PENSACOLA INTERNATIONAL AIRPORT

MASTER PLAN UPDATE

AVIATION FORECAST

JULY 2016

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RS&H

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1.1.1 Project Introduction

The Master Plan Update Team prepared this aviation activity forecast for the Pensacola International Airport ("PNS") 2016 Master Plan Update ("MPU"). This MPU forecasts operations and passenger activity for the period 2016 through 2035 - and includes projections of passenger enplanements, passenger movements, and cargo volumes. Forecasts for general aviation ("GA") movements are based on the Federal Aviation Administration ("FAA") *Aerospace Forecast, Fiscal Year 2016-2035* projected GA national growth rate and military movements are based on the FAA's 2015 Terminal Area Forecast ("TAF") for PNS. Fiscal year ("FY") 2015, year-ended September 30th, is used as the base year for all of our forecasts.

1.1.2 Airport Background

The Pensacola Catchment Area is defined by its economic and demographic profile driving demand for air service. The Catchment Areas' economic and demographic characteristics are quantifiable via various data sources including the U.S. Department of Commerce data set and the U.S. Office of Management and Budget's definition of Micropolitan and Metropolitan Statistical Areas ("MSA") that apply and standardize U.S. Bureau of Census data. The economic and demographic data that is available for the MSA's provides the basis to aggregate and develop an economic and demographic profile of the market to assess the economic drivers of future demand. As such the core of the Pensacola Catchment Area comprises the Pensacola-Ferry Pass-Brent, Florida MSA and the Baldwin County, Alabama.

Assessing and defining an airport's catchment area (primary, secondary and tertiary) requires an evaluation of a number of factors including accessibility of the airport and consideration of alternative air travel options within the regional market. In the case of the air travel market in Northwest Florida and Southeast Alabama commercial air service is provided at four airports including Pensacola International Airport. The four airports are Mobile Regional ("MOB"), Pensacola International ("PNS"), Destin Ft. Walton Beach ("VPS") and Northwest Florida Beaches International ("ECP"). These four airports are located along a 185-mile stretch of the Gulf Coast and within 5 minutes to 45 minutes of Interstate 10 in Northwest Florida and Southern Alabama.

In today's aviation environment Small Hub airports such as PNS must measure the level of air service not only based on non-stop options but also on the level of connectivity available to air travel customer. At PNS the four largest U.S. air carriers (in order of domestic available seat miles ("ASMs") for Fiscal Year 2016) Southwest, Delta, American and United offer year round

non-stop service to seven airline hubs and connecting markets. A Small Hub airport such as PNS with this level of service can be characterized as offering its customers excellent service to the global air transportation network.

At PNS the mix of aircraft operations and capacity measured in seat departures has changed significantly in the post – Great Recession era. The shift in aircraft operations at PNS has focused on the replacement of less than 60 seat aircraft (predominately small regional jets) with larger regional jets with 61 to 100 seats. This movement is evident in the decline by 58.25% in the small RJ and turbo prop category while there has been a corresponding increase by 48.07% in larger regional jets in the market in fiscal year 2009 to fiscal year 2016 period. During this same period PNS experienced a 12.43% increase in mainline aircraft operations

As the aircraft mix in the PNS market evolves so does the profile of the scheduled seat capacity. In Fiscal Year 2009 mainline seat departures represented 49.4%, of capacity with large regionals 18% and small regional jets and turboprops 32.5%. By Fiscal Year 2016, the shift in the aircraft mix is evident in the trend toward larger aircraft when measured by seat departure – mainline 57.3%, larger regionals 23% and small regionals and turbo props 18.8%.

1.2 FORECASTING METHODOLOGY

1.2.1 Introduction

Air travel is a derived demand. Demand for air transportation between origin and destination markets is derived from the socio-economic interactions between these markets, shaped by carriers' networks and available airlift capacity. Generally, business/trade activity, tourism/visitor activity as well as visiting friends and relatives ("VFR") constitute the primary components of air travel at an airport.

Dependable forecasting practice requires awareness of the uncertainties surrounding the forecasts. Considerable effort by the project team has gone into analyzing the factors affecting traffic activity at PNS. However, as with any forecasts, there are uncertainties regarding these factors, such as the outlook for the local and world economies and the structure of the airline industry. A pragmatic and yet systematic approach has been used to produce a set of unbiased airport activity forecasts for PNS.

