



WAKULLA
COUNTY

Wakulla County Airport Master Plan Update 2013



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Wakulla County Airport Master Plan Update

Introduction

The objective of this study is to provide an Airport Master Plan Update for use by Wakulla County Officials as a planning guide in determining the future policies, goals, and development of the Wakulla County Airport.

Wakulla County, Florida owns and operates the Wakulla County Airport (2J0). The previous Airport Master Plan was completed in 1989 and had never been updated. The Airport Layout Plan (ALP), a set of drawings that generally depicts an airports existing and planned development, was updated in 2008, but was never formally adopted by the County. Since that time, there have been changes in airport planning criteria that affect the ALP. It was thought by some members of the public that an ALP would not be effective without an accompanying Master Plan to provide the background and basis for what is depicted on the drawings in the ALP. This led to the decision to develop an updated ALP and this supporting Airport Master Plan Update.

This Airport Master Plan Update will serve as a management guide for airport development. Development priorities, staging plans, and cost estimates are included for improvements proposed in this Airport Master Plan Update. This document has a study horizon of 20 years and has recommendations based on the existing conditions of the airport, enhancing the conformity of the airport with state and federal airport criteria and potential future changes in activity characteristics.

Funding for this Airport Master Plan Update and ALP was provided to Wakulla County through a grant from the Florida Department of Transportation (FDOT).

Goals

As a part of the planning process, a set of goals were defined to guide the planning effort. These goals were developed in conjunction with County officials. It is the object of this Master Plan to accomplish the following key goals:

- Enhance the financial self-sufficiency of the airport
- Provide recommendations to be compliant with state licensing requirements
- Provide recommendations that enhance safety

- Identify environmental concerns
- Receive development recommendations from the citizens of Wakulla County
- Provide development recommendations for land side and airside facilities

Objective

The objective of this study is to provide a reasoned and realistic Airport Master Plan Update, taking into consideration the input from the citizens of the County for use by Wakulla County officials as a guide for determining future policies, goals, investment and facility development at the Wakulla County Airport.

The development of an Airport Master Plan is a public process. Guidance on Airport Master Plan development is provided by the FDOT publication *Guidebook for Airport Master Planning*. Typically, a Master Plan will include a series of sections which review a range of subjects including: existing conditions, facility inventory, activity forecasts, environmental considerations, and an ALP. Recommendations included in this plan will be staged throughout a 20-year planning horizon.

To accomplish this objective, the development of the Wakulla County Airport Master Plan Update:

- Accumulates historical information relative to the airport, the area surrounding the airport, and the previous Airport Master Plan.
- Assembles data on the airport's existing aviation activity and facilities, including:
 - Airport facilities, buildings, fencing, and airport services
 - Airside facilities
 - Landside facilities
- Provides a conceptual plan that integrates the Wakulla County Airport with the adjacent land areas and subdivisions.
- Considers potential impacts to the natural and man-made environment.
- Provides aviation forecasts and assesses facility demand and capacity.
- Suggests airport development to ensure safety and meet state licensing requirements while also encouraging economic growth in the County.
- Provides an updated ALP.

The airport master planning process, once approved by FDOT and adopted by the Wakulla County Board of County Commissioners, satisfies the necessary requirements to obtain State financial assistance for the airport. This master planning process does not have to be complex, and has long-term benefits, not only for direct users of the airport, but also for all Wakulla County residents through economic benefit to the

County, improvement to the County's overall transportation system, and the ability to respond to emergency events.

Origin of Study

Recognizing that the airport had been operating for years without a current master plan and that there are deviations from state requirements, the Wakulla County Board of County Commissioners determined that the time had arrived to conduct a public master planning process to discuss and define what the future of the airport would be. At the request of the Wakulla County Board of County Commissioners, FDOT agreed to participate in the development of this Master Plan. Funding was provided by FDOT District 3.

National Plan of Integrated Airport Systems

The National Plan of Integrated Airport Systems (NPIAS) identifies nearly 3,400 existing and proposed airports that are significant to national air transportation and thus eligible to receive federal grants under the Airport Improvement Program (AIP). It also includes estimates of the amount of AIP money needed to fund infrastructure development projects that will bring these airports up to current design standards and add capacity to congested airports.

The NPIAS contains all commercial service airports, all reliever airports, and selected general aviation airports. At this time Wakulla County Airport is not listed as one of the general aviation (GA) airports in the NPAIS, therefore it is not currently eligible for federal funding under the AIP.

Florida Aviation System Plan

The Florida Aviation System Plan (FASP) 2025 provides documentation of airports and related facilities needed to meet current and projected statewide aviation demands. For planned airport improvements to be eligible for state funding, the airport master plan must be consistent with the FASP. The Wakulla County Airport is identified as a public-use general aviation airport in the FASP that primarily serves the needs of an adjacent fly-in community. For the purpose of this Airport Master Plan Update, it is assumed that Wakulla County Airport will continue to be designated and operate as a general aviation airport non-reliever airport throughout and beyond the 20-year study horizon.

A review of the FASP and the 2011 Airport Demand/Capacity study indicates adequate operational capacity exists in the region during the 20-year planning period. The FASP also states the future role of this airport is limited by lack of local funding, manmade factors and environmental factors; however the

FASP notes the airport will likely continue to serve recreation and sport aviation activity and some flight training activity during the planning period. There is an inherent need to be consistent with the FASP as the guiding statewide aviation plan during the master planning process as well as address airport-licensing standards, but this Master Plan will also address sponsor needs and goals while recognizing the financial, manmade, and environmental factors that act to constrain facility development.

Airport Ownership and Management

The Wakulla County Airport is owned and operated by the Wakulla County Board of County Commissioners. Mr. Steven Fults serves as the airport manager and is responsible for the daily operation of the airport. Maintenance and repairs at the airport are done by Wakulla County Department of Public Works. All decisions and actions regarding the airport must be approved by the County Commission.

The airport property was deeded to the County by Mr. and Mrs. Fenton Jones in March 1963. The property was conveyed:

“for the sole purpose of establishing and maintaining a public landing strip for light aircraft and upon express covenant of the County that it will develop and construct said landing strip in a manner which will meet the requirements of the Florida Development Commission (now the Florida Department of Transportation) for licensing, and the necessary requirements for said landing strip to be placed upon aviation maps of the U.S. Government.”

The transfer deed also stipulated that:

“in the event that said airport is not maintained to the above standards and the Board of County Commissioners of Wakulla County, Florida is so notified in writing by either the of the above named governmental agencies (FDOT or FAA), failure of said board to meet or comply with said requirements within sixty (60) days after being notified in writing shall automatically and without further procedure, cause the Title to the above described land to revert to the parties of the first part (Mr. and Mrs. Jones), their heirs or assigns.”

In 2003, an agreement was reached between the Tarpine Homeowners Association and the heirs of Mr. and Mrs. Fenton’s estate where the Homeowners Association became partial reverters of the estate.

While this issue would need to be re-evaluated by the County attorney and attorneys of the heirs, there is the possibility that the Tarpine subdivision could take over ownership of the airport if the County failed to comply with the provisions of the original conveyance requirements or no longer chose to maintain/fund the airport.

During interviews with the airport manager, it was stated that if ownership of the airport were to be assumed by Tarpine, it would still be obligated to stay open as a public use airport.

Data Sources

Numerous agencies and sources have been consulted in the development of this Master Plan. These include:

- Wakulla County Board of County Commissioners
- Wakulla County Chamber of Commerce
- Wakulla County Tax Collector
- Florida Department of Transportation (FDOT)
- Federal Aviation Administration (FAA)
- Department of Environmental Protection (FDEP)
- U.S. Census
- Bureau of Economic Research

In addition to these data sources, stakeholder interviews and site visits were also completed throughout the development of the Airport Master Plan Update.

Airport Location

The Wakulla County Airport is located in southern Wakulla County, near Ochlockonee Bay, in the Florida Panhandle. The nearest population center is the unincorporated community of Panacea, located three miles north on US 98. The airport is fifteen miles south of the unincorporated Town of Crawfordville, Florida. Crawfordville is the Wakulla County seat and is the nearest commercial population center. The airport is located 35 miles south of the City of Tallahassee. Tallahassee is the nearest major metropolitan area and houses the state capital as well as three major universities (Florida State University, Florida Agricultural and Mechanical University, and Tallahassee Community College) and Tallahassee Regional Airport (TLH), a commercial service airport serving the area.

The main roads providing access to the Airport are US 98, US 319, and SR 372 (Surf Road). US 98 is the primary east/west corridor generally running parallel to the gulf coast in much of Wakulla County, while US 319, which intersects US 98 a few miles north of the airport, provides north/south connectivity. US 319 provides access to Crawfordville, Tallahassee, and eventually Interstate 10 (I-10). US 98 connects further south into Franklin County, to the City of Carrabelle and the Carrabelle-Thompson Airport (X13) and continues west through the Florida Panhandle. No other roadways play a large role in providing the access to the Wakulla County Airport. The regional transportation system is shown in **Figure 1-1 (Page 10)**.

Airport Role

The Wakulla County Airport provides general aviation services to Wakulla County. Due to its lack of amenities, including a fuel farm or a paved runway, the majority of general aviation activity in the area is directed to nearby airports including Tallahassee Regional Airport and Carrabelle-Thompson Airport. The airport currently has no fixed base operators and primarily serves local residents and residents of the Tarpine Fly-In Community who can access the airfield via a street/taxiway system within the community as well as through-the-fence via individual residences.

According to the Florida Aviation System Plan (FASP):

“In its current role, the airport focuses on serving general aviation aircraft. It presently supports flight training, sport/recreational flying, and visiting aircraft. Some business flights use the airport, but are a small percentage of the overall operations. The airport could attract more recreational flights if fuel facilities were provided. The airport’s future role is limited by lack of local funding, manmade factors, and environmental factors. The airport does not report any community factors that will limit its future system role of growth. The airport sees itself experiencing some growth in the future. The airport’s vision for its future is to provide an airport for based flight schools and increase the number of recreational operations.”

Flight training is a component of this airport’s general aviation activity. Roughly ten percent of the airport’s annual operations are related to flight training. The flight training activity comes from itinerant aircraft and by operations by pilots who are based out of the Tarpine subdivision who



Military Aircraft Using the Airport

conduct practice landings and takeoffs. While there are no businesses on the airport, corporate and business users flying small single and occasional twin-engine aircraft are responsible for about ten percent of the annual operations. There are no corporate-based aircraft on the airfield at this time. The airport also attracts transient or visiting aircraft, with approximately twenty percent of the airport's usage originating from transient users. A large majority of activity at the airport comes from residents of the Tarpine Community who have aircraft based out of their private residences. The airport does not have any based military aircraft but has had military operations occur at the airport within the last year.

Surrounding Airports

There are two public use airports located within a 30 nautical mile (NM) radius of Wakulla County Airport. They are Tallahassee Regional Airport and Carrabelle-Thompson Airport. The locations of these airports as well as other airports in the area are shown in **Figure 1-2 (Page 11)**. A heliport at the Tallahassee Memorial Hospital and a private landing strip on Dog Head Island are also within 30 NM, but will not be included in the analysis of this document because they are not public-use facilities. Details of the airports within 30 NM of the Wakulla County Airport are shown in **Table 1-1**.

Table 1-1
Public Use Airports within 30 NM

| Airport | Distance and Direction From Wakulla Airport | Longest Runway (Orientation) |
|------------------------------------|---|------------------------------|
| Tallahassee Regional Airport (TLH) | 25 NM - north | 8,000' x 150' (09/27) |
| Carrabelle-Thompson Airport (X13) | 15 NM - southwest | 4,039' x 75' (05/23) |

Sources: Florida Aviation Database (FAD), Runway Information

Surrounding Area

Regional features surrounding the airport include forested wetlands, wetlands, springs and sinkholes, State and National Forests, National Wildlife Refuges, and aquatic preserves. Wildlife of many species rely on these areas for habitat and cover. The area also includes numerous historical and archaeological sites including San Marcos de Apalache and the Wakulla Springs Hotel. Neither of the noted historical/archaeological resources would be negatively affected by growth at the airport.

Wakulla County and many of the surrounding counties are very lightly populated, though the population in Wakulla County has increased significantly in recent years. The only true population center in the

region is Tallahassee, located to the north in Leon County and the growth occurring in Wakulla has generally been driven by the growth occurring in Tallahassee and in the coastal portion of the county.

Population

Within Wakulla County the only incorporated municipalities are the communities of Sopchoppy, which is several miles to the northwest of the airport and St. Marks which is well to the northeast of Wakulla County Airport. The County's forecasted population growth is shown in **Table 1-2**. This table shows that Wakulla is expected to grow throughout the planning horizon.

Table 1-2
Existing and Projected Population

| Existing and Projected Population | | | | | | | |
|-----------------------------------|--------|--------|--------|--------|--------|--------|--------|
| Year | 2012 | 2015 | 2020 | 2025 | 2030 | 2035 | 2040 |
| Population | 30,771 | 32,100 | 34,800 | 37,400 | 39,800 | 41,900 | 43,800 |
| % Change (from 2012) | | 4% | 13% | 22% | 29% | 36% | 42% |

Source: Bureau of Economic Research (BEBR), 2012

Employment

Table 1-3 shows employment statistics for Wakulla County. According to the 2010 Census and the Bureau of Economic Research, the county has an unemployment rate that was slightly lower than the state and national average, which given the national economic conditions at the time was somewhat impressive. However, while unemployment was below state and national averages at the time, Income in the county was well below the national average as well as well below the average for the State of Florida.

Table 1-3
Employment Statistics

| 2010 | | | | | | | | |
|----------------|------------|--------------|-------|----------|--------|----------|----------|----------|
| Wakulla County | | | | National | State | County | National | State |
| Labor Force | Employment | Unemployment | | | | Income | | |
| | | Number | Rate | Rate | Rate | | | |
| 16,867 | 15,483 | 1,384 | 8.20% | 9.60% | 11.50% | \$32,686 | \$50,695 | \$44,490 |

Source: Bureau of Economic Research (BEBR), 2012

County Services

The Wakulla County government consists of a five member commission, elected for four-year terms. The airport is run by the airport manager with assistance from county administration. Law enforcement is provided by the Wakulla County Sheriff's Department and Fire and Rescue is provided by local

volunteer fire departments around the County. Wakulla County does not have a Fire and Rescue Department with a Fire Chief who oversees EMS, volunteer fire, and animal control.

Tarpine Community

The Tarpine Community is located to the east of the existing airport property. The community consists of approximately 33 residential units as well as numerous vacant lots. The community was developed due to its close location to the airport. Several units have direct access from their lots onto the airport while others taxi via internal subdivision streets to a paved access way (Stenson Taxiway) that extends from Monocoupe Circle to the existing airport runway. Most residents within Tarpine have a personal aircraft that they either park or hangar store on their property. This community is the primary user of the airport. The residents who use the airport are considered residential through-the-fence (RTTF) operators and do not count as based aircraft at the airport; because of this, the airport is severely underrepresented in terms of based aircraft according to FDOT forecasting methods. The Tarpine community presents the airport with a unique problem, while it provides the airport with a majority of its users, these users are not counted in the forecasts for the airport. Many of the recommendations and suggestions presented in this Master Plan were developed including the aircraft in Tarpine as based aircraft.

