ORLANDO INTERNATIONAL AIRPORT

AIRPORT MASTER PLAN UPDATE | 2011-2031

EXECUTIVE SUMMARY

PUBLISHED SEPTEMBER 2014

GREATER ORLANDO AVIATION AUTHORITY

GREATER ORLANDO AVIATION AUTHORITY

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EXECUTIVE SUMMARY

MASTER PLAN UPDATE FOR THE ORLANDO INTERNATIONAL AIRPORT (2011-2031)

CONTENTS

AIRPORT ROLE AND SETTING

The role of an airport to its community and surrounding region depends on the perspective of the individual viewing the airport. Many terms are attached to airports around the world including the following:

- Economic Engine
- Economic Catalyst
- Transportation Conduit or Pipeline to the Region
- Intermodal Hub
- Airport City
- Aerotropolis

In reality, depending on the airport, all of the terms used above are correct and underscore the diverse role of an airport within its region. Since the dawn of modern civilization, transportation has been at the heart of economic activity: from shipping on rivers and oceans, to moving on paved roads perfected by the Romans, to railroads in the 19th century and then in the beginning of the 20th century to the advent of aviation. The FAA report entitled "The Economic Impact of Civil Aviation on the U.S. Economy" dated June, 2014 states that in 2012 civil aviation accounted for 5.4% of the U.S. GDP, $1.5 trillion in economic activity and approximately 11.8 million jobs. For the last decade, the impact of airports measured as a percentage of U.S. GDP has fluctuated between 4.6% and 5.6% in response to recessions in the broader economy. Within the State of Florida, the impact of aviation on the economy is almost twice as significant. According to the 2014 data compiled by the Florida Department of Transportation, 8.5% of the Florida GDP is derived from business dependent on aviation and airline passenger growth more than double the national average.

For many of the larger commercial service airports in the U.S., including Orlando which is ranked 14th in terms of annual passenger enplanements, the role of the airport is evolving to serve the needs of the region. For the Orlando International Airport, the long planned transformation into an intermodal hub is now advancing into design and construction. Such improvements recognize the unique opportunity that practically exist only at airports where all or most modes of transportation can be brought together in one location. As intermodal connections are improved and economic activity expands, the airport then becomes a logical location to consider future commercial ventures that can transform the airport into an "airport city." Such improvements can assist in the diversification of airport revenues, add to the financial stability of the airport enterprise, and provide an economic stimulus to the regional economy. In recognition of these benefits, the Greater Orlando Aviation Authority adopted the following vision and mission statements and strategic goals to guide the direction of the organization into the future:

PURPOSE OF AN AIRPORT MASTER PLAN

An Airport Master Plan is a comprehensive study of an airport that is updated periodically in accordance with guidance from the Federal Aviation Administration (FAA). The document describes the short, intermediate and long range plans for the airport to meet future aviation demand. The projects contained in those plans are then to be shown on the Airport Layout Plan (ALP).

The elements of the master planning process will vary in complexity and level of detail depending on the size, function, issues and problems of the individual airport. The steps are described in FAA Advisory Circular 150/5070-6b, "Airport Master Plans."

Although the FAA will usually assist in the funding of an airport master plan, the FAA will only actually approve two specific work products as follows:

1. Aviation Demand Forecast
2. Airport Layout Plan

The Greater Orlando Aviation Authority previously completed an update to the Orlando International Airport's Master Plan in 2005.

GREATER ORLANDO AVIATION AUTHORITY

OUR COMMITMENTS

MISSION:

Provide safe, secure, customer-friendly, affordable services and facilities that promote The Orlando Experience™.

VISION:

Advance Orlando and the region as the premier intermodal transportation gateway for global commerce.

OUR STRATEGIC GOALS

- Exceed the expectations of the travelling public with the collaboration of our airport partners and the community
- Foster economic development for the region
- Operate and maintain safe, secure and world-class facilities
- Act in a fiscally responsible manner

One additional role for the airport is that it serves as the first and last impression of the community to air travelers. In a location such as Central Florida that is such a major destination for visitors from around the world, this role for the airport is very important to the community and government and business partners. The creation of the Orlando Experience™ by the Greater Orlando Aviation Authority is reflected in its Mission and Vision statements but at its core it offers a more fundamental human experience, a sense of place and knowing that you have arrived at a special place that offers unique and lasting experiences.

The physical setting for the Orlando International Airport has its roots in humble beginnings as a small military air base beginning in 1942 that grew into a major U.S. Air Force Base by 1952. In 1962, the transformation into a public use airport began because the Herndon Airport (now "Orlando Executive Airport") was being constrained by the need to serve commercial jet aircraft and their more extensive airfield requirements. In 1974, the McCoy Air Force Base was closed and initially the public airport terminal consisted of former military buildings on the northern border of airport property. In 1981, ten years after the opening of Walt Disney World, the first phase of the airport's north terminal complex was opened. At that time, the airport was located in a relatively undeveloped area approximately 12 miles southeast of downtown Orlando and 20 miles east of Walt Disney World. To the east was the Kennedy Space Center that has been the hub for the U.S. space program and Port Canaveral that had yet to transform into one of the largest passenger seaports in the world.

In the two decades that followed, the Central Florida region continued to grow primarily in the areas to the north and west of the airport as Disney, Universal, International Drive and the Convention Center area, Downtown Orlando, University of Central Florida (UCF), Maitland Center, and other commercial activity centers thrived. The Kennedy Space Center continued to thrive with the start of the Space Shuttle program and Port Canaveral continued to grow. By 1996, when low cost airlines began to arrive and grow rapidly, the airport's market catchment area expanded as customers travelled additional distance to access markets served by direct, affordable air service.

In the last decade, the emergence of Port Canaveral to the east, Lake Nona's Medical City to the south, further development of the I-4 corridor and new large scale planned developments in southeastern Orange County and northern Osceola County, including the eventual development of portions of the 300,000-acre Deseret Ranch east of the airport, underscores one important trend. The airport will be located at the geographic centroid of a mega region that will serve nearly half the population of the State of Florida. According to the Bureau of Economic and Business Research at the University of Florida, the 2013 estimate of the population of Florida was 19,259,543. For long term planning purposes, the question then becomes how much larger this mega-region will become? Will it double or triple in size over the next 50-75 years?

The final answer to that question will not be known for decades. However, the importance of long range planning beyond the 20-year horizon supports the need for the Greater Orlando Aviation Authority to maintain flexibility for the airport to substantially expand along with the region. Airfield, terminal, surface transportation and other support facilities will need to be able to expand both incrementally and affordably as the airport serves in one of its many diverse roles in the local, state, and national economies.

FIGURE 1 – MCO CATCHMENT AREA

NOTE: Catchment Area for illustrative purposes only.

ORLANDO INTERNATIONAL AIRPORT (MCO)	2-HR CATCHMENT	METRO AREA
TOTAL POPULATION	12,420,231	2,850,422
AVERAGE HOUSEHOLD INCOME	$48,823	$50,677
MIAMI INTERNATIONAL AIRPORT (MIA)		
TOTAL POPULATION	8,146,171	4,593,922
AVERAGE HOUSEHOLD INCOME	$50,986	$50,574
TAMPA INTERNATIONAL AIRPORT (TPA)		
TOTAL POPULATION	10,777,821	3,555,931
AVERAGE HOUSEHOLD INCOME	$48,204	$49,046

SOURCE: GOAA, September 2014.

HISTORIC AIRPORT GROWTH AND RELATIONSHIP TO REGION, STATE, AND NATIONAL EVENTS AND TRENDS

The historic growth of the airport has been closely tied to the growth of the region, specifically the growth in visitors to the region enjoying the world class tourist destinations. **Table 1** below provides a comparison of airport growth to the relative growth of other specific sectors in the region and state.

At the time of the opening of Walt Disney World in 1971, the Orlando Airport served almost 1.3 million annual passengers and was located in converted lightweight prefabricated structures (quonset huts) on the north side of airport property near what is today the SR 528 Beachline Expressway. As indicated in **Table 1**, ten years later, after the opening of SeaWorld in 1973 and just prior to the opening of Epcot in 1982, the airport had grown by 372% (16.8% compounded annually) to almost 6.1 million annual passengers. On September 20, 1981, the first phase of the new terminal complex opened with two airside buildings (Airsides 1 and 3) and the western half of a landside building. By 1991, after the opening of the Orange County Convention center in 1983 and Universal Studios in 1990, the airport had grown by an additional 303% (11.7% compounded annually) to over 18.4 million annual passengers. On September 11, 2000, a third airside to serve Delta Airlines and expanded international activity was opened. However in January 1991, the start of the first Persian Gulf War was followed by a recession and plateau of passenger activity in the range of 21.5 to 22.5 million annual passengers for almost four years.

In 1996, an improving economy and the arrival of Southwest Airlines at the Orlando International led to five years of positive growth including rates of 13.9% and 6.7%, in 1996 and 1997, respectively. During those five years, the opening of two additional phases of expansion to the Orange County Convention Center, Disney's Animal Kingdom and Universal's Islands of Adventure supported the continued growth of visitors to the region. In the late 1990's, the response to that surge in growth included a flurry of terminal and roadway capacity projects and the opening of the fourth airside at the north terminal in September 2000. By March 2001, airport passenger traffic would reach a high of 31.1 million annual passengers on a rolling 12 month basis followed by a slight decline caused by a mild recession. After the events of September 11, 2001, passenger traffic would drop 20% to 26.0 million annual passengers in the summer of 2002 before mounting a strong comeback. As Illustrated on **Figure 2**, full recovery in passenger traffic took three years, including a second dip in passenger traffic caused by a SARS outbreak in Asia, and then continued on a strong positive trend until cresting in May 2008 at 37.3 million annual passengers on a rolling 12-month basis. The severe economic recession in the fall of 2008 led to 10% drop in passenger traffic to 33.5 million annual passengers in August 2009. Since the fall of 2009, a slow and gradual recovery occurred until the summer of 2011 when passenger traffic reached a plateau around 35 million annual passengers (MAP).

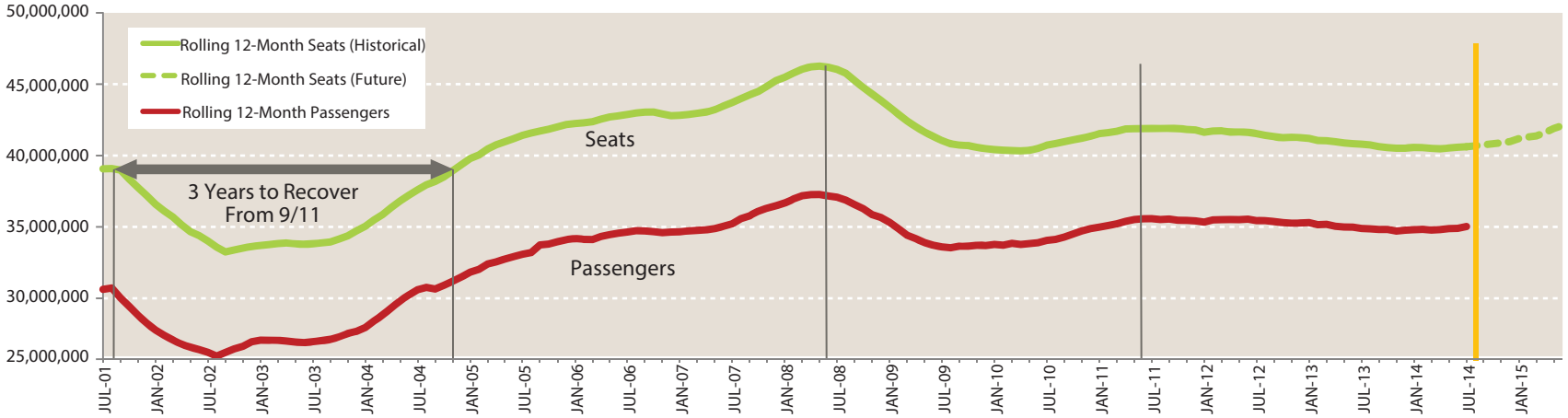
From 1971 to 1991, the growth of airport traffic has been most closely tied to visitor growth in the region (**Figure 3**). As the tourism industry has matured, the rate of airport passenger growth has slowed as well since the base upon which the growth is measured is now such a large denominator. Looking to the future, population and business growth will become more significant factors to airport growth built upon what is projected to be a large foundation of ongoing tourism and visitor activity. As an example of this pattern, consider the growth pattern in Miami, Florida over the last 100 years. It too was a popular tourist destination following the introduction of rail to south Florida by Henry Flagler. Decades later, as the region matured, population and business activity growth in the region have continued to cause the need to expand airports in south Florida.

TABLE 1 – KEY HISTORICAL STATISTICS

Year	Total Airport Passengers	Compound Annual Growth Rate (CAGR)	City Population	Compound Annual Growth Rate (CAGR)	MSA Population	Compound Annual Growth Rate (CAGR)	Florida Population	Compound Annual Growth Rate (CAGR)	"Central Florida Visitors"	Compound Annual Growth Rate (CAGR)	Hotel Rooms	Compound Annual Growth Rate (CAGR)
1971	1,287,540		99,006		522,575		6,789,443		N/A		N/A	
1981	6,072,145	16.8%	128,251	2.6%	804,925	4.4%	9,746,324	3.7%	N/A		33,620	
1991	18,411,945	11.7%	166,582	2.6%	1,224,852	4.3%	12,937,926	2.9%	27,530,000		77,511	8.7%
2001	28,253,248	4.4%	197,314	1.7%	1,644,566	3.0%	15,982,378	2.1%	40,763,000	4.0%	106,069	3.2%
2011	35,426,436	2.3%	243,329	2.1%	2,171,360	2.8%	18,801,310	1.6%	55,168,000	3.1%	114,968	0.8%
2013	34,768,416	-0.9%	255,483	2.5%	2,267,846	2.2%	19,317,568	1.4%	59,270,000	3.7%	116,499	0.7%

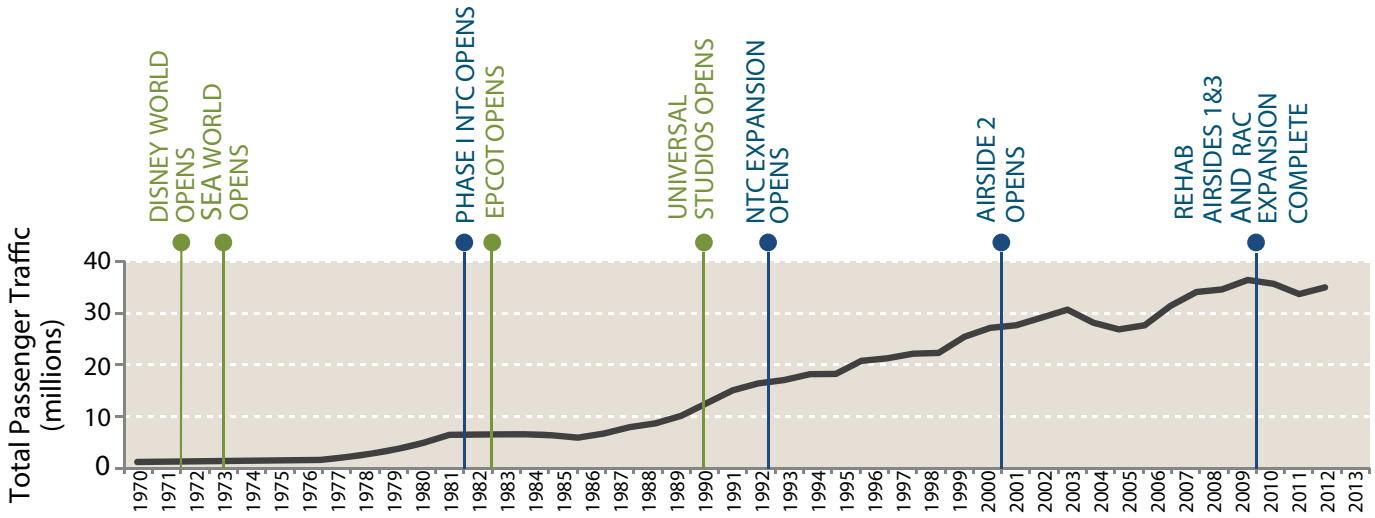
SOURCE: GOAA, September 2014.

FIGURE 2 – SCHEDULED SEAT CAPACITY



SOURCE: Airline landing reports (GOAA) and Innovata flight schedules (Diio) as of September 9, 2014.

FIGURE 3 – RESPONSE TO CHANGES IN PASSENGER GROWTH



SOURCE: SchenkelShultz Architecture, September, 2014.

AIRPORT SERVICE AREA AND SURROUNDING AIRPORTS

The Orlando-Kissimmee-Sanford Metropolitan Statistical Area (the MSA) encompasses one of the largest leisure and hospitality centers in the world. Seven of the top 10 U.S. theme parks, based on attendance, are located in the MSA. In 2010, the Orlando area attracted more than 51 million visitors, whose spending generated an impact of approximately $28 billion dollars on the area economy, according to Visit Orlando. The Airport Service Area is represented by the MSA (consisting of Lake, Orange, Osceola, and Seminole counties). Orlando is the primary city within the MSA. The Port Canaveral cruise port and Atlantic Ocean beaches are within a one-hour drive from the Airport to the east and the Tampa Bay area and Gulf Coast beaches are within a two-hour drive to the southwest.

As illustrated on **Figure 4**, other passenger airports located near the Orlando International Airport include Orlando-Sanford International, Daytona Beach International, Melbourne International, and Lakeland Linder Regional, however, given the limited number of airlines operating at these airports, none is considered a direct competitor to MCO.

