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Master Plan Executive Summary

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City of Atlanta, Department of Aviation Published March 2015

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This document provides an overview of the findings

and recommendations from the Master Plan study

for Hartsfield-Jackson Atlanta International Airport.

The Master Plan report should be consulted for

additional information on the technical analyses,

assumptions, and methodologies supporting the

findings and recommendations.

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Airport History

Hartsfield-Jackson Atlanta International Airport (the Airport or ATL) has served the City of Atlanta's commercial aviation needs since the dawn of air travel. Originally operating as Candler Field, the Airport became Atlar Municipal Airport in the 1930s, with its terminal facilities located north o the airfield and south of Virginia Avenue.

Expanded and reconfigured several times to accommodate increasing passenger and aircraft activity, the Airport as configured today has its roots in the Atlanta Airport Improvement Program completed in 198 This development program resulted in a new state-of-the-art Central Passenger Terminal Complex (CPTC) situated midfield between the nor and south airfields and encompassing a centralized terminal building or the west connected to a series of parallel north-south midfield concours via an underground automated people mover (Plane Train) system. At the time of construction, this configuration of terminal building and concourses was innovative, providing improved connections for travelers and significant operating efficiencies for airlines, and has since been copied at many other airports worldwide.



All photographs of Hartsfield-Jackson Atlanta International Airport provided courtesy of the City of Atlanta, Department of Aviation.

S	The Airport was renamed William B. Hartsfield Atlanta Airport in 1971 to
f	honor the long-time mayor of Atlanta, who oversaw the initial growth
nta	of the Airport, and renamed again five months later to William B. Hartsfield
of	Atlanta International Airport when Eastern Airlines initiated the first
	international service at the Airport. In 2003 the Airport was renamed
	Hartsfield-Jackson Atlanta International Airport to honor the late mayor
	of Atlanta, Maynard H. Jackson Jr., for his role in redeveloping the Airport
	into its current configuration in the 1970s.
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	Since the 1970s, the Airport has continued to expand while remaining
th	consistent with the CPTC configuration; most recently, Runway 10-28
ı	(2006), the Rental Car Center (2009) and the International Terminal/
es	Concourse F (2012) were added as recommended in the 1999 Airport
	Master Plan. The Airport has been the busiest in the world in terms of
	enplaned passengers since 1998.



Introduction

In January 2011, the City of Atlanta, Department of Aviation (DOA) initiated the current Airport Master Plan to provide a guide for facility development that will accommodate the future commercial aviation needs of the region throughout the 20-year planning period. With the opening of the Maynard H. Jackson Jr. International Terminal in May 2012, the final major component recommended in the 1999 Master Plan was completed, and it became necessary to focus attention on planning for future development. In preparing the Master Plan, the planning team identified and analyzed improvements to airfield, terminal/gate, landside, and support facilities necessary to efficiently accommodate forecast growth in commercial aviation activity at the Airport.

A master plan is one of the most important documents from an airport management and operations perspective, as it guides future airport growth and development. The master plan provides a road map for efficiently accommodating aviation demand throughout the foreseeable future (typically, a 20-year period), while preserving the flexibility necessary to respond to a continually evolving industry. Aviation has changed significantly in the last 16 years since the 1999 Master Plan was completed. These changes have been most significant in relation to passenger and baggage screening, technology changes affecting airline check-in procedures, the airline aircraft fleets, and aviation industry economics.

The current Master Plan was undertaken at a time of considerable change at the Airport. Southwest Airlines' acquisition of AirTran Airways in 2011 ultimately led to the initiation of service by Southwest Airlines at the Airport in early 2012, and the merging of flight operations for the combined airline under the Southwest Airlines brand in late 2014. At the same time, Delta Air Lines was implementing changes to its regional aircraft fleet to retire smaller 50-seat regional jets in favor of 70-to-90-seat regional jets, and to convert the fleet serving some regional aircraft markets to mainline Boeing 717 aircraft. Southwest's acquisition of AirTran has resulted in significant changes in the combined airline's connecting passenger activity at the Airport. Along with the changes in Delta's fleet, these events have affected the character of growth in aircraft operations at the Airport and, in turn, the demand/capacity relationships among airfield, terminal, and landside facilities going forward. These factors were considered in preparing the Master Plan to define a development plan that will support logical and purposeful development that efficiently meets Airport and community needs, minimizes the likelihood of incompatible or conflicting development, and preserves options to enable prudent development-related decision-making as demand or other conditions warrant or opportunities are presented.

Master Planning Process

At the start of the master planning process, numerous meetings were held with Airport stakeholders to provide them with an understanding of the master planning process, and to gather information on the perceived strengths, weaknesses, opportunities, and threats related to the Airport. Subsequently, an inventory of the physical and operational characteristics of the Airport and its environs was conducted to provide the basis for the required analyses. Aviation activity forecasts were developed for the 20-year planning period through coordination with the airlines, and were ultimately reviewed and approved by the Federal Aviation Administration (FAA). The forecasts were used to establish future requirements for airfield, terminal/gate, landside (access and parking), and support facilities, which were then used to define alternatives for each component. The alternatives were evaluated and the preferred alternative for each was selected and integrated into an overall development plan for the Airport. An implementation plan, including timing and triggers for the various development components, and cost estimates were developed for subsequent use in financial planning. During the master planning process, input was received through stakeholder group meetings, public workshops, the Airline Working Group, and the Master Plan Advisory Committee, which included representatives from government agencies, airlines, and local business/community organizations.











Aviation Activity Forecasts

To assess the ability of Airport facilities to accommodate future demand and to identify the extent of new or expanded facilities required, aviation activity forecasts were developed for airline passengers, scheduled and other aircraft operations, and cargo tonnage.

The enplaned passenger forecasts were developed using a bottom-up approach based on regression analysis using socioeconomic variables and airline network characteristics. Specifically, socioeconomic regression analysis based on the historical relationships between local socioeconomic factors (e.g., population, employment, per capita income) and numbers of originating passengers at the Airport was used to forecast future numbers of originating passengers. Assumptions regarding future connecting passenger percentages at the Airport were then used with the originating passenger forecasts to derive forecasts of total enplaned passengers for the 20-year planning period. Passenger airline aircraft operations (takeoffs and landings) forecasts were developed based on historical and forecast relationships among enplaned passengers, load factors, and average seating capacities of aircraft types serving the Airport. Additionally, conversations with representatives from both Delta Air Lines and Southwest Airlines supported assumptions used in this analysis.

Development of the air cargo tonnage forecasts involved both quantitative analysis and subjective judgment. In general, historical air cargo activity at the airport was examined to identify trends that provided an indication of future activity. Additionally, a review of industry forecasts prepared by the FAA (*FAA Aerospace Forecasts, Years 2012 – 2032*) and The Boeing Company (*World Air Cargo Forecasts, 2010 – 2011*) provided an understanding of domestic and international market trends. Ultimately, both analysis and judgment were used to inform the development of forecast cargo tonnage.