Figure 1-1
Regional Transportation System

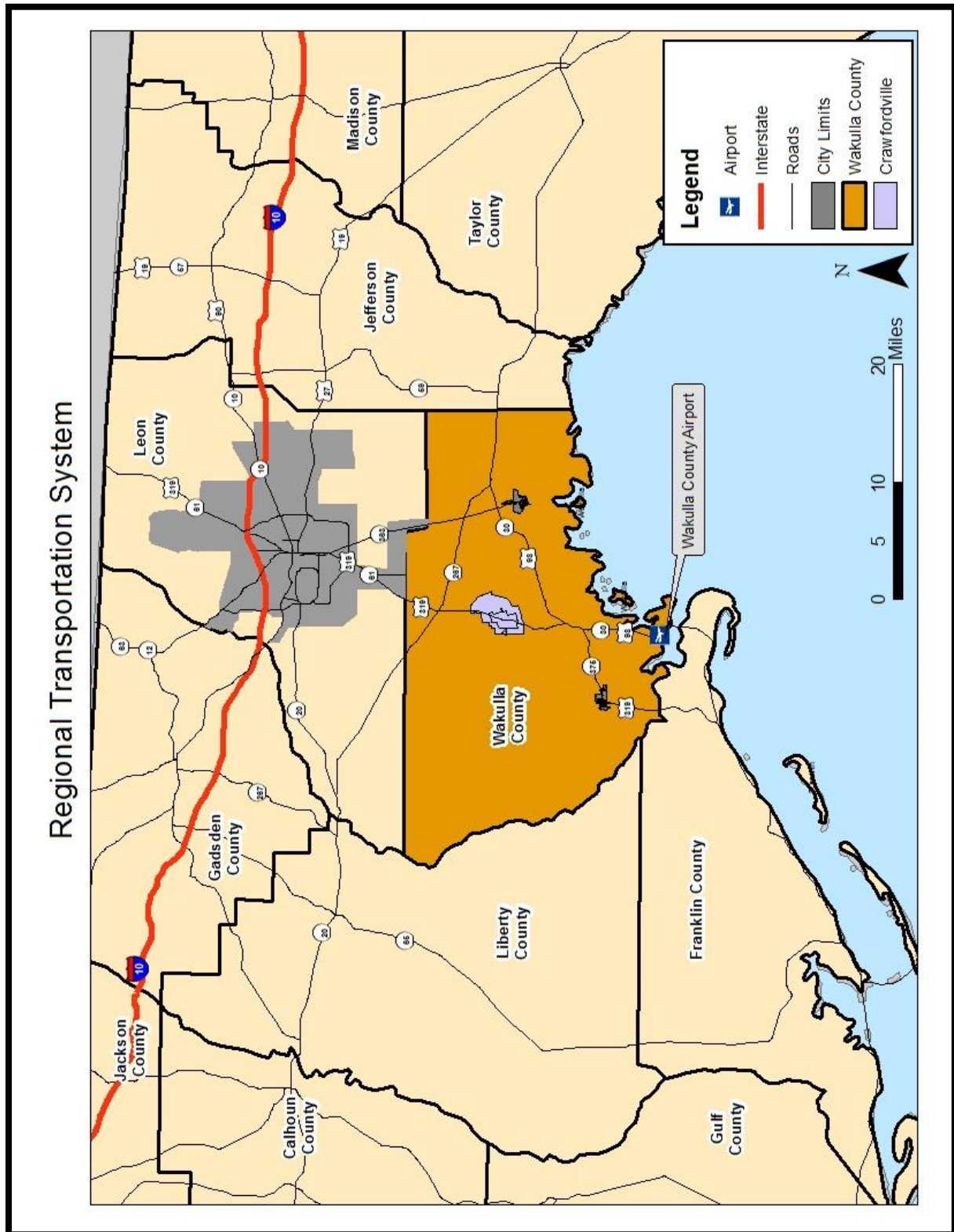
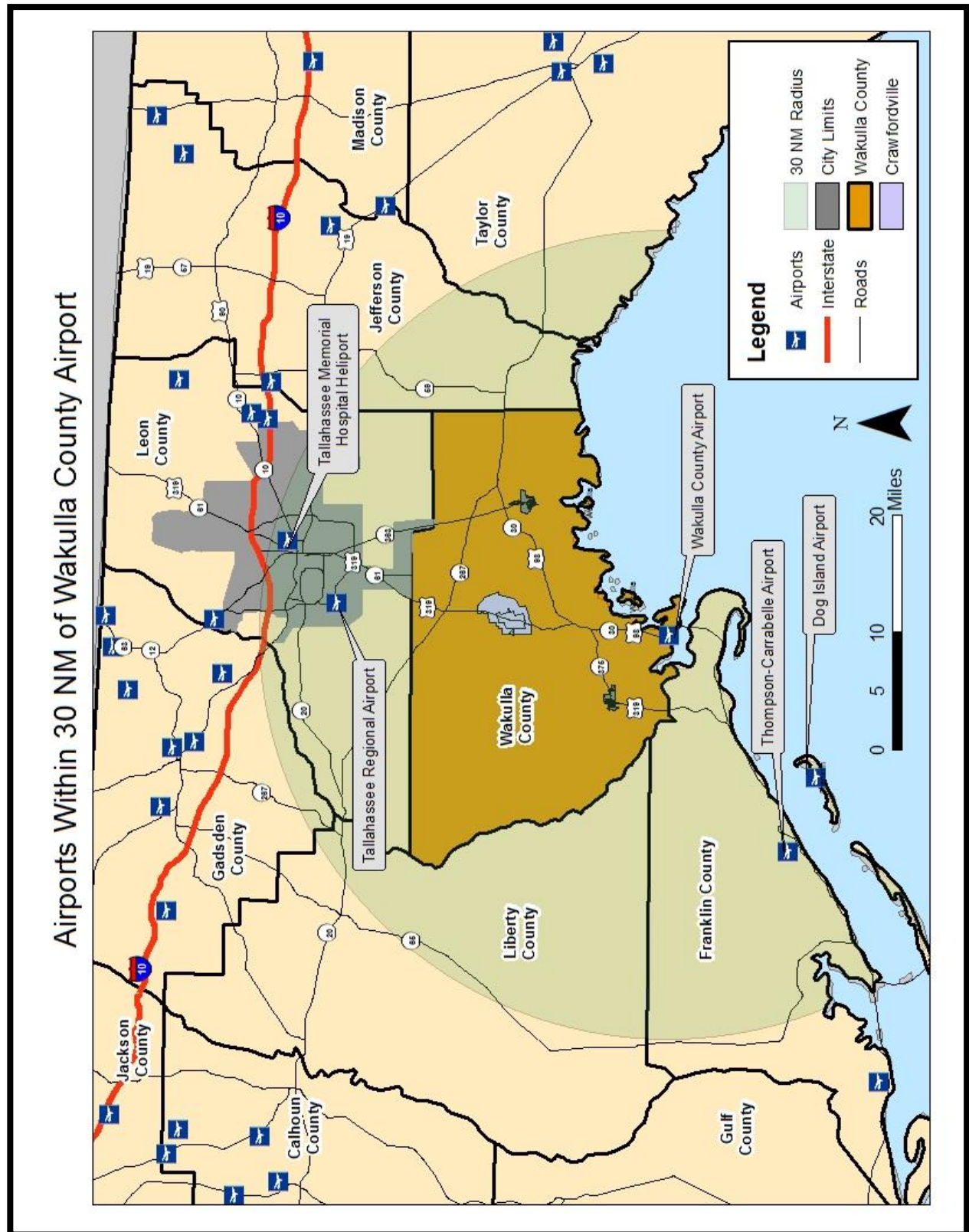


Figure 1-2
Airports Within 30 NM of Wakulla



Existing Facilities and Plans

Introduction

This section of the Wakulla County Airport Master Plan provides general information related to the Wakulla County Airport and Wakulla County. This information will serve as the basis for subsequent analyses in the Airport Master Plan and will provide a foundation for the proposed facility enhancements.

Overview

The existing airport reference point (ARP) is located at latitude 29°59'21.37" and longitude 84°23'44.72". The ARP has an elevation of 11.5 feet. The airport is located on 13.17 acres of land. Currently, the airport consists of a turf runway. A technical rendering of the airport, provided by FDOT is shown in **Figure 1-3 (Page 14)**. The location of the airport and the surrounding properties are shown in **Figure 1-4 (Page 15)**.

Airfield Facilities

Runway 18/36

The Wakulla County Airport is located on 13.17 acres of land and consists of one runway oriented in the north/south direction. The runway identifier is 18/36 (approximately 180 degrees/360 degrees). The existing runway is turf and is approximately 2,572 feet in length and 70 feet in width, which is 10 feet wider than what the FAA specifies for a runway serving small aircraft only (aircraft under 12,500 pounds). A section of the runway located near the north runway end has historically presented challenges



Runway 18/36 Facing North

due to a tendency of the area to be wet and often causes the surface to rut. This section of runway is bordered by wetlands on both sides and appears to have bisected a wetland area. The controlling obstruction to the north of the runway is US 98, while controlling obstructions to the south include private residences, trees, and CR 372 (Surf Road). These obstructions limit the effective length of the runway

due to the requirement to displace the landing threshold to avoid obstructions. The landing length of Runway 18 is 2,372 and the landing length of Runway 36 is 2,193. Currently, the only markings on the runway are painted white tires that mark the runway edge, runway end, and displaced threshold. Additional information and characteristics of Runway 18/36 are shown in Table 1-4.

**Table 1-4
Runway Characteristics**

| Characteristics of Runway 18/36 | |
|---------------------------------|---|
| Length (feet) | 2,572 |
| Width (feet) | 70 |
| Reference Code | A-1 |
| Effective Gradient | > 0.5% |
| Displacement (Runway 18) | 652' |
| Displacement (Runway 36) | 727' |
| Critical Aircraft | Beechcraft Baron 55 |
| Surface | Turf |
| Surface Strength | N/A |
| Approach Surface (Runway 18) | 20:1 |
| Approach Surface (Runway 36) | 20:1 |
| Lighting | Runway end, edge, & displaced threshold |
| Markings | N/A |
| NAVAIDS | N/A |
| Visual Approach Aids | None |

Source: Planning Technologies Incorporated, 2013

Figure 1-3
Technical Rendering of Existing Wakulla County Airport

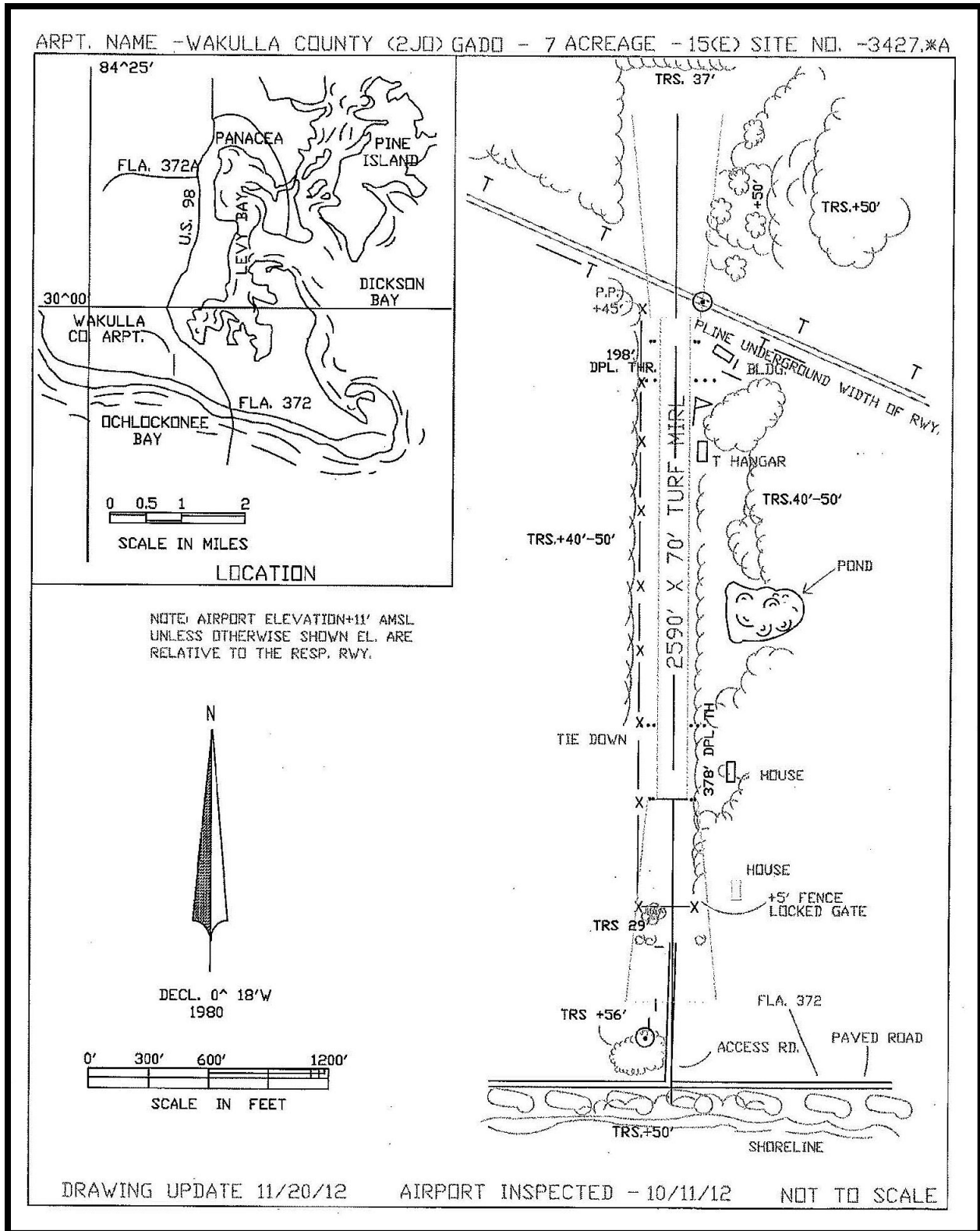
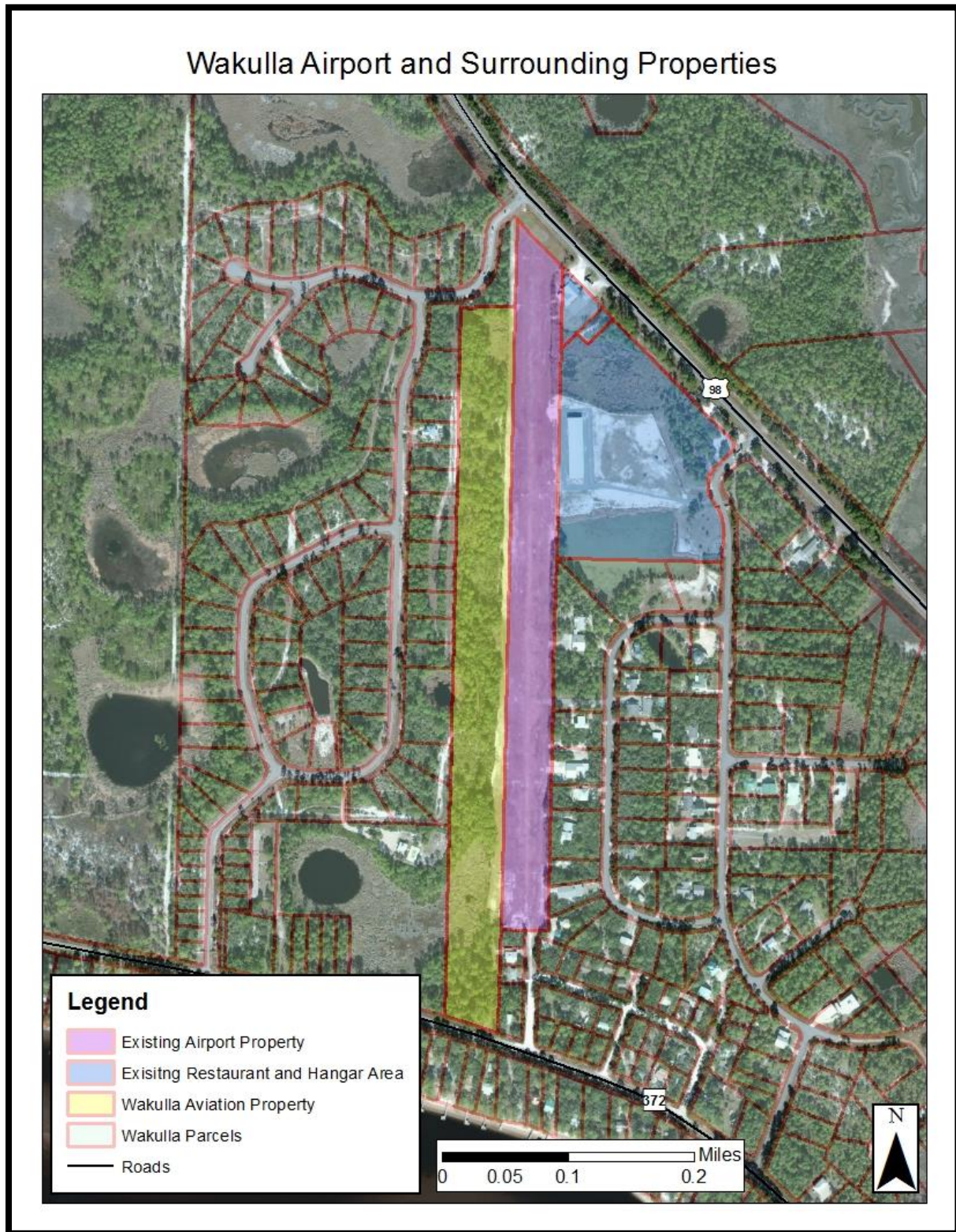


Figure 1-4
Wakulla Airport and Surrounding Properties



Helipad

There is an undesignated helicopter landing area located at the north end of runway 18/36. It is not paved and has traditionally only been used as a landing for emergency aircraft. It is accessed by a wooden footbridge that connects to the parking lot of an existing restaurant site located east of the north runway end. The Master Plan will review options for providing an optional designated location for the accommodation of emergency helicopter operations.



Helicopter Landing and Foot Bridge

Taxiways

There are no existing taxiways at Wakulla County Airport. There is a taxiway that leads from the Tarpine Community to the runway that is referred to as the “Stenson Taxiway,” though it is not a true taxiway and is not associated with the publically owned airport facility. During the preparation of this master plan, the Stenson Taxiway was painted with hold lines.



Stenson Taxiway with Hold Lines

Currently, aircraft taxi along the edge of the runway via an undesignated and non-standard turf taxi route. Due to the low numbers of operations that occur at the airport, this undefined taxiway does not cause serious conflict between taxiing aircraft and aircraft using the runway. Providing for some means of aircraft taxi movements that meet a minimum safe lateral separation from the runway alignment will be considered as a part of this planning effort. In doing so, the safety of ground taxi movements will be enhanced and the potential, albeit remote chance for interaction between a taxiing aircraft and a landing or takeoff, will be mitigated. The ultimate nature of the taxiway (paved) will likely be dependent upon airport funding and financial considerations.



Runway Edge Lighting

Aprons Area and Tie Downs

The airport has five tie-down locations located on an undefined turf apron area. Currently, these locations are in proximity to the operational area of the airport, which causes safety concerns. Additionally, because these areas are not secured, security has been an issue in the past, and caused some residents to not leave their aircraft at the airport. If future development requires it, apron areas should be constructed as needed and with recommended security enhancements.

Airfield Lighting

There is currently low-level runway edge lighting on each side of the runway at 200-foot intervals that identifies the runway edge. The runway ends have runway end lights and both displaced landing thresholds have displaced threshold lighting, although they are in very poor condition and in the case of the threshold lighting the spacing between lights is non-standard. During the preparation of this Master Plan Update, the airport manager was in the process of replacing the plastic domes on the light fixtures; therefore it is expected that these will be up to date.

