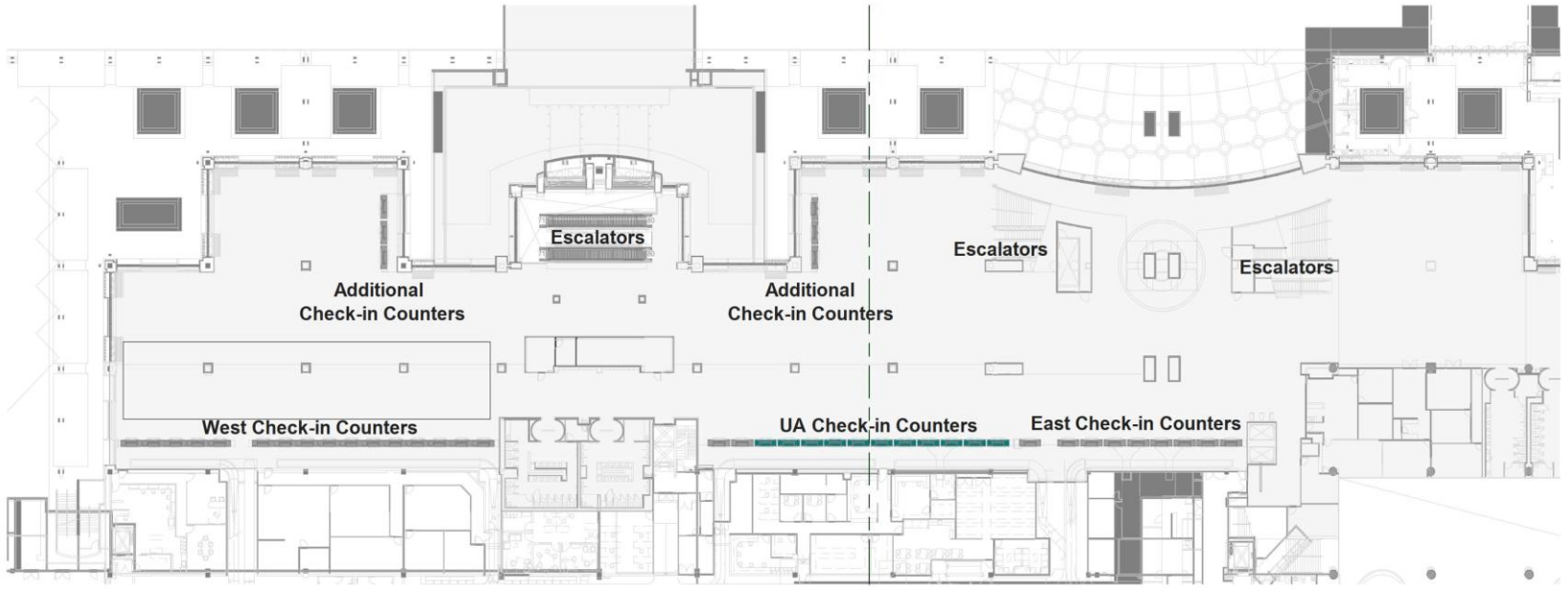



**Figure D-35. Airfield Alternatives Round 2 - Alternative 5 - High Cost**

Source: AECOM

# D.3 Round 1 Commercial Passenger Terminal Alternatives




Notes:

**UA Kiosks**
- 2 Premium
- 10 Economy

**UA Agent Counters**
- 3 Premium
- 7 Economy

**OAL Kiosks**
- N/A

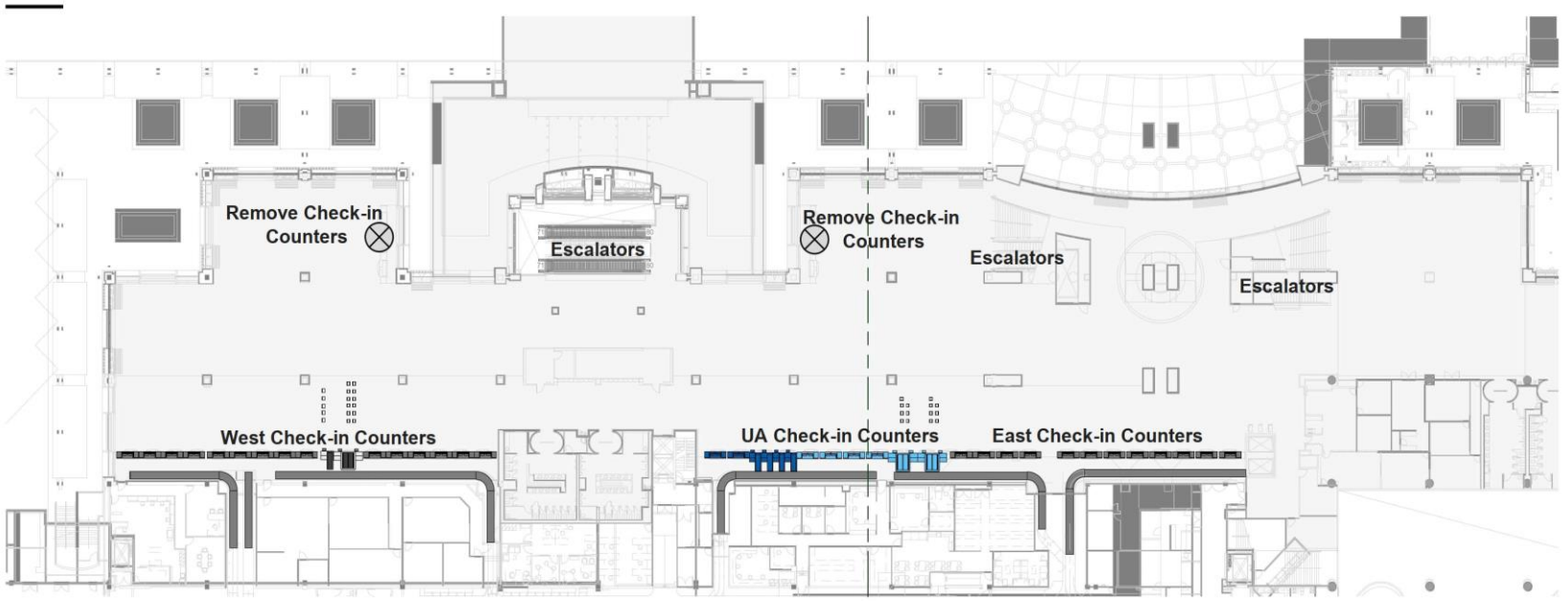
**OAL Agent Counters**
- 66 Total

Total Check-in positions: 88

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**Figure D-36. Check-in Facilities - Alternative 1 - No Action**

Source: AECOM




Notes:

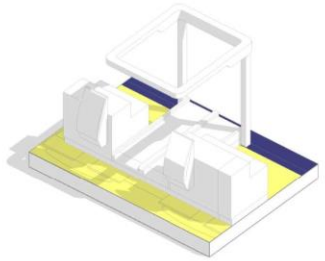
**UA Kiosks**
- 4 Premium
- 14 Economy

**OAL Kiosks**
- 5 Premium
- 12 Economy

**UA Agent Counters**
- 4 Premium
- 8 Economy

**OAL Agent Counters**
- 54 Total

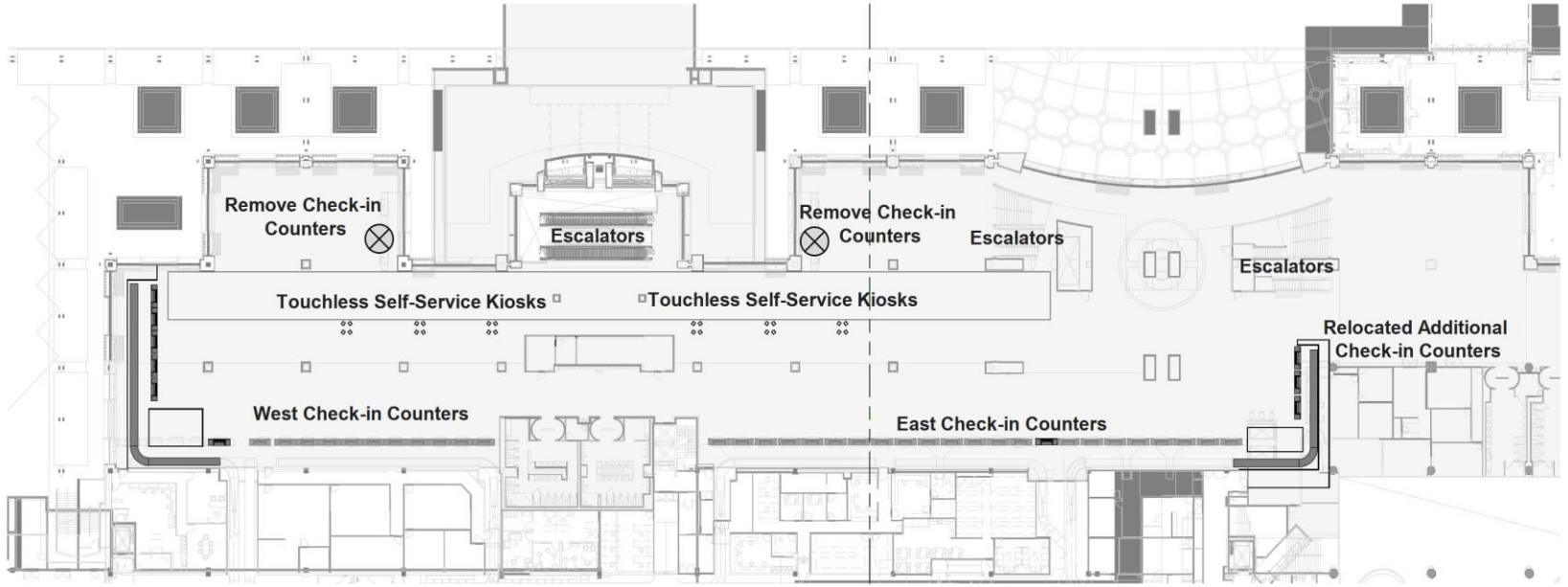
Total Check-in positions: 101



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**Figure D-37. Check-in Facilities - Alternative 2 - Add CUSS Kiosks**

Source: AECOM



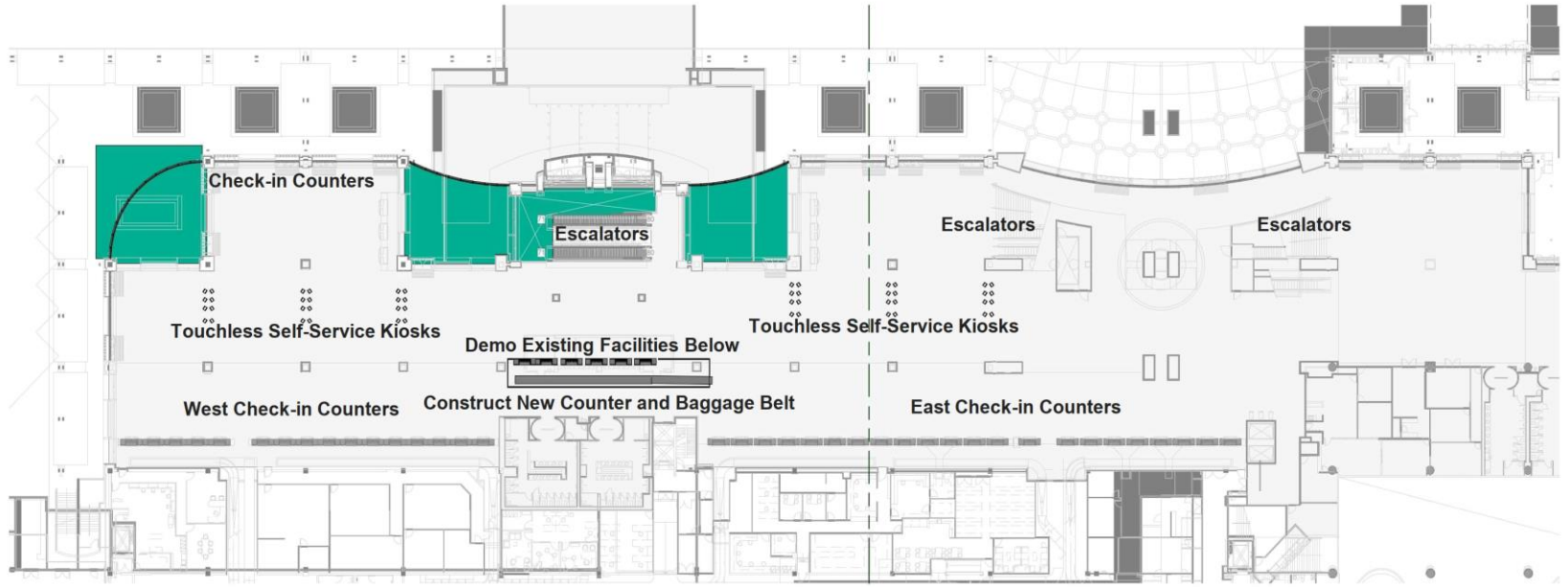

Notes:
- 88 Check-in positions
- 24 Kiosks
- Reduced check-in counter queuing to less than recommended

Total Check-in positions: 112

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**Figure D-38. Check-in Facilities - Alternative 3 - Add CUSS Kiosks and Relocate Ticket Counters**

Source: AECOM




Notes:

- 88 Check-in positions
- 48 Kiosks
- Queuing is tight but do-able
- Will need to find space for areas demoed in lobby

Total Check-in positions: 136

aecom.com

**Figure D-39. Check-in Facilities - Alternative 4 - Expand Frontage**

Source: AECOM

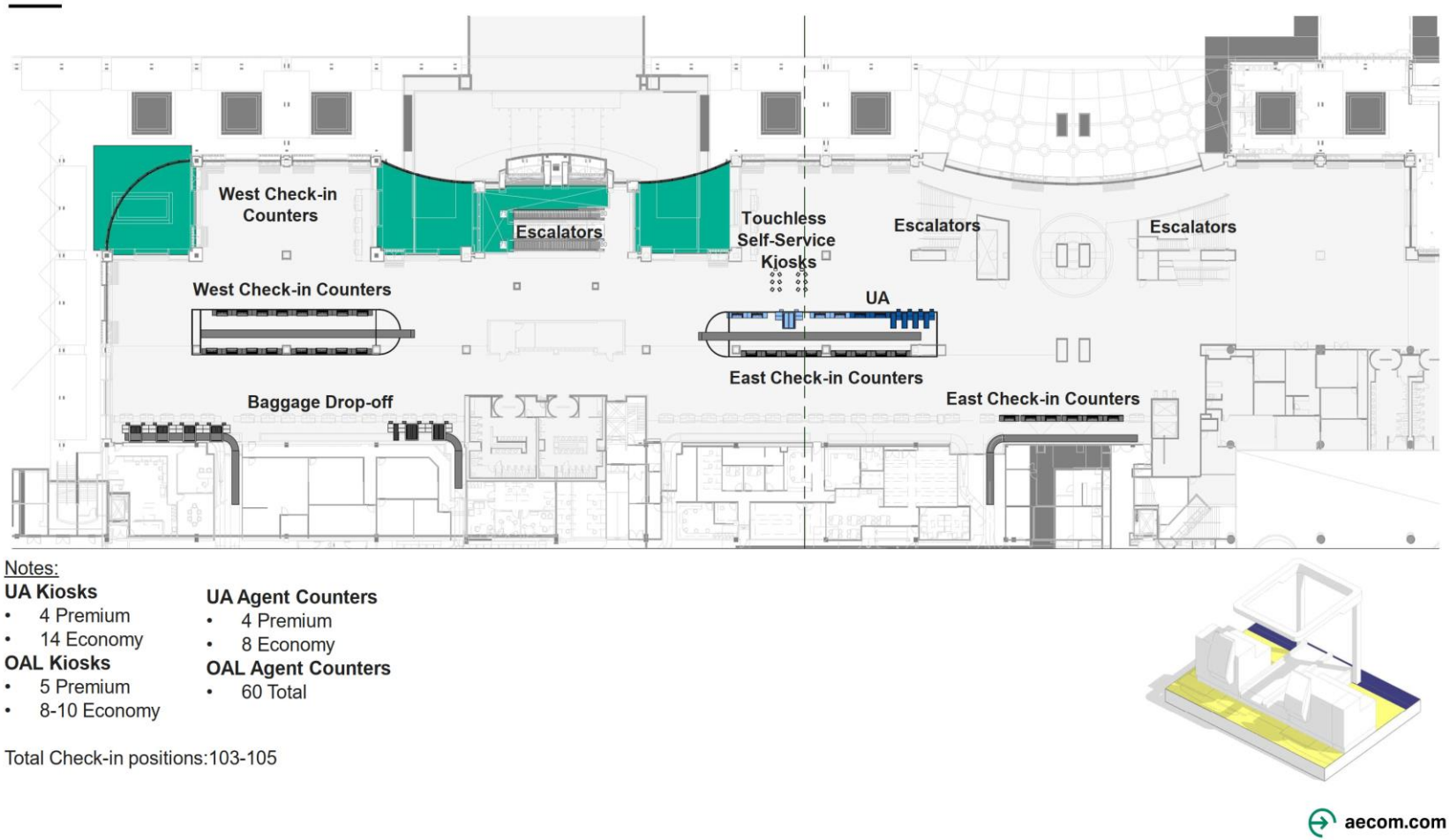
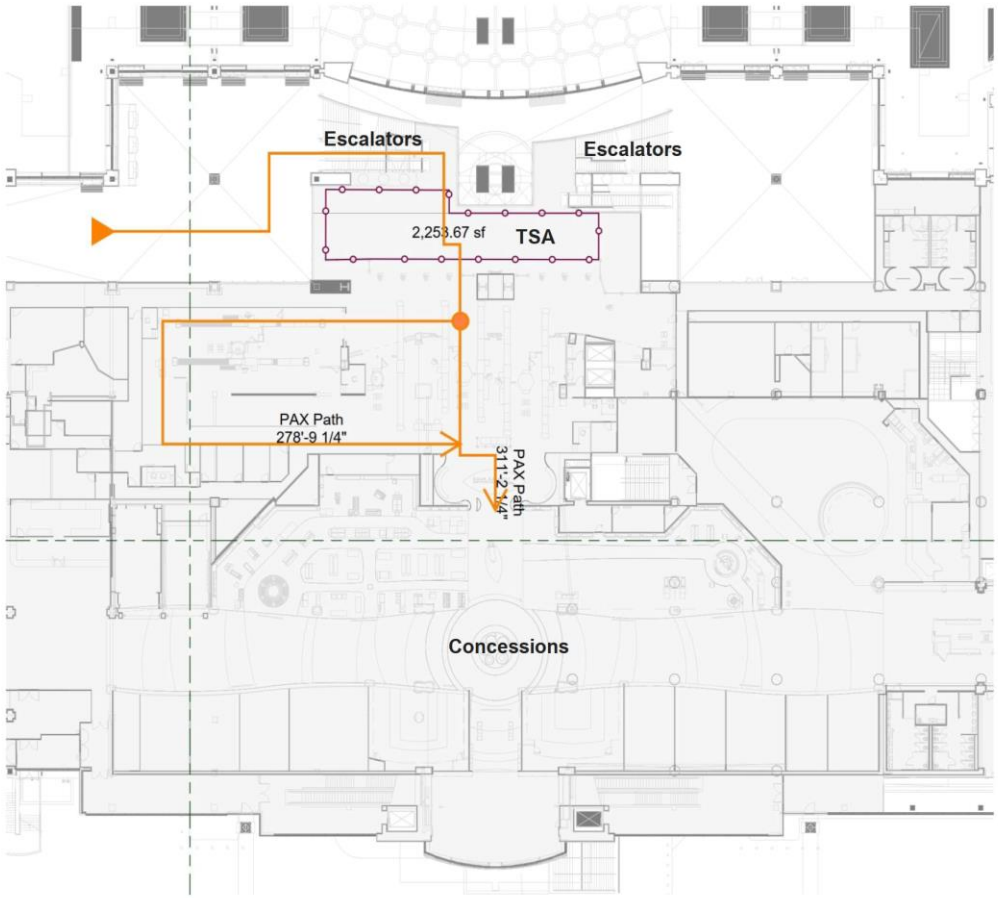



**Figure D-40. Check-in Facilities - Alternative 5 - Expand Frontage with Island**

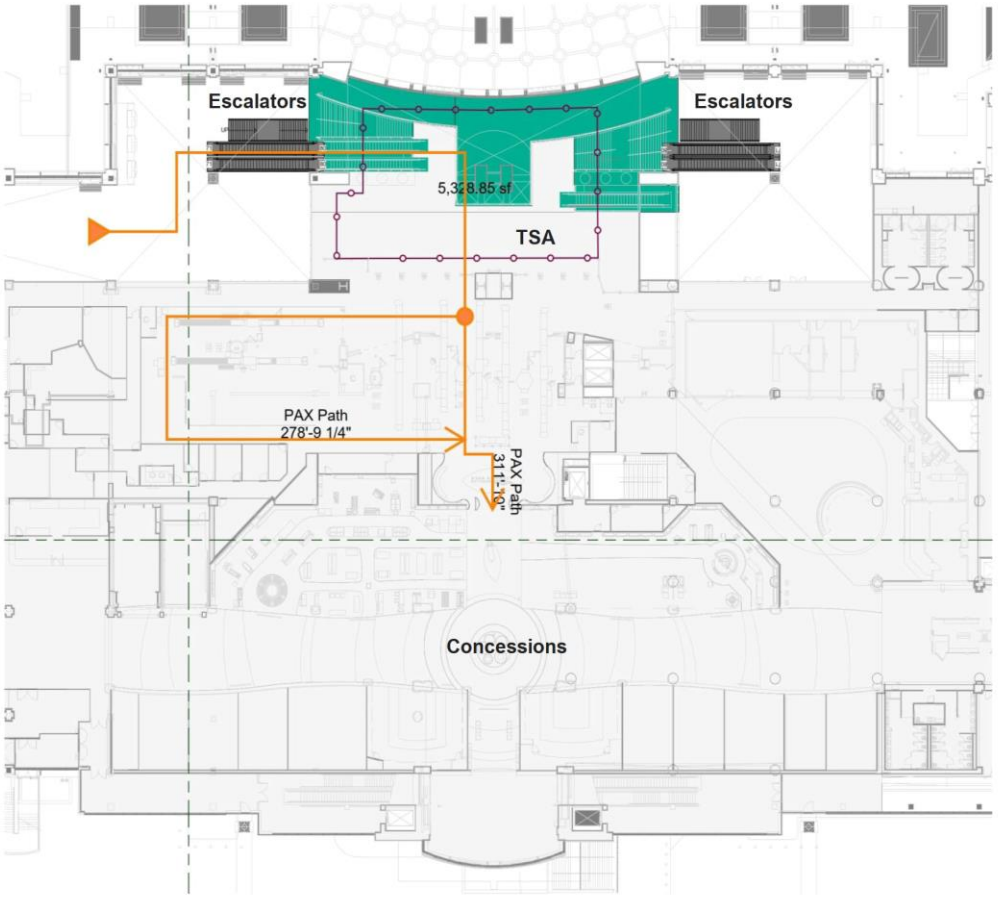
Source: AECOM




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**Figure D-41. SSCP - Alternative 1 - No Action**

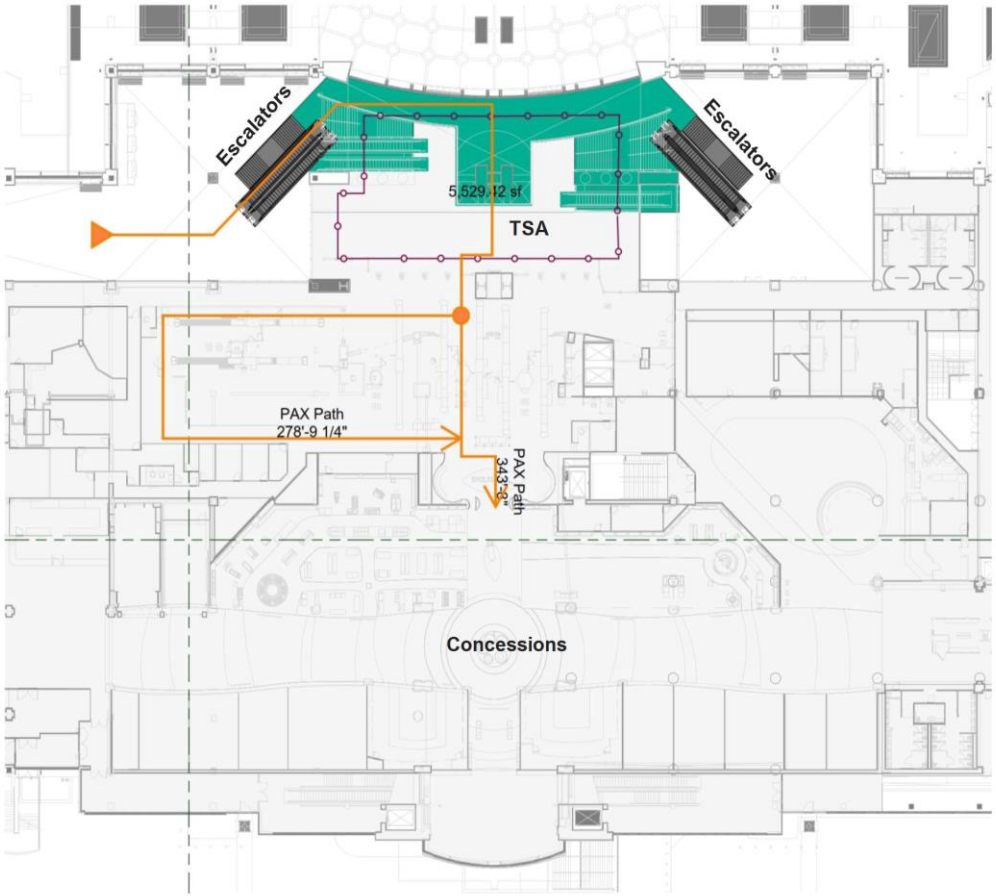
Source: AECOM




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**Figure D-42. SSCP - Alternative 2 - Expand Queuing (A)**

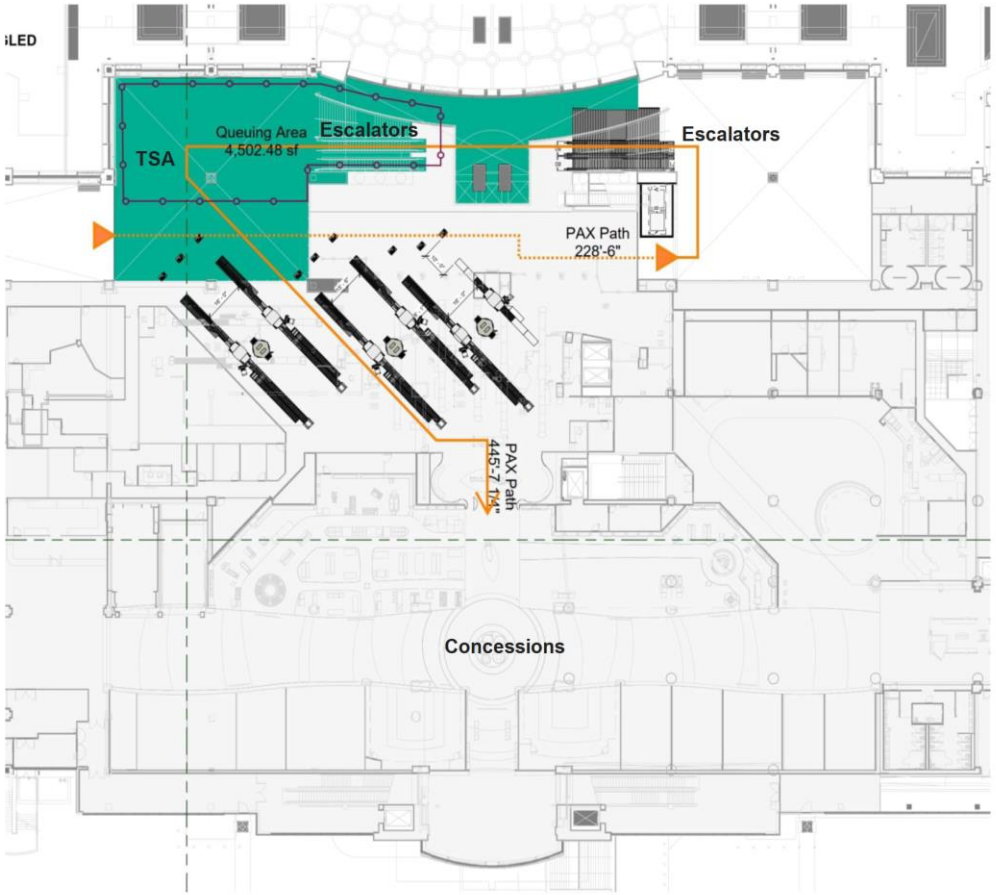
Source: AECOM




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**Figure D-43. SSCP - Alternative 3 - Expand Queuing (B)**

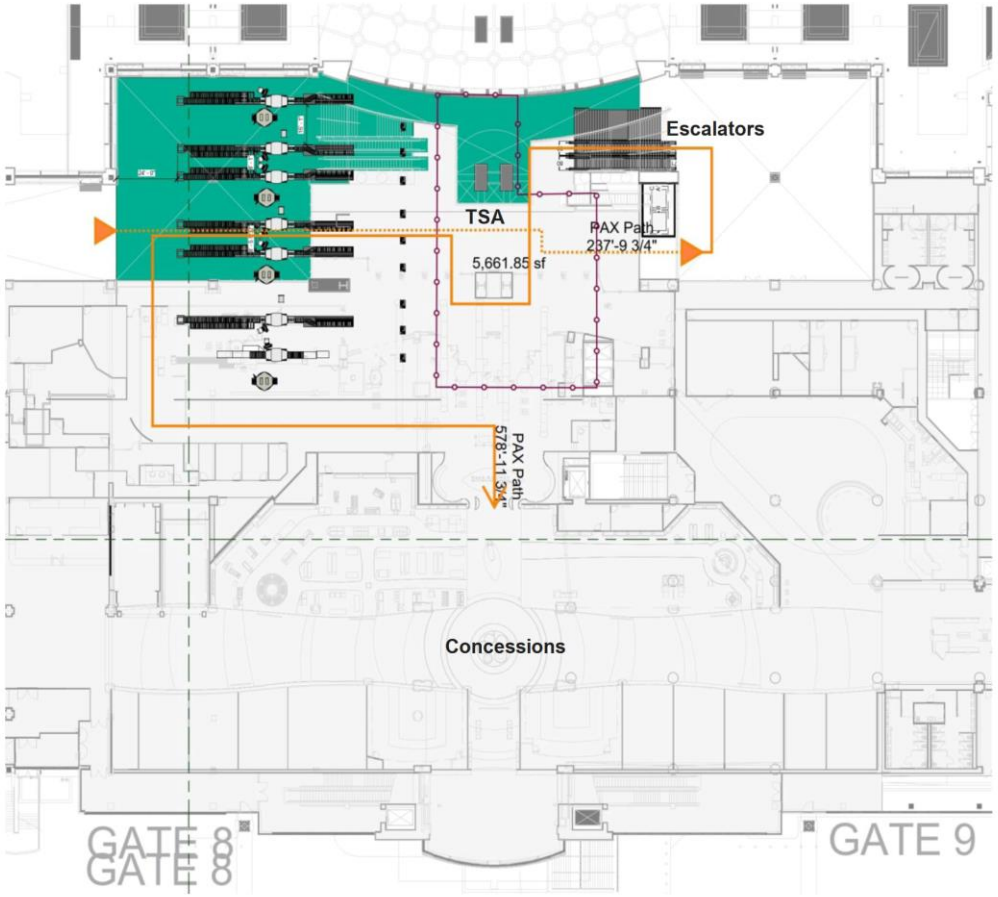
Source: AECOM




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**Figure D-44. SSCP - Alternative 4 - Expand SSCP – Angled**

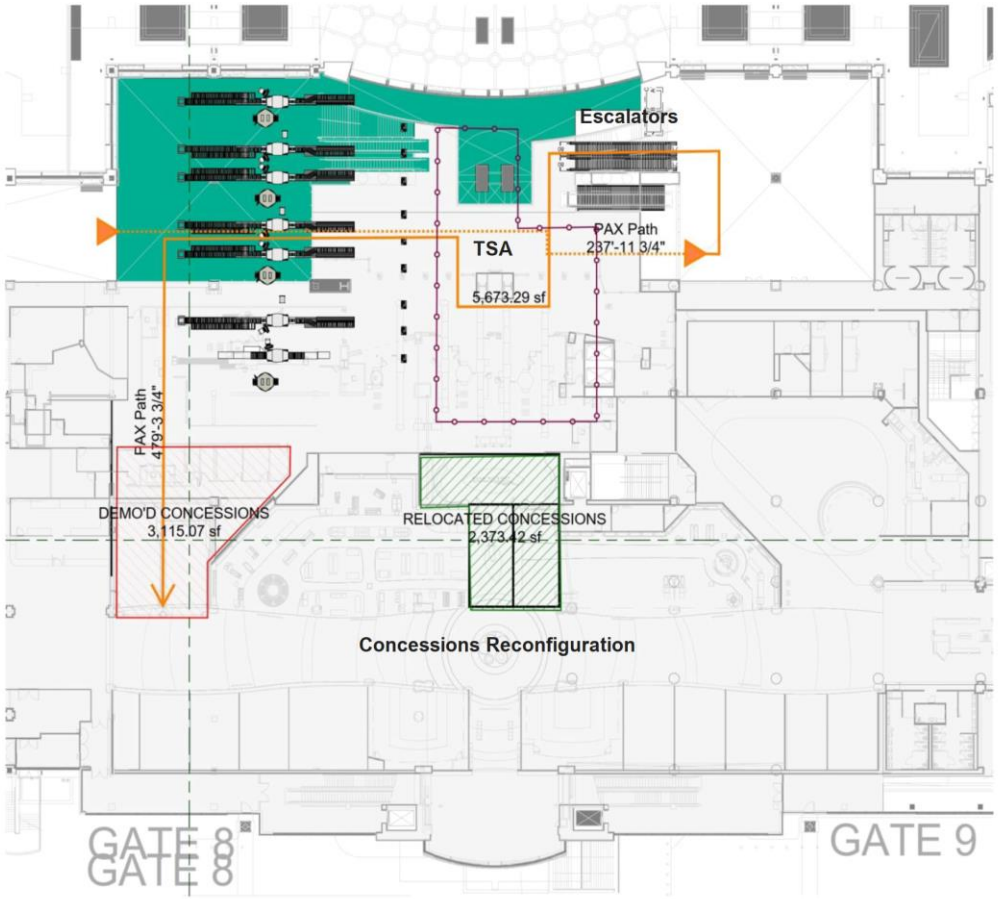
Source: AECOM




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**Figure D-45. SSCP - Alternative 5 - Expand SSCP - East to West (A)**

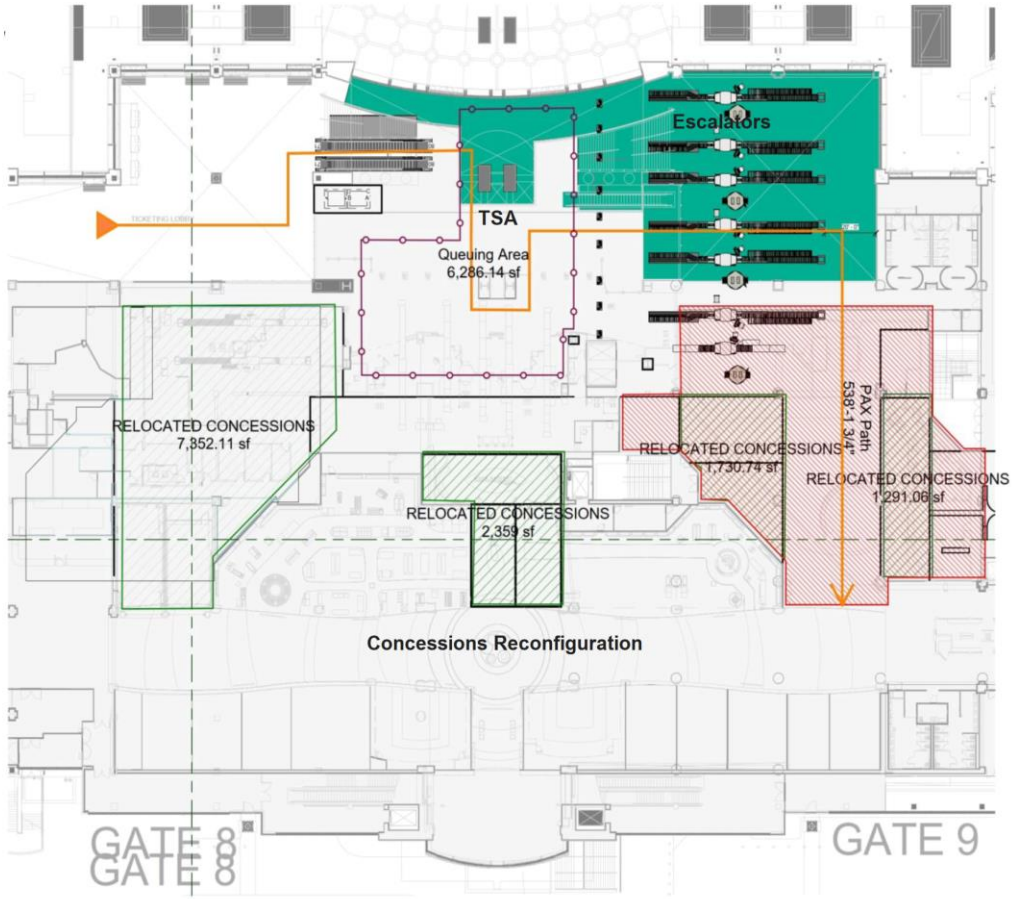
Source: AECOM




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**Figure D-46. SSCP - Alternative 6 - Expand SSCP - East to West (B)**

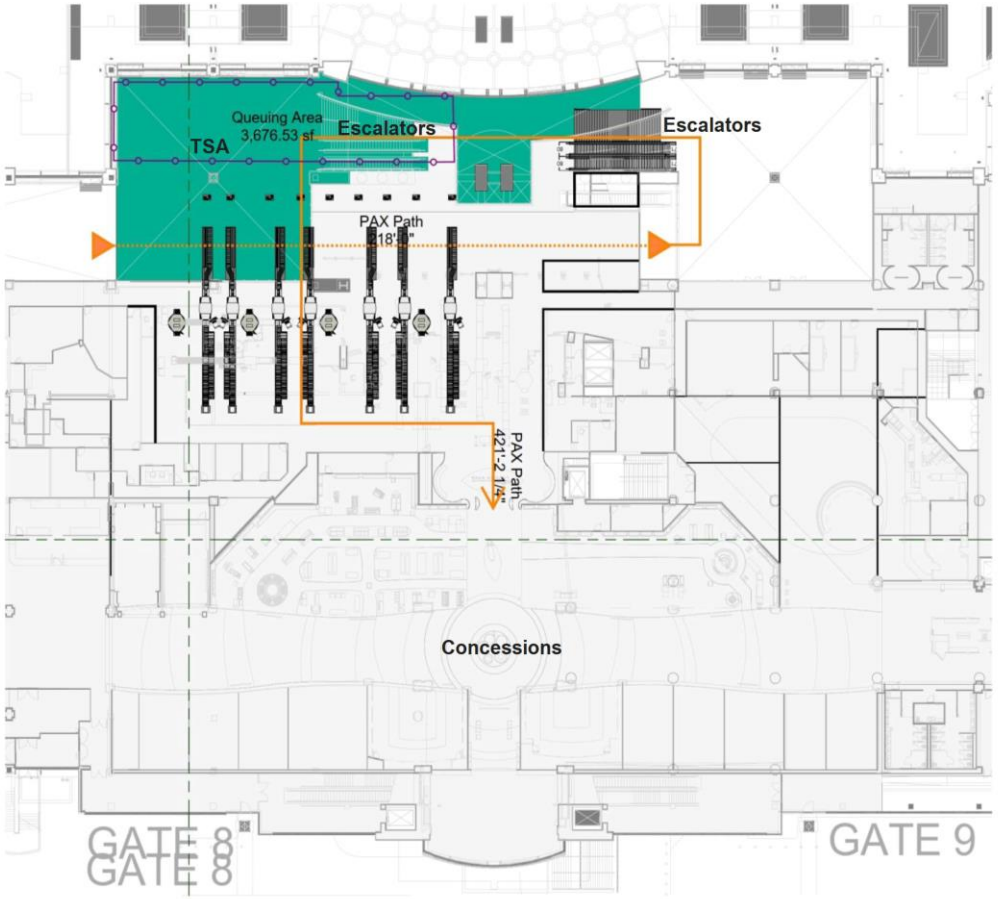
Source: AECOM




aecom.com

**Figure D-47. SSCP - Alternative 7 - Expand SSCP - East to West (C)**

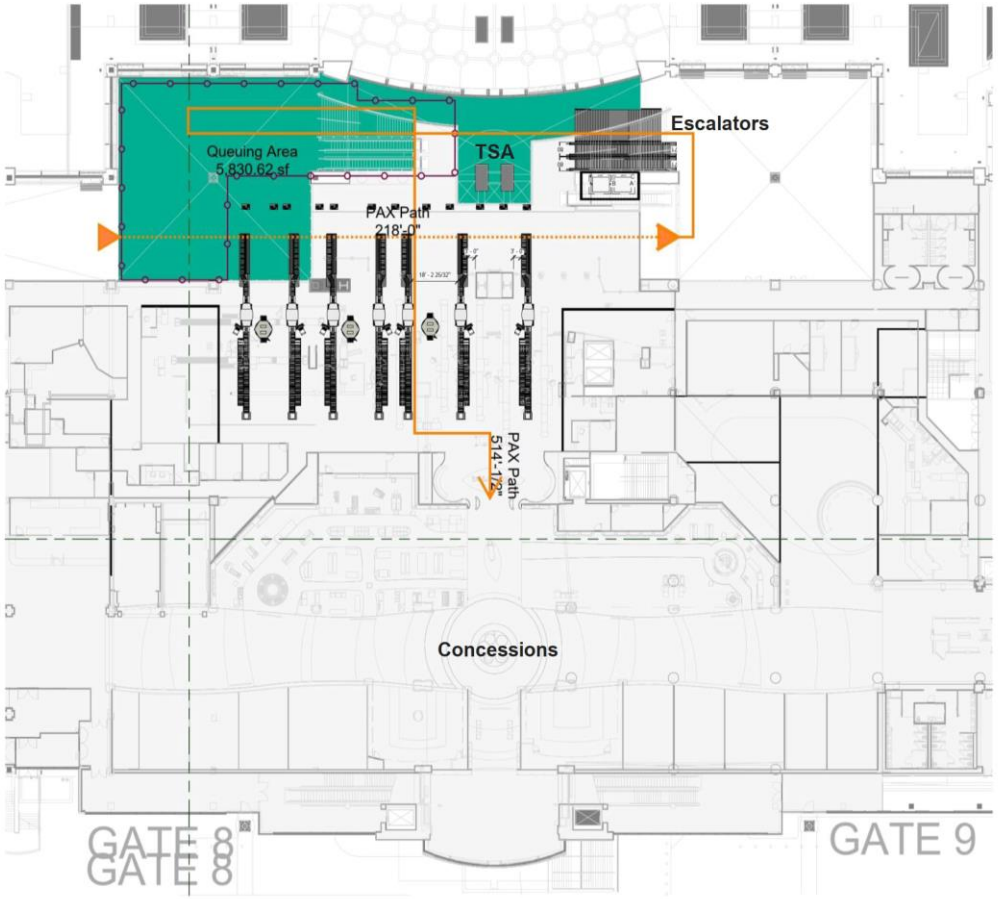
Source: AECOM




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**Figure D-48. SSCP - Alternative 8 - Expand SSCP - North to South (A)**

Source: AECOM




aecom.com

**Figure D-49. SSCP - Alternative 9 - Expand SSCP - North to South (B)**

Source: AECOM

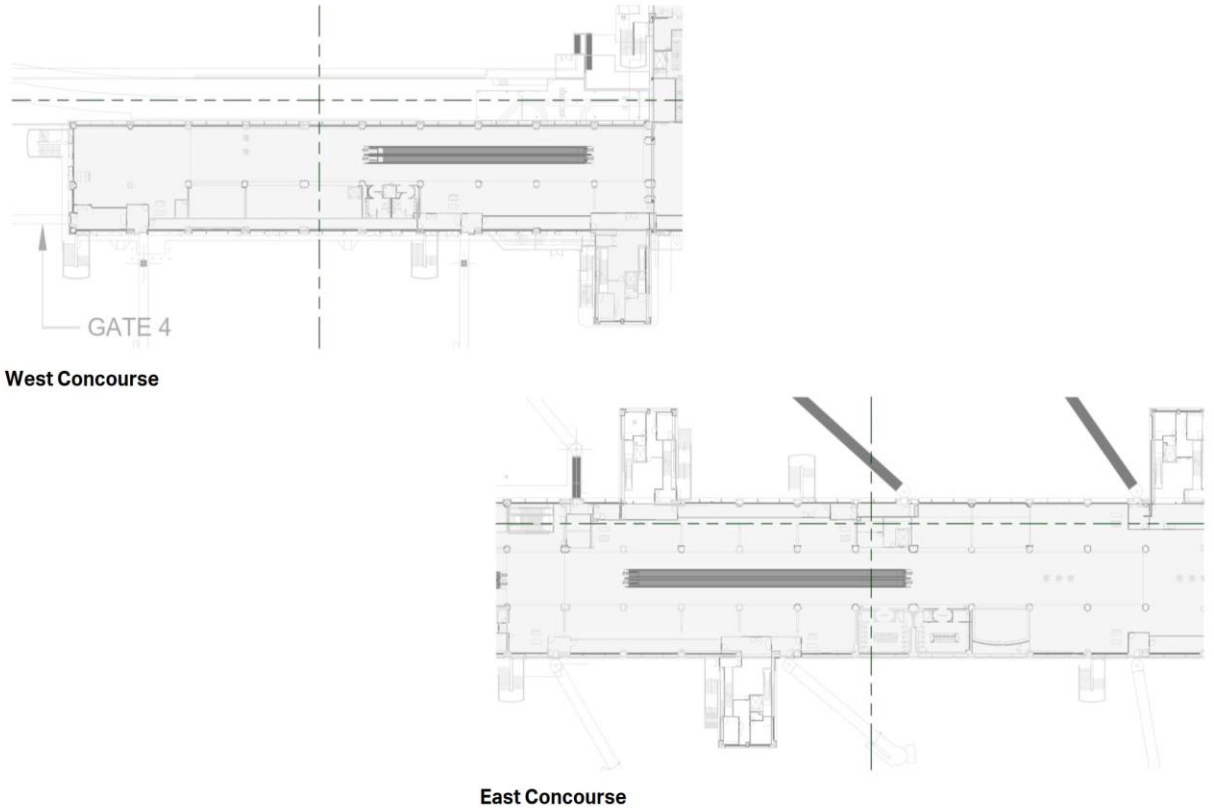



**Figure D-50. Holdrooms - Alternative 1 - No Action**

Source: AECOM

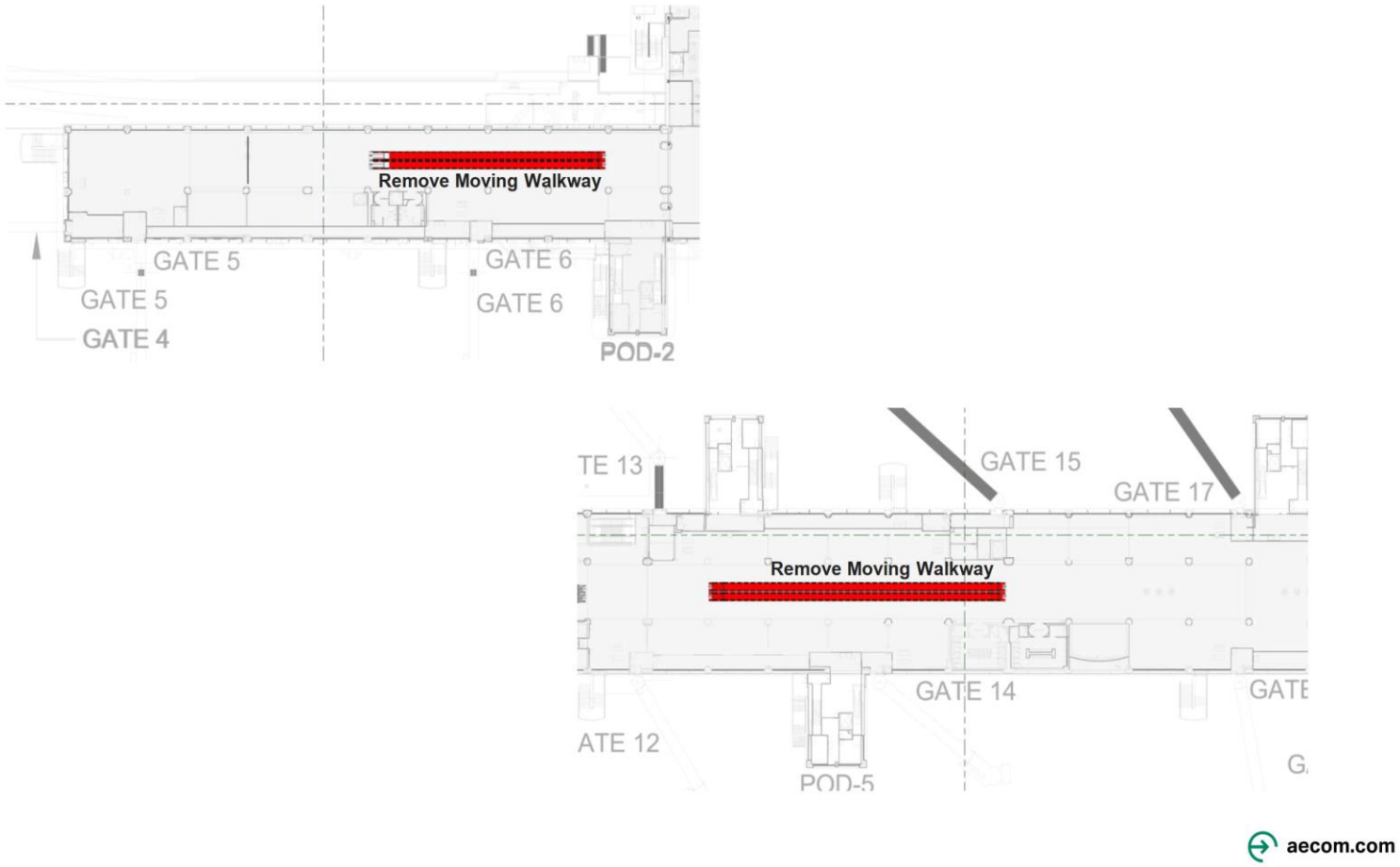



**Figure D-51. Holdrooms - Alternative 2 - Remove Moving Walkways East and West**

Source: AECOM

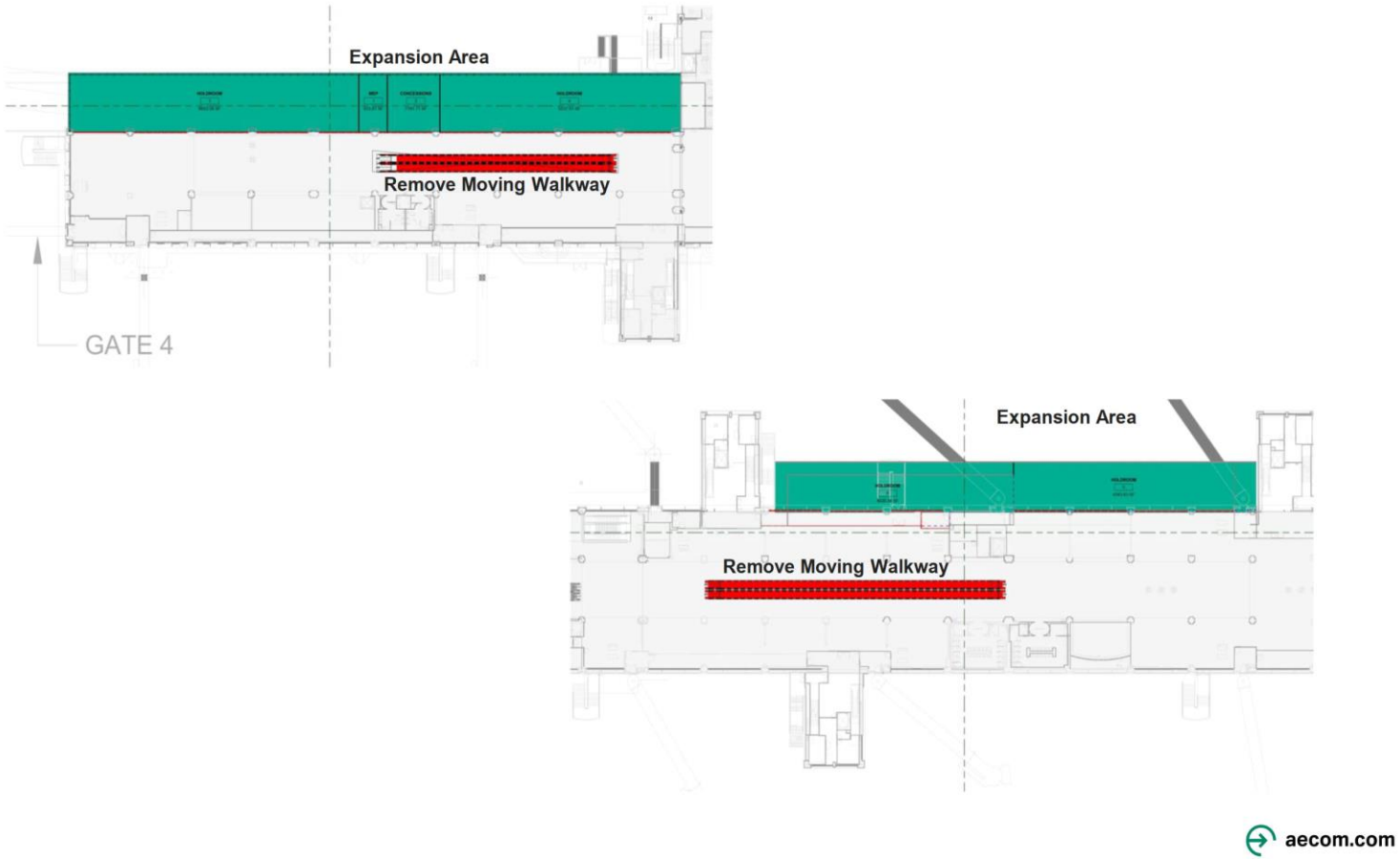



**Figure D-52. Holdrooms - Alternative 3 - Remove Moving Walkways and Expand Concourses**

Source: AECOM

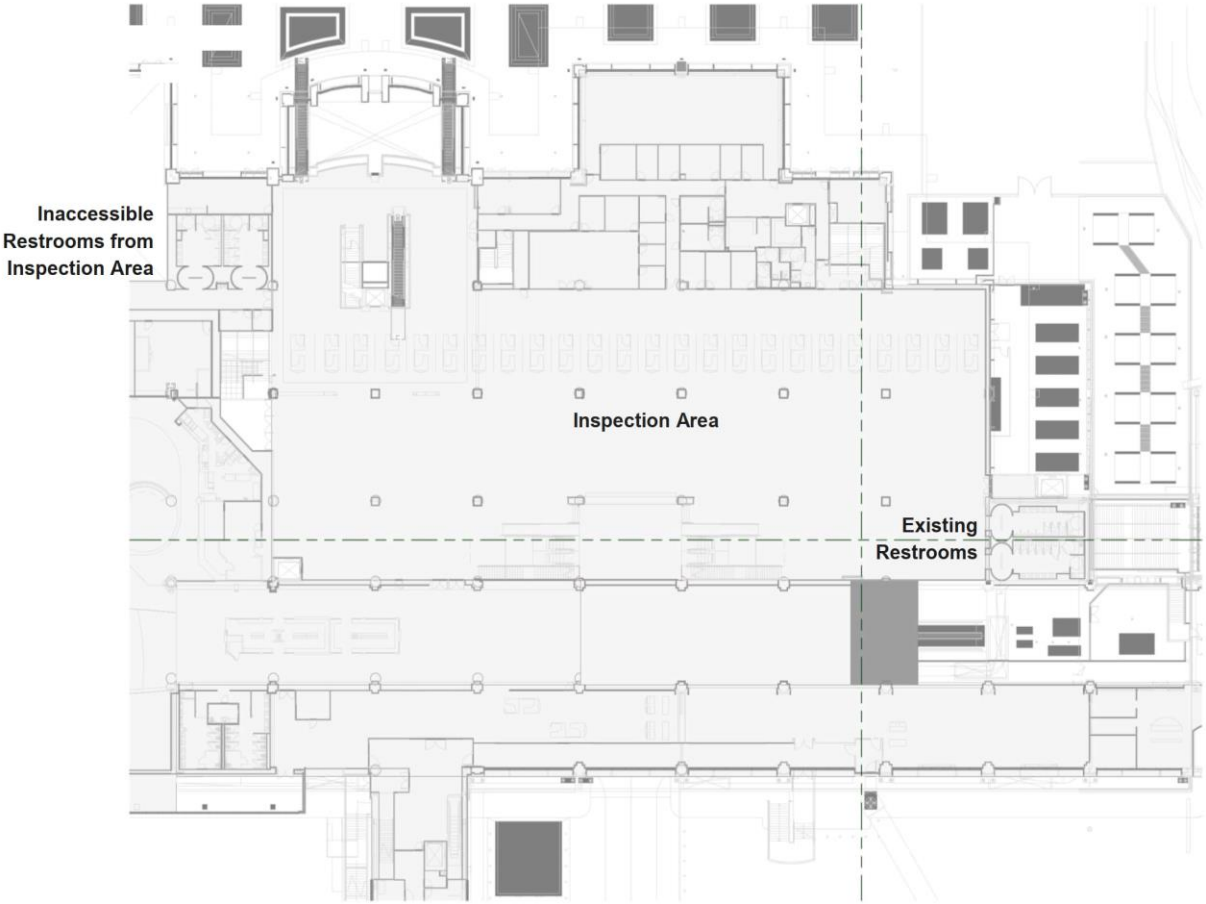



**Figure D-53. Restrooms - Alternative 1 - No Action**

Source: AECOM

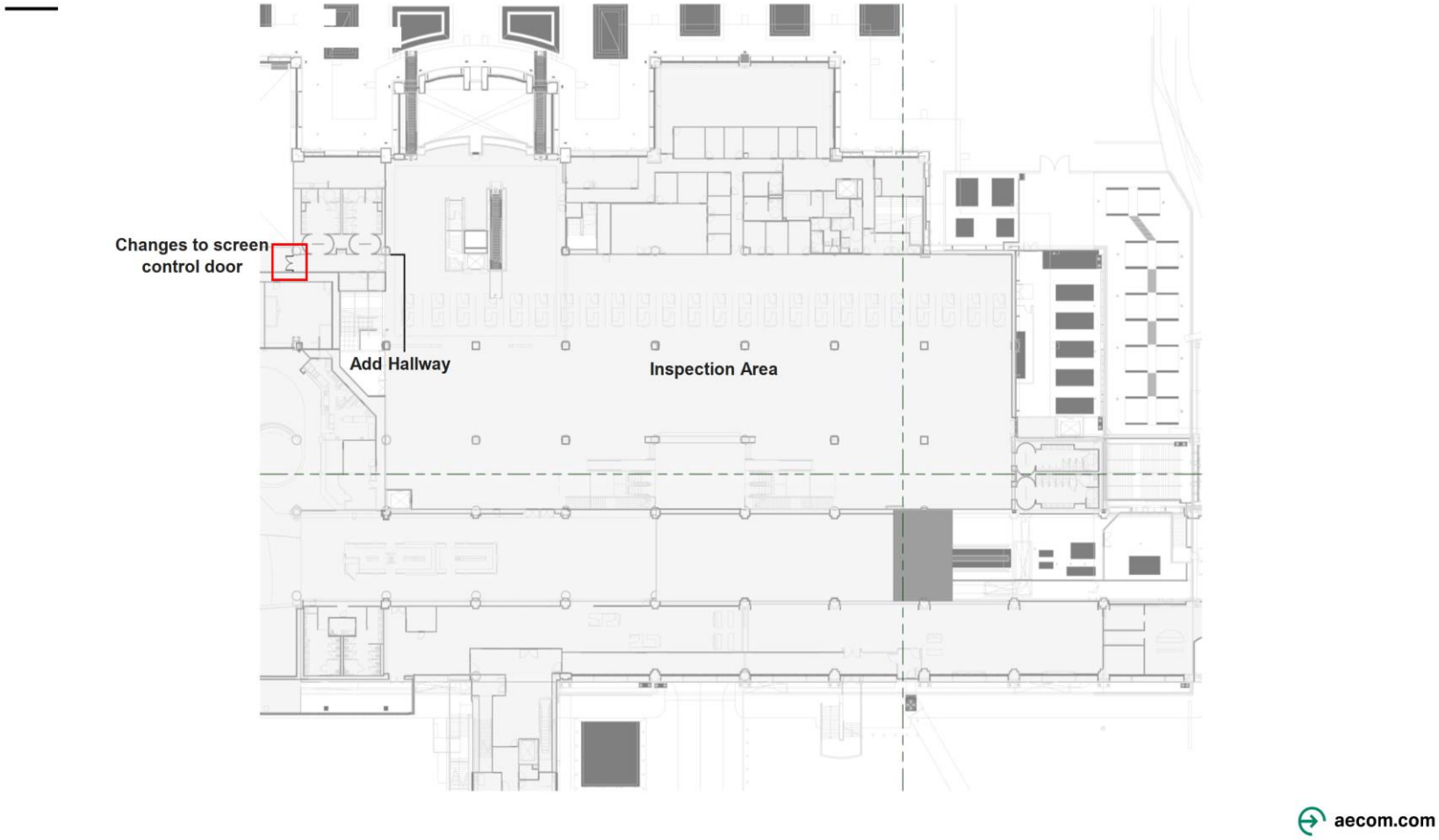
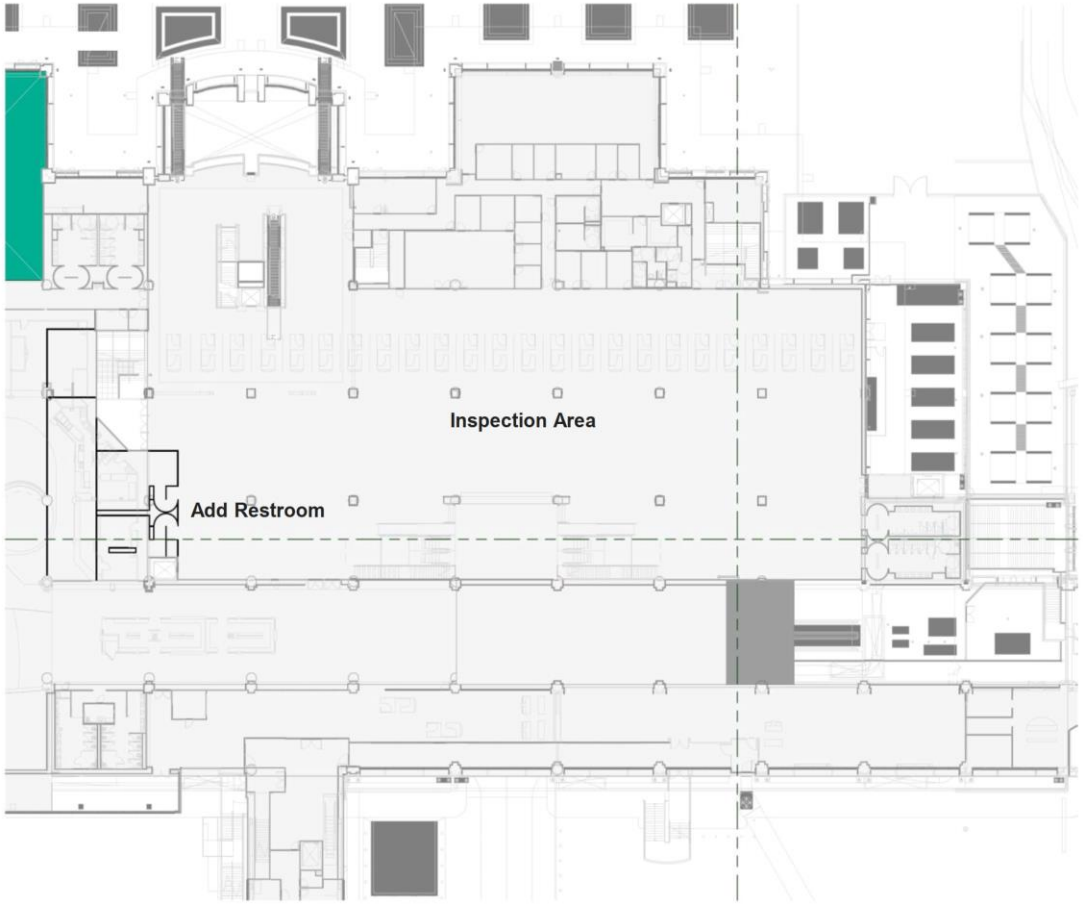



**Figure D-54. Restrooms - Alternative 2 - Immigration Restroom (A)**

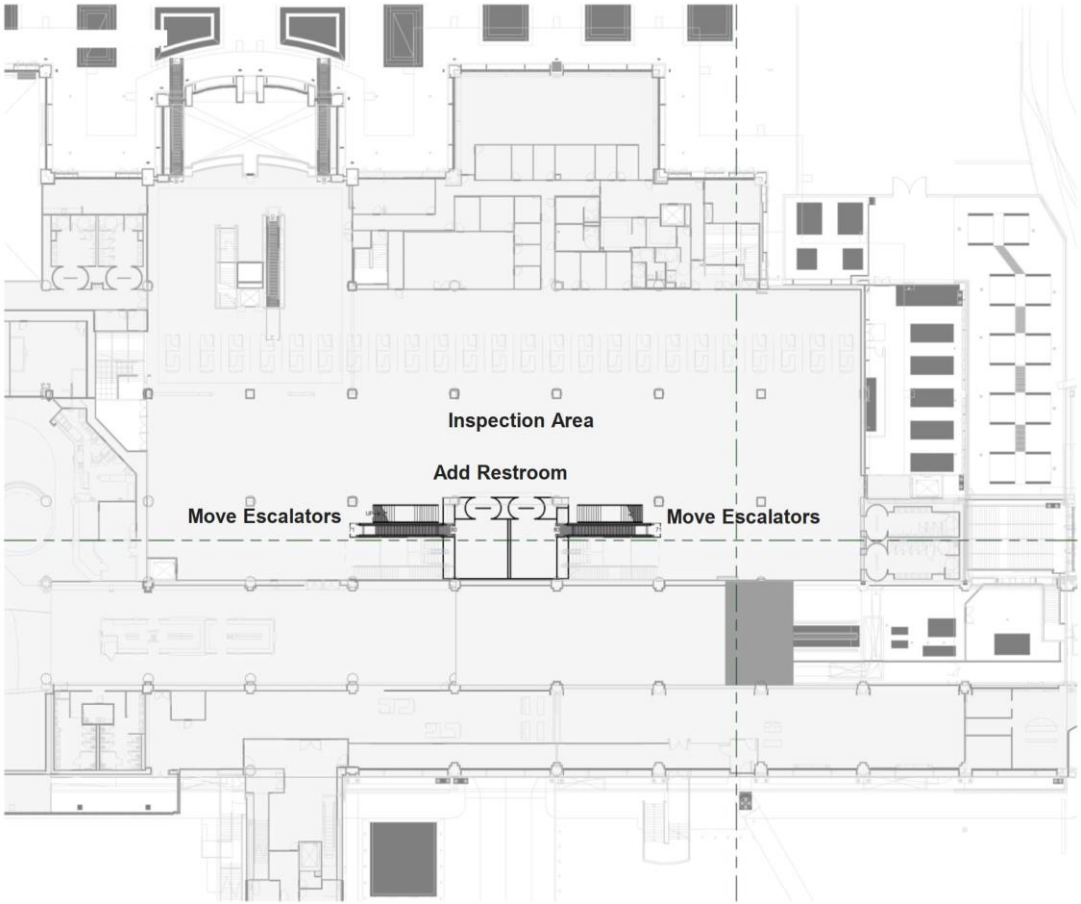
Source: AECOM




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**Figure D-55. Restrooms - Alternative 3 - Immigration Restroom (B)**

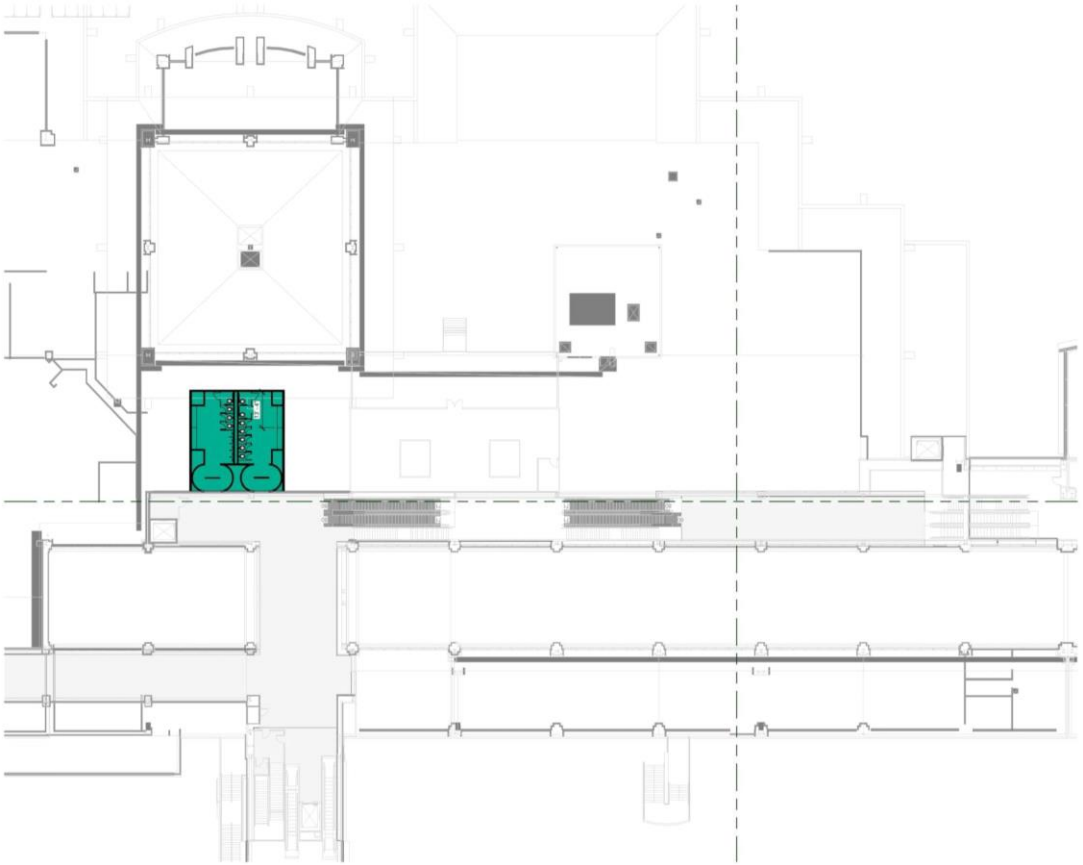
Source: AECOM




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**Figure D-56. Restrooms - Alternative 4 - Central Restroom**

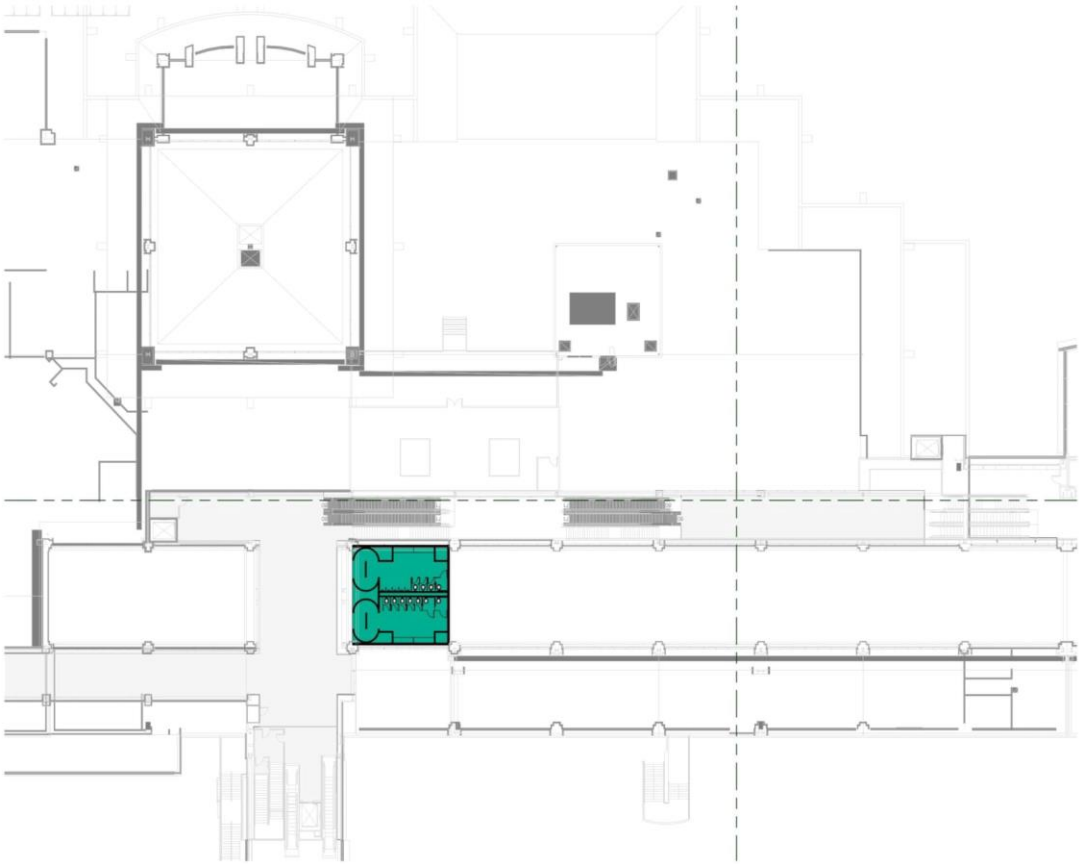
Source: AECOM



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**Figure D-57. Restrooms - Alternative 5 - Sterile Corridor**

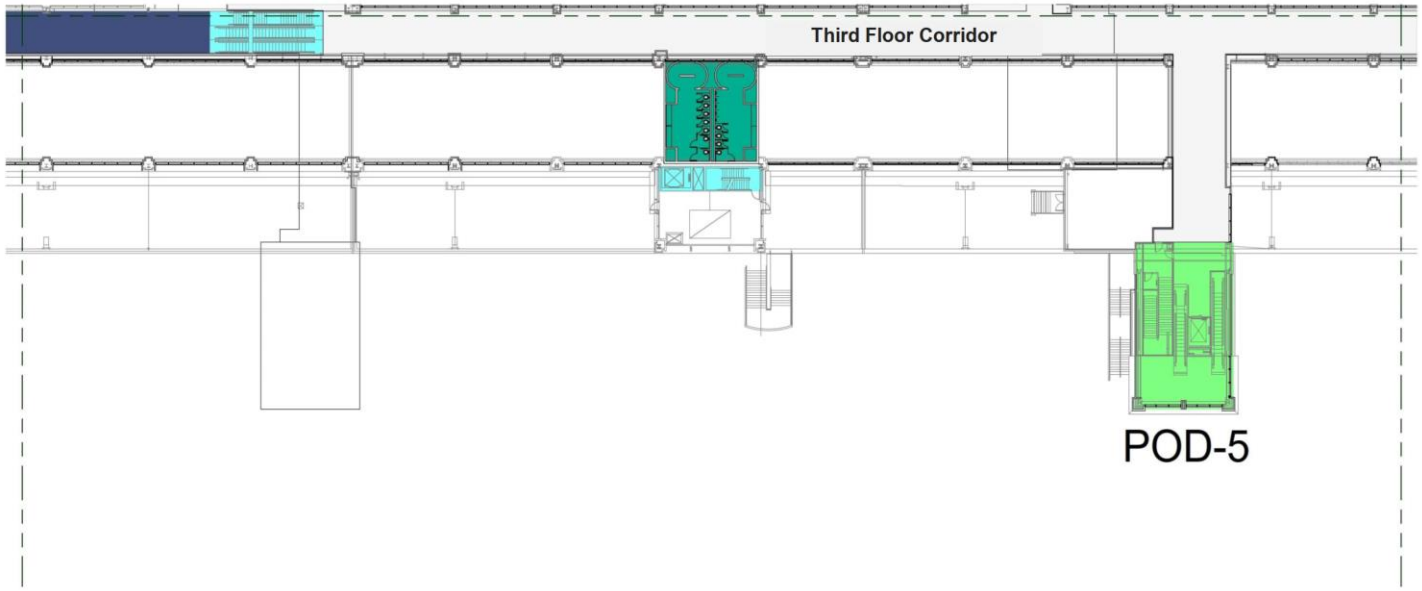
Source: AECOM



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**Figure D-58. Restrooms - Alternative 6 - Restroom Over Concourse**

Source: AECOM




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**Figure D-59. Restrooms - Alternative 7 - High Arrivals Sterile Corridor**

Source: AECOM

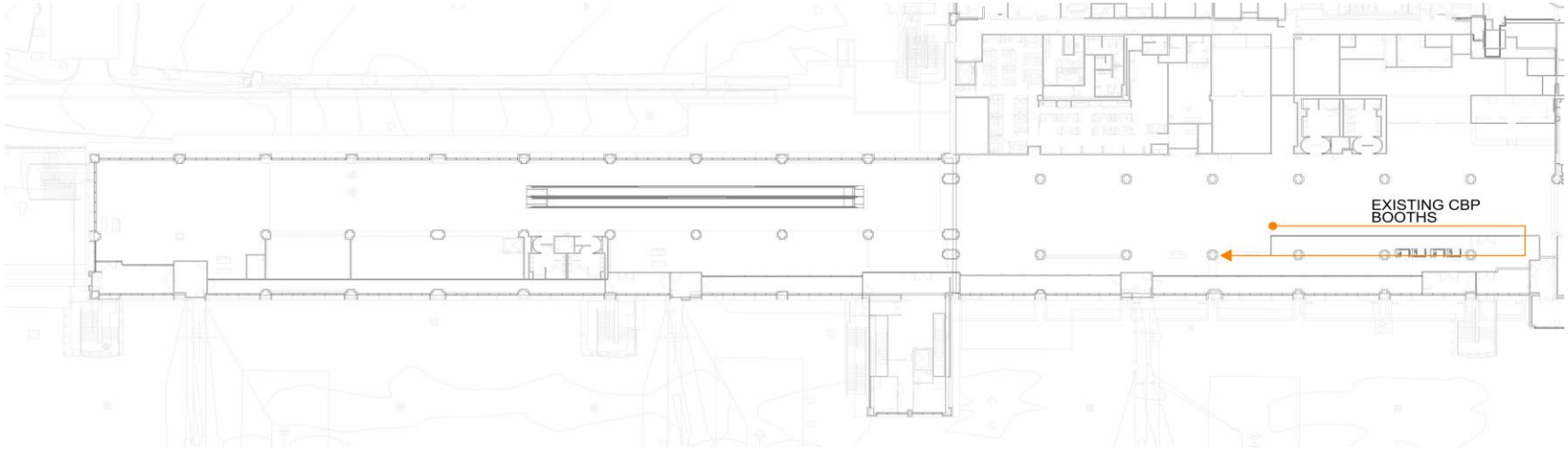



**Figure D-60. CBP - Alternative 1 - No Action**

Source: AECOM

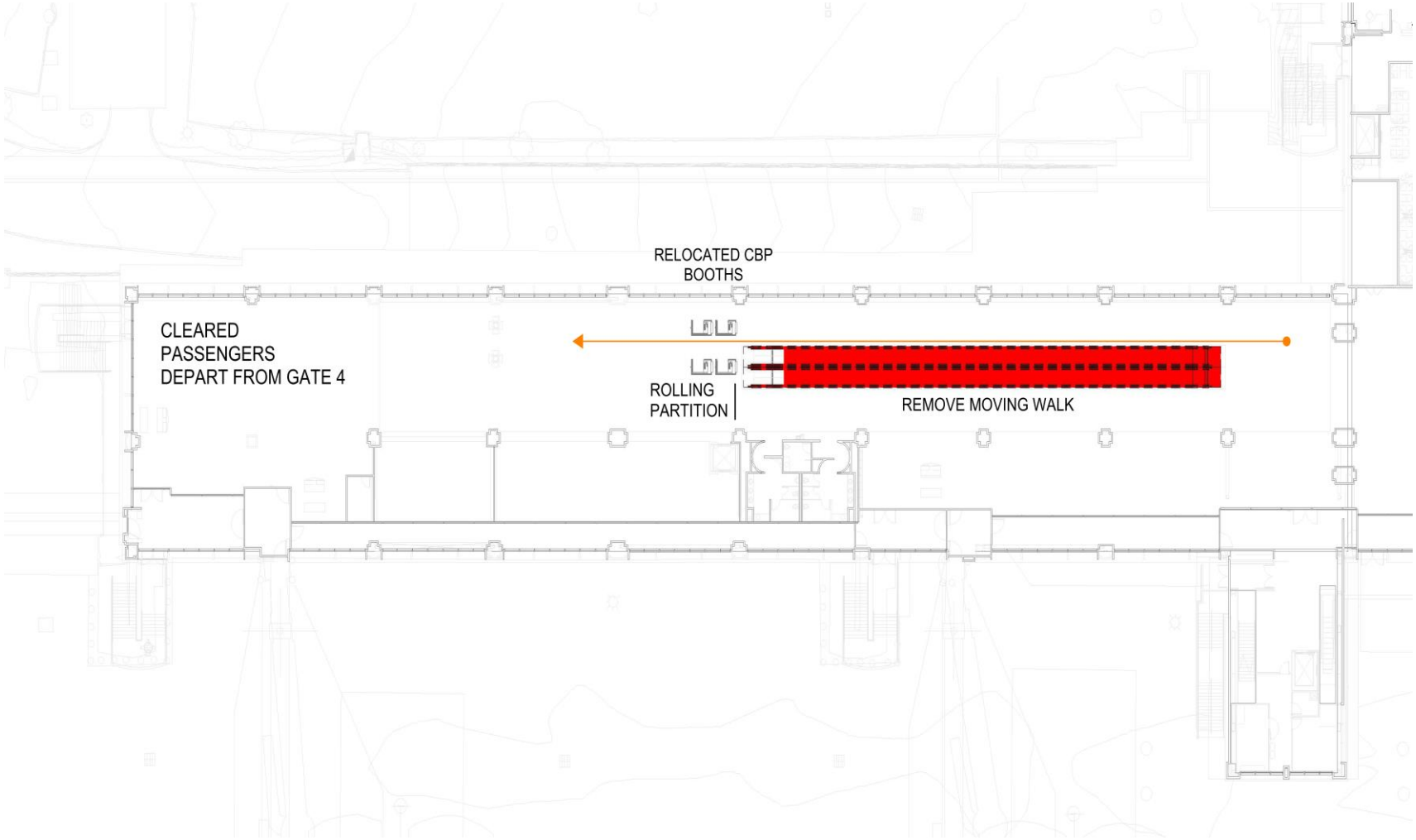



**Figure D-61. CBP - Alternative 2 - Shift to Gates 4 and 5**

Source: AECOM

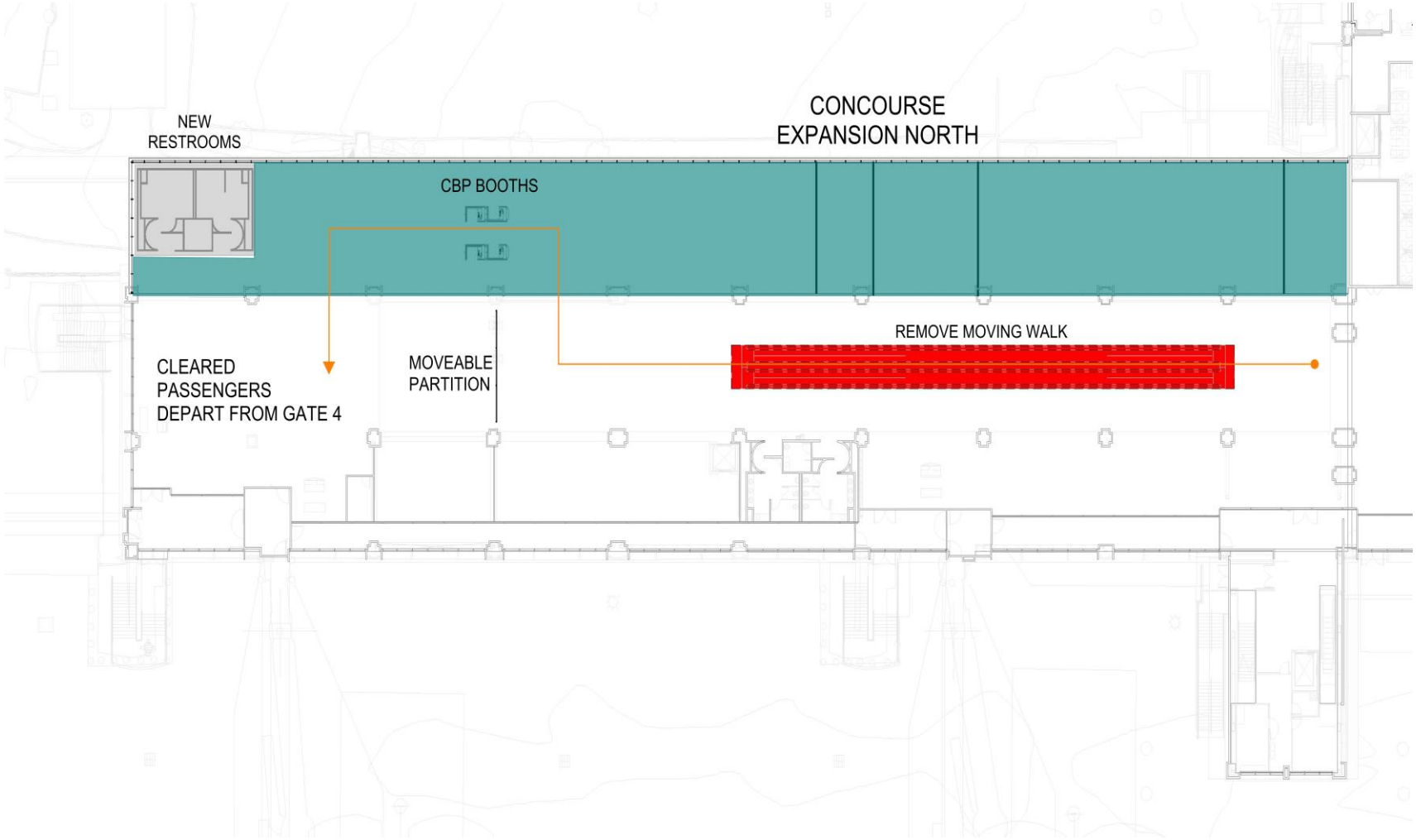



**Figure D-62. CBP - Alternative 3 - Shift to Gates 4 and 5 and West Concourse Expansion**

Source: AECOM

# D.4 Round 2 Commercial Passenger Terminal Alternatives

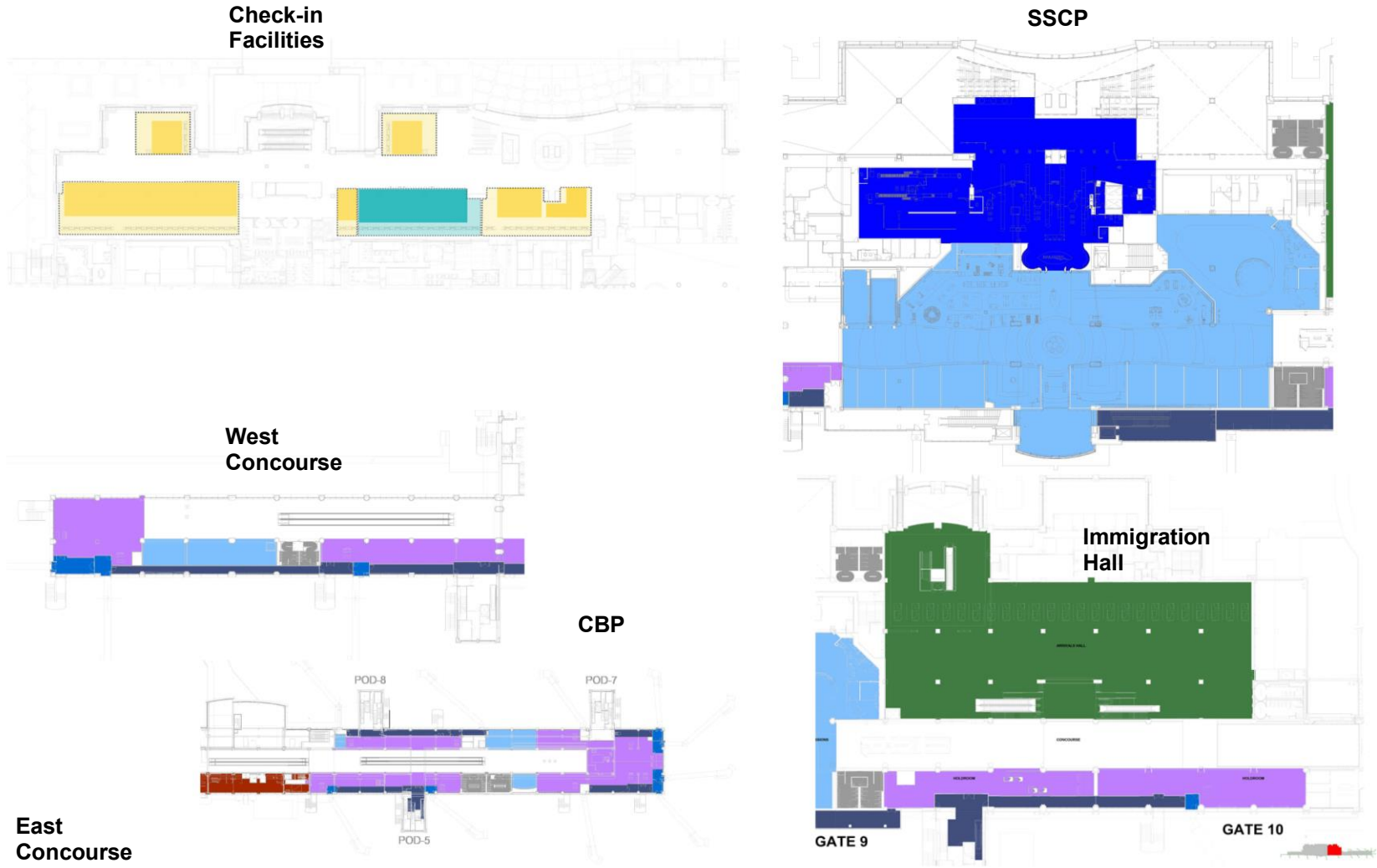



**Figure D-63. Commercial Passenger Terminal - Alternative 1 - No Action**

Source: AECOM

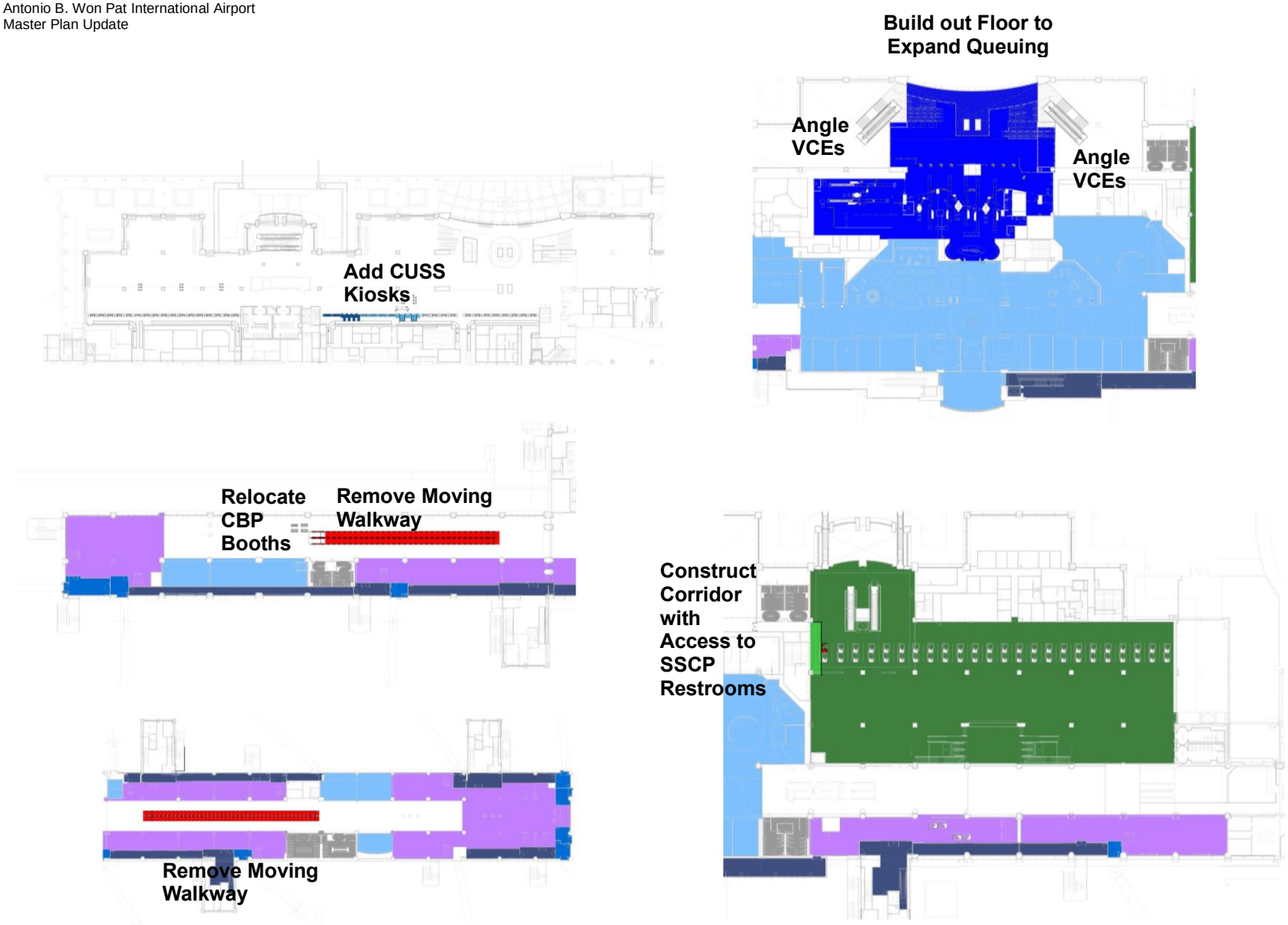



**Figure D-64. Commercial Passenger Terminal - Alternative 2 - Short-Term Improvements**

Source: AECOM

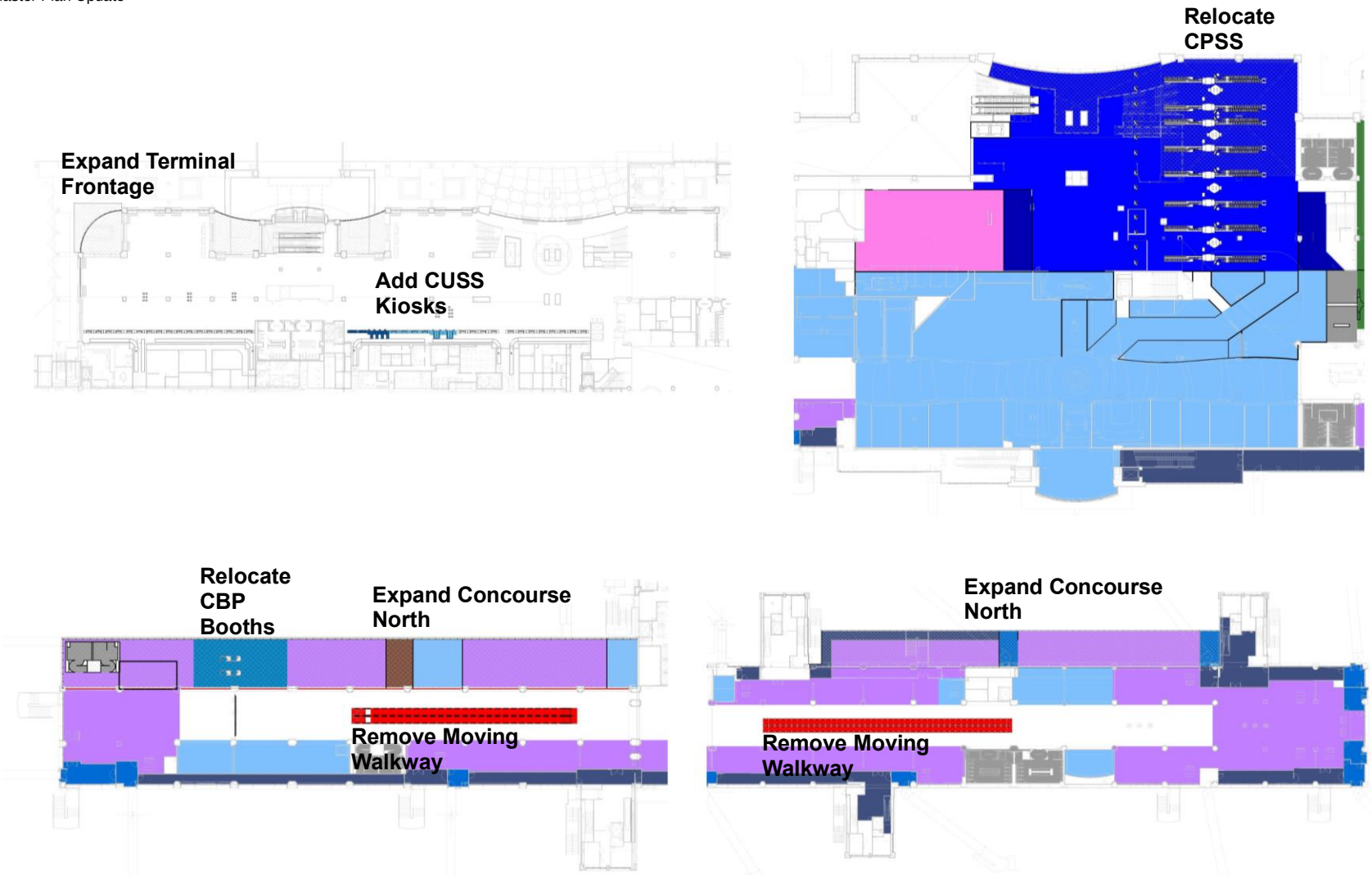



**Figure D-65. Commercial Passenger Terminal - Alternative 3 - Future Proofing (1 of 2)**

Source: AECOM

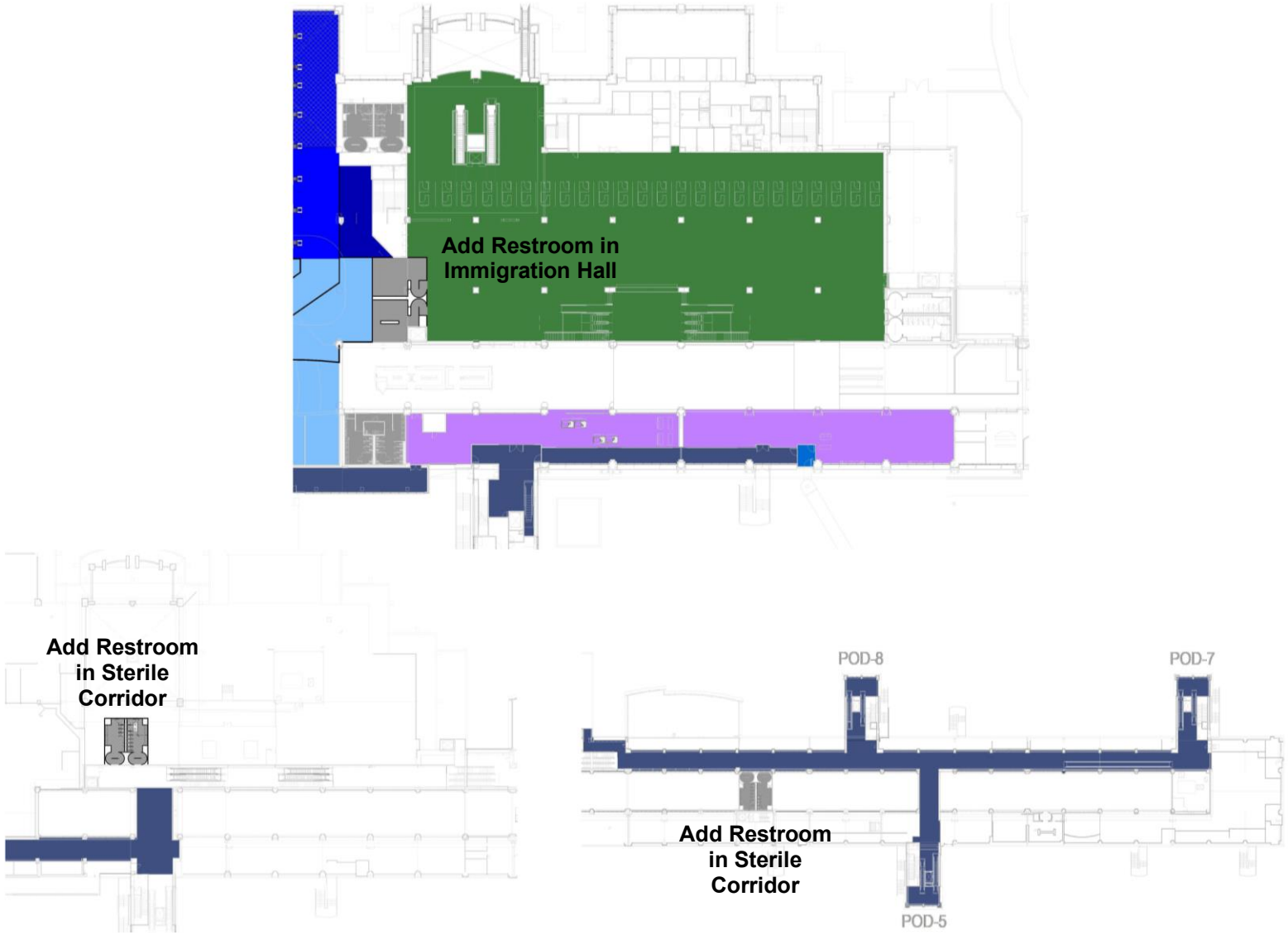



**Figure D-66. Commercial Passenger Terminal - Alternative 3 - Future Proofing (2 of 2)**

Source: AECOM

# D.5 Landside Short-Term Improvements




**Figure D-67. Short-Term Improvement 1 - Add Eastbound Lane**

Source: AECOM

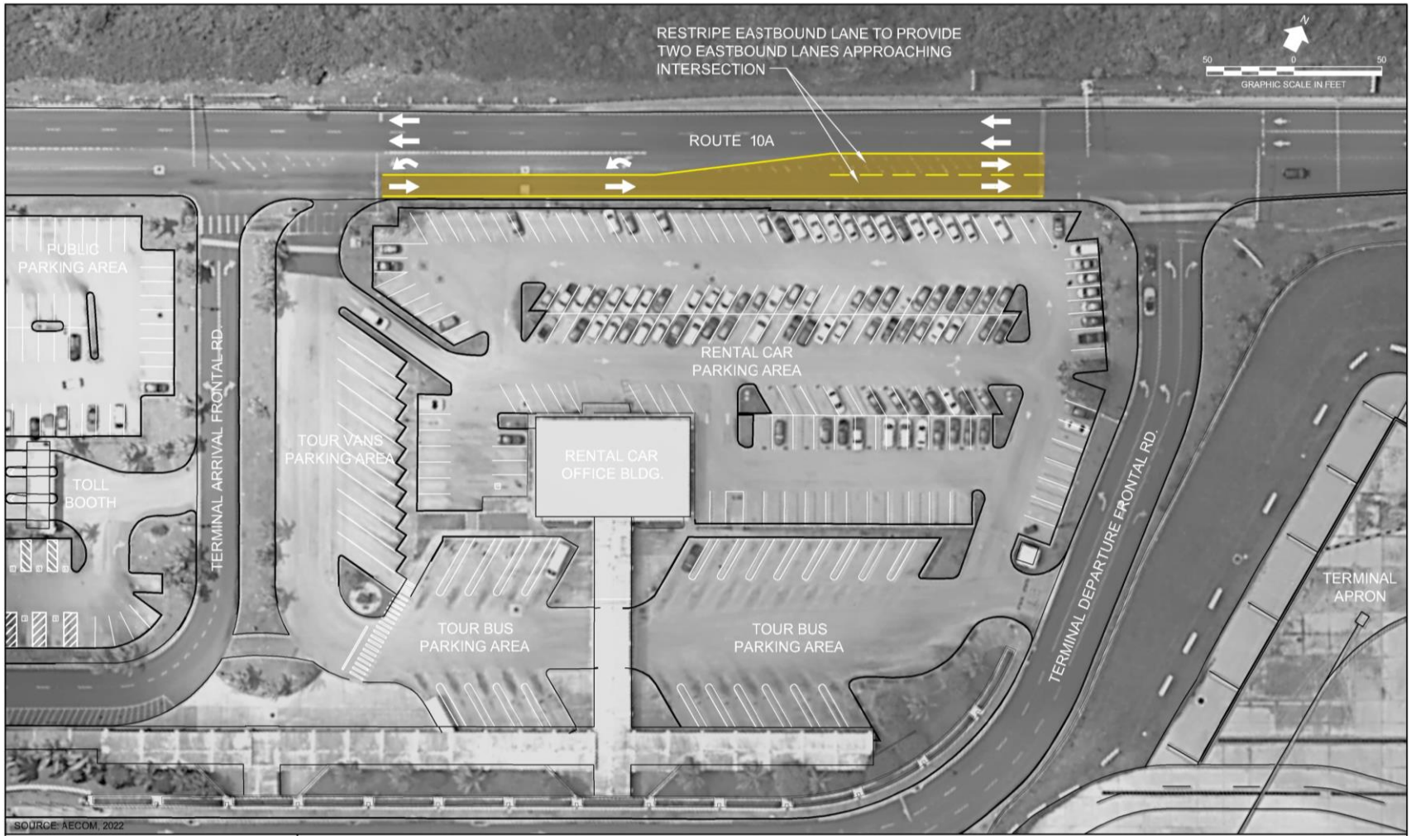



**Figure D-68. Short-Term Improvement 2 - Restripe to Provide Two Eastbound Lanes**

Source: AECOM

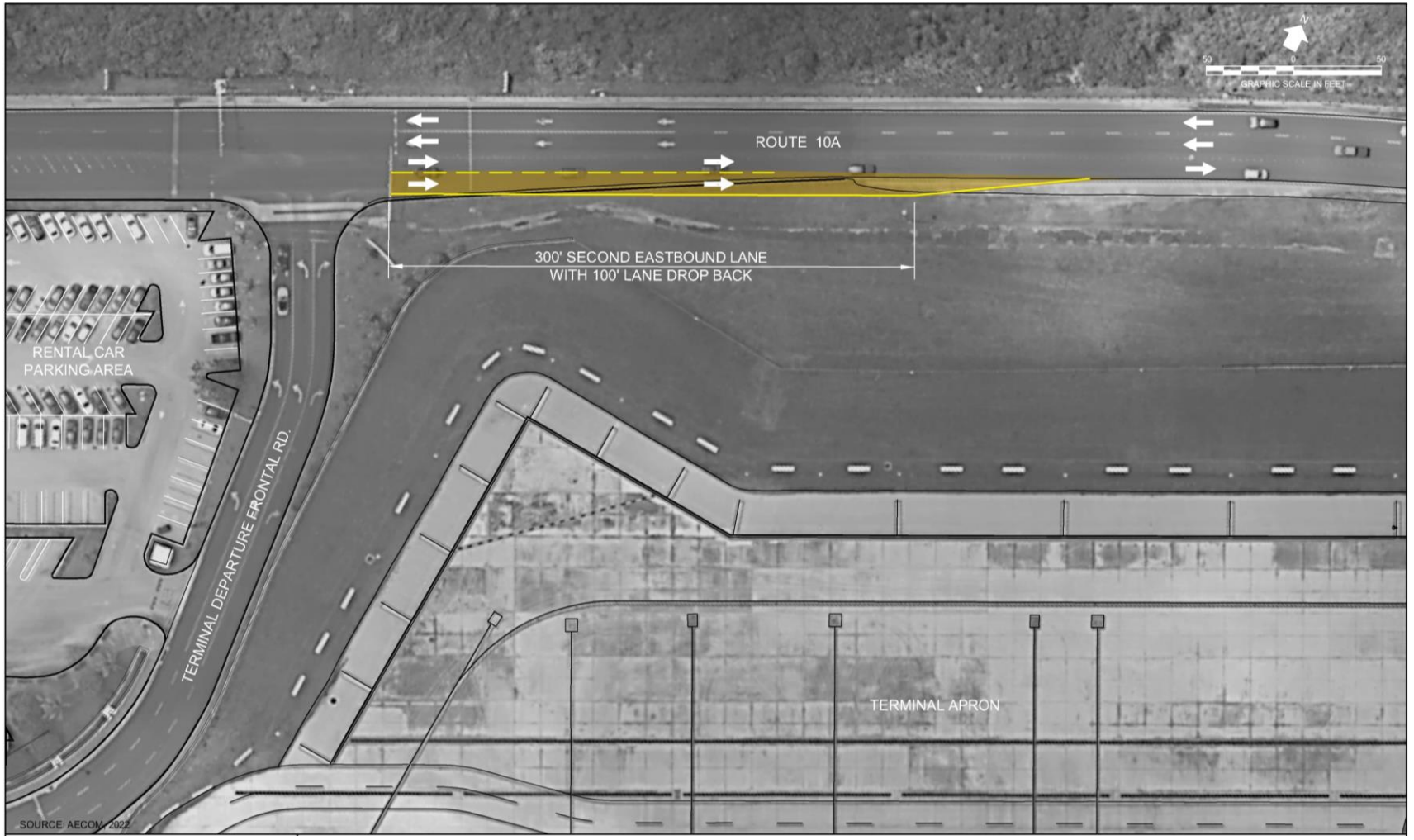



**Figure D-69. Short-Term Improvement 3 - Extend Second Eastbound Lane**

Source: AECOM

# D.6 Round 1 GA, Cargo, and Support Facilities Alternatives




**Figure D-70. GA Terminal - Alternative 1 - No Action**

Source: AECOM




**Figure D-71. GA Terminal - Alternative 2 - West of Nose Dock Hangar**

Source: AECOM




**Figure D-72. GA Terminal - Alternative 3 - East of Nose Dock Hangar**

Source: AECOM




**Figure D-73. GA Terminal - Alternative 4 - Repurpose ARFF Facility**

Source: AECOM




**Figure D-74. GA Bulk Storage Hangar - Alternative 1 - No Action**

Source: AECOM




**Figure D-75. GA Bulk Storage Hangar - Alternative 2 - East of ACI Hangar**

Source: AECOM




**Figure D-76. GA Bulk Storage Hangar - Alternative 3 - East of ARFF**

Source: AECOM

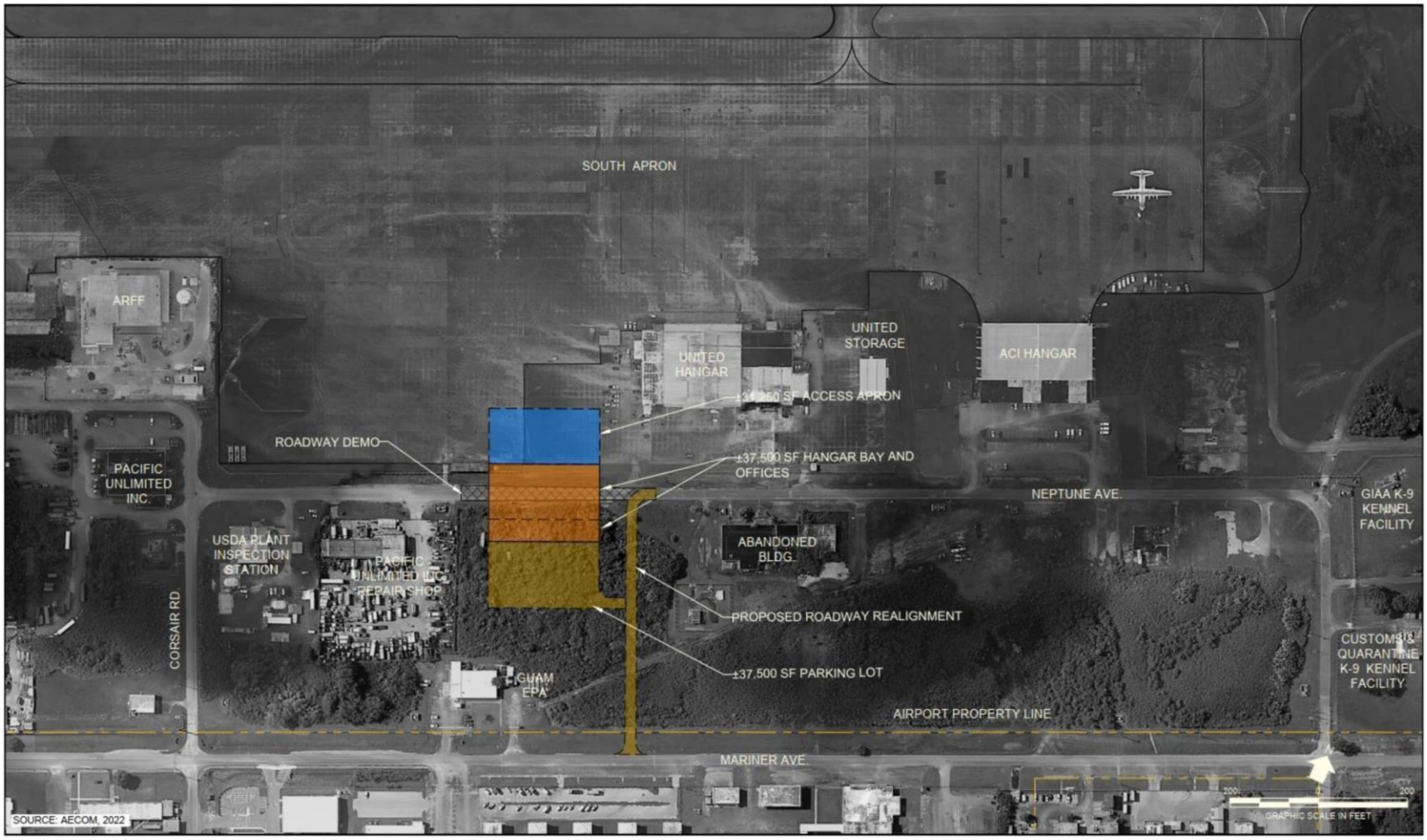



**Figure D-77. GA Bulk Storage Hangar - Alternative 4 - West of United Hangar**

Source: AECOM




**Figure D-78. Light Aircraft Commuter Terminal - Alternative**

Source: AECOM




**Figure D-79. Light Aircraft Commuter Terminal - Alternative 2 - Replace in Place**

Source: AECOM

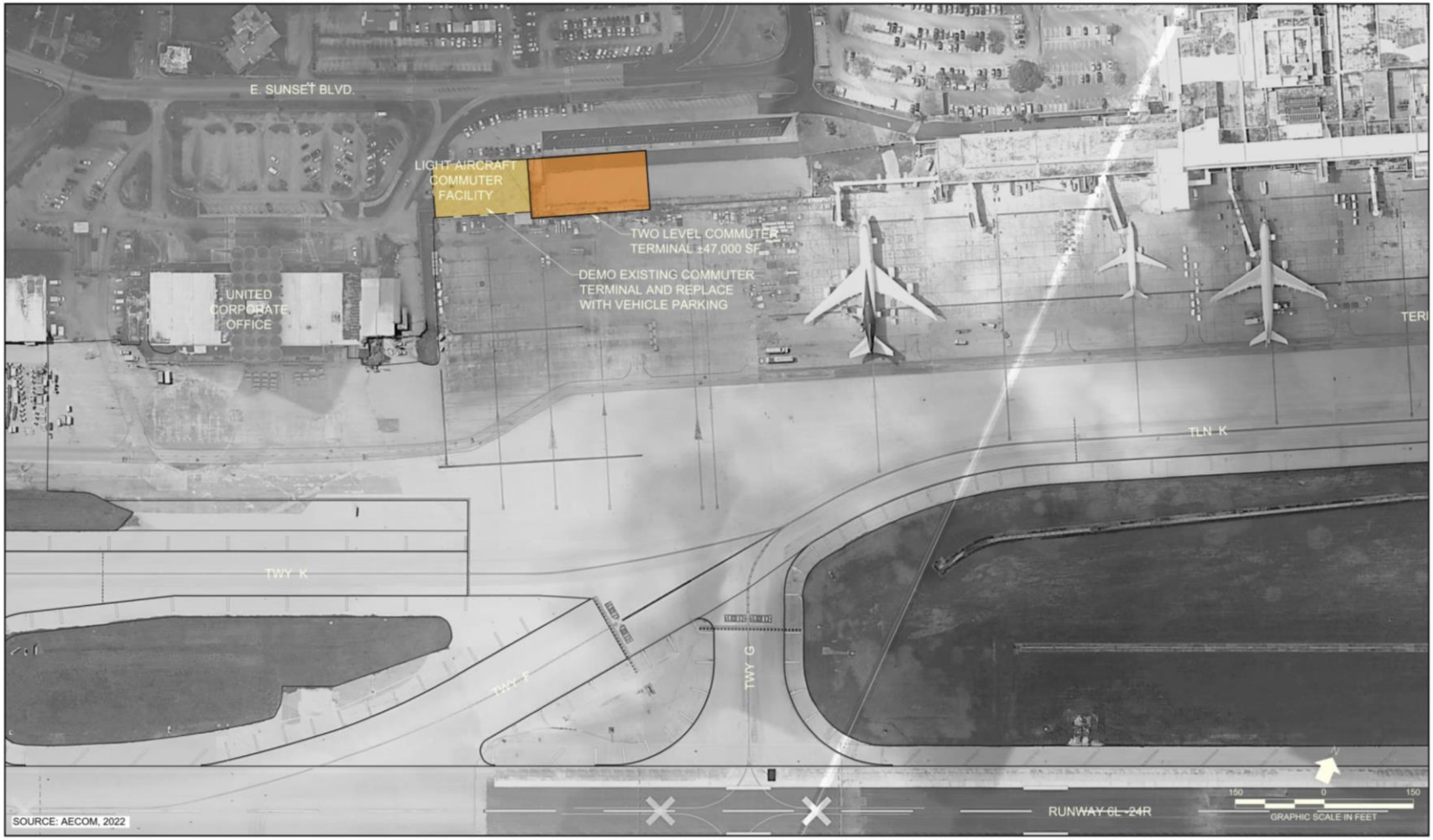



**Figure D-80. Light Aircraft Commuter Terminal - Alternative 3 - New Facility East of Existing and Demolish Existing Facility**

Source: AECOM

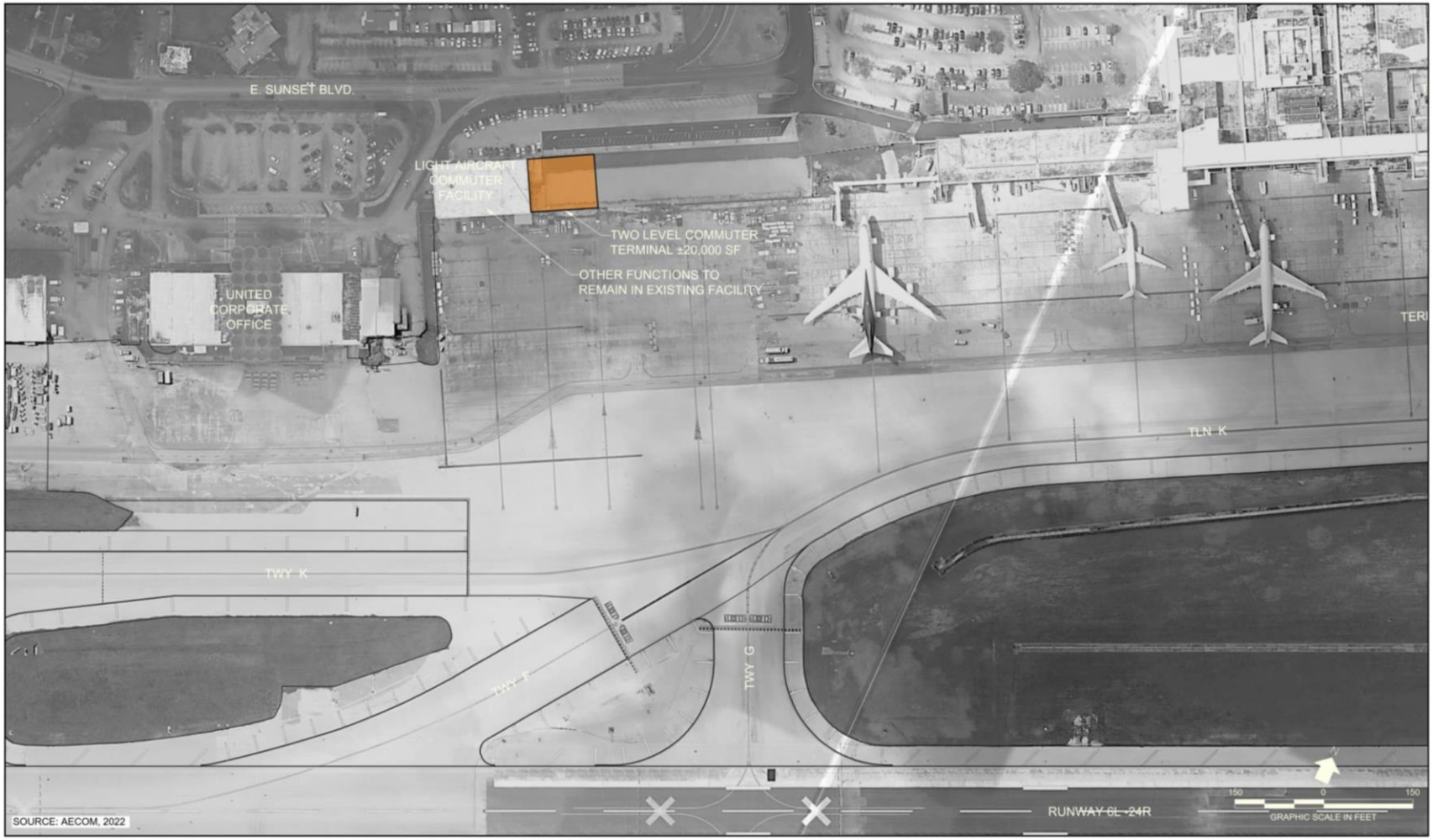



**Figure D-81. Light Aircraft Commuter Terminal - Alternative 4 - New Facility East of Existing Facility and Existing Facility to Remain**

Source: AECOM

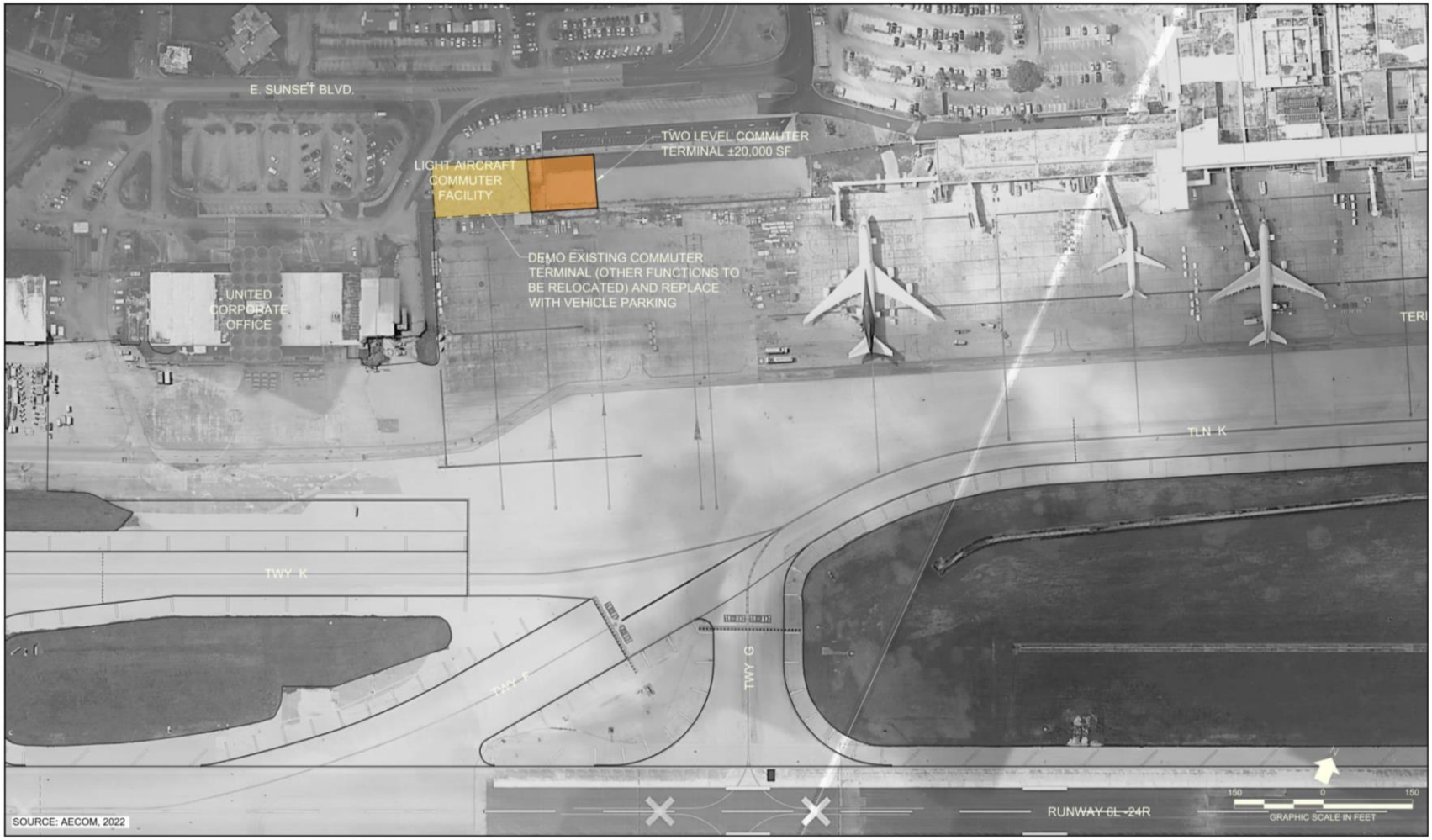



**Figure D-82. Light Aircraft Commuter Terminal - Alternative 5 - New Facility East of Existing, Relocate Tenants, and Demolish Existing Facility**