Between 2011 and 2031 (the end of the planning period for the Master averaging between 84 percent and 85 percent. The average number of seats Plan), the total number of enplaned passengers is forecast to increase from per departure is forecast to increase from an Airport average of 122.6 seats 46,332,795 to 60,331,400. During this period, the number of originating in 2011 to an average of 138.1 seats in 2031. This forecast increase in seats enplaned passengers is forecast to increase from 14,360,706 to 21,728,000, per departure is a result of airline plans to phase-in larger and more efficient while the number of connecting enplaned passengers is forecast to increase aircraft and the complete phase-out of the 50-seat regional jet because of from 31,972,089 to 38,603,400. The connecting passenger share of total its economic operating inefficiencies. enplaned passengers is forecast to decrease from 69.0 percent in 2011 Total cargo weight at ATL is forecast to increase from 663,136 tons in 2011 to 64.0 percent in 2031 as Southwest continues to assimilate the AirTran to 1,414,000 tons in 2031. Approximately 60 percent of this cargo weight operation and reduces connecting passenger volumes.

to 64.0 percent in 2031 as Southwest continues to assimilate the AirTran operation and reduces connecting passenger volumes. The number of passenger airline aircraft operations at the Airport is forecast to increase from 892,256 in 2011 to 1,034,600 in 2031. Between 2011 and 2031, the majority of passenger airline aircraft operations are forecast to be domestic operations; however, the domestic share of total operations is forecast to decrease from 92.4 percent in 2011 to 88.8 percent in 2031. Over the same period, load factors are forecast to remain relatively unchanged, the same period, load factors are forecast to remain relatively unchanged, to 64.0 percent in 2031 as Southwest continues to assimilate the AirTran operation and reduces connecting passenger volumes. Total cargo weight at ATL is forecast to increase from 663,136 tons in 2011 to 1,414,000 tons in 2031. Approximately 60 percent of this cargo weight will be carried by all-cargo aircraft, with the remainder carried as belly cargo on passenger aircraft. The number of all-cargo aircraft operations is forecast to increase from 11,908 in 2011 to 19,200 in 2031. The number of general aviation (GA)/air taxi operations is forecast to increase from 19,430 in 2011 to 21,100 in 2031, while the number of military aircraft operations is forecast to remain constant at 400 annual operations throughout the planning period. Total operations will grow from 923,991 in 2011 to 1,075,300 in 2031.

Annual Enplaned Passengers



Commercial Passenger Aircraft Operations



Annual Cargo Volume



Total Aircraft Operations

Existing Facilities



AIRFIELD

- 1 Runway 8L-26R / 9,000 feet
- 2 Runway 8R-26L / 10,000 feet
- 3 Runway 9L-27R / 12,390 feet
- 4 Runway 9R-27L / 9,000 feet
- 5 Runway 10- 28 / 9,000 feet

TERMINAL

- 6 Domestic Terminal / Concourse T
- 7 Concourse A
- 8 Concourse B
- 9 Concourse C
- 10 Concourse D
- 11 Concourse E
- 12 International Terminal / Concourse F

LANDSIDE

- 13 North and South Domestic Parking Decks
- 14 Consolidated Rental Car Facility
- 15 International Hourly Parking Deck
- 16 International Park-Ride Parking Deck

SUPPORT

- 17 Southwest Hangar
- 18 ExpressJet Hangar
- 19 North Cargo Facilities
- 20 FAA Airport Traffic Control Tower
- 21 Delta Technical Operations Center
- 22 Gate Gourmet Domestic
- 23 Delta International Cargo
- 24 Delta Laundry & GSE
- 25 Delta Flight Kitchen
- 26 Maintenance Facilities
- 27 United States Postal Service
- 28 Gate Gourmet International
- 29 South Cargo Facilities
- 30 City South Hangar
- 31 Landmark Aviation
- 32 Technical Support Campus
- 33 DOA Safety Training Facility
- --- Runway Protection Zone
- ---- Property Line

Facility Requirements

The relationship between demand and capacity with regard to the many functional components of an airport is complex. Numerous factors affect how efficiently a certain level of activity (demand) can be processed within a specific system or facility (capacity). Furthermore, the level of service (LOS) that is acceptable varies by user, facility, and stakeholder. The relationship between demand and capacity was explored in the requirements analysis in the context of various Airport components; the ability of existing facilities to accommodate future demand and the future facility development needed to accommodate future activity were assessed. Various computer models were used to simulate passenger movements across all terminal processes, vehicle movements on the landside roadway and curbside areas, and aircraft movements in the airspace and on the airfield. Additionally, planning factors were developed using information gathered during the master planning process, industry standards, and metrics provided by Airport staff, as well as experience and knowledge of other airports. The combination of these factors and the analyses conducted provided the basis for the assessment of future facility requirements.

Requirement Category	Existing	2016	2021	2031
Million Annual Passengers	95	100	106	121
Peak Month Average Weekday Operations	2,808	2,818	2,918	3,252
Airfield				
Airfield Capacity				
Visual Meteorological Conditions				

visual meteorological conditions		
- Departure		
- Arrival		
Instrument Meteorological Conditions		
- Departure		
- Arrival		
Runway Length		
Airfield Design Standards		

Terminal		
Gates		
Domestic Security Screening		
- Checkpoint Lanes		
- Checkpoint Queuing		
International Security Screening		
Customs and Border Protection Facilities		
Domestic Ticketing/Baggage Check		
International Ticketing/Baggage Check		
North Baggage Claim		
South Baggage Claim		
Baggage Systems		
Holdroom		
- Concourse T		
- Concourse A		
- Concourse B		
- Concourse C		
- Concourse D		
- Concourse E		
- Concourse F		

Legend SUFFICIENT MARGINAL DEFICIENT



Requirement Category	Existing	2016	2021	2031
Million Annual Passengers	95	100	106	121
Peak Month Average Weekday Operations	2,808	2,818	2,918	3,252
Terminal (continued)				
Concessions – Post-Security				
Concessions – Pre-Security				
Plane Train				
Ground Transportation				
Roadway Capacity				
- Domestic Terminal Roads				
- International Terminal Roads				
Curbfront Capacity				
- North Departures				
- North Arrivals				
- South Departures				
- South Arrivals				
- International Departures				
- International Arrivals				
Domestic Passenger Parking				
International Passenger Parking				
Employee Parking				
Ground Transportation Center				
Rental Car Center				
SkyTrain				

Support Facilities	
Aircraft Maintenance	
Ground Support Equipment Storage/Maintenance	
Flight Kitchens	
Airline Support	
Cargo Facilities	
General Aviation	
Airport Maintenance	

 Legend

 SUFFICIENT
 MARGINAL
 DEFICIENT

Airfield Facilities

The airfield at Hartsfield-Jackson Atlanta International Airport consists of runways, taxiways, apron areas, deicing pads, navigational aids, nonlicensed vehicle roads (NLVR), and support facilities. The airfield has five parallel runways, configured as two independent sets of dependent runway pairs (Runways 8L-26R and 8R-26L, and Runways 9L-27R and 9R-27L) and a single independent Runway 10-28, all oriented in the eastwest direction. Runways 8L-26R, 9R-27L, and 10-28 operate primarily as arrival runways and are each 9,000 feet long. Runway 8R-26L (10,000 feet long) and Runway 9L-27R (12,390 feet long) operate primarily as departure runways. All runways are designed to accommodate aircraft up to Airplane Design Group (ADG) V (e.g., Boeing 747, Boeing 787, Boeing 777, Airbus A340/A330). Additionally, ADG VI aircraft (Airbus A380) can operate on Runways 9L-27R and 9R-27L under Modifications of Standards approved by the FAA after their shoulders were extended to 50 feet in width. In general, the Airport operates with arrivals on Runway 10-28 and the outer runway of each dependent pair (Runways 8L-26R and 9R-27L) and departures on the inner runway of each pair (Runways 8R-26L and 9L-27R).