Local demographic and economic trends generally reflect the long-term growth of the MSA economy, and a growing economy correlates with increasing volumes of passenger air traffic. Travel to the MSA for leisure reasons (largely theme park visits) tends to correlate with the health of the broader U.S. economy. With regards to demographic trends, the MSA accounted for approximately 11% (2.1 million) of Florida's 2010 population (18.8 million) and ranks third largest in the state, after Miami-Fort Lauderdale-Pompano Beach and Tampa-St. Petersburg-Clearwater. Between 1990 and 2010, the MSA population increased at a rate approximately one-and-a-half times that of Florida and more than two-and-a-half times that of the nation.

Since 1990, employment in the MSA has exhibited stronger growth than in Florida and the nation as a whole. Between 1990 and 2010, employment in the MSA increased at a rate approximately twice that of Florida and roughly three times that of the nation—similar to population growth patterns. Following the 2001 recession, employment levels rebounded more quickly and more strongly in the MSA than in the nation. Between 2007 and 2010, employment in both the MSA and Florida declined to a greater extent than the nation as a whole, reflecting a greater impact from the housing and real estate decline, construction slowdown, and the state's relative dependence on discretionary travel. A total of 51.5 million visitors traveled to the MSA by all modes of transport in 2010; this was a record high, and it was up 18% from 2000. The vast majority of visitors in 2010 (93%) were domestic travelers, while the remainder (7%) were international travelers.

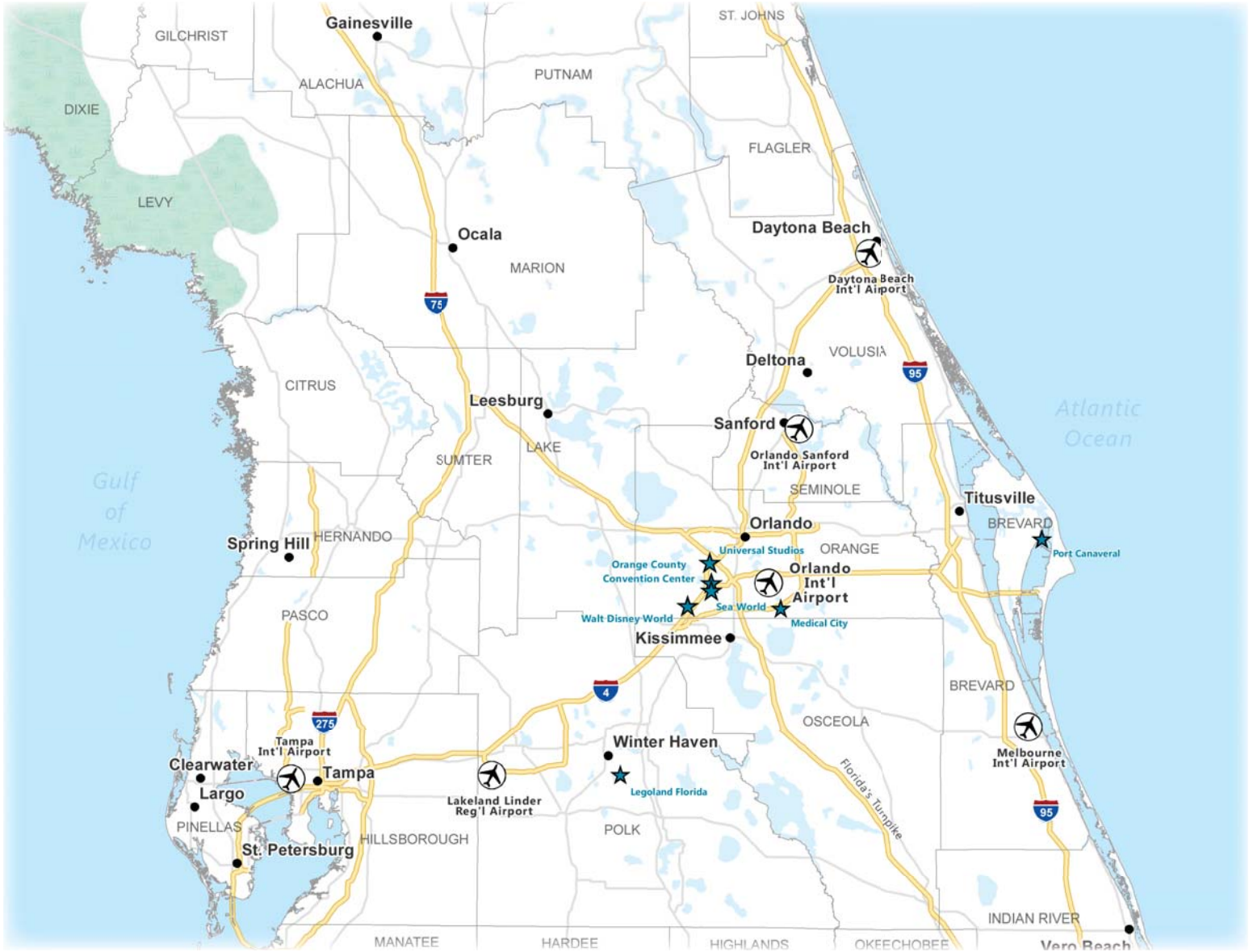
Among domestic visitors arriving by all modes of transport in 2010, those traveling to Orlando for leisure reasons accounted for 80% of the total, with the remainder (20%) visiting on business. While the majority (93%) of Florida residents visiting Orlando arrived by road, approximately half (49%) of non-Florida residents visiting Orlando arrived by air.

Leisure visitors far outnumber business visitors. Between 1995 and 2005, out-of-state visitors arriving by all modes of transport increased 5.1% per year, on average. This pattern of robust growth was interrupted in the four years that followed, dampened by a spike in fuel costs and the 2008-2009 global economic recession. In 2010, however, visitors rebounded strongly (+9.6%, year-over-year). Among international visitors to the MSA in 2010, nearly half (49%) originated in either Canada or the United Kingdom. Most (85%) travelers from overseas visit the Orlando area for leisure purposes.

In summary, it is noteworthy that the service area for the Orlando International Airport has expanded in both the domestic and international sectors for the following reasons:

1. Air service is provided by almost all domestic air carriers.
2. The airlines operating at MCO offer an extensive network of direct flights to primary and secondary markets.
3. Airlines offer competitive air fares due to airline competition in most markets to and from MCO.

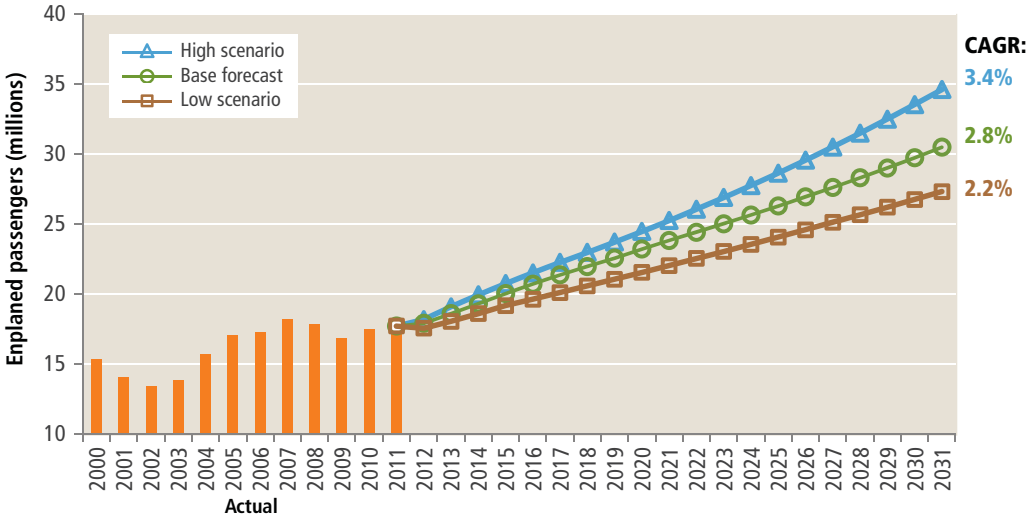
FIGURE 4 – NEIGHBORING AIRPORTS AND LEISURE AND HOSPITALITY CENTERS



ROAD MILES FROM ORLANDO TO	
TAMPA	93
JACKSONVILLE	155
MIAMI	238

SOURCE: Forecast: LeighFisher, Inc. Aviation Demand Forecasts, Orlando International Airport Master Plan Update, May 2012.

FIGURE 5 – COMPARISON OF HIGH, BASE, AND LOW ENPLANED PASSENGER FORECASTS



SOURCE: LeighFisher, Inc., Aviation Demand Forecasts, Final Report, May 2012.

TABLE 2 – 2012 PLANNING ACTIVITY LEVELS

PLANNING ACTIVITY LEVEL	TOTAL PASSENGERS (MILLIONS)	YEAR WHEN TOTAL PASSENGER THRESHOLD LEVELS ARE FORECAST TO BE REACHED		
		LOW SCENARIO	BASE FORECAST	HIGH SCENARIO
40 MAP	40	2017	2015	2014
45 MAP	45	2022	2019	2017
50 MAP	50	2027	2023	2021
55 MAP	55	2031	2027	2024
60 MAP	60	n.a.	2031	2027
65 MAP	65	n.a.	n.a.	2029

SOURCE: LeighFisher, Inc., Aviation Demand Forecasts, Final Report, May 2012.

AVIATION FORECASTS

On June 14, 2012, the FAA approved the official forecasts for the Master Plan Study. The forecast included passenger, aircraft, cargo and derivative forecasts that include peak hour information.

PASSENGER FORECAST

In terms of passenger growth forecasts, the standard industry measure is passenger enplanements which consist of passengers boarding aircraft at the Orlando International Airport and departing for another airport. As these forecasts are developed, typically there are high, intermediate (base) and low growth rate scenarios that seek to reflect a range for future activity. Actual growth curves will never follow a straight line as can be seen by examining the historical growth depicted on **Figure 5**. Projections into the future generally estimate straight line growth over the forecast period.

As illustrated on **Figure 5**, the 20-year base forecast for the Orlando International Airport estimates a 2.8% annual compounded growth rate for total passenger traffic. That growth rate can be further broken into a domestic growth rate of 2.3% and an international growth rate of 5.9% during the forecast period from 2012 to 2031.

Based on those growth rates, total passenger traffic is projected to increase by approximately 74% to nearly 61 million annual passengers (MAP). Domestic and international traffic are estimated to increase by 57% and 315% respectively over the 20-year forecast period. The tripling of international passenger traffic will clearly require new passenger processing facilities as the two existing facilities in the north terminal are eventually closed and re-purposed to serve domestic passenger growth.

As indicated in **Table 2** to the left, the demand projections for MCO are organized into seven levels: a baseline of existing demand levels and six planning activity levels (PALs) that represent projected short-term and long-term growth at the airport, expressed in terms of Million Annual Passengers or "MAP." The PALs are intended to be independent of a specific year since demand projections are uncertain and growth rates can fluctuate considerably over the course of a forecast period. Therefore, the PALs represent demand levels, not necessarily a specific year, which can be used as benchmarks for planning, designing, or constructing airport development projects. In some instances, a projected year of occurrence for each PAL may be given for general planning purposes, but the timeline alone would not trigger development. To accommodate the dynamic nature of aviation activity, the PALs are used as reference for the terminal, airfield, and support facility demand/capacity and facility requirements. For example, if the North Terminal capacity is estimated to be 45 MAP, then a review of **Table 2** indicates that this

threshold would likely to be reached between 2017 and 2022 based on the low, base, and high growth scenario forecasts.

One additional consideration in using this information is the allowance of time to actually implement projects. Large capital programs require years to formulate, finance, design and construct. In the example of the North Terminal reaching capacity at some point in the future, a reasonable estimate would be to use four years to implement phase 1 of the South Terminal based on one year to design and three years to procure, construct and place into service. Once these timeframes are established, the formulation of demand triggers may be completed to provide the Greater Orlando Aviation Authority a guide to the implementation of the Capital Improvement Plan. Later in this document, specific triggers for capital projects will be reviewed in detail.

AIR CARGO TONNAGE FORECAST

Air cargo service at Orlando International Airport is provided by passenger airlines using their aircraft's lower deck, or belly hold, and by the all-cargo airlines using freighter aircraft. The air cargo tonnage forecast at MCO was derived from the forecasts of passenger and all-cargo flight operations. For each category of cargo operator (passenger vs. all-cargo, U.S. airline vs. foreign-flag, freight integrator vs. other), historical time-series of cargo tonnage per flight operation was established from 2006 through 2010. Projected changes in these ratios over the forecast period were then applied to the flight operations forecasts to produce air cargo tonnage forecasts for each airline category. Total air cargo at the Airport is projected to grow from 187,100 tons in 2011 to 307,900 tons in 2031, a compounded annual increase of 2.5 percent.

FLIGHT OPERATIONS FORECAST (Figures 6 and 7)

Total aircraft operations (arrivals and departures) at Orlando International Airport are forecast to increase from 324,090 in 2011 to 503,100 in 2031, a compounded annual growth rate of 2.3%.

Air carrier aircraft operations are forecast to increase from 287,408 in 2011 to 469,800 in 2031, an annual compounded growth rate of 2.5 percent during this period.

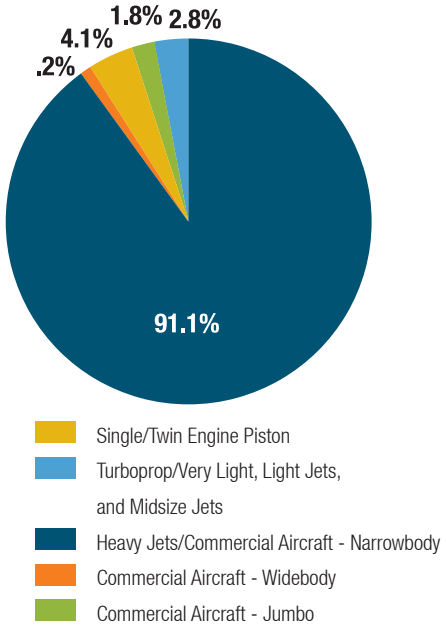
Enplaned passenger load factors were forecast to increase marginally over the forecast period, from 83.4% in 2011 to 84.8% in 2031. Average seats per flight were also forecast to increase, from 148 in 2011 to 153 in 2031.

The air carrier fleet mix is expected to remain primarily narrowbody jets and will only increase as the slightly larger, more fuel efficient, narrowbodies continue replacing the existing narrowbody models. In 2000, narrowbodies accounted for 69% of flights and 76% of seats operated at the Airport. By 2011, these proportions had risen to 90% and 91%, respectively. The remaining flights and seats at the Airport were provided almost entirely by regional and widebody jets, with only a negligible share of the Airport's flights operated by turboprop aircraft.

All-cargo operations are forecast to increase from 5,524 in 2011 to 6,800 in 2031, a compounded annual growth rate of 1.0 percent during the forecast period. Operations from each of the cargo aircraft categories (Large, Medium, and Small) are projected to have a near identical compound annual growth rate of 1.0 percent for Large and 1.1 percent for both Medium and Small aircraft.

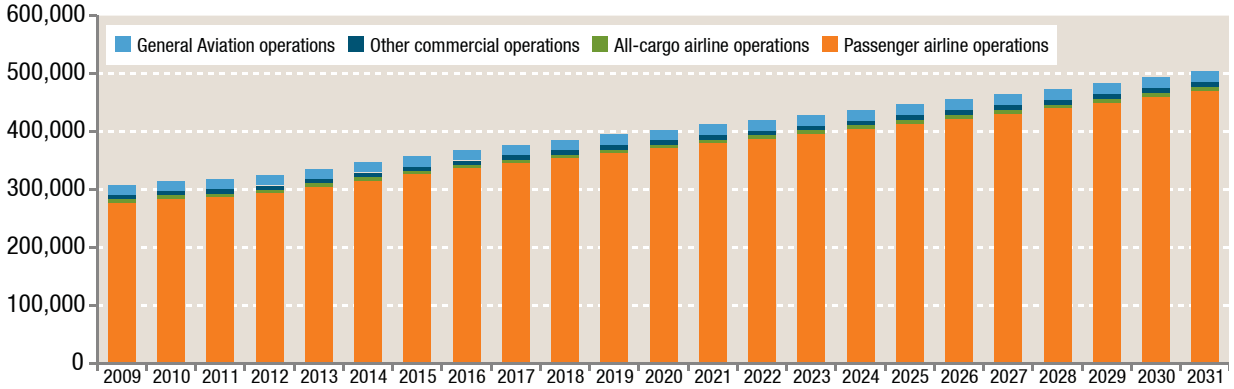
General aviation operations at the Airport are forecast to increase from 16,317 in 2011 to 17,800 in 2031, a 0.4 percent compound annual growth rate. Among GA operations, jet and turboprop flights will increase as a proportion of all GA flights. The number of piston-engine aircraft operations at the Airport will decline as the number of such aircraft in use nationally declines and will account for a decreasing share of GA flights.