In general, the potential traffic demand pool is quantified by the economic and demographic profile of the airport's catchment area (described by e.g. GDP, personal income, private consumption levels, tourism, and population). The traditional traffic forecast approach, therefore, focuses on the recognized relationship that exists between air traffic development

and the development of socio-economic variables that are known to drive air traffic. For instance, history has shown that there is a close relationship between global economic growth (expressed in real Gross Domestic Product) and annual air traffic growth.

Through statistical tools, such as regression analysis, the relationship between air traffic and the relevant socio-economic factors can be found and expressed in various econometric models. Using long-term projections of the independent variables (like GDP, income etc.), future traffic levels can now be predicted.

The project team analyzed the various factors that have historically driven air traffic activity in the Pensacola Catchment Area. Simply put, it is reasonable to assume that the factors that have historically driven air travel demand will continue to drive air travel demand in the future, and in the same proportions. For instance, all things being equal, if a 1% increase in regional GDP is found to be highly correlated to a 1% increase in air travel historically, an analytical model can be developed to then estimate future air travel levels based on forecasts of GDP. Econometric models enable this forecasting technique and allow for testing to ensure that the forecast results are reasonable and acceptable.

As described in the rest of this chapter, forecasts have been produced for the following:

- Enplaned Passengers;
- Air Transport Movements (Commercial, General Aviation, Military and Total);
- Air Cargo Volume.

The following sections describe the methodology used to forecast each separate segment; the results are presented in the next section.

1.2.2 Enplaned Passengers

The passenger traffic forecasts for PNS are based on proven and accepted techniques for estimating airport demand levels. The analytical underpinnings of this airport forecast model are comprised of four key steps:

1) Estimation of total 2016 enplanements based on 2016 April-to-date actual enplanement data and estimated average load factor applied to scheduled seat departures through September 2016;

2) Estimation of near-term future total traffic for 2016 through 2020, based on growth in capacity projected by carriers currently serving PNS combined with the Gross Regional Product ("GRP") of the Pensacola-Ferry Pass-Brent Metropolitan Statistical Area ("MSA"). These estimates are supplemented by expected changes in passenger demand patterns based on information gathered via site visits, direct airline and stakeholder input, industry intelligence and other information sources.

The following list of base assumptions were informed by the aforementioned sources. The subsequent assumptions were considered when calculating the bottom-up estimates for the next five year and the econometric modeling for the longer term projections in Base Case Passenger Enplanements Forecast:

- The Air Carrier category will continue to outpace the Air Commuter/Air Taxi category at an increasing pace as the core carriers continue to introduce mainline equipment at PNS. The Air Carrier category is expected to account for approximately 65% of the commercial enplanements by 2035;
- Delta indicated they plan to grow capacity in the market 3% per annum over the next few years;
- Southwest capacity has stabilized at 3 times daily service with limited Saturday only seasonal services;
- American Airlines and United Airlines are up-gauging capacity as appropriate on a seasonal basis;
- Silver plans to maintain current service levels for the foreseeable future;
- Growth in the Regional Jet fleet at PNS - Boeing indicated that from 2004 to 2014 through seat densification and up-gauging that the number of single aisle seats have increased on average 1 to 1.5 seats per year from 139 to 152 seats in 2014. Boeing is projecting this trend will continue for the next decade or so. In addition, Bombardier in its forecast is projecting substantial growth in the delivery of 60 to 100 seat and 100 to 150 seat aircraft between 2014 and 2034. These deliveries will be replacements for smaller Regional Jets and net new capacity in the fleets of North American air carriers;
- A "dummy variable" is applied to the regression analysis to normalize the data for the impacts of the economic recession in 2009 and BP Oil Spill in the Gulf of Mexico in 2010;
- It should be noted that all the forecasts provided in this report are unconstrained forecasts - they have been developed without consideration of the ability of the current or future airport facilities to handle the forecast traffic. If airport capacity is

