PAC/TAC Combined Meeting #4

Ellison Onizuka Kona International Airport at Keahole (KOA) Master Plan Update

June 10, 2026

Agenda

- **Master Plan Objectives**
- **Project Development Process (Master Plan to Implementation)**
- **Individual Alternatives**
  - Landside and Terminal
  - Second Runway and other Airfield Improvements
  - Air Cargo
  - General Aviation and Fixed Base Operator (FBO)
  - Helicopter Facility
  - Land Use
- **Consolidated Alternatives**
- **Next Steps**

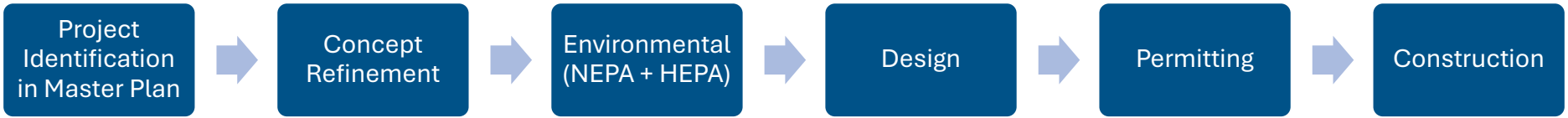
Master Plan Objectives

Master Plan Objectives and Corresponding Alternatives

- Provide additional airport access: **Landside Alternatives**
- Modernize the terminal with enhanced amenities: **Terminal Alternatives**
- Integrate second “right-sized” runway: **Second Runway Alternatives**
- Enhance safety for both fixed-wing and rotary-wing activities: **Helicopter Facility Alternatives**
- Pursue development of airport lands and facilities: **Air Cargo, GA and FBO Alternatives**
- Reliable supply of power and jet fuel: **Land Use Alternatives**

From Master Plan to Implementation: Development Process

We are here



Identify future demand and develop alternatives

Refine project footprints to enable environmental review

Evaluate environmental impacts and obtain clearance

Obtain all required approvals (e.g., state and county permits)

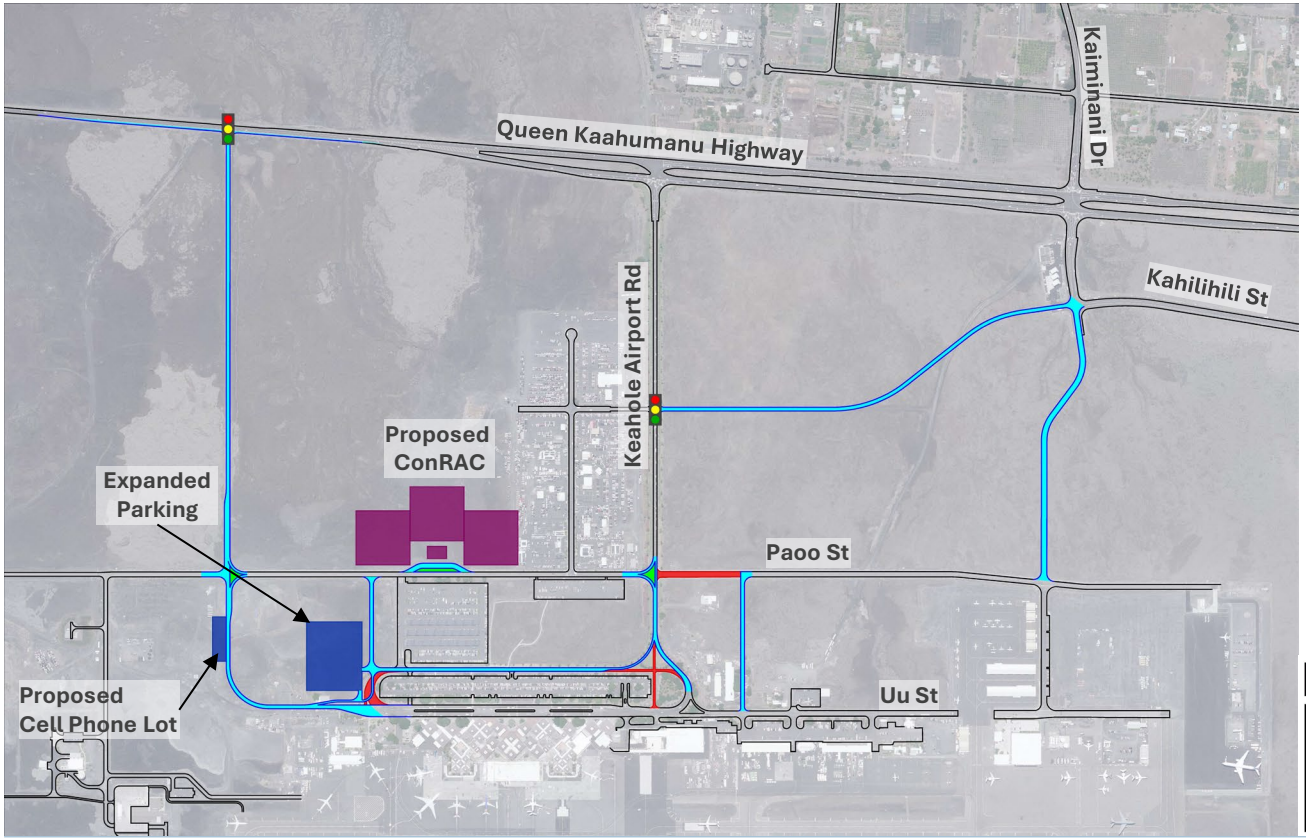
Note:
- NEPA – National Environmental Policy Act (Federal)
- HEPA – Hawaii Environmental Policy Act

Landside Alternatives

Landside Alternatives Objectives

- Provide fully separated north and south access points to and from the terminal curbside
- Maintain site access to hotel and adjacent development via a parallel roadway to the Queen Kaahumanu Highway
- Expand parking and rental car (RAC) areas to accommodate projected growth
- Provide RAC access from both north and south, with early separation from terminal curbside traffic

Landside Alternative 1

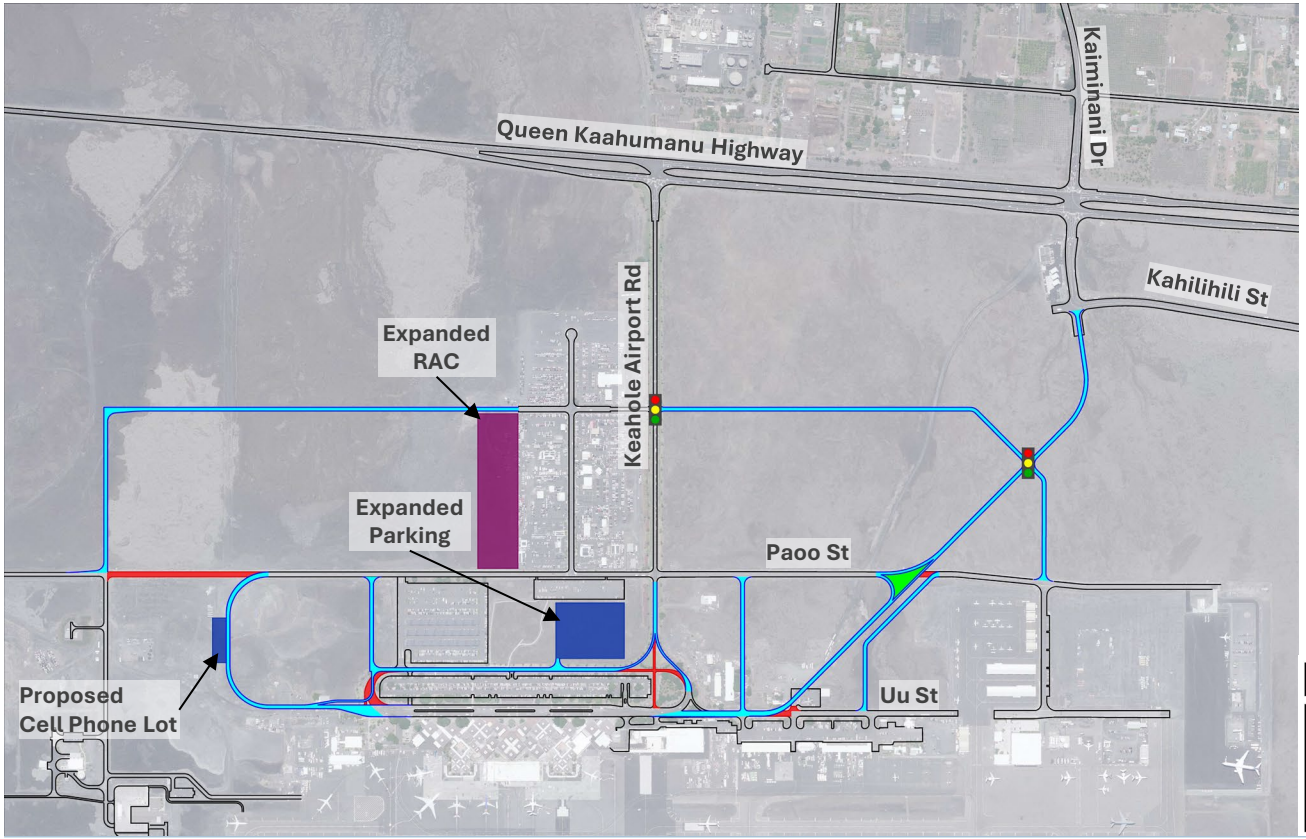


Key Elements:

- New north access point to and from the terminal curbside
- New parallel roadway to Queen Kaahumanu Highway to support future development
- Expanded parking and RAC areas to accommodate projected growth
- RAC access from both north and south
- New consolidated rental car (ConRAC) facility, which includes the Customer Service Building (CSB) and Quick Turn-Around Area (QTA)

DRAWING LEGEND	
EXISTING ROAD	
FUTURE ROAD	
FUTURE ROAD ISLAND	
DEMOLITION OF EXISTING ROAD	
FUTURE RENTAL CAR FACILITIES	
FUTURE PARKING LOT	