Runway 10-28, the newest runway, was completed in 2006 and has provided a significant increase in arrival capacity. The analysis of the airfield's operation with forecast activity identified the need for additional capacity primarily in poor weather conditions near the end of the planning period (e.g., 2031) to mitigate aircraft operational delay. Development of a new runway is typically the most effective way to address increasing delay. The potential development of a new runway at both closely spaced and widely spaced locations relative to the existing runways was analyzed. Both runway spacing options would involve significant costs and impacts. Given that evolving air traffic control technology could significantly affect the runway location and timing decisions prior to development, specific decisions on runway development have been left until necessitated by demand. Because the closely spaced runway option would be located primarily on existing Airport property, it is shown on the Development Plan to ensure that other Airport development occurs in a manner that would be compatible with the Closely Spaced Runway (Runway 10L-28R) if it were determined to be the preferred runway development alternative at a later date. Several enabling projects related to the Closely Spaced Runway are depicted on the Development Plan (pages 24 and 28), including the Taxiway R to Runway 10L connector taxiway, South Cargo expansion, Aircraft Rescue and Fire Fighting (ARFF) Station 33 relocation, and the supplemental Airport Traffic Control Tower (ATCT).

Runway 9L-27R is the Airport's longest runway at 12,390 feet and critical to the operation of long-haul international departures. To mitigate operational impacts (aircraft payload restrictions) associated with this runway's closure during periodic maintenance, eventual reconstruction, or other unforeseen events, the extension of Runway 8R-26L from 10,000 feet to 11,200 feet is included in the Development Plan.

The Development Plan incorporates taxiway development around the Runway 9L end, allowing aircraft arriving on Runways 9R-27L and 10-28 to taxi to the Domestic Terminal area independent of operations on Runway 9L-27R. The Runway 9L end-around taxiway would be similar to the Runway 8R end-around taxiway completed in 2007, which has improved departure capacity on Runway 8R-26L by reducing runway crossings by aircraft arriving on Runway 8L-26R.

Taxiway connectivity between the north and south airfields is currently limited to the taxilanes between the concourses and Taxiway D. Under existing conditions, direct access to the north and south airfields is provided from most gates in the gate area, with the exception of aircraft parked on the east side of Concourse F. With the expansion of gate facilities to the east of Concourse F, it is desirable to provide an additional means of access to the north airfield from this area to mitigate conflicting aircraft movements and minimize taxiing times and delays. Development of a north-south crossfield taxiway to connect the Runway 26L and Runway 27R ends is included to provide this additional north-south airfield connection. Designing this taxiway to accommodate ADG VI aircraft, as well as implementing modifications to Taxiway L to accommodate ADG VI aircraft, would improve the ability to accommodate these large aircraft that are anticipated to remain a limited component of international activity at the Airport.

Runway Site Alternatives



Terminal/Gate Facilities

The Central Passenger Terminal Complex (CPTC) consists of two independent processing facilities for domestic and international passengers, with associated gates and five midfield concourses. The primary processing of domestic passengers occurs at the Domestic Terminal at the west end of the CPTC. The Domestic Terminal is bifurcated into Domestic Terminal North and Domestic Terminal South. Concourse T is integrated into the Domestic Terminal. International passengers are processed at the new Maynard H. Jackson Jr. International Terminal (the International Terminal) at the east side of the CPTC, which includes Concourse F. In addition to the terminal gates, the terminals serve five midfield concourses, A through E, via the Plane Train and pedestrian walkways.

With the opening of the International Terminal in May 2012 and relocation of international activities to that facility, significant capacity became available in the Domestic Terminal to accommodate future growth. As a result, most of the functional areas in the Domestic Terminal are sufficient to accommodate demand during the planning period. A few functional areas (security screening checkpoint queuing, Domestic Terminal North baggage claim, International Terminal ticketing) would reach capacity near the end of the planning period under current operating assumptions. These facilities should be monitored regarding the ultimate need for expansion.

Additional gate capacity is needed to accommodate demand through the planning period. Two general options were analyzed for gate facility expansion: east gate development to the east of the International Terminal and connected through an extension of the existing Plane Train system, and south gate development on the west side of the airfield between Runways 9R-27L and 10-28 and connected to the Domestic Terminal by a new automated people mover system. Ultimately, east gate development was determined to be preferred because it would optimize the use of existing infrastructure, maintain existing passenger flows and the arrangement of passenger processing facilities along the spine of the Airport, and provide gate use (international/domestic) flexibility.

The preferred concept for gate expansion includes the development of Concourse G connected to the International Terminal, and satellite Concourses H and I, which would be accessed through an extension of the existing Plane Train system and pedestrian walkways. As envisioned,



these facilities would be oriented north-south, and occupy the site south of Maynard H. Jackson Jr. Boulevard. Beyond the planning period, these concourses could be extended north into the Delta Technical Operations Center site to provide full pier concourses similar to Concourses A through E. Depending on future gate allocation, and decisions regarding the centralization of international passenger processing facilities, Concourses G through I could be configured to accommodate both international and domestic passenger activity.

With the exception of Concourse D, existing Concourses A through E provide sufficient capacity to adequately accommodate holdrooms and related facilities on each concourse. Concourse D is narrower than the other concourses and, as a result, deficient in holdroom seating capacity. This deficiency is addressed in the Development Plan, and could be mitigated either through concourse widening or developing additional concession nodes and removing the concessions adjacent to existing holdroom areas.

To support the development of Concourses G through I, and to accommodate forecast passenger growth, the Plane Train system will require extension to the east to serve the new concourses, and extension to the west to increase capacity. The westward extension of the Plane Train would allow for relocation of the train turnback from between Concourse T and the baggage claim station to west of the baggage claim station. This relocation would permit an increase in train frequency and a 20 percent increase in train carrying capacity in each direction.

East Gates Development Preferred Alternative







Landside Facilities

Landside facilities at the Airport include access roads, parking, and rental car facilities. Additionally, facilities associated with commercial vehicles (taxicabs, limousines, shared-ride vehicles, off-Airport parking shuttles, and hotel courtesy vehicles) are also included in this component.

Significant improvements to the Domestic Terminal roadway system were recently implemented through the Inbound Roadway Improvements project. With the exception of some minor lane additions likely to be necessary in the 2031 timeframe, analysis of the Domestic Terminal roadway system suggests that it will be capable of accommodating traffic throughout the planning period.

Simulation modeling of the International Terminal roadway system identified the signalized intersection of Maynard H. Jackson Jr. Boulevard and Loop Road as a potential capacity concern. The volume of traffic completing certain movements, in conjunction with the intersection signal's long cycle length, results in long signal delay on a number of approaches. Specific operational and facility enhancements at this intersection will be developed through further evaluation of the intersection considering the effects of nearby traffic signals.