NAVAIDS and Approach Lighting

Wakulla County Airport is a basic visual flight rules (VFR) approach landing facility. No instrument approaches have been established for either runway end and none are planned. Additionally, the runway is not served by a visual approach descent indicator lighting such as a precision approach path indicator (PAPI) or visual approach slope indicator (VASI). The approach to Runway 18 crosses over the alignment of US 98, which is a two-lane road, located 120 feet north of the runway end. FAA standards require a minimum of 15 feet of vertical clearance over a non-interstate public roadway, which is provided through the 199' displacement of the runway landing threshold, and provides an approach slope meeting the required 20:1 slope for a visual approach.

The Runway 36 threshold is displaced 379 from the south end of the runway

and the approach is established based on clearing trees along and either side of the extended runway centerline. Based on the current location of the displaced threshold a 20:1 approach slope is provided to Runway 36 conforming to standard for a visual approach, The landing threshold for Runway 36 was



Displaced Threshold Lighting

originally displaced due to an 18-foot high hangar that was located immediately west of the south runway end. This structure has subsequently been removed.

Security Fencing

Along the south end of the existing runway is a strip of fencing that spans approximately 70 feet, separating the airport from the adjacent property, but no other fencing has been constructed at this time. Airport staff and residents have identified the need for a completed perimeter fence to minimize unauthorized access to the airport except through dedicated airport access points.

There are areas of thick vegetation adjacent to the airport, which also serves as a natural, albeit limited, buffer for the airport. When fencing is installed, the airport will need to identify areas for vegetation removal and the installation of clear zones around the fence. During the completion of this Master Plan Update, a vegetative buffer was designed to be planted along the southern boundary of the airport. The proposed security fence should be integrated with this buffer to minimize the negative visual effects of the on the property owners along Surf Road.



Open Access at South End of Runway



Vehicle Access Gate at South End of Runway

Airfield Directional Guidance

There are currently two wind cones located at the airport. One is located on the southwest end of the runway and the other is located on the eastern side of the runway near the existing private hangar facility. Both appear to be in



Wind Cone

operational condition, however, the wind cone located next to the hangar facility is located within the runway's primary surface; therefore, it will need to be relocated. No other directional indicators are located on the airport at this time.

Landside Facilities

Introduction

Landside facilities include hangars, terminal buildings, automobile parking lots, and related support facilities. At this time, there are no landside facilities of any kind provided by the airport. There is a private hangar facility located on private property with access to the airfield on the northeast side of the runway approximately 500 feet south of the Runway 18 landing threshold.

Fixed Base Operators (FBO)

A Fixed Base Operator provides a range of facilities and services to the aircraft owners and operators at an airport. These services may include aircraft, airframe, and avionics service and repair, aircraft storage, and fuel as well as areas for flight planning, weather checks and often serve as a small terminal for general aviation pilots and customers. There are no FBOs located at the airport and given the limited number of based aircraft the development of a full service FBO would be financially challenging.

Fuel

There are currently no fueling facilities located at the airport.

Terminal

There is no terminal facility located at the airport.

Hangars

There is currently one private hangar facility located immediately to the east of the airport. It provides ten T-hangar storage spaces for renters. From a site visit at the airport on January 29, 2013, at least five of the T-hangars are open and are either empty or being used to store non-aviation related items.



Hangar Facility



Empty T-Hangar Storage

Airport Access

The airport has both vehicle and pedestrian access points. The vehicle access points at the airport are located at the existing restaurant site, the existing private hangar area, the Stenson Taxiway, and the southern end of the runway via Bay Drive. The access point at the restaurant site is not a true vehicle access point, though it is used for emergency medical evacuations. The vehicle access point at the private hangar (not located on airport property) uses an electronic keypad to operate the gate. The access point at Stenson Taxiway has a drop bar to prevent unauthorized aircraft from using the airport. The remaining vehicle gate along the southern perimeter fence is secured using chain and manual lock. There are also additional vehicle and pedestrian access points to the airport that are unsecured (i.e., lack of fence and gate). These areas generally provide unrestricted access to the airport. Airport staff has installed a no trespassing sign along the northern vehicle access point identifying the airport property. The airport also installed a sign on the backside of mechanical/electrical box located adjacent to the pedestrian access at the restaurant; however, this sign is not visible until the person is on the airport property. In addition, there are approximately four additional aircraft access points (driveways) from adjacent residences to the airport.



Unrestricted Access from Tarpine Community



Vehicle Access at Northern End of the Runway

Vehicle Parking

There is no formal parking area at the airport. Because the airport does not offer its own aircraft storage area, people who use the airport either store their aircraft at their own residence as is the case in the Tarpine Community or use the private hangars. The private hangar site does have a designated parking area.

Meteorological Conditions

Seasonal Temperatures

The climate of Wakulla County is conducive to aviation activities. The temperatures remain relatively warm throughout the year. The average high temperature in the summer and winter months is 92 and 63 degrees, respectively. The average low temperature in the summer and winter months is 72 and 38 degrees, respectively (Enterprise Florida Profile).

Runway Orientation/Wind Coverage and Prevailing Wind Patterns

A central factor influencing runway orientation and the number of necessary runways at an airport is wind. Ideally, runways should be aligned with the prevailing wind. Wind conditions affect all airplanes to varying degrees. Generally, the smaller the airplane, the more it is affected by wind – particularly crosswinds. Runway wind coverage is the percent of time that crosswind components are below an acceptable velocity. The FAA identifies the desirable wind coverage (ability to land or depart without a crosswind exceeding a specific velocity threshold based on aircraft type) for an airport as 95 percent. In the case of Wakulla County Airport the runway system should provide the ability to land or takeoff 95% of the time with crosswinds not exceeding 10.5 knots. If the wind coverage for a particular runway is less than 95 percent, a crosswind runway is recommended.

The most desirable runway orientation provides the greatest runway wind coverage with the least crosswind components, as defined by the airport reference code (ARC) for the airport.

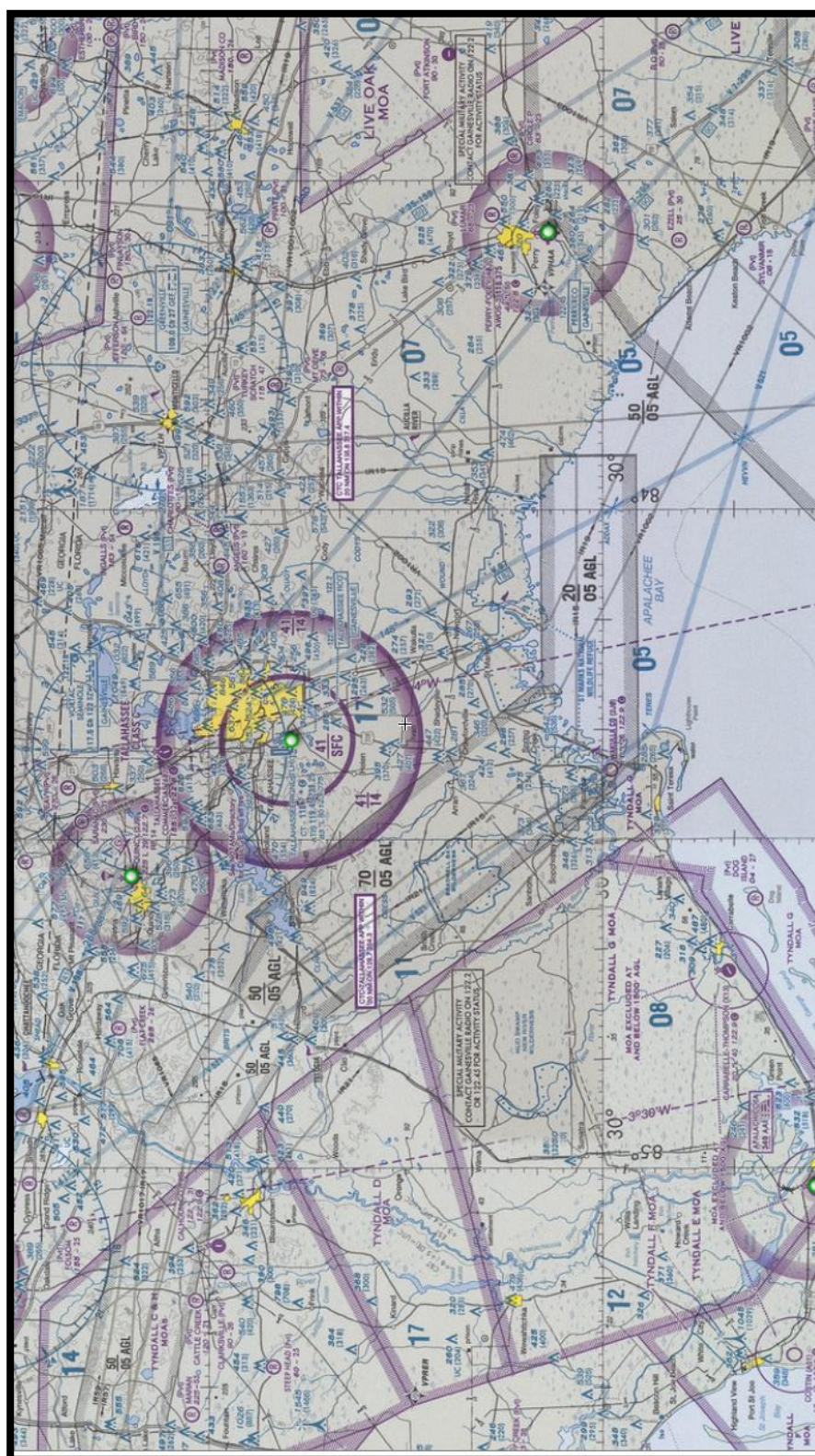
An all-weather wind rose analysis was completed for the Wakulla County Airport. It was found that the wind coverage for the airport was 95.80 percent exceeding the FAA threshold criteria of 95% wind coverage at the specified 10.5 knot wind velocity required for the safe operations of small aircraft. Therefore, wind coverage is not an issue that needs to be mitigated at this time. An all-weather wind rose for the airport is included in the ALP.

Airspace Structure and Approach Capabilities

The Wakulla County Airport is a visual flight rules (VFR) only airport. Visual flight rules are regulations under which the weather must be clear enough to allow the pilot to see where the aircraft is going. For pilot's that wish to use the airport, communication with other pilots should be done using the common traffic advisory frequency (CTAF) and by contacting the airport manager. The Wakulla County Airport is in the Jacksonville Sectional Aeronautical Chart. These charts are used as a navigation reference for VFR pilots. The topographic information featured consists of the relief and a judicious selection of visual checkpoints used for flight under visual flight rules. The checkpoints include populated places, drainage

patterns, roads, railroads, and other distinctive landmarks. The aeronautical information on Sectional Charts includes visual and radio aids to navigation, airports, controlled airspace, restricted areas, mapped towers and obstructions, and related data. The aeronautical chart for the area surrounding the Wakulla County Airport is provided below in **Figure 1-5**.

Aeronautical Chart



Local Development Plans

Land Use and Zoning

The existing airport property, private hangar facility, and the restaurant site all currently have a future land use designation of Urban-2. According to the Wakulla County Comprehensive Plan Urban-2 land includes, “public land uses including schools may be permitted within this land use designation subject to staff review, public hearing, and approval process if compatible and consistent with the land use designation and establishment as a Conditional Use in the Wakulla County Land Development Code, Section 3-21.”

The site to the west of the airport that is realistically the only area that could be viably considered to provide for future development has a future land use of Urban-1. Urban-1 follows the same criteria listed above for Urban-2 and is designated to be converted to Urban-2 through the plan amendment process when full urban services are in place. The Airport Development section addresses, in detail, options that are considered for potential aviation related activities and would be identified for a change in future land use.

Wakulla County does not have a specific land use designation or zoning district for airport land, however, their land development code does provide some specific regulations related to development with regards to airport zones and airspace height limitations; airport land use restrictions; the lighting of structures over 200 feet; and airport noise zones. These are provided in the Wakulla County Code of Ordinances, Sections 4.031, 4.032, 4.033, 4.034, and 4.035. It is suggested that the County develop specific land uses and zoning designations for the airport and land surrounding the airport to ensure land use compatibility with future development.

Bicycle and Pedestrian Facility Plans

Wakulla County is currently in the process of design and construction of the Ochlockonee Bay Bicycle Trail. Portions of this trail run along CR 372 (Surf Road), which is located along the southern side of the airport and runs adjacent to parcels that are being likely to be considered for acquisition to address airport surfaces and approach requirements in this Master Plan. Additionally, portions of the proposed Capital City to Sea Loop Trail are located adjacent to airport property along US 98.

These facility plans are not expected to have any limiting effect on the airport or its operations. Together, these facilities and the airport contribute to the multimodal transportation system in the county and support improved mobility.

Forecasts

Introduction

The development of quantitative projections of aviation activity at Wakulla County Airport is based upon existing facility and community indices, such as population and employment. Aviation forecasts attempt to predict the nature and amount of annual aviation activity occurring over a 20-year planning horizon.

Aviation forecasts need to be completed at general aviation airports in to provide a basis for assessing existing facilities relative to their ability to meet potential demand and to define excess or deficient facility capacity. In general, there are two main sources for general aviation forecasts for airports in Florida; the Federal Aviation Administration (FAA) and the Florida Department of Transportation (FDOT). The FAA conducts forecasts using the Terminal Area Forecast (TAF) and aerospace growth rates while FDOT uses the Florida Aviation System Plan (FASP). The airport is currently not included in FAA TAF forecast. Additionally, due to the small number of operations that occur at the airport, forecasts should not be based on the FAA's aerospace growth rates, which are typically associated with general aviation facilities providing a greater array of capabilities and services.

This would generally result in defaulting to the projections contained in the FASP, however, based on field interviews it was noted that the operation numbers presented to FDOT for the FASP were inaccurate. Therefore, an alternative forecast measure will need to be utilized for the airport. For the purposes of this Master Plan Update and based on input received, estimates of current airport activity will be used and growth of operations will be projected at two percent per year (one percent growth will also be shown as a reference). For purposes of clarity, an operation consists of a single landing or a single takeoff, thus if an aircraft is conducting a flight training exercise known as a touch and go or a landing with an immediate takeoff without coming to a stop, this counts as two operations.

Forecast Elements

Forecasting future conditions is an important step in the Master Plan process. It documents the historical figures for the airport and projects future conditions for based aircraft, enplaned passengers, aircraft operations, peak period, and vehicles. Due to the small size and lack of amenities at the airport, not all of these forecasts are applicable. In this section, only the number of based aircraft and number of aircraft operations will be reviewed and forecasted-

Factors Affecting Demand Forecasts

Aviation activity has historically been found to be strongly linked to socio-economic factors in the larger community outside of the airport. The following factors have been found to often be of particular significance and have been considered in forecasting at the airport:

- Economic growth and change in industrial activity
- Demographic patterns
- Disposable personal income
- Geographic attributes
- Local aviation actions

Due to the rural nature of the airport and the lack of amenities that are available, demand forecasts will probably not increase without significant infrastructure development. If the airport remains in its current condition activity levels at the facility could be expected to remain relatively flat with any increase that might occur stemming from new residents in the Tarpine community or perhaps slight activity growth stemming from new visitors to this portion of the Florida coast for leisure or eco-tourism. However, if the determination is made to improve facilities, enhance the conformity with design standards, improve the runway surface conditions, and address issues identified in inspection reports, activity could increase at Wakulla County Airport.

Historical Figures

Aircraft Operations

Recording the number of aircraft operations at an airport is often an inexact science at a non-towered airport or one that does not have an FBO or full time employee at the airport who could conduct periodic operational sample counts. As a result there is no existing count of the exact number of operations on an annual basis. It was indicated by the airport manager that the same number of operations (5,475) has been reported to the FAD for every year since 1988. In an attempt to develop a basis for an existing operations level estimate, the airport manager took estimated counts from the residents of Tarpine for the months of May and June 2013. Tarpine residents were asked to record their operations at the airport, as well as record when they noticed an aircraft not based out of Tarpine operating into or out of Wakulla County Airport. The airport manager reported that there were 320 operations in May (**Table 1-5a**) and 280 operations in June (**Table 1-5b**). These figures extrapolated out for the entire year would be 3,600 operations (this uses an average of 300 operations a month for 12 months). This number is 1,875 less than the amount reported to FDOT. The figure reported above does not include the low approaches that were

observed from the airport. If these are included, the number of operation increases to 362 in May and 319 in June, representing approximately 4,086 operations for the year, again less than what had been report to the FAD. This level provided a baseline for the development of projections.

**Table 1-5a
May Operations**

| May | | |
|---------|----------|----------|
| User | Takeoffs | Landings |
| Tarpine | 114 | 114 |
| Others | 46 | 46 |

**Table 1-5b
June Operations**

| June | | |
|---------|----------|----------|
| User | Takeoffs | Landings |
| Tarpine | 101 | 101 |
| Others | 39 | 39 |

Based Aircraft

The figures for the number of based aircraft that have been reported by the FASP have fluctuated considerably over the years. The number of aircraft based at Wakulla County Airport was relatively constant between 1988 to 2002, with between eight and ten reported based aircraft at the airport. Between 2003 and 2006, the reported number of based aircraft increased to 31 and 32 before falling to ten in 2007. Between 2008 and 2011, the airport fluctuated between two and three based aircraft. The large fluctuation in the number of based aircraft was noted to be a result of a change in reporting methods by the airport manager. During the three year spike in based aircraft (2004 to 2006), the airport manager at the time counted aircraft that were based out of the Tarpine community as aircraft based at the airport. This led to a sharp increase that did not truly reflect observed numbers of aircraft actually based on the actual airport site. This is important as the number of based aircraft at an airport is a key driver in determining the extent of area needed for aircraft parking ramp.