Source: AECOM




**Figure D-83. Light Aircraft Commuter Terminal - Alternative 6 - New Facility on South Apron**

Source: AECOM

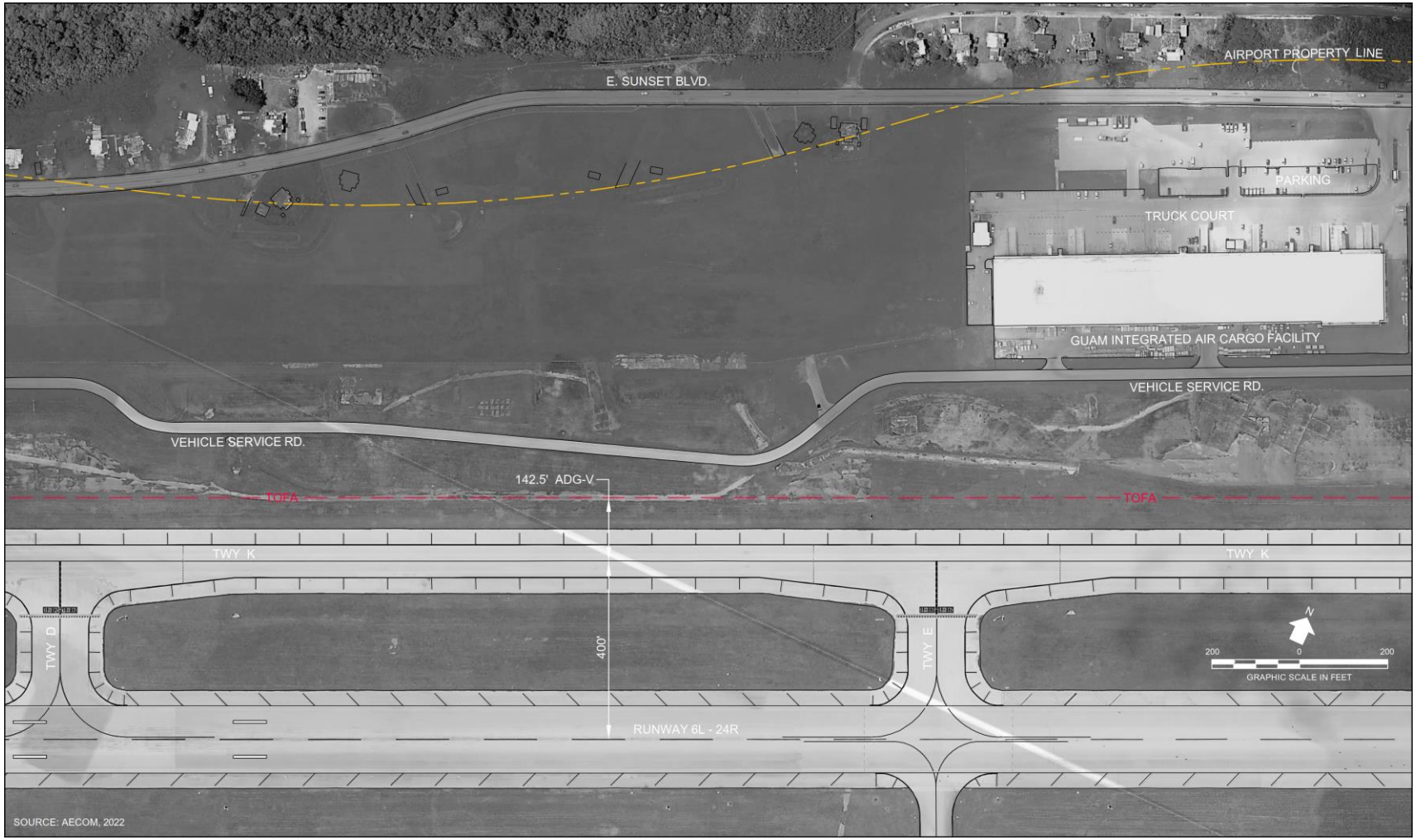



**Figure D-84. Air Cargo - Alternative 1 - No Action**

Source: AECOM

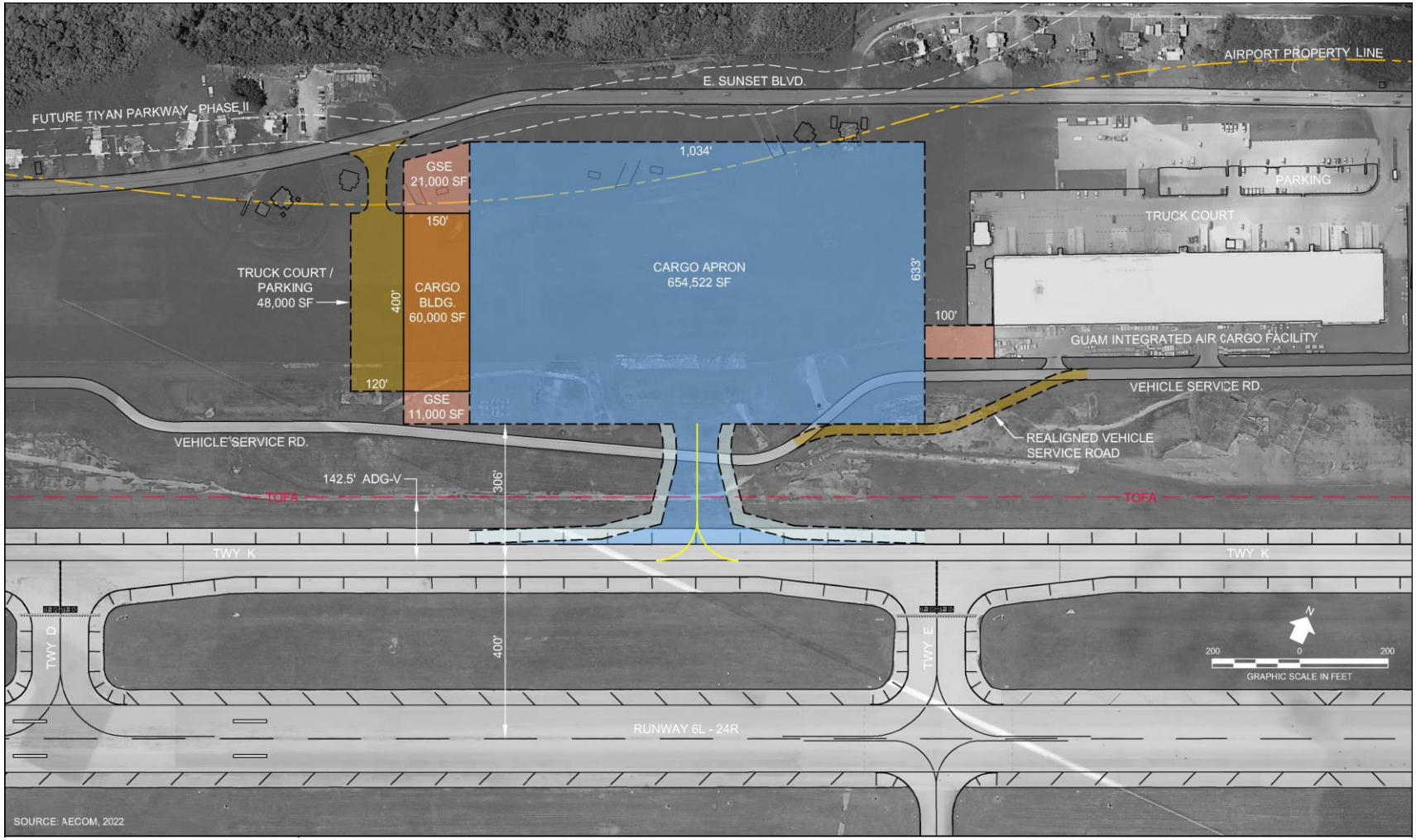



**Figure D-85. Air Cargo - Alternative 2 - North Cargo West with West Parking**

Source: AECOM

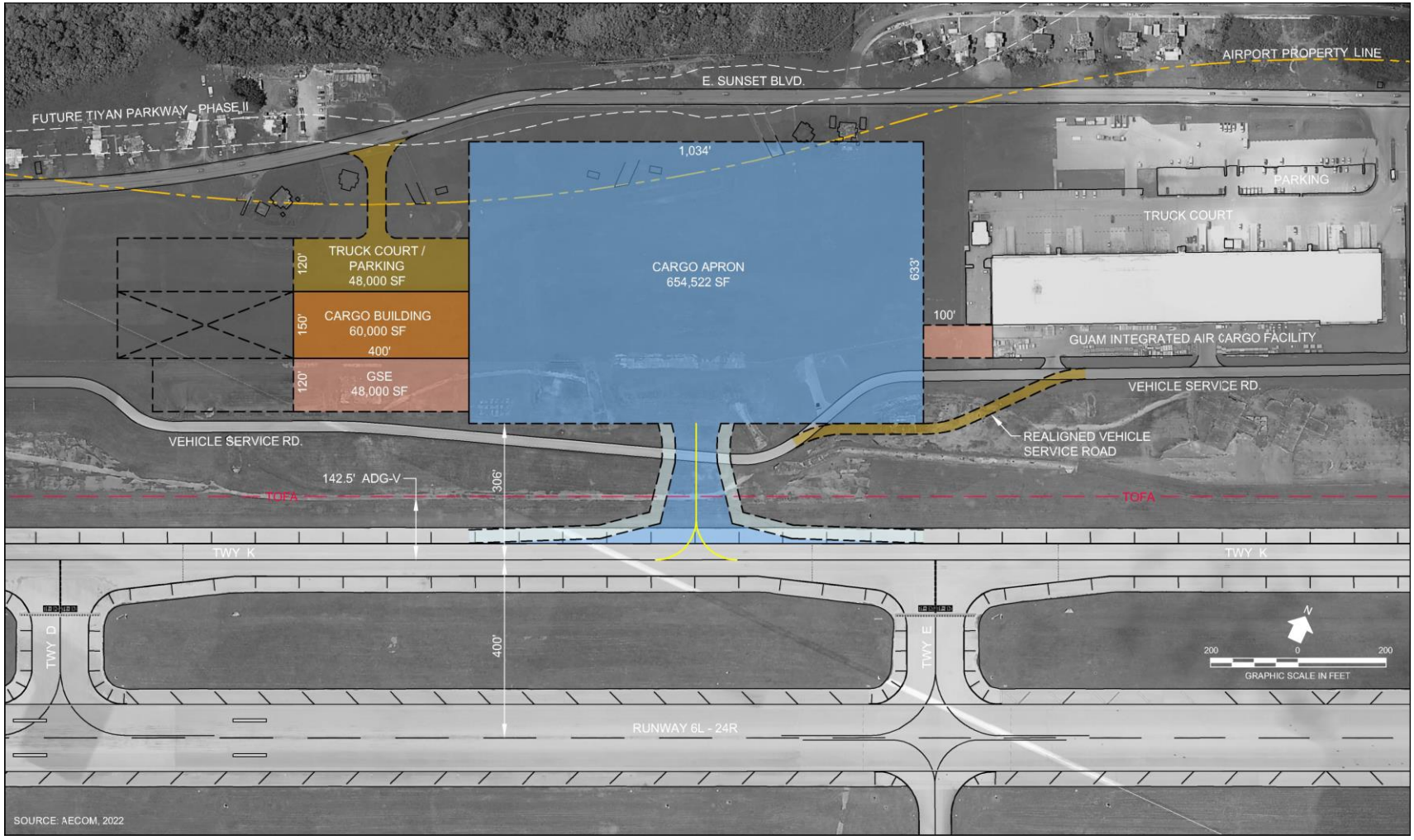



**Figure D-86. Air Cargo - Alternative 3 - North Cargo West with North Parking**

Source: AECOM

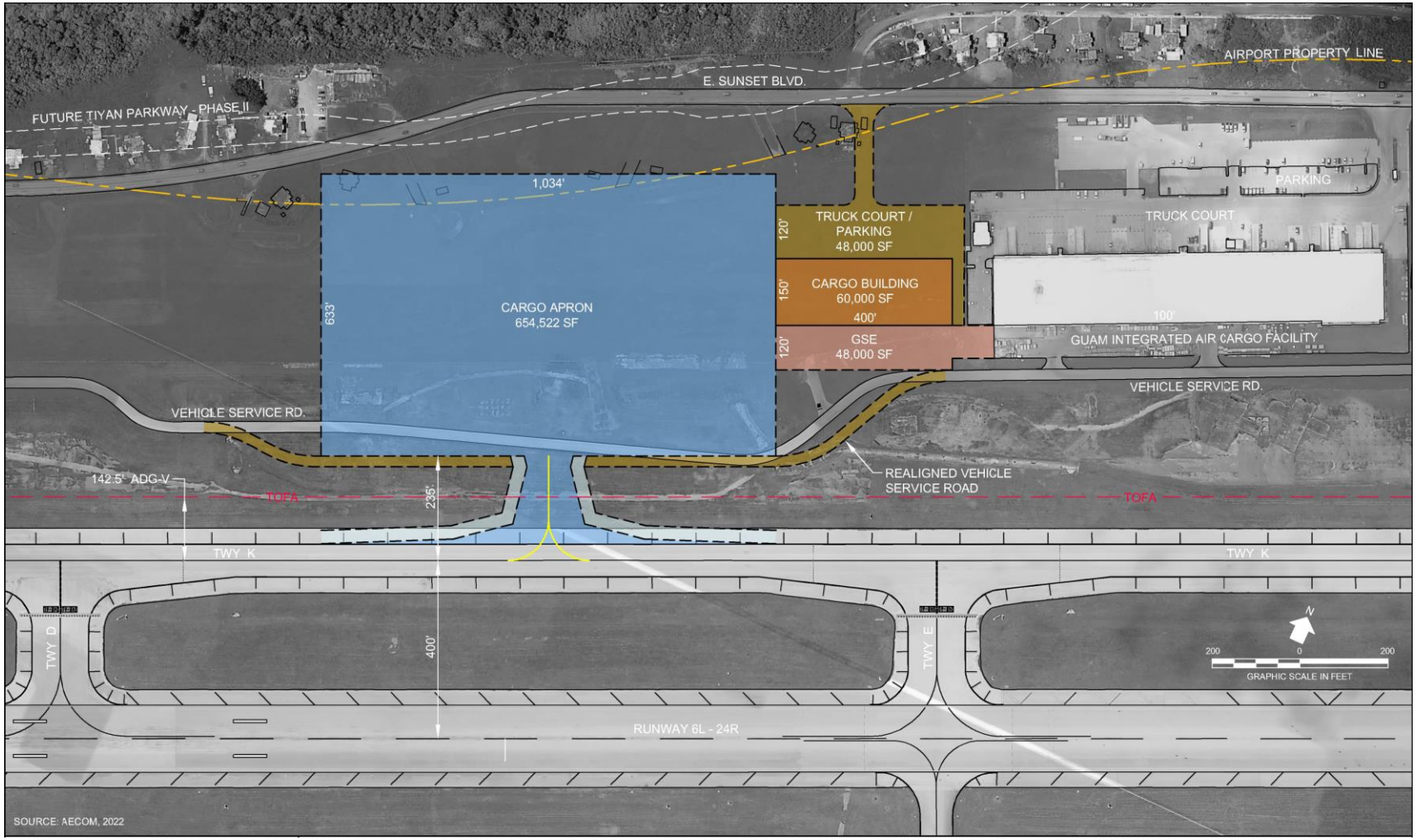



**Figure D-87. Air Cargo - Alternative 4 - North Cargo East with North Parking**

Source: AECOM

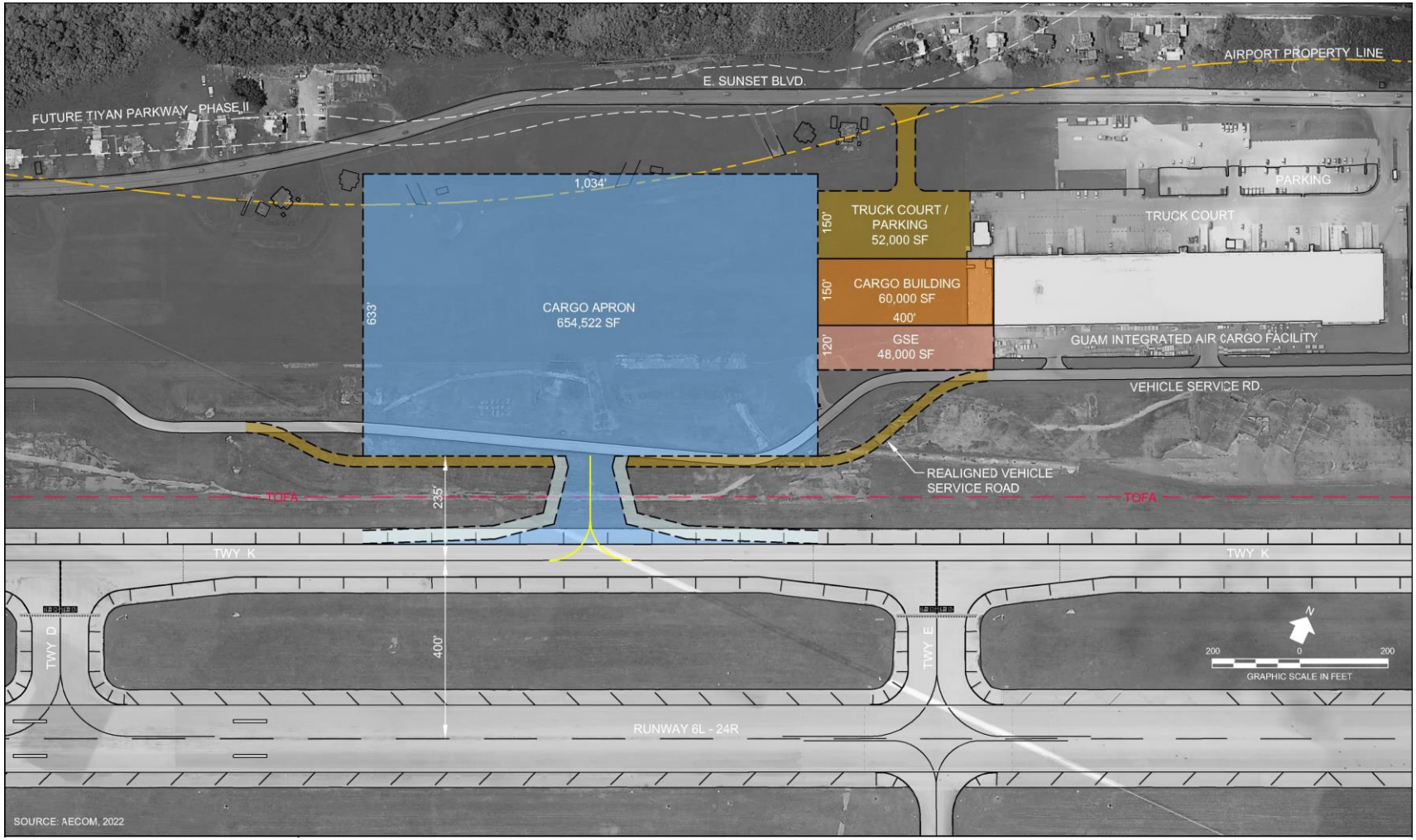



**Figure D-88. Air Cargo - Alternative 5 - North Cargo Shifted East with North Cargo**

Source: AECOM

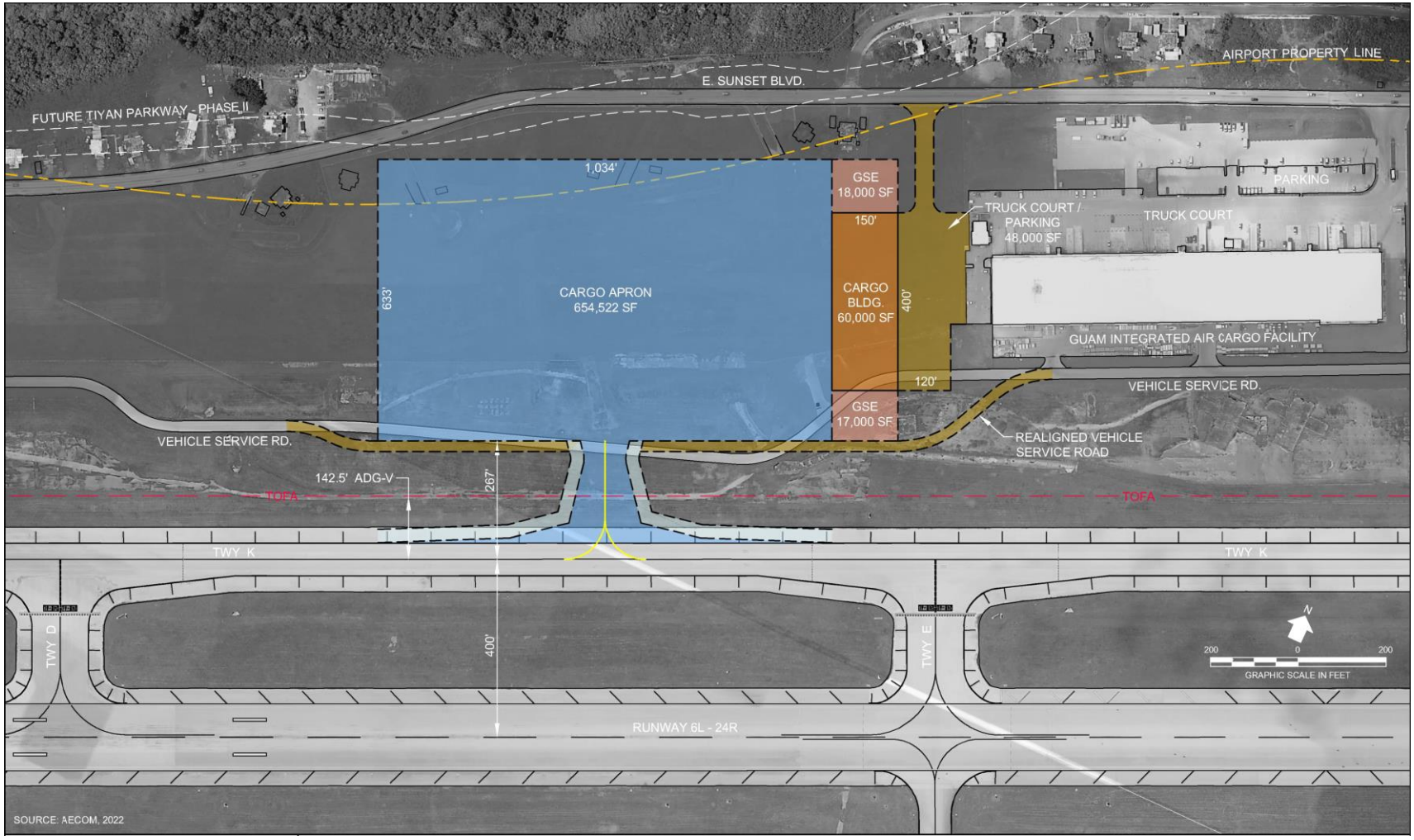



**Figure D-89. Air Cargo - Alternative 6 - North Cargo East with East Parking**

Source: AECOM




**Figure D-90. Air Cargo - Alternative 7 - South Cargo Apron Center**

Source: AECOM




**Figure D-91. Air Cargo - Alternative 8 - South Cargo West**

Source: AECOM




**Figure D-92. Air Cargo - Alternative 9 - South Cargo East**

Source: AECOM

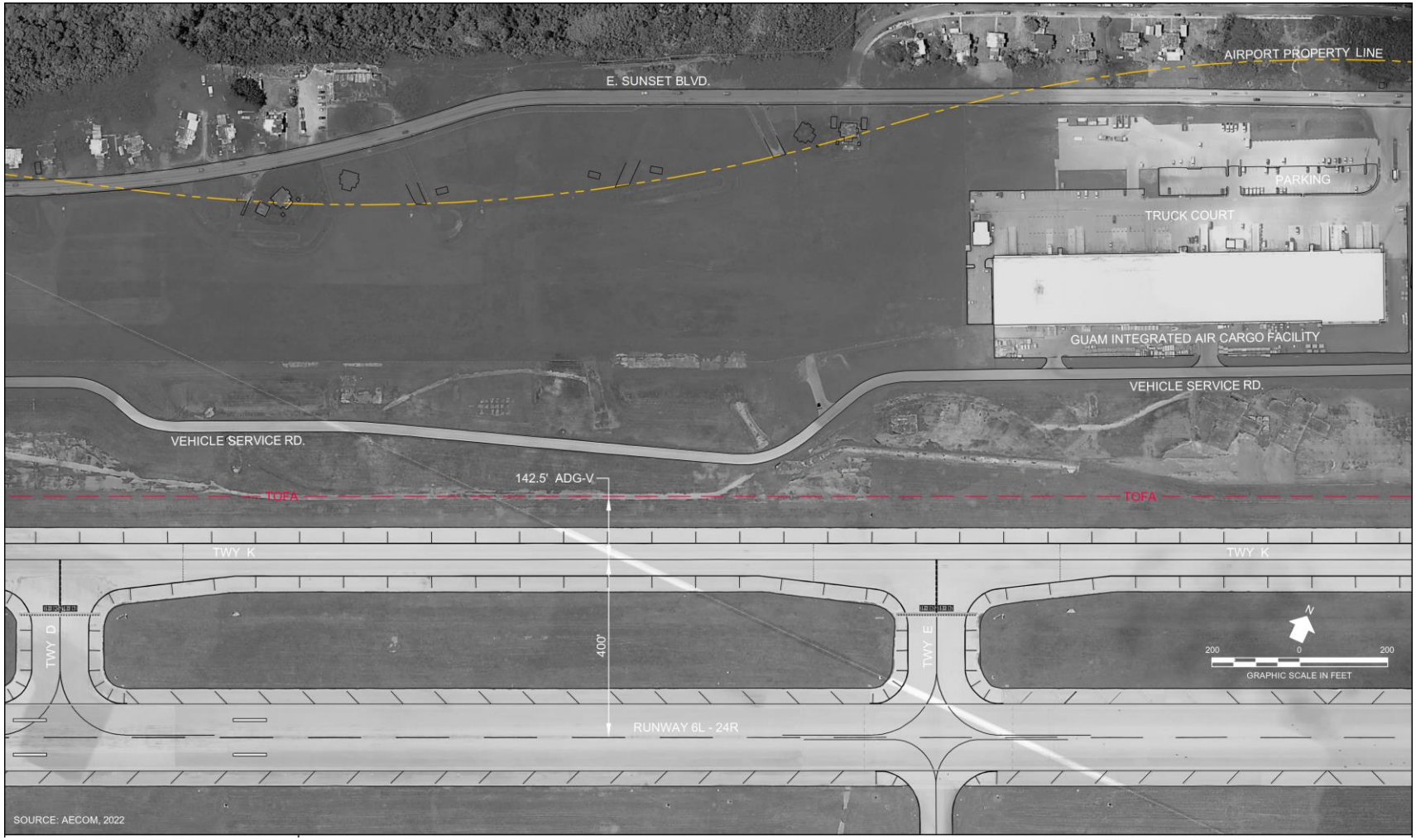



**Figure D-93. Aircraft Maintenance - Alternative 1 - No Action**

Source: AECOM

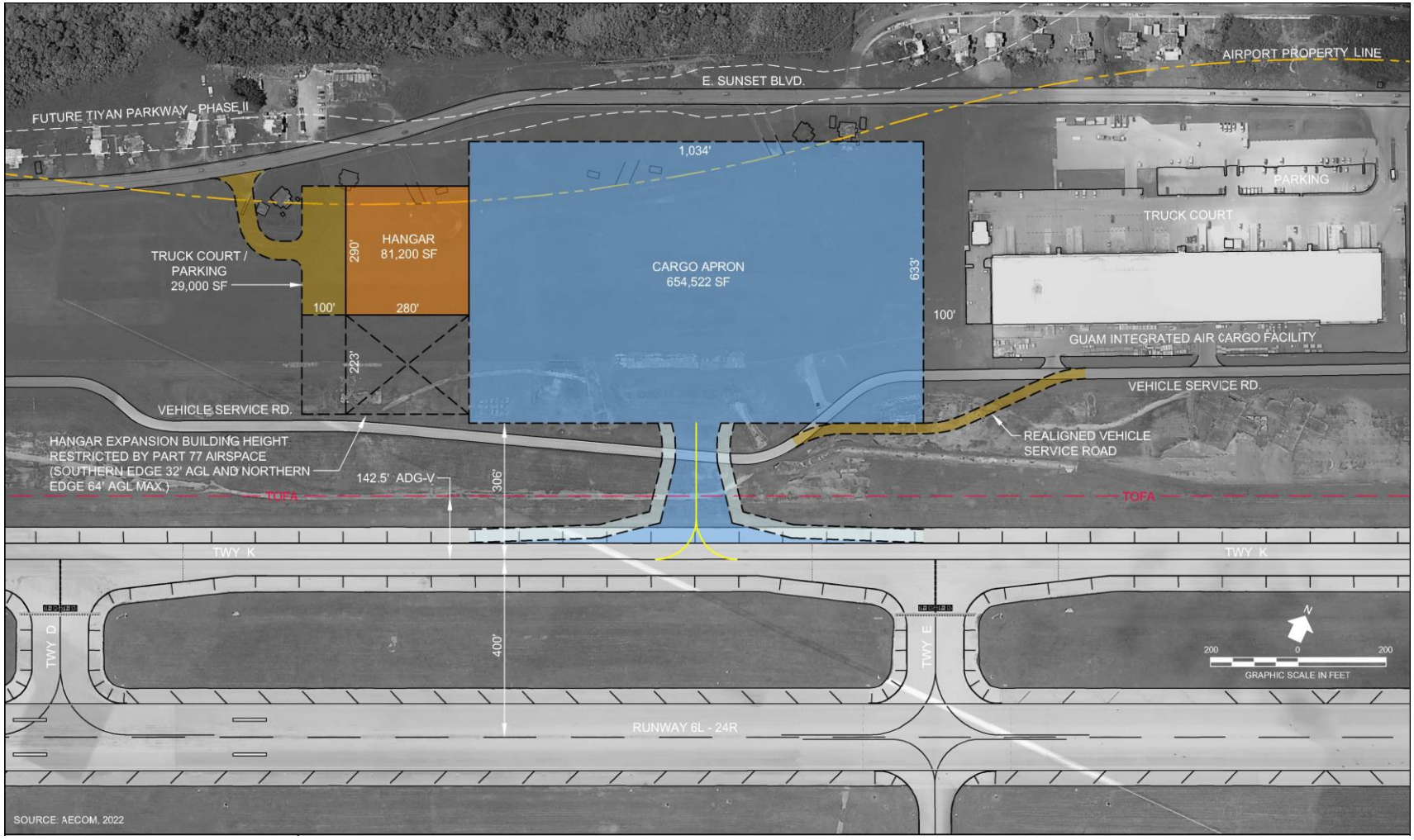



**Figure D-94. Aircraft Maintenance - Alternative 2 - North Maintenance Hangar**

Source: AECOM

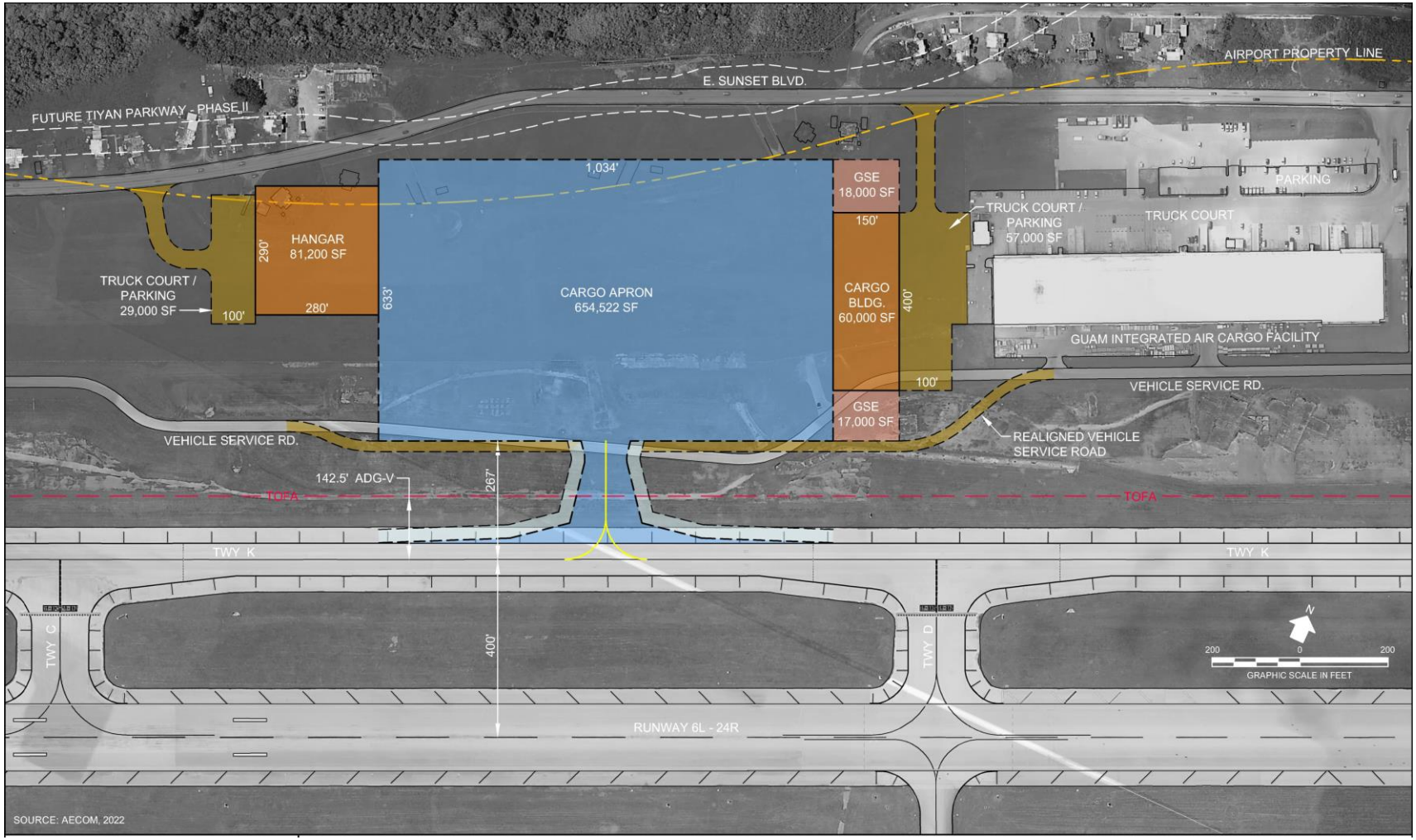



**Figure D-95. Aircraft Maintenance - Alternative 3 - North Maintenance Hangar with Cargo**

Source: AECOM




**Figure D-96. Aircraft Maintenance - Alternative 4 - South Maintenance Hangar West**

Source: AECOM




**Figure D-97. Aircraft Maintenance - Alternative 5 - South Maintenance Hangar Center - Near United Hangar**

Source: AECOM




**Figure D-98. Aircraft Maintenance - Alternative 6 - South Maintenance Hangar Center - Near ARFF**

Source: AECOM




**Figure D-99. Aircraft Maintenance - Alternative 7 - South Maintenance Hangar East**

Source: AECOM




**Figure D-100. Aircraft Maintenance - Alternative 8 - South Maintenance Hangar Far East**

Source: AECOM




**Figure D-101. Aircraft Maintenance - Alternative 9 - South Maintenance Hangar Southeast**

Source: AECOM




**Figure D-102. Aircraft Fuel - Alternative 1 - No Action**

Source: AECOM




**Figure D-103. Aircraft Fuel - Alternative 2 - Jet A Tank South**

Source: AECOM

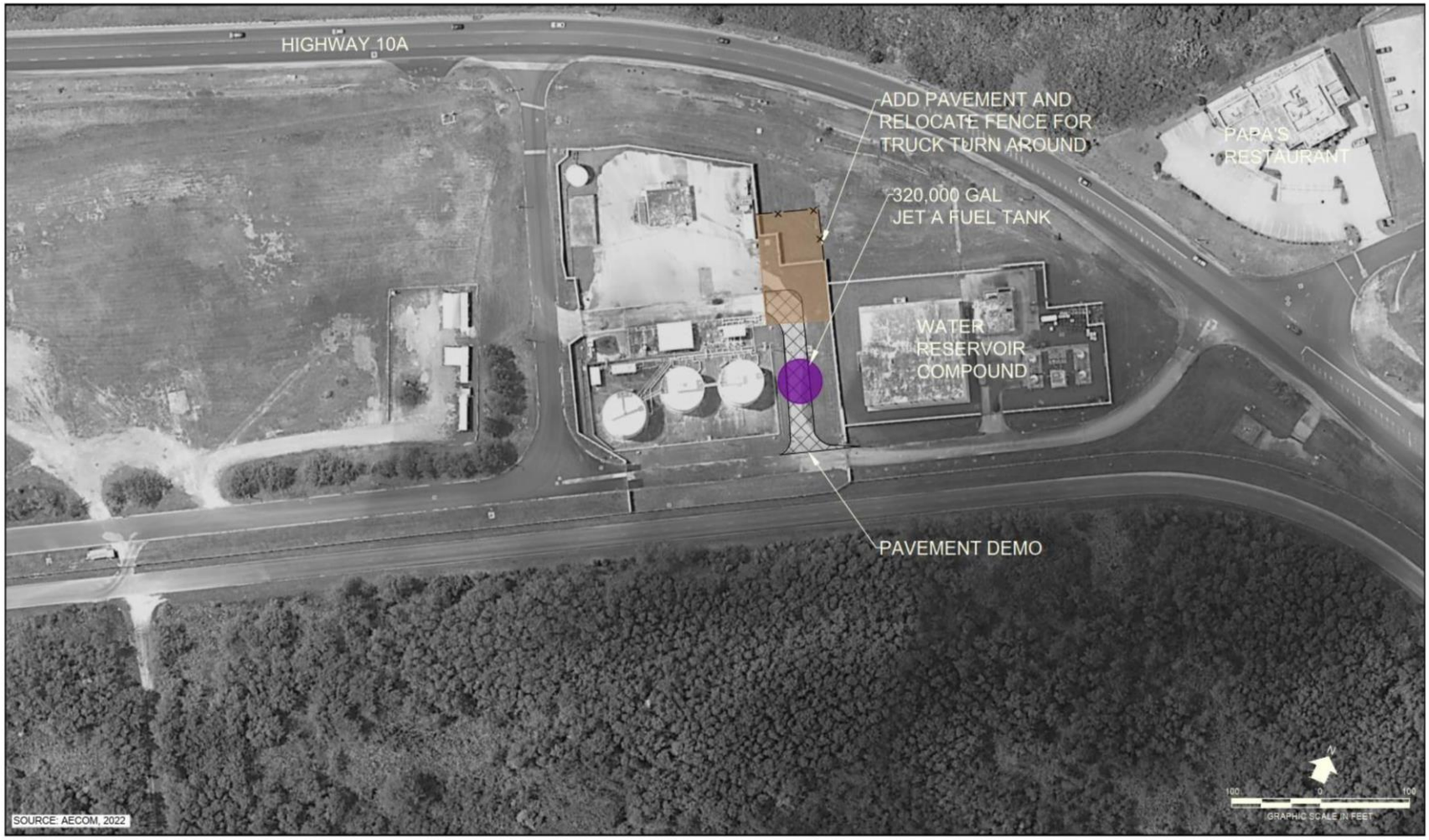



**Figure D-104. Aircraft Fuel - Alternative 3 - Jet A Tank East**

Source: AECOM




**Figure D-105. Aircraft Fuel - Alternative 4 - Jet A Tank North**

Source: AECOM

# D.7 Round 2 GA, Cargo, and Support Facilities Alternatives

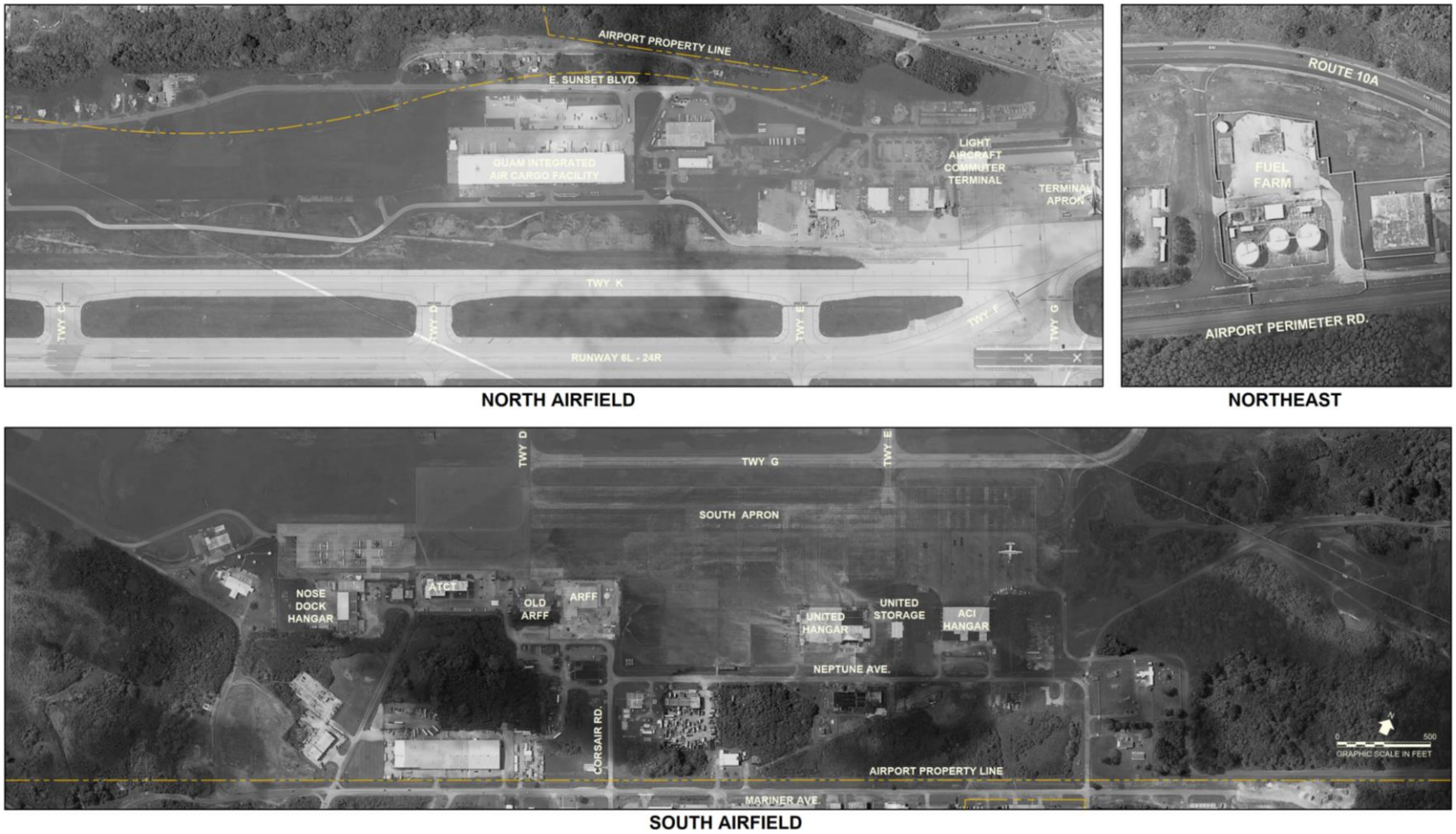
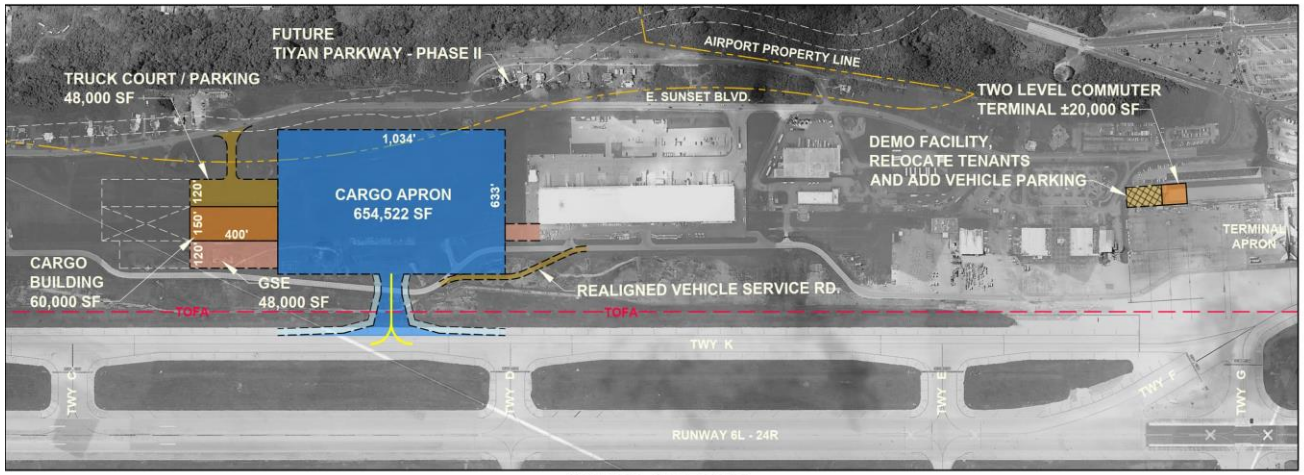
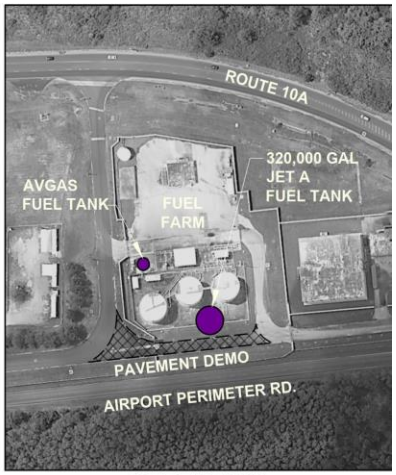



**Figure D-106. GA, Cargo, and Support Facilities Alternatives Round 2 - Alternative 1 - No Action**

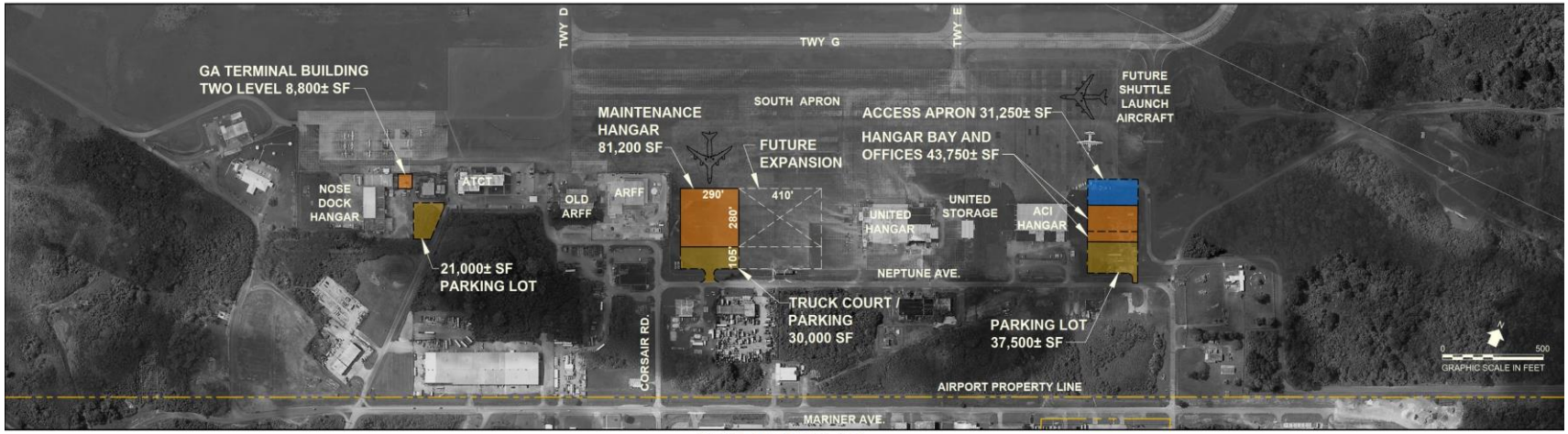
Source: AECOM




NORTH AIRFIELD




NORTHEAST




SOUTH AIRFIELD

**Figure D-107. GA, Cargo, and Support Facilities Alternatives Round 2 - Alternative 2 - Consolidated Alternative**

Source: AECOM

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# Antonio B. Won Pat International Airport Master Plan Update

Appendix E – Preferred Airfield Alternative – Declared Distances

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E.1 Declared Distances Based on the Preferred Airfield Alternative.....E-1

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# Appendix E: Preferred Airfield Alternative – Declared Distances

## E.1 Declared Distances Based on the Preferred Airfield Alternative

**Figure E-1** displays the proposed declared distances along the runways based on the preferred airfield alternative. For more information on declared distances and the preferred airfield alternative, see **Chapter 5:** *Alternatives Development and Evaluation* and **Appendix C:** *Runway Protection Zone Assessment*.

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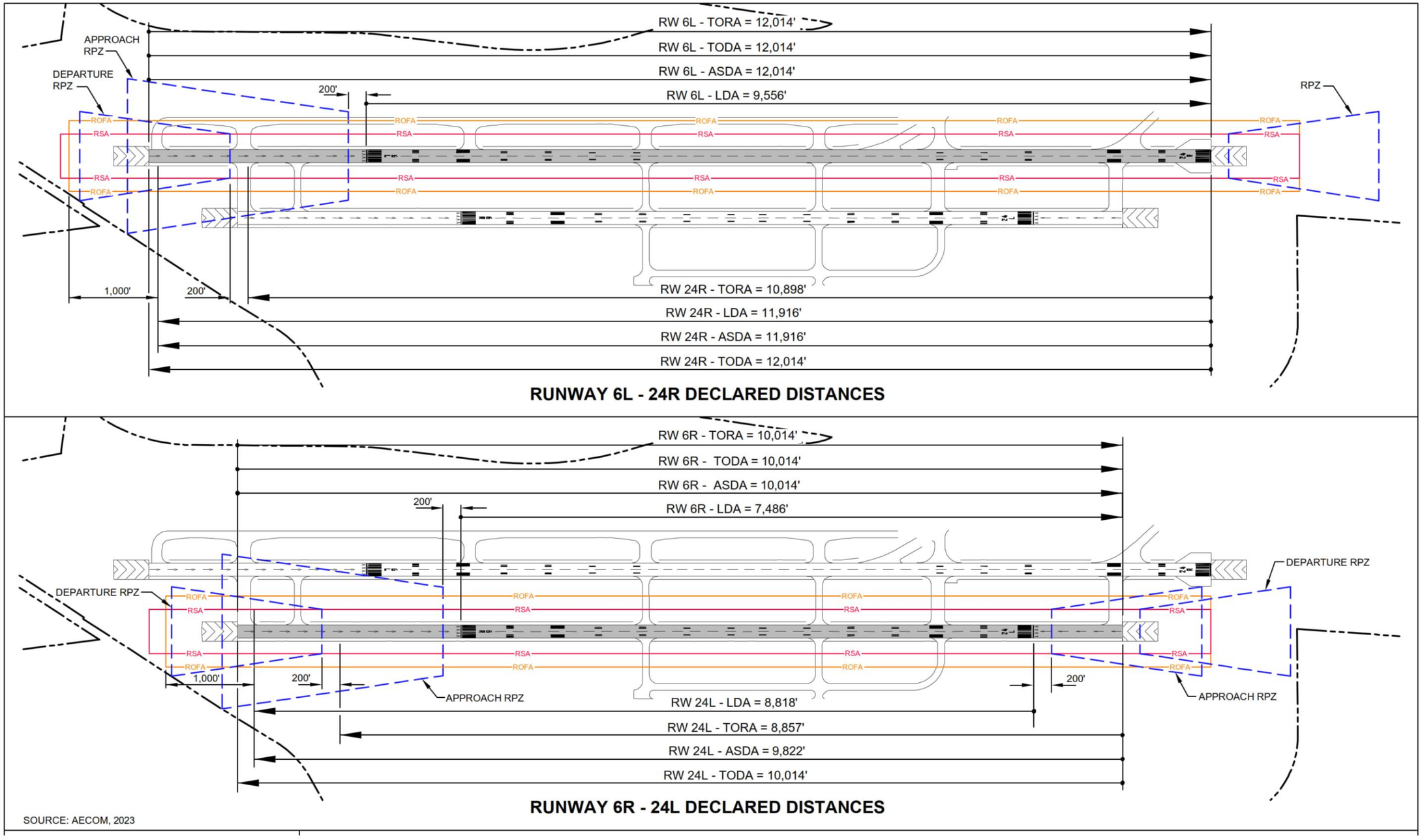



**Figure E-1. Preferred Airfield Alternative – Declared Distances**

Source: AECOM

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# Antonio B. Won Pat International Airport Master Plan Update

Appendix F – Visioning, Realization, and Regulatory Meetings – Presentations and Meeting Minutes

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# Appendix F: Visioning, Realization, and Regulatory Meetings – Presentations and Meeting Minutes

## F.1 Visioning Meeting Presentation and Meeting Minutes

# Antonio B. Won Pat International Airport – Master Plan Update

## Stakeholder Advisory Group Visioning Meeting

March 2, 2022

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# Agenda

- Introductions
- 2012 Airport Master Plan Summary
- Project Overview
- Stakeholder Advisory Group
- Visioning Session
- Next Steps

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Introductions
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# Existing Facilities at the Airport




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# Question




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2012 Airport Master Plan Summary
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# 2012 Airport Master Plan Update Goals and Objectives




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# Issues/Concerns Identified in 2012 Airport Master Plan



## Factors Affecting FORECASTS

Declining tourism from Japan and Korea

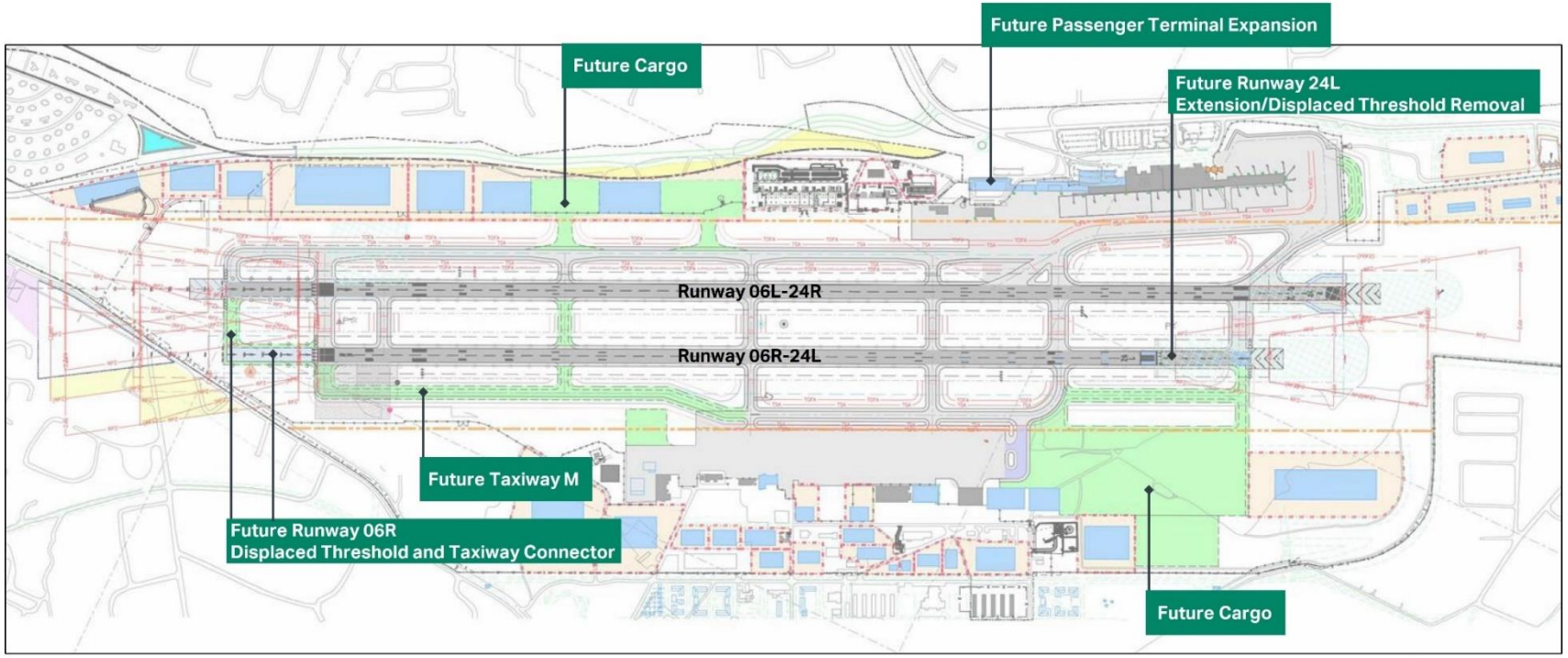


## Factors Affecting TERMINAL

- ✓ Arrival/Departure Co-mingling
- ✓ Checked bag screening (in-lobby)
- ✓ Passenger screening lanes
- Aging PBB/GPU/PCA equipment
- Insufficient GSE storage area
- Washroom breakdowns and cleanliness
- ✓ Insufficient check-in counters

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# 2012 Airport Layout Plan – Future Projects




Project Overview
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# Project Team

**AECOM**

Project Management

Airport Master Planning Services

**InterVISTAS**

Financial Planning

Air Service Development

**E.M. Chen & Associates**

Engineering

Cost Estimate

Facility Condition Assessment

Local Support

**NV5 GEOSPATIAL**

Field Survey

Aerial Survey

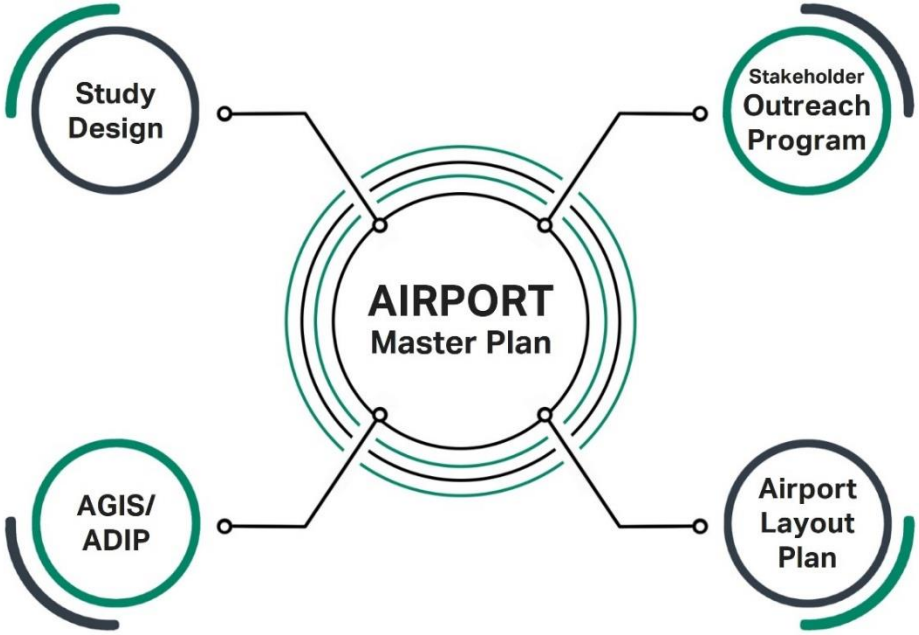
Planimetric Mapping

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# Goals and Objectives



# Project Overview




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# Master Planning Process – The 3-Phased Project Approach




## Visioning

Goal:
*Establish project vision, analyze existing conditions/issues, and develop demand forecasts*

Key Elements

- Develop scope and detailed work plan
- Identify stakeholders
- Inventory of existing conditions
- Facility conditions assessment
- Airport GIS Gap Analysis

Prepare and submit technical reports/working papers

## Realization

Goal:
*Understand airport needs, prepare facility requirements, develop alternate solutions*

Key Elements

- Facility requirements
- Alternate development and evaluation
- Environmental considerations
- Sustainability
- Runway Protection Zone

Prepare and submit technical reports/working papers

## Implementation

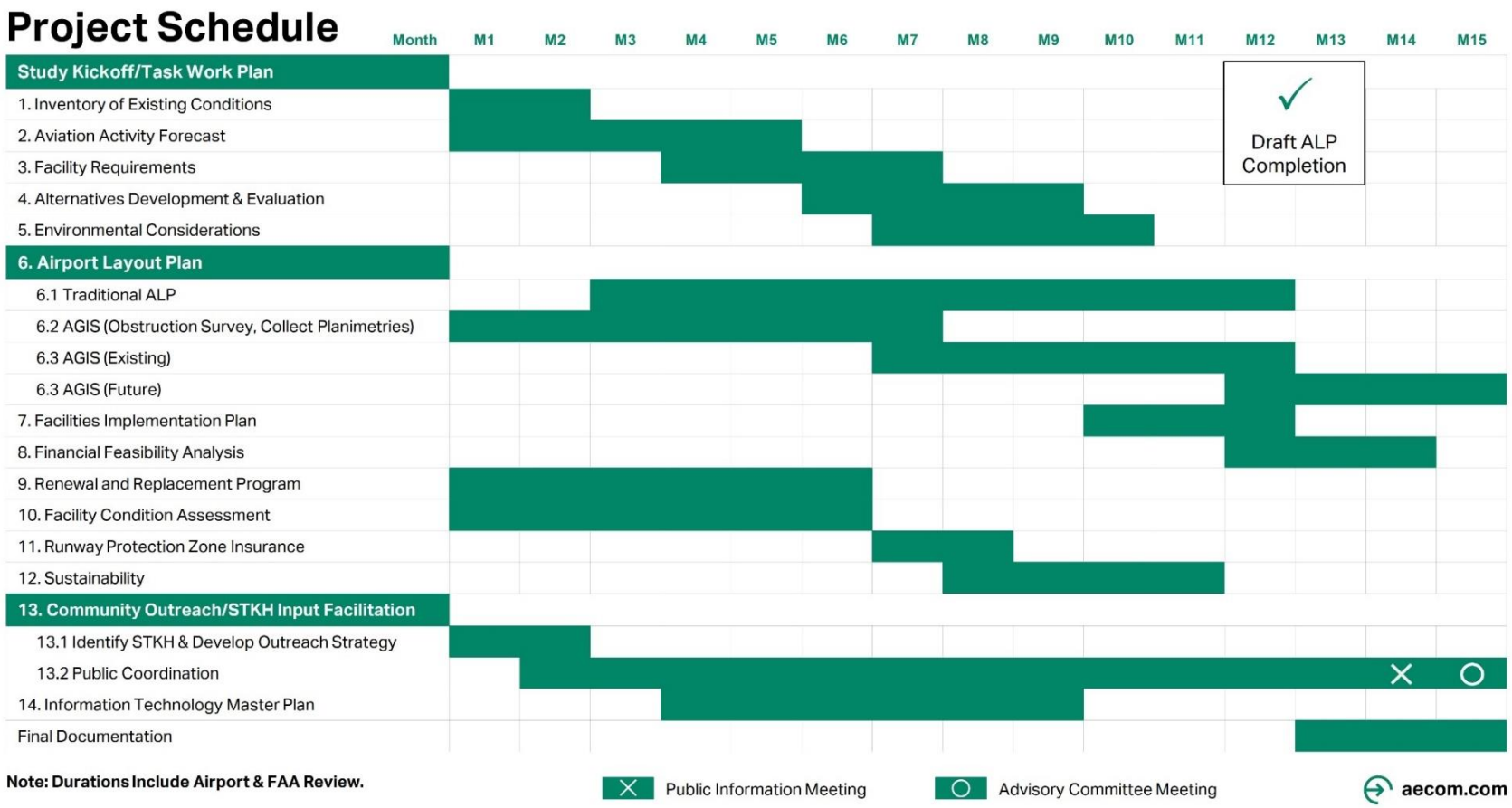
Goal:
*Strategize for the future phased development*

Key Elements

- Airport Layout Plan
- Facilities implementation plan
- Financial feasibility analysis
- Renewal and replacement program
- Sustainability

Prepare and submit technical reports/working papers
Prepare overall technical report and ALP drawings

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Project Schedule
Month
M1
M2
M3
M4
M5
M6
M7
M8
M9
M10
M11
M12
M13
M14
M15
Study Kickoff/Task Work Plan
1. Inventory of Existing Conditions
2. Aviation Activity Forecast
3. Facility Requirements
4. Alternatives Development & Evaluation
5. Environmental Considerations
6. Airport Layout Plan
6.1 Traditional ALP
6.2 AGIS (Obstruction Survey, Collect Planimetries)
6.3 AGIS (Existing)
6.3 AGIS (Future)
7. Facilities Implementation Plan
8. Financial Feasibility Analysis
9. Renewal and Replacement Program
10. Facility Condition Assessment
11. Runway Protection Zone Insurance
12. Sustainability
13. Community Outreach/STKH Input Facilitation
13.1 Identify STKH & Develop Outreach Strategy
13.2 Public Coordination
14. Information Technology Master Plan
Final Documentation
Draft ALP Completion
Note: Durations Include Airport & FAA Review.
Public Information Meeting
Advisory Committee Meeting
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Stakeholder Advisory Committee
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# Stakeholder Group Members

| Key Stakeholders | |
|---|---|
| United Airlines | Philippine Airlines |
| Air Seoul | T'way Air |
| Air Busan | Asia Pacific Airlines |
| China Airlines | U.S. Customs and Border Protection |
| Japan Airlines | Transportation Security Administration |
| Jin Air | Guam Customs & Quarantine Agency |
| Korean Air | Federal Aviation Administration |
| Jeju Air | |

| Operational Stakeholders | |
|---|---|
| Menzies Aviation | Burger King |
| ACI Pacific LLC | Dominos/Golden Bowl |
| Guam Flight Services | Sissie's Café |
| Supreme Group | Oasis Café |
| Lotte Duty Free | Micronesia Munchies |
| AVIS | PacAir Properties |
| Hertz | LSG Sky Chefs |
| National | Stroll Guam |
| Nissan | UPS |
| Airport Tentekomai | FedEx Guam |

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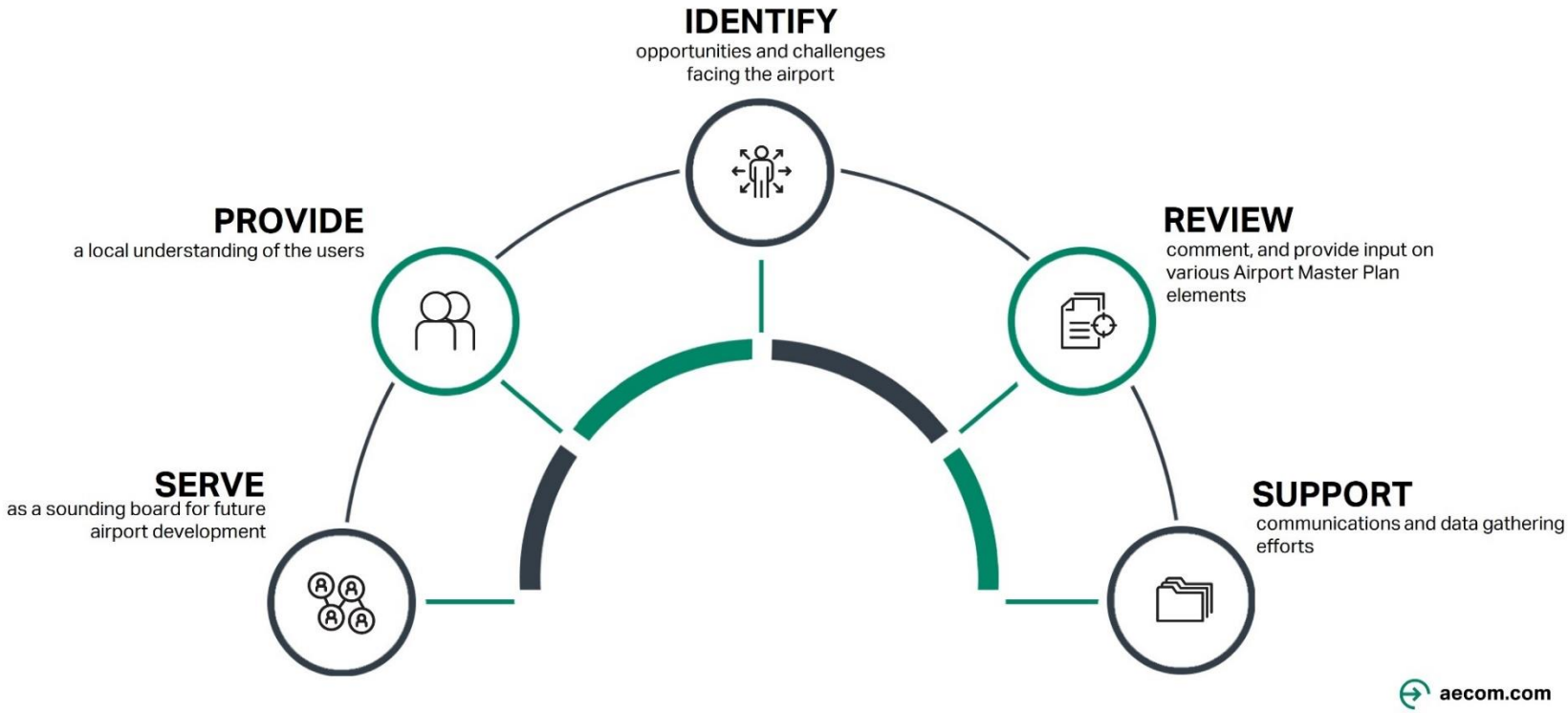
# Stakeholder Group Members

| Internal |
| --- |
| Brian J. Bamba – Chairman of the Board |
| John M. Quinata – Executive Manager |
| Artemio "Ricky" Hernandez, Ph.D. – Deputy Executive Manager |
| Frank Santos – TMG |
| Jean M. Arriola – Airport Services Manager |
| Juan M. Reyes – Air Terminal Manager |
| Victor Cruz – Engineer Supervisor |
| Raymond Quintanilla – Airport Operations Superintendent |
| Ken McDonald – Properties and Facilities Superintendent |
| Ann Bautista – Acting Comptroller |
| Vincente Naputi – Chief of Airport Police |
| Joe Javellana – Property Management |
| Raymond Mantanona – ARFF Chief |
| Rolenda L. Faasuamalie – Airport Marketing Administrator |

| Island Leaders/Community Advisory Group |
| --- |
| Guam Legislature/Committee on Air Transportation |
| Guam Economic Development Authority |
| Guam Visitors Bureau |
| Guam Chamber of Commerce |
| Guam Women's Chamber of Commerce |

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# Stakeholder Group Role



# Meetings




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Visioning Session
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# Exercise

Let's **discuss** the following **questions**.



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# Questions

How do you see the island of Guam changing over the next 5-10 years? **How**

How do you see these changes influencing the airport? **How**

What are some key airport needs? Safety issues? Infrastructure? Development? **What**

What are potential opportunities to grow the airport? **What**

What are potential developmental challenges? Environmental? Cost? **What**



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Next Steps
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# Next Steps




Ongoing

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# Questions or Comments?

Contact Information

Elliott Lindgren: elliott.lindgren@aecom.com

Greg Mayer: gregory.mayer@aecom.com

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# Thank You!

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# Agenda

**Meeting name**
Stakeholder Advisory Committee Visioning Meeting

**Meeting date**
March 2, 2022

**Location**
GIAA Meeting Rooms 1&2

**Project number**
GIAA-FY20-02-6

**Subject**
Visioning Meeting Workshop – Key Stakeholders

**Time**
9:30 AM GMT

**Project name**
A. B. Won Pat International Airport Master Plan Update

**AECOM project number**
60670976

**Prepared by**
Greg Mayer

**Attendees**
See Tables Below

**Circulation list**
John M. Quinata,
Artemio "Ricky" Hernandez, Ph.D.,
Frank Santos,
Jean M. Arriola,
Juan M. Reyes,
Rolenda L. Fassuamalie,
Elliott Lindgren, Greg Mayer

# Meeting Minutes

Key Stakeholder Attendees:

| Attendee | Company/Organization |
|---|---|
| Miyun "Denise" Moon | Air Busan |
| G. Chin | Asia Air Pacific |
| Hui Liu | China Airlines |
| Tim Cornelison | Federal Aviation Administration |
| Ignacio "Ike" Peredo | Guam Customs & Quarantine |
| Robert Navarro | Japan Airlines Co., Ltd. |
| Hyunjun Lim | Jeju Air |
| Hea L. Kang | Korean Air |
| Neung Kwon | Korean Air |
| Shinjiro "Mark" Okuhira | Philippine Airlines |
| Jorge Guerrero | Transportation Security Administration |
| Tess Antonio | Transportation Security Administration |
| Gerald Aevermann | U.S. Customs & Border Protection (CBP) |
| Mark Pablo | U.S. Customs & Border Protection (CBP) |
| Joe Alcairo | U.S. Customs & Border Protection (CBP) |
| Justin Marion | United Airlines |

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GIAA Attendees:

| Attendee | Role |
|---|---|
| John "JQ" M. Quinata | Executive Manager |
| Artemio "Ricky" Hernandez, Ph.D. | Deputy Executive Manager |
| Frank Santos | Transportation Management Group (TMG) Guam |
| Jean Arriola | Airport Services Manager |
| Rolenda Fassuamalie | Airport Marketing Administrator |
| Victor Cruz | Engineer Supervisor |
| Ken McDonald | Properties and Facilities Superintendent |
| Fred Tupaz | Transportation Management Group (TMG) Guam |
| Linette Perez | Program Coordinator |
| Vanessa Pangindian | Property Management Office |
| Trini LG Cotelesse | Planning |
| Pete Camacho | Planning |
| Virginia Molo | Personnel Services |
| Austin Grant | Airport Administration |

Dr. Ricky Hernandez started the meeting by welcoming the Key Stakeholders to the Visioning Meeting Workshop; explained that each stakeholder was chosen because of the value and crucial role their organization or company plays in the future of the airport; explained to the stakeholders how important their ideas and input will be throughout the workshop; and introduced Frank Santos (TMG Guam), Elliott Lindgren (AECOM), and Greg Mayer (AECOM).

Frank Santos gave a brief history of the airport and stressed the need for this Airport Master Plan as the previous one was completed in 2012. The previous Airport Master Plan focused on topics such as resolving the comingling of the concourse and the recently completed third floor international arrivals corridor. The FAA approved the grant for the Airport Master Plan in 2021. He mentioned some of the ongoing projects at the airport that includes the Runway 6L/24R pavement rehabilitation and the new ARFF facility, as well as future projects such as a Part 150 Study. Frank emphasized the importance of stakeholder involvement throughout this entire process.

Elliott Lindgren introduced himself as the Project Manager and started the Stakeholder Advisory Committee Visioning Meeting presentation.

Elliott Lindgren asked the Key Stakeholders to describe their vision of the airport in 5, 10, and 20 years.

Tim Cornelison (FAA) mentioned that there are existing issues with the terminal building. He expressed concern that there are aircraft that are arriving at 2AM, 3AM, 4AM, even 5AM and if those aircraft don't have an incentive to come, they will go somewhere else.

Mark Okuhira (Philippine Airlines) would like to see a terminal expansion, more gates, and updated facilities and jet bridges. He also mentioned there were no existing issues with his airline.

CBP employees would like to see the airport get up to capacity and the airport could potentially see two million passengers in the next 10 years which should lead to a terminal and/or commuter terminal expansion. The industry is transitioning to automated systems and the airport needs to be able to accommodate the change. Additionally, they are noticing that the CBP booths have been experiencing additional passengers and there are queuing issues. They would like to see the immigration process become paperless. Parking should be revisited as there appears to be insufficient employee parking spaces.

Justin Marion (United) wants a better overall experience for the customer/passenger. The airport should look to implement new technology and improving the food court. The airport is the first and last impression the passenger has of Guam and it's important that it's a positive experience. Consider adding charging stations and increasing the holdroom size because the new

A

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sterile corridor reduced their capacity. Pedestrian wayfinding could be improved, especially during the HNL outbound flight as passengers have a difficult time understanding where to go.

A stakeholder [unsure who] is concerned about the gate dependency issue created by the new sterile corridor and the difficulties it creates when two flights arrive at the same time. They would like to improve the experience for passengers arriving in Guam. Often aircraft are arriving in the early morning and passengers are not able to check-in to their hotels. The addition of Global Entry has greatly improved the arrival process for passengers and quoted "if you build it, they will come."

Robert Navarro (Japan Airlines) is concerned that it may take the airport 3-5 years to fully recover. Japan Airlines suspended flights to Guam do to COVID-19. The biggest issue is that commodities are at a standstill. His vision for the airport includes facial recognition, adoption of a higher security model, and a "smooth" passenger experience. When tourism and population inevitably increase, the airport should consider noise abatement issues during peak hours, a potential monorail between the airport and the hotels, and that mass transit will most likely become electric.

An additional airline representative mentioned that the airport could benefit from an emergency contact group chat.

Elliott Lindgren continued the presentation providing a summary of the 2012 Airport Master Plan and ALP, an overview of this current Airport Master Plan, who the stakeholders are, how the Airport Master Plan process works, and how the stakeholders will impact the process. See the attached PowerPoint presentation for more information.

After a short break, the group divided up into two smaller working groups to answer five questions that will help drive the Airport Master Planning process. The questions included:

- How do you see the island of Guam changing over the next 5-10 years?
- How do you see these changes influencing the airport?
- What are some key airport needs? Safety issues? Infrastructure? Development?
- What are potential opportunities to grow the airport?
- What are potential developmental challenges? Environmental? Cost?

Below is a summary of topics that the visioning groups came up with.

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How do you see the island of Guam changing over the next 5-10 years?

- Recovering from the COVID-19 pandemic (3-5 Years)
- Increasing tourism could lead to capacity issues (hotel, rental cars, etc.)
- Infrastructure improvements of mass transit and public transportation
- Hopefully, a progressive legislature/pro-economic development resulting from the 2022 election
- Fewer and fewer quarantine restrictions as the COVID-19 pandemic nears its conclusion
- The Department of Defence continues to build-up their forces in Guam which brings more troops and their families to the Island
- General cost increases due to inflation
- The crime rate on the Island was a continuing concern
- Growing TNC demands - Stroll Guam is the only TNC on the island
- Electric vehicle growth

How do you see these changes influencing the airport?

- More demand to process passengers due to the increasing volume
- Growing demand for vehicle charging stations for electric vehicles
- A need to accommodate military families as the DoD builds up its forces in Guam
- Increasing demand for cargo
- Accommodating support facilities as demand grows such as catering
- Increases in flights could lead to future noise issues
- The build-up of military aircraft traffic could lead to airspace capacity issues

What are some key airport needs? Safety issues? Infrastructure? Development?

- More employee parking spots and fewer public spots
- Faster and more reliable IT infrastructure
- More public health personnel to keep up with the more stringent safety protocols resulting from the COVID-19 pandemic
- Increase in accessibility especially for passengers with disabilities
- Quicker or new moving walkways as the existing ones are slow and outdated
- Improved approach to sustainability as a whole
- Modernization of the mechanical equipment
- Improved queuing for TSA and CBP (virtual queue) as the airport continues to experience heavy congestion
- Improved ergonomics for airline employees (i.e., lifting of bags, pier sorts, check-in)
- Storm alerts to prepare for adverse weather
- Prepare the airport for future pandemics such as incorporating automation/touchless technology and isolation rooms
- Pre-clear cargo (north cargo expansion) for a smoother and quicker experience

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What are potential opportunities to grow the airport?

- Increase public parking rates, specifically overnight parking, to generate higher revenue
- Potential for a terminal expansion where Gates 1, 2, and 3 are – similar to what is shown on the ALP
- Re-evaluate the three-bank flight schedule to ease the impact on CBP and the resulting passenger queues
- Perform a bathroom utilization study in the arrivals area
- Relocate the commuter terminal to the south side where there is room for development
- Prepare for a General Aviation resurgence
- Provide opportunities for maintenance repair and overhaul (MRO) companies at the airport
- A standalone training facility for pilot training

What are potential developmental challenges? Environmental? Cost?

- Cargo opportunities as cargo is currently in very high demand and the airport does not have the specific facility and equipment needs
- The existing hydrant fuel lines stop at spot 3 and would need to be extended
- There are legal restrictions that prevent the airport from entering into lease agreements longer than 5 years which makes it difficult to attract tenants
- Lack of a standalone GSE equipment shelter

The two groups reconvened and summarized their findings.

Elliott Lindgren discussed the next steps in the Airport Master Plan process and that certain things such as the Facility Conditions Assessment, inventory and data collection, forecasts, and facility requirements are all underway. The AECOM Airport Master Plan team will be returning sometime in the summer to update the stakeholders on the project and present alternatives for discussion.

Elliott Lindgren ended the meeting.

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# Agenda

**Meeting name**
Stakeholder Advisory Committee Visioning Meeting

**Subject**
Visioning Meeting Workshop – Operational Stakeholders

**Attendees**
See Tables Below

**Circulation list**
John M. Quinata,
Artemio "Ricky" Hernandez, Ph.D.,
Frank Santos,
Jean M. Arriola,
Juan M. Reyes,
Rolenda L. Fassuamalie,
Elliott Lindgren, Greg Mayer

**Meeting date**
March 2, 2022

**Time**
1:30 PM GMT

**Location**
GIAA Meeting Rooms 1&2

**Project name**
A. B. Won Pat International Airport Master Plan Update

**Project number**
GIAA-FY20-02-6

**AECOM project number**
60670976

**Prepared by**
Greg Mayer

# Meeting Minutes

Operational Stakeholder Attendees:

| Attendee | Company/Organization |
|---|---|
| Jehn Joyner | Cabras Marine |
| Fe Singh | Denny's of Guam |
| Ken Ray Paulino | Hertz Rent A Car |
| Matthew Johnson | JMC Guam, Inc. |
| Daewoong Chen | Lotte Duty Free Guam |
| Aileen Costelo | LSG Sky Chefs |
| Rodney Paet | Menzies Aviation |
| Mildred Siagaot | Menzies Aviation |
| Robert Naval | Micronesia Air Cargo |
| James Valencia | Nissan Rent A Car |
| Arnel Bonto | Nissan Rent A Car |
| Joseph L. Cruz | PacAir Properties |
| Krystle Merfalen | PacAir Properties |
| Ricky Woodall | Skydive Guam |
| Richard Luo | Sunleader |
| Ernest J. Cruz | Supreme Group Guam |

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GIAA Attendees:

| Attendee | Role |
|---|---|
| Dr. Artemio "Ricky" Hernandez | Deputy Executive Manager |
| Frank Santos | TMG Guam |
| Jean Arriola | Airport Services Manager |
| Rolenda Fassuamalie | Airport Marketing Administrator |
| Victor Cruz | Engineer Supervisor |
| Pedro Lizama | Safety Officer |
| Cheryl Bustos | Program Coordinator |
| Vivian Aflague | Personnel Officer |
| Liz Blas | Property Management Office |
| Henry Cruz | Supply Administrator |
| Austin Grant | Airport Administration |

Dr. Ricky Hernandez started the meeting by welcoming the Operational Stakeholders to the Visioning Meeting Workshop; explained that each stakeholder was chosen because of the value and crucial role their organization or company plays in the future of the airport; explained to the stakeholders how important their ideas and input will be throughout the workshop; and introduced Frank Santos (TMG Guam), Elliott Lindgren (AECOM), and Greg Mayer (AECOM).

Frank Santos gave a brief history of the airport and stressed the need for this Airport Master Plan as the previous one was completed in 2012. The previous Airport Master Plan focused on topics such as resolving the comingling of the concourse and the recently completed third floor international arrivals corridor. The FAA approved the grant for the Airport Master Plan in 2021. He mentioned some of the ongoing projects at the airport that includes the Runway 6L/24R pavement rehabilitation and the new ARFF facility, as well as future projects such as a Part 150 Study. Frank emphasized the importance of stakeholder involvement throughout this entire process.

Elliott Lindgren introduced himself as the Project Manager and started the Stakeholder Advisory Committee Visioning Meeting presentation.

Elliott Lindgren asked the Key Stakeholders to describe their vision of the airport in 5, 10, and 20 years.

Rodney Paet (Menzies Aviation) envisioned the airport meeting its desired passenger count.

Joseph L. Cruz (PacAir) he would like to see the airport prepared for the increase in military growth, specifically the USMC in the next five years and the Army and Navy in the next 10 years. More military families are living here and more are expected within the near future.

James Valencia and Arnel Bonto (Nissan Rent A Car) discussed a similar vision in terms of military growth and mentioned the inevitable rise in tourism as we move past the pandemic. They want to see the airport "get back to where it was" before the pandemic.

Elliott Lindgren continued the presentation providing a summary of the 2012 Airport Master Plan and ALP, an overview of this current Airport Master Plan, who the stakeholders are, how the Airport Master Plan process works, and how the stakeholders will impact the process. See the attached PowerPoint presentation for more information.

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After a short break, the group divided up into two smaller working groups to answer five questions that will help drive the Airport Master Planning process. The questions included:

- How do you see the island of Guam changing over the next 5-10 years?
- How do you see these changes influencing the airport?
- What are some key airport needs? Safety issues? Infrastructure? Development?
- What are potential opportunities to grow the airport?
- What are potential developmental challenges? Environmental? Cost?

Below is a summary of topics that the visioning groups came up with.

How do you see the island of Guam changing over the next 5-10 years?

- Recovering from the pandemic (Short term)
- Military construction, transfer (MCB Camp Blaz), and build-up as the island is preparing for a huge surge in military personnel
- More housing due to the increased population of about 2,500 – 5,000 people in the next few years and military families
- Additional infrastructure for mass transit and public transportation as a result of the military and population boom
- Growing tourism numbers/additional tourist attractions
- Cargo demand specifically from the growth of online shopping during the pandemic
- Hotel construction as tourists will begin to come back to the island
- New markets opening now as travel restrictions become less stringent
- Increase in security measures due to the growing crime rate throughout the island
- Electrification as we are moving towards a more environmentally friendly world
- Uncertainty – Potential of another pandemic?!

How do you see these changes influencing the airport?

- Rental car and bus lot congestion, especially during peak hours
- Increased reliance on touchless technology/social distance/counter dividers resulting from the pandemic
- Health screening/quarantine processing capability as a result of the pandemic
- Sustainability/sustainable building design/renewable energy sources
- Need for vehicle chargers with the increase of electric vehicles
- New infrastructure to support the large quantity of cargo operations
- Growth in commuter traffic between the Islands

What are some key airport needs? Safety issues? Infrastructure? Development?

- More capacity for the rental car operators to accommodate additional cars and tour buses
- Terminal and roof improvements due to water leaks
- More lounges for passengers, pre- and post-security – Noticing a number of passengers who have earlier hotel checkouts eating and drinking at restaurants, bars, and coffee shops along the roads within a close proximity of the airport
- Additional cargo space/shelters/facilities to balance out the surge of cargo and military operations
- Restroom utilization study – the bathrooms between Gates 7 and 8 are crowded during peak hours

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- Play areas for children to keep them entertained before or after flights
- More flexible flight schedule so concessions/lounges are not super congested at peak hours
- Improved parking lot lighting for all airport lots
- Better overall passenger experience
- Improve the IT infrastructure and automation throughout the airport as Guam does not have a lot of labour resources
- New commuter terminal

What are potential opportunities to grow the airport?

- Incentivize the airlines to operate during non-peak hours or have a flexible flight schedule to balance the demand on concessions
- Seek opportunities to diversify revenue throughout the airport
- Potentially move daily charter flight that operates to Anderson AFB to GUM
- More GA pilot training, similar to JAL, would benefit the airport and perspective pilots
- Potential for an Amazon-type hub between Asia and the Americas that could utilize pre-clearance for customs/cargo
- New destinations might look attractive to potential passengers especially now that the comingling issues has been resolved
- Airport hotel (50-100 rooms) on top of the terminal specifically for pilots and/or transit passengers only staying for a few hours, one night, or that need to catch an early flight
- Opportunities for sustainability such as solar panels on top of facilities
- Gas or fuelling station for airport vehicles – has been “in the works” for the past few years
- Improve the wayfinding to make it easier for passengers to navigate their way through the airport
- GUM has land available for development on north side
- Land is available on the south side for an FBO/MRO/Cargo facility
- Information desks, particularly for tourists – could benefit from a translator as the airport sees a number of foreign passengers
- Could integrate commuter terminal operations into a possible terminal expansion

What are potential developmental challenges? Environmental? Cost?

- Lack of physical space due to constraints around the airport – particularly roads and terrain
- Lack of tourists due to the COVID-19 pandemic
- Lack of skilled labour/labour shortage makes it difficult to hire the right employees
- Water runoff/drainage/stormwater issues on the airfield during heavy rainstorms
- Legal restrictions preventing the airport from entering into lease agreements for longer than 5 years
- Balancing the military and commercial operations
- Inflation issues/fuel prices have been on the rise specifically in the last few months
- Potential geopolitical issues like what’s happening between Taiwan and Hong Kong as well as Russia and Ukraine
- Environmental containments such as PFAS
- Uncertainty with the election as 2022 is an election year in Guam
- Original landowner concerns
- Affordable housing as more people will lead to a competitive housing market

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The two groups reconvened and summarized their findings.

Elliott Lindgren discussed the next steps in the Airport Master Plan process and that certain things such as the Facility Conditions Assessment, inventory and data collection, forecasts, and facility requirements are all underway. The AECOM Airport Master Plan team will be returning sometime in the summer to update the stakeholders on the project and present alternatives for discussion.

Elliott Lindgren ended the meeting.

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# Agenda

**Meeting name**
Stakeholder Advisory Committee Visioning Meeting

**Meeting date**
March 4, 2022

**Location**
GIAA Meeting Rooms 1&2

**Project number**
GIAA-FY20-02-6

**Subject**
Visioning Meeting Workshop – Internal Stakeholders

**Time**
9:00 AM GMT

**Project name**
A. B. Won Pat International Airport Master Plan Update

**AECOM project number**
60670976

**Prepared by**
Greg Mayer

**Attendees**
See Tables Below

**Circulation list**
John M. Quinata,
Artemio "Ricky" Hernandez, Ph.D.,
Frank Santos,
Jean M. Arriola,
Juan M. Reyes,
Rolenda L. Fassuamalie,
Elliott Lindgren, Greg Mayer

# Meeting Minutes

Internal Stakeholders Attendees:

| Attendee | Role |
|---|---|
| Brian J. Bamba | Chairman of the Board |
| John "JQ" M. Quinata | Executive Manager |
| Artemio "Ricky" Hernandez, Ph.D. | Deputy Executive Manager |
| Frank Santos | TMG Guam |
| Jean Arriola | Airport Services Manager |
| Juan Reyes | Air Terminal Manager |
| Rolenda Fassuamalie | Airport Marketing Administrator |
| Victor Cruz | Engineer Supervisor |
| Ken McDonald | Properties and Facilities Superintendent |
| Raymond Quintanilla | Airport Operations Superintendent |
| Ann Bautista | Acting Comptroller |
| Raymond Mantanona | ARFF Chief |
| Vanessa Pangindian | Property Management Office |
| Austin Grant | Airport Administration |

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Dr. Ricky Hernandez started the meeting by welcoming the Internal Stakeholders to the Visioning Meeting Workshop; explained that each stakeholder was chosen because of the value and crucial role their organization or company plays in the future of the airport; explained to the stakeholders how important their ideas and input will be throughout the workshop; and introduced Frank Santos (TMG Guam), Elliott Lindgren (AECOM), and Greg Mayer (AECOM).

Frank Santos gave a brief history of the airport and stressed the need for this Airport Master Plan as the previous one was completed in 2012. The previous Airport Master Plan focused on topics such as resolving the comingling of the concourse and the recently completed third floor international arrivals corridor. The FAA approved the grant for the Airport Master Plan in 2021. He mentioned some of the ongoing projects at the airport that includes the Runway 6L/24R pavement rehabilitation and the new ARFF facility, as well as future projects such as a Part 150 Study. Frank emphasized the importance of stakeholder involvement throughout this entire process.

Elliott Lindgren introduced himself as the Project Manager and started the Stakeholder Advisory Committee Visioning Meeting presentation.

Elliott Lindgren asked the Key Stakeholders to describe their vision of the airport in 5, 10, and 20 years.

Juan Reyes would like to see the airport brace for the upcoming demand and increasing military operations and would like to see the airport equipped with the right facilities and infrastructure to meet the demand.

Rolenda Fassuamalie would like to see updated signage and an “incubator-like” environment for different cultures.

Victor Cruz expressed concern about the aging facilities and the need to prepare for their replacement. Improve the use of the unused property as a potential source of revenue.

Raymond Quintanilla sees an increase in personnel and a fleet adjustment towards more widebody aircraft.

Vanessa Pangindian wants to see the airport equipped with new energy saving equipment, water bottle filling stations, more retail stores (specifically food and beverage), and for there to be an easier experience for customers.

Ken McDonald would like more general upgrades to the facility and awnings for the arrival and departure curbs.

Ann Bautista hopes the airport has more concessions, more tenants, and potentially some new public partnerships.

Jean Arriola would like to see the airport incorporate new technology, increase innovation, and utilize the existing data to increase both the passenger and employee experience.

Frank Santos discussed that there are many constraints surrounding airport property and that the airport as a whole needs to grow within its footprint. He wants to see the airport grow to a point where the airport cannot accept any new tenants, airlines, etc. This will have to start with a replacement of the terminal roof, fire alarms, water system, and electrical system. He’d like to see the airport shift towards using renewable fuel and potentially a terminal expansion to the west.

Dr. Ricky Hernandez’s five-year plan is to recover and prepare. His ten-year plan includes preparing for customers by implementing projects that will improve the customer’s experience. The airport should also focus on net zero goals such as sustainable aviation fuel as that is what international airport, airline, and civil aviation authority organizations such as ACI, IATA, and ICAO are focusing on.

John Quinata wants to get the numbers back to the 2019 mark. He envisions the airport to attract locals to become pilots and expects General Aviation growth. There is a large opportunity to lease out airport property on the south side to support operations.

Chairman Brian J. Bamba reemphasized a lot of what was discussed amongst the other Internal Stakeholders and emphasized the importance of Guam being a tourist destination, how safety should become a top priority, and that the airport should be able to respond properly to an ill passenger. He also mentioned that the vision of the airport relies a lot on the government. He wants to see an airport that can help out the smaller airports in the smaller islands surrounding Guam.

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Elliott Lindgren continued the presentation providing a summary of the 2012 Airport Master Plan and ALP, an overview of this current Airport Master Plan, who the stakeholders are, how the Airport Master Plan process works, and how the stakeholders will impact the process. See the attached PowerPoint presentation for more information.

After a short break, the group worked together to answer five questions that will help drive the Airport Master Planning process. The questions included:

- How do you see the island of Guam changing over the next 5-10 years?
- How do you see these changes influencing the airport?
- What are some key airport needs? Safety issues? Infrastructure? Development?
- What are potential opportunities to grow the airport?
- What are potential developmental challenges? Environmental? Cost?

Below is a summary of topics that the visioning group came up with.

How do you see the island of Guam changing over the next 5-10 years?

- Assimilate 911/emergency tendencies in our daily lives/operations
  - The Department of Defence continues to build-up their forces in Guam which brings more troops and their families to the Island. Pacific Agility provides an opportunity for multinational participants presenting their own capabilities to the other participants
  - Cope North is a humanitarian assistance and disaster relief training exercise
- Increased cargo demand from the growth of online shopping
- Demand for more inner-island travel
- Increased drone/eVTOL activity and the potential for a vertiport
- Prepare for newly elected officials as 2022 is an election year
- Prepare for more diverse population growth while locals may be leaving
- Increase in population could lead to noise impacts

How do you see these changes influencing the airport?

- Prepare for the military to use GIAA more (fuel, security plan, facilities)
  - Could receive revenue through military usage of the airport (Grant Assurance 25)
- Implementation of touchless technology as a result of the Covid pandemic
- Introduction of biometrics systems for a quicker and smoother check-in
- Need for increased training and succession planning for airport employees

What are some key airport needs? Safety issues? Infrastructure? Development?

- A south side fuel facility, the existing fuel farm is located on the far northeast side of airport property
- Potential military usage of the south ramp could impact air carrier service
- Geofencing technology to aid with commercial traffic counts
- IT infrastructure so the airport can provide services to the customer
- Need for better internal technology as a lot of the airport's technology is outdated
- More robust cyber-security in order to keep up with increasing technology
- Facilities such as lactation rooms/family rooms/dad rooms/pet areas/genderless bathrooms/rest areas for long travellers/entertainment areas/lounge areas in order to benefit all types of passengers needs

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- New macerators and triturators; one was constructed in 1982 and the other in 1996
- Gate 3 improvements – Back up of vehicles/security issues/need for two lanes (could potentially move closer to Gate 7)
- New the loading dock or trash collection area – the existing area is unpleasant and undersized for truck deliveries
- ARFF burn pit would make it easier for fire fighter to maintain their certification – currently certifications are usually done off island
- Ramp Tower needs which include automation, improved visibility, and more cameras on the airfield
- Upgrade of Airfield Lighting Vault as it is a very old facility
- Need for a dedicated, off-site Emergency Control Center – GIAA currently uses the conference rooms in the terminal
- The Terminal Center is in need of upgrades and needs council consolidation and proper training
- Facility for centralized admin functions – (i.e. The Accounting Building is located out in the rental car parking area)

What are potential opportunities to grow the airport?

- Land for future development on the south side and southwest of the cargo facilities
- Lease out facilities and use existing land to generate revenue
- Potential for the Virgin Orbit Spaceport to target Guam again in the future
- Environmental stewardship such as green walls and refillable water fountains to be more eco-friendly
- Public benefits such as walking trails, bike trails, etc.

What are potential developmental challenges? Environmental? Cost?

- General funding
- 5-year lease restriction poses issues with attracting tenants
- South Tiyan facilities have hazardous material issues
- South side road access – current access point is not airport property
  - Lack of land development around south side facilities
- Environmental issues during Navy transfer (south of Runway 6R)

Elliott Lindgren discussed the next steps in the Airport Master Plan process and that certain things such as the Facility Conditions Assessment, inventory and data collection, forecasts, and facility requirements are all underway. The AECOM Airport Master Plan team will be returning sometime in the summer to update the stakeholders on the project and present alternatives for discussion.

Elliott Lindgren ended the meeting.

After the Internal Stakeholder's Visioning Meeting Workshop, a few members of the Internal Team and the AECOM team had a meeting with Kimberly Evans from the FAA HNL ADO.

Kimberly Evans mentioned that she would like an invitation to the Realization Meeting. If she is unable to make the meeting, Elliott Lindgren could brief her during a layover at HNL.

Kimberly Evans emphasized that the AECOM team should convey the AGIS process to the sponsors.

GIAA will set up a separate call with Kimberly to discuss the previously mentioned FAA TAF issues end of March/Early April.

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## F.2 Realization Meeting Presentation and Meeting Minutes

# Antonio B. Won Pat International Airport

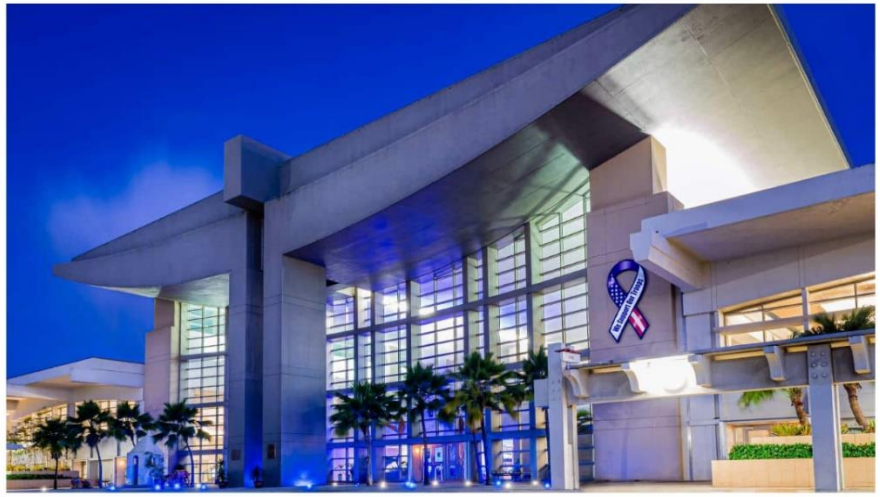
## Stakeholder Realization Meeting

December 13th, 2022

Delivering a better world

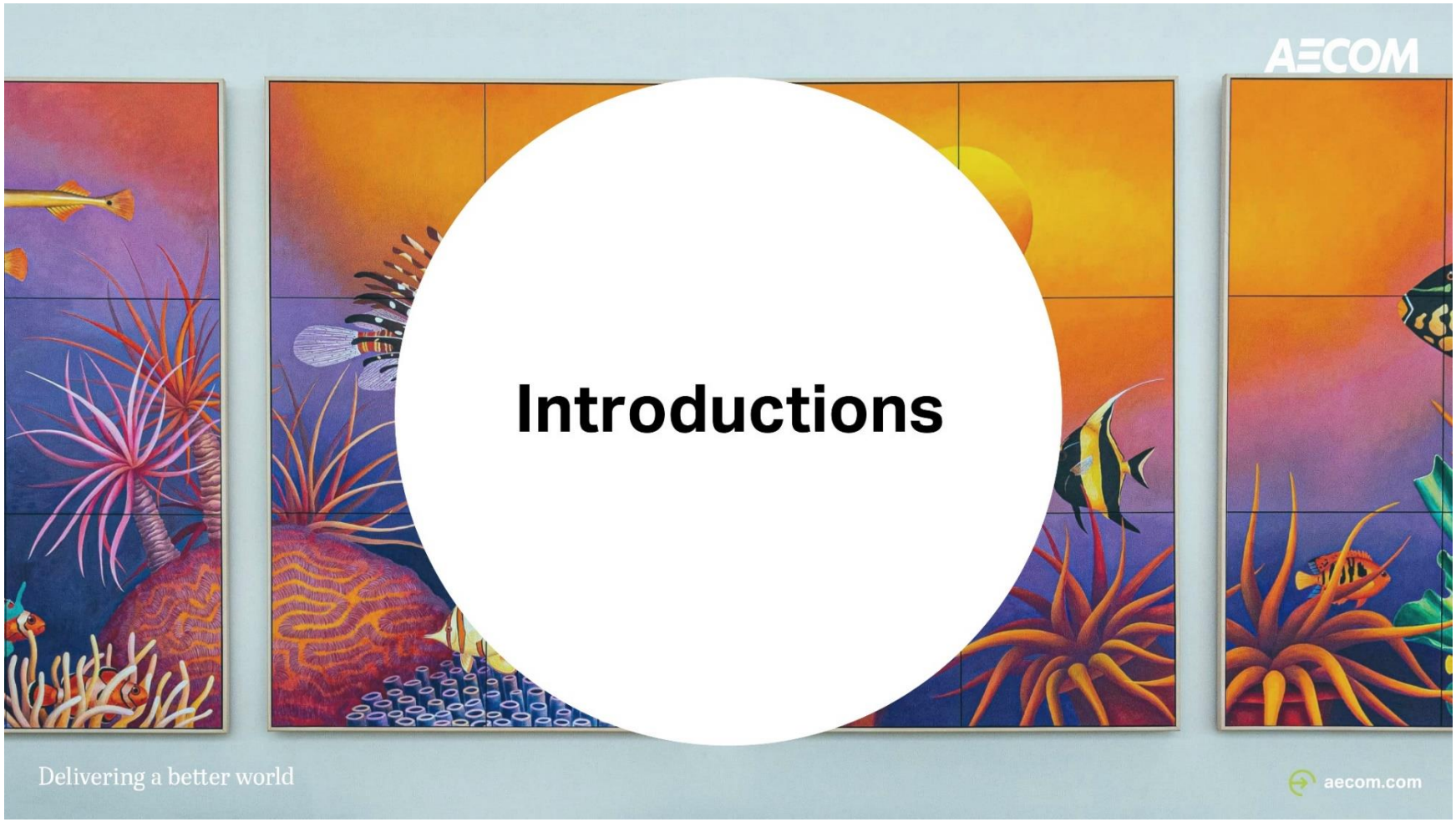
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# Agenda



- Introductions
- Scope Overview
- Airport Forecasts
- Existing Conditions
- Alternatives Process
  - Airfield
  - Commercial Passenger Terminal
  - General Aviation, Cargo, and Support Facilities
  - Landside
- Preferred Alternative
- Next Steps

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Introductions
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# Stakeholder Group Members

| Key Stakeholders | |
|---|---|
| United Airlines | Philippine Airlines |
| Air Seoul | T'way Air |
| Air Busan | Asia Pacific Airlines |
| China Airlines | U.S. Customs and Border Protection |
| Japan Airlines | Transportation Security Administration |
| Jin Air | Guam Customs & Quarantine Agency |
| Korean Air | Federal Aviation Administration |
| Jeju Air | |

| Operational Stakeholders | |
|---|---|
| Menzies Aviation | Burger King |
| ACI Pacific LLC | Dominos/Golden Bowl |
| Guam Flight Services | Sissie's Café |
| Supreme Group | Oasis Café |
| Lotte Duty Free | Micronesia Munchies |
| AVIS | PacAir Properties |
| Hertz | LSG Sky Chefs |
| National | Stroll Guam |
| Nissan | UPS |
| Airport Tentekomai | FedEx Guam |

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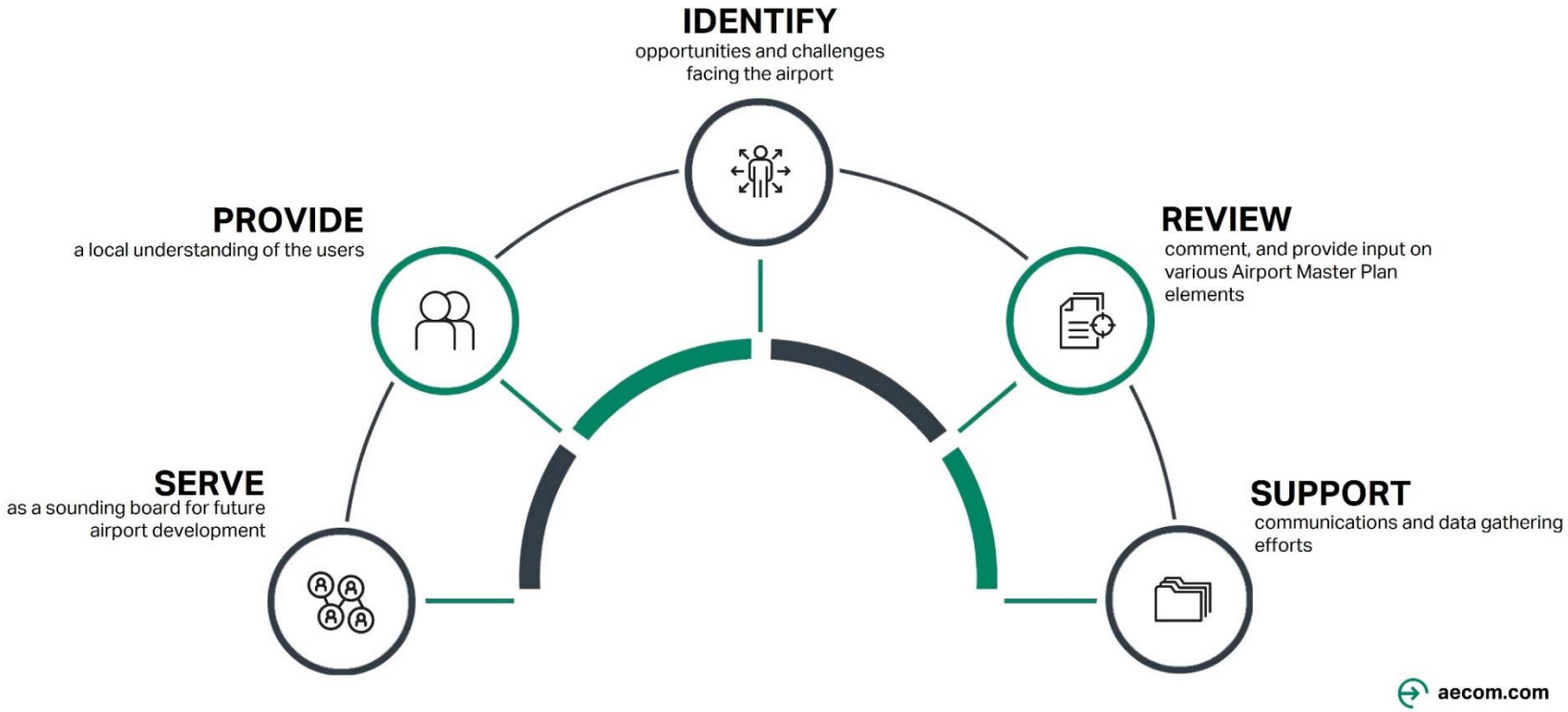
# Stakeholder Group Members

| Internal |
| --- |
| Brian J. Bamba – Chairman of the Board |
| John M. Quinata – Executive Manager |
| Artemio "Ricky" Hernandez, Ph.D. – Deputy Executive Manager |
| Frank Santos – TMG |
| Jean M. Arriola – Airport Services Manager |
| Juan M. Reyes – Air Terminal Manager |
| Audie Artero – Engineer Supervisor |
| Raymond Quintanilla – Airport Operations Superintendent |
| Ken McDonald – Properties and Facilities Superintendent |
| Ann Bautista – Acting Comptroller |
| Vincente Naputi – Chief of Airport Police |
| Joe Javellana – Property Management |
| Raymond Mantanona – ARFF Chief |
| Rolenda L. Faasuamalie – Airport Marketing Administrator |

| Island Leaders/Community Advisory Group |
| --- |
| Guam Legislature/Committee on Air Transportation |
| Guam Economic Development Authority |
| Guam Visitors Bureau |
| Guam Chamber of Commerce |
| Guam Women's Chamber of Commerce |

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# Stakeholder Group Role



# Goals and Objectives



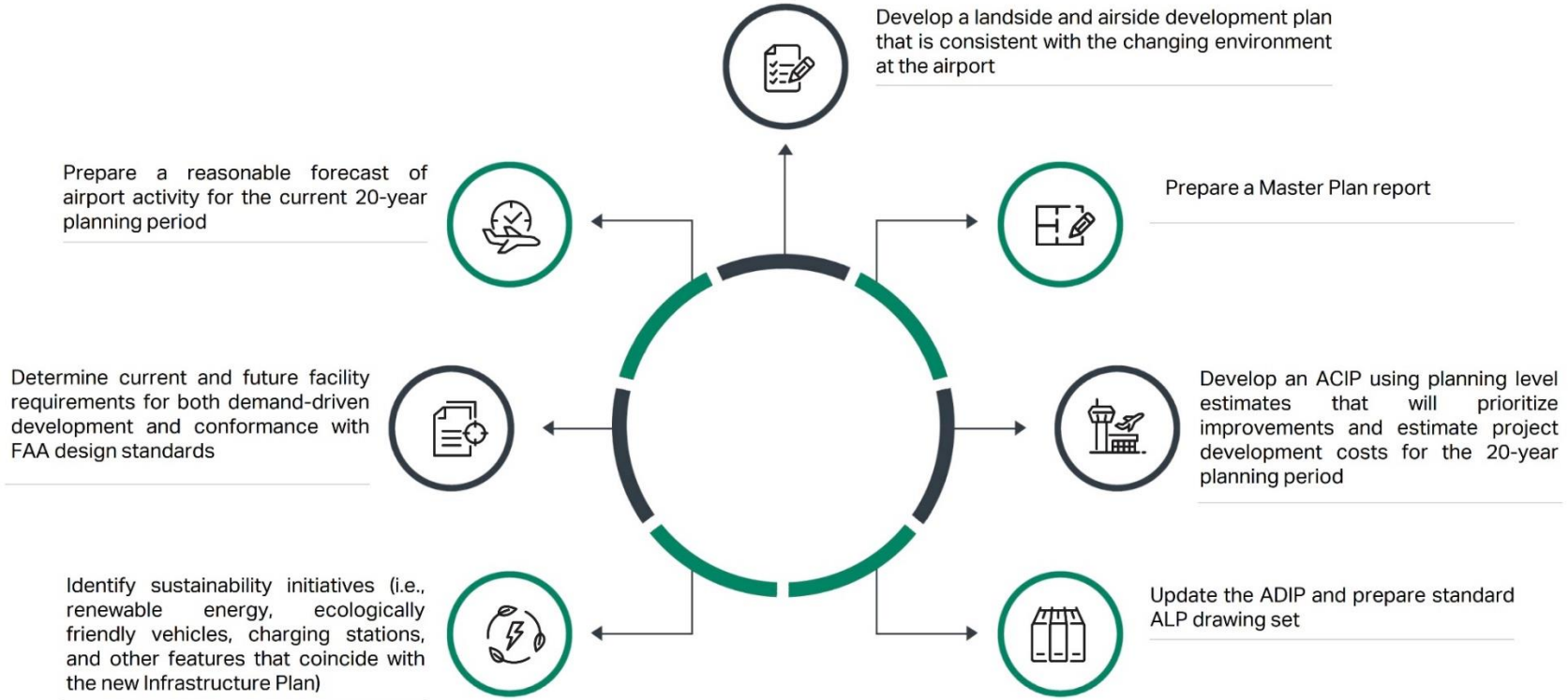

**Visioning Meeting Focus Areas** (February 3, 2022)

- Covid-19 Pandemic Tourism Recovery
- New Light Aircraft Commuter Terminal
- Military Build Up
- Future Air Cargo Growth
- Passenger Experience
- Spaceport Opportunities

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Departures
Scope Overview
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# Scope




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# Master Planning Process – The 3-Phased Project Approach




**Goal:**
***Establish project vision, analyze existing conditions/issues, and develop demand forecasts***

Key Elements
- Develop scope and detailed work plan
- Identify stakeholders
- Inventory of existing conditions
- Facility conditions assessment
- Airport GIS Gap Analysis

*Prepare and submit technical reports/working papers*

**Goal:**
***Understand airport needs, prepare facility requirements, develop alternate solutions***

Key Elements
- Facility requirements
- Alternate development and evaluation
- Environmental considerations
- Sustainability
- Runway Protection Zone

*Prepare and submit technical reports/working papers*

**Goal:**
***Strategize for the future phased development***

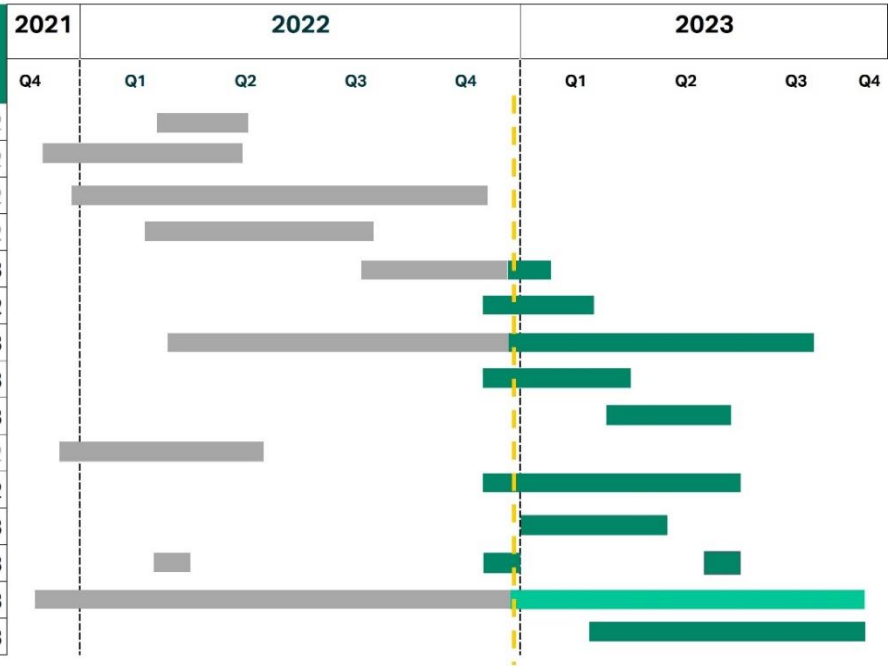
Key Elements
- Airport Layout Plan
- Facilities implementation plan
- Financial feasibility analysis
- Renewal and replacement program
- Sustainability

*Prepare and submit technical reports/working papers*
*Prepare overall technical report and ALP drawings*

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# Project Schedule

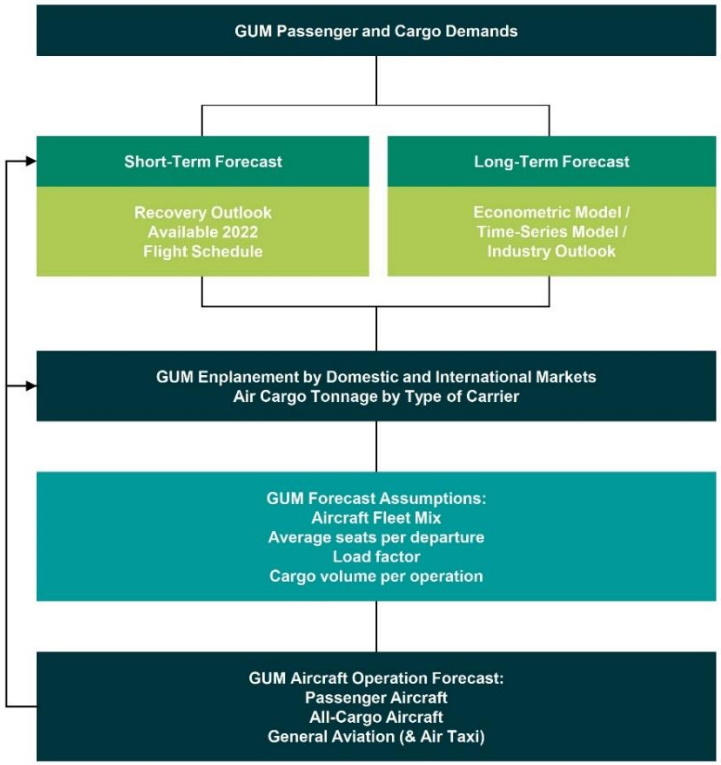
| Task Name | Start Date | End Date |
|---|---|---|
| Task 1: Study Design | 3/2/2022 | 5/11/2022 |
| Task 2: Inventory of Existing Conditions | 11/29/2021 | 5/8/2022 |
| Task 3: Aviation Forecasts | 12/13/2021 | 12/1/2022 |
| Task 4: Facility Requirements | 2/14/2021 | 8/30/2022 |
| Task 5: Alternatives Development and Evaluation | 8/10/2022 | 1/17/2023 |
| Task 6: Environmental Overview | 11/28/2022 | 2/28/2022 |
| Task 7: Airport Layout Plan | 3/10/2022 | 8/29/2023 |
| Task 8: Facilities Implementation Plan | 11/28/2022 | 3/28/2023 |
| Task 9: Financial Feasibility Analysis | 3/8/2023 | 6/14/2023 |
| Task 10: Facility Condition Assessment | 12/7/2021 | 6/20/2022 |
| Task 11: Runway Protection Zone Assessment | 4/8/2022 | 11/11/2022 |
| Task 12: Sustainability | 1/1/2023 | 4/1/2023 |
| Task 13: Community/Stakeholder Input Facilitation | 11/15/2021 | 3/17/2023 |
| Task 14: GIAA Meetings | 11/15/2021 | 10/5/2023 |
| Task 15: Final Deliverables | 2/11/2023 | 10/5/2023 |




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# Overall Forecast Approach



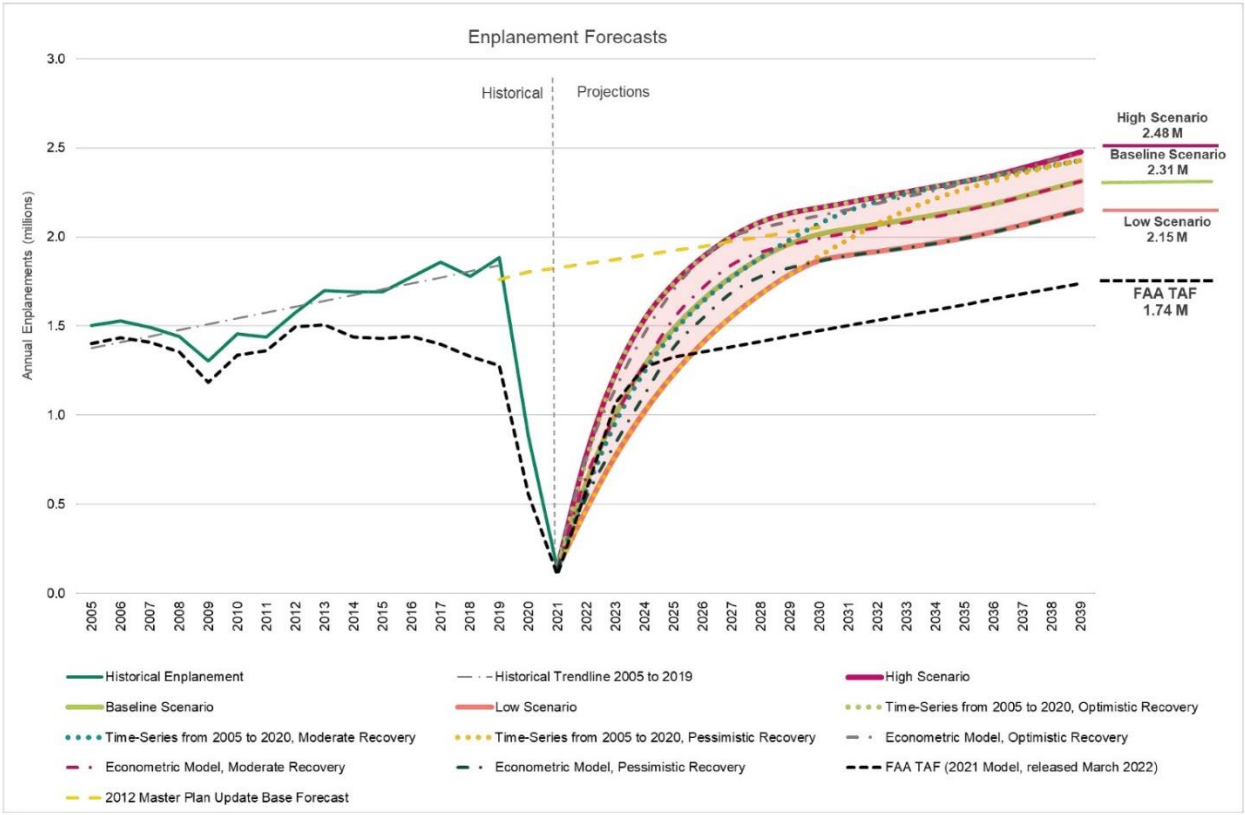

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# Fundamental Factors



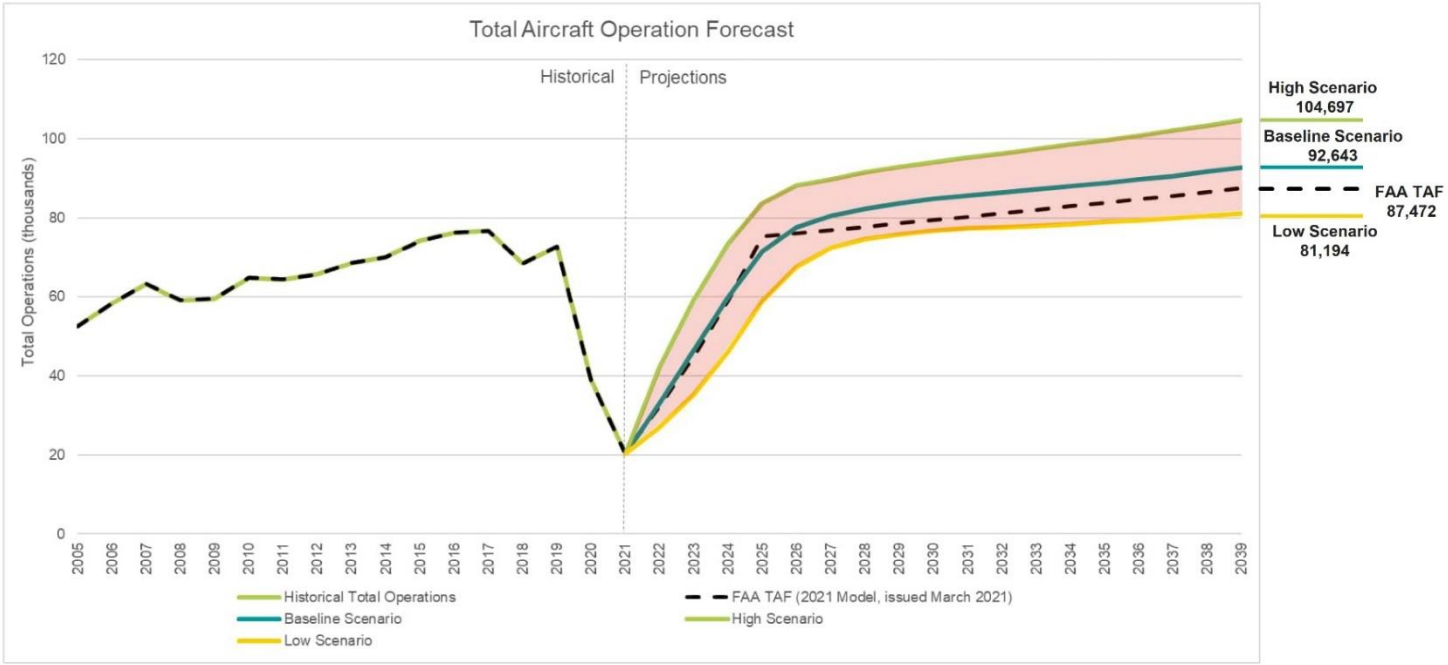

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# Enplanement Forecast



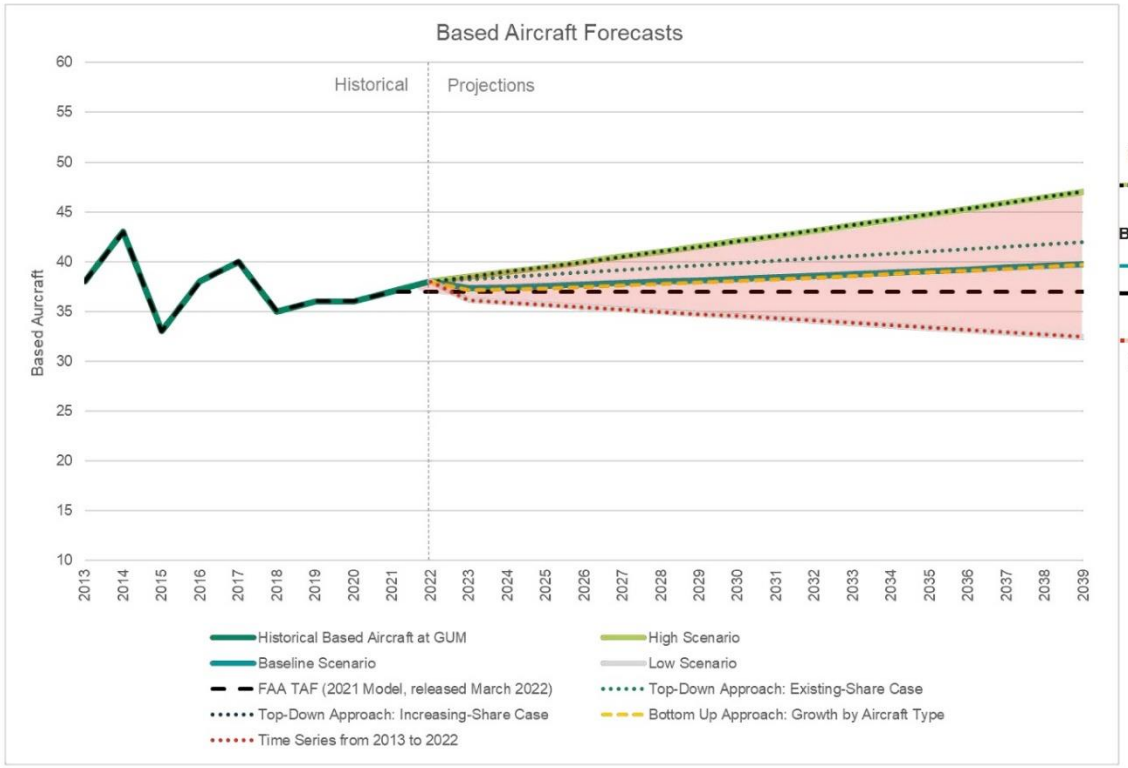

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# Aircraft Operations Forecast




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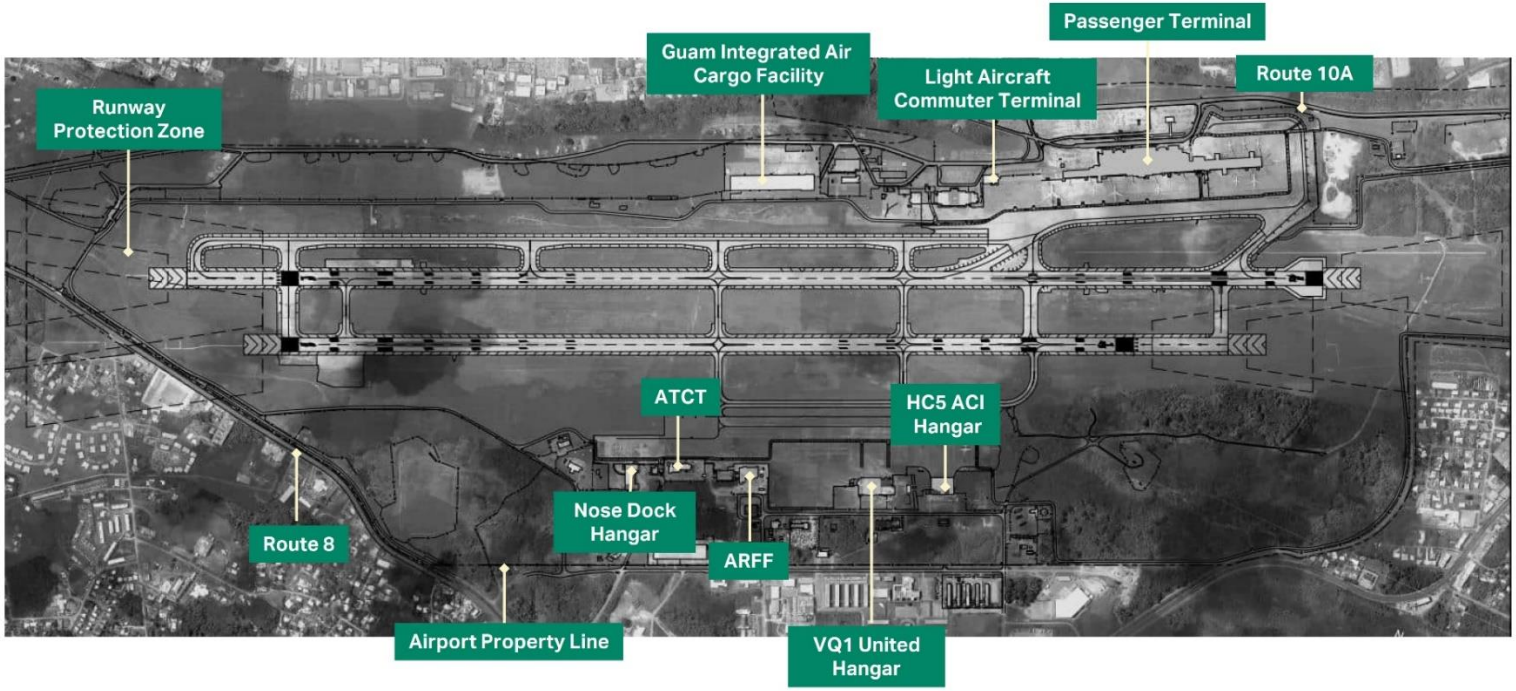
# Based Aircraft Forecast




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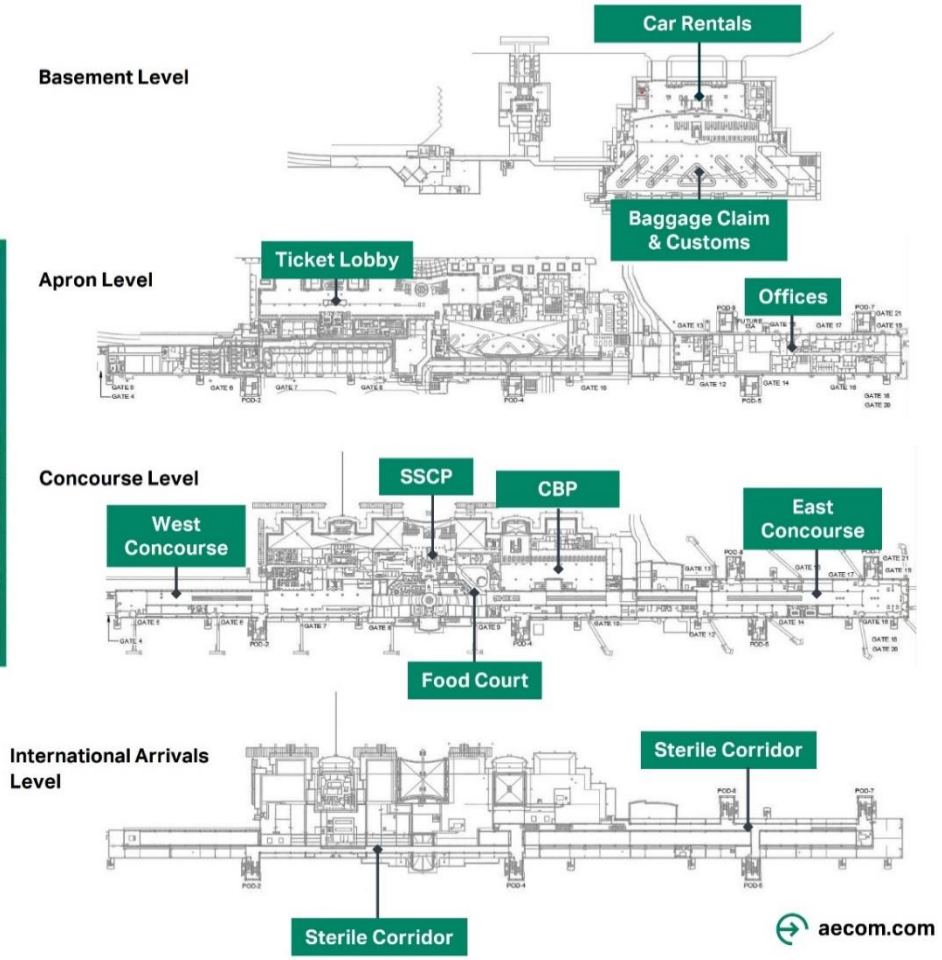
# Existing Facilities at the Airport

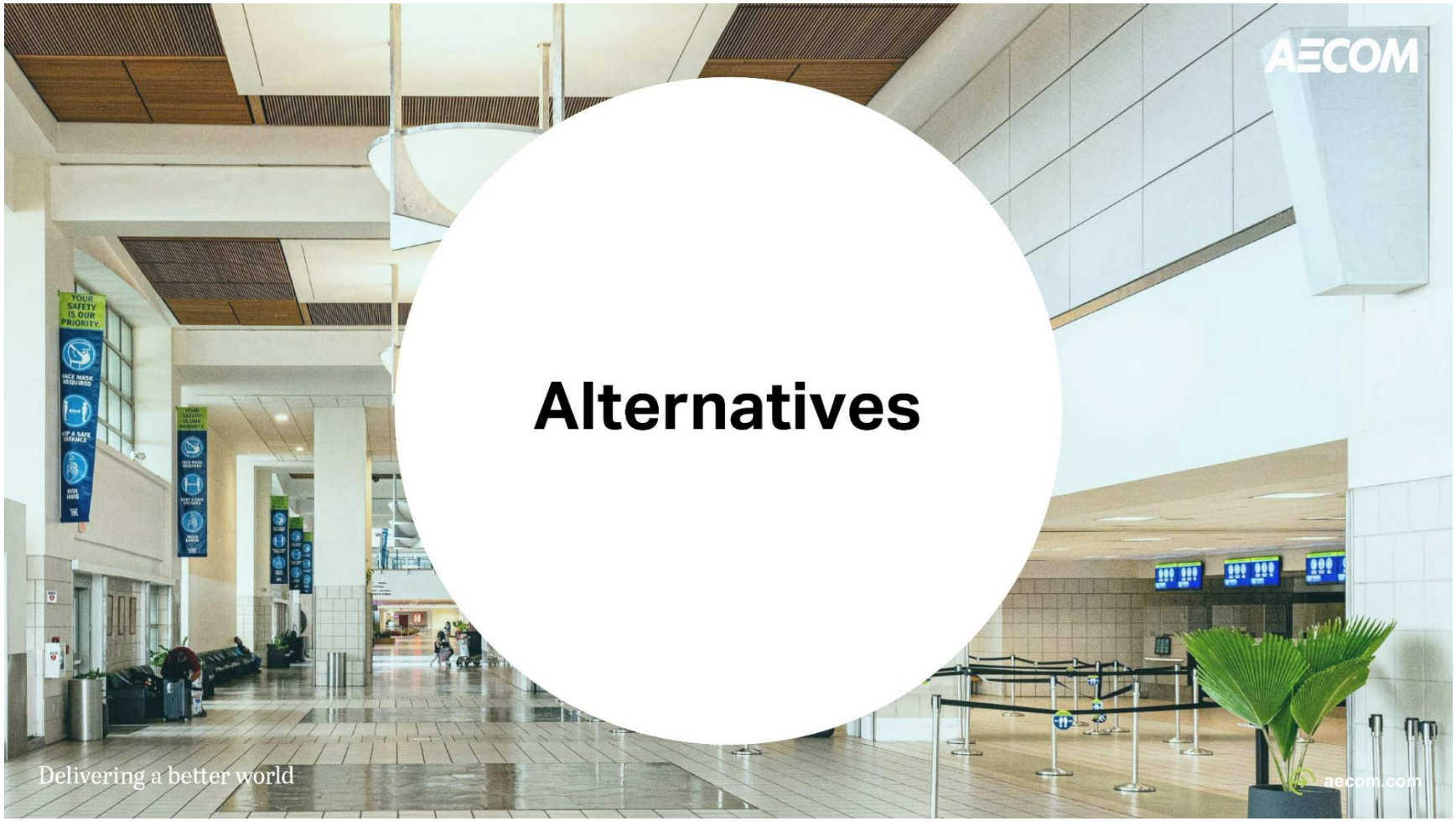



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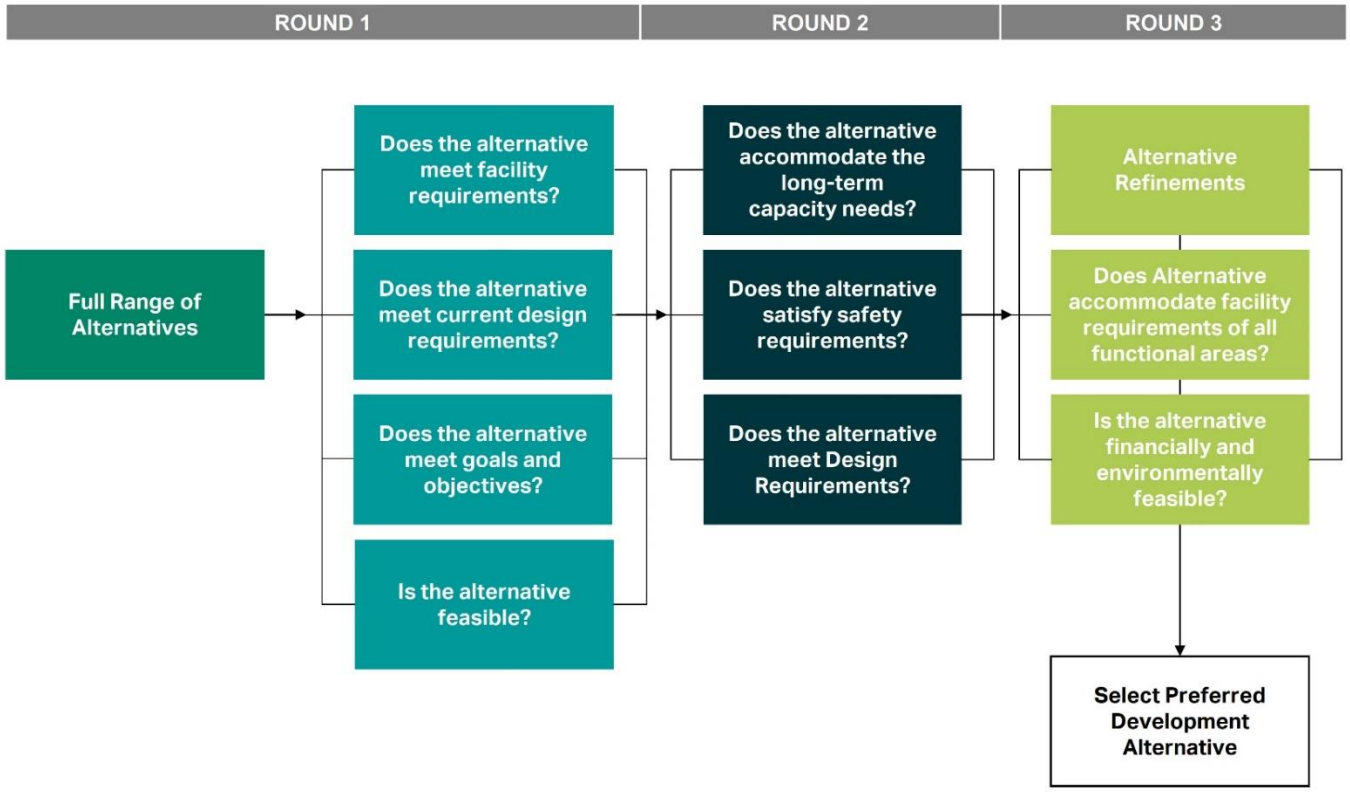
# Existing Passenger Terminal