Analysis of the terminal curbside capacity identified the Domestic Terminal South departures curb as currently capacity-constrained, and the only curbside facility experiencing unacceptable levels of service during the

planning period. Operational and physical improvements are being implemented that will mitigate these capacity issues as well as help to control pedestrian crossing/vehicle interactions.

On-Airport public parking for the Domestic Terminal is provided in the North and South Parking Decks; North, South, and West Economy lots; and Park-Ride Lots A, B, and C. The North and South Parking Decks currently fill to capacity at some point in more than 50 percent of the weeks annually. Furthermore, the condition of these facilities will require their reconstruction/ major rehabilitation in the near term just to maintain them at their current capacity. Consequently, and recognizing the need for additional parking garage capacity, reconstruction of both parking decks, increasing from four floors to eight floors, is included in the Development Plan.

Currently, Airport tenants individually determine whether or not to provide parking for their employees. The DOA has considered the possibility of providing parking for employees without employer-provided parking, and potential sites have been identified. DOA policy decisions will ultimately determine if these facilities are developed.

The Development Plan also provides for the potential relocation of existing commercial ground transportation facilities that may be affected by future redevelopment in the area of the existing Ground Transportation Center (GTC) and taxicab hold lot.

Support Facilities

Support facilities include general aviation, aircraft maintenance and other Increasing ground support equipment (GSE) storage requirements will airline facilities, Airport administration and maintenance, cargo facilities, result from the addition of airline gates and should be programmed as flight kitchens, fuel farms, and ARFF facilities. Support facilities are part of new gate development. primarily located along the northern boundary of the Airport, east of the · Cargo facility expansion will be necessary to accommodate long-term International Terminal, and between Runways 9R-27L and 10-28.

Support facility requirements can be related to changes in aviation activity, changing regulatory requirements, or airline decisions regarding flight amenities or fleet maintenance activities provided at an airport. The following support facility expansion needs at the Airport have been identified for the planning period.

- Certain components of Delta Air Lines' flight kitchen facilities are Cargo facilities are currently located on the north side of the airfield inefficient/inadequate. With the transition of some regional jet activity (integrators and all-cargo), between Runways 9R-27L and 10-28 (all-cargo), to mainline service currently under way, additional flight kitchen and east of the International Terminal (belly). The North Cargo Building, capacity will be needed. which serves FedEx, Southwest, and other nonscheduled all-cargo operators, is reaching the end of its useful life and will likely require significant DOA maintenance activities are scattered around the Airport in investment or reconstruction. Additionally, the facility has deficient landside numerous facilities, some originally intended for maintenance use and area that limits its efficiency. The Development Plan includes redevelopment others that were previously in other uses. Consolidation of maintenance of the North Cargo Area contiguous to the South Cargo Area, creating a facilities into a single campus would improve operational efficiency to cargo corridor between Runways 9R-27L and 10-28. Truck access to this site meet future demand. would be readily available via Interstate 85 to the west. Cargo expansion would also be accommodated in this corridor through redevelopment of the City South Hangar on the east end of the site.





cargo growth in belly, integrator (i.e., all-cargo carriers that provide door-to-door package delivery services), and traditional freighter activity. Some facility elements (truck staging) are currently inefficient/ inadequate and may be addressed sooner. Additionally, DOA marketing initiatives to grow cargo activity at the Airport could require cargo facility expansion sooner than anticipated.

Sustainability

The Department of Aviation has a rich history of incorporating sustainability practices into Airport construction and operation dating back to the late 1990s. The DOA has always emphasized implementing sustainability practices through landfill diversion, emissions reductions, reduced water consumption, and reduced electricity use, as well as through other techniques. Examples include:

- Using sawcut slabs from the 1999 Runway 9R-27L reconstruction and incorporating these slabs years later in the deepest fill areas for Runway 10-28 in lieu of placing the slabs in a landfill.
- Retrofitting terminal and concourse restroom fixtures in 2008 with low-flow water and toilet fixtures.
- Replacement of Domestic Terminal parking deck metal halide lights in 2011 with efficient LED lights.
- Implementation of Taxiway "V" in 2007 resulting in reduced aircraft taxi-out emissions and enhanced airfield safety.

These examples, and many other projects (whether they are labeled as sustainability projects or are projects that yield environmental gains), have produced documented environmental benefits.

While the development of Master Plan alternatives was primarily focused on addressing identified facility shortfalls, all alternatives incorporate sustainability aspects. Each project was reviewed relative to the Department's four sustainability goal areas (energy, water, emissions, and waste) to determine qualitative benefits and opportunities that would be expected. The Department is committed to incorporating these sustainability aspects, as well as others to be identified, into the design of these projects when they are ready to be implemented and assuming funding availability. The Department of Aviation's Asset Management and Sustainability Division produced a document complementing the Master Plan that contains many sustainability ideas and concepts, as well as establishes guiding principles to maintain a balanced approach to future development and management. As Master Plan components are identified for more detailed planning and coordination in the future, the construction and financial feasibility of sustainability ideas and concepts will be more thoroughly analyzed for incorporation into individual projects.

Project Sustainability Opportunities by Sustainability Topic

Project	Other – General, Social, Economic	Energy	Water	Emissions	Waste
Examples of Sustainability Aspects	Enhance passenger experience, Procure local materials	Incorporate LED lighting, Use low-E glass, Capture ambient lighting	Harvest rainwater, Use permeable pavements, Install low flow fixtures	Improved operational efficiencies, Encourage low emission vehicle use	Use of recycled materials, Facilitate recycling through design
Airfield Projects					
Runway 9L End-Around Taxiway	Х	Х		Х	Х
Runway 26L Extension	Х	Х		Х	Х
Closely Spaced Runway	Х	Х		Х	Х
			1		
Terminal/Gate Projects					
East Gates Development	Х	Х	Х	Х	Х
Concourse D Holdroom Expansion	Х	Х	Х	Х	Х
Plane Train Turnback Relocation	Х			Х	Х
Domestic Terminal North and South Parking Decks Reconstruction and Expansion	х	х	х	х	х
South Curbfront Capacity	Х			X	Х
Future Ground Transportation Facility	Х	Х	Х	Х	Х

Project	Other – General, Social, Economic	Energy	Water	Emissions	Waste
Examples of Sustainability Aspects	Enhance passenger experience, Procure local materials	Incorporate LED lighting, Use low-E glass, Capture ambient lighting	Harvest rainwater, Use permeable pavements, Install low flow fixtures	Improved operational efficiencies, Encourage low emission vehicle use	Use of recycled materials, Facilitate recycling through design
Airfield Projects					
Runway 9L End-Around Taxiway	Х	Х		Х	Х
Runway 26L Extension	Х	Х		Х	Х
Closely Spaced Runway	Х	Х		Х	Х
Terminal/Gate Projects					
East Gates Development	Х	Х	Х	Х	Х
Concourse D Holdroom Expansion	Х	Х	Х	Х	Х
Plane Train Turnback Relocation	Х			Х	Х
Domestic Terminal North and South Parking Decks Reconstruction and Expansion	х	х	x	х	Х
South Curbfront Capacity	Х			Х	Х
Future Ground Transportation Facility	Х	Х	X	Х	Х
Future Commercial Development	Х	Х	Х	Х	Х
Intersection improvements (Maynard H. Jackson Jr. Boulevard and Loop Road)	Х	X		Х	Х