FIGURE 6 – PROJECTED AIRCRAFT FLEET MIX (61 MAP – 2031)



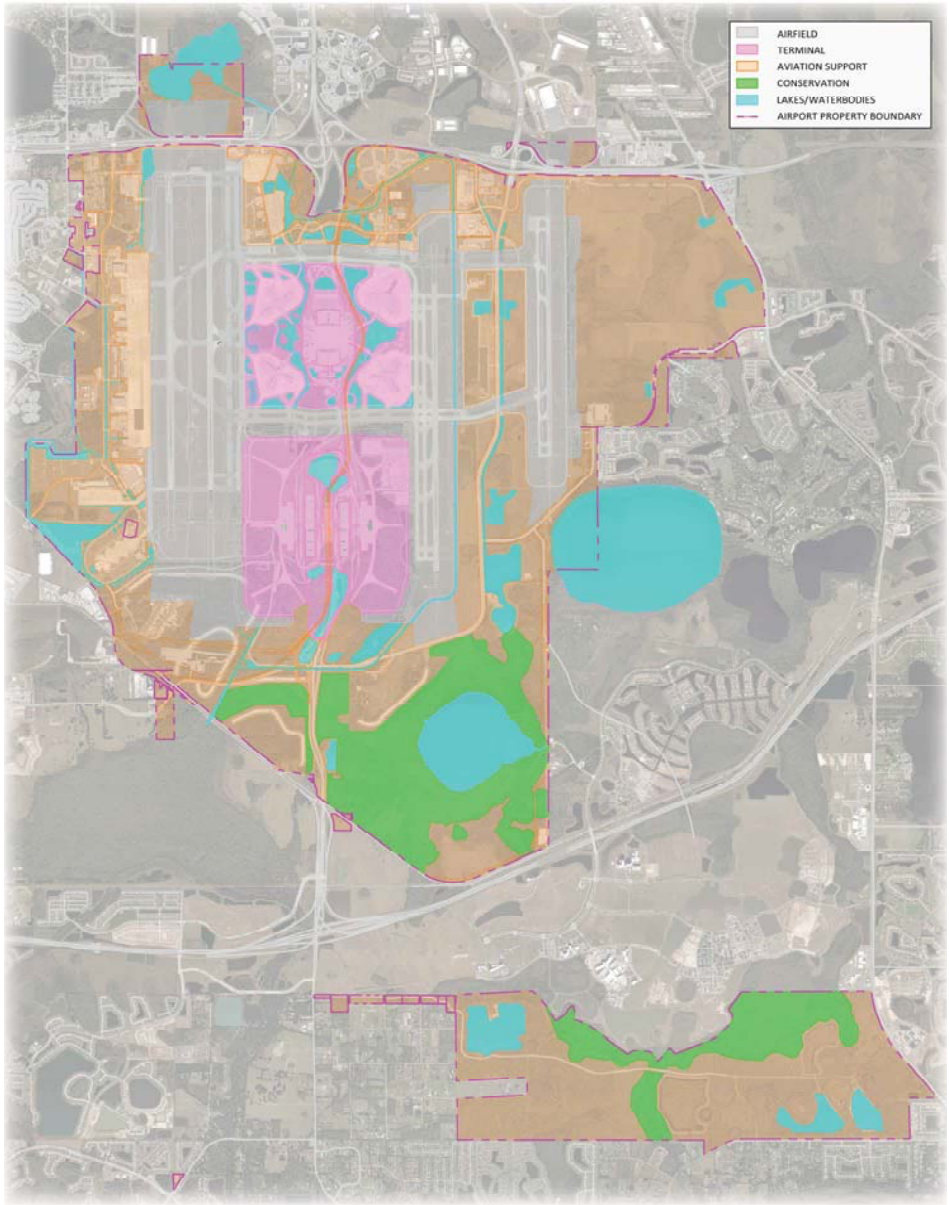
SOURCE: LeighFisher, Inc., Aviation Demand Forecasts, Final Report, May 2012.

FIGURE 7 – AIRCRAFT OPERATIONS FORECAST



SOURCE: LeighFisher, Inc., Aviation Demand Forecasts, Final Report, May 2012.

FIGURE 8 – ON-AIRPORT LAND USE MAP



SOURCE: GOAA, September 2014.

INVENTORY AND AIRPORT TODAY – LAND AND AIRFIELD

From its origins as a strategic air command Unites States Air Force Base, the Orlando International Airport has been endowed with two key ingredients essential to any airport – land and an unconstrained airfield. At the time the 2,549-acre McCoy Air Force Base was released to the City of Orlando in 1974, the airfield consisted of two parallel 12,000 foot runways and associated taxiway system designed to serve B-52 jet aircraft. From that time until June 2005 when the Greater Orlando Aviation Authority closed on the 176 acre Busch Property on the east side of the airport, 13,430 acres of land were assembled to form the fourth largest airport by land mass in the United States see **(Figure 8)**. Only the airports in Denver, Dallas-Ft. Worth, and Ft. Myers are larger than Orlando. It should be noted that the Ft. Myers Airport land area includes approximately 7,000 acres of wetland mitigation conservation areas whereas Orlando has not retained title to most of its 10,000 acres of wetland mitigation sites. The benefits of such a large land area include the following:

- Ability to expand
- Flexibility
- More buffer from neighbors and fewer residents living within the 65 Day/Night Noise Level contour
- No obstructions
- Revenue generating opportunities to increase non-airline revenues
- Economic development opportunities

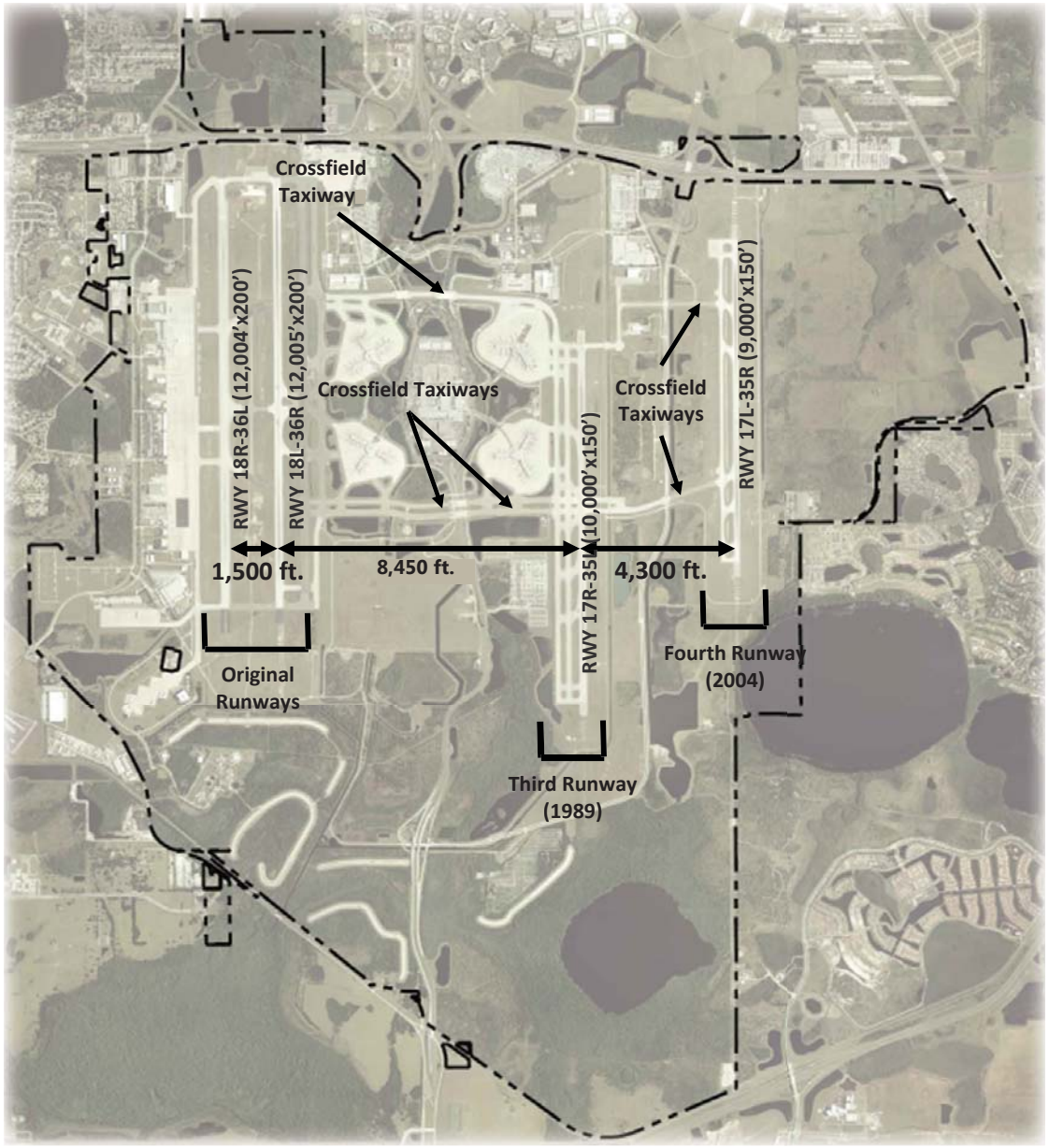
The airfield at the Orlando International Airport has also undergone a significant transformation since the closure of the Air Force Base. A third 10,000 foot runway was added in 1989 and a fourth 9,000 foot runway was added in 2004. All runways are oriented in a north-south direction and are separated by significant distance to allow for future triple independent instrument landing system approaches. **Figure 9** provides a graphic displaying the key dimensions of the runways. The significance of this feature is that the future runway capacity will be able to be expanded without the addition of new runways. Technology improvements are also likely to increase the annual capacity of the Airport in the future. Enhanced global positioning system (GPS) technology will likely make precision approaches available to each runway end and aircraft design improvements would reduce the formation of wingtip vortices, resulting in reduced aircraft horizontal separations, thereby potentially increasing the capacity of the airfield. New airspace routes and better navigation tools, both in the cockpit and in the hands of FAA air traffic control personnel, are also likely to improve the efficiency of aircraft operations and therefore airfield capacity.

The existing taxiway system at the airport is relatively simple in support of the four parallel runways. Among the most important features to note are the locations where east-west taxiways connect the runway system. These "crossfield" taxiways are located to the north and south of the north terminal complex and two locations between the third and fourth runways. The taxiways are also configured to be expanded in the future by adding additional parallel taxiways as airfield demand will dictate.

ORLANDO INTERNATIONAL AIRPORT – 1984

ORLANDO INTERNATIONAL AIRPORT – 1998

FIGURE 9 – EXISTING AIRFIELD



SOURCE: GOAA, September 2014.

INVENTORY AND AIRPORT TODAY – TERMINAL, ROADS, GROUND TRANSPORTATION, PARKING, RENTAL CAR

As an airport with a very high percentage of Origin and Destination (O&D) passenger traffic, the Orlando International Airport is unlike many other US airports. At many US airports, airfield capacity is the primary constraint to airport growth. In Orlando, it is the landside components such as terminal, roadways, curbs and ground transportation that constrain the overall airport capacity.

At the time the existing terminal opened in 1981, there were two airsides with a total of 48 gates and the western half of the landside building. The design capacity of the original terminal was 12 million annual passengers and the opening year demand was approximately 6 million annual passengers. It is important to note that the peak hour characteristics of airlines at that time were more concentrated around three daily peaks in the early morning, midday and late afternoon. In later years, those trends would change.

Within 10 years of opening the new terminal, passenger demand reached 150% of original design capacity at 18 million annual passengers before the opening of a third airside in September 1990. Such a surge in growth created many stress points in the airside buildings, such as limited holdroom areas and aircraft parking positions, but the most challenging areas occurred at landside in the ticket lobbies, baggage claim and make-up areas. Curb capacity was not yet a problem since the entire elevated north terminal curb system (as it exists today) was already built and provided an overflow area until the full build-out of the terminal was complete. However, roadway, parking and rental car facilities were also inadequate and resulted in the rapid development of the first phase of the Terminal A and B parking garages including the use of level 1 for rental car ready-return services.

In 1996, the introduction of Low Cost Carriers (LCC's) led to the next surge in growth and two major capital programs of the Near Term and North Terminal programs. The Near Term program was approved in January 1997 and dealt with $240 million of immediate capacity needs for terminal, parking and rental car operations. The $395 million North Terminal program included the addition of the fourth airside (Airside 2), the build-out of the landside building, a new FAA Air Traffic Control Tower, and the first North Crossfield Taxiway.

By the time Airside 2 opened in September 2000, total airport passenger traffic had already reached 30.5 million annual passengers, 25% above the original design capacity of the four-airside North Terminal Complex. Preparations for Phase 1 of a first phase South Terminal project were the topic of ongoing discussions between the Greater Orlando Aviation Authority and the airlines. The mitigating factors to this demand were twofold; the first being the spreading of peak hour passenger traffic which allowed for additional annual throughput and the second was the implementation of north terminal capacity projects that were targeted as the weak links in the chain of the airport's capacity.

The North Terminal is now over 30 years old, has four airsides, 93 gates, 137 retail and food and beverage concessions and over 4.5 million square feet of building area. Since 2000, airport capacity has been evaluated multiple times with each effort seeking to optimize the north terminal while maintaining an acceptable level of passenger service. By 2013, a final wave of projects were approved including capacity projects to improve baggage systems, ticketing lobbies, and international passenger processing facilities at Airside 4. The final link in the chain of North Terminal capacity was the area of roads and curbs. With the FAA's approval of PFC 17 and the South Airport Automated People Mover program, the North Terminal capacity is 40 million annual passengers and it may be stressed to 45 million annual passengers during the development of Phase 1 of the south terminal.

NEEDS ASSESSMENT – OVERALL AIRPORT

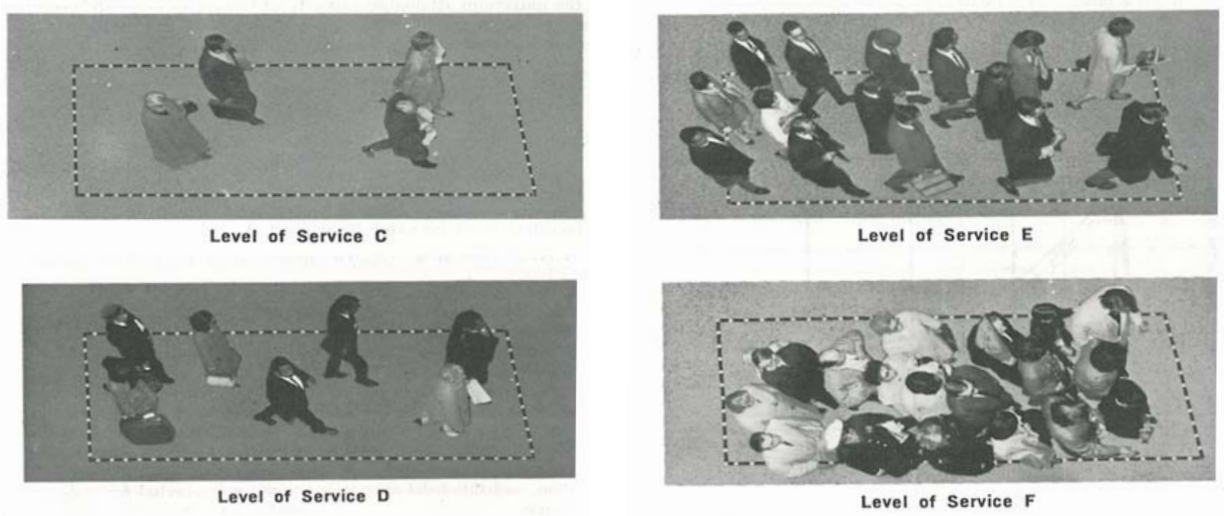
In order to assess the needs of the airport, one must examine the entire spectrum of functions that occur at the airport. This requires a review of scores of components and to then identify the weak links in the chain. After that task, one must then determine if there are affordable solutions to enhance the capacity of those weaker links in the system. The runways, taxiways, aircraft parking aprons, enplaning and deplaning terminal components, roadways, curbs, parking and rental car facilities, utilities, electrical and mechanical and much more, are each broken down into their component parts. From there the most critical items are identified to that must be addressed if the capacity of the airport is to be increased without the requirement to build major items such as a new runway or terminal.

In order to identify the most critical capacity constraints, a level of service (LOS) standard must be established. For most areas, industry standards exist such as the level of service standards (A-F, see **Figure 10**) for roads, passenger circulation, and queuing in the Terminal. Accompanying that standard must be a unit of measure to compute its relative acceptance as either exceeding, meeting or operating below customer expectations. For many capacity components, the most appropriate measure is to examine peak hour activity or more particularly the peak hour in the average busy day in the peak month of the year. Such an approach is common for capacity components that serve as conduits of passenger activity such as ticketing areas, circulation corridors and security checkpoints. For other capacity items that serve as a storage device, such as parking garages, different metrics are used. In the case of a garage, a more meaningful measure is the percentage of spaces that are occupied and the ease with which a customer can find an open parking space.

For the Orlando International Airport, the peak month of passenger activity is in March, normally representing approximately 10% of the annual passenger traffic. The average busy day is typically 3.3% of the busy month. The peak hour will vary depending on whether or not passengers are enplaning (i.e. boarding flights) or deplaning. The peak hour can vary from year to year as airlines adjust their flight schedules and the type of aircraft serving the airport. For Orlando, the enplaning peak hour will typically represent about 10.5 to 11% of the average day in the peak month. The deplaning peak will usually be a lower figure in the range of 8.5 to 10% of the average day in the peak month. These factors are assembled to calculate peak aircraft, passenger, baggage, and vehicular demand. These demand levels are then compared to the respective capacity of individual components so that future airport needs can be assessed.