Landside Alternative 2

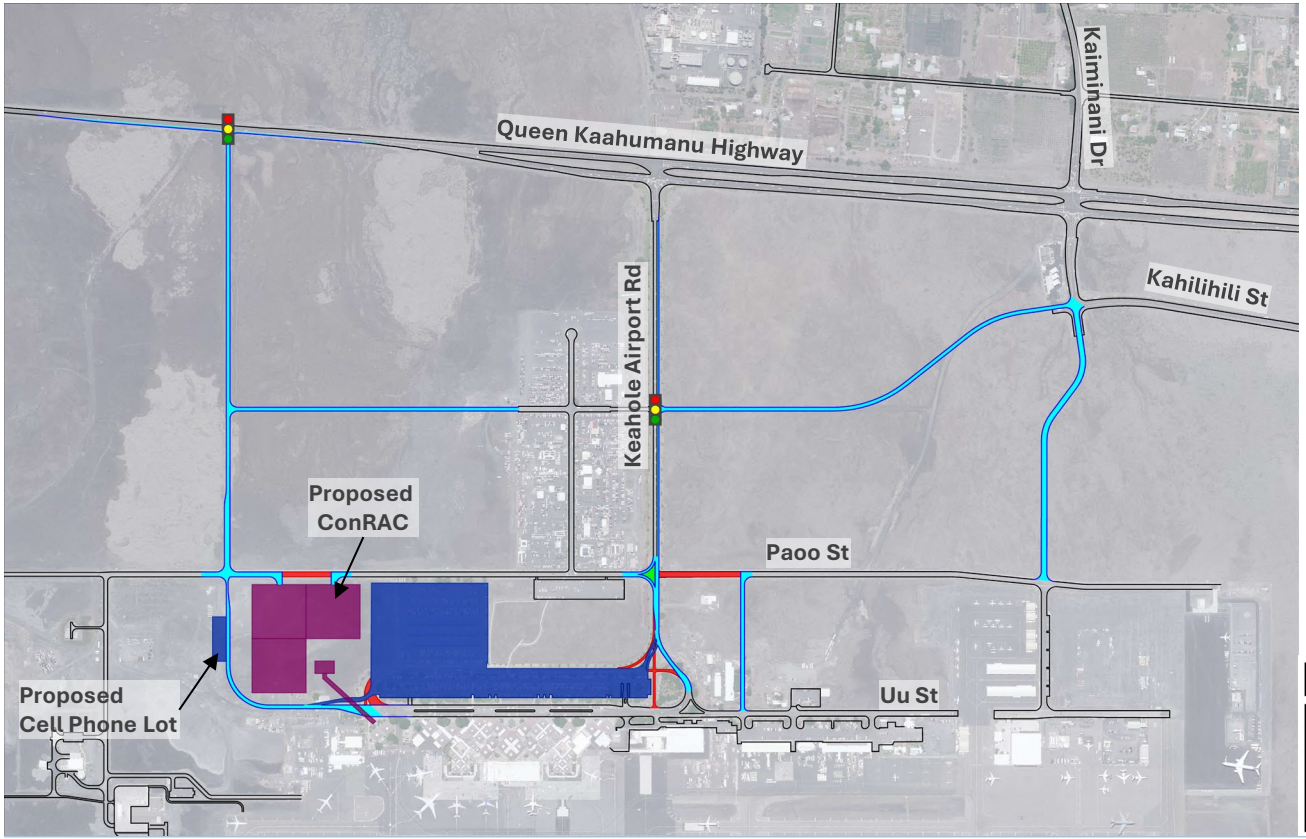


Key Elements:

- New extended south access point to and from the terminal curbside
- New parallel roadway to Queen Kaahumanu Highway to support future development
- Expanded parking and RAC areas to accommodate projected growth

DRAWING LEGEND	
EXISTING ROAD	
FUTURE ROAD	
FUTURE ROAD ISLAND	
DEMOLITION OF EXISTING ROAD	
FUTURE RENTAL CAR FACILITIES	
FUTURE PARKING LOT	

Landside Alternative 3



Key Elements:

- New north access point to and from the terminal curbside
- New parallel roadway to Queen Kaahumanu Highway to support future development
- Expanded parking and RAC areas to accommodate projected growth
- RAC access from both the north and south
- New walkable ConRAC facility, which includes the CSB and QTA, with a pedestrian bridge from the terminal curbside

DRAWING LEGEND	
EXISTING ROAD	
FUTURE ROAD	
FUTURE ROAD ISLAND	
DEMOLITION OF EXISTING ROAD	
FUTURE RENTAL CAR FACILITIES	
FUTURE PARKING LOT	

Terminal Alternatives

Terminal Alternatives Objectives

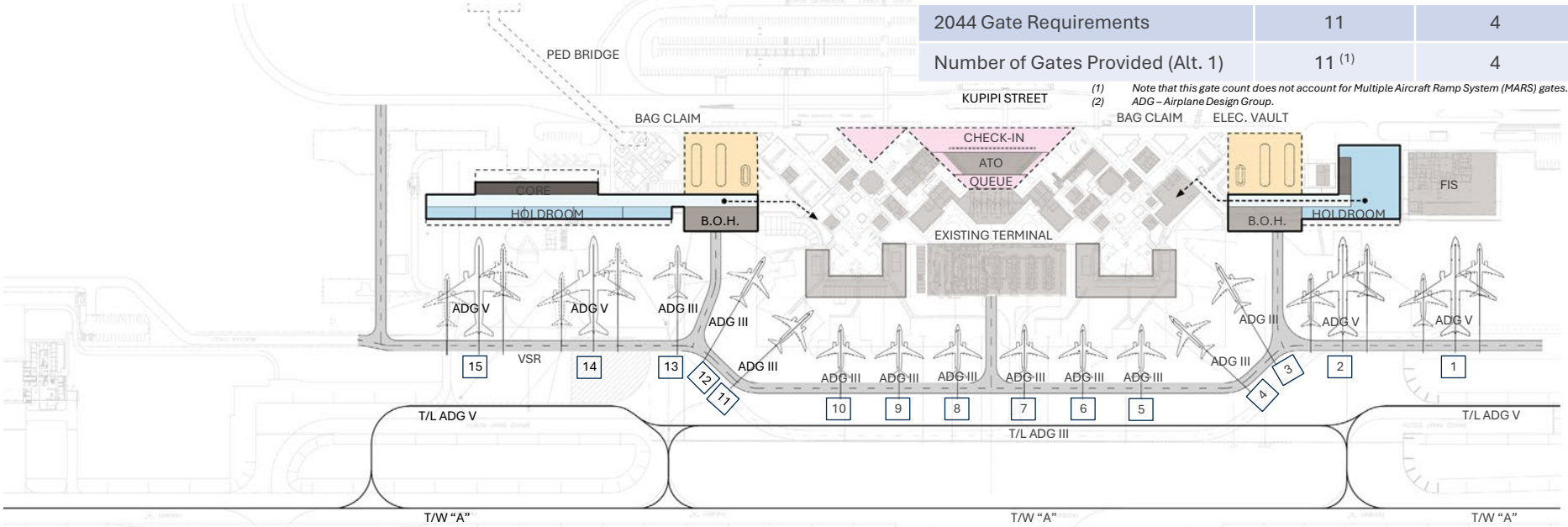
- Implementable
- Improve operations
- Improve overall terminal efficiency and functionality
- Enhance passenger experience
- Accommodate projected growth and demand

Alternative 1: Dual Expansion (1 Story)

- **Compatible with all Landside Alternatives**

	ADG III	ADG V
2044 Gate Requirements	11	4
Number of Gates Provided (Alt. 1)	11 (1)	4

(1) *Note that this gate count does not account for Multiple Aircraft Ramp System (MARS) gates.*
(2) *ADG – Airplane Design Group.*



LEGEND

- Gate Expansion
- Bag Claim Improvements
- Check-In Lobby Improvements

ACRONYM:

ATO – Airline Ticketing Office
B.O.H – Back of House
ELEC. – Electrical
FIS – Federal Inspection Services
PED – Pedestrian
T/L – Taxilane
T/W – Taxiway
VSR – Vehicle Service Road

0' 90' 180' 360'

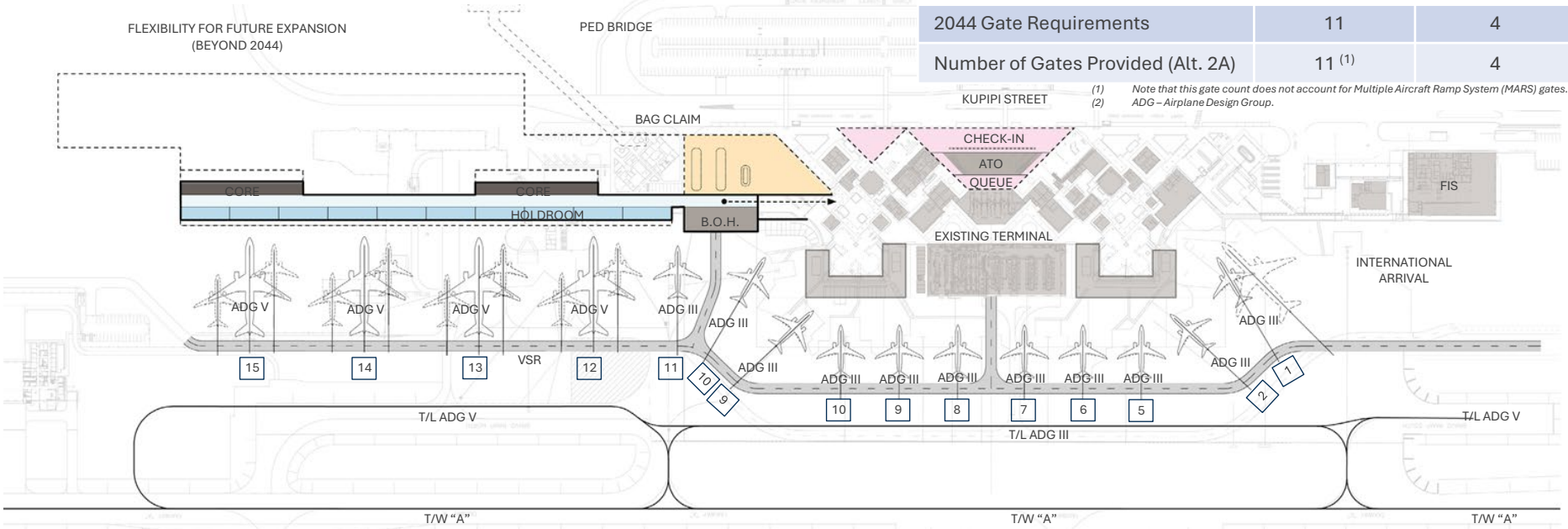
Draft for Discussion Purposes Only
Subject to Further Analyses and Decisions

Alternative 2A: North Expansion (1 Story)

- **Compatible with all Landside Alternatives**

	ADG III	ADG V
2044 Gate Requirements	11	4
Number of Gates Provided (Alt. 2A)	11 (1)	4

(1) Note that this gate count does not account for Multiple Aircraft Ramp System (MARS) gates.
(2) ADG – Airplane Design Group.



LEGEND

- Gate Expansion
- Bag Claim Improvements
- Check-In Lobby Improvements

ACRONYM:

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VSR – Vehicle Service Road

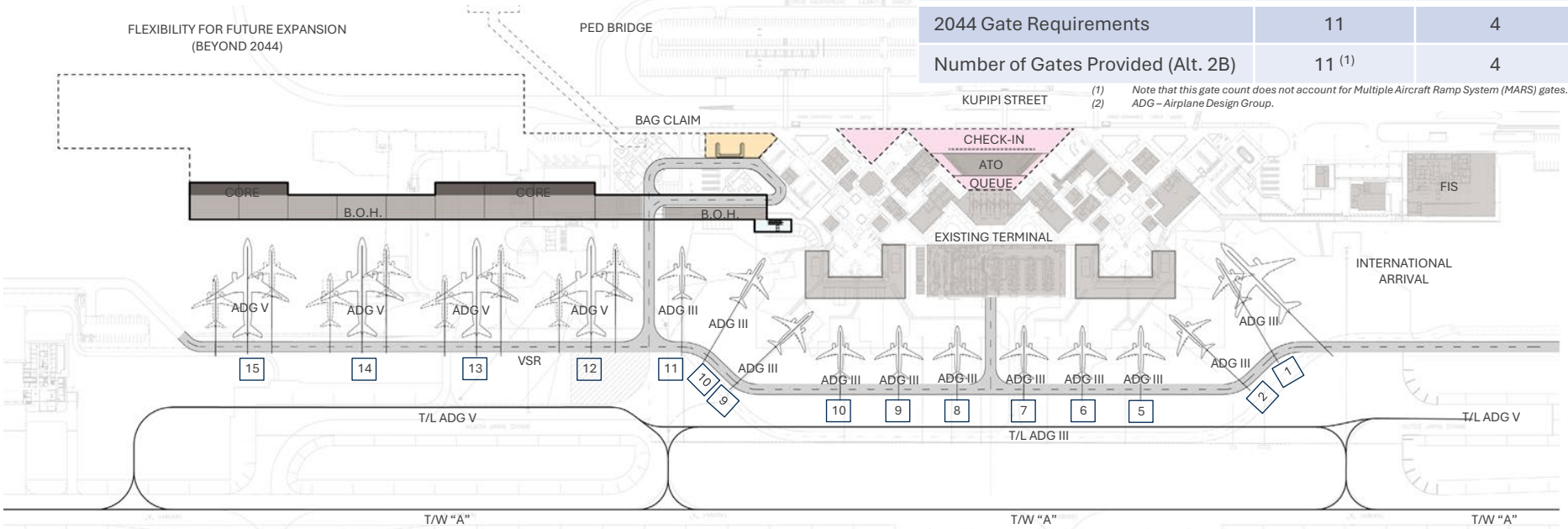
0' 90' 180' 360'

Alternative 2B: North Expansion (2 Story) – Level 1

- **Compatible with all Landside Alternatives**

	ADG III	ADG V
2044 Gate Requirements	11	4
Number of Gates Provided (Alt. 2B)	11 (1)	4

(1) Note that this gate count does not account for Multiple Aircraft Ramp System (MARS) gates.
(2) ADG – Airplane Design Group.