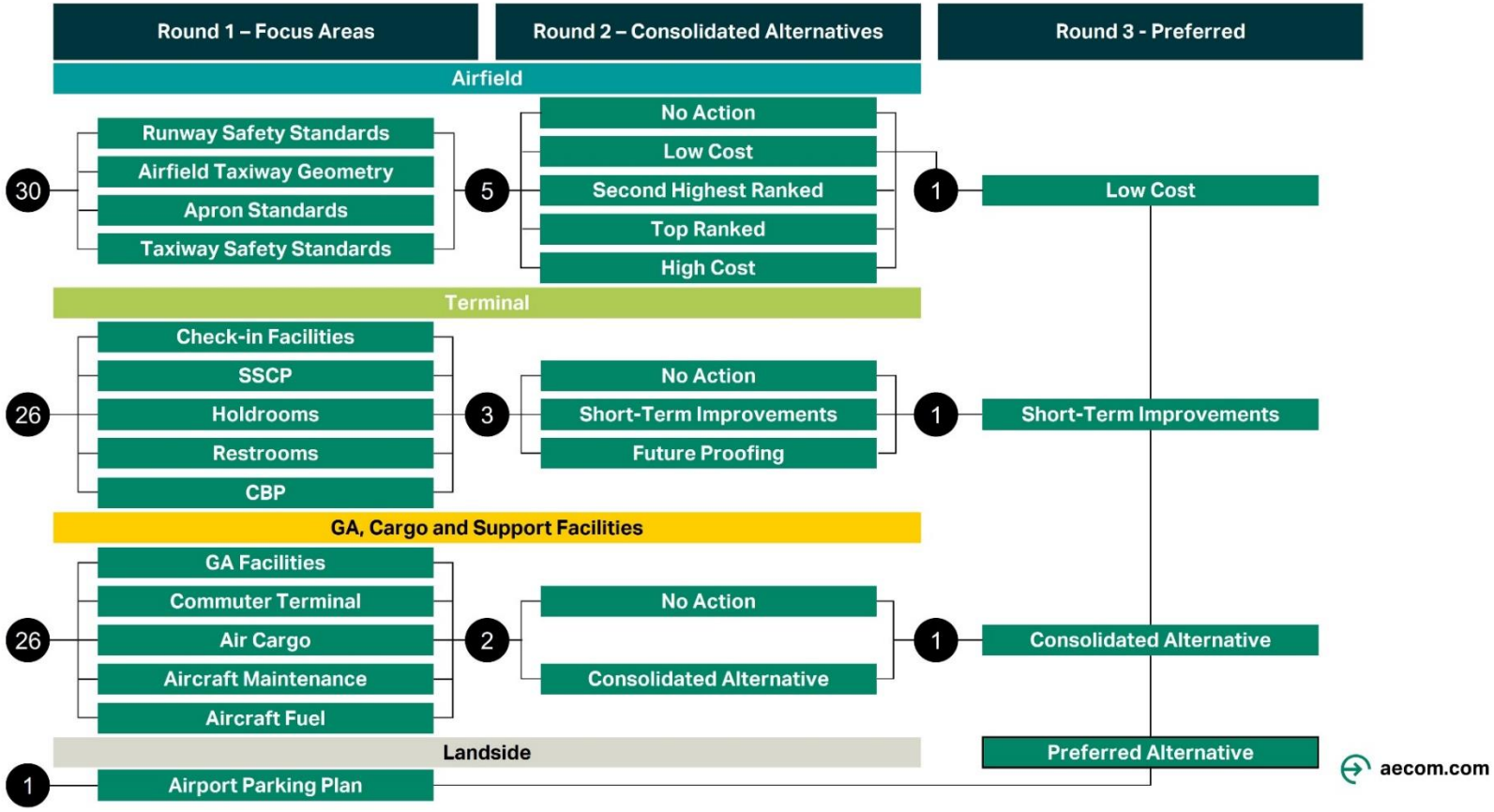

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# Alternatives Process




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# Alternatives Process




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# Airfield Facility Requirements – Runways

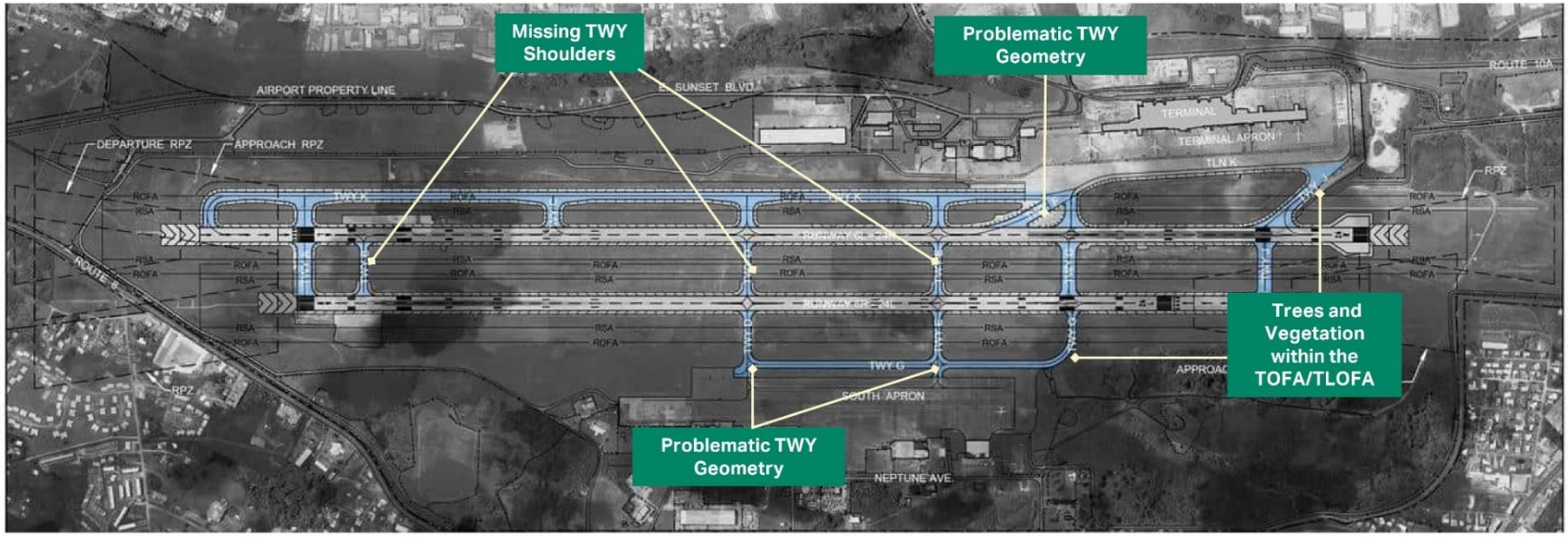



## Runway Safety Standards

- Correct Runway 6L and 6R ROFA deficiencies
- Grade the existing terrain within the Runway 24L RSA and ROFA
- Address drainage system within the Runway 24L RSA
- Address Runway 6L and 6R RPZ deficiencies

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# Airfield Facility Requirements – Taxiways




## Airfield Taxiway Geometry and Safety Standards

- Construct taxiway shoulders for all or portions of Taxiways B, D, E, G, and J
- Remove trees/vegetation within the TOFAs of Taxiways G and J
- Update taxiway fillet geometry for all taxiway intersections
- Reconfigure problematic taxiway geometries based on FAA design recommendations

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# Airfield Facility Requirements – Aprons




## Apron Standards

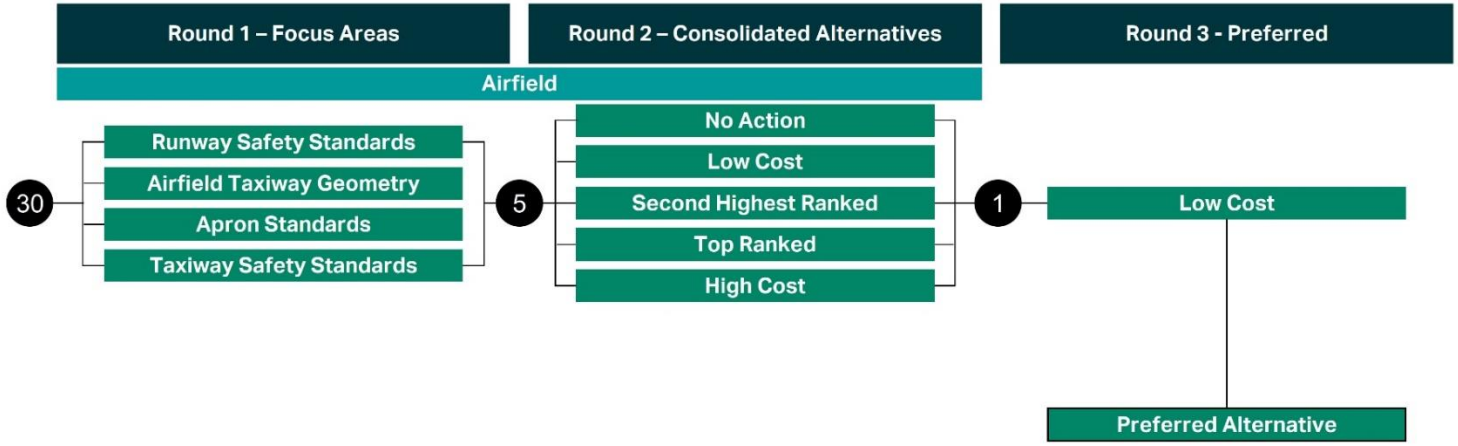
- Provide standard taxilane centerline to fixed object clearance between Taxilane K (ADG V) and fixed object (passenger terminal apron VSR)
- Provide standard taxiway centerline to taxilane centerline separation between Taxiway G (ADG V) and the south apron taxilane (ADG V)

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# Airfield Alternatives



# Airfield Alternatives Process

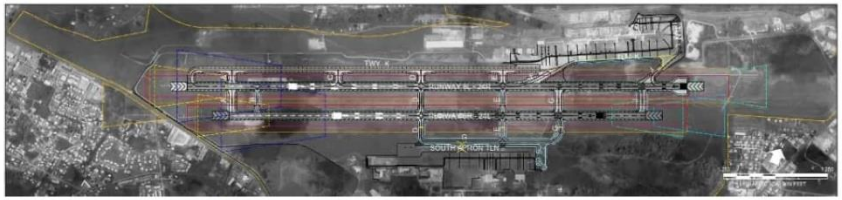



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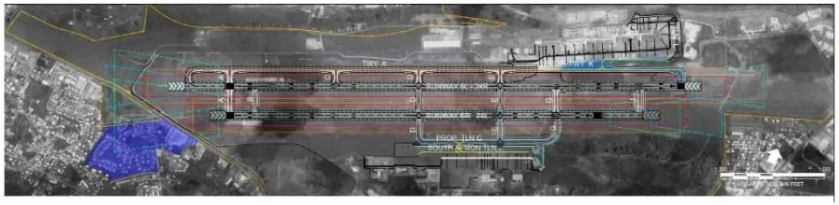
# Round 2 Alternatives



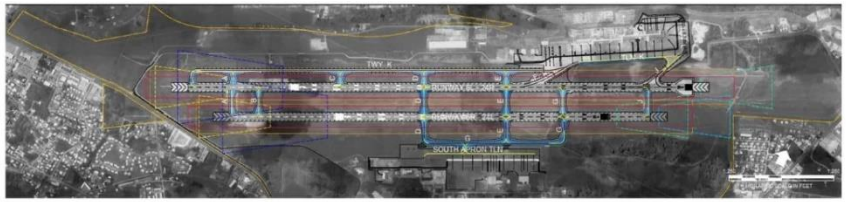
Alternative 1 – No Action



Alternative 2 – Low Cost



Alternative 3 – Second Highest Ranked in Round 1



Alternative 4 – Highest Ranked in Round 1



Alternative 5 – High Cost

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# Round 2 Evaluation and Cost Estimates

| Criteria | Weighting | Alternative 1 | Alternative 2 | Alternative 3 | Alternative 4 | Alternative 5 |
|---|---|---|---|---|---|---|
| Airside Operational Efficiency | 15% | | | | | |
| Cost Impacts | 15% | | | | | |
| Ease of Implementation | 5% | | | | | |
| New Airfield Pavement | 5% | | | | | |
| Environmental Impacts | 15% | | | | | |
| Apron Depth Impact | 2.5% | | | | | |
| Satisfies FAA RSA Requirements | 5% | | | | | |
| Satisfies FAA ROFA Requirements | 5% | | | | | |
| Satisfies FAA RPZ Requirements | 7.5% | | | | | |
| Satisfies FAA Grading/Drainage Standards | 5% | | | | | |
| Addresses FAA Problematic Taxiway Geometry | 5% | | | | | |
| Satisfies FAA TDG 6 Requirements | 10% | | | | | |
| Satisfies FAA Taxiway/Taxilane Separation | 5% | | | | | |
| **Total** | 100% | 57.5 | 130 | 122.5 | 122.5 | 112.5 |

- Unfavorable
- Neutral
- Favorable

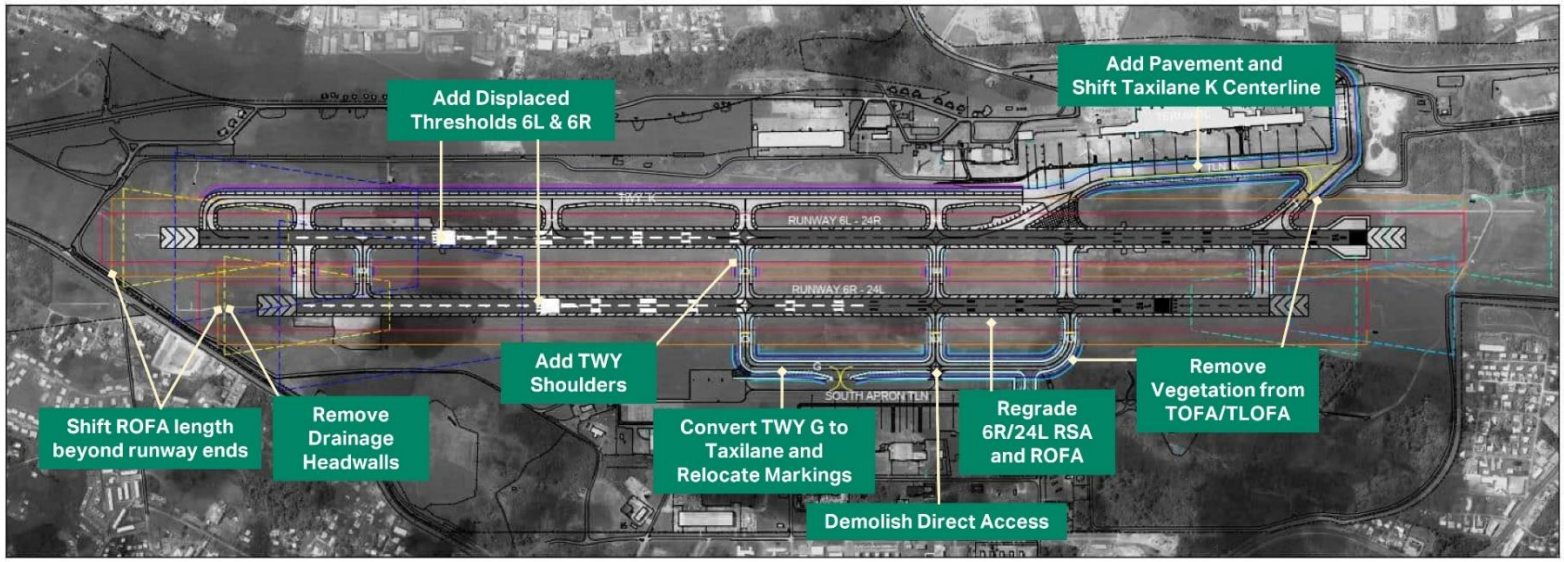
| Airfield Alternative | Estimated Total Cost |
|---|---|
| Alternative 1 | $0 |
| Alternative 2 | $31,800,000 |
| Alternative 3 | $84,900,000 |
| Alternative 4 | $121,300,000 |
| Alternative 5 | $174,400,000 |

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# Airfield Alternatives – Preferred

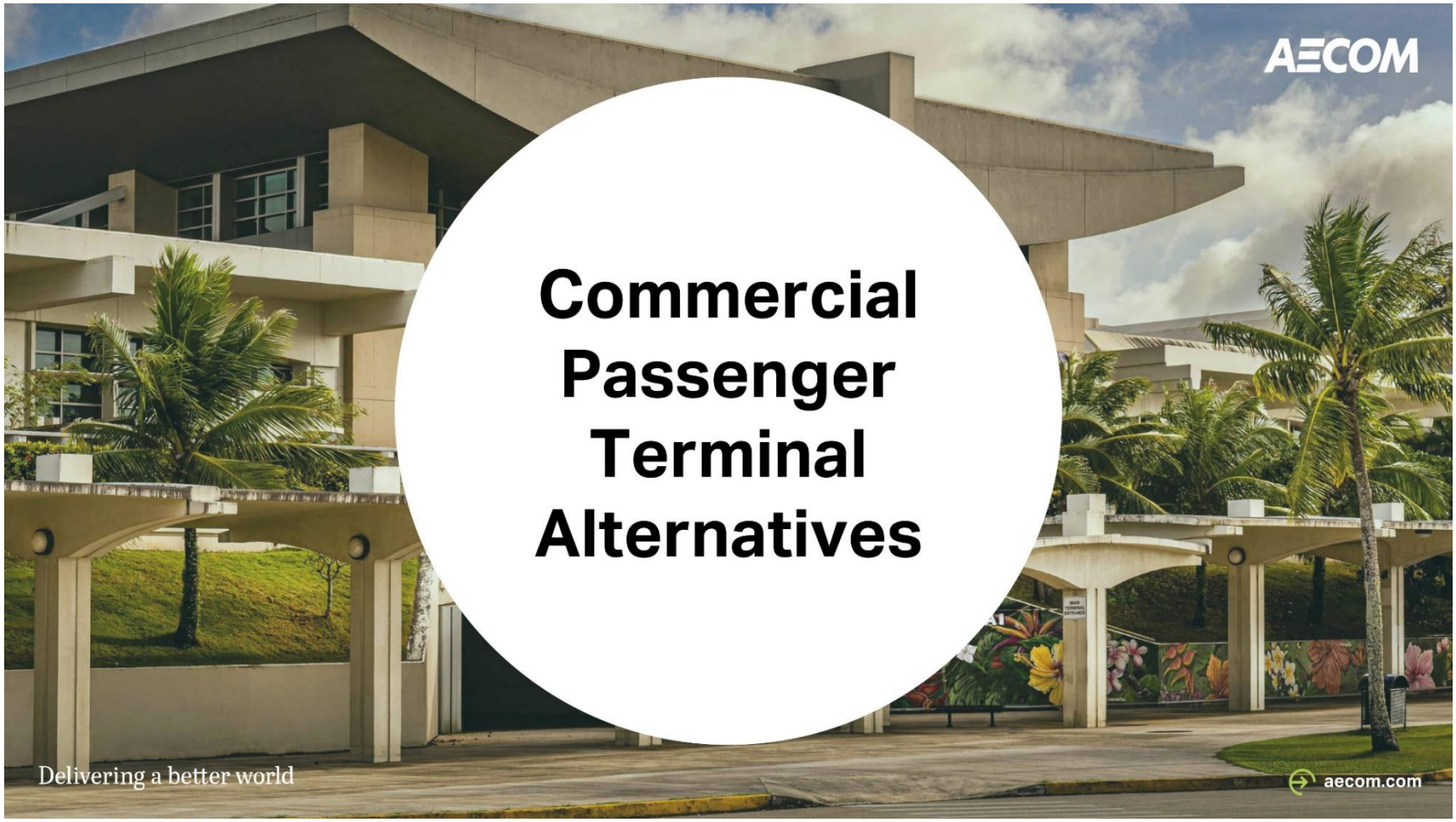


# Preferred Alternative

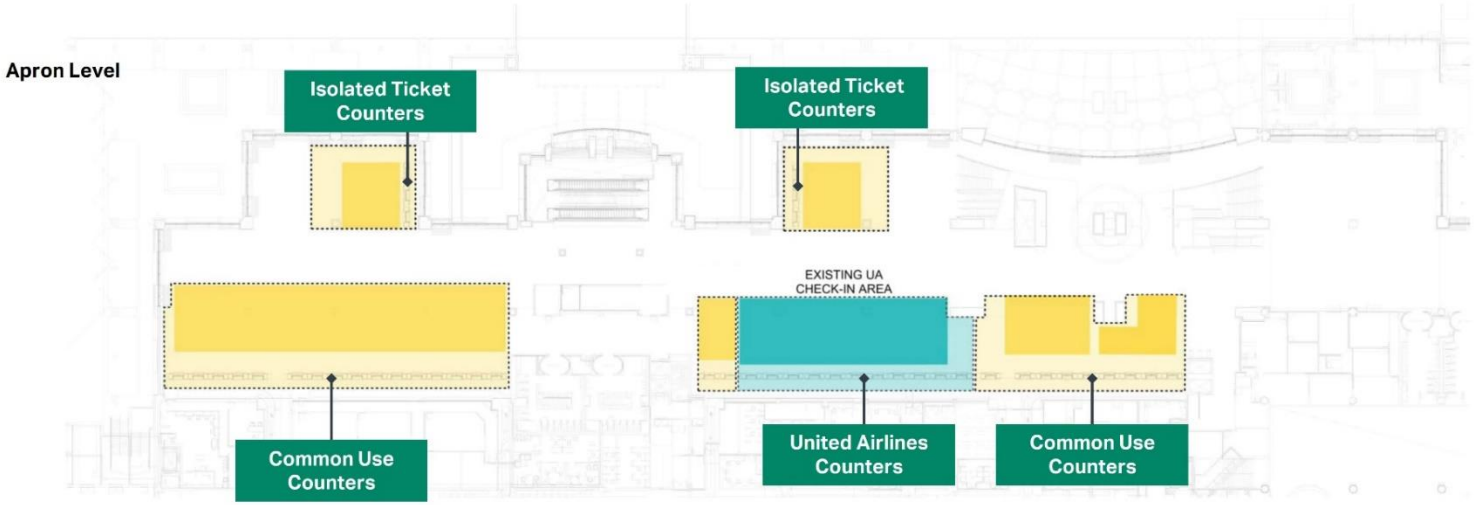



## Alternative 2 – Low Cost

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# Check-in Facilities – Facility Requirements




## Check-in Facilities

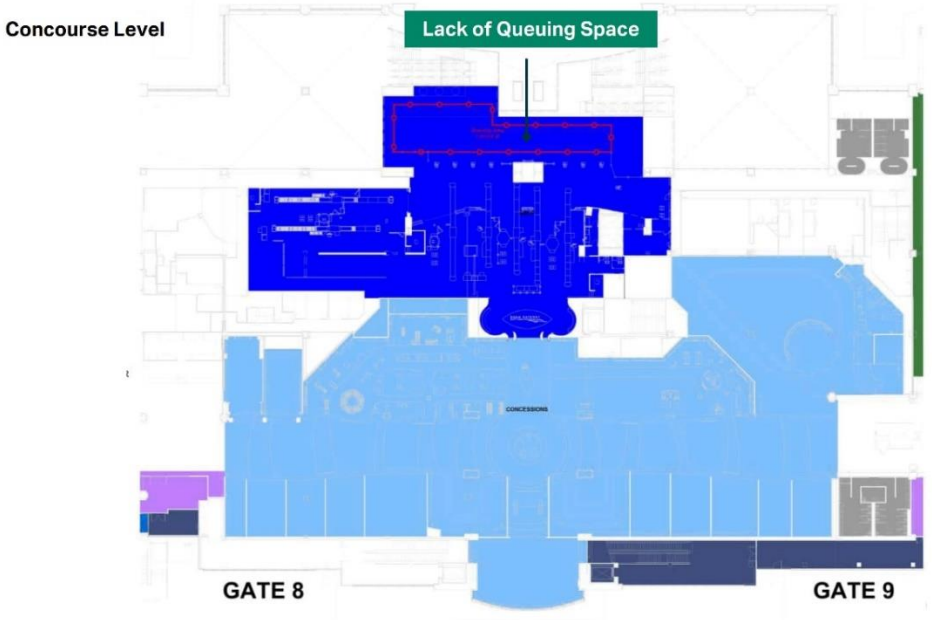
- Add common use touchless self-service kiosks.
- Add baggage induction points at the 12 counters next to the entrances between the East and West Check-in Areas.

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# Security Screening Checkpoint – Facility Requirements

**SSCP**

- Enlarge the TSA queue area.
- Will need reconfiguration and/or expansion if TSA upgrades to CPSS at the Airport.




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# CBP, Holdrooms, and Restrooms – Facility Requirements




## CBP

- Re-examine outbound CBP visa inspection currently located at Gates 7 and 9.

## Holdrooms

- Holdrooms require expansion and/or innovative solutions to optimize the use of existing space.

## Restrooms

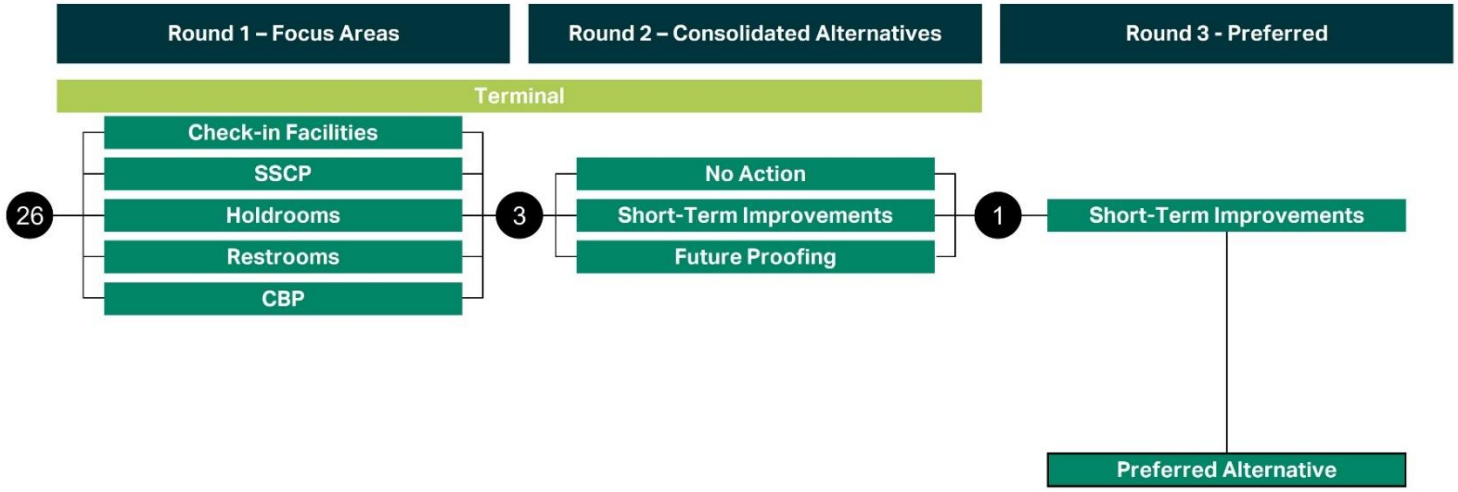
- Additional restrooms may be needed for international arrivals.

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# Commercial Passenger Terminal Alternatives

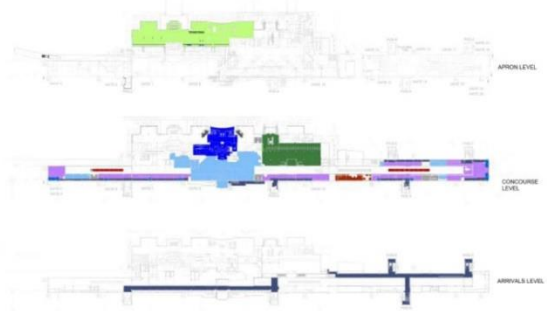


# Commercial Passenger Terminal Alternatives Process

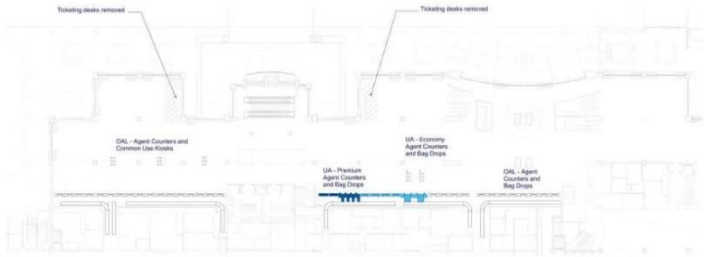



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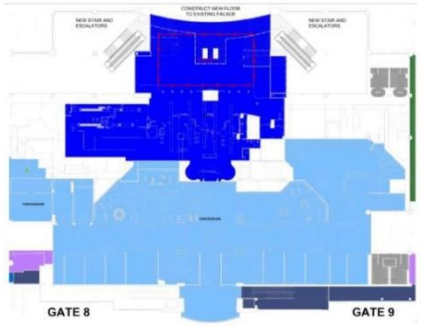
# Round 2 Alternatives




Alternative 2 – Short Term Improvements



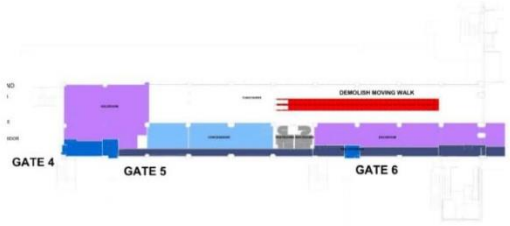

Alternative 2 – Ticketing - CSSS



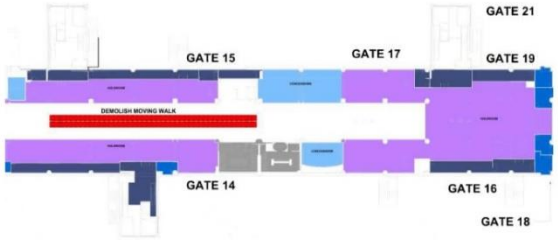

Alternative 2 – SSCP – Expand Queuing

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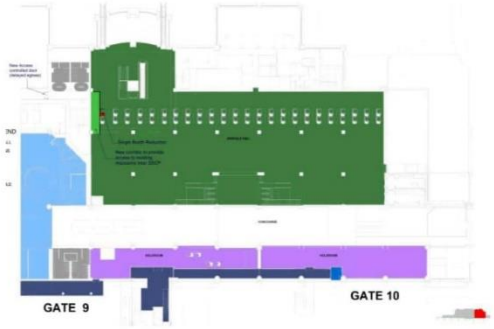
# Round 2 Alternatives




**Alternative 2 – Holdrooms – West Concourse Moving Walk Removal and Relocate CBP Booths to Gates 4/5**



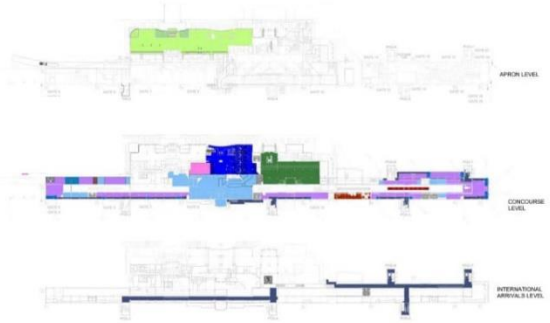

**Alternative 2 – Holdrooms – East Concourse Moving Walk Removal**



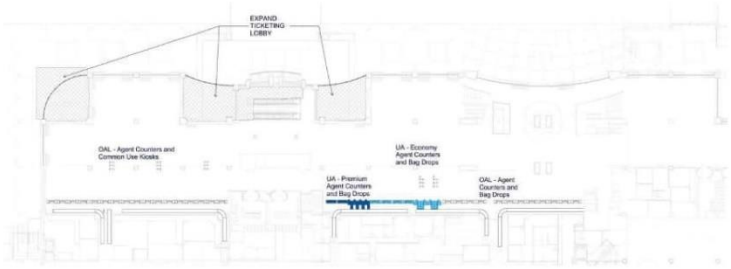

**Alternative 2 – Arrivals Hall – Restroom Corridor**

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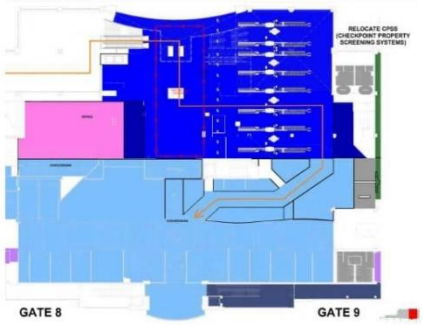
# Round 2 Alternatives




**Alternative 3 – Future Proofing**



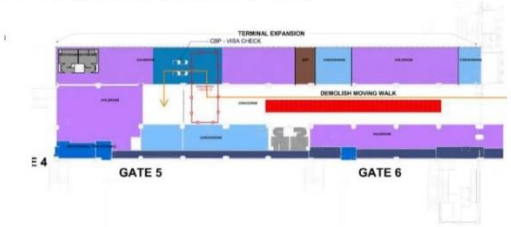

**Alternative 3 – Ticketing – CSSS and Lobby Expansion**



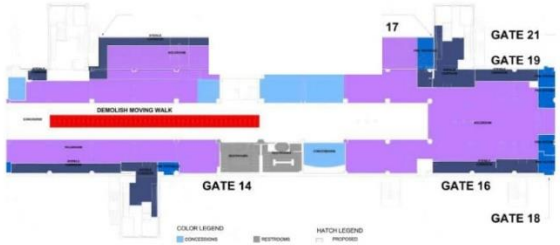

**Alternative 3 – SSCP – Expand Queuing and Relocate CPSS**

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# Round 2 Alternatives




**Alternative 3 – Holdrooms – West Concourse Moving Walk Removal, Holdroom Expansion, and Relocate CBP Booths to Gates 4/5**



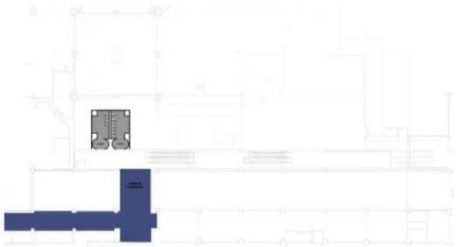

**Alternative 3 – Holdrooms – East Concourse Moving Walk Removal and Holdroom Expansion**



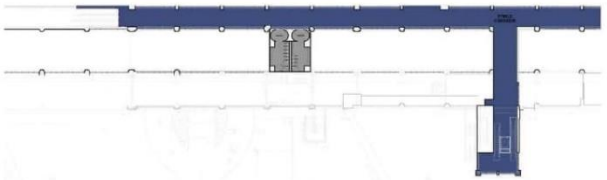

**Alternative 3 – Arrivals Hall – New Restroom**

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# Round 2 Alternatives



**Alternative 3 – Sterile Corridor – Add New Restroom**



**Alternative 3 – Sterile Corridor – Add New Restroom**

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# Round 2 Evaluation and Cost Estimates

| Criteria | Weighting | Alternative 1 | Alternative 2 | Alternative 3 |
|---|---|---|---|---|
| Operational Efficiency | 10% | Unfavorable | Favorable | Favorable |
| Cost Impacts | 15% | Neutral | Favorable | Unfavorable |
| Ease of Implementation | 10% | Neutral | Favorable | Unfavorable |
| Building Construction Impacts | 10% | Neutral | Favorable | Unfavorable |
| Satisfies LoS Maximum Waiting Time Guidelines (Economy) | 2.5% | Unfavorable | Favorable | Favorable |
| Satisfies LoS Maximum Waiting Time Guidelines (Business/First Class) | 2.5% | Unfavorable | Favorable | Favorable |
| Impacts Ticket Lobby | 5% | Neutral | Favorable | Unfavorable |
| PAX Movement Complexity (Check-in) | 4% | Unfavorable | Neutral | Favorable |
| Meets LoS for TSA Guidelines (Queue) | 4% | Unfavorable | Neutral | Favorable |
| Meets LoS for TSA Guidelines (Post Screening) | 4% | Unfavorable | Unfavorable | Favorable |
| Impacts on Concessions | 5% | Neutral | Favorable | Neutral |
| PAX SSCP Length of Travel | 2% | Neutral | Neutral | Neutral |
| Investment Impact | 5% | Unfavorable | Neutral | Favorable |
| PAX Movement Complexity (Concourse) | 4% | Neutral | Neutral | Neutral |
| Restroom Access | 5% | Unfavorable | Neutral | Favorable |
| Overall Walking Distance | 2% | Neutral | Neutral | Neutral |
| PAX Experience | 10% | Unfavorable | Neutral | Favorable |
| **Total** | 100% | 53 | 151 | 107 |

Unfavorable

Neutral

Favorable

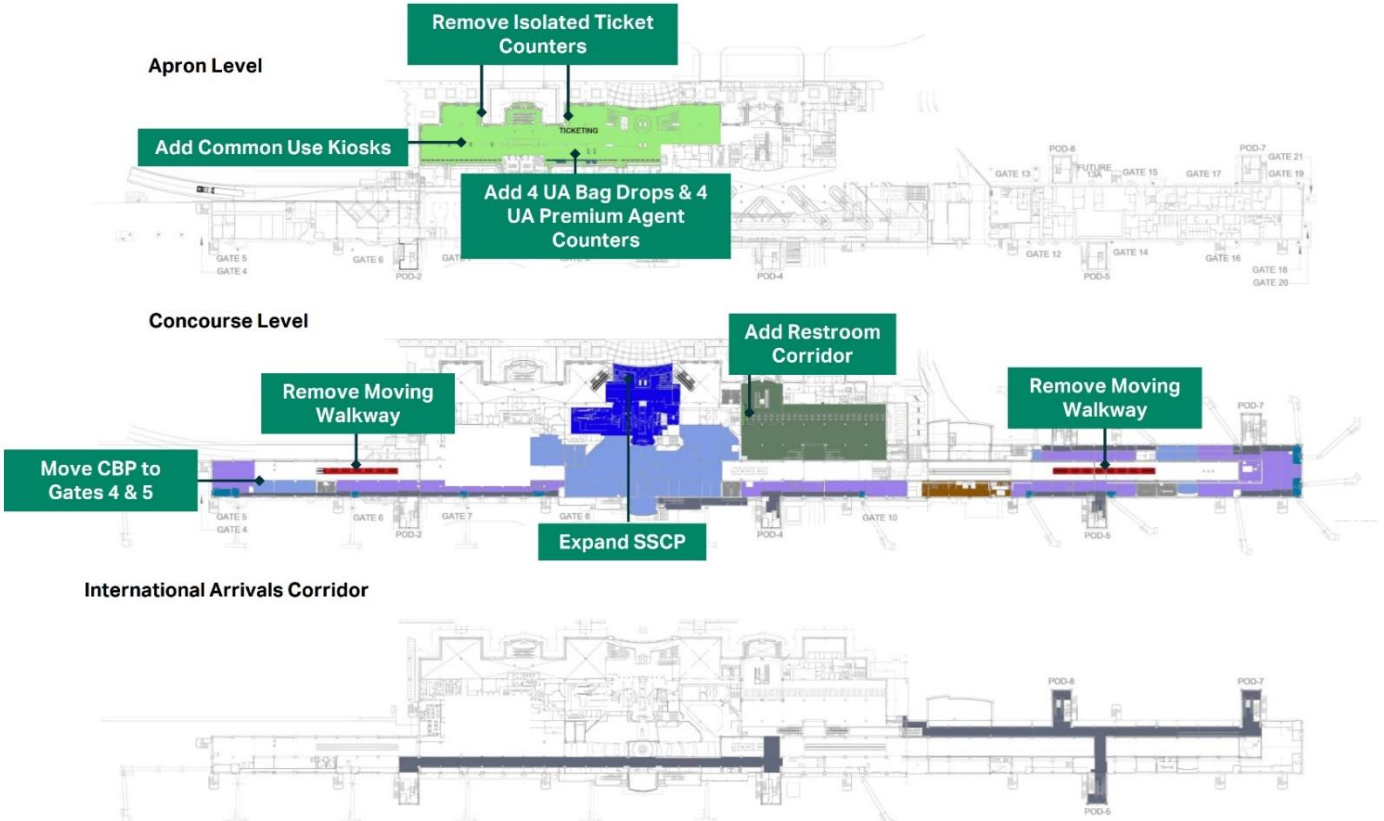
| Commercial Passenger Terminal Alternative | Estimated Total Cost |
|---|---|
| Alternative 1 | $0 |
| Alternative 2 | $17,170,000 |
| Alternative 3 | $97,810,000 |

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# Commercial Passenger Terminal Alternatives – Preferred



# Preferred Alternative

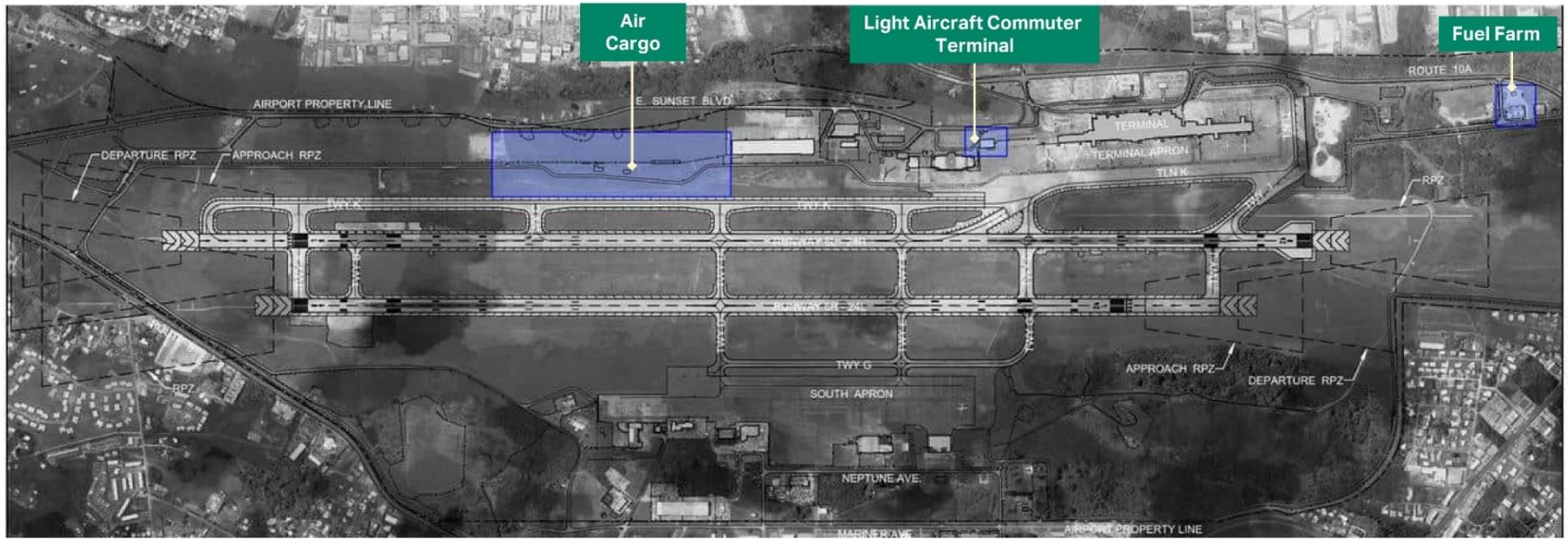



## Alternative 2 – Short-Term Improvements

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# North Airfield – Facility Requirements




**Light Aircraft Commuter Facility**

- A recommended replacement of the existing facility with a newer facility of similar size.

**Air Cargo Facilities**

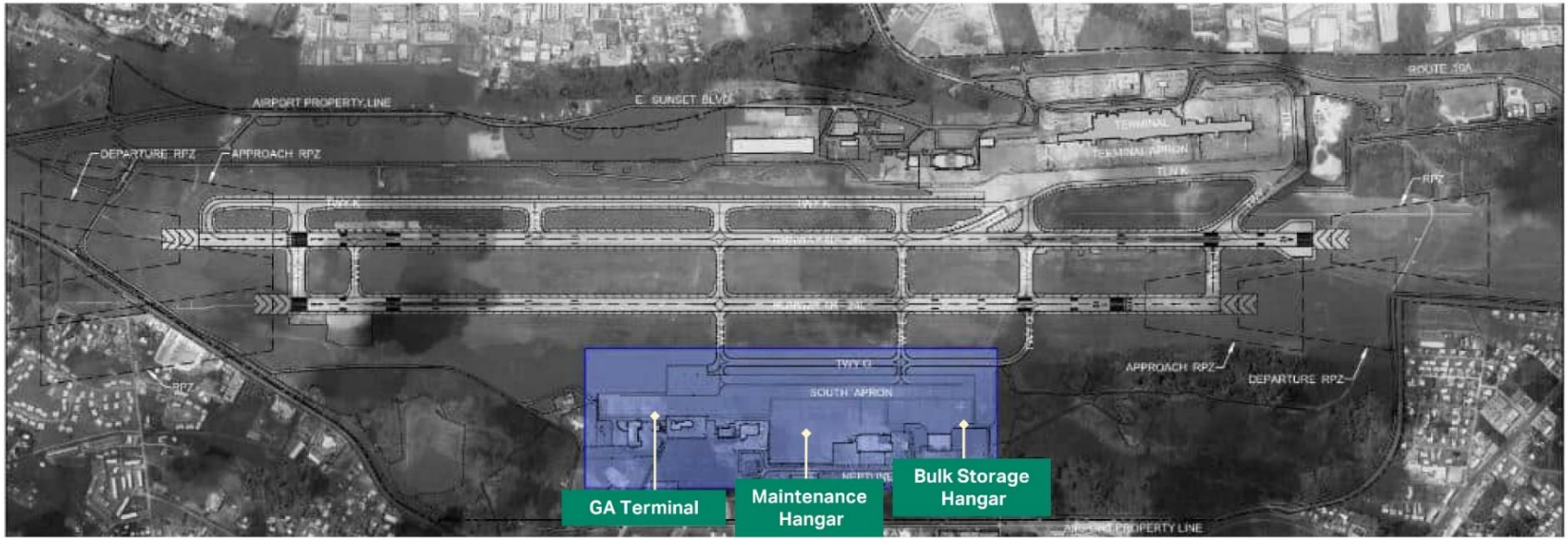
- A 60,000 SF air cargo facility with associated loading docks and vehicle parking to accompany the planned cargo apron development.

**Aircraft Fuel Facility**

- A new jet fuel storage tank is recommended based recent supply chain issues, shipping issues, and geo-political issues.
- An Avgas fuel tank is requested based on Airport demand.

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# South Airfield – Facility Requirements




**General Aviation Facilities**

- A recommended 37,500 SF conventional hangar for bulk aircraft storage and maintenance.
- A dedicated 8,800 SF GA terminal with at least 56 vehicle parking spaces.

**Aircraft Maintenance Facilities**

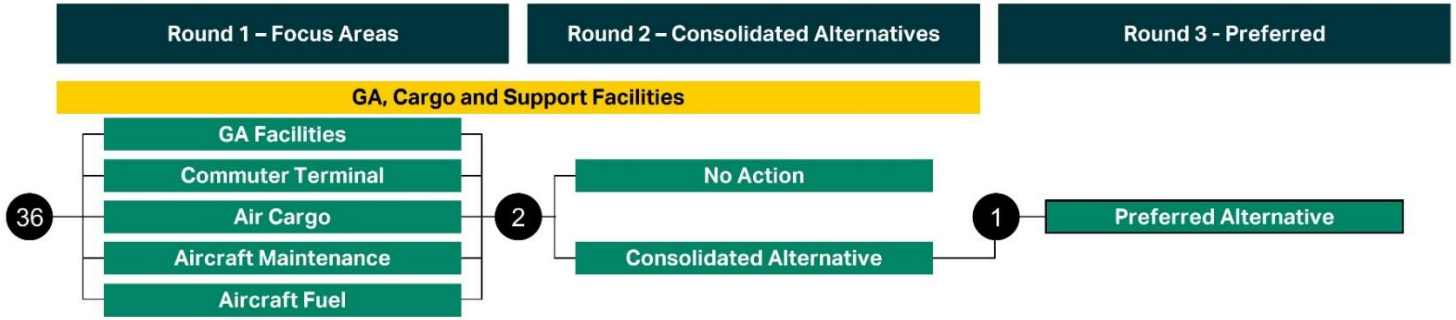
- An 81,200 SF is recommended to accommodate future widebody aircraft maintenance operations.

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# General Aviation, Cargo, and Support Facilities Alternatives



# GA, Cargo, and Support Facilities Alternative Process

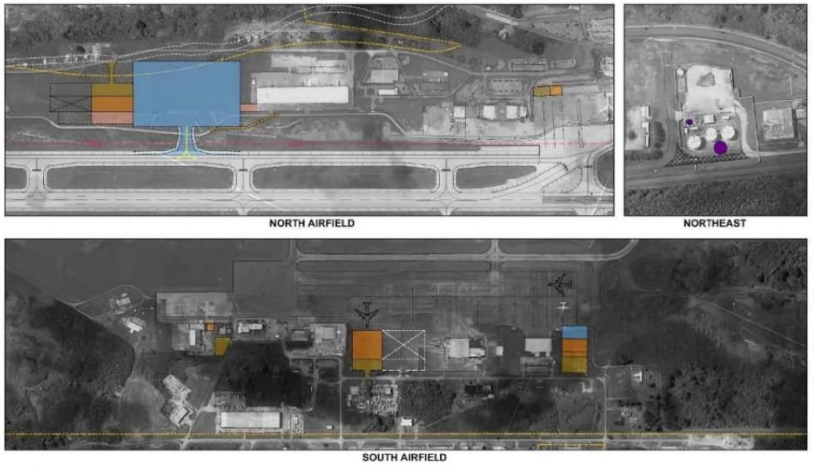



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# Round 2 Alternatives




## Alternative 1 – No Action




## Alternative 2 – Consolidated Alternative

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# Round 2 Evaluation

| Criteria | Weighting | Alternative 1 | Alternative 2 |
|---|---|---|---|
| Airside Operational Efficiency | 15% | | |
| Cost Impacts | 20% | | |
| Ease of Implementation | 10% | | |
| Satisfies Future Airport Forecast Requirement | 15% | | |
| Can Accommodate Additional Future Growth and Function Changes | 10% | | |
| Improves User (Passengers, Operators, etc.) Experience | 7.5% | | |
| New Facilities for Long Term Usage | 7.5% | | |
| Impacts Ultimate Terminal Development | 5% | | |
| Preserves Future Shuttle Launch Aircraft | 10% | | |
| **Total** | 100% | 100 | 130 |

Unfavorable

Neutral

Favorable

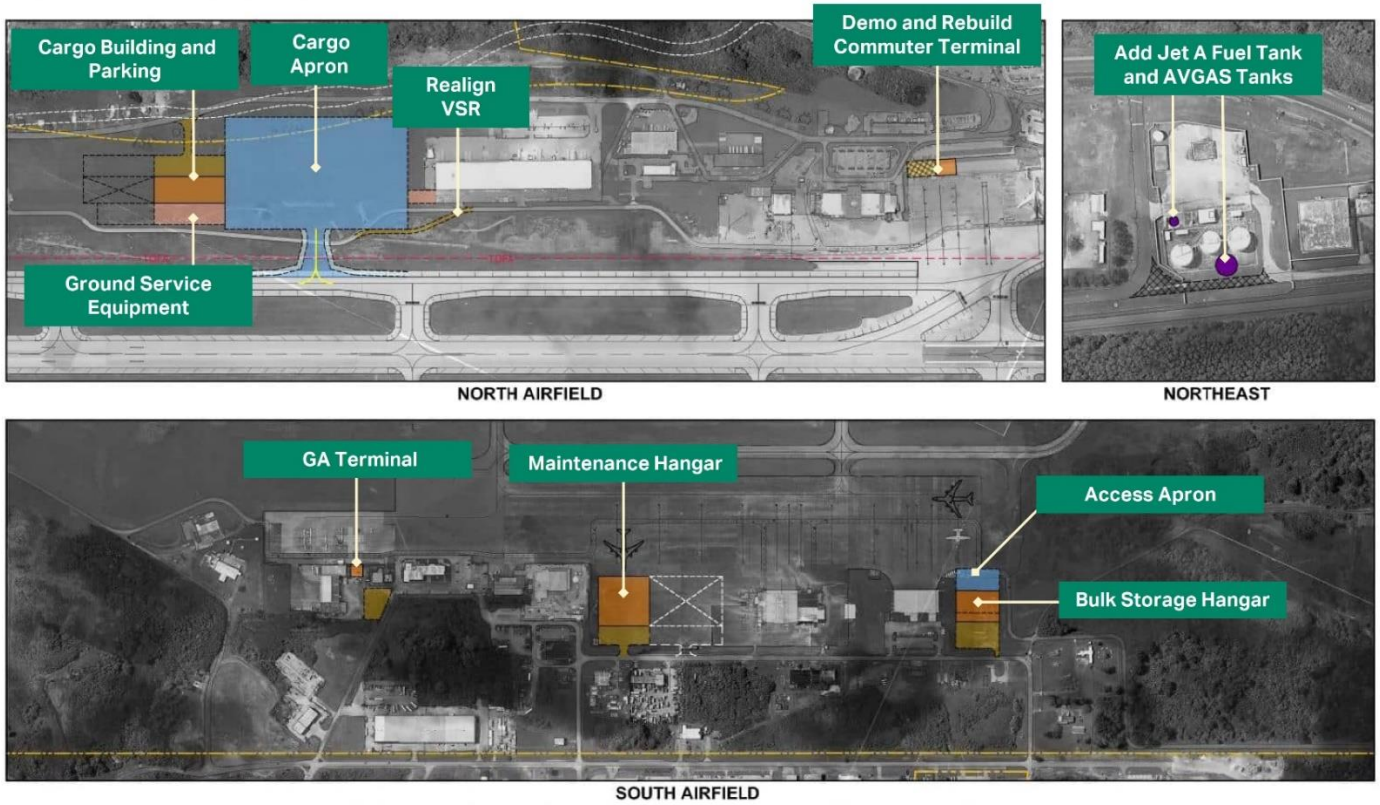
| Criteria | Estimated Total Cost |
|---|---|
| Alternative 1 | $0 |
| Alternative 2 | $341,470,000 |

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# General Aviation, Cargo, and Support Facilities – Round 3

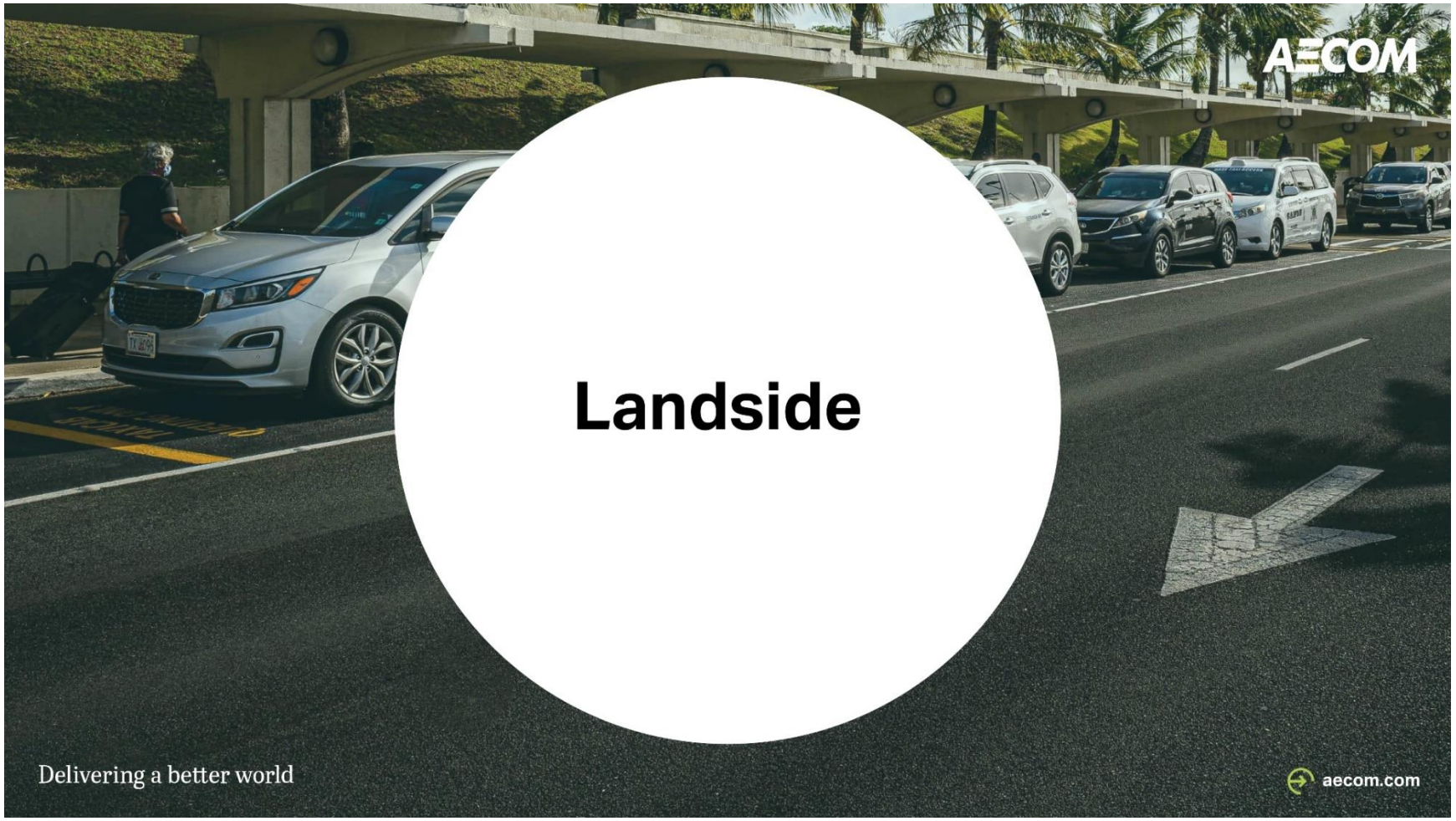


# Preferred Alternative



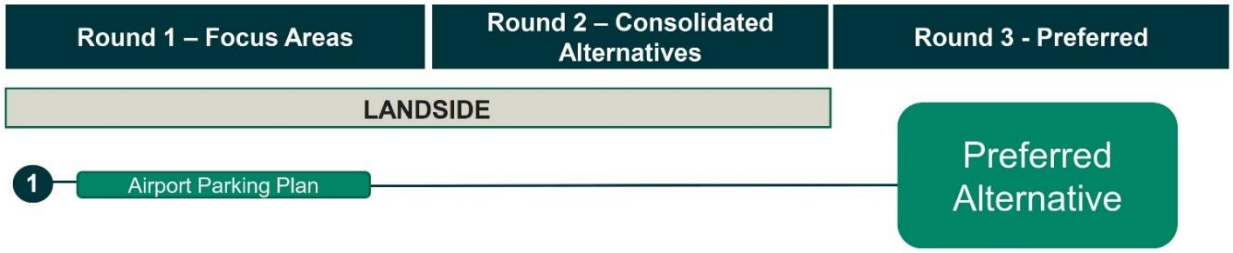

## Alternative 2 – Consolidated Alternative

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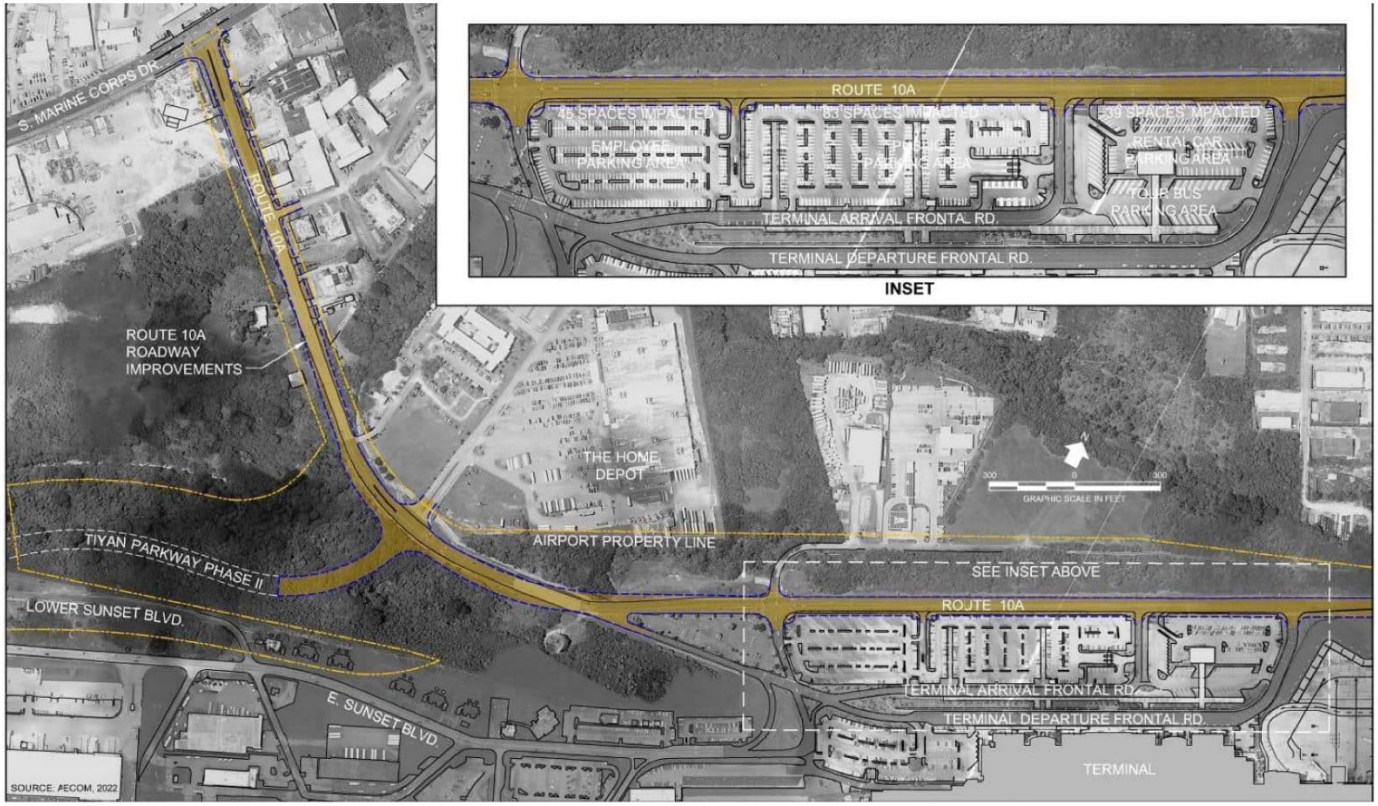
# Planned Landside Improvements




Round 1 – Focus Areas
Round 2 – Consolidated Alternatives
Round 3 - Preferred
LANDSIDE
1
Airport Parking Plan
Preferred Alternative

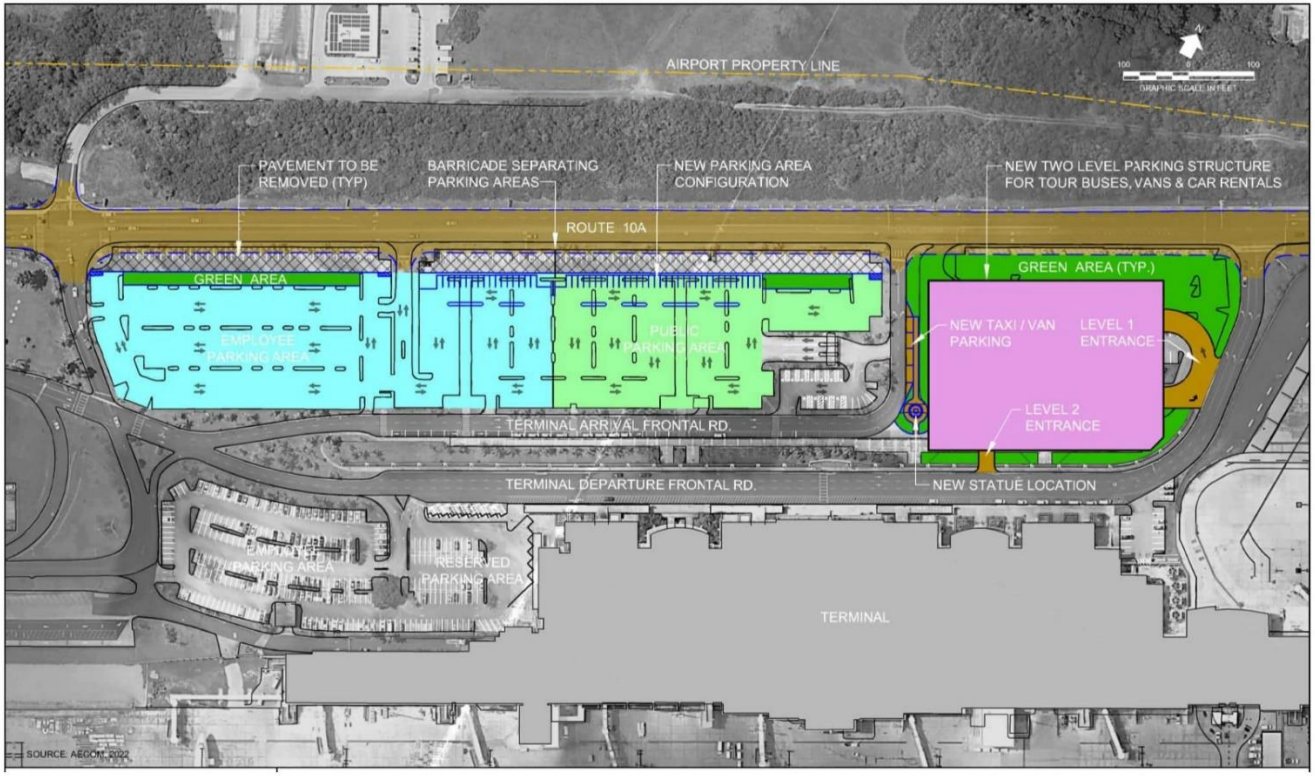
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# Route 10A Widening and Tiyan Parkway Construction Design




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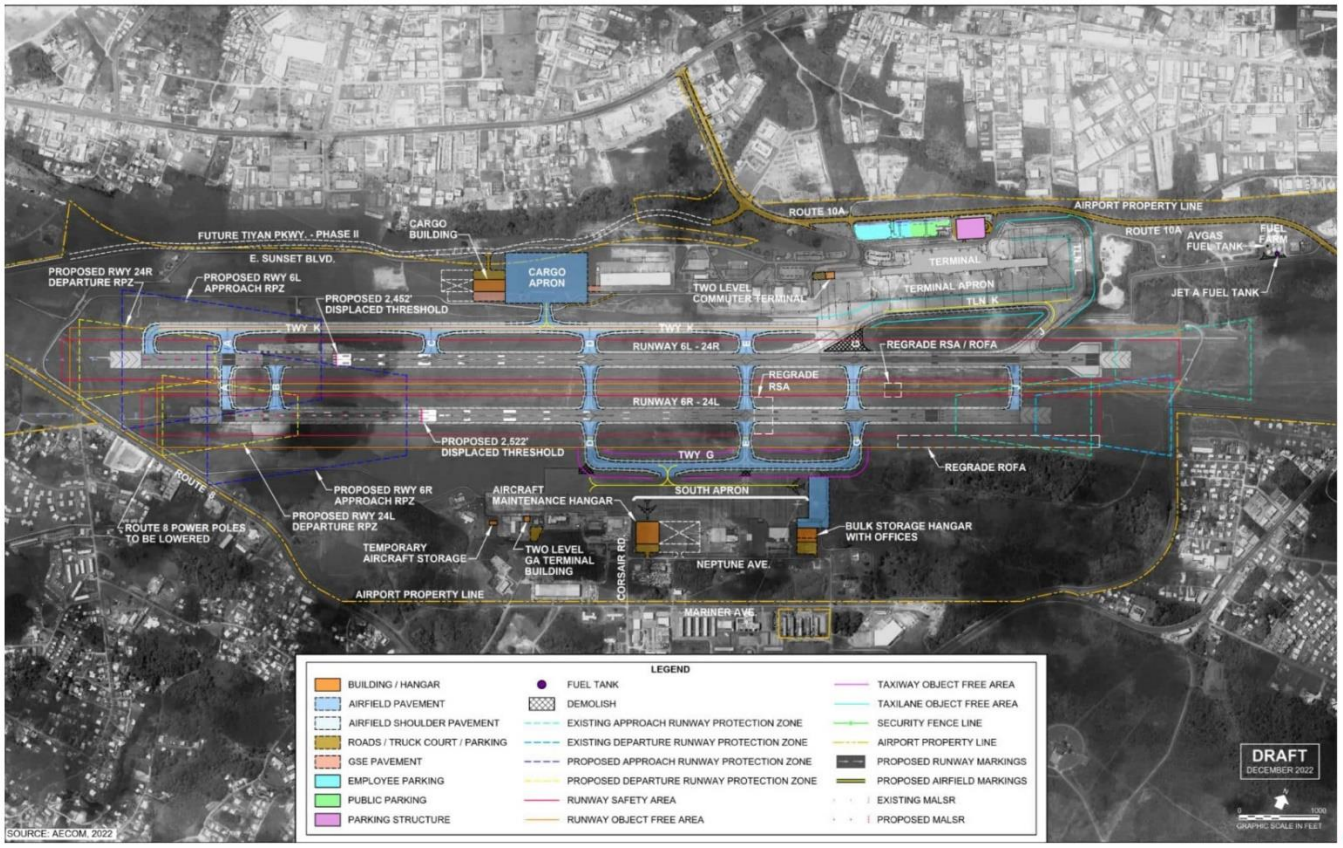
# Airport Parking Plan




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Preferred Alternative
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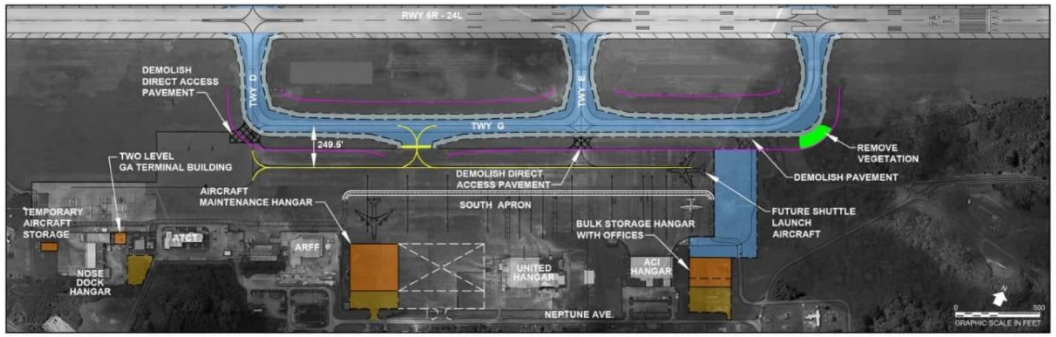
# Preferred Alternative




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# Preferred Alternative




**LEGEND**

| | | |
|---|---|---|
| BUILDING / HANGAR | FUEL TANK | TAXIWAY OBJECT FREE AREA |
| AIRFIELD PAVEMENT | DEMOLISH | TAXILANE OBJECT FREE AREA |
| AIRFIELD SHOULDER PAVEMENT | EXISTING APPROACH RUNWAY PROTECTION ZONE | SECURITY FENCE LINE |
| ROADS / TRUCK COURT / PARKING | EXISTING DEPARTURE RUNWAY PROTECTION ZONE | AIRPORT PROPERTY LINE |
| GSE PAVEMENT | PROPOSED APPROACH RUNWAY PROTECTION ZONE | PROPOSED RUNWAY MARKINGS |
| EMPLOYEE PARKING | PROPOSED DEPARTURE RUNWAY PROTECTION ZONE | PROPOSED AIRFIELD MARKINGS |
| PUBLIC PARKING | RUNWAY SAFETY AREA | EXISTING MALSR |
| PARKING STRUCTURE | RUNWAY OBJECT FREE AREA | PROPOSED MALSR |

SOURCE: AECOM, 2022

DRAFT
DECEMBER 2022

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# Preliminary ROM Cost Estimates

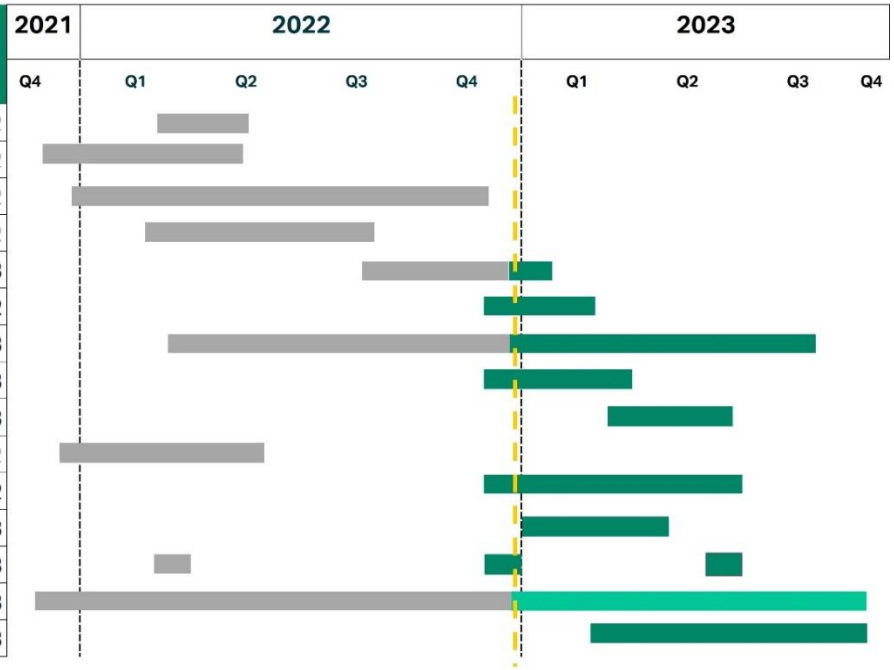
| Location | Estimated Total Cost |
|---|---|
| Airfield | $31,800,000 |
| Commercial Passenger Terminal | $17,170,000 |
| GA, Cargo, and Support Facilities | $341,470,000 |
| Landside | $149,200,000 |
| **Total** | $539,640,000 |




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# Project Schedule

| Task Name | Start Date | End Date |
|---|---|---|
| Task 1: Study Design | 3/2/2022 | 5/11/2022 |
| Task 2: Inventory of Existing Conditions | 11/29/2021 | 5/8/2022 |
| Task 3: Aviation Forecasts | 12/13/2021 | 12/1/2022 |
| Task 4: Facility Requirements | 2/14/2021 | 8/30/2022 |
| Task 5: Alternatives Development and Evaluation | 8/10/2022 | 1/17/2023 |
| Task 6: Environmental Overview | 11/28/2022 | 2/28/2022 |
| Task 7: Airport Layout Plan | 3/10/2022 | 8/29/2023 |
| Task 8: Facilities Implementation Plan | 11/28/2022 | 3/28/2023 |
| Task 9: Financial Feasibility Analysis | 3/8/2023 | 6/14/2023 |
| Task 10: Facility Condition Assessment | 12/7/2021 | 6/20/2022 |
| Task 11: Runway Protection Zone Assessment | 4/8/2022 | 11/11/2022 |
| Task 12: Sustainability | 1/1/2023 | 4/1/2023 |
| Task 13: Community/Stakeholder Input Facilitation | 11/15/2021 | 3/17/2023 |
| Task 14: GIAA Meetings | 11/15/2021 | 10/5/2023 |
| Task 15: Final Deliverables | 2/11/2023 | 10/5/2023 |




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# Next Steps




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# Questions or Comments?

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# Thank You!

Contact Information

Elliott Lindgren: elliott.lindgren@aecom.com

Greg Mayer: gregory.mayer@aecom.com

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# Agenda

**Meeting name**
Stakeholder Advisory Committee Realization Meeting

**Meeting date**
December 13, 2022

**Location**
GIAA Meeting Rooms 1&2

**Project number**
GIAA-FY20-02-6

**Prepared by**
Greg Mayer

**Subject**
Realization Meeting Workshop – Key Stakeholders

**Time**
9:00 AM GMT

**Project name**
A. B. Won Pat International Airport Master Plan Update

**AECOM project number**
60670976

**Attendees**
See Tables Below

**Circulation list**
John M. Quinata,
Artemio "Ricky" Hernandez, Ph.D.,
Frank Santos,
Jean M. Arriola,
Juan M. Reyes,
Rolenda L. Fassuamalie,
Elliott Lindgren, Greg Mayer

# Meeting Minutes

Key Stakeholder Attendees:

| Attendee | Company/Organization |
|---|---|
| Ken Quenga | Airport Police |
| Ernie Galito | Atkins Kroll, Inc. |
| Winnie Hung | China Airlines |
| George Chiu | CTSI Logistics |
| Tim Cornelison | Federal Aviation Administration |
| Vincent S.N. Perez | Guam Customs & Quarantine |
| Francis Fejarang | Guam Customs & Quarantine |
| Yuichuri Yamakawa | Japan Airlines |
| Hyunjun Lim | Jeju Air |
| Paul Kim | Jin Air |
| Neung Kwon | Korean Air |
| Ann Wells | Transportation Security Administration (TSA) |
| Mark Pablo | U.S. Customs & Border Protection (CBP) |
| Justin Marion | United Airlines |
| Sam Shinohara | United Airlines |

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GIAA Attendees:

| Attendee | Role |
|---|---|
| Frank Santos | Transportation Management Group (TMG) Guam |
| Jean Arriola | Airport Services Manager |
| Audie Artero | Engineer Supervisor |
| Fred Tupaz | Transportation Management Group (TMG) Guam |
| Raymond Quintanilla | Airport Operations Superintendent |
| Pete Camacho | Planning |
| Ann Bautista | Acting Comptroller |
| Anthony Quidachay | Safety Administrator |
| Ike Tambora | Project Engineer |
| Peter Torres | Building Maintenance Supervisor |
| Joe Javellana | Property Management Office |
| Rufo Lujan | Management Analyst |

AECOM/E.M. Chen Attendees:

| Attendee | Master Plan Role |
|---|---|
| Elliott Lindgren | Project Manager |
| Greg Mayer | Planning |
| Doug Sachman | Project Director |
| Carmen Au | Forecasting |
| Paul Krieger | Planning |
| Brittany Hause | Planning |
| Alan Chen | Local Support |

A copy of the Realization Meeting Workshop presentation is included as an attachment to the meeting minutes.

Juan Reyes (GIAA) started the meeting by welcoming the Key Stakeholders to the Realization Meeting Workshop, explained that this is the second stakeholder meeting in the Master Plan Process, emphasized how important stakeholder input is in the 5-, 10-, and 20-year development of the Airport, and introduced Elliott Lindgren and Greg Mayer of AECOM.

Elliott Lindgren (AECOM) began the Stakeholder Advisory Committee Realization Meeting presentation by reviewing the Visioning Meeting Workshop that took place back in March and discussing the agenda for this workshop which included reviews of the Airport Forecasts, Existing Conditions, Alternatives Process, and Preferred Alternative. This was followed by introductions of the AECOM/E.M. Chen team members, GIAA representatives, and the Key Stakeholders which can be viewed in the tables above.

Elliott Lindgren then reviewed the stakeholder group roles, the goals and objectives of the Airport Master Plan, and provided an overview of the Scope of Work that was portrayed during the Visioning Meeting Workshop. An updated schedule was displayed that showed the completion of the Study Design, Inventory, Forecasts, Facility Requirements, and Facility Condition Assessment tasks. Ongoing tasks included the Alternatives Development and Evaluation and tasks about to be kicked off include the Environmental Overview, Airport Layout Plan, Runway Protection Zone (RPZ) Assessment, and Sustainability.

Shifting to the Airport Forecasts, Elliott Lindgren discussed the overall approach of the forecasts and fundamental factors that went into determining the enplanement, operations, and based aircraft forecasts for the next 20 years at the Airport. While the baseline scenario for the aircraft operations and based aircraft mainly lined up with the Federal Aviation Administration's (FAA's)

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Terminal Area Forecast (TAF), the FAA TAF numbers for the enplanement forecast were significantly lower and the Airport is working on refining those numbers with the FAA based on the numbers produced in the Master Plan.

Elliott Lindgren explained the existing conditions to the group showing key elements of the airfield such as the commercial passenger terminal facility, the United hangar, the ACI hangar, and others. He then discussed the key elements of the commercial passenger terminal such as the ticket lobby, Security Screening Checkpoint (SSCP), Customs and Border Protection (CBP), and the new fourth floor sterile corridor.

Focusing on the alternatives, Elliott Lindgren discussed the alternatives process, a three-round process in which some alternatives would get eliminated while others would get combined and further refined along the process. He explained the process was broken out into four main areas of the Airport:

- Airfield
- Commercial Passenger Terminal
- General Aviation (GA), Cargo, and Support Facilities
- Landside

The first round began with a total of 93 alternatives throughout the four categories ultimately leading to one preferred alternative within each section.

Starting with the Airfield, Elliott Lindgren stated that the Facility Requirements chapter of the Master Plan identified multiple deficiencies or non-standard conditions throughout the airfield including terrain issues, lack of taxiway shoulder, non-standard centerline to centerline separation, problematic taxiway geometry, and non-standard conditions within the Runway 6L and 6R end RPZs. He stated that after 30 Round 1 alternatives were developed among different areas of the airfield, five Round 2 alternatives were created combining Round 1 alternatives that moved forward in the alternatives process.

Greg Mayer (AECOM) provided detailed explanations of the five Round 2 Airfield Alternatives and discussed that an evaluation matrix and high-level cost estimates were created. Ultimately, **Alternative 2 – Low Cost**, was chosen as the preferred airfield alternative.

Highlights of the preferred alternative include adding a displaced threshold to Runway 6R while increasing the existing displaced threshold for Runway 6L, adding taxiway shoulder where applicable, re-grading the terrain where it does not meet FAA standard, shifting Taxilane K and the South Apron to create adequate centerline to centerline separation, and removing trees and vegetation with sensitive taxiway safety areas.

In terms of the Commercial Passenger Terminal alternatives, Elliott Lindgren discussed recommendations and requirements identified in the Facility Requirements chapter of the Master Plan in order to meet standards and to help the Airport provide a better service to passengers flying in and out of the Airport. These include the lack of self-service kiosks at the check-in facilities, too small of a queuing area for passengers waiting to go through the SSCP causing passengers to have to queue along the apron level of the terminal, a lack of space in the gate holdroom areas causing passenger overflow, the lack of restrooms for international arrivals, and to re-examine the CBP visa inspection process currently located at Gates 7 and 9.

He stated that 26 Round 1 commercial passenger terminal alternatives were developed and through the alternatives process, three Round 2 alternatives were created combining Round 1 alternatives that moved forward in the alternatives process. He stated that **Alternative 3 – Future Proofing**, could be implemented as a long-term solution beyond the 20-year Master Plan planning period, while **Alternative 2 – Short-Term Improvements**, was selected as the preferred commercial passenger terminal alternative, as this alternative provides short-term solutions for the issues identified in the Facility Requirements chapter.

Highlights of the preferred alternative include the implementation of common use self-service kiosks at the check-in facilities, building out the floor of the SSCP queue area towards the windows to expand the queue area, removing two moving walkways (one in the West Concourse and one in the East Concourse) to allow for holdroom expansion, adding a secure corridor between the immigration hall and the SSCP so international arrivals can have access to a second bathroom, and relocating the CBP visa inspection area to the Gate 4/5 area so the entire West Concourse does not need to be blocked off prior to the flight to HNL.

Elliott Lindgren then discussed the recommendations identified in the Facility Requirements chapter for the GA, cargo, and support facilities. He stated that the airfield had sufficient capacity to improve existing functions or replace existing facilities in order to meet the forecasted GA, cargo, and support operations. Areas identified for improvement included the need for

additional GA facilities, a new and improved Light Aircraft Commuter Terminal, a new fuel tank, a widebody maintenance hangar, and air cargo facilities to line up with the ongoing planned project that includes an FAA funded cargo apron. He stated that after 36 Round 1 alternatives were developed, two Round 2 alternatives were created combining Round 1 alternatives that moved forward in the alternatives process.

**Alternative 2 – Consolidated Alternative** was selected as the preferred alternative as only one alternative from each Round 1 focus area was continued in the alternatives process. Highlights of the preferred alternative include a GA terminal to the east of the Nose Dock hangar, a Maintenance Hangar east of the Aircraft Rescue and Fire Fighting (ARFF) facility, a GA bulk storage hangar east of the ACI hangar, a cargo building west of the planned air cargo apron, a new Light Aircraft Commuter Terminal (where the old facility would be demoed and tenants would be relocated), and one additional Jet A fuel tank and the replacement of the existing Avgas tank.

Elliott Lindgren explained that based on the planned widening of Route 10A and the construction of Phase II of Tiyan Parkway, a preferred parking plan, developed by the Airport, would be incorporated as the preferred Landside Alternative for the Master Plan. The Airport Parking Plan included demolition of the first row of parking spots closest to Route 10A, reconfiguring the public parking and employee parking lots, and the implementation of a two-level parking structure on the site of the existing rental car area. This new parking structure would include ample parking for tourist buses, vans, and limousines on the first level and rental car parking on the second.

Elliott Lindgren then presented the Airport's preferred alternative which was made up of the elements from the preferred airfield, commercial passenger terminal, GA, cargo, and support, and landside alternatives. He mentioned a few refinements had been made to the Airport's preferred alternative based on GIAA feedback. These included replacing the addition of taxiway shoulders with the incorporation of FAA required Taxiway Design Group (TDG) 6 pavement geometry and adding in a temporary aircraft storage facility west of the Nose Dock Hangar. A high-level cost estimate was developed for the preferred alternative, excluding the refinements made, which totalled $539,640,000.

Elliott Lindgren discussed the project schedule once again and reviewed the next steps of the Master Plan process which included reviewing comments from the realization meeting, finalizing the preferred alternative, meeting with the FAA to discuss the alternatives and forecasts, and documenting the alternatives analysis process.

During Q&A, Tim Cornelison (FAA) asked that during the alternatives analysis process and the ultimate selection of the preferred alternative, if there is anyone from an operational standpoint contributing to some of the decisions made in the process. Elliott Lindgren mentioned that the people providing input on these decisions include individuals from GIAA and members of the AECOM team and they are hoping for feedback from stakeholders. The stakeholder exclaimed his concern with the shifting of the thresholds for Runways 6L and 6R as it may cause issues with aircraft landing on a wet runway. Elliott Lindgren emphasized that the Master Plan needs to include some sort of solution that addresses the RPZ issues being located off Airport property and that many alternatives were taken into consideration. Timing of implementing the displaced thresholds would be up to Airport discretion.

Justin Marion (United Airlines) asked if the project team had looked into any alternatives to the Baggage Handling System (BHS) and baggage claim area. Elliott Lindgren confirmed that the project team did look into this during the terminal facility requirements and and ultimately determined that there was no need to improve or adjust these functions during the Master Plan planning period as the Airport has adequate capacity for both areas. Carmen Au (AECOM) added that these were specifically looked into when evaluating peak hours.

Justin Marion asked that if there was any wiggle room for additional volume during peak afternoon hours (2-5pm) or if the Airport was around capacity. Carmen Au mentioned that this wasn't really looked at during the forecast analysis. He also asked what impact the projected military build-up would have on the Airport. Elliott Lindgren stated the build-up would have very little impact on the Airport itself with only a minor increase in passenger enplanements and that the high-level projections incorporate the military build-up, but there are no individual forecasts for military traffic or a specific number of personnel. Carmen Au added that the terminal should also have adequate gate space for this build-up. Elliott Lindgren that a detailed analysis of the forecasts could be made available for the stakeholders.

Justin Marion also asked when and what the overall deliverable is going to be. Elliott Lindgren answered that the primary deliverable will be the overall Master Plan Report, as well as an overall Airport Layout Plan (ALP) sheet set. These will both go to the FAA by October 2023. Frank Santos added that the FAA must approve the Forecast chapter of the Master Plan and the ALP. The Forecast chapter has already been accepted by the FAA.

An additional stakeholder asked if the Environmental Overview considers chapter elements such as sustainability, eco-friendly projects, etc. Elliott Lindgren informed the stakeholders that the Environmental Overview chapter takes the preferred alternative

and examines if any of the proposed projects will have any significant environmental impacts. A separate Sustainability chapter will be included to evaluate existing sustainability initiatives and areas in which the Airport can benefit from sustainability initiatives.

Vincent S.N. Perez (Guam Customs and Quarantine) asked if there were any plans on repairing, replacing, or refurbishing the baggage belts that lead to the baggage claim area. Elliott Lindgren mentioned that there was not in terms of the Master Plan, but Frank Santos stated that a separate project that includes multiple conveyance elements (i.e., elevators, escalators, baggage belts), is being evaluated. There is also a plan to replace the inspection counters for Guam Customs and Immigration as the counters are very low and passengers are able to look down at sensitive information.

Another stakeholder asked if any back-room space such as airline offices or storage was looked into improving or expanding. Elliott Lindgren said there was not as those areas did not pose as a problem from an operational standpoint.

Vincent S.N. Perez asked why the addition of a secure hallway from the immigration hall to the bathrooms was decided as he was under the impression that there were other ideas for that area between the immigration hall and the bathrooms. Frank Santos mentioned that the addition of a secure hallway would not have a major impact on the area he was referring to as the hallway would be located mainly within the existing immigration hall.

Justin Marion asked if there was a possibility to incorporate things such as additional conference rooms or training rooms as well.

Elliott Lindgren assured that the Stakeholder Realization Meeting Workshop presentation would be provided to the stakeholders and he ended the meeting.

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# Agenda

**Meeting name**
Stakeholder Advisory Committee Realization Meeting

**Subject**
Realization Meeting Workshop – Operational Stakeholders

**Attendees**
See Tables Below

**Circulation list**
John M. Quinata,
Artemio "Ricky" Hernandez, Ph.D.,
Frank Santos,
Jean M. Arriola,
Juan M. Reyes,
Rolenda L. Fassuamalie,
Elliott Lindgren, Greg Mayer

**Meeting date**
December 13, 2022

**Time**
1:00 PM GMT

**Location**
GIAA Meeting Rooms 1&2

**Project name**
A. B. Won Pat International Airport Master Plan Update

**Project number**
GIAA-FY20-02-6

**AECOM project number**
60670976

**Prepared by**
Greg Mayer

# Meeting Minutes

Operational Stakeholder Attendees:

| Attendee | Company/Organization |
|---|---|
| Ernie Galito | Atkins Kroll, Inc. |
| Art Dawley | Aviation Concepts, Inc. |
| Rudy Rodolfo | Burger King |
| Zeus Villafuerte | FedEx |
| Ken Ray Paulino | Hertz Rent A Car |
| Ronald Del Rosario | JMC Guam, Inc. |
| Letitia Law-Byerly | Lotte Duty Free Guam |
| Aileen Costelo | LSG Sky Chefs |
| Rodney Paet | Menzies Aviation |
| Jennye Untalan | Menzies Aviation |
| Pete Borja | Nissan Rent A Car |
| Marlon de Sagun | Nissan Rent A Car |
| James Valencia | Nissan Rent A Car |
| Joesph L. Cruz | PacAir Properties |
| Krystle Merfalen | PacAir Properties |
| Darrel Dela Paz | Supreme Group Guam |

GIAA Attendees:

| Attendee | Role |
|---|---|
| Frank Santos | Transportation Management Group (TMG) Guam |
| Jean Arriola | Airport Services Manager |
| Trini L.G. Cotelesse | Program Coordinator |
| Danny Cepera | Data Processing Manager |
| Henry Cruz | Supply Management Administrator |
| Arleen M. Torres-Sanchez | Systems Programmer |
| Vivian Aflague | Management Analyst |
| Rosie U. Balajadia | Administrative Officer |
| Virginia Molo | Personnel Specialist |
| Marcia D. Taitano | Program Coordinator |
| Bill Gutierrez | Management Analyst |

AECOM Attendees:

| Attendee | Master Plan Role |
|---|---|
| Elliott Lindgren | Project Manager |
| Greg Mayer | Planning |

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hangar east of the ACI hangar, a cargo building west of the planned air cargo apron, a new Light Aircraft Commuter Terminal (where the old facility would be demoed and tenants would be relocated), and one additional Jet A fuel tank and the replacement of the existing Avgas tank.

Elliott Lindgren explained that based on the planned widening of Route 10A and the construction of Phase II of Tiyan Parkway, a preferred parking plan, developed by the Airport, would be incorporated as the preferred Landside Alternative for the Master Plan. The Airport Parking Plan included demolition of the first row of parking spots closest to Route 10A, reconfiguring the public parking and employee parking lots, and the implementation of a two-level parking structure on the site of the existing rental car area. This new parking structure would include ample parking for tourist buses, vans, and limousines on the first level and rental car parking on the second.

Elliott Lindgren then presented the Airport's preferred alternative which was made up of the elements from the preferred airfield, commercial passenger terminal, GA, cargo, and support, and landside alternatives. He mentioned a few refinements had been made to the Airport's preferred alternative based on GIAA feedback. These included replacing the addition of taxiway shoulders with the incorporation of FAA required Taxiway Design Group (TDG) 6 pavement geometry and adding in a temporary aircraft storage facility west of the Nose Dock Hangar. A high-level cost estimate was developed for the preferred alternative, excluding the refinements made, which totalled $539,640,000.

Elliott Lindgren discussed the project schedule once again and reviewed the next steps of the Master Plan process which included reviewing comments from the realization meeting, finalizing the preferred alternative, meeting with the FAA to discuss the alternatives and forecasts, and documenting the alternatives analysis process.

During Q&A, Art Dawley (Aviation Concepts, Inc.) asked if the project team looked into any opportunities in the grassy area to the west of the ACI hangar. Elliott Lindgren stated that the team did not as the area does not pose much room for expansion. Art Dawley mentioned that over the last few years, ACI has had to turn away multiple smaller civilian flight departments that could benefit from that smaller area and could help provide revenue opportunities.

Frank Santos added that the Route 10A widening project is not an Airport planned project and that this project would probably be implemented before the Phase II Tiyan Parkway construction. He also stated that two canopies will be included in the parking lots, as well as an additional 14' canopy over the drop-off lane along the terminal departures' road.

A stakeholder asked how many parking stalls would be impacted based on the Route 10A widening. Greg Mayer mentioned that approximately 138 employee and 109 parking public parking spaces would be impacted. Elliott Lindgren stated that during the initial analysis, the Airport would still have adequate parking for both areas, but an additional analysis might be needed. If needed the divider between public parking and employee parking could be shifted. The stakeholder also asked how the rental car lot would be impacted based on the new parking structure. Elliott Lindgren stated that there would be more parking stalls in the proposed parking structure then there is today.

Another stakeholder asked what the parking capacity would be for the proposed parking structure. Greg Mayer mentioned that the proposed structure can hold 277 rental car spaces, 36 tour bus spaces, 30 tour van spaces, two off-Airport rental van spaces, and two limousine spaces. The second level of the parking structure would be roof-top parking and Frank Santos mentioned there is an opportunity to incorporate solar panels along the structure.

Elliott Lindgren assured that the Stakeholder Realization Meeting Workshop presentation would be provided to the stakeholders and he ended the meeting.

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# Agenda

**Meeting name**
Stakeholder Advisory Committee Realization Meeting

**Subject**
Realization Meeting Workshop – Internal Stakeholders

**Attendees**
See Tables Below

**Circulation list**
John M. Quinata,
Artemio "Ricky" Hernandez, Ph.D.,
Frank Santos,
Jean M. Arriola,
Juan M. Reyes,
Rolenda L. Fassuamalie,
Elliott Lindgren, Greg Mayer

**Meeting date**
December 14, 2022

**Time**
9:00 AM GMT

**Location**
GIAA Meeting Rooms 1&2

**Project name**
A. B. Won Pat International Airport Master Plan Update

**Project number**
GIAA-FY20-02-6

**AECOM project number**
60670976

**Prepared by**
Greg Mayer

# Meeting Minutes

Internal Stakeholder Attendees:

| Attendee | Role |
|---|---|
| Frank Santos | Transportation Management Group (TMG) Guam |
| Jean Arriola | Airport Services Manager |
| Audie Artero | Engineer Supervisor |
| Artemio "Ricky" Hernandez, Ph.D. | Deputy Executive Manager |
| Juan Reyes | Air Terminal Manager |
| Joe Javellana | Property Management Office |
| Ann Bautista | Acting Comptroller |

AECOM/E.M. Chen Attendees:

| Attendee | Master Plan Role |
|---|---|
| Elliott Lindgren | Project Manager |
| Greg Mayer | Planning |
| Carmen Au | Forecasting |
| Brittany Hause | Planning |
| Alan Chen | Local Support |

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A copy of the Realization Meeting Workshop presentation is included as an attachment to the meeting minutes.

Elliott Lindgren (AECOM) started the meeting.

Frank Santos began the meeting by asking when the Airport is anticipating to getting back to the level of operations observed in 2019. Elliott Lindgren stated that the forecasts show those numbers being achieved between 2026 and 2028. Jean Arriola stated that forecasts developed by InterVISTAS had them returning to those numbers earlier and that the InterVISTAS forecasts were developed different than those from a Master Plan standpoint. Carmen Au added that the forecasts developed by InterVISTAS and the forecasts developed for the Mast Plan are very similar in terms of enplanements for 2024.

Regarding a question asked in a previous stakeholder meeting, Elliott Lindgren confirmed that the Master Plan forecasts does include the proposed military build-up numbers. Frank Santos reiterated that the FAA approved the Forecasts developed for the Master Plan.

Elliott Lindgren proceeded to identify the projects proposed in the preferred alternative. The airfield projects include adding a displaced threshold to Runway 6R while increasing the existing displaced threshold for Runway 6L, adding taxiway shoulder where applicable, regrading the terrain where it does not meet FAA standard, shifting Taxilane K and the South Apron to create adequate centerline to centerline separation, and removing trees and vegetation with sensitive taxiway safety areas.

The General Aviation (GA), cargo, and support facilities projects include a GA terminal to the east of the Nose Dock hangar, a Maintenance Hangar east of the Aircraft Rescue and Fire Fighting (ARFF) facility, a GA bulk storage hangar east of the ACI hangar, a cargo building west of the planned air cargo apron, a new Light Aircraft Commuter Terminal (where the old facility would be demolished and tenants would be relocated), and one additional Jet A fuel tank and the replacement of the existing Avgas tank.

Frank Santos mentioned that the Runway Protection Zone (RPZs) shown appear to be larger than what was anticipated. Greg Mayer and Elliott Lindgren stated that both Runway 6L and 6R have approaches that incorporate lower than ¾-mile visibility minimums, resulting in the largest-sized RPZs. An additional analysis may be needed.

Frank Santos added that GIAA would like to see two additional access gates on the preferred alternative. These would be located to the east of the ACI Hangar where Neptune Ave and Security Road meet and between the Guam Integrated Air Cargo facility and the CTSI/DHL facilities. Jean Arriola also asked to include another ultimate widebody hangar to the east of the proposed GA bulk storage hangar.

Elliott Lindgren also added his recommendation to maintain areas identified for proposed aviation development on the Airport's current Airport Layout Plan (ALP) to the ALP that will be developed in the Master Plan. The project team will look into the accurate terminology to identify areas on the ALP that will be reserved as non-aviation development. Shifting to the commercial passenger terminal, Elliott Lindgren recommended to add PODs 1, 3, and 6 to the preferred alternative and ALP.

Elliott Lindgren asked about the area west of the ACI hangar that was brought up in a previous stakeholder meeting. It was determined that the area does not have any significant issues and the area could be reserved for future development.

Elliott Lindgren then proceeded to identify the projects proposed in the preferred commercial passenger terminal alternative which includes the implementation of common use self-service kiosks at the check-in facilities, building out the floor of the Security Screening Checkpoint (SSCP) queue area towards the windows to expand the queue area, removing two moving walkways (one in the West Concourse and one in the East Concourse) to allow for holdroom expansion, adding a secure corridor between the immigration hall and the SSCP so internationally arriving passengers can have access to a second bathroom, and relocating the Customs and Border Protection (CBP) visa inspection area to the Gate 4/5 area so the entire West Concourse does not need to be blocked off prior to the flight to HNL.

Elliott Lindgren also discussed the "Future Proofing" alternative developed in the Round 2 alternatives analysis as projects proposed in this alternative, can be implemented as longer-term solutions. Highlights of this alternative include expanding the terminal footprint out by the check-in facilities, shifting the Checkpoint Property Screening Systems (CPSS) to allow for additional queuing space, expanding out portions of the East and West Concourse to provide additional holdroom space, concessions, restrooms, etc., and adding bathrooms in the existing immigration hall or within the fourth-floor sterile corridor.

During discussions of the SSCP, Jean Arriolla asked if there was an opportunity to relocate some of the existing office space adjacent to the west food court area, as there does not appear to be adequate eating space. Elliott Lindgren mentioned that this was not looked into because the facility requirements indicate that total space is adequate therefore, it may simply be a matter of modifying the layout of the area to improve the utilization.

During discussions of the CBP visa inspection, Frank Santos mentioned there may be an opportunity to have three inspection booths with two agents in each booth to help increase the inspection process. It was also stated that if the CBP inspection area is relocated to the Gate 4/5 area, passengers that need to use the restroom once cleared through CBP would need to give their passport to an airline agent in order to use the restroom.

Frank Santos also asked to use the word “remove” instead of “demolish” when discussing the proposed plans for the moving walkways just in case the Airport decides to repurpose them. Frank Santos also recommended that GIAA should have a specific representative to contact when the Sustainability task is kicked off.

Elliott Lindgren ended the meeting.

## F.3 Regulatory Meeting Presentation and Meeting Minutes

# Antonio B. Won Pat International Airport

## Stakeholder Regulatory Meeting

July 25th, 2023

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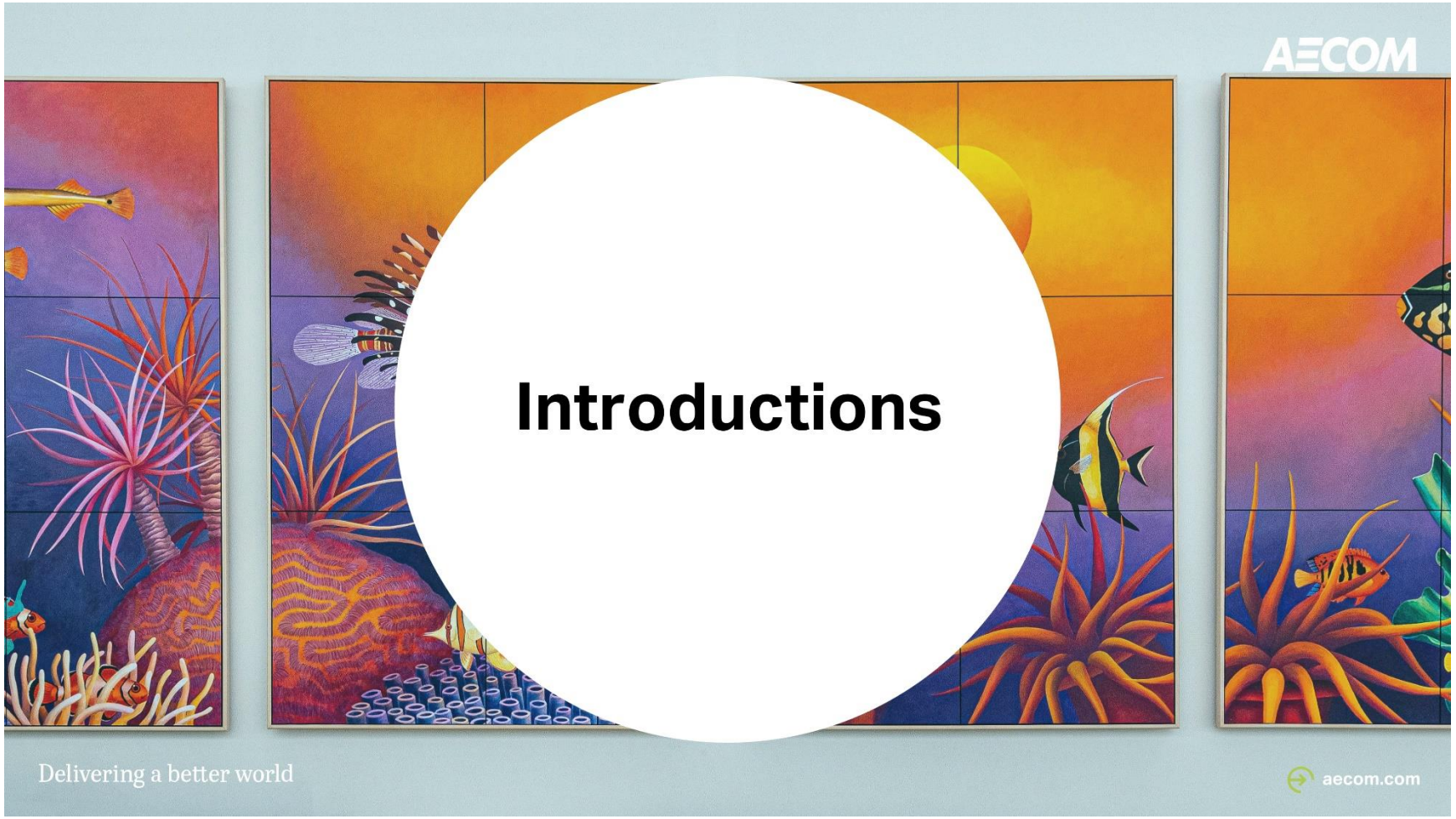
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# Agenda

- Introductions
- Scope Overview
- Airport Development Plan
  - Refinements
- Facilities Implementation Plan
  - Cost Estimates
  - Financial Funding
- Environmental Overview
- Sustainability
- Next Steps



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# Stakeholder Group Members

| Key Stakeholders | |
|---|---|
| United Airlines | Philippine Airlines |
| Air Seoul | T'way Air |
| Air Busan | Asia Pacific Airlines |
| China Airlines | U.S. Customs and Border Protection |
| Japan Airlines | Transportation Security Administration |
| Jin Air | Guam Customs & Quarantine Agency |
| Korean Air | Federal Aviation Administration |
| Jeju Air | |

| Operational Stakeholders | |
|---|---|
| Menzies Aviation | Burger King |
| ACI Pacific LLC | Dominos/Golden Bowl |
| Guam Flight Services | Sissie's Café |
| Supreme Group | Oasis Café |
| Lotte Duty Free | Micronesia Munchies |
| AVIS/Budget/Payless | PacAir Properties |
| Hertz/Dollar | PacAir LTD |
| National/Enterprise/Alamo | LSG Sky Chefs |
| Nissan | Stroll Guam |
| Airport Tentekomai | UPS |
| Micronesian Air Cargo Services | FedEx Guam |
| Triple B | DHL |
| Secure Safe | CTSI |
| Foreign Exchange Global Currency | |

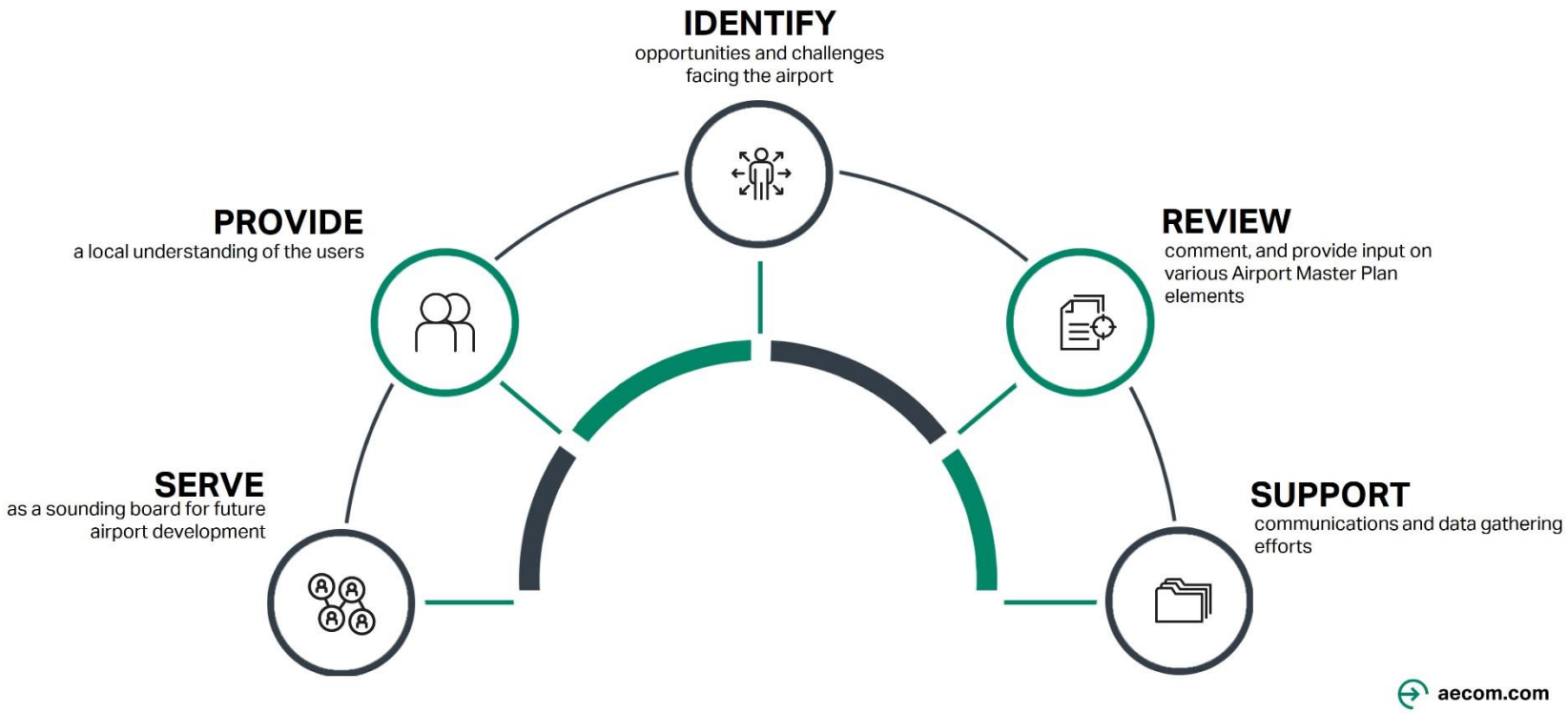
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# Stakeholder Group Members

| Internal Stakeholders |
| --- |
| Brian J. Bamba – Chairman of the Board |
| John M. Quinata – Executive Manager |
| Artemio "Ricky" Hernandez, Ph.D. – Deputy Executive Manager |
| Frank Santos – TMG |
| Jean M. Arriola – Airport Services Manager |
| Juan M. Reyes – Air Terminal Manager |
| Audie Artero – Engineer Supervisor |
| Raymond Quintanilla – Airport Operations Superintendent |
| Ken McDonald – Properties and Facilities Superintendent |
| Danielle Camacho – General Accounting Supervisor |
| Debbie Ngata – General Accounting Supervisor |
| Vincente Naputi – Chief of Airport Police |
| Joe Javellana – Property Management |
| Raymond Mantanona – ARFF Chief |
| Rolenda L. Faasuamalie – Airport Marketing Administrator |

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# Stakeholder Group Role



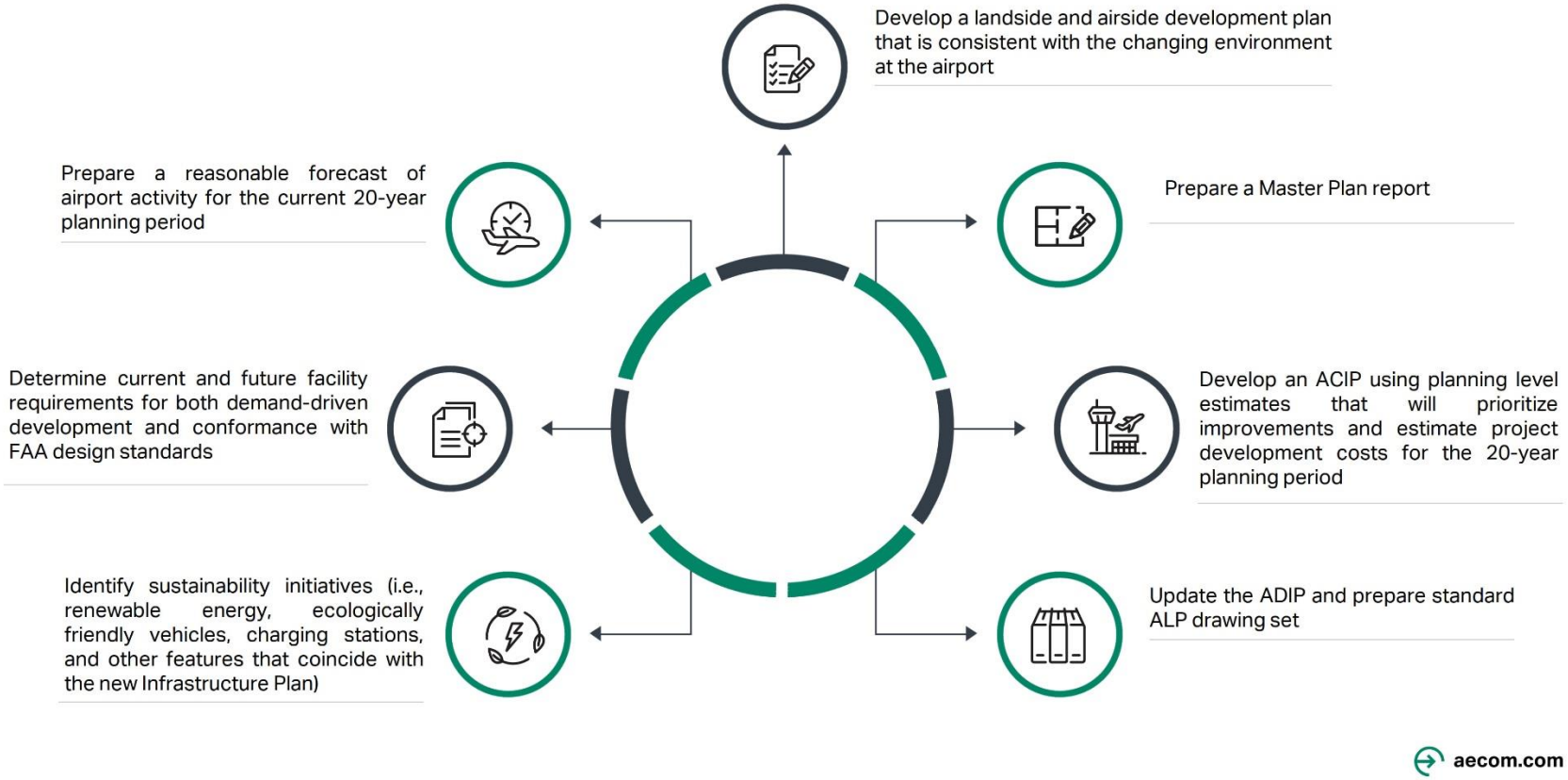
# Goals and Objectives




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Departures
Scope Overview
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# Scope




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# Master Planning Process – The 3-Phased Project Approach




**Goal:**
***Establish project vision, analyze existing conditions/issues, and develop demand forecasts***

Key Elements
- Develop scope and detailed work plan
- Identify stakeholders
- Inventory of existing conditions
- Facility conditions assessment
- Airport GIS Gap Analysis

*Prepare and submit technical reports/working papers*

**Goal:**
***Understand airport needs, prepare facility requirements, develop alternate solutions***

Key Elements
- Facility requirements
- Alternate development and evaluation
- Environmental considerations
- Runway Protection Zone

*Prepare and submit technical reports/working papers*

**Goal:**
***Strategize for the future phased development***

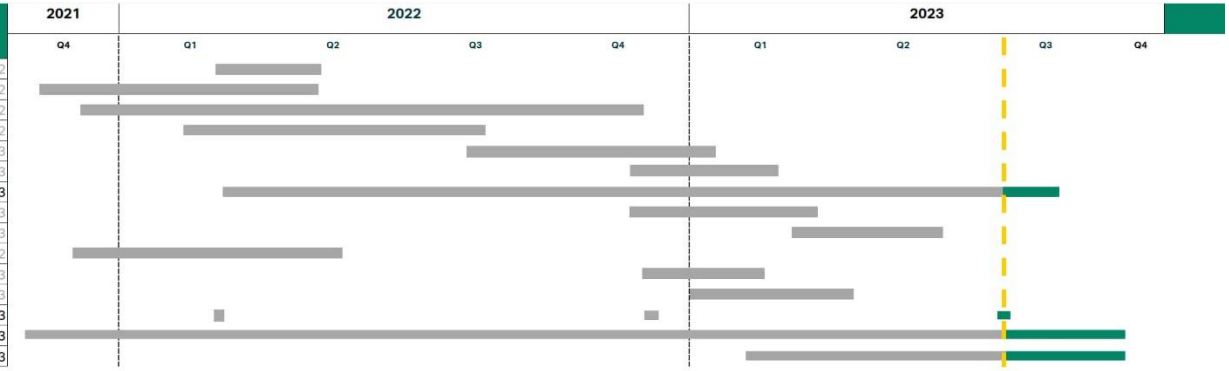
Key Elements
- Airport Layout Plan
- Facilities implementation plan
- Financial feasibility analysis
- Sustainability

*Prepare and submit technical reports/working papers*
*Prepare overall technical report and ALP drawings*

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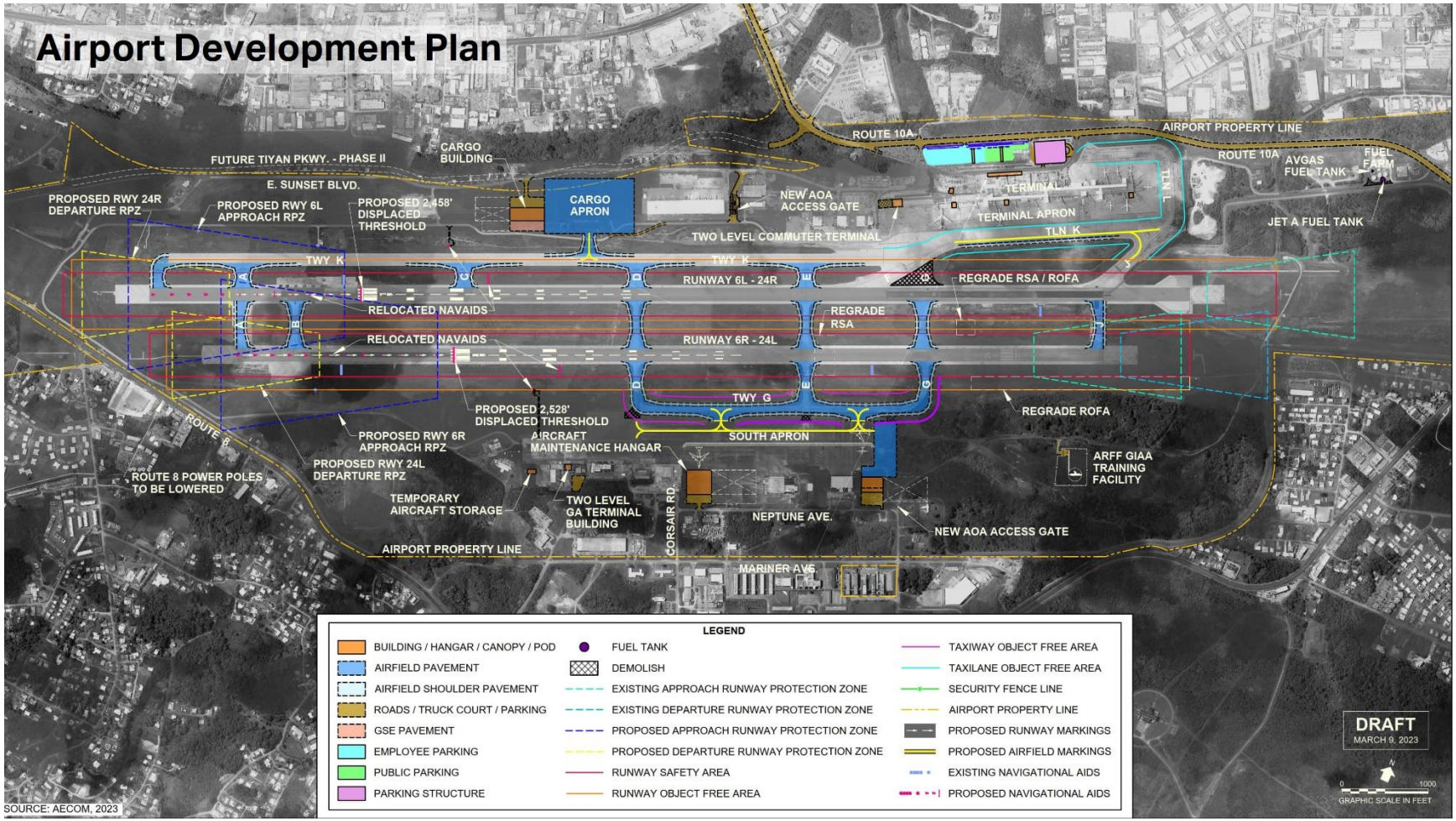
# Project Schedule

| Task Name | Start Date | End Date |
|---|---|---|
| Task 1: Study Design | 3/2/2022 | 5/11/2022 |
| Task 2: Inventory of Existing Conditions | 11/29/2021 | 5/8/2022 |
| Task 3: Aviation Forecasts | 12/13/2021 | 12/1/2022 |
| Task 4: Facility Requirements | 2/14/2021 | 8/30/2022 |
| Task 5: Alternatives Development and Evaluation | 8/10/2022 | 1/17/2023 |
| Task 6: Environmental Overview | 11/28/2022 | 2/28/2023 |
| Task 7: Airport Layout Plan | 3/10/2022 | 8/29/2023 |
| Task 8: Facilities Implementation Plan | 11/28/2022 | 3/28/2023 |
| Task 9: Financial Feasibility Analysis | 3/8/2023 | 6/14/2023 |
| Task 10: Facility Condition Assessment | 12/7/2021 | 6/20/2022 |
| Task 11: Runway Protection Zone Assessment | 11/11/2022 | 2/26/2023 |
| Task 12: Sustainability | 1/1/2023 | 4/1/2023 |
| Task 13: Community/Stakeholder Input Facilitation | 11/15/2021 | 7/26/2023 |
| Task 14: GIAA Meetings | 11/15/2021 | 10/5/2023 |
| Task 15: Final Deliverables | 2/11/2023 | 10/5/2023 |

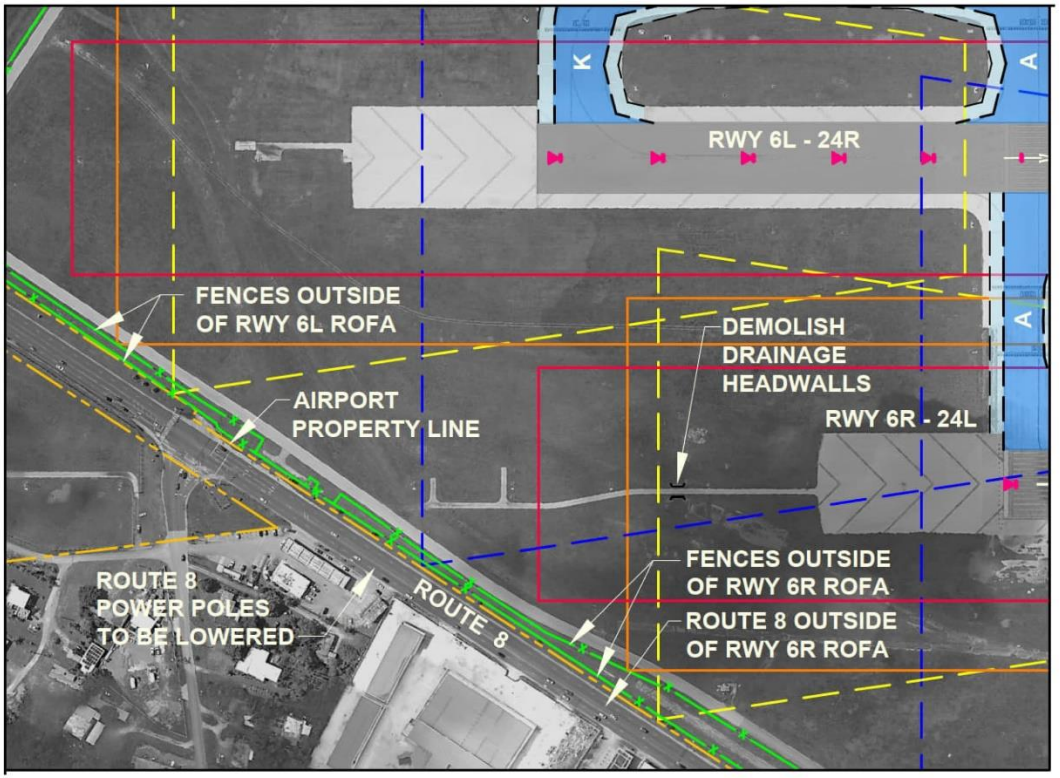



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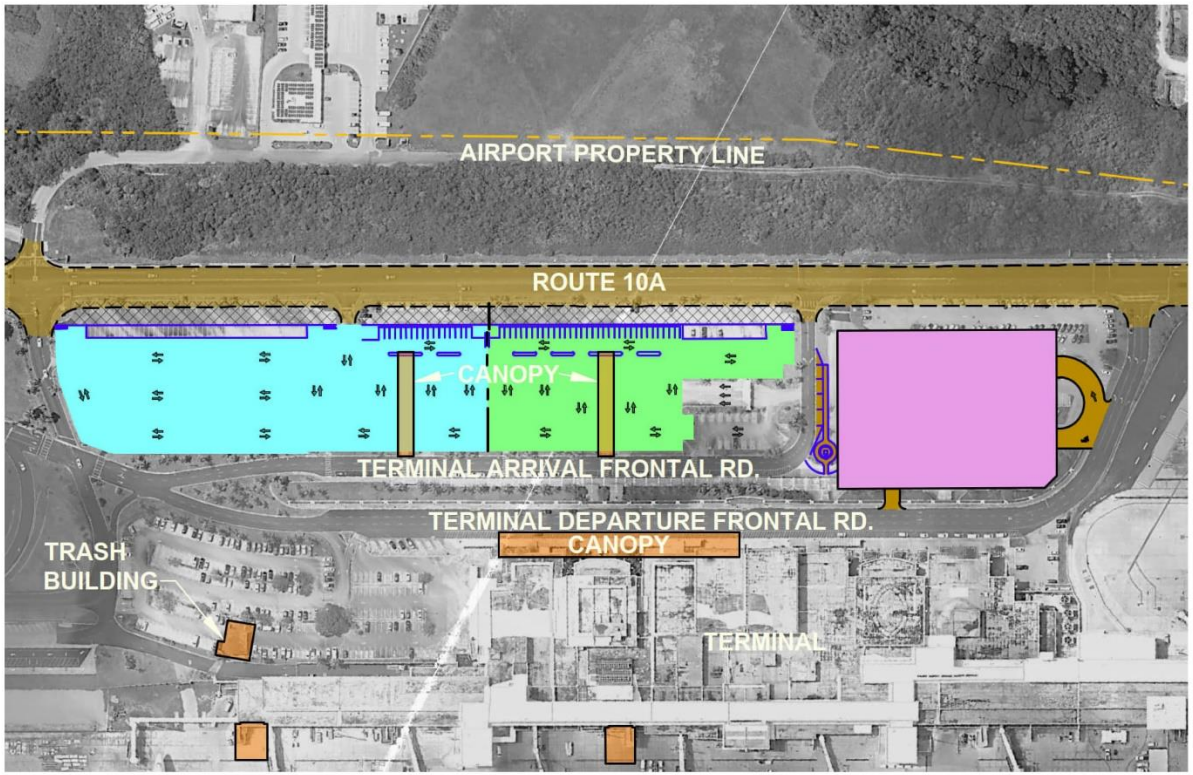

Airport Development Plan
ROUTE 10A
AIRPORT PROPERTY LINE
FUTURE TIYAN PKWY. - PHASE II
CARGO BUILDING
E. SUNSET BLVD.
PROPOSED RWY 24R DEPARTURE RPZ
PROPOSED RWY 6L APPROACH RPZ
PROPOSED 2,458' DISPLACED THRESHOLD
CARGO APRON
NEW AOA ACCESS GATE
TERMINAL
TERMINAL APRON
TLN L
TLN K
TWO LEVEL COMMUTER TERMINAL
AVGAS FUEL TANK
FUEL FARM
JET A FUEL TANK
TWY K
RUNWAY 6L - 24R
REGRADE RSA / ROFA
RELOCATED NAVAIDS
REGRADE RSA
RELOCATED NAVAIDS
RUNWAY 6R - 24L
TWY G
PROPOSED 2,528' DISPLACED THRESHOLD
REGRADE ROFA
PROPOSED RWY 6R APPROACH RPZ
AIRCRAFT MAINTENANCE HANGAR
SOUTH APRON
ROUTE 8
PROPOSED RWY 24L DEPARTURE RPZ
ARFF GIAA TRAINING FACILITY
ROUTE 8 POWER POLES TO BE LOWERED
TEMPORARY AIRCRAFT STORAGE
TWO LEVEL GA TERMINAL BUILDING
CORSAIR RD.
NEPTUNE AVE.
NEW AOA ACCESS GATE
AIRPORT PROPERTY LINE
MARINER AVE.
LEGEND
BUILDING / HANGAR / CANOPY / POD
AIRFIELD PAVEMENT
AIRFIELD SHOULDER PAVEMENT
ROADS / TRUCK COURT / PARKING
GSE PAVEMENT
EMPLOYEE PARKING
PUBLIC PARKING
PARKING STRUCTURE
FUEL TANK
DEMOLISH
EXISTING APPROACH RUNWAY PROTECTION ZONE
EXISTING DEPARTURE RUNWAY PROTECTION ZONE
PROPOSED APPROACH RUNWAY PROTECTION ZONE
PROPOSED DEPARTURE RUNWAY PROTECTION ZONE
RUNWAY SAFETY AREA
RUNWAY OBJECT FREE AREA
TAXIWAY OBJECT FREE AREA
TAXILANE OBJECT FREE AREA
SECURITY FENCE LINE
AIRPORT PROPERTY LINE
PROPOSED RUNWAY MARKINGS
PROPOSED AIRFIELD MARKINGS
EXISTING NAVIGATIONAL AIDS
PROPOSED NAVIGATIONAL AIDS
DRAFT
MARCH 9, 2023
0
1000
GRAPHIC SCALE IN FEET
SOURCE: AECOM, 2023

# Airport Development Plan



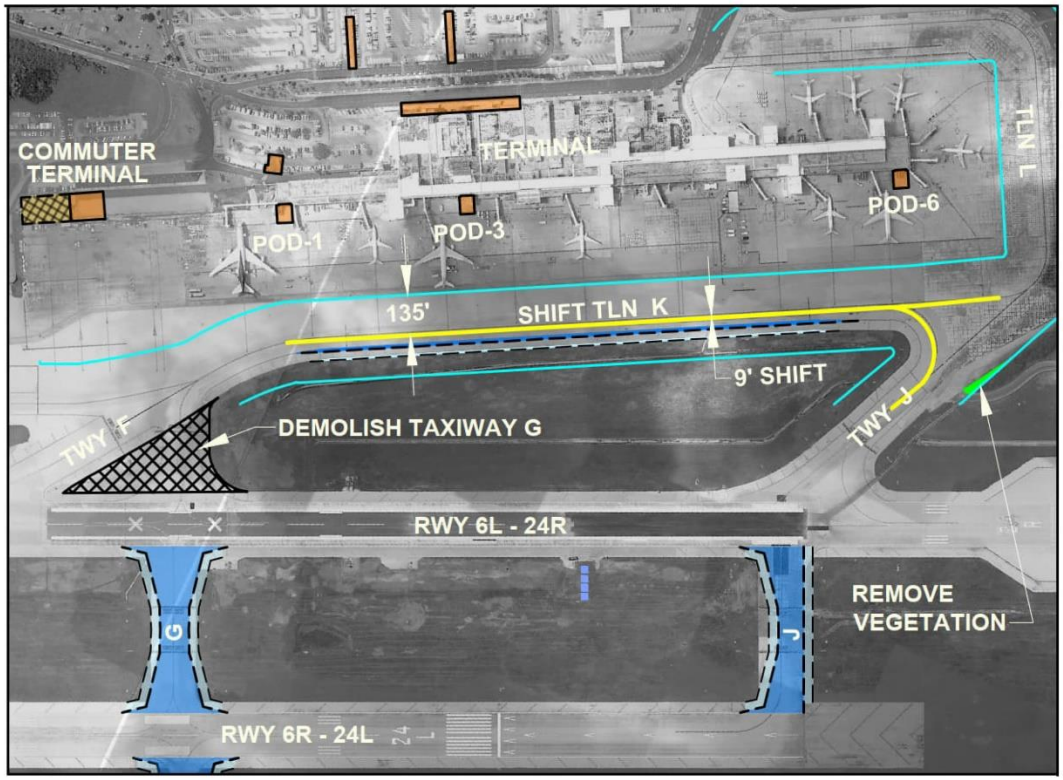

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# Airport Development Plan



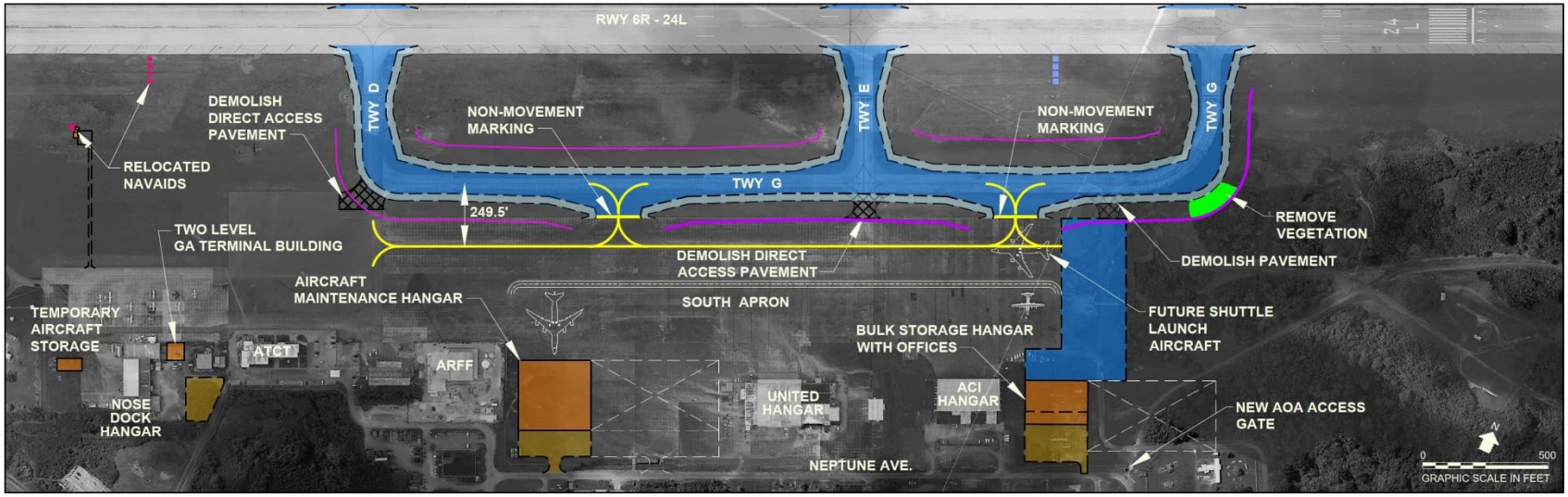

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# Airport Development Plan




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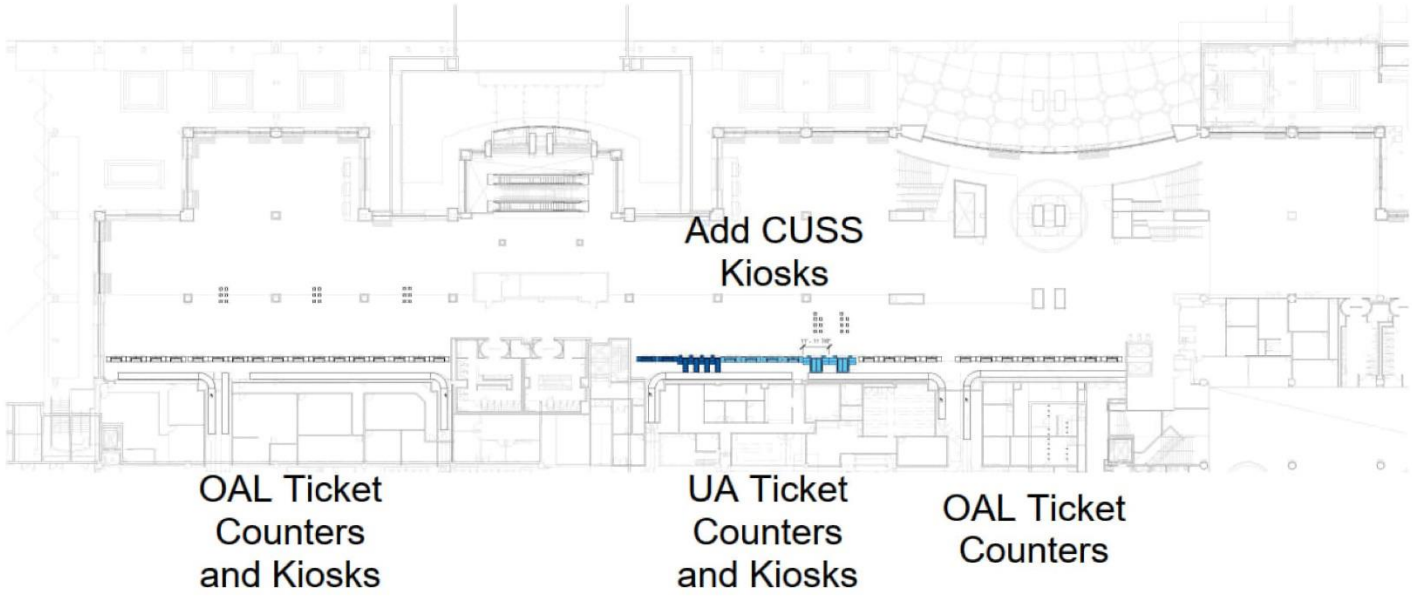
# Airport Development Plan