Support Facility Projects					
South Cargo Expansion	Х	Х	Х	Х	Х
North Cargo Relocation and Expansion	Х	Х	Х	Х	Х
Airport Maintenance Facilities Relocation/Consolidation	Х	Х	Х	Х	Х











Airport Sustainability Guiding Principles

Maintain a balanced and integrated approach for all future development and management:















Development Plan

A Development Plan was created that identifies short-range (approximate 0- to 10-year time frame) and long-range (approximate 11- to 20-year time frame) projects. The division between short and long-range projects was established to characterize development that would have a higher likelihood of need and implementation within 10 years; however, it is important to recognize that the division is approximate and dynamic. The short-range projects are those that are needed to meet existing demand or to accommodate the forecast 2021 demand. Long-range projects are those that are expected to be necessary after the short-range projects are implemented and to accommodate additional forecast demand through 2031. Many of the long-range projects will undergo further analysis regarding their ultimate configuration and timing as demand continues

to increase and technology associated with the processing of passengers and aircraft evolves.

The facility requirements that are the foundation for phased development through the 2031 planning period were determined based on the Master Plan Aviation Activity Forecasts prepared in 2013. Given the changes occurring in the aviation industry, airline optimization of system capacity, and the effects of airline consolidation specifically occurring at the Airport, activity levels and characteristics have differed from the forecast. Consequently, in the discussion that follows, projects characterized as needed in the short- or long-range may be shifted between time frames as actual activity triggers implementation.



Short-Range Development Plan (0- To 10-Year Time Frame)

The following projects are currently anticipated to be needed at the Airport through 2021. These facilities and projects are shown on the Short-Range Development Plan on page 24.

Airfield

9L End-Around Taxiway – The Runway 9L end-around taxiway will permit arrivals by Boeing 757 and shorter aircraft on Runways 27L and 28 to taxi unimpeded around the Runway 9L end during Runway 27R departures minimizing runway crossings and improving Runway 27R departure capacity. Detailed geometry was developed and is currently under review by the FAA. Implementation of the Runway 9L end-around taxiway would result in the loss of the Park-Ride Reserve Lot (1,333 spaces) and Park-Ride Lots A and B (4,006 spaces).

Runway 26L Extension – Extension of Runway 26L by 1,200 feet would increase the available departure length for Runway 26L departures by 1,200 feet and for Runway 8R departures by approximately 600 feet. This project requires the relocation/bridging of Airport Loop Road and the Non-Licensed Vehicle Road (NLVR).

Airfield Safety Area and Access Improvements - Several non-standard runway safety areas, NLVR signs, and other conditions were previously noted by Airport Operations, Maintenance, and FAA personnel, and were the subject of a separate study concurrent with the Master Plan. Proposed improvements from that study include airfield grading modifications, signage modifications, and removal of certain objects within safety areas.

Gates/Terminal

East Gates Phase 1 (Concourse G) - Development of a 10-gate Concourse G is included to accommodate the short-range need for additional gate capacity. These gates would be international arrivals capable, and connected to the existing U.S. Customs and Border Protection (CBP) facility at the base of Concourse F. Domestic operations could be accommodated at these gates in periods of low international demand, and would also benefit from reduced international use of Concourse E. The development of Concourse G would affect the existing Gate Gourmet Domestic Kitchen and the Delta International Cargo facility.

Concourse D Holdroom Expansion – This project addresses the existing holdroom deficiencies in Concourse D that result from its narrow width. Potential options for expansion include widening of the concourse and consolidating concessions into expanded concession nodes, freeing additional space for holdrooms. Further analysis beyond the Master Plan will determine the ultimate scope of this project.

Plane Train Turnback – This project would relocate the west Plane Train

turnback from east of the baggage claim station to west of the baggage

claim station permitting reduced train headways and increased capacity.

the Metropolitan Atlanta Rapid Transit Authority (MARTA) station, the

GTC, and the SkyTrain Terminal station. An estimated 14 additional

capacity resulting from the turnback relocation.

• Airport Terminal Signage Modernization

Concourse Holdroom Expansion

Curbside Canopy Replacement

Curbside Facade Modernization

Concourse Holdroom Modernization

Lower Level Pedestrian Tunnel Renovations

• Plane Train Passenger Tunnel Renovations

Plane Train Station Ceiling Renovations

• Passenger Security Screening Checkpoint Renovations

Concourse Circulation Corridor Ceiling Renovation

Modernization Program.

Atrium Renovation

Relocation of the turnback would require construction in the area beneath

automated people mover cars would be required to realize the additional

Domestic Terminal Through Concourse D Modernization Program -

This program consists of a wide range of facility improvement projects

that would provide renovations to the Domestic Terminal/Gate facilities.

This program is also intended to provide a more consistent passenger experience throughout the entire terminal/concourse area at the Airport.

The following list provides an overview of the projects included in the

- Terminal Baggage Claim Upgrades Terminal Lobby Ceiling Renovation
- Terminal Lobby Clerestory Window Expansion
- Terminal North Check-in Lobby Renovation
- Terminal Vestibule Renovation

Landside

Domestic Terminal North and South Parking Decks - This project includes the reconstruction and expansion of the North and South Parking Decks to eight levels from their existing four levels and includes the development of new entry and exit plazas, as well as pedestrian bridges over the upper level roadway linking the parking decks to the Domestic Terminal. This project addresses capacity constraints identified in the existing Domestic Terminal parking facilities, primarily the North and South Parking Decks. Additionally, parking capacity lost as a result of other projects (the Runway 9L end-around taxiway and potential commercial development) would require replacement.

Employee Parking – Department of Aviation policy decisions regarding the desire to provide employee parking for concessionaires, international airlines, the Transportation Security Administration, and other governmental agencies may dictate the need to develop on-site employee parking. Potential sites have been identified for the development of employee surface parking. The use of excess parking deck capacity after redevelopment for interim employee parking until the space is needed for passenger demand is also being considered.

Domestic Terminal South Departure Curb – This project would implement near-term operational modifications to the South Departure Curb to mitigate inner departure curb capacity issues currently being experienced. These modifications would be implemented on both the north and south curbs and include changing curb utilization, expanding use of automated vehicle identification for commercial users of the curb, and adding signalization at pedestrian crosswalks.

Commercial Development – This project includes the development of a full service hotel, travel plaza, and mixed-use development on Airport property located west of the Domestic Terminal on land currently occupied by the West Economy Parking Lot, former rental car facilities, and the taxicab staging area.

GTC Relocation – This project consists of reconfiguring the existing Domestic Terminal commercial vehicle loading/unloading zones and relocating their respective Commercial Vehicle Hold Lot locations.