LEGEND

- Gate Expansion
- Bag Claim Improvements
- Check-In Lobby Improvements

ACRONYM:

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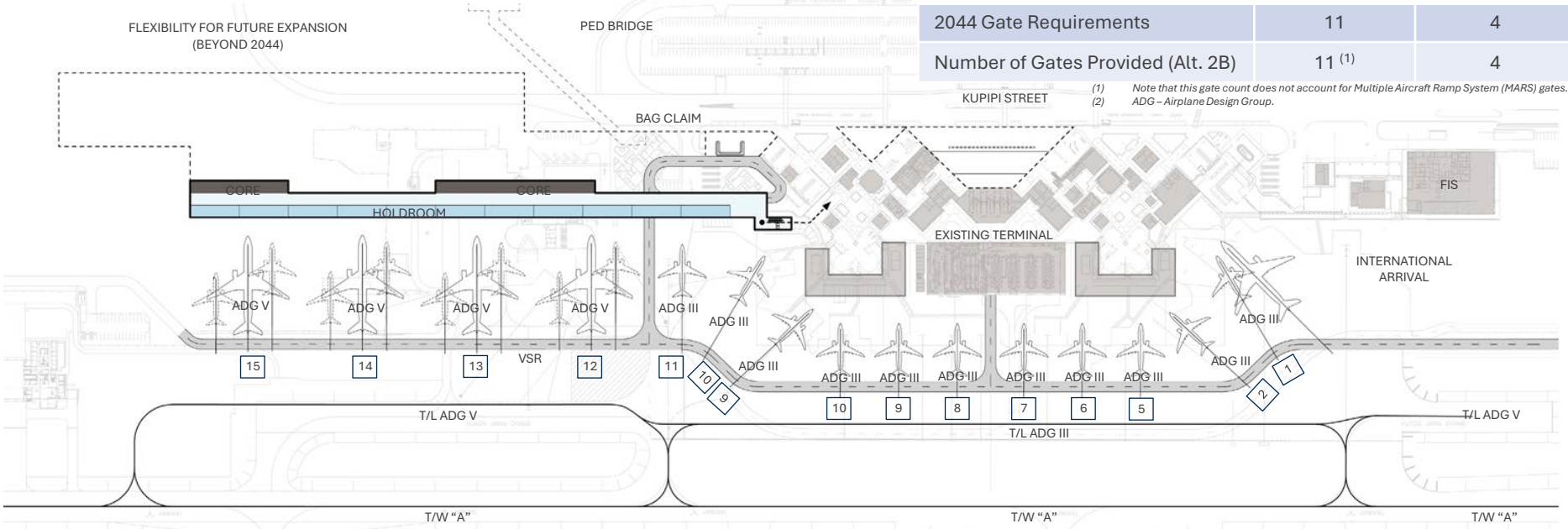
0' 90' 180' 360'

Alternative 2B: North Expansion (2 Story) – Level 2

- **Compatible with all Landside Alternatives**

	ADG III	ADG V
2044 Gate Requirements	11	4
Number of Gates Provided (Alt. 2B)	11 (1)	4

(1) Note that this gate count does not account for Multiple Aircraft Ramp System (MARS) gates.
(2) ADG – Airplane Design Group.



LEGEND

- Gate Expansion
- Bag Claim Improvements
- Check-In Lobby Improvements

ACRONYM:

ATO – Airline Ticketing Office
B.O.H – Back of House
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T/W – Taxiway
VSR – Vehicle Service Road

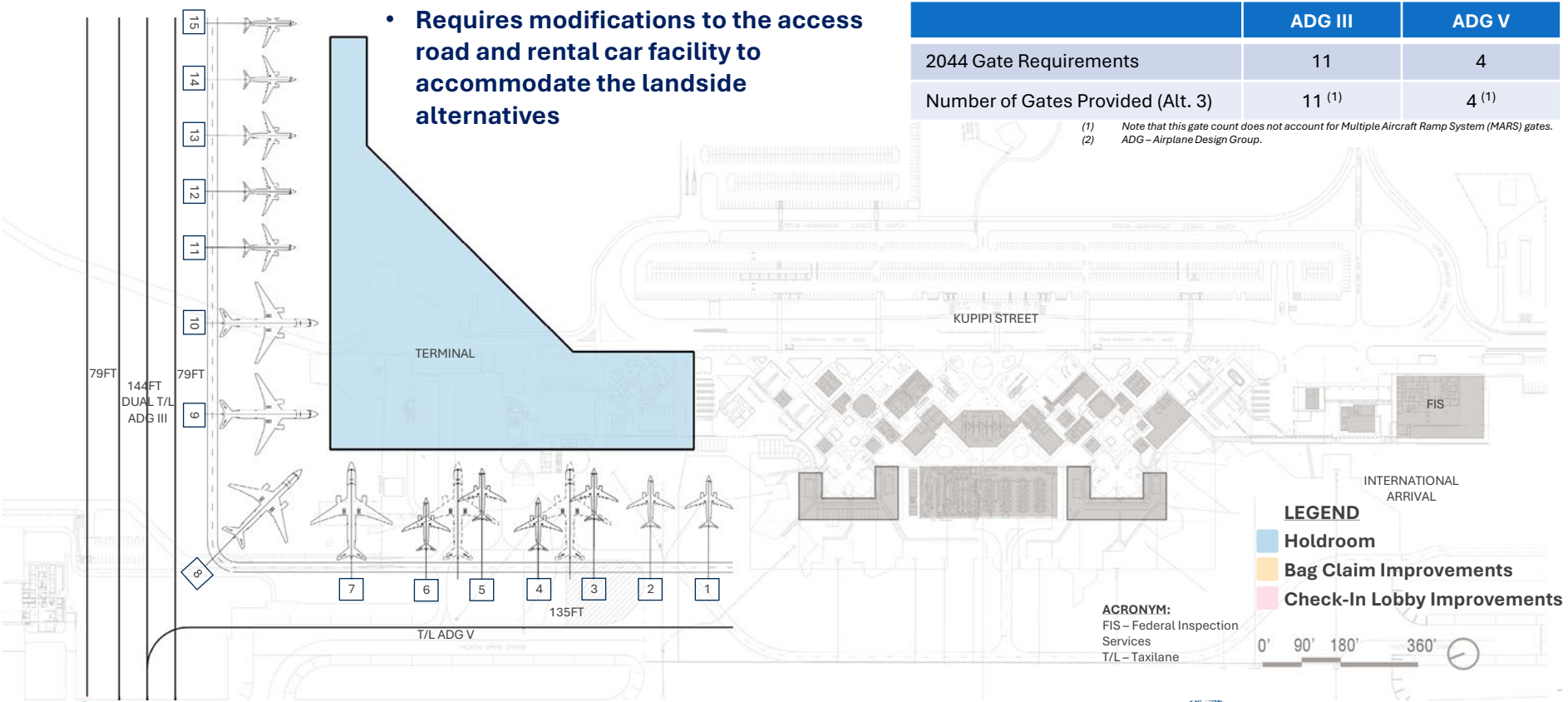
0' 90' 180' 360'

Alternative 3: North Expansion New Terminal

- **Requires modifications to the access road and rental car facility to accommodate the landside alternatives**

	ADG III	ADG V
2044 Gate Requirements	11	4
Number of Gates Provided (Alt. 3)	11 (1)	4 (1)

(1) *Note that this gate count does not account for Multiple Aircraft Ramp System (MARS) gates.*
(2) *ADG – Airplane Design Group.*



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Second Runway Alternatives

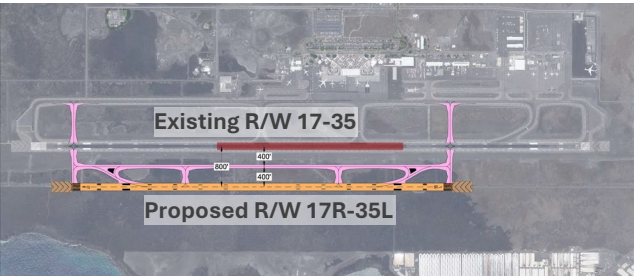
Second Runway Alternatives Objectives

- Integrate a “right-sized” second runway to enhance resiliency at KOA
- Configure second runway to provide sufficient wind coverage
- Optimize exit taxiway placement to improve operational efficiency without overbuilding
- Enhance safety by introducing a second parallel runway to reduce airfield complexity and increase Air Traffic Controller (ATC) flexibility
- Evaluate rerouting touch-and-go operations to the oceanside, with these operations primarily occurring on the second runway, to help reduce noise impacts

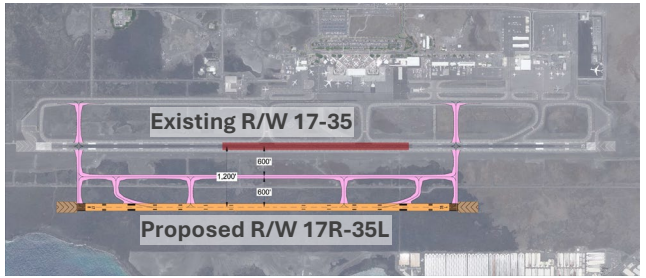
Runway Length Analysis

- Evaluate both takeoff and landing length requirements (including wet runway operating conditions)
- Key factors influencing runway length requirements include:
  - Route and fuel requirements
  - Aircraft operating empty weight
  - Payload assumptions
- Target routes and aircraft types include:
  - Key medium- and long-haul routes identified in the forecast
  - Widebody aircraft and the Boeing 737 MAX 9
- Analysis identifies the estimated takeoff weight under typical operating conditions for the target routes and aircraft types, **resulting in a required runway length of 7,500 feet**

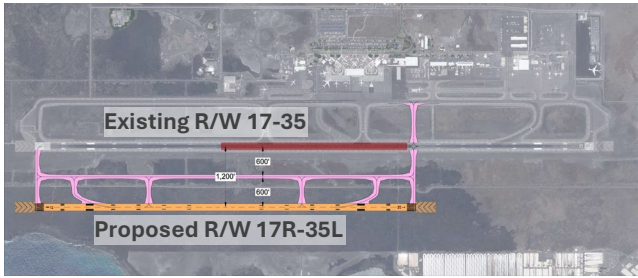
Second Runway Alternatives Overview



Alternative 1
Proposed Runway 17R-35L is 7,500’ L x 150’ W
800’ offset from Existing Runway 17-35
(Stagger Runway 17 ends by 800’)