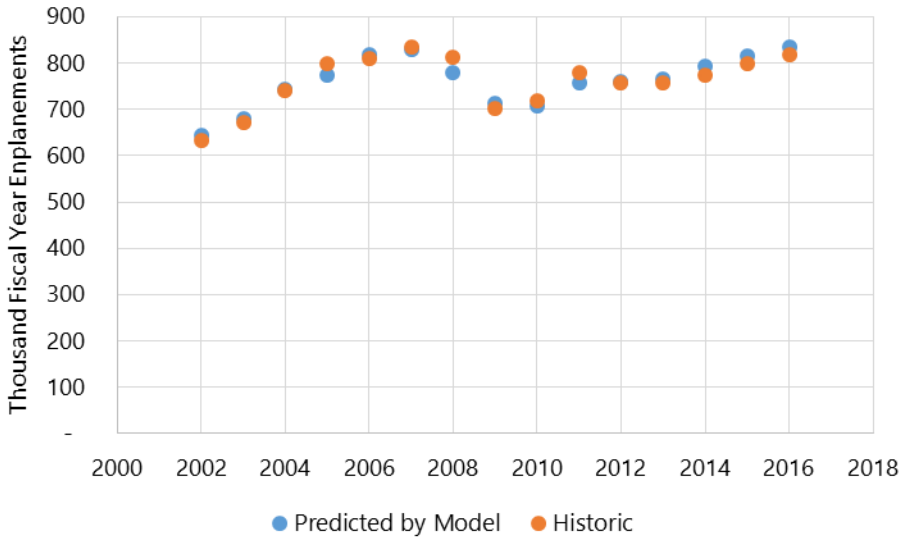
not expanded to fully accommodate future unconstrained demand, there is the potential that some of this traffic may not materialize;

3) An organic forecast of enplanements based on growth rates generated by an econometric regression analysis to forecast the future for the remainder of the planning period 2021 through 2035; and

4) Determine the market share division between Air Carrier and Air Taxi/Commuter enplanements based on historical and projected market share proportions.

Through an econometric model developed by Inter*VISTAS*, historic fiscal year enplanements developed between 2002 and 2015 and an estimate of 2016 at PNS has been related to the historical development of various socio-economic variables, such as the economic growth in Pensacola and Florida, population growth and income growth in both of these areas, airline fare levels, and other relevant factors. Using a regression analysis, the Real Gross Regional Product ("GRP") of the Pensacola-Ferry Pass-Brent, FL Metropolitan Statistical Area ("MSA") with a dummy variable applied for the economic recession in 2009 and BP Oil Spill in the Gulf of Mexico in 2010 were identified to be the variables with the strongest correlations with historical enplanement development. The regression analysis produced a high adjusted R^2 value of 0.903, indicating that this variable is expected to serve as a reliable predictor for future total enplanement development (see Figure 1-1).

FIGURE 1-1
GOODNESS-OF-FIT ECONOMETRIC MODEL FOR ENPLANEMENTS



Source: InterVISTAS Consulting Inc.

The model for determining total O&D traffic can be described by the following equation:

Enplanements
$= c_1 + c_2 * (\textit{Real Pensacola GRP})$

where:

- *Enplanements* are fiscal year enplaned passengers at PNS
- *Real Pensacola GRP* is the Pensacola-Ferry Pass-Brent, FL MSA Gross Regional Product adjusted for inflation
- c_1 and c_2 are the estimated model parameters capturing the impact of various factors on enplanement growth at the airport, where the c_1 Coefficient represents the intercept of the linear regression formula and the c_2 Coefficient represents the slope of the linear regression formula
- c_1 Coefficient = -150327.152
- c_2 Coefficient = 60.204

For the independent variable of historical and forecast data for the Penacola-Ferry Pass-Brent, FL MSA Gross Regional Product, this study utilized the long-term economic forecast published in the 2015 edition of the *Complete Economic and Demograpic Data Source* ("CEDDS") by Woods & Poole Economics, Inc. This is a highly trusted and reputable soure for ecomomic forecasting for markets within the United States. The CEDDS is also a recognized and approved source under the FAA's *Forecasting Aviation Activity by Airport Guidelines*.

The following forecast of Gross Domestic, State, and Regional Product for the United States, Florida, and the Pensacola-Ferry Pass-Brent, FL MSA are displayed in Figure 1-2.

FIGURE 1-2
GROSS DOMESTIC, STATE, AND REGIONAL PRODUCT OF THE UNITED STATES, FLORIDA, AND PENSACOLA-FERRY PASS MSA HISTORICAL & FORECAST

YEAR	UNITED STATES	FLORIDA	PENSACOLA MSA
2000	12,306,432	591,175	12,537
2005	14,116,075	757,847	15,358
2010	14,620,949	716,756	15,241
2015	16,261,994	785,381	16,017
2016	16,632,973	806,335	16,367
2017	17,005,442	827,437	16,717
2018	17,382,455	848,837	17,069
2019	17,765,537	870,637	17,427
2020	18,155,067	892,857	17,790
2025	20,171,743	1,009,488	19,671
2030	22,268,693	1,133,797	21,636
2035	24,446,551	1,265,467	23,672
CAGR			
2000-2015	1.88%	1.91%	1.65%
2015-2016	2.28%	2.67%	2.18%
2015-2020	2.23%	2.60%	2.12%
2015-2025	2.18%	2.54%	2.08%
2015-2030	2.12%	2.48%	2.02%
2015-2035	2.06%	2.41%	1.97%

Source: Woods & Poole Economics, Inc.