Concerning the topic of needs assessment, a final point to underscore is the dynamic nature of the results. Peaking characteristics and processing rates can change. Such changes have occurred often during the evolution of the aviation industry. Following the events of September 11, 2001, dramatic changes in passenger and baggage processing rates occurred in the security sector. New procedures at passenger security checkpoints reduced processing rates by more than 50% causing the need to expand checkpoints in spatially constrained areas. The need for 100% checked baggage screening created an even greater challenge. For several years after September 11, ticket lobbies were improvised to accommodate very large-sized baggage screening equipment. Eventually, the traditional airline baggage sortation and make-up areas were converted into compact and complex systems of conveyors needed to both screen and sort baggage. Some airports found new locations to place the function. At Orlando, the Remote Screening Facility (RSF) was developed at first to support the Disney Magical Express (DME) operation and then to provide relief to airline baggage areas that could take advantage of off-airport check-in operations at hotels and convention facilities.

FIGURE 10 – IATA LEVEL OF SERVICE FRAMEWORK – PASSENGER CIRCULATIONS



SOURCE: John J. Fruin, Pedestrian Planning and Design, 1971.

NEEDS ASSESSMENT – ROLE OF INNOVATION AND TECHNOLOGY

Innovation and technology has always played an important role at airports. In the case of the Orlando International Airport, both innovation and technology have served to maximize the capacity of the North Terminal complex before triggering the need to build the first phase of the South Terminal complex. As discussed on the previous page, the peaking characteristics of an airport are critical to defining the demand that must be handled by airport facilities. The level of service standards address how pleasant the customer experience will be during the peak demand periods of activity.

On the capacity side of the equation, there are five key attributes that determine a component's capacity which include:

1. Size (building area, queue area, etc.)
2. Configuration (i.e. number of levels in building, etc.)
3. Quantity (number of ticket counters, security checkpoints, baggage claim devices, etc.)
4. Service Innovation
5. Technology Innovation

In a location such as the north terminal at the Orlando International Airport, the ability to influence size, configuration and quantity have been mostly exhausted due to the physically constrained nature of the building except for the projects that are beyond the point of diminishing return. At this point, service innovations and technology have provided relief and many benefits to enhance the customer experience.

Service innovations at the Orlando International Airport have included the following list of actions:

- Creation of a fourth curb on level 1 of Terminals A and B
- Introduction of the CLEAR Program at the Passenger Security Checkpoints
- Continued operations of Disney Magical Express serving Disney hotels and cruise ships
- Remote Check-in and Baggage Screening Facility

The use of technology at the Orlando International Airport has included both the adaptation of existing equipment and the next generation of technology for use in the industry:

- Self-service check-in kiosks
- Automated Passport Control
- Parking Revenue Control systems

Innovation and technology have proven to be vital tools for an airport to maximize its capacity while serving the needs of customers at an acceptable level of service. Flexibility, however, is the most important feature an airport can promote for it provides options to incrementally add capacity while minimizing impacts on existing facilities and operations.

NEEDS ASSESSMENT – AIRFIELD AND TERMINAL

AIRFIELD

With its four runways and extensive taxiway system, the Orlando International Airport is in the favorable position not to require any large scale, near term airfield capacity improvement projects. Asset preservation projects will dominate the near and mid-term airfield Capital Improvement Plan (CIP) projects. For CY 2013, total airfield operations consisting of all landings and takeoffs were 291,662. The estimated annual runway capacity, also known as the Airport Service Volume (ASV), is 704,000. The ASV will further increase with the implementation of triple simultaneous instrument landing system operations. In the interim, airfield demand can more than double commensurate with the growth in passenger traffic in the terminals.

Eventually, airfield projects to expand aircraft parking aprons at the south terminal and the associated taxiway extension projects will be required on a demand driven basis. In the intermediate to long term, three runway extensions will be required at the Orlando International Airport. None of the proposed runway extensions are required for runway capacity but instead for support of added terminal and taxiway capacity. The demand trigger for each of the runway extensions are described below:

1. 2,980 Ft. Extension to Southern End of Runway 18L-36R; Trigger – Building third phase of terminal C

2. 1,500 Ft. Extension to Northern End of Runway 17R-35L; Trigger – Building second North Crossfield Taxiway

3. 1,500 Ft. Extension to Southern End of Runway 18R-36L; Trigger – Further development of Alert Area to overcome airspace obstruction issues

TERMINAL

As discussed in previous sections, terminal capacity and specifically North Terminal capacity has been a dominant topic since the mid 1990's. The North Terminal capacity was originally estimated to be 24 million annual passengers. By the mid 1990's, including accounting for the anticipated fourth airside (Airside 2), North Terminal Capacity was estimated to be 30 million annual passengers at an acceptable level of customer service and 33 million annual passengers at a stressed level of service. The increase in capacity was a result of some spreading of peak hour airline activity and implementation of capacity projects including a larger third airside (Airside 4) and landside terminal building and associated improvements.

After the completion of the 1995 Master Plan, at least seven more terminal capacity studies were conducted. On most of those occasions, the Greater Orlando Aviation Authority and Signatory Airlines formed joint working groups, each with their own independent consultants, to reach consensus recommendations on both terminal capacity and viable capacity projects to be implemented as part of the Capital Improvement Plan. The aggregate total of those capacity projects from 1996 to the present totals over $1 billion. With each iteration, as problem areas were addressed by operational or capital project implementation, the weak link in the capacity chain would move again. In the terminal area, security screening, baggage systems, international passenger processing and ticket lobby areas have presented recurring challenges and the subject of multiple enhancement projects over the last 15 years. Now in 2014, at the end of these iterations of capacity analyses and project implementations, physical and space limitations in the North Terminal have reached a point of diminishing return for further investment. North Terminal capacity is now estimated to be 40 million annual passengers at an acceptable level of service and can be stressed to an estimated 45 million annual passengers while the first phase of the South Terminal is constructed.

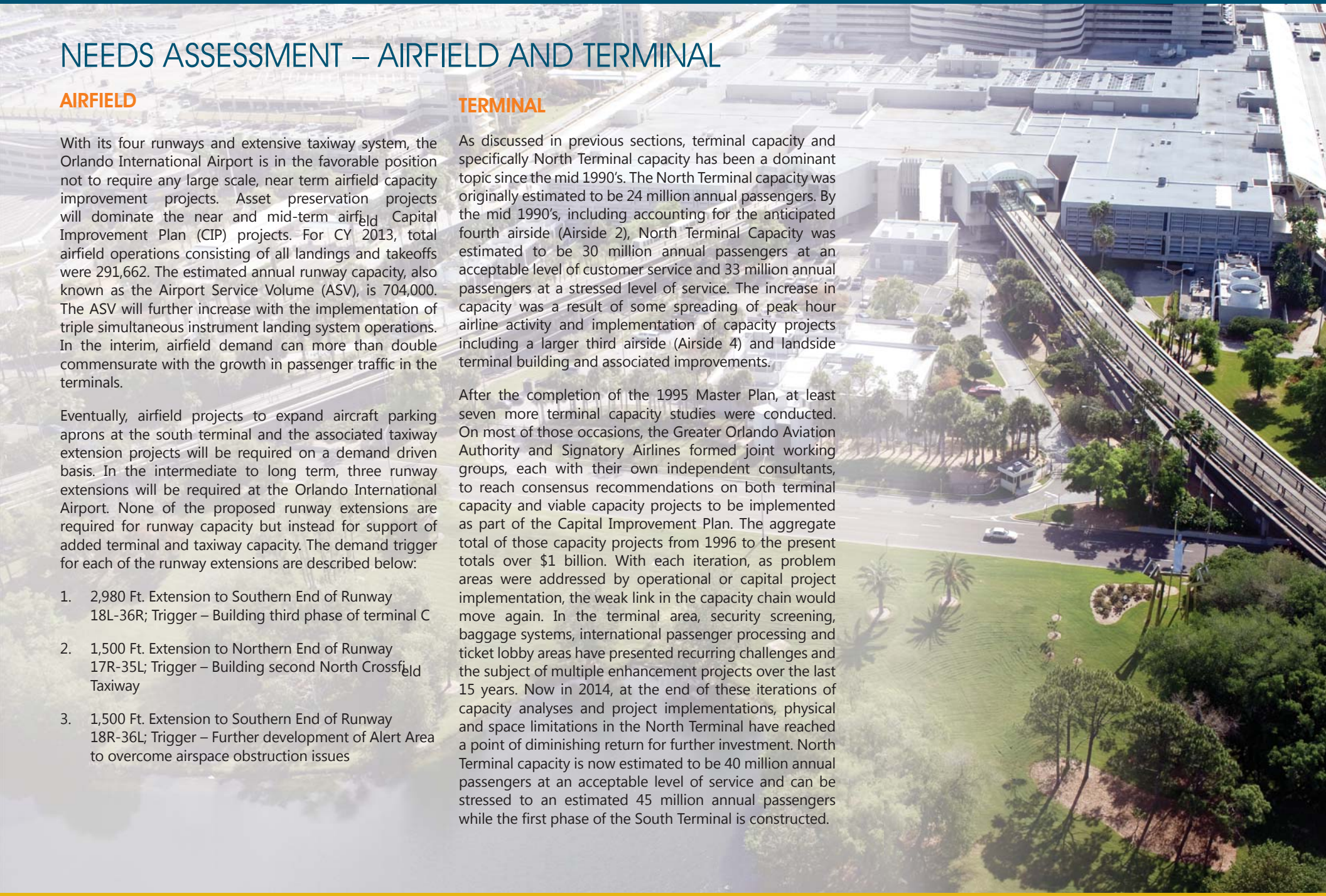
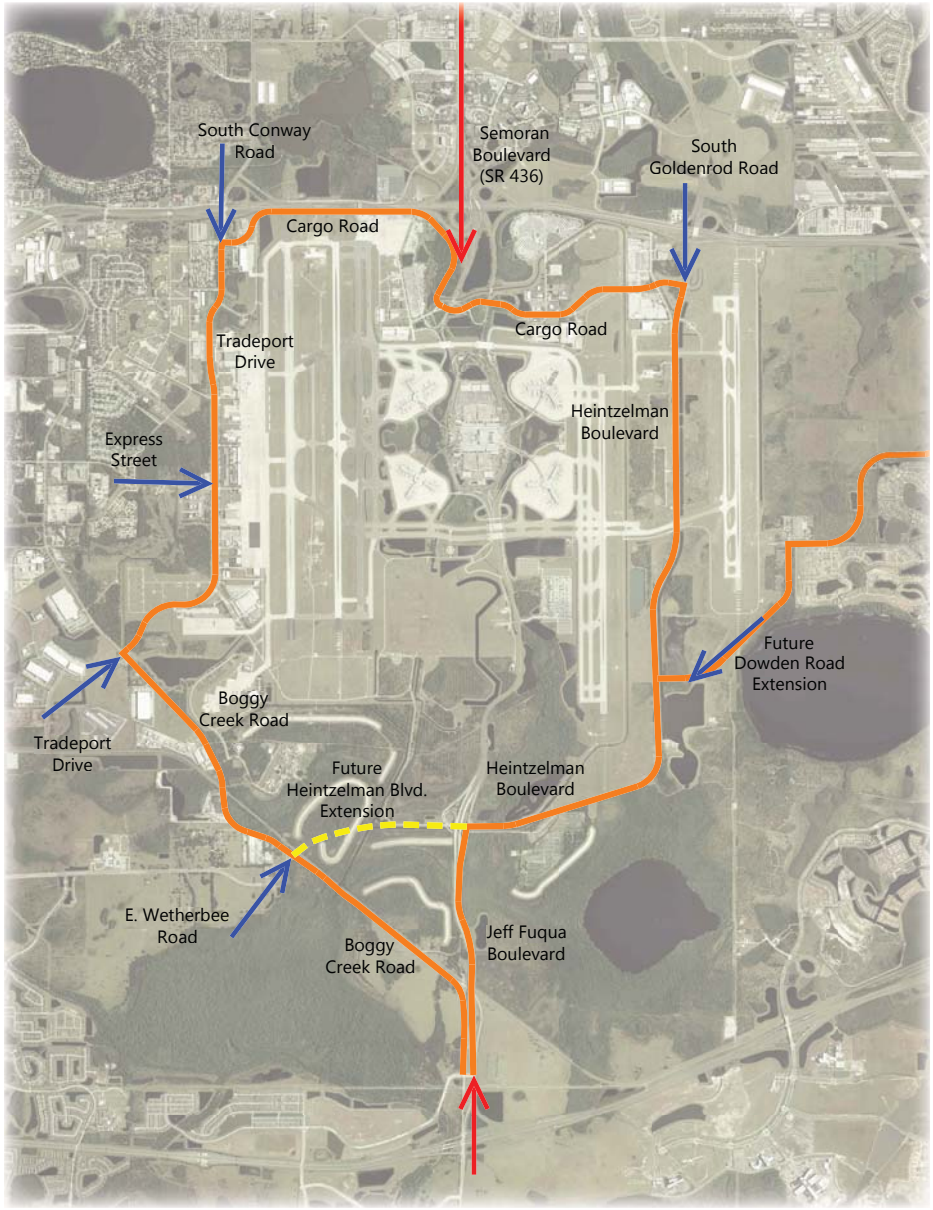


FIGURE 11 – AIRPORT BELTWAY SYSTEM



SOURCE: GOAA, September 2014.

NEEDS ASSESSMENT – ROADWAYS, CURBS, PARKING, AND INTERMODAL FACILITIES

ROADWAYS AND CURBS

As the third busiest domestic Origin and Destination (O&D) airport in the United States, over 95 percent of the passengers arrive at the Airport via the terminal area roadway system. Unlike a connecting or "hub" airport which have a majority of passengers that transfer from one flight to the other in the airside gate areas, Orlando passengers are "crossing the curb" at the landside terminal and scattering in dozens of directions depending on their mode of surface transportation. The backbone of that surface transportation system are the roadways and curbs. For the Easter 2014 airport traffic counts, an average daily number of 37,500 vehicle trips used southbound Jeff Fuqua Boulevard. For the last five years, the same figure has averaged 115,000 with approximately 80% arriving from the north and 20% from the south. As airport vehicular traffic grows over the future decades, it is likely that average daily trips (ADT) will at least double to over 200,000 daily trips exceeding the current amount of traffic using I-4 today through downtown Orlando (175,000 ADT). As the region grows to the south and east, and as highway networks are expanded, the split between north and south vehicular trips will begin to become more balanced on a percentage basis. Nonetheless, the total number of trips from each direction will continue to increase in absolute numbers and always pose challenges to find the most efficient solutions. A regional focus on comprehensive solutions will also be vital to future success.

The on-airport solution to surface transportation issues lies in a multi-faceted solution including the following:

- Continued development of a "beltway system" consisting of Tradeport Drive on the west, Bear and Cargo Roads on the north and Heintzelman Boulevard and Boggy Creek Road on the south (**Figure 11)**. This beltway can support a radial network of current and future roads to access the airport from almost all directions and relieve pressure on the primary airport entrance and exit roads.
- Development of multiple curb areas at the terminal and at other locations including at the future South Airport APM station and Intermodal Terminal Facility to distribute trips to more locations with expanded capacity for all modes of surface transportation.
- Widening of existing roads, improved airport signage to include dynamic messaging boards and the development of expanded cell-phone parking lots.

- Future consideration of a tolling system on select airport roads to minimize or eliminate cut-through traffic **(Figure 12)**. Dallas Fort-Worth airport uses such a system in tandem with parking revenue control operations.

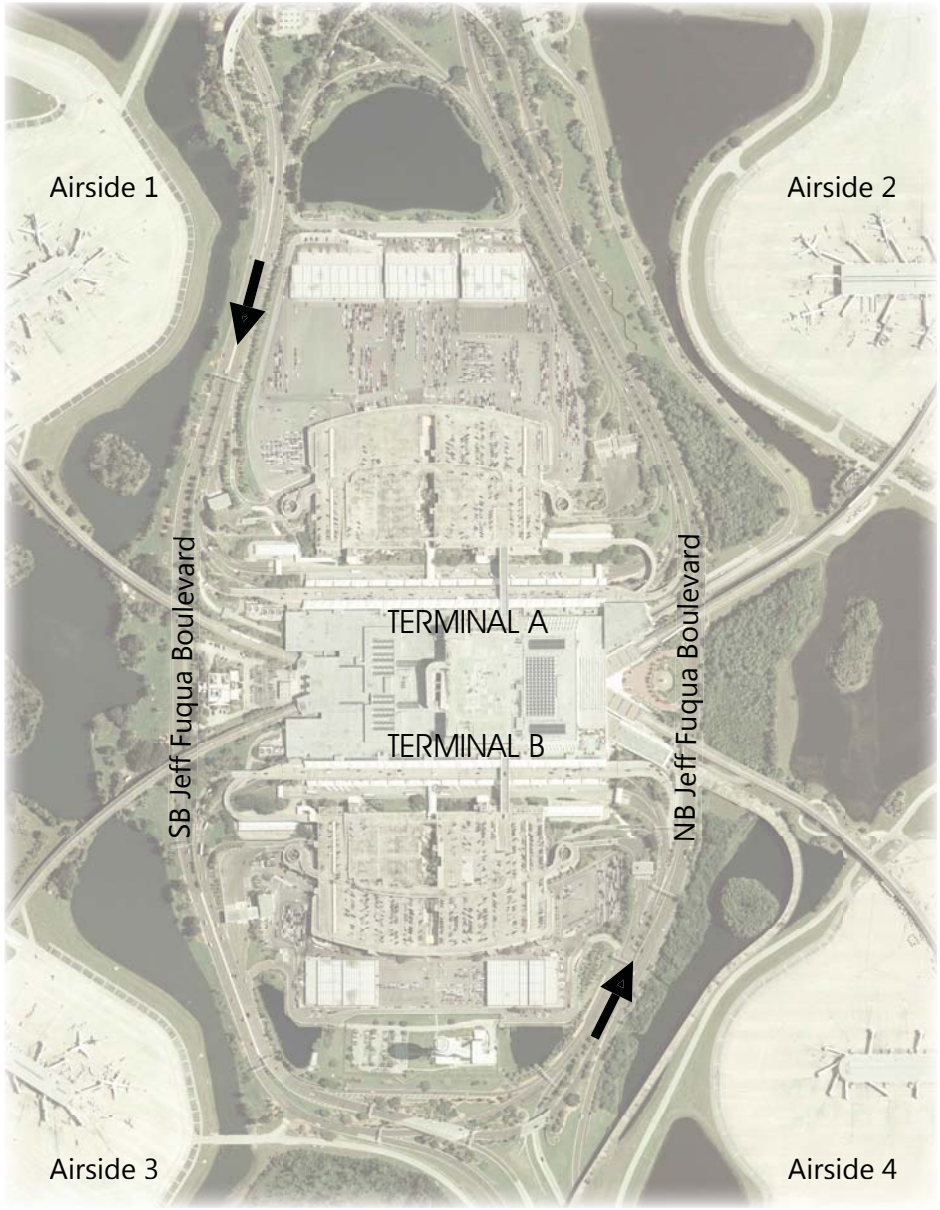
Despite implementation of roadway and curb projects to serve all vehicular traffic, the need for intermodal connectivity to rail systems will improve the transportation system.