Currently, they airport has no based aircraft; all local aircraft are based out of the Tarpine Community or are based in the private hangar adjacent to the airport but not physically at the airport. The FAD and FASP projected virtually no growth in the number of based aircraft through the 20-year planning horizon. It should be noted that these projections were based on the assumption that there would be no change in the availability of airport facilities. As noted in the inventory section, the airport has five tie-downs located almost immediately adjacent to the edge of the runway alignment and does not physically delineate the aircraft parking area. Further, the airfield itself is not fenced and there is virtually unrestricted accessibility to any aircraft that would be parked on the airport. If these conditions were to persist, it is reasonable to assume that there would be, at best, limited potential to see a change in the number of aircraft physically based on the airport site. If facility improvements were to occur as a result of the recommendations from this Master Plan some limited growth in actual aircraft based at the airport

should be assumed and planned for. Given the more accurate historical count of two to three based aircraft from the 2002 to 2003 timeframe and coupled with the growing population of Wakulla County, the lower per capita income level, and the cost of aircraft ownership and operation, two based aircraft in the five-year horizon have been projected increasing to six in the ten-year horizon. This projected level of based aircraft assumes that there will be improvements in the airport that will mitigate several of the physical factors that limit aircraft basing as noted above. Even if this limited number of based aircraft does not occur, an area of the airport would still need to be reserved to accommodate the parking of transient aircraft that do occasionally use the airport and the County should consider this in their planning effort. This fact is supported by interviews with the airport manager and residents who are currently basing their aircraft at other airports in the region who indicated that they are interested in basing their aircraft at Wakulla County if facilities were available.

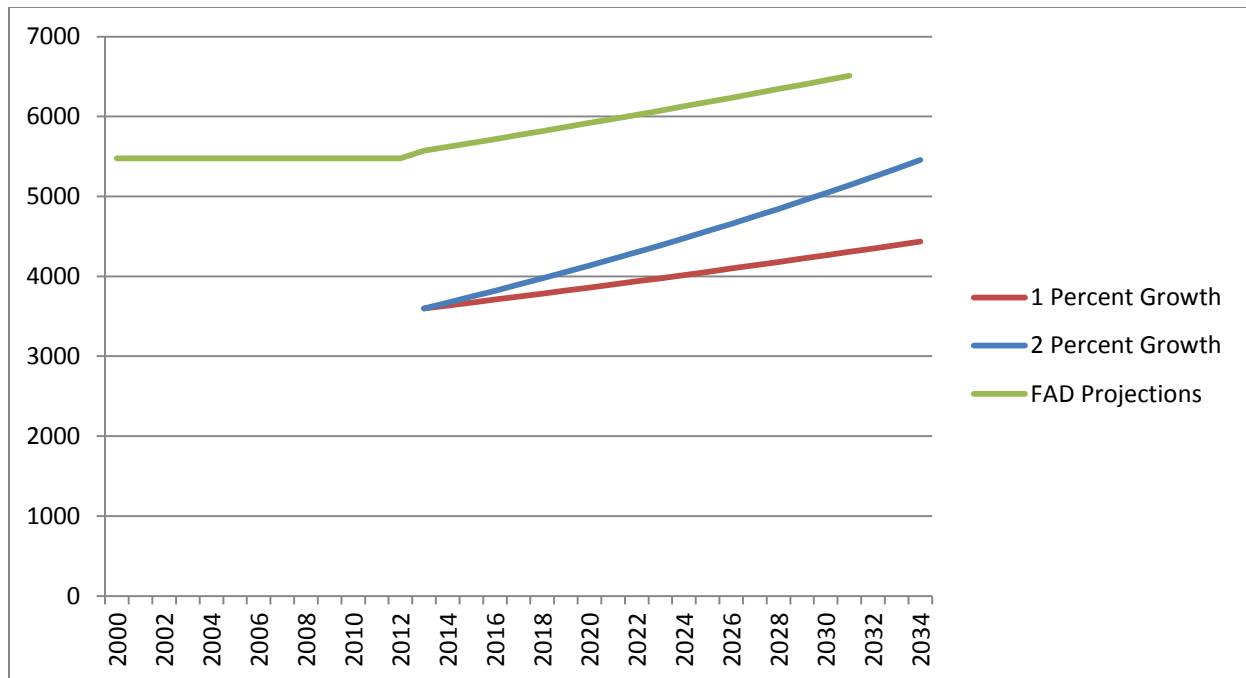
Forecasts

Aircraft Operations

As noted, due to the unreliability of the historically reported aircraft operations, the forecast numbers that the FAD and FASP provide were deemed to be unreliable. As noted, the airport manager utilized the only realistic source of data available, which consisted of aircraft owners operating out of the airport and living adjacent to the facility to derive indices of estimated current activity. The operations estimate derived from this process has been used as the baseline number and has been projected out at a moderate two percent growth rate (two percent) and a more conservative rate of one percent, annually. **Figure 1-6** shows the forecasted growth rates using one and two percent growth as well the FADs projected growth. FAD projections are only available through 2031.

From a comparative basis the two percent growth rate results in aircraft operations growing from their current level to a 2033 level of activity equal to that the airport had reported for the period 1988-2002 by the airport.

**Figure 1-6
Forecasted Growth Rates**



With two percent growth per year at the airport, there would be approximately 5,349 operations at the airport in 2033. It is assumed that if the airport were to pave the runway, provide fuel facilities, and provide hangars, the number of operations could increase at an accelerated rate. The number of operations could also increase if the current airport standards and security deficiencies are addressed and should certain basic facilities or services such as a defined/improved aircraft parking area be provided or an aircraft maintenance provider locates at the airport. For the purposes of this Master Plan Update, the two percent growth rate will be used. Regardless, the County should monitor activity to the extent possible to obtain a better idea of operations at the facility and to scale improvement to the demand that occurs.

Forecast Summary

The forecasted numbers of operations are provided in **Table 1-6**. The operations projections takes into account the level of activity that is generated by aircraft owners based out of the Tarpine community and the private off-airport private hangar both of which lie adjacent to the airport and have direct access to the airfield. Operations from these two user groups include both local training activity and itinerant operations. Some growth can be expected, as the Tarpine community is not fully built and has a number of available lots for development, and is specifically designed for aircraft owners who wish to live in a fly-in community. While these users do not show up as being specifically based at Wakulla County Airport, these aircraft operators would generally not be residing in Tarpine if it were not for the airport.

The forecasts that have been developed indicate that the airport will not experience extensive growth that might drive the need for a major runway extension or massive growth in airport facilities. The primary driver for facility enhancement at Wakulla County Airport will be addressing design standard deficiencies and actions to improve the operational safety for current users that by their nature will potentially generate some moderate growth in activity over the planning period. Forecasts by their nature are speculative and the reader should keep in mind that these projections are influenced by external factors. For example, a healthy expansion in tourism that could include eco-tourism, sport fishing or other similar activities could trigger enhanced use of the Wakulla County Airport.

**Table 1-6
Forecasted Number of Operations**

| Number of Operations | | | |
|----------------------|--------------------|--------------------|-----------------|
| Year | One Percent Growth | Two Percent Growth | FAD Projections |
| 2012 | N/A | N/A | 5,475 |
| 2013 | 3,600* | 3,600* | 5,571 |
| 2014 | 3,636 | 3,672 | 5,619 |
| 2015 | 3,672 | 3,745 | 5,668 |
| 2016 | 3,709 | 3,820 | 5,717 |
| 2017 | 3,746 | 3,897 | 5,767 |
| 2018 | 3,784 | 3,975 | 5,817 |
| 2019 | 3,821 | 4,054 | 5,868 |
| 2020 | 3,860 | 4,135 | 5,919 |
| 2021 | 3,898 | 4,218 | 5,970 |
| 2022 | 3,937 | 4,302 | 6,022 |
| 2023 | 3,977 | 4,388 | 6,075 |
| 2024 | 4,016 | 4,476 | 6,128 |
| 2025 | 4,057 | 4,566 | 6,181 |
| 2026 | 4,097 | 4,657 | 6,235 |
| 2027 | 4,138 | 4,750 | 6,289 |
| 2028 | 4,179 | 4,845 | 6,344 |
| 2029 | 4,221 | 4,942 | 6,399 |
| 2030 | 4,263 | 5,041 | 6,454 |
| 2031 | 4,306 | 5,142 | 6,511 |
| 2032 | 4,349 | 5,245 | n/a |
| 2033 | 4,393 | 5,349 | n/a |
| 2034 | 4,437 | 5,456 | n/a |

* Based on airport manager estimates

Landside and Airside Analysis

Introduction

Landside and airside facility requirements for the Wakulla County Airport are presented in this section. The airport reference code, runways, airspace requirements, terminal area requirements, ground access, circulation, parking, general aviation, air cargo, fuel storage, security, property acquisition, maintenance, rehabilitation, support facilities, utilities, and aircraft rescue and firefighting facilities are all generally discussed in the facility requirements section. In general, facility requirements have been generated for two functional areas, airside facilities and landside facilities, both will be discussed in this section. The Wakulla County Airport is considered an Approach Category A, Design Group 1 (A-1) airport. A-1 airports support aviation activity from small aircraft that have low approach speeds. This designation will be discussed more throughout this section.

Design Standards

Airport Reference Code (ARC)

The airport reference code (ARC) is used to relate airport design criteria to the operational and physical characteristics of the aircraft anticipated to operate at the airport on a continuing basis. The ARC is made up of two components. The first considers the aircraft approach category, which is related to approach speed of aircraft using the airport. The second considers the airplane design group, which is related to the length of the aircraft wingspan. The Aircraft Approach Category and Airplane Design Groups are shown in **Table 1-7**.

The ARC is selected by considering the critical aircraft type, both the present and future role of the airport, and the forecasts of aviation activity as established during the forecast element. Selection of the ARC as a first step in the airport facility requirements element will ensure that proper airport design standards are selected during the remainder of the planning effort.

The Wakulla County Airport is designated as an A-1 airport. That means that it should be designed for aircraft with an approach speed of less than 91 knots and a wingspan of less than 49 feet. This Master Plan Update recommends that the airport remain an A-1 airport with a caveat that it be limited to aircraft of under 12,500 pounds, which ensures that the airport remains in conformity with the conditions of the deed. Master Plan recommendations will be consistent with this ARC.

Table 1-7
Aircraft Approach Category and Airplane Design Group

| Approach Category | Approach Speed |
|-------------------|--|
| Category A | Speed less than 91 knots |
| Category B | Speed 91 knots to less than 121 knots |
| Category C | Speed 121 knots to less than 141 knots |
| Category D | Speed 141 knots to less than 166 knots |
| Category E | Speed 166 knots or more |
| Design Group | Wing Span |
| Group I | Less than 49 feet |
| Group II | 49 feet to less than 79 feet |
| Group III | 79 feet to less than 118 feet |
| Group IV | 118 feet to less than 171 feet |
| Group V | 171 feet to less than 214 feet |
| Group VI | 214 feet to less than 262 feet |

Source: FAA AC 150/5300-13A

Critical Aircraft

The critical aircraft is the most demanding aircraft that is projected to use the airport in the planning period. The critical aircraft helps determine the ARC and is pivotal when planning and designing new airport facilities. The critical aircraft at the airport is the twin engine Beechcraft Baron 55. This aircraft has a wingspan of 37.8 feet and a maximum weight of all variants of 6,100 pounds. The aircraft is powered by two six cylinder air cooled piston engines, room for five passengers and one crew member, and a range of 942 nautical miles.

Runway 18/36

It is recommended that ARC A-1 standards be applied throughout the 20-year planning horizon. Currently, the airport and Runway 18/36 do not meet all runway design guidelines as described by the FAA in AC 150/5300-13A for the ARC A-I or in Rule 14-60, F.A.C. For reference, the design guidelines are shown in **Table 1-8**.

Runway Protection Zone (RPZ)

The function of runway protection zones (RPZ) is to enhance the protection of people and property on the ground. Where practical, airport owners should own the property under the runway approach and departure areas to at least the limits of the RPZ. It is desirable to clear the entire RPZ of all aboveground objects. Where this is impractical, airport owners, as a minimum, should maintain the RPZ clear of all

facilities supporting incompatible objectives and activities with a focus on preventing places of public assembly.

Runway 18/36 currently has numerous objects in the RPZ that are inconsistent with the RPZ land use guidance. There are numerous residential properties located to the south of the airport and along Surf Road that fall within the RPZ. On the north end of the runway US 98 falls within the RPZ. Because it is impractical for the County to purchase the properties to the south Surf Road, the airport sponsor will need to coordinate with FDOT and the FAA to remove obstructions when feasible and mitigate the risk of existing incompatible land uses in the RPZ as practical.

Runway Safety Area (RSA)

According to the FAA, a runway safety area is a defined surface surrounding the runway prepared or suitable for reducing the risk of damage to aircraft in the event of an undershoot, overshoot, or excursion from the runway.

Current standards for A-1 airports require that the width of the RSA be 120 feet and the length extend 240 feet beyond departure end and prior to the threshold. The RSA currently meets all specifications from FAA through the displacement of the runway thresholds and application of a concept referred to as declared distances.

Runway Object Free Area

The runway object free area (ROFA) is an area surrounding the runway that must be cleared of all objects except those that are related to navigational aids (NAVAIDS) and aircraft ground maneuvering. Similar to the RSA, the ROFA extends 240 feet beyond departure ends and prior to the thresholds, additionally; the ROFA has a width of 250 feet.

Currently, the runway does not meet these standards. There are a considerable number of objects encroaching in the ROFA. Trees, building, and utility poles are a few of the obstructions within the ROFA. Action should be taken to the extent feasible to remove objects that penetrate the required ROFA. These may include easements to remove trees or objects, land acquisition to accomplish the same or potentially airfield reconfiguration.

**Table 1-8
Design Guidelines**

| Design Guidelines | | Standard Distance (feet) |
|--|-----------------------------|--------------------------|
| Runway Safety Area (RSA) | | |
| | Length beyond departure end | 240 |
| | Length prior to threshold | 240 |
| | Width | 120 |
| Runway Object Free Area (ROFA) | | |
| | Length beyond runway end | 240 |
| | Length prior to threshold | 240 |
| | Width | 250 |
| Runway Obstacle Free Zone (ROFZ) | | |
| | Length | 200 |
| | Width | 120/250 |
| Approach Runway Protection Zone (RPZ) | | |
| | Length | 1000 |
| | Inner Width | 250 |
| | Outer Width | 450 |
| | Acres | 8.035 |
| Departure Runway Protection Zone (RPZ) | | |
| | Length | 1000 |
| | Inner Width | 250 |
| | Outer Width | 450 |
| | Acres | 8.035 |

Source: FAA AC 150/5300-13A, Table 3-8

Primary Surfaces

Trees are located 100 to 125 feet to the west of the runway and trees, buildings, windsock piles, lighting detection system, berms, and utility poles are located 75 to 125 feet to the east of the runway. These deficiencies are in direct conflict with Rule 14-60.007(2)(b)1.a, F.A.C. which states that the width of the primary surface must be 250 feet. In addition to the tree line to the east and west of the runway, the runway is also bordered to the north and south by US 98 and US 372, respectively. These roadways and obstacles constrain the runway length. In order to expand and enhance the runway, it will need to be moved or extended to the west in order to be compliant with airfield standards for licensed airports.

The airport and county need to remove these infractions immediately, and when new facilities are designed, special consideration needs to be given so that the primary surface remains the proper dimensions. The proposed runway and alignment in the ALP provides adequate space for the required primary surface area.

Approach Ratios

According to AC 150/5300-13A, for visual runways, a minimum 20:1 approach slope ratio to the threshold or displaced threshold should be maintained. If the approach ratio is less than 20:1 to the threshold, the runway shall be displaced the distance necessary to maintain a 20:1 ratio. If the displaced threshold location reduces the effective runway length below the minimum effective length requirements, the end of the runway shall be closed until the obstruction causing the displacement is removed. It was identified through an FDOT inspection on June 27, 2013 that the approach ratio of both runway 18 and 36 are in compliance with these minimum standards for visual approach ratios. In the event of any recommended alterations to the runway at the airport that would impact the runway ends or the displaced threshold locations, providing a minimum 20:1 approach slope is to be required.

Runway Centerline to Taxiway Centerline Distance

Runway-to-taxiway separation standards provide minimum recommended distances between runway centerlines and parallel taxiway centerlines. These standards ensure that aircraft can safely operate on both the runway and parallel taxiway simultaneously. These standards also ensure that aircraft on a taxiway do not penetrate the edge of the RSA or ROFA. Given that Wakulla County Airport is limited to aircraft of 12,500 pounds by the deed conveying the airport to the County standards specifically applicable to small aircraft only could be applied in the event of a decision to provide a parallel taxi route adjacent to the runway alignment. FAA criteria establish a runway centerline parallel to a taxiway/taxilane centerline must be 150 feet for aircraft in approach category A and B design group I that are less than 12,500 pounds.

The airport does not currently have a designated taxiway, therefore no specific distance exists between the runway and taxiway centerline. Should reconfiguration of the airfield be considered the standard noted above should be applied when considering the provision of a parallel taxiway or taxilane.

Runway Centerline to Aircraft Parking Centerline Distance

Runway-to-parking separation standards provide minimum recommended distances between runway centerlines and aircraft parking centerlines. These standards ensure that aircraft can safely operate on both the runway and aircraft parking facility simultaneously. These standards also ensure that aircraft in the parking area do not penetrate the edge of the RSA or ROFA. Based on current FAA guidance an aircraft parking apron should be situated no closer than 125 feet from the runway centerline.