1.2.3 Air Transport Movements

Commercial airline air transport movements ("ATMs") are generally a function of passenger traffic demand and air service development, shaped by carrier networks and average aircraft size. Forecasts of future air transport movements are derived taking into consideration passenger traffic demand, potential service improvements/expansion, change of average aircraft size, and load factor.

Passenger air transport movements depend on the average aircraft size and average load factor (i.e. average passengers per flight), as represented by the formula below:

$$\text{Air Transport Movements} = \frac{\text{Passenger Forecasts}}{\text{Average Aircraft Size x Average Load Factor}}$$

Where: Average Aircraft Size x Average Load factor = Average Passengers per Air Transport Movement

Forecasts of aircraft fleet mix and flight load factors were prepared and applied. The changes in future fleet mix and load factors reflect:

- Current airline and fleet mix based on 2016 commercial scheduled carriers' most recent schedules. These schedules were utilized to compute base-level 2016 fleet mix percentages by aircraft type;
- Market development and new air services;
- Carrier fleet replacement plans and improved aircraft utilization;
- Aircraft load factors have been held constant at 83% throughout the forecast period.

Separate forecasts were developed for domestic commercial scheduled traffic, including breakdowns by aircraft size. Forecasts of air cargo, military and general aviation air transport movements were also produced in order to forecast total movements at the airport.

The commercial fleet mix at PNS during the forecast period is expected to closely reflect the general trends in the aircraft fleets of the U.S. airline sector. Today, the fleet renewal strategies of U.S airlines are driven by the requirement to optimize operational efficiency and capacity in order to maximize shareholder returns. The focus of the fleet renewal plans is to deploy in the U.S. market more efficient, both from an operational and financial perspective, next generation narrow body and larger regional aircraft.

The primary commercial scheduled service pattern at PNS today and during the forecast period is expected to be operations to airline hubs and major connecting points. As such, the expected fleet mix at PNS will continue to evolve in line with the airline industry fleet renewal trends for aircraft serving the domestic market.

The fleet mix forecast envisions the continued introduction of new and more efficient narrow body aircraft and the replacement of small (50 seat or less) regional jets with larger regional jets (70 seat class). The FAA Aerospace Forecast Fiscal Year 2016 – 2036 anticipates that by 2025 a very limited number of 50 seat jet and turbo prop aircraft will remain in the U.S. airline fleet. This projection of the future composition of the U.S. airline fleets is supported by the rapid retirement of small regional jets and turbo prop aircraft by, and the lack of future orders from Major U.S. air carriers for aircraft with a design capacity of less than 70 seats.

The projection of the fleet mix is influenced and informed by a number of factors including discussions with representative of the airlines and the publically announced fleet renewal plans of the four largest U.S. airlines, Delta Air Lines, Southwest Airlines American Airlines and United Airlines. The results of the Fleet Mix projections are displayed in Figure 1-3.

FIGURE 1-3
PENSACOLA FLEET MIX PROJECTION

	2016	2020	2025	2030	2035
Itinerant Movements					
Air Carrier	***15,232***	***17,213***	***19,454***	***21,804***	***24,246***
Bombardier 700 (C-II)	1,387	1,824	2,113	2,342	2,579
Airbus 319 (C-III)	264	188	297	471	654
Airbus 320 (C-III)	246	170	278	452	635
Airbus 321 (C-III)		420	726	1,037	1,357
Boeing 717 (C-III)	259	183	292	466	649
Boeing 737 (C-III)	2,391	2,363	2,520	2,742	2,972
Boeing 88 (C-III)	2,044	1,735	1,597	1,546	1,507
Boeing 90 (C-III)	1,459	1,413	1,552	1,756	1,968
Bombardier 900 (C-III)	4,067	5,613	6,295	6,648	7,006
Embraer 170 (C-III)	147	71	178	350	530
Embraer 175 (C-III)	1,053	1,352	1,592	1,805	2,027
Airbus 300 (D-IV)	505	517	530	542	555
Boeing 757 (D-IV)	1,407	1,359	1,486	1,651	1,810
Commuter/Air Taxi	***11,491***	***11,400***	***10,893***	***10,236***	***9,429***
Bombardier 200 (C-II)	738	274	148	148	148
Embraer 145 (C-II)	4,606	1,708	922	922	922
Saab 340 (C-II)	2,581	2,581	2,581	2,581	2,581
Other Commuter/Air Taxi	3,566	6,837	7,242	6,585	5,778
Total Commercial Movements	26,722	28,613	30,348	32,039	33,675
General Aviation	*26,039*	*26,353*	*26,750*	*27,154*	*27,564*
Military	*18,323*	*18,323*	*18,323*	*18,323*	*18,323*
Local Movements					
General Aviation	*32,787*	*33,182*	*33,683*	*34,191*	*34,707*
Military	*1,141*	*1,141*	*1,141*	*1,141*	*1,141*
Total Movements	105,012	107,611	110,244	112,848	115,410

Source: InterVISTAS Consulting, Inc.