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# Airport Development Plan

## Check-in




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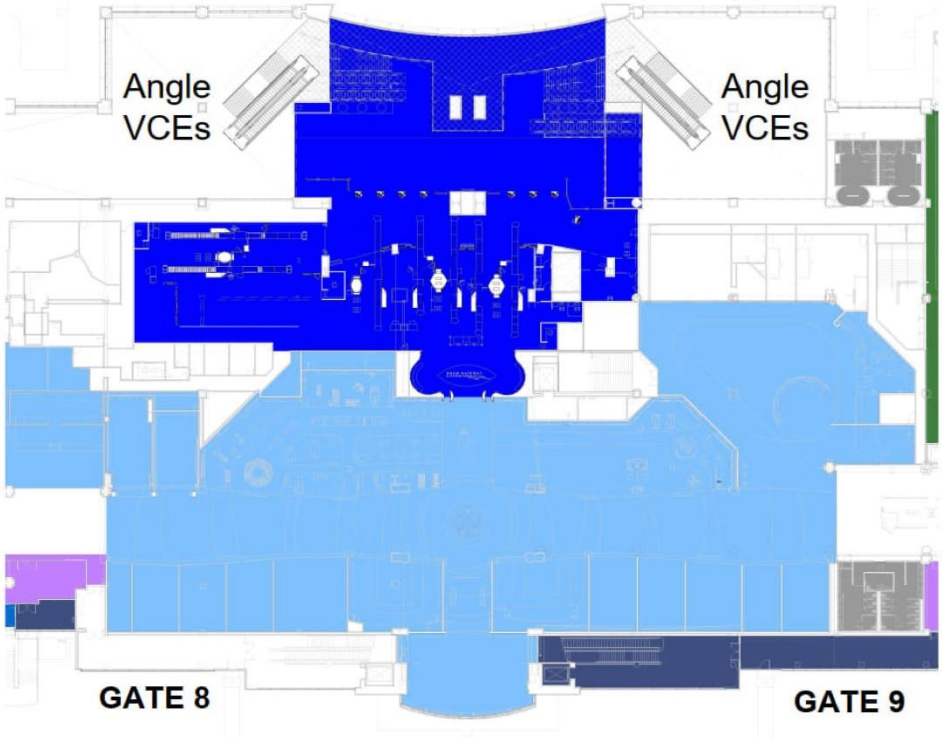
# Airport Development Plan

## SSCP

Expand Floor for
Additional SSCP Queuing

COLOR LEGEND

- ARRIVALS HALL
- CONCESSIONS
- CONCOURSE
- CORRIDOOR
- HOLDROOM
- PBB VESTIBULE
- RESTROOMS
- SSCP
- STERILE CORRIDOR

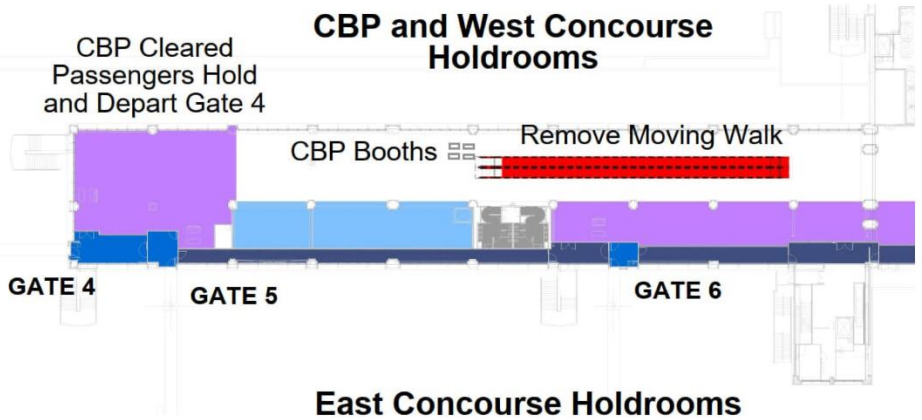



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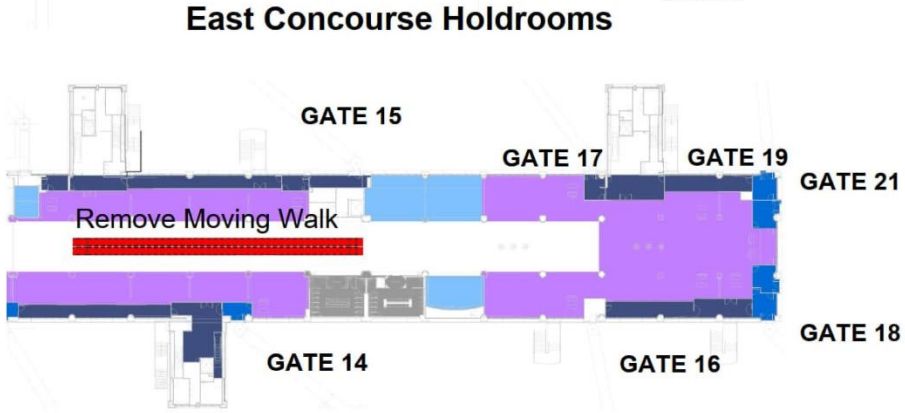
# Airport Development Plan

COLOR LEGEND

- ARRIVALS HALL
- CONCESSIONS
- CONCOURSE
- CORRIDOOR
- HOLDROOM
- PBB VESTIBULE
- RESTROOMS
- SSCP
- STERILE CORRIDOR

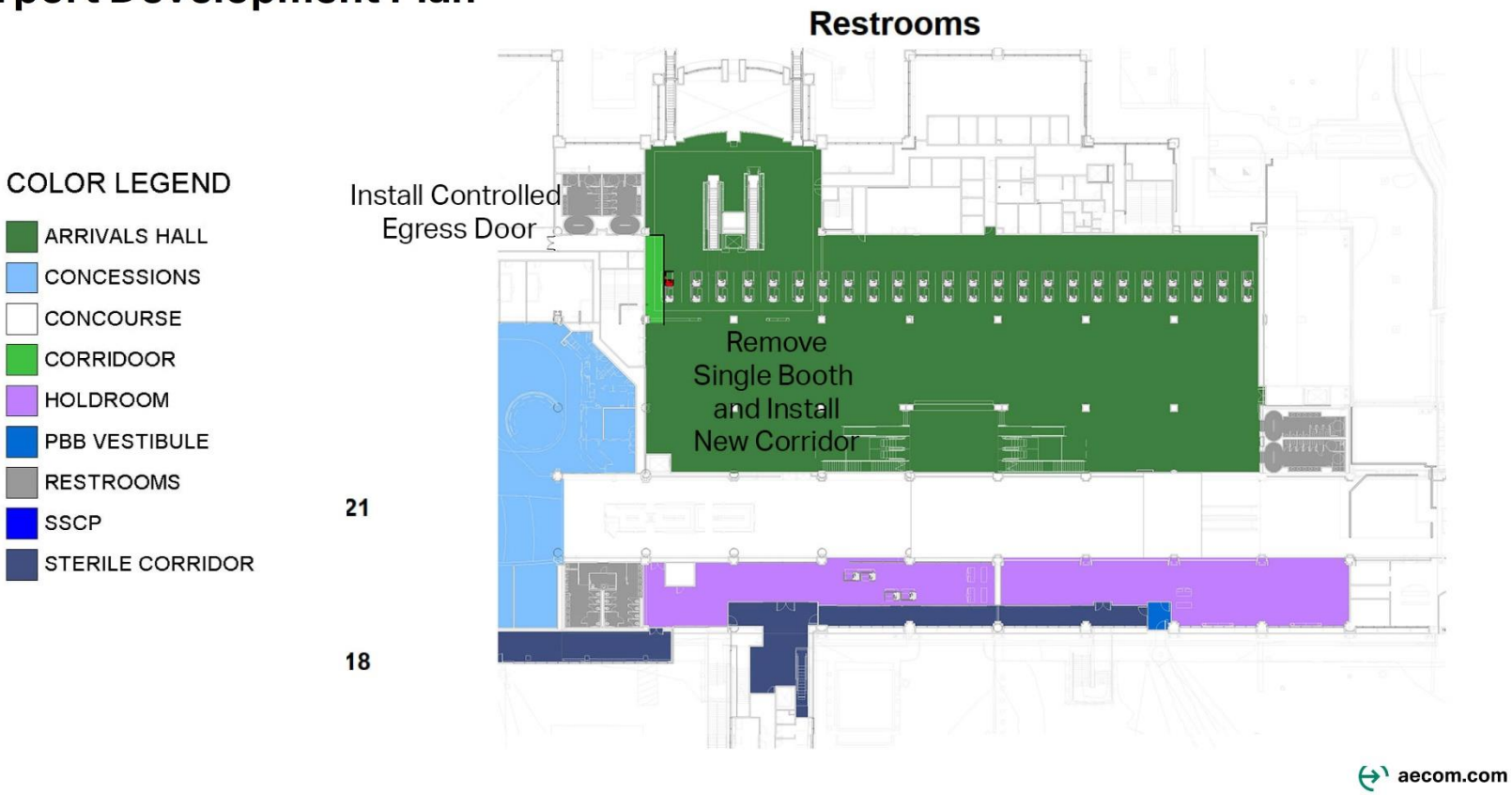



In




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# Airport Development Plan



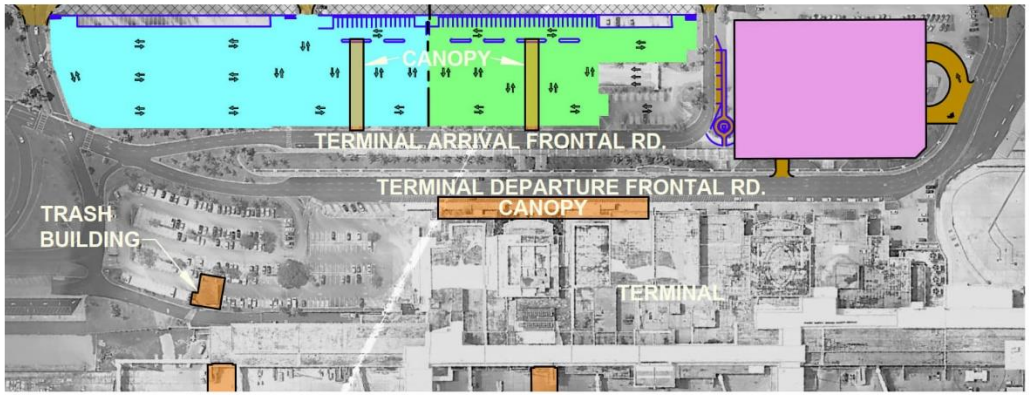
# Airport Development Plan – Refinements

## Trash Facility & Loading Docks

- Added two covered dumpsters where the triturator is in the upper employee parking lot

## Canopies

- Added two canopies over the vehicle parking lots and a canopy over the right-most lane of the Terminal Departure Frontal Road




## Terminal Pods

- Added Pods 1, 3, and 6 for additional passenger circulation with access to the sterile corridor

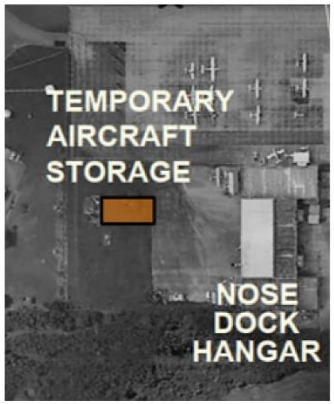



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# Airport Development Plan – Refinements

### Aircraft Storage Facility

- Added a temporary storage facility west of the nose dock hangar




### ARFF GIAA Training Facility

- Added a training facility and burn pit where the former U.S. Navy burn pit was




### Route 8 Power Poles

- Added the lowering of power poles along Route 8 as they could be potential obstructions to Runway 6L or 6R approaches

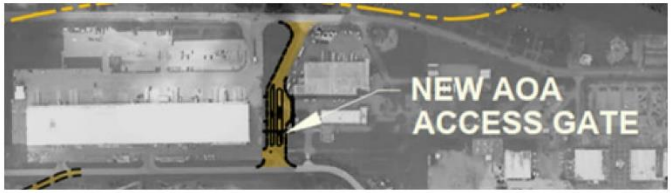



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# Airport Development Plan – Refinements

### North AOA Access Gate

- Added a new access road and AOA access gate to the east of the Guam Integrated Air Cargo facility

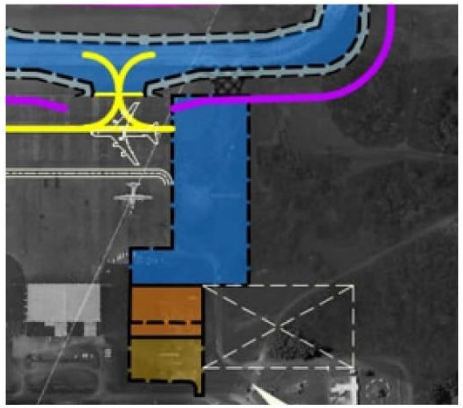



### CBP and Guam CQA Inspection Booths

- Added replacing the CBP and CQA inspection booths with booths that meet current design standards which will seat agents higher than they currently are

### South AOA Access Gate and New South Apron Taxiway Connector and Apron Pavement

- Added a new AOA access gate off of Neptune Avenue with access to the South Apron
- Added a second taxiway connector between Taxiway G and the South Apron
- Added pavement over the former “birdbath” pavement along the east side of the South Apron



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# Facilities Implementation Plan – Overview

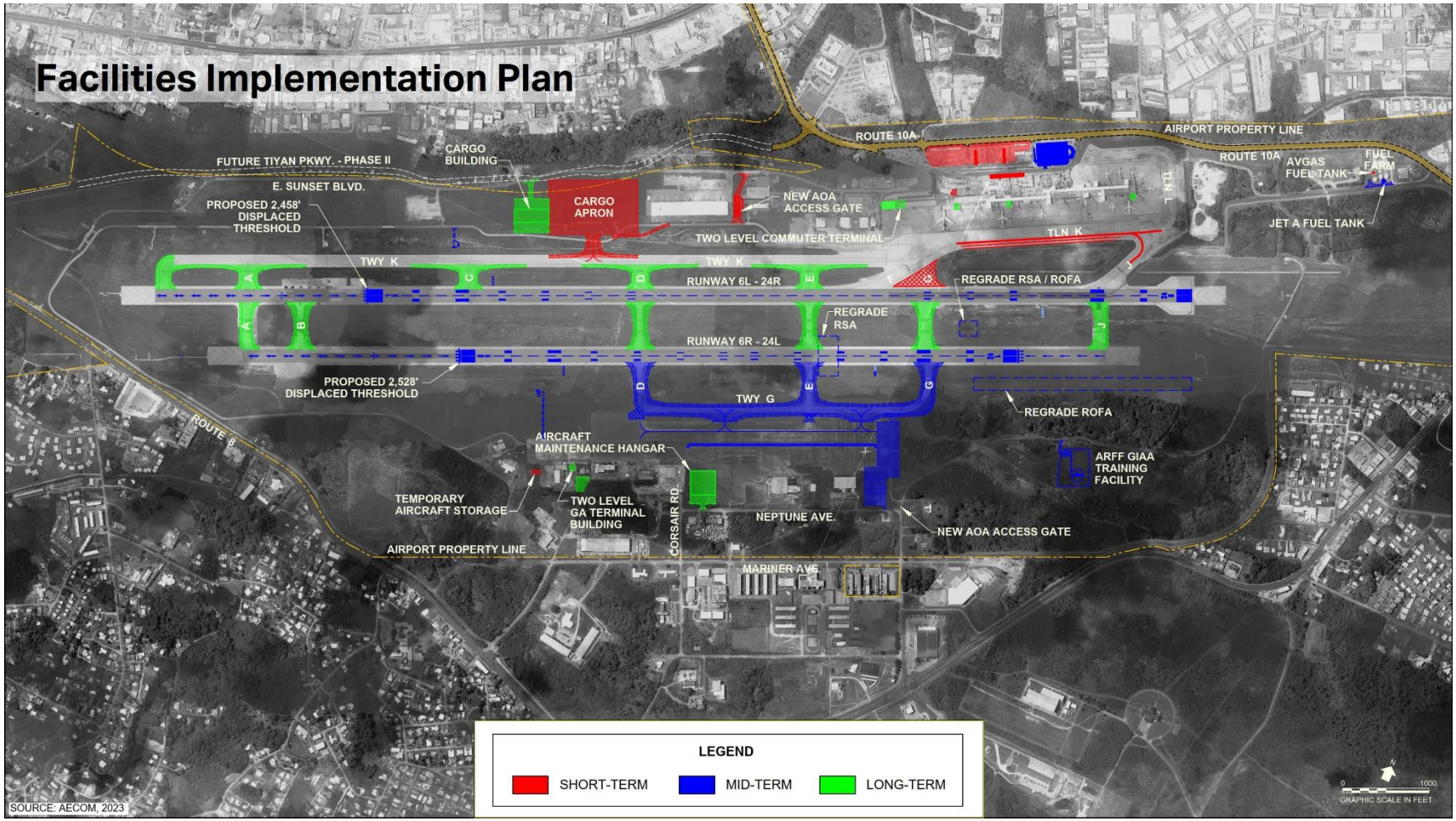
- Documents the project phasing, timing, and cost of the projects proposed in the Airport Development Plan
- Broken out into three phases:
  - Short-Term (Years 0-5)
  - Mid-Term (Years 6-10)
  - Long-Term (Years 11-20)
- Factors that affect implementation and phasing:
  - Growth and congestion
  - Facility life cycle
  - Policy and regulation changes
  - Facility optimization and/or revenue generation

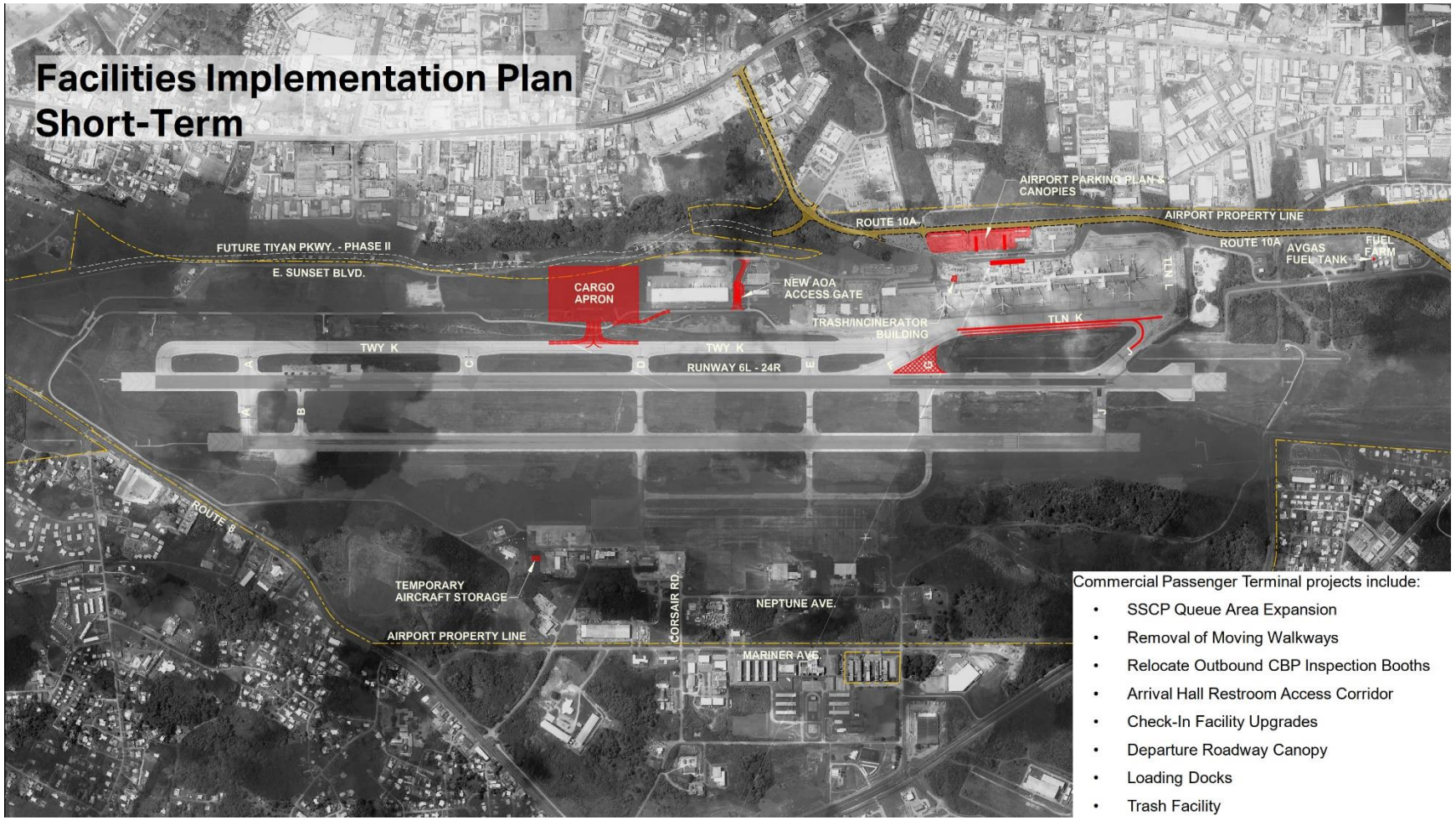







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Facilities Implementation Plan
ROUTE 10A
AIRPORT PROPERTY LINE
FUTURE TIYAN PKWY. - PHASE II
CARGO BUILDING
E. SUNSET BLVD.
PROPOSED 2,458' DISPLACED THRESHOLD
CARGO APRON
NEW AOA ACCESS GATE
TWO LEVEL COMMUTER TERMINAL
TLN K
TWY K
RUNWAY 6L - 24R
REGRADE RSA / ROFA
REGRADE RSA
RUNWAY 6R - 24L
PROPOSED 2,528' DISPLACED THRESHOLD
TWY G
REGRADE ROFA
AVGAS FUEL TANK
FUEL FARM
JET A FUEL TANK
ROUTE 8
AIRCRAFT MAINTENANCE HANGAR
ARFF GIAA TRAINING FACILITY
TEMPORARY AIRCRAFT STORAGE
TWO LEVEL GA TERMINAL BUILDING
CORSAIR RD
NEPTUNE AVE.
NEW AOA ACCESS GATE
AIRPORT PROPERTY LINE
MARINER AVE.
LEGEND
SHORT-TERM
MID-TERM
LONG-TERM
SOURCE: AECOM, 2023
GRAPHIC SCALE IN FEET


Facilities Implementation Plan
Short-Term
AIRPORT PARKING PLAZA CANOPIES
ROUTE 10A
AIRPORT PROPERTY LINE
FUTURE TIYAN PKWY. - PHASE II
E. SUNSET BLVD.
CARGO APRON
NEW AOA ACCESS GATE
TRASH/INCINERATOR BUILDING
TLN K
TWY K
TWY K
RUNWAY 6L - 24R
ROUTE 10A
AVGAS FUEL TANK
FUEL FARM
TLN T
ROUTE 8
TEMPORARY AIRCRAFT STORAGE
CORSAIR RD.
NEPTUNE AVE.
AIRPORT PROPERTY LINE
MARINER AVE.
Commercial Passenger Terminal projects include:
• SSCP Queue Area Expansion
• Removal of Moving Walkways
• Relocate Outbound CBP Inspection Booths
• Arrival Hall Restroom Access Corridor
• Check-In Facility Upgrades
• Departure Roadway Canopy
• Loading Docks
• Trash Facility

# Facilities Implementation Plan – Short-Term – Schedule

| Project ID | Project | Duration | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |
|---|---|---|---|---|---|---|---|---|
| | | Year | 1 | 2 | 3 | 4 | 5 | 6 |
| Short-Term (0-5 Years) | | | | | | | | |
| I-A-01 | Vegetation Removal | 6 months | | | | | | |
| I-A-02 | North Apron Improvements and Taxiway G Removal | 30 months | | | | | | |
| I-A-03 | Wind Cone Relocation (2) | 6 months | | | | | | |
| I-T-01 | Removal of Moving Walkways in Concourse (2) | 12 months | | | | | | |
| I-T-02 | Relocate Outbound CBP Inspection Process | 9 months | | | | | | |
| I-T-03 | Arrivals Hall Restroom Access Corridor | 9 months | | | | | | |
| I-T-04 | SSCP Queue Area Expansion | 24 months | | | | | | |
| I-T-05 | Check-in Facility Upgrades | 12 months | | | | | | |
| I-T-06 | Terminal Departure Roadway Canopy | 9 months | | | | | | |
| I-T-07 | Loading Docks (2) | 6 months | | | | | | |
| I-L-01 | Airport Parking Plan | 24 months | | | | | | |
| I-C-01 | Cargo Apron | 24 months | | | | | | |
| I-GA-01 | Temporary Aircraft Storage Facility | 6 months | | | | | | |
| I-S-01 | Aircraft Fuel Avgas Tank | 9 months | | | | | | |
| I-S-02 | North AOA Access Gate | 18 months | | | | | | |
| I-S-03 | Trash/Incinerator Building | 6 months | | | | | | |

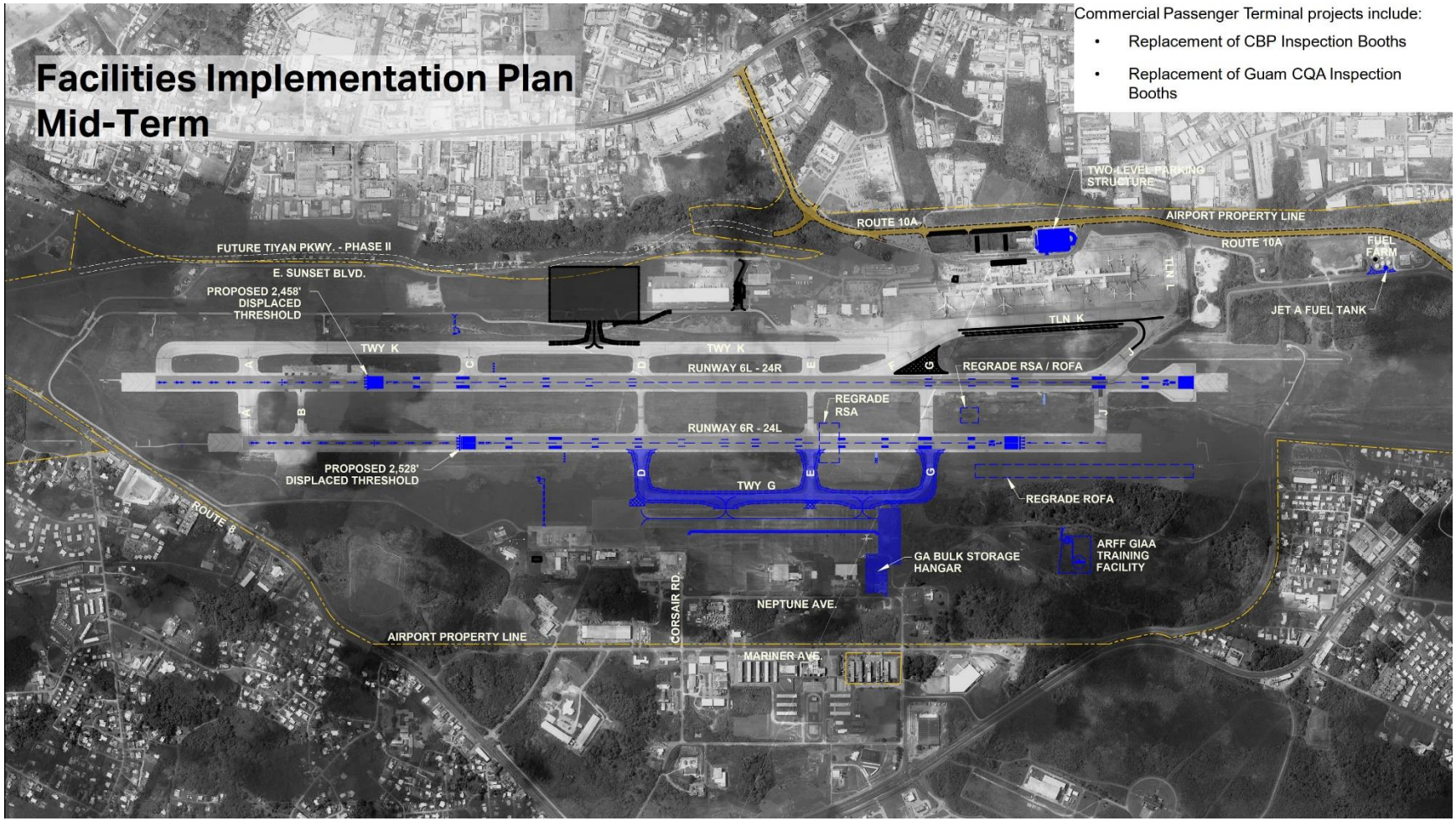
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# Facilities Implementation Plan – Short-Term – Funding ($000)

| Project | Estimated Cost* | FAA AIP Grants | Bonds/PPP | Airport Funds | 3rd Party | Total |
|---|---|---|---|---|---|---|
| **Airfield** | | | | | | |
| Taxiway/Runway Maintenance | $1,964 | $1,767 | | $196 | | **$1,964** |
| **Terminal** | | | | | | |
| SSCP Expansion | $15,740 | $14,166 | | $1,574 | | **$15,740** |
| Other Improvements | $4,953 | $2,476 | | $2,476 | | **$4,953** |
| **Landside** | | | | | | |
| Airport Parking Plan | $7,379 | | $6,641 | | $738 | **$7,379** |
| **Cargo** | | | | | | |
| Cargo Apron | $45,378 | $40,840 | | $4,538 | | **$45,378** |
| **General Aviation** | | | | | | |
| Temporary Storage Hangar | $6,243 | | | | $6,243 | **$6,243** |
| **Support** | | | | | | |
| Various | $14,582 | $10,936 | | $3,645 | | **$14,582** |
| **Total** | **$96,239** | **$70,187** | **$6,641** | **$12,430** | **$6,981** | **$96,239** |

*Escalated project cost

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Facilities Implementation Plan
Mid-Term
Commercial Passenger Terminal projects include:
• Replacement of CBP Inspection Booths
• Replacement of Guam CQA Inspection Booths
TWO-LEVEL PARKING STRUCTURE
ROUTE 10A
AIRPORT PROPERTY LINE
ROUTE 10A
FUEL FARM
FUTURE TIYAN PKWY. - PHASE II
E. SUNSET BLVD.
PROPOSED 2,458' DISPLACED THRESHOLD
TLN L
TLN K
JET A FUEL TANK
TWY K
TWY K
RUNWAY 6L - 24R
REGRADE RSA / ROFA
REGRADE RSA
RUNWAY 6R - 24L
PROPOSED 2,528' DISPLACED THRESHOLD
TWY G
REGRADE ROFA
ROUTE 8
ARFF GIAA TRAINING FACILITY
GA BULK STORAGE HANGAR
CORSAIR RD.
NEPTUNE AVE.
AIRPORT PROPERTY LINE
MARINER AVE.

# Facilities Implementation Plan – Mid-Term – Schedule

| Project ID | Project | Duration | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 |
|---|---|---|---|---|---|---|---|---|---|
| | | Year | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| Mid-Term (6-10 Years) | | | | | | | | | |
| II-A-01 | Runway 6R/24L Safety Standards Compliance | 60 months | | | | | | | |
| II-A-02 | South Apron Taxiway Connector Improvements | 24 months | | | | | | | |
| II-A-03 | Shift South Apron Taxilane | 24 months | | | | | | | |
| II-A-04 | Upgrade Taxiway D South, Taxiway E South, and Taxiway G South | 24 months | | | | | | | |
| II-A-05 | Runway 6L/24R Safety Standards Compliance | 36 months | | | | | | | |
| II-T-01 | Upgrade CBP Protection Booths (23) | 6 months | | | | | | | |
| II-T-02 | Upgrade Guam CQA Booths (11) | 6 months | | | | | | | |
| II-L-01 | Rental Car Parking Structure | 24 months | | | | | | | |
| II-GA-01 | GA Bulk Storage Hangar | 42 months | | | | | | | |
| II-S-01 | Aircraft Fuel Jet A Tank | 9 months | | | | | | | |
| II-S-02 | South AOA Access Gate | 18 months | | | | | | | |
| II-S-03 | ARFF GIAA Training Facility and Burn Pit | 24 months | | | | | | | |

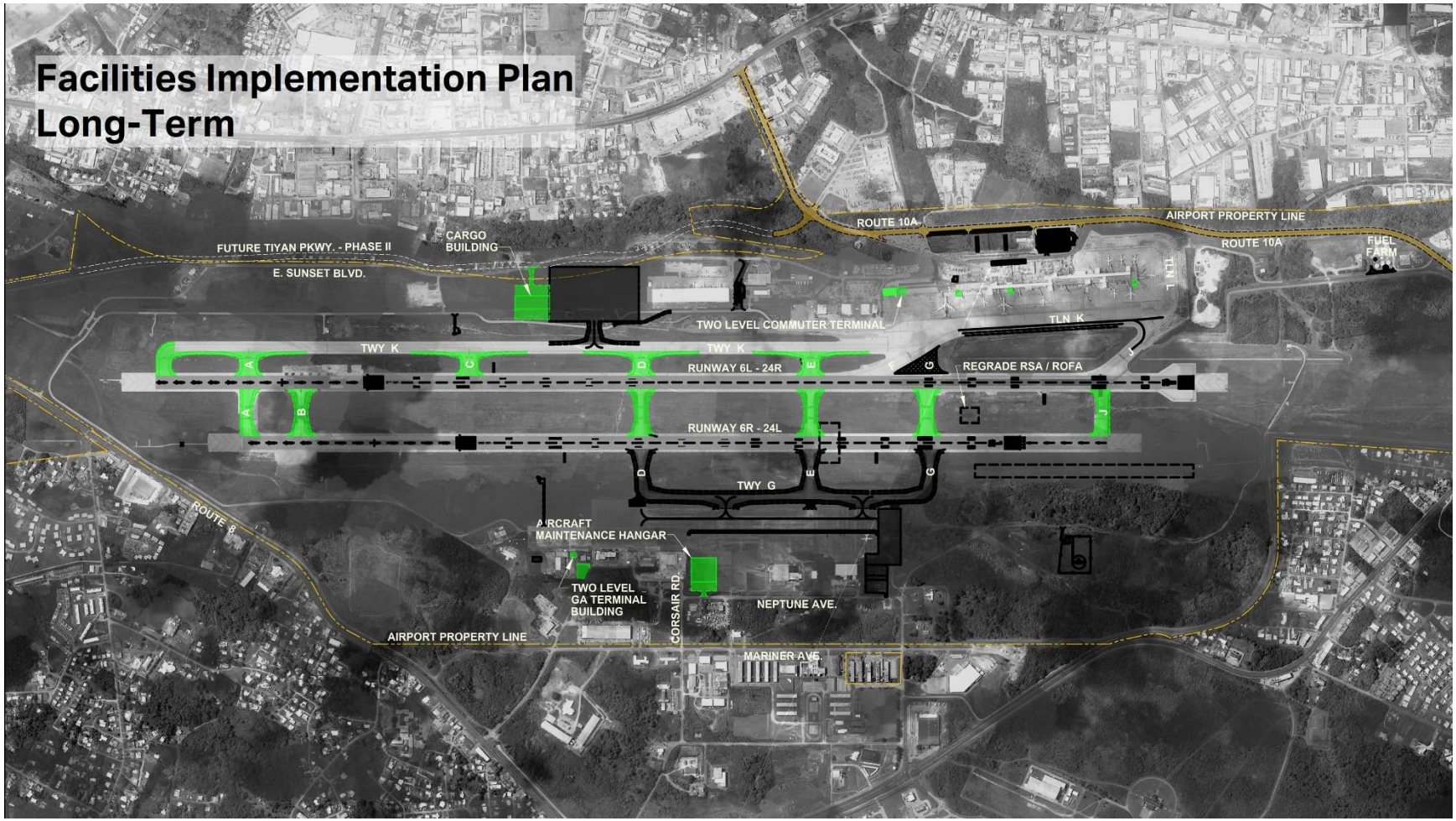
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# Facilities Implementation Plan – Mid-Term – Funding ($000)

| Project | Estimated Cost* | FAA AIP Grants | Bonds/PPP | Airport Funds | 3rd Party | Total |
|---|---|---|---|---|---|---|
| **Airfield** | | | | | | |
| Runway Modifications | $8,106 | $7,295 | | $811 | | **$8,106** |
| Taxiway/Apron Connectors | $10,906 | $9,816 | | $1,091 | | **$10,906** |
| Taxiway Upgrades | $54,265 | $48,838 | | $5,426 | | **$54,265** |
| **Terminal** | | | | | | |
| CBP/CQA Booths | $845 | $845 | | | | **$845** |
| **Landside** | | | | | | |
| Rental Car Structure | $190,388 | | $171,350 | | $19,039 | **$190,388** |
| **General Aviation** | | | | | | |
| Storage Hangar | $113,143 | $10,000 | | | $103,143 | **$113,143** |
| **Support** | | | | | | |
| Jet A Fuel Tank | $35,093 | | $31,584 | $3,509 | | **$35,093** |
| South AOA Access Gate | $456 | $228 | | $228 | | **$456** |
| ARFF GIAA Burn Pit & Facility | $16,855 | $15,170 | | $1,686 | | **$16,855** |
| **Total** | **$430,059** | **$92,193** | **$202,933** | **$12,751** | **$122,182** | **$430,059** |

*Escalated project cost

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Facilities Implementation Plan
Long-Term
FUTURE TIYAN PKWY. - PHASE II
E. SUNSET BLVD.
CARGO BUILDING
ROUTE 10A
AIRPORT PROPERTY LINE
ROUTE 10A
FUEL FARM
TWO LEVEL COMMUTER TERMINAL
TLN K
TWY K
TWY K
RUNWAY 6L - 24R
REGRADE RSA / ROFA
RUNWAY 6R - 24L
TWY G
AIRCRAFT MAINTENANCE HANGAR
ROUTE 8
TWO LEVEL GA TERMINAL BUILDING
CORSAIR RD.
NEPTUNE AVE.
AIRPORT PROPERTY LINE
MARINER AVE.

# Facilities Implementation Plan – Long-Term – Schedule

| Project ID | Project | Duration | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 | 2040 | 2041 | 2042 | 2043 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Year | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| Long-Term (11-20 Years) | | | | | | | | | | | | |
| III-A-01 | Upgrade Taxiway A North and Taxiway K Connector | 24 months | | | | | | | | | | |
| III-A-02 | Upgrade Taxiway A Center | 24 months | | | | | | | | | | |
| III-A-03 | Upgrade Taxiway B | 24 months | | | | | | | | | | |
| III-A-04 | Upgrade Taxiway C | 24 months | | | | | | | | | | |
| III-A-05 | Upgrade Taxiway D North | 24 months | | | | | | | | | | |
| III-A-06 | Upgrade Taxiway D Center | 24 months | | | | | | | | | | |
| III-A-07 | Upgrade Taxiway E North | 24 months | | | | | | | | | | |
| III-A-08 | Upgrade Taxiway E Center | 24 months | | | | | | | | | | |
| III-A-09 | Upgrade Taxiway G Center | 24 months | | | | | | | | | | |
| III-A-10 | Upgrade Taxiway J | 24 months | | | | | | | | | | |
| III-T-01 | Construction of Pods 1, 3 and 6 | 30 months | | | | | | | | | | |
| III-C-01 | Cargo Facilities | 48 months | | | | | | | | | | |
| III-GA-01 | GA Terminal | 48 months | | | | | | | | | | |
| III-GA-02 | Light Commuter Aircraft Terminal | 60 months | | | | | | | | | | |
| III-S-01 | Large Aircraft Maintenance Hangar | 60 months | | | | | | | | | | |

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# Facilities Implementation Plan – Long-Term – Cost Estimates

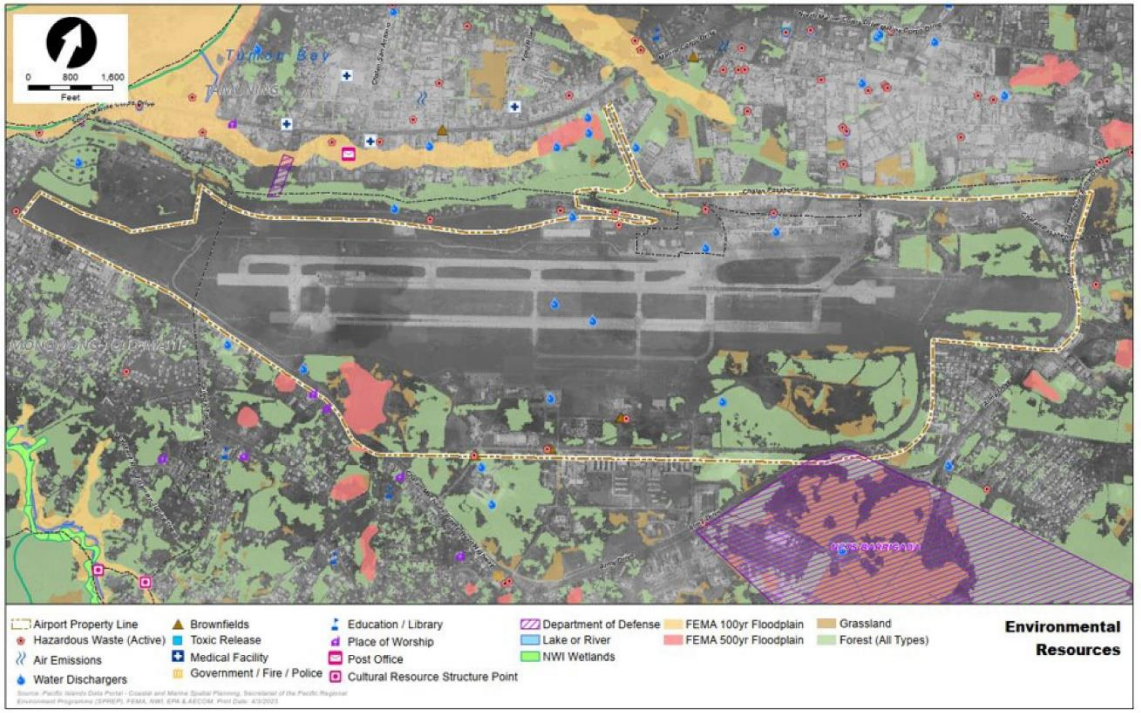
| Project Type | Estimated Cost |
|---|---|
| Airfield | $69,291,000 |
| Terminal | $43,840,000 |
| Landside | $0 |
| Cargo | $77,110,000 |
| General Aviation | $74,620,000 |
| Support Facilities | $90,420,000 |
| **Total** | **$355,281,000** |

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Environmental Overview
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# Environmental Resources Evaluated

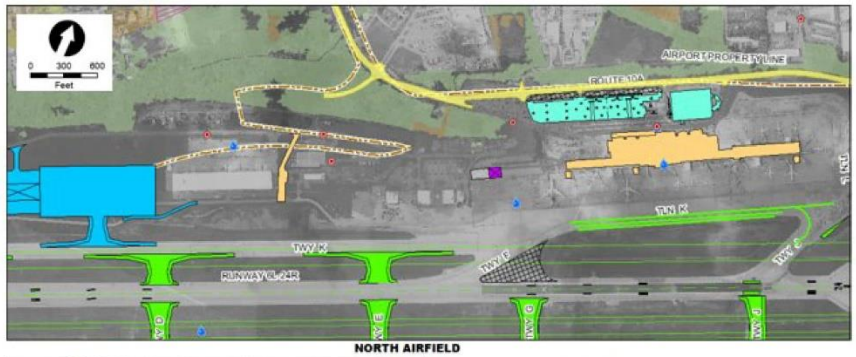
- Air Quality
- Biological Resources
- Coastal Resources
- Hazardous Materials
- Cultural Resources/Section 4(f)
- Natural Resources and Energy Supply
- Noise and Compatible Land Use
- Socioeconomics, Environmental Justice, and Children's Health Safety Risks
- Visual Effects
- Water Resources

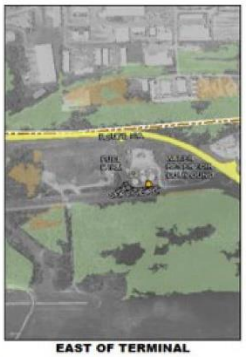



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# Environmental Resources Potentially Affected

- Air Quality
- Biological Resources
- Coastal Resources
- Hazardous Materials
- Cultural Resources/Section 4(f)
- Natural Resources and Energy Supply
- Noise and Compatible Land Use
- Socioeconomics, Environmental Justice, and Children's Health Safety Risks
- Visual Effects
- Water Resources










**IMPROVEMENTS**

- Airport Property Line
- Route 10 Widening Project (Others)
- Airfield
- Cargo
- General Aviation
- Landside
- Terminal
- Support Facility
- Removed

**ENVIRONMENTAL FEATURES**

- Hazardous Waste (Active)
- Water Dischargers
- Brownfields
- FEMA 100yr Floodplain
- FEMA 500yr Floodplain
- Grassland
- Forest (All Types)

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# Environmental Resource Overview

**Biological Resources:**
Projects proposed in undeveloped areas would be evaluated for potential species habitat.



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# Environmental Resource Overview

**Hazardous Materials:**
Hazardous materials encountered during development would be handled in accordance with all applicable regulations.



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# Environmental Resource Overview

**Coastal Resources:**
The entire island of Guam is a designated Coastal Zone. Any future development would need to be consistent with the Coastal Zone Management Plan (CZMP).

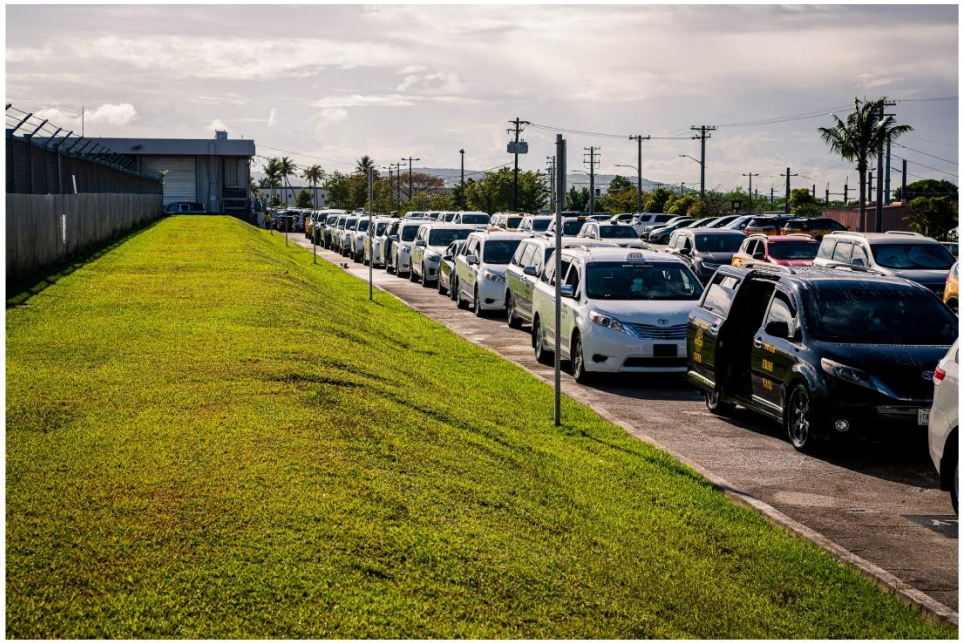



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# Environmental Resource Overview

**Natural Resources and Energy Supply**

Future projects would evaluate potential impacts on energy supplies and consumable natural resources.



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# NEPA Compliance Outlook

- Implementation of most projects in the Airport Development Plan would require compliance with the National Environmental Policy Act (NEPA) to receive federal financial assistance.
- For projects not "categorically excluded" under FAA Order 1050.1F, compliance with NEPA is generally satisfied through the preparation of an Environmental Assessment (EA). A CATEX could take up to six months from draft through FAA acceptance.
- A CATEX could take up to six months while an EA could take between 12 and 18 months from draft through FAA approval/finding.

**Projects That Could Be Exempt From NEPA**

| Project No. | Recommended Project |
|---|---|
| I-T-01 | Interior modification to remove moving walkways to increase concourse space flexibility |
| I-T-02 | Interior modification to relocate the outbound CBP at Gate 7 to the vicinity of Gate 4 to increase space in holdrooms |
| I-T-03 | Interior modification to provide additional restrooms for arriving international passengers |
| I-T-04 | Interior modification to increase the terminal SSCP queue area |
| I-T-05 | Interior modification to upgrade the terminal check-in facilities by replacing check-in counters with kiosks |
| II-T-01 | Interior modification to upgrade the CBP inspection booths |
| II-T-02 | Interior modification to upgrade the Guam CQA inspection booths |

**Projects That May Require an EA**

| Project No. | Recommended Project |
|---|---|
| II-A-01 | Runway 6R/24L Safety Standards Compliance |
| II-A-05 | Runway 6L/24R Safety Standards Compliance |
| II-GA-01 | General Aviation Bulk Storage Hangar |
| II-S-03 | GIAA ARFF Training Facility and Burn Pit |
| III-C-01 | Cargo Facilities |

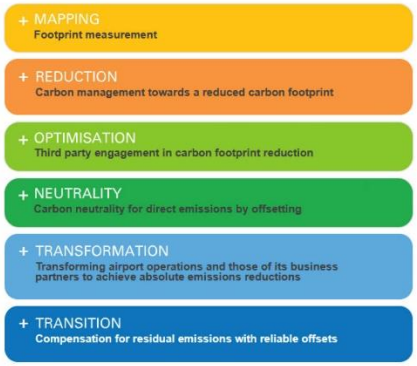
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# Sustainability Context

## Industry Drivers

- International Civil Aviation Organization (ICAO)
- Airports Council International (ACI)
- Airport Carbon Accreditation (ACA)
- National Air Transportation Association (NATA)
- International Air Transport Association (IATA)




## Peer Airports

| Name | Location | Passenger Count | Sustainability Initiatives |
|---|---|---|---|
| Lihue Airport (LIH) | Hawaii, U.S. | 1,039,607 *(2021)* | Lighting upgrades • Air conditioning • Upgrades to reduce energy losses from older systems • Building Automation System: advanced controls of HVAC, water, and lighting systems to reduce unnecessary energy consumption • New transformers to increase annual savings and efficiently transfer incoming power. |
| Ellison Onizuka Kona International Airport (KOA) | Hawaii, U.S. | 1,404,584 *(2021)* | Lighting upgrades • Air conditioning • Upgrades to reduce energy losses from older systems • Building Automation System: advanced controls of HVAC, water, and lighting systems to reduce unnecessary energy consumption • New transformers to increase annual savings and efficiently transfer incoming power. |
| La Tontouta International Airport (NOU) | New Caledonia | ~530,000 annually | Level 2 Airport Carbon Accreditation • Developed a carbon management plan • Set targets for reducing GHG emissions |
| Nadi International Airport (NAN) | Fiji | ~2,400,000 annually | Level 3 Airport Carbon Accreditation • Published environmental policy • Indoor sustainability improvements like efficient lighting, use of natural light, and use of alternative energy • Mangrove Replanting Initiative • Stakeholder engagement in environmental policy development • Development of master plan • Public sustainability target – net zero by 2050 |

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# Sustainability Context

## Relevant Regulatory & Regional Context

- Infrastructure Investment and Jobs Act (IIJA)
- Inflation Reduction Act (IRA)
- Guam Power Authority's (GPA's) Clean Energy Master Plan (CEMP)
- Guam Green Growth (G3)
- Local2030 Islands Network

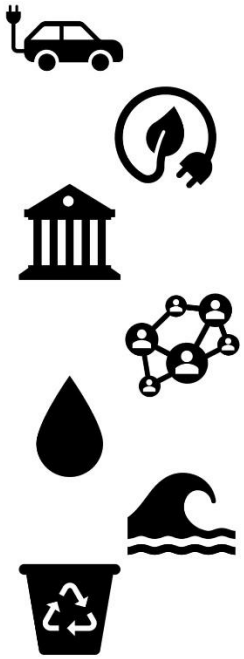
## Physical Climate Risk

- Asset damage and operational disruptions from tropical cyclones and other severe storms
- Flooding impacts from sea level rise and storm surge, and increasing extreme precipitation and high-water days
- Increasing average annual temperatures and extreme heat events
- Drought impacts on water availability

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# Sustainability Strategies

| Sustainability Strategies |
| --- |
| Energy & Fuels (Decarbonization) |
| Sustainable Buildings & Infrastructure |
| Airport Sustainability Governance |
| Social Sustainability |
| Water Conservation and Management |
| Climate Resilience |
| Waste and Material Management |



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# Sustainability Strategies

## Energy & Fuels (Decarbonization)



- EF-1: Energy audit
- EF-2: On-site renewables
- EF-3: Fuel switching
- EF-4: Alternative aviation fuels
- EF-5: Equipment electrification
- EF-6: Energy conservation measures (ECMs)
- EF-7: Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)
- EF-8: EVs and charging infrastructure

## Sustainable Buildings & Infrastructure



- SBI-1: Sustainability rating systems
- SBI-2: Green building materials
- SBI-3: Asset management program

## Airport Sustainability Governance



- GOV-1: Sustainability vision statement & policy
- GOV-2: ACA certification
- GOV-3: Contractor and design requirements
- GOV-4: Establish a sustainability and ESG working group / department / staff
- GOV-5: Annual Sustainability Report and ESG disclosures
- GOV-6: Environmental management system (EMS)
- GOV-7: Local network support

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# Sustainability Strategies

## Social Sustainability

- SS-1: Institutionalizing EJ considerations into Airport decision making
- SS-2: Stakeholder engagement
- SS-3: Public transportation and outdoor spaces
- SS-4: Indoor sustainability improvements
- SS-5: Emergency alert systems



## Water Conservation and Management



- WAT-1: Water conservation measures
- WAT-2: Native landscaping and xeriscaping
- WAT-3: Stormwater and drought management
- WAT-4: Rainwater capture, storage, and use
- WAT-5: Greywater and recycled water

## Climate Resilience



- CR-1: Additional infrastructure hardening
- CR-2: Emergency plans / policies
- CR-3: Climate vulnerability assessment and adaptation planning

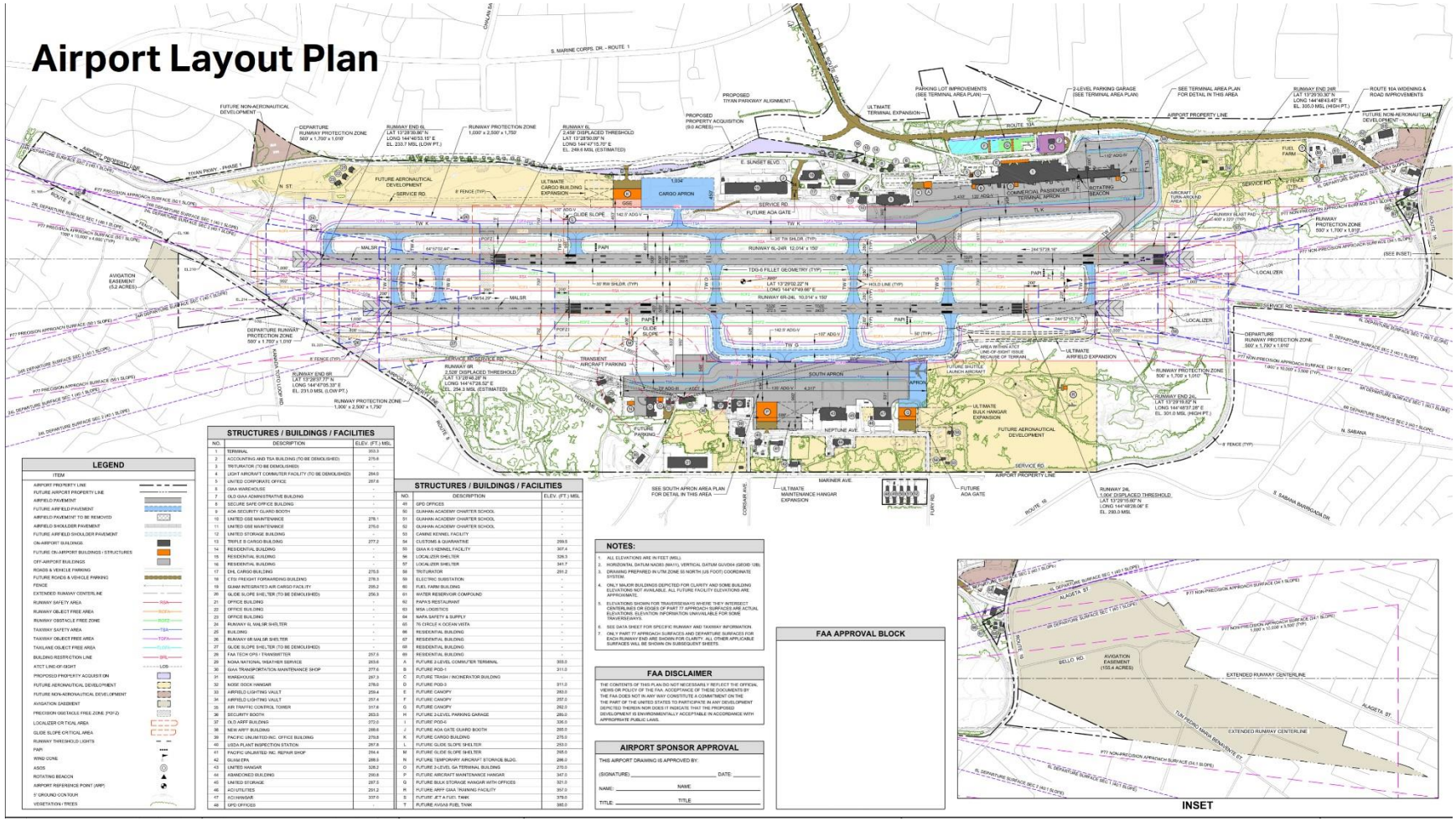
## Waste and Material Management



- WMM-1: Conduct a waste audit
- WMM-2: Waste receptacles system
- WMM-3: Organics/compostable waste collection
- WMM-4: Sustainable supply chain and green procurement
- WMM-5: Construction and demolition waste

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Airport Layout Plan
LEGEND
STRUCTURES / BUILDINGS / FACILITIES
STRUCTURES / BUILDINGS / FACILITIES
NOTES:
FAA APPROVAL BLOCK
FAA DISCLAIMER
AIRPORT SPONSOR APPROVAL
INSET

# Next Steps




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## Public Information Workshop

- Thursday, July 27th
- 10:30a – 12:00 p
- GIAA Conference Rooms 1 and 2





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# Questions or Comments?

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# Thank You!

Contact Information

Elliott Lindgren: elliott.lindgren@aecom.com

Greg Mayer: gregory.mayer@aecom.com

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# Antonio B. Won Pat International Airport Master Plan Update

Appendix G – Forecast Approval Letter

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# Appendix G: Forecast Approval Letter

## G.1 Forecast Approval Letter

**Figure G-1** displays the Federal Aviation Administration (FAA) forecast approval letter for this Master Plan. For more information on the forecasts, see **Chapter 3:** *Aviation Demand Forecasts*.

U.S. Department
of Transportation
**Federal Aviation
Administration**

Western-Pacific Region
Office of Airports
Honolulu Airports District Office

Federal Aviation Administration
300 Ala Moana Blvd. Rm 7-12
Honolulu, HI 96850

March 27, 2024

VIA EMAIL

John M. Quinata
Executive Manager
Guam International Airport Authority
P.O. Box 8770
Tamuning, Guam 96931

Dear Mr. Quinata:

**A.B. Won Pat International Airport (GUM)**
**Airport Master Plan Update: Forecast**
**AIP Grant/Project: 3-66-0001-113-2021**

The Federal Aviation Administration (FAA) has completed its review of the Aviation Demand Forecast associated with the Airport Master Plan Update, dated March 28, 2023, for A.B. Won Pat International Airport (GUM). The FAA approves these forecasts for airport planning purposes, including Airport Layout Plan development.

In summary, although the master plan forecast isn't within the 10 percent allowance for the 5-year planning horizon, the airport forecast appropriately explains the difference is due largely in part to the inconsistent historical TAF data. Based on the latest TAF released January 2024, both the enplanement and total operation forecast for the Master Plan Update differ from the latest FAA TAF by less than 15 percent in the 10-year planning horizon (3.4 percent for enplanement, 2.6 percent for total operations). The master plan forecast is consistent with the FAA TAF in 10-year and 15-year.

This forecast was prepared at the same time as the evolving impacts of the COVID-19 public health emergency. Forecast approval is based on the methodology, data, and conclusions at the time the document was prepared. However, consideration of the impacts of the COVID-19 public health emergency on aviation activity is warranted to acknowledge the reduced confidence in growth projections using currently-available data.

Accordingly, FAA approval of this forecast does not constitute justification for future projects. Justification for future projects will be made based on activity levels at the time the project is requested for development. Documentation of actual activity levels meeting planning activity levels will be necessary to justify AIP funding for eligible projects.

If you have further questions or need for clarification, please feel free to contact me via phone at (424) 405-7313 or via email at joseph.carlini@faa.gov.

Sincerely,

JOSEPH M CARLINI
Digitally signed by JOSEPH M CARLINI
Date: 2024.03.27 16:34:50 -07'00'

Joseph Carlini
AWP Regional Planner

Cc: Frank Santos, Director, Transportation Management Group, LLC
Elliott Lindgren, Vice President, Aviation, AECOM



**Figure G-1. FAA Forecast Approval Letter**

Source: Federal Aviation Administration

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# Antonio B. Won Pat International Airport Master Plan Update

Appendix H – Airport Layout Plan

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# Appendix H: Airport Layout Plan

## H.1 Airport Layout Plan – Conditional Approval

On October 18, 2024, the Federal Aviation Administration (FAA) Honolulu Airports District Office (HNL-ADO) completed their review of the Antonio B. Won Pat International Airport (Airport) Airport Layout Plan (ALP) and issued a "Conditional Approval" of the ALP dated June 2023. The official letter of approval letter can be found in **Figure H-1** and the ALP sheet set can be found in **Figures H-2** through **H-52**.

U.S. Department of Transportation
Federal Aviation Administration

Western-Pacific Region
Airports Division
Honolulu Airports District Office

300 Ala Moana Blvd.
Room 7-128
Honolulu, HI 96850-7128

October 18, 2024

Mr. John M. Quinata
Executive Manager
A.B. Won Pat International Airport Authority
P.O. Box 8770
Tamuning, Guam 96931

Dear Mr. Quinata,

Federal Aviation Administration (FAA)
Conditional Approval for Airport Layout Plan (ALP)
A.B. Won Pat International Airport (GUM)
Airspace Case Study No. 2023-AWP-3177-NRA

The Honolulu Airports District Office (HNL-ADO) has completed the final review of the A.B. Won Pat International Airport updated Airport Layout Plan (ALP) drawing set. Accordingly, a **Conditional Approval** is issued for the subject ALP, dated **June 2023**. A signed copy of the approved ALP is enclosed.

An aeronautical study, Airspace Case Study No. 2023-AWP-3177-NRA was conducted on the proposed development depicted on the ALP. This determination does not constitute FAA approval or disapproval of the physical development involved in the proposal. It is a determination with respect to the safe and efficient use of navigable airspace by aircraft and with respect to the safety of persons and property on the ground.

In making this determination, the FAA has considered matters such as the effects the proposal would have on existing or planned traffic patterns of neighboring airports, the effects it would have on the existing airspace structure and projected programs of the FAA, the effects it would have on the safety of persons and property on the ground, and the effects that existing or proposed manmade objects (on file with the FAA), and known natural objects within the affected area would have on the airport proposal.

If the ALP reflects future configurations that require amendment of current instrument flight procedures or a need for additional flight procedures, requests must be submitted 24-36 months prior to construction completion through the Instrument Flight Procedures Information Gateway (IFP Gateway) at https://www.faa.gov/air_traffic/flight_info/aeronav/procedures/ifp_initiation/ . Please reference the NRA case number in the request. No IFR Effect if the RWY thresholds do not move more than 50 feet longitudinally, 10 feet laterally, or 3 feet vertically.

The FAA has only limited means to prevent the construction of structures near an airport. The airport sponsor has the primary responsibility to protect the airport environs through such means

as local zoning ordinances, property acquisition, avigation easements, letters of agreement or other means.

This ALP approval is conditioned on acknowledgement that any development on airport property requiring Federal environmental approval must receive such written approval from FAA prior to commencement of the subject development. This ALP approval is also conditioned on acceptance of the plan under local land use laws. We encourage appropriate agencies to adopt land use and height restrictive zoning based on the plan.

Approval of the plan does not indicate that the United States will participate in the cost of any development proposed. AIP funding requires evidence of eligibility and justification at the time a funding request is ripe for consideration. When construction of any proposed structure or development indicated on the plan is undertaken, such construction requires normal 45-day advance notification to FAA for review in accordance with applicable Federal Aviation Regulations (i.e., Parts 77, 157, 152, etc.). More notice is generally beneficial to ensure that all statutory, regulatory, technical and operational issues can be addressed in a timely manner.

Please attach this letter to the FAA-approved Airport Layout Plan and retain it for your records.

Sincerely,

GORDON K WONG

Digitally signed by GORDON K WONG
Date: 2024.10.18 19:03:24 -10'00'

Gordon Wong
Manager, Honolulu Airports District Office

Enclosure: FAA Conditionally Approved ALP

2

**Figure H-1. FAA Conditionally Approved ALP - Approval Letter**

Source: FAA

# AIRPORT LAYOUT PLAN DRAWING SET

## ANTONIO B. WON PAT INTERNATIONAL AIRPORT (GUM)

### TAMUNING, 96913, GUAM

PREPARED FOR:

A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM

PREPARED BY:

AECOM

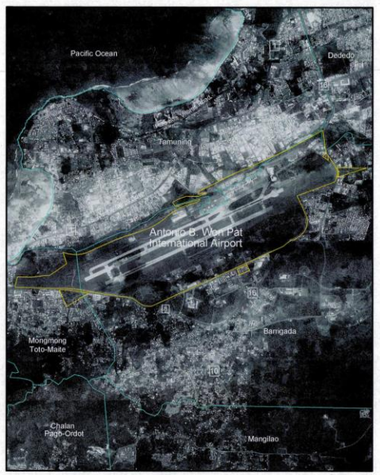
JUNE 2023




LOCATION MAP

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VICINITY MAP

| NO. | REVISIONS | BY | APP. | DATE | NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

A. B. Won Pat International Airport Authority, Guam
355 Chalan Pasaheru B224-A
Tamuning, 96916, Guam
Tel 671.646.0300
www.guamairport.com

AECOM Technical Services Inc.
1635 Market Street, Suite 1000
Philadelphia, Pennsylvania 19103
Tel 215.399.4300
www.aecom.com

AIRPORT SPONSOR APPROVAL

Name: John M. Quinata

Title: Executive Manager

Signature:

Date: 10-08-24

FAA APPROVAL STAMP

NO ACTION

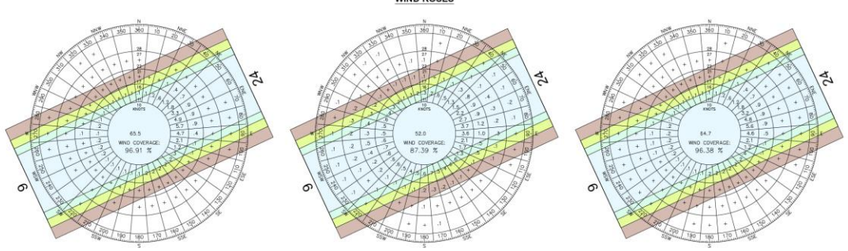
**Figure H-2. Title Sheet**

Source: AECOM

## RUNWAY DATA

| ITEM | RUNWAY 6L-24R | | RUNWAY 6R-24L | |
|---|---|---|---|---|
| | EXISTING RUNWAY 6L | FUTURE RUNWAY 6L | EXISTING RUNWAY 24R | FUTURE RUNWAY 24R | EXISTING RUNWAY 6R | FUTURE RUNWAY 6R | EXISTING RUNWAY 24L | FUTURE RUNWAY 24L |
| RUNWAY DESIGN CODE (RDC) | D-V-2400 | SAME | D-V-5000 | SAME | D-V-2400 | SAME | D-V-5000 | SAME |
| APPROACH REFERENCE CODE (APRC) | D / V / 2400 | SAME | D / V / 4000 | SAME | D / V / 2400 | SAME | D / V / 4000 | SAME |
| DEPARTURE REFERENCE CODE (DPRC) | D / V | SAME | D / V | SAME | D / V | SAME | D / V | SAME |
| PAVEMENT STRENGTH (x 1000 lbs.) | | | | | | | | |
| SINGLE WHEEL | 135 | SAME | 135 | SAME | 135 | SAME | 135 | SAME |
| DUAL WHEEL | 235 | SAME | 235 | SAME | 235 | SAME | 235 | SAME |
| DUAL TANDEM | 390 | SAME | 390 | SAME | 390 | SAME | 390 | SAME |
| DOUBLE DUAL TANDEM | 780 | SAME | 780 | SAME | 780 | SAME | 780 | SAME |
| PCN | 69 / F / B / X / U | SAME | 69 / F / B / X / U | SAME | 69 / F / B / X / U | SAME | 69 / F / B / X / U | SAME |
| SURFACE MATERIAL AND TREATMENT | ASPH-CONC-GRVD | SAME | ASPH-CONC-GRVD | SAME | ASPH-CONC-GRVD | SAME | ASPH-CONC-GRVD | SAME |
| EFFECTIVE RUNWAY GRADIENT (%) | 0.5 UP | SAME | 0.7 DOWN | SAME | 0.8 UP | SAME | 0.6 DOWN | SAME |
| MAXIMUM GRADE (%) | - | SAME | - | SAME | - | SAME | - | SAME |
| PERCENT (%) WIND COVERAGE | | | | | | | | |
| ALL WEATHER | 20 KNOTS-98.88% | SAME | 20 KNOTS-98.88% | SAME | 20 KNOTS-98.88% | SAME | 20 KNOTS-98.88% | SAME |
| IFR | 20 KNOTS-98.88% | SAME | 20 KNOTS-98.88% | SAME | 20 KNOTS-98.88% | SAME | 20 KNOTS-98.88% | SAME |
| VFR | 20 KNOTS-99.24% | SAME | 20 KNOTS-99.24% | SAME | 20 KNOTS-99.24% | SAME | 20 KNOTS-99.24% | SAME |
| RUNWAY LENGTH | 12,014' | SAME | 12,014' | SAME | 10,014' | SAME | 10,014' | SAME |
| RUNWAY WIDTH | 150' | SAME | 150' | SAME | 150' | SAME | 150' | SAME |
| RUNWAY SHOULDER WIDTH | 35' | SAME | 35' | SAME | 35' | SAME | 35' | SAME |
| RUNWAY END COORDINATES (NAD 83) | | | | | | | | |
| LATITUDE | 13° 28' 39.86" N | SAME | 13° 29' 30.30" N | SAME | 13° 28' 37.77" N | SAME | 13° 29' 19.82" N | SAME |
| LONGITUDE | 144° 48' 53.15" E | SAME | 144° 48' 43.45" E | SAME | 144° 47' 05.33" E | SAME | 144° 48' 37.28" E | SAME |
| RUNWAY END ELEVATION | 233.7 | SAME | 305.0 | SAME | 231.0 | SAME | 301.0 | SAME |
| DISPLACED THRESHOLD COORDINATES (NAD 83) | | | | | | | | |
| LATITUDE | 13° 28' 44.07" N | 13° 28' 50.09" N | N / A | SAME | N / A | 13° 28' 48.28" N | 13° 29' 15.60" N | SAME |
| LONGITUDE | 144° 47' 02.33" E | 144° 47' 15.70" E | N / A | SAME | N / A | 144° 47' 28.52" E | 144° 48' 28.06" E | SAME |
| DISPLACED THRESHOLD ELEVATION | 239.9 | 249.6 | N / A | SAME | N / A | 254.3 | 293.0 | SAME |
| RUNWAY LIGHTING TYPE | HIRL | SAME | HIRL | SAME | HIRL | SAME | HIRL | SAME |
| RUNWAY MARKING TYPE | PRECISION | SAME | NON-PRECISION | SAME | PRECISION | SAME | NON-PRECISION | SAME |
| FAR PART 77 CATEGORY-TYPE | | | | | | | | |
| APPROACH SURFACE SLOPE | 50:1 | SAME | 34:1 | SAME | 50:1 | SAME | 34:1 | SAME |
| APPROACH TYPE | CAT I - ILS | SAME | RNAV (GPS) Y | SAME | RNAV (RNP) Z | SAME | RNAV (GPS) Y | SAME |
| LOWEST VISIBILITY MINIMUMS | 300 - 1/2 SM | SAME | 900 - 2 1/2 SM | SAME | 300 - 1/2 SM | SAME | 900 - 2 3/4 SM | SAME |
| TYPE OF AERONAUTICAL SURVEY REQUIRED | VERTICALLY GUIDED | SAME | VERTICALLY GUIDED | SAME | VERTICALLY GUIDED | SAME | VERTICALLY GUIDED | SAME |
| RUNWAY DEPARTURE SURFACE | YES | SAME | YES | SAME | YES | SAME | YES | SAME |
| THRESHOLD SITING SURFACE (TSS) | 34:1 (SURFACE 5)<br>30:1 (SURFACE 6) | SAME | 20:1 (SURFACE 5)<br>30:1 (SURFACE 6) | SAME | 34:1 (SURFACE 5)<br>30:1 (SURFACE 6) | SAME | 20:1 (SURFACE 5)<br>30:1 (SURFACE 6) | SAME |
| VISUAL APPROACH AIDS | PAPI, MALSR | SAME | PAPI | SAME | PAPI, MALSR | SAME | PAPI | SAME |
| INSTRUMENT APPROACH AIDS | LOC / DME, GS, VORTAC | SAME | NDB, VORTAC | SAME | LOC / DME, GS, VORTAC | SAME | VORTAC | SAME |
| TOUCHDOWN ZONE ELEVATION | 252.6 | 260.5 | 305.0 | SAME | 257.9 | 272.5 | 301.0 | SAME |

## WIND ROSES




### VFR

VFR WIND COVERAGE

| CROSSWIND COMPONENT | RUNWAY HEADING | | |
|---|---|---|---|
| | 6L-24R | 6R-24L | TOTAL |
| 10.5 knots | 96.57% | 96.57% | 96.57% |
| 13 knots | 98.57% | 98.57% | 98.57% |
| 16 knots | 99.73% | 99.73% | 99.73% |
| 20 knots | 99.94% | 99.94% | 99.94% |

### IFR

IFR WIND COVERAGE

| CROSSWIND COMPONENT | RUNWAY HEADING | | |
|---|---|---|---|
| | 6L-24R | 6R-24L | TOTAL |
| 10.5 knots | 86.64% | 86.64% | 86.64% |
| 13 knots | 92.67% | 92.67% | 92.67% |
| 16 knots | 96.99% | 96.99% | 96.99% |
| 20 knots | 98.88% | 98.88% | 98.88% |

| | |
|---|---|
| Data Source : | FAA's Airport Data and Information Portal |
| Period of Record : | 2013 - 2022 |
| No. of Observations : | 157,193 |
| Station : | 912120 Guam International Airport |

### ALL WEATHER

ALL-WEATHER WIND COVERAGE

| CROSSWIND COMPONENT | RUNWAY HEADING | | |
|---|---|---|---|
| | 6L-24R | 6R-24L | TOTAL |
| 10.5 knots | 96.01% | 96.01% | 96.01% |
| 13 knots | 98.24% | 98.24% | 98.24% |
| 16 knots | 99.57% | 99.57% | 99.57% |
| 20 knots | 99.88% | 99.88% | 99.88% |

**NOTES:**

1. ALL ELEVATIONS ARE IN FEET (MSL).
2. HORIZONTAL DATUM NADS3 (NAD 83), VERTICAL DATUM GUVD04 (GEOID 12B).
3. PLANIMETRICS ARE BASED ON AERIAL MAPPING PRODUCED BY NVS, 2022 PHOTOGRAPHY.
4. OBSTRUCTION DATA SURVEYED BY NVS, 2022 SURVEY.
5. MEAN MAX TEMPERATURE AND AIRPORT MAGNETIC VARIATION DATA FROM NOAA.
6. WIND ROSE DATA DEVELOPED USING FAA AIRPORT DATA AND INFORMATION PORTAL.
7. SOURCE FOR LOWEST VISIBILITY MINIMUMS: AIRNAV.COM INSTRUMENT APPROACH PLATES, 23 FEBRUARY 2023 TO 20 APRIL 2023.
8. RUNWAY END AND DISPLACED THRESHOLD COORDINATES AND ELEVATIONS PROVIDED BY NVS, 2022.

## AIRPORT DATA

ANTONIO B. WON PAT INTERNATIONAL AIRPORT (GUM)
CITY: TAMUNING, 96913, GUAM

| DESCRIPTION | EXISTING | PROPOSED |
|---|---|---|
| AIRPORT REFERENCE CODE (ARC) | D-V | SAME |
| MEAN MAX. TEMP. HOTTEST MONTH | 84.2°F (JUNE) | SAME |
| AIRPORT ELEVATION (HAVD 88/ABOVE MSL) | 305.0 | SAME |
| AIRPORT NAVIGATIONAL AIDS | PAPI, MALSR, LOC / DME, GS, VORTAC, NDB, BEACON | SAME |
| AIRPORT REFERENCE POINT (A.R.P.) COORDINATES (NAD 83) | LAT: 13° 29' 02.22" N<br>LONG: 144° 47' 49.66" E | SAME |
| MISCELLANEOUS FACILITIES | ATCT, ASOS, WIND CONES | SAME |
| CRITICAL DESIGN AIRCRAFT | D-V: B777-300ER | SAME |
| AIRPORT MAGNETIC VARIATION AND DATE | 9° 23' EAST CHANGING BY 0° 1' WEST / YEAR (JAN. 2023) | SAME |
| NPIAS SERVICE LEVEL | PRIMARY: NON-HUB | SAME |
| STATE EQUIVALENCE ROLE | N / A | SAME |

## EXISTING / FUTURE RUNWAY PROTECTION ZONE TABLE

| RUNWAY THRESHOLD | APPROACH RPZ | | | DEPARTURE RPZ | | |
|---|---|---|---|---|---|---|
| | LENGTH | INNER WIDTH | OUTER WIDTH | LENGTH | INNER WIDTH | OUTER WIDTH |
| RUNWAY 6L | 2,500' | 1,000' | 1,750' | 1,700' | 500' | 1,010' |
| RUNWAY 24R | 1,700' | 500' | 1,010' | 1,700' | 500' | 1,010' |
| RUNWAY 6R | 2,500' | 1,000' | 1,750' | 1,700' | 500' | 1,010' |
| RUNWAY 24L | 1,700' | 500' | 1,010' | 1,700' | 500' | 1,010' |

## EXISTING DECLARED DISTANCES

| RUNWAY END | TORA | TODA | ASDA | LDA |
|---|---|---|---|---|
| EXISTING RUNWAY 6L | 12,014' | 12,014' | 12,014' | 11,014' |
| EXISTING RUNWAY 24R | 12,014' | 12,014' | 12,014' | 12,014' |
| EXISTING RUNWAY 6R | 10,014' | 10,014' | 10,014' | 10,014' |
| EXISTING RUNWAY 24L | 9,714' | 9,714' | 9,714' | 8,710' |

## FUTURE DECLARED DISTANCES

| RUNWAY END | TORA | TODA | ASDA | LDA |
|---|---|---|---|---|
| FUTURE RUNWAY 6L | 12,014' | 12,014' | 12,014' | 9,556' |
| FUTURE RUNWAY 24R | 10,898' | 12,014' | 11,916' | 11,916' |
| FUTURE RUNWAY 6R | 10,014' | 10,014' | 10,014' | 7,486' |
| FUTURE RUNWAY 24L | 8,857' | 10,014' | 9,822' | 8,818' |

## TERMINOLOGY LEGEND

| | |
|---|---|
| ADG | AIRPLANE DESIGN GROUP |
| APV | APPROACH PROCEDURE WITH VERTICAL GUIDANCE |
| ARFF | AIRPORT RESCUE FIRE FIGHTING |
| ARP | AIRPORT REFERENCE POINT |
| ASDA | ACCELERATE STOP DISTANCE AVAILABLE |
| ASR | AIRPORT SURVEILLANCE RADAR |
| ASOS | AUTOMATED SURFACE OBSERVATION SYSTEM |
| ATCT | AIRPORT TRAFFIC CONTROL TOWER |
| BRL | BUILDING RESTRICTION LINE |
| CAT | CATEGORY |
| DME | DISTANCE MEASURING EQUIPMENT |
| EL | ELEVATION |
| GA | GENERAL AVIATION |
| GS | GLIDE SLOPE |
| HIRL | HIGH INTENSITY RUNWAY LIGHTS |
| HITL | HIGH INTENSITY TAXIWAY LIGHTS |
| IA-OFZ | INNER-APPROACH OBSTACLE FREE ZONE |
| IFR | INSTRUMENT FLIGHT RULES |
| ILS | INSTRUMENT LANDING SYSTEM |
| IT-OFZ | INNER-TRANSITIONAL OBSTACLE FREE ZONE |
| LOC | LOCALIZER |
| LDA | LANDING DISTANCE AVAILABLE |
| LNAV | LATERAL NAVIGATION |
| LPV | LOCALIZER PERFORMANCE WITH VERTICAL GUIDANCE |
| MALSR | MEDIUM INTENSITY APPROACH LIGHT SYSTEM - INCLUDING R/W ALIGNMENT INDICATOR LIGHTS |
| MITL | MEDIUM INTENSITY TAXIWAY LIGHTS |
| NDB | NON-DIRECTIONAL BEACON |
| OFA | OBJECT FREE AREA |
| OFZ | OBSTACLE FREE ZONE |
| PAPI | PRECISION APPROACH PATH INDICATOR |
| POFZ | PRECISION OBSTACLE FREE ZONE |
| RDC | RUNWAY DESIGN CODE |
| REIL | RUNWAY END IDENTIFIER LIGHTS |
| RNAV | AREA NAVIGATION |
| RNP | REQUIRED NAVIGATION PERFORMANCE |
| ROFA | RUNWAY OBJECT FREE AREA |
| ROFZ | RUNWAY OBSTACLE FREE ZONE |
| RPZ | RUNWAY PROTECTION ZONE |
| RSA | RUNWAY SAFETY AREA |
| SM | STATUTE MILE |
| TDG | TAXIWAY DESIGN GROUP |
| TDZE | TOUCHDOWN ZONE ELEVATION |
| TL | TAXILANE |
| TODA | TAKE-OFF DISTANCE AVAILABLE |
| TORA | TAKE-OFF RUN AVAILABLE |
| TW | TAXIWAY |
| VFR | VISUAL FLIGHT RULES |
| VORTAC | VERY HIGH FREQUENCY (VHF) OMNIDIRECTIONAL RANGE WITH TACTICAL AIR NAVIGATION |

## AIRFIELD TAXIWAY SYSTEM

| TAXIWAY / TAXILANE NAME | WIDTH (FT) | EDGE LIGHTING | CENTERLINE LIGHTING | AIRPLANE DESIGN GROUP | TAXIWAY DESIGN GROUP | TAXIWAY SAFETY AREA | TAXIWAY OBJECT FREE AREA | TAXIWAY EDGE SAFETY MARGIN | TAXIWAY SHOULDER WIDTH |
|---|---|---|---|---|---|---|---|---|---|
| A (BETWEEN RW 6L-24R & TW K) | 150 | HITL | N / A | V | 6 | 214' | 285' | 14' | 35' |
| A (BETWEEN RW 6L-24R & RW 6R-24L) | 150 | HITL | N / A | V | 6 | 214' | 285' | 14' | 35' |
| B (BETWEEN RW 6L-24R & RW 6R-24L) | 75 | HITL | N / A | V | 6 | 214' | 285' | 14' | 0' |
| C | 125 | HITL | N / A | V | 6 | 214' | 285' | 14' | 30' |
| D (BETWEEN RW 6L-24R & TW K) | 125 | HITL | N / A | V | 6 | 214' | 285' | 14' | 30' |
| D (BETWEEN RW 6L-24R & RW 6R-24L) | 75 | HITL | N / A | V | 6 | 214' | 285' | 14' | 0' |
| D (BETWEEN RW 6R-24L & S. APRON) | 75 | HITL | N / A | V | 6 | 214' | 285' | 14' | 0' |
| E (BETWEEN RW 6L-24R & TW K) | 125 | HITL | N / A | V | 6 | 214' | 285' | 14' | 30' |
| E (BETWEEN RW 6L-24R & RW 6R-24L) | 75 | HITL | N / A | V | 6 | 214' | 285' | 14' | 0' |
| E (BETWEEN RW 6R-24L & S. APRON) | 75 | HITL | N / A | V | 6 | 214' | 285' | 14' | 0' |
| F | 115 | HITL | N / A | V | 6 | 214' | 285' | 14' | 115' |
| G (BETWEEN RW 6L-24R & TW K) | 115 | HITL | N / A | V | 6 | 214' | 285' | 14' | 30' |
| G (BETWEEN RW 6L-24R & RW 6R-24L) | 150 | HITL | N / A | V | 6 | 214' | 285' | 14' | 0' |
| G (BETWEEN RW 6R-24L & S. APRON) | 75 | HITL | N / A | V | 6 | 214' | 285' | 14' | 0' |
| J (BETWEEN RW 6L-24R & TL K) | 75 | HITL | (SEE NOTE 1) | V | 6 | 214' | 285' | 14' | 35' |
| J (BETWEEN RW 6L-24R & RW 6R-24L) | 150 | HITL | N / A | V | 6 | 214' | 285' | 14' | 0' |
| K | 75 | HITL | N / A | V | 6 | 214' | 285' | 14' | 35' |
| TL K | 75 | HITL | (SEE NOTE 2) | V | 6 | 214' | 270' | 14' | 35' |
| TL L (EAST OF THE EAST END OF TERMINAL) | 75 | HITL | (SEE NOTE 3) | V | 6 | 214' | 270' | 14' | 100' |
| TL L (NORTH OF THE EAST END OF TERMINAL) | 75 | HITL | (SEE NOTE 3) | IV | 4 | 171' | 224' | 10' | 25' |
| TL (SOUTH APRON EAST) | 75 | HITL | N / A | V | 6 | 214' | 270' | N / A | N / A |
| TL (SOUTH APRON WEST) | 50 | HITL | N / A | III | 3 | 118' | 158' | N / A | N / A |

NOTES:

1. TAXIWAY J HAS HITL CENTERLINE LIGHTS FROM NORTH HOLDLINE AROUND TO THE WEST TO TAXILANE K.
2. TAXILANE K HAS HITL CENTERLINE LIGHTS FROM GATE 14 EXTENDING EAST AND AROUND TO THE NORTH TO TAXILANE L.
3. TAXILANE L HAS HITL CENTERLINE LIGHTS FROM THE SOUTH INTERSECTION OF TAXILANE K TO THE NORTH AND TURNING TO THE WEST ALONG THE CONTINUANCE OF TAXILANE L TO GATE 13.

## RUNWAY SAFETY AREA DIMENSIONS

| ITEM | RUNWAY 6L-24R | | | | RUNWAY 6R-24L | | | |
|---|---|---|---|---|---|---|---|---|
| | EXISTING RUNWAY 6L | FUTURE RUNWAY 6L | EXISTING RUNWAY 24R | FUTURE RUNWAY 24R | EXISTING RUNWAY 6R | FUTURE RUNWAY 6R | EXISTING RUNWAY 24L | FUTURE RUNWAY 24L |
| RUNWAY SAFETY AREA (RSA) | | | | | | | | |
| LENGTH | 1,000' | SAME | 1,000' | SAME | 700' | 1,000' | 1,000' | SAME |
| WIDTH | 500' | SAME | 500' | SAME | 500' | SAME | 500' | SAME |
| RUNWAY OBJECT FREE AREA (ROFA) | | | | | | | | |
| LENGTH | 1,000' | SAME | 1,000' | SAME | 1,000' | SAME | 1,000' | SAME |
| WIDTH | 800' | SAME | 800' | SAME | 800' | SAME | 800' | SAME |
| RUNWAY OBSTACLE FREE ZONE (ROFZ) | | | | | | | | |
| LENGTH | 200' | SAME | 200' | SAME | 200' | SAME | 200' | SAME |
| WIDTH | 400' | SAME | 400' | SAME | 400' | SAME | 400' | SAME |
| INNER-APPROACH OBSTACLE FREE ZONE (IA-OFZ) | | | | | | | | |
| LENGTH | 2,402' | 2,400' | N / A | SAME | 2,598' | 2,400' | N / A | SAME |
| WIDTH | 400' | SAME | N / A | SAME | 400' | SAME | N / A | SAME |
| INNER-TRANSITIONAL OBSTACLE FREE ZONE (IT-OFZ) | YES | SAME | NO | SAME | YES | SAME | NO | SAME |
| PRECISION OBSTACLE FREE ZONE (POFZ) | | | | | | | | |
| LENGTH | 200' | SAME | N / A | SAME | 200' | SAME | N / A | SAME |
| WIDTH | 800' | SAME | N / A | SAME | 800' | SAME | N / A | SAME |

## MODIFICATION TO FAA STANDARDS

| NUMBER | REQUEST | AIRSPACE CASE NUMBER | DATE SUBMITTED | FAA APPROVAL DATE | EXPIRATION DATE OF FAA APPROVAL | DESCRIPTION / STANDARD TO BE MODIFIED |
|---|---|---|---|---|---|---|
| 1 | RUNWAY 6L / 24R<br>GROUP VI RUNWAY WIDTH & BLAST PAD WIDTH, AC 150 / 5300-13A, CHANGE 1, AIRPORT DESIGN, TABLE 3-5 | 2018-AWP-2409-NRA | MARCH 8, 2018 | OCTOBER 31, 2018 | CONDITIONALLY APPROVED | UNDER THIS MODIFICATION OF STANDARDS, THE RUNWAY WILL BE USED FOR LANDING AND DEPARTURE WITHOUT ENJOINED FOR BOARD, THE EXISTING LENGTH OF THE BLAST PAD MEETS THE 95X95X3 STANDARD OF 480 FEET PER ENGINEERING BRIEF NO. 74A, USE OF "95X FOOT WIDE RUNWAY 6-24/B BLAST PADS FOR BOTH A DEPARTURES. THE 95-FOOT STANDARD ENABLED RUNWAY SHOULDER WIDTH NEED NOT BE INCREASED TO THE AIRPLANE DESIGN GROUP VI STANDARD OF 45 FEET AND THE 25D FEET STANDARD BLAST PAD WIDTH NEED NOT BE INCREASED TO THE AIRPLANE DESIGN GROUP STANDARD OF 280 FEET. RUNWAY 24R AND TAXIWAY J INTERSECTION TAKEOFF DISTANCE IS 11,819 FEET. |
| 2 | RUNWAY 6R / 24L<br>GROUP VI RUNWAY WIDTH & BLAST PAD WIDTH, AC 150 / 5300-13A, CHANGE 1, AIRPORT DESIGN, TABLE 3-5 | 2018-AWP-2409-NRA | MARCH 8, 2018 | OCTOBER 31, 2018 | CONDITIONALLY APPROVED | UNDER THIS MODIFICATION OF STANDARDS, THE RUNWAY WILL BE USED FOR LANDING AND DEPARTURE WITHOUT ENJOINED FOR BOARD, THE EXISTING LENGTH OF THE BLAST PAD MEETS THE 95X95X3 STANDARD OF 480 FEET PER ENGINEERING BRIEF NO. 74A, USE OF "95X FOOT WIDE RUNWAY 6-24/B BLAST PADS FOR BOTH A DEPARTURES. THE 95-FOOT STANDARD ENABLED RUNWAY SHOULDER WIDTH NEED NOT BE INCREASED TO THE AIRPLANE DESIGN GROUP VI STANDARD OF 45 FEET AND THE 25D FEET STANDARD BLAST PAD WIDTH NEED NOT BE INCREASED TO THE AIRPLANE DESIGN GROUP STANDARD OF 280 FEET. |
| 3 | TAXIWAY OBJECT FREE AREA, TAXIWAY WINGTIP CLEARANCE, AC 150/5300-13A, CHANGE 1, AIRPORT DESIGN, FIGURE 4-8, 4-9, 4-10 & TABLE 4-1 | 2018-AWP-2410-NRA | JUNE 26, 2018 | OCTOBER 31, 2018 | CONDITIONALLY APPROVED | IN THIS MODIFICATION OF STANDARDS, PART OF TAXIWAY K IN FRONT OF THE EAST END OF THE TERMINAL WILL BE USED FOR TAXIING OPERATIONS. THEREFORE THE WINGTIP CLEARANCE CAN BE 97 FEET FOR ADG-VI AIRCRAFT AND AS PER ENGINEERING BRIEF #79, PART 2, EQUATION NOS. 2 AND 4, THE 97 FEET WINGTIP CLEARANCE CAN BE REDUCED BY HALF OF THE WINGSPAN OF THE OBJECT AND THE VALUE OF SEPARATION BETWEEN TAXILANE CENTERLINE TO FIXED / MOVABLE OBJECT ARE LESSER THAN THE VALUES PROVIDED BY AC 150 / 5300-13A, AIRPORT DESIGN, EXHIBIT 1-TABLE 4-1. |
| 4 | RUNWAY TO TAXIWAY SEPARATION, AC 150 / 5300-13A, CHANGE 1, AIRPORT DESIGN, TABLE 3-8 DEPARTURE REFERENCE CODE | 2018-AWP-2411-NRA | JUNE 26, 2018 | OCTOBER 31, 2018 | CONDITIONALLY APPROVED | ACCORDING TO FOOTNOTE 2 OF TABLE 3-8, DEPARTURE REFERENCE CODE, FOR RUNWAY 6L-24R AND RUNWAY 6R-24L IS D/V/2400 AND D/V/5000 AND THE SEPARATION OF 400 FEET IS REQUIRED. HOWEVER, ADG-VI AIRPLANES MAY DEPART WITH AIRCRAFT ON THE PARALLEL TAXIWAY WHERE THE RUNWAY TO TAXIWAY SEPARATION IS 300 FEET, IF THE ADG-VI AIRPLANE OR SMALLER AIRCRAFT OCCUPIES THE PARALLEL TAXIWAY BEYOND 1000 FEET OF THE POINT OF THE START OF TAKEOFF ROLL. |

| NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|

PREPARED FOR

A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM

AECOM

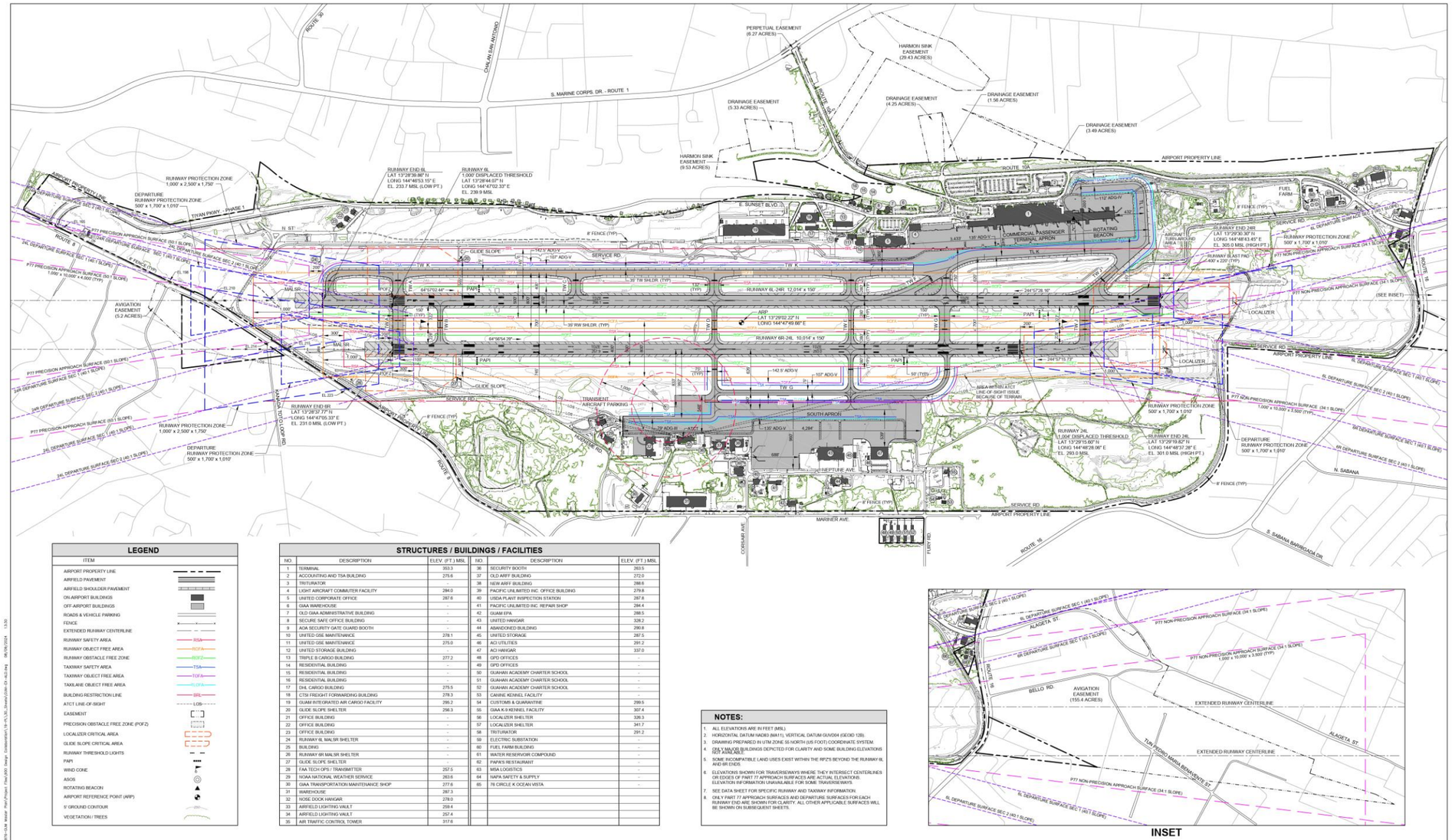
# AIRPORT DATA SHEET

ANTONIO B. WON PAT INTERNATIONAL AIRPORT

DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WBS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 06/23
SHEET: 2 OF 51

**Figure H-3. Airport Data Sheet**

Source: AECOM




**LEGEND**

| ITEM |
|---|
| AIRPORT PROPERTY LINE |
| AIRFIELD PAVEMENT |
| AIRFIELD SHOULDER PAVEMENT |
| ON-AIRPORT BUILDINGS |
| OFF-AIRPORT BUILDINGS |
| ROADS & VEHICLE PARKING |
| FENCE |
| EXTENDED RUNWAY CENTERLINE |
| RUNWAY SAFETY AREA |
| RUNWAY OBJECT FREE AREA |
| RUNWAY OBSTACLE FREE ZONE |
| TAXIWAY SAFETY AREA |
| TAXIWAY OBJECT FREE AREA |
| TAXILANE OBJECT FREE AREA |
| BUILDING RESTRICTION LINE |
| ATCT LINE-OF-SIGHT |
| EASEMENT |
| PRECISION OBSTACLE FREE ZONE (POFZ) |
| LOCALIZER CRITICAL AREA |
| GLIDE SLOPE CRITICAL AREA |
| RUNWAY THRESHOLD LIGHTS |
| PAPI |
| WIND CONE |
| ASOS |
| ROTATING BEACON |
| AIRPORT REFERENCE POINT (ARP) |
| 5' GROUND CONTOUR |
| VEGETATION / TREES |

**STRUCTURES / BUILDINGS / FACILITIES**

| NO. | DESCRIPTION | ELEV. (FT.) MSL | NO. | DESCRIPTION | ELEV. (FT.) MSL |
|---|---|---|---|---|---|
| 1 | TERMINAL | 353.3 | 36 | SECURITY BOOTH | 263.5 |
| 2 | ACCOUNTING AND TSA BUILDING | 275.6 | 37 | OLD ARFF BUILDING | 272.0 |
| 3 | TRITURATOR | - | 38 | NEW ARFF BUILDING | 288.6 |
| 4 | LIGHT AIRCRAFT COMMUTER FACILITY | 284.0 | 39 | PACIFIC UNLIMITED INC. OFFICE BUILDING | 279.8 |
| 5 | UNITED CORPORATE OFFICE | 287.6 | 40 | USDA PLANT INSPECTION STATION | 287.8 |
| 6 | GIAA WAREHOUSE | - | 41 | PACIFIC UNLIMITED INC. REPAIR SHOP | 284.4 |
| 7 | OLD GIAA ADMINISTRATIVE BUILDING | - | 42 | GUAM EPA | 288.5 |
| 8 | SECURE SAFE OFFICE BUILDING | - | 43 | UNITED HANGAR | 328.2 |
| 9 | ACA SECURITY GATE GUARD BOOTH | - | 44 | ABANDONED BUILDING | 290.8 |
| 10 | UNITED GSE MAINTENANCE | 278.1 | 45 | UNITED STORAGE | 287.5 |
| 11 | UNITED GSE MAINTENANCE | 275.0 | 46 | ACI UTILITIES | 291.2 |
| 12 | UNITED STORAGE BUILDING | - | 47 | ACI HANGAR | 337.0 |
| 13 | TRIPLE B CARGO BUILDING | 277.2 | 48 | GPD OFFICES | - |
| 14 | RESIDENTIAL BUILDING | - | 49 | GPD OFFICES | - |
| 15 | RESIDENTIAL BUILDING | - | 50 | GUAHAN ACADEMY CHARTER SCHOOL | - |
| 16 | RESIDENTIAL BUILDING | - | 51 | GUAHAN ACADEMY CHARTER SCHOOL | - |
| 17 | DHL CARGO BUILDING | 275.5 | 52 | GUAHAN ACADEMY CHARTER SCHOOL | - |
| 18 | CTSI FREIGHT FORWARDING BUILDING | 278.3 | 53 | CANINE KENNEL FACILITY | - |
| 19 | GUAM INTEGRATED AIR CARGO FACILITY | 295.2 | 54 | CUSTOMS & QUARANTINE | 288.5 |
| 20 | GLIDE SLOPE SHELTER | 296.3 | 55 | GIAA K-9 KENNEL FACILITY | 307.4 |
| 21 | OFFICE BUILDING | - | 56 | LOCALIZER SHELTER | 328.3 |
| 22 | OFFICE BUILDING | - | 57 | LOCALIZER SHELTER | 341.7 |
| 23 | OFFICE BUILDING | - | 58 | TRITURATOR | 291.2 |
| 24 | RUNWAY 6L MALSR SHELTER | - | 59 | ELECTRIC SUBSTATION | - |
| 25 | BUILDING | - | 60 | FUEL FARM BUILDING | - |
| 26 | RUNWAY 6R MALSR SHELTER | - | 61 | WATER RESERVOIR COMPOUND | - |
| 27 | GLIDE SLOPE SHELTER | - | 62 | PAPA'S RESTAURANT | - |
| 28 | FAA TECH OPS / TRANSMITTER | 257.5 | 63 | MSA LOGISTICS | - |
| 29 | NOAA NATIONAL WEATHER SERVICE | 263.6 | 64 | NAPA SAFETY & SUPPLY | - |
| 30 | GIAA TRANSPORTATION MAINTENANCE SHOP | 277.6 | 65 | 76 CIRCLE K OCEAN VISTA | - |
| 31 | WAREHOUSE | 287.3 | | | |
| 32 | NOSE DOCK HANGAR | 278.0 | | | |
| 33 | AIRFIELD LIGHTING VAULT | 259.4 | | | |
| 34 | AIRFIELD LIGHTING VAULT | 257.4 | | | |
| 35 | AIR TRAFFIC CONTROL TOWER | 317.6 | | | |

**NOTES:**

1. ALL ELEVATIONS ARE IN FEET (MSL).
2. HORIZONTAL DATUM NAD83 (NAA1), VERTICAL DATUM GUVD04 (GEOID 12B).
3. DRAWING PREPARED IN UTM ZONE 55 NORTH (US FOOT) COORDINATE SYSTEM.
4. ONLY MAJOR BUILDINGS DEPICTED FOR CLARITY AND SOME BUILDING ELEVATIONS NOT AVAILABLE.
5. SOME INCOMPATIBLE LAND USES EXIST WITHIN THE RPZ'S BEYOND THE RUNWAY 6L AND 6R ENDS.
6. ELEVATIONS SHOWN FOR TRAVERSEWAYS WHERE THEY INTERSECT CENTERLINES OR EDGES OF PART 77 APPROACH SURFACES ARE ACTUAL ELEVATIONS. ELEVATION INFORMATION UNAVAILABLE FOR SOME TRAVERSEWAYS.
7. SEE DATA SHEET FOR SPECIFIC RUNWAY AND TAXIWAY INFORMATION.
8. ONLY PART 77 APPROACH SURFACES AND DEPARTURE SURFACES FOR EACH RUNWAY END ARE SHOWN FOR CLARITY. ALL OTHER APPLICABLE SURFACES WILL BE SHOWN ON SUBSEQUENT SHEETS.

| NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|

| NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|

MAGNETIC DECLINATION = 9°23' (E-4°) EAST (JANUARY 2023)
ANNUAL RATE OF CHANGE: 0°1' (0.017°) WEST / YEAR
600 0 600
HORIZONTAL SCALE IN FEET
SCALE: 1" = 600'

PREPARED FOR
A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM
AECOM

EXISTING FACILITIES PLAN

ANTONIO B. WON PAT INTERNATIONAL AIRPORT

DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WBS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 06/23
SHEET: 3 OF 51

**Figure H-4. Existing Facilities Plan**

Source: AECOM

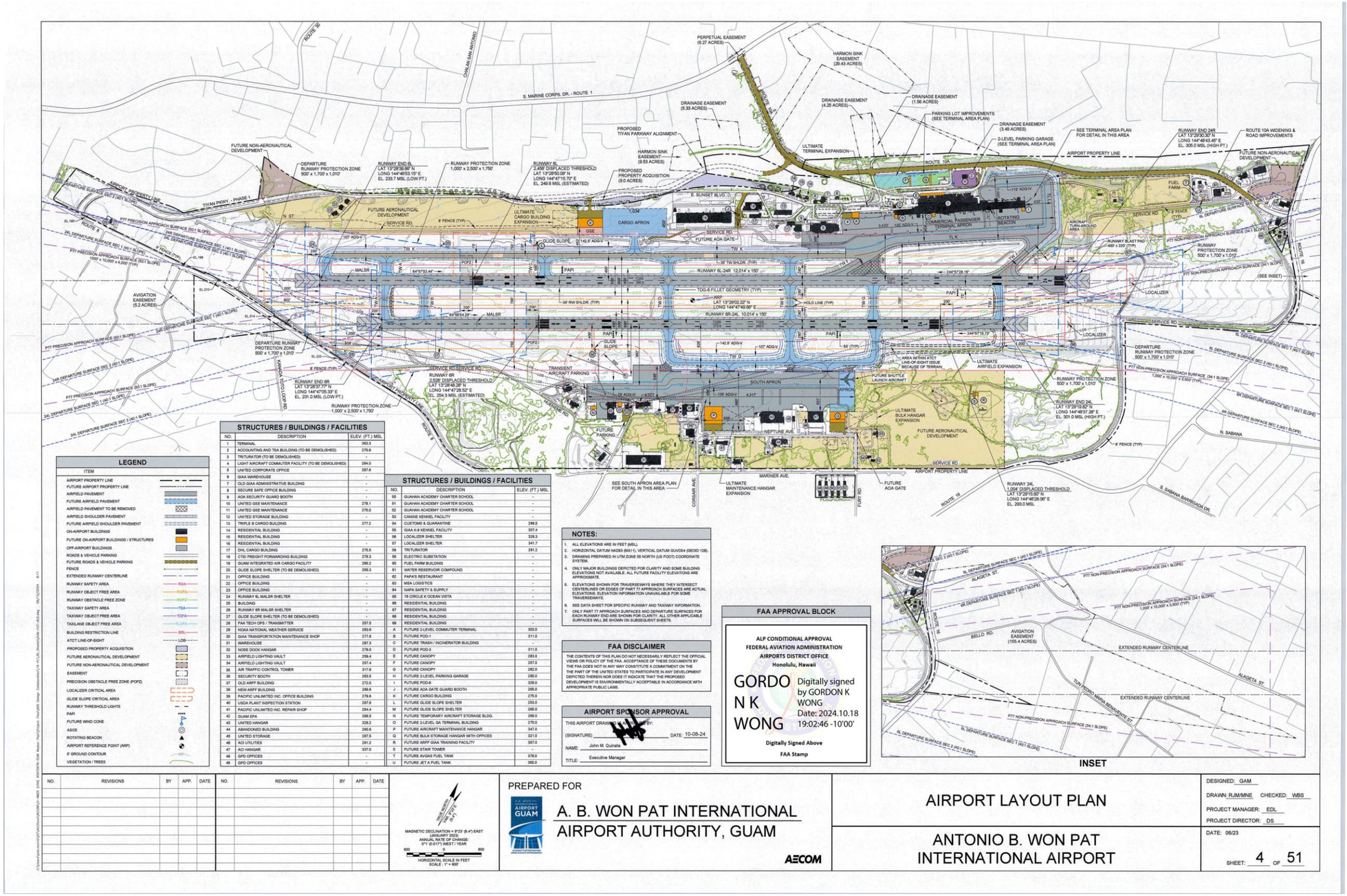
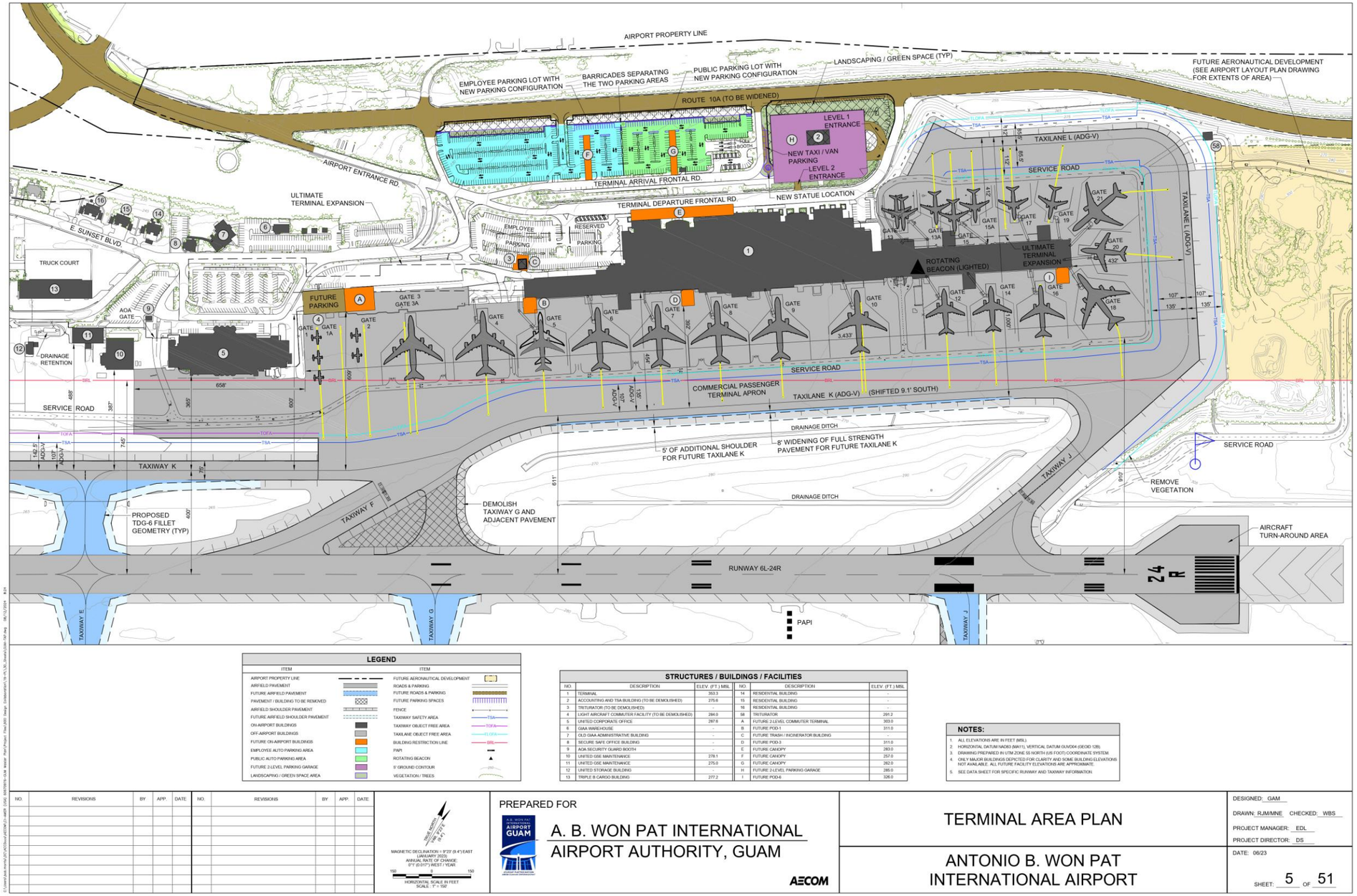



**Figure H-5. Airport Layout Plan**

Source: AECOM

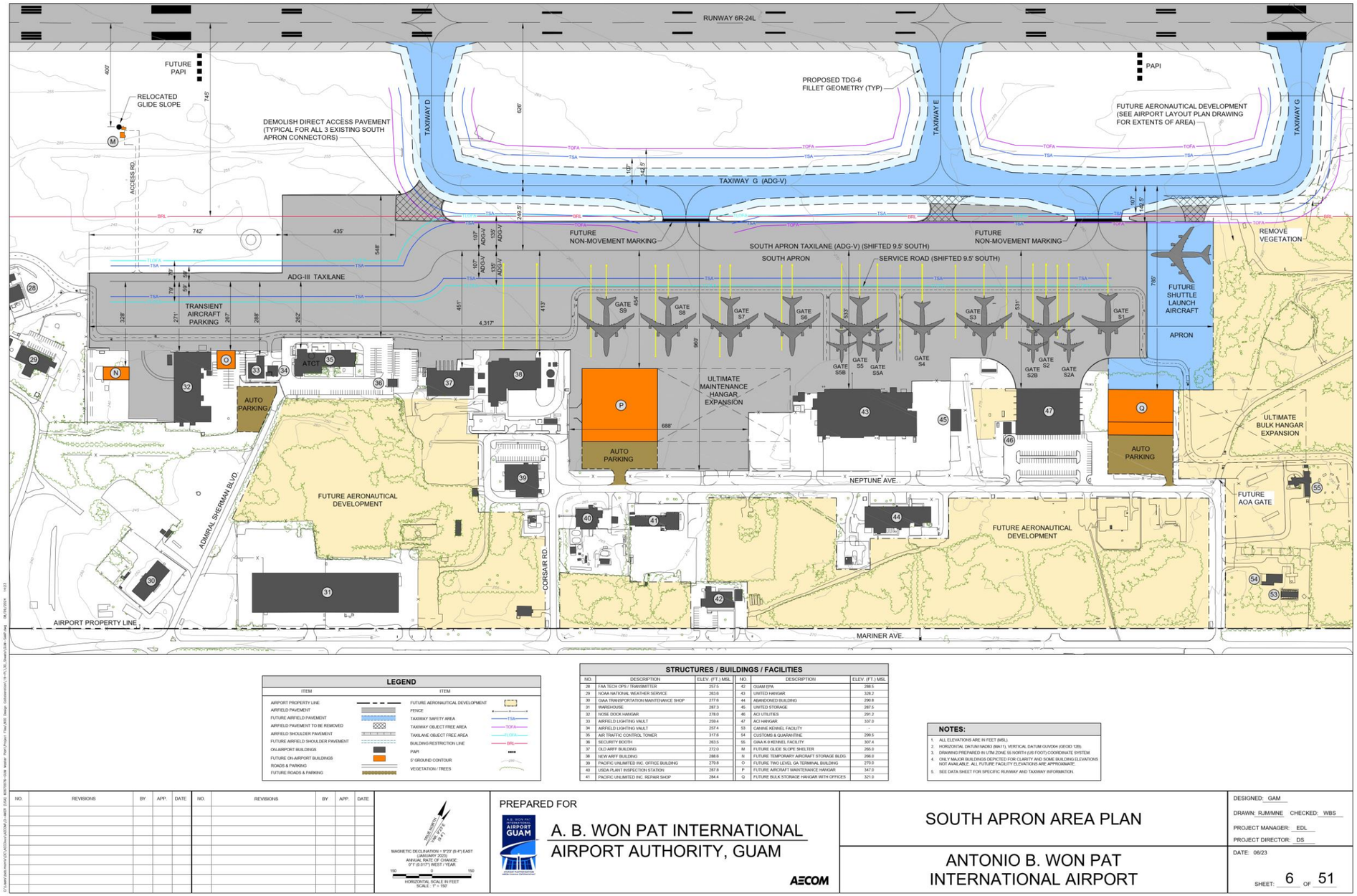



| ITEM | | ITEM | |
|---|---|---|---|
| AIRPORT PROPERTY LINE | | FUTURE AERONAUTICAL DEVELOPMENT | |
| AIRFIELD PAVEMENT | | ROADS & PARKING | |
| FUTURE AIRFIELD PAVEMENT | | FUTURE ROADS & PARKING | |
| PAVEMENT / BUILDING TO BE REMOVED | | FUTURE PARKING SPACES | |
| AIRFIELD SHOULDER PAVEMENT | | FENCE | |
| FUTURE AIRFIELD SHOULDER PAVEMENT | | TAXIWAY SAFETY AREA | TSA |
| ON-AIRPORT BUILDINGS | | TAXIWAY OBJECT FREE AREA | TOFA |
| OFF-AIRPORT BUILDINGS | | TAXILANE OBJECT FREE AREA | TLOFA |
| FUTURE ON-AIRPORT BUILDINGS | | BUILDING RESTRICTION LINE | BRL |
| EMPLOYEE AUTO PARKING AREA | | PAPI | |
| PUBLIC AUTO PARKING AREA | | ROTATING BEACON | |
| FUTURE 2-LEVEL PARKING GARAGE | | 5' GROUND CONTOUR | |
| LANDSCAPING / GREEN SPACE AREA | | VEGETATION / TREES | |

| NO. | DESCRIPTION | ELEV. (FT.) MSL | NO. | DESCRIPTION | ELEV. (FT.) MSL |
|---|---|---|---|---|---|
| 1 | TERMINAL | 353.3 | 14 | RESIDENTIAL BUILDING | - |
| 2 | ACCOUNTING AND TSA BUILDING (TO BE DEMOLISHED) | 275.6 | 15 | RESIDENTIAL BUILDING | - |
| 3 | TRITURATOR (TO BE DEMOLISHED) | - | 16 | RESIDENTIAL BUILDING | - |
| 4 | LIGHT AIRCRAFT COMMUTER FACILITY (TO BE DEMOLISHED) | 284.0 | 58 | TRITURATOR | 291.2 |
| 5 | UNITED CORPORATE OFFICE | 287.6 | A | FUTURE 2-LEVEL COMMUTER TERMINAL | 303.0 |
| 6 | GIAA WAREHOUSE | - | B | FUTURE POD-1 | 311.0 |
| 7 | OLD GIAA ADMINISTRATIVE BUILDING | - | C | FUTURE TRASH / INCINERATOR BUILDING | - |
| 8 | SECURE SAFE OFFICE BUILDING | - | D | FUTURE POD-3 | 311.0 |
| 9 | AOA SECURITY GUARD BOOTH | - | E | FUTURE CANOPY | 283.0 |
| 10 | UNITED GSE MAINTENANCE | 278.1 | F | FUTURE CANOPY | 257.0 |
| 11 | UNITED GSE MAINTENANCE | 275.0 | G | FUTURE CANOPY | 262.0 |
| 12 | UNITED STORAGE BUILDING | - | H | FUTURE 2-LEVEL PARKING GARAGE | 285.0 |
| 13 | TRIPLE B CARGO BUILDING | 277.2 | I | FUTURE POD-6 | 326.0 |

**Figure H-6. Terminal Area Plan**

Source: AECOM




**LEGEND**

| ITEM | ITEM |
|---|---|
| AIRPORT PROPERTY LINE | FUTURE AERONAUTICAL DEVELOPMENT |
| AIRFIELD PAVEMENT | FENCE |
| FUTURE AIRFIELD PAVEMENT | TAXIWAY SAFETY AREA |
| AIRFIELD PAVEMENT TO BE REMOVED | TAXIWAY OBJECT FREE AREA |
| AIRFIELD SHOULDER PAVEMENT | TAXILANE OBJECT FREE AREA |
| FUTURE AIRFIELD SHOULDER PAVEMENT | BUILDING RESTRICTION LINE |
| ON AIRPORT BUILDINGS | PAPI |
| FUTURE ON-AIRPORT BUILDINGS | 5' GROUND CONTOUR |
| ROADS & PARKING | VEGETATION / TREES |
| FUTURE ROADS & PARKING | |

**STRUCTURES / BUILDINGS / FACILITIES**

| NO. | DESCRIPTION | ELEV. (FT.) MSL | NO. | DESCRIPTION | ELEV. (FT.) MSL |
|---|---|---|---|---|---|
| 28 | FAA TECH OPS / TRANSMITTER | 257.5 | 42 | GUAM EPA | 296.5 |
| 29 | NOAA NATIONAL WEATHER SERVICE | 263.6 | 43 | UNITED HANGAR | 328.2 |
| 30 | GIAA TRANSPORTATION MAINTENANCE SHOP | 277.6 | 44 | ABANDONED BUILDING | 296.8 |
| 31 | WAREHOUSE | 287.3 | 45 | UNITED STORAGE | 287.5 |
| 32 | NOISE DOCK HANGAR | 278.0 | 46 | ACI UTILITIES | 291.2 |
| 33 | AIRFIELD LIGHTING VAULT | 259.4 | 47 | ACI HANGAR | 337.0 |
| 34 | AIRFIELD LIGHTING VAULT | 257.4 | 53 | CANINE KENNEL FACILITY | |
| 35 | AIR TRAFFIC CONTROL TOWER | 317.6 | 54 | CUSTOMS & QUARANTINE | 299.5 |
| 36 | SECURITY BOOTH | 263.5 | 55 | GIAA K-9 KENNEL FACILITY | 307.4 |
| 37 | OLD ARFF BUILDING | 272.0 | M | FUTURE GLIDE SLOPE SHELTER | 265.0 |
| 38 | NEW ARFF BUILDING | 288.6 | N | FUTURE TEMPORARY AIRCRAFT STORAGE BLDG. | 290.0 |
| 39 | PACIFIC UNLIMITED INC. OFFICE BUILDING | 279.8 | O | FUTURE TWO-LEVEL GA TERMINAL BUILDING | 270.0 |
| 40 | USDA PLANT INSPECTION STATION | 287.8 | P | FUTURE AIRCRAFT MAINTENANCE HANGAR | 347.0 |
| 41 | PACIFIC UNLIMITED INC. REPAIR SHOP | 284.4 | Q | FUTURE BULK STORAGE HANGAR WITH OFFICES | 321.0 |

**NOTES:**

1. ALL ELEVATIONS ARE IN FEET (MSL).
2. HORIZONTAL DATUM NAD83 (MA11). VERTICAL DATUM GUVD04 (GEOID 12B).
3. DRAWING PREPARED IN UTM ZONE 55 NORTH (US FOOT) COORDINATE SYSTEM.
4. ONLY MAJOR BUILDINGS DEPICTED FOR CLARITY AND SOME BUILDING ELEVATIONS NOT AVAILABLE. ALL FUTURE FACILITY ELEVATIONS ARE APPROXIMATE.
5. SEE DATA SHEET FOR SPECIFIC RUNWAY AND TAXIWAY INFORMATION.

| NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|

MAGNETIC DECLINATION = 9°23' (9.4°) EAST (JANUARY 2023)
ANNUAL RATE OF CHANGE: 0°7' (0.01°) WEST / YEAR
HORIZONTAL SCALE IN FEET
SCALE: 1" = 150'

PREPARED FOR
A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM
AECOM

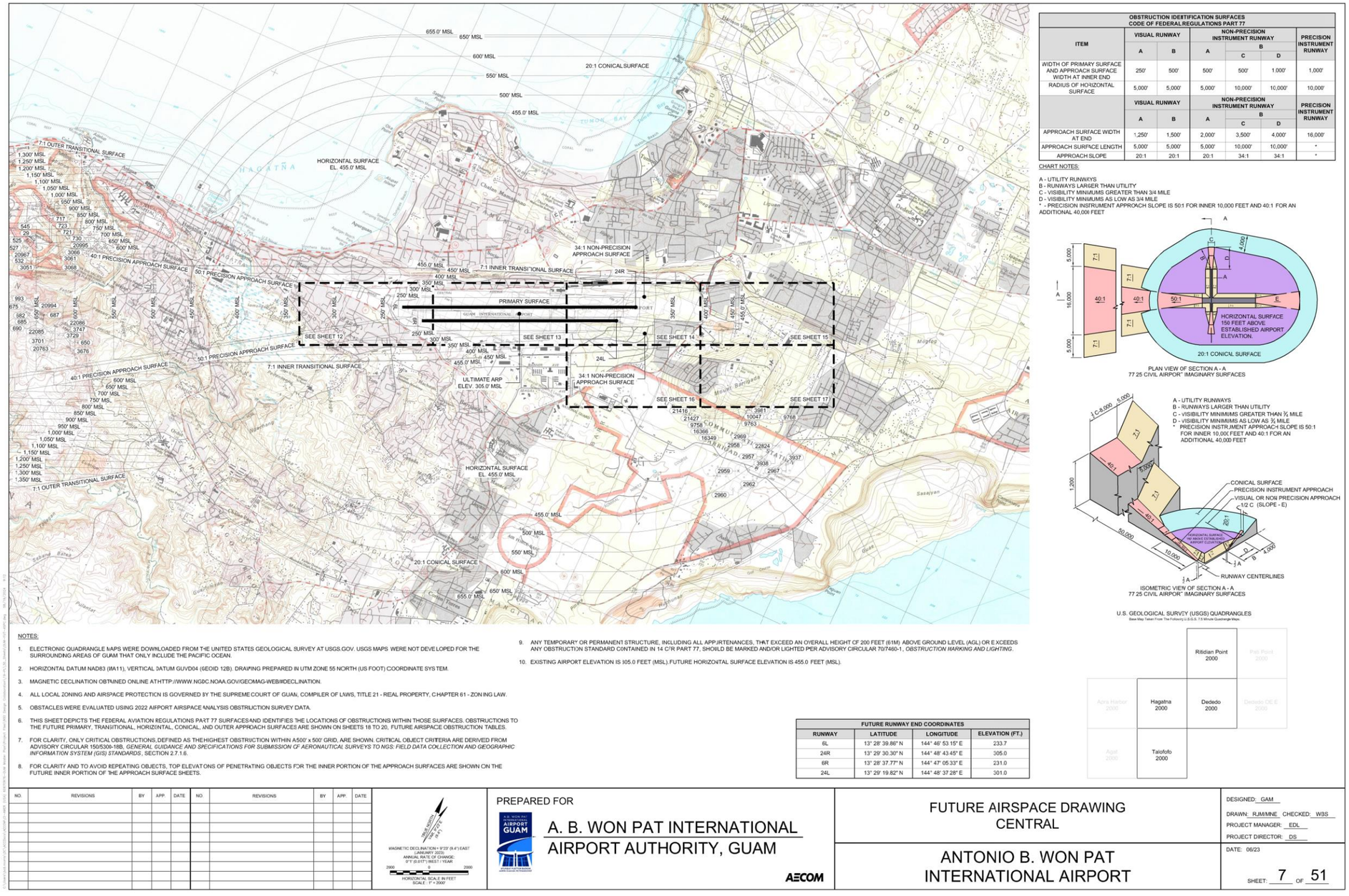
SOUTH APRON AREA PLAN

ANTONIO B. WON PAT INTERNATIONAL AIRPORT

DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WBS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 06/23
SHEET: 6 OF 51

**Figure H-7. South Apron Area Plan**

Source: AECOM




| OBSTRUCTION IDENTIFICATION SURFACES CODE OF FEDERAL REGULATIONS PART 77 | | | | | | |
|---|---|---|---|---|---|---|
| ITEM | VISUAL RUNWAY | | NON-PRECISION INSTRUMENT RUNWAY | | | PRECISION INSTRUMENT RUNWAY |
| | A | B | A | B C | B D | |
| WIDTH OF PRIMARY SURFACE AND APPROACH SURFACE WIDTH AT INNER END | 250' | 500' | 500' | 500' | 1,000' | 1,000' |
| RADIUS OF HORIZONTAL SURFACE | 5,000' | 5,000' | 5,000' | 10,000' | 10,000' | 10,000' |
| | VISUAL RUNWAY | | NON-PRECISION INSTRUMENT RUNWAY | | | PRECISION INSTRUMENT RUNWAY |
| | A | B | A | B C | B D | |
| APPROACH SURFACE WIDTH AT END | 1,250' | 1,500' | 2,000' | 3,500' | 4,000' | 16,000' |
| APPROACH SURFACE LENGTH | 5,000' | 5,000' | 5,000' | 10,000' | 10,000' | * |
| APPROACH SLOPE | 20:1 | 20:1 | 20:1 | 34:1 | 34:1 | * |

CHART NOTES:

A - UTILITY RUNWAYS
B - RUNWAYS LARGER THAN UTILITY
C - VISIBILITY MINIUMS GREATER THAN 3/4 MILE
D - VISIBILITY MINIUMS AS LOW AS 3/4 MILE
* - PRECISION INSTRUMENT APPROACH SLOPE IS 50:1 FOR INNER 10,000 FEET AND 40:1 FOR AN ADDITIONAL 40,000 FEET




PLAN VIEW OF SECTION A - A
77.25 CIVIL AIRPORT IMAGINARY SURFACES




ISOMETRIC VIEW OF SECTION A - A
77.25 CIVIL AIRPORT IMAGINARY SURFACES

U.S. GEOLOGICAL SURVEY (USGS) QUADRANGLES
Base Map Taken From The Following U.S.G.S. 7.5 Minute Quadrangle Maps:




NOTES:

1. ELECTRONIC QUADRANGLE MAPS WERE DOWNLOADED FROM THE UNITED STATES GEOLOGICAL SURVEY AT USGS.GOV. USGS MAPS WERE NOT DEVELOPED FOR THE SURROUNDING AREAS OF GUAM THAT ONLY INCLUDE THE PACIFIC OCEAN.
2. HORIZONTAL DATUM NAD83 (IIA11), VERTICAL DATUM GUVD04 (GEOID 12B). DRAWING PREPARED IN UTM ZONE 55 NORTH (US FOOT) COORDINATE SYSTEM.
3. MAGNETIC DECLINATION OBTAINED ONLINE AT HTTP://WWW.NGDC.NOAA.GOV/GEOMAG-WEB/#DECLINATION.
4. ALL LOCAL ZONING AND AIRSPACE PROTECTION IS GOVERNED BY THE SUPREME COURT OF GUAM, COMPILER OF LAWS, TITLE 21 - REAL PROPERTY, CHAPTER 61 - ZONING LAW.
5. OBSTACLES WERE EVALUATED USING 2022 AIRPORT AIRSPACE ANALYSIS OBSTRUCTION SURVEY DATA.
6. THIS SHEET DEPICTS THE FEDERAL AVIATION REGULATIONS PART 77 SURFACES AND IDENTIFIES THE LOCATIONS OF OBSTRUCTIONS WITHIN THOSE SURFACES. OBSTRUCTIONS TO THE FUTURE PRIMARY, TRANSITIONAL, HORIZONTAL, CONICAL, AND OUTER APPROACH SURFACES ARE SHOWN ON SHEETS 18 TO 20. FUTURE AIRSPACE OBSTRUCTION TABLES.
7. FOR CLARITY, ONLY CRITICAL OBSTRUCTIONS, DEFINED AS THE HIGHEST OBSTRUCTION WITHIN A 500' x 500' GRID, ARE SHOWN. CRITICAL OBJECT CRITERIA ARE DERIVED FROM ADVISORY CIRCULAR 150/5306-18B, *GENERAL GUIDANCE AND SPECIFICATIONS FOR SUBMISSION OF AERONAUTICAL SURVEYS TO NGS: FIELD DATA COLLECTION AND GEOGRAPHIC INFORMATION SYSTEM (GIS) STANDARDS*, SECTION 2.7.1.6.
8. FOR CLARITY AND TO AVOID REPEATING OBJECTS, TOP ELEVATIONS OF PENETRATING OBJECTS FOR THE INNER PORTION OF THE APPROACH SURFACES ARE SHOWN ON THE FUTURE INNER PORTION OF THE APPROACH SURFACE SHEETS.
9. ANY TEMPORARY OR PERMANENT STRUCTURE, INCLUDING ALL APPURTENANCES, THAT EXCEED AN OVERALL HEIGHT OF 200 FEET (61M) ABOVE GROUND LEVEL (AGL) OR EXCEEDS ANY OBSTRUCTION STANDARD CONTAINED IN 14 CFR PART 77, SHOULD BE MARKED AND/OR LIGHTED PER ADVISORY CIRCULAR 70/7460-1, *OBSTRUCTION MARKING AND LIGHTING*.
10. EXISTING AIRPORT ELEVATION IS 105.0 FEET (MSL). FUTURE HORIZONTAL SURFACE ELEVATION IS 455.0 FEET (MSL).

| FUTURE RUNWAY END COORDINATES | | | |
|---|---|---|---|
| RUNWAY | LATITUDE | LONGITUDE | ELEVATION (FT.) |
| 6L | 13° 28' 39.86" N | 144° 46' 53.15" E | 233.7 |
| 24R | 13° 29' 30.30" N | 144° 48' 43.45" E | 305.0 |
| 6R | 13° 28' 37.77" N | 144° 47' 05.33" E | 231.0 |
| 24L | 13° 29' 19.82" N | 144° 48' 37.28" E | 301.0 |

| NO. | REVISIONS | BY | APP. | DATE | NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