The airport does not currently have a designated aircraft parking area, therefore no specific distance exists between the runway and parking centerline. It is also apparent that given the width of the existing operational portion of the airport there is not sufficient room for a parking area that would meet the noted

standard. As noted, there appears to be a need to provide limited aircraft parking at the airport; however, in doing so the County would also need to conform to the noted design guidance or run the risk of accepting potential responsibility in the event of an incident of interaction between a parked and departing or arriving aircraft excursion from the runway.

Lighting

Low-level runway edge lighting on each side of the runway at 200-foot intervals identifies the runway edge. The runway thresholds have runway end lights and displaced threshold lighting for each runway, although they were noted to be in very poor condition and non-standard. During a meeting with the airport manager on April 24, 2013, it was stated that the light fixtures at the airport are currently in the process of being upgraded to meet FDOT requirements.

Taxiways

The airport has no clearly defined taxiway on airport property. The Stenson Taxiway, located in the Tarpine neighborhood, currently meets all FDOT requirements. As a provision in this Master Plan Update, a designated turf taxiway is recommended to provide a maneuvering area for aircraft.

Annual Service Volumes (ASV)

As stated in the FDOT *Guidebook for Airport Master Planning*, runway capacity only needs to be analyzed at airports where there is an existing issue of demand exceeding capacity. Because there are no commercial flights or commercial aircraft that use the Wakulla County Airport and no issue of demand exceeding capacity, capacity does not need to be analyzed.

Though it was not needed, a brief analysis was done to make sure that the annual service volumes (ASV) of the airport did not produce conditions that could cause delay and would continue to do throughout the planning horizon. FAA AC 150/5060 Ch. 2, indicates that an airport with a single runway accommodating the aircraft mix that is anticipated at Wakulla County Airport would typically be able to accommodate upwards of 230,000 aircraft operations per year. This value, however assumes the existence of a parallel taxiway which is not the case at the airport. Even if the capacity of the single runway were cut in half by the lack of a parallel taxiway, which is an overstatement, the single runway would be able to accommodate 115,000 annual operations. FAA employs a threshold of 60 percent of the airfield ASV as the point when planning for capacity enhancement should commence. Using the 115,000 ASV value and applying the 60 percent rule of thumb set for in FAA guidance suggests that the need to plan to enhance the airfield capacity would not triggered until the airport reached an estimated 69,000 annual takeoffs and landings. This value is significantly above any recorded year of operation for the Wakulla County Airport and significantly exceeds any forecasted operations level within the planning horizon.

Airside Facility Analysis

Hangars

There is currently one ten-unit private hangar located adjacent to the airport that was constructed within the last seven years. From observations taken during a site visit at the airport (January 29, 2013), at least half of the hangar space is empty (half of the hangars were observed to be open and in some disrepair, the other half were closed and no conditions could be noted). Current FDOT guidelines have mathematical requirements for determining minimum necessary hangar space; however, it is recommended that the airport develop additional hangar capacity above the recommendations determined in FDOT calculations to promote added based aircraft and to meet the latent demand noted by aircraft owners presently located at other area airports. This Master Plan and ALP recommends that two additional hangars be built, one for aircraft storage and one for aircraft maintenance over the 20-year planning horizon.

Aircraft Aprons

Transient aircraft apron requirements are based on the number of peak-day transient aircraft compared to the apron area requirement to park the average sized transient aircraft. This may range from 360 square yards to 500 square yards per aircraft, depending on the specific nature of the airport and the aircraft it serves.

The airport currently has no clearly defined apron areas. However, due to the fact that there are currently no fuel facilities and limited transient aircraft operations, an apron facility is not needed at this time. This condition is, however something of a chicken and egg situation in that the lack of a defined and maintained aircraft parking area essentially discourages transient aircraft from considering Wakulla County Airport as a potential landing location, causing these aircraft to overfly the airport for other facilities. This means that the economic benefit of these potential visitors is captured by the other areas.

It was noted in the forecast section that approximately 10 percent of the airport operational activity is associated with transient flight activity. Under current airport conditions, the County should consider defining a location to accommodate the parking of at least three transient aircraft and making the necessary grading/turf improvements along with anchored tie-downs for these aircraft. Based on industry rule of thumb calculations this level of itinerant parking would be adequate for the planning period based on the two percent growth scenario and the anticipated level of daily itinerant operations. By providing three transient aircraft parking positions, the airport could accommodate overnight parking while also have space for aircraft that arrive and depart on the same day. For the current airport configuration, design standards found in AC 150/5300-13A should be considered to the extent possible when planning apron

facilities and should additional changes to the airport be defined maximizing the conformity of any designated apron with standards should be a central goal.

Automated Weather Observation System (AWOS)

There is no automated weather observation system located at the airport. The County might look into the potential of installation of an AWOS at some point over the twenty year planning horizon as an enhancement to safety, assuming the level of activity at the airport or other considerations could be used to justify FAA or FDOT funding for the facility.

NAVAIDS, Approach Lighting, and Visual Aids

The airport currently has no NAVAIDS, approach lighting, or visual aids. It is recommended that the airport install, at a minimum, a precision approach path indicator (PAPI) to provide pilots with a visual reference when landing at the airport in twilight or evening conditions.

Landside Facility Analysis

Airport Office

Currently there is no office facility for the airport. Because of this, the airport is often left unattended and susceptible to unauthorized activity. It is recommended that in the future, the existing restaurant site be converted into an airport office facility. It is possible that the provision of an airport office with some other limited amenities could increase the number of itinerant aircraft and attract more users to the airport, thus increasing its viability.

Terminal Building

Space requirements of a dedicated general aviation terminal building can be based on the projected number of peak-hour pilots and passengers multiplied by a demand factor of between 40 and 100 square feet per peak-hour pilot and passenger. However, this planning standard depends on the specific nature of the airport.

Wakulla County Airport has no terminal building, and because of the small number of aircraft operations and number of low based aircraft that are located there, a terminal building is not anticipated to be needed during the planning period nor given other priorities associated with meeting standards would committing financial resources to a small terminal facility be warranted. No further analysis of terminal building facilities was performed.

Fuel Storage Requirements

The airport currently has no fuel storage facilities. **Table 1-9** shows the estimated number of gallons of fuel that would be needed based on existing and forecasted aircraft operations and FDOT gallons per operations figures. The annual demand is limited and would generally suggest that if a fuel storage facility is considered the size of any tank would be small, probably in the 500 to 1,000 gallon range with periodic fuel deliveries by a vendor. The tank capacity could increase as demand dictates, and room for expansion would need to be reserved. Management at the airport will need to determine if the forecasted demand warrants the construction of a fuel farm area at the airport. Special consideration will need to be given to the fact that new engine technologies permit the use of automobile and diesel fuel in newer aircraft. If the County determines it is their goal to try to stimulate growth at the airport, the availability of a fuel capability would likely be an element of that strategy, however the County would also need to address the environmental and fuel facility security issues that are typically associated with a fueling operation, particularly on an unattended airport such as Wakulla County Airport.

Table 1-9
Estimated Fuel Requirements

| Year | Piston Aircraft Operations | Gallons per Operation | Projected Annual AVGAS Fuel Demand (Gallons) |
|--|----------------------------|-----------------------|--|
| Estimate | | | |
| 2013 | 3,600 | 3.4 | 12,240 |
| Forecast (based on two percent growth) | | | |
| 2015 | 3,672 | 3.7 | 13,586 |
| 2020 | 3,860 | 3.7 | 14,282 |
| 2025 | 4,057 | 3.7 | 15,011 |
| 2030 | 4,263 | 3.7 | 15,773 |

Utilities

Airport utilities are provided by Progress Energy. There is currently no sewer provided and the existing turf runway is watered via an irrigation pump that draws water from a nearby pond.

Water, sewer, electricity are available on the property adjacent to the airport that are owned by Panacea Coastal Properties (existing hangar facilities) and Shellback (existing restaurant facility).

How utilities will be implemented at the airport will need to be considered during planning and design of any enhanced facilities. For example, electrical utilities should be placed in conduit underground so as not to interfere with aircraft operations. Utilities should be constructed as development at the airport requires it. Depending on the quantity of facilities that are constructed, the needed utilities may vary greatly.

Vehicle Parking

Terminal vehicular parking requirements at general aviation airports can be based on the number of peak-hour vehicles as projected in the forecast section. Normally, a primary space requirement is based on between one and two spaces for each projected peak-hour vehicle, depending on the specific nature of the airport. This factor considers employee parking. Parking requirements for secondary areas, such as near T-hangars, should also be considered.

Currently, Wakulla County Airport has no vehicular parking facilities. It was stated during an interview with the airport manager that large majorities of the people who use the airport come from the adjacent Tarpine Community. Consideration should be given to providing an area for vehicular parking capable of accommodating up to a maximum of no more than 15 parking spaces.

Security Requirements

The airport currently has no security measures in place, including fencing around the perimeter. However, a security assessment was recently completed for the airport and presented the following security recommendations for the airport.

Fencing

There are only limited areas of the airport that are fenced. The airport has identified an ongoing project to remove vegetation to the west and potentially realign the runway. Upon completion of the vegetation removal and determination of future facility enhancements, the airport should install a perimeter fence with related gates/access controls. The airport should remove the existing vehicle access point at the restaurant when the fencing is installed.

Access Controls

As part of the recommended fencing, the airport should install, at a minimum, manual access gates at the airport. The airport should remove the existing vehicle access point at the restaurant when the fencing is installed to reduce the overall number of vehicle access points to the airport. However, due to the location

of the current informal helicopter landing zone at the north end of the airport/U.S. 98 for helicopter (life flight) activities, a secured pedestrian access gate should be installed.

Lighting

The airport did not identify lighting as a needed element during an interview completed with the airport manager on October 25, 2012. Due to the airport's location within a rural area and adjacent to the Ochlockonee Bay, a full lighting project may not be desired and/or recommended. The airport should investigate the feasibility of installing minimum, low level lighting at airport access points as part of the fencing/access control project and also as a part of enhance site security, especially if there is the intent to accommodate aircraft on a small tie-down apron..

Additional Signage

Although limited signage is currently provided, the airport should install additional uniform signage at all access points including unsecured, unrestricted access points. It is recommended that additional airport property signs or similar signage be installed at appropriate locations along the airport perimeter to identify and increase awareness of the airport property.

Alternatives for Airport Development

The existing conditions discussion provided an overview of project related goals and objectives along with a summary of the existing airport, its limited facilities, and a number of design standard deficiencies that were further explored in the Facility Requirements Section. From the forecast section, it is clear that the airport does not face an operational capacity constraint. Given these considerations it became clear that the question to be addressed by Wakulla County, who is the airport sponsor, related to whether the County should retain the airport as it is without addressing licensing deficiencies and design deficiencies with the potential risk that attended this action, let the Tarpine Community take over the airport, close the facility and develop a new airport elsewhere, or take reasonable actions to improve the facility to meet criteria to the maximum extent viable. This last alternative required some definition as to what improvements were to be considered as a part of the alternative. The four alternatives that are considered in this assessment are:

1. Do nothing
2. Return deed to Tarpine Community
3. Relocate the airport
4. Pave runway with turf taxiway

Alternative 1 – Do Nothing

The do nothing alternative is the least desirable because it would most likely lead to the closure of the airport. Because the airport does not meet airfield standards for licensed airports (Rule 14-60, F.A.C.), if nothing is done at the airport, it would lose its certification and, given liability considerations of operating an unlicensed airport, would likely be forced to close. For the airport to comply with FDOT specifications, additional parcels of land would need to be acquired so that the primary surface area is clear of obstructions. Because of this requirement, the Do Nothing option is rendered null and void as the true no action option is one of airport closure. Keeping the existing facility operating would require one of two options for addressing the obstructions, which are:

1. Purchase the property that the existing hangar is located on and remove the berm and other obstructions from the property.
2. Purchase the 16 acre parcel to the west of the airport and engineer and realign a new grass strip runway.

The requirements that the airport would need to meet to remain open and in compliance with FDOT specifications present the airport with a large expense that would ultimately bring no added economic or facility value to the County. The airport would likely still operate at a loss to the County and the added expenses would make it even more financially unviable. Because of this, it is unlikely that the County would be willing to make the necessary changes to keep the airport open and operational. Therefore, this alternative is not recommended.

The expense report for the Wakulla County Airport is provided in **Table 1-10**.

Table 1-10
Wakulla County Airport Financial Ledger

| | FY 2006-2007 | FY 2007-2008 | FY 2008-2009 | FY 2009-2010 | FY 2010-2011 | FY 2011-2012 | 2013 thru June 13 | Total |
|-----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------------------|----------------|
| General Fund | | | | | | | | |
| Revenue | \$0.00 | \$1,740.00 | \$1,200.00 | \$1,565.00 | \$1,200.00 | \$1,320.00 | \$1,320.00 | \$8,345.00 |
| Expenses | \$0.00 | \$22,962.24 | \$15,342.26 | \$23,643.24 | \$3,926.95 | \$4,281.73 | \$3,995.38 | \$74,151.80 |
| Total: | | | | | | | | (\$65,806.80) |
| Airport Grants | | | | | | | | |
| Revenue | \$0.00 | \$32,150.00 | \$27,200.00 | \$4,716.09 | \$11,940.26 | \$0.00 | \$37,740.16 | \$113,746.51 |
| Expenses | \$32,150.00 | \$43,856.35 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$60,788.72 | \$136,795.07 |
| Total: | | | | | | | | (\$23,048.56) |
| Other Funding | | | | | | | | |
| Revenue | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Expenses | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$14,760.00 | \$1,675.00 | \$16,435.00 |
| Total: | | | | | | | | (\$16,435.00) |
| Total: | | | | | | | | (\$105,290.36) |

Alternative 2 – Return Deed to Tarpine Homeowners Association

The second alternative is to return the airport deed to the Tarpine Homeowners Association. When the airport was originally given to the County, it was done so to be used as a public airport facility. It stipulated that if the County were to ever not maintain the land for those purposes, the land would go to the heirs of the original owner of the land. In 2003, an agreement was reached between the heirs and the Tarpine Homeowners Association that, in the event of the County giving up ownership of the airport, it would partially revert to the Tarpine Homeowners Association instead of the heirs. There have been legal questions over how this partial reverter would actually be implemented, but even if the Tarpine Homeowners Association were to receive full rights under the reverter clause, the general consensus is that the association, it would be obligated to keep the airport open for public use. Certainly, given the

importance of the airport to the Tarpine community, they would have a strong vested interest in retaining the operational capability of the airport. Essentially, this alternative shifts the responsibility and affiliated liability of bringing the airport into conformity with state licensing requirements which are required for public use facilities and which is stipulated in the conveyance document. Thus, Tarpine would be faced with the same issues that were noted under the first alternative and would have to go through a re-licensing process that could take over a year to complete, during this time the airport would be open to neither the residents of Tarpine nor residents of the county.

While this alternative shifts the responsibility for the airport to the homeowners association, in doing so it also virtually ensures that the airport will not experience any significant improvement and not contribute to the generation of economic benefit to the surrounding area or the County. The costs of airport improvements associated with achieving benefits for others outside of Tarpine would simply not be borne by community residents and rightfully so. Whether the homeowners association has the long-term financial capacity to operate, maintain, and ultimately meet public use airport design and safety criteria is questionable given what these potential actions could cost on an individual homeowner basis. Further, given the somewhat unsettled nature of what the partial reverter actually means, this alternative also has a high likelihood of bringing the County, Tarpine residents, and the original heirs into a legal battle that could cost the County a significant legal fees that could be applied to addressing the needs of the airport. Many of the residents of Tarpine chose to live in Wakulla County because the airport was a public use facility and access to the airfield has been provided to the community since the inception of the development. Shifting the financial, legal, and operational burden onto a limited number of residents will result in a decision by some to relocate due to the affiliated cost on a per resident basis.

Finally, the airport currently provides a public service function, accommodating a location for life-flight operations. Often overlooked is the role that even a small airport can play in emergency situations, whether providing a base of operations for search and rescue activities, post storm relief efforts or helicopter fire suppression during periodic acute forest and brush fire events. Ensuring this capability is not the role for a small number of private citizens, it is the role of government.

Alternative 3 – Relocate the Airport

During the public involvement phase of this Master Plan Update, it was suggested that the airport could be relocated to a location that is more centrally located within the County, and would better serve more residents. Interviews were conducted with county officials and residents to assess the feasibility of relocating the airport. During these interviews, various locations were suggested for relocating the airport. The primary justification for relocating the airport would be for it to be closer to Crawfordville.

However, all of the recommended areas for relocation presented considerable hazards with surrounding developments and environmental considerations. It was ultimately concluded that the time, cost, lack of desirable location, and considerable environmental issues would make relocation of the airport not feasible.

Alternative 4 – Pave Runway and Develop Ultimate Build-Out (ALP Recommendations)

Due to the limitations of the preceding alternatives, it was determined that the final alternative involving reasonable improvements at the current site would address a number of design standard issues, mitigate licensing requirements, enhance the safety of airport operations, and provide a foundation for the generation of economic benefit to Wakulla County was the most appropriate action. As a result of input from County officials, the advisory committee, and the survey process, it is recommended that the airport remain under County control and actions be taken to improve facilities through the paving of the runway alignment to mitigate the soft and often wet turf on parts of the runway that could contribute to an aircraft incident. If found to be appropriate, enhancements typically found at small general aviation airports can also be implemented at the Wakulla County Airport (as identified in this Master Plan Update and in the ALP) as part of a public/private partnership. The improvements would aid the airport in generating revenue to cover airport operations and maintenance, and generate potential economic return. For example, during plan development, pilots noted that the availability of additional amenities would trigger their move to the airport, while aviation related businesses expressed an interest in relocating to the airport if certain facility enhancements were provided. This would enhance the ability to accommodate added itinerant users who would eat at local restaurants, patronize local businesses and potential stay in local lodgings would all generate a return to the community. Finally, the proposed action would enhance the viability of the airport as an emergency operations/evacuation area and emergency medical transportation facility. Based on discussions and input received during the planning process, it was determined that paving the runway and designating a turf taxiway gives Wakulla County the best opportunity to foster and promote new and expanded economic activity and retain the airport as an asset.