1.2.4 Air Cargo Volume

Air cargo activity is often highly correlated with the economic activity ("GDP" or "GRP") of relevant markets. Further, the "demand pull" concept generally dictates that air trade volume is driven by economic activity of the destination region or country. This study looked at typical indicators of economic activity including GDP/GRP and other independent variables to test relationships to PNS's historic air cargo levels.

While econometric modeling can be a very good predictor of air cargo demand on a global or regional level, it is understood that adequate supply of belly space and freighter capacity must be present at airports in order to assume that macro-economic relationships will extend to the individual airport level. In fact, for an airport level forecast, it is often the case that supply of air cargo capacity is just as important as the "demand-pull" created by economic growth and activity.

In the case of historic PNS air cargo volumes, no meaningful relationship was found with a variety of independent variables including real GDP/GRP levels of economies in the Pensacola region and the larger United States market. Regression analysis models produced poor R-squared values and other goodness-of-fit statistical measures. These poor regression analysis results could be attributed to the operational profile of the airport. For example, PNS operations are currently dominated by regional and narrow body passenger aircraft with very low air cargo capacity in their belly space. Further, PNS's all-cargo operations are at fairly modest levels – consisting of daily operations by UPS jet and feeder aircraft during the work week. With this information on air cargo capacity levels at PNS, macro-economic air cargo relationships would not expect to be reflected in the historic air cargo statistics at the airport. Therefore, this study relied on an alternative method of forecasting air cargo at PNS – a method that has often been used on other similar airport forecast engagements. This method forecasts cargo at PNS based on estimates of cargo that will be carried in the bellies of passenger aircraft and by all-cargo aircraft.

Having already forecasted passengers and passenger aircraft movements at PNS, this analysis applied assumptions of belly cargo capacity and typical tonnage for those aircraft during each year of the forecast. For passenger belly cargo forecasts, the analysis further distinguished between mainline aircraft (i.e. true narrowbodies) and regional aircraft (i.e. regional jets and turboprops). Since 2009, belly cargo onboard mainline passenger aircraft has seen slight declines from 97 pounds per mainline air transport movement ("ATM") to 56 pounds per ATM. Analysis shows that this decline largely due to two factors: 1) Delta mainline aircraft carried fewer cargo pounds per operation and 2) Southwest operates many of its PNS flights with no inbound or outbound cargo which has the effect of diluting average pounds per mainline ATM. In 2015, mainline passenger aircraft averaged approximately 56 pounds per operation. Despite these recent declines in average pounds per mainline ATM, the analysis assumes that as PNS carriers up-gauge and add mainline aircraft operations, more belly cargo will be moved by those airlines. This assumption was validated through the interview process with the airlines currently serving PNS. By 2035, the analysis assumes that an average of 70 pounds will be carried per mainline ATM at PNS. In addition, very small amounts of cargo are carried by regional aircraft (typically averaging between 0.5 and 1.5 pounds per ATM). Applying the estimated annual

average cargo pounds per passenger ATM type to the previously forecasted commercial passenger ATMs yields an annual belly cargo forecast at PNS.

To complete the cargo forecast, the study forecast the tonnage to be carried by all-cargo freighter aircraft. In the case of PNS, UPS operates approximately 10 ATMs per week with jet aircraft and 10 ATMs per week with smaller turboprop aircraft (operated by Ameriflight). Since UPS moved its regional air operations to PNS from Mobile in 2011, all-cargo aircraft have consistently operated at levels close to these ATM counts. In fact, even before the move to PNS, UPS operated the same number of flights at Mobile for many years. Interviews with UPS for this PNS Master Plan Update revealed that the airline has no plans to change its level of flight operations at the airport and would continue to operate consistent with past levels. After analyzing average cargo pounds carried by UPS jets and Ameriflight turboprops at PNS, the study was able to forecast total pounds of cargo carried by all-cargo aircraft. Based on recent growth rates and market dynamics, the study assumed modest development of the cargo pounds per ATM over the forecast period. This assumption was also validated by direct interview responses from UPS, as well as the review of historic air cargo levels at MOB and PNS over a sustained period of time.