MAGNETIC DECLINATION = 9°23' (9.4°) EAST
(JANUARY 2023)
ANNUAL RATE OF CHANGE:
0°1' (0.017°) WEST / YEAR
2000 0 2000
HORIZONTAL SCALE IN FEET
SCALE : 1" = 2000'

PREPARED FOR
A. B. WON PAT INTERNATIONAL AIRPORT GUAM
A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM
AECOM

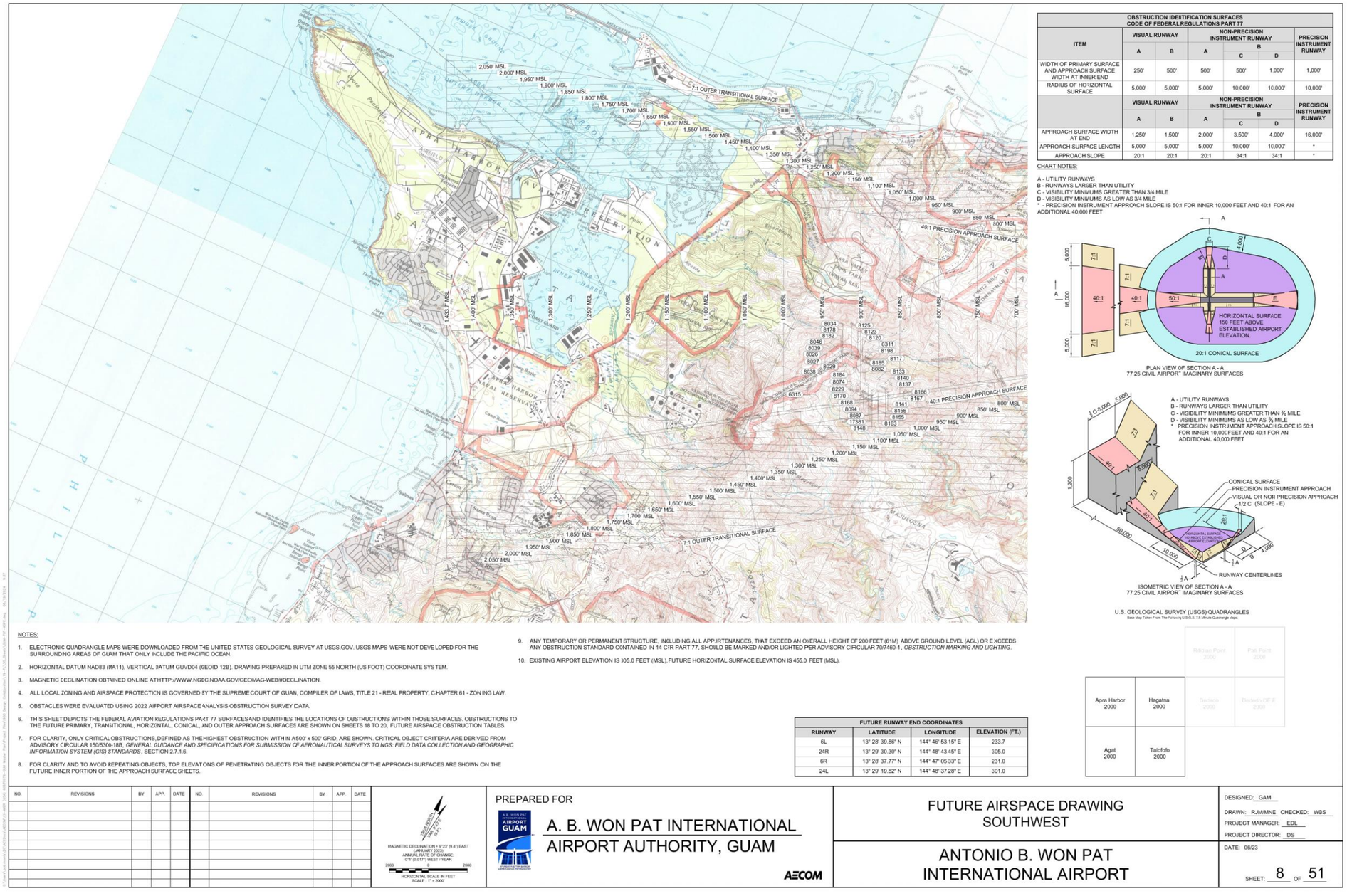
FUTURE AIRSPACE DRAWING
CENTRAL

ANTONIO B. WON PAT
INTERNATIONAL AIRPORT

DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WSS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 06/23
SHEET: 7 OF 51

**Figure H-8. Future Airspace Drawing – Central**

Source: AECOM




| OBSTRUCTION IDENTIFICATION SURFACES CODE OF FEDERAL REGULATIONS PART 77 | | | | | | |
|---|---|---|---|---|---|---|
| ITEM | VISUAL RUNWAY | | NON-PRECISION INSTRUMENT RUNWAY | | | PRECISION INSTRUMENT RUNWAY |
| | A | B | A | B | | |
| | | | | C | D | |
| WIDTH OF PRIMARY SURFACE AND APPROACH SURFACE WIDTH AT INNER END | 250' | 500' | 500' | 500' | 1,000' | 1,000' |
| RADIUS OF HORIZONTAL SURFACE | 5,000' | 5,000' | 5,000' | 10,000' | 10,000' | 10,000' |
| | VISUAL RUNWAY | | NON-PRECISION INSTRUMENT RUNWAY | | | PRECISION INSTRUMENT RUNWAY |
| | A | B | A | B | | |
| | | | | C | D | |
| APPROACH SURFACE WIDTH AT END | 1,250' | 1,500' | 2,000' | 3,500' | 4,000' | 16,000' |
| APPROACH SURFACE LENGTH | 5,000' | 5,000' | 5,000' | 10,000' | 10,000' | * |
| APPROACH SLOPE | 20:1 | 20:1 | 20:1 | 34:1 | 34:1 | * |

CHART NOTES:

A - UTILITY RUNWAYS
B - RUNWAYS LARGER THAN UTILITY
C - VISIBILITY MINIMUMS GREATER THAN 3/4 MILE
D - VISIBILITY MINIMUMS AS LOW AS 3/4 MILE
* - PRECISION INSTRUMENT APPROACH SLOPE IS 50:1 FOR INNER 10,000 FEET AND 40:1 FOR AN ADDITIONAL 40,000 FEET




PLAN VIEW OF SECTION A - A
77 25 CIVIL AIRPOR" IMAGINARY SURFACES




ISOMETRIC VIEW OF SECTION A - A
77 25 CIVIL AIRPOR" IMAGINARY SURFACES

U.S. GEOLOGICAL SURVEY (USGS) QUADRANGLES
Base Map Taken From The Following U.S.G.S. 7.5 Minute Quadrangle Maps:

| | | | |
|---|---|---|---|
| | | Ritidian Point 2000 | Pati Point 2000 |
| Apra Harbor 2000 | Hagatna 2000 | Dadedo 2000 | Dadedo OE E 2000 |
| Agat 2000 | Talofofo 2000 | | |

NOTES:

1. ELECTRONIC QUADRANGLE MAPS WERE DOWNLOADED FROM THE UNITED STATES GEOLOGICAL SURVEY AT USGS.GOV. USGS MAPS WERE NOT DEVELOPED FOR THE SURROUNDING AREAS OF GUAM THAT ONLY INCLUDE THE PACIFIC OCEAN.
2. HORIZONTAL DATUM NAD83 (IMA11), VERTICAL DATUM GUVD04 (GEOID 12B). DRAWING PREPARED IN UTM ZONE 55 NORTH (US FOOT) COORDINATE SYSTEM.
3. MAGNETIC DECLINATION OBTAINED ONLINE AT HTTP://WWW.NGDC.NOAA.GOV/GEOMAG-WEB/#DECLINATION.
4. ALL LOCAL ZONING AND AIRSPACE PROTECTION IS GOVERNED BY THE SUPREME COURT OF GUAM, COMPILER OF LAWS, TITLE 21 - REAL PROPERTY, CHAPTER 61 - ZONING LAW.
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8. FOR CLARITY AND TO AVOID REPEATING OBJECTS, TOP ELEVATIONS OF PENETRATING OBJECTS FOR THE INNER PORTION OF THE APPROACH SURFACES ARE SHOWN ON THE FUTURE INNER PORTION OF THE APPROACH SURFACE SHEETS.
9. ANY TEMPORARY OR PERMANENT STRUCTURE, INCLUDING ALL APPURTENANCES, THAT EXCEED AN OVERALL HEIGHT OF 200 FEET (61M) ABOVE GROUND LEVEL (AGL) OR EXCEEDS ANY OBSTRUCTION STANDARD CONTAINED IN 14 CFR PART 77, SHOULD BE MARKED AND/OR LIGHTED PER ADVISORY CIRCULAR 70/7460-1, *OBSTRUCTION MARKING AND LIGHTING*.
10. EXISTING AIRPORT ELEVATION IS 305.0 FEET (MSL). FUTURE HORIZONTAL SURFACE ELEVATION IS 455.0 FEET (MSL).

| FUTURE RUNWAY END COORDINATES | | | |
|---|---|---|---|
| RUNWAY | LATITUDE | LONGITUDE | ELEVATION (FT.) |
| 6L | 13° 28' 39.86" N | 144° 46' 53.15" E | 233.7 |
| 24R | 13° 29' 30.30" N | 144° 48' 43.45" E | 305.0 |
| 6R | 13° 28' 37.77" N | 144° 47' 05.33" E | 231.0 |
| 24L | 13° 29' 19.82" N | 144° 48' 37.28" E | 301.0 |

| NO. | REVISIONS | BY | APP. | DATE | NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

MAGNETIC DECLINATION = 9°23' (9.4°) EAST
(JANUARY 2023)
ANNUAL RATE OF CHANGE:
0°1" (0.017°) WEST / YEAR
2000 0 2000
HORIZONTAL SCALE IN FEET
SCALE: 1" = 2000'

PREPARED FOR
A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM
AECOM

FUTURE AIRSPACE DRAWING
SOUTHWEST

ANTONIO B. WON PAT
INTERNATIONAL AIRPORT

DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WSS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 06/23
SHEET: 8 OF 51

**Figure H-9. Future Airspace Drawing – Southwest**

Source: AECOM

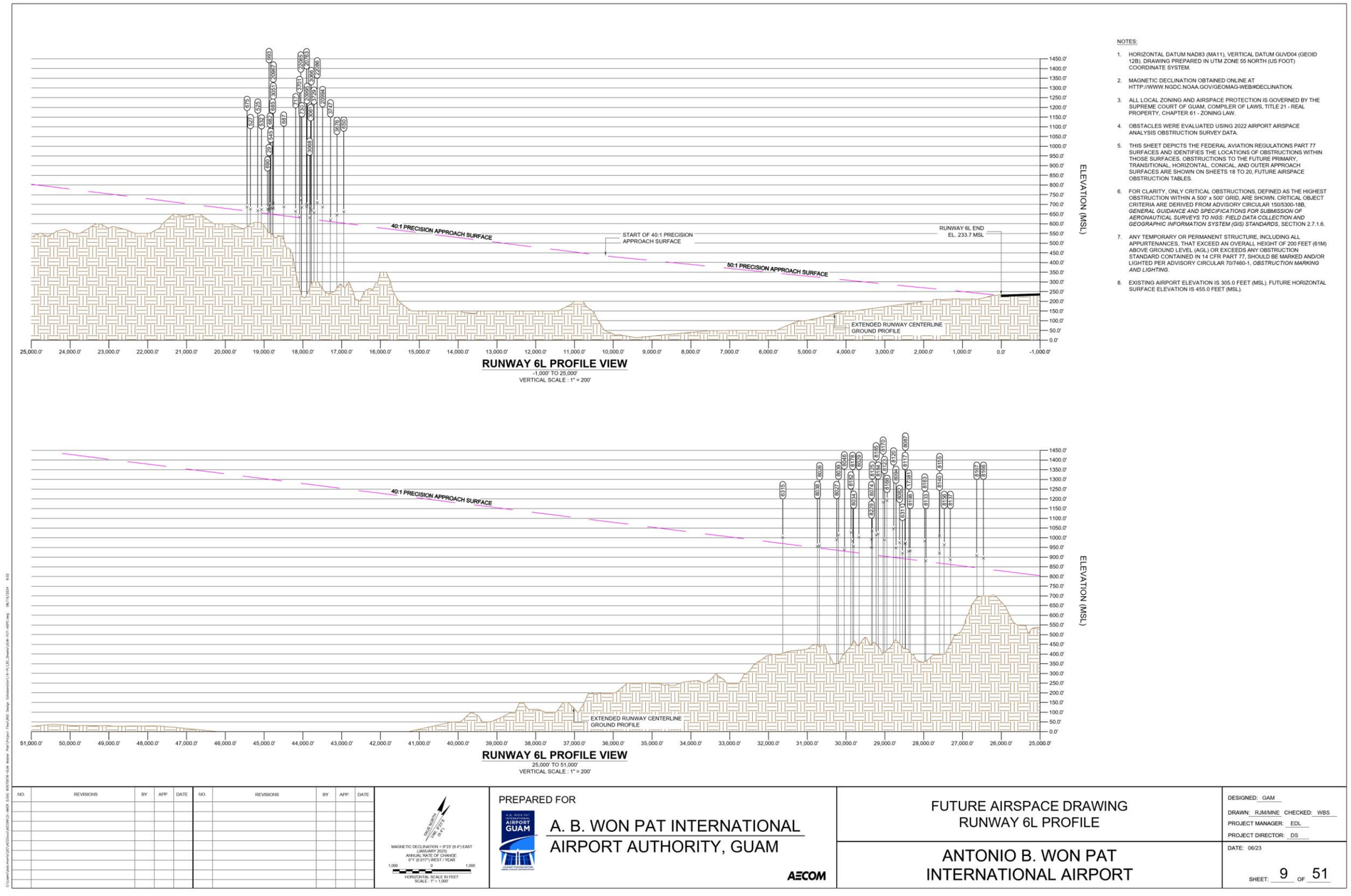



**Figure H-10. Future Airspace Drawing – Runway 6L Profile**

Source: AECOM

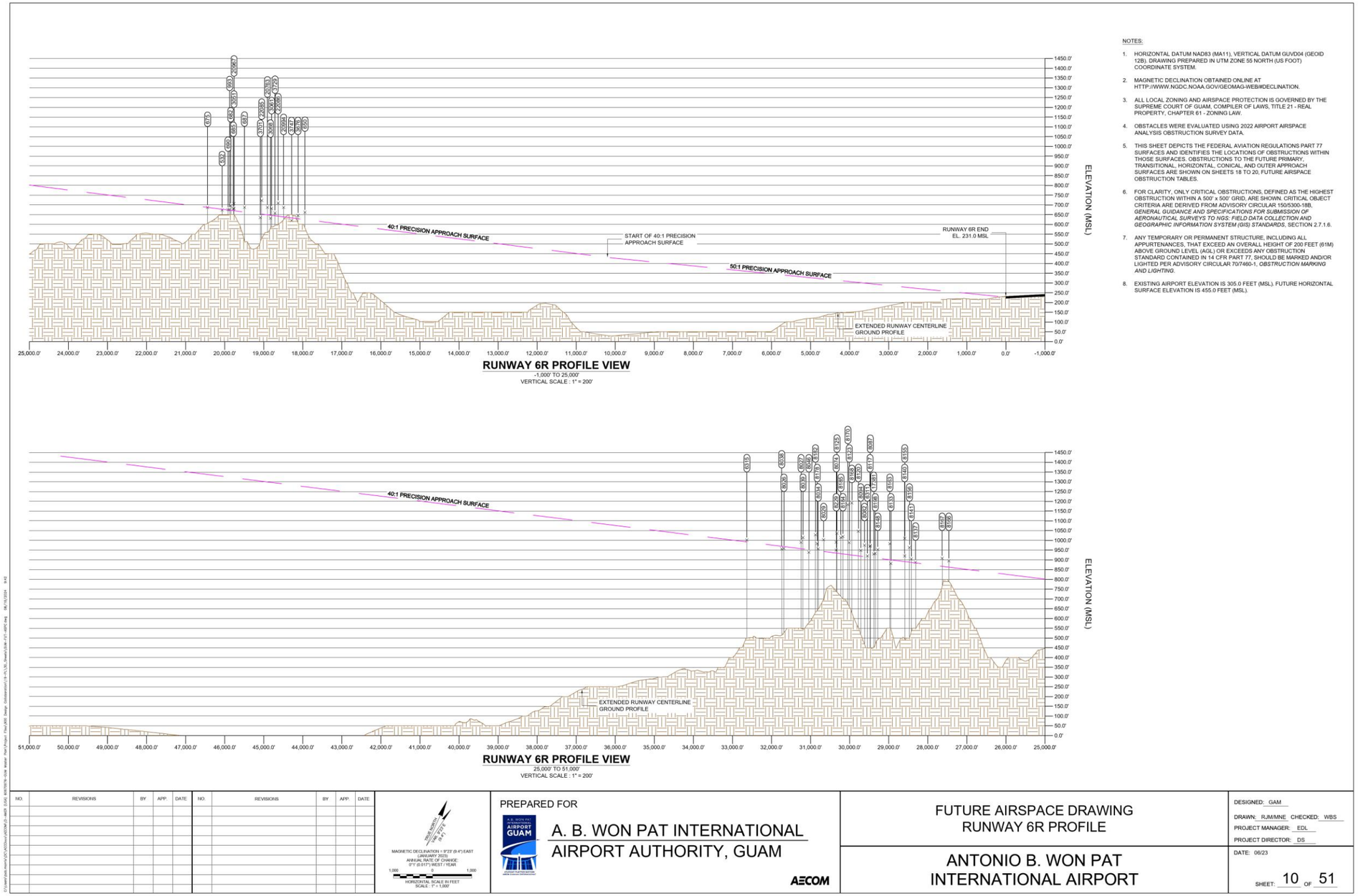
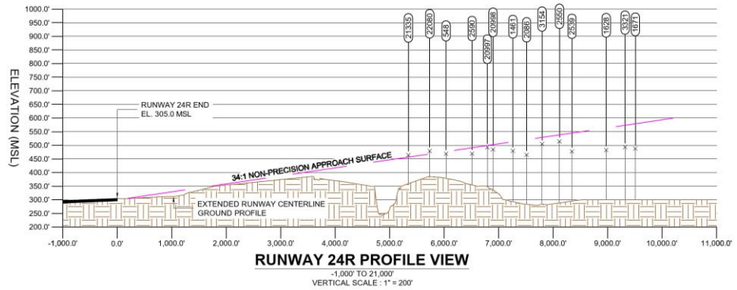
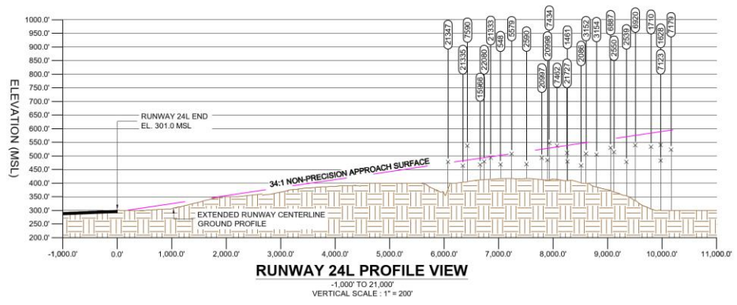



**Figure H-11. Future Airspace Drawing – Runway 6R Profile**

Source: AECOM




**RUNWAY 24R PROFILE VIEW**
-1,000' TO 21,000'
VERTICAL SCALE : 1" = 200'




**RUNWAY 24L PROFILE VIEW**
-1,000' TO 21,000'
VERTICAL SCALE : 1" = 200'

NOTES:

1. HORIZONTAL DATUM NAD83 (MA11), VERTICAL DATUM GUVD04 (GEOID 12B). DRAWING PREPARED IN UTM ZONE 55 NORTH (US FOOT) COORDINATE SYSTEM.
2. MAGNETIC DECLINATION OBTAINED ONLINE AT HTTP://WWW.NGDC.NOAA.GOV/GEOMAG-WEB/#DECLINATION.
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4. OBSTACLES WERE EVALUATED USING 2022 AIRPORT AIRSPACE ANALYSIS OBSTRUCTION SURVEY DATA.
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7. ANY TEMPORARY OR PERMANENT STRUCTURE, INCLUDING ALL APPURTENANCES, THAT EXCEED AN OVERALL HEIGHT OF 200 FEET (61M) ABOVE GROUND LEVEL (AGL) OR EXCEEDS ANY OBSTRUCTION STANDARD CONTAINED IN 14 CFR PART 77, SHOULD BE MARKED AND/OR LIGHTED PER ADVISORY CIRCULAR 70/7460-1, *OBSTRUCTION MARKING AND LIGHTING*.
8. EXISTING AIRPORT ELEVATION IS 305.0 FEET (MSL). FUTURE HORIZONTAL SURFACE ELEVATION IS 455.0 FEET (MSL).

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TRUE NORTH
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ANNUAL RATE OF CHANGE: 0°1' (0.017°) WEST / YEAR
1,000 0 1,000
HORIZONTAL SCALE IN FEET
SCALE: 1" = 1,000'

PREPARED FOR
A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM
AECOM

FUTURE AIRSPACE DRAWING
RUNWAY 24L AND 24R PROFILES

ANTONIO B. WON PAT INTERNATIONAL AIRPORT

DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WBS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 06/23
SHEET: 11 OF 51

**Figure H-12. Future Airspace Drawing – Runway 24L & 24R Profiles**

Source: AECOM




NOTES:

1. ELECTRONIC QUADRANGLE MAPS WERE DOWNLOADED FROM THE UNITED STATES GEOLOGICAL SURVEY AT USGS.GOV. USGS MAPS WERE NOT DEVELOPED FOR THE SURROUNDING AREAS OF GUAM THAT ONLY INCLUDE THE PACIFIC OCEAN.
2. HORIZONTAL DATUM NAD83 (IHA11), VERTICAL DATUM GUVD04 (GEOID 12B). DRAWING PREPARED IN UTM ZONE 55 NORTH (US FOOT) COORDINATE SYSTEM.
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8. FOR CLARITY AND TO AVOID REPEATING OBJECTS, TOP ELEVATIONS OF PENETRATING OBJECTS FOR THE INNER PORTION OF THE APPROACH SURFACES ARE SHOWN ON THE FUTURE INNER PORTION OF THE APPROACH SURFACE SHEETS.
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10. EXISTING AIRPORT ELEVATION IS 305.0 FEET (MSL). FUTURE HORIZONTAL SURFACE ELEVATION IS 455.0 FEET (MSL).

KEY PLAN



| NO. | REVISIONS | BY | APP. | DATE | NO. | REVISIONS | BY | APP. | DATE |
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ANNUAL RATE OF CHANGE: 0°1' (0.01°) WEST / YEAR
HORIZONTAL SCALE IN FEET
SCALE: 1" = 200'

PREPARED FOR
A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM
AECOM

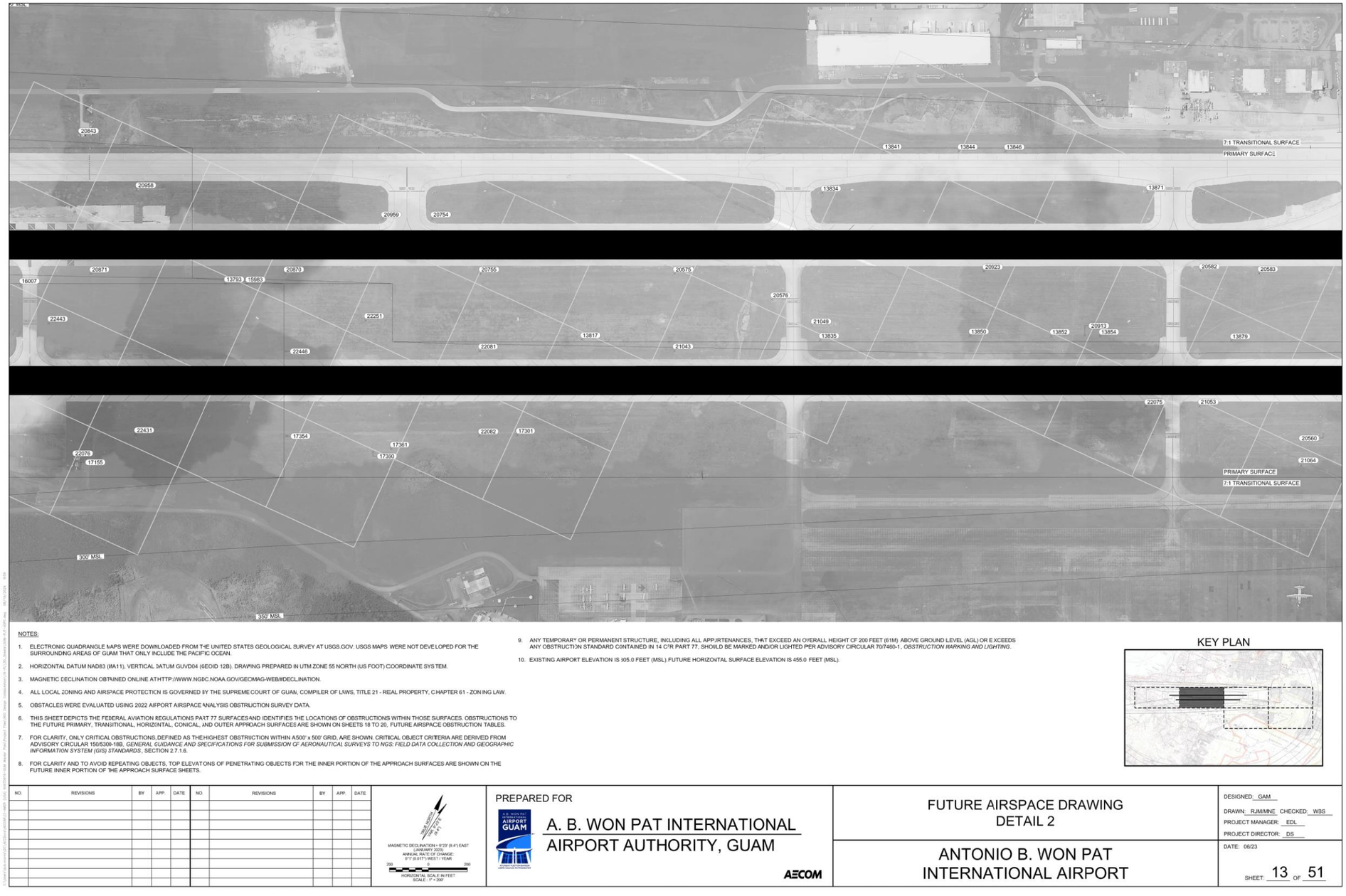
FUTURE AIRSPACE DRAWING
DETAIL 1

ANTONIO B. WON PAT
INTERNATIONAL AIRPORT

DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WBS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 06/23
SHEET: 12 OF 51

**Figure H-13. Future Airspace Drawing – Detail 1**

Source: AECOM




NOTES:

1. ELECTRONIC QUADRANGLE MAPS WERE DOWNLOADED FROM THE UNITED STATES GEOLOGICAL SURVEY AT USGS.GOV. USGS MAPS WERE NOT DEVELOPED FOR THE SURROUNDING AREAS OF GUAM THAT ONLY INCLUDE THE PACIFIC OCEAN.
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KEY PLAN



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200 0 200
HORIZONTAL SCALE IN FEET
SCALE: 1" = 200'

PREPARED FOR
A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM
AECOM

FUTURE AIRSPACE DRAWING
DETAIL 2

ANTONIO B. WON PAT
INTERNATIONAL AIRPORT

DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WBS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 06/23
SHEET: 13 OF 51

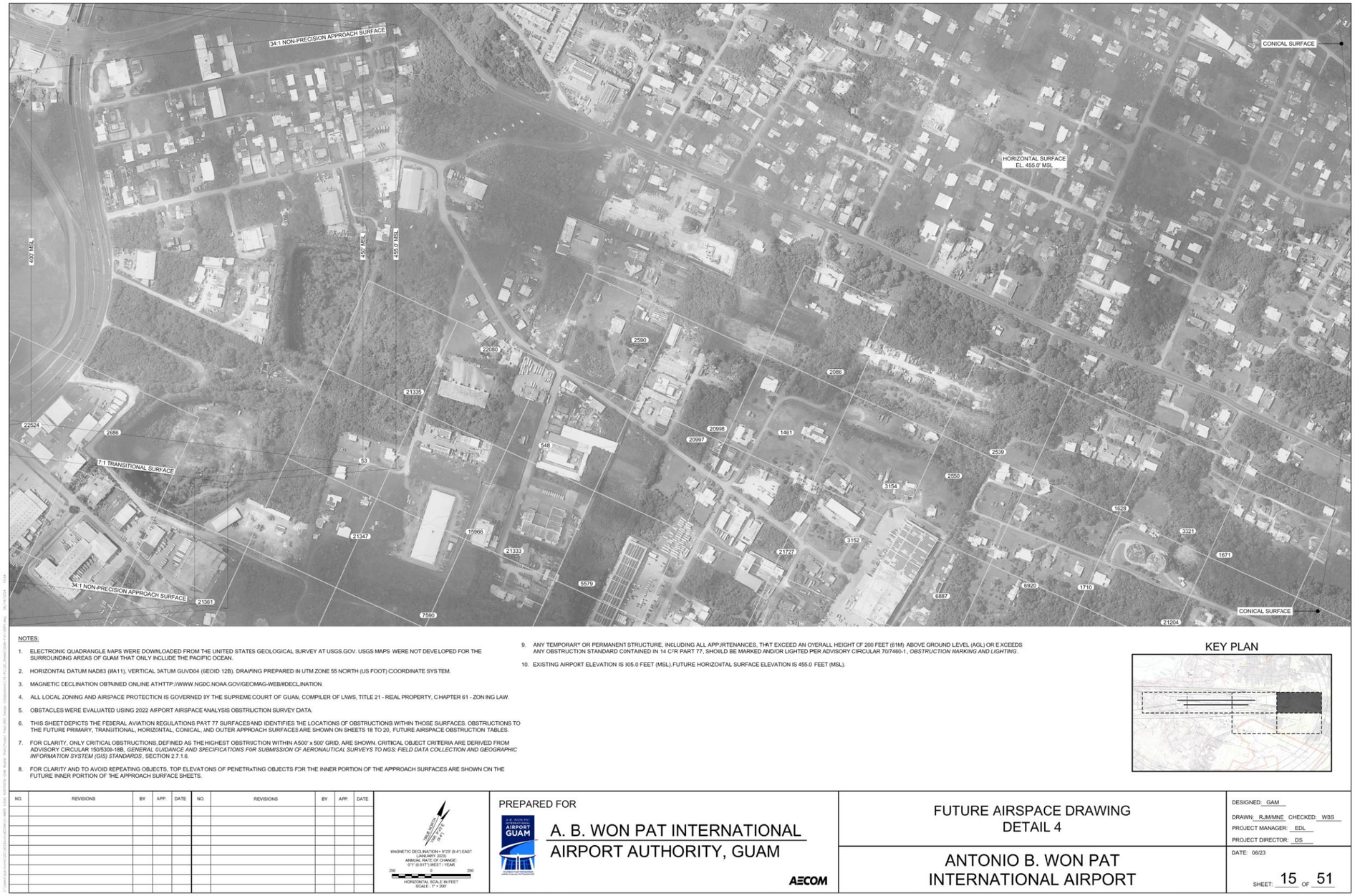
**Figure H-14. Future Airspace Drawing – Detail 2**

Source: AECOM




**Figure H-15. Future Airspace Drawing – Detail 3**

Source: AECOM




NOTES:

1. ELECTRONIC QUADRANGLE MAPS WERE DOWNLOADED FROM THE UNITED STATES GEOLOGICAL SURVEY AT USGS.GOV. USGS MAPS WERE NOT DEVELOPED FOR THE SURROUNDING AREAS OF GUAM THAT ONLY INCLUDE THE PACIFIC OCEAN.
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KEY PLAN



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200 0 200
HORIZONTAL SCALE IN FEET
SCALE: 1" = 200'

PREPARED FOR
A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM
AECOM

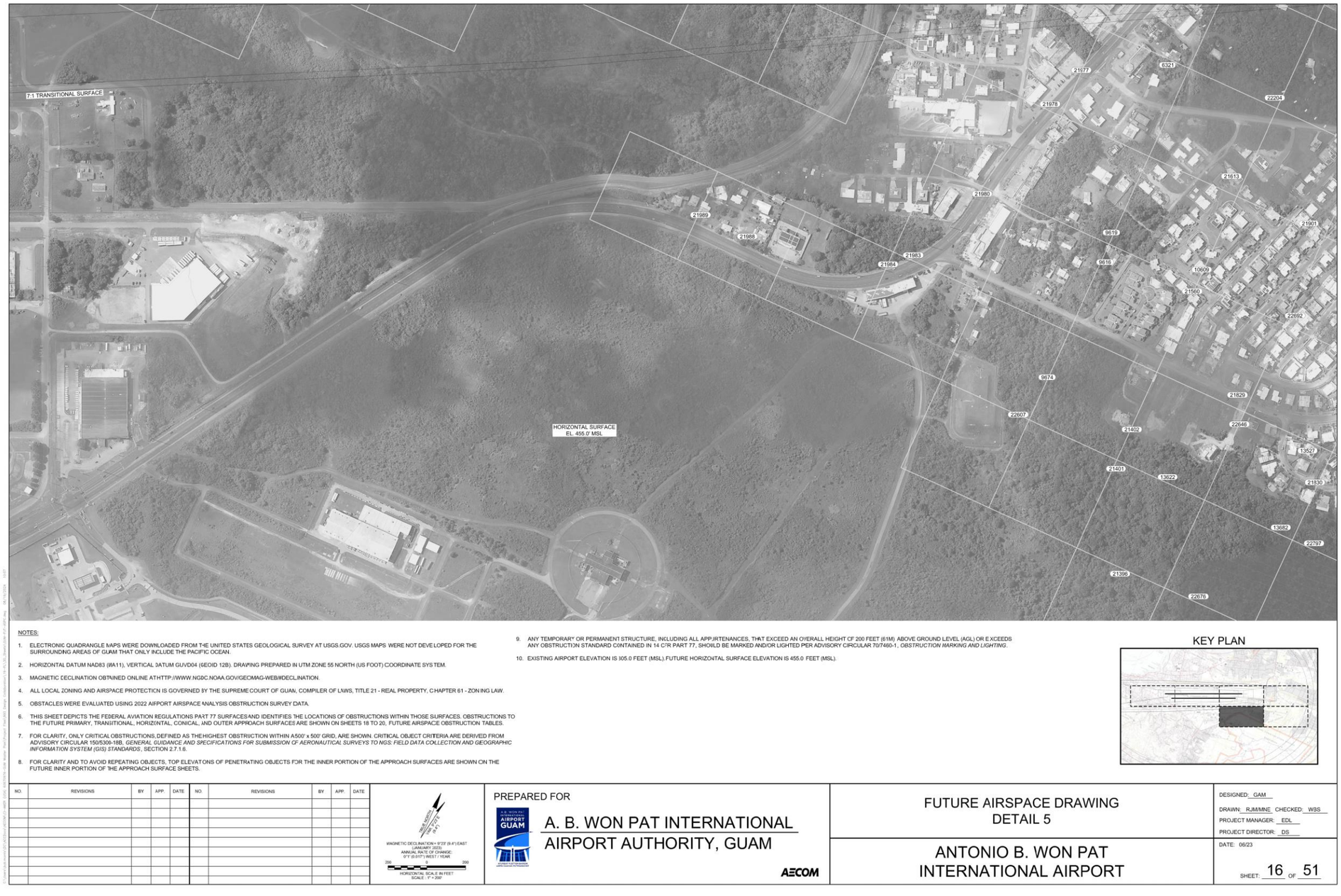
FUTURE AIRSPACE DRAWING
DETAIL 4

ANTONIO B. WON PAT
INTERNATIONAL AIRPORT

DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WBS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 06/23
SHEET: 15 OF 51

**Figure H-16. Future Airspace Drawing – Detail 4**

Source: AECOM




NOTES:

1. ELECTRONIC QUADRANGLE MAPS WERE DOWNLOADED FROM THE UNITED STATES GEOLOGICAL SURVEY AT USGS.GOV. USGS MAPS WERE NOT DEVELOPED FOR THE SURROUNDING AREAS OF GUAM THAT ONLY INCLUDE THE PACIFIC OCEAN.
2. HORIZONTAL DATUM NAD83 (IMA11), VERTICAL DATUM GUVD04 (GEOID 12B). DRAWING PREPARED IN UTM ZONE 55 NORTH (US FOOT) COORDINATE SYSTEM.
3. MAGNETIC DECLINATION OBTAINED ONLINE AT HTTP://WWW.NGDC.NOAA.GOV/GEOMAG-WEB/#DECLINATION.
4. ALL LOCAL ZONING AND AIRSPACE PROTECTION IS GOVERNED BY THE SUPREME COURT OF GUAM, COMPILER OF LAWS, TITLE 21 - REAL PROPERTY, CHAPTER 61 - ZONING LAW.
5. OBSTACLES WERE EVALUATED USING 2022 AIRPORT AIRSPACE ANALYSIS OBSTRUCTION SURVEY DATA.
6. THIS SHEET DEPICTS THE FEDERAL AVIATION REGULATIONS PART 77 SURFACES AND IDENTIFIES THE LOCATIONS OF OBSTRUCTIONS WITHIN THOSE SURFACES. OBSTRUCTIONS TO THE FUTURE PRIMARY, TRANSITIONAL, HORIZONTAL, CONICAL, AND OUTER APPROACH SURFACES ARE SHOWN ON SHEETS 18 TO 20, FUTURE AIRSPACE OBSTRUCTION TABLES.
7. FOR CLARITY, ONLY CRITICAL OBSTRUCTIONS, DEFINED AS THE HIGHEST OBSTRUCTION WITHIN A 500' x 500' GRID, ARE SHOWN. CRITICAL OBJECT CRITERIA ARE DERIVED FROM ADVISORY CIRCULAR 150/5300-18B, *GENERAL GUIDANCE AND SPECIFICATIONS FOR SUBMISSION OF AERONAUTICAL SURVEYS TO NGS: FIELD DATA COLLECTION AND GEOGRAPHIC INFORMATION SYSTEM (GIS) STANDARDS*, SECTION 2.7.1.6.
8. FOR CLARITY AND TO AVOID REPEATING OBJECTS, TOP ELEVATIONS OF PENETRATING OBJECTS FOR THE INNER PORTION OF THE APPROACH SURFACES ARE SHOWN ON THE FUTURE INNER PORTION OF THE APPROACH SURFACE SHEETS.
9. ANY TEMPORARY OR PERMANENT STRUCTURE, INCLUDING ALL APPURTENANCES, THAT EXCEED AN OVERALL HEIGHT OF 200 FEET (61M) ABOVE GROUND LEVEL (AGL) OR EXCEEDS ANY OBSTRUCTION STANDARD CONTAINED IN 14 CFR PART 77, SHOULD BE MARKED AND/OR LIGHTED PER ADVISORY CIRCULAR *70/7460-1, OBSTRUCTION MARKING AND LIGHTING*.
10. EXISTING AIRPORT ELEVATION IS 305.0 FEET (MSL). FUTURE HORIZONTAL SURFACE ELEVATION IS 455.0 FEET (MSL).

KEY PLAN



| NO. | REVISIONS | BY | APP. | DATE | NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

TRUE BEARING 090° 00' 00" (E)
GRID BEARING 090° 00' 00" (E)

MAGNETIC DECLINATION = 9°23' (9.4°) EAST (JANUARY 2023)
ANNUAL RATE OF CHANGE: 0°1' (0.01°) WEST / YEAR

200 0 200
HORIZONTAL SCALE IN FEET
SCALE: 1" = 200'

PREPARED FOR

A. B. WON PAT INTERNATIONAL AIRPORT GUAM

A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM

AECOM

FUTURE AIRSPACE DRAWING
DETAIL 5

ANTONIO B. WON PAT
INTERNATIONAL AIRPORT

DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WBS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS

DATE: 06/23

SHEET: 16 OF 51

**Figure H-17. Future Airspace Drawing – Detail 5**

Source: AECOM

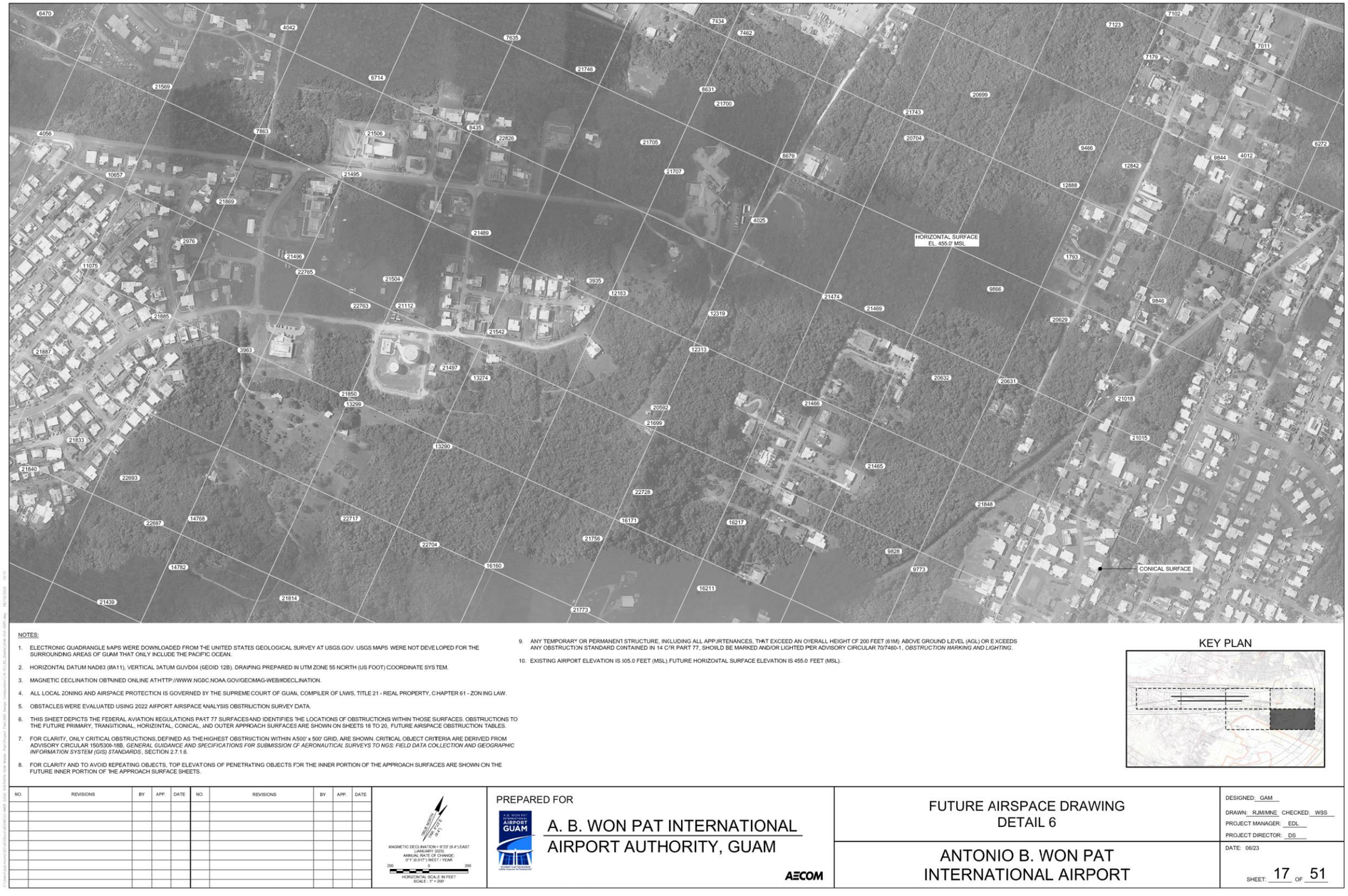



**Figure H-18. Future Airspace Drawing – Detail 6**

Source: AECOM

**FUTURE PART 77 PRIMARY SURFACE OBSTRUCTIONS**

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | SURFACE PENETRATION | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|
| | | MSL | AGL | | | |
| 12028 | SIGN | 295.5 | 3.5 | 292.0 | 2.2 | NO ACTION |
| 12071 | RUNWAY LIGHT | 235.1 | 1.6 | 233.5 | 1.4 | NO ACTION |
| 12072 | RUNWAY LIGHT | 235.8 | 2.0 | 233.7 | 2.0 | NO ACTION |
| 13763 | WINDSOCK | 249.5 | 10.1 | 239.4 | 14.4 | NO ACTION |
| 13817 | GROUND | 261.8 | 0.0 | 261.8 | 3.9 | NO ACTION |
| 13834 | SIGN | 263.0 | 3.6 | 259.4 | 1.9 | NO ACTION |
| 13835 | GROUND | 267.5 | 0.0 | 267.5 | 6.3 | NO ACTION |
| 13841 | GROUND | 262.8 | 0.0 | 262.8 | 0.6 | NO ACTION |
| 13844 | GROUND | 264.7 | 0.0 | 264.7 | 1.1 | NO ACTION |
| 13846 | GROUND | 265.8 | 0.0 | 265.8 | 1.3 | NO ACTION |
| 13850 | GROUND | 271.9 | 0.0 | 271.9 | 8.1 | NO ACTION |
| 13852 | GROUND | 274.8 | 0.0 | 274.8 | 9.2 | NO ACTION |
| 13854 | GROUND | 276.8 | 0.0 | 276.8 | 9.7 | NO ACTION |
| 13871 | SIGN | 268.5 | 3.7 | 264.8 | 0.1 | NO ACTION |
| 13879 | GROUND | 276.8 | 0.0 | 276.8 | 6.6 | NO ACTION |
| 13911 | GROUND | 287.6 | 0.0 | 287.6 | 5.8 | NO ACTION |
| 13918 | GROUND | 293.0 | 0.0 | 293.0 | 5.3 | NO ACTION |
| 13922 | GROUND | 296.5 | 0.0 | 296.5 | 4.5 | NO ACTION |
| 15983 | GROUND | 251.5 | 0.0 | 251.5 | 3.1 | NO ACTION |
| 16007 | GROUND | 244.0 | 0.0 | 244.0 | 6.5 | NO ACTION |
| 17155 | BUILDING | 249.1 | 13.0 | 236.1 | 8.9 | NO ACTION |
| 17301 | GROUND | 259.4 | 0.0 | 259.4 | 0.5 | NO ACTION |
| 17311 | GROUND | 292.0 | 0.0 | 292.0 | 3.0 | NO ACTION |
| 17354 | GROUND | 251.4 | 0.0 | 251.4 | 1.3 | NO ACTION |
| 17360 | GROUND | 257.0 | 0.0 | 257.0 | 3.3 | NO ACTION |
| 17361 | GROUND | 256.4 | 0.0 | 256.4 | 1.8 | NO ACTION |
| 20560 | UTILITY BOX | 285.5 | 3.9 | 281.6 | 4.2 | NO ACTION |
| 20575 | SIGN | 263.7 | 4.8 | 258.9 | 4.4 | NO ACTION |
| 20576 | SIGN | 264.8 | 3.9 | 260.9 | 4.2 | NO ACTION |
| 20582 | SIGN | 273.8 | 2.9 | 270.9 | 4.2 | NO ACTION |
| 20583 | SIGN | 278.1 | 5.3 | 272.8 | 7.2 | NO ACTION |
| 20585 | SIGN | 280.1 | 3.7 | 276.5 | 5.5 | NO ACTION |
| 20587 | SIGN | 291.9 | 5.2 | 286.7 | 4.8 | NO ACTION |
| 20754 | SIGN | 256.8 | 3.4 | 253.4 | 1.5 | NO ACTION |
| 20755 | SIGN | 261.3 | 4.8 | 256.4 | 5.2 | NO ACTION |
| 20804 | GROUND | 310.5 | 0.0 | 310.5 | 5.5 | NO ACTION |
| 20811 | GROUND | 296.4 | 0.0 | 296.4 | 0.7 | NO ACTION |
| 20816 | TREE | 324.4 | 24.5 | 299.9 | 22.3 | TRIM/REMOVE |
| 20869 | SIGN | 284.4 | 5.8 | 278.6 | 7.0 | NO ACTION |
| 20870 | SIGN | 257.5 | 5.0 | 252.5 | 4.8 | NO ACTION |
| 20871 | SIGN | 251.9 | 3.3 | 248.6 | 5.8 | NO ACTION |
| 20890 | GROUND | 292.9 | 0.0 | 292.9 | 2.2 | NO ACTION |
| 20913 | GROUND | 275.7 | 0.0 | 275.7 | 9.1 | NO ACTION |
| 20923 | GROUND | 264.9 | 0.0 | 264.9 | 0.8 | NO ACTION |
| 20958 | UTILITY BOX | 250.8 | 3.7 | 247.1 | 2.9 | NO ACTION |
| 20959 | SIGN | 256.1 | 3.3 | 252.8 | 1.8 | NO ACTION |
| 20961 | SIGN | 243.7 | 3.0 | 240.7 | 2.3 | NO ACTION |
| 20993 | SIGN | 300.8 | 3.5 | 297.3 | 1.4 | NO ACTION |
| 21043 | SIGN | 269.4 | 5.1 | 264.4 | 6.1 | NO ACTION |
| 21049 | SIGN | 268.9 | 3.5 | 265.4 | 7.9 | NO ACTION |
| 21053 | SIGN | 280.0 | 3.4 | 276.6 | 1.2 | NO ACTION |
| 21054 | SIGN | 283.6 | 3.7 | 280.0 | 8.8 | NO ACTION |
| 21059 | SIGN | 289.6 | 3.3 | 286.4 | 4.5 | NO ACTION |
| 21064 | ELECTRIC BOX | 286.9 | 6.2 | 280.7 | 6.1 | NO ACTION |
| 22072 | SIGN | 238.8 | 3.3 | 235.5 | 7.8 | NO ACTION |
| 22074 | SIGN | 303.7 | 3.2 | 300.4 | 6.4 | NO ACTION |
| 22075 | SIGN | 278.8 | 3.4 | 275.4 | 1.2 | NO ACTION |
| 22076 | ANTENNA | 277.2 | 40.8 | 236.4 | 37.1 | NO ACTION |
| 22081 | SIGN | 263.7 | 4.5 | 259.1 | 5.7 | NO ACTION |
| 22082 | GROUND | 259.6 | 0.0 | 259.6 | 1.7 | NO ACTION |
| 22084 | WINDSOCK | 306.2 | 10.2 | 296.0 | 13.4 | NO ACTION |
| 22216 | SIGN | 285.4 | 3.0 | 282.4 | 8.0 | NO ACTION |
| 22251 | GROUND | 255.9 | 0.0 | 255.9 | 2.5 | NO ACTION |
| 22423 | GROUND | 233.3 | 0.0 | 233.3 | 1.3 | NO ACTION |
| 22431 | UTILITY BOX | 246.0 | 3.0 | 243.0 | 2.9 | NO ACTION |
| 22443 | SIGN | 246.0 | 3.3 | 242.7 | 7.1 | NO ACTION |
| 22446 | SIGN | 255.7 | 4.0 | 251.6 | 5.6 | NO ACTION |

**FUTURE PART 77 TRANSITIONAL SURFACE OBSTRUCTIONS**

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | SURFACE PENETRATION | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|
| | | MSL | AGL | | | |
| 53 | UTILITY POLE | 456.0 | 37.6 | 418.4 | 5.8 | MARK/LIGHT |
| 293 | TREE | 427.1 | 77.1 | 350.0 | 46.7 | TRIM/REMOVE |
| 408 | TREE | 422.2 | 72.2 | 350.0 | 35.2 | TRIM/REMOVE |
| 432 | BUSH | 359.8 | 9.8 | 350.0 | 23.0 | TRIM/REMOVE |
| 721 | TREE | 654.1 | 54.1 | 600.0 | 24.9 | TRIM/REMOVE |
| 723 | TREE | 653.7 | 53.7 | 600.0 | 1.6 | TRIM/REMOVE |
| 974 | TREE | 409.5 | 12.6 | 396.9 | 15.6 | TRIM/REMOVE |
| 2686 | TREE | 424.3 | 42.4 | 381.9 | 9.7 | TRIM/REMOVE |
| 3237 | TREE | 354.0 | 47.5 | 306.5 | 41.1 | TRIM/REMOVE |
| 3603 | TREE | 370.5 | 56.9 | 313.6 | 50.0 | TRIM/REMOVE |
| 3654 | TREE | 424.6 | 74.6 | 350.0 | 60.2 | TRIM/REMOVE |
| 5893 | TREE | 426.1 | 76.1 | 350.0 | 37.4 | TRIM/REMOVE |
| 6217 | BUSH | 367.2 | 11.3 | 355.9 | 19.9 | TRIM/REMOVE |
| 13762 | TREE | 338.2 | 38.2 | 300.0 | 18.7 | TRIM/REMOVE |
| 13793 | GROUND | 251.7 | 0.0 | 251.7 | 4.2 | NO ACTION |
| 13954 | GROUND | 310.8 | 0.0 | 310.8 | 5.8 | NO ACTION |
| 15102 | TREE | 423.9 | 73.9 | 350.0 | 8.7 | TRIM/REMOVE |
| 15174 | TREE | 422.3 | 72.3 | 350.0 | 28.6 | TRIM/REMOVE |
| 15198 | TREE | 399.6 | 63.2 | 336.5 | 92.0 | TRIM/REMOVE |
| 15211 | TREE | 413.3 | 63.3 | 350.0 | 86.1 | TRIM/REMOVE |
| 16573 | TREE | 407.0 | 66.9 | 340.2 | 93.4 | TRIM/REMOVE |
| 17635 | TREE | 418.9 | 61.4 | 357.5 | 70.6 | TRIM/REMOVE |
| 17890 | TREE | 423.5 | 25.4 | 398.1 | 28.8 | TRIM/REMOVE |
| 18078 | TREE | 367.7 | 63.9 | 303.8 | 68.4 | TRIM/REMOVE |
| 18325 | TREE | 395.1 | 51.4 | 343.8 | 81.4 | TRIM/REMOVE |
| 18433 | TREE | 389.8 | 80.8 | 309.0 | 84.3 | TRIM/REMOVE |
| 18524 | TREE | 259.6 | 59.6 | 200.0 | 1.0 | TRIM/REMOVE |
| 18525 | TREE | 260.3 | 60.3 | 200.0 | 1.9 | TRIM/REMOVE |
| 18657 | TREE | 344.6 | 44.6 | 300.0 | 0.9 | TRIM/REMOVE |
| 18732 | TREE | 363.5 | 63.5 | 300.0 | 66.9 | TRIM/REMOVE |
| 18952 | TREE | 381.0 | 67.3 | 313.7 | 53.5 | TRIM/REMOVE |
| 19375 | TREE | 433.5 | 71.1 | 362.4 | 62.2 | TRIM/REMOVE |
| 19989 | TREE | 408.0 | 58.0 | 350.0 | 56.4 | TRIM/REMOVE |
| 20051 | TREE | 363.2 | 63.2 | 300.0 | 45.1 | TRIM/REMOVE |
| 20651 | TREE | 416.6 | 66.6 | 350.0 | 55.1 | TRIM/REMOVE |
| 20657 | TREE | 411.1 | 61.1 | 350.0 | 32.4 | TRIM/REMOVE |
| 20662 | TREE | 392.1 | 51.0 | 341.1 | 48.3 | TRIM/REMOVE |
| 20666 | TREE | 380.0 | 47.4 | 332.7 | 42.0 | TRIM/REMOVE |
| 20738 | TREE | 395.1 | 70.7 | 324.5 | 20.3 | TRIM/REMOVE |
| 20840 | GROUND | 302.4 | 0.0 | 302.4 | 0.5 | NO ACTION |
| 20843 | ANTENNA | 287.3 | 41.6 | 245.7 | 31.9 | NO ACTION |
| 21178 | POLE | 414.8 | 14.7 | 400.1 | 8.3 | MARK/LIGHT |
| 21222 | BUILDING | 387.2 | 9.9 | 377.2 | 22.7 | MARK/LIGHT |
| 21290 | FENCE | 383.8 | 8.7 | 375.1 | 21.6 | NO ACTION |
| 21361 | POLE | 480.8 | 37.3 | 443.5 | 29.2 | MARK/LIGHT |
| 21371 | TREE | 455.7 | 34.1 | 421.6 | 25.1 | TRIM/REMOVE |
| 21629 | POLE | 405.4 | 36.5 | 368.9 | 44.9 | MARK/LIGHT |
| 21632 | TREE | 444.4 | 45.5 | 398.9 | 47.5 | TRIM/REMOVE |
| 21660 | POLE | 415.3 | 39.6 | 375.7 | 2.6 | MARK/LIGHT |
| 21685 | TREE | 403.6 | 60.9 | 342.8 | 90.0 | TRIM/REMOVE |
| 21922 | TREE | 366.6 | 66.6 | 300.0 | 49.8 | TRIM/REMOVE |
| 21948 | TREE | 426.4 | 68.9 | 357.5 | 23.9 | TRIM/REMOVE |
| 21957 | TREE | 426.5 | 59.7 | 366.8 | 5.1 | TRIM/REMOVE |
| 21965 | POWER TRANSMISSION POLE | 486.2 | 81.0 | 405.1 | 84.1 | MARK/LIGHT |
| 21975 | POWER TRANSMISSION POLE | 481.6 | 75.7 | 405.9 | 49.5 | MARK/LIGHT |
| 22384 | TREE | 405.9 | 12.8 | 393.1 | 14.6 | TRIM/REMOVE |
| 22482 | TREE | 383.2 | 60.7 | 322.5 | 33.5 | TRIM/REMOVE |
| 22485 | TREE | 279.3 | 74.2 | 205.0 | 11.4 | TRIM/REMOVE |
| 22497 | PARKING LOT | 370.8 | 10.0 | 360.8 | 11.0 | NO ACTION |
| 22503 | TREE | 417.4 | 66.6 | 350.8 | 71.4 | TRIM/REMOVE |
| 22524 | POLE | 421.4 | 17.4 | 404.0 | 17.1 | MARK/LIGHT |
| 22554 | UTILITY POLE | 406.4 | 39.9 | 366.5 | 43.6 | MARK/LIGHT |
| 22837 | GROUND | 332.0 | 0.0 | 332.0 | 14.6 | NO ACTION |
| 22839 | GROUND | 341.3 | 0.0 | 341.3 | 18.1 | NO ACTION |

NOTES:

1. FOR CLARITY AND TO AVOID REPEATING OBJECTS, TOP ELEVATIONS OF PENETRATING OBJECTS FOR THE INNER PORTION OF THE APPROACH SURFACES ARE SHOWN ON THE FUTURE INNER PORTION OF THE APPROACH SURFACE OBSTRUCTION DATA TABLE SHEETS. ALL RUNWAY 24L/24R APPROACH OBSTRUCTIONS ARE DEPICTED ON THE INNER PORTION OF THE APPROACH SURFACE DATA TABLE SHEETS.
2. OBSTACLES WERE EVALUATED USING 2022 AIRPORT AIRSPACE ANALYSIS OBSTRUCTION SURVEY DATA.
3. FOR CLARITY, ONLY CRITICAL OBSTRUCTIONS, DEFINED AS THE HIGHEST OBSTRUCTION WITHIN A 500' x 500' GRID, ARE SHOWN. CRITICAL OBJECT CRITERIA ARE DERIVED FROM ADVISORY CIRCULAR 150/5300-18B, *GENERAL GUIDANCE AND SPECIFICATIONS FOR SUBMISSION OF AERONAUTICAL SURVEYS TO NGS: FIELD DATA COLLECTION AND GEOGRAPHIC INFORMATION SYSTEM (GIS) STANDARDS*, SECTION 2.7.1.6.
4. ANY TEMPORARY OR PERMANENT STRUCTURE, INCLUDING ALL APPURTENANCES, THAT EXCEED AN OVERALL HEIGHT OF 200 FEET (61M) ABOVE GROUND LEVEL (AGL) OR EXCEEDS ANY OBSTRUCTION STANDARD CONTAINED IN 14 CFR PART 77, SHOULD BE MARKED AND/OR LIGHTED PER ADVISORY CIRCULAR *7o7460-1, OBSTRUCTION MARKING AND LIGHTING*.
5. ALL ELEVATIONS ARE IN FEET.

| NO. | REVISIONS | BY | APP. | DATE | NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|---|---|---|---|---|

MAGNETIC DECLINATION = 9°23' (9.4°) EAST (JANUARY 2023)
ANNUAL RATE OF CHANGE: 0°1' (0.017°) WEST / YEAR

PREPARED FOR
A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM
AECOM

FUTURE AIRSPACE OBSTRUCTION TABLES
PRIMARY AND TRANSITIONAL SURFACES

ANTONIO B. WON PAT
INTERNATIONAL AIRPORT

DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WBS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 06/23
SHEET: 18 OF 51

**Figure H-19. Future Airspace Obstruction Tables – Primary and Transitional Surfaces**

Source: AECOM

**FUTURE PART 77 HORIZONTAL SURFACE OBSTRUCTIONS**

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | SURFACE PENETRATION | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|
| | | MSL | AGL | | | |
| 548 | UTILITY POLE | 468.4 | 39.7 | 428.8 | 13.4 | MARK/LIGHT |
| 1461 | TREE | 479.1 | 42.6 | 436.6 | 24.1 | TRIM/REMOVE |
| 1628 | TREE | 482.4 | 44.9 | 437.5 | 27.4 | TRIM/REMOVE |
| 1671 | TREE | 487.8 | 66.0 | 421.7 | 32.8 | TRIM/REMOVE |
| 1710 | TREE | 533.4 | 83.4 | 450.0 | 78.4 | TRIM/REMOVE |
| 1793 | BUILDING | 489.3 | 31.9 | 457.4 | 34.3 | MARK/LIGHT |
| 2086 | TREE | 464.6 | 64.6 | 400.0 | 9.6 | TRIM/REMOVE |
| 2539 | TREE | 477.5 | 58.2 | 419.3 | 22.5 | TRIM/REMOVE |
| 2550 | TREE | 514.1 | 64.1 | 450.0 | 59.1 | TRIM/REMOVE |
| 2590 | TREE | 469.5 | 61.3 | 408.2 | 14.5 | TRIM/REMOVE |
| 2957 | ANTENNA | 461.5 | 78.4 | 383.1 | 6.5 | MARK/LIGHT |
| 2958 | ANTENNA | 456.8 | 78.0 | 378.8 | 1.8 | MARK/LIGHT |
| 2959 | ANTENNA | 505.3 | 121.1 | 384.2 | 50.3 | MARK/LIGHT |
| 2969 | ANTENNA | 462.8 | 77.8 | 385.0 | 7.8 | MARK/LIGHT |
| 2976 | ANTENNA | 694.3 | 70.6 | 623.7 | 239.3 | MARK/LIGHT |
| 3152 | UTILITY POLE | 508.2 | 37.9 | 470.3 | 53.2 | MARK/LIGHT |
| 3154 | UTILITY POLE | 504.5 | 37.1 | 467.4 | 49.5 | MARK/LIGHT |
| 3321 | CELL TOWER | 493.4 | 61.3 | 432.1 | 38.4 | MARK/LIGHT |
| 3935 | TREE | 666.0 | 38.2 | 627.8 | 211.0 | TRIM/REMOVE |
| 3963 | UTILITY POLE | 660.4 | 39.4 | 621.0 | 205.4 | MARK/LIGHT |
| 3981 | UTILITY POLE | 460.2 | 37.9 | 422.4 | 5.2 | MARK/LIGHT |
| 4012 | UTILITY POLE | 477.0 | 37.7 | 439.2 | 22.0 | MARK/LIGHT |
| 4025 | UTILITY POLE | 592.4 | 41.9 | 550.5 | 137.4 | MARK/LIGHT |
| 4042 | UTILITY POLE | 525.8 | 37.7 | 488.0 | 70.8 | MARK/LIGHT |
| 4056 | UTILITY POLE | 553.3 | 42.4 | 510.9 | 98.3 | MARK/LIGHT |
| 5579 | TREE | 507.8 | 39.3 | 468.6 | 52.8 | TRIM/REMOVE |
| 6321 | TREE | 469.9 | 41.5 | 428.3 | 14.9 | TRIM/REMOVE |
| 6470 | TREE | 501.4 | 53.9 | 447.5 | 46.4 | TRIM/REMOVE |
| 6714 | TREE | 610.0 | 43.2 | 566.8 | 155.0 | TRIM/REMOVE |
| 6887 | TREE | 529.5 | 79.5 | 450.0 | 74.5 | TRIM/REMOVE |
| 6920 | TREE | 539.1 | 89.1 | 450.0 | 84.1 | TRIM/REMOVE |
| 7011 | TREE | 467.6 | 29.3 | 438.3 | 12.6 | TRIM/REMOVE |
| 7102 | TREE | 508.3 | 58.3 | 450.0 | 53.3 | TRIM/REMOVE |
| 7123 | TREE | 539.9 | 89.9 | 450.0 | 84.9 | TRIM/REMOVE |
| 7179 | TREE | 522.7 | 72.7 | 450.0 | 67.7 | TRIM/REMOVE |
| 7434 | TREE | 546.8 | 46.8 | 500.0 | 91.8 | TRIM/REMOVE |
| 7462 | TREE | 536.9 | 33.4 | 503.6 | 81.9 | TRIM/REMOVE |
| 7590 | TREE | 536.9 | 36.9 | 500.0 | 81.9 | TRIM/REMOVE |
| 7635 | TREE | 586.3 | 34.0 | 552.3 | 131.3 | TRIM/REMOVE |
| 7863 | TREE | 596.3 | 30.0 | 566.3 | 141.3 | TRIM/REMOVE |
| 8435 | TREE | 640.1 | 25.1 | 615.0 | 185.1 | TRIM/REMOVE |
| 8631 | TREE | 645.1 | 45.1 | 600.0 | 190.1 | TRIM/REMOVE |
| 8679 | TREE | 572.6 | 46.5 | 526.1 | 117.6 | TRIM/REMOVE |
| 9466 | TREE | 531.3 | 81.3 | 450.0 | 76.3 | TRIM/REMOVE |
| 9616 | TREE | 504.0 | 52.7 | 451.3 | 49.0 | TRIM/REMOVE |
| 9619 | TREE | 490.8 | 44.9 | 445.9 | 35.8 | TRIM/REMOVE |
| 9674 | TREE | 492.3 | 43.2 | 449.1 | 37.3 | TRIM/REMOVE |
| 9758 | TREE | 472.6 | 49.5 | 423.1 | 17.6 | TRIM/REMOVE |
| 9763 | TREE | 461.2 | 61.2 | 400.0 | 6.2 | TRIM/REMOVE |
| 9768 | TREE | 475.4 | 75.2 | 400.2 | 20.4 | TRIM/REMOVE |
| 9773 | TREE | 465.7 | 50.0 | 415.7 | 10.7 | TRIM/REMOVE |
| 9828 | TREE | 461.2 | 43.8 | 417.4 | 6.2 | TRIM/REMOVE |
| 9844 | TREE | 475.4 | 32.2 | 443.2 | 20.4 | TRIM/REMOVE |
| 9846 | TREE | 466.8 | 47.5 | 419.4 | 11.8 | TRIM/REMOVE |
| 9866 | TREE | 520.9 | 59.6 | 461.3 | 65.9 | TRIM/REMOVE |
| 10047 | TREE | 503.1 | 56.3 | 446.8 | 48.1 | TRIM/REMOVE |
| 10609 | TREE | 546.6 | 37.7 | 508.9 | 91.6 | TRIM/REMOVE |
| 10657 | TREE | 590.3 | 32.3 | 558.0 | 135.3 | TRIM/REMOVE |
| 11075 | TREE | 639.6 | 39.6 | 600.0 | 184.5 | TRIM/REMOVE |
| 12183 | TREE | 655.1 | 32.3 | 622.7 | 200.1 | TRIM/REMOVE |
| 12313 | TREE | 619.9 | 46.7 | 573.2 | 164.9 | TRIM/REMOVE |
| 12319 | TREE | 609.3 | 36.3 | 573.0 | 154.3 | TRIM/REMOVE |
| 12842 | TREE | 518.1 | 68.1 | 450.0 | 63.1 | TRIM/REMOVE |
| 12888 | TREE | 518.6 | 59.0 | 459.5 | 63.6 | TRIM/REMOVE |
| 13274 | TREE | 687.5 | 44.4 | 643.1 | 232.5 | TRIM/REMOVE |
| 13290 | TREE | 642.1 | 33.9 | 608.2 | 187.1 | TRIM/REMOVE |
| 13299 | TREE | 681.1 | 56.3 | 624.8 | 226.1 | TRIM/REMOVE |
| 13527 | TREE | 656.9 | 56.9 | 600.0 | 201.9 | TRIM/REMOVE |
| 13622 | TREE | 561.6 | 41.7 | 519.9 | 106.6 | TRIM/REMOVE |
| 13682 | TREE | 581.6 | 49.5 | 532.1 | 126.6 | TRIM/REMOVE |

**FUTURE PART 77 HORIZONTAL SURFACE OBSTRUCTIONS**

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | SURFACE PENETRATION | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|
| | | MSL | AGL | | | |
| 14768 | TREE | 622.2 | 40.2 | 582.0 | 167.2 | TRIM/REMOVE |
| 14782 | TREE | 623.1 | 46.2 | 576.9 | 168.1 | TRIM/REMOVE |
| 15966 | TREE | 467.8 | 22.2 | 445.7 | 12.8 | TRIM/REMOVE |
| 16160 | TREE | 578.5 | 57.2 | 521.3 | 123.5 | TRIM/REMOVE |
| 16171 | TREE | 622.2 | 47.1 | 575.2 | 167.2 | TRIM/REMOVE |
| 16211 | TREE | 471.7 | 35.2 | 436.5 | 16.7 | TRIM/REMOVE |
| 16217 | TREE | 485.7 | 47.6 | 438.2 | 30.7 | TRIM/REMOVE |
| 16349 | TREE | 493.3 | 53.7 | 439.6 | 38.3 | TRIM/REMOVE |
| 16366 | TREE | 568.0 | 46.1 | 521.9 | 113.0 | TRIM/REMOVE |
| 20592 | ANTENNA | 763.2 | 163.0 | 600.2 | 308.2 | MARK/LIGHT |
| 20629 | TREE | 494.7 | 47.1 | 447.7 | 39.7 | TRIM/REMOVE |
| 20631 | TREE | 495.5 | 50.4 | 445.1 | 40.5 | TRIM/REMOVE |
| 20632 | TREE | 508.5 | 58.5 | 450.0 | 53.5 | TRIM/REMOVE |
| 20699 | TREE | 529.6 | 79.6 | 450.0 | 74.6 | TRIM/REMOVE |
| 20704 | TREE | 523.8 | 46.3 | 477.5 | 68.8 | TRIM/REMOVE |
| 20997 | TREE | 492.3 | 65.6 | 426.7 | 37.3 | TRIM/REMOVE |
| 20998 | TREE | 484.4 | 58.1 | 426.4 | 29.4 | TRIM/REMOVE |
| 21015 | TREE | 468.1 | 51.4 | 416.8 | 13.1 | TRIM/REMOVE |
| 21018 | TREE | 478.2 | 56.0 | 422.2 | 23.2 | TRIM/REMOVE |
| 21112 | ANTENNA | 756.6 | 97.8 | 658.7 | 301.6 | MARK/LIGHT |
| 21204 | TREE | 535.2 | 85.2 | 450.0 | 80.2 | TRIM/REMOVE |
| 21333 | TREE | 493.2 | 43.2 | 450.0 | 38.2 | TRIM/REMOVE |
| 21335 | TREE | 463.7 | 57.1 | 406.6 | 8.7 | TRIM/REMOVE |
| 21347 | TREE | 478.0 | 44.7 | 433.3 | 23.0 | TRIM/REMOVE |
| 21396 | TREE | 488.4 | 60.7 | 427.7 | 33.4 | TRIM/REMOVE |
| 21401 | TREE | 545.2 | 57.3 | 487.9 | 90.2 | TRIM/REMOVE |
| 21402 | TREE | 567.6 | 57.3 | 510.4 | 112.6 | TRIM/REMOVE |
| 21416 | TREE | 484.9 | 64.1 | 420.8 | 29.9 | TRIM/REMOVE |
| 21427 | TREE | 494.3 | 62.4 | 431.8 | 39.2 | TRIM/REMOVE |
| 21439 | TREE | 583.8 | 42.8 | 541.0 | 128.8 | TRIM/REMOVE |
| 21465 | TREE | 494.7 | 59.8 | 434.9 | 39.7 | TRIM/REMOVE |
| 21466 | TREE | 517.5 | 63.4 | 454.1 | 62.5 | TRIM/REMOVE |
| 21469 | TREE | 528.1 | 59.5 | 468.6 | 73.1 | TRIM/REMOVE |
| 21474 | TREE | 527.2 | 41.3 | 485.9 | 72.2 | TRIM/REMOVE |
| 21489 | POLE | 682.7 | 37.1 | 645.6 | 227.7 | LOWER/RELOCATE |
| 21495 | POLE | 665.7 | 38.4 | 627.3 | 210.7 | LOWER/RELOCATE |
| 21496 | ANTENNA | 805.6 | 154.2 | 651.4 | 350.6 | MARK/LIGHT |
| 21497 | ANTENNA | 782.4 | 131.0 | 651.3 | 327.4 | MARK/LIGHT |
| 21504 | ANTENNA | 813.3 | 154.9 | 658.4 | 358.3 | MARK/LIGHT |
| 21506 | BUILDING | 701.7 | 89.9 | 611.8 | 246.7 | MARK/LIGHT |
| 21542 | POLE | 690.7 | 35.7 | 655.0 | 235.7 | MARK/LIGHT |
| 21560 | TREE | 567.5 | 54.2 | 513.3 | 112.5 | TRIM/REMOVE |
| 21569 | TREE | 545.9 | 34.5 | 511.3 | 90.9 | TRIM/REMOVE |
| 21613 | BUILDING | 525.5 | 32.2 | 493.3 | 70.5 | MARK/LIGHT |
| 21699 | ANTENNA | 803.4 | 200.1 | 603.3 | 348.4 | MARK/LIGHT |
| 21700 | TREE | 667.5 | 67.5 | 600.0 | 212.5 | TRIM/REMOVE |
| 21705 | TREE | 657.0 | 57.0 | 600.0 | 202.0 | TRIM/REMOVE |
| 21707 | TREE | 647.8 | 47.8 | 600.0 | 192.8 | TRIM/REMOVE |
| 21727 | TREE | 510.7 | 60.7 | 450.0 | 55.7 | TRIM/REMOVE |
| 21743 | TREE | 532.0 | 66.3 | 465.7 | 77.0 | TRIM/REMOVE |
| 21746 | TREE | 599.9 | 43.3 | 556.6 | 144.9 | TRIM/REMOVE |
| 21756 | TREE | 629.6 | 79.6 | 550.0 | 174.6 | TRIM/REMOVE |
| 21773 | TREE | 501.7 | 34.4 | 467.2 | 46.7 | TRIM/REMOVE |
| 21814 | TREE | 547.2 | 60.6 | 486.6 | 92.2 | TRIM/REMOVE |
| 21829 | POLE | 628.9 | 48.4 | 580.5 | 173.8 | MARK/LIGHT |
| 21830 | TREE | 657.4 | 57.4 | 600.0 | 202.4 | TRIM/REMOVE |
| 21833 | TREE | 663.6 | 63.6 | 600.0 | 208.6 | TRIM/REMOVE |
| 21840 | TREE | 648.7 | 48.7 | 600.0 | 193.7 | TRIM/REMOVE |
| 21848 | POLE | 466.9 | 44.7 | 422.1 | 11.9 | MARK/LIGHT |
| 21850 | TREE | 686.5 | 59.1 | 627.3 | 231.5 | TRIM/REMOVE |
| 21869 | TREE | 668.0 | 58.2 | 609.8 | 213.0 | TRIM/REMOVE |
| 21885 | TREE | 660.4 | 60.4 | 600.0 | 205.4 | TRIM/REMOVE |
| 21887 | TREE | 657.1 | 57.1 | 600.0 | 202.1 | TRIM/REMOVE |
| 21901 | TREE | 579.9 | 30.5 | 549.4 | 124.9 | TRIM/REMOVE |
| 21977 | POWER TRANSMISSION POLE | 488.1 | 80.1 | 408.1 | 33.1 | MARK/LIGHT |
| 21978 | POWER TRANSMISSION POLE | 490.3 | 83.4 | 406.9 | 35.3 | MARK/LIGHT |
| 21980 | POWER TRANSMISSION POLE | 477.9 | 74.5 | 403.4 | 22.9 | MARK/LIGHT |
| 21983 | POWER TRANSMISSION POLE | 465.2 | 74.1 | 391.1 | 10.2 | MARK/LIGHT |
| 21984 | POWER TRANSMISSION POLE | 462.8 | 74.0 | 388.8 | 7.8 | MARK/LIGHT |
| 21988 | POWER TRANSMISSION POLE | 459.4 | 80.8 | 378.6 | 4.4 | MARK/LIGHT |

**FUTURE PART 77 HORIZONTAL SURFACE OBSTRUCTIONS**

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | SURFACE PENETRATION | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|
| | | MSL | AGL | | | |
| 21989 | POWER TRANSMISSION POLE | 461.8 | 86.8 | 375.1 | 6.8 | MARK/LIGHT |
| 22080 | TREE | 478.8 | 72.2 | 406.6 | 23.8 | TRIM/REMOVE |
| 22204 | TREE | 486.6 | 37.0 | 449.7 | 31.6 | TRIM/REMOVE |
| 22607 | TREE | 475.8 | 42.7 | 433.1 | 20.8 | TRIM/REMOVE |
| 22646 | UTILITY POLE | 614.7 | 27.5 | 587.2 | 159.7 | MARK/LIGHT |
| 22676 | TREE | 497.8 | 61.7 | 436.1 | 42.8 | TRIM/REMOVE |
| 22692 | TREE | 605.8 | 30.6 | 575.2 | 150.8 | TRIM/REMOVE |
| 22693 | TREE | 656.3 | 56.3 | 600.0 | 201.3 | TRIM/REMOVE |
| 22697 | TREE | 652.3 | 52.3 | 600.0 | 197.3 | TRIM/REMOVE |
| 22704 | TREE | 602.8 | 54.2 | 548.6 | 147.8 | TRIM/REMOVE |
| 22717 | TREE | 629.1 | 58.3 | 570.8 | 174.1 | TRIM/REMOVE |
| 22728 | TREE | 646.5 | 46.5 | 600.0 | 191.5 | TRIM/REMOVE |
| 22763 | ANTENNA | 760.3 | 105.0 | 655.2 | 305.3 | MARK/LIGHT |
| 22765 | POLE | 696.5 | 44.4 | 652.0 | 241.5 | MARK/LIGHT |
| 22797 | TREE | 579.2 | 49.9 | 529.3 | 124.2 | TRIM/REMOVE |
| 22826 | BUILDING | 652.7 | 33.3 | 619.4 | 197.7 | MARK/LIGHT |

**FUTURE PART 77 CONICAL SURFACE OBSTRUCTIONS**

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | SURFACE PENETRATION | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|
| | | MSL | AGL | | | |
| 2960 | ANTENNA | 499.3 | 121.3 | 378.0 | 23.1 | MARK/LIGHT |
| 2962 | ANTENNA | 505.3 | 121.3 | 383.9 | 18.0 | MARK/LIGHT |
| 2967 | ANTENNA | 525.3 | 121.1 | 404.2 | 18.4 | MARK/LIGHT |
| 3937 | ANTENNA | 525.0 | 120.7 | 404.3 | 19.4 | MARK/LIGHT |
| 3938 | ANTENNA | 514.5 | 122.2 | 392.3 | 42.1 | MARK/LIGHT |
| 6272 | TREE | 476.6 | 58.2 | 418.4 | 6.6 | TRIM/REMOVE |
| 22824 | ANTENNA | 511.8 | 122.1 | 389.6 | 50.8 | MARK/LIGHT |

NOTES:

1. FOR CLARITY AND TO AVOID REPEATING OBJECTS, TOP ELEVATIONS OF PENETRATING OBJECTS FOR THE INNER PORTION OF THE APPROACH SURFACES ARE SHOWN ON THE FUTURE INNER PORTION OF THE APPROACH SURFACE OBSTRUCTION DATA TABLE SHEETS. ALL RUNWAY 24L/24R APPROACH OBSTRUCTIONS ARE DEPICTED ON THE INNER PORTION OF THE APPROACH SURFACE DATA TABLE SHEETS.
2. OBSTACLES WERE EVALUATED USING 2022 AIRPORT AIRSPACE ANALYSIS OBSTRUCTION SURVEY DATA.
3. FOR CLARITY, ONLY CRITICAL OBSTRUCTIONS, DEFINED AS THE HIGHEST OBSTRUCTION WITHIN A 500' x 500' GRID, ARE SHOWN. CRITICAL OBJECT CRITERIA ARE DERIVED FROM ADVISORY CIRCULAR 150/5300-18B, *GENERAL GUIDANCE AND SPECIFICATIONS FOR SUBMISSION OF AERONAUTICAL SURVEYS TO NGS: FIELD DATA COLLECTION AND GEOGRAPHIC INFORMATION SYSTEM (GIS) STANDARDS*, SECTION 2.7.1.6.
4. ANY TEMPORARY OR PERMANENT STRUCTURE, INCLUDING ALL APPURTENANCES, THAT EXCEED AN OVERALL HEIGHT OF 200 FEET (61M) ABOVE GROUND LEVEL (AGL) OR EXCEEDS ANY OBSTRUCTION STANDARD CONTAINED IN 14 CFR PART 77, SHOULD BE MARKED AND/OR LIGHTED PER ADVISORY CIRCULAR 70/7460-1, *OBSTRUCTION MARKING AND LIGHTING*.
5. ALL ELEVATIONS ARE IN FEET.

| NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|
| | | | | |

| NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|
| | | | | |

TRUE NORTH
MAGNETIC DECLINATION = 9°23' (9.4°) EAST (JANUARY 2023)
ANNUAL RATE OF CHANGE: 0°1" (0.017") WEST / YEAR

PREPARED FOR
A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM
AECOM

FUTURE AIRSPACE OBSTRUCTION TABLES
HORIZONTAL AND CONICAL SURFACE

ANTONIO B. WON PAT
INTERNATIONAL AIRPORT

DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WBS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 06/23
SHEET: 19 OF 51

**Figure H-20. Future Airspace Obstruction Tables – Horizontal and Conical Surfaces**

Source: AECOM

**FUTURE PART 77 RUNWAY 6L/6R OUTER APPROACH SURFACE OBSTRUCTIONS**

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | SURFACE PENETRATION | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|
| | | MSL | AGL | | | |
| 29 | UTILITY POLE | 664.1 | 37.2 | 626.8 | 13.6 | MARK/LIGHT |
| 525 | FLAGPOLE | 668.5 | 46.7 | 621.8 | 10.8 | MARK/LIGHT |
| 527 | TREE | 675.4 | 61.2 | 614.2 | 12.9 | TRIM/REMOVE |
| 532 | TREE | 673.8 | 67.5 | 606.3 | 18.5 | TRIM/REMOVE |
| 545 | TREE | 681.9 | 51.4 | 630.5 | 32.5 | TRIM/REMOVE |
| 650 | TREE | 662.2 | 15.6 | 646.6 | 59.9 | TRIM/REMOVE |
| 675 | TREE | 686.7 | 81.5 | 605.2 | 22.0 | TRIM/REMOVE |
| 682 | TREE | 695.2 | 45.2 | 650.0 | 45.3 | TRIM/REMOVE |
| 685 | TREE | 679.1 | 29.1 | 650.0 | 30.9 | TRIM/REMOVE |
| 687 | TREE | 688.1 | 38.1 | 650.0 | 47.1 | TRIM/REMOVE |
| 690 | TREE | 675.4 | 27.4 | 648.0 | 23.9 | TRIM/REMOVE |
| 717 | TREE | 664.7 | 52.8 | 611.9 | 31.3 | TRIM/REMOVE |
| 730 | TREE | 684.7 | 58.9 | 625.7 | 55.3 | TRIM/REMOVE |
| 993 | TREE | 675.6 | 32.6 | 643.0 | 25.1 | TRIM/REMOVE |
| 3051 | TREE | 681.6 | 49.9 | 631.6 | 33.8 | TRIM/REMOVE |
| 3061 | TREE | 682.1 | 52.9 | 629.2 | 58.4 | TRIM/REMOVE |
| 3066 | TREE | 670.8 | 39.3 | 631.6 | 47.6 | TRIM/REMOVE |
| 3068 | TREE | 632.1 | 58.0 | 574.0 | 7.7 | TRIM/REMOVE |
| 3676 | TREE | 645.4 | 44.9 | 600.6 | 38.7 | TRIM/REMOVE |
| 3701 | GROUND | 635.2 | 0.0 | 635.2 | 4.3 | NO ACTION |
| 3729 | TREE | 658.4 | 30.9 | 627.5 | 36.9 | TRIM/REMOVE |
| 3747 | TREE | 619.6 | 28.1 | 591.4 | 8.6 | TRIM/REMOVE |
| 6311 | OTHER | 920.1 | 23.3 | 896.9 | 27.8 | MARK/LIGHT |
| 6315 | NATURAL | 1001.4 | 51.4 | 950.0 | 31.9 | NO ACTION |
| 8026 | NATURAL | 959.0 | 59.0 | 900.0 | 13.2 | NO ACTION |
| 8027 | NATURAL | 990.1 | 40.1 | 950.0 | 55.3 | NO ACTION |
| 8029 | NATURAL | 1003.1 | 53.1 | 950.0 | 82.7 | NO ACTION |
| 8034 | NATURAL | 956.4 | 6.4 | 950.0 | 32.6 | NO ACTION |
| 8038 | NATURAL | 955.9 | 55.9 | 900.0 | 8.7 | NO ACTION |
| 8039 | NATURAL | 1014.6 | 64.6 | 950.0 | 81.0 | NO ACTION |
| 8046 | NATURAL | 939.0 | 32.7 | 906.3 | 9.2 | NO ACTION |
| 8074 | NATURAL | 990.6 | 28.6 | 962.0 | 78.3 | NO ACTION |
| 8082 | NATURAL | 975.3 | 55.6 | 919.7 | 81.1 | NO ACTION |
| 8087 | NATURAL | 973.1 | 57.8 | 915.4 | 82.6 | NO ACTION |
| 8094 | NATURAL | 948.3 | 5.8 | 942.4 | 51.7 | NO ACTION |
| 8117 | NATURAL | 969.0 | 19.0 | 950.0 | 78.3 | NO ACTION |
| 8120 | NATURAL | 1046.5 | 46.5 | 1000.0 | 148.4 | NO ACTION |
| 8123 | NATURAL | 988.7 | 17.7 | 971.0 | 84.7 | NO ACTION |
| 8125 | NATURAL | 1036.1 | 36.1 | 1000.0 | 124.3 | NO ACTION |
| 8133 | NATURAL | 881.8 | 16.1 | 865.6 | 4.5 | NO ACTION |
| 8137 | NATURAL | 887.8 | 12.1 | 875.7 | 26.3 | NO ACTION |
| 8140 | NATURAL | 919.7 | 16.2 | 903.5 | 51.2 | NO ACTION |
| 8141 | NATURAL | 904.6 | 16.8 | 887.8 | 37.1 | NO ACTION |
| 8148 | NATURAL | 953.0 | 48.7 | 904.3 | 67.3 | NO ACTION |
| 8155 | NATURAL | 1010.1 | 17.5 | 992.6 | 141.6 | NO ACTION |
| 8156 | NATURAL | 963.8 | 35.5 | 928.3 | 98.4 | NO ACTION |
| 8163 | NATURAL | 982.7 | 32.7 | 950.0 | 104.7 | NO ACTION |
| 8166 | NATURAL | 894.5 | 44.5 | 850.0 | 54.3 | NO ACTION |
| 8167 | NATURAL | 908.0 | 8.0 | 900.0 | 63.5 | NO ACTION |
| 8168 | OTHER | 1191.8 | 181.7 | 1010.1 | 289.5 | MARK/LIGHT |
| 8170 | OTHER | 1183.6 | 115.2 | 1068.3 | 278.7 | MARK/LIGHT |
| 8178 | OTHER | 983.7 | 46.6 | 937.1 | 59.3 | NO ACTION |
| 8182 | OTHER | 1028.2 | 47.5 | 980.7 | 102.6 | MARK/LIGHT |
| 8184 | OTHER | 1019.8 | 47.7 | 972.0 | 111.7 | MARK/LIGHT |
| 8185 | OTHER | 1014.5 | 46.3 | 968.2 | 105.1 | MARK/LIGHT |
| 8198 | OTHER | 933.3 | 42.5 | 890.8 | 46.0 | MARK/LIGHT |
| 8229 | GROUND | 949.7 | 0.0 | 949.7 | 37.4 | NO ACTION |
| 17381 | NATURAL | 930.3 | 30.3 | 900.0 | 19.7 | NO ACTION |
| 20763 | GROUND | 688.0 | 0.0 | 688.0 | 61.7 | NO ACTION |
| 20967 | TREE | 706.4 | 56.4 | 650.0 | 58.7 | TRIM/REMOVE |
| 20994 | TREE | 687.1 | 37.1 | 650.0 | 71.1 | TRIM/REMOVE |
| 20995 | TREE | 698.1 | 49.6 | 648.5 | 72.0 | TRIM/REMOVE |
| 22085 | ANTENNA | 723.1 | 64.2 | 658.9 | 93.1 | MARK/LIGHT |
| 22086 | GROUND | 709.7 | 0.0 | 709.7 | 90.2 | NO ACTION |

NOTES:

1. FOR CLARITY AND TO AVOID REPEATING OBJECTS, TOP ELEVATIONS OF PENETRATING OBJECTS FOR THE INNER PORTION OF THE APPROACH SURFACES ARE SHOWN ON THE FUTURE INNER PORTION OF THE APPROACH SURFACE OBSTRUCTION DATA TABLE SHEETS. ALL RUNWAY 24L/24R APPROACH OBSTRUCTIONS ARE DEPICTED ON THE INNER PORTION OF THE APPROACH SURFACE DATA TABLE SHEETS.
2. OBSTACLES WERE EVALUATED USING 2022 AIRPORT AIRSPACE ANALYSIS OBSTRUCTION SURVEY DATA.
3. FOR CLARITY, ONLY CRITICAL OBSTRUCTIONS, DEFINED AS THE HIGHEST OBSTRUCTION WITHIN A 500' x 500' GRID, ARE SHOWN. CRITICAL OBJECT CRITERIA ARE DERIVED FROM ADVISORY CIRCULAR 150/5300-18B, *GENERAL GUIDANCE AND SPECIFICATIONS FOR SUBMISSION OF AERONAUTICAL SURVEYS TO NGS: FIELD DATA COLLECTION AND GEOGRAPHIC INFORMATION SYSTEM (GIS) STANDARDS*, SECTION 2.7.1.6.
4. ANY TEMPORARY OR PERMANENT STRUCTURE, INCLUDING ALL APPURTENANCES, THAT EXCEED AN OVERALL HEIGHT OF 200 FEET (61M) ABOVE GROUND LEVEL (AGL) OR EXCEEDS ANY OBSTRUCTION STANDARD CONTAINED IN 14 CFR PART 77, SHOULD BE MARKED AND/OR LIGHTED PER ADVISORY CIRCULAR 70/7460-1, *OBSTRUCTION MARKING AND LIGHTING*.
5. ALL ELEVATIONS ARE IN FEET.

| NO. | REVISIONS | BY | APP. | DATE | NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

TRUE NORTH
MAGNETIC DECLINATION = 9°23' (9.4°) EAST (JANUARY 2023)
ANNUAL RATE OF CHANGE: 0°1' (0.017°) WEST / YEAR

PREPARED FOR
A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM
AECOM

FUTURE AIRSPACE OBSTRUCTION TABLES
OUTER APPROACH SURFACE

ANTONIO B. WON PAT INTERNATIONAL AIRPORT

DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WBS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 06/23
SHEET: 20 OF 51

**Figure H-21. Future Airspace Obstruction Tables – Outer Approach Surface**

Source: AECOM

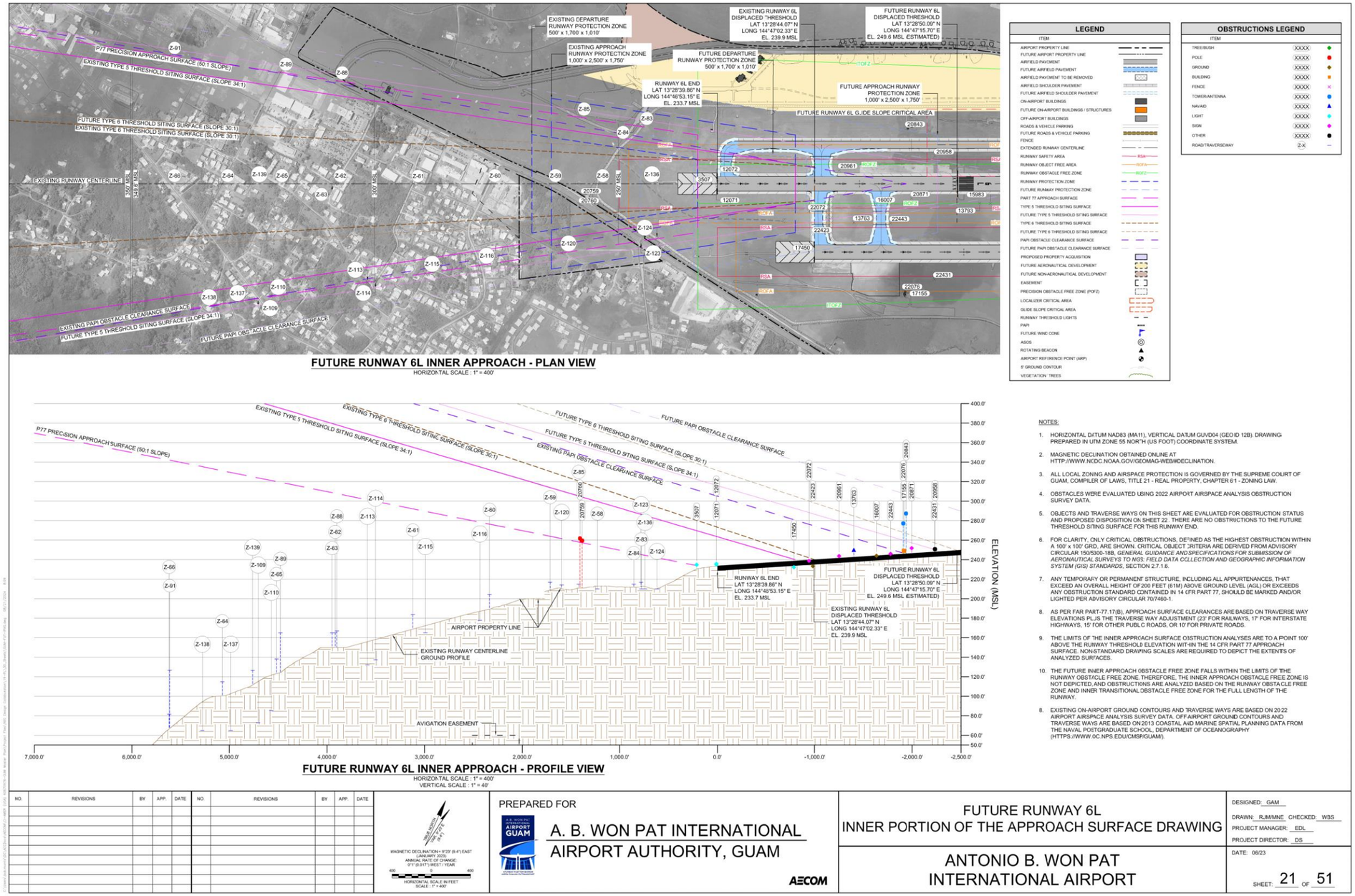



**Figure H-22. Future Runway 6L Inner Portion of the Approach Surface**

Source: AECOM

**RUNWAY 6L - FUTURE APPROACH SURFACE OBSTRUCTIONS**

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | PART 77 | | TSS TYPE 5 | | TSS TYPE 6 | | OFZ | | PAPI OCS | | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MSL | AGL | | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | |
| 3507 | RUNWAY LIGHT | 234.8 | 4.4 | 230.3 | 234.0 | 0.8 | 322.2 | -87.4 | 338.5 | -103.8 | 260.2 | -25.4 | 372.6 | -137.8 | NO ACTION |
| 12071 | RUNWAY LIGHT | 235.1 | 1.6 | 233.5 | N/A | N/A | 316.3 | -81.2 | 331.9 | -96.7 | 233.7 | 1.4 | 366.4 | -131.3 | NO ACTION |
| 12072 | RUNWAY LIGHT | 235.8 | 2.0 | 233.7 | N/A | N/A | 316.3 | -80.5 | 331.9 | -96.1 | 233.7 | 2.0 | 366.4 | -130.7 | NO ACTION |
| 13763 | WINDSOCK | 249.5 | 10.1 | 239.4 | N/A | N/A | N/A | N/A | N/A | N/A | 315.5 | -65.9 | N/A | N/A | NO ACTION |
| 13793 | GROUND | 251.7 | N/A | 251.7 | N/A | N/A | N/A | N/A | N/A | N/A | 291.1 | -39.5 | N/A | N/A | NO ACTION |
| 13817 | GROUND | 261.8 | N/A | 261.8 | N/A | N/A | N/A | N/A | N/A | N/A | 346.2 | -84.4 | N/A | N/A | NO ACTION |
| 13834 | SIGN | 263.0 | 3.6 | 259.4 | N/A | N/A | N/A | N/A | N/A | N/A | 312.6 | -49.6 | N/A | N/A | NO ACTION |
| 13835 | GROUND | 267.5 | N/A | 267.5 | N/A | N/A | N/A | N/A | N/A | N/A | 349.9 | -82.4 | N/A | N/A | NO ACTION |
| 15983 | GROUND | 251.5 | N/A | 251.5 | N/A | N/A | N/A | N/A | N/A | N/A | 292.0 | -40.5 | N/A | N/A | NO ACTION |
| 16007 | GROUND | 244.0 | N/A | 244.0 | N/A | N/A | 267.9 | -23.9 | 277.0 | -33.0 | 285.5 | -41.5 | 316.5 | -72.5 | NO ACTION |
| 17155 | BUILDING | 249.1 | 13.0 | 236.1 | N/A | N/A | N/A | N/A | N/A | N/A | 439.5 | -190.4 | N/A | N/A | NO ACTION |
| 17301 | GROUND | 259.4 | N/A | 259.4 | N/A | N/A | N/A | N/A | N/A | N/A | 427.3 | -167.9 | N/A | N/A | NO ACTION |
| 17354 | GROUND | 251.4 | N/A | 251.4 | N/A | N/A | N/A | N/A | N/A | N/A | 424.0 | -172.5 | N/A | N/A | NO ACTION |
| 17360 | GROUND | 257.0 | N/A | 257.0 | N/A | N/A | N/A | N/A | N/A | N/A | 439.3 | -182.4 | N/A | N/A | NO ACTION |
| 17361 | GROUND | 256.4 | N/A | 256.4 | N/A | N/A | N/A | N/A | N/A | N/A | 436.9 | -180.6 | N/A | N/A | NO ACTION |
| 17450 | RUNWAY LIGHT | 232.3 | 5.7 | 226.6 | N/A | N/A | N/A | N/A | N/A | N/A | 362.0 | -129.7 | N/A | N/A | NO ACTION |
| 20575 | SIGN | 263.7 | 4.8 | 258.9 | N/A | N/A | N/A | N/A | N/A | N/A | 259.3 | 4.4 | N/A | N/A | LOWER/RELOCATE |
| 20576 | SIGN | 264.8 | 3.9 | 260.9 | N/A | N/A | N/A | N/A | N/A | N/A | 314.5 | -49.7 | N/A | N/A | NO ACTION |
| 20754 | SIGN | 256.8 | 3.4 | 253.4 | N/A | N/A | N/A | N/A | N/A | N/A | 255.2 | 1.6 | N/A | N/A | LOWER/RELOCATE |
| 20755 | SIGN | 261.3 | 4.8 | 256.4 | N/A | N/A | N/A | N/A | N/A | N/A | 256.1 | 5.2 | N/A | N/A | LOWER/RELOCATE |
| 20759 | POLE | 259.6 | 48.6 | 211.1 | 257.4 | 2.2 | 356.7 | -97.0 | 377.6 | -118.0 | 283.6 | -24.0 | 408.4 | -148.8 | MARK/LIGHT |
| 20760 | POLE | 261.9 | 50.8 | 211.1 | 257.8 | 4.1 | 357.3 | -95.4 | 378.4 | -116.4 | N/A | N/A | 409.2 | -147.3 | MARK/LIGHT |
| 20843 | ANTENNA | 287.3 | 41.6 | 245.7 | N/A | N/A | N/A | N/A | N/A | N/A | 347.0 | -59.7 | N/A | N/A | NO ACTION |
| 20870 | SIGN | 257.5 | 5.0 | 252.5 | N/A | N/A | N/A | N/A | N/A | N/A | 252.6 | 4.8 | N/A | N/A | LOWER/RELOCATE |
| 20871 | SIGN | 251.9 | 3.3 | 248.6 | N/A | N/A | 257.3 | -5.4 | 265.0 | -13.1 | 246.2 | 5.8 | 305.3 | -53.4 | LOWER/RELOCATE |
| 20958 | UTILITY BOX | 250.8 | 3.7 | 247.1 | N/A | N/A | N/A | N/A | N/A | N/A | 302.2 | -51.4 | N/A | N/A | NO ACTION |
| 20959 | SIGN | 256.1 | 3.3 | 252.8 | N/A | N/A | N/A | N/A | N/A | N/A | 254.4 | 1.8 | N/A | N/A | LOWER/RELOCATE |
| 20961 | SIGN | 243.7 | 3.0 | 240.7 | N/A | N/A | 279.2 | -35.5 | 289.8 | -46.1 | 241.4 | 2.3 | 328.0 | -84.3 | LOWER/RELOCATE |
| 21043 | SIGN | 269.4 | 5.1 | 264.4 | N/A | N/A | N/A | N/A | N/A | N/A | 357.2 | -87.8 | N/A | N/A | NO ACTION |
| 21049 | SIGN | 268.9 | 3.5 | 265.4 | N/A | N/A | N/A | N/A | N/A | N/A | 337.5 | -68.5 | N/A | N/A | NO ACTION |
| 22072 | SIGN | 238.8 | 3.3 | 235.5 | N/A | N/A | 288.3 | -49.5 | N/A | N/A | 293.4 | -54.6 | 337.8 | -99.0 | NO ACTION |
| 22076 | ANTENNA | 277.2 | 40.8 | 236.4 | N/A | N/A | N/A | N/A | N/A | N/A | 435.5 | -158.2 | N/A | N/A | NO ACTION |
| 22081 | SIGN | 263.7 | 4.5 | 259.1 | N/A | N/A | N/A | N/A | N/A | N/A | 354.1 | -90.4 | N/A | N/A | NO ACTION |
| 22082 | GROUND | 259.6 | N/A | 259.6 | N/A | N/A | N/A | N/A | N/A | N/A | 427.1 | -167.5 | N/A | N/A | NO ACTION |
| 22251 | GROUND | 255.9 | N/A | 255.9 | N/A | N/A | N/A | N/A | N/A | N/A | 325.8 | -69.9 | N/A | N/A | NO ACTION |
| 22423 | GROUND | 233.3 | N/A | 233.3 | N/A | N/A | N/A | N/A | N/A | N/A | 333.1 | -99.8 | N/A | N/A | NO ACTION |
| 22431 | UTILITY BOX | 246.0 | 3.0 | 243.0 | N/A | N/A | N/A | N/A | N/A | N/A | 417.7 | -171.7 | N/A | N/A | NO ACTION |
| 22443 | SIGN | 246.0 | 3.3 | 242.7 | N/A | N/A | N/A | N/A | N/A | N/A | 319.0 | -73.0 | N/A | N/A | NO ACTION |
| 22446 | SIGN | 255.7 | 4.0 | 251.6 | N/A | N/A | N/A | N/A | N/A | N/A | 351.0 | -95.4 | N/A | N/A | NO ACTION |

**RUNWAY 6L - FUTURE TRAVERSE WAY DATA**

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | PART 77 | | TSS TYPE 5 | | TSS TYPE 6 | | OFZ | | PAPI OCS | | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MSL | AGL | | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | |
| Z-58 | AIRPORT SERVICE RD | 210.0 | 10.0 | 200.0 | 254.3 | -44.3 | 352.1 | -142.1 | 372.4 | -162.4 | 280.5 | -70.5 | 403.6 | -193.6 | NO ACTION |
| Z-59 | PURPLE HEART MEMORIAL HWY | 217.0 | 17.0 | 200.0 | 264.0 | -47.0 | 366.4 | -149.4 | 388.6 | -171.6 | N/A | N/A | 418.4 | -201.4 | NO ACTION |
| Z-60 | CHN R S SANCHEZ | 204.3 | 15.0 | 189.3 | 276.4 | -72.2 | 384.6 | -180.4 | 409.3 | -205.1 | N/A | N/A | 437.4 | -233.2 | NO ACTION |
| Z-61 | ROBAT ST | 183.8 | 15.0 | 168.8 | 292.1 | -108.3 | 407.7 | -223.9 | 435.4 | -251.7 | N/A | N/A | 461.4 | -277.6 | NO ACTION |
| Z-62 | PATERNO ST | 165.0 | 15.0 | 150.0 | 308.0 | -143.0 | 431.1 | -266.1 | 462.0 | -297.0 | N/A | N/A | 485.7 | -320.7 | NO ACTION |
| Z-63 | TUN ANTONIO ST | 165.0 | 15.0 | 150.0 | 308.7 | -143.7 | 432.1 | -267.1 | 463.1 | -298.1 | N/A | N/A | 486.7 | -321.7 | NO ACTION |
| Z-64 | BIANG ST | 115.0 | 15.0 | 100.0 | 331.2 | -216.2 | 465.1 | -350.1 | 500.5 | -385.5 | N/A | N/A | 521.0 | -406.0 | NO ACTION |
| Z-65 | MANIBUSAN ST | 138.2 | 15.0 | 123.2 | 320.1 | -181.9 | 448.8 | -310.6 | 482.1 | -343.9 | N/A | N/A | 504.1 | -365.9 | NO ACTION |
| Z-66 | SGT ROY T DAMIAN JR ST | 81.6 | 15.0 | 66.6 | 342.1 | -260.5 | 481.2 | -399.6 | 518.8 | -437.1 | N/A | N/A | 537.7 | -456.1 | NO ACTION |
| Z-83 | AIRPORT SERVICE RD | 210.0 | 10.0 | 200.0 | 245.2 | -35.2 | 338.8 | -128.8 | N/A | N/A | N/A | N/A | 391.0 | -181.0 | NO ACTION |
| Z-84 | N ST | 215.0 | 15.0 | 200.0 | 246.8 | -31.8 | 341.1 | -126.1 | N/A | N/A | N/A | N/A | 393.4 | -178.4 | NO ACTION |
| Z-85 | LANDING RD | 215.0 | 15.0 | 200.0 | 258.1 | -43.1 | 357.7 | -142.7 | N/A | N/A | N/A | N/A | 410.8 | -195.8 | NO ACTION |
| Z-88 | PURPLE HEART MEMORIAL HWY | 167.0 | 17.0 | 150.0 | 307.7 | -140.7 | 430.7 | -263.7 | N/A | N/A | N/A | N/A | 487.5 | -320.5 | NO ACTION |
| Z-89 | BIANG ST | 165.0 | 15.0 | 150.0 | 319.3 | -154.3 | 447.7 | -282.7 | N/A | N/A | N/A | N/A | 505.4 | -340.4 | NO ACTION |
| Z-91 | N OLD G W RD | 126.7 | 15.0 | 111.7 | 342.0 | -215.3 | 481.1 | -354.3 | N/A | N/A | N/A | N/A | 540.4 | -413.7 | NO ACTION |
| Z-109 | SGT ROY T DAMIAN JR ST | 72.9 | 15.0 | 57.9 | 323.8 | -250.9 | 454.3 | -381.4 | N/A | N/A | N/A | N/A | 512.3 | -439.4 | NO ACTION |
| Z-110 | TUBA ST | 85.2 | 15.0 | 70.2 | 321.1 | -236.0 | 450.4 | -365.2 | N/A | N/A | N/A | N/A | 508.2 | -423.0 | NO ACTION |
| Z-113 | MANIBUSAN ST | 132.2 | 15.0 | 117.2 | 301.4 | -169.2 | 421.4 | -289.1 | N/A | N/A | N/A | N/A | 477.7 | -345.5 | NO ACTION |
| Z-114 | ROBAT ST | 137.4 | 15.0 | 122.4 | 299.7 | -162.3 | 418.9 | -281.5 | N/A | N/A | N/A | N/A | 475.2 | -337.8 | NO ACTION |
| Z-115 | BALAKO ST | 165.0 | 15.0 | 150.0 | 289.5 | -124.5 | 403.9 | -238.9 | N/A | N/A | N/A | N/A | 459.4 | -294.4 | NO ACTION |
| Z-116 | CHN R S SANCHEZ | 177.9 | 15.0 | 162.9 | 278.4 | -100.5 | 387.6 | -209.6 | N/A | N/A | N/A | N/A | 442.2 | -264.3 | NO ACTION |
| Z-120 | RAMIREZ WY | 214.1 | 15.0 | 199.1 | 261.6 | -47.5 | 362.9 | -148.8 | N/A | N/A | N/A | N/A | 416.3 | -202.2 | NO ACTION |
| Z-123 | PURPLE HEART MEMORIAL HWY | 217.0 | 17.0 | 200.0 | 245.3 | -28.3 | 338.9 | -121.9 | N/A | N/A | N/A | N/A | 391.1 | -174.1 | NO ACTION |
| Z-124 | AIRPORT SERVICE RD | 210.0 | 10.0 | 200.0 | 242.1 | -32.1 | 334.1 | -124.1 | N/A | N/A | N/A | N/A | 386.1 | -176.1 | NO ACTION |
| Z-136 | AIRPORT SERVICE RD | 210.0 | 10.0 | 200.0 | 244.5 | -34.5 | 337.7 | -127.7 | 356.1 | -146.1 | 270.7 | -60.7 | 388.6 | -178.6 | NO ACTION |
| Z-137 | KADI LN | 65.0 | 15.0 | 50.0 | 329.5 | -264.5 | 462.6 | -397.6 | N/A | N/A | N/A | N/A | 521.1 | -456.1 | NO ACTION |
| Z-138 | DUMANG SIGOT ST | 65.0 | 15.0 | 50.0 | 335.3 | -270.3 | 471.2 | -406.2 | N/A | N/A | N/A | N/A | 530.0 | -465.0 | NO ACTION |
| Z-139 | TAN CHONG ST | 126.6 | 15.0 | 111.6 | 325.0 | -198.4 | 456.0 | -329.4 | 490.2 | -363.6 | N/A | N/A | 511.6 | -385.0 | NO ACTION |

NOTES:

1. HORIZONTAL DATUM NAD83 (MA11), VERTICAL DATUM GUVD04 (GEOID 12B). DRAWING PREPARED IN UTM ZONE 55 NORTH (US FOOT) COORDINATE SYSTEM.
2. MAGNETIC DECLINATION OBTAINED ONLINE AT HTTP://WWW.NGDC.NOAA.GOV/GEOMAG-WEB/#DECLINATION.
3. ALL LOCAL ZONING AND AIRSPACE PROTECTION IS GOVERNED BY THE SUPREME COURT OF GUAM, COMPILER OF LAWS, TITLE 21 - REAL PROPERTY, CHAPTER 61 - ZONING LAW.
4. OBSTACLES WERE EVALUATED USING 2022 AIRPORT AIRSPACE ANALYSIS OBSTRUCTION SURVEY DATA.
5. OBJECTS AND TRAVERSE WAYS ON THIS SHEET ARE EVALUATED FOR OBSTRUCTION STATUS AND PROPOSED DISPOSITION. THERE ARE NO OBSTRUCTIONS TO THE FUTURE THRESHOLD SITING SURFACE FOR THIS RUNWAY END.
6. FOR CLARITY, ONLY CRITICAL OBSTRUCTIONS, DEFINED AS THE HIGHEST OBSTRUCTION WITHIN A 100' x 100' GRID, ARE SHOWN. CRITICAL OBJECT CRITERIA ARE DERIVED FROM ADVISORY CIRCULAR 150/5300-18B, *GENERAL GUIDANCE AND SPECIFICATIONS FOR SUBMISSION OF AERONAUTICAL SURVEYS TO NGS: FIELD DATA COLLECTION AND GEOGRAPHIC INFORMATION SYSTEM (GIS) STANDARDS*, SECTION 2.7.1.6.
7. ANY TEMPORARY OR PERMANENT STRUCTURE, INCLUDING ALL APPURTENANCES, THAT EXCEED AN OVERALL HEIGHT OF 200 FEET (61M) ABOVE GROUND LEVEL (AGL) OR EXCEEDS ANY OBSTRUCTION STANDARD CONTAINED IN 14 CFR PART 77, SHOULD BE MARKED AND/OR LIGHTED PER ADVISORY CIRCULAR 70/7460-1.
8. AS PER FAR PART-77.17(B), APPROACH SURFACE CLEARANCES ARE BASED ON TRAVERSE WAY ELEVATIONS PLUS THE TRAVERSE WAY ADJUSTMENT (23' FOR RAILWAYS, 17' FOR INTERSTATE HIGHWAYS, 15' FOR OTHER PUBLIC ROADS, OR 10' FOR PRIVATE ROADS).
9. THE LIMITS OF THE INNER APPROACH SURFACE OBSTRUCTION ANALYSES ARE TO A POINT 100' ABOVE THE RUNWAY THRESHOLD ELEVATION WITHIN THE 14 CFR PART 77 APPROACH SURFACE.
10. EXISTING ON-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2022 AIRPORT AIRSPACE ANALYSIS SURVEY DATA. OFF-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2013 COASTAL AND MARINE SPATIAL PLANNING DATA FROM THE NAVAL POSTGRADUATE SCHOOL, DEPARTMENT OF OCEANOGRAPHY (HTTPS://WWW.OC.NPS.EDU/CMSP/GUAM/).
11. ALL ELEVATIONS ARE IN FEET.
12. WHERE OBJECTS DO NOT FALL WITHIN THE LATERAL EXTENTS OF A GIVEN SURFACE, SURFACE ELEVATION AND SURFACE PENETRATION FIELDS ARE ASSIGNED A VALUE OF "N/A".
13. ACCORDING TO FAA AC 150/5300-13B, *AIRPORT DESIGN*, ALL OBSTACLE FREE ZONE (OFZ) SURFACES MUST REMAIN CLEAR OF OBJECTS, EXCEPT FOR FRANGIBLE NAVAIDS. IDENTIFIED OFZ PENETRATIONS FOR THIS RUNWAY REQUIRE FURTHER EVALUATION FOR WAYS OF COMPLYING WITH FAA OFZ CLEARING STANDARDS.

| NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|
| NO. | REVISIONS | BY | APP. | DATE |

TRUE NORTH
MAGNETIC DECLINATION = 9°23' (9.4°) EAST
(JANUARY 2023)
ANNUAL RATE OF CHANGE:
0°1' (0.017°) WEST / YEAR

PREPARED FOR
A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM
AECOM

FUTURE RUNWAY 6L
INNER PORTION OF THE APPROACH SURFACE
DATA TABLES

ANTONIO B. WON PAT
INTERNATIONAL AIRPORT

DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WBS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 06/23
SHEET: 22 OF 51

**Figure H-23. Future Runway 6L Inner Portion of the Approach Surface Data Tables**

Source: AECOM

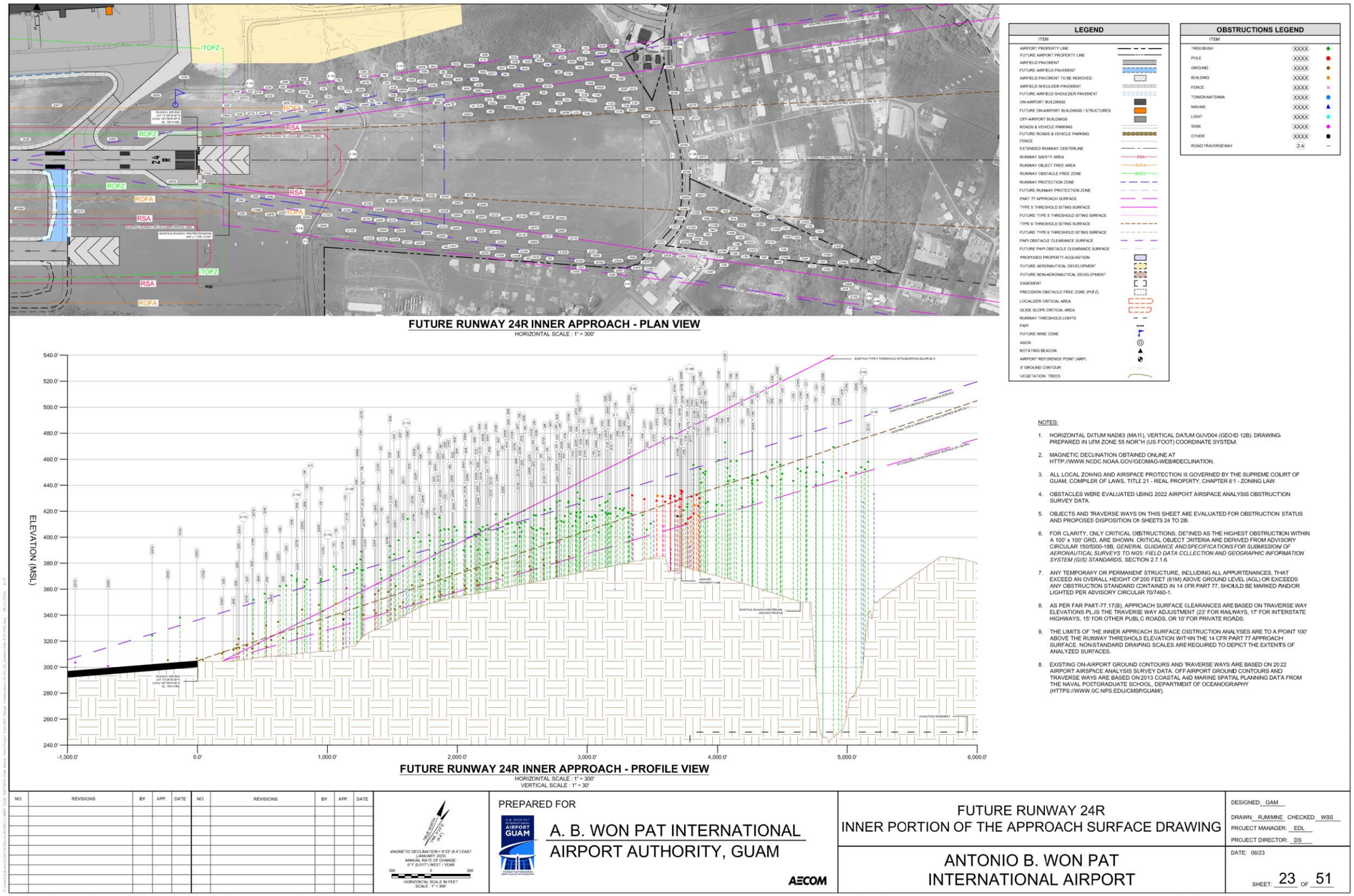



**Figure H-24. Future Runway 24R Inner Portion of the Approach Surface**

Source: AECOM

**RUNWAY 24R - FUTURE APPROACH SURFACE OBSTRUCTIONS**

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | PART 77 | | TSS TYPE 5 | | TSS TYPE 6 | | OFZ | | PAPI OCS | | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MSL | AGL | | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | |
| 1 | BUILDING | 348.8 | 17.7 | 331.1 | 330.4 | 18.4 | N/A | N/A | N/A | N/A | N/A | N/A | 369.6 | -20.8 | NO ACTION |
| 3 | TRANSFORMER | 336.8 | 5.6 | 331.2 | 332.2 | 4.6 | N/A | N/A | N/A | N/A | N/A | N/A | 371.4 | -34.6 | NO ACTION |
| 108 | TREE | 365.5 | 46.4 | 319.0 | 323.4 | 42.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 130 | TREE | 366.4 | 43.2 | 323.2 | 327.0 | 39.4 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 134 | TREE | 367.8 | 44.5 | 323.3 | 327.1 | 40.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 195 | GROUND | 341.6 | N/A | 341.6 | 339.5 | 2.1 | N/A | N/A | N/A | N/A | N/A | N/A | 379.1 | -37.5 | NO ACTION |
| 254 | TREE | 375.0 | 27.8 | 347.2 | 340.6 | 34.4 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 260 | TREE | 404.4 | 54.4 | 350.0 | 368.1 | 36.2 | N/A | N/A | N/A | N/A | N/A | N/A | 409.5 | -5.2 | TRIM/REMOVE |
| 283 | TREE | 405.4 | 55.4 | 350.0 | 375.9 | 29.5 | N/A | N/A | N/A | N/A | N/A | N/A | 417.3 | -11.9 | TRIM/REMOVE |
| 288 | TREE | 421.0 | 71.0 | 350.0 | 377.7 | 43.3 | N/A | N/A | N/A | N/A | N/A | N/A | 419.7 | 1.3 | TRIM/REMOVE |
| 290 | TREE | 417.0 | 67.0 | 350.0 | 375.3 | 41.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 294 | TREE | 428.1 | 78.1 | 350.0 | 381.1 | 47.0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 295 | TREE | 414.5 | 64.5 | 350.0 | 380.2 | 34.2 | N/A | N/A | N/A | N/A | N/A | N/A | 422.0 | -7.6 | TRIM/REMOVE |
| 304 | TREE | 406.9 | 56.9 | 350.0 | 376.8 | 30.1 | 427.1 | -20.2 | N/A | N/A | N/A | N/A | 417.9 | -11.0 | TRIM/REMOVE |
| 306 | TREE | 406.9 | 56.9 | 350.0 | 380.3 | 26.6 | 433.0 | -26.1 | N/A | N/A | N/A | N/A | 421.2 | -14.3 | TRIM/REMOVE |
| 307 | TREE | 395.8 | 44.7 | 351.0 | 378.8 | 17.0 | 430.5 | -34.7 | N/A | N/A | N/A | N/A | 419.5 | -23.7 | TRIM/REMOVE |
| 341 | TREE | 392.7 | 42.7 | 350.0 | 361.0 | 31.8 | 400.1 | -7.4 | N/A | N/A | N/A | N/A | 401.1 | -8.4 | TRIM/REMOVE |
| 345 | TREE | 388.2 | 38.2 | 350.0 | 364.8 | 23.4 | 406.6 | -18.4 | N/A | N/A | N/A | N/A | 404.9 | -16.7 | TRIM/REMOVE |
| 352 | TREE | 407.4 | 57.4 | 350.0 | 371.9 | 35.5 | 418.8 | -11.4 | N/A | N/A | N/A | N/A | 412.6 | -5.2 | TRIM/REMOVE |
| 360 | TREE | 411.7 | 31.1 | 380.6 | 373.2 | 38.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 365 | TREE | 402.7 | 16.6 | 386.1 | 378.3 | 24.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 396 | TREE | 405.2 | 55.2 | 350.0 | 354.1 | 51.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 411 | TREE | 428.2 | 78.2 | 350.0 | 386.6 | 41.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 412 | TREE | 425.2 | 75.2 | 350.0 | 385.5 | 39.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 588 | TREE | 367.5 | 47.5 | 320.0 | 323.8 | 43.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 608 | TREE | 362.4 | 50.6 | 311.8 | 317.8 | 44.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 759 | TREE | 375.4 | 44.6 | 330.7 | 330.5 | 44.9 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 761 | TREE | 377.4 | 48.7 | 328.7 | 330.0 | 47.4 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 774 | TREE | 374.7 | 43.7 | 331.0 | 332.7 | 42.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 786 | TREE | 374.7 | 39.4 | 335.4 | 336.4 | 38.4 | N/A | N/A | N/A | N/A | N/A | N/A | 376.1 | -1.3 | TRIM/REMOVE |
| 787 | TREE | 374.7 | 38.7 | 336.0 | 336.6 | 38.1 | N/A | N/A | N/A | N/A | N/A | N/A | 376.4 | -1.7 | TRIM/REMOVE |
| 799 | TREE | 368.4 | 20.4 | 348.0 | 340.8 | 27.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 836 | TREE | 371.0 | 25.3 | 345.8 | 343.1 | 28.0 | N/A | N/A | N/A | N/A | N/A | N/A | 383.0 | -12.0 | TRIM/REMOVE |
| 862 | TREE | 380.8 | 30.8 | 350.0 | 356.2 | 24.7 | 392.0 | -11.2 | N/A | N/A | N/A | N/A | 396.3 | -15.4 | TRIM/REMOVE |
| 879 | TREE | 366.6 | 16.6 | 350.0 | 355.2 | 11.4 | 390.4 | -23.8 | N/A | N/A | N/A | N/A | 395.2 | -28.7 | TRIM/REMOVE |
| 923 | TREE | 406.5 | 24.3 | 382.3 | 375.0 | 31.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 1019 | TREE | 400.5 | 50.5 | 350.0 | 362.1 | 38.4 | 402.0 | -1.5 | N/A | N/A | N/A | N/A | 402.3 | -1.8 | TRIM/REMOVE |
| 1048 | TREE | 416.9 | 56.9 | 360.0 | 399.9 | 17.1 | 466.3 | -49.3 | 419.2 | -2.2 | N/A | N/A | 441.2 | -24.3 | TRIM/REMOVE |
| 1093 | TREE | 429.6 | 79.6 | 350.0 | 385.7 | 43.9 | N/A | N/A | N/A | N/A | N/A | N/A | 428.1 | 1.5 | TRIM/REMOVE |
| 1094 | TREE | 418.9 | 68.9 | 350.0 | 384.9 | 34.1 | N/A | N/A | N/A | N/A | N/A | N/A | 427.0 | -8.0 | TRIM/REMOVE |
| 1097 | TREE | 411.9 | 61.9 | 350.0 | 380.5 | 31.4 | 433.4 | -21.4 | N/A | N/A | N/A | N/A | 421.6 | -9.7 | TRIM/REMOVE |
| 1109 | TREE | 413.0 | 63.0 | 350.0 | 388.8 | 24.3 | 447.4 | -34.3 | N/A | N/A | N/A | N/A | 430.1 | -17.1 | TRIM/REMOVE |
| 1307 | TREE | 440.5 | 46.4 | 394.0 | 439.1 | 1.4 | 532.9 | -92.5 | N/A | N/A | N/A | N/A | 483.0 | -42.5 | TRIM/REMOVE |
| 1311 | TREE | 449.6 | 61.2 | 388.3 | 436.8 | 12.8 | 529.0 | -79.5 | N/A | N/A | N/A | N/A | 480.8 | -31.2 | TRIM/REMOVE |
| 1325 | TREE | 453.8 | 53.8 | 400.0 | 449.4 | 4.4 | 550.4 | -96.6 | N/A | N/A | N/A | N/A | 493.6 | -39.8 | TRIM/REMOVE |
| 1326 | TREE | 452.2 | 52.2 | 400.0 | 450.2 | 2.0 | 551.9 | -99.7 | N/A | N/A | N/A | N/A | 494.5 | -42.3 | TRIM/REMOVE |
| 1340 | TREE | 455.9 | 55.9 | 400.0 | 431.0 | 24.9 | 519.2 | -63.3 | N/A | N/A | N/A | N/A | 474.5 | -18.7 | TRIM/REMOVE |
| 1348 | TREE | 439.1 | 81.3 | 357.9 | 436.9 | 2.2 | 529.3 | -90.1 | N/A | N/A | N/A | N/A | 480.1 | -41.0 | TRIM/REMOVE |
| 1349 | TREE | 453.7 | 94.5 | 359.2 | 437.1 | 16.7 | 529.5 | -75.8 | N/A | N/A | N/A | N/A | 480.3 | -26.6 | TRIM/REMOVE |
| 1351 | TREE | 450.2 | 95.0 | 355.2 | 439.2 | 11.0 | 533.1 | -82.9 | N/A | N/A | N/A | N/A | 482.6 | -32.3 | TRIM/REMOVE |
| 1354 | TREE | 443.4 | 60.6 | 382.8 | 433.9 | 9.4 | 524.2 | -80.8 | N/A | N/A | N/A | N/A | 477.3 | -33.9 | TRIM/REMOVE |
| 1357 | TREE | 448.9 | 66.4 | 382.5 | 431.4 | 17.4 | 520.0 | -71.1 | N/A | N/A | N/A | N/A | 474.5 | -25.6 | TRIM/REMOVE |
| 1358 | TREE | 444.2 | 57.6 | 386.7 | 431.1 | 13.2 | 519.3 | -75.1 | N/A | N/A | N/A | N/A | 474.2 | -29.9 | TRIM/REMOVE |
| 1369 | TREE | 448.2 | 56.8 | 391.4 | 424.7 | 23.5 | 508.5 | -60.3 | N/A | N/A | N/A | N/A | 467.3 | -19.0 | TRIM/REMOVE |
| 1371 | TREE | 445.6 | 53.9 | 391.7 | 428.1 | 17.5 | 514.3 | -68.7 | N/A | N/A | N/A | N/A | 470.8 | -25.2 | TRIM/REMOVE |
| 1383 | TREE | 424.7 | 45.2 | 379.5 | 416.5 | 8.2 | N/A | N/A | N/A | N/A | N/A | N/A | 460.0 | -35.3 | TRIM/REMOVE |
| 1385 | TREE | 453.2 | 55.1 | 398.2 | 419.0 | 34.2 | 498.9 | -45.6 | N/A | N/A | N/A | N/A | 462.2 | -9.0 | TRIM/REMOVE |
| 1391 | TREE | 423.7 | 71.5 | 352.3 | 422.4 | 1.4 | 504.5 | -80.8 | N/A | N/A | N/A | N/A | 465.9 | -42.1 | TRIM/REMOVE |
| 1394 | TREE | 458.7 | 58.7 | 400.0 | 421.1 | 37.6 | 502.4 | -43.6 | N/A | N/A | N/A | N/A | 464.0 | -5.3 | TRIM/REMOVE |
| 1396 | TREE | 458.5 | 58.5 | 400.0 | 419.8 | 38.7 | 500.1 | -41.6 | N/A | N/A | N/A | N/A | 462.6 | -4.1 | TRIM/REMOVE |
| 1402 | TREE | 452.5 | 52.5 | 400.0 | 412.9 | 39.6 | 488.4 | -35.9 | N/A | N/A | N/A | N/A | 455.7 | -3.2 | TRIM/REMOVE |
| 1408 | TREE | 443.2 | 43.2 | 400.0 | 419.2 | 24.1 | 499.1 | -55.8 | N/A | N/A | N/A | N/A | 461.9 | -18.6 | TRIM/REMOVE |
| 1848 | TREE | 439.5 | 83.7 | 355.8 | 429.1 | 10.4 | 516.0 | -76.5 | N/A | N/A | N/A | N/A | 472.8 | -33.3 | TRIM/REMOVE |
| 1857 | TREE | 443.9 | 49.4 | 394.5 | 425.8 | 18.1 | 510.4 | -66.5 | N/A | N/A | N/A | N/A | 469.2 | -25.4 | TRIM/REMOVE |
| 1865 | TREE | 441.5 | 45.3 | 396.2 | 424.6 | 16.9 | 508.3 | -66.8 | N/A | N/A | N/A | N/A | 467.2 | -25.7 | TRIM/REMOVE |
| 1916 | TREE | 444.2 | 45.5 | 398.7 | 420.6 | 23.7 | 501.4 | -57.2 | N/A | N/A | N/A | N/A | 463.1 | -18.8 | TRIM/REMOVE |
| 1919 | TREE | 447.0 | 50.4 | 396.6 | 419.5 | 27.5 | 499.7 | -52.7 | N/A | N/A | N/A | N/A | 462.0 | -15.0 | TRIM/REMOVE |
| 1920 | TREE | 424.5 | 31.9 | 392.6 | 417.8 | 6.7 | 496.8 | -72.3 | N/A | N/A | N/A | N/A | 460.0 | -35.5 | TRIM/REMOVE |
| 1928 | TREE | 418.7 | 18.7 | 400.0 | 396.8 | 22.0 | N/A | N/A | N/A | N/A | N/A | N/A | 439.6 | -20.8 | TRIM/REMOVE |
| 1935 | TREE | 423.4 | 23.4 | 400.0 | 410.0 | 13.4 | 483.4 | -60.1 | N/A | N/A | N/A | N/A | 452.7 | -29.3 | TRIM/REMOVE |
| 1938 | TREE | 420.7 | 20.7 | 400.0 | 409.1 | 11.6 | 482.0 | -61.3 | N/A | N/A | N/A | N/A | 451.5 | -30.8 | TRIM/REMOVE |
| 1958 | TREE | 449.6 | 49.6 | 400.0 | 413.6 | 36.1 | 489.5 | -39.9 | N/A | N/A | N/A | N/A | 455.8 | -6.1 | TRIM/REMOVE |
| 1961 | TREE | 442.1 | 42.1 | 400.0 | 413.1 | 29.0 | 488.8 | -46.6 | N/A | N/A | N/A | N/A | 455.5 | -13.4 | TRIM/REMOVE |

NOTES:

1. HORIZONTAL DATUM NAD83 (MA11), VERTICAL DATUM GUVD04 (GEOID 12B). DRAWING PREPARED IN UTM ZONE 55 NORTH (US FOOT) COORDINATE SYSTEM.
2. MAGNETIC DECLINATION OBTAINED ONLINE AT HTTP://WWW.NGDC.NOAA.GOV/GEOMAG-WEB/#DECLINATION.
3. ALL LOCAL ZONING AND AIRSPACE PROTECTION IS GOVERNED BY THE SUPREME COURT OF GUAM, COMPILER OF LAWS, TITLE 21 - REAL PROPERTY, CHAPTER 61 - ZONING LAW.
4. OBSTACLES WERE EVALUATED USING 2022 AIRPORT AIRSPACE ANALYSIS OBSTRUCTION SURVEY DATA.
5. FOR CLARITY, ONLY CRITICAL OBSTRUCTIONS, DEFINED AS THE HIGHEST OBSTRUCTION WITHIN A 100' x 100' GRID, ARE SHOWN. CRITICAL OBJECT CRITERIA ARE DERIVED FROM ADVISORY CIRCULAR 150/5300-18B, *GENERAL GUIDANCE AND SPECIFICATIONS FOR SUBMISSION OF AERONAUTICAL SURVEYS TO NGS: FIELD DATA COLLECTION AND GEOGRAPHIC INFORMATION SYSTEM (GIS) STANDARDS*, SECTION 2.7.1.6.
6. ANY TEMPORARY OR PERMANENT STRUCTURE, INCLUDING ALL APPURTENANCES, THAT EXCEED AN OVERALL HEIGHT OF 200 FEET (61M) ABOVE GROUND LEVEL (AGL) OR EXCEEDS ANY OBSTRUCTION STANDARD CONTAINED IN 14 CFR PART 77, SHOULD BE MARKED AND/OR LIGHTED PER ADVISORY CIRCULAR 70/7460-1.
7. AS PER FAR PART-77.17(B), APPROACH SURFACE CLEARANCES ARE BASED ON TRAVERSE WAY ELEVATIONS PLUS THE TRAVERSE WAY ADJUSTMENT (23' FOR RAILWAYS, 17' FOR INTERSTATE HIGHWAYS, 15' FOR OTHER PUBLIC ROADS, OR 10' FOR PRIVATE ROADS).
8. THE LIMITS OF THE INNER APPROACH SURFACE OBSTRUCTION ANALYSES ARE TO A POINT 100' ABOVE THE RUNWAY THRESHOLD ELEVATION WITHIN THE 14 CFR PART 77 APPROACH SURFACE.
9. EXISTING ON-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2022 AIRPORT AIRSPACE ANALYSIS SURVEY DATA. OFF-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2013 COASTAL AND MARINE SPATIAL PLANNING DATA FROM THE NAVAL POSTGRADUATE SCHOOL, DEPARTMENT OF OCEANOGRAPHY (HTTPS://WWW.OC.NPS.EDU/CMSP/GUAM).
10. ALL ELEVATIONS ARE IN FEET.
11. WHERE OBJECTS DO NOT FALL WITHIN THE LATERAL EXTENTS OF A GIVEN SURFACE, SURFACE ELEVATION AND SURFACE PENETRATION FIELDS ARE ASSIGNED A VALUE OF "N/A".
12. ACCORDING TO FAA AC 150/5300-13B, *AIRPORT DESIGN*, ALL OBSTACLE FREE ZONE (OFZ) SURFACES MUST REMAIN CLEAR OF OBJECTS, EXCEPT FOR FRANGIBLE NAVAIDS. IDENTIFIED OFZ PENETRATIONS FOR THIS RUNWAY REQUIRE FURTHER EVALUATION FOR WAYS OF COMPLYING WITH FAA OFZ CLEARING STANDARDS.