Though the improvements to the airport are a relatively large investment, a significant portion of this investment would be derived through financial assistance from the FDOT. The potential impact that the investment in an important piece of county infrastructure could have on the surrounding area makes full development a feasible option; therefore, it is recommended, that the airport be developed with a paved runway and turf taxiway.

As noted, the alternative under consideration involves a careful balance of facility enhancement with fiscal prudence. For example, developing the airport with a paved parallel taxiway would provide the County with the most modern facility possible, but also adds additional costs to development. The most cost effective way of providing the ability to access the runway ends without taxiing on the runway will likely involve the development of a designated parallel grass taxiway for the foreseeable future which could be upgraded as demand and financial capability allow. This results in the achievement of a valuable safety enhancement in a highly cost effective manner. Additional detail regarding the components of the recommended development program are contained in the following section. David Edwards, The County Administrator, provided the following guidance on the development and implementation of Alternative 4:

- Wakulla County will work within any future funding provided by FDOT for capital improvements, studies, engineering, surveying permitting and land purchases. It is not anticipated that County funds will be required or provided for capital improvements. However, should FDOT require any County funding then the BOCC will determine whether to move forward with Airport improvements.
- Wakulla County and the Tarpine Home Owners Association (HOA) will enter into an agreement for the funding of ongoing maintenance of the airport operations. It is anticipated that \$6,000.00 per year initially will be paid to the County by the Tarpine HOA. This payment is to be received annually no later than October 1 of each year, with the exception of the first year which will be prorated to October 1. If an agreement cannot be obtained with the Tarpine HOA, then the BOCC will need to decide whether to move forward with Airport improvements.
- Wakulla County using FDOT funds will engage an engineering firm to develop a design, permitting and construction plans for the Airport runway improvements. If it is determined that permitting of a critical aspect of the improvements cannot be obtained or will be costly (monetarily) to the County, then the BOCC will need to decide whether to move forward with Airport improvements.
- Wakulla County will request funding from FDOT for the purchase of the 16 acres (+/-) to the west of the existing runway and the four (4) or so lots on the south end of the runway that are between the end of the runway and Surf Road, and purchase the land needed on the north end of the runway from the Refuge subdivision and/or its title holder.
- Wakulla County will request funding from FDOT for construction of the Airport improvements.
- Wakulla County will request funding for a small fuel facility for fueling airplanes, all revenue from fueling will be realized by the County.

- Wakulla County may establish a runway fee to be paid by all planes landing at the airport with the exception of the plane owners within the Tarpine community who are contributing to the maintenance of the airport.
- Wakulla County does not anticipate purchasing the hanger land or hangers at this time, but may elect to do so in the future based on the availability of FDOT funding.

Airport Development

Environmental Feasibility Study

Numerous parcels have been identified for acquisition in order to bring the Wakulla County Airport into compliance with current FDOT licensing standards. However, because of the environmental sensitivity of the area, prior to any land acquisition, an environmental feasibility study needs to be completed in order to determine if the land is suitable for airport development. This feasibility study will, at a minimum, review the requirements of state, local, and federal permitting; include a geotechnical engineering investigation that should include a soil survey and possibly a karst investigation; include the location and magnitude of wetlands; as well as any other potential environmental issues that may be present on the parcels identified for acquisition. If the outcome of this feasibility study determines that the land is suitable for development, then Wakulla County can move ahead with developing the airport.

Land Acquisition

Clearly, a central deficiency impacting the viability of Wakulla County Airport is the limited property available for addressing identified deficiencies and design standards issues. As a result, land acquisition is the most essential need and the key element to the future viability and development at the airport. Without the acquisition of the parcels recommended in this section, there is no potential for growth or expansion of the airport and the ability to address key standards and licensing issues is simply not possible. Land acquisition is the most important step in beginning the implementation of actions to improve the operational capability of the airport and to enhance the operational safety of the airport in addition to providing required area for the reasonable development at the airport. From meetings with airport staff and local representatives, 13 parcels have been identified for acquisition to support the future needs and to provide for long term development at the airport. As a prelude to the acquisition of land, an environmental study will be necessary to define the extent and potential cost of any mitigation of environmental impacts and also to determine the requisite federal, state, and local (if any) permits that may be required. These parcels should be acquired through fee simple acquisition. Any roads that are blocked off as a result of this land acquisition should be reconstructed with cul-de-sacs for safety purposes. The following parcels that have been identified for acquisition are listed in **Table 2-1** and are graphically depicted in **Figure 2-1**.

**Table 2-1
Parcels Identified for Acquisition**

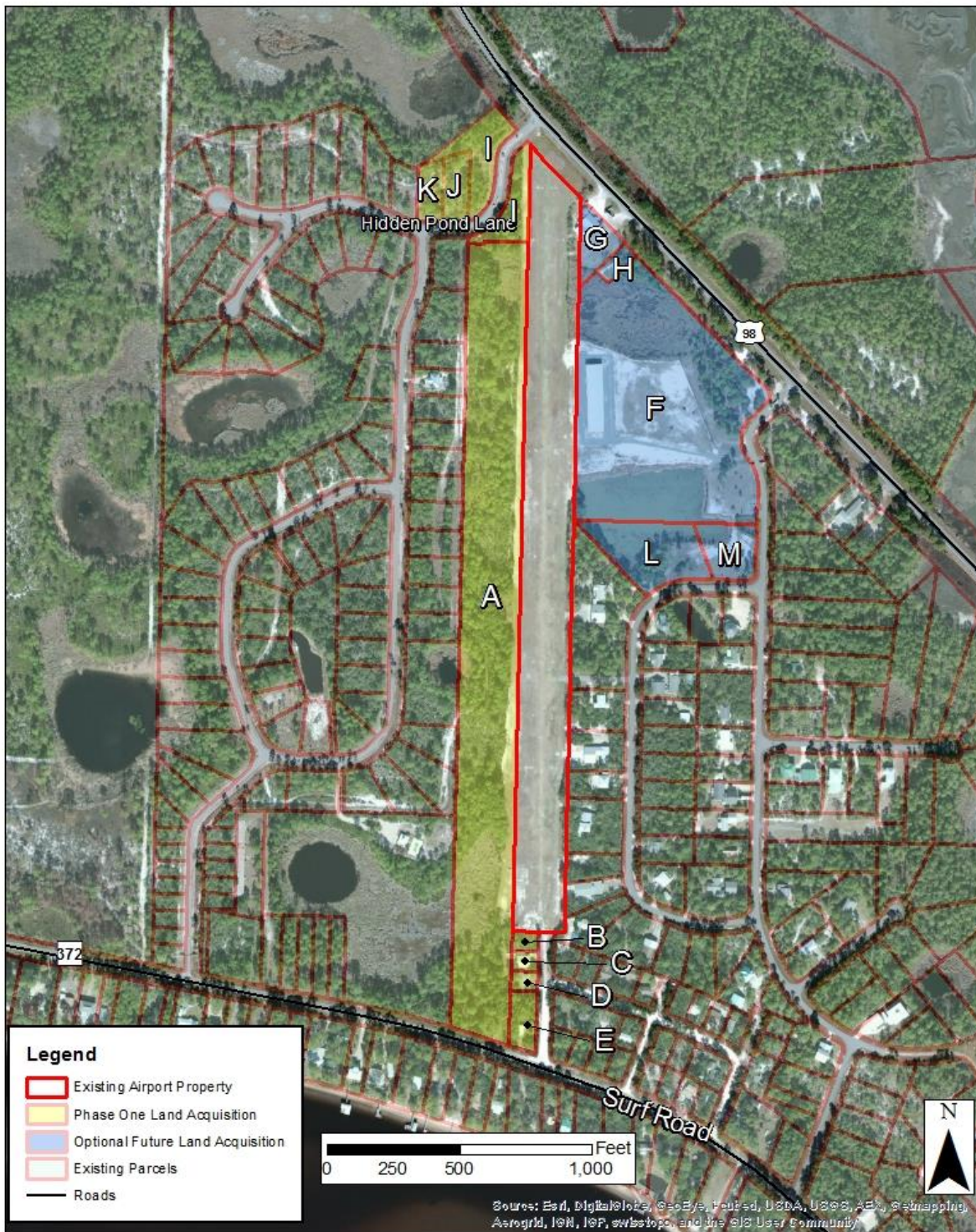
| Parcel | Parcel ID | General Location | Parcel Description | Owner | Acres | Existing Land Use | Future Land Use |
|---------------|-------------------------|---|--|----------------------------------|--------------|---------------------------|------------------------|
| A | 02-6S-02W-000-03616-000 | West of the existing runway | This property is needed to expand the runway and provide space for a designated taxiway. This property will also eliminate limiting obstructions at the airport. | Wakulla Airport Properties, LLC. | 16.2 | Semi-Rural Residential | Urban 1* |
| B | 01-6S-02W-034-03591-000 | South of runway and east of Bay Drive | Parcel needed for runway expansion and RPZ clearance. | Thomas Keister | 0.17 | Single Family Residential | Urban 2 |
| C | 01-6S-02W-034-03590-000 | South of runway and east of Bay Drive | Parcel needed for runway expansion and RPZ clearance. | Thomas Keister | 0.17 | Single Family Residential | Urban 2 |
| D | 01-6S-02W-034-03590-001 | South of runway and east of Bay Drive | Parcel needed for runway expansion and RPZ clearance. | Steven and Milfred Sharp | 0.17 | Single Family Residential | Urban 2 |
| E | 01-6S-02W-000-03585-000 | South of runway and east of Bay Drive | Parcel needed for runway expansion and RPZ clearance. | Thomas Harvey and Briggs Jenkins | 0.5 | Single Family Residential | Urban 2 |
| F** | 01-6S-02W-147-03576-F26 | East of runway and west of Tarpine Drive | Parcel for optional future facility development. | Panacea Coastal Properties, Inc. | 12.7 | General Commercial | Urban 2 |
| G** | 01-6S-02W-000-03570-000 | Northeast of runway and south of US 98 | Parcel for optional future office development. | Shellback, LLC. | 1.1 | General Commercial | Urban 2 |
| H** | 01-6S-02W-147-03576-F33 | Northeast of runway and south of US 98 | Parcel for optional future office development. | Shellback, LLC. | 0.22 | General Commercial | Urban 2 |
| I | 02-6S-02W-308-03616-A01 | Northwest of the runway and south of Hidden Pond Lane | Parcel needed for runway expansion, road realignment, and obstruction clearance. | KMZ Land, LLC. | 0.85 | Semi-Rural Residential | Urban 1* |

| | | | | | | | |
|--------------|-------------------------|---------------------|--|--------------------------|--------------|------------------------|----------|
| J | 02-6S-02W-308-03616-104 | Northwest of runway | Parcel needed for runway expansion, road realignment, and obstruction clearance. | Ronald and Martha Noel | 0.58 | Semi-Rural Residential | Urban 1* |
| K | 02-6S-02W-308-03616-103 | Northwest of runway | Parcel needed for runway expansion, road realignment, and obstruction clearance. | Philip and Luella Hunt | 0.48 | Semi-Rural Residential | Urban 1* |
| L** | 01-6S-02W-147-13576-A02 | East of runway | Parcel identified for optional future airport development | Bonnie Coulter | 2.03 | Semi-Rural Residential | Urban 2 |
| M** | 01-6S-02W-147-03576-A01 | East of runway | Parcel identified for optional future airport development | Francis and Bess Dickson | 0.96 | Semi-Rural Residential | Urban 2 |
| Total | | | | | 36.13 | | |

*A future land use map amendment will be necessary to provide for consistent designations for all airport properties

** Parcels identified for optional future airport development

Table 2-1
Parcels Identified for Acquisition



Land Acquisition Justification

The land acquisition program has been divided into two phases. The first phase acquisition effort is focused on acquiring those parcels that are required to address standards related deficiencies and to enhance the safety of operations on the airfield at Wakulla County Airport. The County should focus on securing the properties delineated in Phase One as the primary objective. In the event that other properties listed as a phase two priority become available for acquisition these should be considered if additional funding is available over and above that necessary for the acquisition of Phase One properties.

Phase One Land Acquisition

Parcel A

Parcel A is a 16.2 acre tract of land (identified as Parcel A in **Table 2-1** and **Figure 2-1**) located to the west of the airport that is essential to the ability to address recommended airfield improvements and mitigate airfield standards considerations. Acquiring this parcel would allow the airport to expand the runway as well as provide additional space for a designated taxiway. Additionally, acquiring this parcel for runway relocation will eliminate existing obstructions in the RSA that exist on the northeast portion of the runway. The owner of this parcel has indicated their willingness to sell the property.

Parcel A has two significant wetland areas, one in the northern portion of the parcel and one in the southern portion of the parcel. Special consideration will need to be given to these areas to assure that they are properly mitigated when the property is developed. An additional wetland area extends onto the property in the center; however, due to its small size, engineering efforts can be used to avoid impacts to this area.

Parcels B - E and I - K

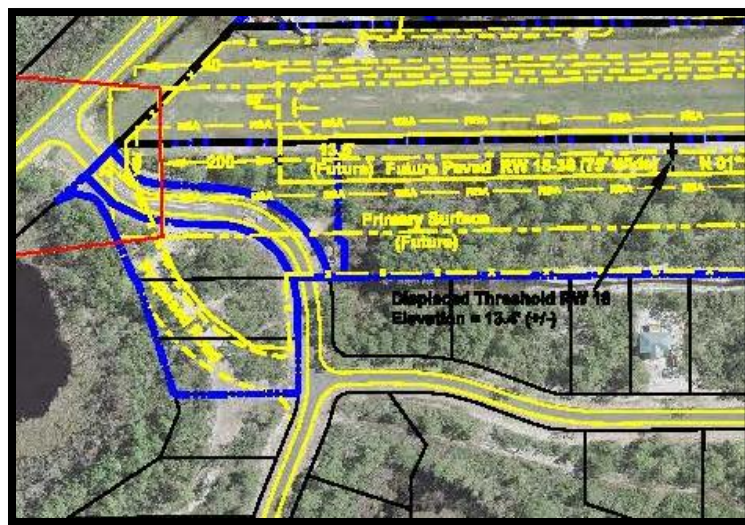
The parcels to the north and south of the airport also need to be acquired (these parcels are identified as Parcels B-E and I-K in **Table 2-1** and **Figure 2-1**) for the runway to be realigned. Acquiring these parcels would allow the airport to shift the runway to the north to minimize impacts on property owners to the south of Surf Road. These parcels consist of single family residential units as well as bank-owned land. The owners of these properties have indicated that they are willing to sell.

Parcels B – E, comprising a total of 1.01 acres, should be cleared to be used for runway realignment and expansion. These southern parcels are needed to provide an adequate visual and noise buffer as well as required clear zones and approach ratios. Currently, there are three structures that fall in the proposed RSA and RPZ. The FAA is very clear that under their standards, residential properties are not to be located in either the RSA or RPZ, therefore, acquiring this land is necessary for the proposed runway

alignment to be feasible. It was noted in field interviews that the owners of these parcels are willing to sell their property.

Parcel I is a 0.85 acre non-contiguous parcel with portion of the tract located to the north and south of Hidden Pond Lane. The parcel is owned by KMZ Land LLC, and will need to be acquired so that Hidden Pond Lane can be realigned to allow for the proposed runway alignment and required object free zones. The proposed realignment of Hidden Pond Lane is shown in **Figure 2-2**.

Figure 2-2
Proposed Realignment of Hidden Pond Lane



Combined Parcels J and K comprise 1.06 acres of land that is required to accommodate the realignment of Hidden Pond Lane as delineated in **Figure 2-2**. The proposed realignment of Hidden Pond lane facilitates the recommended runway alignment and limits obstructions in the RSA and RPZ. There are currently no structures on these parcels. The owners interest or willingness to sell is not known at this time.

Optional Future (Phase Two) Land Acquisition

Five additional parcels, located to the northeast and east of the runway, should be considered for acquisition to provide area to accommodate future airport support facilities and activities such as a future airport office and aviation related facilities and business development. These parcels are identified as Properties F, G, H, L, and M in **Figure 2-1** and **Table 2-1**. These sites are well suited to provide the airport with amenities such as a fuel farm, FBO, T-hangars, a maintenance hangar, and airport offices. The parcels to be acquired are described below.

Parcel F

Parcel F is a 12.7 acre tract of land. Currently, the only structure on this parcel is a privately owned T-hangar that has through the fence access to Wakulla County Airport. While relatively new, the condition of the existing hangar was noted to be poor, though further structural analysis would be needed to assess if the existing hangar could be salvaged. There are wetland areas that surround this property that includes a large pond located on the southern end of the site, therefore design and engineering should be done to mitigate these issues when the property is being developed.

Parcel G

Parcel G is a 1.1 acre tract of land that currently has one building, a two sided billboard, and numerous utility poles. The building is a former restaurant that is currently vacant and has frontage on U.S. 98. It is possible that the existing building could be refurbished to be used for an airport office and potential satellite station for the Wakulla County Sheriff's Office. The Wakulla County Sheriff's Office, has indicated an interest in further exploring this option.

Parcel H

This parcel contains 0.22 acres of commercial property. There are no buildings or structures located on this parcel. The parcel contains pine trees and is almost entirely covered by a wetland.