1.3 AIRPORT ACTIVITY FORECASTS

1.3.1 Enplaned Passengers Forecast

Utilizing the steps described in the previous section, the Base Case, or most likely forecast, of enplaned passengers at PNS was calculated. Additionally, two sensitivity forecasts were calculated to reflect the possibility of the economic forecasts underachieving (Low Case) or overachieving (High Case) the levels put forth in the Woods & Pool Gross Domestic Product Forecast for the Pensacola-Ferry Pass-Brent, FL MSA. The Low Case utilizes the Base Case GDP growth reduced by 10%, while the High Case applies a 10% increase to the forecast GDP growth rate. Overall Compound Annual Growth Rates for the forecast period of 2015 through 2035 are expected to be 2.37% in the Base Case, 1.83% in the Low Case, and 2.90% in High Case. The Base Case of enplaned passengers at PNS and the subsequent sensitivity analysis forecasts for the Low and High Cases are displayed in Figure 1-4.

FIGURE 1-4
PENSACOLA ENPLANED PASSENGER FORECAST – BASE, LOW, & HIGH CASES

YEAR	BASE CASE	LOW CASE	HIGH CASE
2002	632,379	632,379	632,379
2005	799,759	799,759	799,759
2010	719,648	719,648	719,648
2015	797,854	797,854	797,854
2016	819,396	819,396	819,396
2017	844,722	839,516	850,005
2018	870,048	859,635	880,614
2019	895,373	879,755	911,223
2020	920,699	899,874	941,832
2025	1,033,956	982,753	1,087,206
2030	1,152,239	1,065,651	1,244,523
2035	1,274,815	1,147,731	1,413,625
CAGR			
2002-2015	1.80%	1.80%	1.80%
2015-2016	2.70%	2.70%	2.70%
2015-2020	2.91%	2.44%	3.37%
2015-2025	2.63%	2.11%	3.14%
2015-2030	2.48%	1.95%	3.01%
2015-2035	2.37%	1.83%	2.90%

Source: InterVISTAS Consulting, Inc.

1.3.2 Air Transport Movements Forecast

Utilizing the steps described in the previous Methodology section, the Base Case, or most likely forecast, of Commercial Passenger Air Transport Movements at PNS was calculated. Additionally, two sensitivity forecasts were calculated to reflect the possibility of the Enplaned Passenger Forecast underachieving (Low Case) or overachieving (High Case) the levels put forth in the Base Case Enplaned Passenger Forecast. Overall Compound Annual Growth Rates for the forecast period of 2015 through 2035 are expected to be 2.37% in the Base Case, 1.83% in the Low Case, and 2.90% in High Case. The Base Case of Air Traffic Movements at PNS and the subsequent sensitivity analysis forecasts for the Low and High Cases are displayed in Figure 1-5.

FIGURE 1-5
PENSACOLA SCHEDULED COMMERCIAL PASSENGER AIR TRANSPORT MOVEMENTS FORECAST – BASE, LOW, & HIGH CASES

YEAR	BASE CASE	LOW CASE	HIGH CASE
2005	38,606	38,606	38,606
2010	30,204	30,204	30,204
2015	26,345	26,345	26,345
2016	26,722	26,722	26,722
2017	27,212	27,045	27,382
2018	27,690	27,359	28,027
2019	28,157	27,666	28,656
2020	28,613	27,966	29,270
2025	30,348	28,845	31,911
2030	32,039	29,632	34,605
2035	33,675	30,318	37,342
CAGR			
2005-2015	-3.75%	-3.75%	-3.75%
2015-2016	1.43%	1.43%	1.43%
2015-2020	1.67%	1.20%	2.13%
2015-2025	1.42%	0.91%	1.94%
2015-2030	1.31%	0.79%	1.83%
2015-2035	1.23%	0.70%	1.76%

Source: InterVISTAS Consulting, Inc.

In addition to Commercial Passenger Air Transport Movements, forecasts of Non-Commercial Military, General Aviation ("GA"), and Total Airport Air Transport Movements were calculated. In discussions with representatives of the military and other local sources, the FAA's *Terminal Area Forecast* (issued in January 2016) was referenced as the most accurate method of completing the military movements forecast section of the airport forecast. Therefore, the study relied on the forecast currently being published by the FAA for PNS's military movements.

