



Appendix C

**TERMINAL ALTERNATIVES
EVALUATION CRITERIA**

EXHIBIT C-1
Kona International Airport Master Plan
Terminal Area Development Alternatives
Development Concept Evaluation

EVALUATION CRITERIA	Alternative 1 Expand Existing	Alternative 2 New OST - North	Alternative 3 New OST – South
PEOPLE			
Environment for People			
Architecture			
Experience – Concepts Enhance Design Opportunity			
Level of Service – User Convenience/Adequate Services			
Stress Reduction – Intuitive, Simple, Clear Wayfinding			
PLACE			
Natural Environment			
Context – Sustainable Approach			
Climate – Responsive and Adequate			
Resources – Efficient Site, Open Space, Minimize Stormwater			
Recycle – Maintain Use or Optimize Adaptive Re-use of Facilities			
Community Values			
Culture – Responsive and Relative			
Past – Addresses Current Shortfalls in Expectations			
Present – Maintains Current Valued KOA Characteristics			
Future – Aligns with Community Vision			
PURPOSE			
Function			
Performance			
Efficiency – PAX Processing, Walking Distance, Vertical Movement, Operations			
Flexibility – Adaptable			
Expandability – Space Between and Beyond Functions to Grow			
Facilities Program			
Facility Requirements – Meets Projected			
Passenger Processing – Timely, Meets Goals			
Development Strategy			
Implementation and Constructability – Reasonable Complexity			
Current Phase of Development Considers Future Phases – Grows Into			
Replace Function Before Removing Function – Avoid Temporary Facilities			
Airport Operations – Maintain Safe and Secure			
Airfield – Requires Change in Configuration			
Landside – Requires Change in Configuration			
Cost			
Finance			
Initial Magnitude of Cost and Benefit – Bang for Buck/Value			
Phased Program – Demand Based, Funding Based			
Modernization – Existing Facilities Upgraded/Maintained			
Operational – Optimizes			
Maintenance – Optimizes			
Revenue – Maximize Concessions/Improve Exposure			

**Exhibit C-2
Terminal Alternative Benefit Analysis
Alternatives 1/2/3 – Expand Existing**

Short Term Cost \$64,180,000

Advantages

Main Architectural Character	1	Continues locally preferred ground loading and open air “Aloha Spirit.”
Flexibility for Future Changes	2	The Short Term is the same for all three alternatives. Maintains flexibility to respond to changing demands and financial capability in the future.
	3	Allows common-use processing, check-in kiosks, etc. to be implemented when and if the airlines desire them.
Optimize Current Facilities	4	Onizuka Space Center need not move in the near term. Allows time for proper program development, future needs determination, fund raising, site preparation, design and construction.
Incremental Growth	5	Parking can be added as needed.
Demand Based	6	Allows minimal expenditure to address only the most critical needs: bag claim, passenger security, bag screening, passenger shelter, etc.
	7	No changes to the apron, t/w, roads and drives.

Disadvantages

Passenger Level of Service	1	Defers improvements to concessions, displays, toilets, TSA offices, tenant spaces, etc.
Maintenance Costs	2	Delays significant upgrades needed for building maintenance and systems.
Operational Efficiency	3	Continues current 2 terminal functions; lack of airport operational flexibility.
		Moving bag screening to existing bag make-up areas will result in cramped space; duplications of equipment and staffing continues.

**Exhibit C-3
Terminal Alternative Benefit Analysis
Alternative 1 – Expand Existing**

Intermediate Term Cost \$141,320,000

Advantages

Maintain Architectural Character	1	Maintains present "Aloha Spirit" with courtyards, open air, shared by both interisland and mainland passengers.
Passenger Level of Service	2	Provides second-level loading w/ bridges for mainland flights. Expand concessions, toilets, airlines club rooms if desired. May use natural ventilation or AC.
	3	When drives moves mauka this provides space for non-secure concessions expansion, displays, waiting.
	4	Provides space for more concessions, displays around courtyards; more seating for interisland passengers.
Operational Efficiency	5	Interisland flights continue to ground load but flexibility to use loading bridges when available.
	6	Avoids split operation for airlines.
	7	Unifies terminals into single operationally flexible complex.
	8	Single central passenger screening with adequate queue area, TSA offices and exam rooms and space for expansion in future as needed.
	9	Centralizes bag make-up with single TSA screening operations. Efficient use of staff and equipment.
	10	Turn North Ticketing to face south – straight conveyor run to bag make-up; provides a single ticketing court with flexibility to balance program requirements within space available.
	11	More convenient and clear location for USDA and HDOA.
Expandability	12	Space available under concourse for ramp operations.
	13	Bag claim can expand as needed to meet demand.
Constructability	14	CBP can expand as needed, not required as a part of Intermediate Term.
Minimize Impacts	15	When terminal drives move mauka to edge of existing parking, the parking area is not impacted – provides space for non-secure concessions expansion, displays, waiting.
	16	No change to airside aircraft circulation or new paving.
Phased Program	17	This alternative can be achieved in stages as demand and financial capability dictate. In most cases, expansion of one function need not impact adjacent functions.