INTERMODAL TRANSPORTATION FACILITIES, PARKING, AND RENTAL CAR FACILITIES

The planning for rail corridors and intermodal facilities has been a part of the master plan for the Orlando International Airport since the original concepts were drawn on a napkin. Orlando's central location in the State of Florida, the airport's location in the center of a growing region and the reality of local and statewide plans for rail systems provide the foundation for a true intermodal terminal facility at the Orlando International Airport.

Such an intermodal terminal facility in combination with public parking, rental car facilities at the largest rental car market in the world, other forms of ground transportation and eventually adjacent "transit oriented development," (TOD) can realize a vision and mission long foreseen by the Greater Orlando Aviation Authority.

FIGURE 12 –TERMINAL ROADWAYS AND CURBS



SOURCE: GOAA, September 2014.

IMPLEMENTATION PLAN

The purpose of each periodic update to an airport's master plan is to assist in the development of 5, 10 and 20 year capital programs for the airport. This information is used to work with the FAA and Florida Department of Transportation to formulate short and long range funding plans. The information is also important for use in coordinating planning issues with the City of Orlando, Orange County, Orlando Utilities Commission, MetroPlan Orlando, East Central Florida Regional Planning Council, Central Florida Expressway Authority, and other local and State agencies.

In the case of the Orlando International Airport, those 5, 10 and 20-year incremental plans are prepared as required by FAA and within the context of the airport's ultimate development potential. The ultimate development plan, which refers to projects or space allocation anticipated beyond the 20-year Master Plan Update planning period, will only be realized as passenger and tenant demand dictates (and when the associated projects are financially viable). The importance of the ultimate plan is that a wide range of spatial issues associated with the airfield, airspace, terminals and other infrastructure may be coordinated. The preparation of the Airport Layout Plan (ALP) that is submitted to FAA for approval is the mechanism that is used to coordinate with all applicable FAA departments at the local, regional and headquarter offices. Such FAA groups include, among others, the Airports District Office (ADO), and Air Traffic and Technical Operations.

Figure 13 (see right) is the proposed Ultimate Development Plan for the Orlando International Airport. The highlights of the development plan are summarized as follows:

- The existing North Terminal Complex is completed and can serve a maximum capacity of 40 million annual passengers at an acceptable level of service. The terminal can be stressed to 45 million annual passengers at a lower level of service. Future capital improvements beyond those capacity projects that are already approved and in progress will be targeted asset preservation projects.

- In the center of the future 1,300 acre South Terminal site will be a South Airport Automated People Mover (APM) Complex project. The facility will be located adjacent to an Intermodal Terminal that will support multiple forms of ground transportation including up to three forms of rail. The APM project will initially serve to maximize the North Terminal capacity and defer the construction of the first phase of the South Terminal Complex. After the first phase of the South Terminal is opened, the APM project will provide a passenger connection between the North and South Terminals

- The South Terminal will ultimately provide two new terminals, Terminal C and D, that may implemented on a phased basis. Terminal C will be located on the west side of the project site and support the early phases of the south terminal.

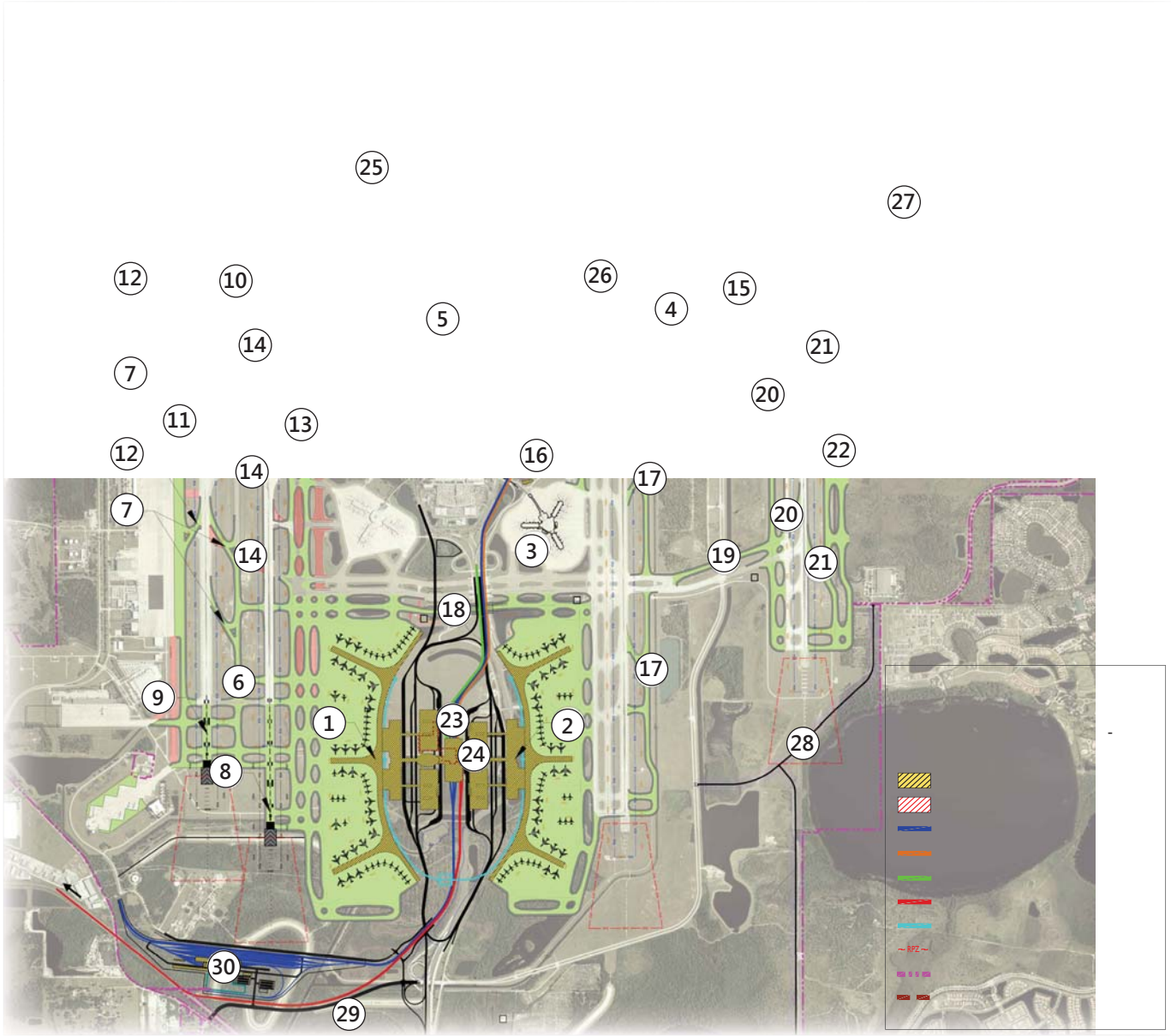
- Three runway extensions are proposed to existing runways. No change is proposed to the location or length of the fourth runway (Runway 17L-35R) located on the east side of the airport.

- The parallel taxiways on the west airfield are proposed to be shifted and extended. The lateral shifting of the taxiways will maintain FAA Airplane Design Group VI taxiway spacing necessary to support Airbus A-380 and Boeing 747-8 operations without providing excess separation. The narrowing of the separation will allow for the "recaptured" real estate to be developed for aviation support facilities and to increase non-airline revenues. The extension of the taxiways will be implemented to support both terminal expansions and runway extensions.

- The crossfield taxiway systems will include the addition of a second north crossfield taxiway from the west airfield to the fourth runway and the addition of a third mid-crossfield taxiway. The first project will require a 1,500 foot extension to Runway 17L-35R to eliminate an airspace obstruction issue. The second project will enable the elimination of the previously planned south crossfield taxiways and negate any building height restrictions in the center of the South Terminal site since FAA air traffic control line of sight constraints will no longer be a factor.

Additional projects are included on the Ultimate Development Plan for the Orlando International Airport and are included in the update to the Airport Layout Plan (ALP).

FIGURE 13 – ULTIMATE AIRPORT DEVELOPMENT PLAN



SOURCE: Ricondo & Associates, Inc., September 2014.

TERMINAL PROJECTS

1 Proposed South Terminal Complex Terminal C
2 Proposed South Terminal Complex Terminal D
3 Airside 4 Expansion/Customs & Border Protection Improvements

AIRFIELD PROJECTS

4 Runway Extension - 17R End
5 Proposed North Crossfield Taxiway K
6 South Extension of Taxiway Z to Taxiway B 10
7 Proposed High-Speed Taxiways for Taxiway Z
8 Runway Extension - 36R End
9 Runway Extension - 36L End
10 North Extension of Taxiway Z to Taxiway B 2
11 Taxiway A Realignment
12 Proposed High-Speed Taxiways for Taxiway A
13 Realignment of Taxiways B and C
14 Closure of Taxiway Connectors
15 Taxiway K Extension (between Runway 17 ends)
16 Connector Taxiway between Airsides 2 & 4
17 Proposed Taxiway L (parallel to Runway 17R-35L) including High-Speed Exit Taxiways
18 Proposed Mid-Crossfield Taxiway Q
19 Extension of Taxiway E
20 Proposed Taxiway M (parallel to 17L-35R) including High-Speed Taxiways
21 Proposed Taxiway P (parallel to 17L-35R) including High-Speed Taxiways
22 Proposed Taxiway T (parallel to 17L-35R)

LANDSIDE/RAILWAY PROJECTS

23 South Terminal Complex APM Station
24 Intermodal Terminal Facility (ITF)
25 Cargo Road Extension / Bear Road Widening
26 Cargo Road Relocation
27 Jetport Drive Relocation
28 Dowden Road Extension
29 Heintzelman Boulevard Extension

NON-GOAA PROJECTS

30 AAF Rail Line and Vehicle Maintenance Facility (VMF)

FEATURES OF THE SOUTH TERMINAL COMPLEX CONCEPT

The most significant feature of the Ultimate Development Plan is the concept plan for the future South Terminal. In the early versions of the master plan in the 1980's, the concept was to replicate the North Terminal, consisting of a two sided landside terminal and four remote airsides connected via Automated People Mover (APM) systems, in the South Terminal site. The Orlando version of the "landside/airside" concept has proven to be a very effective design for domestic origin and destination (O&D) passenger activity. When the O&D passenger can experience the concept within one of the North Terminal's four quadrants, the scale of the overall facility is mitigated and walking distance is kept to a minimum. The three level landside terminal has also provided tremendous flexibility to address ground transportation, curbside and back-of-house functions such as terminal service and delivery functions.

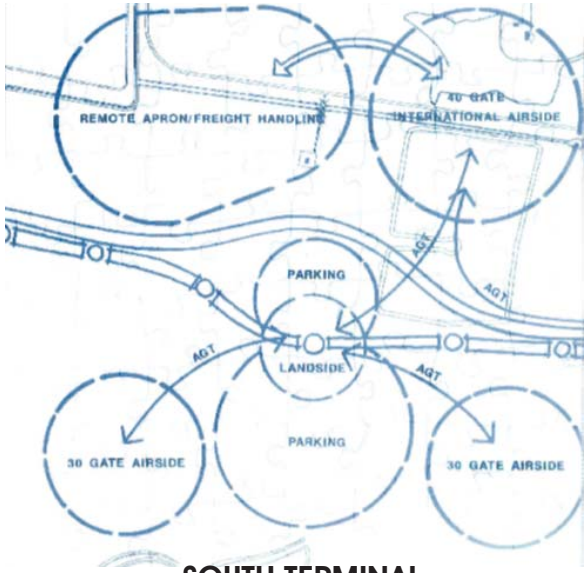
The lessons learned from the landside/airside concept were primarily in the areas of international passenger processing and incremental terminal development. The design of international passenger processing facilities has proven to be a significant challenge. The ideal configuration will offer the arriving international passenger the ability to process through U.S. Customs and Border Protection facilities and then proceed directly to all forms of ground transportation. The landside/airside concept however presents physical separation of facilities in order to reduce walking distance and optimize airside configuration for aircraft parking. A second significant challenge is the ability to add terminal space and gates on an incremental basis. Once an airside is full, the cost to add one additional gate becomes relatively high since an Automated People Mover system and a new quadrant of landside building is required.

Over the last 25 years, many concepts have been developed, critiqued, and then refined further. This iterative process has included the participation of a wide range of airlines, tenants, government agencies, community partners and airport staff. Among the most fundamental questions that have been asked and vetted are the following:

1. How to build an affordable first phase of the South Terminal that can evolve into an ultimate concept that offers modern customer amenities?
2. Which airlines will occupy the early phases of the South Terminal?
3. Will one or both Customs and Border Protection facilities close in the North Terminal when the South Terminal open?
4. How to retain the best features of the North Terminal while correcting its deficiencies?
5. How to provide multiple surface transportation alternatives for future implementation including rail corridors and an Intermodal Terminal?

The South Terminal concept depicted on the Ultimate Development Plan and on **Figure 14** represents a hybrid design of the North Terminal with the following revisions and enhancements:

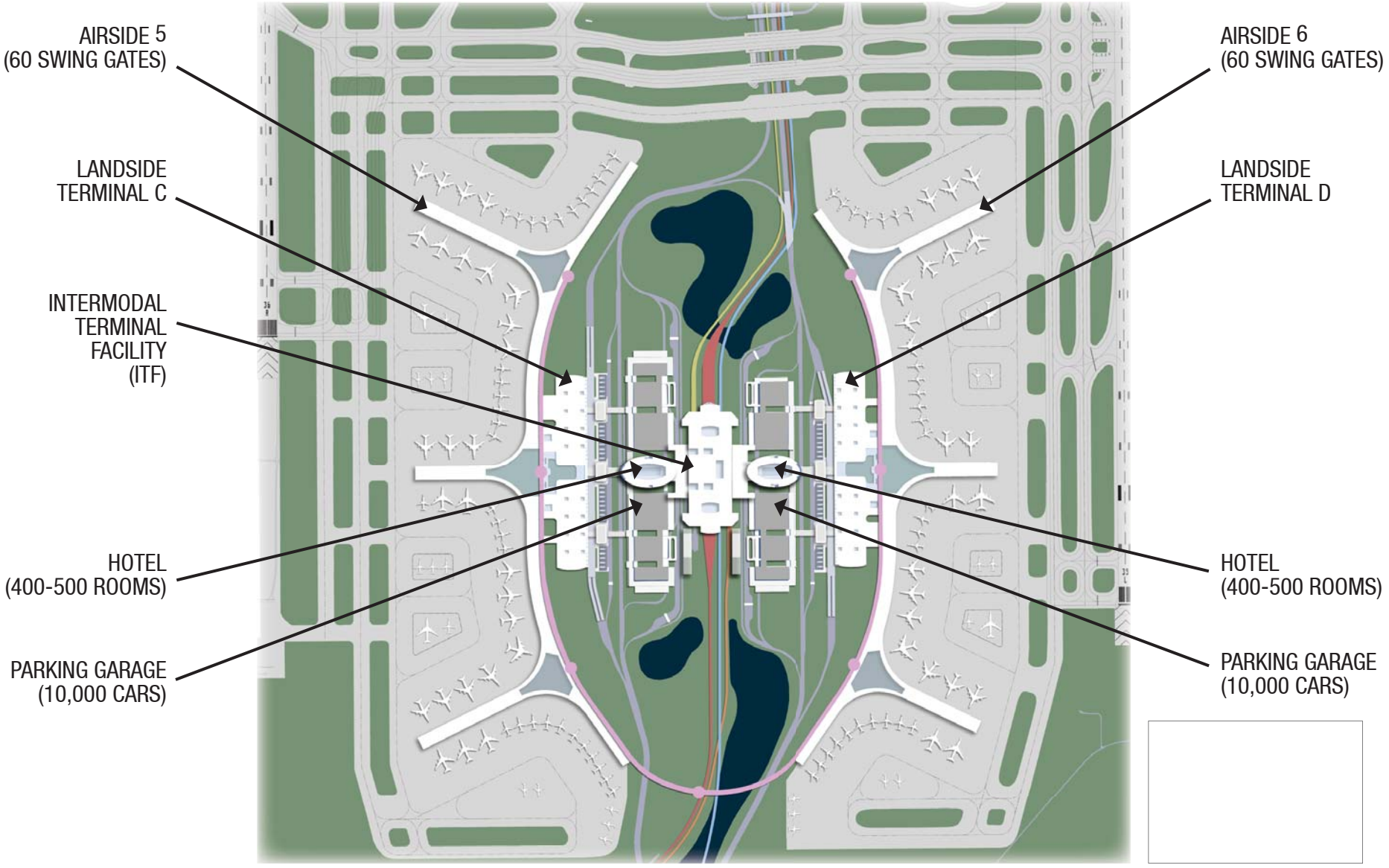
- Introduction of two unit airside concourses, Terminals C and D, that will allow for a 16-gate first phase terminal project that can ultimately be expanded to 120 gates.
- The two 60-gate unit terminals will facilitate much simpler incremental gate expansion as tenant demand dictates. The rotation of the landside terminals onto a north-south axis will allow for the option of terminal expansion without the constraint of the terminal loop-road system experienced in the North Terminal Complex.
- U.S. Customs and Border Protection facilities will be located in the landside terminal buildings, connected to airside gates via continuous sterile corridor.
- All 120 gates can be configured to be "swing" gates to serve domestic and international airline activity.
- Airside hubs will offer expanded space for food and beverage and retail concessions beyond security checkpoints.
- The terminal configuration will support the requirement of the FAA January 2001 ALP Supplement approval and accommodate the location of most stormwater ponds in the center of the future South Terminal Complex site to minimize wildlife attractants on or near active runways and taxiways.
- An Intermodal Terminal Facility is located at the center of the South Terminal Complex site in order to best serve both Terminals C and D and the potential for future revenue producing hotel and commercial development.
- The two airside portions of the unit terminal will offer the option for a secure, cable driven APM system that can be located inside the building envelope and connect all six Terminal C and D hub areas. An interconnection to the North Terminal APM system can be provided to facilitate passenger connections between the North and South Terminals.