Alternative 2
Proposed Runway 17R-35L is 7,500’ L x 150’ W
1,200’ offset from Existing Runway 17-35
(Stagger Runway 17 ends by 800’)



Alternative 3
Proposed Runway 17R-35L is 7,500’ L x 150’ W
1,200’ offset from Existing Runway 17-35
(Align Runway 17 ends)

DRAWING LEGEND	
FUTURE RUNWAY PAVEMENT	
FUTURE BLAST PAD	
FUTURE TAXIWAY PAVEMENT	
HIGH-ENERGY AREA OF A RUNWAY	

- The recommended minimum runway centerline separation distance for ADG-V runways is 1,200 feet. *(FAA Advisory Circular 150/5300-13B, Change 1 Section 3.9.4.2)*
- The preference for aligning the two runways toward the Runway 17 ends is driven by the high frequency of south flow operations (departures and arrivals on Runway 17), which occurs approximately 74% of the time annually

Second Runway Alternative 1 Concept Family

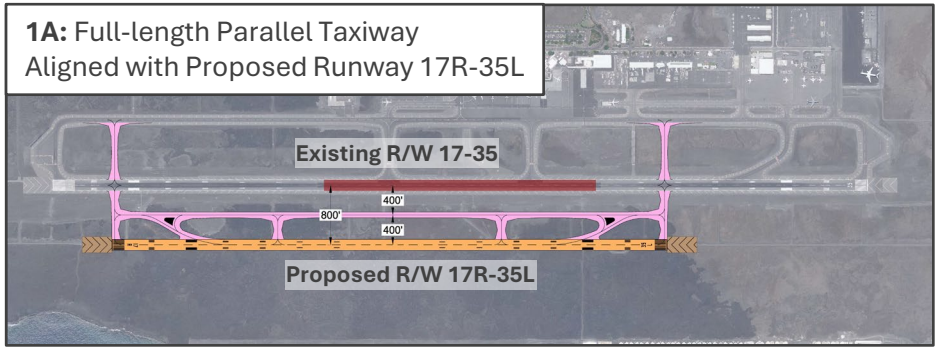
Alternative 1

- Proposed Runway 17R-35L is 7,500’ L x 150’ W
- 800-foot lateral offset from Existing Runway 17-35
- Stagger Runway 17 ends by 800’

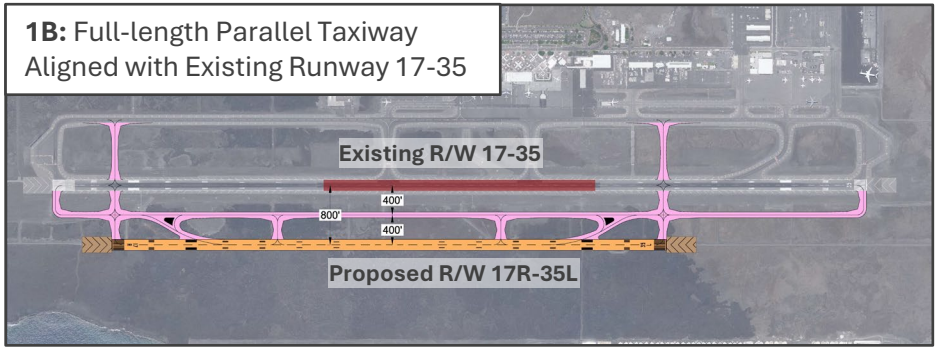
DRAWING LEGEND

FUTURE RUNWAY PAVEMENT	
FUTURE BLAST PAD	
FUTURE TAXIWAY PAVEMENT	
HIGH-ENERGY AREA OF A RUNWAY	

1A: Full-length Parallel Taxiway
Aligned with Proposed Runway 17R-35L



1B: Full-length Parallel Taxiway
Aligned with Existing Runway 17-35



Weighted Arrival Runway Occupancy Time – Fuselage Out (seconds)

Runway	Existing	Alternative 1A	Alternative 1B
Existing 17	69.0	68.2 (-0.8)	68.2 (-0.8)
Existing 35	88.6	82.2 (-6.4)	82.2 (-6.4)
Proposed 17R	-	54.4	54.4
Proposed 35L	-	54.4	54.4

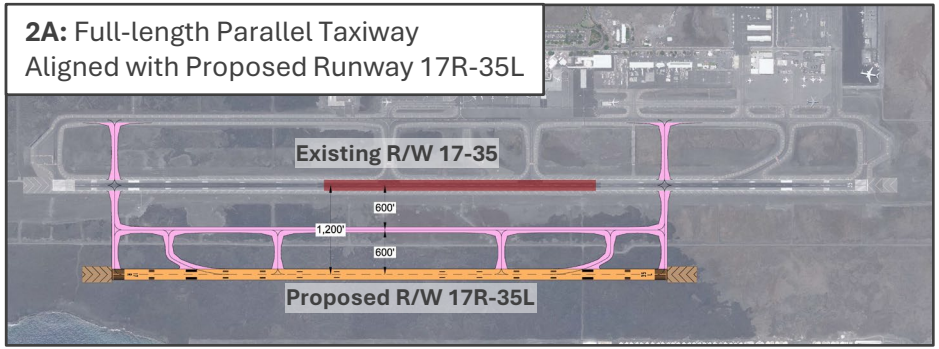
Second Runway Alternative 2 Concept Family

Alternative 2

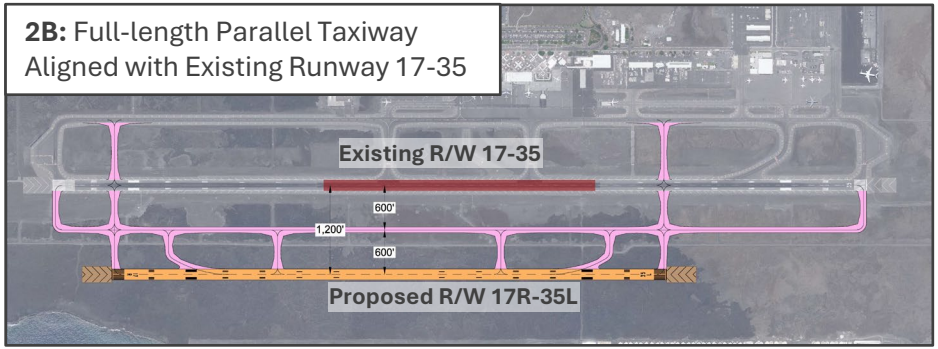
- Proposed Runway 17R-35L is 7,500’ L x 150’ W
- 1,200-foot lateral offset from Existing Runway 17-35
- Stagger Runway 17 ends by 800’

DRAWING LEGEND	
FUTURE RUNWAY PAVEMENT	
FUTURE BLAST PAD	
FUTURE TAXIWAY PAVEMENT	
HIGH-ENERGY AREA OF A RUNWAY	

2A: Full-length Parallel Taxiway
Aligned with Proposed Runway 17R-35L



2B: Full-length Parallel Taxiway
Aligned with Existing Runway 17-35



Weighted Arrival Runway Occupancy Time – Fuselage Out (seconds)

Runway	Existing	Alternative 2A	Alternative 2B
Existing 17	69.0	68.2 (-0.8)	68.2 (-0.8)
Existing 35	88.6	82.2 (-6.4)	82.2 (-6.4)
Proposed 17R	-	54.4	54.4
Proposed 35L	-	54.4	54.4

Second Runway Alternative 3 Concept Family

Alternative 3

- Proposed Runway 17R-35L is 7,500’ L x 150’ W
- 1,200-foot lateral offset from Existing Runway 17-35
- Align Runway 17 ends

DRAWING LEGEND	
FUTURE RUNWAY PAVEMENT	
FUTURE BLAST PAD	
FUTURE TAXIWAY PAVEMENT	
HIGH-ENERGY AREA OF A RUNWAY	

3A: Full-length Parallel Taxiway Aligned with Proposed Runway 17R-35L

3B: Full-length Parallel Taxiway Aligned with Existing Runway 17-35

Weighted Arrival Runway Occupancy Time – Fuselage Out (seconds)

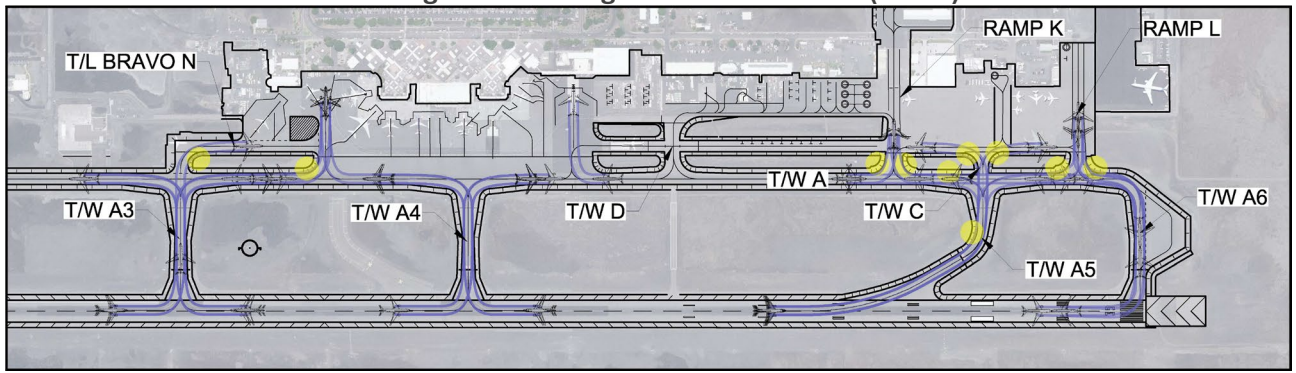
Runway	Existing	Alternative 3A	Alternative 3B
Existing 17	69.0	65.1 (-3.9)	65.1 (-3.9)
Existing 35	88.6	88.2 (-0.4)	88.2 (-0.4)
Proposed 17R	-	54.4	54.4
Proposed 35L	-	54.4	54.4

Additional Airfield Improvements

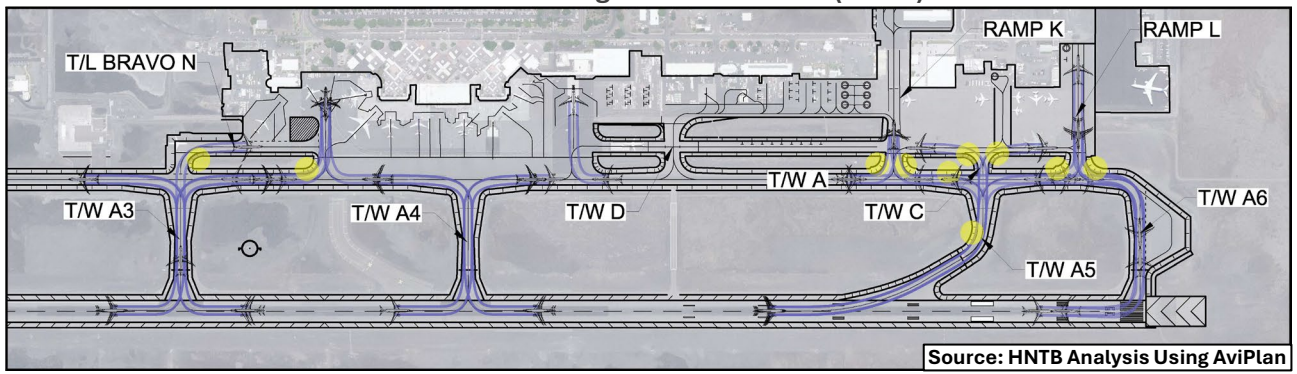
Taxiway Edge Safety Margin (TESM) Deficiencies