Support

South Cargo Expansion (Cargo Building E) - This project provides for the development of Cargo Building E and supporting ramp to provide for additional cargo facility capacity for all-cargo/freighter carriers. Potentially included in this development is a cargo fumigation facility to support cargo activities. This project would be configured to be compatible with the development of the Closely Spaced Runway and related Loop Road relocation. Facilities that would be affected by this development include employee parking facilities utilized by the Atlanta Airlines Terminal Corporation (AATC)/airline employees (1,580 spaces) and the vacant City South Hangar and ancillary facilities.

Department of Aviation Airport Maintenance Complex Consolidation -This project provides for the consolidation of airport maintenance facilities that are currently accommodated in a number of locations around the Airport, some of which would be affected by the Closely Spaced Runway and East Gates development. Prior studies identified a site south of I-285 near the east end of Runway 10-28 for airport maintenance facility consolidation. Further analysis of the location for Airport Maintenance Complex consolidation will occur subsequent to the Master Plan.





Support Facility Relocations Phase 1 – Relocation of the Gate Gourmet Domestic Kitchen and the Delta International Cargo facility is required to provide for the development of Concourse G. This project provides for the relocation of these facilities to a site east of I-75 that would be connected to the airfield by an NLVR bridge over the freeway. Included in this project are property acquisition, replacement facilities construction, and bridge/NLVR construction.





Master Plan Phasing, Short-Range Development Plan (0- To 10-Year Time Frame)



AIRFIELD

- 9L End-Around Taxiway 1
- Runway 26L Extension 2
- 3 Airfield Safety Area and Access Improvements

TERMINAL

- East Gates Phase 1 (Concourse G) 4
- Concourse D Holdroom Expansion 5
- Plane Train Turnback Relocation 6
- Terminal Modernization 7

LANDSIDE

- 8 North and South Parking Decks
- 9 Employee Parking10 South Departure Curb
- Commercial Development 11
- 12 GTC Relocation

SUPPORT

- 13 South Cargo Expansion (Cargo Building E)
- 14 Airport Maintenance Consolidation
- 15 Support Facility Relocation

DEMOLITION

- Building and Road Demolition Site Improvements (Parking Loss and Grading)
- EXISTING
- Buildings
- Runways
- Taxiways
- Runway Protection Zone - - -
- ---- Property Line

The following long-range projects are envisioned for the approximate 11- to 20-year time frame. The build-out of facilities/development areas is planned to be completed incrementally as demand warrants. Some of these projects may be accelerated to the short-range time frame, some may be deferred, some may be deemed unnecessary as a result of material changes, and new projects may be added. These facilities and projects are shown on the Long-Range Development Plan on page 28.

Airfield

North-South Crossfield Taxiway – The North-South Crossfield Taxiway would connect the Runway 26L and Runway 27R ends providing improvements in taxiway connectivity between the north and south airfields to mitigate conflicting aircraft movements and minimize taxiing times and delays. This taxiway is especially important to the long term efficient operation of the East Gates development. This taxiway is configured to accommodate ADG VI aircraft but the ultimate geometry will depend upon the final configuration of the East Gates development, and the decision regarding the inclusion of deicing/remote aircraft parking facilities at the east end of the site.

Closely Spaced Runway – Development of the Closely Spaced Runway would provide incremental operational capacity by eliminating the mixed use of Runway 10-28 in high demand periods and allowing independent arrival/departure operations on this runway pair. Additionally, some limited benefits would be expected under existing air traffic rules in instrument conditions, with potentially more benefits realized under future NextGen initiatives. Assuming a 10-year development timeline, and an additional 2 years prior to development for final determination of the preferred runway location, the trigger to initiate final runway location discussions would occur at approximately 925,000 annual operations. Additional runway capacity should be operational at approximately 1,040,000 annual operations (4 minutes of annual average delay).

Several enabling projects are related to the Closely Spaced Runway development, including the Taxiway R to Runway 10L connector taxiway, South Cargo expansion, ARFF #33 relocation, and the Supplemental ATCT.

Taxiway R to Runway 10L Connector Taxiway – This project provides for the development of a taxiway from the future Closely Spaced Runway

parallel taxiway to Taxiway R near its west end. This taxiway would be developed in conjunction with Runway 10L-28R and provides for improved aircraft movements on the south airfield.

Runway 9R End-Around Taxiway – The Runway 9R end-around taxiway will permit arrivals by B757 and shorter aircraft on Runway 10-28 and the Closely Spaced Runway to taxi unimpeded around the Runway 9R end during Runway 27L and Runway 9R arrivals minimizing runway crossings and improving Runway 9R-27L arrival capacity.

Supplemental ATCT – Development of a Supplemental ATCT would occur in conjunction with the development of the Closely Spaced Runway to mitigate line-of-sight issues from the existing main ATCT and provide for the control of aircraft movements on both the new runway and existing Runway 10-28.

Taxiway L ADG VI Improvements – This project includes modifications to Taxiway L east of proposed Concourse G to allow for simultaneous operation by ADG V and ADG VI aircraft on Taxiway M and Taxiway L. It was anticipated in developing the forecasts that ADG VI aircraft would remain a limited component of activity at the Airport used exclusively in international service. As such, ADG VI criteria were incorporated into the areas of East Gate international facility development.

Gates

East Gates Phase 2 – This project provides for the long-range development of additional gates in the East Gates area beyond the development of Concourse G. A total of 23 additional gates would be required in the longrange beyond those provided at Concourse G. These gates would be developed to accommodate international arrivals, and would be connected to a new consolidated international arrivals facility by a sterile train and corridors. Access to these gates would be provided by an extension of the Plane Train and/or pedestrian walkways. These gates could be used for domestic operations in periods of low international demand, and would also provide the benefit of reduced international use of Concourse E. Development of the East Gates Phase 2 would require the relocation of several facilities including the Delta Laundry Shop, Delta GSE facility, Delta Flight Kitchen, three DOA Field Maintenance Storage buildings, AATC Vehicle Storage, ARFF #35, Georgia Power substations, and an FAA remote transmitter.

Landside

Maynard H. Jackson Jr. Boulevard/Loop Road Improvements – This project provides for long term improvements to the Maynard H. Jackson Jr. Boulevard/Loop Road intersection to mitigate the poor level of service resulting from high numbers of turning movements and long cycle times. Several alternatives are being considered ranging from restriping within the existing intersection footprint to constructing new bridges and underpasses. Further analysis will be performed to select a preferred alternative for implementation.

Support

ARFF #33 Relocation – This project provides for the relocation of ARFF #33 necessitated by the development of the Closely Spaced Runway. Two potential sites have been identified for ARFF station relocation, both capable of meeting response times to Runway 10-28 and the new runway.

ARFF #35 Relocation – This project provides for the relocation of ARFF #35 necessitated by the development of the East Gates Phase 2. While several sites have been considered for ARFF #35 relocation, it would likely be



necessary to integrate the facility into the East Gates development and this ARFF station should be included in detailed planning for the East Gates.