SOUTH TERMINAL CONCEPT SKETCH – 1990

The next section will address the subject of demand triggers and phasing for the proposed Ultimate Airport Development Plan.

FIGURE 14 – SOUTH TERMINAL COMPLEX



SOURCE: SchenkelShultz Architecture, September, 2014.

DEMAND TRIGGERS AND PHASING

On October 2, 2013, the Greater Orlando Aviation Authority agreed that the commencement of the future South Terminal Complex (STC) will be demand driven based on the achievement of two trigger points:

- 40 Million Annual Passengers at the North Terminal Complex (NTC) initiating a Design and Construction Program for the South Terminal Complex Phase I; and
- 2 MAP Arriving International Passengers processed through Federal Inspection Stations

The significance of this action is that a logical, orderly Capital Improvement Plan may be developed and the organization may make preparations for the implementation of the planned projects. **Table 3** to the right provides a summary of future program triggers for additional phases of the future South Terminal Complex program. The highlights from **Table 3** are narrated below.

Phase 1 represents the current period from 2014 through 2017 wherein a series of North Terminal capacity projects will be implemented. Those projects will be funded primarily with FAA approved PFC funding and address projects needed to maximize the North Terminal capacity. Baggage handling, ticket lobby and circulation, international passenger processing projects and roadway and curb projects will be the target of this 3-year effort. The South Airport Automated People Mover (APM) system project will support both North Terminal capacity needs to delay the implementation of the first phase of the South Terminal and a passenger connection to the future south terminal.

Phase 1 will also include the Intermodal Terminal Facility project that is proposed to be located adjacent to the South Airport APM station. The Intermodal Terminal will be funded by grants and a loan from the Florida Department of Transportation and serve up to three forms of rail including the proposed All Aboard Florida rail system that will connect Miami and other stations in south Florida to the Orlando International Airport. The project will augment surface transportation to the Orlando International Airport but is not the subject of any specific capacity trigger for implementation.

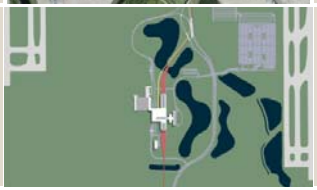
Phase 2 is the first phase of the South Terminal that is proposed to be 16 gates. The trigger for this project was approved by the Greater Orlando Aviation Authority on October 2, 2013, and is defined at the top of this page. The first 16 gates of the future South Terminal Complex are proposed to be constructed in the central section of Terminal C on the west side of the project site. Phase 3 will require a modest taxiway extension to the southern end of Taxiway C but will not require a runway extension. This project will also benefit from the South Airport APM project implemented in phase 2 since a substantial amount of road, ground transportation, utility and parking infrastructure will be completed during that program.

Phase 3 is the second phase of the South Terminal and new gates and terminal areas will be located to the north of the initial South Terminal gates. For the purposes of this exercise, it is assumed that phase 2 will add an additional 16 gates to the South Terminal but that figure may be adjusted based on actual airline demand. No taxiway extensions or third mid-crossfield taxiway will be required for this phase of the development program. The option to construct the first phase of a cable driven APM system that can be located inside the airside building envelope and connect Terminal C hub areas could be developed if warranted.

Phase 4 is the next phase of the South Terminal and assumed to represent the build-out of the 60 gate Terminal C facility. This phase of the Terminal C expansion will require the extensions of Runway 18L-36R and Taxiways B and C. As shown in **Figure 15** and **16**, the southern portion of Terminal C will require taxiway extensions to access the aircraft aprons that serve the gate areas. When the taxiways are extended, aircraft taxiing on Taxiway B to the southernmost gates will penetrate NAVAID and approach surfaces to Runway 36R. That condition can only be remedied by the extension of the runway. The proposed 2,980 foot extension to Runway 18L-36R will need to be programmed to be implemented as part of the southern portion of Terminal C. The extension to Runway 18L-36R will shift the Runway Protection Zone (RPZ) to the south as well, but it is important to note that the relocated RPZ will not encroach on future road and rail corridors that are proposed to traverse the southern portion of airport property.

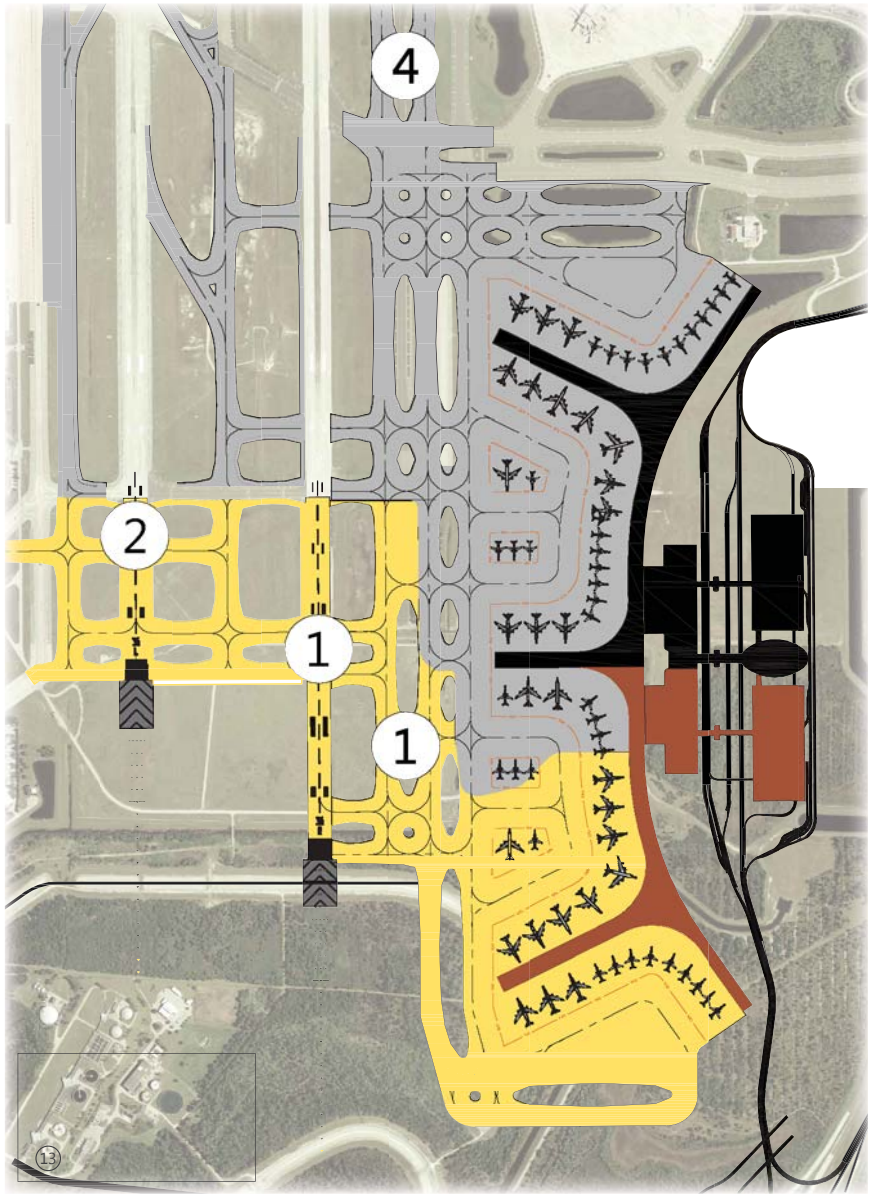
The ultimate build-out of the South Terminal Complex will occur with the phased development of Terminal D on the east side of the 1,300 acre South Terminal site. At this stage of the planning process, Terminals C and D are proposed to be similar in size and configuration, but that assumption will certainly be re-examined as part of future updates to the Master Plan.

TABLE 3 – MCO PROJECTED AIRPORT DEMAND TRIGGERS AND PHASING

PHASE		DEMAND TRIGGER/ START DESIGN	TARGET OPEN PHASE	AIRPORT CAPACITY NORTH AND SOUTH TERMINALS	COMMENTS
EXISTING NORTH TERMINAL COMPLEX		N/A	N/A	40 MAP	NORTH TERMINAL IS CURRENTLY SERVING 35 MAP
PHASE 1 SOUTH AIRPORT COMPLEX – SOUTH AIRPORT APM COMPLEX AND INTERMODAL TERMINAL FACILITY		35 MAP	40 MAP	45 MAP	ALONG WITH SEPARATE BAGGAGE, TICKETING AND INTERNATIONAL PASSENGER PROCESSING PROJECTS, OVERALL AIRPORT CAPACITY CAN BE STRESSED TO 45 MAP
PHASE 2 SOUTH AIRPORT COMPLEX – ADD PHASE 1 OF SOUTH TERMINAL		1- 40 MAP AND 2- 2 MAP IN FIS	45 MAP	50 MAP	ADD FIRST +/- 16 GATES NOTE – CAPACITY INCREASE WILL BE A FUNCTION OF TYPE OF AIRLINE RELOCATED TO NEW GATES
PHASE 3 SOUTH AIRPORT COMPLEX– ADD PHASE 2 OF SOUTH TERMINAL		50 MAP	55 MAP	60 MAP	ADD ADDITIONAL +/- 16 GATES NOTE – CAPACITY INCREASE WILL BE A FUNCTION OF TYPE OF AIRLINE RELOCATED TO NEW GATES
PHASE 4 SOUTH AIRPORT COMPLEX– ADD PHASE 3 OF SOUTH TERMINAL		60 MAP	65 MAP	70 MAP	
ULTIMATE NORTH AND SOUTH TERMINALS		TBD	TBD	100 MAP	

SOURCE: GOAA, September 2014.

FIGURE 15 – FUTURE AIRFIELD DEVELOPMENT – WEST AIRFIELD



SOURCE: Ricondo & Associates, Inc., September 2014.

Regarding other trigger and phasing information, the following list addresses the major projects proposed on the Ultimate Airport Development Plan:

1. The extension to Runway 18L-36R by 2,980 feet should be implemented when the third phase of development for the South Terminal Complex is initiated. This runway extension would allow for the extension of both Taxiways B and C, which will provide access to the apron areas associated with the third phase of the south terminal expansion.

2. The extension to Runway 18R-36L should be implemented either at the time of the extension to Runway 18L-36R or the development of significant aviation development in the former alert area.

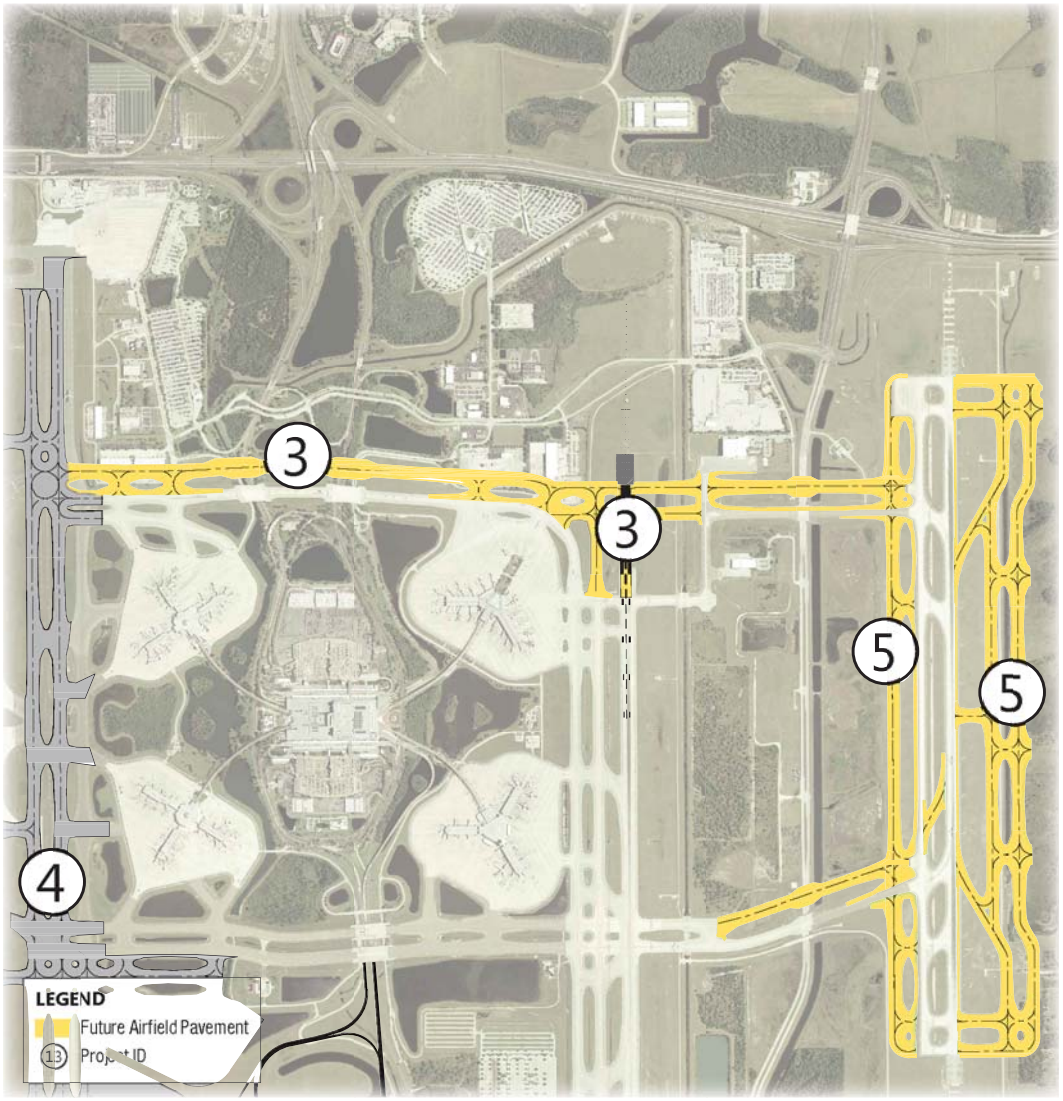
3. The 1,500 foot extension to Runway 17R-35L and parallel Taxiway K must be implemented upon the construction of the second North Crossfield taxiway. The new taxiways will create airspace penetrations by taxiing aircraft that can only be resolved by way of the runway extension. When the runway is extended, the Runway Protection Zone (RPZ) will shift over East Cargo Road and require either a re-alignment of Cargo Road north into the existing landfill or obtaining FAA approval to allow the public road to remain within the existing RPZ.

4. The shifting of Taxiways B and C to the west (North of Taxiway B10) should occur either at the time of the next major pavement rehabilitation projects or when the taxiways are extended to the south.

5. The construction of the parallel taxiways on the east and west side of Runway 17L-35R should be implemented with the expansion of aviation related development in the midfield and east airfield areas (See Figure 16).

The phasing of smaller projects will be addressed in the periodic updates to the Capital Improvement Plan.

FIGURE 16 – FUTURE AIRFIELD DEVELOPMENT – NORTH MIDFIELD & EAST AIRFIELD AREAS



SOURCE: Ricondo & Associates, Inc., September 2014.

REVIEW OF ENVIRONMENTAL, LAND USE AND ENTITLEMENT ISSUES

In order for the Greater Orlando Aviation Authority to proceed with the implementation of a Capital Improvement Plan, a multitude of approvals are required from local, state and federal agencies. Depending on the project, the list of required approvals can be long and very costly and time consuming to obtain. Below is a partial list of the types of approvals:

Local Approvals:

- Future Land Use
- Noise Overlay Zoning
- Development of Regional Impact (DRI)
- Building Height Zoning
- Project Building Permits

State Approvals:

- Water Management District stormwater and dewatering permits
- Environmental Resource Permit for wetland impacts and mitigation

Federal Approvals:

- Airport Layout Plan
- Airspace
- Project specific NEPA action
- U.S. Army Corps of Engineers Dredge and Fill permit

For the purposes of this Executive Summary document, a review of only the most significant issues will be examined in order to provide an understanding of how projects go from concept to reality.