| NO. | REVISIONS | BY | APP. | DATE | NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|---|---|---|---|---|

MAGNETIC DECLINATION = 9°27' (9.4°) EAST (JANUARY 2022)
ANNUAL RATE OF CHANGE: 0°1' (0.017°) WEST / YEAR

PREPARED FOR
A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM
AECOM

FUTURE RUNWAY 24R
INNER PORTION OF THE APPROACH SURFACE
DATA TABLES - A

ANTONIO B. WON PAT
INTERNATIONAL AIRPORT

DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WBS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 06/23
SHEET: 24 OF 51

**Figure H-25. Future Runway 24R Inner Portion of the Approach Surface Data Tables – A**

Source: AECOM

**RUNWAY 24R - FUTURE APPROACH SURFACE OBSTRUCTIONS**

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | PART 77 | | TSS TYPE 5 | | TSS TYPE 6 | | OFZ | | PAPI OCS | | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MSL | AGL | | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | |
| 1963 | TREE | 448.4 | 48.4 | 400.0 | 414.0 | 34.4 | 490.2 | -41.9 | N/A | N/A | N/A | N/A | 456.4 | -8.0 | TRIM/REMOVE |
| 2476 | TREE | 446.5 | 46.5 | 400.0 | 445.0 | 1.5 | N/A | N/A | N/A | N/A | N/A | N/A | 490.2 | -43.7 | TRIM/REMOVE |
| 2563 | GROUND | 321.9 | N/A | 321.9 | 308.5 | 13.4 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | NO ACTION |
| 2564 | GROUND | 317.4 | N/A | 317.4 | 308.1 | 9.3 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | NO ACTION |
| 2565 | GROUND | 314.4 | N/A | 314.4 | 311.5 | 2.9 | N/A | N/A | N/A | N/A | N/A | N/A | 349.9 | -35.5 | NO ACTION |
| 2566 | GROUND | 315.9 | N/A | 315.9 | 314.8 | 1.1 | N/A | N/A | N/A | N/A | N/A | N/A | 353.2 | -37.3 | NO ACTION |
| 2567 | GROUND | 346.7 | N/A | 346.7 | 345.0 | 1.7 | 373.0 | -26.3 | N/A | N/A | N/A | N/A | 384.4 | -37.7 | NO ACTION |
| 2629 | TREE | 420.4 | 70.4 | 350.0 | 372.9 | 47.4 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 2632 | TREE | 410.8 | 60.8 | 350.0 | 372.3 | 38.4 | N/A | N/A | N/A | N/A | N/A | N/A | 414.1 | -3.3 | TRIM/REMOVE |
| 2663 | TREE | 396.9 | 32.1 | 364.8 | 354.7 | 42.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 2829 | TREE | 374.9 | 37.4 | 337.5 | 334.5 | 40.3 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 2836 | GROUND | 322.6 | N/A | 322.6 | 318.5 | 4.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | NO ACTION |
| 2844 | GROUND | 318.2 | N/A | 318.2 | 312.9 | 5.3 | N/A | N/A | N/A | N/A | N/A | N/A | 351.5 | -33.3 | NO ACTION |
| 2846 | GROUND | 313.4 | N/A | 313.4 | 307.3 | 6.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | NO ACTION |
| 2856 | TREE | 362.4 | 42.5 | 319.9 | 323.3 | 39.0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 2876 | TREE | 404.2 | 54.2 | 350.0 | 372.4 | 31.8 | 419.6 | -15.4 | N/A | N/A | N/A | N/A | 413.3 | -9.1 | TRIM/REMOVE |
| 2877 | TREE | 410.0 | 60.0 | 350.0 | 371.5 | 38.5 | 418.1 | -8.0 | N/A | N/A | N/A | N/A | 412.2 | -2.2 | TRIM/REMOVE |
| 2886 | TREE | 393.5 | 43.5 | 350.0 | 371.2 | 22.3 | 417.5 | -24.0 | N/A | N/A | N/A | N/A | 411.6 | -18.1 | TRIM/REMOVE |
| 2920 | TREE | 406.1 | 56.1 | 350.0 | 364.3 | 41.8 | 405.8 | 0.3 | N/A | N/A | N/A | N/A | 404.8 | 1.4 | TRIM/REMOVE |
| 2922 | TREE | 405.9 | 55.9 | 350.0 | 365.1 | 40.8 | 407.2 | -1.3 | N/A | N/A | N/A | N/A | 405.5 | 0.4 | TRIM/REMOVE |
| 2930 | TREE | 405.6 | 55.6 | 350.0 | 367.1 | 38.6 | 410.5 | -4.9 | N/A | N/A | N/A | N/A | 407.7 | -2.1 | TRIM/REMOVE |
| 2985 | TREE | 402.2 | 52.2 | 350.0 | 361.8 | 40.4 | N/A | N/A | N/A | N/A | N/A | N/A | 402.4 | -0.3 | TRIM/REMOVE |
| 3021 | TREE | 411.6 | 61.6 | 350.0 | 382.0 | 29.6 | 435.9 | -24.3 | N/A | N/A | N/A | N/A | 423.0 | -11.4 | TRIM/REMOVE |
| 3103 | TREE | 408.6 | 55.1 | 353.5 | 384.0 | 24.6 | 439.3 | -30.7 | N/A | N/A | N/A | N/A | 424.9 | -16.2 | TRIM/REMOVE |
| 3106 | TREE | 404.4 | 49.5 | 354.8 | 386.5 | 17.8 | 443.6 | -39.3 | 404.1 | 0.3 | N/A | N/A | 427.4 | -23.1 | TRIM/REMOVE |
| 3122 | TREE | 417.5 | 65.9 | 351.6 | 391.8 | 25.7 | 452.6 | -35.1 | N/A | N/A | N/A | N/A | 433.1 | -15.6 | TRIM/REMOVE |
| 3128 | UTILITY POLE | 410.6 | 47.8 | 362.9 | 409.6 | 1.0 | 482.9 | -72.2 | N/A | N/A | N/A | N/A | 451.8 | -41.2 | MARK/LIGHT |
| 3179 | TREE | 422.5 | 66.5 | 356.0 | 393.8 | 28.7 | 455.9 | -33.4 | 412.3 | 10.2 | N/A | N/A | 435.0 | -12.4 | TRIM/REMOVE |
| 3189 | TREE | 420.8 | 67.2 | 353.5 | 395.4 | 25.4 | 458.6 | -37.8 | N/A | N/A | N/A | N/A | 436.7 | -15.9 | TRIM/REMOVE |
| 3193 | TREE | 418.1 | 65.2 | 352.9 | 397.3 | 20.7 | 462.0 | -43.9 | N/A | N/A | N/A | N/A | 438.8 | -20.7 | TRIM/REMOVE |
| 3202 | TREE | 422.2 | 72.0 | 350.3 | 395.7 | 26.6 | 459.1 | -36.9 | N/A | N/A | N/A | N/A | 437.2 | -14.9 | TRIM/REMOVE |
| 3212 | TREE | 400.6 | 50.6 | 350.0 | 396.9 | 3.7 | 461.2 | -60.7 | N/A | N/A | N/A | N/A | 438.7 | -38.1 | TRIM/REMOVE |
| 3224 | TREE | 405.8 | 49.1 | 356.7 | 400.8 | 5.0 | 467.9 | -62.1 | 420.3 | -14.5 | N/A | N/A | 442.3 | -36.5 | TRIM/REMOVE |
| 3225 | GROUND | 311.7 | N/A | 311.7 | 305.0 | 6.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | NO ACTION |
| 3226 | GROUND | 314.6 | N/A | 314.6 | 307.9 | 6.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | NO ACTION |
| 3227 | GROUND | 316.9 | N/A | 316.9 | 310.4 | 6.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | NO ACTION |
| 3232 | TREE | 350.1 | 39.8 | 310.2 | 314.7 | 35.4 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 3238 | TREE | 356.5 | 48.2 | 308.3 | 314.4 | 42.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 3263 | TREE | 362.8 | 48.8 | 314.0 | 319.2 | 43.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 3393 | TREE | 383.1 | 42.7 | 340.4 | 336.0 | 47.0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 3395 | TREE | 379.3 | 40.0 | 339.3 | 335.2 | 44.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 3417 | TREE | 416.0 | 66.0 | 350.0 | 387.7 | 28.2 | 445.7 | -29.7 | N/A | N/A | N/A | N/A | 428.9 | -13.0 | TRIM/REMOVE |
| 3420 | TREE | 415.4 | 65.4 | 350.0 | 385.7 | 29.7 | 442.2 | -26.8 | N/A | N/A | N/A | N/A | 426.9 | -11.4 | TRIM/REMOVE |
| 3439 | TREE | 419.4 | 69.4 | 350.0 | 385.9 | 33.5 | 442.5 | -23.1 | N/A | N/A | N/A | N/A | 427.1 | -7.8 | TRIM/REMOVE |
| 3468 | TREE | 410.8 | 60.8 | 350.0 | 387.3 | 23.5 | 444.8 | -34.1 | N/A | N/A | N/A | N/A | 428.9 | -18.1 | TRIM/REMOVE |
| 3490 | TREE | 416.3 | 66.3 | 350.0 | 394.1 | 22.1 | 456.5 | -40.2 | N/A | N/A | N/A | N/A | 436.1 | -19.9 | TRIM/REMOVE |
| 3493 | TREE | 418.2 | 68.2 | 350.0 | 392.7 | 25.6 | 454.0 | -35.8 | N/A | N/A | N/A | N/A | 434.7 | -16.5 | TRIM/REMOVE |
| 3528 | TREE | 384.4 | 39.1 | 345.3 | 342.6 | 41.9 | N/A | N/A | N/A | N/A | N/A | N/A | 382.6 | 1.9 | TRIM/REMOVE |
| 3536 | TREE | 393.3 | 45.8 | 347.5 | 342.7 | 50.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 3547 | TREE | 387.1 | 37.1 | 350.0 | 343.7 | 43.4 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 3558 | TREE | 414.1 | 64.1 | 350.0 | 346.7 | 67.4 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 3563 | TREE | 403.7 | 53.7 | 350.0 | 349.1 | 54.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 3566 | TREE | 396.7 | 46.7 | 350.0 | 349.6 | 47.0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 3598 | TREE | 370.5 | 55.9 | 314.7 | 320.4 | 50.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 3606 | TREE | 368.0 | 51.8 | 316.2 | 321.8 | 46.4 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 3625 | TREE | 406.0 | 56.0 | 350.0 | 355.1 | 50.9 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 3632 | TREE | 408.0 | 58.0 | 350.0 | 357.3 | 50.7 | N/A | N/A | N/A | N/A | N/A | N/A | 398.3 | 9.8 | TRIM/REMOVE |
| 3638 | TREE | 411.6 | 61.6 | 350.0 | 359.8 | 51.8 | N/A | N/A | N/A | N/A | N/A | N/A | 400.7 | 10.8 | TRIM/REMOVE |
| 3644 | TREE | 405.2 | 55.2 | 350.0 | 357.8 | 47.5 | N/A | N/A | N/A | N/A | N/A | N/A | 398.6 | 6.6 | TRIM/REMOVE |
| 3651 | TREE | 397.3 | 47.3 | 350.0 | 351.7 | 45.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 3655 | TREE | 406.4 | 56.4 | 350.0 | 362.9 | 43.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 3657 | TREE | 409.4 | 59.4 | 350.0 | 367.2 | 42.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 3658 | TREE | 410.4 | 60.4 | 350.0 | 369.4 | 41.0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 3659 | TREE | 418.0 | 68.0 | 350.0 | 369.4 | 48.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 3763 | TREE | 420.6 | 70.6 | 350.0 | 390.7 | 29.9 | N/A | N/A | N/A | N/A | N/A | N/A | 433.2 | -12.6 | TRIM/REMOVE |
| 3764 | TREE | 424.6 | 74.6 | 350.0 | 390.2 | 34.4 | N/A | N/A | N/A | N/A | N/A | N/A | 432.6 | -8.0 | TRIM/REMOVE |
| 3799 | TREE | 416.3 | 66.3 | 350.0 | 382.3 | 34.0 | N/A | N/A | N/A | N/A | N/A | N/A | 424.1 | -7.8 | TRIM/REMOVE |
| 3805 | TREE | 383.2 | 33.2 | 350.0 | 352.6 | 30.6 | 385.9 | -2.7 | N/A | N/A | N/A | N/A | 392.6 | -9.4 | TRIM/REMOVE |
| 3836 | TREE | 427.2 | 77.2 | 350.0 | 380.5 | 46.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 3841 | TREE | 421.9 | 71.9 | 350.0 | 379.0 | 42.9 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 4919 | TREE | 410.1 | 60.1 | 350.0 | 369.1 | 41.0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 4959 | TREE | 390.3 | 40.3 | 350.0 | 362.5 | 27.8 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 5016 | TREE | 408.5 | 58.5 | 350.0 | 392.8 | 15.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |

NOTES:

1. HORIZONTAL DATUM NAD83 (MA11), VERTICAL DATUM GUVD04 (GEOID 12B). DRAWING PREPARED IN UTM ZONE 55 NORTH (US FOOT) COORDINATE SYSTEM.
2. MAGNETIC DECLINATION OBTAINED ONLINE AT HTTP://WWW.NGDC.NOAA.GOV/GEOMAG-WEB/#DECLINATION.
3. ALL LOCAL ZONING AND AIRSPACE PROTECTION IS GOVERNED BY THE SUPREME COURT OF GUAM, COMPILER OF LAWS, TITLE 21 - REAL PROPERTY, CHAPTER 61 - ZONING LAW.
4. OBSTACLES WERE EVALUATED USING 2022 AIRPORT AIRSPACE ANALYSIS OBSTRUCTION SURVEY DATA.
5. FOR CLARITY, ONLY CRITICAL OBSTRUCTIONS, DEFINED AS THE HIGHEST OBSTRUCTION WITHIN A 100' x 100' GRID, ARE SHOWN. CRITICAL OBJECT CRITERIA ARE DERIVED FROM ADVISORY CIRCULAR 150/5300-18B, *GENERAL GUIDANCE AND SPECIFICATIONS FOR SUBMISSION OF AERONAUTICAL SURVEYS TO NGS: FIELD DATA COLLECTION AND GEOGRAPHIC INFORMATION SYSTEM (GIS) STANDARDS*, SECTION 2.7.1.6.
6. ANY TEMPORARY OR PERMANENT STRUCTURE, INCLUDING ALL APPURTENANCES, THAT EXCEED AN OVERALL HEIGHT OF 200 FEET (61M) ABOVE GROUND LEVEL (AGL) OR EXCEEDS ANY OBSTRUCTION STANDARD CONTAINED IN 14 CFR PART 77, SHOULD BE MARKED AND/OR LIGHTED PER ADVISORY CIRCULAR 70/7460-1.
7. AS PER FAR PART-77.17(B), APPROACH SURFACE CLEARANCES ARE BASED ON TRAVERSE WAY ELEVATIONS PLUS THE TRAVERSE WAY ADJUSTMENT (23' FOR RAILWAYS, 17' FOR INTERSTATE HIGHWAYS, 15' FOR OTHER PUBLIC ROADS, OR 10' FOR PRIVATE ROADS).
8. THE LIMITS OF THE INNER APPROACH SURFACE OBSTRUCTION ANALYSES ARE TO A POINT 100' ABOVE THE RUNWAY THRESHOLD ELEVATION WITHIN THE 14 CFR PART 77 APPROACH SURFACE.
9. EXISTING ON-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2022 AIRPORT AIRSPACE ANALYSIS SURVEY DATA. OFF-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2013 COASTAL AND MARINE SPATIAL PLANNING DATA FROM THE NAVAL POSTGRADUATE SCHOOL, DEPARTMENT OF OCEANOGRAPHY (HTTPS://WWW.OC.NPS.EDU/CMSP/GUAM).
10. ALL ELEVATIONS ARE IN FEET.
11. WHERE OBJECTS DO NOT FALL WITHIN THE LATERAL EXTENTS OF A GIVEN SURFACE, SURFACE ELEVATION AND SURFACE PENETRATION FIELDS ARE ASSIGNED A VALUE OF "N/A".
12. ACCORDING TO FAA AC 150/5300-13B, *AIRPORT DESIGN*, ALL OBSTACLE FREE ZONE (OFZ) SURFACES MUST REMAIN CLEAR OF OBJECTS, EXCEPT FOR FRANGIBLE NAVAIDS. IDENTIFIED OFZ PENETRATIONS FOR THIS RUNWAY REQUIRE FURTHER EVALUATION FOR WAYS OF COMPLYING WITH FAA OFZ CLEARING STANDARDS.

| NO. | REVISIONS | BY | APP. | DATE | NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|---|---|---|---|---|

MAGNETIC DECLINATION = 9°27' (9.4°) EAST (JANUARY 2022)
ANNUAL RATE OF CHANGE: 0°1' (0.017°) WEST / YEAR

PREPARED FOR

A. B. WON PAT INTERNATIONAL AIRPORT GUAM

A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM

AECOM

FUTURE RUNWAY 24R
INNER PORTION OF THE APPROACH SURFACE
DATA TABLES - B

ANTONIO B. WON PAT
INTERNATIONAL AIRPORT

DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WBS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 06/23
SHEET: 25 OF 51

**Figure H-26. Future Runway 24R Inner Portion of the Approach Surface Data Tables – B**

Source: AECOM

## RUNWAY 24R - FUTURE APPROACH SURFACE OBSTRUCTIONS

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | PART 77 | | TSS TYPE 5 | | TSS TYPE 6 | | OFZ | | PAPI OCS | | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MSL | AGL | | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | |
| 5032 | TREE | 398.0 | 48.0 | 350.0 | 356.8 | 41.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 5158 | TREE | 401.6 | 51.6 | 350.0 | 351.6 | 50.0 | N/A | N/A | N/A | N/A | N/A | N/A | 392.2 | 9.4 | TRIM/REMOVE |
| 5230 | TREE | 389.3 | 39.3 | 350.0 | 347.0 | 42.3 | N/A | N/A | N/A | N/A | N/A | N/A | 387.3 | 2.0 | TRIM/REMOVE |
| 5611 | TREE | 411.7 | 61.7 | 350.0 | 361.1 | 50.6 | N/A | N/A | N/A | N/A | N/A | N/A | 402.1 | 9.6 | TRIM/REMOVE |
| 5853 | TREE | 427.5 | 77.5 | 350.0 | 383.1 | 44.4 | N/A | N/A | N/A | N/A | N/A | N/A | 425.4 | 2.1 | TRIM/REMOVE |
| 5914 | TREE | 399.5 | 49.5 | 350.0 | 375.2 | 24.4 | 424.3 | -24.7 | N/A | N/A | N/A | N/A | 415.9 | -16.3 | TRIM/REMOVE |
| 6019 | TREE | 403.8 | 53.8 | 350.0 | 390.0 | 13.8 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 6096 | TREE | 416.7 | 66.7 | 350.0 | 375.7 | 41.0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 6115 | TREE | 401.8 | 51.8 | 350.0 | 363.0 | 38.8 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 6171 | TREE | 419.9 | 19.9 | 400.0 | 416.4 | 3.5 | N/A | N/A | N/A | N/A | N/A | N/A | 459.8 | -39.8 | TRIM/REMOVE |
| 6220 | TREE | 418.2 | 27.5 | 390.7 | 383.6 | 34.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 6226 | TREE | 426.8 | 30.2 | 396.6 | 391.4 | 35.3 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 12028 | SIGN | 295.5 | 3.5 | 292.0 | N/A | N/A | N/A | N/A | N/A | N/A | 293.3 | 2.2 | N/A | N/A | LOWER/RELOCATE |
| 13762 | TREE | 338.2 | 38.2 | 300.0 | N/A | N/A | N/A | N/A | N/A | N/A | 412.5 | -74.2 | N/A | N/A | NO ACTION |
| 13841 | GROUND | 262.8 | N/A | 262.8 | N/A | N/A | N/A | N/A | N/A | N/A | 349.7 | -86.9 | N/A | N/A | NO ACTION |
| 13844 | GROUND | 264.7 | N/A | 264.7 | N/A | N/A | N/A | N/A | N/A | N/A | 350.9 | -86.2 | N/A | N/A | NO ACTION |
| 13846 | GROUND | 265.8 | N/A | 265.8 | N/A | N/A | N/A | N/A | N/A | N/A | 351.7 | -85.9 | N/A | N/A | NO ACTION |
| 13850 | GROUND | 271.9 | N/A | 271.9 | N/A | N/A | N/A | N/A | N/A | N/A | 348.8 | -76.9 | N/A | N/A | NO ACTION |
| 13852 | GROUND | 274.8 | N/A | 274.8 | N/A | N/A | N/A | N/A | N/A | N/A | 351.0 | -76.2 | N/A | N/A | NO ACTION |
| 13854 | GROUND | 276.8 | N/A | 276.8 | N/A | N/A | N/A | N/A | N/A | N/A | 352.4 | -75.7 | N/A | N/A | NO ACTION |
| 13871 | SIGN | 268.5 | 3.7 | 264.8 | N/A | N/A | N/A | N/A | N/A | N/A | 320.8 | -52.3 | N/A | N/A | NO ACTION |
| 13879 | GROUND | 276.8 | N/A | 276.8 | N/A | N/A | N/A | N/A | N/A | N/A | 359.5 | -82.7 | N/A | N/A | NO ACTION |
| 13911 | GROUND | 287.6 | N/A | 287.6 | N/A | N/A | N/A | N/A | N/A | N/A | 370.9 | -83.3 | N/A | N/A | NO ACTION |
| 13918 | GROUND | 293.0 | N/A | 293.0 | N/A | N/A | N/A | N/A | N/A | N/A | 377.2 | -84.2 | N/A | N/A | NO ACTION |
| 13922 | GROUND | 296.5 | N/A | 296.5 | N/A | N/A | N/A | N/A | N/A | N/A | 381.6 | -85.1 | N/A | N/A | NO ACTION |
| 20560 | UTILITY BOX | 285.5 | 3.9 | 281.6 | N/A | N/A | N/A | N/A | N/A | N/A | 441.8 | -156.3 | N/A | N/A | NO ACTION |
| 20582 | SIGN | 273.8 | 2.9 | 270.9 | N/A | N/A | N/A | N/A | N/A | N/A | 269.7 | 4.2 | N/A | N/A | LOWER/RELOCATE |
| 20583 | SIGN | 278.1 | 5.3 | 272.8 | N/A | N/A | N/A | N/A | N/A | N/A | 270.9 | 7.2 | N/A | N/A | LOWER/RELOCATE |
| 20585 | SIGN | 280.1 | 3.7 | 276.5 | N/A | N/A | N/A | N/A | N/A | N/A | 274.6 | 5.5 | N/A | N/A | LOWER/RELOCATE |
| 20587 | SIGN | 291.9 | 5.2 | 286.7 | N/A | N/A | N/A | N/A | N/A | N/A | 287.1 | 4.8 | N/A | N/A | LOWER/RELOCATE |
| 20597 | TREE | 421.9 | 71.9 | 350.0 | 394.7 | 27.2 | 457.5 | -35.6 | N/A | N/A | N/A | N/A | 436.4 | -14.6 | TRIM/REMOVE |
| 20598 | TREE | 412.4 | 59.5 | 352.9 | 381.5 | 30.9 | 435.0 | -22.6 | N/A | N/A | N/A | N/A | 422.2 | -9.8 | TRIM/REMOVE |
| 20600 | TREE | 413.9 | 63.9 | 350.0 | 368.7 | 45.3 | 413.2 | 0.7 | N/A | N/A | N/A | N/A | 409.1 | 4.8 | TRIM/REMOVE |
| 20601 | TREE | 390.0 | 40.0 | 350.0 | 359.3 | 30.6 | 397.4 | -7.4 | N/A | N/A | N/A | N/A | 399.3 | -9.3 | TRIM/REMOVE |
| 20605 | TREE | 427.3 | 63.7 | 363.7 | 424.8 | 2.5 | 508.6 | -81.3 | 447.4 | -20.1 | N/A | N/A | 466.8 | -39.5 | TRIM/REMOVE |
| 20645 | TREE | 427.7 | 77.7 | 350.0 | 391.9 | 35.7 | N/A | N/A | N/A | N/A | N/A | N/A | 434.5 | -6.8 | TRIM/REMOVE |
| 20649 | TREE | 408.0 | 58.0 | 350.0 | 363.6 | 44.4 | N/A | N/A | N/A | N/A | N/A | N/A | 404.3 | 3.7 | TRIM/REMOVE |
| 20653 | TREE | 388.0 | 38.0 | 350.0 | 352.9 | 35.0 | 386.5 | 1.5 | N/A | N/A | N/A | N/A | 393.0 | -5.1 | TRIM/REMOVE |
| 20654 | TREE | 397.7 | 48.0 | 349.7 | 344.7 | 53.0 | N/A | N/A | N/A | N/A | N/A | N/A | 384.9 | 12.8 | TRIM/REMOVE |
| 20656 | TREE | 399.5 | 49.5 | 350.0 | 348.2 | 51.3 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 20665 | TREE | 376.3 | 42.3 | 334.0 | 335.3 | 41.0 | N/A | N/A | N/A | N/A | N/A | N/A | 375.1 | 1.3 | TRIM/REMOVE |
| 20669 | POWER TRANSMISSION POLE | 435.9 | 57.5 | 378.4 | 408.6 | 27.3 | 481.1 | -45.2 | 429.1 | 6.8 | N/A | N/A | 450.3 | -14.3 | MARK/LIGHT |
| 20670 | POLE | 424.0 | 48.8 | 375.3 | 412.5 | 11.6 | 487.7 | -63.7 | 433.5 | -9.4 | N/A | N/A | 454.0 | -30.0 | MARK/LIGHT |
| 20671 | POLE | 432.6 | 48.9 | 383.7 | 412.1 | 20.5 | 487.0 | -54.5 | 433.0 | -0.5 | N/A | N/A | 453.8 | -21.3 | MARK/LIGHT |
| 20675 | TREE | 410.5 | 46.9 | 363.5 | 401.7 | 8.7 | 469.5 | -59.0 | 421.3 | -10.8 | N/A | N/A | 443.1 | -32.6 | TRIM/REMOVE |
| 20677 | TREE | 418.9 | 62.8 | 356.1 | 396.6 | 22.3 | 460.7 | -41.8 | 415.4 | 3.5 | N/A | N/A | 437.9 | -19.0 | TRIM/REMOVE |
| 20678 | TREE | 418.8 | 65.1 | 353.7 | 391.5 | 27.3 | 452.1 | -33.3 | N/A | N/A | N/A | N/A | 432.7 | -13.9 | TRIM/REMOVE |
| 20721 | TREE | 416.5 | 66.5 | 350.0 | 384.8 | 31.7 | 440.7 | -24.2 | N/A | N/A | N/A | N/A | 426.1 | -9.7 | TRIM/REMOVE |
| 20722 | TREE | 434.4 | 84.4 | 350.0 | 385.2 | 49.3 | N/A | N/A | N/A | N/A | N/A | N/A | 427.6 | 6.8 | TRIM/REMOVE |
| 20724 | TREE | 406.2 | 56.2 | 350.0 | 377.4 | 28.7 | 428.1 | -22.0 | N/A | N/A | N/A | N/A | 418.7 | -12.5 | TRIM/REMOVE |
| 20725 | TREE | 403.8 | 53.8 | 350.0 | 370.8 | 33.0 | N/A | N/A | N/A | N/A | N/A | N/A | 411.9 | -8.1 | TRIM/REMOVE |
| 20729 | TREE | 366.4 | 48.9 | 317.5 | 321.5 | 44.9 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 20730 | TREE | 351.9 | 45.3 | 306.6 | 311.8 | 40.0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 20734 | GROUND | 316.6 | N/A | 316.6 | 310.3 | 6.3 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | NO ACTION |
| 20740 | TREE | 389.0 | 49.9 | 339.0 | 336.3 | 52.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 20764 | POWER TRANSMISSION POLE | 431.6 | 66.3 | 365.3 | 407.1 | 24.5 | 478.6 | -47.0 | 427.4 | 4.2 | N/A | N/A | 448.7 | -17.1 | MARK/LIGHT |
| 20765 | POWER TRANSMISSION POLE | 429.7 | 62.1 | 367.6 | 408.3 | 21.4 | 480.6 | -50.8 | 428.7 | 1.0 | N/A | N/A | 449.7 | -19.9 | MARK/LIGHT |
| 20766 | POWER TRANSMISSION POLE | 435.3 | 61.2 | 374.1 | 408.9 | 26.4 | 481.6 | -46.3 | 429.4 | 5.9 | N/A | N/A | 450.3 | -15.0 | MARK/LIGHT |
| 20770 | POLE | 414.3 | 50.1 | 364.2 | 410.2 | 4.1 | 483.8 | -69.5 | N/A | N/A | N/A | N/A | 452.1 | -37.7 | MARK/LIGHT |
| 20771 | POLE | 415.3 | 48.1 | 367.2 | 410.7 | 4.5 | 484.7 | -69.5 | 431.5 | -16.2 | N/A | N/A | 452.4 | -37.2 | MARK/LIGHT |
| 20772 | POLE | 418.2 | 48.2 | 370.1 | 411.4 | 6.8 | 485.9 | -67.7 | 432.3 | -14.0 | N/A | N/A | 453.0 | -34.8 | MARK/LIGHT |
| 20773 | POLE | 429.9 | 49.8 | 380.1 | 412.7 | 17.2 | 488.1 | -58.2 | 433.8 | -3.8 | N/A | N/A | 454.3 | -24.4 | MARK/LIGHT |
| 20779 | BUSH | 353.9 | 3.0 | 350.8 | 352.7 | 1.1 | 386.2 | -32.3 | 365.8 | -11.9 | N/A | N/A | 392.0 | -38.1 | TRIM/REMOVE |
| 20783 | POWER TRANSMISSION POLE | 430.0 | 66.3 | 363.7 | 406.1 | 23.9 | 476.8 | -46.8 | N/A | N/A | N/A | N/A | 448.1 | -18.1 | MARK/LIGHT |
| 20784 | POWER TRANSMISSION POLE | 427.3 | 66.6 | 360.7 | 405.0 | 22.4 | 474.9 | -47.6 | N/A | N/A | N/A | N/A | 447.6 | -20.3 | MARK/LIGHT |
| 20785 | POWER TRANSMISSION POLE | 431.5 | 73.6 | 357.9 | 404.4 | 27.2 | N/A | N/A | N/A | N/A | N/A | N/A | 447.7 | -16.2 | MARK/LIGHT |
| 20786 | POWER TRANSMISSION POLE | 433.6 | 76.4 | 357.2 | 408.7 | 24.9 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | MARK/LIGHT |
| 20796 | GROUND | 360.6 | N/A | 360.6 | 359.8 | 0.8 | 398.2 | -37.6 | 373.8 | -13.2 | N/A | N/A | 399.7 | -39.1 | NO ACTION |
| 20797 | GROUND | 355.8 | N/A | 355.8 | 354.3 | 1.6 | 388.8 | -32.9 | N/A | N/A | N/A | N/A | 394.0 | -38.1 | NO ACTION |
| 20798 | GROUND | 349.3 | N/A | 349.3 | 348.0 | 1.2 | 378.2 | -28.9 | N/A | N/A | N/A | N/A | 387.6 | -38.4 | NO ACTION |
| 20799 | GROUND | 343.7 | N/A | 343.7 | 342.1 | 1.7 | 368.0 | -24.3 | N/A | N/A | N/A | N/A | 381.5 | -37.7 | NO ACTION |
| 20801 | GROUND | 344.5 | N/A | 344.5 | 343.9 | 0.6 | 371.1 | -26.6 | N/A | N/A | N/A | N/A | 383.2 | -38.8 | NO ACTION |
| 20804 | GROUND | 310.5 | N/A | 310.5 | N/A | N/A | N/A | N/A | N/A | N/A | 364.4 | -53.9 | N/A | N/A | NO ACTION |

NOTES:

1. HORIZONTAL DATUM NAD83 (MA11), VERTICAL DATUM GUVD04 (GEOID 12B). DRAWING PREPARED IN UTM ZONE 55 NORTH (US FOOT) COORDINATE SYSTEM.
2. MAGNETIC DECLINATION OBTAINED ONLINE AT HTTP://WWW.NGDC.NOAA.GOV/GEOMAG-WEB/#DECLINATION.
3. ALL LOCAL ZONING AND AIRSPACE PROTECTION IS GOVERNED BY THE SUPREME COURT OF GUAM, COMPILER OF LAWS, TITLE 21 - REAL PROPERTY, CHAPTER 61 - ZONING LAW.
4. OBSTACLES WERE EVALUATED USING 2022 AIRPORT AIRSPACE ANALYSIS OBSTRUCTION SURVEY DATA.
5. FOR CLARITY, ONLY CRITICAL OBSTRUCTIONS, DEFINED AS THE HIGHEST OBSTRUCTION WITHIN A 100' x 100' GRID, ARE SHOWN. CRITICAL OBJECT CRITERIA ARE DERIVED FROM ADVISORY CIRCULAR 150/5300-18B, *GENERAL GUIDANCE AND SPECIFICATIONS FOR SUBMISSION OF AERONAUTICAL SURVEYS TO NGS: FIELD DATA COLLECTION AND GEOGRAPHIC INFORMATION SYSTEM (GIS) STANDARDS*, SECTION 2.7.1.6.
6. ANY TEMPORARY OR PERMANENT STRUCTURE, INCLUDING ALL APPURTENANCES, THAT EXCEED AN OVERALL HEIGHT OF 200 FEET (61M) ABOVE GROUND LEVEL (AGL) OR EXCEEDS ANY OBSTRUCTION STANDARD CONTAINED IN 14 CFR PART 77, SHOULD BE MARKED AND/OR LIGHTED PER ADVISORY CIRCULAR 70/7460-1.
7. AS PER FAR PART-77.17(B), APPROACH SURFACE CLEARANCES ARE BASED ON TRAVERSE WAY ELEVATIONS PLUS THE TRAVERSE WAY ADJUSTMENT (23' FOR RAILWAYS, 17' FOR INTERSTATE HIGHWAYS, 15' FOR OTHER PUBLIC ROADS, OR 10' FOR PRIVATE ROADS).
8. THE LIMITS OF THE INNER APPROACH SURFACE OBSTRUCTION ANALYSES ARE TO A POINT 100' ABOVE THE RUNWAY THRESHOLD ELEVATION WITHIN THE 14 CFR PART 77 APPROACH SURFACE.
9. EXISTING ON-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2022 AIRPORT AIRSPACE ANALYSIS SURVEY DATA. OFF-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2013 COASTAL AND MARINE SPATIAL PLANNING DATA FROM THE NAVAL POSTGRADUATE SCHOOL, DEPARTMENT OF OCEANOGRAPHY (HTTPS://WWW.OC.NPS.EDU/CMSP/GUAM).
10. ALL ELEVATIONS ARE IN FEET.
11. WHERE OBJECTS DO NOT FALL WITHIN THE LATERAL EXTENTS OF A GIVEN SURFACE, SURFACE ELEVATION AND SURFACE PENETRATION FIELDS ARE ASSIGNED A VALUE OF "N/A".
12. ACCORDING TO FAA AC 150/5300-13B, *AIRPORT DESIGN*, ALL OBSTACLE FREE ZONE (OFZ) SURFACES MUST REMAIN CLEAR OF OBJECTS, EXCEPT FOR FRANGIBLE NAVAIDS. IDENTIFIED OFZ PENETRATIONS FOR THIS RUNWAY REQUIRE FURTHER EVALUATION FOR WAYS OF COMPLYING WITH FAA OFZ CLEARING STANDARDS.

| NO. | REVISIONS | BY | APP. | DATE | NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

MAGNETIC DECLINATION = 9°23' (9.4°) EAST (JANUARY 2022)
ANNUAL RATE OF CHANGE: 0°1' (0.017°) WEST / YEAR

PREPARED FOR
A. B. WON PAT INTERNATIONAL AIRPORT GUAM
A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM
AECOM

FUTURE RUNWAY 24R
INNER PORTION OF THE APPROACH SURFACE
DATA TABLES - C

ANTONIO B. WON PAT
INTERNATIONAL AIRPORT

DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WBS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 06/23
SHEET: 26 OF 51

**Figure H-27. Future Runway 24R Inner Portion of the Approach Surface Data Tables – C**

Source: AECOM

**RUNWAY 24R - FUTURE APPROACH SURFACE OBSTRUCTIONS**

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | PART 77 | | TSS TYPE 5 | | TSS TYPE 6 | | OFZ | | PAPI OCS | | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MSL | AGL | | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | |
| 20805 | GROUND | 321.0 | N/A | 321.0 | 315.8 | 5.2 | N/A | N/A | N/A | N/A | N/A | N/A | 354.5 | -33.5 | NO ACTION |
| 20806 | GROUND | 325.7 | N/A | 325.7 | 321.7 | 4.1 | N/A | N/A | N/A | N/A | N/A | N/A | 360.5 | -34.8 | NO ACTION |
| 20807 | GROUND | 330.0 | N/A | 330.0 | 326.9 | 3.1 | N/A | N/A | N/A | N/A | N/A | N/A | 365.9 | -35.9 | NO ACTION |
| 20811 | GROUND | 296.4 | N/A | 296.4 | N/A | N/A | N/A | N/A | N/A | N/A | 368.4 | -72.0 | N/A | N/A | NO ACTION |
| 20815 | GROUND | 315.0 | N/A | 315.0 | 308.6 | 6.4 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | NO ACTION |
| 20816 | TREE | 324.4 | 24.5 | 299.9 | N/A | N/A | N/A | N/A | N/A | N/A | 387.7 | -63.3 | N/A | N/A | NO ACTION |
| 20823 | TREE | 415.1 | 65.1 | 350.0 | 353.9 | 61.3 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 20824 | TREE | 411.7 | 61.7 | 350.0 | 359.6 | 52.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 20825 | TREE | 415.7 | 65.7 | 350.0 | 389.3 | 26.4 | 448.3 | -32.6 | N/A | N/A | N/A | N/A | 430.9 | -15.2 | TRIM/REMOVE |
| 20828 | TREE | 418.3 | 68.3 | 350.0 | 392.1 | 26.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 20830 | GROUND | 305.5 | N/A | 305.5 | N/A | N/A | N/A | N/A | N/A | N/A | 303.2 | 2.3 | 329.7 | -24.2 | NO ACTION |
| 20831 | GROUND | 306.8 | N/A | 306.8 | N/A | N/A | N/A | N/A | N/A | N/A | 305.0 | 1.9 | 336.5 | -29.6 | NO ACTION |
| 20849 | TREE | 449.8 | 48.7 | 401.1 | 448.1 | 1.7 | 548.4 | -98.6 | N/A | N/A | N/A | N/A | 493.1 | -43.3 | TRIM/REMOVE |
| 20869 | SIGN | 284.4 | 5.8 | 278.6 | N/A | N/A | N/A | N/A | N/A | N/A | 277.4 | 7.0 | N/A | N/A | LOWER/RELOCATE |
| 20890 | GROUND | 292.9 | N/A | 292.9 | N/A | N/A | N/A | N/A | N/A | N/A | 354.4 | -61.5 | N/A | N/A | NO ACTION |
| 20913 | GROUND | 275.7 | N/A | 275.7 | N/A | N/A | N/A | N/A | N/A | N/A | 350.9 | -75.2 | N/A | N/A | NO ACTION |
| 20923 | GROUND | 264.9 | N/A | 264.9 | N/A | N/A | N/A | N/A | N/A | N/A | 264.1 | 0.8 | N/A | N/A | NO ACTION |
| 20971 | TREE | 371.7 | 21.7 | 350.0 | 349.4 | 22.3 | N/A | N/A | N/A | N/A | N/A | N/A | 389.4 | -17.7 | TRIM/REMOVE |
| 20977 | TREE | 409.3 | 59.3 | 350.0 | 364.7 | 44.5 | N/A | N/A | N/A | N/A | N/A | N/A | 406.1 | 3.2 | TRIM/REMOVE |
| 20993 | SIGN | 300.8 | 3.5 | 297.3 | N/A | N/A | N/A | N/A | N/A | N/A | 299.5 | 1.4 | N/A | N/A | LOWER/RELOCATE |
| 21022 | GROUND | 305.8 | N/A | 305.8 | N/A | N/A | N/A | N/A | 306.4 | -0.7 | 305.0 | 0.8 | 337.7 | -32.0 | NO ACTION |
| 21026 | GROUND | 352.1 | N/A | 352.1 | 351.1 | 1.1 | 383.3 | -31.2 | N/A | N/A | N/A | N/A | 390.6 | -38.5 | NO ACTION |
| 21053 | SIGN | 280.0 | 3.4 | 276.6 | N/A | N/A | N/A | N/A | N/A | N/A | 415.2 | -135.2 | N/A | N/A | NO ACTION |
| 21054 | SIGN | 283.6 | 3.7 | 280.0 | N/A | N/A | N/A | N/A | N/A | N/A | 351.6 | -67.9 | N/A | N/A | NO ACTION |
| 21083 | BUILDING | 431.8 | 25.4 | 406.5 | 403.2 | 28.6 | N/A | N/A | N/A | N/A | N/A | N/A | 446.4 | -14.6 | MARK/LIGHT |
| 21096 | BILLBOARD | 416.2 | 12.0 | 404.2 | 407.8 | 8.4 | N/A | N/A | N/A | N/A | N/A | N/A | 450.9 | -34.7 | MARK/LIGHT |
| 21135 | STREET SIGN | 360.9 | 9.6 | 351.3 | 332.9 | 28.0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | LOWER/RELOCATE |
| 21189 | BUILDING | 424.5 | 22.6 | 401.9 | 411.5 | 13.0 | N/A | N/A | N/A | N/A | N/A | N/A | 455.1 | -30.6 | MARK/LIGHT |
| 21191 | BUILDING | 416.4 | 14.2 | 402.2 | 412.5 | 3.8 | N/A | N/A | N/A | N/A | N/A | N/A | 455.7 | -39.4 | MARK/LIGHT |
| 21234 | FENCE | 362.3 | 9.6 | 352.7 | 337.0 | 25.3 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | NO ACTION |
| 21235 | FENCE | 364.3 | 9.5 | 354.9 | 339.9 | 24.4 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | NO ACTION |
| 21236 | FENCE | 367.2 | 9.3 | 357.9 | 342.8 | 24.3 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | NO ACTION |
| 21249 | FENCE | 396.2 | 9.3 | 386.9 | 381.0 | 15.3 | N/A | N/A | N/A | N/A | N/A | N/A | 423.2 | -27.0 | NO ACTION |
| 21251 | FENCE | 398.7 | 9.2 | 389.5 | 386.8 | 11.8 | N/A | N/A | N/A | N/A | N/A | N/A | 429.3 | -30.6 | NO ACTION |
| 21303 | GROUND | 343.2 | N/A | 343.2 | 327.5 | 15.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | NO ACTION |
| 21305 | TREE | 427.3 | 32.5 | 394.7 | 414.6 | 12.7 | 491.3 | -64.0 | 435.9 | -8.6 | N/A | N/A | 456.6 | -29.4 | TRIM/REMOVE |
| 21307 | TREE | 443.6 | 57.0 | 386.6 | 424.5 | 19.1 | 508.2 | -64.6 | 447.1 | -3.5 | N/A | N/A | 467.0 | -23.3 | TRIM/REMOVE |
| 21352 | POLE | 449.4 | 37.6 | 411.8 | 445.9 | 3.5 | N/A | N/A | N/A | N/A | N/A | N/A | 491.2 | -41.8 | MARK/LIGHT |
| 21365 | TREE | 425.6 | 25.6 | 400.0 | 410.0 | 15.6 | 483.6 | -57.9 | N/A | N/A | N/A | N/A | 452.3 | -26.7 | TRIM/REMOVE |
| 21366 | TREE | 459.5 | 59.5 | 400.0 | 417.0 | 42.4 | 495.4 | -36.0 | N/A | N/A | N/A | N/A | 460.2 | -0.7 | TRIM/REMOVE |
| 21367 | TREE | 472.9 | 72.9 | 400.0 | 418.5 | 54.4 | 498.0 | -25.0 | N/A | N/A | N/A | N/A | 461.4 | 11.6 | TRIM/REMOVE |
| 21368 | TREE | 450.6 | 50.6 | 400.0 | 414.1 | 36.5 | 490.4 | -39.8 | N/A | N/A | N/A | N/A | 456.4 | -5.8 | TRIM/REMOVE |
| 21637 | TREE | 406.1 | 40.7 | 365.5 | 356.0 | 50.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 21638 | TREE | 411.3 | 33.3 | 377.9 | 370.2 | 41.0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 21639 | TREE | 407.7 | 25.9 | 381.8 | 374.6 | 33.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 21640 | TREE | 426.5 | 35.6 | 390.9 | 383.1 | 43.4 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 21642 | TREE | 437.9 | 37.9 | 400.0 | 396.8 | 41.1 | N/A | N/A | N/A | N/A | N/A | N/A | 439.8 | -1.9 | TRIM/REMOVE |
| 21646 | TREE | 452.8 | 86.6 | 366.1 | 435.0 | 17.8 | 525.9 | -73.2 | N/A | N/A | N/A | N/A | 478.1 | -25.3 | TRIM/REMOVE |
| 21648 | TREE | 455.6 | 62.4 | 393.3 | 429.1 | 26.5 | 516.0 | -60.4 | N/A | N/A | N/A | N/A | 472.1 | -16.5 | TRIM/REMOVE |
| 21659 | TREE | 417.8 | 42.4 | 375.4 | 366.6 | 51.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 21663 | TREE | 447.9 | 47.9 | 400.0 | 440.7 | 7.2 | 535.7 | -87.8 | N/A | N/A | N/A | N/A | 485.2 | -37.3 | TRIM/REMOVE |
| 21665 | TREE | 469.4 | 100.6 | 368.8 | 443.1 | 26.3 | 539.7 | -70.3 | N/A | N/A | N/A | N/A | 486.9 | -17.5 | TRIM/REMOVE |
| 21666 | TREE | 451.0 | 51.0 | 400.0 | 444.2 | 6.8 | 541.7 | -90.7 | N/A | N/A | N/A | N/A | 488.6 | -37.6 | TRIM/REMOVE |
| 21667 | TREE | 450.9 | 50.9 | 400.0 | 435.6 | 15.3 | 527.0 | -76.1 | N/A | N/A | N/A | N/A | 479.6 | -28.7 | TRIM/REMOVE |
| 21668 | TREE | 457.9 | 57.9 | 400.0 | 430.3 | 27.6 | 517.9 | -60.1 | N/A | N/A | N/A | N/A | 473.8 | -15.9 | TRIM/REMOVE |
| 21669 | TREE | 457.5 | 66.7 | 390.8 | 440.7 | 16.8 | 535.7 | -78.2 | N/A | N/A | N/A | N/A | 484.7 | -27.2 | TRIM/REMOVE |
| 21670 | TREE | 445.9 | 54.5 | 391.3 | 423.7 | 22.2 | 506.8 | -60.9 | N/A | N/A | N/A | N/A | 467.0 | -21.2 | TRIM/REMOVE |
| 21674 | PRIMARY ROAD | 412.2 | 15.0 | 397.2 | 402.4 | 9.9 | N/A | N/A | N/A | N/A | N/A | N/A | 445.3 | -33.0 | NO ACTION |
| 21680 | POWER TRANSMISSION POLE | 423.4 | 42.1 | 381.3 | 408.2 | 15.1 | 480.5 | -57.2 | N/A | N/A | N/A | N/A | 450.1 | -26.7 | MARK/LIGHT |
| 21693 | POLE | 431.3 | 43.2 | 388.1 | 411.0 | 20.3 | 485.2 | -53.9 | N/A | N/A | N/A | N/A | 453.0 | -21.7 | MARK/LIGHT |
| 21847 | TREE | 426.3 | 53.7 | 372.6 | 414.1 | 12.2 | N/A | N/A | N/A | N/A | N/A | N/A | 457.9 | -31.6 | TRIM/REMOVE |
| 21970 | POWER TRANSMISSION POLE | 432.2 | 32.0 | 400.3 | 397.6 | 34.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | MARK/LIGHT |
| 21971 | POWER TRANSMISSION POLE | 429.3 | 32.8 | 396.5 | 400.3 | 29.0 | N/A | N/A | N/A | N/A | N/A | N/A | 443.1 | -13.8 | MARK/LIGHT |
| 21972 | POWER TRANSMISSION POLE | 428.1 | 35.9 | 392.2 | 403.0 | 25.1 | 471.7 | -43.5 | N/A | N/A | N/A | N/A | 445.5 | -17.4 | MARK/LIGHT |
| 21973 | POWER TRANSMISSION POLE | 432.0 | 45.2 | 386.8 | 406.2 | 25.9 | 477.0 | -45.0 | N/A | N/A | N/A | N/A | 448.3 | -16.3 | MARK/LIGHT |
| 21974 | POWER TRANSMISSION POLE | 427.9 | 43.5 | 384.3 | 407.4 | 20.5 | 479.1 | -51.2 | N/A | N/A | N/A | N/A | 449.4 | -21.5 | MARK/LIGHT |
| 21999 | GROUND | 325.8 | N/A | 325.8 | 311.7 | 14.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | NO ACTION |
| 22001 | GROUND | 334.9 | N/A | 334.9 | 317.4 | 17.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | NO ACTION |
| 22002 | GROUND | 344.3 | N/A | 344.3 | 322.8 | 21.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | NO ACTION |
| 22011 | TREE | 377.8 | 20.8 | 357.0 | 345.7 | 32.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 22061 | TREE | 433.4 | 36.1 | 397.3 | 392.4 | 41.0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 22063 | TREE | 415.6 | 22.8 | 392.8 | 388.4 | 27.2 | N/A | N/A | N/A | N/A | N/A | N/A | 431.0 | -15.4 | TRIM/REMOVE |
| 22066 | TREE | 455.6 | 55.6 | 400.0 | 411.4 | 44.3 | 485.8 | -30.2 | N/A | N/A | N/A | N/A | 454.0 | 1.6 | TRIM/REMOVE |

NOTES:

1. HORIZONTAL DATUM NAD83 (MA11), VERTICAL DATUM GUVD04 (GEOID 12B). DRAWING PREPARED IN UTM ZONE 55 NORTH (US FOOT) COORDINATE SYSTEM.
2. MAGNETIC DECLINATION OBTAINED ONLINE AT HTTP://WWW.NGDC.NOAA.GOV/GEOMAG-WEB/#DECLINATION.
3. ALL LOCAL ZONING AND AIRSPACE PROTECTION IS GOVERNED BY THE SUPREME COURT OF GUAM, COMPILER OF LAWS, TITLE 21 - REAL PROPERTY, CHAPTER 61 - ZONING LAW.
4. OBSTACLES WERE EVALUATED USING 2022 AIRPORT AIRSPACE ANALYSIS OBSTRUCTION SURVEY DATA.
5. FOR CLARITY, ONLY CRITICAL OBSTRUCTIONS, DEFINED AS THE HIGHEST OBSTRUCTION WITHIN A 100' x 100' GRID, ARE SHOWN. CRITICAL OBJECT CRITERIA ARE DERIVED FROM ADVISORY CIRCULAR 150/5300-18B, *GENERAL GUIDANCE AND SPECIFICATIONS FOR SUBMISSION OF AERONAUTICAL SURVEYS TO NGS: FIELD DATA COLLECTION AND GEOGRAPHIC INFORMATION SYSTEM (GIS) STANDARDS*, SECTION 2.7.1.6.
6. ANY TEMPORARY OR PERMANENT STRUCTURE, INCLUDING ALL APPURTENANCES, THAT EXCEED AN OVERALL HEIGHT OF 200 FEET (61M) ABOVE GROUND LEVEL (AGL) OR EXCEEDS ANY OBSTRUCTION STANDARD CONTAINED IN 14 CFR PART 77, SHOULD BE MARKED AND/OR LIGHTED PER ADVISORY CIRCULAR 70/7460-1.
7. AS PER FAR PART-77.17(B), APPROACH SURFACE CLEARANCES ARE BASED ON TRAVERSE WAY ELEVATIONS PLUS THE TRAVERSE WAY ADJUSTMENT (23' FOR RAILWAYS, 17' FOR INTERSTATE HIGHWAYS, 15' FOR OTHER PUBLIC ROADS, OR 10' FOR PRIVATE ROADS).
8. THE LIMITS OF THE INNER APPROACH SURFACE OBSTRUCTION ANALYSES ARE TO A POINT 100' ABOVE THE RUNWAY THRESHOLD ELEVATION WITHIN THE 14 CFR PART 77 APPROACH SURFACE.
9. EXISTING ON-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2022 AIRPORT AIRSPACE ANALYSIS SURVEY DATA. OFF-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2013 COASTAL AND MARINE SPATIAL PLANNING DATA FROM THE NAVAL POSTGRADUATE SCHOOL, DEPARTMENT OF OCEANOGRAPHY (HTTPS://WWW.OC.NPS.EDU/CMSP/GUAM).
10. ALL ELEVATIONS ARE IN FEET.
11. WHERE OBJECTS DO NOT FALL WITHIN THE LATERAL EXTENTS OF A GIVEN SURFACE, SURFACE ELEVATION AND SURFACE PENETRATION FIELDS ARE ASSIGNED A VALUE OF "N/A".
12. ACCORDING TO FAA AC 150/5300-13B, *AIRPORT DESIGN*, ALL OBSTACLE FREE ZONE (OFZ) SURFACES MUST REMAIN CLEAR OF OBJECTS, EXCEPT FOR FRANGIBLE NAVAIDS. IDENTIFIED OFZ PENETRATIONS FOR THIS RUNWAY REQUIRE FURTHER EVALUATION FOR WAYS OF COMPLYING WITH FAA OFZ CLEARING STANDARDS.

| NO. | REVISIONS | BY | APP. | DATE | NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

MAGNETIC DECLINATION = 9°23' (9.4°) EAST (JANUARY 2022)
ANNUAL RATE OF CHANGE: 0°1' (0.017') WEST / YEAR

PREPARED FOR
A. B. WON PAT INTERNATIONAL AIRPORT GUAM
A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM
AECOM

FUTURE RUNWAY 24R
INNER PORTION OF THE APPROACH SURFACE
DATA TABLES - D

ANTONIO B. WON PAT
INTERNATIONAL AIRPORT

DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WBS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 06/23
SHEET: 27 OF 51

**Figure H-28. Future Runway 24R Inner Portion of the Approach Surface Data Tables – D**

Source: AECOM

**RUNWAY 24R - FUTURE APPROACH SURFACE OBSTRUCTIONS**

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | PART 77 | | TSS TYPE 5 | | TSS TYPE 6 | | OFZ | | PAPI OCS | | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MSL | AGL | | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | |
| 22074 | SIGN | 303.7 | 3.2 | 300.4 | N/A | N/A | N/A | N/A | N/A | N/A | 374.0 | -70.3 | N/A | N/A | NO ACTION |
| 22075 | SIGN | 278.8 | 3.4 | 275.4 | N/A | N/A | N/A | N/A | N/A | N/A | 413.9 | -135.2 | N/A | N/A | NO ACTION |
| 22084 | WINDSOCK | 306.2 | 10.2 | 296.0 | N/A | N/A | N/A | N/A | N/A | N/A | 365.8 | -59.6 | N/A | N/A | NO ACTION |
| 22108 | GROUND | 340.3 | N/A | 340.3 | 336.7 | 3.7 | 358.8 | -18.5 | N/A | N/A | N/A | N/A | 376.0 | -35.6 | NO ACTION |
| 22109 | GROUND | 341.0 | N/A | 341.0 | 332.0 | 9.1 | N/A | N/A | N/A | N/A | N/A | N/A | 371.4 | -30.3 | NO ACTION |
| 22116 | GROUND | 385.2 | N/A | 385.2 | 383.2 | 2.0 | N/A | N/A | N/A | N/A | N/A | N/A | 425.0 | -39.8 | NO ACTION |
| 22117 | GROUND | 382.8 | N/A | 382.8 | 377.3 | 5.4 | N/A | N/A | N/A | N/A | N/A | N/A | 418.9 | -36.1 | NO ACTION |
| 22118 | GROUND | 380.6 | N/A | 380.6 | 371.5 | 9.1 | N/A | N/A | N/A | N/A | N/A | N/A | 412.9 | -32.2 | NO ACTION |
| 22119 | GROUND | 377.3 | N/A | 377.3 | 365.5 | 11.8 | N/A | N/A | N/A | N/A | N/A | N/A | 406.6 | -29.3 | NO ACTION |
| 22121 | GROUND | 369.6 | N/A | 369.8 | 353.6 | 16.0 | N/A | N/A | N/A | N/A | N/A | N/A | 394.2 | -24.6 | NO ACTION |
| 22122 | GROUND | 363.1 | N/A | 363.1 | 347.7 | 15.4 | N/A | N/A | N/A | N/A | N/A | N/A | 388.0 | -24.9 | NO ACTION |
| 22123 | GROUND | 357.9 | N/A | 357.9 | 342.3 | 15.6 | N/A | N/A | N/A | N/A | N/A | N/A | 382.3 | -24.4 | NO ACTION |
| 22124 | GROUND | 354.0 | N/A | 354.0 | 336.4 | 17.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | NO ACTION |
| 22126 | GROUND | 362.8 | N/A | 362.8 | 359.6 | 3.2 | 397.8 | -35.0 | N/A | N/A | N/A | N/A | 399.8 | -37.1 | NO ACTION |
| 22127 | GROUND | 368.3 | N/A | 368.3 | 365.5 | 2.8 | 407.8 | -39.5 | N/A | N/A | N/A | N/A | 406.0 | -37.7 | NO ACTION |
| 22128 | GROUND | 373.3 | N/A | 373.3 | 371.5 | 1.8 | 418.1 | -44.8 | N/A | N/A | N/A | N/A | 412.3 | -39.0 | NO ACTION |
| 22129 | GROUND | 378.3 | N/A | 378.3 | 377.5 | 0.8 | 428.3 | -50.0 | N/A | N/A | N/A | N/A | 418.5 | -40.2 | NO ACTION |
| 22131 | TREE | 458.1 | 58.1 | 400.0 | 450.9 | 7.1 | 553.1 | -95.0 | N/A | N/A | N/A | N/A | 495.2 | -37.1 | TRIM/REMOVE |
| 22135 | TREE | 446.8 | 46.8 | 400.0 | 427.8 | 19.0 | 513.8 | -67.0 | N/A | N/A | N/A | N/A | 471.1 | -24.3 | TRIM/REMOVE |
| 22216 | SIGN | 285.4 | 3.0 | 282.4 | N/A | N/A | N/A | N/A | N/A | N/A | 354.2 | -68.8 | N/A | N/A | NO ACTION |
| 22297 | TREE | 381.1 | 21.9 | 359.2 | 348.5 | 32.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 22310 | TREE | 405.3 | 32.9 | 372.4 | 363.2 | 42.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 22313 | TREE | 398.0 | 25.9 | 372.1 | 364.4 | 33.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 22358 | GROUND | 358.0 | N/A | 358.0 | 354.1 | 3.9 | 388.4 | -30.4 | N/A | N/A | N/A | N/A | 394.1 | -36.1 | NO ACTION |
| 22369 | TREE | 400.9 | 22.4 | 378.5 | 372.0 | 28.9 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 22391 | TREE | 412.4 | 21.1 | 391.4 | 384.7 | 27.8 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 22392 | TREE | 416.9 | 22.7 | 394.2 | 389.1 | 27.8 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 22409 | TREE | 416.3 | 16.3 | 400.0 | 408.6 | 7.8 | 481.1 | -64.7 | N/A | N/A | N/A | N/A | 451.2 | -34.9 | TRIM/REMOVE |
| 22422 | TREE | 437.9 | 37.9 | 400.0 | 422.3 | 15.6 | 504.3 | -66.4 | N/A | N/A | N/A | N/A | 465.2 | -27.3 | TRIM/REMOVE |
| 22538 | FENCE | 408.5 | 7.1 | 401.4 | 404.5 | 4.0 | N/A | N/A | N/A | N/A | N/A | N/A | 447.5 | -39.0 | NO ACTION |
| 22836 | GROUND | 332.2 | N/A | 332.2 | 314.7 | 17.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | NO ACTION |
| 22842 | GROUND | 348.0 | N/A | 348.0 | 326.6 | 21.4 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | NO ACTION |
| 22844 | GROUND | 358.7 | N/A | 358.7 | 340.1 | 18.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | NO ACTION |
| 22845 | GROUND | 356.1 | N/A | 356.1 | 339.3 | 16.7 | N/A | N/A | N/A | N/A | N/A | N/A | 379.3 | -23.3 | NO ACTION |
| 22846 | GROUND | 343.7 | N/A | 343.7 | 339.2 | 4.5 | N/A | N/A | N/A | N/A | N/A | N/A | 378.8 | -35.1 | NO ACTION |
| 22848 | GROUND | 362.5 | N/A | 362.5 | 344.0 | 18.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | NO ACTION |
| 22849 | GROUND | 367.0 | N/A | 367.0 | 350.1 | 16.9 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | NO ACTION |
| 22851 | GROUND | 354.0 | N/A | 354.0 | 349.8 | 4.3 | 381.1 | -27.1 | N/A | N/A | N/A | N/A | 389.7 | -35.7 | NO ACTION |
| 22852 | GROUND | 350.0 | N/A | 350.0 | 345.7 | 4.3 | N/A | N/A | N/A | N/A | N/A | N/A | 385.5 | -35.5 | NO ACTION |
| 22853 | GROUND | 357.8 | N/A | 357.8 | 357.1 | 0.8 | 393.5 | -35.7 | N/A | N/A | N/A | N/A | 397.0 | -39.2 | NO ACTION |
| 22854 | GROUND | 361.5 | N/A | 361.5 | 356.9 | 4.6 | 393.2 | -31.7 | N/A | N/A | N/A | N/A | 397.1 | -35.7 | NO ACTION |
| 22855 | GROUND | 372.1 | N/A | 372.1 | 356.7 | 15.4 | N/A | N/A | N/A | N/A | N/A | N/A | 397.4 | -25.3 | NO ACTION |
| 22856 | GROUND | 375.1 | N/A | 375.1 | 362.1 | 13.0 | N/A | N/A | N/A | N/A | N/A | N/A | 403.1 | -28.0 | NO ACTION |
| 22857 | GROUND | 366.3 | N/A | 366.3 | 362.4 | 3.9 | 402.5 | -36.2 | N/A | N/A | N/A | N/A | 402.9 | -36.6 | NO ACTION |
| 22858 | GROUND | 363.4 | N/A | 363.4 | 362.6 | 0.7 | 403.0 | -39.6 | N/A | N/A | N/A | N/A | 402.8 | -39.4 | NO ACTION |
| 22860 | GROUND | 370.7 | N/A | 370.7 | 368.2 | 2.5 | 412.4 | -41.7 | N/A | N/A | N/A | N/A | 408.9 | -38.2 | NO ACTION |
| 22862 | GROUND | 375.9 | N/A | 375.9 | 360.1 | 15.8 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | NO ACTION |
| 22864 | GROUND | 379.9 | N/A | 379.9 | 366.8 | 13.1 | N/A | N/A | N/A | N/A | N/A | N/A | 408.3 | -28.4 | NO ACTION |
| 22867 | GROUND | 370.3 | N/A | 370.3 | 353.6 | 16.8 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | NO ACTION |
| 22869 | GROUND | 385.1 | N/A | 385.1 | 374.2 | 10.9 | N/A | N/A | N/A | N/A | N/A | N/A | 415.9 | -30.8 | NO ACTION |
| 22870 | GROUND | 377.5 | N/A | 377.5 | 374.2 | 3.3 | 422.7 | -45.2 | N/A | N/A | N/A | N/A | 415.4 | -37.9 | NO ACTION |
| 22871 | GROUND | 375.4 | N/A | 375.4 | 374.5 | 0.9 | 423.1 | -47.7 | N/A | N/A | N/A | N/A | 415.3 | -39.9 | NO ACTION |
| 22890 | GROUND | 382.1 | N/A | 382.1 | 380.4 | 1.7 | 433.2 | -51.1 | N/A | N/A | N/A | N/A | 421.9 | -39.8 | NO ACTION |
| 22891 | GROUND | 380.7 | N/A | 380.7 | 380.6 | 0.1 | 433.4 | -52.8 | N/A | N/A | N/A | N/A | 421.6 | -41.0 | NO ACTION |

**RUNWAY 24R - FUTURE TRAVERSE WAY DATA**

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | PART 77 | | TSS TYPE 5 | | TSS TYPE 6 | | OFZ | | PAPI OCS | | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MSL | AGL | | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | |
| Z-1 | AIRPORT SERVICE RD | 360.0 | 10.0 | 350.0 | 393.6 | -33.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | NO ACTION |
| Z-3 | AIRPORT SERVICE RD | 390.9 | 10.0 | 380.9 | 406.3 | -15.3 | 477.2 | -86.2 | 426.4 | -35.5 | N/A | N/A | 447.6 | -56.6 | NO ACTION |
| Z-5 | AIRPORT SERVICE RD | 359.4 | 10.0 | 349.4 | 324.7 | 34.8 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | NO ACTION |
| Z-22 | ARMY DR | 367.0 | 17.0 | 350.0 | 407.1 | -40.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | NO ACTION |
| Z-49 | UNKNOWN | 433.3 | 15.0 | 418.3 | 452.3 | -18.9 | N/A | N/A | N/A | N/A | N/A | N/A | 498.2 | -64.9 | NO ACTION |
| Z-50 | UNKNOWN | 427.0 | 15.0 | 412.0 | 449.8 | -22.8 | N/A | N/A | N/A | N/A | N/A | N/A | 495.7 | -68.6 | NO ACTION |
| Z-52 | ARMY DR | 417.0 | 17.0 | 400.0 | 397.8 | 19.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | NO ACTION |
| Z-128 | ARMY DR | 392.9 | 17.0 | 375.9 | 410.5 | -17.6 | 484.3 | -91.5 | 431.2 | -38.4 | N/A | N/A | 451.9 | -59.1 | NO ACTION |
| Z-129 | AIRPORT SERVICE RD | 352.3 | 10.0 | 342.3 | 333.6 | 18.7 | 353.6 | -1.4 | 344.1 | 8.2 | N/A | N/A | 372.1 | -19.8 | NO ACTION |
| Z-130 | AIRPORT SERVICE RD | 355.9 | 10.0 | 345.9 | 321.5 | 34.4 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | NO ACTION |
| Z-131 | AIRPORT SERVICE RD | 360.0 | 10.0 | 350.0 | 346.4 | 13.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | NO ACTION |
| Z-132 | AIRPORT SERVICE RD | 338.4 | 10.0 | 328.4 | 328.7 | 9.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | NO ACTION |
| Z-133 | AIRPORT SERVICE RD | 314.5 | 10.0 | 304.5 | 309.6 | 5.0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | NO ACTION |

NOTES:

1. HORIZONTAL DATUM NAD83 (MA11), VERTICAL DATUM GUVD04 (GEOID 12B). DRAWING PREPARED IN UTM ZONE 55 NORTH (US FOOT) COORDINATE SYSTEM.
2. MAGNETIC DECLINATION OBTAINED ONLINE AT HTTP://WWW.NGDC.NOAA.GOV/GEOMAG-WEB/#DECLINATION.
3. ALL LOCAL ZONING AND AIRSPACE PROTECTION IS GOVERNED BY THE SUPREME COURT OF GUAM, COMPILER OF LAWS, TITLE 21 - REAL PROPERTY, CHAPTER 61 - ZONING LAW.
4. OBSTACLES WERE EVALUATED USING 2022 AIRPORT AIRSPACE ANALYSIS OBSTRUCTION SURVEY DATA.
5. FOR CLARITY, ONLY CRITICAL OBSTRUCTIONS, DEFINED AS THE HIGHEST OBSTRUCTION WITHIN A 100' x 100' GRID, ARE SHOWN. CRITICAL OBJECT CRITERIA ARE DERIVED FROM ADVISORY CIRCULAR 150/5300-18B, *GENERAL GUIDANCE AND SPECIFICATIONS FOR SUBMISSION OF AERONAUTICAL SURVEYS TO NGS: FIELD DATA COLLECTION AND GEOGRAPHIC INFORMATION SYSTEM (GIS) STANDARDS*, SECTION 2.7.1.6.
6. ANY TEMPORARY OR PERMANENT STRUCTURE, INCLUDING ALL APPURTENANCES, THAT EXCEED AN OVERALL HEIGHT OF 200 FEET (61M) ABOVE GROUND LEVEL (AGL) OR EXCEEDS ANY OBSTRUCTION STANDARD CONTAINED IN 14 CFR PART 77, SHOULD BE MARKED AND/OR LIGHTED PER ADVISORY CIRCULAR 70/7460-1.
7. AS PER FAR PART-77.17(B), APPROACH SURFACE CLEARANCES ARE BASED ON TRAVERSE WAY ELEVATIONS PLUS THE TRAVERSE WAY ADJUSTMENT (23' FOR RAILWAYS, 17' FOR INTERSTATE HIGHWAYS, 15' FOR OTHER PUBLIC ROADS, OR 10' FOR PRIVATE ROADS).
8. THE LIMITS OF THE INNER APPROACH SURFACE OBSTRUCTION ANALYSES ARE TO A POINT 100' ABOVE THE RUNWAY THRESHOLD ELEVATION WITHIN THE 14 CFR PART 77 APPROACH SURFACE.
9. EXISTING ON-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2022 AIRPORT AIRSPACE ANALYSIS SURVEY DATA. OFF-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2013 COASTAL AND MARINE SPATIAL PLANNING DATA FROM THE NAVAL POSTGRADUATE SCHOOL, DEPARTMENT OF OCEANOGRAPHY (HTTPS://WWW.OC.NPS.EDU/CMSP/GUAM).
10. ALL ELEVATIONS ARE IN FEET.
11. WHERE OBJECTS DO NOT FALL WITHIN THE LATERAL EXTENTS OF A GIVEN SURFACE, SURFACE ELEVATION AND SURFACE PENETRATION FIELDS ARE ASSIGNED A VALUE OF "N/A".
12. ACCORDING TO FAA AC 150/5300-13B, *AIRPORT DESIGN*, ALL OBSTACLE FREE ZONE (OFZ) SURFACES MUST REMAIN CLEAR OF OBJECTS, EXCEPT FOR FRANGIBLE NAVAIDS. IDENTIFIED OFZ PENETRATIONS FOR THIS RUNWAY REQUIRE FURTHER EVALUATION FOR WAYS OF COMPLYING WITH FAA OFZ CLEARING STANDARDS.

| NO. | REVISIONS | BY | APP. | DATE | NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

MAGNETIC DECLINATION = 9°23' (9.4°) EAST (JANUARY 2023)
ANNUAL RATE OF CHANGE: 0°1' (0.017°) WEST / YEAR

PREPARED FOR
A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM
AECOM

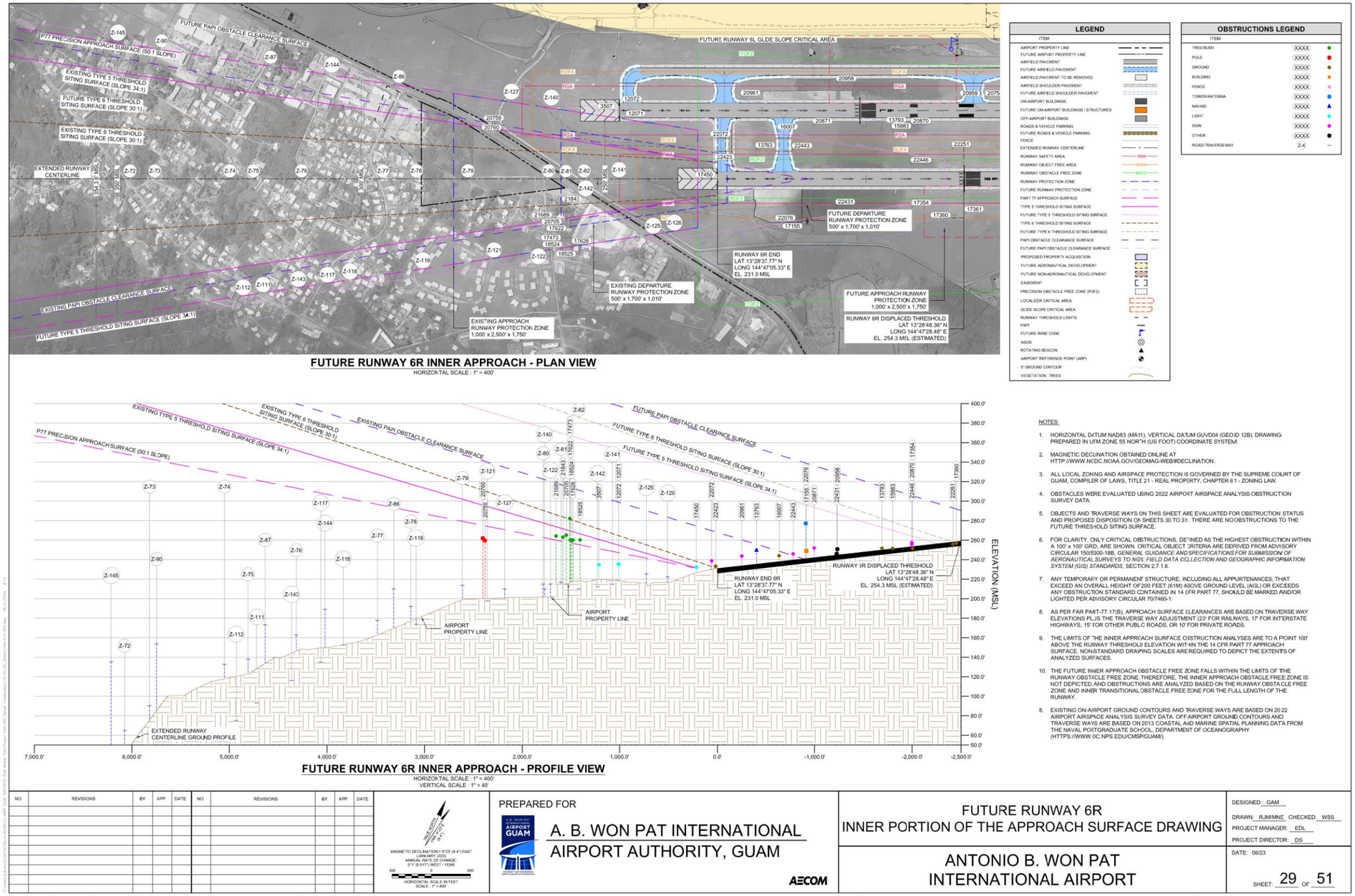
FUTURE RUNWAY 24R
INNER PORTION OF THE APPROACH SURFACE
DATA TABLES - E

ANTONIO B. WON PAT INTERNATIONAL AIRPORT

DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WBS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 06/23
SHEET: 28 OF 51

**Figure H-29. Future Runway 24R Inner Portion of the Approach Surface Data Tables – E**

Source: AECOM




## FUTURE RUNWAY 6R INNER APPROACH - PLAN VIEW

HORIZONTAL SCALE : 1" = 400'




## FUTURE RUNWAY 6R INNER APPROACH - PROFILE VIEW

HORIZONTAL SCALE : 1" = 400'
VERTICAL SCALE : 1" = 40'

NOTES:

1. HORIZONTAL DATUM NAD83 (MA11), VERTICAL DATUM GUVD04 (GEOID 12B). DRAWING PREPARED IN UTM ZONE 55 NORTH (US FOOT) COORDINATE SYSTEM.
2. MAGNETIC DECLINATION OBTAINED ONLINE AT HTTP://WWW.NCDC.NOAA.GOV/GEOMAG-WEB/#DECLINATION.
3. ALL LOCAL ZONING AND AIRSPACE PROTECTION IS GOVERNED BY THE SUPREME COURT OF GUAM, COMPILER OF LAWS, TITLE 21 - REAL PROPERTY, CHAPTER 61 - ZONING LAW.
4. OBSTACLES WERE EVALUATED USING 2022 AIRPORT AIRSPACE ANALYSIS OBSTRUCTION SURVEY DATA.
5. OBJECTS AND TRAVERSE WAYS ON THIS SHEET ARE EVALUATED FOR OBSTRUCTION STATUS AND PROPOSED DISPOSITION ON SHEETS 30 TO 31. THERE ARE NO OBSTRUCTIONS TO THE FUTURE THRESHOLD SITING SURFACE.
6. FOR CLARITY, ONLY CRITICAL OBSTRUCTIONS, DEFINED AS THE HIGHEST OBSTRUCTION WITHIN A 100' x 100' GRID, ARE SHOWN. CRITICAL OBJECT CRITERIA ARE DERIVED FROM ADVISORY CIRCULAR 150/5300-18B, *GENERAL GUIDANCE AND SPECIFICATIONS FOR SUBMISSION OF AERONAUTICAL SURVEYS TO NGS: FIELD DATA COLLECTION AND GEOGRAPHIC INFORMATION SYSTEM (GIS) STANDARDS*, SECTION 2.7.1.6.
7. ANY TEMPORARY OR PERMANENT STRUCTURE, INCLUDING ALL APPURTENANCES, THAT EXCEED AN OVERALL HEIGHT OF 200 FEET (61M) ABOVE GROUND LEVEL (AGL) OR EXCEEDS ANY OBSTRUCTION STANDARD CONTAINED IN 14 CFR PART 77, SHOULD BE MARKED AND/OR LIGHTED PER ADVISORY CIRCULAR 70/7460-1.
8. AS PER FAR PART-77.17(B), APPROACH SURFACE CLEARANCES ARE BASED ON TRAVERSE WAY ELEVATIONS PLUS THE TRAVERSE WAY ADJUSTMENT (23' FOR RAILWAYS, 17' FOR INTERSTATE HIGHWAYS, 15' FOR OTHER PUBLIC ROADS, OR 10' FOR PRIVATE ROADS.
9. THE LIMITS OF THE INNER APPROACH SURFACE OBSTRUCTION ANALYSES ARE TO A POINT 100' ABOVE THE RUNWAY THRESHOLD ELEVATION WITHIN THE 14 CFR PART 77 APPROACH SURFACE. NON-STANDARD DRAWING SCALES ARE REQUIRED TO DEPICT THE EXTENTS OF ANALYZED SURFACES.
10. THE FUTURE INNER APPROACH OBSTACLE FREE ZONE FALLS WITHIN THE LIMITS OF THE RUNWAY OBSTACLE FREE ZONE. THEREFORE, THE INNER APPROACH OBSTACLE FREE ZONE IS NOT DEPICTED AND OBSTRUCTIONS ARE ANALYZED BASED ON THE RUNWAY OBSTACLE FREE ZONE AND INNER TRANSITIONAL OBSTACLE FREE ZONE FOR THE FULL LENGTH OF THE RUNWAY.
8. EXISTING ON-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2022 AIRPORT AIRSPACE ANALYSIS SURVEY DATA. OFF-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2013 COASTAL AND MARINE SPATIAL PLANNING DATA FROM THE NAVAL POSTGRADUATE SCHOOL, DEPARTMENT OF OCEANOGRAPHY (HTTPS://WWW.OC.NPS.EDU/CMSP/GUAM/).

| NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|

MAGNETIC DECLINATION = 9°23' (9.4°) EAST
(JANUARY 2023)
ANNUAL RATE OF CHANGE:
0°1' (0.017°) WEST / YEAR

HORIZONTAL SCALE IN FEET
SCALE : 1" = 400'

PREPARED FOR
A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM

AECOM

FUTURE RUNWAY 6R
INNER PORTION OF THE APPROACH SURFACE DRAWING

ANTONIO B. WON PAT INTERNATIONAL AIRPORT

DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WSS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 08/23
SHEET: 29 OF 51

**Figure H-30. Future Runway 6R Inner Portion of the Approach Surface Drawing**

Source: AECOM

**RUNWAY 6R - FUTURE APPROACH SURFACE OBSTRUCTIONS**

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | PART 77 | | TSS TYPE 5 | | TSS TYPE 6 | | OFZ | | PAPI OCS | | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MSL | AGL | | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | |
| 3507 | RUNWAY LIGHT | 234.8 | 4.4 | 230.3 | N/A | N/A | 358.4 | -123.7 | N/A | N/A | N/A | N/A | 405.3 | -170.6 | NO ACTION |
| 12071 | RUNWAY LIGHT | 235.1 | 1.6 | 233.5 | N/A | N/A | 352.5 | -117.4 | N/A | N/A | N/A | N/A | 399.1 | -164.0 | NO ACTION |
| 12072 | RUNWAY LIGHT | 235.8 | 2.0 | 233.7 | N/A | N/A | 352.5 | -116.8 | N/A | N/A | N/A | N/A | 399.3 | -163.5 | NO ACTION |
| 13763 | WINDSOCK | 249.5 | 10.1 | 239.4 | N/A | N/A | 311.0 | -61.5 | N/A | N/A | 292.4 | -42.8 | 354.9 | -105.4 | NO ACTION |
| 13793 | GROUND | 251.7 | N/A | 251.7 | N/A | N/A | N/A | N/A | N/A | N/A | 337.5 | -85.9 | N/A | N/A | NO ACTION |
| 13817 | GROUND | 261.8 | N/A | 261.8 | N/A | N/A | N/A | N/A | N/A | N/A | 302.7 | -40.9 | N/A | N/A | NO ACTION |
| 13834 | SIGN | 263.0 | 3.6 | 259.4 | N/A | N/A | N/A | N/A | N/A | N/A | 435.5 | -172.4 | N/A | N/A | NO ACTION |
| 13835 | GROUND | 267.5 | N/A | 267.5 | N/A | N/A | N/A | N/A | N/A | N/A | 308.8 | -41.4 | N/A | N/A | NO ACTION |
| 15983 | GROUND | 251.5 | N/A | 251.5 | N/A | N/A | N/A | N/A | N/A | N/A | 338.3 | -86.8 | N/A | N/A | NO ACTION |
| 16007 | GROUND | 244.0 | N/A | 244.0 | N/A | N/A | N/A | N/A | N/A | N/A | 326.2 | -82.2 | 348.7 | -104.6 | NO ACTION |
| 17155 | BUILDING | 249.1 | 13.0 | 236.1 | N/A | N/A | N/A | N/A | N/A | N/A | 317.4 | -68.3 | 339.8 | -90.8 | NO ACTION |
| 17301 | GROUND | 259.4 | N/A | 259.4 | N/A | N/A | N/A | N/A | N/A | N/A | 312.8 | -53.4 | N/A | N/A | NO ACTION |
| 17354 | GROUND | 251.4 | N/A | 251.4 | N/A | N/A | N/A | N/A | N/A | N/A | 304.7 | -53.3 | N/A | N/A | NO ACTION |
| 17360 | GROUND | 257.0 | N/A | 257.0 | N/A | N/A | N/A | N/A | N/A | N/A | 322.1 | -65.2 | N/A | N/A | NO ACTION |
| 17361 | GROUND | 256.4 | N/A | 256.4 | N/A | N/A | N/A | N/A | N/A | N/A | 320.2 | -63.9 | N/A | N/A | NO ACTION |
| 17450 | RUNWAY LIGHT | 232.3 | 5.7 | 226.6 | 231.3 | 1.0 | 329.1 | -96.7 | 345.7 | -113.4 | 231.3 | 1.0 | 373.2 | -140.9 | NO ACTION |
| 17473 | TREE | 282.1 | 82.1 | 200.0 | 257.2 | 24.9 | 367.2 | -85.1 | N/A | N/A | N/A | N/A | 414.0 | -131.9 | TRIM/REMOVE |
| 17622 | TREE | 260.0 | 60.0 | 200.0 | 257.1 | 2.9 | 367.1 | -107.0 | 388.8 | -128.7 | N/A | N/A | 413.0 | -153.0 | TRIM/REMOVE |
| 17626 | TREE | 260.1 | 60.1 | 200.0 | 256.6 | 3.5 | 366.3 | -106.2 | N/A | N/A | N/A | N/A | 413.3 | -153.3 | TRIM/REMOVE |
| 18524 | TREE | 259.6 | 59.6 | 200.0 | N/A | N/A | 366.7 | -107.1 | N/A | N/A | N/A | N/A | 413.9 | -154.2 | NO ACTION |
| 18525 | TREE | 260.3 | 60.3 | 200.0 | N/A | N/A | 364.1 | -103.8 | N/A | N/A | N/A | N/A | 411.2 | -150.9 | NO ACTION |
| 20575 | SIGN | 263.7 | 4.8 | 258.9 | N/A | N/A | N/A | N/A | N/A | N/A | 362.0 | -98.3 | N/A | N/A | NO ACTION |
| 20576 | SIGN | 264.8 | 3.9 | 260.9 | N/A | N/A | N/A | N/A | N/A | N/A | 342.3 | -77.5 | N/A | N/A | NO ACTION |
| 20705 | TREE | 265.1 | 65.1 | 200.0 | 258.0 | 7.2 | 368.3 | -103.2 | 390.2 | -125.0 | N/A | N/A | 414.3 | -149.2 | TRIM/REMOVE |
| 20754 | SIGN | 256.8 | 3.4 | 253.4 | N/A | N/A | N/A | N/A | N/A | N/A | 402.0 | -145.2 | N/A | N/A | NO ACTION |
| 20755 | SIGN | 261.3 | 4.8 | 256.4 | N/A | N/A | N/A | N/A | N/A | N/A | 356.5 | -95.3 | N/A | N/A | NO ACTION |
| 20759 | POLE | 259.6 | 48.6 | 211.1 | 274.7 | -15.0 | 392.9 | -133.2 | N/A | N/A | N/A | N/A | 440.4 | -180.8 | NO ACTION |
| 20760 | POLE | 261.9 | 50.8 | 211.1 | 275.1 | -13.2 | 393.5 | -131.6 | N/A | N/A | N/A | N/A | 440.8 | -178.9 | NO ACTION |
| 20870 | SIGN | 257.5 | 5.0 | 252.5 | N/A | N/A | N/A | N/A | N/A | N/A | 348.6 | -91.1 | N/A | N/A | NO ACTION |
| 20871 | SIGN | 251.9 | 3.3 | 248.6 | N/A | N/A | N/A | N/A | N/A | N/A | 339.6 | -87.7 | N/A | N/A | NO ACTION |
| 20958 | UTILITY BOX | 250.8 | 3.7 | 247.1 | N/A | N/A | N/A | N/A | N/A | N/A | 414.2 | -163.4 | N/A | N/A | NO ACTION |
| 20959 | SIGN | 256.1 | 3.3 | 252.8 | N/A | N/A | N/A | N/A | N/A | N/A | 399.9 | -143.8 | N/A | N/A | NO ACTION |
| 20961 | SIGN | 243.7 | 3.0 | 240.7 | N/A | N/A | N/A | N/A | N/A | N/A | 380.1 | -136.4 | N/A | N/A | NO ACTION |
| 21043 | SIGN | 269.4 | 5.1 | 264.4 | N/A | N/A | N/A | N/A | N/A | N/A | 263.3 | 6.1 | N/A | N/A | LOWER/RELOCATE |
| 21049 | SIGN | 268.9 | 3.5 | 265.4 | N/A | N/A | N/A | N/A | N/A | N/A | 320.9 | -51.9 | N/A | N/A | NO ACTION |
| 21689 | TREE | 264.3 | 64.3 | 200.0 | 260.0 | 4.2 | 371.4 | -107.1 | 393.6 | -129.4 | N/A | N/A | 417.5 | -153.2 | TRIM/REMOVE |
| 21843 | TREE | 263.1 | 63.1 | 200.0 | 258.6 | 4.4 | 369.3 | -106.2 | 391.3 | -128.2 | N/A | N/A | 415.2 | -152.1 | TRIM/REMOVE |
| 22072 | SIGN | 238.8 | 3.3 | 235.5 | N/A | N/A | 324.5 | -85.7 | N/A | N/A | 307.3 | -68.5 | 369.3 | -130.5 | NO ACTION |
| 22076 | ANTENNA | 277.2 | 40.8 | 236.4 | N/A | N/A | 296.1 | -18.9 | N/A | N/A | 313.3 | -36.0 | 339.9 | -62.7 | NO ACTION |
| 22081 | SIGN | 263.7 | 4.5 | 259.1 | N/A | N/A | N/A | N/A | N/A | N/A | 257.9 | 5.8 | N/A | N/A | LOWER/RELOCATE |
| 22082 | GROUND | 259.6 | N/A | 259.6 | N/A | N/A | N/A | N/A | N/A | N/A | 312.3 | -52.7 | N/A | N/A | NO ACTION |
| 22251 | GROUND | 255.9 | N/A | 255.9 | N/A | N/A | N/A | N/A | N/A | N/A | 311.9 | -56.1 | N/A | N/A | NO ACTION |
| 22423 | GROUND | 233.3 | N/A | 233.3 | N/A | N/A | 323.3 | -90.0 | 339.2 | -105.9 | 231.0 | 2.3 | 367.4 | -134.1 | NO ACTION |
| 22431 | UTILITY BOX | 246.0 | 3.0 | 243.0 | N/A | N/A | 286.7 | -40.7 | N/A | N/A | 296.3 | -50.3 | 329.8 | -83.8 | NO ACTION |
| 22443 | SIGN | 246.0 | 3.3 | 242.7 | N/A | N/A | 299.9 | -53.9 | N/A | N/A | 295.0 | -49.0 | 343.5 | -97.4 | NO ACTION |
| 22446 | SIGN | 255.7 | 4.0 | 251.6 | N/A | N/A | 264.0 | -8.4 | 272.0 | -16.3 | 250.0 | 5.6 | 305.9 | -50.3 | LOWER/RELOCATE |

NOTES:

1. HORIZONTAL DATUM NAD83 (MA11), VERTICAL DATUM GUVD04 (GEOID 12B). DRAWING PREPARED IN UTM ZONE 55 NORTH (US FOOT) COORDINATE SYSTEM.
2. MAGNETIC DECLINATION OBTAINED ONLINE AT HTTP://WWW.NGDC.NOAA.GOV/GEOMAG-WEB/#DECLINATION.
3. ALL LOCAL ZONING AND AIRSPACE PROTECTION IS GOVERNED BY THE SUPREME COURT OF GUAM, COMPILER OF LAWS, TITLE 21 - REAL PROPERTY, CHAPTER 61 - ZONING LAW.
4. OBSTACLES WERE EVALUATED USING 2022 AIRPORT AIRSPACE ANALYSIS OBSTRUCTION SURVEY DATA.
5. OBJECTS AND TRAVERSE WAYS ON THIS SHEET ARE EVALUATED FOR OBSTRUCTION STATUS AND PROPOSED DISPOSITION. THERE ARE NO OBSTRUCTIONS TO THE FUTURE THRESHOLD SITING SURFACE FOR THIS RUNWAY END.
6. FOR CLARITY, ONLY CRITICAL OBSTRUCTIONS, DEFINED AS THE HIGHEST OBSTRUCTION WITHIN A 100' x 100' GRID, ARE SHOWN. CRITICAL OBJECT CRITERIA ARE DERIVED FROM ADVISORY CIRCULAR 150/5300-18B, *GENERAL GUIDANCE AND SPECIFICATIONS FOR SUBMISSION OF AERONAUTICAL SURVEYS TO NGS: FIELD DATA COLLECTION AND GEOGRAPHIC INFORMATION SYSTEM (GIS) STANDARDS*, SECTION 2.7.1.6.
7. ANY TEMPORARY OR PERMANENT STRUCTURE, INCLUDING ALL APPURTENANCES, THAT EXCEED AN OVERALL HEIGHT OF 200 FEET (61M) ABOVE GROUND LEVEL (AGL) OR EXCEEDS ANY OBSTRUCTION STANDARD CONTAINED IN 14 CFR PART 77, SHOULD BE MARKED AND/OR LIGHTED PER ADVISORY CIRCULAR 70/7460-1.
8. AS PER FAR PART-77.17(B), APPROACH SURFACE CLEARANCES ARE BASED ON TRAVERSE WAY ELEVATIONS PLUS THE TRAVERSE WAY ADJUSTMENT (23' FOR RAILWAYS, 17' FOR INTERSTATE HIGHWAYS, 15' FOR OTHER PUBLIC ROADS, OR 10' FOR PRIVATE ROADS).
9. THE LIMITS OF THE INNER APPROACH SURFACE OBSTRUCTION ANALYSES ARE TO A POINT 100' ABOVE THE RUNWAY THRESHOLD ELEVATION WITHIN THE 14 CFR PART 77 APPROACH SURFACE.
10. EXISTING ON-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2022 AIRPORT AIRSPACE ANALYSIS SURVEY DATA. OFF-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2013 COASTAL AND MARINE SPATIAL PLANNING DATA FROM THE NAVAL POSTGRADUATE SCHOOL, DEPARTMENT OF OCEANOGRAPHY (HTTPS://WWW.OC.NPS.EDU/CMSP/GUAM/).
11. ALL ELEVATIONS ARE IN FEET.
12. WHERE OBJECTS DO NOT FALL WITHIN THE LATERAL EXTENTS OF A GIVEN SURFACE, SURFACE ELEVATION AND SURFACE PENETRATION FIELDS ARE ASSIGNED A VALUE OF "N/A".
13. ACCORDING TO FAA AC 150/5300-13B, *AIRPORT DESIGN*, ALL OBSTACLE FREE ZONE (OFZ) SURFACES MUST REMAIN CLEAR OF OBJECTS, EXCEPT FOR FRANGIBLE NAVAIDS. IDENTIFIED OFZ PENETRATIONS FOR THIS RUNWAY REQUIRE FURTHER EVALUATION FOR WAYS OF COMPLYING WITH FAA OFZ CLEARING STANDARDS.

| NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|

| NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|

TRUE NORTH
MAGNETIC DECLINATION = 9°23' (9.4°) EAST (JANUARY 2023)
ANNUAL RATE OF CHANGE: 0°1' (0.017') WEST / YEAR

PREPARED FOR
A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM
AECOM

FUTURE RUNWAY 6R
INNER PORTION OF THE APPROACH SURFACE
DATA TABLES - A

ANTONIO B. WON PAT
INTERNATIONAL AIRPORT

DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WBS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 06/23
SHEET: 30 OF 51

**Figure H-31. Future Runway 6R Inner Portion of the Approach Surface Data Tables – A**

Source: AECOM

**RUNWAY 6R - FUTURE TRAVERSE WAY DATA**

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | PART 77 | | TSS TYPE 5 | | TSS TYPE 6 | | OFZ | | PAPI OCS | | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MSL | AGL | | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | |
| Z-72 | SGT ROY T DAMIAN JR ST | 65.0 | 15.0 | 50.0 | 348.5 | -283.5 | 478.1 | -413.1 | 541.1 | -476.1 | N/A | N/A | 552.3 | -487.3 | NO ACTION |
| Z-73 | JESUS CAMACHO ST | 90.4 | 15.0 | 75.4 | 343.4 | -253.0 | 470.7 | -380.3 | 532.6 | -442.2 | N/A | N/A | 544.6 | -454.2 | NO ACTION |
| Z-74 | TUBA ST | 132.8 | 15.0 | 117.8 | 328.0 | -195.3 | 448.0 | -315.2 | 506.9 | -374.2 | N/A | N/A | 521.0 | -388.3 | NO ACTION |
| Z-75 | MANIBUSAN ST | 138.0 | 15.0 | 123.0 | 323.2 | -185.1 | 440.9 | -302.9 | 498.9 | -360.8 | N/A | N/A | 513.6 | -375.6 | NO ACTION |
| Z-76 | ROBAT ST | 162.7 | 15.0 | 147.7 | 313.4 | -150.6 | 426.5 | -263.7 | 482.5 | -319.8 | N/A | N/A | 498.6 | -335.9 | NO ACTION |
| Z-77 | CHN R S SANCHEZ | 177.9 | 15.0 | 162.9 | 296.7 | -118.8 | 401.9 | -224.0 | 454.7 | -276.8 | N/A | N/A | 473.1 | -295.3 | NO ACTION |
| Z-78 | E MALATE ST | 192.0 | 15.0 | 177.0 | 289.8 | -97.8 | 391.8 | -199.8 | 443.2 | -251.2 | N/A | N/A | 462.6 | -270.6 | NO ACTION |
| Z-79 | RAMIREZ WY | 213.8 | 15.0 | 198.8 | 279.2 | -65.4 | 376.3 | -162.4 | 425.6 | -211.8 | 279.2 | -65.4 | 446.5 | -232.7 | NO ACTION |
| Z-80 | CANADA TOTO RD | 215.0 | 15.0 | 200.0 | 262.7 | -47.7 | 351.9 | -136.9 | 398.0 | -183.0 | 262.7 | -47.7 | 421.2 | -206.2 | NO ACTION |
| Z-81 | PURPLE HEART MEMORIAL HWY | 217.0 | 17.0 | 200.0 | 259.1 | -42.1 | 346.6 | -129.6 | 392.0 | -175.0 | 259.1 | -42.1 | 415.7 | -198.7 | NO ACTION |
| Z-82 | AIRPORT SERVICE RD | 210.0 | 10.0 | 200.0 | 255.4 | -45.4 | 341.1 | -131.1 | 385.8 | -175.8 | 255.4 | -45.4 | 410.0 | -200.0 | NO ACTION |
| Z-86 | PURPLE HEART MEMORIAL HWY | 210.3 | 17.0 | 193.3 | 293.3 | -83.0 | 396.9 | -186.7 | N/A | N/A | N/A | N/A | 470.1 | -259.8 | NO ACTION |
| Z-87 | PATERNO ST | 173.3 | 15.0 | 158.3 | 319.7 | -146.4 | 435.7 | -262.4 | N/A | N/A | N/A | N/A | 510.8 | -337.5 | NO ACTION |
| Z-90 | BIANG ST | 153.7 | 15.0 | 138.7 | 342.0 | -188.3 | 468.6 | -314.9 | N/A | N/A | N/A | N/A | 545.3 | -391.6 | NO ACTION |
| Z-111 | SGT ROY T DAMIAN JR ST | 93.2 | 15.0 | 78.2 | 321.4 | -228.2 | 438.3 | -345.1 | N/A | N/A | N/A | N/A | 513.5 | -420.3 | NO ACTION |
| Z-112 | TORRES ST | 75.3 | 15.0 | 60.3 | 325.6 | -250.3 | 444.4 | -369.2 | N/A | N/A | N/A | N/A | 520.0 | -444.7 | NO ACTION |
| Z-117 | CHN R S SANCHEZ | 135.0 | 15.0 | 120.0 | 308.3 | -173.3 | 419.0 | -284.0 | N/A | N/A | N/A | N/A | 493.3 | -358.3 | NO ACTION |
| Z-118 | CABAYERO ST | 152.4 | 15.0 | 137.4 | 303.7 | -151.3 | 412.2 | -259.9 | N/A | N/A | N/A | N/A | 486.1 | -333.8 | NO ACTION |
| Z-119 | CALLE DAMIAN ST | 173.8 | 15.0 | 158.8 | 288.7 | -115.0 | 390.3 | -216.5 | N/A | N/A | N/A | N/A | 463.1 | -289.3 | NO ACTION |
| Z-121 | CALLE PAQUITO ST | 197.7 | 15.0 | 182.7 | 274.1 | -76.5 | 368.7 | -171.1 | N/A | N/A | N/A | N/A | 440.5 | -242.8 | NO ACTION |
| Z-122 | CANADA TOTO RD | 215.0 | 15.0 | 200.0 | 261.2 | -46.2 | 349.8 | -134.8 | N/A | N/A | N/A | N/A | 420.5 | -205.5 | NO ACTION |
| Z-125 | PURPLE HEART MEMORIAL HWY | 225.6 | 17.0 | 208.6 | 241.5 | -15.9 | 320.8 | -95.2 | N/A | N/A | N/A | N/A | 390.1 | -164.5 | NO ACTION |
| Z-126 | AIRPORT SERVICE RD | 222.4 | 10.0 | 212.4 | 237.2 | -14.8 | 314.4 | -92.1 | N/A | N/A | N/A | N/A | 383.4 | -161.0 | NO ACTION |
| Z-127 | AIRPORT SERVICE RD | 210.0 | 10.0 | 200.0 | 270.6 | -60.6 | 363.6 | -153.6 | N/A | N/A | N/A | N/A | 435.1 | -225.1 | NO ACTION |
| Z-140 | AIRPORT SERVICE RD | 210.0 | 10.0 | 200.0 | 262.4 | -52.4 | 365.3 | -155.3 | N/A | N/A | N/A | N/A | 422.4 | -212.4 | NO ACTION |
| Z-141 | AIRPORT SERVICE RD | 214.8 | 10.0 | 204.8 | 248.5 | -33.7 | 346.4 | -131.6 | 374.3 | -159.5 | 248.5 | -33.7 | 399.5 | -184.7 | NO ACTION |
| Z-142 | AIRPORT SERVICE RD | 212.2 | 10.0 | 202.2 | 251.5 | -39.3 | 350.5 | -138.3 | 379.4 | -167.2 | 251.5 | -39.3 | 404.1 | -191.9 | NO ACTION |
| Z-143 | ANGA ST | 116.1 | 15.0 | 101.1 | 314.3 | -198.2 | 435.6 | -319.4 | N/A | N/A | N/A | N/A | 502.6 | -386.4 | NO ACTION |
| Z-144 | ROBAT ST | 189.2 | 15.0 | 174.2 | 307.4 | -118.2 | 426.2 | -237.0 | N/A | N/A | N/A | N/A | 491.9 | -302.7 | NO ACTION |
| Z-145 | CAMACHO ST | 135.3 | 15.0 | 120.3 | 351.3 | -215.9 | 485.6 | -350.2 | N/A | N/A | N/A | N/A | 559.6 | -424.3 | NO ACTION |

NOTES:

1. HORIZONTAL DATUM NAD83 (MA11), VERTICAL DATUM GUVD04 (GEOID 12B). DRAWING PREPARED IN UTM ZONE 55 NORTH (US FOOT) COORDINATE SYSTEM.
2. MAGNETIC DECLINATION OBTAINED ONLINE AT HTTP://WWW.NGDC.NOAA.GOV/GEOMAG-WEB/#DECLINATION.
3. ALL LOCAL ZONING AND AIRSPACE PROTECTION IS GOVERNED BY THE SUPREME COURT OF GUAM, COMPILER OF LAWS, TITLE 21 - REAL PROPERTY, CHAPTER 61 - ZONING LAW.
4. OBSTACLES WERE EVALUATED USING 2022 AIRPORT AIRSPACE ANALYSIS OBSTRUCTION SURVEY DATA.
5. OBJECTS AND TRAVERSE WAYS ON THIS SHEET ARE EVALUATED FOR OBSTRUCTION STATUS AND PROPOSED DISPOSITION. THERE ARE NO OBSTRUCTIONS TO THE FUTURE THRESHOLD SITING SURFACE FOR THIS RUNWAY END.
6. FOR CLARITY, ONLY CRITICAL OBSTRUCTIONS, DEFINED AS THE HIGHEST OBSTRUCTION WITHIN A 100' x 100' GRID, ARE SHOWN. CRITICAL OBJECT CRITERIA ARE DERIVED FROM ADVISORY CIRCULAR 150/5300-18B, *GENERAL GUIDANCE AND SPECIFICATIONS FOR SUBMISSION OF AERONAUTICAL SURVEYS TO NGS: FIELD DATA COLLECTION AND GEOGRAPHIC INFORMATION SYSTEM (GIS) STANDARDS*, SECTION 2.7.1.6.
7. ANY TEMPORARY OR PERMANENT STRUCTURE, INCLUDING ALL APPURTENANCES, THAT EXCEED AN OVERALL HEIGHT OF 200 FEET (61M) ABOVE GROUND LEVEL (AGL) OR EXCEEDS ANY OBSTRUCTION STANDARD CONTAINED IN 14 CFR PART 77, SHOULD BE MARKED AND/OR LIGHTED PER ADVISORY CIRCULAR 70/7460-1.
8. AS PER FAR PART-77.17(B), APPROACH SURFACE CLEARANCES ARE BASED ON TRAVERSE WAY ELEVATIONS PLUS THE TRAVERSE WAY ADJUSTMENT (23' FOR RAILWAYS, 17' FOR INTERSTATE HIGHWAYS, 15' FOR OTHER PUBLIC ROADS, OR 10' FOR PRIVATE ROADS).
9. THE LIMITS OF THE INNER APPROACH SURFACE OBSTRUCTION ANALYSES ARE TO A POINT 100' ABOVE THE RUNWAY THRESHOLD ELEVATION WITHIN THE 14 CFR PART 77 APPROACH SURFACE.
10. EXISTING ON-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2022 AIRPORT AIRSPACE ANALYSIS SURVEY DATA. OFF-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2013 COASTAL AND MARINE SPATIAL PLANNING DATA FROM THE NAVAL POSTGRADUATE SCHOOL, DEPARTMENT OF OCEANOGRAPHY (HTTPS://WWW.OC.NPS.EDU/CMSP/GUAM/).
11. ALL ELEVATIONS ARE IN FEET.
12. WHERE OBJECTS DO NOT FALL WITHIN THE LATERAL EXTENTS OF A GIVEN SURFACE, SURFACE ELEVATION AND SURFACE PENETRATION FIELDS ARE ASSIGNED A VALUE OF "N/A".
13. ACCORDING TO FAA AC 150/5300-13B, *AIRPORT DESIGN*, ALL OBSTACLE FREE ZONE (OFZ) SURFACES MUST REMAIN CLEAR OF OBJECTS, EXCEPT FOR FRANGIBLE NAVAIDS. IDENTIFIED OFZ PENETRATIONS FOR THIS RUNWAY REQUIRE FURTHER EVALUATION FOR WAYS OF COMPLYING WITH FAA OFZ CLEARING STANDARDS.

| NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|

| NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|

TRUE NORTH
MAGNETIC DECLINATION = 9°23' (9.4°) EAST (JANUARY 2023)
ANNUAL RATE OF CHANGE: 0°1' (0.017°) WEST / YEAR

PREPARED FOR
A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM
AECOM

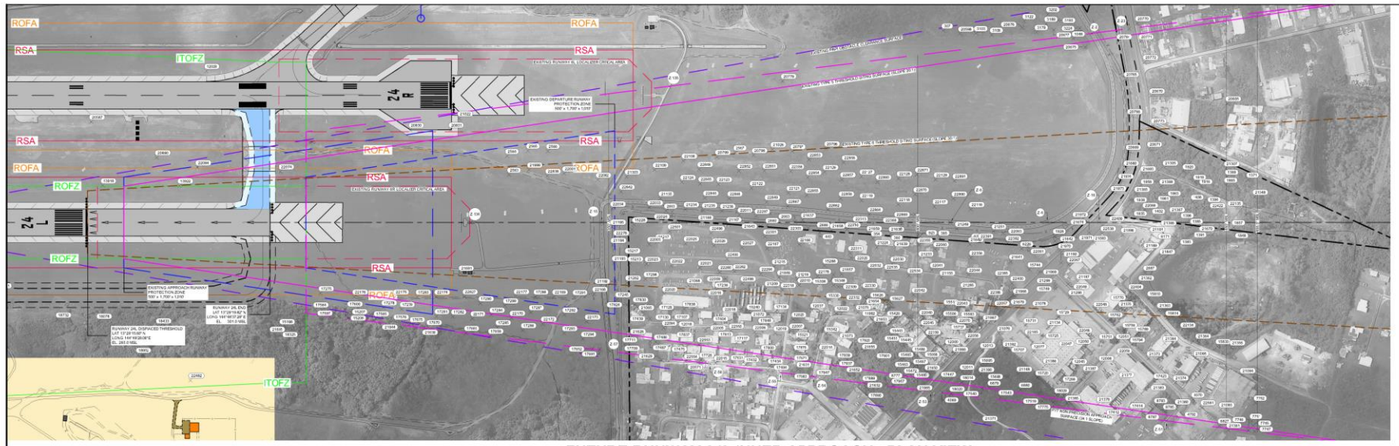
FUTURE RUNWAY 6R
INNER PORTION OF THE APPROACH SURFACE
DATA TABLES - B

ANTONIO B. WON PAT
INTERNATIONAL AIRPORT

DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WBS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 06/23
SHEET: 31 OF 51

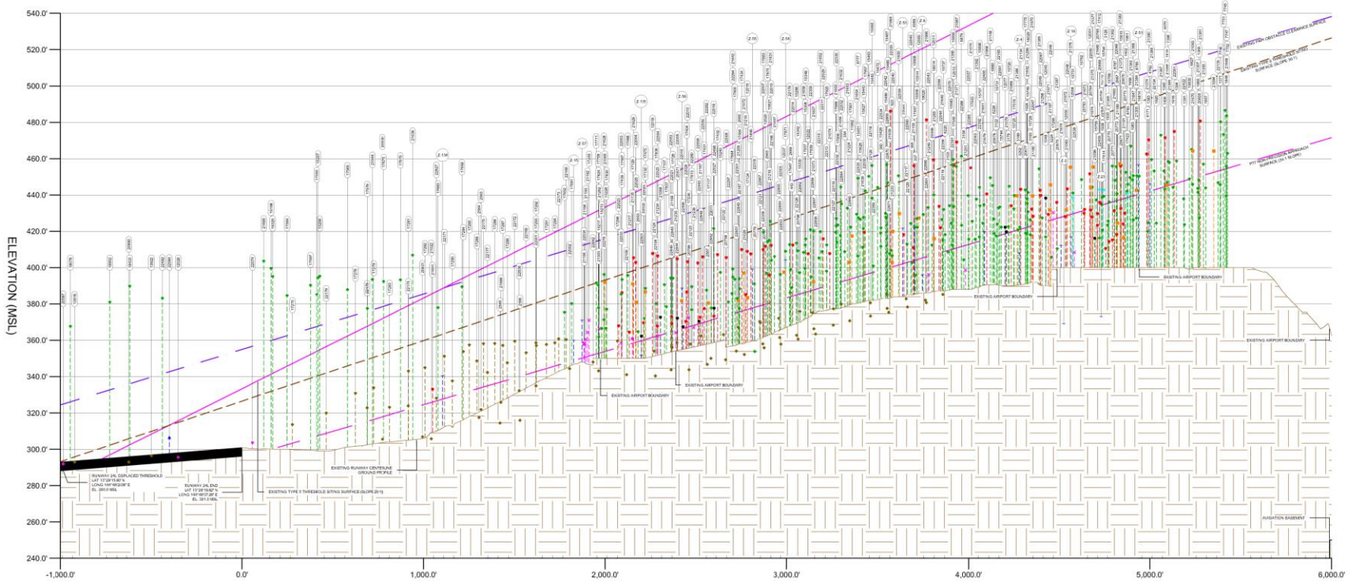
**Figure H-32. Future Runway 6R Inner Portion of the Approach Surface Data Tables – B**

Source: AECOM




## FUTURE RUNWAY 24L INNER APPROACH - PLAN VIEW

HORIZONTAL SCALE : 1" = 300'




## FUTURE RUNWAY 24L INNER APPROACH - PROFILE VIEW

HORIZONTAL SCALE : 1" = 300'
VERTICAL SCALE : 1" = 30'

### LEGEND

| ITEM |
|---|
| AIRPORT PROPERTY LINE |
| FUTURE AIRPORT PROPERTY LINE |
| AIRFIELD PAVEMENT |
| FUTURE AIRFIELD PAVEMENT |
| AIRFIELD PAVEMENT TO BE REMOVED |
| AIRFIELD SHOULDER PAVEMENT |
| FUTURE AIRFIELD SHOULDER PAVEMENT |
| ON-AIRPORT BUILDINGS |
| FUTURE ON-AIRPORT BUILDINGS / STRUCTURES |
| OFF-AIRPORT BUILDINGS |
| ROADS & VEHICLE PARKING |
| FUTURE ROADS & VEHICLE PARKING |
| FENCE |
| EXTENDED RUNWAY CENTERLINE |
| RUNWAY SAFETY AREA |
| RUNWAY OBJECT FREE AREA |
| RUNWAY OBSTACLE FREE ZONE |
| RUNWAY PROTECTION ZONE |
| FUTURE RUNWAY PROTECTION ZONE |
| PART 77 APPROACH SURFACE |
| TYPE 5 THRESHOLD SITING SURFACE |
| FUTURE TYPE 5 THRESHOLD SITING SURFACE |
| TYPE 6 THRESHOLD SITING SURFACE |
| FUTURE TYPE 6 THRESHOLD SITING SURFACE |
| PAPI OBSTACLE CLEARANCE SURFACE |
| FUTURE PAPI OBSTACLE CLEARANCE SURFACE |
| PROPOSED PROPERTY ACQUISITION |
| FUTURE AERONAUTICAL DEVELOPMENT |
| FUTURE NON-AERONAUTICAL DEVELOPMENT |
| EASEMENT |
| PRECISION OBSTACLE FREE ZONE (POFZ) |
| LOCALIZER CRITICAL AREA |
| GLIDE SLOPE CRITICAL AREA |
| RUNWAY THRESHOLD LIGHTS |
| PAPI |
| FUTURE WIND CONE |
| ASOS |
| ROTATING BEACON |
| AIRPORT REFERENCE POINT (ARP) |
| 5' GROUND CONTOUR |
| VEGETATION TREES |

### OBSTRUCTIONS LEGEND

| ITEM | | |
|---|---|---|
| TREE/BUSH | XXXX | |
| POLE | XXXX | |
| GROUND | XXXX | |
| BUILDING | XXXX | |
| FENCE | XXXX | |
| TOWER/ANTENNA | XXXX | |
| NAVAID | XXXX | |
| LIGHT | XXXX | |
| SIGN | XXXX | |
| OTHER | XXXX | |
| ROAD/TRAVERSEWAY | Z-X | |

NOTES:

1. HORIZONTAL DATUM NAD83 (MA11), VERTICAL DATUM GUVD04 (GEOID 12B). DRAWING PREPARED IN UTM ZONE 55 NOR"H (US FOOT) COORDINATE SYSTEM.
2. MAGNETIC DECLINATION OBTAINED ONLINE AT HTTP://WWW.NCDC.NOAA.GOV/GEOMAG-WEB/#DECLINATION.
3. ALL LOCAL ZONING AND AIRSPACE PROTECTION IS GOVERNED BY THE SUPREME COURT OF GUAM, COMPILER OF LAWS, TITLE 21 - REAL PROPERTY, CHAPTER 61 - ZONING LAW.
4. OBSTACLES WERE EVALUATED USING 2022 AIRPORT AIRSPACE ANALYSIS OBSTRUCTION SURVEY DATA.
5. OBJECTS AND TRAVERSE WAYS ON THIS SHEET ARE EVALUATED FOR OBSTRUCTION STATUS AND PROPOSED DISPOSITION ON SHEETS 33 TO 40.
6. FOR CLARITY, ONLY CRITICAL OBSTRUCTIONS, DEFINED AS THE HIGHEST OBSTRUCTION WITHIN A 100' x 100' GRD, ARE SHOWN. CRITICAL OBJECT CRITERIA ARE DERIVED FROM ADVISORY CIRCULAR 150/5300-18B, *GENERAL GUIDANCE AND SPECIFICATIONS FOR SUBMISSION OF AERONAUTICAL SURVEYS TO NGS: FIELD DATA COLLECTION AND GEOGRAPHIC INFORMATION SYSTEM (GIS) STANDARDS*, SECTION 2.7.1.6.
7. ANY TEMPORARY OR PERMANENT STRUCTURE, INCLUDING ALL APPURTENANCES, THAT EXCEED AN OVERALL HEIGHT OF 200 FEET (61M) ABOVE GROUND LEVEL (AGL) OR EXCEEDS ANY OBSTRUCTION STANDARD CONTAINED IN 14 CFR PART 77, SHOULD BE MARKED AND/OR LIGHTED PER ADVISORY CIRCULAR 70/7460-1.
8. AS PER FAR PART-77.17(B), APPROACH SURFACE CLEARANCES ARE BASED ON TRAVERSE WAY ELEVATIONS PLUS THE TRAVERSE WAY ADJUSTMENT (23' FOR RAILWAYS, 17' FOR INTERSTATE HIGHWAYS, 15' FOR OTHER PUBLIC ROADS, OR 10' FOR PRIVATE ROADS.
9. THE LIMITS OF THE INNER APPROACH SURFACE OBSTRUCTION ANALYSES ARE TO A POINT 100' ABOVE THE RUNWAY THRESHOLD ELEVATION WITHIN THE 14 CFR PART 77 APPROACH SURFACE. NON-STANDARD DRAWING SCALES ARE REQUIRED TO DEPICT THE EXTENTS OF ANALYZED SURFACES.
8. EXISTING ON-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2022 AIRPORT AIRSPACE ANALYSIS SURVEY DATA. OFF-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2013 COASTAL AND MARINE SPATIAL PLANNING DATA FROM THE NAVAL POSTGRADUATE SCHOOL, DEPARTMENT OF OCEANOGRAPHY (HTTPS://WWW.OC.NPS.EDU/CMSP/GUAM/).

| NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|

| NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|

TRUE NORTH
GRID NORTH
MAGNETIC DECLINATION = 9°23' (9.4°) EAST
JANUARY 2023
ANNUAL RATE OF CHANGE:
0°1' (0.017') WEST / YEAR
300 0 300
HORIZONTAL SCALE IN FEET
SCALE : 1" = 300'

PREPARED FOR
A. B. WON PAT INTERNATIONAL AIRPORT GUAM
A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM
AECOM

FUTURE RUNWAY 24L
INNER PORTION OF THE APPROACH SURFACE DRAWING

ANTONIO B. WON PAT
INTERNATIONAL AIRPORT

DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WSS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 06/23
SHEET: 32 OF 51

**Figure H-33. Future Runway 24L Inner Portion of the Approach Surface Drawing**

Source: AECOM

**RUNWAY 24L - FUTURE APPROACH SURFACE OBSTRUCTIONS**

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | PART 77 | | TSS TYPE 5 | | TSS TYPE 6 | | OFZ | | PAPI OCS | | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MSL | AGL | | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | |
| 307 | TREE | 395.8 | 44.7 | 351.0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 471.0 | -75.2 | NO ACTION |
| 354 | TREE | 408.8 | 32.0 | 376.8 | 392.8 | 16.0 | 499.3 | -90.5 | 437.2 | -28.4 | N/A | N/A | 456.4 | -47.6 | TRIM/REMOVE |
| 360 | TREE | 411.7 | 31.1 | 380.6 | 398.6 | 13.1 | 509.1 | -97.5 | 443.8 | -32.1 | N/A | N/A | 462.4 | -50.7 | TRIM/REMOVE |
| 365 | TREE | 402.7 | 16.6 | 386.1 | 403.6 | -0.9 | 517.7 | -115.0 | 449.5 | -46.8 | N/A | N/A | 467.7 | -65.0 | TRIM/REMOVE |
| 443 | TREE | 389.0 | 19.3 | 369.7 | 384.2 | 4.8 | 484.6 | -95.6 | 427.4 | -38.4 | N/A | N/A | 447.4 | -58.4 | TRIM/REMOVE |
| 923 | TREE | 406.5 | 24.3 | 382.3 | 400.4 | 6.1 | 512.2 | -105.7 | 445.8 | -39.3 | N/A | N/A | 464.3 | -57.8 | TRIM/REMOVE |
| 1048 | TREE | 416.9 | 56.9 | 360.0 | 425.2 | -8.3 | N/A | N/A | N/A | N/A | N/A | N/A | 492.4 | -75.5 | TRIM/REMOVE |
| 1307 | TREE | 440.5 | 48.4 | 394.0 | 464.5 | -24.0 | 621.1 | -180.7 | 518.4 | -78.0 | N/A | N/A | 530.8 | -90.4 | NO ACTION |
| 1311 | TREE | 449.6 | 61.2 | 388.3 | 462.2 | -12.6 | 617.2 | -167.7 | 515.8 | -66.2 | N/A | N/A | 528.5 | -78.9 | NO ACTION |
| 1325 | TREE | 453.8 | 53.8 | 400.0 | 474.8 | -20.9 | 638.6 | -184.8 | 530.1 | -76.3 | N/A | N/A | 541.5 | -87.7 | NO ACTION |
| 1326 | TREE | 452.2 | 52.2 | 400.0 | 475.6 | -23.4 | 640.1 | -187.9 | 531.1 | -78.8 | N/A | N/A | 542.4 | -90.2 | NO ACTION |
| 1340 | TREE | 455.9 | 55.9 | 400.0 | 456.4 | -0.5 | 607.4 | -151.5 | 509.3 | -53.4 | N/A | N/A | 522.4 | -66.6 | TRIM/REMOVE |
| 1348 | TREE | 439.1 | 81.3 | 357.9 | 462.3 | -23.2 | 617.4 | -178.3 | 516.0 | -76.8 | N/A | N/A | 528.6 | -89.5 | NO ACTION |
| 1349 | TREE | 453.7 | 94.5 | 359.2 | 462.5 | -8.7 | 617.7 | -164.0 | 516.2 | -62.4 | N/A | N/A | 528.8 | -75.1 | TRIM/REMOVE |
| 1351 | TREE | 450.2 | 95.0 | 355.2 | 464.6 | -14.3 | 621.3 | -171.1 | 518.6 | -68.3 | N/A | N/A | 531.0 | -80.8 | NO ACTION |
| 1354 | TREE | 443.4 | 60.6 | 382.8 | 459.3 | -16.0 | 612.4 | -169.0 | 512.6 | -69.2 | N/A | N/A | 525.5 | -82.1 | NO ACTION |
| 1357 | TREE | 448.9 | 66.4 | 382.5 | 456.8 | -8.0 | 608.2 | -159.3 | 509.8 | -60.9 | N/A | N/A | 522.9 | -74.1 | TRIM/REMOVE |
| 1358 | TREE | 444.2 | 57.6 | 386.7 | 456.5 | -12.2 | 607.5 | -163.3 | 509.4 | -65.1 | N/A | N/A | 522.6 | -78.3 | NO ACTION |
| 1369 | TREE | 448.2 | 56.8 | 391.4 | 450.1 | -1.9 | 596.7 | -148.5 | 502.1 | -53.9 | N/A | N/A | 516.0 | -67.8 | TRIM/REMOVE |
| 1371 | TREE | 445.6 | 53.9 | 391.7 | 453.5 | -7.9 | 602.5 | -156.9 | 506.0 | -60.4 | N/A | N/A | 519.6 | -74.0 | TRIM/REMOVE |
| 1383 | TREE | 424.7 | 45.2 | 379.5 | 441.9 | -17.2 | 582.8 | -158.1 | 492.9 | -68.1 | N/A | N/A | 507.4 | -82.7 | NO ACTION |
| 1385 | TREE | 453.2 | 55.1 | 398.2 | 444.4 | 8.8 | 587.1 | -133.8 | 495.7 | -42.5 | N/A | N/A | 510.0 | -56.8 | TRIM/REMOVE |
| 1391 | TREE | 423.7 | 71.5 | 352.3 | 447.7 | -24.0 | 592.7 | -169.0 | 499.5 | -75.7 | N/A | N/A | 513.5 | -89.8 | NO ACTION |
| 1394 | TREE | 458.7 | 58.7 | 400.0 | 446.5 | 12.3 | 590.6 | -131.8 | 498.0 | -39.3 | N/A | N/A | 512.2 | -53.4 | TRIM/REMOVE |
| 1396 | TREE | 458.5 | 58.5 | 400.0 | 445.2 | 13.3 | 588.3 | -129.8 | 496.5 | -38.1 | N/A | N/A | 510.8 | -52.3 | TRIM/REMOVE |
| 1402 | TREE | 452.5 | 52.5 | 400.0 | 438.3 | 14.2 | 576.6 | -124.1 | 488.7 | -36.2 | N/A | N/A | 503.6 | -51.1 | TRIM/REMOVE |
| 1408 | TREE | 443.2 | 43.2 | 400.0 | 444.5 | -1.3 | 587.3 | -144.0 | 495.8 | -52.6 | N/A | N/A | 510.2 | -66.9 | TRIM/REMOVE |
| 1848 | TREE | 439.5 | 83.7 | 355.8 | 454.5 | -15.0 | 604.2 | -164.7 | 507.1 | -67.6 | N/A | N/A | 520.5 | -81.0 | NO ACTION |
| 1857 | TREE | 443.9 | 49.4 | 394.5 | 451.2 | -7.3 | 598.6 | -154.7 | 503.4 | -59.5 | N/A | N/A | 517.0 | -73.2 | TRIM/REMOVE |
| 1865 | TREE | 441.5 | 45.3 | 396.2 | 449.9 | -8.5 | 596.5 | -155.0 | 502.0 | -60.5 | N/A | N/A | 515.8 | -74.4 | TRIM/REMOVE |
| 1916 | TREE | 444.2 | 45.5 | 398.7 | 445.9 | -1.7 | 589.6 | -145.4 | 497.4 | -53.2 | N/A | N/A | 511.7 | -67.4 | TRIM/REMOVE |
| 1919 | TREE | 447.0 | 50.4 | 396.6 | 444.9 | 2.1 | 587.9 | -140.9 | 496.3 | -49.3 | N/A | N/A | 510.6 | -63.6 | TRIM/REMOVE |
| 1920 | TREE | 424.5 | 31.9 | 392.6 | 443.2 | -18.7 | 585.0 | -160.5 | 494.3 | -69.8 | N/A | N/A | 508.9 | -84.4 | NO ACTION |
| 1928 | TREE | 418.7 | 18.7 | 400.0 | 422.1 | -3.4 | 549.2 | -130.4 | 470.4 | -51.7 | N/A | N/A | 486.9 | -68.1 | TRIM/REMOVE |
| 1935 | TREE | 423.4 | 23.4 | 400.0 | 435.3 | -12.0 | 571.6 | -148.2 | 485.4 | -62.0 | N/A | N/A | 500.6 | -77.2 | NO ACTION |
| 1938 | TREE | 420.7 | 20.7 | 400.0 | 434.5 | -13.8 | 570.2 | -149.5 | 484.5 | -63.7 | N/A | N/A | 499.8 | -79.0 | NO ACTION |
| 1958 | TREE | 449.6 | 49.6 | 400.0 | 438.9 | 10.7 | 577.7 | -128.1 | 489.5 | -39.9 | N/A | N/A | 504.4 | -54.8 | TRIM/REMOVE |
| 1961 | TREE | 442.1 | 42.1 | 400.0 | 438.5 | 3.7 | 577.0 | -134.8 | 489.0 | -46.8 | N/A | N/A | 503.9 | -61.8 | TRIM/REMOVE |
| 1963 | TREE | 448.4 | 48.4 | 400.0 | 439.3 | 9.0 | 578.4 | -130.1 | 489.9 | -41.6 | N/A | N/A | 504.8 | -56.4 | TRIM/REMOVE |
| 2476 | TREE | 446.5 | 46.5 | 400.0 | 470.3 | -23.9 | 631.1 | -184.7 | 525.1 | -78.6 | N/A | N/A | 537.1 | -90.7 | NO ACTION |
| 2563 | GROUND | 321.9 | N/A | 321.9 | 333.8 | -12.0 | 399.1 | -77.2 | 370.4 | -48.5 | N/A | N/A | 395.4 | -73.6 | NO ACTION |
| 2564 | GROUND | 317.4 | N/A | 317.4 | 333.5 | -16.1 | 398.5 | -81.1 | N/A | N/A | N/A | N/A | 395.4 | -77.9 | NO ACTION |
| 2565 | GROUND | 314.4 | N/A | 314.4 | 336.9 | -22.5 | 404.3 | -89.9 | N/A | N/A | N/A | N/A | 399.0 | -84.6 | NO ACTION |
| 2566 | GROUND | 315.9 | N/A | 315.9 | 340.2 | -24.2 | 409.8 | -93.9 | N/A | N/A | N/A | N/A | 402.3 | -86.4 | NO ACTION |
| 2567 | GROUND | 346.7 | N/A | 346.7 | 370.4 | -23.7 | 461.2 | -114.5 | N/A | N/A | N/A | N/A | 433.6 | -86.8 | NO ACTION |
| 2653 | TREE | 364.7 | 14.7 | 350.0 | 359.2 | 5.6 | 442.1 | -77.4 | 399.1 | -34.4 | N/A | N/A | 421.5 | -56.8 | TRIM/REMOVE |
| 2660 | TREE | 393.9 | 31.8 | 362.1 | 375.6 | 18.3 | 470.1 | -76.2 | 417.7 | -23.8 | N/A | N/A | 438.5 | -44.7 | TRIM/REMOVE |
| 2663 | TREE | 396.9 | 32.1 | 364.8 | 380.1 | 16.8 | 477.7 | -80.8 | 422.8 | -25.9 | N/A | N/A | 443.2 | -46.3 | TRIM/REMOVE |
| 2666 | TREE | 398.9 | 29.9 | 369.0 | 384.0 | 15.0 | 484.3 | -85.4 | 427.2 | -28.3 | N/A | N/A | 447.2 | -48.3 | TRIM/REMOVE |
| 2687 | TREE | 440.7 | 73.2 | 367.5 | 436.9 | 3.8 | 574.2 | -133.5 | 487.1 | -46.5 | N/A | N/A | 502.3 | -61.6 | TRIM/REMOVE |
| 3103 | TREE | 408.6 | 55.1 | 353.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 476.3 | -67.6 | NO ACTION |
| 3106 | TREE | 404.4 | 49.5 | 354.8 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 478.8 | -74.5 | NO ACTION |
| 3122 | TREE | 417.5 | 65.9 | 351.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 484.6 | -67.1 | NO ACTION |
| 3128 | UTILITY POLE | 410.6 | 47.8 | 362.9 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 503.4 | -92.8 | NO ACTION |
| 3179 | TREE | 422.5 | 66.5 | 356.0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 486.3 | -63.8 | NO ACTION |
| 3189 | TREE | 420.8 | 67.2 | 353.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 488.1 | -67.4 | NO ACTION |
| 3193 | TREE | 418.1 | 65.2 | 352.9 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 490.3 | -72.2 | NO ACTION |
| 3202 | TREE | 422.2 | 72.0 | 350.3 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 488.7 | -66.5 | NO ACTION |
| 3224 | TREE | 405.8 | 49.1 | 356.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 493.6 | -87.8 | NO ACTION |
| 4042 | UTILITY POLE | 525.8 | 37.7 | 488.0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 533.3 | -7.5 | NO ACTION |
| 4069 | UTILITY POLE | 456.1 | 48.0 | 408.2 | 404.0 | 52.2 | N/A | N/A | N/A | N/A | N/A | N/A | 470.2 | -14.0 | MARK/LIGHT |
| 4070 | UTILITY POLE | 471.5 | 37.7 | 433.8 | 444.6 | 26.9 | 587.4 | -115.8 | N/A | N/A | N/A | N/A | 512.1 | -40.6 | MARK/LIGHT |
| 4792 | SECONDARY ROAD | 446.2 | 10.0 | 436.2 | 442.2 | 4.0 | 583.2 | -137.0 | N/A | N/A | N/A | N/A | 509.9 | -63.7 | NO ACTION |
| 6171 | TREE | 419.9 | 19.9 | 400.0 | 441.8 | -21.9 | 582.6 | -162.7 | 492.7 | -72.8 | N/A | N/A | 507.3 | -87.4 | NO ACTION |
| 6220 | TREE | 418.2 | 27.5 | 390.7 | 408.9 | 9.2 | 526.8 | -108.6 | 455.5 | -37.3 | N/A | N/A | 473.2 | -55.0 | TRIM/REMOVE |
| 6226 | TREE | 426.8 | 30.2 | 396.6 | 416.8 | 10.0 | 540.1 | -113.4 | 464.4 | -37.7 | N/A | N/A | 481.4 | -54.6 | TRIM/REMOVE |
| 6827 | TREE | 465.1 | 16.0 | 449.0 | 448.9 | 16.2 | N/A | N/A | N/A | N/A | N/A | N/A | 517.2 | -52.1 | TRIM/REMOVE |
| 6879 | TREE | 461.4 | 45.2 | 416.2 | 411.5 | 49.9 | 531.2 | -69.8 | N/A | N/A | N/A | N/A | 477.9 | -16.5 | TRIM/REMOVE |
| 6880 | TREE | 445.2 | 24.0 | 421.3 | 416.8 | 28.6 | 539.8 | -94.5 | N/A | N/A | N/A | N/A | 483.1 | -37.9 | TRIM/REMOVE |
| 7745 | TREE | 486.6 | 36.6 | 450.0 | 454.3 | 32.3 | 603.9 | -117.3 | N/A | N/A | N/A | N/A | 522.7 | -36.2 | TRIM/REMOVE |
| 7746 | TREE | 480.3 | 30.3 | 450.0 | 453.6 | 26.7 | N/A | N/A | N/A | N/A | N/A | N/A | 522.1 | -41.8 | TRIM/REMOVE |
| 7747 | TREE | 483.6 | 33.6 | 450.0 | 454.6 | 29.0 | N/A | N/A | N/A | N/A | N/A | N/A | 523.1 | -39.6 | TRIM/REMOVE |
| 7751 | TREE | 473.3 | 26.0 | 447.3 | 454.0 | 19.3 | 603.4 | -130.1 | N/A | N/A | N/A | N/A | 522.4 | -49.0 | TRIM/REMOVE |

NOTES:

1. HORIZONTAL DATUM NAD83 (MA11), VERTICAL DATUM GUVD04 (GEOID 12B). DRAWING PREPARED IN UTM ZONE 55 NORTH (US FOOT) COORDINATE SYSTEM.
2. MAGNETIC DECLINATION OBTAINED ONLINE AT HTTP://WWW.NGDC.NOAA.GOV/GEOMAG-WEB/#DECLINATION.
3. ALL LOCAL ZONING AND AIRSPACE PROTECTION IS GOVERNED BY THE SUPREME COURT OF GUAM, COMPILER OF LAWS, TITLE 21 - REAL PROPERTY, CHAPTER 61 - ZONING LAW.
4. OBSTACLES WERE EVALUATED USING 2022 AIRPORT AIRSPACE ANALYSIS OBSTRUCTION SURVEY DATA.
5. FOR CLARITY, ONLY CRITICAL OBSTRUCTIONS, DEFINED AS THE HIGHEST OBSTRUCTION WITHIN A 100' x 100' GRID, ARE SHOWN. CRITICAL OBJECT CRITERIA ARE DERIVED FROM ADVISORY CIRCULAR 150/5300-18B, *GENERAL GUIDANCE AND SPECIFICATIONS FOR SUBMISSION OF AERONAUTICAL SURVEYS TO NGS: FIELD DATA COLLECTION AND GEOGRAPHIC INFORMATION SYSTEM (GIS) STANDARDS*, SECTION 2.7.1.6.
6. ANY TEMPORARY OR PERMANENT STRUCTURE, INCLUDING ALL APPURTENANCES, THAT EXCEED AN OVERALL HEIGHT OF 200 FEET (61M) ABOVE GROUND LEVEL (AGL) OR EXCEEDS ANY OBSTRUCTION STANDARD CONTAINED IN 14 CFR PART 77, SHOULD BE MARKED AND/OR LIGHTED PER ADVISORY CIRCULAR 70/7460-1.
7. AS PER FAR PART-77.17(B), APPROACH SURFACE CLEARANCES ARE BASED ON TRAVERSE WAY ELEVATIONS PLUS THE TRAVERSE WAY ADJUSTMENT (23' FOR RAILWAYS, 17' FOR INTERSTATE HIGHWAYS, 15' FOR OTHER PUBLIC ROADS, OR 10' FOR PRIVATE ROADS).
8. THE LIMITS OF THE INNER APPROACH SURFACE OBSTRUCTION ANALYSES ARE TO A POINT 100' ABOVE THE RUNWAY THRESHOLD ELEVATION WITHIN THE 14 CFR PART 77 APPROACH SURFACE.
9. EXISTING ON-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2022 AIRPORT AIRSPACE ANALYSIS SURVEY DATA. OFF-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2013 COASTAL AND MARINE SPATIAL PLANNING DATA FROM THE NAVAL POSTGRADUATE SCHOOL, DEPARTMENT OF OCEANOGRAPHY (HTTPS://WWW.OC.NPS.EDU/CMSP/GUAM).
10. ALL ELEVATIONS ARE IN FEET.
11. WHERE OBJECTS DO NOT FALL WITHIN THE LATERAL EXTENTS OF A GIVEN SURFACE, SURFACE ELEVATION AND SURFACE PENETRATION FIELDS ARE ASSIGNED A VALUE OF "N/A".
12. ACCORDING TO FAA AC 150/5300-13B, *AIRPORT DESIGN*, ALL OBSTACLE FREE ZONE (OFZ) SURFACES MUST REMAIN CLEAR OF OBJECTS, EXCEPT FOR FRANGIBLE NAVAIDS. IDENTIFIED OFZ PENETRATIONS FOR THIS RUNWAY REQUIRE FURTHER EVALUATION FOR WAYS OF COMPLYING WITH FAA OFZ CLEARING STANDARDS.

| NO. | REVISIONS | BY | APP. | DATE | NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

MAGNETIC DECLINATION = 9°23' (9.4°) EAST (JANUARY 2022)
ANNUAL RATE OF CHANGE: 0°1' (0.017°) WEST / YEAR

PREPARED FOR
A. B. WON PAT INTERNATIONAL AIRPORT GUAM
A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM
AECOM

FUTURE RUNWAY 24L
INNER PORTION OF THE APPROACH SURFACE
DATA TABLES - A

ANTONIO B. WON PAT
INTERNATIONAL AIRPORT

DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WBS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 06/23
SHEET: 33 OF 51

**Figure H-34. Future Runway 24L Inner Portion of the Approach Surface Data Tables – A**

Source: AECOM

## RUNWAY 24L - FUTURE APPROACH SURFACE OBSTRUCTIONS

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | PART 77 | | TSS TYPE 5 | | TSS TYPE 6 | | OFZ | | PAPI OCS | | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MSL | AGL | | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | |
| 7752 | TREE | 462.9 | 26.4 | 436.6 | 454.7 | 8.2 | 604.5 | -141.6 | N/A | N/A | N/A | N/A | 522.6 | -59.7 | TRIM/REMOVE |
| 8777 | TREE | 449.2 | 49.2 | 400.0 | 394.9 | 54.3 | N/A | N/A | N/A | N/A | N/A | N/A | 460.7 | -11.4 | TRIM/REMOVE |
| 8783 | TREE | 445.9 | 11.1 | 434.8 | 438.6 | 7.3 | 577.2 | -131.3 | N/A | N/A | N/A | N/A | 506.1 | -60.2 | TRIM/REMOVE |
| 8785 | TREE | 450.5 | 13.2 | 437.4 | 440.0 | 10.5 | 579.6 | -129.1 | N/A | N/A | N/A | N/A | 507.7 | -57.2 | TRIM/REMOVE |
| 8787 | TREE | 448.1 | 9.3 | 438.9 | 436.5 | 11.7 | N/A | N/A | N/A | N/A | N/A | N/A | 504.1 | -56.0 | TRIM/REMOVE |
| 11992 | BUILDING | 417.4 | 33.5 | 384.0 | 393.9 | 23.5 | 501.2 | -83.8 | N/A | N/A | N/A | N/A | 458.1 | -40.7 | MARK/LIGHT |
| 12000 | BUILDING | 427.4 | 23.6 | 403.7 | 404.7 | 22.6 | 519.6 | -92.3 | N/A | N/A | N/A | N/A | 470.0 | -42.6 | MARK/LIGHT |
| 12008 | LIGHT POLE | 438.6 | 19.2 | 419.4 | 429.6 | 9.0 | 561.8 | -123.3 | N/A | N/A | N/A | N/A | 495.9 | -57.3 | MARK/LIGHT |
| 12011 | UTILITY POLE | 459.4 | 48.0 | 411.4 | 407.1 | 52.3 | 523.6 | -64.2 | N/A | N/A | N/A | N/A | 472.9 | -13.5 | MARK/LIGHT |
| 12013 | UTILITY POLE | 456.5 | 48.6 | 407.9 | 410.3 | 46.1 | 529.1 | -72.7 | N/A | N/A | N/A | N/A | 475.8 | -19.3 | MARK/LIGHT |
| 12018 | UTILITY POLE | 407.8 | 41.9 | 365.9 | 361.8 | 46.2 | 446.2 | -38.5 | N/A | N/A | N/A | N/A | 425.1 | -17.3 | MARK/LIGHT |
| 12019 | UTILITY POLE | 409.0 | 39.0 | 370.0 | 376.9 | 32.1 | 472.3 | -63.3 | N/A | N/A | N/A | N/A | 441.0 | -32.0 | MARK/LIGHT |
| 12020 | UTILITY POLE | 411.7 | 39.3 | 372.5 | 379.8 | 31.9 | 477.3 | -65.6 | N/A | N/A | N/A | N/A | 443.8 | -32.0 | MARK/LIGHT |
| 12022 | UTILITY POLE | 407.7 | 29.5 | 378.2 | 386.8 | 20.9 | 489.1 | -81.4 | N/A | N/A | N/A | N/A | 450.9 | -43.2 | MARK/LIGHT |
| 12028 | SIGN | 295.5 | 3.5 | 292.0 | N/A | N/A | N/A | N/A | N/A | N/A | 443.8 | -148.2 | N/A | N/A | NO ACTION |
| 12037 | BUILDING | 397.5 | 21.2 | 376.3 | 382.9 | 14.6 | 482.5 | -85.0 | N/A | N/A | N/A | N/A | 446.8 | -49.3 | MARK/LIGHT |
| 12045 | TANK | 438.2 | 27.1 | 411.1 | 425.2 | 13.0 | 554.5 | -116.3 | N/A | N/A | N/A | N/A | 491.5 | -53.3 | MARK/LIGHT |
| 12050 | LIGHT POLE | 431.2 | 20.6 | 410.6 | 428.5 | 2.7 | 560.0 | -128.8 | N/A | N/A | N/A | N/A | 494.4 | -63.2 | MARK/LIGHT |
| 12051 | UTILITY POLE | 451.6 | 37.5 | 414.1 | 432.4 | 19.2 | 566.6 | -115.0 | N/A | N/A | N/A | N/A | 498.4 | -46.8 | MARK/LIGHT |
| 12077 | CANOPY | 422.2 | 12.2 | 410.0 | 418.6 | 3.6 | 543.3 | -121.0 | N/A | N/A | N/A | N/A | 484.4 | -62.2 | MARK/LIGHT |
| 13850 | GROUND | 271.9 | N/A | 271.9 | N/A | N/A | N/A | N/A | N/A | N/A | 317.8 | -45.9 | N/A | N/A | NO ACTION |
| 13852 | GROUND | 274.8 | N/A | 274.8 | N/A | N/A | N/A | N/A | N/A | N/A | 320.2 | -45.3 | N/A | N/A | NO ACTION |
| 13854 | GROUND | 276.8 | N/A | 276.8 | N/A | N/A | N/A | N/A | N/A | N/A | 321.3 | -44.6 | N/A | N/A | NO ACTION |
| 13871 | SIGN | 268.5 | 3.7 | 264.8 | N/A | N/A | N/A | N/A | N/A | N/A | 446.7 | -178.2 | N/A | N/A | NO ACTION |
| 13879 | GROUND | 276.8 | N/A | 276.8 | N/A | N/A | N/A | N/A | N/A | N/A | 320.3 | -43.5 | N/A | N/A | NO ACTION |
| 13911 | GROUND | 287.6 | N/A | 287.6 | N/A | N/A | N/A | N/A | N/A | N/A | 329.8 | -42.3 | N/A | N/A | NO ACTION |
| 13918 | GROUND | 293.0 | N/A | 293.0 | N/A | N/A | N/A | N/A | N/A | N/A | 334.2 | -41.3 | 327.2 | -34.2 | NO ACTION |
| 13922 | GROUND | 296.5 | N/A | 296.5 | N/A | N/A | 308.3 | -11.8 | 309.9 | -13.4 | 337.4 | -41.0 | 340.0 | -43.6 | NO ACTION |
| 15198 | TREE | 399.6 | 63.2 | 336.5 | N/A | N/A | N/A | N/A | N/A | N/A | 398.8 | 0.8 | N/A | N/A | TRIM/REMOVE |
| 15206 | TREE | 395.3 | 62.1 | 333.3 | 307.7 | 87.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 15207 | TREE | 394.4 | 63.7 | 330.7 | 307.4 | 86.9 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 15213 | TREE | 366.5 | 16.5 | 350.0 | 353.4 | 13.1 | 432.3 | -65.8 | 392.5 | -26.0 | N/A | N/A | 415.6 | -49.1 | TRIM/REMOVE |
| 15217 | TREE | 361.9 | 11.9 | 350.0 | 352.9 | 9.0 | 431.5 | -69.6 | 392.0 | -30.1 | N/A | N/A | 415.1 | -53.2 | TRIM/REMOVE |
| 15228 | TREE | 366.7 | 16.7 | 350.0 | 354.0 | 12.6 | 433.4 | -66.8 | 393.3 | -26.6 | N/A | N/A | 416.1 | -49.5 | TRIM/REMOVE |
| 15240 | TREE | 397.4 | 25.6 | 371.9 | 372.6 | 24.8 | 464.9 | -67.5 | N/A | N/A | N/A | N/A | 436.1 | -38.7 | TRIM/REMOVE |
| 15288 | TREE | 413.5 | 37.7 | 375.8 | 384.9 | 28.6 | 485.9 | -72.4 | 428.3 | -14.7 | N/A | N/A | 448.4 | -34.8 | TRIM/REMOVE |
| 15308 | TREE | 412.5 | 34.1 | 378.4 | 386.4 | 26.2 | 488.4 | -75.9 | 429.9 | -17.4 | N/A | N/A | 449.9 | -37.4 | TRIM/REMOVE |
| 15330 | TREE | 397.3 | 15.4 | 381.9 | 385.4 | 11.8 | 486.8 | -89.6 | N/A | N/A | N/A | N/A | 449.3 | -52.0 | TRIM/REMOVE |
| 15342 | TREE | 409.3 | 23.5 | 385.8 | 385.2 | 24.1 | 486.3 | -77.0 | N/A | N/A | N/A | N/A | 449.5 | -40.2 | TRIM/REMOVE |
| 15348 | TREE | 415.8 | 35.6 | 380.2 | 386.4 | 29.4 | 488.5 | -72.7 | 430.0 | -14.2 | N/A | N/A | 450.1 | -34.3 | TRIM/REMOVE |
| 15426 | TREE | 419.1 | 24.0 | 395.1 | 398.5 | 20.5 | 509.1 | -90.0 | N/A | N/A | N/A | N/A | 463.1 | -44.0 | TRIM/REMOVE |
| 15443 | TREE | 427.7 | 32.2 | 395.5 | 395.8 | 31.9 | 504.4 | -76.7 | N/A | N/A | N/A | N/A | 460.5 | -32.8 | TRIM/REMOVE |
| 15445 | TREE | 438.3 | 40.4 | 397.9 | 397.2 | 41.1 | 506.7 | -68.5 | N/A | N/A | N/A | N/A | 462.1 | -23.8 | TRIM/REMOVE |
| 15451 | TREE | 427.5 | 31.8 | 395.7 | 394.9 | 32.5 | 503.0 | -75.5 | N/A | N/A | N/A | N/A | 459.8 | -32.3 | TRIM/REMOVE |
| 15463 | TREE | 450.3 | 50.3 | 400.0 | 396.6 | 53.7 | 505.8 | -55.5 | N/A | N/A | N/A | N/A | 462.1 | -11.8 | TRIM/REMOVE |
| 15465 | TREE | 456.2 | 56.5 | 399.7 | 397.2 | 59.1 | 506.7 | -50.5 | N/A | N/A | N/A | N/A | 462.4 | -6.2 | TRIM/REMOVE |
| 15467 | TREE | 456.7 | 56.7 | 400.0 | 399.5 | 57.2 | 510.7 | -54.0 | N/A | N/A | N/A | N/A | 465.0 | -8.3 | TRIM/REMOVE |
| 15472 | TREE | 444.2 | 44.2 | 400.0 | 398.1 | 46.1 | 508.2 | -64.1 | N/A | N/A | N/A | N/A | 463.7 | -19.5 | TRIM/REMOVE |
| 15480 | TREE | 446.8 | 46.8 | 400.0 | 399.7 | 47.1 | N/A | N/A | N/A | N/A | N/A | N/A | 465.5 | -18.7 | TRIM/REMOVE |
| 15486 | TREE | 427.7 | 27.7 | 400.0 | 399.4 | 28.3 | 510.5 | -82.8 | N/A | N/A | N/A | N/A | 464.6 | -36.9 | TRIM/REMOVE |
| 15506 | TREE | 427.0 | 27.7 | 399.3 | 404.4 | 22.6 | 519.1 | -92.1 | N/A | N/A | N/A | N/A | 469.2 | -42.2 | TRIM/REMOVE |
| 15514 | TREE | 422.2 | 25.0 | 397.2 | 404.5 | 17.7 | 519.2 | -97.0 | N/A | N/A | N/A | N/A | 469.1 | -46.9 | TRIM/REMOVE |
| 15583 | TREE | 424.5 | 24.4 | 400.1 | 409.9 | 14.6 | 528.4 | -103.9 | N/A | N/A | N/A | N/A | 475.0 | -50.5 | TRIM/REMOVE |
| 15621 | TREE | 415.1 | 32.9 | 382.2 | 380.5 | 34.7 | 478.4 | -63.2 | N/A | N/A | N/A | N/A | 444.8 | -29.6 | TRIM/REMOVE |
| 15626 | TREE | 426.6 | 36.4 | 390.2 | 395.3 | 31.3 | 503.5 | -76.9 | N/A | N/A | N/A | N/A | 459.5 | -32.9 | TRIM/REMOVE |
| 15627 | TREE | 421.5 | 30.9 | 390.6 | 395.8 | 25.8 | 504.4 | -82.8 | N/A | N/A | N/A | N/A | 460.0 | -38.5 | TRIM/REMOVE |
| 15668 | TREE | 422.7 | 22.2 | 400.5 | 404.0 | 18.7 | 518.4 | -95.7 | N/A | N/A | N/A | N/A | 469.3 | -46.6 | TRIM/REMOVE |
| 15695 | TREE | 459.6 | 49.3 | 410.3 | 410.2 | 49.4 | 528.9 | -69.4 | N/A | N/A | N/A | N/A | 476.0 | -16.4 | TRIM/REMOVE |
| 15698 | TREE | 444.2 | 27.8 | 416.4 | 414.5 | 29.7 | 536.3 | -92.1 | N/A | N/A | N/A | N/A | 480.7 | -36.5 | TRIM/REMOVE |
| 15707 | TREE | 434.0 | 23.4 | 410.6 | 414.6 | 19.5 | 536.4 | -102.3 | N/A | N/A | N/A | N/A | 480.2 | -46.2 | TRIM/REMOVE |
| 15720 | TREE | 444.8 | 22.9 | 421.9 | 419.3 | 25.5 | 544.3 | -99.5 | N/A | N/A | N/A | N/A | 485.6 | -40.8 | TRIM/REMOVE |
| 15725 | TREE | 432.3 | 17.7 | 414.6 | 420.0 | 12.3 | 545.6 | -113.3 | N/A | N/A | N/A | N/A | 485.6 | -53.3 | TRIM/REMOVE |
| 15729 | TREE | 426.3 | 14.7 | 411.7 | 422.7 | 3.6 | 550.2 | -123.8 | N/A | N/A | N/A | N/A | 488.1 | -61.7 | TRIM/REMOVE |
| 15731 | TREE | 423.9 | 14.6 | 409.3 | 417.4 | 6.6 | 541.1 | -117.1 | N/A | N/A | N/A | N/A | 482.7 | -58.7 | TRIM/REMOVE |
| 15737 | TREE | 432.0 | 32.0 | 400.0 | 408.7 | 23.3 | 526.3 | -94.3 | N/A | N/A | N/A | N/A | 473.7 | -41.7 | TRIM/REMOVE |
| 15744 | TREE | 422.3 | 22.4 | 399.9 | 418.0 | 4.3 | 542.2 | -119.9 | 465.8 | -43.5 | N/A | N/A | 482.8 | -60.4 | TRIM/REMOVE |
| 15749 | TREE | 430.8 | 29.5 | 401.3 | 422.3 | 8.5 | 549.5 | -118.7 | 470.6 | -39.9 | N/A | N/A | 487.4 | -56.6 | TRIM/REMOVE |
| 15751 | TREE | 441.1 | 24.4 | 416.7 | 429.6 | 11.5 | 562.0 | -120.9 | N/A | N/A | N/A | N/A | 495.6 | -54.5 | TRIM/REMOVE |
| 15759 | TREE | 437.3 | 27.1 | 410.2 | 433.4 | 3.9 | 568.4 | -131.1 | N/A | N/A | N/A | N/A | 499.4 | -62.1 | TRIM/REMOVE |
| 15762 | TREE | 448.5 | 40.8 | 407.7 | 431.0 | 17.4 | 564.3 | -115.9 | N/A | N/A | N/A | N/A | 496.8 | -48.3 | TRIM/REMOVE |
| 15770 | TREE | 438.7 | 38.7 | 400.0 | 434.4 | 4.3 | 570.1 | -131.3 | 484.4 | -45.6 | N/A | N/A | 500.0 | -61.2 | TRIM/REMOVE |
| 15789 | TREE | 436.2 | 25.9 | 410.3 | 435.6 | 0.6 | 572.0 | -135.8 | N/A | N/A | N/A | N/A | 501.6 | -65.4 | TRIM/REMOVE |
| 15794 | TREE | 439.2 | 24.2 | 415.0 | 434.7 | 4.5 | 570.5 | -131.3 | N/A | N/A | N/A | N/A | 500.9 | -61.7 | TRIM/REMOVE |

NOTES:

1. HORIZONTAL DATUM NAD83 (MA11), VERTICAL DATUM GUVD04 (GEOID 12B). DRAWING PREPARED IN UTM ZONE 55 NORTH (US FOOT) COORDINATE SYSTEM.
2. MAGNETIC DECLINATION OBTAINED ONLINE AT HTTP://WWW.NGDC.NOAA.GOV/GEOMAG-WEB/#DECLINATION.
3. ALL LOCAL ZONING AND AIRSPACE PROTECTION IS GOVERNED BY THE SUPREME COURT OF GUAM, COMPILER OF LAWS, TITLE 21 - REAL PROPERTY, CHAPTER 61 - ZONING LAW.
4. OBSTACLES WERE EVALUATED USING 2022 AIRPORT AIRSPACE ANALYSIS OBSTRUCTION SURVEY DATA.
5. FOR CLARITY, ONLY CRITICAL OBSTRUCTIONS, DEFINED AS THE HIGHEST OBSTRUCTION WITHIN A 100' x 100' GRID, ARE SHOWN. CRITICAL OBJECT CRITERIA ARE DERIVED FROM ADVISORY CIRCULAR 150/5300-18B, *GENERAL GUIDANCE AND SPECIFICATIONS FOR SUBMISSION OF AERONAUTICAL SURVEYS TO NGS: FIELD DATA COLLECTION AND GEOGRAPHIC INFORMATION SYSTEM (GIS) STANDARDS*, SECTION 2.7.1.6.
6. ANY TEMPORARY OR PERMANENT STRUCTURE, INCLUDING ALL APPURTENANCES, THAT EXCEED AN OVERALL HEIGHT OF 200 FEET (61M) ABOVE GROUND LEVEL (AGL) OR EXCEEDS ANY OBSTRUCTION STANDARD CONTAINED IN 14 CFR PART 77, SHOULD BE MARKED AND/OR LIGHTED PER ADVISORY CIRCULAR 70/7460-1.
7. AS PER FAR PART-77.17(B), APPROACH SURFACE CLEARANCES ARE BASED ON TRAVERSE WAY ELEVATIONS PLUS THE TRAVERSE WAY ADJUSTMENT (23' FOR RAILWAYS, 17' FOR INTERSTATE HIGHWAYS, 15' FOR OTHER PUBLIC ROADS, OR 10' FOR PRIVATE ROADS).
8. THE LIMITS OF THE INNER APPROACH SURFACE OBSTRUCTION ANALYSES ARE TO A POINT 100' ABOVE THE RUNWAY THRESHOLD ELEVATION WITHIN THE 14 CFR PART 77 APPROACH SURFACE.
9. EXISTING ON-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2022 AIRPORT AIRSPACE ANALYSIS SURVEY DATA. OFF-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2013 COASTAL AND MARINE SPATIAL PLANNING DATA FROM THE NAVAL POSTGRADUATE SCHOOL, DEPARTMENT OF OCEANOGRAPHY (HTTPS://WWW.OC.NPS.EDU/CMSP/GUAM).
10. ALL ELEVATIONS ARE IN FEET.
11. WHERE OBJECTS DO NOT FALL WITHIN THE LATERAL EXTENTS OF A GIVEN SURFACE, SURFACE ELEVATION AND SURFACE PENETRATION FIELDS ARE ASSIGNED A VALUE OF "N/A".
12. ACCORDING TO FAA AC 150/5300-13B, *AIRPORT DESIGN*, ALL OBSTACLE FREE ZONE (OFZ) SURFACES MUST REMAIN CLEAR OF OBJECTS, EXCEPT FOR FRANGIBLE NAVAIDS. IDENTIFIED OFZ PENETRATIONS FOR THIS RUNWAY REQUIRE FURTHER EVALUATION FOR WAYS OF COMPLYING WITH FAA OFZ CLEARING STANDARDS.

| NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|

MAGNETIC DECLINATION = 9°23' (9.4°) EAST (JANUARY 2022)
ANNUAL RATE OF CHANGE: 0°1' (0.017°) WEST / YEAR

PREPARED FOR
A. B. WON PAT INTERNATIONAL AIRPORT GUAM
A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM
AECOM

FUTURE RUNWAY 24L
INNER PORTION OF THE APPROACH SURFACE
DATA TABLES - B

ANTONIO B. WON PAT
INTERNATIONAL AIRPORT

DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WBS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 06/23
SHEET: 34 OF 51

**Figure H-35. Future Runway 24L Inner Portion of the Approach Surface Data Tables – B**

Source: AECOM

**RUNWAY 24L - FUTURE APPROACH SURFACE OBSTRUCTIONS**

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | PART 77 | | TSS TYPE 5 | | TSS TYPE 6 | | OFZ | | PAPI OCS | | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MSL | AGL | | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | |
| 15810 | TREE | 456.4 | 56.4 | 400.0 | 437.5 | 18.9 | 575.3 | -118.9 | 487.9 | -31.4 | N/A | N/A | 503.2 | -46.8 | TRIM/REMOVE |
| 15814 | TREE | 450.4 | 50.4 | 400.0 | 440.4 | 9.9 | 580.3 | -129.9 | N/A | N/A | N/A | N/A | 506.4 | -56.1 | TRIM/REMOVE |
| 15830 | TREE | 448.8 | 48.6 | 400.2 | 448.6 | 0.3 | 594.1 | -145.3 | N/A | N/A | N/A | N/A | 515.3 | -66.4 | TRIM/REMOVE |
| 17107 | TREE | 390.7 | 26.4 | 364.2 | 363.5 | 27.2 | 449.5 | -58.8 | N/A | N/A | N/A | N/A | 426.7 | -36.0 | TRIM/REMOVE |
| 17117 | BUILDING | 380.5 | 13.3 | 367.2 | 370.6 | 9.9 | 461.6 | -81.1 | N/A | N/A | N/A | N/A | 434.7 | -54.2 | MARK/LIGHT |
| 17129 | BUILDING | 391.0 | 25.1 | 365.9 | 358.3 | 32.7 | 440.7 | -49.7 | N/A | N/A | N/A | N/A | 421.4 | -30.4 | MARK/LIGHT |
| 17130 | BUILDING | 386.6 | 21.2 | 365.4 | 360.4 | 26.2 | 444.2 | -57.7 | N/A | N/A | N/A | N/A | 423.5 | -36.9 | MARK/LIGHT |
| 17134 | BUILDING | 383.4 | 12.2 | 371.1 | 377.0 | 6.4 | 472.4 | -89.0 | N/A | N/A | N/A | N/A | 440.7 | -57.3 | MARK/LIGHT |
| 17236 | FENCE | 372.6 | 6.8 | 365.7 | 367.4 | 5.2 | 456.1 | -83.6 | 408.4 | -35.9 | N/A | N/A | 430.4 | -57.9 | NO ACTION |
| 17245 | FENCE | 371.1 | 10.5 | 360.6 | 351.3 | 19.7 | 428.8 | -57.8 | N/A | N/A | N/A | N/A | 414.0 | -42.9 | NO ACTION |
| 17266 | FENCE | 430.4 | 7.6 | 422.8 | 426.5 | 4.0 | 556.5 | -126.1 | N/A | N/A | N/A | N/A | 493.0 | -62.6 | NO ACTION |
| 17275 | GROUND | 313.6 | N/A | 313.6 | 303.3 | 10.3 | N/A | N/A | N/A | N/A | N/A | N/A | 364.3 | -50.7 | NO ACTION |
| 17278 | GROUND | 330.8 | N/A | 330.8 | 313.4 | 17.4 | N/A | N/A | N/A | N/A | N/A | N/A | 375.1 | -44.2 | NO ACTION |
| 17279 | GROUND | 333.9 | N/A | 333.9 | 316.4 | 17.5 | N/A | N/A | N/A | N/A | N/A | N/A | 378.1 | -44.3 | NO ACTION |
| 17281 | GROUND | 343.1 | N/A | 343.1 | 322.0 | 21.0 | N/A | N/A | N/A | N/A | N/A | N/A | 384.1 | -41.1 | NO ACTION |
| 17282 | GROUND | 345.0 | N/A | 345.0 | 324.7 | 20.2 | N/A | N/A | N/A | N/A | N/A | N/A | 386.9 | -41.9 | NO ACTION |
| 17283 | GROUND | 323.1 | N/A | 323.1 | 319.0 | 4.1 | 373.8 | -50.7 | N/A | N/A | N/A | N/A | 380.5 | -57.4 | NO ACTION |
| 17284 | GROUND | 353.8 | N/A | 353.8 | 331.0 | 22.8 | N/A | N/A | N/A | N/A | N/A | N/A | 393.3 | -39.5 | NO ACTION |
| 17285 | GROUND | 357.5 | N/A | 357.5 | 331.9 | 25.5 | N/A | N/A | N/A | N/A | N/A | N/A | 394.6 | -37.1 | NO ACTION |
| 17286 | GROUND | 358.2 | N/A | 358.2 | 336.0 | 22.2 | N/A | N/A | N/A | N/A | N/A | N/A | 398.9 | -40.6 | NO ACTION |
| 17287 | GROUND | 357.2 | N/A | 357.2 | 337.3 | 19.9 | 405.0 | -47.8 | N/A | N/A | N/A | N/A | 399.8 | -42.6 | NO ACTION |
| 17288 | GROUND | 347.6 | N/A | 347.6 | 338.1 | 9.6 | 406.3 | -58.7 | N/A | N/A | N/A | N/A | 400.2 | -52.6 | NO ACTION |
| 17289 | GROUND | 348.6 | N/A | 348.6 | 333.2 | 15.5 | 397.9 | -49.3 | N/A | N/A | N/A | N/A | 395.3 | -46.7 | NO ACTION |
| 17290 | GROUND | 337.6 | N/A | 337.6 | 329.2 | 8.4 | 391.2 | -53.6 | N/A | N/A | N/A | N/A | 391.2 | -53.6 | NO ACTION |
| 17291 | GROUND | 357.7 | N/A | 357.7 | 344.4 | 13.3 | 417.1 | -59.4 | N/A | N/A | N/A | N/A | 406.8 | -49.1 | NO ACTION |
| 17292 | GROUND | 357.1 | N/A | 357.1 | 342.8 | 14.3 | 414.3 | -57.2 | N/A | N/A | N/A | N/A | 405.4 | -48.4 | NO ACTION |
| 17293 | GROUND | 358.6 | N/A | 358.6 | 342.7 | 15.9 | N/A | N/A | N/A | N/A | N/A | N/A | 405.8 | -47.2 | NO ACTION |
| 17294 | GROUND | 358.6 | N/A | 358.6 | 345.8 | 12.8 | N/A | N/A | N/A | N/A | N/A | N/A | 409.1 | -50.5 | NO ACTION |
| 17298 | GROUND | 359.6 | N/A | 359.6 | 355.9 | 3.7 | 436.6 | -77.0 | 395.4 | -35.8 | N/A | N/A | 418.4 | -58.8 | NO ACTION |
| 17311 | GROUND | 292.0 | N/A | 292.0 | N/A | N/A | N/A | N/A | N/A | N/A | 358.1 | -66.1 | N/A | N/A | NO ACTION |
| 17404 | POLE | 386.6 | 19.6 | 367.0 | 367.1 | 19.5 | 455.6 | -69.0 | N/A | N/A | N/A | N/A | 430.7 | -44.1 | MARK/LIGHT |
| 17412 | LIGHT POLE | 442.9 | 17.5 | 425.4 | 433.9 | 9.0 | N/A | N/A | N/A | N/A | N/A | N/A | 501.6 | -58.6 | MARK/LIGHT |
| 17414 | LIGHT POLE | 442.8 | 18.1 | 424.8 | 434.7 | 8.1 | N/A | N/A | N/A | N/A | N/A | N/A | 502.2 | -59.4 | MARK/LIGHT |
| 17423 | LIGHT POLE | 440.8 | 18.2 | 422.6 | 438.5 | 2.3 | 577.0 | -136.2 | N/A | N/A | N/A | N/A | 505.5 | -64.7 | MARK/LIGHT |
| 17431 | UTILITY POLE | 377.5 | 13.0 | 364.5 | 369.9 | 7.6 | N/A | N/A | N/A | N/A | N/A | N/A | 434.5 | -56.9 | MARK/LIGHT |
| 17432 | UTILITY POLE | 407.1 | 40.5 | 366.6 | 372.1 | 35.0 | N/A | N/A | N/A | N/A | N/A | N/A | 436.8 | -29.6 | MARK/LIGHT |
| 17434 | UTILITY POLE | 409.9 | 39.6 | 370.3 | 376.0 | 33.9 | N/A | N/A | N/A | N/A | N/A | N/A | 440.8 | -30.9 | MARK/LIGHT |
| 17439 | UTILITY POLE | 386.2 | 21.1 | 365.1 | 356.6 | 29.6 | 437.8 | -51.6 | N/A | N/A | N/A | N/A | 419.7 | -33.6 | MARK/LIGHT |
| 17447 | PRIMARY ROAD | 421.8 | 15.0 | 406.8 | 404.1 | 17.7 | 518.5 | -96.7 | N/A | N/A | N/A | N/A | 470.0 | -48.2 | NO ACTION |
| 17475 | TREE | 388.6 | 21.1 | 367.5 | 360.4 | 28.2 | N/A | N/A | N/A | N/A | N/A | N/A | 424.5 | -35.9 | TRIM/REMOVE |
| 17486 | TREE | 395.7 | 31.9 | 363.8 | 357.5 | 38.2 | N/A | N/A | N/A | N/A | N/A | N/A | 421.2 | -25.5 | TRIM/REMOVE |
| 17487 | TREE | 393.4 | 30.3 | 363.1 | 356.6 | 36.8 | N/A | N/A | N/A | N/A | N/A | N/A | 420.3 | -26.8 | TRIM/REMOVE |
| 17494 | TREE | 388.4 | 6.3 | 382.2 | 375.7 | 12.7 | N/A | N/A | N/A | N/A | N/A | N/A | 440.6 | -52.2 | TRIM/REMOVE |
| 17519 | TREE | 439.7 | 12.1 | 427.6 | 420.1 | 19.6 | N/A | N/A | N/A | N/A | N/A | N/A | 487.0 | -47.3 | TRIM/REMOVE |
| 17540 | TREE | 433.6 | 18.3 | 415.3 | 410.3 | 23.3 | N/A | N/A | N/A | N/A | N/A | N/A | 476.6 | -43.0 | TRIM/REMOVE |
| 17543 | TREE | 425.6 | 5.4 | 420.2 | 413.4 | 12.2 | N/A | N/A | N/A | N/A | N/A | N/A | 480.0 | -54.4 | TRIM/REMOVE |
| 17564 | TREE | 384.6 | 57.9 | 326.7 | 302.4 | 82.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 17565 | TREE | 387.9 | 60.6 | 327.3 | 312.2 | 75.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 17576 | TREE | 377.6 | 44.0 | 333.5 | 315.4 | 62.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 17597 | TREE | 390.3 | 57.6 | 332.7 | 306.2 | 84.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 17600 | TREE | 385.3 | 59.8 | 325.4 | 307.2 | 78.0 | N/A | N/A | N/A | N/A | N/A | N/A | 368.8 | 16.5 | TRIM/REMOVE |
| 17652 | TREE | 375.4 | 16.4 | 359.1 | 347.3 | 28.1 | N/A | N/A | N/A | N/A | N/A | N/A | 410.9 | -35.5 | TRIM/REMOVE |
| 17658 | TREE | 389.5 | 39.5 | 350.0 | 330.8 | 58.7 | N/A | N/A | N/A | N/A | N/A | N/A | 393.6 | -4.1 | TRIM/REMOVE |
| 17670 | TREE | 393.3 | 48.6 | 344.6 | 320.7 | 72.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 17675 | TREE | 392.4 | 53.5 | 338.9 | 318.0 | 74.4 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 17683 | TREE | 378.0 | 28.0 | 350.0 | 326.8 | 51.2 | N/A | N/A | N/A | N/A | N/A | N/A | 389.5 | -11.5 | TRIM/REMOVE |
| 17691 | TREE | 380.3 | 20.5 | 359.8 | 348.5 | 31.8 | N/A | N/A | N/A | N/A | N/A | N/A | 412.1 | -31.9 | TRIM/REMOVE |
| 17709 | TREE | 390.4 | 27.7 | 362.6 | 352.8 | 37.6 | N/A | N/A | N/A | N/A | N/A | N/A | 416.7 | -26.3 | TRIM/REMOVE |
| 17711 | TREE | 391.6 | 30.5 | 361.1 | 352.5 | 39.1 | N/A | N/A | N/A | N/A | N/A | N/A | 416.1 | -24.5 | TRIM/REMOVE |
| 17726 | TREE | 394.2 | 22.2 | 372.0 | 364.8 | 29.3 | N/A | N/A | N/A | N/A | N/A | N/A | 429.2 | -35.0 | TRIM/REMOVE |
| 17775 | TREE | 442.8 | 12.8 | 430.1 | 421.9 | 21.0 | N/A | N/A | N/A | N/A | N/A | N/A | 488.8 | -46.0 | TRIM/REMOVE |
| 17800 | TREE | 393.6 | 14.4 | 379.1 | 374.9 | 18.7 | 468.9 | -75.3 | N/A | N/A | N/A | N/A | 439.3 | -45.8 | TRIM/REMOVE |
| 17813 | TREE | 376.8 | 5.1 | 371.7 | 367.9 | 8.9 | 457.0 | -80.2 | N/A | N/A | N/A | N/A | 431.8 | -55.0 | TRIM/REMOVE |
| 17824 | TREE | 377.9 | 22.7 | 355.2 | 352.9 | 25.1 | 431.4 | -53.5 | N/A | N/A | N/A | N/A | 415.6 | -37.7 | TRIM/REMOVE |
| 17830 | TREE | 377.2 | 21.0 | 356.2 | 354.2 | 23.0 | 433.6 | -56.5 | N/A | N/A | N/A | N/A | 417.0 | -39.8 | TRIM/REMOVE |
| 17837 | TREE | 378.5 | 11.1 | 367.4 | 363.8 | 14.7 | 450.0 | -71.5 | N/A | N/A | N/A | N/A | 427.4 | -48.9 | TRIM/REMOVE |
| 17838 | TREE | 380.2 | 17.1 | 363.1 | 362.1 | 18.0 | 447.2 | -67.0 | N/A | N/A | N/A | N/A | 425.3 | -45.1 | TRIM/REMOVE |
| 17848 | TREE | 385.7 | 10.6 | 375.2 | 374.4 | 11.3 | 468.1 | -82.4 | N/A | N/A | N/A | N/A | 438.3 | -52.6 | TRIM/REMOVE |
| 17871 | TREE | 409.0 | 21.8 | 387.2 | 383.2 | 25.8 | 482.9 | -74.0 | N/A | N/A | N/A | N/A | 448.0 | -39.0 | TRIM/REMOVE |
| 17875 | TREE | 414.3 | 30.7 | 383.5 | 380.2 | 34.1 | 477.9 | -63.6 | N/A | N/A | N/A | N/A | 444.8 | -30.5 | TRIM/REMOVE |
| 17883 | TREE | 419.6 | 34.2 | 385.4 | 379.5 | 40.0 | N/A | N/A | N/A | N/A | N/A | N/A | 444.6 | -25.0 | TRIM/REMOVE |
| 17889 | TREE | 423.0 | 25.7 | 397.3 | 391.3 | 31.7 | N/A | N/A | N/A | N/A | N/A | N/A | 457.0 | -34.0 | TRIM/REMOVE |
| 17890 | TREE | 423.5 | 25.4 | 398.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 457.4 | -33.9 | NO ACTION |

NOTES:

1. HORIZONTAL DATUM NAD83 (MA11), VERTICAL DATUM GUVD04 (GEOID 12B). DRAWING PREPARED IN UTM ZONE 55 NORTH (US FOOT) COORDINATE SYSTEM.
2. MAGNETIC DECLINATION OBTAINED ONLINE AT HTTP://WWW.NGDC.NOAA.GOV/GEOMAG-WEB/#DECLINATION.
3. ALL LOCAL ZONING AND AIRSPACE PROTECTION IS GOVERNED BY THE SUPREME COURT OF GUAM, COMPILER OF LAWS, TITLE 21 - REAL PROPERTY, CHAPTER 61 - ZONING LAW.
4. OBSTACLES WERE EVALUATED USING 2022 AIRPORT AIRSPACE ANALYSIS OBSTRUCTION SURVEY DATA.
5. FOR CLARITY, ONLY CRITICAL OBSTRUCTIONS, DEFINED AS THE HIGHEST OBSTRUCTION WITHIN A 100' x 100' GRID, ARE SHOWN. CRITICAL OBJECT CRITERIA ARE DERIVED FROM ADVISORY CIRCULAR 150/5300-18B, *GENERAL GUIDANCE AND SPECIFICATIONS FOR SUBMISSION OF AERONAUTICAL SURVEYS TO NGS: FIELD DATA COLLECTION AND GEOGRAPHIC INFORMATION SYSTEM (GIS) STANDARDS*, SECTION 2.7.1.6.
6. ANY TEMPORARY OR PERMANENT STRUCTURE, INCLUDING ALL APPURTENANCES, THAT EXCEED AN OVERALL HEIGHT OF 200 FEET (61M) ABOVE GROUND LEVEL (AGL) OR EXCEEDS ANY OBSTRUCTION STANDARD CONTAINED IN 14 CFR PART 77, SHOULD BE MARKED AND/OR LIGHTED PER ADVISORY CIRCULAR 70/7460-1.
7. AS PER FAR PART-77.17(B), APPROACH SURFACE CLEARANCES ARE BASED ON TRAVERSE WAY ELEVATIONS PLUS THE TRAVERSE WAY ADJUSTMENT (23' FOR RAILWAYS, 17' FOR INTERSTATE HIGHWAYS, 15' FOR OTHER PUBLIC ROADS, OR 10' FOR PRIVATE ROADS).
8. THE LIMITS OF THE INNER APPROACH SURFACE OBSTRUCTION ANALYSES ARE TO A POINT 100' ABOVE THE RUNWAY THRESHOLD ELEVATION WITHIN THE 14 CFR PART 77 APPROACH SURFACE.
9. EXISTING ON-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2022 AIRPORT AIRSPACE ANALYSIS SURVEY DATA. OFF-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2013 COASTAL AND MARINE SPATIAL PLANNING DATA FROM THE NAVAL POSTGRADUATE SCHOOL, DEPARTMENT OF OCEANOGRAPHY (HTTPS://WWW.OC.NPS.EDU/CMSP/GUAM).
10. ALL ELEVATIONS ARE IN FEET.
11. WHERE OBJECTS DO NOT FALL WITHIN THE LATERAL EXTENTS OF A GIVEN SURFACE, SURFACE ELEVATION AND SURFACE PENETRATION FIELDS ARE ASSIGNED A VALUE OF "N/A".
12. ACCORDING TO FAA AC 150/5300-13B, *AIRPORT DESIGN*, ALL OBSTACLE FREE ZONE (OFZ) SURFACES MUST REMAIN CLEAR OF OBJECTS, EXCEPT FOR FRANGIBLE NAVAIDS. IDENTIFIED OFZ PENETRATIONS FOR THIS RUNWAY REQUIRE FURTHER EVALUATION FOR WAYS OF COMPLYING WITH FAA OFZ CLEARING STANDARDS.

| NO. | REVISIONS | BY | APP. | DATE | NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|---|---|---|---|---|

MAGNETIC DECLINATION = 0°27' (0.4°) EAST (JANUARY 2022)
ANNUAL RATE OF CHANGE: 0°1' (0.017°) WEST / YEAR

PREPARED FOR
A. B. WON PAT INTERNATIONAL AIRPORT GUAM
A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM
AECOM

FUTURE RUNWAY 24L
INNER PORTION OF THE APPROACH SURFACE
DATA TABLES - C

ANTONIO B. WON PAT
INTERNATIONAL AIRPORT

DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WBS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 06/23
SHEET: 35 OF 51

**Figure H-36. Future Runway 24L Inner Portion of the Approach Surface Data Tables – C**

Source: AECOM

**RUNWAY 24L - FUTURE APPROACH SURFACE OBSTRUCTIONS**

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | PART 77 | | TSS TYPE 5 | | TSS TYPE 6 | | OFZ | | PAPI OCS | | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MSL | AGL | | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | |
| 17901 | TREE | 422.3 | 25.6 | 396.7 | 393.7 | 28.7 | 500.8 | -78.5 | N/A | N/A | N/A | N/A | 458.9 | -36.5 | TRIM/REMOVE |
| 17920 | TREE | 412.5 | 20.7 | 391.8 | 389.8 | 22.7 | 494.2 | -81.7 | N/A | N/A | N/A | N/A | 454.6 | -42.1 | TRIM/REMOVE |
| 17937 | TREE | 399.5 | 8.9 | 390.6 | 386.3 | 13.2 | 488.3 | -88.8 | N/A | N/A | N/A | N/A | 451.4 | -51.9 | TRIM/REMOVE |
| 17939 | TREE | 394.9 | 4.1 | 390.8 | 387.3 | 7.7 | 489.9 | -94.9 | N/A | N/A | N/A | N/A | 452.2 | -57.3 | TRIM/REMOVE |
| 17947 | TREE | 386.2 | -3.7 | 389.9 | 383.9 | 2.3 | N/A | N/A | N/A | N/A | N/A | N/A | 449.2 | -63.0 | TRIM/REMOVE |
| 17957 | TREE | 442.2 | 42.2 | 400.0 | 396.1 | 46.1 | N/A | N/A | N/A | N/A | N/A | N/A | 461.9 | -19.7 | TRIM/REMOVE |
| 18014 | TREE | 440.0 | 29.9 | 410.1 | 407.1 | 32.9 | 523.7 | -83.7 | N/A | N/A | N/A | N/A | 473.2 | -33.2 | TRIM/REMOVE |
| 18020 | TREE | 429.3 | 19.7 | 409.6 | 405.4 | 23.8 | N/A | N/A | N/A | N/A | N/A | N/A | 471.7 | -42.4 | TRIM/REMOVE |
| 18029 | TREE | 441.4 | 12.2 | 429.2 | 422.3 | 19.1 | 549.5 | -108.1 | N/A | N/A | N/A | N/A | 489.1 | -47.7 | TRIM/REMOVE |
| 18078 | TREE | 367.7 | 63.9 | 303.8 | N/A | N/A | N/A | N/A | N/A | N/A | 390.5 | -22.8 | N/A | N/A | NO ACTION |
| 18325 | TREE | 395.1 | 51.4 | 343.8 | N/A | N/A | N/A | N/A | N/A | N/A | 406.0 | -10.9 | N/A | N/A | NO ACTION |
| 18433 | TREE | 389.8 | 80.8 | 309.0 | N/A | N/A | N/A | N/A | N/A | N/A | 397.4 | -7.6 | N/A | N/A | TRIM/REMOVE |
| 18657 | TREE | 344.6 | 44.6 | 300.0 | N/A | N/A | N/A | N/A | N/A | N/A | 442.6 | -98.0 | N/A | N/A | NO ACTION |
| 18732 | TREE | 363.5 | 63.5 | 300.0 | N/A | N/A | N/A | N/A | N/A | N/A | 387.6 | -24.0 | N/A | N/A | NO ACTION |
| 18952 | TREE | 381.0 | 67.3 | 313.7 | N/A | N/A | N/A | N/A | N/A | N/A | 423.4 | -42.4 | N/A | N/A | NO ACTION |
| 20051 | TREE | 363.2 | 63.2 | 300.0 | N/A | N/A | N/A | N/A | N/A | N/A | 413.2 | -50.0 | N/A | N/A | NO ACTION |
| 20560 | UTILITY BOX | 285.5 | 3.9 | 281.6 | N/A | N/A | N/A | N/A | N/A | N/A | 334.0 | -48.5 | N/A | N/A | NO ACTION |
| 20571 | WALL | 372.2 | 6.6 | 365.6 | 365.6 | 6.6 | N/A | N/A | N/A | N/A | N/A | N/A | 430.0 | -57.8 | MARK/LIGHT |
| 20582 | SIGN | 273.8 | 2.9 | 270.9 | N/A | N/A | N/A | N/A | N/A | N/A | 380.0 | -106.2 | N/A | N/A | NO ACTION |
| 20583 | SIGN | 278.1 | 5.3 | 272.8 | N/A | N/A | N/A | N/A | N/A | N/A | 378.9 | -100.8 | N/A | N/A | NO ACTION |
| 20585 | SIGN | 280.1 | 3.7 | 276.5 | N/A | N/A | N/A | N/A | N/A | N/A | 384.2 | -104.1 | N/A | N/A | NO ACTION |
| 20587 | SIGN | 291.9 | 5.2 | 286.7 | N/A | N/A | N/A | N/A | N/A | N/A | 392.2 | -100.3 | N/A | N/A | NO ACTION |
| 20598 | TREE | 412.4 | 59.5 | 352.9 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 473.6 | -61.2 | NO ACTION |
| 20605 | TREE | 427.3 | 63.7 | 363.7 | 450.2 | -22.8 | 596.8 | -169.5 | N/A | N/A | N/A | N/A | 516.8 | -89.5 | NO ACTION |
| 20669 | POWER TRANSMISSION POLE | 435.9 | 57.5 | 378.4 | 434.0 | 2.0 | 569.3 | -133.4 | 483.9 | -47.9 | N/A | N/A | 499.5 | -63.6 | MARK/LIGHT |
| 20670 | POLE | 424.0 | 48.8 | 375.3 | 437.8 | -13.8 | 575.9 | -151.9 | N/A | N/A | N/A | N/A | 504.2 | -80.2 | NO ACTION |
| 20671 | POLE | 432.6 | 48.9 | 383.7 | 437.5 | -4.9 | 575.2 | -142.7 | 487.8 | -55.3 | N/A | N/A | 503.1 | -70.6 | NO ACTION |
| 20675 | TREE | 410.5 | 46.9 | 363.5 | 427.1 | -16.7 | 557.6 | -147.2 | N/A | N/A | N/A | N/A | 494.1 | -83.7 | NO ACTION |
| 20677 | TREE | 418.9 | 62.8 | 356.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 489.2 | -70.3 | NO ACTION |
| 20678 | TREE | 418.8 | 65.1 | 353.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 484.1 | -65.3 | NO ACTION |
| 20764 | POWER TRANSMISSION POLE | 431.6 | 66.3 | 365.3 | 432.5 | -0.9 | 566.8 | -135.2 | N/A | N/A | N/A | N/A | 499.8 | -68.2 | NO ACTION |
| 20765 | POWER TRANSMISSION POLE | 429.7 | 62.1 | 367.6 | 433.7 | -3.9 | 568.8 | -139.0 | N/A | N/A | N/A | N/A | 500.2 | -70.5 | NO ACTION |
| 20766 | POWER TRANSMISSION POLE | 435.3 | 61.2 | 374.1 | 434.2 | 1.1 | 569.8 | -134.5 | N/A | N/A | N/A | N/A | 500.2 | -64.9 | MARK/LIGHT |
| 20770 | POLE | 414.3 | 50.1 | 364.2 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 503.4 | -89.0 | NO ACTION |
| 20771 | POLE | 415.3 | 48.1 | 367.2 | 436.1 | -20.8 | 572.9 | -157.7 | N/A | N/A | N/A | N/A | 503.5 | -88.2 | NO ACTION |
| 20772 | POLE | 418.2 | 48.2 | 370.1 | 436.8 | -18.5 | 574.1 | -155.9 | N/A | N/A | N/A | N/A | 503.7 | -85.5 | NO ACTION |
| 20773 | POLE | 429.9 | 49.8 | 380.1 | 438.1 | -8.2 | 576.3 | -146.4 | N/A | N/A | N/A | N/A | 504.1 | -74.1 | NO ACTION |
| 20779 | BUSH | 353.9 | 3.0 | 350.8 | 378.1 | -24.3 | N/A | N/A | N/A | N/A | N/A | N/A | 442.9 | -89.1 | NO ACTION |
| 20783 | POWER TRANSMISSION POLE | 430.0 | 66.3 | 363.7 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 499.6 | -69.6 | NO ACTION |
| 20796 | GROUND | 360.6 | N/A | 360.6 | 385.2 | -24.6 | 486.4 | -125.8 | 428.6 | -68.0 | N/A | N/A | 448.9 | -88.4 | NO ACTION |
| 20797 | GROUND | 355.8 | N/A | 355.8 | 379.7 | -23.8 | 477.0 | -121.1 | 422.3 | -66.5 | N/A | N/A | 443.2 | -87.4 | NO ACTION |
| 20798 | GROUND | 349.3 | N/A | 349.3 | 373.4 | -24.2 | 466.4 | -117.1 | 415.2 | -66.0 | N/A | N/A | 436.7 | -87.4 | NO ACTION |
| 20799 | GROUND | 343.7 | N/A | 343.7 | 367.4 | -23.7 | 456.2 | -112.5 | 408.5 | -64.7 | N/A | N/A | 430.5 | -86.7 | NO ACTION |
| 20830 | GROUND | 305.5 | N/A | 305.5 | 317.8 | -12.3 | N/A | N/A | N/A | N/A | N/A | N/A | 379.7 | -74.2 | NO ACTION |
| 20831 | GROUND | 306.8 | N/A | 306.8 | 324.3 | -17.5 | N/A | N/A | N/A | N/A | N/A | N/A | 386.4 | -79.6 | NO ACTION |
| 20849 | TREE | 449.8 | 48.7 | 401.1 | 473.5 | -23.7 | 636.5 | -186.7 | 528.7 | -78.9 | N/A | N/A | 540.3 | -90.5 | NO ACTION |
| 20869 | SIGN | 284.4 | 5.8 | 278.6 | N/A | N/A | N/A | N/A | N/A | N/A | 384.4 | -100.0 | N/A | N/A | NO ACTION |
| 20890 | GROUND | 292.9 | N/A | 292.9 | N/A | N/A | N/A | N/A | N/A | N/A | 362.4 | -69.5 | N/A | N/A | NO ACTION |
| 20913 | GROUND | 275.7 | N/A | 275.7 | N/A | N/A | N/A | N/A | N/A | N/A | 322.0 | -46.3 | N/A | N/A | NO ACTION |
| 20923 | GROUND | 264.9 | N/A | 264.9 | N/A | N/A | N/A | N/A | N/A | N/A | 373.9 | -109.0 | N/A | N/A | NO ACTION |
| 21022 | GROUND | 305.8 | N/A | 305.8 | 325.7 | -20.0 | N/A | N/A | N/A | N/A | N/A | N/A | 388.2 | -82.4 | NO ACTION |
| 21026 | GROUND | 352.1 | N/A | 352.1 | 376.4 | -24.3 | 471.5 | -119.4 | N/A | N/A | N/A | N/A | 439.9 | -87.8 | NO ACTION |
| 21053 | SIGN | 280.0 | 3.4 | 276.6 | N/A | N/A | N/A | N/A | N/A | N/A | 278.8 | 1.2 | N/A | N/A | LOWER/RELOCATE |
| 21054 | SIGN | 283.6 | 3.7 | 280.0 | N/A | N/A | N/A | N/A | N/A | N/A | 336.6 | -53.0 | N/A | N/A | NO ACTION |
| 21059 | SIGN | 289.6 | 3.3 | 286.4 | N/A | N/A | N/A | N/A | N/A | N/A | 364.5 | -74.8 | N/A | N/A | NO ACTION |
| 21064 | ELECTRIC BOX | 286.9 | 6.2 | 280.7 | N/A | N/A | N/A | N/A | N/A | N/A | 360.0 | -73.1 | N/A | N/A | NO ACTION |
| 21065 | BUILDING | 391.9 | 25.9 | 366.0 | 353.9 | 38.0 | 433.1 | -41.2 | N/A | N/A | N/A | N/A | 416.8 | -24.9 | MARK/LIGHT |
| 21068 | PARKING LOT | 372.7 | 10.0 | 362.7 | 362.8 | 9.9 | 448.4 | -75.7 | 403.3 | -30.6 | N/A | N/A | 425.7 | -53.0 | NO ACTION |
| 21072 | BUILDING | 397.0 | 25.4 | 371.7 | 376.3 | 20.7 | 471.3 | -74.3 | N/A | N/A | N/A | N/A | 440.1 | -43.1 | MARK/LIGHT |
| 21073 | BUILDING | 392.3 | 14.6 | 377.6 | 387.6 | 4.6 | 490.5 | -98.3 | N/A | N/A | N/A | N/A | 452.2 | -60.0 | MARK/LIGHT |
| 21074 | UTILITY POLE | 407.8 | 27.1 | 380.6 | 390.3 | 17.5 | 495.0 | -87.2 | N/A | N/A | N/A | N/A | 454.4 | -46.7 | MARK/LIGHT |
| 21076 | UTILITY POLE | 455.0 | 49.6 | 405.4 | 413.1 | 41.9 | 533.8 | -78.8 | N/A | N/A | N/A | N/A | 478.3 | -23.3 | MARK/LIGHT |
| 21078 | PARKING LOT | 419.8 | 10.0 | 409.8 | 418.8 | 1.0 | 543.6 | -123.8 | 466.7 | -46.9 | N/A | N/A | 484.0 | -64.2 | NO ACTION |
| 21083 | BUILDING | 431.8 | 25.4 | 406.5 | 428.6 | 3.2 | 560.2 | -128.3 | 477.8 | -45.9 | N/A | N/A | 493.6 | -61.8 | MARK/LIGHT |
| 21093 | BUILDING | 464.3 | 28.8 | 435.5 | 449.1 | 15.2 | 595.0 | -130.7 | N/A | N/A | N/A | N/A | 517.0 | -52.7 | MARK/LIGHT |
| 21094 | BUILDING | 464.2 | 29.3 | 434.9 | 452.5 | 11.7 | 600.8 | -136.6 | N/A | N/A | N/A | N/A | 519.8 | -55.6 | MARK/LIGHT |
| 21095 | BUILDING | 445.4 | 20.5 | 425.0 | 444.9 | 0.5 | 587.9 | -142.5 | N/A | N/A | N/A | N/A | 511.7 | -66.3 | MARK/LIGHT |
| 21096 | BILLBOARD | 416.2 | 12.0 | 404.2 | 433.2 | -17.0 | 568.0 | -151.8 | 483.0 | -66.8 | N/A | N/A | 498.4 | -82.2 | MARK/LIGHT |
| 21134 | FLAGPOLE | 443.2 | 32.3 | 410.8 | 421.2 | 22.0 | 547.6 | -104.4 | N/A | N/A | N/A | N/A | 486.6 | -43.5 | MARK/LIGHT |
| 21135 | STREET SIGN | 360.9 | 9.6 | 351.3 | 358.3 | 2.6 | 440.6 | -79.7 | 398.1 | -37.2 | N/A | N/A | 420.6 | -59.7 | LOWER/RELOCATE |
| 21148 | TREE | 449.5 | 32.0 | 417.5 | 416.3 | 33.2 | 539.2 | -89.7 | N/A | N/A | N/A | N/A | 482.4 | -32.9 | TRIM/REMOVE |
| 21155 | POLE | 411.0 | 28.4 | 382.6 | 403.8 | 7.2 | 518.1 | -107.1 | 449.7 | -38.7 | N/A | N/A | 468.1 | -57.1 | MARK/LIGHT |
| 21167 | POLE | 372.7 | 14.2 | 358.6 | 369.2 | 3.5 | 459.3 | -86.6 | 410.5 | -37.8 | N/A | N/A | 431.9 | -59.2 | MARK/LIGHT |

NOTES:

1. HORIZONTAL DATUM NAD83 (MA11), VERTICAL DATUM GUVD04 (GEOID 12B). DRAWING PREPARED IN UTM ZONE 55 NORTH (US FOOT) COORDINATE SYSTEM.
2. MAGNETIC DECLINATION OBTAINED ONLINE AT HTTP://WWW.NGDC.NOAA.GOV/GEOMAG-WEB/#DECLINATION.
3. ALL LOCAL ZONING AND AIRSPACE PROTECTION IS GOVERNED BY THE SUPREME COURT OF GUAM, COMPILER OF LAWS, TITLE 21 - REAL PROPERTY, CHAPTER 61 - ZONING LAW.
4. OBSTACLES WERE EVALUATED USING 2022 AIRPORT AIRSPACE ANALYSIS OBSTRUCTION SURVEY DATA.
5. FOR CLARITY, ONLY CRITICAL OBSTRUCTIONS, DEFINED AS THE HIGHEST OBSTRUCTION WITHIN A 100' x 100' GRID, ARE SHOWN. CRITICAL OBJECT CRITERIA ARE DERIVED FROM ADVISORY CIRCULAR 150/5300-18B, *GENERAL GUIDANCE AND SPECIFICATIONS FOR SUBMISSION OF AERONAUTICAL SURVEYS TO NGS: FIELD DATA COLLECTION AND GEOGRAPHIC INFORMATION SYSTEM (GIS) STANDARDS*, SECTION 2.7.1.6.
6. ANY TEMPORARY OR PERMANENT STRUCTURE, INCLUDING ALL APPURTENANCES, THAT EXCEED AN OVERALL HEIGHT OF 200 FEET (61M) ABOVE GROUND LEVEL (AGL) OR EXCEEDS ANY OBSTRUCTION STANDARD CONTAINED IN 14 CFR PART 77, SHOULD BE MARKED AND/OR LIGHTED PER ADVISORY CIRCULAR 70/7460-1.
7. AS PER FAR PART-77.17(B), APPROACH SURFACE CLEARANCES ARE BASED ON TRAVERSE WAY ELEVATIONS PLUS THE TRAVERSE WAY ADJUSTMENT (23' FOR RAILWAYS, 17' FOR INTERSTATE HIGHWAYS, 15' FOR OTHER PUBLIC ROADS, OR 10' FOR PRIVATE ROADS).
8. THE LIMITS OF THE INNER APPROACH SURFACE OBSTRUCTION ANALYSES ARE TO A POINT 100' ABOVE THE RUNWAY THRESHOLD ELEVATION WITHIN THE 14 CFR PART 77 APPROACH SURFACE.
9. EXISTING ON-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2022 AIRPORT AIRSPACE ANALYSIS SURVEY DATA. OFF-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2013 COASTAL AND MARINE SPATIAL PLANNING DATA FROM THE NAVAL POSTGRADUATE SCHOOL, DEPARTMENT OF OCEANOGRAPHY (HTTPS://WWW.OC.NPS.EDU/CMSP/GUAM).
10. ALL ELEVATIONS ARE IN FEET.
11. WHERE OBJECTS DO NOT FALL WITHIN THE LATERAL EXTENTS OF A GIVEN SURFACE, SURFACE ELEVATION AND SURFACE PENETRATION FIELDS ARE ASSIGNED A VALUE OF "N/A".
12. ACCORDING TO FAA AC 150/5300-13B, *AIRPORT DESIGN*, ALL OBSTACLE FREE ZONE (OFZ) SURFACES MUST REMAIN CLEAR OF OBJECTS, EXCEPT FOR FRANGIBLE NAVAIDS. IDENTIFIED OFZ PENETRATIONS FOR THIS RUNWAY REQUIRE FURTHER EVALUATION FOR WAYS OF COMPLYING WITH FAA OFZ CLEARING STANDARDS.

| NO. | REVISIONS | BY | APP. | DATE | NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

MAGNETIC DECLINATION = 9°23' (9.4°) EAST (JANUARY 2022)
ANNUAL RATE OF CHANGE: 0°1' (0.017') WEST / YEAR

PREPARED FOR
A. B. WON PAT INTERNATIONAL AIRPORT GUAM
A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM
AECOM

FUTURE RUNWAY 24L
INNER PORTION OF THE APPROACH SURFACE
DATA TABLES - D

ANTONIO B. WON PAT
INTERNATIONAL AIRPORT

DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WBS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 06/23
SHEET: 36 OF 51

**Figure H-37. Future Runway 24L Inner Portion of the Approach Surface Data Tables – D**

Source: AECOM

## RUNWAY 24L - FUTURE APPROACH SURFACE OBSTRUCTIONS

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | PART 77 | | TSS TYPE 5 | | TSS TYPE 6 | | OFZ | | PAPI OCS | | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MSL | AGL | | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | |
| 21168 | POLE | 369.4 | 13.8 | 355.6 | 364.7 | 4.7 | 451.5 | -82.2 | 405.3 | -36.0 | N/A | N/A | 427.2 | -57.8 | MARK/LIGHT |
| 21180 | POLE | 428.3 | 24.7 | 403.5 | 423.2 | 5.1 | 550.9 | -122.7 | 471.6 | -43.3 | N/A | N/A | 488.0 | -59.8 | MARK/LIGHT |
| 21187 | BUILDING | 431.8 | 25.7 | 406.1 | 425.9 | 5.9 | 555.6 | -123.9 | 474.8 | -43.0 | N/A | N/A | 491.1 | -59.3 | MARK/LIGHT |
| 21189 | BUILDING | 424.5 | 22.6 | 401.9 | 436.9 | -12.4 | 574.3 | -149.8 | 487.2 | -62.7 | N/A | N/A | 502.3 | -77.7 | NO ACTION |
| 21191 | BUILDING | 416.4 | 14.2 | 402.2 | 437.9 | -21.5 | 576.0 | -159.6 | 488.3 | -72.0 | N/A | N/A | 503.3 | -86.9 | NO ACTION |
| 21192 | FENCE | 364.4 | 9.3 | 355.1 | 351.1 | 13.3 | 428.4 | -64.0 | 390.0 | -25.5 | N/A | N/A | 413.5 | -49.0 | NO ACTION |
| 21193 | FENCE | 360.6 | 9.4 | 351.2 | 350.8 | 9.8 | 427.9 | -67.3 | 389.6 | -29.0 | N/A | N/A | 413.0 | -52.4 | NO ACTION |
| 21194 | FENCE | 358.5 | 9.7 | 348.8 | 350.6 | 7.9 | 427.6 | -69.1 | 389.4 | -30.9 | N/A | N/A | 412.6 | -54.2 | NO ACTION |
| 21195 | FENCE | 357.8 | 9.2 | 348.6 | 350.5 | 7.3 | 427.5 | -69.7 | 389.3 | -31.5 | N/A | N/A | 412.5 | -54.7 | NO ACTION |
| 21209 | BUILDING | 381.9 | 12.9 | 369.0 | 375.5 | 6.4 | 469.8 | -88.0 | 417.6 | -35.7 | N/A | N/A | 438.8 | -56.9 | MARK/LIGHT |
| 21215 | POLE | 385.1 | 17.1 | 368.0 | 376.7 | 8.5 | 471.9 | -86.8 | 418.9 | -33.8 | N/A | N/A | 439.8 | -54.7 | MARK/LIGHT |
| 21217 | POLE | 364.5 | 14.1 | 350.4 | 357.8 | 6.7 | 439.8 | -75.3 | 397.5 | -33.1 | N/A | N/A | 420.1 | -55.6 | MARK/LIGHT |
| 21219 | POLE | 395.8 | 23.4 | 372.4 | 380.5 | 15.3 | 478.4 | -82.6 | 423.3 | -27.4 | N/A | N/A | 443.9 | -48.1 | MARK/LIGHT |
| 21224 | BUILDING | 402.9 | 21.6 | 381.2 | 393.4 | 9.5 | 500.4 | -97.5 | 437.9 | -35.0 | N/A | N/A | 457.1 | -54.2 | MARK/LIGHT |
| 21233 | BUILDING | 402.8 | 20.3 | 382.6 | 400.4 | 2.4 | 512.2 | -109.4 | 445.8 | -43.0 | N/A | N/A | 464.4 | -61.6 | MARK/LIGHT |
| 21234 | FENCE | 362.3 | 9.6 | 352.7 | 362.4 | 0.0 | 447.6 | -85.2 | 402.7 | -40.4 | N/A | N/A | 424.8 | -62.5 | NO ACTION |
| 21235 | FENCE | 364.3 | 9.5 | 354.9 | 365.3 | -0.9 | 452.6 | -88.2 | 406.0 | -41.7 | N/A | N/A | 427.8 | -63.5 | NO ACTION |
| 21236 | FENCE | 367.2 | 9.3 | 357.9 | 368.2 | -1.1 | 457.5 | -90.4 | 409.4 | -42.2 | N/A | N/A | 430.9 | -63.7 | NO ACTION |
| 21249 | FENCE | 396.2 | 9.3 | 386.9 | 406.3 | -10.1 | 522.3 | -126.1 | 452.5 | -56.3 | N/A | N/A | 470.5 | -74.2 | NO ACTION |
| 21251 | FENCE | 398.7 | 9.2 | 389.5 | 412.2 | -13.5 | 532.3 | -133.6 | 459.2 | -60.5 | N/A | N/A | 476.6 | -77.9 | NO ACTION |
| 21262 | FENCE | 366.5 | 9.2 | 357.3 | 353.0 | 13.5 | 431.6 | -65.1 | 392.1 | -25.6 | N/A | N/A | 415.4 | -48.9 | NO ACTION |
| 21285 | BUILDING | 415.9 | 26.3 | 389.6 | 407.2 | 8.7 | 523.8 | -107.9 | 453.5 | -37.6 | N/A | N/A | 471.7 | -55.8 | MARK/LIGHT |
| 21298 | TREE | 427.4 | 24.4 | 403.0 | 424.7 | 2.7 | 553.5 | -126.1 | 473.3 | -46.0 | N/A | N/A | 489.9 | -62.5 | TRIM/REMOVE |
| 21299 | TREE | 435.4 | 35.2 | 400.2 | 422.2 | 13.2 | 549.3 | -113.9 | 470.5 | -35.1 | N/A | N/A | 487.2 | -51.8 | TRIM/REMOVE |
| 21303 | GROUND | 343.2 | N/A | 343.2 | 352.9 | -9.7 | 431.4 | -88.3 | 391.9 | -48.8 | N/A | N/A | 415.1 | -72.0 | NO ACTION |
| 21305 | TREE | 427.3 | 32.5 | 394.7 | 440.0 | -12.7 | 579.5 | -152.2 | 490.7 | -63.4 | N/A | N/A | 505.6 | -78.3 | NO ACTION |
| 21307 | TREE | 443.6 | 57.0 | 386.6 | 449.9 | -6.3 | 596.4 | -152.8 | 501.9 | -58.3 | N/A | N/A | 515.9 | -72.3 | TRIM/REMOVE |
| 21352 | POLE | 449.4 | 37.6 | 411.8 | 471.3 | -21.9 | 632.8 | -183.4 | 526.2 | -76.8 | N/A | N/A | 538.2 | -88.7 | NO ACTION |
| 21355 | TREE | 457.0 | 55.4 | 401.6 | 450.8 | 6.2 | 597.9 | -141.0 | N/A | N/A | N/A | N/A | 517.6 | -60.6 | TRIM/REMOVE |
| 21361 | POLE | 480.8 | 37.3 | 443.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 518.7 | -37.9 | NO ACTION |
| 21362 | TREE | 455.9 | 66.0 | 390.0 | 436.1 | 19.8 | 572.9 | -117.0 | 486.3 | -30.3 | N/A | N/A | 501.6 | -45.7 | TRIM/REMOVE |
| 21363 | TREE | 466.9 | 91.3 | 375.7 | 439.1 | 27.9 | 578.0 | -111.0 | 489.6 | -22.7 | N/A | N/A | 504.9 | -38.0 | TRIM/REMOVE |
| 21364 | TREE | 457.8 | 78.5 | 379.3 | 445.3 | 12.5 | 588.6 | -130.7 | N/A | N/A | N/A | N/A | 511.8 | -54.0 | TRIM/REMOVE |
| 21365 | TREE | 425.6 | 25.6 | 400.0 | 435.4 | -9.8 | 571.8 | -146.1 | 485.5 | -59.9 | N/A | N/A | 500.7 | -75.1 | TRIM/REMOVE |
| 21366 | TREE | 459.5 | 59.5 | 400.0 | 442.4 | 17.1 | 583.6 | -124.2 | 493.4 | -34.0 | N/A | N/A | 507.9 | -48.5 | TRIM/REMOVE |
| 21367 | TREE | 472.9 | 72.9 | 400.0 | 443.9 | 29.0 | 586.2 | -113.2 | 495.1 | -22.2 | N/A | N/A | 509.5 | -36.6 | TRIM/REMOVE |
| 21368 | TREE | 450.6 | 50.6 | 400.0 | 439.5 | 11.2 | 578.6 | -128.0 | 490.1 | -39.5 | N/A | N/A | 504.9 | -54.3 | TRIM/REMOVE |
| 21371 | TREE | 455.7 | 34.1 | 421.6 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 478.0 | -22.3 | NO ACTION |
| 21373 | POLE | 455.8 | 34.2 | 421.6 | 437.4 | 18.4 | 575.2 | -119.3 | N/A | N/A | N/A | N/A | 503.9 | -48.1 | MARK/LIGHT |
| 21374 | POLE | 462.5 | 37.6 | 425.0 | 441.6 | 20.9 | 582.3 | -119.8 | N/A | N/A | N/A | N/A | 508.7 | -46.2 | MARK/LIGHT |
| 21375 | TREE | 444.3 | 41.7 | 402.6 | 432.8 | 11.5 | 567.3 | -123.0 | 482.5 | -38.2 | N/A | N/A | 498.4 | -54.1 | TRIM/REMOVE |
| 21377 | BUILDING | 455.4 | 30.6 | 424.8 | 432.9 | 22.5 | 567.5 | -112.1 | N/A | N/A | N/A | N/A | 499.7 | -44.3 | MARK/LIGHT |
| 21378 | BUILDING | 455.3 | 30.5 | 424.8 | 429.2 | 26.1 | 561.2 | -105.9 | N/A | N/A | N/A | N/A | 496.4 | -41.1 | MARK/LIGHT |
| 21380 | POLE | 470.3 | 36.7 | 433.6 | 441.9 | 28.4 | 582.9 | -112.6 | N/A | N/A | N/A | N/A | 509.6 | -39.3 | MARK/LIGHT |
| 21383 | BUILDING | 457.2 | 31.8 | 425.5 | 437.3 | 20.0 | 575.0 | -117.7 | N/A | N/A | N/A | N/A | 504.3 | -47.0 | MARK/LIGHT |
| 21384 | BUILDING | 442.7 | 19.8 | 422.8 | 440.0 | 2.7 | 579.5 | -136.9 | N/A | N/A | N/A | N/A | 506.3 | -63.7 | MARK/LIGHT |
| 21385 | TREE | 454.4 | 21.5 | 432.9 | 424.2 | 30.2 | N/A | N/A | N/A | N/A | N/A | N/A | 491.2 | -36.8 | TRIM/REMOVE |
| 21386 | BUILDING | 439.7 | 30.8 | 408.8 | 420.5 | 19.1 | 546.4 | -106.8 | N/A | N/A | N/A | N/A | 486.6 | -47.0 | MARK/LIGHT |
| 21387 | POLE | 435.9 | 26.1 | 409.9 | 427.0 | 8.9 | 557.5 | -121.6 | N/A | N/A | N/A | N/A | 493.5 | -57.6 | MARK/LIGHT |
| 21390 | TREE | 456.7 | 44.7 | 412.0 | 410.1 | 46.5 | 528.8 | -72.1 | N/A | N/A | N/A | N/A | 476.1 | -19.4 | TRIM/REMOVE |
| 21392 | TREE | 437.7 | 27.9 | 409.8 | 414.0 | 23.7 | 535.4 | -97.7 | N/A | N/A | N/A | N/A | 479.6 | -41.9 | TRIM/REMOVE |
| 21628 | TREE | 396.2 | 35.7 | 360.6 | 353.7 | 42.5 | N/A | N/A | N/A | N/A | N/A | N/A | 417.2 | -20.9 | TRIM/REMOVE |
| 21629 | POLE | 405.4 | 36.5 | 368.9 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 422.7 | -17.2 | NO ACTION |
| 21631 | TREE | 425.5 | 39.4 | 386.1 | 380.7 | 44.8 | N/A | N/A | N/A | N/A | N/A | N/A | 445.7 | -20.2 | TRIM/REMOVE |
| 21632 | TREE | 444.4 | 45.5 | 398.9 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 458.0 | -13.6 | NO ACTION |
| 21636 | TREE | 406.9 | 59.5 | 347.4 | 322.7 | 84.1 | N/A | N/A | N/A | N/A | N/A | N/A | 385.1 | 21.8 | TRIM/REMOVE |
| 21637 | TREE | 406.1 | 40.7 | 365.5 | 381.4 | 24.8 | 479.9 | -73.7 | 424.2 | -18.1 | N/A | N/A | 444.5 | -38.4 | TRIM/REMOVE |
| 21638 | TREE | 411.3 | 33.3 | 377.9 | 395.6 | 15.6 | 504.1 | -92.9 | 440.4 | -29.2 | N/A | N/A | 459.3 | -48.1 | TRIM/REMOVE |
| 21639 | TREE | 407.7 | 25.9 | 381.8 | 400.0 | 7.7 | 511.5 | -103.8 | 445.3 | -37.7 | N/A | N/A | 463.9 | -56.2 | TRIM/REMOVE |
| 21640 | TREE | 426.5 | 35.6 | 390.9 | 408.4 | 18.1 | 525.9 | -99.4 | 454.9 | -28.4 | N/A | N/A | 472.7 | -46.2 | TRIM/REMOVE |
| 21641 | TREE | 424.5 | 27.4 | 397.1 | 415.0 | 9.5 | 537.1 | -112.6 | 462.4 | -37.9 | N/A | N/A | 479.6 | -55.1 | TRIM/REMOVE |
| 21642 | TREE | 437.9 | 37.9 | 400.0 | 422.2 | 15.7 | 549.2 | -111.4 | 470.5 | -32.6 | N/A | N/A | 486.9 | -49.1 | TRIM/REMOVE |
| 21643 | TREE | 399.3 | 37.8 | 361.5 | 374.6 | 24.7 | 468.3 | -69.1 | 416.5 | -17.3 | N/A | N/A | 437.5 | -38.2 | TRIM/REMOVE |
| 21646 | TREE | 452.8 | 86.6 | 366.1 | 460.3 | -7.6 | 614.1 | -161.4 | 513.8 | -61.0 | N/A | N/A | 526.6 | -73.8 | TRIM/REMOVE |
| 21648 | TREE | 455.6 | 62.4 | 393.3 | 454.5 | 1.1 | 604.2 | -148.6 | 507.2 | -51.5 | N/A | N/A | 520.6 | -64.9 | TRIM/REMOVE |
| 21650 | TREE | 450.6 | 49.9 | 400.7 | 401.4 | 49.2 | 514.0 | -63.4 | N/A | N/A | N/A | N/A | 467.1 | -16.5 | TRIM/REMOVE |
| 21652 | TREE | 419.8 | 25.9 | 394.0 | 388.8 | 31.1 | N/A | N/A | N/A | N/A | N/A | N/A | 454.1 | -34.3 | TRIM/REMOVE |
| 21653 | TREE | 432.8 | 41.0 | 391.7 | 393.2 | 39.6 | 500.0 | -67.2 | N/A | N/A | N/A | N/A | 457.6 | -24.9 | TRIM/REMOVE |
| 21654 | TREE | 429.4 | 40.2 | 389.3 | 394.7 | 34.8 | 502.5 | -73.1 | N/A | N/A | N/A | N/A | 458.8 | -29.4 | TRIM/REMOVE |
| 21655 | TREE | 419.5 | 26.1 | 393.4 | 391.2 | 28.2 | 496.7 | -77.2 | N/A | N/A | N/A | N/A | 456.1 | -36.7 | TRIM/REMOVE |
| 21657 | TREE | 420.1 | 40.8 | 379.3 | 387.7 | 32.4 | 490.6 | -70.5 | 431.4 | -11.3 | N/A | N/A | 451.3 | -31.2 | TRIM/REMOVE |
| 21658 | TREE | 408.4 | 37.5 | 370.9 | 386.1 | 22.3 | 487.9 | -79.5 | 429.6 | -21.2 | N/A | N/A | 449.4 | -41.0 | TRIM/REMOVE |
| 21659 | TREE | 417.8 | 42.4 | 375.4 | 392.0 | 25.7 | 498.0 | -80.2 | 436.3 | -18.6 | N/A | N/A | 455.6 | -37.8 | TRIM/REMOVE |

NOTES:

1. HORIZONTAL DATUM NAD83 (MA11), VERTICAL DATUM GUVD04 (GEOID 12B). DRAWING PREPARED IN UTM ZONE 55 NORTH (US FOOT) COORDINATE SYSTEM.
2. MAGNETIC DECLINATION OBTAINED ONLINE AT HTTP://WWW.NGDC.NOAA.GOV/GEOMAG-WEB/#DECLINATION.
3. ALL LOCAL ZONING AND AIRSPACE PROTECTION IS GOVERNED BY THE SUPREME COURT OF GUAM, COMPILER OF LAWS, TITLE 21 - REAL PROPERTY, CHAPTER 61 - ZONING LAW.
4. OBSTACLES WERE EVALUATED USING 2022 AIRPORT AIRSPACE ANALYSIS OBSTRUCTION SURVEY DATA.
5. FOR CLARITY, ONLY CRITICAL OBSTRUCTIONS, DEFINED AS THE HIGHEST OBSTRUCTION WITHIN A 100' x 100' GRID, ARE SHOWN. CRITICAL OBJECT CRITERIA ARE DERIVED FROM ADVISORY CIRCULAR 150/5300-18B, *GENERAL GUIDANCE AND SPECIFICATIONS FOR SUBMISSION OF AERONAUTICAL SURVEYS TO NGS: FIELD DATA COLLECTION AND GEOGRAPHIC INFORMATION SYSTEM (GIS) STANDARDS*, SECTION 2.7.1.6.
6. ANY TEMPORARY OR PERMANENT STRUCTURE, INCLUDING ALL APPURTENANCES, THAT EXCEED AN OVERALL HEIGHT OF 200 FEET (61M) ABOVE GROUND LEVEL (AGL) OR EXCEEDS ANY OBSTRUCTION STANDARD CONTAINED IN 14 CFR PART 77, SHOULD BE MARKED AND/OR LIGHTED PER ADVISORY CIRCULAR 70/7460-1.
7. AS PER FAR PART-77.17(B), APPROACH SURFACE CLEARANCES ARE BASED ON TRAVERSE WAY ELEVATIONS PLUS THE TRAVERSE WAY ADJUSTMENT (23' FOR RAILWAYS, 17' FOR INTERSTATE HIGHWAYS, 15' FOR OTHER PUBLIC ROADS, OR 10' FOR PRIVATE ROADS).
8. THE LIMITS OF THE INNER APPROACH SURFACE OBSTRUCTION ANALYSES ARE TO A POINT 100' ABOVE THE RUNWAY THRESHOLD ELEVATION WITHIN THE 14 CFR PART 77 APPROACH SURFACE.
9. EXISTING ON-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2022 AIRPORT AIRSPACE ANALYSIS SURVEY DATA. OFF-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2013 COASTAL AND MARINE SPATIAL PLANNING DATA FROM THE NAVAL POSTGRADUATE SCHOOL, DEPARTMENT OF OCEANOGRAPHY (HTTPS://WWW.OC.NPS.EDU/CMSP/GUAM).
10. ALL ELEVATIONS ARE IN FEET.
11. WHERE OBJECTS DO NOT FALL WITHIN THE LATERAL EXTENTS OF A GIVEN SURFACE, SURFACE ELEVATION AND SURFACE PENETRATION FIELDS ARE ASSIGNED A VALUE OF "N/A".
12. ACCORDING TO FAA AC 150/5300-13B, *AIRPORT DESIGN*, ALL OBSTACLE FREE ZONE (OFZ) SURFACES MUST REMAIN CLEAR OF OBJECTS, EXCEPT FOR FRANGIBLE NAVAIDS. IDENTIFIED OFZ PENETRATIONS FOR THIS RUNWAY REQUIRE FURTHER EVALUATION FOR WAYS OF COMPLYING WITH FAA OFZ CLEARING STANDARDS.

| NO. | REVISIONS | BY | APP. | DATE | NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

MAGNETIC DECLINATION = 9°23' (9.4°) EAST (JANUARY 2022)
ANNUAL RATE OF CHANGE: 0°1' (0.017') WEST / YEAR

PREPARED FOR
A. B. WON PAT INTERNATIONAL AIRPORT GUAM
A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM
AECOM

FUTURE RUNWAY 24L
INNER PORTION OF THE APPROACH SURFACE
DATA TABLES - E

ANTONIO B. WON PAT
INTERNATIONAL AIRPORT

DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WBS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 06/23
SHEET: 37 OF 51

**Figure H-38. Future Runway 24L Inner Portion of the Approach Surface Data Tables – E**

Source: AECOM

## RUNWAY 24L - FUTURE APPROACH SURFACE OBSTRUCTIONS

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | PART 77 | | TSS TYPE 5 | | TSS TYPE 6 | | OFZ | | PAPI OCS | | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MSL | AGL | | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | |
| 21663 | TREE | 447.9 | 47.9 | 400.0 | 466.1 | -18.2 | 623.9 | -176.0 | 520.3 | -72.4 | N/A | N/A | 532.6 | -84.7 | NO ACTION |
| 21665 | TREE | 469.4 | 100.6 | 368.8 | 468.4 | 0.9 | 627.9 | -158.5 | 522.9 | -53.6 | N/A | N/A | 535.0 | -65.6 | TRIM/REMOVE |
| 21666 | TREE | 451.0 | 51.0 | 400.0 | 469.6 | -18.6 | 629.9 | -178.9 | 524.3 | -73.3 | N/A | N/A | 536.2 | -85.2 | NO ACTION |
| 21667 | TREE | 450.9 | 50.9 | 400.0 | 461.0 | -10.1 | 615.2 | -164.3 | 514.5 | -63.6 | N/A | N/A | 527.2 | -76.3 | NO ACTION |
| 21668 | TREE | 457.9 | 57.9 | 400.0 | 455.6 | 2.2 | 606.1 | -148.3 | 508.4 | -50.5 | N/A | N/A | 521.7 | -63.8 | TRIM/REMOVE |
| 21669 | TREE | 457.5 | 66.7 | 390.8 | 466.1 | -8.6 | 623.9 | -166.4 | 520.3 | -62.8 | N/A | N/A | 532.5 | -75.0 | TRIM/REMOVE |
| 21670 | TREE | 445.9 | 54.5 | 391.3 | 449.1 | -3.2 | 595.0 | -149.1 | 501.0 | -55.1 | N/A | N/A | 514.9 | -69.0 | TRIM/REMOVE |
| 21674 | PRIMARY ROAD | 412.2 | 15.0 | 397.2 | 427.7 | -15.5 | 558.7 | -146.5 | 476.8 | -64.6 | N/A | N/A | 492.7 | -80.5 | NO ACTION |
| 21679 | PRIMARY ROAD | 419.7 | 15.0 | 404.7 | 415.3 | 4.4 | 537.6 | -117.9 | 462.7 | -43.0 | N/A | N/A | 480.3 | -60.6 | NO ACTION |
| 21680 | POWER TRANSMISSION POLE | 423.4 | 42.1 | 381.3 | 433.6 | -10.3 | 568.7 | -145.4 | 483.5 | -60.1 | N/A | N/A | 499.0 | -75.6 | NO ACTION |
| 21685 | TREE | 403.6 | 60.9 | 342.8 | N/A | N/A | N/A | N/A | N/A | N/A | 405.8 | -2.2 | N/A | N/A | TRIM/REMOVE |
| 21691 | POLE | 333.1 | 18.0 | 315.0 | 326.0 | 7.1 | 385.7 | -52.6 | 361.4 | -28.4 | N/A | N/A | 387.3 | -54.3 | NO ACTION |
| 21693 | POLE | 431.3 | 43.2 | 388.1 | 436.4 | -5.0 | 573.4 | -142.1 | 486.6 | -55.3 | N/A | N/A | 501.8 | -70.5 | NO ACTION |
| 21846 | POLE | 407.5 | 38.0 | 369.5 | 377.5 | 30.1 | 473.3 | -65.8 | 419.9 | -12.3 | N/A | N/A | 440.8 | -33.2 | MARK/LIGHT |
| 21847 | TREE | 426.3 | 53.7 | 372.6 | 439.5 | -13.1 | 578.7 | -152.3 | 490.1 | -63.8 | N/A | N/A | 505.0 | -78.6 | NO ACTION |
| 21922 | TREE | 366.6 | 66.6 | 300.0 | N/A | N/A | N/A | N/A | N/A | N/A | 411.9 | -45.3 | N/A | N/A | NO ACTION |
| 21944 | TREE | 393.5 | 58.5 | 335.0 | 316.2 | 77.3 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | TRIM/REMOVE |
| 21965 | POWER TRANSMISSION POLE | 486.2 | 81.0 | 405.1 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 466.3 | 19.9 | MARK/LIGHT |
| 21966 | POWER TRANSMISSION POLE | 481.3 | 76.2 | 405.1 | 405.9 | 75.4 | 521.7 | -40.4 | N/A | N/A | N/A | N/A | 471.4 | 9.9 | MARK/LIGHT |
| 21967 | POWER TRANSMISSION POLE | 469.1 | 67.1 | 402.1 | 410.8 | 58.3 | 529.9 | -60.8 | N/A | N/A | N/A | N/A | 475.8 | -6.7 | MARK/LIGHT |
| 21968 | POWER TRANSMISSION POLE | 440.6 | 36.7 | 403.9 | 415.7 | 24.9 | 538.2 | -97.6 | 463.2 | -22.6 | N/A | N/A | 480.6 | -40.0 | MARK/LIGHT |
| 21969 | POWER TRANSMISSION POLE | 434.1 | 31.3 | 402.7 | 419.6 | 14.4 | 544.9 | -110.9 | 467.6 | -33.6 | N/A | N/A | 484.4 | -50.4 | MARK/LIGHT |
| 21970 | POWER TRANSMISSION POLE | 432.2 | 32.0 | 400.3 | 422.9 | 9.3 | 550.5 | -118.3 | 471.4 | -39.1 | N/A | N/A | 487.8 | -55.5 | MARK/LIGHT |
| 21971 | POWER TRANSMISSION POLE | 429.3 | 32.8 | 396.5 | 425.7 | 3.7 | 555.2 | -125.9 | 474.5 | -45.1 | N/A | N/A | 490.5 | -61.2 | MARK/LIGHT |
| 21972 | POWER TRANSMISSION POLE | 428.1 | 35.9 | 392.2 | 428.4 | -0.3 | 559.9 | -131.7 | 477.6 | -49.4 | N/A | N/A | 493.4 | -65.3 | NO ACTION |
| 21973 | POWER TRANSMISSION POLE | 432.0 | 45.2 | 386.8 | 431.5 | 0.5 | 565.2 | -133.1 | 481.1 | -49.1 | N/A | N/A | 496.7 | -64.7 | MARK/LIGHT |
| 21974 | POWER TRANSMISSION POLE | 427.9 | 43.5 | 384.3 | 432.8 | -4.9 | 567.3 | -139.4 | 482.5 | -54.7 | N/A | N/A | 498.0 | -70.2 | NO ACTION |
| 21999 | GROUND | 325.8 | N/A | 325.8 | 337.0 | -11.2 | 404.5 | -78.7 | 374.0 | -48.2 | N/A | N/A | 398.8 | -73.0 | NO ACTION |
| 22001 | GROUND | 334.9 | N/A | 334.9 | 342.8 | -7.9 | 414.2 | -79.3 | 380.5 | -45.6 | N/A | N/A | 404.7 | -69.8 | NO ACTION |
| 22002 | GROUND | 344.3 | N/A | 344.3 | 348.2 | -3.8 | 423.4 | -79.1 | 386.6 | -42.3 | N/A | N/A | 410.2 | -65.9 | NO ACTION |
| 22003 | TREE | 385.4 | 35.4 | 350.0 | 356.5 | 28.9 | 437.6 | -52.2 | 396.0 | -10.6 | N/A | N/A | 418.7 | -33.3 | TRIM/REMOVE |
| 22004 | POLE | 402.9 | 38.8 | 364.1 | 358.8 | 44.1 | 441.5 | -38.6 | N/A | N/A | N/A | N/A | 422.2 | -19.3 | MARK/LIGHT |
| 22005 | POLE | 404.8 | 38.7 | 366.1 | 365.6 | 39.3 | 453.0 | -48.2 | N/A | N/A | N/A | N/A | 429.2 | -24.4 | MARK/LIGHT |
| 22006 | POLE | 405.6 | 37.5 | 368.1 | 373.5 | 32.0 | 466.5 | -61.0 | N/A | N/A | N/A | N/A | 437.5 | -31.9 | MARK/LIGHT |
| 22007 | POLE | 410.0 | 38.4 | 371.6 | 379.5 | 30.5 | 476.7 | -66.7 | N/A | N/A | N/A | N/A | 443.6 | -33.6 | MARK/LIGHT |
| 22009 | POLE | 402.6 | 36.8 | 365.8 | 368.9 | 33.7 | 458.6 | -56.1 | 410.1 | -7.5 | N/A | N/A | 431.8 | -29.3 | MARK/LIGHT |
| 22010 | POLE | 412.2 | 38.9 | 373.3 | 380.8 | 31.4 | 478.9 | -66.7 | 423.6 | -11.4 | N/A | N/A | 444.3 | -32.0 | MARK/LIGHT |
| 22011 | TREE | 377.8 | 20.8 | 357.0 | 371.1 | 6.7 | 462.4 | -84.6 | 412.6 | -34.8 | N/A | N/A | 433.9 | -56.1 | TRIM/REMOVE |
| 22014 | POLE | 412.5 | 36.5 | 376.0 | 384.3 | 28.2 | 484.9 | -72.4 | N/A | N/A | N/A | N/A | 449.0 | -36.5 | MARK/LIGHT |
| 22015 | POLE | 403.2 | 38.2 | 365.0 | 367.2 | 36.0 | N/A | N/A | N/A | N/A | N/A | N/A | 431.7 | -28.5 | MARK/LIGHT |
| 22016 | BUILDING | 381.7 | 16.6 | 365.1 | 366.3 | 15.4 | 454.2 | -72.5 | N/A | N/A | N/A | N/A | 429.4 | -47.7 | MARK/LIGHT |
| 22018 | TREE | 421.5 | 50.9 | 370.6 | 371.5 | 50.1 | 463.1 | -41.5 | N/A | N/A | N/A | N/A | 435.0 | -13.4 | TRIM/REMOVE |
| 22020 | BUILDING | 381.0 | 17.5 | 363.6 | 358.9 | 22.2 | 441.6 | -60.6 | N/A | N/A | N/A | N/A | 421.7 | -40.6 | MARK/LIGHT |
| 22021 | POLE | 373.0 | 14.1 | 359.0 | 364.6 | 8.4 | 451.5 | -78.4 | 405.3 | -32.3 | N/A | N/A | 427.4 | -54.3 | MARK/LIGHT |
| 22022 | POLE | 369.6 | 14.0 | 355.6 | 360.1 | 9.6 | 443.7 | -74.0 | 400.1 | -30.5 | N/A | N/A | 422.6 | -52.9 | MARK/LIGHT |
| 22023 | POLE | 368.0 | 14.5 | 353.5 | 356.1 | 11.9 | 436.9 | -68.9 | 395.6 | -27.6 | N/A | N/A | 418.4 | -50.5 | MARK/LIGHT |
| 22024 | TREE | 372.0 | 22.0 | 350.0 | 360.2 | 11.8 | 443.9 | -71.9 | 400.2 | -28.2 | N/A | N/A | 422.5 | -50.5 | TRIM/REMOVE |
| 22025 | POLE | 367.8 | 13.9 | 353.9 | 362.4 | 5.4 | 447.6 | -79.8 | 402.7 | -35.0 | N/A | N/A | 424.8 | -57.1 | MARK/LIGHT |
| 22026 | POLE | 370.3 | 13.5 | 356.8 | 366.9 | 3.4 | 455.4 | -85.0 | 407.9 | -37.6 | N/A | N/A | 429.6 | -59.2 | MARK/LIGHT |
| 22027 | POLE | 373.3 | 13.4 | 359.9 | 371.5 | 1.8 | 463.2 | -89.9 | 413.1 | -39.8 | N/A | N/A | 434.4 | -61.1 | MARK/LIGHT |
| 22029 | POLE | 415.8 | 38.1 | 377.8 | 389.2 | 26.6 | 493.2 | -77.4 | 433.1 | -17.3 | N/A | N/A | 452.8 | -37.0 | MARK/LIGHT |
| 22030 | POLE | 419.5 | 37.0 | 382.5 | 395.9 | 23.6 | 504.6 | -85.1 | 440.7 | -21.2 | N/A | N/A | 459.7 | -40.2 | MARK/LIGHT |
| 22032 | TREE | 435.1 | 52.9 | 382.2 | 392.2 | 42.8 | 498.3 | -63.3 | 436.6 | -1.5 | N/A | N/A | 456.0 | -20.9 | TRIM/REMOVE |
| 22033 | FENCE | 358.5 | 9.4 | 349.1 | 356.5 | 2.0 | 437.6 | -79.1 | 396.0 | -37.5 | N/A | N/A | 418.7 | -60.2 | NO ACTION |
| 22034 | FENCE | 358.2 | 9.0 | 349.2 | 350.5 | 7.7 | 427.5 | -69.3 | 389.3 | -31.1 | N/A | N/A | 412.5 | -54.3 | NO ACTION |
| 22039 | BUILDING | 429.8 | 24.2 | 405.6 | 401.6 | 28.3 | 514.2 | -84.4 | N/A | N/A | N/A | N/A | 466.5 | -36.7 | MARK/LIGHT |
| 22040 | BUILDING | 419.9 | 24.2 | 395.7 | 400.5 | 19.4 | 512.4 | -92.5 | N/A | N/A | N/A | N/A | 465.1 | -45.2 | MARK/LIGHT |
| 22041 | POLE | 418.1 | 36.6 | 381.5 | 402.3 | 15.9 | 515.4 | -97.3 | 447.9 | -29.8 | N/A | N/A | 466.4 | -48.3 | MARK/LIGHT |
| 22042 | TREE | 429.9 | 38.3 | 391.6 | 399.3 | 30.6 | 510.4 | -80.5 | 444.6 | -14.7 | N/A | N/A | 463.6 | -33.7 | TRIM/REMOVE |
| 22043 | TREE | 433.1 | 34.5 | 398.6 | 406.2 | 26.8 | 522.1 | -89.1 | N/A | N/A | N/A | N/A | 470.9 | -37.8 | TRIM/REMOVE |
| 22044 | POLE | 422.0 | 37.9 | 384.1 | 408.2 | 13.8 | 525.5 | -103.5 | 454.7 | -32.7 | N/A | N/A | 472.6 | -50.6 | MARK/LIGHT |
| 22045 | TREE | 424.3 | 26.0 | 398.4 | 403.5 | 20.9 | 517.4 | -93.1 | N/A | N/A | N/A | N/A | 468.1 | -43.8 | TRIM/REMOVE |
| 22046 | BUILDING | 445.6 | 35.9 | 409.7 | 426.0 | 19.5 | 555.8 | -110.2 | N/A | N/A | N/A | N/A | 491.8 | -46.2 | MARK/LIGHT |
| 22047 | BUILDING | 439.5 | 29.0 | 410.5 | 423.1 | 16.4 | 550.8 | -111.3 | N/A | N/A | N/A | N/A | 489.0 | -49.4 | MARK/LIGHT |
| 22048 | POLE | 443.4 | 36.0 | 407.4 | 428.7 | 14.7 | 560.4 | -117.0 | 477.9 | -34.5 | N/A | N/A | 494.2 | -50.8 | MARK/LIGHT |
| 22049 | POLE | 442.6 | 37.7 | 404.9 | 424.3 | 18.3 | 552.9 | -110.3 | 473.0 | -30.3 | N/A | N/A | 489.4 | -46.8 | MARK/LIGHT |
| 22050 | BUILDING | 444.2 | 27.1 | 417.1 | 432.5 | 11.7 | 566.8 | -122.7 | N/A | N/A | N/A | N/A | 498.8 | -54.6 | MARK/LIGHT |
| 22056 | POLE | 433.7 | 29.9 | 403.8 | 408.0 | 25.8 | 525.1 | -91.4 | N/A | N/A | N/A | N/A | 473.2 | -39.5 | MARK/LIGHT |
| 22057 | TREE | 439.7 | 39.7 | 400.0 | 412.6 | 27.0 | 533.1 | -93.4 | N/A | N/A | N/A | N/A | 477.5 | -37.9 | TRIM/REMOVE |
| 22060 | TREE | 412.9 | 27.3 | 385.6 | 402.9 | 10.1 | 516.4 | -103.5 | 448.6 | -35.7 | N/A | N/A | 466.9 | -54.0 | TRIM/REMOVE |
| 22061 | TREE | 433.4 | 36.1 | 397.3 | 417.8 | 15.6 | 541.8 | -108.4 | 465.5 | -32.2 | N/A | N/A | 482.4 | -49.0 | TRIM/REMOVE |
| 22063 | TREE | 415.6 | 22.8 | 392.8 | 413.8 | 1.8 | 535.0 | -119.4 | 461.0 | -45.4 | N/A | N/A | 478.2 | -62.6 | TRIM/REMOVE |
| 22066 | TREE | 455.6 | 55.6 | 400.0 | 436.7 | 18.9 | 574.0 | -118.4 | 487.0 | -31.4 | N/A | N/A | 502.1 | -46.4 | TRIM/REMOVE |

NOTES:

1. HORIZONTAL DATUM NAD83 (MA11), VERTICAL DATUM GUVD04 (GEOID 12B). DRAWING PREPARED IN UTM ZONE 55 NORTH (US FOOT) COORDINATE SYSTEM.
2. MAGNETIC DECLINATION OBTAINED ONLINE AT HTTP://WWW.NGDC.NOAA.GOV/GEOMAG-WEB/#DECLINATION.
3. ALL LOCAL ZONING AND AIRSPACE PROTECTION IS GOVERNED BY THE SUPREME COURT OF GUAM, COMPILER OF LAWS, TITLE 21 - REAL PROPERTY, CHAPTER 61 - ZONING LAW.
4. OBSTACLES WERE EVALUATED USING 2022 AIRPORT AIRSPACE ANALYSIS OBSTRUCTION SURVEY DATA.
5. FOR CLARITY, ONLY CRITICAL OBSTRUCTIONS, DEFINED AS THE HIGHEST OBSTRUCTION WITHIN A 100' x 100' GRID, ARE SHOWN. CRITICAL OBJECT CRITERIA ARE DERIVED FROM ADVISORY CIRCULAR 150/5300-18B, *GENERAL GUIDANCE AND SPECIFICATIONS FOR SUBMISSION OF AERONAUTICAL SURVEYS TO NGS: FIELD DATA COLLECTION AND GEOGRAPHIC INFORMATION SYSTEM (GIS) STANDARDS*, SECTION 2.7.1.6.
6. ANY TEMPORARY OR PERMANENT STRUCTURE, INCLUDING ALL APPURTENANCES, THAT EXCEED AN OVERALL HEIGHT OF 200 FEET (61M) ABOVE GROUND LEVEL (AGL) OR EXCEEDS ANY OBSTRUCTION STANDARD CONTAINED IN 14 CFR PART 77, SHOULD BE MARKED AND/OR LIGHTED PER ADVISORY CIRCULAR 70/7460-1.
7. AS PER FAR PART-77.17(B), APPROACH SURFACE CLEARANCES ARE BASED ON TRAVERSE WAY ELEVATIONS PLUS THE TRAVERSE WAY ADJUSTMENT (23' FOR RAILWAYS, 17' FOR INTERSTATE HIGHWAYS, 15' FOR OTHER PUBLIC ROADS, OR 10' FOR PRIVATE ROADS).
8. THE LIMITS OF THE INNER APPROACH SURFACE OBSTRUCTION ANALYSES ARE TO A POINT 100' ABOVE THE RUNWAY THRESHOLD ELEVATION WITHIN THE 14 CFR PART 77 APPROACH SURFACE.
9. EXISTING ON-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2022 AIRPORT AIRSPACE ANALYSIS SURVEY DATA. OFF-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2013 COASTAL AND MARINE SPATIAL PLANNING DATA FROM THE NAVAL POSTGRADUATE SCHOOL, DEPARTMENT OF OCEANOGRAPHY (HTTPS://WWW.OC.NPS.EDU/CMSP/GUAM).
10. ALL ELEVATIONS ARE IN FEET.
11. WHERE OBJECTS DO NOT FALL WITHIN THE LATERAL EXTENTS OF A GIVEN SURFACE, SURFACE ELEVATION AND SURFACE PENETRATION FIELDS ARE ASSIGNED A VALUE OF "N/A".
12. ACCORDING TO FAA AC 150/5300-13B, *AIRPORT DESIGN*, ALL OBSTACLE FREE ZONE (OFZ) SURFACES MUST REMAIN CLEAR OF OBJECTS, EXCEPT FOR FRANGIBLE NAVAIDS. IDENTIFIED OFZ PENETRATIONS FOR THIS RUNWAY REQUIRE FURTHER EVALUATION FOR WAYS OF COMPLYING WITH FAA OFZ CLEARING STANDARDS.

| NO. | REVISIONS | BY | APP. | DATE | NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

MAGNETIC DECLINATION = 0°27' (0.4°) EAST (JANUARY 2022)
ANNUAL RATE OF CHANGE: 0°1' (0.017°) WEST / YEAR

PREPARED FOR
A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM
AECOM

FUTURE RUNWAY 24L
INNER PORTION OF THE APPROACH SURFACE
DATA TABLES - F

ANTONIO B. WON PAT
INTERNATIONAL AIRPORT

DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WBS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 06/23
SHEET: 38 OF 51

**Figure H-39. Future Runway 24L Inner Portion of the Approach Surface Data Tables – F**

Source: AECOM

**RUNWAY 24L - FUTURE APPROACH SURFACE OBSTRUCTIONS**

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | PART 77 | | TSS TYPE 5 | | TSS TYPE 6 | | OFZ | | PAPI OCS | | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MSL | AGL | | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | |
| 22067 | POLE | 439.8 | 35.9 | 403.9 | 424.4 | 15.4 | 553.1 | -113.3 | 473.1 | -33.3 | N/A | N/A | 489.4 | -49.6 | MARK/LIGHT |
| 22070 | TREE | 434.1 | 34.1 | 400.0 | 409.6 | 24.5 | 528.0 | -93.8 | N/A | N/A | N/A | N/A | 474.6 | -40.5 | TRIM/REMOVE |
| 22074 | SIGN | 303.7 | 3.2 | 300.4 | N/A | N/A | 336.2 | -32.5 | N/A | N/A | 354.4 | -50.8 | 357.2 | -53.5 | NO ACTION |
| 22075 | SIGN | 278.8 | 3.4 | 275.4 | N/A | N/A | N/A | N/A | N/A | N/A | 277.5 | 1.2 | N/A | N/A | LOWER/RELOCATE |
| 22084 | WINDSOCK | 306.2 | 10.2 | 296.0 | N/A | N/A | N/A | N/A | N/A | N/A | 354.9 | -48.6 | 343.4 | -37.1 | NO ACTION |
| 22108 | GROUND | 340.3 | N/A | 340.3 | 362.0 | -21.7 | 447.0 | -106.7 | 402.3 | -62.0 | N/A | N/A | 424.8 | -84.5 | NO ACTION |
| 22109 | GROUND | 341.0 | N/A | 341.0 | 357.3 | -16.3 | 439.0 | -98.0 | 397.0 | -56.0 | N/A | N/A | 419.9 | -78.8 | NO ACTION |
| 22116 | GROUND | 385.2 | N/A | 385.2 | 408.6 | -23.4 | 526.1 | -141.0 | 455.1 | -69.9 | N/A | N/A | 472.8 | -87.6 | NO ACTION |
| 22117 | GROUND | 382.8 | N/A | 382.8 | 402.7 | -19.9 | 516.2 | -133.4 | 448.4 | -65.7 | N/A | N/A | 466.7 | -83.9 | NO ACTION |
| 22118 | GROUND | 380.6 | N/A | 380.6 | 396.9 | -16.2 | 506.3 | -125.6 | 441.8 | -61.2 | N/A | N/A | 460.7 | -80.0 | NO ACTION |
| 22119 | GROUND | 377.3 | N/A | 377.3 | 390.9 | -13.5 | 496.1 | -118.7 | 435.0 | -57.7 | N/A | N/A | 454.4 | -77.1 | NO ACTION |
| 22121 | GROUND | 369.6 | N/A | 369.6 | 379.0 | -9.4 | 475.9 | -106.3 | 421.6 | -52.0 | N/A | N/A | 442.2 | -72.6 | NO ACTION |
| 22122 | GROUND | 363.1 | N/A | 363.1 | 373.1 | -10.0 | 465.8 | -102.7 | 414.8 | -51.8 | N/A | N/A | 436.0 | -72.9 | NO ACTION |
| 22123 | GROUND | 357.9 | N/A | 357.9 | 367.6 | -9.7 | 456.6 | -98.6 | 408.7 | -50.8 | N/A | N/A | 430.4 | -72.5 | NO ACTION |
| 22124 | GROUND | 354.0 | N/A | 354.0 | 361.8 | -7.8 | 446.6 | -92.7 | 402.1 | -48.1 | N/A | N/A | 424.4 | -70.4 | NO ACTION |
| 22126 | GROUND | 362.8 | N/A | 362.8 | 384.9 | -22.2 | 486.0 | -123.2 | 428.3 | -65.5 | N/A | N/A | 448.5 | -85.7 | NO ACTION |
| 22127 | GROUND | 368.3 | N/A | 368.3 | 390.9 | -22.6 | 496.0 | -127.7 | 435.0 | -66.7 | N/A | N/A | 454.6 | -86.3 | NO ACTION |
| 22128 | GROUND | 373.3 | N/A | 373.3 | 396.9 | -23.6 | 506.3 | -133.0 | 441.9 | -68.6 | N/A | N/A | 460.8 | -87.5 | NO ACTION |
| 22129 | GROUND | 378.3 | N/A | 378.3 | 402.9 | -24.6 | 516.5 | -138.2 | 448.7 | -70.4 | N/A | N/A | 467.1 | -88.8 | NO ACTION |
| 22131 | TREE | 458.1 | 58.1 | 400.0 | 476.3 | -18.3 | 641.3 | -183.2 | 531.8 | -73.8 | N/A | N/A | 543.1 | -85.1 | NO ACTION |
| 22134 | TREE | 453.2 | 84.4 | 368.9 | 442.8 | 10.4 | 584.4 | -131.1 | N/A | N/A | N/A | N/A | 509.1 | -55.8 | TRIM/REMOVE |
| 22135 | TREE | 446.8 | 46.8 | 400.0 | 453.2 | -6.4 | 602.0 | -155.2 | 505.6 | -58.8 | N/A | N/A | 519.1 | -72.3 | TRIM/REMOVE |
| 22165 | TREE | 432.9 | 21.2 | 411.8 | 417.6 | 15.4 | 541.5 | -108.5 | N/A | N/A | N/A | N/A | 483.1 | -50.1 | TRIM/REMOVE |
| 22166 | TREE | 404.1 | 34.9 | 369.2 | 380.8 | 23.3 | 478.9 | -74.8 | 423.6 | -19.5 | N/A | N/A | 444.0 | -39.9 | TRIM/REMOVE |
| 22167 | TREE | 377.5 | 11.5 | 366.0 | 375.6 | 1.9 | 470.1 | -92.6 | 417.7 | -40.2 | N/A | N/A | 438.6 | -61.1 | TRIM/REMOVE |
| 22168 | GROUND | 360.4 | N/A | 360.4 | 347.6 | 12.8 | 422.5 | -62.1 | N/A | N/A | N/A | N/A | 410.0 | -49.6 | NO ACTION |
| 22169 | GROUND | 353.1 | N/A | 353.1 | 341.1 | 12.0 | 411.5 | -58.4 | N/A | N/A | N/A | N/A | 403.4 | -50.3 | NO ACTION |
| 22170 | GROUND | 358.1 | N/A | 358.1 | 334.2 | 23.9 | N/A | N/A | N/A | N/A | N/A | N/A | 396.7 | -38.6 | NO ACTION |
| 22171 | GROUND | 351.3 | N/A | 351.3 | 327.9 | 23.4 | N/A | N/A | N/A | N/A | N/A | N/A | 390.2 | -38.9 | NO ACTION |
| 22172 | GROUND | 359.5 | N/A | 359.5 | 339.3 | 20.2 | N/A | N/A | N/A | N/A | N/A | N/A | 402.1 | -42.6 | NO ACTION |
| 22173 | GROUND | 360.8 | N/A | 360.8 | 346.4 | 14.5 | 420.4 | -59.6 | N/A | N/A | N/A | N/A | 409.3 | -48.5 | NO ACTION |
| 22174 | GROUND | 323.9 | N/A | 323.9 | 322.0 | 1.9 | 379.0 | -55.1 | N/A | N/A | N/A | N/A | 383.7 | -59.8 | NO ACTION |
| 22175 | GROUND | 322.8 | N/A | 322.8 | 315.3 | 7.5 | 367.6 | -44.8 | N/A | N/A | N/A | N/A | 376.7 | -54.0 | NO ACTION |
| 22176 | GROUND | 320.0 | N/A | 320.0 | 308.8 | 11.2 | N/A | N/A | N/A | N/A | N/A | N/A | 370.0 | -50.0 | NO ACTION |
| 22177 | GROUND | 342.3 | N/A | 342.3 | 334.9 | 7.4 | 400.8 | -58.5 | N/A | N/A | N/A | N/A | 396.9 | -54.6 | NO ACTION |
| 22178 | TREE | 412.8 | 36.0 | 376.8 | 383.8 | 28.9 | 484.0 | -71.3 | 427.0 | -14.3 | N/A | N/A | 447.3 | -34.6 | TRIM/REMOVE |
| 22216 | SIGN | 285.4 | 3.0 | 282.4 | N/A | N/A | N/A | N/A | N/A | N/A | 338.7 | -53.3 | N/A | N/A | NO ACTION |
| 22278 | TREE | 371.3 | 21.3 | 350.0 | 353.7 | 17.6 | 432.9 | -61.6 | 392.9 | -21.6 | N/A | N/A | 415.8 | -44.5 | TRIM/REMOVE |
| 22280 | TREE | 389.5 | 26.7 | 362.8 | 367.9 | 21.6 | 457.0 | -67.5 | 409.0 | -19.5 | N/A | N/A | 430.8 | -41.2 | TRIM/REMOVE |
| 22282 | TREE | 387.6 | 22.8 | 364.7 | 370.3 | 17.3 | 461.0 | -73.4 | 411.7 | -24.1 | N/A | N/A | 433.2 | -45.6 | TRIM/REMOVE |
| 22294 | TREE | 394.8 | 25.9 | 368.9 | 374.6 | 20.2 | 468.4 | -73.5 | 416.6 | -21.7 | N/A | N/A | 437.7 | -42.9 | TRIM/REMOVE |
| 22297 | TREE | 381.1 | 21.9 | 359.2 | 373.8 | 7.3 | 467.1 | -86.0 | 415.7 | -34.6 | N/A | N/A | 436.7 | -55.6 | TRIM/REMOVE |
| 22301 | TREE | 383.0 | 19.3 | 363.7 | 375.3 | 7.8 | 469.5 | -86.5 | 417.3 | -34.3 | N/A | N/A | 438.2 | -55.2 | TRIM/REMOVE |
| 22303 | TREE | 396.3 | 28.7 | 367.5 | 382.3 | 13.9 | 481.5 | -85.2 | 425.3 | -29.1 | N/A | N/A | 445.5 | -49.3 | TRIM/REMOVE |
| 22309 | TREE | 420.9 | 39.9 | 381.0 | 387.2 | 33.7 | 489.8 | -68.9 | 430.8 | -9.9 | N/A | N/A | 450.9 | -30.0 | TRIM/REMOVE |
| 22310 | TREE | 405.3 | 32.9 | 372.4 | 388.5 | 16.7 | 492.1 | -86.8 | 432.4 | -27.1 | N/A | N/A | 452.0 | -46.7 | TRIM/REMOVE |
| 22311 | TREE | 408.8 | 31.8 | 377.0 | 389.0 | 19.7 | 492.9 | -84.2 | 433.0 | -24.2 | N/A | N/A | 452.6 | -43.8 | TRIM/REMOVE |
| 22313 | TREE | 398.0 | 25.9 | 372.1 | 389.8 | 8.2 | 494.2 | -96.2 | 433.8 | -35.8 | N/A | N/A | 453.3 | -55.2 | TRIM/REMOVE |
| 22318 | TREE | 391.1 | 17.1 | 374.0 | 378.1 | 13.0 | 474.3 | -83.2 | 420.5 | -29.4 | N/A | N/A | 441.5 | -50.4 | TRIM/REMOVE |
| 22330 | TREE | 427.0 | 42.3 | 384.8 | 391.3 | 35.7 | 496.8 | -69.8 | 435.5 | -8.5 | N/A | N/A | 455.3 | -28.2 | TRIM/REMOVE |
| 22332 | TREE | 414.0 | 28.0 | 386.0 | 391.4 | 22.6 | 497.0 | -83.0 | 435.7 | -21.6 | N/A | N/A | 455.4 | -41.4 | TRIM/REMOVE |
| 22355 | TREE | 409.5 | 26.5 | 383.0 | 400.2 | 9.3 | 511.9 | -102.4 | 445.6 | -36.0 | N/A | N/A | 464.1 | -54.6 | TRIM/REMOVE |
| 22356 | TREE | 415.2 | 22.6 | 392.5 | 408.6 | 6.6 | 526.2 | -111.0 | 455.1 | -39.9 | N/A | N/A | 472.9 | -57.7 | TRIM/REMOVE |
| 22358 | GROUND | 358.0 | N/A | 358.0 | 379.4 | -21.4 | 476.6 | -118.6 | 422.1 | -64.1 | N/A | N/A | 442.7 | -84.8 | NO ACTION |
| 22369 | TREE | 400.9 | 22.4 | 378.5 | 397.4 | 3.5 | 507.1 | -106.2 | 442.4 | -41.5 | N/A | N/A | 461.1 | -60.3 | TRIM/REMOVE |
| 22385 | TREE | 415.6 | 17.6 | 398.0 | 412.7 | 2.9 | 533.2 | -117.6 | 459.8 | -44.2 | N/A | N/A | 477.3 | -61.7 | TRIM/REMOVE |
| 22386 | TREE | 423.3 | 23.3 | 400.0 | 411.8 | 11.7 | 531.2 | -108.0 | 458.5 | -35.2 | N/A | N/A | 476.3 | -53.1 | TRIM/REMOVE |
| 22391 | TREE | 412.4 | 21.1 | 391.4 | 410.1 | 2.4 | 528.7 | -116.2 | 456.8 | -44.3 | N/A | N/A | 474.4 | -61.9 | TRIM/REMOVE |
| 22392 | TREE | 416.9 | 22.7 | 394.2 | 414.5 | 2.4 | 536.2 | -119.3 | 461.8 | -44.9 | N/A | N/A | 479.0 | -62.0 | TRIM/REMOVE |
| 22400 | TREE | 434.6 | 34.6 | 400.0 | 415.2 | 19.4 | 537.4 | -102.8 | 462.6 | -28.0 | N/A | N/A | 480.0 | -45.3 | TRIM/REMOVE |
| 22404 | TREE | 434.7 | 34.7 | 400.0 | 434.4 | 0.3 | 570.0 | -135.4 | 484.4 | -49.7 | N/A | N/A | 499.9 | -65.2 | TRIM/REMOVE |
| 22409 | TREE | 416.3 | 16.3 | 400.0 | 433.9 | -17.6 | 569.3 | -152.9 | 483.8 | -67.5 | N/A | N/A | 499.1 | -82.8 | NO ACTION |
| 22422 | TREE | 437.9 | 37.9 | 400.0 | 447.6 | -9.7 | 592.5 | -154.6 | 499.4 | -61.5 | N/A | N/A | 513.4 | -75.5 | TRIM/REMOVE |
| 22482 | TREE | 383.2 | 60.7 | 322.5 | N/A | N/A | N/A | N/A | N/A | N/A | 449.0 | -65.8 | N/A | N/A | NO ACTION |
| 22493 | PARKING LOT | 370.5 | 10.0 | 360.5 | 369.1 | 1.4 | 459.0 | -88.5 | 410.3 | -39.8 | N/A | N/A | 431.9 | -61.4 | NO ACTION |
| 22496 | PARKING LOT | 367.5 | 10.0 | 357.5 | 366.5 | 1.0 | 454.6 | -87.1 | 407.4 | -39.9 | N/A | N/A | 429.1 | -61.6 | NO ACTION |
| 22498 | PARKING LOT | 377.7 | 10.0 | 367.7 | 371.6 | 6.2 | 463.2 | -85.5 | 413.1 | -35.4 | N/A | N/A | 434.7 | -57.0 | NO ACTION |
| 22501 | PARKING LOT | 362.3 | 10.0 | 352.3 | 359.7 | 2.6 | 443.1 | -80.8 | 399.7 | -37.4 | N/A | N/A | 422.1 | -59.8 | NO ACTION |
| 22534 | TREE | 421.9 | 34.4 | 387.5 | 398.6 | 23.3 | 509.2 | -87.3 | 443.8 | -21.9 | N/A | N/A | 462.6 | -40.8 | TRIM/REMOVE |
| 22535 | TREE | 406.4 | 22.0 | 384.3 | 394.9 | 11.5 | 502.9 | -96.5 | 439.6 | -33.2 | N/A | N/A | 458.8 | -52.4 | TRIM/REMOVE |
| 22538 | FENCE | 408.5 | 7.1 | 401.4 | 429.9 | -21.4 | 562.4 | -153.9 | 479.2 | -70.8 | N/A | N/A | 494.9 | -86.5 | NO ACTION |
| 22550 | UTILITY POLE | 405.9 | 38.4 | 367.6 | 369.6 | 36.3 | 460.0 | -54.0 | N/A | N/A | N/A | N/A | 433.5 | -27.5 | MARK/LIGHT |
| 22553 | TREE | 394.3 | 24.5 | 369.8 | 364.5 | 29.8 | 451.2 | -56.9 | N/A | N/A | N/A | N/A | 428.5 | -34.1 | TRIM/REMOVE |

NOTES:

1. HORIZONTAL DATUM NAD83 (MA11), VERTICAL DATUM GUVD04 (GEOID 12B). DRAWING PREPARED IN UTM ZONE 55 NORTH (US FOOT) COORDINATE SYSTEM.
2. MAGNETIC DECLINATION OBTAINED ONLINE AT HTTP://WWW.NGDC.NOAA.GOV/GEOMAG-WEB/#DECLINATION.
3. ALL LOCAL ZONING AND AIRSPACE PROTECTION IS GOVERNED BY THE SUPREME COURT OF GUAM, COMPILER OF LAWS, TITLE 21 - REAL PROPERTY, CHAPTER 61 - ZONING LAW.
4. OBSTACLES WERE EVALUATED USING 2022 AIRPORT AIRSPACE ANALYSIS OBSTRUCTION SURVEY DATA.
5. FOR CLARITY, ONLY CRITICAL OBSTRUCTIONS, DEFINED AS THE HIGHEST OBSTRUCTION WITHIN A 100' x 100' GRID, ARE SHOWN. CRITICAL OBJECT CRITERIA ARE DERIVED FROM ADVISORY CIRCULAR 150/5300-18B, *GENERAL GUIDANCE AND SPECIFICATIONS FOR SUBMISSION OF AERONAUTICAL SURVEYS TO NGS: FIELD DATA COLLECTION AND GEOGRAPHIC INFORMATION SYSTEM (GIS) STANDARDS*, SECTION 2.7.1.6.
6. ANY TEMPORARY OR PERMANENT STRUCTURE, INCLUDING ALL APPURTENANCES, THAT EXCEED AN OVERALL HEIGHT OF 200 FEET (61M) ABOVE GROUND LEVEL (AGL) OR EXCEEDS ANY OBSTRUCTION STANDARD CONTAINED IN 14 CFR PART 77, SHOULD BE MARKED AND/OR LIGHTED PER ADVISORY CIRCULAR 70/7460-1.
7. AS PER FAR PART-77.17(B), APPROACH SURFACE CLEARANCES ARE BASED ON TRAVERSE WAY ELEVATIONS PLUS THE TRAVERSE WAY ADJUSTMENT (23' FOR RAILWAYS, 17' FOR INTERSTATE HIGHWAYS, 15' FOR OTHER PUBLIC ROADS, OR 10' FOR PRIVATE ROADS).
8. THE LIMITS OF THE INNER APPROACH SURFACE OBSTRUCTION ANALYSES ARE TO A POINT 100' ABOVE THE RUNWAY THRESHOLD ELEVATION WITHIN THE 14 CFR PART 77 APPROACH SURFACE.
9. EXISTING ON-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2022 AIRPORT AIRSPACE ANALYSIS SURVEY DATA. OFF-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2013 COASTAL AND MARINE SPATIAL PLANNING DATA FROM THE NAVAL POSTGRADUATE SCHOOL, DEPARTMENT OF OCEANOGRAPHY (HTTPS://WWW.OC.NPS.EDU/CMSP/GUAM).
10. ALL ELEVATIONS ARE IN FEET.
11. WHERE OBJECTS DO NOT FALL WITHIN THE LATERAL EXTENTS OF A GIVEN SURFACE, SURFACE ELEVATION AND SURFACE PENETRATION FIELDS ARE ASSIGNED A VALUE OF "N/A".
12. ACCORDING TO FAA AC 150/5300-13B, *AIRPORT DESIGN*, ALL OBSTACLE FREE ZONE (OFZ) SURFACES MUST REMAIN CLEAR OF OBJECTS, EXCEPT FOR FRANGIBLE NAVAIDS. IDENTIFIED OFZ PENETRATIONS FOR THIS RUNWAY REQUIRE FURTHER EVALUATION FOR WAYS OF COMPLYING WITH FAA OFZ CLEARING STANDARDS.

| NO. | REVISIONS | BY | APP. | DATE | NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

MAGNETIC DECLINATION = 9°23' (9.4°) EAST (JANUARY 2022)
ANNUAL RATE OF CHANGE: 0°1' (0.017') WEST / YEAR

PREPARED FOR
A. B. WON PAT INTERNATIONAL AIRPORT GUAM
A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM
AECOM

FUTURE RUNWAY 24L
INNER PORTION OF THE APPROACH SURFACE
DATA TABLES - G

ANTONIO B. WON PAT
INTERNATIONAL AIRPORT

DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WBS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 06/23
SHEET: 39 OF 51

**Figure H-40. Future Runway 24L Inner Portion of the Approach Surface Data Tables – G**

Source: AECOM

**RUNWAY 24L - FUTURE APPROACH SURFACE OBSTRUCTIONS**

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | PART 77 | | TSS TYPE 5 | | TSS TYPE 6 | | OFZ | | PAPI OCS | | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MSL | AGL | | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | |
| 22554 | UTILITY POLE | 406.4 | 39.9 | 366.5 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 426.7 | -20.3 | NO ACTION |
| 22561 | UTILITY POLE | 475.0 | 41.8 | 433.2 | 446.1 | 28.9 | 590.0 | -115.0 | N/A | N/A | N/A | N/A | 513.9 | -38.9 | MARK/LIGHT |
| 22827 | GROUND | 328.1 | N/A | 328.1 | 326.6 | 1.5 | 386.7 | -58.7 | N/A | N/A | N/A | N/A | 388.3 | -60.3 | NO ACTION |
| 22838 | GROUND | 332.2 | N/A | 332.2 | 340.0 | -7.8 | 409.6 | -77.4 | 377.4 | -45.2 | N/A | N/A | 401.8 | -69.6 | NO ACTION |
| 22842 | GROUND | 348.0 | N/A | 348.0 | 352.0 | -4.0 | 429.9 | -81.9 | 390.9 | -43.0 | N/A | N/A | 414.1 | -66.1 | NO ACTION |
| 22844 | GROUND | 358.7 | N/A | 358.7 | 365.5 | -6.8 | 452.9 | -94.2 | 406.3 | -47.5 | N/A | N/A | 428.1 | -69.4 | NO ACTION |
| 22845 | GROUND | 356.1 | N/A | 356.1 | 364.7 | -8.7 | 451.6 | -95.5 | 405.4 | -49.3 | N/A | N/A | 427.4 | -71.3 | NO ACTION |
| 22846 | GROUND | 343.7 | N/A | 343.7 | 364.6 | -20.9 | 451.3 | -107.6 | 405.2 | -61.5 | N/A | N/A | 427.4 | -83.7 | NO ACTION |
| 22848 | GROUND | 362.5 | N/A | 362.5 | 369.4 | -6.9 | 459.5 | -97.0 | 410.7 | -48.2 | N/A | N/A | 432.1 | -69.7 | NO ACTION |
| 22849 | GROUND | 367.0 | N/A | 367.0 | 375.5 | -8.4 | 469.9 | -102.8 | 417.6 | -50.5 | N/A | N/A | 438.5 | -71.4 | NO ACTION |
| 22851 | GROUND | 354.0 | N/A | 354.0 | 375.1 | -21.1 | 469.3 | -115.3 | 417.2 | -63.2 | N/A | N/A | 438.3 | -84.3 | NO ACTION |
| 22852 | GROUND | 350.0 | N/A | 350.0 | 371.0 | -21.0 | 462.3 | -112.3 | 412.5 | -62.5 | N/A | N/A | 434.0 | -84.0 | NO ACTION |
| 22853 | GROUND | 357.8 | N/A | 357.8 | 382.4 | -24.6 | 481.7 | -123.9 | 425.5 | -67.6 | N/A | N/A | 446.0 | -88.1 | NO ACTION |
| 22854 | GROUND | 361.5 | N/A | 361.5 | 382.2 | -20.7 | 481.4 | -119.9 | 425.2 | -63.8 | N/A | N/A | 445.6 | -84.1 | NO ACTION |
| 22855 | GROUND | 372.1 | N/A | 372.1 | 382.1 | -10.0 | 481.1 | -109.0 | 425.0 | -53.0 | N/A | N/A | 445.3 | -73.2 | NO ACTION |
| 22856 | GROUND | 375.1 | N/A | 375.1 | 387.5 | -12.4 | 490.3 | -115.2 | 431.2 | -56.1 | N/A | N/A | 451.0 | -75.8 | NO ACTION |
| 22857 | GROUND | 366.3 | N/A | 366.3 | 387.7 | -21.4 | 490.7 | -124.4 | 431.5 | -65.2 | N/A | N/A | 451.3 | -85.0 | NO ACTION |
| 22858 | GROUND | 363.4 | N/A | 363.4 | 388.0 | -24.6 | 491.2 | -127.8 | 431.8 | -68.4 | N/A | N/A | 451.7 | -88.3 | NO ACTION |
| 22860 | GROUND | 370.7 | N/A | 370.7 | 393.5 | -22.8 | 500.6 | -129.9 | 438.1 | -67.4 | N/A | N/A | 457.3 | -86.6 | NO ACTION |
| 22862 | GROUND | 375.9 | N/A | 375.9 | 385.5 | -9.6 | 486.9 | -111.0 | 428.9 | -53.0 | N/A | N/A | 448.8 | -72.9 | NO ACTION |
| 22864 | GROUND | 379.9 | N/A | 379.9 | 392.2 | -12.3 | 498.3 | -118.4 | 436.5 | -56.6 | N/A | N/A | 455.8 | -75.9 | NO ACTION |
| 22867 | GROUND | 370.3 | N/A | 370.3 | 378.9 | -8.6 | 475.7 | -105.4 | 421.5 | -51.2 | N/A | N/A | 442.0 | -71.7 | NO ACTION |
| 22869 | GROUND | 385.1 | N/A | 385.1 | 399.6 | -14.5 | 510.8 | -125.7 | 444.9 | -59.8 | N/A | N/A | 463.4 | -78.3 | NO ACTION |
| 22870 | GROUND | 377.5 | N/A | 377.5 | 399.6 | -22.1 | 510.9 | -133.4 | 444.9 | -67.4 | N/A | N/A | 463.5 | -86.0 | NO ACTION |
| 22871 | GROUND | 375.4 | N/A | 375.4 | 399.9 | -24.5 | 511.3 | -135.9 | 445.2 | -69.8 | N/A | N/A | 463.9 | -88.5 | NO ACTION |
| 22890 | GROUND | 382.1 | N/A | 382.1 | 405.8 | -23.7 | 521.4 | -139.3 | 451.9 | -69.9 | N/A | N/A | 469.9 | -87.9 | NO ACTION |
| 22891 | GROUND | 380.7 | N/A | 380.7 | 405.9 | -25.3 | 521.6 | -141.0 | 452.1 | -71.4 | N/A | N/A | 470.2 | -89.5 | NO ACTION |

**RUNWAY 24L - FUTURE TRAVERSE WAY DATA**

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | PART 77 | | TSS TYPE 5 | | TSS TYPE 6 | | OFZ | | PAPI OCS | | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | MSL | AGL | | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | |
| Z-2 | AIRPORT SERVICE RD | 369.1 | 10.0 | 359.1 | 428.2 | -59.1 | N/A | N/A | N/A | N/A | N/A | N/A | 495.5 | -126.5 | NO ACTION |
| Z-4 | AIRPORT SERVICE RD | 408.1 | 10.0 | 398.1 | 420.9 | -12.8 | 547.1 | -139.0 | 469.0 | -61.0 | N/A | N/A | 485.6 | -77.5 | NO ACTION |
| Z-6 | AIRPORT SERVICE RD | 396.1 | 10.0 | 386.1 | 405.3 | -9.2 | 520.5 | -124.5 | 451.4 | -55.3 | N/A | N/A | 469.4 | -73.3 | NO ACTION |
| Z-15 | AIRPORT SERVICE RD | 360.0 | 10.0 | 350.0 | 348.8 | 11.2 | 424.6 | -64.6 | 387.4 | -27.4 | N/A | N/A | 410.7 | -50.7 | NO ACTION |
| Z-16 | ARMY DR | 417.0 | 17.0 | 400.0 | 429.4 | -12.4 | 561.5 | -144.5 | 478.6 | -61.6 | N/A | N/A | 494.4 | -77.4 | NO ACTION |
| Z-23 | ARMY DR | 373.1 | 17.0 | 356.1 | 434.3 | -61.2 | N/A | N/A | N/A | N/A | N/A | N/A | 501.9 | -128.8 | NO ACTION |
| Z-51 | JUAN C FEJERAN ST | 456.6 | 15.0 | 441.6 | 440.3 | 16.4 | N/A | N/A | N/A | N/A | N/A | N/A | 508.2 | -51.6 | NO ACTION |
| Z-53 | ARMY DR | 421.7 | 17.0 | 404.7 | 402.1 | 19.6 | N/A | N/A | N/A | N/A | N/A | N/A | 468.3 | -46.6 | NO ACTION |
| Z-54 | UNKNOWN | 404.2 | 15.0 | 389.2 | 383.2 | 21.1 | N/A | N/A | N/A | N/A | N/A | N/A | 448.4 | -44.2 | NO ACTION |
| Z-55 | PANGELINAN WY | 399.1 | 15.0 | 384.1 | 377.7 | 21.4 | N/A | N/A | N/A | N/A | N/A | N/A | 442.8 | -43.6 | NO ACTION |
| Z-56 | UNKNOWN | 388.7 | 15.0 | 373.7 | 366.3 | 22.4 | N/A | N/A | N/A | N/A | N/A | N/A | 430.8 | -42.1 | NO ACTION |
| Z-57 | AIRPORT SERVICE RD | 371.1 | 10.0 | 361.1 | 350.2 | 20.8 | N/A | N/A | N/A | N/A | N/A | N/A | 414.0 | -42.9 | NO ACTION |
| Z-134 | AIRPORT SERVICE RD | 340.4 | 10.0 | 330.4 | 327.6 | 12.8 | 388.4 | -48.0 | 363.3 | -22.9 | N/A | N/A | 388.7 | -48.2 | NO ACTION |
| Z-135 | AIRPORT SERVICE RD | 351.7 | 10.0 | 341.7 | 359.7 | -7.9 | N/A | N/A | N/A | N/A | N/A | N/A | 423.9 | -72.1 | NO ACTION |

NOTES:

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2. MAGNETIC DECLINATION OBTAINED ONLINE AT HTTP://WWW.NGDC.NOAA.GOV/GEOMAG-WEB/#DECLINATION.
3. ALL LOCAL ZONING AND AIRSPACE PROTECTION IS GOVERNED BY THE SUPREME COURT OF GUAM, COMPILER OF LAWS, TITLE 21 - REAL PROPERTY, CHAPTER 61 - ZONING LAW.
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6. ANY TEMPORARY OR PERMANENT STRUCTURE, INCLUDING ALL APPURTENANCES, THAT EXCEED AN OVERALL HEIGHT OF 200 FEET (61M) ABOVE GROUND LEVEL (AGL) OR EXCEEDS ANY OBSTRUCTION STANDARD CONTAINED IN 14 CFR PART 77, SHOULD BE MARKED AND/OR LIGHTED PER ADVISORY CIRCULAR 70/7460-1.
7. AS PER FAR PART-77.17(B), APPROACH SURFACE CLEARANCES ARE BASED ON TRAVERSE WAY ELEVATIONS PLUS THE TRAVERSE WAY ADJUSTMENT (23' FOR RAILWAYS, 17' FOR INTERSTATE HIGHWAYS, 15' FOR OTHER PUBLIC ROADS, OR 10' FOR PRIVATE ROADS).
8. THE LIMITS OF THE INNER APPROACH SURFACE OBSTRUCTION ANALYSES ARE TO A POINT 100' ABOVE THE RUNWAY THRESHOLD ELEVATION WITHIN THE 14 CFR PART 77 APPROACH SURFACE.
9. EXISTING ON-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2022 AIRPORT AIRSPACE ANALYSIS SURVEY DATA. OFF-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2013 COASTAL AND MARINE SPATIAL PLANNING DATA FROM THE NAVAL POSTGRADUATE SCHOOL, DEPARTMENT OF OCEANOGRAPHY (HTTPS://WWW.OC.NPS.EDU/CMSP/GUAM).
10. ALL ELEVATIONS ARE IN FEET.
11. WHERE OBJECTS DO NOT FALL WITHIN THE LATERAL EXTENTS OF A GIVEN SURFACE, SURFACE ELEVATION AND SURFACE PENETRATION FIELDS ARE ASSIGNED A VALUE OF "N/A".
12. ACCORDING TO FAA AC 150/5300-13B, *AIRPORT DESIGN*, ALL OBSTACLE FREE ZONE (OFZ) SURFACES MUST REMAIN CLEAR OF OBJECTS, EXCEPT FOR FRANGIBLE NAVAIDS. IDENTIFIED OFZ PENETRATIONS FOR THIS RUNWAY REQUIRE FURTHER EVALUATION FOR WAYS OF COMPLYING WITH FAA OFZ CLEARING STANDARDS.

| NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|

| NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|

MAGNETIC DECLINATION = 9°23' (9.4°) EAST (JANUARY 2023)
ANNUAL RATE OF CHANGE: 0°1' (0.01°) WEST / YEAR

PREPARED FOR
A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM
AECOM

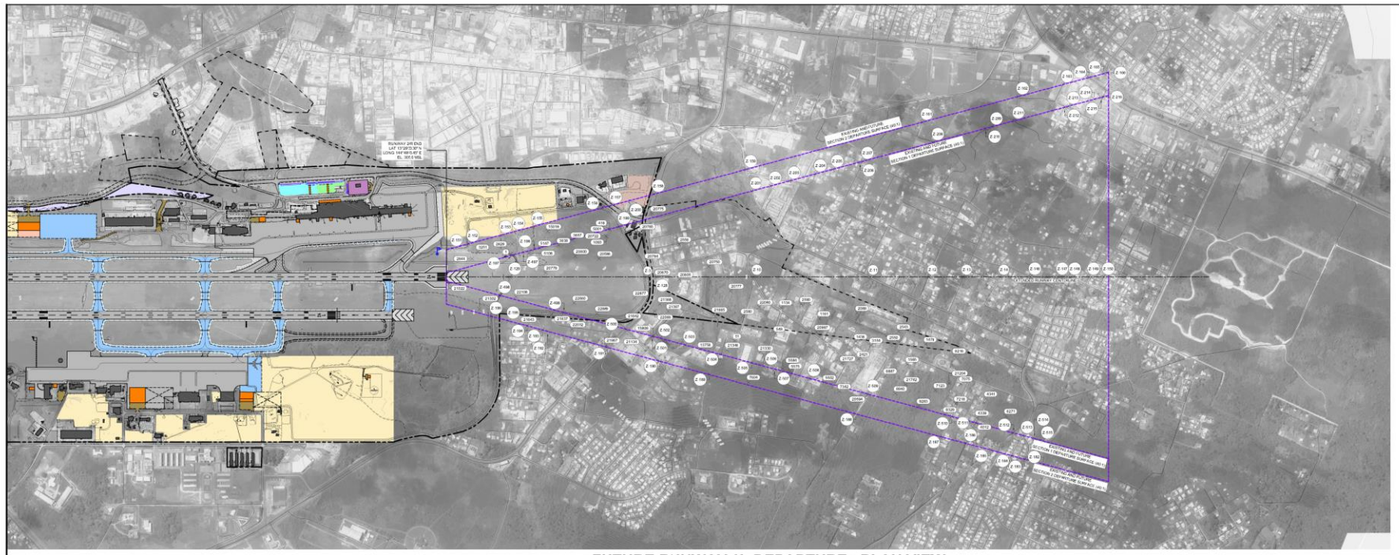
FUTURE RUNWAY 24L
INNER PORTION OF THE APPROACH SURFACE
DATA TABLES - H

ANTONIO B. WON PAT
INTERNATIONAL AIRPORT

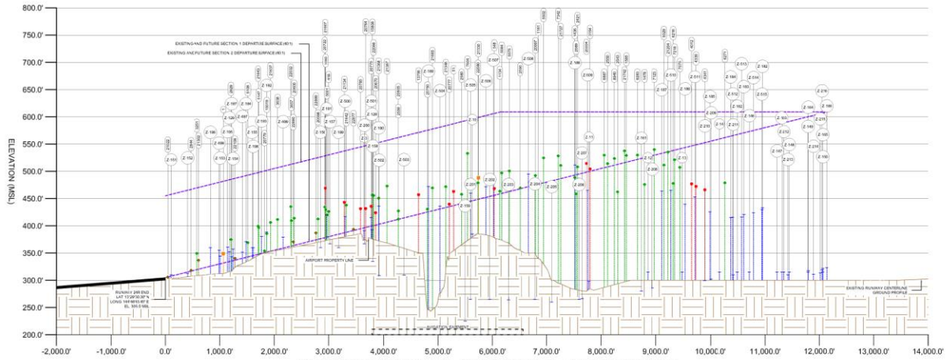
DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WBS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 06/23
SHEET: 40 OF 51

**Figure H-41. Future Runway 24L Inner Portion of the Approach Surface Data Tables – H**

Source: AECOM



**FUTURE RUNWAY 6L DEPARTURE - PLAN VIEW**
HORIZONTAL SCALE : 1" = 1,000'




**FUTURE RUNWAY 6L DEPARTURE - PROFILE VIEW**
HORIZONTAL SCALE : 1" = 1,000'
VERTICAL SCALE : 1" = 100'

**LEGEND**

| ITEM |
|---|
| AIRPORT PROPERTY LINE |
| FUTURE AIRPORT PROPERTY LINE |
| AIRFIELD PAVEMENT |
| FUTURE AIRFIELD PAVEMENT |
| AIRFIELD PAVEMENT TO BE REMOVED |
| AIRFIELD SHOULDER PAVEMENT |
| FUTURE AIRFIELD SHOULDER PAVEMENT |
| ON-AIRPORT BUILDINGS |
| FUTURE ON-AIRPORT BUILDINGS / STRUCTURES |
| OFF-AIRPORT BUILDINGS |
| ROADS & VEHICLE PARKING |
| FUTURE ROADS & VEHICLE PARKING |
| FENCE |
| EXTENDED RUNWAY CENTERLINE |
| DEPARTURE SURFACE (SURFACE 7) |
| FUTURE DEPARTURE SURFACE (SURFACE 7) |
| PROPOSED PROPERTY ACQUISITION |
| FUTURE AERONAUTICAL DEVELOPMENT |
| FUTURE NON-AERONAUTICAL DEVELOPMENT |
| EASEMENT |
| RUNWAY THRESHOLD LIGHTS |
| PAPI |
| FUTURE WIND CONE |
| ASOS |
| ROTATING BEACON |
| AIRPORT REFERENCE POINT (ARP) |
| 10' GROUND CONTOUR |
| VEGETATION TREES |

**OBSTRUCTIONS LEGEND**

| ITEM | | |
|---|---|---|
| TREE/BUSH | XXXX | ◆ |
| POLE | XXXX | ● |
| GROUND | XXXX | ◆ |
| BUILDING | XXXX | ■ |
| FENCE | XXXX | × |
| TOWER/ANTENNA | XXXX | ● |
| NAVAID | XXXX | ▲ |
| LIGHT | XXXX | ● |
| SIGN | XXXX | ◆ |
| OTHER | XXXX | ● |
| ROAD/TRAVERSEWAY | Z-X | — |

NOTES:

1. HORIZONTAL DATUM NAD83 (MA11), VERTICAL DATUM GUVD04 (GEOID 12B). DRAWING PREPARED IN UTM ZONE 55 NORTH (US FOOT) COORDINATE SYSTEM.
2. MAGNETIC DECLINATION OBTAINED ONLINE AT HTTP://WWW.NCDC.NOAA.GOV/GEOMAG-WEB/#DECLINATION.
3. ALL LOCAL ZONING AND AIRSPACE PROTECTION IS GOVERNED BY THE SUPREME COURT OF GUAM, COMPILER OF LAWS, TITLE 21 - REAL PROPERTY, CHAPTER 61 - ZONING LAW.
4. OBSTACLES WERE EVALUATED USING 2022 AIRPORT AIRSPACE ANALYSIS OBSTRUCTION SURVEY DATA.
5. OBJECTS AND TRAVERSE WAYS ON THIS SHEET ARE EVALUATED FOR OBSTRUCTION STATUS AND PROPOSED DISPOSITION ON SHEET 42.
6. FOR CLARITY, ONLY CRITICAL OBSTRUCTIONS, DEFINED AS THE HIGHEST OBSTRUCTION WITHIN A 500' x 500' GRID, ARE SHOWN. CRITICAL OBJECT CRITERIA ARE DERIVED FROM ADVISORY CIRCULAR 150/5300-18B, *GENERAL GUIDANCE AND SPECIFICATIONS FOR SUBMISSION OF AERONAUTICAL SURVEYS TO NGS: FIELD DATA COLLECTION AND GEOGRAPHIC INFORMATION SYSTEM (GIS) STANDARDS*, SECTION 2.7.1.6.
7. AS PER FAR PART-77.17(B), APPROACH SURFACE CLEARANCES ARE BASED ON TRAVERSE WAY ELEVATIONS PLUS THE TRAVERSE WAY ADJUSTMENT (23' FOR RAILWAYS, 17' FOR INTERSTATE HIGHWAYS, 15' FOR OTHER PUBLIC ROADS, OR 10' FOR PRIVATE ROADS).
8. EXISTING ON-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2022 AIRPORT AIRSPACE ANALYSIS SURVEY DATA. OFF-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2013 COASTAL AND MARINE SPATIAL PLANNING DATA FROM THE NAVAL POSTGRADUATE SCHOOL, DEPARTMENT OF OCEANOGRAPHY (HTTPS://WWW.OC.NPS.EDU/CMSP/GUAM).

| NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|

| NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|

MAGNETIC DECLINATION = 9°23' (9.4°) EAST (JANUARY 2023)
ANNUAL RATE OF CHANGE: 0° 1' (0.01°) WEST / YEAR
HORIZONTAL SCALE IN FEET
SCALE : 1" = 1,000'

PREPARED FOR
A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM
AECOM

FUTURE RUNWAY 6L
DEPARTURE SURFACE DRAWING

ANTONIO B. WON PAT
INTERNATIONAL AIRPORT

DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WBS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 06/23
SHEET: 41 OF 51

**Figure H-42. Future Runway 6L Departure Surface Drawing**

Source: AECOM

### RUNWAY 6L - FUTURE DEPARTURE SURFACE OBSTRUCTIONS

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | DEPARTURE | | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|---|
| | | MSL | AGL | | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | |
| 1 | BUILDING | 348.8 | 17.7 | 331.1 | 336.7 | 12.1 | MARK/LIGHT |
| 51 | UTILITY POLE | 462.9 | 43.1 | 419.9 | 437.1 | 25.8 | MARK/LIGHT |
| 418 | TREE | 426.3 | 76.3 | 350.0 | 380.0 | 46.3 | TRIM/REMOVE |
| 548 | UTILITY POLE | 468.4 | 39.7 | 428.8 | 456.0 | 12.4 | MARK/LIGHT |
| 1093 | TREE | 429.6 | 79.6 | 350.0 | 378.6 | 51.0 | TRIM/REMOVE |
| 1134 | TREE | 463.5 | 52.2 | 411.3 | 458.5 | 5.0 | TRIM/REMOVE |
| 1161 | TREE | 481.8 | 67.3 | 414.5 | 476.3 | 5.5 | TRIM/REMOVE |
| 1436 | TREE | 488.4 | 38.4 | 450.0 | 492.9 | -4.6 | TRIM/REMOVE |
| 1478 | TREE | 476.0 | 50.5 | 425.5 | 525.0 | -49.0 | NO ACTION |
| 1585 | TREE | 529.1 | 79.1 | 450.0 | 516.7 | 12.4 | TRIM/REMOVE |
| 2089 | TREE | 458.4 | 58.4 | 400.0 | 493.6 | -35.2 | NO ACTION |
| 2421 | TREE | 508.1 | 58.1 | 450.0 | 494.2 | 13.9 | TRIM/REMOVE |
| 2543 | TREE | 462.3 | 61.6 | 400.6 | 512.7 | -50.4 | NO ACTION |
| 2550 | TREE | 514.1 | 64.1 | 450.0 | 508.1 | 6.0 | TRIM/REMOVE |
| 2556 | TREE | 412.2 | 62.2 | 350.0 | 411.9 | 0.3 | TRIM/REMOVE |
| 2580 | TREE | 457.8 | 51.6 | 406.3 | 441.0 | 16.9 | TRIM/REMOVE |
| 2590 | TREE | 469.5 | 61.3 | 408.2 | 467.9 | 1.5 | TRIM/REMOVE |
| 2829 | TREE | 374.9 | 37.4 | 337.5 | 407.5 | -32.7 | NO ACTION |
| 2844 | GROUND | 318.2 | 0.0 | 318.2 | 363.9 | -45.8 | NO ACTION |
| 3154 | UTILITY POLE | 504.5 | 37.1 | 467.4 | 500.1 | 4.4 | MARK/LIGHT |
| 3251 | TREE | 349.3 | 37.3 | 312.0 | 401.0 | -51.7 | NO ACTION |
| 3638 | TREE | 411.6 | 61.6 | 350.0 | 356.6 | 55.0 | TRIM/REMOVE |
| 3657 | TREE | 409.4 | 59.4 | 350.0 | 362.9 | 46.5 | TRIM/REMOVE |
| 4012 | UTILITY POLE | 477.0 | 37.7 | 439.2 | 579.2 | -102.2 | NO ACTION |
| 4339 | UTILITY POLE | 472.3 | 39.1 | 433.1 | 548.5 | -76.2 | NO ACTION |
| 4341 | UTILITY POLE | 466.1 | 39.3 | 426.8 | 552.5 | -86.5 | NO ACTION |
| 5001 | TREE | 419.8 | 69.8 | 350.0 | 384.3 | 35.5 | TRIM/REMOVE |
| 5108 | TREE | 368.9 | 23.4 | 345.5 | 342.8 | 26.1 | TRIM/REMOVE |
| 5147 | TREE | 396.6 | 46.6 | 350.0 | 347.9 | 48.7 | TRIM/REMOVE |
| 5502 | TREE | 524.5 | 36.6 | 487.9 | 478.7 | 45.8 | TRIM/REMOVE |
| 5575 | TREE | 500.6 | 39.0 | 461.6 | 462.9 | 37.8 | TRIM/REMOVE |
| 5584 | TREE | 497.0 | 33.7 | 463.2 | 459.4 | 37.6 | TRIM/REMOVE |
| 6216 | TREE | 477.8 | 55.6 | 422.2 | 538.1 | -60.4 | NO ACTION |
| 6271 | TREE | 478.8 | 62.5 | 416.3 | 561.8 | -83.0 | NO ACTION |
| 6887 | TREE | 529.5 | 79.5 | 450.0 | 506.5 | 23.0 | TRIM/REMOVE |
| 7075 | TREE | 507.3 | 57.3 | 450.0 | 541.2 | -33.9 | NO ACTION |
| 7123 | TREE | 539.9 | 89.9 | 450.0 | 529.5 | 10.4 | TRIM/REMOVE |
| 7218 | TREE | 521.3 | 71.3 | 450.0 | 538.8 | -17.5 | NO ACTION |
| 7342 | TREE | 528.2 | 42.8 | 485.4 | 516.7 | 11.5 | TRIM/REMOVE |
| 7604 | TREE | 532.9 | 24.9 | 508.0 | 573.4 | -40.5 | NO ACTION |
| 8940 | TREE | 523.3 | 73.3 | 450.0 | 511.2 | 12.1 | TRIM/REMOVE |
| 9283 | TREE | 529.7 | 79.7 | 450.0 | 521.7 | 7.9 | TRIM/REMOVE |
| 9329 | TREE | 511.4 | 61.4 | 450.0 | 533.9 | -22.6 | NO ACTION |
| 13756 | UTILITY POLE | 457.0 | 35.2 | 421.7 | 425.5 | 31.4 | MARK/LIGHT |
| 15019 | TREE | 385.7 | 35.7 | 350.0 | 444.6 | -58.9 | NO ACTION |
| 15808 | TREE | 456.4 | 56.4 | 400.0 | 400.0 | 56.5 | TRIM/REMOVE |
| 20594 | UTILITY POLE | 514.4 | 38.3 | 476.2 | 503.0 | 11.4 | MARK/LIGHT |
| 20598 | TREE | 412.4 | 59.5 | 352.9 | 375.1 | 37.4 | TRIM/REMOVE |
| 20600 | TREE | 413.9 | 63.9 | 350.0 | 364.2 | 49.8 | TRIM/REMOVE |
| 20605 | TREE | 427.3 | 63.7 | 363.7 | 411.9 | 15.4 | TRIM/REMOVE |
| 20670 | POLE | 424.0 | 48.8 | 375.3 | 401.4 | 22.6 | MARK/LIGHT |
| 20722 | TREE | 434.4 | 84.4 | 350.0 | 378.2 | 56.2 | TRIM/REMOVE |
| 20750 | TREE | 430.5 | 80.5 | 350.0 | 425.2 | 5.3 | TRIM/REMOVE |
| 20764 | POWER TRANSMISSION POLE | 431.6 | 66.3 | 365.3 | 396.9 | 34.7 | MARK/LIGHT |
| 20775 | POLE | 435.8 | 86.3 | 349.5 | 427.6 | 8.2 | MARK/LIGHT |
| 20777 | POLE | 439.6 | 45.5 | 394.2 | 435.2 | 4.5 | MARK/LIGHT |
| 20779 | BUSH | 353.9 | 3.0 | 350.8 | 350.6 | 3.2 | TRIM/REMOVE |
| 20785 | POWER TRANSMISSION POLE | 431.5 | 73.6 | 357.9 | 394.5 | 37.0 | MARK/LIGHT |
| 20997 | TREE | 492.3 | 65.6 | 426.7 | 475.0 | 17.3 | TRIM/REMOVE |
| 21022 | GROUND | 305.8 | 0.0 | 305.8 | 320.6 | -14.9 | NO ACTION |
| 21134 | FLAGPOLE | 443.2 | 32.3 | 410.8 | 500.3 | -57.1 | NO ACTION |
| 21204 | TREE | 535.2 | 85.2 | 450.0 | 535.8 | -0.6 | TRIM/REMOVE |
| 21302 | GROUND | 336.8 | 0.0 | 336.8 | 444.3 | -107.5 | NO ACTION |
| 21330 | BUILDING | 488.0 | 51.1 | 436.9 | 448.7 | 39.3 | MARK/LIGHT |
| 21348 | TREE | 471.7 | 50.5 | 421.3 | 433.6 | 38.2 | TRIM/REMOVE |
| 21367 | TREE | 472.9 | 72.9 | 400.0 | 406.6 | 66.4 | TRIM/REMOVE |
| 21368 | TREE | 450.6 | 50.6 | 400.0 | 402.8 | 47.8 | TRIM/REMOVE |
| 21637 | TREE | 406.1 | 40.7 | 365.5 | 386.4 | 19.7 | TRIM/REMOVE |
| 21642 | TREE | 437.9 | 37.9 | 400.0 | 388.1 | 49.8 | TRIM/REMOVE |
| 21643 | TREE | 399.3 | 37.8 | 361.5 | 414.4 | -15.1 | NO ACTION |
| 21665 | TREE | 469.4 | 100.6 | 368.8 | 427.4 | 41.9 | TRIM/REMOVE |
| 21727 | TREE | 510.7 | 60.7 | 450.0 | 486.5 | 24.2 | TRIM/REMOVE |
| 21742 | TREE | 537.6 | 87.6 | 450.0 | 515.8 | 21.8 | TRIM/REMOVE |

### RUNWAY 6L - FUTURE DEPARTURE SURFACE OBSTRUCTIONS

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | DEPARTURE | | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|---|
| | | MSL | AGL | | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | |
| 21967 | POWER TRANSMISSION POLE | 469.1 | 67.1 | 402.1 | 515.3 | -46.2 | NO ACTION |
| 22032 | TREE | 435.1 | 52.9 | 382.2 | 457.5 | -22.4 | NO ACTION |
| 22066 | TREE | 455.6 | 55.6 | 400.0 | 400.5 | 55.2 | TRIM/REMOVE |
| 22080 | TREE | 478.8 | 72.2 | 406.6 | 448.5 | 30.3 | TRIM/REMOVE |
| 22108 | GROUND | 340.3 | 0.0 | 340.3 | 336.9 | 3.4 | NO ACTION |
| 22860 | GROUND | 370.7 | 0.0 | 370.7 | 363.7 | 7.0 | NO ACTION |
| 22877 | GROUND | 393.4 | 0.0 | 393.4 | 391.3 | 2.1 | NO ACTION |
| 22889 | GROUND | 387.0 | 0.0 | 387.0 | 374.1 | 12.9 | NO ACTION |

### RUNWAY 6L - FUTURE TRAVERSE WAY DATA

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | DEPARTURE | | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|---|
| | | MSL | AGL | | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | |
| Z-3 | AIRPORT SERVICE RD | 390.9 | 10.0 | 380.9 | 396.1 | -5.2 | NO ACTION |
| Z-10 | BELLO ST | 384.9 | 15.0 | 369.9 | 445.9 | -61.0 | NO ACTION |
| Z-11 | ALAGETA ST | 298.0 | 15.0 | 283.0 | 499.5 | -201.5 | NO ACTION |
| Z-12 | UHANG ST | 315.0 | 15.0 | 300.0 | 526.5 | -211.5 | NO ACTION |
| Z-13 | KALAMASA DR | 315.0 | 15.0 | 300.0 | 542.2 | -227.2 | NO ACTION |
| Z-14 | AYUYU ST | 315.0 | 15.0 | 300.0 | 559.3 | -244.3 | NO ACTION |
| Z-128 | ARMY DR | 392.9 | 17.0 | 375.9 | 399.7 | -6.9 | NO ACTION |
| Z-129 | AIRPORT SERVICE RD | 352.3 | 10.0 | 342.3 | 334.3 | 17.9 | NO ACTION |
| Z-146 | AHAU LN | 315.0 | 15.0 | 300.0 | 573.0 | -258.0 | NO ACTION |
| Z-147 | MACHECHE AVE | 315.0 | 15.0 | 300.0 | 585.6 | -270.6 | NO ACTION |
| Z-148 | MAGOF RD | 315.0 | 15.0 | 300.0 | 591.4 | -276.4 | NO ACTION |
| Z-149 | HIBISCUS ST | 315.0 | 15.0 | 300.0 | 600.0 | -285.0 | NO ACTION |
| Z-150 | PLUMERIA ST | 315.0 | 15.0 | 300.0 | 606.8 | -291.8 | NO ACTION |
| Z-151 | AIRPORT SERVICE RD | 310.0 | 10.0 | 300.0 | 457.6 | -147.6 | NO ACTION |
| Z-152 | AIRPORT SERVICE RD | 312.8 | 10.0 | 302.8 | 465.1 | -152.3 | NO ACTION |
| Z-153 | AIRPORT SERVICE RD | 344.5 | 10.0 | 334.5 | 480.2 | -135.7 | NO ACTION |
| Z-154 | AIRPORT SERVICE RD | 357.4 | 10.0 | 347.4 | 486.1 | -128.7 | NO ACTION |
| Z-155 | AIRPORT SERVICE RD | 360.0 | 10.0 | 350.0 | 494.9 | -134.9 | NO ACTION |
| Z-156 | AIRPORT SERVICE RD | 360.0 | 10.0 | 350.0 | 526.3 | -166.3 | NO ACTION |
| Z-157 | TIYAN PKWY | 367.0 | 17.0 | 350.0 | 530.7 | -163.7 | NO ACTION |
| Z-158 | ARMY DR | 334.6 | 17.0 | 317.6 | 550.2 | -215.5 | NO ACTION |
| Z-159 | MENDIOKA ST | 225.1 | 15.0 | 210.1 | 592.7 | -367.6 | NO ACTION |
| Z-161 | ASOSANA LN | 280.1 | 15.0 | 265.1 | 609.0 | -328.9 | NO ACTION |
| Z-162 | CHANDO CT | 315.0 | 15.0 | 300.0 | 609.0 | -294.0 | NO ACTION |
| Z-163 | UNKNOWN | 315.0 | 15.0 | 300.0 | 609.0 | -294.0 | NO ACTION |
| Z-164 | MARINE CORPS DR | 317.8 | 17.0 | 300.8 | 609.0 | -291.2 | NO ACTION |
| Z-165 | BUENA VISTA AVE | 321.6 | 15.0 | 306.6 | 609.0 | -287.4 | NO ACTION |
| Z-166 | IGLESIA CIR | 323.1 | 15.0 | 308.1 | 609.0 | -285.9 | NO ACTION |
| Z-182 | CARNATION AVE | 433.2 | 15.0 | 418.2 | 609.0 | -175.8 | NO ACTION |
| Z-183 | ORCHID AVE | 420.7 | 15.0 | 405.7 | 609.0 | -188.3 | NO ACTION |
| Z-184 | GARDENA AVE | 415.0 | 15.0 | 400.0 | 609.0 | -194.0 | NO ACTION |
| Z-185 | CARNATION LP | 425.7 | 15.0 | 410.7 | 609.0 | -183.3 | NO ACTION |
| Z-186 | S-32 | 439.6 | 15.0 | 424.6 | 609.0 | -169.4 | NO ACTION |
| Z-187 | UNKNOWN | 463.7 | 15.0 | 448.7 | 609.0 | -145.3 | NO ACTION |
| Z-188 | UNKNOWN | 511.6 | 15.0 | 496.6 | 609.0 | -97.4 | NO ACTION |
| Z-189 | UNKNOWN | 472.0 | 15.0 | 457.0 | 575.7 | -103.7 | NO ACTION |
| Z-190 | JUAN C FEJERAN ST | 436.1 | 15.0 | 421.1 | 552.9 | -116.8 | NO ACTION |
| Z-191 | ARMY DR | 420.0 | 17.0 | 403.0 | 529.0 | -109.1 | NO ACTION |
| Z-192 | PANGELINAN WY | 388.5 | 15.0 | 373.5 | 501.6 | -113.1 | NO ACTION |
| Z-193 | UNKNOWN | 380.5 | 10.0 | 370.5 | 499.3 | -118.8 | NO ACTION |
| Z-194 | UNKNOWN | 371.1 | 10.0 | 361.1 | 492.1 | -120.9 | NO ACTION |
| Z-195 | UNKNOWN | 360.8 | 10.0 | 350.8 | 483.6 | -122.8 | NO ACTION |
| Z-196 | AIRPORT SERVICE RD | 360.0 | 10.0 | 350.0 | 475.8 | -115.8 | NO ACTION |
| Z-197 | AIRPORT SERVICE RD | 343.4 | 10.0 | 333.4 | 335.4 | 7.9 | NO ACTION |
| Z-198 | AIRPORT SERVICE RD | 360.0 | 10.0 | 350.0 | 345.3 | 14.7 | NO ACTION |
| Z-199 | AIRPORT SERVICE RD | 360.0 | 10.0 | 350.0 | 384.6 | -24.6 | NO ACTION |
| Z-200 | ARMY DR | 367.0 | 17.0 | 350.0 | 396.3 | -29.3 | NO ACTION |
| Z-201 | MENDIOKA ST | 265.0 | 15.0 | 250.0 | 445.0 | -180.0 | NO ACTION |
| Z-202 | MENDIOKA ST | 265.0 | 15.0 | 250.0 | 453.9 | -188.9 | NO ACTION |
| Z-203 | E ADDENG ST | 264.1 | 15.0 | 249.1 | 462.5 | -198.4 | NO ACTION |
| Z-204 | E ADDENG ST | 265.0 | 15.0 | 250.0 | 474.7 | -209.7 | NO ACTION |
| Z-205 | UNKNOWN | 260.0 | 10.0 | 250.0 | 482.4 | -222.4 | NO ACTION |
| Z-206 | E ADDENG ST | 265.0 | 15.0 | 250.0 | 494.9 | -229.9 | NO ACTION |
| Z-207 | ACHO LATTE ST | 266.0 | 15.0 | 251.0 | 496.3 | -230.3 | NO ACTION |
| Z-208 | UNKNOWN | 286.0 | 10.0 | 276.0 | 528.6 | -242.6 | NO ACTION |
| Z-209 | CHANDO CT | 302.2 | 10.0 | 292.2 | 555.4 | -253.2 | NO ACTION |
| Z-210 | UNKNOWN | 299.5 | 10.0 | 289.5 | 552.5 | -253.0 | NO ACTION |
| Z-211 | CHANDO CT | 310.0 | 10.0 | 300.0 | 565.6 | -255.6 | NO ACTION |
| Z-212 | W LIGUAN AVE | 315.0 | 15.0 | 300.0 | 588.9 | -273.9 | NO ACTION |
| Z-213 | UNKNOWN | 310.0 | 10.0 | 300.0 | 590.8 | -280.8 | NO ACTION |

### RUNWAY 6L - FUTURE TRAVERSE WAY DATA

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | DEPARTURE | | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|---|
| | | MSL | AGL | | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | |
| Z-214 | UNKNOWN | 311.2 | 10.0 | 301.2 | 602.5 | -291.3 | NO ACTION |
| Z-215 | UNKNOWN | 313.4 | 10.0 | 303.4 | 605.6 | -292.2 | NO ACTION |
| Z-216 | UNKNOWN | 319.0 | 15.0 | 304.0 | 606.5 | -287.5 | NO ACTION |
| Z-497 | AIRPORT SERVICE RD | 351.6 | 10.0 | 341.6 | 340.4 | 11.3 | NO ACTION |
| Z-498 | AIRPORT SERVICE RD | 355.2 | 10.0 | 345.2 | 329.7 | 25.5 | NO ACTION |
| Z-499 | AIRPORT SERVICE RD | 379.2 | 10.0 | 369.2 | 359.1 | 20.1 | NO ACTION |
| Z-500 | ARMY DR | 417.0 | 17.0 | 400.0 | 387.5 | 29.5 | NO ACTION |
| Z-501 | UNKNOWN | 415.0 | 15.0 | 400.0 | 399.4 | 15.6 | NO ACTION |
| Z-502 | UNKNOWN | 308.7 | 10.0 | 298.7 | 403.0 | -94.2 | NO ACTION |
| Z-503 | UNKNOWN | 309.6 | 15.0 | 294.6 | 414.5 | -104.9 | NO ACTION |
| Z-504 | UNKNOWN | 436.1 | 15.0 | 421.1 | 430.9 | 5.2 | NO ACTION |
| Z-505 | UNKNOWN | 460.0 | 10.0 | 450.0 | 445.1 | 14.9 | NO ACTION |
| Z-506 | UNKNOWN | 471.8 | 10.0 | 461.8 | 452.1 | 19.7 | NO ACTION |
| Z-507 | UNKNOWN | 481.1 | 10.0 | 471.1 | 455.6 | 25.5 | NO ACTION |
| Z-508 | DUENAS RD | 494.9 | 15.0 | 479.9 | 471.8 | 23.1 | NO ACTION |
| Z-509 | UNKNOWN | 465.0 | 15.0 | 450.0 | 498.9 | -33.9 | NO ACTION |
| Z-510 | UNKNOWN | 465.0 | 15.0 | 450.0 | 537.1 | -72.1 | NO ACTION |
| Z-511 | S-32 | 452.9 | 15.0 | 437.9 | 548.0 | -95.1 | NO ACTION |
| Z-512 | CARNATION LP | 415.8 | 15.0 | 400.8 | 565.4 | -149.6 | NO ACTION |
| Z-513 | GARDENA AVE | 416.1 | 15.0 | 401.1 | 569.5 | -153.4 | NO ACTION |
| Z-514 | CARNATION AVE | 424.0 | 15.0 | 409.0 | 574.9 | -150.8 | NO ACTION |
| Z-515 | UNKNOWN | 429.7 | 15.0 | 414.7 | 578.7 | -149.0 | NO ACTION |

NOTES:

1. HORIZONTAL DATUM NAD83 (MA11), VERTICAL DATUM GUVD04 (GEOID 12B). DRAWING PREPARED IN UTM ZONE 55 NORTH (US FOOT) COORDINATE SYSTEM.
2. MAGNETIC DECLINATION OBTAINED ONLINE AT HTTP://WWW.NGDC.NOAA.GOV/GEOMAG-WEB/#DECLINATION.
3. ALL LOCAL ZONING AND AIRSPACE PROTECTION IS GOVERNED BY THE SUPREME COURT OF GUAM, COMPILER OF LAWS, TITLE 21 - REAL PROPERTY, CHAPTER 61 - ZONING LAW.
4. OBSTACLES WERE EVALUATED USING 2022 AIRPORT AIRSPACE ANALYSIS OBSTRUCTION SURVEY DATA.
5. FOR CLARITY, ONLY CRITICAL OBSTRUCTIONS, DEFINED AS THE HIGHEST OBSTRUCTION WITHIN A 500' x 500' GRID, ARE SHOWN. CRITICAL OBJECT CRITERIA ARE DERIVED FROM ADVISORY CIRCULAR 150/5300-18B, *GENERAL GUIDANCE AND SPECIFICATIONS FOR SUBMISSION OF AERONAUTICAL SURVEYS TO NGS: FIELD DATA COLLECTION AND GEOGRAPHIC INFORMATION SYSTEM (GIS) STANDARDS*, SECTION 2.7.1.6.
6. AS PER FAR PART-77.17(B), APPROACH SURFACE CLEARANCES ARE BASED ON TRAVERSE WAY ELEVATIONS PLUS THE TRAVERSE WAY ADJUSTMENT (23' FOR RAILWAYS, 17' FOR INTERSTATE HIGHWAYS, 15' FOR OTHER PUBLIC ROADS, OR 10' FOR PRIVATE ROADS).
7. EXISTING ON-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2022 AIRPORT AIRSPACE ANALYSIS SURVEY DATA. OFF-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2013 COASTAL AND MARINE SPATIAL PLANNING DATA FROM THE NAVAL POSTGRADUATE SCHOOL, DEPARTMENT OF OCEANOGRAPHY (HTTPS://WWW.OC.NPS.EDU/CMSP/GUAM/).
8. TO ACCOUNT FOR GROWTH SINCE SURVEY, TREES WITHIN 10 FEET OF PENETRATING A SURFACE ARE ASSIGNED A PROPOSED DISPOSITION OF TRIM/REMOVE.

| NO. | REVISIONS | BY | APP. | DATE | NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|---|---|---|---|---|

MAGNETIC DECLINATION = 9°23' (9.4°) EAST (JANUARY 2023)
ANNUAL RATE OF CHANGE: 0°1' (0.017') WEST / YEAR

PREPARED FOR

A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM

AECOM

FUTURE RUNWAY 6L
DEPARTURE SURFACE
DATA TABLES

ANTONIO B. WON PAT
INTERNATIONAL AIRPORT

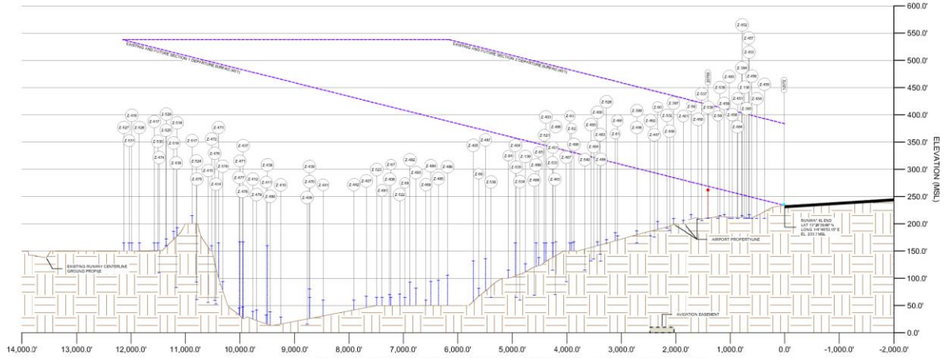
DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WBS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 06/23
SHEET: 42 OF 51

**Figure H-43. Future Runway 6L Departure Surface Data Tables**

Source: AECOM



**FUTURE RUNWAY 24R DEPARTURE - PLAN VIEW**
HORIZONTAL SCALE : 1" = 1,000'




**FUTURE RUNWAY 24R DEPARTURE - PROFILE VIEW**
HORIZONTAL SCALE : 1" = 1,000'
VERTICAL SCALE : 1" = 100'

**LEGEND**

| ITEM | |
|---|---|
| AIRPORT PROPERTY LINE | |
| FUTURE AIRPORT PROPERTY LINE | |
| AIRFIELD PAVEMENT | |
| FUTURE AIRFIELD PAVEMENT | |
| AIRFIELD PAVEMENT TO BE REMOVED | |
| AIRFIELD SHOULDER PAVEMENT | |
| FUTURE AIRFIELD SHOULDER PAVEMENT | |
| ON-AIRPORT BUILDINGS | |
| FUTURE ON-AIRPORT BUILDINGS / STRUCTURES | |
| OFF-AIRPORT BUILDINGS | |
| ROADS & VEHICLE PARKING | |
| FUTURE ROADS & VEHICLE PARKING | |
| FENCE | |
| EXTENDED RUNWAY CENTERLINE | |
| DEPARTURE SURFACE (SURFACE 7) | |
| FUTURE DEPARTURE SURFACE (SURFACE 7) | |
| PROPOSED PROPERTY ACQUISITION | |
| FUTURE AERONAUTICAL DEVELOPMENT | |
| FUTURE NON-AERONAUTICAL DEVELOPMENT | |
| AVIGATION EASEMENT | |
| RUNWAY THRESHOLD LIGHTS | |
| PAPI | |
| WIND CONE | |
| ASOS | |
| ROTATING BEACON | |
| AIRPORT REFERENCE POINT (ARP) | |
| 10' GROUND CONTOUR | |
| VEGETATION TREES | |

**OBSTRUCTIONS LEGEND**

| ITEM | | |
|---|---|---|
| TREE/BUSH | XXXX | |
| POLE | XXXX | |
| GROUND | XXXX | |
| BUILDING | XXXX | |
| FENCE | XXXX | |
| TOWER/ANTENNA | XXXX | |
| NAVAID | XXXX | |
| LIGHT | XXXX | |
| SIGN | XXXX | |
| OTHER | XXXX | |
| ROAD/TRAVERSEWAY | Z-X | |

NOTES:

1. HORIZONTAL DATUM NAD83 (MA11), VERTICAL DATUM GUVD04 (GEOID 12B). DRAWING PREPARED IN UTM ZONE 55 NORTH (US FOOT) COORDINATE SYSTEM.
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4. OBSTACLES WERE EVALUATED USING 2022 AIRPORT AIRSPACE ANALYSIS OBSTRUCTION SURVEY DATA.
5. OBJECTS AND TRAVERSE WAYS ON THIS SHEET ARE EVALUATED FOR OBSTRUCTION STATUS AND PROPOSED DISPOSITION ON SHEET 44.
6. FOR CLARITY, ONLY CRITICAL OBSTRUCTIONS, DEFINED AS THE HIGHEST OBSTRUCTION WITHIN A 500' x 500' GRID, ARE SHOWN. CRITICAL OBJECT CRITERIA ARE DERIVED FROM ADVISORY CIRCULAR 150/5300-18B, *GENERAL GUIDANCE AND SPECIFICATIONS FOR SUBMISSION OF AERONAUTICAL SURVEYS TO NGS: FIELD DATA COLLECTION AND GEOGRAPHIC INFORMATION SYSTEM (GIS) STANDARDS*, SECTION 2.7.1.6.
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| NO. | REVISIONS | BY | APP. | DATE | NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

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ANNUAL RATE OF CHANGE: 0° 1' (0.01°) WEST / YEAR
HORIZONTAL SCALE IN FEET
SCALE : 1" = 1,000'

PREPARED FOR
A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM
AECOM

FUTURE RUNWAY 24R
DEPARTURE SURFACE DRAWING

ANTONIO B. WON PAT
INTERNATIONAL AIRPORT

DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WBS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 06/23
SHEET: 43 OF 51

**Figure H-44. Future Runway 24R Departure Surface Drawing**

Source: AECOM

**RUNWAY 24R - FUTURE DEPARTURE SURFACE OBSTRUCTIONS**

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | DEPARTURE | | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|---|
| | | MSL | AGL | | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | |
| 12072 | RUNWAY LIGHT | 235.8 | 2.0 | 233.7 | 234.0 | 1.8 | NO ACTION |
| 20760 | POLE | 261.9 | 50.8 | 211.1 | 268.9 | -7.0 | NO ACTION |

**RUNWAY 24R - FUTURE TRAVERSE WAY DATA**

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | DEPARTURE | | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|---|
| | | MSL | AGL | | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | |
| Z-58 | AIRPORT SERVICE RD | 210.0 | 10.0 | 200.0 | 264.4 | -54.4 | NO ACTION |
| Z-59 | PURPLE HEART MEMORIAL HWY | 217.0 | 17.0 | 200.0 | 276.6 | -59.6 | NO ACTION |
| Z-60 | CHN R S SANCHEZ | 204.3 | 15.0 | 189.3 | 292.1 | -87.9 | NO ACTION |
| Z-61 | ROBAT ST | 183.8 | 15.0 | 168.8 | 311.7 | -127.9 | NO ACTION |
| Z-62 | PATERNO ST | 165.0 | 15.0 | 150.0 | 331.7 | -166.7 | NO ACTION |
| Z-63 | TUN ANTONIO ST | 165.0 | 15.0 | 150.0 | 332.5 | -167.5 | NO ACTION |
| Z-64 | BIANG ST | 115.0 | 15.0 | 100.0 | 360.6 | -245.6 | NO ACTION |
| Z-65 | MANIBUSAN ST | 138.2 | 15.0 | 123.2 | 346.7 | -208.5 | NO ACTION |
| Z-66 | SGT ROY T DAMIAN JR ST | 81.6 | 15.0 | 66.6 | 374.3 | -292.6 | NO ACTION |
| Z-67 | UNKNOWN | 65.0 | 15.0 | 50.0 | 414.5 | -349.5 | NO ACTION |
| Z-68 | DUENAS ST | 65.0 | 15.0 | 50.0 | 408.1 | -343.1 | NO ACTION |
| Z-136 | AIRPORT SERVICE RD | 210.0 | 10.0 | 200.0 | 252.2 | -42.2 | NO ACTION |
| Z-139 | TAN CHONG ST | 126.6 | 15.0 | 111.6 | 352.8 | -226.2 | NO ACTION |
| Z-393 | AIRPORT SERVICE RD | 210.0 | 10.0 | 200.0 | 401.4 | -191.4 | NO ACTION |
| Z-394 | N ST | 215.0 | 15.0 | 200.0 | 403.4 | -188.4 | NO ACTION |
| Z-397 | E SUNSET BLVD | 209.8 | 17.0 | 192.8 | 434.9 | -225.0 | NO ACTION |
| Z-399 | FOURTH STREET | 187.1 | 15.0 | 172.1 | 451.7 | -264.6 | NO ACTION |
| Z-400 | EAST SUNSET BLVD | 167.0 | 17.0 | 150.0 | 469.9 | -302.9 | NO ACTION |
| Z-401 | E T CALVO WY | 165.0 | 15.0 | 150.0 | 490.5 | -325.5 | NO ACTION |
| Z-403 | KINDO KINDO ST | 165.0 | 15.0 | 150.0 | 493.6 | -328.6 | NO ACTION |
| Z-404 | TITIRES ST | 165.0 | 15.0 | 150.0 | 507.5 | -342.5 | NO ACTION |
| Z-405 | PURPLE HEART MEMORIAL HWY | 132.1 | 17.0 | 115.1 | 526.8 | -394.7 | NO ACTION |
| Z-407 | PURPLE HEART MEMORIAL HWY | 67.0 | 17.0 | 50.0 | 537.7 | -470.7 | NO ACTION |
| Z-408 | PURPLE HEART MEMORIAL HWY | 70.2 | 17.0 | 53.2 | 537.7 | -467.5 | NO ACTION |
| Z-409 | CHALAN SANTO PAPA JUAN PABLO DOS | 15.7 | 15.0 | 0.7 | 537.7 | -522.0 | NO ACTION |
| Z-410 | N CHALAN CANTON TASI | 28.7 | 17.0 | 11.7 | 537.7 | -509.1 | NO ACTION |
| Z-411 | MARTYR ST | 32.7 | 15.0 | 17.7 | 537.7 | -505.0 | NO ACTION |
| Z-412 | ARCHBISHOP F C FLORES ST | 39.2 | 15.0 | 24.2 | 537.7 | -498.5 | NO ACTION |
| Z-414 | DULCE NOMBRE DE MARIA DR | 53.1 | 15.0 | 38.1 | 537.7 | -484.6 | NO ACTION |
| Z-415 | ASPINALL AVE | 55.7 | 15.0 | 40.7 | 537.7 | -482.0 | NO ACTION |
| Z-416 | JOHNSON RD | 165.0 | 15.0 | 150.0 | 537.7 | -372.7 | NO ACTION |
| Z-417 | FORT CT | 165.0 | 15.0 | 150.0 | 537.7 | -372.7 | NO ACTION |
| Z-436 | UNKNOWN | 83.0 | 10.0 | 73.0 | 537.7 | -454.7 | NO ACTION |
| Z-437 | N CHALAN CANTON TASI | 167.0 | 17.0 | 150.0 | 537.7 | -370.7 | NO ACTION |
| Z-438 | UNKNOWN | 160.0 | 10.0 | 150.0 | 537.7 | -377.7 | NO ACTION |
| Z-439 | UNKNOWN | 80.6 | 10.0 | 70.6 | 537.7 | -457.1 | NO ACTION |
| Z-441 | S-2 | 60.0 | 10.0 | 50.0 | 537.7 | -477.7 | NO ACTION |
| Z-442 | S-12 | 60.0 | 10.0 | 50.0 | 537.7 | -477.7 | NO ACTION |
| Z-443 | SGT ROY T DAMIAN JR ST | 70.0 | 15.0 | 55.0 | 489.4 | -419.4 | NO ACTION |
| Z-446 | BALAKO ST | 165.0 | 15.0 | 150.0 | 451.7 | -286.7 | NO ACTION |
| Z-447 | CHN R S SANCHEZ | 175.7 | 15.0 | 160.7 | 443.7 | -268.0 | NO ACTION |
| Z-448 | GUSTO ST | 187.7 | 15.0 | 172.7 | 436.7 | -249.0 | NO ACTION |
| Z-450 | UNKNOWN | 208.4 | 15.0 | 193.4 | 423.4 | -215.0 | NO ACTION |
| Z-451 | UNKNOWN | 210.0 | 10.0 | 200.0 | 405.3 | -195.3 | NO ACTION |
| Z-452 | CANADA TOTO RD | 215.0 | 15.0 | 200.0 | 403.3 | -188.3 | NO ACTION |
| Z-453 | PURPLE HEART MEMORIAL HWY | 217.0 | 17.0 | 200.0 | 400.1 | -183.1 | NO ACTION |
| Z-454 | AIRPORT SERVICE RD | 210.0 | 10.0 | 200.0 | 396.5 | -186.5 | NO ACTION |
| Z-455 | AIRPORT SERVICE RD | 210.2 | 10.0 | 200.2 | 393.0 | -182.8 | NO ACTION |
| Z-456 | AIRPORT SERVICE RD | 210.0 | 10.0 | 200.0 | 248.8 | -38.8 | NO ACTION |
| Z-457 | AIRPORT SERVICE RD | 210.0 | 10.0 | 200.0 | 250.3 | -40.3 | NO ACTION |
| Z-458 | AIRPORT SERVICE RD | 210.0 | 10.0 | 200.0 | 257.8 | -47.8 | NO ACTION |
| Z-459 | PURPLE HEART MEMORIAL HWY | 217.0 | 17.0 | 200.0 | 261.4 | -44.4 | NO ACTION |
| Z-461 | RAMIREZ WY | 206.2 | 15.0 | 191.2 | 280.3 | -74.1 | NO ACTION |
| Z-462 | CHN R S SANCHEZ | 177.7 | 15.0 | 162.7 | 295.5 | -117.8 | NO ACTION |
| Z-463 | UNKNOWN | 144.0 | 15.0 | 129.0 | 318.6 | -174.6 | NO ACTION |
| Z-464 | ROBART ST | 135.6 | 15.0 | 120.6 | 321.6 | -186.1 | NO ACTION |
| Z-465 | MANIBUSAN ST | 132.0 | 15.0 | 117.0 | 322.9 | -190.9 | NO ACTION |
| Z-466 | BALAKO ST | 131.3 | 15.0 | 116.3 | 468.4 | -337.1 | NO ACTION |
| Z-467 | GUSPOD ST | 93.7 | 15.0 | 78.7 | 484.2 | -390.5 | NO ACTION |
| Z-468 | SGT ROY T DAMIAN JR ST | 68.7 | 15.0 | 53.7 | 348.8 | -280.1 | NO ACTION |
| Z-469 | S-12 | 60.0 | 10.0 | 50.0 | 398.4 | -338.4 | NO ACTION |
| Z-470 | S SPRING LN | 65.0 | 15.0 | 50.0 | 451.9 | -386.9 | NO ACTION |
| Z-471 | N CHALAN CANTON TASI | 167.0 | 17.0 | 150.0 | 483.8 | -316.8 | NO ACTION |

**RUNWAY 24R - FUTURE TRAVERSE WAY DATA**

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | DEPARTURE | | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|---|
| | | MSL | AGL | | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | |
| Z-472 | PAPATO LN | 160.0 | 10.0 | 150.0 | 496.9 | -336.9 | NO ACTION |
| Z-473 | SEN GIBSON CT | 165.0 | 15.0 | 150.0 | 493.7 | -328.7 | NO ACTION |
| Z-474 | UNKNOWN | 110.0 | 10.0 | 100.0 | 521.0 | -411.0 | NO ACTION |
| Z-475 | W O'BRIEN DR | 61.1 | 15.0 | 46.1 | 537.7 | -476.6 | NO ACTION |
| Z-476 | W O'BRIEN DR | 59.3 | 15.0 | 44.3 | 495.4 | -436.1 | NO ACTION |
| Z-477 | DULCE NOMBRE DE MARIA DR | 45.3 | 15.0 | 30.3 | 537.7 | -492.4 | NO ACTION |
| Z-478 | ARCHBISHOP F C FLORES ST | 47.5 | 15.0 | 32.5 | 482.6 | -435.0 | NO ACTION |
| Z-479 | MARTYR ST | 41.8 | 15.0 | 26.8 | 476.2 | -434.5 | NO ACTION |
| Z-480 | N CHALAN CANTON TASI | 38.6 | 17.0 | 21.6 | 470.1 | -431.6 | NO ACTION |
| Z-481 | SGT ROY T DAMIAN JR ST | 65.0 | 15.0 | 50.0 | 418.5 | -353.5 | NO ACTION |
| Z-482 | E O'BRIEN DR | 93.1 | 15.0 | 78.1 | 537.7 | -444.6 | NO ACTION |
| Z-483 | J A CAMACHO ST | 82.3 | 15.0 | 67.3 | 403.1 | -320.8 | NO ACTION |
| Z-484 | CALLE V D PEREZ ST | 94.5 | 15.0 | 79.5 | 396.1 | -301.6 | NO ACTION |
| Z-485 | UNKNOWN | 96.3 | 10.0 | 86.3 | 392.7 | -296.4 | NO ACTION |
| Z-486 | UNKNOWN | 105.7 | 10.0 | 95.7 | 388.4 | -282.7 | NO ACTION |
| Z-487 | N OLD G W RD | 135.9 | 15.0 | 120.9 | 371.2 | -235.2 | NO ACTION |
| Z-488 | PURPLE HEART MEMORIAL HWY | 167.0 | 17.0 | 150.0 | 338.9 | -171.9 | NO ACTION |
| Z-489 | PEREZ LN | 165.0 | 15.0 | 150.0 | 498.1 | -333.1 | NO ACTION |
| Z-490 | EAST SUNSET BLVD | 167.0 | 17.0 | 150.0 | 330.6 | -163.6 | NO ACTION |
| Z-491 | EAST SUNSET BLVD | 178.1 | 17.0 | 161.1 | 460.7 | -282.6 | NO ACTION |
| Z-493 | AIRPORT SERVICE RD | 210.0 | 10.0 | 200.0 | 259.1 | -49.1 | NO ACTION |
| Z-494 | AIRPORT SERVICE RD | 210.0 | 10.0 | 200.0 | 255.5 | -45.5 | NO ACTION |
| Z-516 | N CHALAN CANTON TASI | 94.1 | 17.0 | 77.1 | 491.8 | -397.7 | NO ACTION |
| Z-517 | SEN GIBSON CT | 215.0 | 15.0 | 200.0 | 505.8 | -290.8 | NO ACTION |
| Z-518 | CHANDIHA CT | 192.7 | 15.0 | 177.7 | 512.6 | -319.9 | NO ACTION |
| Z-519 | CHANDIHA CT | 186.2 | 15.0 | 171.2 | 514.2 | -328.0 | NO ACTION |
| Z-521 | BIANG ST | 165.0 | 15.0 | 150.0 | 344.2 | -179.2 | NO ACTION |
| Z-522 | E O'BRIEN DR | 71.2 | 15.0 | 56.2 | 410.5 | -339.3 | NO ACTION |
| Z-523 | JG SAN MIGUEL ELEMMENTARY SCHOOL LN | 65.0 | 15.0 | 50.0 | 421.0 | -356.0 | NO ACTION |
| Z-524 | UNKNOWN | 93.1 | 10.0 | 83.1 | 503.9 | -410.8 | NO ACTION |
| Z-525 | UNKNOWN | 160.0 | 10.0 | 150.0 | 517.7 | -357.7 | NO ACTION |
| Z-526 | FORT CT | 165.0 | 15.0 | 150.0 | 530.0 | -365.0 | NO ACTION |
| Z-527 | JOSEPH CRUZ AVE | 165.0 | 15.0 | 150.0 | 537.2 | -372.2 | NO ACTION |
| Z-528 | UNKNOWN | 170.9 | 10.0 | 160.9 | 315.7 | -144.8 | NO ACTION |
| Z-529 | E CHN GUMAYUUS ST | 172.5 | 15.0 | 157.5 | 517.6 | -345.1 | NO ACTION |
| Z-530 | CALLE ANGEL FLORES ST | 165.0 | 15.0 | 150.0 | 521.6 | -356.6 | NO ACTION |
| Z-531 | CHN A B WON PAT DR | 165.0 | 15.0 | 150.0 | 534.8 | -369.8 | NO ACTION |
| Z-532 | E MALATE ST | 192.1 | 15.0 | 177.1 | 287.8 | -95.7 | NO ACTION |
| Z-533 | POTU ST | 114.9 | 15.0 | 99.9 | 340.5 | -225.6 | NO ACTION |
| Z-534 | UNKNOWN | 60.0 | 10.0 | 50.0 | 355.4 | -295.4 | NO ACTION |
| Z-535 | KADI LN | 65.0 | 15.0 | 50.0 | 357.0 | -292.0 | NO ACTION |
| Z-536 | DUMANG SIGOT ST | 65.0 | 15.0 | 50.0 | 368.5 | -303.5 | NO ACTION |
| Z-537 | UNKNOWN | 206.0 | 10.0 | 196.0 | 421.8 | -215.7 | NO ACTION |
| Z-538 | UNKNOWN | 210.0 | 10.0 | 200.0 | 418.9 | -208.9 | NO ACTION |
| Z-539 | RAMIREZ WY | 215.0 | 15.0 | 200.0 | 413.4 | -198.4 | NO ACTION |
| Z-540 | TAN CHICO CT | 115.0 | 15.0 | 100.0 | 475.7 | -360.7 | NO ACTION |

NOTES:

1. HORIZONTAL DATUM NAD83 (MA11), VERTICAL DATUM GUVD04 (GEOID 12B). DRAWING PREPARED IN UTM ZONE 55 NORTH (US FOOT) COORDINATE SYSTEM.
2. MAGNETIC DECLINATION OBTAINED ONLINE AT HTTP://WWW.NGDC.NOAA.GOV/GEOMAG-WEB/#DECLINATION.
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|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

MAGNETIC DECLINATION = 9°23' (9.4°) EAST (JANUARY 2023)
ANNUAL RATE OF CHANGE: 9'1" (0.017°) WEST / YEAR

PREPARED FOR
A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM

AECOM

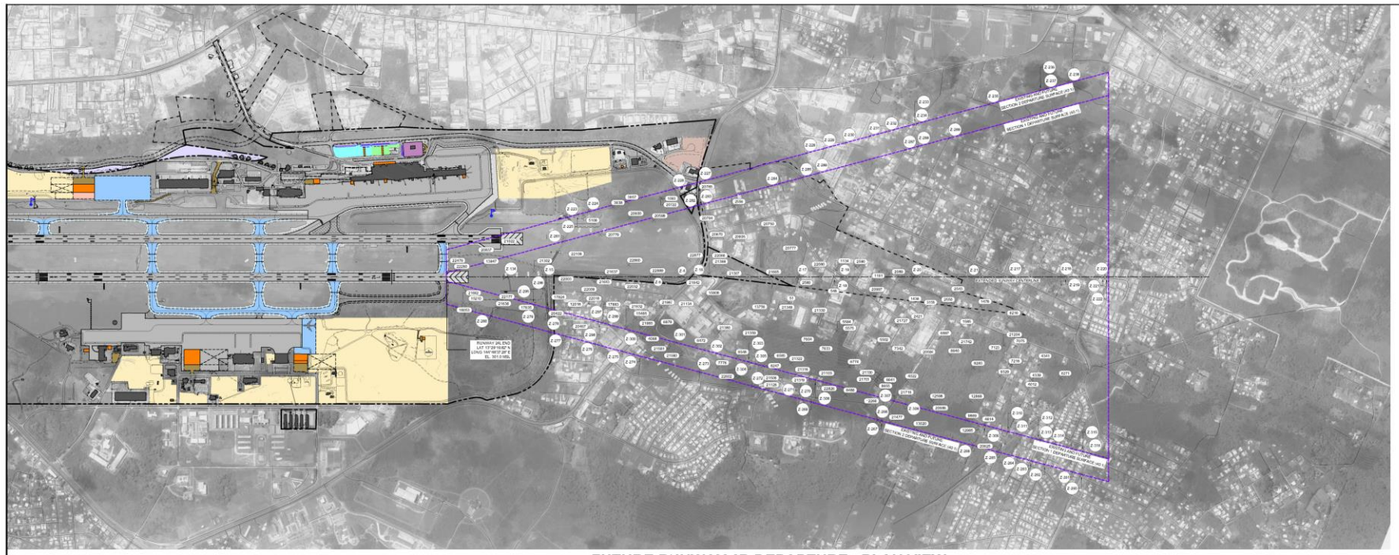
FUTURE RUNWAY 24R
DEPARTURE SURFACE
DATA TABLES

ANTONIO B. WON PAT
INTERNATIONAL AIRPORT

DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WBS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 06/23
SHEET: 44 OF 51

**Figure H-45. Future Runway 24R Departure Surface Data Tables**

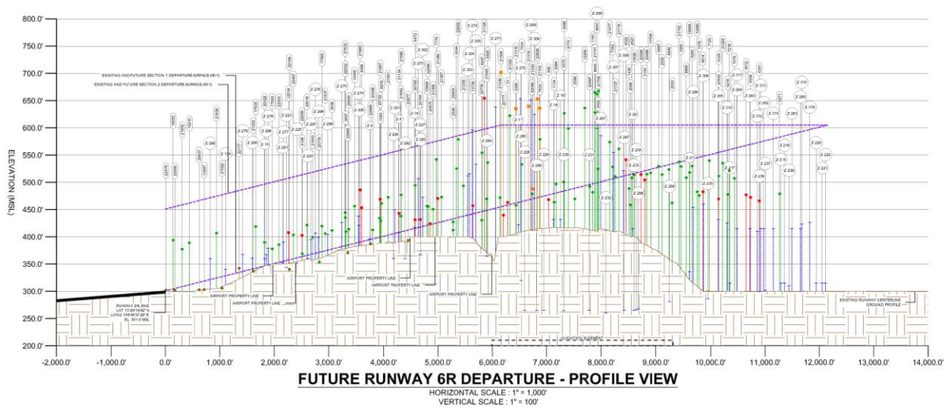
Source: AECOM



**FUTURE RUNWAY 6R DEPARTURE - PLAN VIEW**
HORIZONTAL SCALE : 1" = 1,000'

| LEGEND | |
|---|---|
| ITEM | |
| AIRPORT PROPERTY LINE | |
| FUTURE AIRPORT PROPERTY LINE | |
| AIRFIELD PAVEMENT | |
| FUTURE AIRFIELD PAVEMENT | |
| AIRFIELD PAVEMENT TO BE REMOVED | |
| AIRFIELD SHOULDER PAVEMENT | |
| FUTURE AIRFIELD SHOULDER PAVEMENT | |
| ON-AIRPORT BUILDINGS | |
| FUTURE ON-AIRPORT BUILDINGS / STRUCTURES | |
| OFF-AIRPORT BUILDINGS | |
| ROADS & VEHICLE PARKING | |
| FUTURE ROADS & VEHICLE PARKING | |
| FENCE | |
| EXTENDED RUNWAY CENTERLINE | |
| DEPARTURE SURFACE (SURFACE 7) | |
| FUTURE DEPARTURE SURFACE (SURFACE 7) | |
| PROPOSED PROPERTY ACQUISITION | |
| FUTURE AERONAUTICAL DEVELOPMENT | |
| FUTURE NON-AERONAUTICAL DEVELOPMENT | |
| EASEMENT | |
| RUNWAY THRESHOLD LIGHTS | |
| PAPI | |
| FUTURE WIND CONE | |
| ASOS | |
| ROTATING BEACON | |
| AIRPORT REFERENCE POINT (ARP) | |
| 10' GROUND CONTOUR | |
| VEGETATION TREES | |

| OBSTRUCTIONS LEGEND | | |
|---|---|---|
| ITEM | | |
| TREE/BUSH | XXXX | |
| POLE | XXXX | |
| GROUND | XXXX | |
| BUILDING | XXXX | |
| FENCE | XXXX | |
| TOWER/ANTENNA | XXXX | |
| NAVAID | XXXX | |
| LIGHT | XXXX | |
| SIGN | XXXX | |
| OTHER | XXXX | |
| ROAD/TRAVERSEWAY | Z-X | |




**FUTURE RUNWAY 6R DEPARTURE - PROFILE VIEW**
HORIZONTAL SCALE : 1" = 1,000'
VERTICAL SCALE : 1" = 100'

NOTES:

1. HORIZONTAL DATUM NAD83 (MA11), VERTICAL DATUM GUVD04 (GEOID 12B). DRAWING PREPARED IN UTM ZONE 55 NORTH (US FOOT) COORDINATE SYSTEM.
2. MAGNETIC DECLINATION OBTAINED ONLINE AT HTTP://WWW.NCDC.NOAA.GOV/GEOMAG-WEB/#DECLINATION.
3. ALL LOCAL ZONING AND AIRSPACE PROTECTION IS GOVERNED BY THE SUPREME COURT OF GUAM, COMPILER OF LAWS, TITLE 21 - REAL PROPERTY, CHAPTER 61 - ZONING LAW.
4. OBSTACLES WERE EVALUATED USING 2022 AIRPORT AIRSPACE ANALYSIS OBSTRUCTION SURVEY DATA.
5. OBJECTS AND TRAVERSE WAYS ON THIS SHEET ARE EVALUATED FOR OBSTRUCTION STATUS AND PROPOSED DISPOSITION ON SHEETS 46 TO 47.
6. FOR CLARITY, ONLY CRITICAL OBSTRUCTIONS, DEFINED AS THE HIGHEST OBSTRUCTION WITHIN A 500' x 500' GRID, ARE SHOWN. CRITICAL OBJECT CRITERIA ARE DERIVED FROM ADVISORY CIRCULAR 150/5300-18B, *GENERAL GUIDANCE AND SPECIFICATIONS FOR SUBMISSION OF AERONAUTICAL SURVEYS TO NGS: FIELD DATA COLLECTION AND GEOGRAPHIC INFORMATION SYSTEM (GIS) STANDARDS*, SECTION 2.7.1.6.
7. AS PER FAR PART-77.17(B), APPROACH SURFACE CLEARANCES ARE BASED ON TRAVERSE WAY ELEVATIONS PLUS THE TRAVERSE WAY ADJUSTMENT (23' FOR RAILWAYS, 17' FOR INTERSTATE HIGHWAYS, 15' FOR OTHER PUBLIC ROADS, OR 10' FOR PRIVATE ROADS).
8. EXISTING ON-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2022 AIRPORT AIRSPACE ANALYSIS SURVEY DATA. OFF-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2013 COASTAL AND MARINE SPATIAL PLANNING DATA FROM THE NAVAL POSTGRADUATE SCHOOL, DEPARTMENT OF OCEANOGRAPHY (HTTPS://WWW.OC.NPS.EDU/CMSP/GUAM).

| NO. | REVISIONS | BY | APP. | DATE | NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

TRUE NORTH
GRID NORTH
MAGNETIC DECLINATION = 9°23' (9.4°) EAST (JANUARY 2023)
ANNUAL RATE OF CHANGE: 0°1' (0.01°) WEST / YEAR
1,000 0 1,000
HORIZONTAL SCALE IN FEET
SCALE : 1" = 1,000'

PREPARED FOR
A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM
AECOM

FUTURE RUNWAY 6R
DEPARTURE SURFACE DRAWING

ANTONIO B. WON PAT
INTERNATIONAL AIRPORT

DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WBS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 06/23
SHEET: 45 OF 51

**Figure H-46. Future Runway 6R Departure Surface Drawing**

Source: AECOM

**RUNWAY 6R - FUTURE DEPARTURE SURFACE OBSTRUCTIONS**

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | DEPARTURE | | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|---|
| | | MSL | AGL | | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | |
| 51 | UTILITY POLE | 462.9 | 43.1 | 419.9 | 458.1 | 4.8 | MARK/LIGHT |
| 548 | UTILITY POLE | 468.4 | 39.7 | 428.8 | 477.0 | -8.5 | NO ACTION |
| 1093 | TREE | 429.6 | 79.6 | 350.0 | 508.9 | -79.3 | NO ACTION |
| 1134 | TREE | 463.5 | 52.2 | 411.3 | 479.5 | -16.0 | NO ACTION |
| 1161 | TREE | 481.8 | 67.3 | 414.5 | 497.3 | -15.5 | NO ACTION |
| 1436 | TREE | 488.4 | 38.4 | 450.0 | 513.9 | -25.5 | NO ACTION |
| 1478 | TREE | 476.0 | 50.5 | 425.5 | 545.9 | -69.9 | NO ACTION |
| 1585 | TREE | 529.1 | 79.1 | 450.0 | 537.7 | -8.5 | TRIM/REMOVE |
| 2089 | TREE | 458.4 | 58.4 | 400.0 | 514.5 | -56.2 | NO ACTION |
| 2421 | TREE | 508.1 | 58.1 | 450.0 | 515.2 | -7.0 | TRIM/REMOVE |
| 2543 | TREE | 462.3 | 61.6 | 400.6 | 533.6 | -71.4 | NO ACTION |
| 2550 | TREE | 514.1 | 64.1 | 450.0 | 529.1 | -14.9 | NO ACTION |
| 2556 | TREE | 412.2 | 62.2 | 350.0 | 432.9 | -20.7 | NO ACTION |
| 2580 | TREE | 457.8 | 51.6 | 406.3 | 461.9 | -4.1 | TRIM/REMOVE |
| 2590 | TREE | 469.5 | 61.3 | 408.2 | 488.9 | -19.5 | NO ACTION |
| 3154 | UTILITY POLE | 504.5 | 37.1 | 467.4 | 521.1 | -16.6 | NO ACTION |
| 3638 | TREE | 411.6 | 61.6 | 350.0 | 513.4 | -101.8 | NO ACTION |
| 3657 | TREE | 409.4 | 59.4 | 350.0 | 531.9 | -122.4 | NO ACTION |
| 4012 | UTILITY POLE | 477.0 | 37.7 | 439.2 | 567.5 | -90.5 | NO ACTION |
| 4022 | UTILITY POLE | 541.2 | 40.7 | 500.5 | 512.4 | 28.7 | MARK/LIGHT |
| 4068 | UTILITY POLE | 453.4 | 47.5 | 405.9 | 393.1 | 60.2 | MARK/LIGHT |
| 4339 | UTILITY POLE | 472.3 | 39.1 | 433.1 | 569.5 | -97.2 | NO ACTION |
| 4341 | UTILITY POLE | 466.1 | 39.3 | 426.8 | 573.5 | -107.4 | NO ACTION |
| 4814 | UTILITY POLE | 482.6 | 38.1 | 444.5 | 547.6 | -65.0 | NO ACTION |
| 5108 | TREE | 368.9 | 23.4 | 345.5 | 501.1 | -132.2 | NO ACTION |
| 5502 | TREE | 524.5 | 36.6 | 487.9 | 499.7 | 24.9 | TRIM/REMOVE |
| 5575 | TREE | 500.6 | 39.0 | 461.6 | 483.9 | 16.8 | TRIM/REMOVE |
| 5584 | TREE | 497.0 | 33.7 | 463.2 | 480.3 | 16.6 | TRIM/REMOVE |
| 6216 | TREE | 477.8 | 55.6 | 422.2 | 559.1 | -81.3 | NO ACTION |
| 6271 | TREE | 478.8 | 62.5 | 416.3 | 582.8 | -104.0 | NO ACTION |
| 6472 | TREE | 494.4 | 45.2 | 449.1 | 415.6 | 78.8 | TRIM/REMOVE |
| 6548 | TREE | 525.2 | 43.0 | 482.2 | 434.5 | 90.7 | TRIM/REMOVE |
| 6585 | TREE | 536.3 | 25.9 | 510.3 | 448.9 | 87.4 | TRIM/REMOVE |
| 6774 | TREE | 598.8 | 36.6 | 562.1 | 486.0 | 112.8 | TRIM/REMOVE |
| 6879 | TREE | 461.4 | 45.2 | 416.2 | 400.0 | 61.4 | TRIM/REMOVE |
| 6887 | TREE | 529.5 | 79.5 | 450.0 | 527.5 | 2.0 | TRIM/REMOVE |
| 7075 | TREE | 507.3 | 57.3 | 450.0 | 562.2 | -54.8 | NO ACTION |
| 7123 | TREE | 539.9 | 89.9 | 450.0 | 550.5 | -10.6 | NO ACTION |
| 7218 | TREE | 521.3 | 71.3 | 450.0 | 559.8 | -38.5 | NO ACTION |
| 7342 | TREE | 528.2 | 42.8 | 485.4 | 506.4 | 21.8 | TRIM/REMOVE |
| 7604 | TREE | 532.9 | 24.9 | 508.0 | 464.7 | 68.3 | TRIM/REMOVE |
| 7633 | TREE | 578.8 | 35.9 | 542.9 | 473.0 | 105.8 | TRIM/REMOVE |
| 7776 | TREE | 541.9 | 39.9 | 502.0 | 514.6 | 27.4 | TRIM/REMOVE |
| 8247 | TREE | 554.2 | 24.3 | 529.9 | 446.3 | 107.9 | TRIM/REMOVE |
| 8486 | TREE | 626.8 | 18.8 | 608.0 | 528.2 | 98.6 | TRIM/REMOVE |
| 8641 | TREE | 661.8 | 61.8 | 600.0 | 499.2 | 162.6 | TRIM/REMOVE |
| 8655 | TREE | 628.1 | 28.1 | 600.0 | 498.3 | 129.8 | TRIM/REMOVE |
| 8940 | TREE | 523.3 | 73.3 | 450.0 | 532.2 | -8.8 | TRIM/REMOVE |
| 9283 | TREE | 529.7 | 79.7 | 450.0 | 542.7 | -13.1 | NO ACTION |
| 9329 | TREE | 511.4 | 61.4 | 450.0 | 554.9 | -43.5 | NO ACTION |
| 9869 | TREE | 508.6 | 50.8 | 457.9 | 540.1 | -31.4 | NO ACTION |
| 12018 | UTILITY POLE | 407.8 | 41.9 | 365.9 | 357.5 | 50.3 | MARK/LIGHT |
| 12266 | TREE | 636.2 | 36.2 | 600.0 | 572.0 | 64.2 | TRIM/REMOVE |
| 12598 | TREE | 517.2 | 32.5 | 484.6 | 523.8 | -6.6 | TRIM/REMOVE |
| 12868 | TREE | 518.1 | 55.9 | 462.1 | 541.6 | -23.5 | NO ACTION |
| 12985 | TREE | 482.5 | 32.5 | 450.0 | 557.3 | -74.8 | NO ACTION |
| 13020 | TREE | 513.7 | 33.7 | 480.0 | 605.0 | -91.2 | NO ACTION |
| 13756 | UTILITY POLE | 457.0 | 35.2 | 421.7 | 442.1 | 14.9 | MARK/LIGHT |
| 13947 | GROUND | 303.1 | 0.0 | 303.1 | 318.9 | -15.8 | NO ACTION |
| 15210 | TREE | 389.0 | 63.2 | 325.8 | 413.6 | -24.7 | NO ACTION |
| 15465 | TREE | 456.2 | 56.5 | 399.7 | 387.8 | 68.4 | TRIM/REMOVE |
| 15808 | TREE | 456.4 | 56.4 | 400.0 | 420.9 | 35.5 | TRIM/REMOVE |
| 17635 | TREE | 418.9 | 61.4 | 357.5 | 411.1 | 7.8 | TRIM/REMOVE |
| 17824 | TREE | 377.9 | 22.7 | 355.2 | 350.1 | 27.8 | TRIM/REMOVE |
| 17883 | TREE | 419.6 | 34.2 | 385.4 | 372.8 | 46.8 | TRIM/REMOVE |
| 18053 | TREE | 394.0 | 59.8 | 334.2 | 453.6 | -59.6 | NO ACTION |
| 20422 | TREE | 389.8 | 27.9 | 361.9 | 422.1 | -32.3 | NO ACTION |
| 20467 | TREE | 403.6 | 26.7 | 376.9 | 461.0 | -57.4 | NO ACTION |
| 20594 | UTILITY POLE | 514.4 | 38.3 | 476.2 | 519.3 | -4.9 | NO ACTION |
| 20598 | TREE | 412.4 | 59.5 | 352.9 | 396.0 | 16.4 | TRIM/REMOVE |
| 20600 | TREE | 413.9 | 63.9 | 350.0 | 422.3 | -8.4 | TRIM/REMOVE |
| 20605 | TREE | 427.3 | 63.7 | 363.7 | 432.9 | -5.5 | TRIM/REMOVE |
| 20625 | POLE | 469.2 | 43.6 | 425.6 | 605.0 | -135.7 | NO ACTION |

**RUNWAY 6R - FUTURE DEPARTURE SURFACE OBSTRUCTIONS**

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | DEPARTURE | | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|---|
| | | MSL | AGL | | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | |
| 20670 | POLE | 424.0 | 48.8 | 375.3 | 422.4 | 1.6 | MARK/LIGHT |
| 20686 | TREE | 514.7 | 28.5 | 486.2 | 522.0 | -7.3 | TRIM/REMOVE |
| 20722 | TREE | 434.4 | 84.4 | 350.0 | 513.9 | -79.5 | NO ACTION |
| 20750 | TREE | 430.5 | 80.5 | 350.0 | 446.2 | -15.7 | NO ACTION |
| 20764 | POWER TRANSMISSION POLE | 431.6 | 66.3 | 365.3 | 417.8 | 13.8 | MARK/LIGHT |
| 20777 | POLE | 439.6 | 45.5 | 394.2 | 456.1 | -16.5 | NO ACTION |
| 20779 | BUSH | 353.9 | 3.0 | 350.8 | 371.6 | -17.7 | NO ACTION |
| 20785 | POWER TRANSMISSION POLE | 431.5 | 73.6 | 357.9 | 498.7 | -67.2 | NO ACTION |
| 20837 | GROUND | 302.8 | 0.0 | 302.8 | 377.0 | -74.2 | NO ACTION |
| 20997 | TREE | 492.3 | 65.6 | 426.7 | 495.9 | -3.7 | TRIM/REMOVE |
| 21022 | GROUND | 305.8 | 0.0 | 305.8 | 403.9 | -98.1 | NO ACTION |
| 21103 | BUILDING | 636.3 | 24.9 | 611.4 | 472.8 | 163.4 | MARK/LIGHT |
| 21126 | UTILITY POLE | 654.3 | 40.5 | 613.8 | 595.8 | 58.5 | MARK/LIGHT |
| 21134 | FLAGPOLE | 443.2 | 32.3 | 410.8 | 408.2 | 35.0 | MARK/LIGHT |
| 21204 | TREE | 535.2 | 85.2 | 450.0 | 556.8 | -21.5 | NO ACTION |
| 21302 | GROUND | 336.8 | 0.0 | 336.8 | 341.3 | -4.5 | NO ACTION |
| 21318 | BUILDING | 635.0 | 25.5 | 609.5 | 461.8 | 173.2 | MARK/LIGHT |
| 21319 | BUILDING | 639.3 | 28.5 | 610.8 | 467.8 | 171.5 | MARK/LIGHT |
| 21322 | TREE | 622.1 | 55.1 | 567.0 | 459.1 | 163.0 | TRIM/REMOVE |
| 21330 | BUILDING | 488.0 | 51.1 | 436.9 | 469.7 | 18.4 | MARK/LIGHT |
| 21348 | TREE | 471.7 | 50.5 | 421.3 | 454.5 | 17.2 | TRIM/REMOVE |
| 21359 | TREE | 493.6 | 43.6 | 450.0 | 437.7 | 55.9 | TRIM/REMOVE |
| 21367 | TREE | 472.9 | 72.9 | 400.0 | 427.5 | 45.4 | TRIM/REMOVE |
| 21368 | TREE | 450.6 | 50.6 | 400.0 | 423.8 | 26.9 | TRIM/REMOVE |
| 21380 | POLE | 470.3 | 36.7 | 433.6 | 425.9 | 44.4 | MARK/LIGHT |
| 21477 | TREE | 573.7 | 33.5 | 540.2 | 605.0 | -31.3 | NO ACTION |
| 21506 | BUILDING | 701.7 | 89.9 | 611.8 | 531.6 | 170.1 | MARK/LIGHT |
| 21580 | TREE | 477.0 | 32.3 | 444.6 | 457.1 | 19.9 | TRIM/REMOVE |
| 21581 | TREE | 472.6 | 41.1 | 431.5 | 429.4 | 43.2 | TRIM/REMOVE |
| 21632 | TREE | 444.4 | 45.5 | 398.9 | 383.5 | 60.9 | TRIM/REMOVE |
| 21636 | TREE | 406.9 | 59.5 | 347.4 | 411.7 | -4.8 | TRIM/REMOVE |
| 21637 | TREE | 406.1 | 40.7 | 365.5 | 374.3 | 31.8 | TRIM/REMOVE |
| 21642 | TREE | 437.9 | 37.9 | 400.0 | 409.1 | 28.8 | TRIM/REMOVE |
| 21643 | TREE | 399.3 | 37.8 | 361.5 | 368.6 | 30.7 | TRIM/REMOVE |
| 21665 | TREE | 469.4 | 100.6 | 368.8 | 448.4 | 21.0 | TRIM/REMOVE |
| 21700 | TREE | 667.5 | 67.5 | 600.0 | 500.0 | 167.6 | TRIM/REMOVE |
| 21701 | TREE | 665.0 | 65.0 | 600.0 | 498.2 | 166.8 | TRIM/REMOVE |
| 21716 | TREE | 561.3 | 38.5 | 522.9 | 509.2 | 52.1 | TRIM/REMOVE |
| 21727 | TREE | 510.7 | 60.7 | 450.0 | 507.5 | 3.2 | TRIM/REMOVE |
| 21742 | TREE | 537.6 | 87.6 | 450.0 | 536.8 | 0.8 | TRIM/REMOVE |
| 21942 | TREE | 377.2 | 52.5 | 324.7 | 418.3 | -41.0 | NO ACTION |
| 21965 | POWER TRANSMISSION POLE | 486.2 | 81.0 | 405.1 | 390.3 | 95.8 | MARK/LIGHT |
| 21967 | POWER TRANSMISSION POLE | 469.1 | 67.1 | 402.1 | 399.4 | 69.7 | MARK/LIGHT |
| 22003 | TREE | 385.4 | 35.4 | 350.0 | 353.2 | 32.2 | TRIM/REMOVE |
| 22009 | POLE | 402.6 | 36.8 | 365.8 | 363.7 | 38.8 | MARK/LIGHT |
| 22018 | TREE | 421.5 | 50.9 | 370.6 | 365.9 | 55.6 | TRIM/REMOVE |
| 22032 | TREE | 435.1 | 52.9 | 382.2 | 383.6 | 51.5 | TRIM/REMOVE |
| 22066 | TREE | 455.6 | 55.6 | 400.0 | 421.4 | 34.2 | TRIM/REMOVE |
| 22080 | TREE | 478.8 | 72.2 | 406.6 | 469.5 | 9.4 | TRIM/REMOVE |
| 22108 | GROUND | 340.3 | 0.0 | 340.3 | 357.9 | -17.6 | NO ACTION |
| 22177 | GROUND | 342.3 | 0.0 | 342.3 | 334.8 | 7.5 | NO ACTION |
| 22260 | GROUND | 301.8 | 0.0 | 301.8 | 305.2 | -3.4 | NO ACTION |
| 22479 | GROUND | 302.2 | 0.0 | 302.2 | 312.7 | -10.5 | NO ACTION |
| 22602 | TREE | 578.7 | 38.1 | 540.6 | 543.8 | 34.8 | TRIM/REMOVE |
| 22826 | BUILDING | 652.7 | 33.3 | 619.4 | 493.0 | 159.7 | MARK/LIGHT |
| 22860 | GROUND | 370.7 | 0.0 | 370.7 | 384.7 | -14.0 | NO ACTION |
| 22877 | GROUND | 393.4 | 0.0 | 393.4 | 412.3 | -18.9 | NO ACTION |
| 22889 | GROUND | 387.0 | 0.0 | 387.0 | 395.1 | -8.1 | NO ACTION |

NOTES:

1. HORIZONTAL DATUM NAD83 (MA11), VERTICAL DATUM GUVD04 (GEOID 12B). DRAWING PREPARED IN UTM ZONE 55 NORTH (US FOOT) COORDINATE SYSTEM.
2. MAGNETIC DECLINATION OBTAINED ONLINE AT HTTP://WWW.NGDC.NOAA.GOV/GEOMAG-WEB/#DECLINATION.
3. ALL LOCAL ZONING AND AIRSPACE PROTECTION IS GOVERNED BY THE SUPREME COURT OF GUAM, COMPILER OF LAWS, TITLE 21 - REAL PROPERTY, CHAPTER 61 - ZONING LAW.
4. OBSTACLES WERE EVALUATED USING 2022 AIRPORT AIRSPACE ANALYSIS OBSTRUCTION SURVEY DATA.
5. FOR CLARITY, ONLY CRITICAL OBSTRUCTIONS, DEFINED AS THE HIGHEST OBSTRUCTION WITHIN A 500' x 500' GRID, ARE SHOWN. CRITICAL OBJECT CRITERIA ARE DERIVED FROM ADVISORY CIRCULAR 150/5300-18B, *GENERAL GUIDANCE AND SPECIFICATIONS FOR SUBMISSION OF AERONAUTICAL SURVEYS TO NGS: FIELD DATA COLLECTION AND GEOGRAPHIC INFORMATION SYSTEM (GIS) STANDARDS*, SECTION 2.7.1.6.
6. AS PER FAR PART-77.17(B), APPROACH SURFACE CLEARANCES ARE BASED ON TRAVERSE WAY ELEVATIONS PLUS THE TRAVERSE WAY ADJUSTMENT (23' FOR RAILWAYS, 17' FOR INTERSTATE HIGHWAYS, 15' FOR OTHER PUBLIC ROADS, OR 10' FOR PRIVATE ROADS).
7. EXISTING ON-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2022 AIRPORT AIRSPACE ANALYSIS SURVEY DATA. OFF-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2013 COASTAL AND MARINE SPATIAL PLANNING DATA FROM THE NAVAL POSTGRADUATE SCHOOL, DEPARTMENT OF OCEANOGRAPHY (HTTPS://WWW.OC.NPS.EDU/CMSP/GUAM/).
8. TO ACCOUNT FOR GROWTH SINCE SURVEY, TREES WITHIN 10 FEET OF PENETRATING A SURFACE IS ASSIGNED A PROPOSED DISPOSITION OF TRIM/REMOVE.

| NO. | REVISIONS | BY | APP. | DATE | NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

TRUE NORTH
MAGNETIC NORTH
9°17'E

MAGNETIC DECLINATION = 9°23' (9.4°) EAST (JANUARY 2023)
ANNUAL RATE OF CHANGE: 0°1" (0.017') WEST / YEAR

PREPARED FOR
A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM

AECOM

FUTURE RUNWAY 6R
DEPARTURE SURFACE
DATA TABLES - A

ANTONIO B. WON PAT
INTERNATIONAL AIRPORT

DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WBS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 06/23
SHEET: 46 OF 51

**Figure H-47. Future Runway 6R Departure Surface Data Tables – A**

Source: AECOM

**RUNWAY 6R - FUTURE TRAVERSE WAY DATA**

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | DEPARTURE | | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|---|
| | | MSL | AGL | | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | |
| Z-4 | AIRPORT SERVICE RD | 408.1 | 10.0 | 398.1 | 408.0 | 0.1 | NO ACTION |
| Z-6 | AIRPORT SERVICE RD | 396.1 | 10.0 | 386.1 | 394.7 | 1.4 | NO ACTION |
| Z-15 | AIRPORT SERVICE RD | 360.0 | 10.0 | 350.0 | 346.7 | 13.3 | NO ACTION |
| Z-16 | ARMY DR | 417.0 | 17.0 | 400.0 | 415.2 | 1.8 | NO ACTION |
| Z-17 | UNKNOWN | 422.0 | 15.0 | 407.0 | 463.0 | -41.0 | NO ACTION |
| Z-18 | UNKNOWN | 432.1 | 15.0 | 417.1 | 479.2 | -47.1 | NO ACTION |
| Z-19 | BELLO ST | 431.6 | 15.0 | 416.6 | 482.4 | -50.8 | NO ACTION |
| Z-20 | UNKNOWN | 415.0 | 15.0 | 400.0 | 515.5 | -100.5 | NO ACTION |
| Z-21 | UNKNOWN | 336.0 | 15.0 | 321.0 | 541.5 | -205.5 | NO ACTION |
| Z-134 | AIRPORT SERVICE RD | 340.4 | 10.0 | 330.4 | 328.6 | 11.8 | NO ACTION |
| Z-217 | ALAGETA ST | 315.0 | 15.0 | 300.0 | 560.0 | -245.0 | NO ACTION |
| Z-218 | CORENOSO ST | 315.0 | 15.0 | 300.0 | 583.4 | -268.4 | NO ACTION |
| Z-219 | AHAU LN | 315.0 | 15.0 | 300.0 | 585.1 | -270.1 | NO ACTION |
| Z-220 | MACHECHE AVE | 315.0 | 15.0 | 300.0 | 599.7 | -284.7 | NO ACTION |
| Z-221 | CHALAN NIYOK | 315.0 | 15.0 | 300.0 | 602.4 | -287.4 | NO ACTION |
| Z-222 | KAYON BINGA | 315.0 | 15.0 | 300.0 | 604.0 | -289.0 | NO ACTION |
| Z-223 | AIRPORT SERVICE RD | 343.7 | 10.0 | 333.7 | 506.6 | -162.9 | NO ACTION |
| Z-224 | AIRPORT SERVICE RD | 360.0 | 10.0 | 350.0 | 516.3 | -156.3 | NO ACTION |
| Z-225 | AIRPORT SERVICE RD | 351.2 | 10.0 | 341.2 | 511.3 | -160.1 | NO ACTION |
| Z-226 | AIRPORT SERVICE RD | 360.0 | 10.0 | 350.0 | 555.7 | -195.7 | NO ACTION |
| Z-227 | ARMY DR | 367.0 | 17.0 | 350.0 | 567.8 | -200.8 | NO ACTION |
| Z-228 | MENDIOKA ST | 265.0 | 15.0 | 250.0 | 605.0 | -340.0 | NO ACTION |
| Z-229 | MENDIOKA ST | 265.0 | 15.0 | 250.0 | 605.0 | -340.0 | NO ACTION |
| Z-230 | E ADDENG ST | 264.6 | 15.0 | 249.6 | 605.0 | -340.4 | NO ACTION |
| Z-231 | E ADDENG ST | 265.0 | 15.0 | 250.0 | 605.0 | -340.0 | NO ACTION |
| Z-232 | UNKNOWN | 260.0 | 10.0 | 250.0 | 605.0 | -345.0 | NO ACTION |
| Z-233 | E ADDENG ST | 265.0 | 15.0 | 250.0 | 605.0 | -340.0 | NO ACTION |
| Z-234 | ACHO LATTE ST | 265.9 | 15.0 | 250.9 | 605.0 | -339.0 | NO ACTION |
| Z-235 | UNKNOWN | 286.3 | 10.0 | 276.3 | 605.0 | -318.7 | NO ACTION |
| Z-236 | UNKNOWN | 299.6 | 10.0 | 289.6 | 605.0 | -305.3 | NO ACTION |
| Z-237 | CHANDO CT | 302.1 | 10.0 | 292.1 | 605.0 | -302.9 | NO ACTION |
| Z-238 | UNKNOWN | 310.0 | 10.0 | 300.0 | 605.0 | -295.0 | NO ACTION |
| Z-260 | CARNATION RD | 415.0 | 15.0 | 400.0 | 605.0 | -190.0 | NO ACTION |
| Z-261 | CHERRY BLOSSOM ST | 415.0 | 15.0 | 400.0 | 605.0 | -190.0 | NO ACTION |
| Z-262 | GARDENA AVE | 415.0 | 15.0 | 400.0 | 605.0 | -190.0 | NO ACTION |
| Z-263 | BANYAN ST | 415.0 | 15.0 | 400.0 | 605.0 | -190.0 | NO ACTION |
| Z-264 | FEDERICO ST | 415.0 | 15.0 | 400.0 | 605.0 | -190.0 | NO ACTION |
| Z-265 | DUENDES AVE | 431.8 | 15.0 | 416.8 | 605.0 | -173.1 | NO ACTION |
| Z-266 | UNKNOWN | 454.1 | 15.0 | 439.1 | 605.0 | -150.8 | NO ACTION |
| Z-267 | N SABANA BARRIGADA DR | 585.6 | 15.0 | 570.6 | 605.0 | -19.4 | NO ACTION |
| Z-268 | N SABANA BARRIGADA DR | 598.6 | 15.0 | 583.6 | 605.0 | -6.4 | NO ACTION |
| Z-269 | UNKNOWN | 651.3 | 15.0 | 636.3 | 605.0 | 46.4 | NO ACTION |
| Z-270 | UNKNOWN | 653.5 | 10.0 | 643.5 | 605.0 | 48.5 | NO ACTION |
| Z-271 | N SABANA BARRIGADA DR | 637.8 | 15.0 | 622.8 | 602.6 | 35.2 | NO ACTION |
| Z-272 | UNKNOWN | 595.8 | 10.0 | 585.8 | 591.9 | 3.9 | NO ACTION |
| Z-273 | UNKNOWN | 506.6 | 10.0 | 496.6 | 567.0 | -60.4 | NO ACTION |
| Z-274 | PETE CRUZ SR ST | 438.1 | 15.0 | 423.1 | 539.6 | -101.5 | NO ACTION |
| Z-275 | ARMY DR | 426.3 | 17.0 | 409.3 | 532.0 | -105.7 | NO ACTION |
| Z-276 | PANGELINAN WY | 407.2 | 15.0 | 392.2 | 519.9 | -112.7 | NO ACTION |
| Z-277 | ROSARIO LP | 390.3 | 15.0 | 375.3 | 505.3 | -114.9 | NO ACTION |
| Z-278 | AIRPORT SERVICE RD | 378.8 | 10.0 | 368.8 | 498.3 | -119.5 | NO ACTION |
| Z-279 | AIRPORT SERVICE RD | 367.7 | 10.0 | 357.7 | 486.5 | -118.8 | NO ACTION |
| Z-280 | AIRPORT SERVICE RD | 360.0 | 10.0 | 350.0 | 471.7 | -111.7 | NO ACTION |
| Z-281 | AIRPORT SERVICE RD | 352.8 | 10.0 | 342.8 | 354.8 | -1.9 | NO ACTION |
| Z-282 | AIRPORT SERVICE RD | 360.0 | 10.0 | 350.0 | 410.9 | -50.9 | NO ACTION |
| Z-283 | ARMY DR | 367.0 | 17.0 | 350.0 | 418.1 | -51.1 | NO ACTION |
| Z-284 | MACHECHE RD | 364.5 | 15.0 | 349.5 | 448.5 | -84.0 | NO ACTION |
| Z-285 | ALAGETA ST | 319.8 | 15.0 | 304.8 | 464.2 | -144.5 | NO ACTION |
| Z-286 | MENDIOKA ST | 265.0 | 15.0 | 250.0 | 471.5 | -206.5 | NO ACTION |
| Z-287 | ACHO LATTE ST | 265.0 | 15.0 | 250.0 | 511.6 | -246.6 | NO ACTION |
| Z-288 | UNKNOWN | 268.3 | 15.0 | 253.3 | 518.1 | -249.8 | NO ACTION |
| Z-289 | CHANDIHA ST | 281.0 | 15.0 | 266.0 | 532.4 | -251.5 | NO ACTION |
| Z-295 | AIRPORT SERVICE RD | 361.1 | 10.0 | 351.1 | 340.8 | 20.3 | NO ACTION |
| Z-296 | AIRPORT SERVICE RD | 367.4 | 10.0 | 357.4 | 347.5 | 19.9 | NO ACTION |
| Z-297 | PAPAYA LN | 394.9 | 15.0 | 379.9 | 367.8 | 27.1 | NO ACTION |
| Z-298 | PANGELINAN WY | 399.1 | 15.0 | 384.1 | 371.2 | 27.9 | NO ACTION |
| Z-299 | UNKNOWN | 404.5 | 15.0 | 389.5 | 375.6 | 28.9 | NO ACTION |
| Z-300 | ARMY DR | 420.9 | 17.0 | 403.9 | 389.7 | 31.2 | NO ACTION |
| Z-301 | OLD CORAL PIT RD | 449.7 | 15.0 | 434.7 | 406.1 | 43.6 | NO ACTION |
| Z-302 | UNKNOWN | 472.7 | 15.0 | 457.7 | 419.0 | 53.8 | NO ACTION |
| Z-303 | UNKNOWN | 512.1 | 10.0 | 502.1 | 439.7 | 72.4 | NO ACTION |
| Z-304 | UNKNOWN | 515.6 | 10.0 | 505.6 | 440.5 | 75.1 | NO ACTION |
| Z-305 | UNKNOWN | 533.0 | 15.0 | 518.0 | 443.5 | 89.6 | NO ACTION |

**RUNWAY 6R - FUTURE TRAVERSE WAY DATA**

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | DEPARTURE | | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|---|
| | | MSL | AGL | | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | |
| Z-306 | UNKNOWN | 624.7 | 15.0 | 609.7 | 470.5 | 154.2 | NO ACTION |
| Z-307 | N SABANA BARRIGADA DR | 555.1 | 15.0 | 540.1 | 506.8 | 48.3 | NO ACTION |
| Z-308 | UNKNOWN | 521.3 | 10.0 | 511.3 | 511.3 | 10.0 | NO ACTION |
| Z-309 | UNKNOWN | 460.2 | 15.0 | 445.2 | 547.9 | -87.7 | NO ACTION |
| Z-310 | S-32 | 425.5 | 15.0 | 410.5 | 558.8 | -133.3 | NO ACTION |
| Z-311 | CARNATION LP | 415.0 | 15.0 | 400.0 | 563.2 | -148.2 | NO ACTION |
| Z-312 | UNKNOWN | 410.0 | 10.0 | 400.0 | 572.5 | -162.5 | NO ACTION |
| Z-313 | BANYAN ST | 415.0 | 15.0 | 400.0 | 574.1 | -159.1 | NO ACTION |
| Z-314 | GARDENA AVE | 415.0 | 15.0 | 400.0 | 579.9 | -164.9 | NO ACTION |
| Z-315 | CHERRY BLOSSOM ST | 423.4 | 15.0 | 408.4 | 593.1 | -169.6 | NO ACTION |
| Z-316 | CARNATION RD | 426.3 | 15.0 | 411.3 | 596.8 | -170.5 | NO ACTION |

NOTES:

1. HORIZONTAL DATUM NAD83 (MA11), VERTICAL DATUM GUVD04 (GEOID 12B). DRAWING PREPARED IN UTM ZONE 55 NORTH (US FOOT) COORDINATE SYSTEM.
2. MAGNETIC DECLINATION OBTAINED ONLINE AT HTTP://WWW.NGDC.NOAA.GOV/GEOMAG-WEB/#DECLINATION.
3. ALL LOCAL ZONING AND AIRSPACE PROTECTION IS GOVERNED BY THE SUPREME COURT OF GUAM, COMPILER OF LAWS, TITLE 21 - REAL PROPERTY, CHAPTER 61 - ZONING LAW.
4. OBSTACLES WERE EVALUATED USING 2022 AIRPORT AIRSPACE ANALYSIS OBSTRUCTION SURVEY DATA.
5. FOR CLARITY , ONLY CRITICAL OBSTRUCTIONS, DEFINED AS THE HIGHEST OBSTRUCTION WITHIN A 500' x 500' GRID, ARE SHOWN. CRITICAL OBJECT CRITERIA ARE DERIVED FROM ADVISORY CIRCULAR 150/5300-18B, *GENERAL GUIDANCE AND SPECIFICATIONS FOR SUBMISSION OF AERONAUTICAL SURVEYS TO NGS: FIELD DATA COLLECTION AND GEOGRAPHIC INFORMATION SYSTEM (GIS) STANDARDS*, SECTION 2.7.1.6.
6. AS PER FAR PART-77.17(B), APPROACH SURFACE CLEARANCES ARE BASED ON TRAVERSE WAY ELEVATIONS PLUS THE TRAVERSE WAY ADJUSTMENT (23' FOR RAILWAYS, 17' FOR INTERSTATE HIGHWAYS, 15' FOR OTHER PUBLIC ROADS, OR 10' FOR PRIVATE ROADS).
7. EXISTING ON-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2022 AIRPORT AIRSPACE ANALYSIS SURVEY DATA. OFF-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2013 COASTAL AND MARINE SPATIAL PLANNING DATA FROM THE NAVAL POSTGRADUATE SCHOOL, DEPARTMENT OF OCEANOGRAPHY (HTTPS://WWW.OC.NPS.EDU/CMSP/GUAM/).

| NO. | REVISIONS | BY | APP. | DATE | NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

TRUE NORTH
GRID NORTH
0° 0' 0"

MAGNETIC DECLINATION = 9°23' (9.4°) EAST (JANUARY 2023)
ANNUAL RATE OF CHANGE: 0°1' (0.017') WEST / YEAR

PREPARED FOR

A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM

AECOM

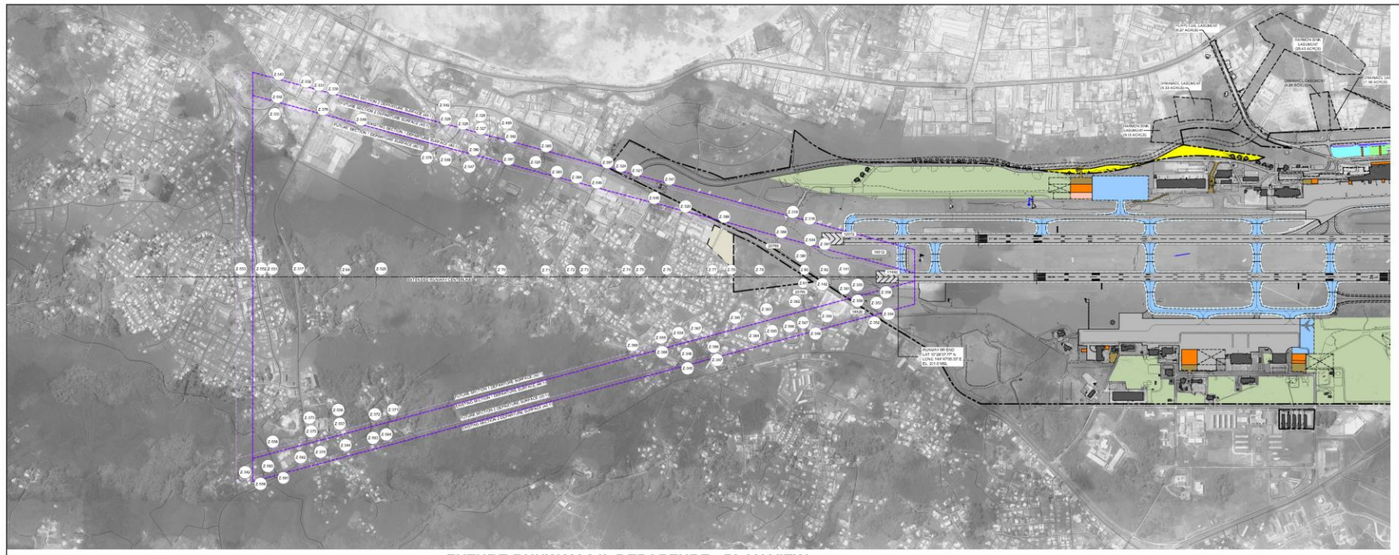
FUTURE RUNWAY 6R
DEPARTURE SURFACE
DATA TABLES - B

ANTONIO B. WON PAT
INTERNATIONAL AIRPORT

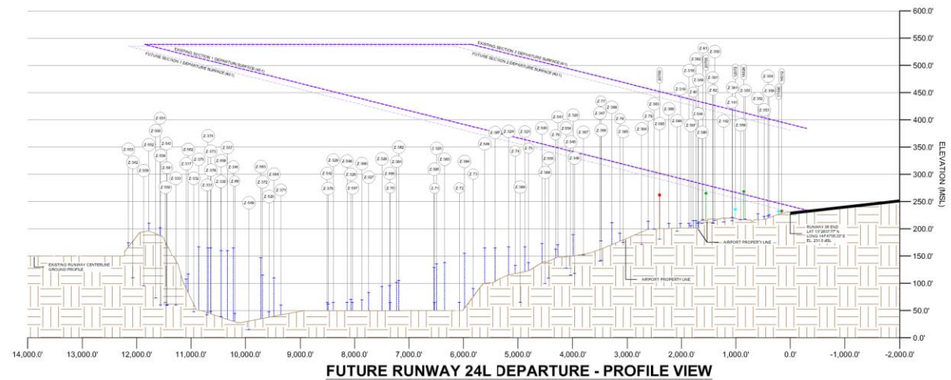
DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WBS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 06/23
SHEET: 47 OF 51

**Figure H-48. Future Runway 6R Departure Surface Data Tables – B**

Source: AECOM



**FUTURE RUNWAY 24L DEPARTURE - PLAN VIEW**
HORIZONTAL SCALE : 1" = 1,000'




**FUTURE RUNWAY 24L DEPARTURE - PROFILE VIEW**
HORIZONTAL SCALE : 1" = 1,000'
VERTICAL SCALE : 1" = 100'

**LEGEND**

| ITEM | |
|---|---|
| AIRPORT PROPERTY LINE | |
| FUTURE AIRPORT PROPERTY LINE | |
| AIRFIELD PAVEMENT | |
| FUTURE AIRFIELD PAVEMENT | |
| AIRFIELD PAVEMENT TO BE REMOVED | |
| AIRFIELD SHOULDER PAVEMENT | |
| FUTURE AIRFIELD SHOULDER PAVEMENT | |
| ON-AIRPORT BUILDINGS | |
| FUTURE ON-AIRPORT BUILDINGS / STRUCTURES | |
| OFF-AIRPORT BUILDINGS | |
| ROADS & VEHICLE PARKING | |
| FUTURE ROADS & VEHICLE PARKING | |
| FENCE | |
| EXTENDED RUNWAY CENTERLINE | |
| DEPARTURE SURFACE (SURFACE 7) | |
| FUTURE DEPARTURE SURFACE (SURFACE 7) | |
| PROPOSED PROPERTY ACQUISITION | |
| FUTURE AERONAUTICAL DEVELOPMENT | |
| FUTURE NON-AERONAUTICAL DEVELOPMENT | |
| AVIGATION EASEMENT | |
| RUNWAY THRESHOLD LIGHTS | |
| PAPI | |
| WIND CONE | |
| ASOS | |
| ROTATING BEACON | |
| AIRPORT REFERENCE POINT (ARP) | |
| 10' GROUND CONTOUR | |
| VEGETATION TREES | |

**OBSTRUCTIONS LEGEND**

| ITEM | | |
|---|---|---|
| TREE/BUSH | XXXX | |
| POLE | XXXX | |
| GROUND | XXXX | |
| BUILDING | XXXX | |
| FENCE | XXXX | |
| TOWER/ANTENNA | XXXX | |
| NAVAID | XXXX | |
| LIGHT | XXXX | |
| SIGN | XXXX | |
| OTHER | XXXX | |
| ROAD/TRAVERSEWAY | Z-X | |

NOTES:

1. HORIZONTAL DATUM NAD83 (MA11), VERTICAL DATUM GUVD04 (GEOID 12B). DRAWING PREPARED IN UTM ZONE 55 NORTH (US FOOT) COORDINATE SYSTEM.
2. MAGNETIC DECLINATION OBTAINED ONLINE AT HTTP://WWW.NCDC.NOAA.GOV/GEOMAG-WEB/#DECLINATION.
3. ALL LOCAL ZONING AND AIRSPACE PROTECTION IS GOVERNED BY THE SUPREME COURT OF GUAM, COMPILER OF LAWS, TITLE 21 - REAL PROPERTY, CHAPTER 61 - ZONING LAW.
4. OBSTACLES WERE EVALUATED USING 2022 AIRPORT AIRSPACE ANALYSIS OBSTRUCTION SURVEY DATA.
5. OBJECTS AND TRAVERSE WAYS ON THIS SHEET ARE EVALUATED FOR OBSTRUCTION STATUS AND PROPOSED DISPOSITION ON SHEET 49 .
6. FOR CLARITY, ONLY CRITICAL OBSTRUCTIONS, DEFINED AS THE HIGHEST OBSTRUCTION WITHIN A 500' x 500' GRID, ARE SHOWN. CRITICAL OBJECT CRITERIA ARE DERIVED FROM ADVISORY CIRCULAR 150/5300-18B, *GENERAL GUIDANCE AND SPECIFICATIONS FOR SUBMISSION OF AERONAUTICAL SURVEYS TO NGS: FIELD DATA COLLECTION AND GEOGRAPHIC INFORMATION SYSTEM (GIS) STANDARDS*, SECTION 2.7.1.6.
7. AS PER FAR PART-77.17(B), APPROACH SURFACE CLEARANCES ARE BASED ON TRAVERSE WAY ELEVATIONS PLUS THE TRAVERSE WAY ADJUSTMENT (23' FOR RAILWAYS, 17' FOR INTERSTATE HIGHWAYS, 15' FOR OTHER PUBLIC ROADS, OR 10' FOR PRIVATE ROADS).
8. EXISTING ON-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2022 AIRPORT AIRSPACE ANALYSIS SURVEY DATA. OFF-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2013 COASTAL AND MARINE SPATIAL PLANNING DATA FROM THE NAVAL POSTGRADUATE SCHOOL, DEPARTMENT OF OCEANOGRAPHY (HTTPS://WWW.OC.NPS.EDU/CMSP/GUAM).

| NO. | REVISIONS | BY | APP. | DATE | NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

TRUE NORTH
GRID NORTH
MAGNETIC DECLINATION = 9°23' (9.4°) EAST (JANUARY 2023)
ANNUAL RATE OF CHANGE: 0°1' (0.01°) WEST / YEAR
1,000 0 1,000
HORIZONTAL SCALE IN FEET
SCALE: 1" = 1,000'

PREPARED FOR
A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM
AECOM

FUTURE RUNWAY 24L
DEPARTURE SURFACE DRAWING

ANTONIO B. WON PAT
INTERNATIONAL AIRPORT

DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WBS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 06/23
SHEET: 48 OF 51

**Figure H-49. Future Runway 24L Departure Surface Drawing**

Source: AECOM

**RUNWAY 24L - DEPARTURE APPROACH SURFACE OBSTRUCTIONS**

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | DEPARTURE | | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|---|
| | | MSL | AGL | | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | |
| 12072 | RUNWAY LIGHT | 235.8 | 2.0 | 233.7 | 381.3 | -145.6 | NO ACTION |
| 16012 | GROUND | 232.4 | 0.0 | 232.4 | 330.6 | -98.2 | NO ACTION |
| 17450 | RUNWAY LIGHT | 232.3 | 5.7 | 226.6 | 236.4 | -4.0 | NO ACTION |
| 18526 | TREE | 268.4 | 62.6 | 205.8 | 400.3 | -131.9 | NO ACTION |
| 20705 | TREE | 265.1 | 65.1 | 200.0 | 269.7 | -4.6 | TRIM/REMOVE |
| 20760 | POLE | 261.9 | 50.8 | 211.1 | 291.2 | -29.3 | NO ACTION |

**RUNWAY 24L - FUTURE TRAVERSE WAY DATA**

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | DEPARTURE | | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|---|
| | | MSL | AGL | | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | |
| Z-69 | LUCIO RD | 44.7 | 15.0 | 29.7 | -441.4 | 486.2 | NO ACTION |
| Z-70 | CASIMIRU ST | 65.0 | 15.0 | 50.0 | -349.7 | 414.7 | NO ACTION |
| Z-71 | UNTALAN CT | 65.0 | 15.0 | 50.0 | -329.3 | 394.3 | NO ACTION |
| Z-72 | SGT ROY T DAMIAN JR ST | 65.0 | 15.0 | 50.0 | -318.0 | 383.0 | NO ACTION |
| Z-73 | JESUS CAMACHO ST | 90.4 | 15.0 | 75.4 | -286.2 | 376.7 | NO ACTION |
| Z-74 | TUBA ST | 132.8 | 15.0 | 117.8 | -224.6 | 357.3 | NO ACTION |
| Z-75 | MANIBUSAN ST | 138.0 | 15.0 | 123.0 | -213.3 | 351.3 | NO ACTION |
| Z-76 | ROBAT ST | 162.7 | 15.0 | 147.7 | -176.3 | 339.0 | NO ACTION |
| Z-77 | CHN R S SANCHEZ | 177.9 | 15.0 | 162.9 | -140.3 | 318.1 | NO ACTION |
| Z-78 | E MALATE ST | 192.0 | 15.0 | 177.0 | -117.5 | 309.5 | NO ACTION |
| Z-79 | RAMIREZ WY | 213.8 | 15.0 | 198.8 | -82.5 | 296.3 | NO ACTION |
| Z-80 | CANADA TOTO RD | 215.0 | 15.0 | 200.0 | -60.6 | 275.6 | NO ACTION |
| Z-81 | PURPLE HEART MEMORIAL HWY | 217.0 | 17.0 | 200.0 | -54.1 | 271.1 | NO ACTION |
| Z-82 | AIRPORT SERVICE RD | 210.0 | 10.0 | 200.0 | -56.5 | 266.5 | NO ACTION |
| Z-141 | AIRPORT SERVICE RD | 214.8 | 10.0 | 204.8 | -43.0 | 257.8 | NO ACTION |
| Z-142 | AIRPORT SERVICE RD | 212.2 | 10.0 | 202.2 | -49.4 | 261.7 | NO ACTION |
| Z-317 | N CHALAN CANTON TASI | 107.6 | 17.0 | 90.6 | -400.7 | 508.4 | NO ACTION |
| Z-318 | AIRPORT SERVICE RD | 210.0 | 10.0 | 200.0 | -217.7 | 427.7 | NO ACTION |
| Z-319 | AIRPORT SERVICE RD | 210.0 | 10.0 | 200.0 | -221.6 | 431.6 | NO ACTION |
| Z-320 | ROBAT ST | 189.5 | 15.0 | 174.5 | -141.4 | 330.9 | NO ACTION |
| Z-321 | EAST SUNSET BLVD | 167.0 | 17.0 | 150.0 | -336.1 | 503.1 | NO ACTION |
| Z-324 | PURPLE HEART MEMORIAL HWY | 167.0 | 17.0 | 150.0 | -343.4 | 510.4 | NO ACTION |
| Z-325 | N OLD G W RD | 135.9 | 15.0 | 120.9 | -399.1 | 535.0 | NO ACTION |
| Z-326 | CALLE V D PEREZ ST | 94.2 | 15.0 | 79.2 | -440.8 | 535.0 | NO ACTION |
| Z-327 | J A CAMACHO ST | 83.0 | 15.0 | 68.0 | -452.0 | 535.0 | NO ACTION |
| Z-328 | E O'BRIEN DR | 70.7 | 15.0 | 55.7 | -464.3 | 535.0 | NO ACTION |
| Z-329 | SGT ROY T DAMIAN JR ST | 65.0 | 15.0 | 50.0 | -470.0 | 535.0 | NO ACTION |
| Z-330 | N CHALAN CANTON TASI | 38.7 | 17.0 | 21.7 | -496.3 | 535.0 | NO ACTION |
| Z-331 | MARTYR ST | 42.2 | 15.0 | 27.2 | -492.8 | 535.0 | NO ACTION |
| Z-332 | ARCHBISHOP F C FLORES ST | 47.7 | 15.0 | 32.7 | -487.3 | 535.0 | NO ACTION |
| Z-333 | SAN RAMON ST | 60.3 | 15.0 | 45.3 | -452.8 | 513.1 | NO ACTION |
| Z-342 | UNKNOWN | 110.0 | 10.0 | 100.0 | -425.0 | 535.0 | NO ACTION |
| Z-344 | AFAME RD | 165.0 | 15.0 | 150.0 | -370.0 | 535.0 | NO ACTION |
| Z-345 | MESNGON ST | 115.0 | 15.0 | 100.0 | -367.0 | 482.0 | NO ACTION |
| Z-346 | SGT ROY T DAMIAN JR ST | 118.1 | 15.0 | 103.1 | -362.2 | 480.3 | NO ACTION |
| Z-347 | CABAYERO ST | 140.8 | 15.0 | 125.8 | -327.9 | 468.7 | NO ACTION |
| Z-349 | CANADA TOTO RD | 211.9 | 15.0 | 196.9 | -211.2 | 423.1 | NO ACTION |
| Z-350 | KINA CT | 215.0 | 15.0 | 200.0 | -200.8 | 415.8 | NO ACTION |
| Z-352 | PURPLE HEART MEMORIAL HWY | 227.4 | 17.0 | 210.4 | -168.5 | 396.0 | NO ACTION |
| Z-353 | AIRPORT SERVICE RD | 222.6 | 10.0 | 212.6 | -170.4 | 393.0 | NO ACTION |
| Z-354 | AIRPORT SERVICE RD | 223.8 | 10.0 | 213.8 | -167.4 | 391.2 | NO ACTION |
| Z-355 | AIRPORT SERVICE RD | 217.8 | 10.0 | 207.8 | -34.0 | 251.8 | NO ACTION |
| Z-358 | AIRPORT SERVICE RD | 225.8 | 10.0 | 215.8 | -14.8 | 240.6 | NO ACTION |
| Z-359 | AIRPORT SERVICE RD | 216.3 | 10.0 | 206.3 | -37.6 | 253.9 | NO ACTION |
| Z-361 | PURPLE HEART MEMORIAL HWY | 220.6 | 17.0 | 203.6 | -37.0 | 257.6 | NO ACTION |
| Z-362 | CANADA TOTO RD | 215.0 | 15.0 | 200.0 | -59.3 | 274.3 | NO ACTION |
| Z-363 | CALLE PAQUITO ST | 199.4 | 15.0 | 184.4 | -94.2 | 293.7 | NO ACTION |
| Z-364 | CALLE DAMIAN CIRCLE | 171.4 | 15.0 | 156.4 | -278.0 | 449.4 | NO ACTION |
| Z-365 | CALLE DAMIAN CIRCLE | 174.9 | 15.0 | 159.9 | -133.1 | 308.0 | NO ACTION |
| Z-366 | CABAYERO ST | 142.0 | 15.0 | 127.0 | -326.0 | 468.0 | NO ACTION |
| Z-367 | CABAYERO ST | 152.1 | 15.0 | 137.1 | -174.1 | 326.2 | NO ACTION |
| Z-368 | SGT ROY T DAMIAN JR ST | 99.4 | 15.0 | 84.4 | -244.4 | 343.8 | NO ACTION |
| Z-369 | TORRES ST | 65.0 | 15.0 | 50.0 | -290.1 | 355.1 | NO ACTION |
| Z-371 | S-2 | 60.0 | 10.0 | 50.0 | -405.1 | 465.1 | NO ACTION |
| Z-372 | S SPRING LN | 115.0 | 15.0 | 100.0 | -358.4 | 473.4 | NO ACTION |
| Z-373 | AFAME RD | 165.0 | 15.0 | 150.0 | -332.2 | 497.2 | NO ACTION |
| Z-374 | DASO RD | 165.0 | 15.0 | 150.0 | -370.0 | 535.0 | NO ACTION |
| Z-375 | N CHALAN CANTON TASI | 167.0 | 17.0 | 150.0 | -335.6 | 502.6 | NO ACTION |
| Z-378 | N CHALAN CANTON TASI | 48.5 | 17.0 | 31.5 | -448.6 | 497.1 | NO ACTION |
| Z-379 | E O'BRIEN DR | 62.3 | 15.0 | 47.3 | -381.1 | 443.3 | NO ACTION |

**RUNWAY 24L - FUTURE TRAVERSE WAY DATA**

| OBJECT ID | DESCRIPTION | OBJECT ELEVATION | | GROUND ELEVATION (MSL) | DEPARTURE | | PROPOSED DISPOSITION |
|---|---|---|---|---|---|---|---|
| | | MSL | AGL | | SURFACE ELEVATION (MSL) | SURFACE PENETRATION | |
| Z-380 | SGT ROY T DAMIAN JR ST | 69.9 | 15.0 | 54.9 | -357.9 | 427.8 | NO ACTION |
| Z-381 | SOUTH OLD G W RD | 101.7 | 15.0 | 86.7 | -310.2 | 411.8 | NO ACTION |
| Z-382 | UNKNOWN | 105.5 | 10.0 | 95.5 | -429.5 | 535.0 | NO ACTION |
| Z-383 | J A CAMACHO ST | 138.2 | 15.0 | 123.2 | -251.6 | 389.7 | NO ACTION |
| Z-384 | J A CAMACHO ST | 155.0 | 15.0 | 140.0 | -225.7 | 380.7 | NO ACTION |
| Z-385 | UNKNOWN | 129.2 | 10.0 | 119.2 | -405.8 | 535.0 | NO ACTION |
| Z-387 | S BIANG ST | 165.0 | 15.0 | 150.0 | -351.7 | 516.7 | NO ACTION |
| Z-388 | PURPLE HEART MEMORIAL HWY | 211.2 | 17.0 | 194.2 | -101.9 | 313.1 | NO ACTION |
| Z-389 | AIRPORT SERVICE RD | 210.0 | 10.0 | 200.0 | -76.8 | 286.8 | NO ACTION |
| Z-390 | AIRPORT SERVICE RD | 210.0 | 10.0 | 200.0 | -61.6 | 271.6 | NO ACTION |
| Z-391 | AIRPORT SERVICE RD | 210.5 | 10.0 | 200.5 | -56.2 | 266.7 | NO ACTION |
| Z-495 | UNKNOWN | 96.0 | 10.0 | 86.0 | -439.0 | 535.0 | NO ACTION |
| Z-520 | S-11 | 47.8 | 10.0 | 37.8 | -422.8 | 470.5 | NO ACTION |
| Z-541 | UNKNOWN | 171.0 | 10.0 | 161.0 | -317.1 | 488.1 | NO ACTION |
| Z-542 | JQ SAN MIGUEL ELEMENTARY SCHOOL LN | 65.0 | 15.0 | 50.0 | -470.0 | 535.0 | NO ACTION |
| Z-543 | W O'BRIEN DR | 59.2 | 15.0 | 44.2 | -475.8 | 535.0 | NO ACTION |
| Z-544 | AIRPORT SERVICE RD | 210.0 | 10.0 | 200.0 | -63.4 | 273.4 | NO ACTION |
| Z-545 | PATERNO ST | 173.2 | 15.0 | 158.2 | -172.0 | 345.2 | NO ACTION |
| Z-546 | S BIANG ST | 165.0 | 15.0 | 150.0 | -206.4 | 371.4 | NO ACTION |
| Z-547 | MARTINEZ LN | 65.0 | 15.0 | 50.0 | -367.2 | 432.2 | NO ACTION |
| Z-548 | MARTINEZ LN | 65.0 | 15.0 | 50.0 | -369.7 | 434.7 | NO ACTION |
| Z-549 | W O'BRIEN DR | 15.2 | 15.0 | 0.2 | -464.5 | 479.6 | NO ACTION |
| Z-550 | CHALAN OBISPO | 64.7 | 15.0 | 49.7 | -453.4 | 518.1 | NO ACTION |
| Z-551 | ERON LN | 202.1 | 15.0 | 187.1 | -318.3 | 520.4 | NO ACTION |
| Z-552 | SEN GIBSON CT | 210.5 | 15.0 | 195.5 | -315.1 | 525.6 | NO ACTION |
| Z-553 | E CHN GUMAYUUS ST | 174.3 | 15.0 | 159.3 | -360.7 | 535.0 | NO ACTION |
| Z-554 | CHN R S SANCHEZ | 127.9 | 15.0 | 112.9 | -206.2 | 334.1 | NO ACTION |
| Z-555 | ANGA ST | 109.6 | 15.0 | 94.6 | -232.6 | 342.2 | NO ACTION |
| Z-556 | S-1 | 160.0 | 10.0 | 150.0 | -332.4 | 492.4 | NO ACTION |
| Z-557 | S-8 | 160.0 | 10.0 | 150.0 | -329.5 | 489.5 | NO ACTION |
| Z-558 | UNKNOWN | 60.0 | 10.0 | 50.0 | -460.3 | 520.3 | NO ACTION |
| Z-559 | S-24 | 95.3 | 10.0 | 85.3 | -439.7 | 535.0 | NO ACTION |
| Z-560 | CHIN CHAOT ST | 73.2 | 15.0 | 58.2 | -461.8 | 535.0 | NO ACTION |
| Z-561 | UNKNOWN | 60.6 | 10.0 | 50.6 | -474.5 | 535.0 | NO ACTION |
| Z-562 | N CHALAN CANTON TASI | 117.0 | 17.0 | 100.0 | -418.0 | 535.0 | NO ACTION |
| Z-563 | UNKNOWN | 146.8 | 10.0 | 136.8 | -388.2 | 535.0 | NO ACTION |
| Z-564 | UNKNOWN | 110.0 | 10.0 | 100.0 | -425.0 | 535.0 | NO ACTION |
| Z-565 | CALLE DAMIAN CIRCLE | 181.2 | 15.0 | 166.2 | -260.0 | 441.2 | NO ACTION |
| Z-566 | CALLE DUENAS ST | 195.8 | 15.0 | 180.8 | -237.4 | 433.2 | NO ACTION |
| Z-567 | CALLE DUENAS ST | 206.2 | 15.0 | 191.2 | -220.6 | 426.8 | NO ACTION |

NOTES:

1. HORIZONTAL DATUM NAD83 (MA11), VERTICAL DATUM GUVD04 (GEOID 12B). DRAWING PREPARED IN UTM ZONE 55 NORTH (US FOOT) COORDINATE SYSTEM.
2. MAGNETIC DECLINATION OBTAINED ONLINE AT HTTP://WWW.NGDC.NOAA.GOV/GEOMAG-WEB/#DECLINATION.
3. ALL LOCAL ZONING AND AIRSPACE PROTECTION IS GOVERNED BY THE SUPREME COURT OF GUAM, COMPILER OF LAWS, TITLE 21 - REAL PROPERTY, CHAPTER 61 - ZONING LAW.
4. OBSTACLES WERE EVALUATED USING 2022 AIRPORT AIRSPACE ANALYSIS OBSTRUCTION SURVEY DATA.
5. FOR CLARITY, ONLY CRITICAL OBSTRUCTIONS, DEFINED AS THE HIGHEST OBSTRUCTION WITHIN A 500' x 500' GRID, ARE SHOWN. CRITICAL OBJECT CRITERIA ARE DERIVED FROM ADVISORY CIRCULAR 150/5300-18B, *GENERAL GUIDANCE AND SPECIFICATIONS FOR SUBMISSION OF AERONAUTICAL SURVEYS TO NGS: FIELD DATA COLLECTION AND GEOGRAPHIC INFORMATION SYSTEM (GIS) STANDARDS*, SECTION 2.7.1.6.
6. AS PER FAR PART-77.17(B), APPROACH SURFACE CLEARANCES ARE BASED ON TRAVERSE WAY ELEVATIONS PLUS THE TRAVERSE WAY ADJUSTMENT (23' FOR RAILWAYS, 17' FOR INTERSTATE HIGHWAYS, 15' FOR OTHER PUBLIC ROADS, OR 10' FOR PRIVATE ROADS).
7. EXISTING ON-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2022 AIRPORT AIRSPACE ANALYSIS SURVEY DATA. OFF-AIRPORT GROUND CONTOURS AND TRAVERSE WAYS ARE BASED ON 2013 COASTAL AND MARINE SPATIAL PLANNING DATA FROM THE NAVAL POSTGRADUATE SCHOOL, DEPARTMENT OF OCEANOGRAPHY (HTTPS://WWW.OC.NPS.EDU/CMSP/GUAM/).
8. TO ACCOUNT FOR GROWTH SINCE SURVEY, TREES WITHIN 10 FEET OF PENETRATING A SURFACE IS ASSIGNED A PROPOSED DISPOSITION OF TRIM/REMOVE

| NO. | REVISIONS | BY | APP. | DATE | NO. | REVISIONS | BY | APP. | DATE |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |

TRUE NORTH
MAGNETIC DECLINATION = 9°23' (9.4°) EAST (JANUARY 2023)
ANNUAL RATE OF CHANGE: 0°1' (0.017°) WEST / YEAR

PREPARED FOR
A. B. WON PAT INTERNATIONAL AIRPORT AUTHORITY, GUAM
AECOM

FUTURE RUNWAY 24L DEPARTURE SURFACE DATA TABLES

ANTONIO B. WON PAT INTERNATIONAL AIRPORT

DESIGNED: GAM
DRAWN: RJM/MNE CHECKED: WBS
PROJECT MANAGER: EDL
PROJECT DIRECTOR: DS
DATE: 06/23
SHEET: 49 OF 51

**Figure H-50. Future Runway 24L Departure Surface Data Tables**

Source: AECOM

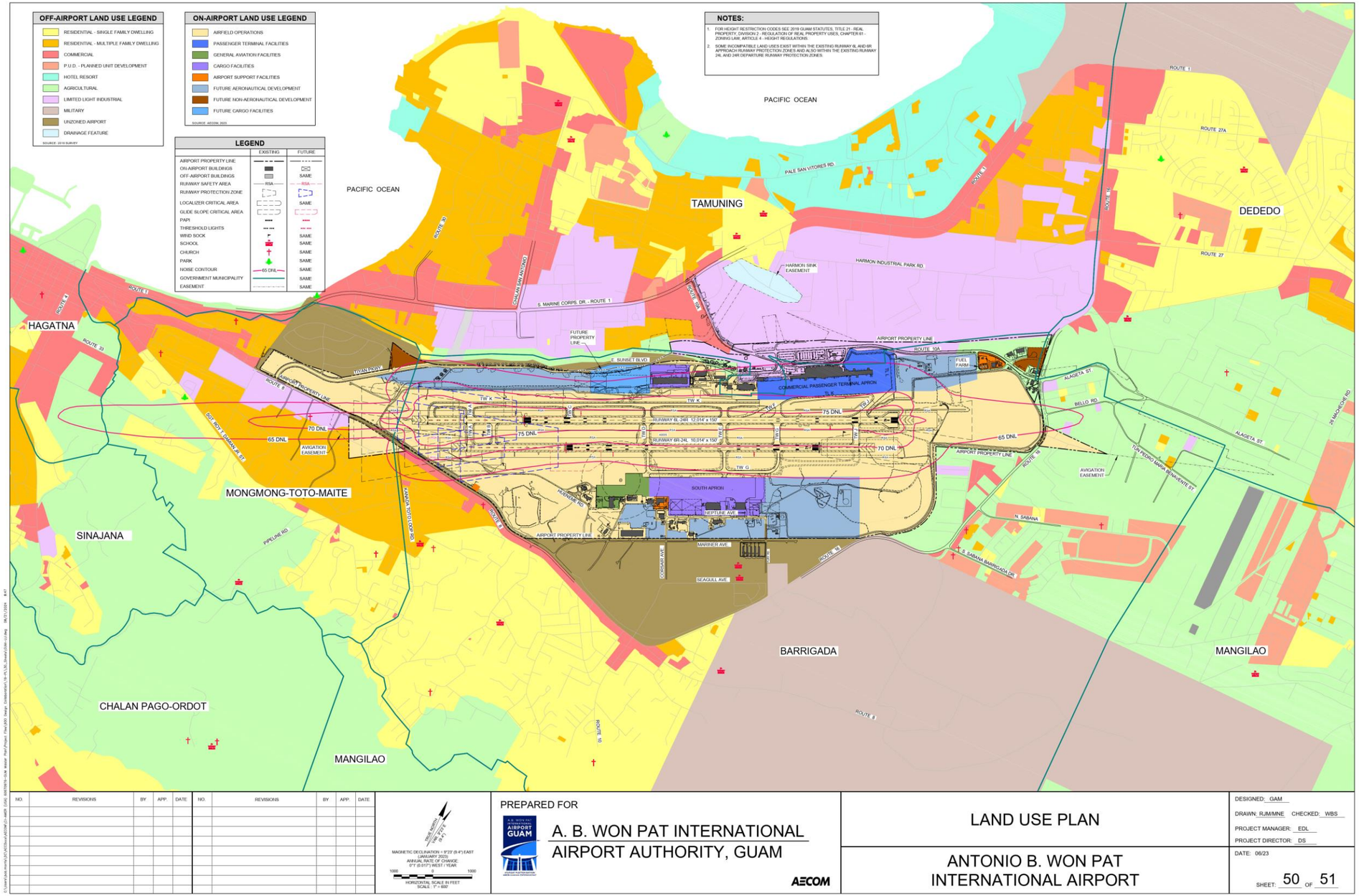



**Figure H-51. Land Use Plan**

Source: AECOM

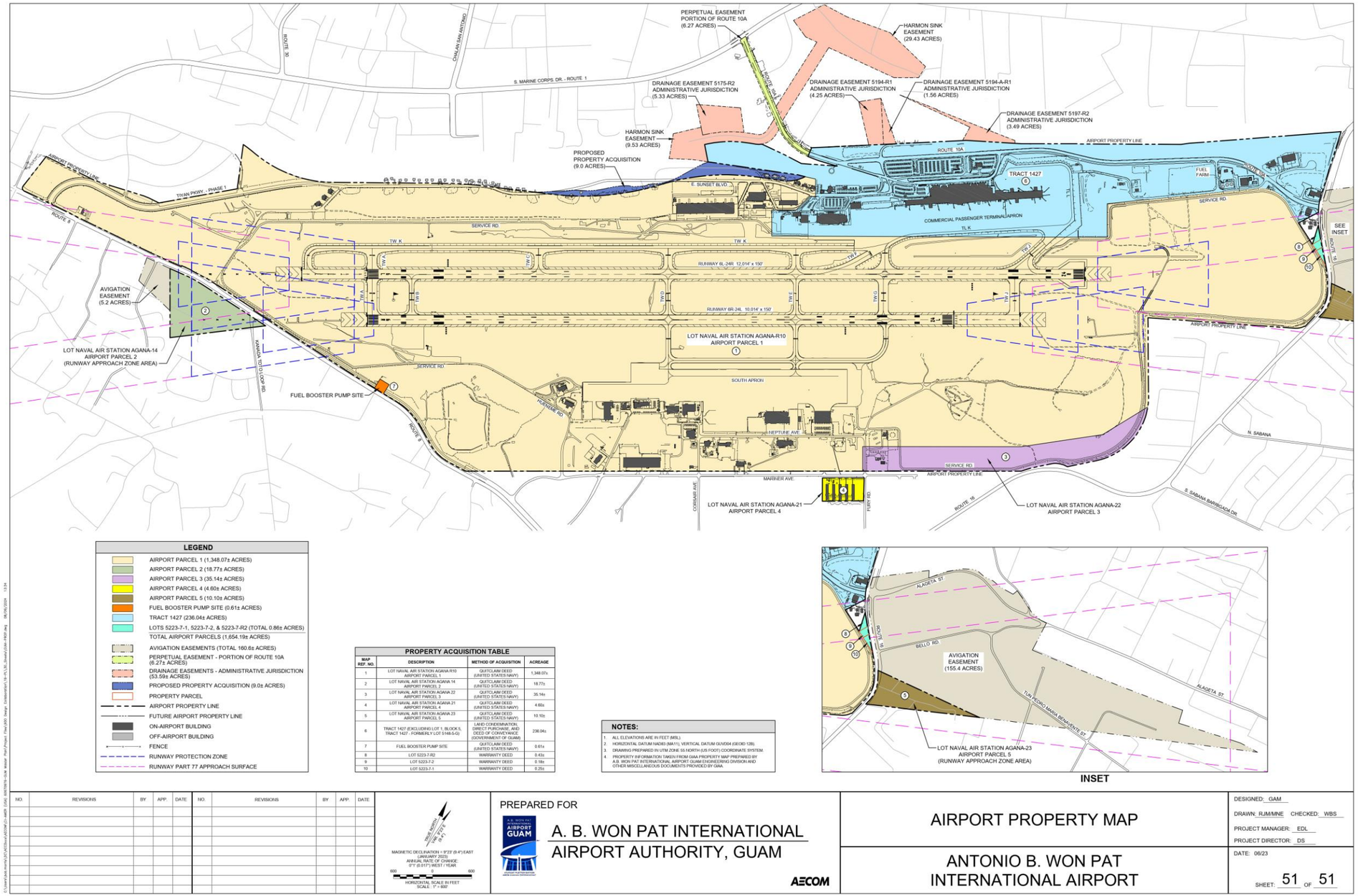



**Figure H-52. Airport Property Map**

Source: AECOM