After correspondence with the Fixed Base Operators ("FBOs") currently operating at the Airport, it was determined that using the FAA's projected industry growth rates for the GA Movements would be the most appropriate methodology for forecasting the GA category. This study utilized the projected GA growth rates published in the *FAA Aerospace Forecast, Fiscal Year 2016-2035*. The results of the major Air Transport Movements forecasted categories are displayed in Figure 1-6.

FIGURE 1-6
PENSACOLA AIR TRANSPORT MOVEMENTS FORECASTS – COMMERCIAL, MILITARY, & GENERAL AVIATION

YEAR	COMMERCIAL	MILITARY	GENERAL AVIATION	TOTAL MOVEMENTS
2005	38,606	27,580	63,083	129,269
2010	30,204	23,979	71,369	125,552
2015	26,345	19,464	58,591	104,400
2016	26,722	19,464	58,825	105,012
2017	27,212	19,464	59,002	105,678
2018	27,690	19,464	59,179	106,333
2019	28,157	19,464	59,356	106,978
2020	28,613	19,464	59,534	107,611
2025	30,348	19,464	60,433	110,244
2030	32,039	19,464	61,345	112,848
2035	33,675	19,464	62,270	115,410
CAGR				
2005-2015	-3.75%	-3.43%	-0.74%	-2.11%
2015-2016	1.43%	0.00%	0.40%	0.59%
2015-2020	1.67%	0.00%	0.32%	0.61%
2015-2025	1.42%	0.00%	0.31%	0.55%
2015-2030	1.31%	0.00%	0.31%	0.52%
2015-2035	1.23%	0.00%	0.30%	0.50%

Source: InterVISTAS Consulting, Inc.

1.3.3 Air Cargo Volume Forecast

During the forecast period, total air cargo at PNS will increase 27% from 14.0 million pounds in 2016 to 17.8 million pounds in 2035. All-cargo aircraft will continue to carry the vast majority of PNS air cargo – 96% of total in 2016 and 94% of total in 2035. The expected increase in mainline narrow body aircraft and the related belly cargo they will carry accounts for the slight decrease in all-cargo share of volumes over time. The compound average growth rate for PNS cargo is forecasted at approximately 1.3% between 2016 and 2035 (see Figure 1-7).

FIGURE 1-7
PENSACOLA AIR CARGO FORECAST SUMMARY (2016-2035)

YEAR	AIR CARGO (POUNDS)	COMPOUND AVG. GROWTH RATE (RELATIVE TO BASE YEAR)
HISTORIC		
2011	2,747,535	
2012	12,625,683	
2013	12,818,948	
2014	13,038,818	
2015	13,062,249	
BASE YEAR		
2016	14,005,129	
FORECAST		
2020	14,863,418	1.5%
2025	16,017,562	1.5%
2030	16,859,185	1.3%
2035	17,754,388	1.3%

Source: InterVISTAS Consulting

1.4 COMPARISON TO THE FAA TERMINAL AREA FORECAST (2015)

Annually, the FAA publishes a *Terminal Area Forecast* ("TAF") for all of the active airports in the *National Plan of Integrated Airport Systems* ("NPIAS") including FAA towered airports, Federal contract towered airports, nonfederal towered airports, and non-towered airports. The TAF serves as the official FAA forecast of aviation activity for U.S. airports. Forecasts are prepared for major users of the National Airspace System including air carrier, air taxi/commuter, general aviation, and military. The forecasts are prepared to meet the budget and planning needs of FAA and provide information for use by state and local authorities, the aviation industry, and the public.

In essence, FAA will find an airport planning forecast generally acceptable if the 5-year, 10-year, and 15-year forecast levels for the airport forecast and the TAF are within 10% of each other. The relevant parameters that should come within 10% of total airport operations, total commercial operations, and total enplanements. It should be emphasized that if the proposed airport forecast exceeds the TAF by more than 10% and is considered valid on FAA review, it will be incorporated into the TAF and NPIAS.

For comparison to the projections that have been published in the 2015 TAF for PNS, the study uses the following standard comparison figures outlined in the FAA's *Forecasting Aviation Activity by Airport* Guidelines. Figure 1-8 details a summary of forecast levels and growth rates put forth in the forecast.