- A **TESM deficiency** occurs when the taxiway edge is within the safety buffer while the aircraft is traveling on the taxiway centerline

Existing Critical Design Aircraft: B777-200 (TDG 5)



Future Critical Design Aircraft: B787-9 (TDG 5)

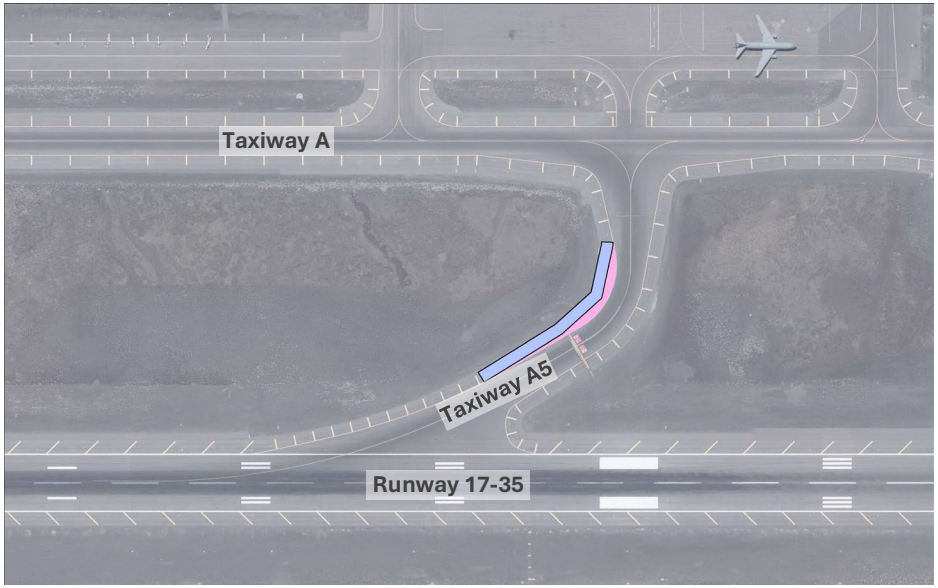


LEGEND

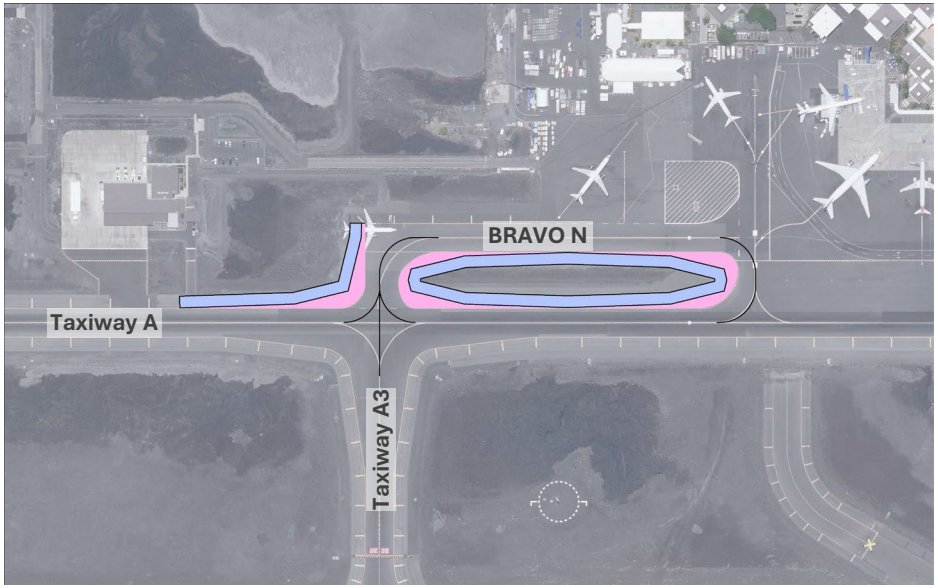
- TDG 5 TESM (14')
- TESM Deficiency

Source: HNTB Analysis Using AviPlan

TESM Deficiency Mitigation Strategies – TDG 5



Taxiway A5



Bravo North

DRAWING LEGEND	
FUTURE TAXIWAY PAVEMENT	
FUTURE TAXIWAY SHOULDER PAVEMENT	

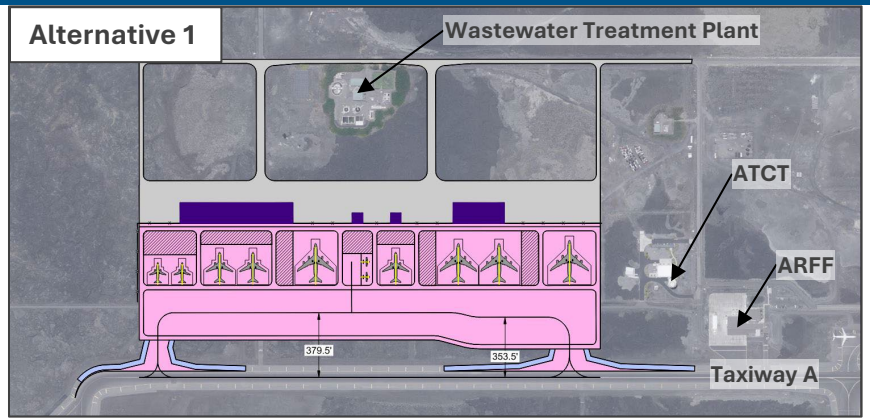
Draft for Discussion Purposes Only
Subject to Further Analyses and Decisions

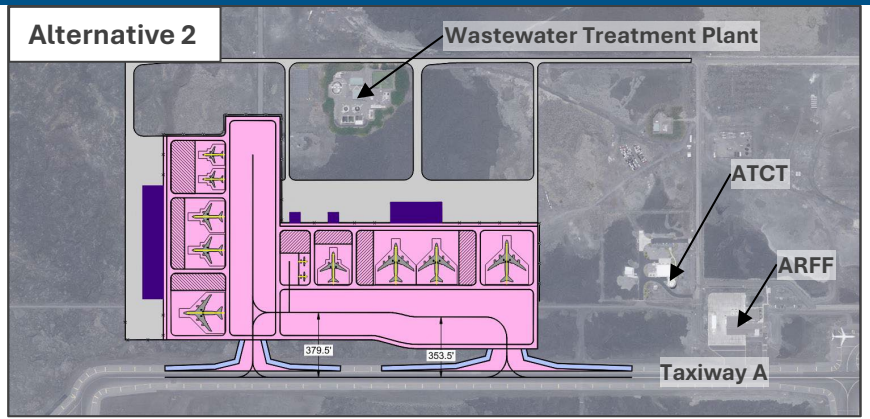
Air Cargo Alternatives

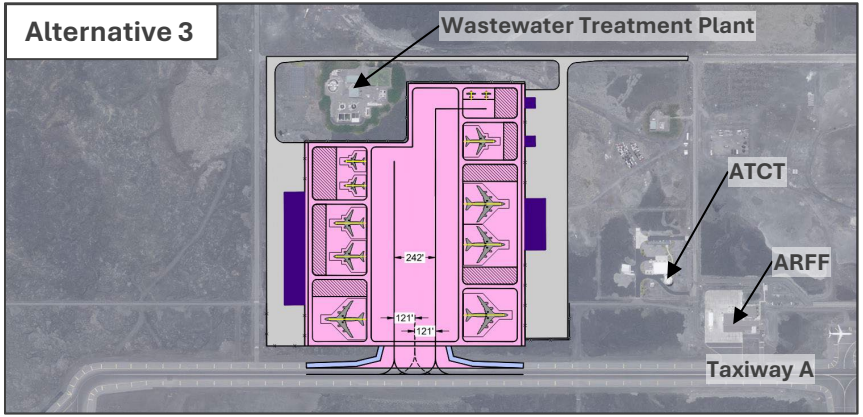
Air Cargo Alternatives Objectives

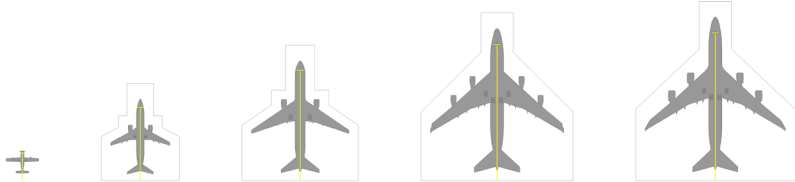
- Provide sufficient facilities to accommodate existing and projected air cargo operations
- Protect existing infrastructure (e.g. wastewater treatment plant, Airport Traffic Control Tower [ATCT], Aircraft Rescue and Fire Fighting [ARFF] station)
- Allow sufficient ramp space for Ground Service Equipment (GSE) storage and future electric GSE charging capabilities
- Consider incorporating a transition facility with cold storage capabilities to support perishables and the Hawaii Department of Agriculture and Biosecurity (DAB) inspections

Air Cargo Alternatives Summary









ADG II (Feeder)
Cessna 208 Caravan
(2 Positions)

ADG III
B737-400
(2 Positions)

ADG IV
B767-300 Freighter
(3 Positions)

ADG V
B747-400 Freighter
(3 Positions)

ADG VI
B747-8 Freighter
(1 Position)

DRAWING LEGEND

FUTURE AIRFIELD PAVEMENT
FUTURE TAXIWAY SHOULDER PAVEMENT
FUTURE GSE STORAGE AREA
FUTURE BUILDING
FUTURE LANDSIDE PAVEMENT
FUTURE PERIMETER FENCE

ACRONYM:
ADG – Airplane Design Group
ARFF – Aircraft Rescue and Fire Fighting
ATCT – Airport Traffic Control Tower
GSE – Ground Service Equipment