Parcel L

This parcel contains 2.03 acres of semi-rural residential land. There are no buildings or structures located on this parcel. The parcel contains pine trees and is almost entirely covered by a wetland.

Parcel M

This parcel contains 0.96 acres of semi-rural residential land. There are no buildings or structures located on this parcel. The parcel contains pine trees and is partially covered by wetlands.

Airport Development

This section further develops projects that were introduced in the Landside and Airside Recommendations portion of the master plan. These recommendations represent the long-term goals of the airport that are recommended to be implemented during the 20-year planning horizon. These recommendations are based on meetings with airport staff, local residents, stakeholders, and elected officials throughout the development of this plan.

In order to fully develop the airport and its facilities, certain assumptions must be made. All recommendations will carry the assumption that the parcels required to support the development recommendations and identified in the land acquisition section have been acquired.

Proposed developments will be divided into two sections:

- 1) Airport Licensing Standards Projects – Projects that need to be completed for the airport to remain compliant with state standards for licensed airports
- 2) Airport Development – Development of landside and airside facilities to make the airport more economically viable

Airport Licensing Standards Projects

Wakulla County Airport has very specific needs that must be met in order for the airport to remain in compliance with state licensing standards. These requirements were determined by FDOT during an airport inspection that was completed on June 27, 2013.

There were two deficiencies noted during FDOT's inspection of the airport. They included the width of the primary surface area and the provision of a public telephone. These deficiencies, as well as mitigation techniques, are discussed in this section.

Runway Primary Surface Area

In accordance with Chapter 14-60.007(2)(b)1.a., F.A.C., for a runway that is not paved, is to be used by an aircraft of any weight, and that has a visual landing approach; the length of the primary surface is the length of the runway, terminating at the end of the runway and the width of the primary surface is 250 feet. Currently the runway at Wakulla County Airport does not meet these minimum standards.

There are two options for mitigating this deficiency. The first option is to purchase the two parcels to the east of the runway where the objects penetrating the primary surface area are located, and remove the objects that are not in compliance. The second option is to get approval from FDOT to allow the airport to mitigate the obstructions when the runway is realigned, as proposed in this Master Plan. This will limit redundant work and save funding for additional projects. The airport should seek an agreement with FDOT to renew their license with the intention that they will correct the deficiency when the runway is realigned, as detailed in this Master Plan and accompanying ALP.

Provision of a Public Telephone

In accordance with Chapter 14-60.007(9)(f), F.A.C., an operational public telephone shall be available at the airport on a 24-hour basis and its location shall be clearly identified to the public.

Because there is currently no office facility at the Airport, there is no public telephone available. To mitigate this, the address of the Airport manager should be provided on a sign near the Stenson taxiway

so that itinerant pilots can contact him regarding use of a telephone.

FDOT Inspection Conclusions

The deficiencies noted during the FDOT inspection are the first priority of the airport. Because it will be difficult to mitigate these deficiencies without land acquisition and runway realignment, it is recommended that the deficiencies be corrected when the airport realigns and stabilizes the runway and affected area (per this Master Plan and ALP) and as development occurs at the airport. (Note: the ALP shows a paved runway, but Runway 18/36 needs to be realigned to remain compliant regardless of whether or not it is paved). In order for the airport to remain compliant, land acquisition of some kind will be needed. It is the recommendation of this Master Plan to acquire the land identified in Table 2-1 so that the runway can be realigned. If the airport is not developed, the primary surface area must be cleared for the airport to remain open and compliant with current licensing standards. Completing such a project would be costly and while it would provide a needed enhancement to airport safety, it would not address other facility needs or other potential safety issues associated with the airfield. The proposed realignment and fully stabilized turf runway with the potential for a designated parallel taxiway would solve both the primary surface issue while also providing for a significant improvement in airfield operational conditions and airfield safety.

Development Recommendations List

A significant goal of this Master Plan, beyond the improvement of the facility to be in accordance with current FDOT licensing criteria, is to provide recommendations that promote growth and the corresponding economic viability at the Wakulla County Airport. To achieve this goal, development of what are typically basic facilities at a small general aviation airport is needed. The following airside and landside recommendations represent projects that have been identified to keep the airport in compliance with FDOT licensing standards and as potential drivers for growth of the airport. It is important to note that the current number of based aircraft and number of operations do not support any additional development beyond becoming compliant with FDOT licensing (though Tarpine does provide based aircraft and RTTF operations that are not counted by FDOT). Development of these facilities will be driven by both the emergence of demand not currently contained in the activity forecast and the availability of funding to cover facility development costs. It should be noted that a large share of this funding may come from state sources, while other sources may involve private sector involvement. For facilities not specifically required to conform to licensing requirements the need for, and timing of, these improvement will be based solely upon the emergence of demand and need and will not be listed under the cost feasible category. As with any long-range planning study the need to consider the potential for

unforeseen need and to ensure that short term actions do not preclude long-term opportunities requires the analysis of potential facility development that may not be specifically justified by demand forecasts. If there is one thing certain in the aviation/airport industry it is that the industry has consistently been dramatically influenced by unforeseen circumstances that have rendered point in time demand forecasts moot. These unforeseen influences run the gamut from national events impacting airport nationally to localized events that have a significant impact on just a single facility.

1) Airside Development

- a. Runway 18/36 realignment, drainage, and stabilization improvements*
- b. Taxiway realignment
- c. New runway end lights and threshold lights
- d. Runway paving (if future conditions support this development)
- e. Helipad (optional future development)
- f. Visual Approach descent indicator lighting systems (optional future development/operational safety enhancement)

2) Landside Developments

- a. Perimeter security fencing
- b. Connector road realignment
- c. Visual landscaping buffer
- d. Wind sock
- e. Fuel farm (optional future development)
- f. Hangar and maintenance facilities (optional future development)
- g. Tie-downs (optional future development)
- h. Office/flight planning area (optional future development, potential joint use sheriff's facility)
- i. Facility for aircraft service business/small aircraft limited fixed base operation (optional future development)

***Note:** Meeting the primary surface requirements cannot be accomplished within the existing site; therefore,

- a. An environmental feasibility study of land to be acquired is necessary to facilitate the purchase of property needed to meet licensing; therefore,
- b. Land would have to be acquired after the environmental feasibility study to allow for conformity with licensing, specifically the primary surface;
- c. This land is needed because the runway (turf or otherwise) has to be shifted to allow for meeting of licensing criteria (primary surface).
 - i. Shifting the runway requires improvements to the landing surface to provide a stable and safe turf operational surface.

- ii. This shifted runway alignment would serve as the alignment in the future for any paved surface should demand emerge

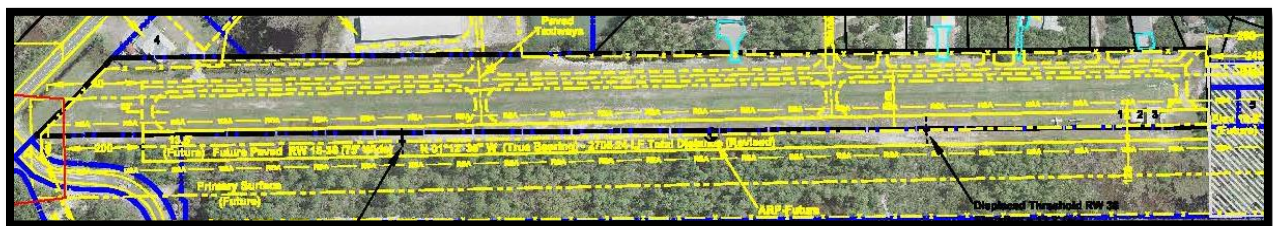
Airside Development

The development recommendations presented in this section assume the environmental study determined airport development was feasible and properties identified in the land acquisition section have been acquired. While it may not be possible to implement all of the recommendations, the County should make an effort to secure funding for the projects that will promote the operational safety and capability of the airfield and support financial feasibility at the airport. The primary outcome of this Master Plan is to help the airport become compliant with FDOT licensing standards, which can be accomplished through realigning the runway. However, this Master Plan will still present details on engineering and paving Runway 18/36 in the future, if future airport activity supports it.

Runway 18/36 Engineering, Realignment, Drainage, and Stabilization

It is necessary that Runway 18/36 be realigned to remain compliant with FDOT licensing standards. The proposed runway alignment concept is shown in **Figure 2-3**. The new runway alignment will minimize redevelopment of existing structures surrounding the airport, as well as minimize interference from obstructions located around the airport. The existing berm, utility poles, and building located at the north end of the property will not need to be removed with the proposed runway alignment. The elevation of the runway should be raised to the minimum required standards for environmental standards, which will allow for a shorter displaced threshold while minimizing hazards caused by flooding.

Figure 2-3
Proposed Runway Alignment



To develop the runway as described, Bay Drive on the south side of the runway will need to be closed (**Figure 2-3a**) and the current alignment of Hidden Pond Lane will need to be realigned per the ALP. County staff have indicated that this would be feasible.

Figure 2-3a
Road Closure at Bay Drive



When realigned, the runway length will increase from 2,572 feet to 2,706 feet. Due to limiting obstructions, the landing distance available for Runway 18 will be 2,054 and the landing distance available for Runway 36 will be 1,979. For both runways 18 and 36 the takeoff distance available will be 2,706.

Realigning and stabilizing the runway will also allow for planes to take-off and land using less of the runway. This will mean that they will be in the air quicker and will be at high altitudes sooner. This will address a significant issue associated with the existing runway, which contains a large area of soft soil (noted in the 5010 as 400' of the runway) that created a safety concern and the potential for an aircraft incident. Realigning and stabilizing the runway will significant mitigate issues that exist as a result of the current turf runway.

Runway Drainage

Numerous wetland areas have been identified surrounding the airport. Because the proposed runway design is elevated two feet, consideration needs to be given to the fact that this may cause an increased amount of runoff and could create areas of ponding along the sides of the runway that should be avoided. Therefore, runway drainage must be considered when planning, designing, and constructing the runway. Proper planning efforts will reduce the amount of work that needs to be done by allowing for certain problems to be mitigated before they are actually realized.

Runway End Lights

Runway end lights indicate the end of the runway. These lights need to be installed to the standard described by the state licensing standards and Chapter 14-60.007(10)(b), F.A.C. Because the current runway end lights were installed with incorrect domes, these should be replaced with up-to-date covers as soon as possible. The airport manager stated during the April inspection that the domes will be replaced in the immediate future. Additionally, the inspection report notes that the lateral separation between the light fixtures is non-standard and this should be addressed at the time the runway is improved.

Displaced Threshold Lights

Displaced threshold lights indicate where the usable surface of the runway begins. These lights need to be installed to the standard described by the state licensing standards and Chapter 14-60.007(10)(c), F.A.C. Because the current displaced threshold lights were installed with incorrect domes, these should be replaced with up-to-date covers as soon as possible. The airport manager stated during the April inspection that the domes will be replaced in the immediate future. Additionally, the inspection report notes that the lateral separation between the light fixtures is non-standard and this should be addressed at the time the runway is improved.

Taxiway Designation

With the realignment of the runway, there will be sufficient space for a designated turf taxiway. The proposed taxiway will be located on the east side of the runway and will have connections to the existing through the fence operations in the Tarpine neighborhood. The taxiway alignment is shown in **Figure 2-4**. Because of space limitations, the taxiway cannot connect to the southern edge of Runway 36. Having a designated taxiway should increase safety and viability of the airport. When the taxiway is designed it should be done so consistent with current FDOT standards and conform to Advisory Circular AC 150/5340-1K and AC 150/5340-18.

Figure 2-4
Proposed Location of Designated Turf Taxiway



If the airport is fully developed, it would be possible to add another taxiway to the west of the existing runway. This, however, would be outside of the current 20-year planning horizon and would need to be analyzed during a future update to this master plan. Because an unpaved taxiway is the County's preferred option, proper lighting and signage will need to be installed to delineate the taxiway.

Helipad Designation

If conditions warrant it, it is recommended that a helipad be constructed to the east of the existing runway in the location shown in the ALP. Due to the rural nature of Wakulla County, having a dedicated helipad is important for the safety of the public. It is not the recommendation of this master plan that the airport have an active heliport; it is only recommended that there be a designated area for emergency medical and hazard landings.

Precision Approach Path Indicator

If future funding becomes available and conditions warrant it, a precision approach path indicator (PAPI) system should be installed at the airport. The precision approach path indicator (PAPI) uses light units similar to the VASI but is installed in a single row of either two or four light units. These lights are visible from approximately five miles during the day and up to 20 miles at night. The visual glide path of the PAPI typically provides safe obstruction clearance within plus or minus 10 degrees of the extended runway centerline and to four SM from the runway threshold. It is recommended that a PAPI system be implemented in the long term, once the other facility enhancements have been made.

Landside Developments

Perimeter Security Fencing

The airport should install a six foot perimeter fence with three strands of barbed wire around the entire property, including parcels acquired for development. The proposed perimeter fence location is shown in the ALP, though it could be slightly modified to run through the middle of the proposed landscape buffer on the south end of the airport property to minimize visual disturbances. Access gates should be placed along the exterior at locations determined during the planning and design phase of the fencing project. Because through the fence operations occur at the airport, an agreement will need to be reached between the homeowners and county as to how the gate access will be monitored and funded. Though through-the-fence operations may be permitted, they will need to be regulated so that access and the required airport usage fees can be collected by the county. Pedestrian access points should be determined once the facility is further developed.

Fuel Farm

If appropriate conditions come into existence, the airport should construct a fuel farm in the location identified in in the ALP. A fuel farm would provide the airport and region with a needed service as well as provide a source of revenue for the county. A study completed by the FAA found that fuel sales are the number one income generator for general aviation airports.

To gauge the need for a fuel farm and estimate the size that would be needed, the airport could consider basing a temporary fuel truck at the airport to provide fuel services. This option has its issues, however and would need to be carefully considered. These issue include the manner of securing the truck and its operations, environmental considerations, and liability factors. Other options might entail a survey of Tarpine residents and owners of registered aircraft in Wakulla and adjacent counties as to their operations at Wakulla and interest in a fueling capability, whether self-fueling would be of interest and using a range of fuel prices to gauge sensitivity to fuel cost as a basis for their interest or lack of interest. If the

temporary fuel truck is well used and contributes to the economic viability of the airport, then a more permanent facility can be developed.

T-Hangar and Maintenance Hangar Facilities

If appropriate conditions and demand exist at some point in the future, and once the existing T-hangar (proposed for acquisition) is either renovated or replaced and fully occupied, the airport should phase in the construction of up to two additional hangar facilities. One of the hangars should be a T-hangar and the other should be capable of serving as a storage hangar or be capable of being used as a light aircraft maintenance facility. Additionally, a survey needs to be performed on the existing hangar facility.



If it is found to be in good condition, or in need of minor repair, then the County should continue use of that facility. If it is found to be in poor condition, the County should demolish the facility and construct a T-hangar in the same location. These hangar facilities provide a necessary service for users of the airport as well as a source of revenue for the County.

These facilities will be connected to the runway by designated turf taxiways. Proper taxiway delineation will be needed to ensure safe operations around the hangar facility. Designated turf taxiways are also shown in the ALP.

The proposed location for the hangar facilities and tie-downs are located on the property currently owned by Panacea Coastal Properties. The exact location of these facilities is shown in **Figure 2-5** and in the ALP.

**Figure 2-5
Facilities for Optional Future**



Tie Downs

The ALP identifies an additional 11 aircraft tie-downs ultimately located surrounding the recommended hangar facilities. Tie-downs can serve as either temporary parking areas or can be rented to aircraft owners. It is a recommendation of this master plan that the space needed for the tie-down location be preserved, but the locations do not need to be made into tie-downs until there is the demand to do so. These could be rented on a short term basis to itinerant aircraft or be used as temporary holding areas for aircraft that are based out of the hangar facilities.

Connector Road

The ALP shows a paved connector road between the proposed office building and the hangar facilities. This connector road is necessary so that pilots have a designated route to access the proposed office area. It may be necessary to leave the road unpaved until usage is determined, but the facility should be marked.

Office, Flight Planning, and Fixed Base Operator (FBO)

The existing building on the north end of the airport property should be developed into an office, flight planning area, and potentially a police substation (FBO) office. These facilities would provide a needed service for the airport and added security.

An airport office would provide an area to manage airport operations and tenants, and a work space for airport employees. A flight planning area will be



Existing Building North of Runway

necessary to provide itinerant and based aircraft with the space to prepare for flights. A flight planning area could be located in the airport office and would include a telephone, computer with an internet connection, and a table large enough to hold flight maps.

During the development of this Master Plan, the Sheriff's office stated that they would be interested in using this area to have a police substation. They stated that they would be interested in having it set up as a potential permanent substation, or could use it as a temporary office for officers in the area. Having this facility on the airport would provide a cost savings to the county and would provide the airport enhanced security.

Having these offices located on airport property could be beneficial for both the airport and the County. Having a fully functioning office that is associated with the airport will allow for increased safety at all hours of the day.

Wind Socks

Two new wind socks will need to be installed. These should be installed outside of the runway safety area. When planning for the runway, special consideration will need to be given for the location of wind socks.

Landscaping Buffer

County staff and residents noted that there was concern that a fully developed airport would be unsightly for residents on Surf Road. Therefore, a 20 foot high and 100 foot deep landscape buffer should be constructed along the southern border of the airport property. The location of this buffer is shown in the ALP and in **Figure 2-6** and a rendering of the buffer is shown in **Figures 2-7a** and **2-7b**. The vegetation that is included in this recommendation was selected so that the maximum growth heights would not affect the 20:1 approach ratio and will not act as an attractant of wildlife.