FIGURE 1-8
PENSACOLA ENPLANEMENTS & MOVEMENTS FORECAST SUMMARY – COMMERCIAL, MILITARY, & GENERAL AVIATION

Forecast Levels and Growth Rates

Specify base year: 2015

	Base Yr. Level	Base Yr.+1yr.	Base Yr.+5yrs.	Base Yr.+10yrs.	Base Yr.+15yrs.	Average Annual Compound Growth Rates: Base Yr. to +1	Base Yr. to +5	Base Yr. to +10	Base Yr. to +15
Passenger Enplanements	2015	2016	2020	2025	2030				
Air Carrier	455,708	471,242	544,018	631,317	726,247	3.41%	3.61%	3.31%	3.16%
Commuter	342,146	348,154	376,681	402,639	425,992	1.76%	1.94%	1.64%	1.47%
TOTAL	797,854	819,396	920,699	1,033,956	1,152,239	2.70%	2.91%	2.63%	2.48%
Operations									
Itinerant									
Air carrier	11,487	15,232	17,213	19,454	21,804	32.60%	8.43%	5.41%	4.36%
Commuter/air taxi	14,858	11,491	11,400	10,893	10,236	-22.66%	-5.16%	-3.06%	-2.45%
Total Commercial Operations	26,345	26,722	28,613	30,348	32,039	1.43%	1.67%	1.42%	1.31%
General aviation	25,935	26,039	26,353	26,750	27,154	0.40%	0.32%	0.31%	0.31%
Military	18,323	18,323	18,323	18,323	18,323	0.00%	0.00%	0.00%	0.00%
Local									
General aviation	32,656	32,787	33,182	33,683	34,191	0.40%	0.32%	0.31%	0.31%
Military	1,141	1,141	1,141	1,141	1,141	0.00%	0.00%	0.00%	0.00%
TOTAL OPERATIONS	104,400	105,012	107,611	110,244	112,848	0.59%	0.61%	0.55%	0.52%
Peak Hour Operations	11	11	12	14	16	2.70%	2.91%	2.63%	2.48%
Cargo/mail (enplaned + deplaned tons)	12,817,667	14,005,129	14,863,418	16,017,562	16,859,185	9.26%	3.01%	2.25%	1.84%
Based Aircraft									
Single Engine (Nonjet)	64	65	69	76	81	1.56%	1.52%	1.73%	1.58%
Multi Engine (Nonjet)	5	5	7	10	15	0.00%	6.96%	7.18%	7.60%
Jet Engine	18	19	22	25	30	5.56%	4.10%	3.34%	3.46%
Helicopter	3	3	3	3	3	0.00%	0.00%	0.00%	0.00%
Other	0	0	0	0	0	0.00%	0.00%	0.00%	0.00%
TOTAL	90	92	101	114	129	2.22%	2.33%	2.39%	2.43%

B. Operational Factors

	Base Yr. Level	Base Yr.+1yr.	Base Yr.+5yrs.	Base Yr.+10yrs.	Base Yr.+15yrs.
Average aircraft size (seats)	72	73	78	82	87
Average enplaning load factor					
Air carrier	84%	83%	83%	83%	83%
Commuter	82%	83%	83%	83%	83%

**Note: Peak Hour Operations represent Peak Hour Scheduled Passenger Operations only.*
Source: InterVISTAS Consulting, Inc.

Figure 1-9 details a summary that compares the airport planning forecast to the TAF forecast. In Figure 1-9, it should be noted that none of the forecast categories under review exceed the +/-10% threshold detailed in the FAA's Guidelines for acceptance.

The TAF numbers in Figure 1-9 are published in the *APO Terminal Area Forecast Detail Report* issued in January 2016, the full TAF forecast for PNS is available for reference on the FAA's TAF website.

FIGURE 1-9
PENSACOLA ENPLANEMENTS & MOVEMENTS FORECAST COMPARISONS TO THE FAA TAF SUMMARY

	Year	Airport Forecast	TAF	AF/TAF (% Difference)
Passenger Enplanements				
Base yr.	2015	797,854	772,649	3.26%
Base yr. + 5yrs.	2020	920,699	896,255	2.73%
Base yr. + 10yrs.	2025	1,033,956	983,507	5.13%
Base yr. + 15yrs.	2030	1,152,239	1,057,190	8.99%
Commercial Operations				
Base yr.	2015	26,345	26,345	0.00%
Base yr. + 5yrs.	2020	28,613	29,310	-2.38%
Base yr. + 10yrs.	2025	30,348	32,229	-5.84%
Base yr. + 15yrs.	2030	32,039	34,589	-7.37%
Total Operations				
Base yr.	2015	104,400	104,400	0.00%
Base yr. + 5yrs.	2020	107,611	107,919	-0.28%
Base yr. + 10yrs.	2025	110,244	111,430	-1.06%
Base yr. + 15yrs.	2030	112,848	114,389	-1.35%

Note: TAF data is on a U.S. government fiscal year basis (October through September).

Source: InterVISTAS Consulting, Inc.