Note that no one particular approval authority is more important than the other, it is most common to address local and federal issues first. Without local land use and zoning approvals and FAA Airport Layout Plan approval, it is difficult to move very far down the road toward project implementation. In the case of the Orlando International Airport, the City of Orlando is the entity that holds title to airport property and is thus the official "Sponsor" in the eyes of the FAA. The roles of the Sponsor include acceptance of all FAA grants and compliance with all grant requirements and assurances. The City of Orlando has also annexed all airport property and therefore has a primary role in the approval of future land use for airport property. The FAA has wide ranging review, approval and compliance authority over federally obligated airports that in the past have received federal land or grants to make airport improvements.

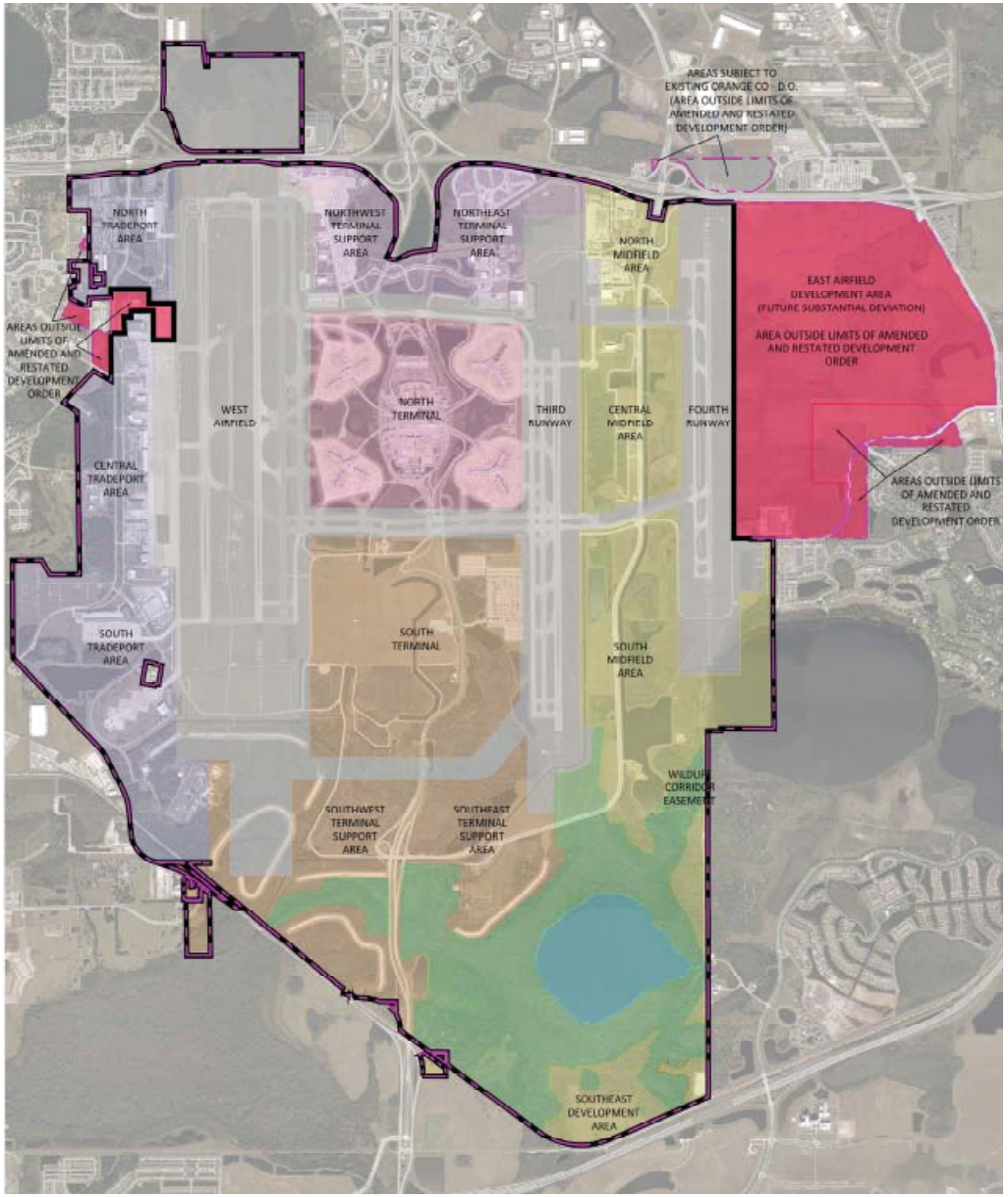
The Greater Orlando Aviation Authority serves as the operator of Orlando International Airport based upon a 50-year agreement with the City of Orlando that was executed in 1976 and will expire in 2026. As such, there has been much cooperation between the organizations over the last 38 years and there are remarkably few land use and zoning issues at the Orlando International Airport. An example of this cooperation relates to building heights both near the airport and in downtown Orlando. In order to protect airspace serving both the Orlando International and Executive Airports, the City of Orlando staff works closely with airport staff not to approve any building locations or building heights

that will interfere with regional airspace including the aircraft approach and departure corridors for all runways in the region.

The local Development of Regional Impact (DRI) and federal National Environmental Policy Act (NEPA) processes are usually the next major actions taken by the airport to gain project approval. For large scale projects such as the future South Terminal Complex, the two processes have many common features but nonetheless require completely independent documents and approvals. **Figure 17** provided on the right illustrates the status of DRI approvals for the Orlando International Airport. In 1999, all previously approved DRI's were combined into a single approval document entitled the "Amended and Restated Development Order". Land areas that are not yet in receipt of DRI approval include the East Airfield Development Area and the Poitras properties.

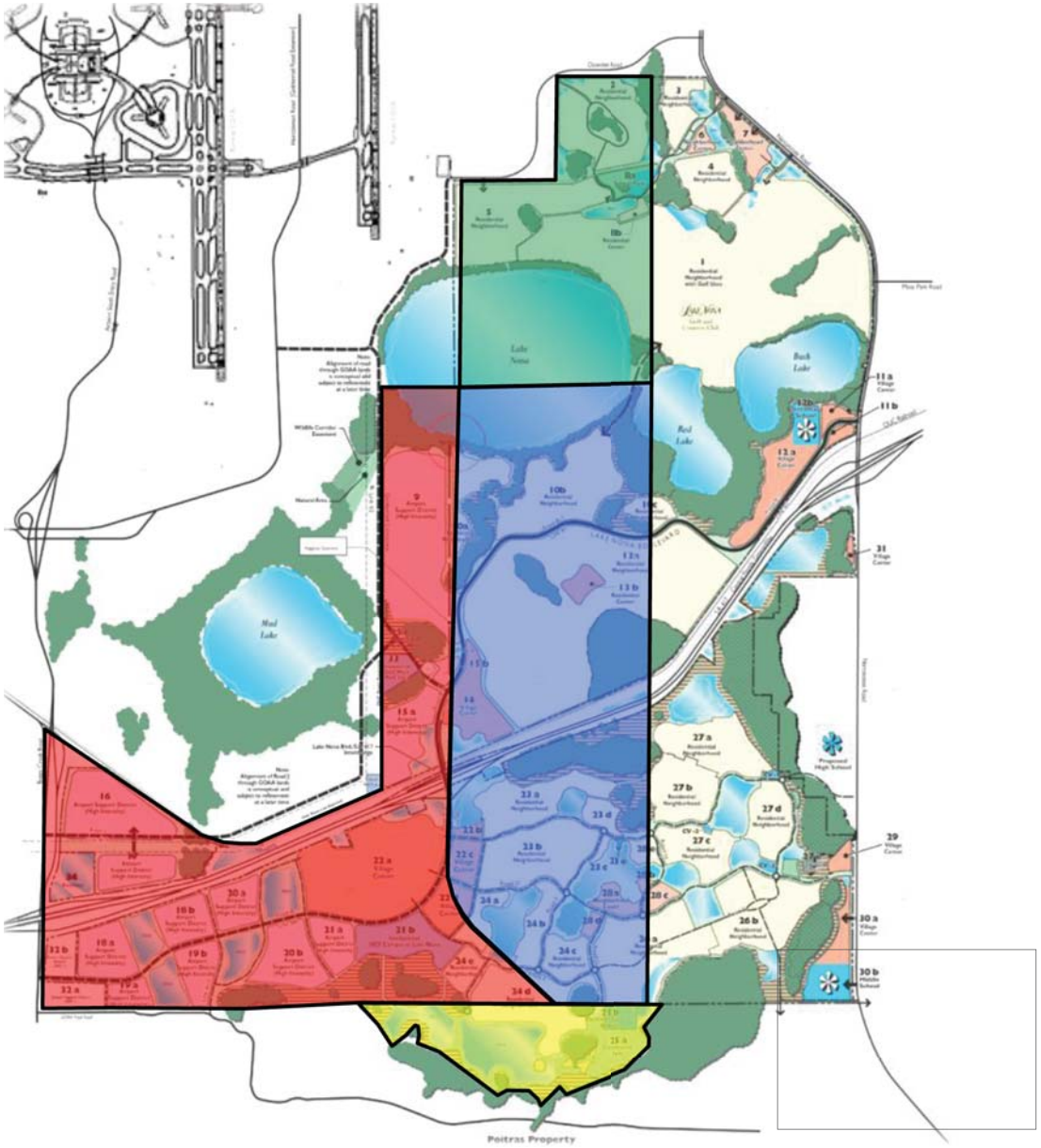
The location of the Orlando International Airport was first established during the development of the Pinecastle Air Force Base (later re-named the McCoy Air Force Base). The location was in the vicinity of many wetland systems that traverse the original and expanded airport property. Because of the presence of wetlands on airport property, most airport projects of any significant size require the removal and filling of wetlands. At the Orlando International Airport, the jurisdiction over the permitting of wetland impacts falls to the South Florida and St. Johns River Water Management Districts at the state level and to the U.S. Army Corps of Engineers (ACOE) at the federal level. The water management districts also handle stormwater permitting. With the exception of a small area north of the SR 528 Beachline Expressway that is handled by the St. Johns River Management District, most state stormwater and wetland impact permitting is handled by the South Florida Water Management District (SFWMD). Since its inception, the Greater Orlando Aviation Authority has successfully mitigated most development areas on airport property. The exceptions include wetlands on the East Airfield Development Area that have yet to be permitted by the ACOE and some small, scattered areas mostly on the western and southern portions of airport property. Most of the wetland mitigation for permitted wetland impacts is now located off airport in the area near the Disney Wilderness Preserve in Osceola County. The Aviation Authority has participated in wetland mitigation on approximately 10,000 acres of land within the region with only 920 acres located on the main airport property in the area around Mud Lake in the southeast area of the airport and 382 acres located on the Poitras property.

FIGURE 17 – AMENDED AND RESTATED DEVELOPMENT ORDER



SOURCE: SchenkelShultz Architecture, September, 2014.

FIGURE 18 – AVIGATION EASEMENTS AND NOISE WAIVERS



SOURCE: GOAA, March 2006.

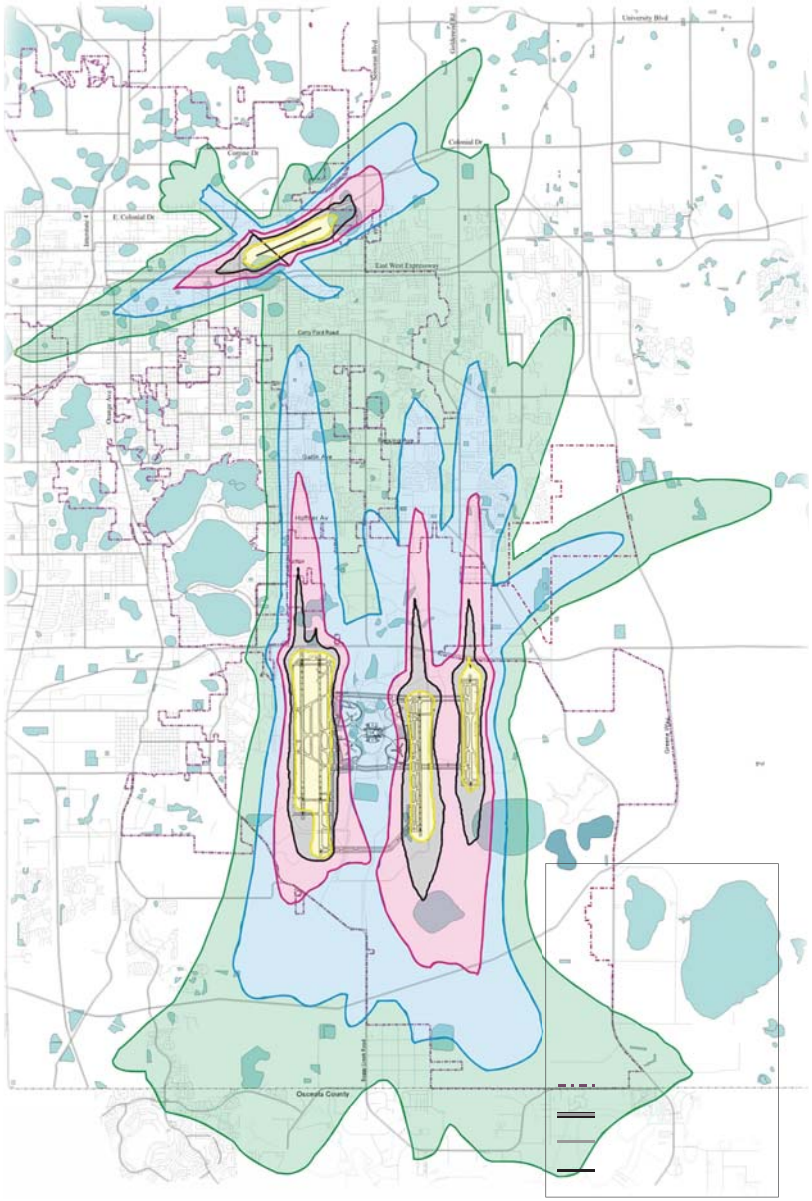
AIRPORT NOISE

Airport noise and its impact on neighboring land use has been and remains an important issue for all airports. In 1978, the Greater Orlando Aviation Authority formed the Airport Noise Abatement Committee (ANAC). Fortunately, due to the airport's large land area, very few residents live within the FAA defined 65 Day/Night Noise Level (DNL) contour which has been established by the FAA as demarcation line for significant airport noise levels. Nonetheless, many additional efforts have been made to inform residents living near the airport or within the flight corridors to and from the airport's runways.

The two most noteworthy actions have been the Aviation Authority's steps taken to: 1) obtain avigation easements **(Figure 18)**, waivers of claim or notification of proximity to the airport and 2) create and obtain City of Orlando and Orange County of Noise/Land Use Overlay Zoning districts. The 1999 noise overlay zoning approvals are depicted on **Figure 19** to the right and represent one of the first such actions in the United States. The unique feature of the overlay zoning districts is that they are based on the proposed build-out of the airport and cover areas within the FAA standard DNL noise contours and single event contours that usually apply when the aircraft land and take off to the north. The significance of this approach is that residential developments near the airport that are not affected by aircraft operations during large portions of the year when the airfield is operating in "south flow" (i.e. aircraft are landing and taking off to the south due to weather and wind conditions) will be informed that during the occasional "north flow" operations, aircraft noise may increase in their areas.

