Foreword
Florida Air Cargo
System Plan Introduction

Globalization is the economic transition to a more connected world; a world organized around nation-states and yet increasingly conjoined in a global marketplace. Worldwide connectivity is required in order for globalization to develop. This development is driven by telecommunications, information technology and transportation of goods and people. In today's new global economy; aviation is at the forefront of the connectivity process. The huge volume of time-critical, high-value products crossing national boundaries by air annually has resulted in markets and industries being connected together, sharing a common goal to improve and enhance the quality of life of individuals, families, businesses and societies.

While dwarfed by the tonnage moving by sea and rail, efficient air transport is critical to economies at both ends of the development scale. Twenty-first century markets trading in high-value goods require the reliability and speed only afforded by air transport, while developing countries so often depend upon highly perishable agricultural products with compressed shelf-life. Between the two extremes are transitional economies in which still developing countries, such as Colombia, are achieving manufacturing standards similar to those of fully developed industrial nations thanks to carefully planned and controlled logistics programs.

In today's global economy, air cargo companies are increasingly involved in supply chain management by manufacturers. Examples of the supply chain and air cargo's importance are provided below:

- A tilapia fish farm in Costa Rica uses air cargo aircraft to transport fish to Miami, Florida on a daily basis which are distributed from there to customers by truck and air. Most of their customers receive their fish within 36 hours of being harvested.

- A leading Singapore semiconductor manufacturer of analog and digital technologies and computer chips uses one of the leading express delivery companies to operate its logistics facility and to handle its orders. As a result, it has achieved an average delivery time of 48 hours on a global basis.

- A Mexican automotive components manufacturer receives components from 135 suppliers located in 17 countries. The company's "just-in-time" delivery systems have been designed to accommodate the specific requirements of each customer for low levels of inventory and rapid stock delivery service. To meet these needs, it relies on integrated express air cargo services for speed and reliability.

- A United Arab Emirates (UAE)-based telecommunications/computer services company, employing 10,500 people, makes extensive use of express delivery services, both within the UAE and for deliveries to other Gulf countries, Africa, India, and Australia.

FLORIDA'S AIR CARGO RELATED AIRPORTS

While many airports in Florida can accommodate air cargo activity to a certain degree, there are 18 airports in Florida which have scheduled air cargo service supporting

business and industry throughout the State. For purposes of this study, these airports are divided into two categories: Strategic Intermodal System (SIS) Airports and Tier Two Airports.

SIS Airports

SIS Airports are airports in Florida which are designated as such by the Florida Department of Transportation (FDOT) as part of its *Strategic Intermodal System Plan 2005*. This plan's goal is to enhance Florida's economic competitiveness and is composed of transportation facilities and services of Statewide and interregional significance. It includes the State's largest and most significant commercial service airports, spaceport, deepwater seaports, freight rail terminals, passenger rail and intercity bus terminals, rail corridors, waterways and highways. The SIS Strategic Plan is the new foundation for Florida's transportation system. Implementation of the SIS will represent a new way of thinking about how Florida plans and manages investments in its transportation system.

FDOT defines SIS Commercial Service Airports as those accommodating 0.25 percent of total U.S. passenger or freight activity. In 2005, this equated to a minimum of 1.8 million passenger enplanements or 200,000 tons of freight and mail.[1] The seven SIS Commercial Service Airports in Florida currently include the following:

- Ft. Lauderdale-Hollywood International
- Jacksonville International
- Miami International
- Orlando International
- Palm Beach International
- Southwest Florida International
- Tampa International

Tier Two Airports

Tier Two Airports are airports in Florida's system of airports that have significant volumes of air cargo on a scheduled basis as well as "Emerging SIS Airports" as noted in FDOT's *Strategic Intermodal System Plan 2005.* To be classified as an Emerging SIS Airport, a facility must be located more than 50 miles away from an SIS Commercial Service Airport. FDOT classifies Emerging SIS Airports as those accommodating 0.05 percent of total U.S. passenger or freight activity. In 2005, this equated to 360,000 passenger enplanements or 40,000 tons of freight and mail. Emerging SIS facilities also are designated based on their ability to serve clusters of transportation-intensive industries in fast-growing economic regions. For example, some Emerging SIS Airports[2] are identified based not on their activity levels, but rather on their proximity to industries that require access to air transportation, such as tourist attractions, universities and high-technology centers. Emerging SIS facilities also are designated to serve economic development needs in Florida's Rural Areas of Critical Economic Concern[3]. The Tier Two Airports in Florida are currently identified as the following:

[1] FDOT, "Strategic Intermodal System (SIS) Strategic Plan," January 2005.
[2] * denotes Emerging SIS Airport
[3] http://www.dot.state.fl.us/planning/SIS/strategicplan/adopted012005.pdf

- Daytona Beach International*
- Gainesville Regional*
- Key West International
- Melbourne International*
- Okaloosa County*
- Panama City-Bay County*
- Orlando Sanford*
- Pensacola Regional*
- Sarasota-Bradenton International *
- St. Petersburg-Clearwater International
- Tallahassee Regional*

Other airports in the State accommodate air cargo on an ad hoc basis. Ad hoc cargo operations are those that take place on demand. Shippers contact an air taxi service or air cargo hauler to transport cargo as needed. In addition, several general aviation airports in the State are utilized by the Federal Reserve to transport banking materials. Although this activity at general aviation airports is important to the State's economy, it was not the focus of the Air Cargo System Plan.

PROJECT OBJECTIVES

Continued growth in the aviation industry in the State of Florida as well as remarkable economic growth and prosperity within the State are presenting unique challenges to airport managers, stakeholders and transportation engineers and planners. Since 1990, airports in Florida experienced rapid growth in passenger and cargo traffic as well as related traffic on regional roadway systems. These roadways are closely linked to both successful aviation facilities and economic development. As a result, some airports in the State with state-of-the-art air cargo facilities experience congestion which often stifles growth. FDOT realizes that air cargo growth on airports must be supported by an efficient roadway network.

This study presents the utilization of air cargo at Florida's airports and how the air cargo industry connects Florida's commerce with the rest of the world. This study focuses primarily on the connectivity air cargo provides by identifying how airports and air routes or "trade lanes", created through bilateral agreements between nations interested in expanding their economies. The study also identifies how air cargo at Florida's system of airports connects the State with the national economy, the rate of air cargo growth over the next 20 years, and the capacity of air cargo facilities to accommodate growth. In order to more fully appreciate and understand the importance of air cargo at Florida's airports, the following factors are analyzed:

- Global Air Cargo Trends
- Florida's Commodity Flows
- Florida Air Cargo Traffic and Trade Lanes
- Air Cargo Facilities and Roadway Inventory
- Forecasts of Florida's Air Cargo Activity
- Air Cargo Capacity Analysis
- Strengths, Weaknesses, Opportunities and Threats to Florida's Air Cargo System
- Recommendations

This project is conducted under FDOT Contract Number C8914 which is grouped into four Tasks. These Tasks are presented in this document and are identified in the appropriate chapter header.

Task 1 – Existing Trends (Chapter 2)
Task 2 – Florida Air Cargo Facility Inventory and Analysis (Chapters 3, 4, & 5)
Task 3 – Florida Air Cargo Forecast (Chapter 6)
Task 4 – Air Cargo Market and Opportunity Analysis (Chapter 7)