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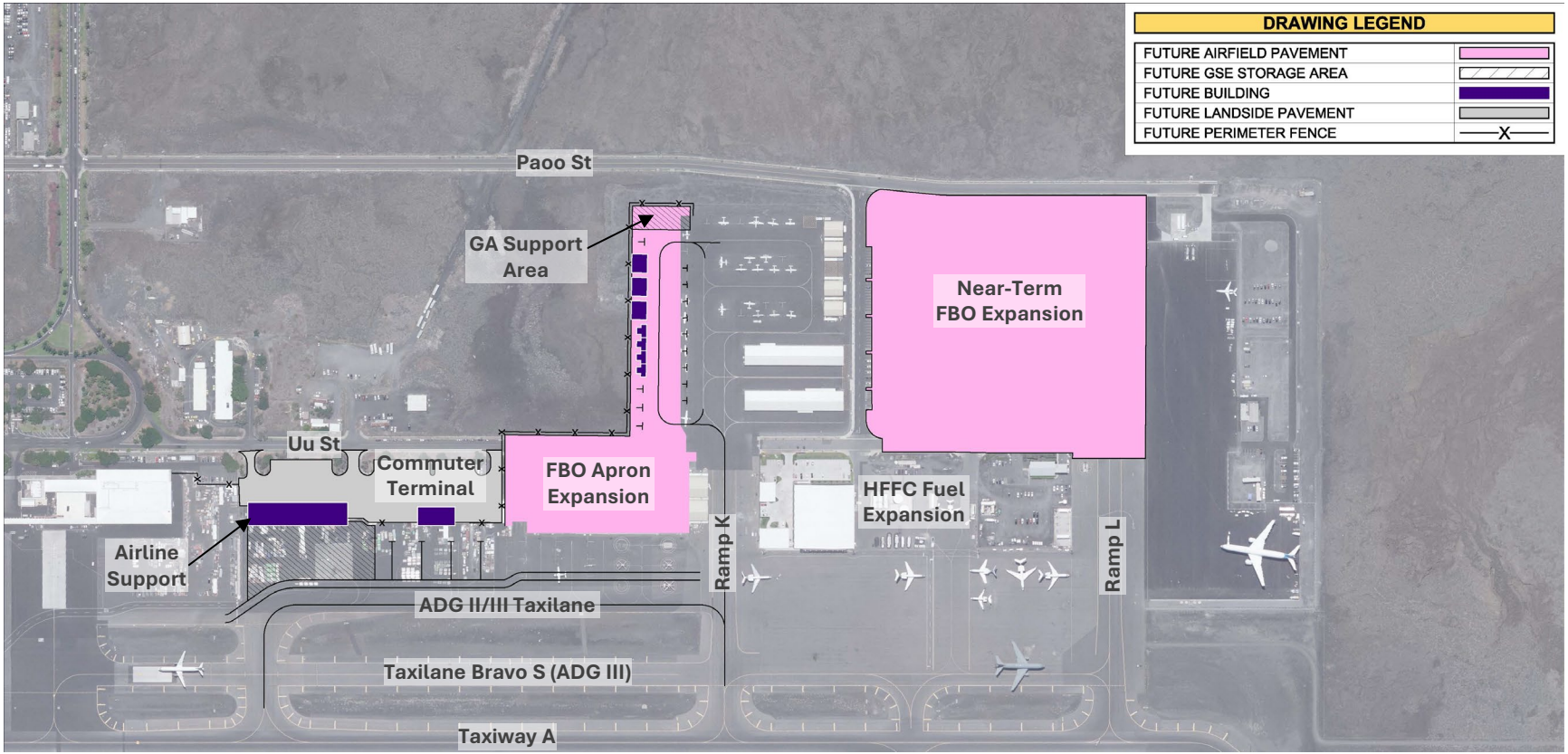
General Aviation and FBO Alternatives

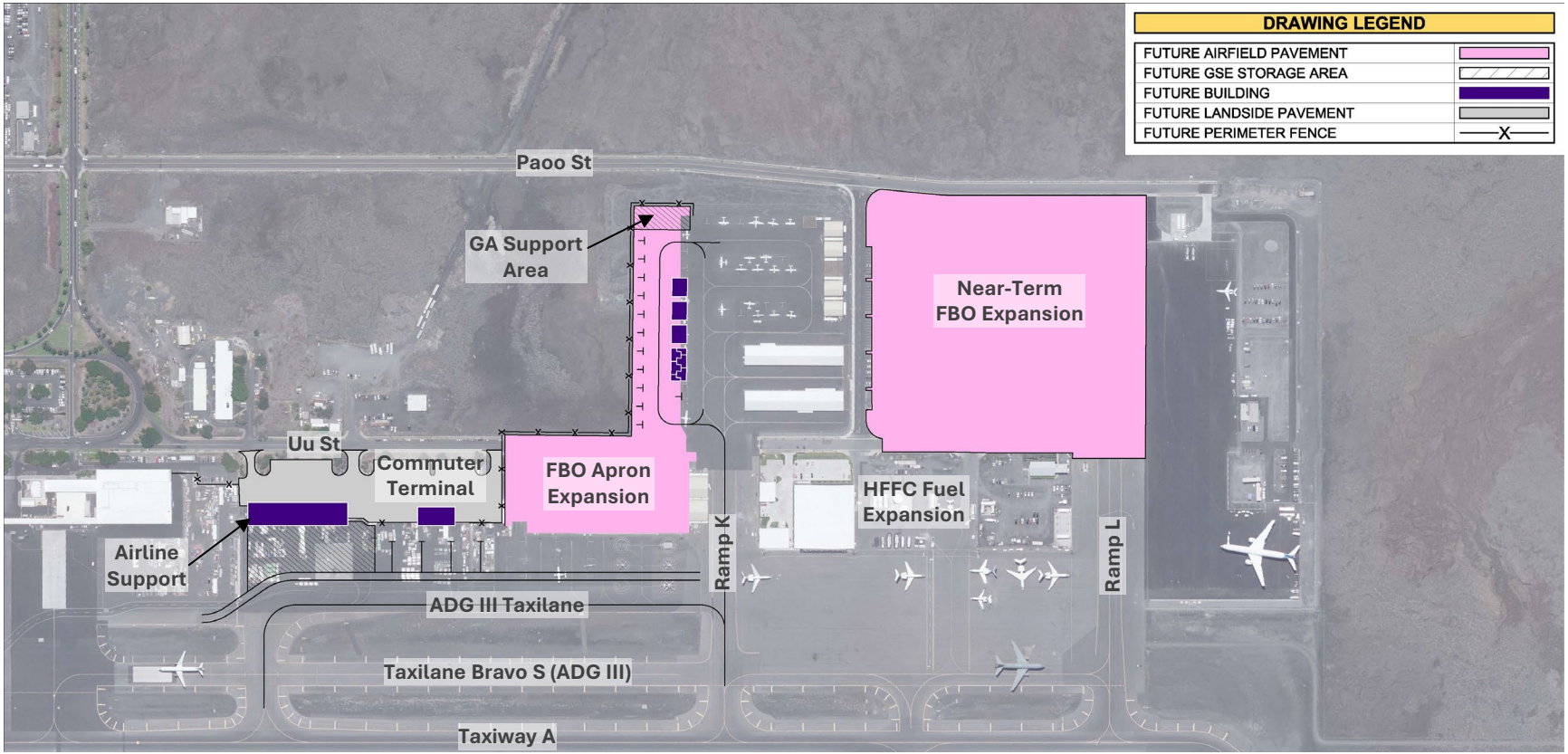
General Aviation and FBO Alternatives Objectives

- Provide sufficient facilities to accommodate the General Aviation (GA) and corporate aviation growth
- Provide additional support facilities for the GA community (e.g., wash rack)
- Protect the Hawaii Fueling Facilities Corporation (HFFC) fuel facility expansion area
- Leverage existing improvements made to the GA apron relocation in recent years
- Account for near-term FBO expansion