Disadvantages

Passenger Level of Service	1	Arriving international passengers continue to walk across apron and use sprung structure for CBP clearance until demand, financial capability or failure of existing structure requires change.
Optimize Current Facilities	2	Requires relocation of the Onizuka Space Center.
Minimize Impacts	3	Requires major changes and upgrades to facilities, buildings and systems while they remain in operation.
	4	Careful phasing and staging of construction required to minimize public inconvenience and coordinate operations during construction.
Costs	5	Tunnels required for bag conveyors from ticketing to bag make-up/TSA screening – need to cut and cover through lava.

Long Term Cost \$102,920,000

Advantages

Passenger Level of Service	1	Raised covered walkway to CBP for arriving international passengers improves security and passenger convenience. Can be expanded in future for second level interisland gates and international arrivals sterile gate.
Flexibility for Future Changes	2	Option remains to go to Alternative 2 or 3 throughout development of Alternative 1.
Minimize Impacts	3	Each area and function can be expanded to respond to demand without affecting other areas.
	4	New CBP facilities can be built while existing continues in full operation with no operational conflicts.
	5	Continue use of tour passenger assembly area and bus parking during and after construction of new CBP.
	6	No additional aircraft paving required. May relocate T/W A closer to runway if group V Traffic frequency requires it.

Disadvantages

Minimize Impacts	1	Requires provision of new offices for Airport Management and staff before CBP can expand into their current areas.
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Alternative 1 Total Cost = \$308,420,000

Exhibit C-4 Terminal Alternative Benefit Analysis Alternative 2 – New North Terminal		
Intermediate Term Cost \$209,850,000		
Advantages		
Maintain Architectural Character	1	Terminal can be designed to continue the atmosphere of Aloha, use natural ventilation in some areas, planting, etc.
Passenger Level of Service	2	Provides a new terminal with all amenities for mainland and international passengers.
Flexibility	3	Interim international bag claim available for domestic use when not secured.
Optimize Current Facilities	4	Onizuka Space Center need not be relocated in near term.
Disadvantages		
Passenger Level of Service	1	Interisland passengers gain only most pressing facilities and systems improvements to prevent failures.
Flexibility	2	Will lose flexibility of interisland aircraft using bridged gates when available.
Operational Efficiency	3	Requires split interisland and overseas operations for some airlines.
Constructability	4	Some construction and infrastructure required in the lava field for roads, parking, terminal, and apron.
Minimize Impacts	5	Temporary CBP facilities using existing Airport Management and staff facilities is required as new terminal requires removal of existing "sprung structure."
	6	Requires construction of new offices for Airport Management and staff before existing remodeled for temporary CBP use.
	7	When T/W A is relocated to the west in this phase or Long Term responding to Group V aircraft frequency, it will require extending T/W A beyond existing T/W G and probable replacement of T/W G to the north.
Incremental Growth	8	Expensive first step as new terminal initial phase of development is extensive in order to be operationally complete.
Demand Based	9	Existing terminal capacity without mainland overseas traffic is way in excess of demand for only interisland passengers.
Long Term Cost \$247,660,000		
*Advantages and Disadvantages from Alternative 1 Intermediate Term apply to the phase		
Advantages		
Incremental Growth	1	New terminal can expand incrementally to respond to demand.
	2	Expansion and upgrade to existing terminal facilities for interisland use per Alternative 1, can be achieved incrementally as demand and financial capability dictate.
Disadvantages		
Constructability	1	Expansion to the north for terminal, concourse and apron will require construction in the lava field.
	2	Limited area available for construction of close in public parking.
Alternative 2 Total Cost = \$521,690,000		

**Exhibit C-5
Terminal Alternative Benefit Analysis
Alternative 3 – New South Terminal**

Intermediate Term Cost \$201,740,000

Advantages

Maintain Architectural Character	1	Terminal can be designed to continue the atmosphere of Aloha, use natural vegetation in some areas, planting, etc.
Passenger Level of Service	2	Provides a new terminal with all amenities for mainland and international passengers.
Optimize Current Facilities	3	Onizuka Space Center need not be relocated in near term.
	4	Preliminary site development and some utilities are in place from current uses of the site.

Disadvantages

Passenger Level of Service	1	Interisland passengers gain only most pressing facilities and systems improvements to prevent failures.
Flexibility	2	Will lose flexibility of interisland aircraft using bridges gates when available.
Operational Efficiency	3	Requires split interisland and overseas operations for some airlines.
Incremental Growth	4	Expensive first step as new terminal initial phase of development is extensive in order to be operationally complete.
Demand Based	5	Existing terminal capacity without mainland overseas traffic is way in excess of demand for only interisland passengers.
Minimize Impacts	6	Requires the relocation of the ATCT and ARFF and limited GA activity.

Long Term Cost \$225,430,000

*Advantages and Disadvantages from Alternative 1 Intermediate Term apply to this phase

Advantages

Incremental Growth	1	New terminal can expand incrementally to respond to demand.
	2	Expansion and upgrade to existing terminal facilities for interisland use per Alternative 1, can be achieved incrementally as demand and financial capability dictate.

Disadvantages

Constructability	1	Limited area available for construction of close in public parking.
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Alternative 3 Total Cost = \$491,350,000