- North Cargo Relocation and Expansion This project provides for the relocation and expansion of facilities serving the North Cargo Area carriers at a site located between Runway 10-28 and the Closely Spaced Runway. This site is configured to provide sufficient space to accommodate North Cargo Area carrier requirements throughout the planning period, and also provides additional space to support potential increased requirements resulting from DOA air cargo marketing initiatives. This project would affect support facilities including DOA Safety and Training, K-9 Training, and Gate Gourmet International Kitchen.
- Support Facility Relocations Phase 2 Relocation of the Delta
 Laundry Shop, Delta GSE facility, Delta Flight Kitchen, three DOA Field
 Maintenance Storage buildings, and AATC Vehicle Storage would be required for development of East Gates Phase 2. This project provides
 for the relocation of these facilities to an expanded support facility relocation site east of I-75. Included in this project would be required
 property acquisition and construction of replacement facilities. Relocation of an FAA remote transmitter would be included in this project, with the ultimate siting of this transmitter to be coordinated with the FAA.





North 0 2,000 ft.

AIRFIELD

- 17 Closely Spaced Runway (Runway 10L-28R)
- 18 Taxiway R to Runway 10L Connector Taxiway
- 19 Supplemental Airport Traffic Control Tower
- 20 Taxiway L ADG-VI Improvements
- 21 9R End-Around Taxiway

TERMINAL

22 East Gates Phase 2 (Concourse H & I)

LANDSIDE

- 23 MHJJ Boulevard / Loop Road Improvements
- 24 Sullivan Road Realignment

SUPPORT

- 25 ARFF Station 33 Relocation
- 26 ARFF Station 35 Relocation
- 27 North Cargo Relocation and Expansion
- 28 Support Facility Relocations Phase 2
- 29 FAA/NWS Equipment Relocations
- 30 Alternate North Cargo Relocation

DEMOLITION

- Building and Road Demolition
- Site Improvements (Parking Loss and Grading)
- SHORT RANGE PROJECTS COMPLETE
- Buildings
- Runways
- Taxiways / Apron

EXISTING

- Buildings
- Runways
- Taxiways
- --- Runway Protection Zone
- ---- Property Line

Project Timing Rationale

The facility requirements analysis identified the improvements necessary to accommodate the forecast activity at a desired level of service. The timeframe that these facility improvements will be needed was also determined. However, the implementation of these improvements will be based on a number of factors including linkages to other projects, DOA and airline priorities, and feasibility. Finally, funding availability may affect implementation of a project.

The following is a list of major Master Plan components and proposed project implementation timing. The proposed timing is based on the assumption that funding would be available when needed.

Domestic Terminal through Concourse D Modernization

This collection of projects is a high-priority for the Department of Aviation and is expected to begin construction in 2016.

Runway 9L End-Around Taxiway, Domestic Terminal Parking Structures Reconstruction and Expansion, and Cargo Building E

These three projects are high-priority projects for the Department of Aviation and are assumed to begin construction in 2017. The end-around taxiway and Cargo Building E would be complete by 2019.

Runway 26L Extension

Runway 9L-27R is the longest runway at the Airport with a length of 12,390 feet, significantly longer than the second longest runway, Runway 8R-26L, with a length of 10,000 feet. Due to its length, Runway 9L-27R accommodates the majority of long-haul international departure operations. The Runway 26L Extension will provide operational flexibility to accommodate international departure peaks, as well as provide redundancy during Runway 9L-27R closures for maintenance activities. Timing for the extension of Runway 26L will be based on the level of activity and operational requirements of the aircraft fleet in international service, and the timing for future major maintenance activities on Runway 9L-27R. It is assumed that construction would begin in 2022.

Concourse D Holdrooms

Due to the concourse's narrow width, the Concourse D holdrooms are space deficient and require some form of expansion. However, changes in airline gate use as well as improvements anticipated through the terminal modernization project may impact the scope and timing for this project. It is anticipated that construction could occur during 2018-2020 in coordination with Domestic Terminal through Concourse D Modernization.

DOA Maintenance Complex Consolidation

The DOA maintenance offices and storage facilities are housed in several buildings around the Airport, many of which are reaching the end of their useful lives or will be affected by other Master Plan development. Consolidation of these facilities is needed soon, and it was assumed for Master Plan purposes that construction would occur in 2018. Should the Closely Spaced Runway be implemented, consolidation of maintenance facilities would be an enabling project for the runway.

Taxiway L ADG VI Modifications

This project would allow ADG VI aircraft parked on Ramp 10 to access Concourse G is envisioned as an international concourse that would the Runway 27R threshold via an ADG VI taxiway. While the taxiway accommodate growth in international operations, as well as a portion of modifications are not required today, it would be beneficial to complete this the international activity currently using Concourse E to allow for growth in domestic operations on that concourse. Recognizing that the City and airlines will execute a new use and lease agreement by September 2017, future gate needs and gate allocations will be redefined at that time. Until then, detailed coordination is needed among the City, Clayton County, the Georgia Department of Transportation, Delta Air Lines, the FAA, and others to develop a more refined plan. Assuming a 7-year implementation period consistent with that experienced for the International Terminal facility requirements. However, three events have occurred that have altered and Concourse F, early construction activities could start in 2018 and the this requirement: concourse could open by 2024.

project prior to constructing the Taxiway L/Ramp 10 interface so that ADG VI aircraft can use it sooner. It would eventually be an enabling project for Concourse G. Under this scenario, construction would begin in 2018. Concourse G The need for 10 additional gates in 2021 was determined when analyzing







- A faster decrease in activity by Southwest than forecast, reducing the airline's gate requirement and freeing up gates on Concourse D South
- Delta's winglet project, reduced the number of gates available to Delta
- Delta's accelerated shift from Delta Connection to Delta mainline flying operations

Construction of Concourse G has a significantly long lead-time for enabling work required prior to construction of the concourse. This enabling work includes planning related to off-site land acquisition and relocation of support facilities currently occupying the site of gate development.





Project Timing Rationale (continued)

North Cargo Relocation and Expansion

The North Cargo building is almost 40 years old and nearing the end of its useful life. Additionally, landside limitations affect its operational efficiency. While DHL, FedEx, and UPS facilities are adequate for their respective operations, the entire North Cargo complex will eventually need replacement due to age and functional obsolescence. Similar to Concourse G, this project has long-lead-time site preparation activities and requires more detailed planning which should begin in the next few years.

This project consists of two components: relocation and expansion. It is quite possible that the expansion component will be needed first, depending upon demand. The expansion also may be implemented to accommodate traditional freighters (i.e., all-cargo carriers that do not provide door-to-door package delivery) in response to DOA marketing initiatives to grow cargo activity at the Airport. Thus, should demand dictate, it would be reasonable to initiate enabling work for the expansion component (currently identified as the east building) beginning in 2020 after Cargo Building E is operational.

Closely Spaced Runway

As a result of recent accelerated actions by both Delta (retirement of 50-seat regional jets and transitioning regional aircraft markets to mainline operation) and Southwest (retirement of smaller Boeing 717 in favor of Boeing 737 aircraft, and reductions in connecting activity), actual aircraft operations are trending significantly lower than forecast. ATL finished calendar year 2014 at 868,359 operations, 4.7 percent lower than the 911,074 experienced in 2013, and 6.1 percent lower than the 925,100 forecast for 2014. However, recent discussions with the airlines regarding growth have identified planned increases in daily departures of 50 per day by the end of 2015, and a total of 100 per day by the end of 2017, a rapid increase in operations.