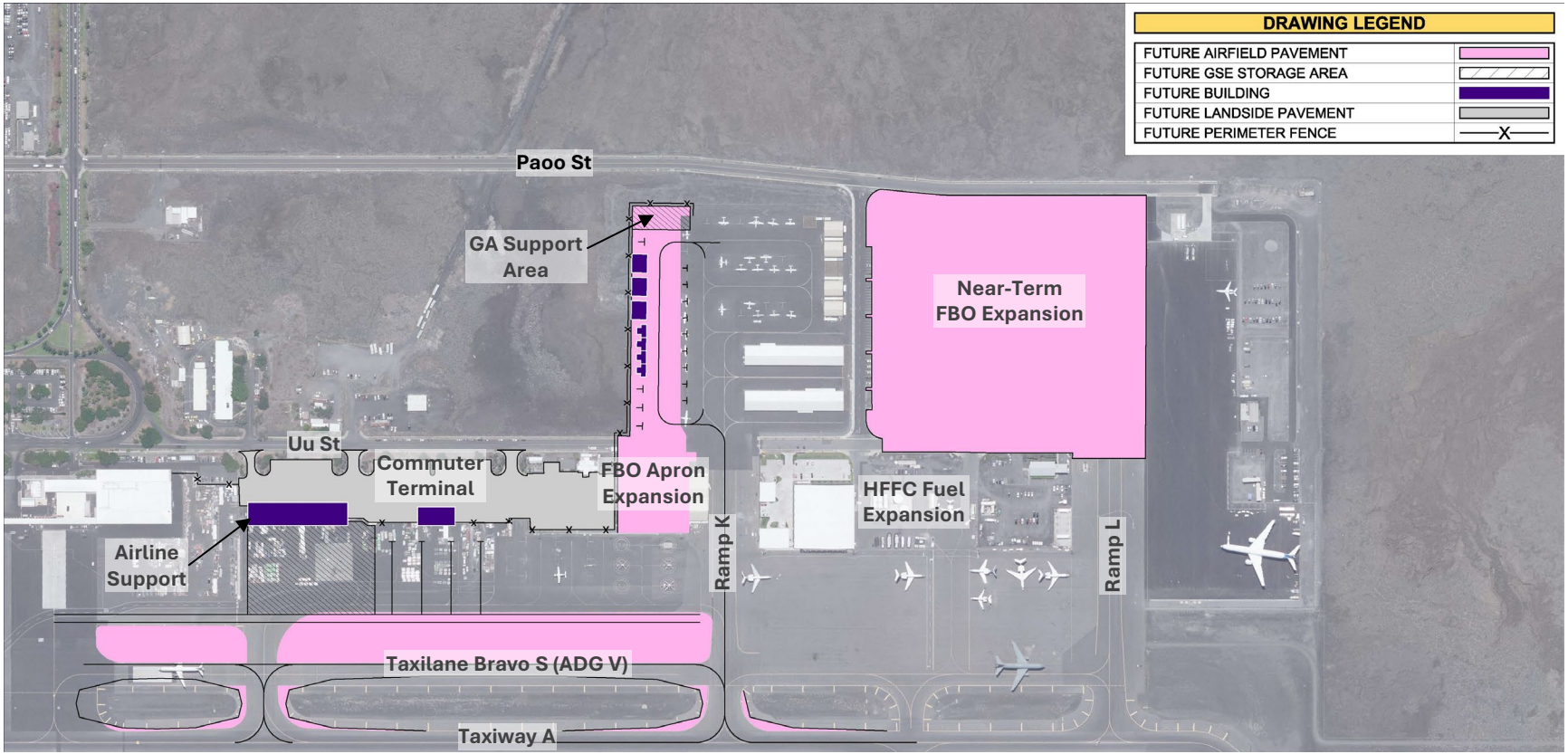
General Aviation and FBO Alternative 1



General Aviation and FBO Alternative 2



General Aviation and FBO Alternative 3

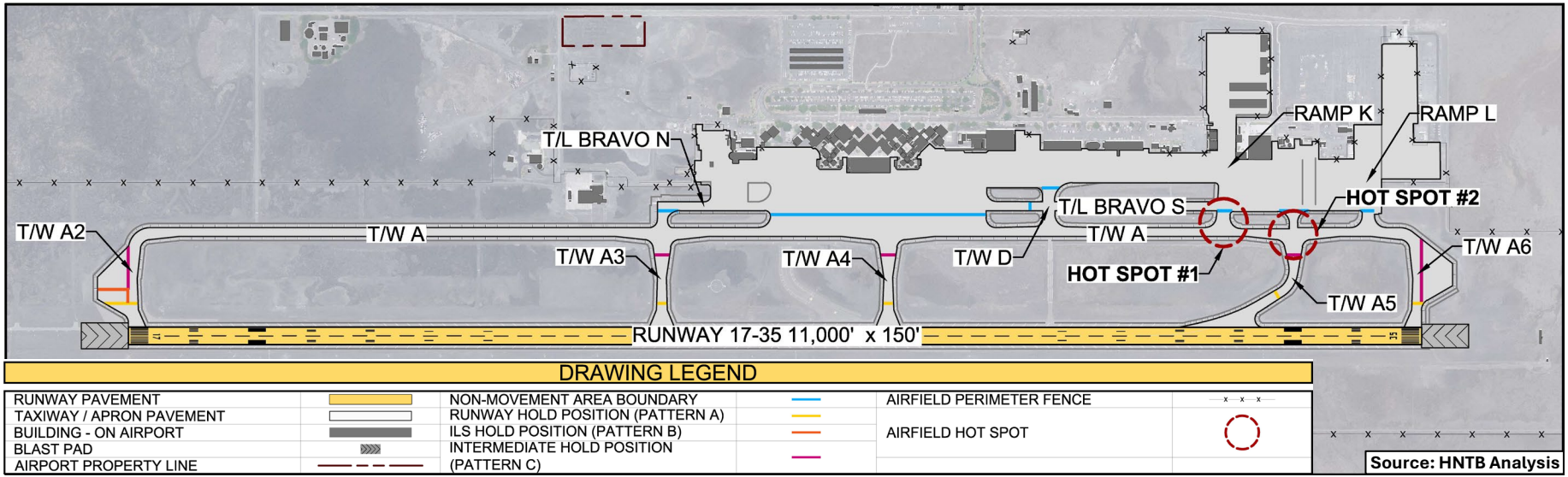


Helicopter Facility Alternatives

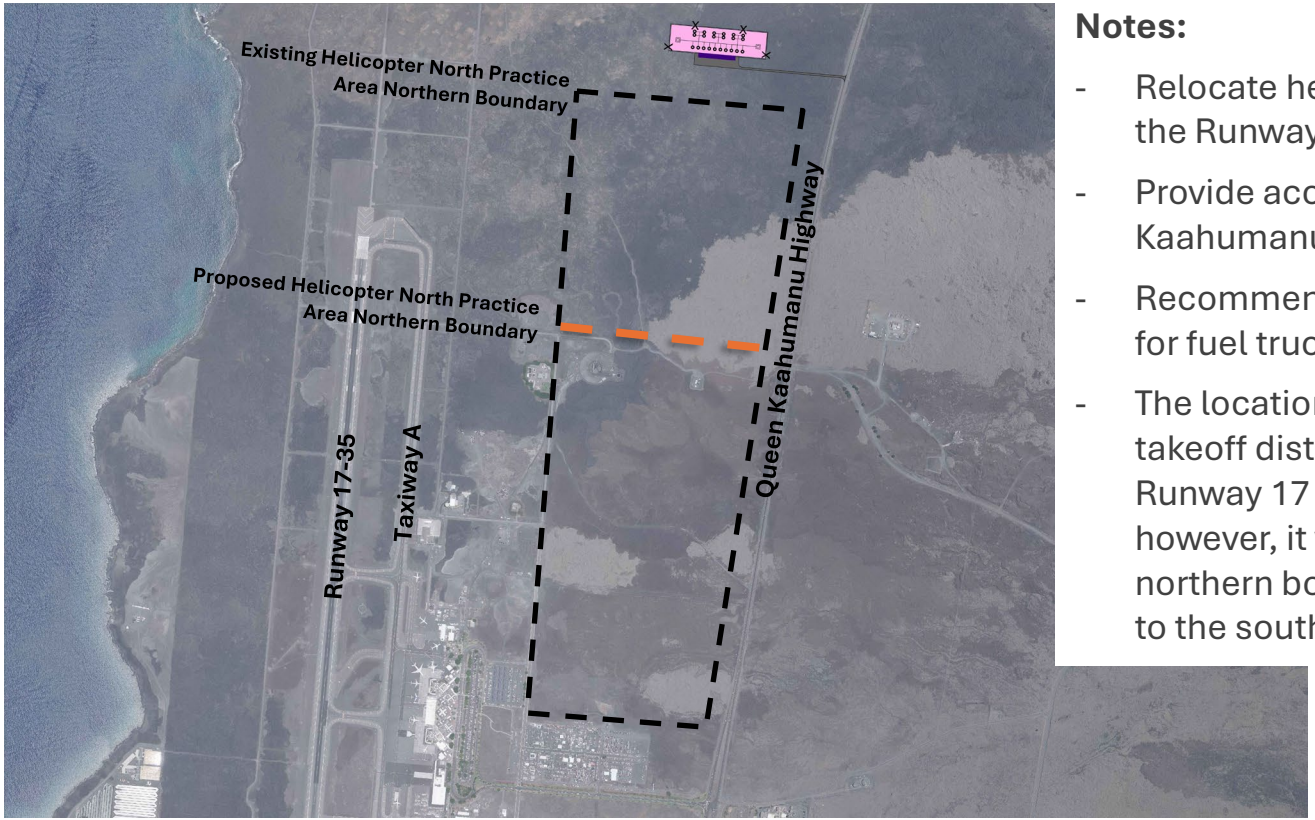
Airfield Hot Spots

- **Hot Spot** is a location within the airfield movement area with a potential risk of safety incidents and require heightened attention by pilots and drivers

Hot Spots	FAA Published Description
1	Extensive helicopter operations on Taxiway A abeam Ramp K
2	Extensive helicopter operations on Taxiway A south of Taxiway A5



Hot Spots Mitigation Strategies – Relocate Helicopter Ops



Notes:

- Relocate helicopter operations northeast of the Runway 17 end
- Provide access via a new road from Queen Kaahumanu Highway
- Recommend adding an airside access road for fuel truck access
- The location provides sufficient southbound takeoff distance from the helipads under Runway 17 prevailing wind conditions; however, it would require shifting the northern boundary approximately 3,550 feet to the south

Helicopter Facility Alternatives Summary

Alternative 1

- Provide **one helipad** for takeoff and landing operations
- Provide access via a new road from Queen Kaahumanu Highway to support efficient medevac transport

Alternative 2

- Provide **two helipads** for takeoff and landing operations
- Provide access via a new road from Queen Kaahumanu Highway to support efficient medevac transport

DRAWING LEGEND	
FUTURE HELIPAD	
FUTURE AIRFIELD PAVEMENT	
FUTURE PASSENGER WALKWAY	
FUTURE BUILDING	
FUTURE LANDSIDE PAVEMENT	
FUTURE PERIMETER FENCE	
FUTURE WINDSOCK	

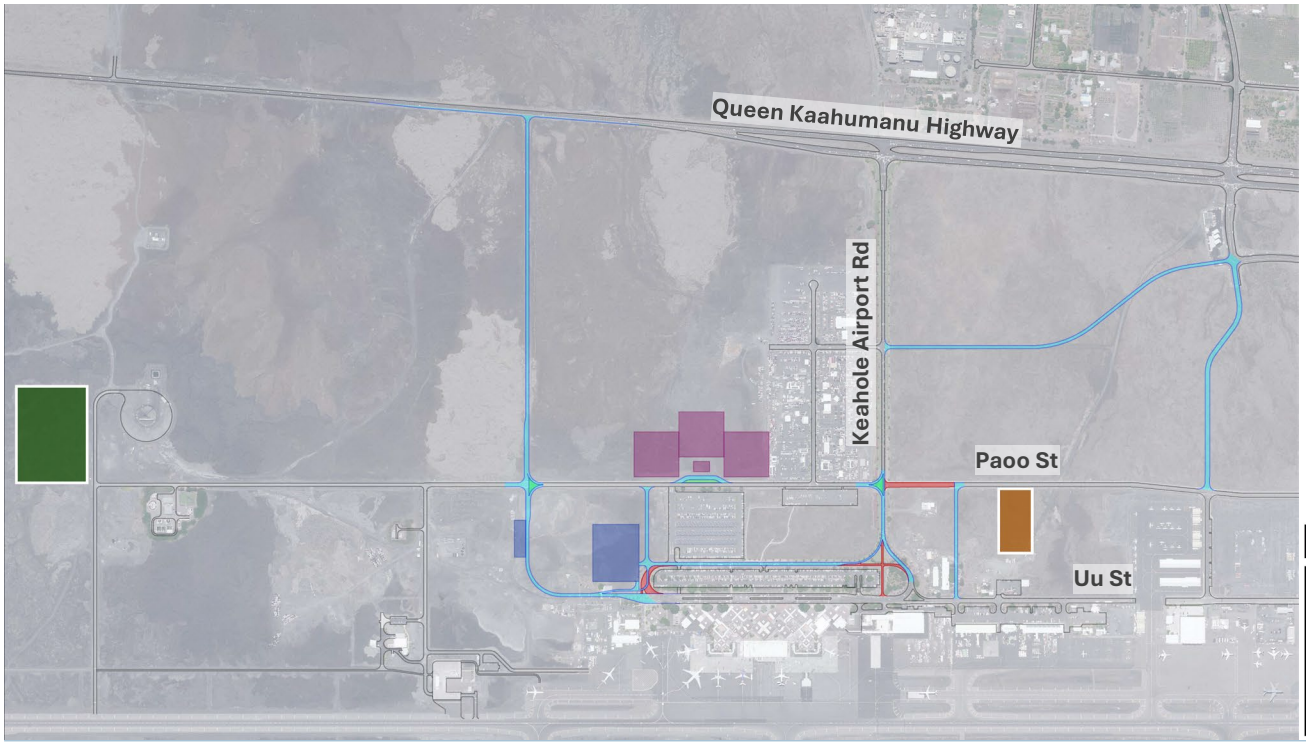
Land Use Alternatives

Land Use Alternatives Objectives

Criteria	Rank of Importance/Notes	Weight
Economic impact - revenue generating for the Department of Transportation / State of Hawaii	• Most important • Tax revenue, supports/creates jobs	50%
Support airport operations	• Airport tenants, businesses that use the airport or air cargo	25%
Political will	• Critical • Aligns with Legislative priorities	10%
Alignment with Kona Community Development Plan (KCDP) / community benefit to support workforce and residents	• Cultural or community impacts • Projects identified in the KCDP – County level support	10%
Environmental sustainability	• Assess species drawn to project sites and coordinate development schedules to mitigate impacts	5%
Drives non-airport visitation/vibrancy/district/interest in area	• Used as guidelines; Not a ranking criteria	N/A

Land Use Alternative 1

- **Compatible with all landside alternatives. Depicted future land uses can be adjusted to align with the preferred landside alternative.**