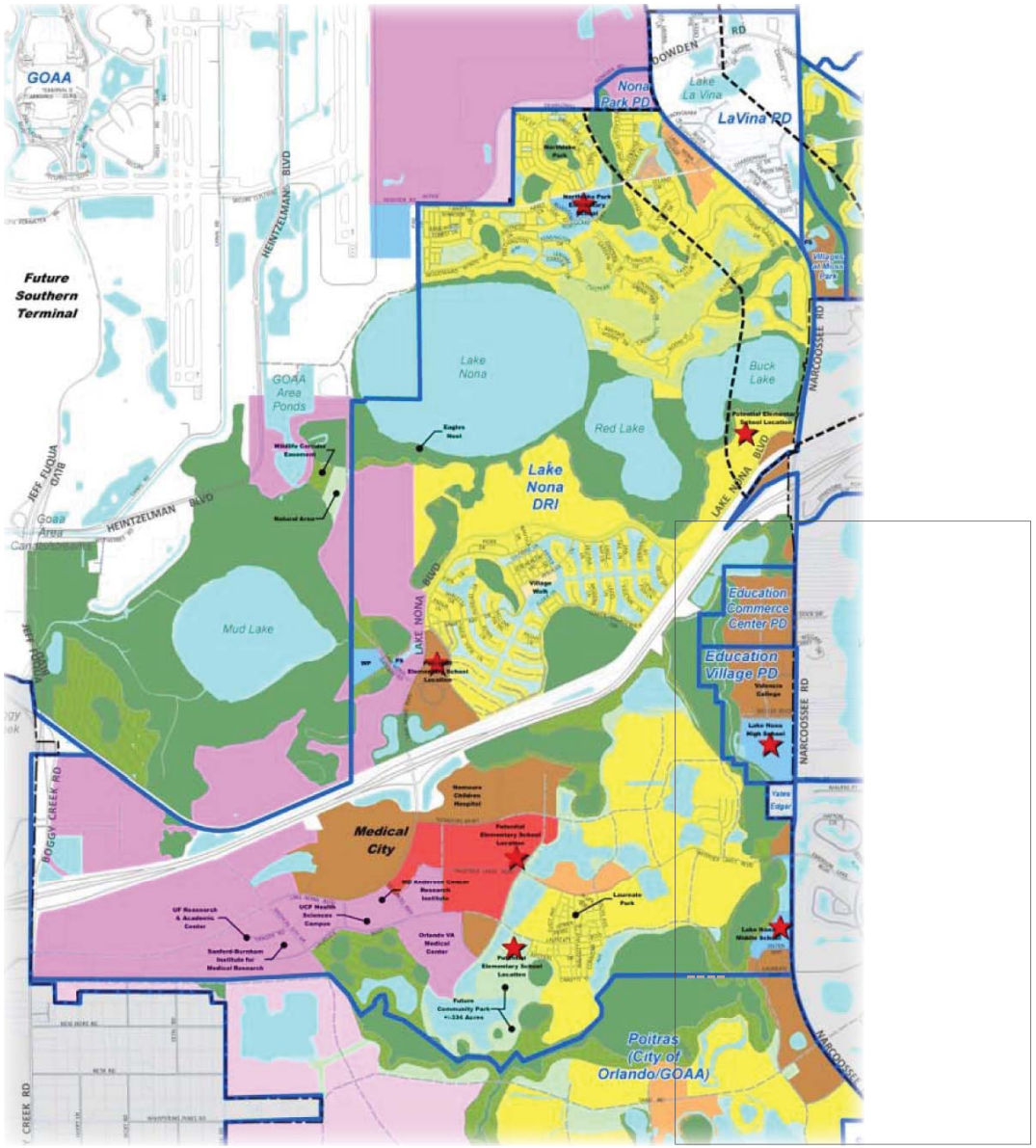
Obtaining airport development approvals and ensuring land use compatibility will always be a vital part of airport development. Such issues require years of advance effort and are critical to ensure the multi-billion dollar investment in airport facilities is not undermined by costly and inefficient countermeasures. Such costly expenditures can require commitment of scarce capital funds, such as Airport Improvement Program (AIP) grant and Passenger Facility Charge (PFC) funds, and cause increased airline rates and charges and undermine the airport's relationship with its neighbors.

FIGURE 19 – AIRPORT NOISE OVERLAY ZONE



SOURCE: OIA FAR Part 150 Study, 2001; and ESA Airports, 2012.

FIGURE 20 – LAKE NONA PLAN



SOURCE: City of Orlando, economic development department city planning division, November 2012.

FINANCIAL OVERVIEW AND CAPITAL IMPROVEMENT PLAN

TABLE 4 – CAPITAL IMPROVEMENT PROJECTS (FY 2013-2018)

DESCRIPTION	APPROVED AMOUNT
TERMINAL	
North Terminal Complex	
Total Ticket Lobby	$113,193,142
Baggage Program	$116,955,000
Bag Handling System Improvements	$30,850,769
Emergency Electrical System Improvements	$26,394,715
Other Terminal	$15,264,042
Closed Circuit Television (CCTV) Improvements (TSA)	$12,000,000
Access Control Security Enhancements	$6,191,500
Airsides 1 & 3 Automated People Mover (APM)	$90,000,000
Subtotal North Terminal	$410,849,168
Airside 4	$114,000,000
TOTAL TERMINAL	**$524,849,168**
AIRFIELD	
Taxiway B1 and B2 Extension and Rehabilitation	$11,116,648
Other Airfield	$64,953,708
TOTAL AIRFIELD	**$76,070,356**
GROUND TRANSPORTATION	
BP 408 North Cell Lot & Return-to-Terminal Roads	$18,486,000
TOTAL GROUND TRANSPORTATION	**$18,486,000**
OTHER	
Other Long Term Planning	$3,562,488
Fiber Infrastructure Program	$11,028,000
TOTAL OTHER	**$14,590,488**
SOUTH AIRPORT APM PROGRAM	$469,854,625
GRAND TOTAL CIP	**$1,103,850,637**

SOURCE: R. W. Block Consulting, Inc.; SchenkelShultz Architecture, August, 2014.

Airports are capital intensive enterprises. The investments in infrastructure are time consuming to implement and typically funded by a wide range of funding sources with each presenting their own unique set of rules as to project eligibility. Therefore, as projects are conceived and vetted through the capital planning process, a wide range of issues must be examined including the impact of the projects on the Airport's annual Operations and Maintenance (O&M) budget, tenant rates and charges, cost per enplaned passenger, debt capacity, debt service coverage and many more.

The formation of a Capital Improvement Plan (CIP) will normally address the following types of on-airport projects in priority order:

1. Asset Preservation – reinvestment in existing facilities to meet current/future needs
2. Capacity Enhancement – airfield layout improvements, navigation improvements, building/facility expansion and reengineering
3. Revenue Enhancement – Land development, development of service and technology innovations

For many airports, priorities #1 and #2 will consume most of the funding capacity within the constraints of maximum targeted tenant rates and charges. **Table 4** to the left describes the $1.1 billion CIP through fiscal year 2018 for the Orlando International Airport as approved by the Authority Board in October 2013. This capital plan is targeted heavily on North Terminal capacity projects that will maximize the use of the existing terminal. As passenger traffic grows from the current 35 MAP to 40 MAP and then to a stress capacity of 45 MAP while the first phase of the future South Terminal is being developed, additional revenues will be generated by the added passengers and their use of concessions, parking, rental car facilities and more.

Priority #3 revenue enhancement projects are growing in importance as the Aviation Authority seeks to increase non-airline revenues which achieves the dual goals of maintaining reasonable tenant rates and charges and being financially self-sufficient. Examples of such initiatives in recent years are infrastructure projects to support the emergence and growth of the jetBlue University, the CLEAR program at security checkpoints and the 3rd generation passport control system developed in conjunction with SITA.

As discussed in the section on Triggers and Phasing, when the airport reaches 40 MAP and 2 MAP of arriving international passengers, development of Phase 2 of the future South Airport Complex will begin. Phase 2 of this Complex includes terminals, airside, airfield and ground transportation components which will cost approximately $1 billion. Thus, once the North Terminal reaches its maximum capacity, the next gate will require a substantial investment. This challenge is why Phase 2 of the South Airport Complex is proposed at a modest 16 gates since that is the smallest size facility that can be built with reasonable efficiency and still provide meaningful relief to the overstress condition at the North Terminal.

Table 5 to the right provides a 20-year perspective of the capital improvement plan for the Orlando International Airport. The table provides the short, intermediate and long term projects in the four major project areas of Terminal, Airfield, Ground Transportation and other GOAA Projects. The estimated total for the 20-year planning horizon is $3.87 billion.

Beyond the five-year plan that extends to the end of 2018, it is important to view intermediate and long term projects as preliminary. Airports must maintain flexibility and re-examine their capital programs on a periodic basis as economic conditions change and a wide range of other factors may influence the viability of the respective projects.

TABLE 5 – CAPITAL IMPROVEMENT PROJECTS

PERIOD	MAP	TERMINAL		AIRFIELD[1]		GROUND TRANSPORTATION		OTHER GOAA PROJECTS	
		Current approved CIP Projects *(Refer to Table 4)*	**$524,849,168**	Current approved CIP Projects *(Refer to Table 4)*	**$76,070,356**	Current approved CIP Projects *(Refer to Table 4)*	**$488,340,625**	Current approved CIP Projects *(Refer to Table 4)*	**$14,590,488**
SHORT TERM (THRU 2018)	**35 - 44**			Rehabilitation of Taxiway C (South of Taxiway F) and Related Work	$8,170,000			Fiber Infrastructure Program (Phase 2)	$5,200,000
				Rehabilitation of Airside 3 Apron	$21,220,000				
				Rehabilitation of Taxiways G and H	$15,070,000				
SUBTOTAL $1,153,510,938		**SUBTOTAL**	**$524,849,168**	**SUBTOTAL**	**$120,530,357**	**SUBTOTAL**	**$488,340,625**	**SUBTOTAL**	**$19,790,788**
INTERMEDIATE TERM (2019-2023)	**45 - 50**	STC Phase I Landside and Airside Buildings (16 Gates @ 45 MAP)	$743,641,770	STC Phase I Airfield:@ 45 MAP • Taxiway C Extension • STC Apron and associated Taxilanes	$169,010,021	Additional 2,600 Public Parking Spaces @ 45 MAP	$86,600,000	Development of Infrastructure for Poitras, EADA, Midfield Area, M-5, Mud Lake, Tradeport	$15,000,000
		NTC-New Sit-down Restaurant Airside 2	$7,200,000			Dowden Road Extension (2 lanes)	$25,747,000	Permanent IT Computer Room	$2,500,000
		NTC-Repurpose Airside 1 FIS	$10,000,000			Heintzelman Blvd Extension (2 lanes)	$10,000,000	Expand Ductbanks at Airside 2 & 4	$1,650,000
		NTC-Rehabilitate Levels 1 & 2 Landside Terminal	$100,000,000	Update R/W pavement markings & directional signage magnetic headings	$3,000,000			Fiber Infrastructure Program (Phase 3)	$10,000,000
		NTC- East Passenger Security Checkpoint Expansion	$10,000,000					GOAA IT Technology Enhancement Projects	$14,515,000
		Relocate International Trash Processing Facility	$4,000,000						
		East Airport Fuel Farm	$30,000,000						
SUBTOTAL $1,242,863,791		**SUBTOTAL**	**$904,841,770**	**SUBTOTAL**	**$172,010,021**	**SUBTOTAL**	**$122,347,000**	**SUBTOTAL**	**$43,665,000**
LONG TERM (2024-2031)	**51 - 60**	STC Phase II Landside and Airside Buildings (+15) Gates @ 55 MAP	$350,000,000	Second North Crossfield Taxiway (K): @ 55 MAP	$189,129,000	Additional 3,500 Public Parking Spaces (Garage) @ 61 MAP	$98,000,000	New GOAA Offices & Warehouse Facilities	$25,000,000
		NTC-Repurpose Airside 4 FIS @ 55-61 MAP	$15,000,000	Relocate FAA Airport Surveillance Radar(ASR-9)	$19,422,000	Expand South Employee Parking Lot (Add 1,000 Spaces) @ 51 MAP	$11,400,000	Tradeport Drainage Improvements	$20,000,000
		South Airport APM Maintenance Support Facility	$35,000,000	Install New ALSs on R/Ws 18L & 36L	$2,000,000	Expand Satellite/Overflow Parking Facilities @ 58 MAP	$23,370,000	Hyatt Hotel Renovation and Upgrades	$16,800,000
				Extend Taxiway Z (to Taxiway B2)	$30,253,000	New QTA at South Terminal Complex	$50,000,000	Fiber Infrastructure Program (Phase 4)	$10,000,000
				Airfield Improvements to meet FAA ADG VI:	$52,800,000	Expand North Employee Parking Lot (Add 1,800 Spaces) @ 45 MAP	$15,400,000		
				Realign Taxiways B (to 551') & C (to 324'/350') @ 55 MAP	$46,220,000				
				South Terminal Complex Phase II Airfield: @ 55 MAP	$170,000,000				
				Extend T/W Z (to T/W B10) including high-speed taxiways	$34,252,000				
				Realign Taxiway A (Phase II) including high-speed taxiways	$78,924,000				
				Rehabilitate Various Runways, Taxiways and Aprons.	$183,610,000				
SUBTOTAL $1,476,580,000		**SUBTOTAL**	**$400,000,000**	**SUBTOTAL**	**$806,610,000**	**SUBTOTAL**	**$198,170,000**	**SUBTOTAL**	**$71,800,000**
20 YEAR TOTAL $3,872,954,729			**$1,829,690,938**		**$1,099,150,378**		**$808,857,625**		**$135,255,788**

[1]Airfield Improvements associated with future aviation development will be approved on a demand driven basis and subject to funding availability.

Projects NOT included in the 2013-2018 CIP Book but recommended by 2014 Airport Master Plan Update

NOTES: Table 4 provides a list of all projects included in the short term (2013-2018) CIP Book and approved by GOAA Board; All costs are reflected in 2013 dollars.

SOURCE: R. W. Block Consulting, Inc.; SchenkelShultz Architecture, August, 2014.

CONCLUSIONS

The story of the Orlando International Airport has been one of vision, tremendous growth, flexibility, teamwork and partnership, and periodic challenges. The North Terminal Complex that was conceived to ultimately serve 24 million annual passengers will now serve over 40 million annual passengers before the opening of the first phase of the South Terminal. For most of the last 15 years, the GOAA has worked with airlines to achieve reasonable rates and charges by implementing multiple rounds and over one billion dollars of capacity projects. The Aviation Authority has adapted to the impacts of wars, terrorism, hurricanes, economic crises and the transition to a new form of airline agreement.

The role of the airport has been to serve the region in any one of many different ways including as an economic engine, transportation pipeline to the region and intermodal hub. Regardless of one's perspective, the airport must be positioned to grow and evolve to continue to fulfill its mission. The purpose of this Master Plan Update effort is to look to the past and learn lessons and then apply that knowledge and the best practices within the industry today toward a future vision that builds upon leadership from the past. The highlights from this 2014 edition of the Master Plan update include the following:

- A Strategic Plan for the Aviation Authority was approved in 2013 to establish vision, mission, and goals for the organization
- Total airport passenger traffic will increase nearly 172% over the next 20 years with international passenger traffic increasing 316% over the next 20 years.
- The airport's service area now extends to 2 hours from the airport and captures 64% of the population of the State of Florida.
- The North Terminal will likely reach its capacity, following the implementation of nearly $525 million of ongoing capacity projects, within the next 5 years.
- The implementation of the South Airport Automated People Mover (APM) program is critical to both maximizing the capacity of the North Terminal and providing a connection to facilities in the future South Terminal Complex.
- Activity triggers are in place to enable the orderly implementation of demand-driven projects to support the continued growth of the airport.
- A financially feasible 5-year, $1.1 Billion Capital Plan is in place.
- A roadmap is in place for a 20-year capital plan including short, intermediate and long term projects.
- Vehicle trips traveling northbound on Jeff Fuqua Boulevard are forecast to exceed 3,100 trips per hour based on an average day in the peak month of 2031.
- Investments in revenue generating opportunities are growing as evidenced by new projects advanced by new projects such as jetBlue Airways and Clean Energy.
- Aviation Authority has received permitting, land use and entitlement approvals for most of the airport's property including the South Terminal Complex.

As the Aviation Authority proceeds with the implementation of its capital program, a recurring cycle will eventually begin. As Phase 1 of the South Terminal is developed and occupied, airline activity will gradually shift to the South Terminal. For each estimated 16 gate increment created in the south, approximately 5 to 7 million annual passengers will migrate from the North Terminal. As the vacated space is leased again, the North Terminal will once again push the limits of its stress capacity over 40 MAP and the need to build the next phase of the South Terminal will be triggered. Eventually both international passenger processing facilities will close in the North Terminal Complex and those spaces will be converted to domestic use. Since domestic activity normally occurs throughout the day with multiple peak periods, the North Terminal will continue to serving a large share of airport passenger traffic for decades into the future. Investment in asset preservation projects for the North Terminal will continue to be an important part of future capital planning.

RELATIONSHIP TO STRATEGIC PLAN VISION, MISSION AND GOALS

This update to the Master Plan for the Orlando International Airport has been specifically prepared to address the mission, vision and goals of the GOAA's Strategic Plan adopted in 2013. Projects have been formulated to address the safety and security of passenger travel including improvements to passenger and baggage screening facilities. Promotion of a high level of passenger service and of the "Orlando Experience™" are also a key part of short, intermediate and long term project initiatives including the maximization of the capacity of the North Terminal and the eventual demand-driven development of the South Terminal. Efforts to expand air service to existing and new markets and entitle airport property for future development have been a priority as the Aviation Authority seeks to foster economic development for the region. Provision for intermodal facilities at the airport for virtually all forms of surface transportation has remained a long-standing vision that will be realized with the development of an Intermodal Terminal Facility over the next several years.

The airport serves many roles in the community and surrounding region. The airport is an economic engine and catalyst, transportation conduit and intermodal hub. But the airport is also a neighbor and partner to many throughout the region and the home to over 18,000 jobs. These more personal roles are equally valued by the Greater Orlando Aviation Authority as well as providing all passengers, employees and stakeholders with a sense of welcome and pride in the Orlando International Airport.

AIRPORT MASTER PLAN CONSULTING TEAM

The Airport Master Plan Update was prepared under the direction of the GOAA Planning, Engineering and Con struction Departments with input and assistance from all of the GOAA departments, representatives of the Fed eral Aviation Administration, Florida Department of Transportation, and the Aviation Authority board members.

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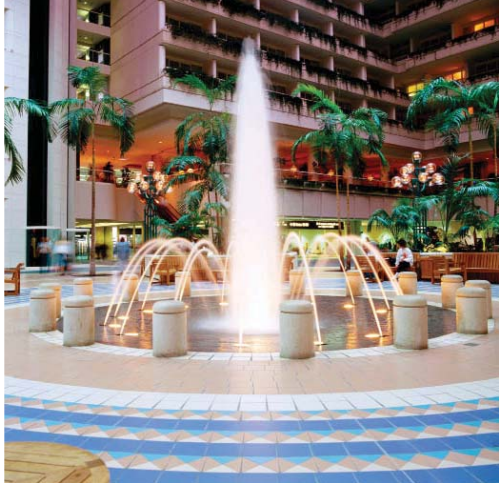

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