The trigger defined for reviewing the proposed location the Closely Spaced Runway is 925,000 annual operations, with the Environmental Impact Statement (EIS) process beginning at 945,000 annual operations and the runway operational at 1,040,000 annual operations. It is anticipated that demand growth will trigger the DOA to review the need and location of the Closely Spaced Runway in 2016 and be prepared to request the FAA to begin the EIS for the runway in early 2018. Using the ten-year duration developed for the project, the runway implementation schedule is anticipated to extend from 2018 through 2027.

Plane Train Turnback Relocation

It was determined that peak-period Plane Train demand will exceed capacity in the late 2020s. Relocation of the turnback and other related components will need to occur after completion of the West Economy Lot commercial development project (assumed in 2018). For the capacity improvements to be completed when needed, construction of the relocated turnback should be initiated in 2023.

North-South Crossfield Taxiway

Sufficient demand to warrant the construction of the north-south crossfield taxiway for access from the international gates to Runway 8R-26L will likely exist upon the opening of Concourse G. It is assumed that construction of the crossfield taxiway would begin in 2025.

Runway 9R End-Around Taxiway and Taxiway R to Runway 10L Connector Taxiway

Concurrent with the Closely Spaced Runway construction, the Runway 9R end-around taxiway and Taxiway R to Runway 10L connector taxiway will be constructed to facilitate aircraft taxiing between the terminal area and Runway 10-28 and the Closely Spaced Runway.







Concourse H

Factors affecting Concourse G implementation also affect Concourse H. It is assumed that the soonest Concourse H construction would begin is after the completion of Concourse G, and only if supported by demand. Therefore, Concourse H construction would begin in 2025 at the earliest.

Concourse I

Concourse I would follow the completion of Concourse H. The earliest Concourse I construction would begin is 2030 and only if supported by demand.

Standalone Sustainability Projects

The Master Plan clearly states that sustainability measures will continue to be incorporated into projects intended to address capacity shortfalls. Numerous opportunities for implementation of stand-alone sustainability projects are also identified in the Master Plan. Stand-alone projects are often funded through partnerships with developers or through federal grants; these projects can be implemented as partnering opportunities become available.

Renewal and Replacement Projects

Renewal and replacement work is expected to occur continuously throughout the 2031 planning period. More detailed implementation plans are provided in DOA Asset Management and Sustainability documents.



Project Timing Rationale (continued)

Summary of Construction Timing

Component	Assumed Construction Years
Domestic Terminal Through Concourse D Modernization	2016-2018
Runway 9L End-Around Taxiway	2017-2019
Cargo Building E	2017-2019
Domestic Terminal North Parking Deck	2017-2020
Airport Maintenance Complex Consolidation	2018-2020
Concourse D Holdrooms	2018-2020
Concourse G	2018-2024
Taxiway L ADG VI	2018-2020
North Cargo Relocation and Expansion (East Building)	2020-2022
Closely Spaced Runway	2020-2027
Domestic Terminal South Parking Deck	2021-2024
Runway 26L Extension	2022-2024
Plane Train Turnback Relocation	2023-2026
N-S Crossfield Taxiway	2025-2029
Concourse H	2025-2029
Concourse I	2030-2034
Standalone Sustainability Projects	As Determined by the Department of Aviation
Renewal and Replacement Projects	As Determined by the Department of Aviation

Project Durations

Component	2015	2016	2017	2018	2019	2
AIRFIELD						
Runway 9L End-Around Taxiway						
Taxiway L ADG VI						
Closely Spaced Runway						
Runway 26L Extension						
North-South Crossfield Taxiway						
GATES/TERMINAL						
Domestic Terminal through Concourse D Modernization						Γ
Concourse D Holdrooms						
Concourse G			Ì			
Plane Train Turnback Relocation						
Concourse H						
Concourse I						
LANDSIDE						
Domestic Terminal North Parking Deck						
Domestic Terminal South Parking Deck						
SUPPORT			,	,		
Cargo Building E						
Airport Maintenance Complex Consolidation						
North Cargo Relocation and Expansion (East Building)						













Development Costs

Estimates of probable development costs were developed for the Master Plan components. Additionally, cost estimates were collected or developed for other non-Master Plan projects expected to be implemented during the 20-year planning period. These projects generally include renewal and replacement projects, terminal modernization projects, information technology projects, and sustainability projects.

Description		Project Total
Airfield	Runway 9L End-Around Taxiway (EAT)	\$59,453,000
	Runway 9R End-Around Taxiway (EAT)	\$34,316,000
	Runway 26L Extension (1,200' x 150')	\$130,136,000
	Closely Spaced Runway (7,888' x 150')	\$1,069,319,000
	Airfield Safety Area, Access and Security Fence Improvements	\$50,981,000
	Taxiway R to Runway 10L Connector Taxiway	\$22,687,000
	North-South Crossfield Connector	\$179,626,000
	Taxiway L ADG VI Improvements	\$6,187,000
	Airfield Construction Cost	\$1,552,705,000
Cargo	North Cargo Relocation & Expansion Enabling	\$54,167,000
	North Cargo Relocation & Expansion	\$574,999,000
	South Cargo Expansion (Cargo Building E & Fumigation Facility)	\$121,664,000
	Cargo Construction Cost	\$750,830,000
Terminal/	Concourse D Quarter Point Expansion	\$74,033,000
Concourse	Domestic Terminal Main Security Queuing	\$1,144,000
	Concourse & Gate Expansion	
	Concourse G Enabling	\$247,143,000
	Concourse G Construction	\$860,741,000
	Concourse H Enabling	\$100,967,000
	Concourse H Construction	\$684,935,000
	Concourse I Enabling	\$36,553,000
	Concourse I Construction	\$406,938,000
	Plane Train Turnback Relocation	\$271,642,000
	Concourse Construction Cost	\$2,684,096,000
Landside	Airport Maintenance Complex Consolidation	\$47,073,000
	Concessions Distribution Center	\$52,166,000
	Domestic Curbfront Improvements	\$4,212,000
	Domestic Terminal North Parking Deck	\$371,898,000
	Domestic Terminal South Parking Deck	\$441,362,000
	Employee Parking	\$8,997,000
	GTC Relocation	\$12,083,000
	Maynard H. Jackson Jr. Blvd./Loop Rd. Intersection Improvements	\$8,494,000
	Landside Construction Cost	\$946,285,000
Other	Domestic Terminal through Concourse D Modernization	\$393,628,000
	Concourse T North Expansion	\$250,000,000
	Sustainability Projects	\$65,420,000
	Tenant Projects	\$99,566,000
	Information Technology Master Plan	\$50,000,000
	Renewal & Replacement Assessments	\$22,435,000
	Renewal & Replacement Facility Repairs	\$10,000,000
	Renewal & Replacement Sanitary Sewer	\$18,540,000
	Renewal & Replacement Facilities CPTC	\$983,084,000
	Renewal & Replacement Facilities non-CPTC	\$117,949,000
	Other Miscellaneous Projects	\$632,074,000
	Other Construction Cost	\$2,642,696,000
Total Estimat	\$8,576,612,000	

Master Plan Project Cost Estimates – Summary



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