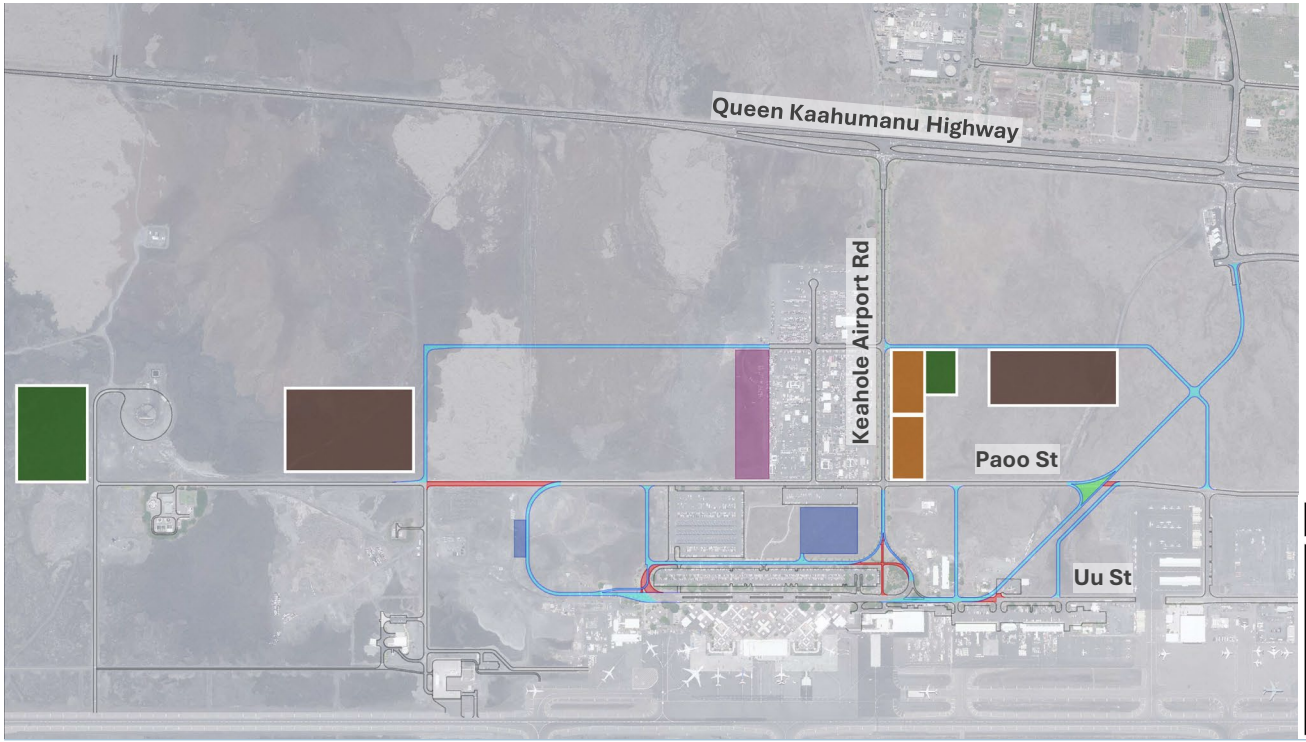
Key Elements:

- Office space for airport tenants (*commercial use*)
- Fire training facility (*institutional use*)

DRAWING LEGEND	
EXISTING ROAD	
FUTURE ROAD	
FUTURE ROAD ISLAND	
DEMOLITION OF EXISTING ROAD	
FUTURE RENTAL CAR FACILITIES	
FUTURE PARKING LOT	
LAND USE: COMMERCIAL	
LAND USE: INSTITUTIONAL	

Land Use Alternative 2

- **Compatible with all landside alternatives. Depicted future land uses can be adjusted to align with the preferred landside alternative.**



Key Elements:

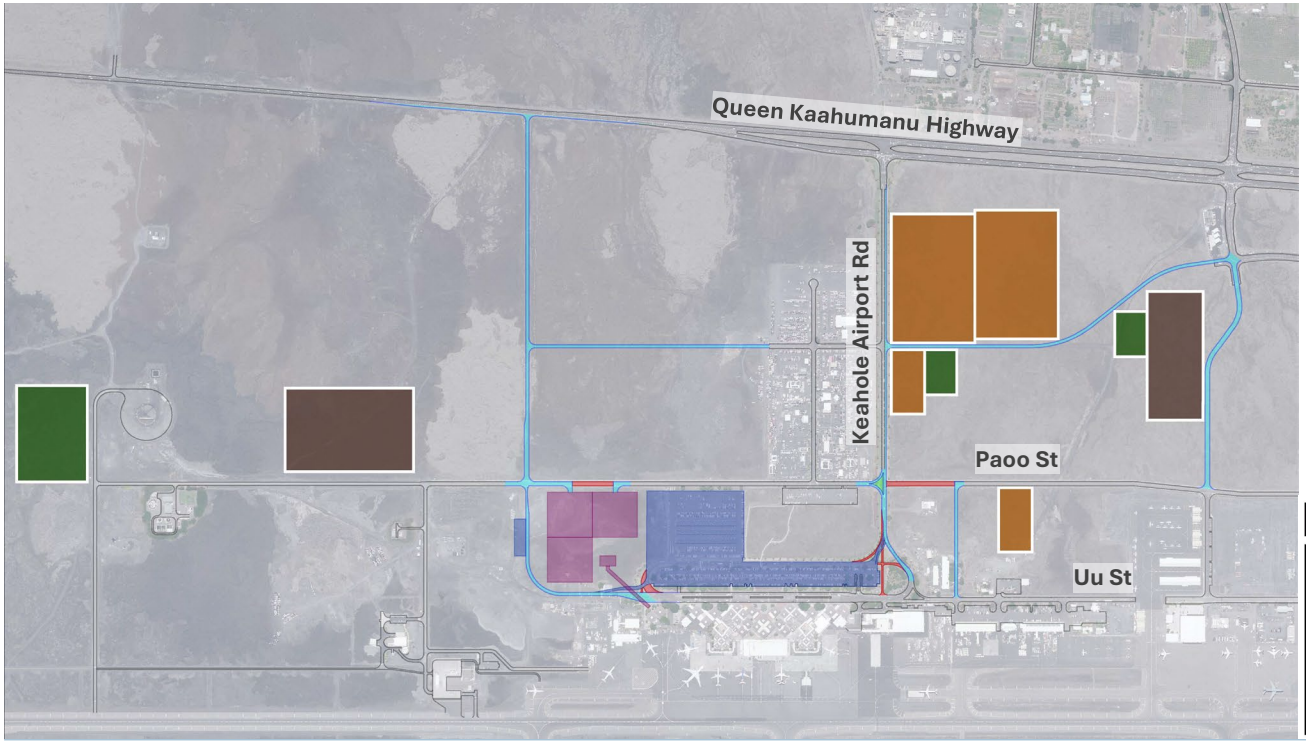
In addition to those included under Alternative 1:

- Limited-Service hotel with small retail component (*commercial use*)
- Mixed use industrial complex near NELHA (*industrial use*)
- Warehouse to support air cargo activities (*industrial use*)
- Educational and cultural center (*institutional use*)

DRAWING LEGEND
EXISTING ROAD
FUTURE ROAD
FUTURE ROAD ISLAND
DEMOLITION OF EXISTING ROAD
FUTURE RENTAL CAR FACILITIES
FUTURE PARKING LOT
LAND USE: COMMERCIAL
LAND USE: INDUSTRIAL
LAND USE: INSTITUTIONAL

Land Use Alternative 3

- **Compatible with all landside alternatives. Depicted future land uses can be adjusted to align with the preferred landside alternative.**



Key Elements:

In addition to those included under Alternatives 1 and 2:

- Full-Service hotel with small retail component below highway (*commercial use*)
- Retail shopping complex (*commercial use*)

DRAWING LEGEND	
EXISTING ROAD	
FUTURE ROAD	
FUTURE ROAD ISLAND	
DEMOLITION OF EXISTING ROAD	
FUTURE RENTAL CAR FACILITIES	
FUTURE PARKING LOT	
LAND USE: COMMERCIAL	
LAND USE: INDUSTRIAL	
LAND USE: INSTITUTIONAL	

Consolidated Alternatives

Approach to Consolidating Alternatives

- **Alternative 1: Minimal Build**
  - Maintain existing infrastructure to the greatest extent possible while meeting projected demand, with only minimal modifications
  - This includes utilizing existing roadways and access points

- **Alternative 2: Modified Existing Infrastructure**
  - Modify existing infrastructure as needed to accommodate future demand, while incorporating improvements that support long-term expandability

Approach to Consolidating Alternatives

- **Alternative 3: Transformational / Landside Redesign**
  - Reconfigure existing terminal and landside operations through a paradigm shift, including:
    - Introduction of a two-level terminal concourse
    - Walkable connection to a consolidated rental car center facility, eliminating the need for rental car shuttles

Consolidated Alternatives Summary

Elements	Alternative 1	Alternative 2	Alternative 3
Landside	**2** • Expand RAC in place • New south access point	**1** • ConRAC with shuttles • New north and south access points	**3** • Walkable ConRAC • New north and south access points
Terminal	**1** • Dual Expansion (1 Level)	**2A** • North Expansion (1 Level)	**2B** • North Expansion (2 Levels)
Second Runway	**1A** • 800’ offset from existing Runway 17-35 • Full-length parallel taxiway aligned with new thresholds	**3A** • 1,200’ offset from existing Runway 17-35 • Full-length parallel taxiway aligned with new runway thresholds	**3B** • 1,200’ offset from existing Runway 17-35 • Full-length parallel taxiway aligned with existing runway thresholds
Air Cargo	**3** • Air cargo apron located perpendicular to Taxiway A	**1** • Air cargo apron located parallel to Taxiway A	**2** • Hybrid configuration between 1 and 3

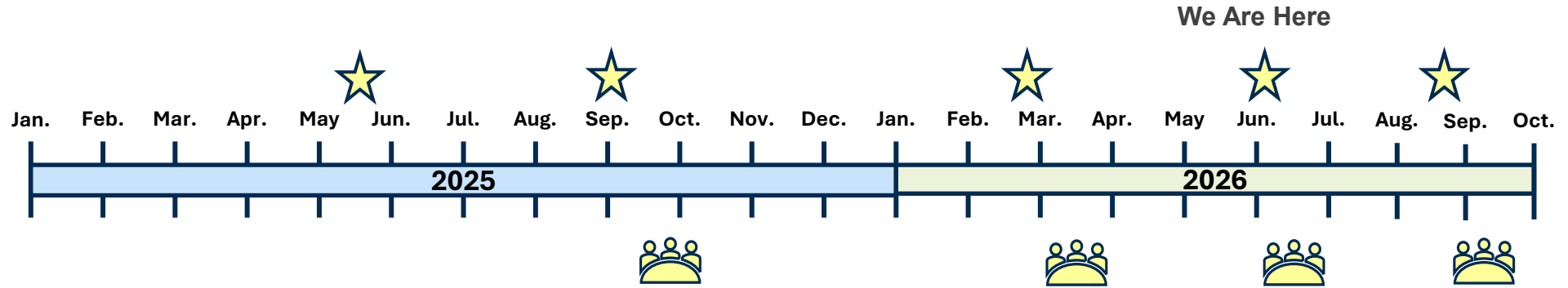
Consolidated Alternatives Summary

Elements	Alternative 1	Alternative 2	Alternative 3
General Aviation and FBO	**3** • Location of proposed hangars and support facilities provides flexibility for future expansion • Achieve full ADG-V operational capability along Taxilane Bravo S	**2** • Location of proposed hangars and support facilities provides flexibility for future expansion	**1** • Location of proposed hangars and support facilities limits expansion capabilities
Helicopter Facility	**1** • Single helipad for takeoff and landing operations	**2** • Two helipads for takeoff and landing operations	**2** • Two helipads for takeoff and landing operations
Land Use	**1** • Commercial and institutional uses only	**2** • Commercial, institutional and industrial uses • No conservation land use change	**3** • Commercial, institutional and industrial uses • Requires conservation land use change

Next Steps

Project Schedule

- Public Advisory Committee (PAC) and Technical Advisory Committee (TAC) Combined Meetings (One Remaining)
- Community Informational Meeting #3 scheduled for June 22
  - One Remaining Community Informational Meeting



Project Website:
https://www.koamasterplanupdate.com/

Next Steps

- Community Informational Meeting #3 scheduled for June 22 (Monday)
  - 6:00 – 7:30 PM
  - West Hawaii Civic Center (74-5044 Ane Keohokalole Hwy, Kailua-Kona, HI 96740)
- Proceed with refined consolidated alternatives and implementation plan
- **PAC/TAC Combined Meeting #5:**
  - Review preferred alternative and implementation plan

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Questions?