An aerial photograph showing a two-lane asphalt road with double yellow lines. To the right of the road is a wide, green grassy buffer strip. Along the edge of this buffer strip, there is a row of young palm trees and other vegetation. The background shows a dense forest of taller trees.

An aerial photograph showing a paved road with a yellow center line. To the right of the road is a wide, green buffer strip filled with dense vegetation, including palm trees and other tropical plants. Beyond the buffer strip is a large, flat green field. A small red car is visible on the road, and a white structure is partially visible in the top right corner.

It is the recommendation of this Master Plan that Wakulla County secure funds to acquire the land necessary to pave and realign the runway and provide a designated turf taxiway. As part of this, the runway should be properly lighted and have security fencing. Additionally, the conservation easement and landscaping buffer should be implemented to minimize negative visual effects. Development recommendations such as the T-hangar facilities and fuel farm are all optional future developments that can be implemented if conditions at the airport permit it.

Environmental Considerations

Introduction

Environmental considerations for the airport and surrounding areas are very important to the implementation of Master Plan elements. The National Environmental Policy Act (NEPA) established the national environmental policy for the United States. In Florida, activities are regulated by numerous rules and regulation and are administered by many levels of government. The Master Plan process should set the stage for the NEPA analysis; it is not intended that the NEPA analysis become part of the Master Plan. For the purposes of this Master Plan, a categorical exclusion (CATEX), formal environmental assessment (EA), or environmental impact statement (EIS) is not required. This summary is intended to provide a summary of potential environmental impacts and mitigation opportunities associated with the selected airport improvements.

In order to have a successful Master Plan, the environmental feasibility must be acceptable to the public and local elected officials. Further, the plan must be compliant with regulatory and statutory requirements.

Proposed development at Wakulla County Airport consists of realigning and paving the runway, land acquisition to improve airport growth potential and compliance with state licensing standards, construction of hangars, addition of fueling capability, designation and paving of a taxiway, acquisition of a building for airport operations and a potential FBO, and general facility enhancements.

The construction of the developments proposed in this Master Plan will result in effects to the human and natural environments. Described below is an assessment of these effects.

Available background information and literature were collected and reviewed to identify the existing environmental conditions at the Wakulla County Airport. A desktop review of readily available GIS data and documentation provided by the airport manager and county representatives was collected and used to develop the environmental overview. Detailed surveys of the project site were not included in the evaluation.

Listed below are the databases and resources reviewed as part of this environmental overview.

- Florida Master Site File (FMSF) for Historic and Archaeological Resources
- US Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) Maps
- Flood Insurance Rate Maps (FIRM) from the Federal Emergency Management Agency (FEMA)

- Northwest Florida Water Management District Flood Information Portal <http://portal.nwfwmdfloodmaps.com/>
- US Geological Survey (USGS) Topographic Maps
- USFWS endangered and threatened species list for Wakulla County (USFWS Information, Planning and Conservation System (IPAC) accessed via the web on June 10, 2013)
- USFWS on-line Critical Habitat Mapper (<http://www.fws.gov/panamacity/specieslist.html>) accessed June 18, 2013.
- Florida Natural Areas Inventory (FNAI) Biodiversity Matrix (<http://www.fnai.org/biointro.cfm>) accessed June 10, 2013.
- Florida Department of Environmental Protection (FDEP) on-line database for potential Hazardous Materials sites
- US Environmental Protection Agency (EPA) Green Book for Non-Attainment Areas (<http://www.epa.gov/airquality/greenbook/mapnpoll.html>) accessed June 18, 2013.
- Aerial photography from FDOT Surveying and Mapping Office

Air Quality

Based on the Environmental Protection Agency (EPA) Green Book, Wakulla County is currently in attainment for all of the National Ambient Air Quality Standards (NAAQS) criteria air pollutants (i.e., O₃, CO, NO₂, PM, SO₂, Pb). Air quality for an airport the size of the Wakulla County Airport is generally not a significant factor; however, the Airport Environmental Handbook (5050.4B) now requires determination by an appropriate FAA Official.

Noise

Aircraft noise is generally considered the most apparent environmental impact from the airport to the surrounding areas. The number of operations at the airport has remained consistent throughout the previous two decades; therefore noise levels have not substantially changed. As noted in the previous Master Plan, the noise contour for aircraft at the airport is located predominantly within the existing airport boundary. It should be noted that actual aviation activity would have to change significantly to trigger the need to revise the noise contours given the type of aircraft operating at the airport and the number of operations. In the social impacts section we identify a case for increased activity which tends to undermine the idea that things are not likely to change significantly that is imparted by this paragraph.

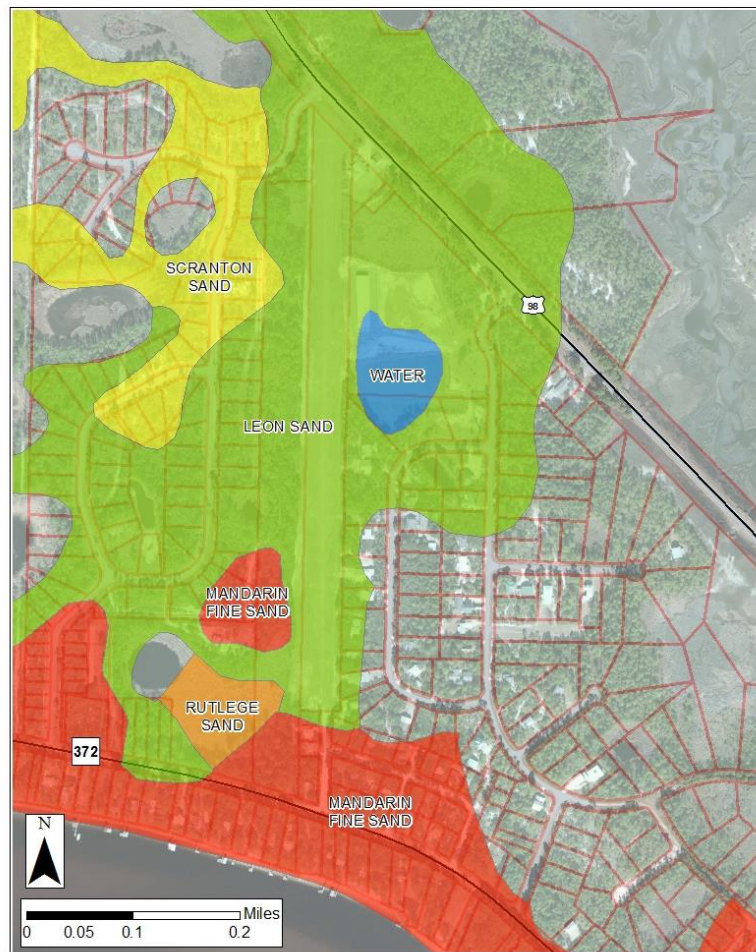
There are numerous residential parcels located south of the airport along Surf Road whose owners/occupants noted that they currently receive noise from the airport. Under the proposed future runway design, a 20 foot high 100 foot thick vegetative buffer will be planted to mitigate for potential noise that may arise from an increase in operations. Because the types of aircraft using the airport are not forecast to change with the proposed developments, the proposed noise mitigation strategy should adequately mitigate for a potential increase in noise that would potentially result from the development.

Depending on its geographic location and the type of vegetation, landscaping can attract hazardous wildlife. It is recommended that airport operators approach landscaping with caution and confine it to airport areas not associated with aircraft movements. A wildlife management biologist should review all landscaping plans. Airport operators should also monitor all landscaped areas on a continual basis for the presence of hazardous wildlife. Airport operators should ensure that plant varieties attractive to hazardous wildlife are not used on the airport.

Wakulla County Soil Survey

According to the US Department of Agriculture's Natural Resources Conservation Service soil survey, there are two primary types of soils that are found on existing and proposed future airport property. The primary soil type is Leon Sand, which is considered to have very poor drainage. The second is Mandarin Fine Sand, which is somewhat poorly drained. There are two additional soil types that cover a very small portion of the parcel to the west of the existing runway. These include Rutledge Sand (very poorly drained) and Scranton Sand (poorly drained). A review was completed of the US Department of Agriculture Natural Resources Conservation Service to determine if Hydric soils were present in the area. No Hydric soils were identified, however, this should be confirmed by site visits during the initial environmental review. The locations of these soil types are shown in **Figure 3-1**.

Figure 3-1
Wakulla Airport Soil Survey

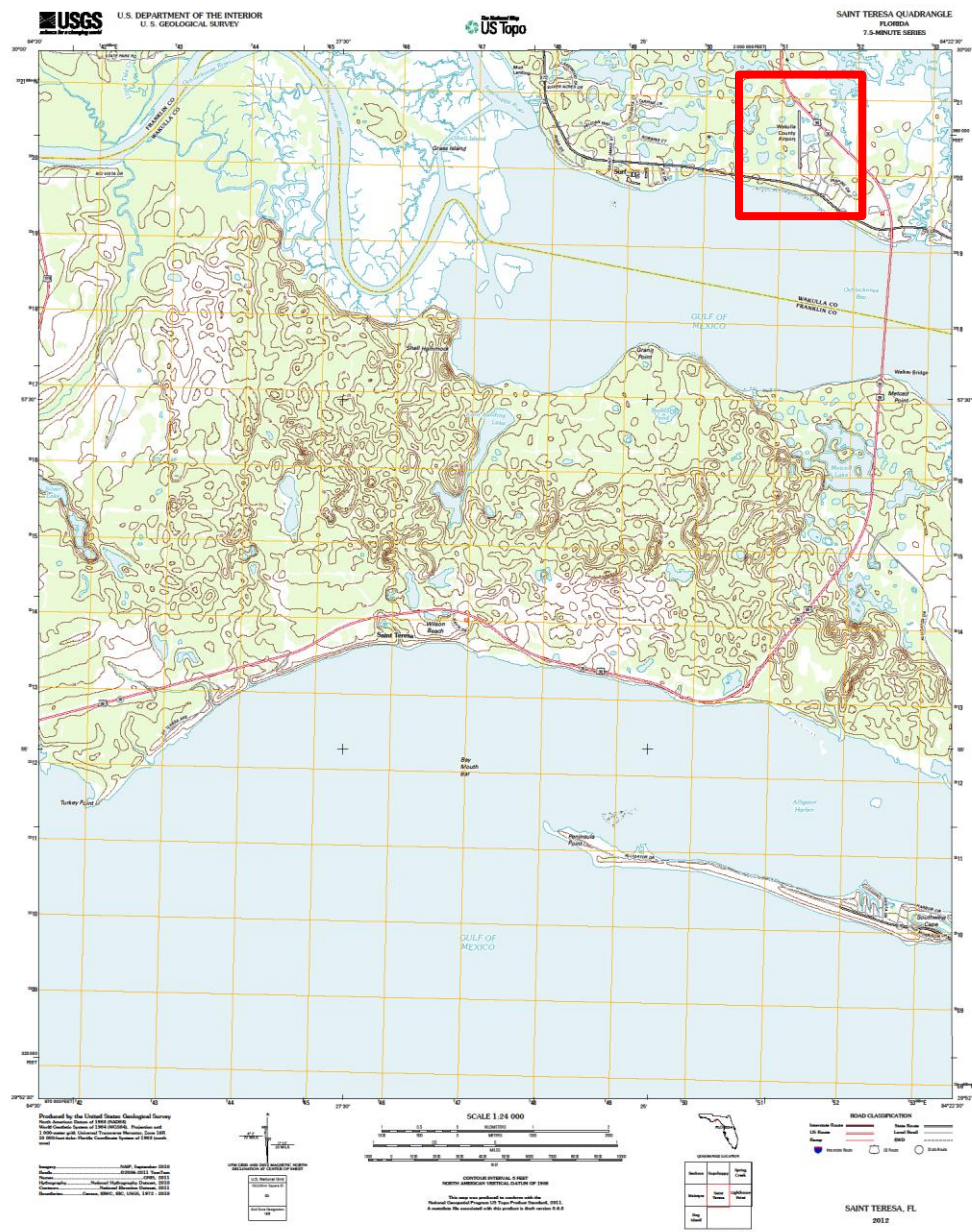


Source: USDA NRCS, 2006

US Topographic Quadrangle

For reference, a US 7.5 Minute Topographic Quadrangle of the project area is provided as **Figure 3-2**. This map shows the elevation of the area in five foot contours as well as water bodies, roadways, and locations of municipal services. The Wakulla County Airport can be seen in the upper right corner of the figure. As shown, the airport is located in level location, with limited contour changes in the surrounding area. Multiple wetland areas can be seen surrounding the airport and will need to be considered during airport expansion and runway engineering and paving.

Figure 3-2
US Topographic Quadrangle



Source: USGS, 2012

Wetlands

Two federal laws regulating wetlands are the River and Harbors Act (RHA) of 1899 and the Clean Water Act (CWA) (Federal Water Pollution Control Act). The focus of the RHA is protection of navigation while the focus of the CWA is prevention of water pollution. Additionally, Florida Statutes pertaining to wetland preservation include State Lands (Ch. 387, F.S.), Water Resources (Ch. 387, F.S.), and Environmental Control (Ch. 403, F.S.). Section 404 of the CWA requires regulation of discharges into “Waters of the United States (“Waters of the U.S.”).” The term “Waters of the U.S.” has broad meaning and incorporates both wetlands and surface waters. Wetlands are defined as “those areas that are inundated or saturated by groundwater at a frequency and duration sufficient to support, and that under normal circumstances, do support a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.” 33 CFR 328.3(b). Executive Order 11990 requires that new construction in wetlands be avoided to the extent possible, and that all practicable measures be taken to minimize or mitigate impacts to wetlands.

National Wetlands Inventory (NWI) maps, soils maps, quadrangle maps and aerial photography were reviewed to identify the approximate location of wetlands on and in the vicinity of the airport. A copy of the NWI map showing the wetlands around the airport and surrounding properties is shown in **Figure 3-3**. It was noted during an interview with the airport manager (April 24, 2013) that the north end of the current runway has a “wet spot” near the existing wetland area. There are freshwater emergent wetlands on either side of the runway at this location and it is likely that the runway bisected the existing wetland. This area within the runway may be classified as a jurisdictional wetland and should be considered during the planning and design phases of the new runway. Mitigation may be required for these impacts. The proposed future development could result in additional impacts primarily associated with the paving and extension of the runway as well as construction of the support functions, such as future parking. It is anticipated that all of the on-site wetlands will be considered jurisdictional by both the State of Florida as well as the US Army Corps of Engineers (USACE). Field flagging of the site wetlands and a jurisdictional determination will be required prior to site development. The state and federal regulations require that avoidance of wetland impacts be considered first in all site planning, then minimization of wetland impacts if avoidance is not possible. Only when avoidance and minimization have been demonstrated can wetlands be impacted and mitigated. An Environmental Resource Permit (ERP) from the State and a Section 404 Dredge and Fill Permit from the USACE would be required for the implementation of the Master Plan.

Figure 3-3
National Wetlands Inventory



Threatened and Endangered Species

The Endangered Species Act of 1973 requires each federal agency to ensure that actions authorized, funded, or carried out by that agency not jeopardize continued existence of any endangered or threatened species, or result in destruction or adverse modification of its habitat. Section 7 of the act states that federal agencies must review their actions; if those actions will affect a listed species or its habitat, they must consult with the U.S. Fish and Wildlife Service. The Florida Fish and Wildlife Conservation Commission (FWC) is responsible for listing and protecting state listed wildlife.

In order to determine the potential for listed species, existing databases were reviewed as described above. There is no USFWS designated critical habitat on or in the immediate vicinity, but the project site is within the USFWS consultation area for West Indian manatee and the red-cockaded woodpecker (RCW). It is anticipated that there would be no impacts or issues related to the manatee as a result of the implementation of the Master Plan as there would be no in-water work where manatees would be present to construction or stormwater outfalls. Field surveys would be required to determine there would be any effect on RCW. The St. Marks Wildlife Refuge is also located east of the airport. According to the U.S. Fish and Wildlife and a review of the Florida Natural Areas Inventory (FNAI), **Table 3-1** lists the species of animal and plant life that might be expected to occur in the vicinity of the airport.

Table 3-1
US Fish and Wildlife Species List

| Group | Name (Scientific Name) | Federal Status |
|--|--|-----------------------|
| Amphibians | Frosted Flatwoods salamander (<i>Ambystoma cingulatum</i>) | T |
| Amphibians | Striped newt (<i>Notophthalmus perstriatus</i>) | ce |
| Birds | Arctic peregrine Falcon (<i>Falco peregrinus tundrius</i>) | Recovery |
| Birds | Red-cockaded woodpecker (<i>Picoides borealis</i>) | E |
| Birds | Wood stork (<i>Mycteria americana</i>) | E |
| Birds | Piping Plover (<i>Charadrius melodus</i>) | T |
| | | |
| Birds | Red knot (<i>Calidris canutus rufa</i>) | ce |
| Clams | Purple bankclimber (mussel) (<i>Elliptoideus sloatianus</i>) | T |
| Clams | Oval pigtoe (<i>Pleurobema pyriforme</i>) | E |
| Clams | Shinyrayed pocketbook (<i>Lampsilis subangulata</i>) | E |
| Clams | Ochlockonee moccasinshell (<i>Medionidus simpsonianus</i>) | E |
| Fishes | Gulf sturgeon (<i>Acipenser oxyrinchus desotoi</i>) | E |
| Flowering Plant | Godfrey's butterwort (<i>Pinguicula ionantha</i>) | E |
| Mammals | West Indian Manatee (<i>Trichechus manatus</i>) | E |
| | | |
| Reptiles | Hawksbill sea turtle (<i>Eretmochelys imbricata</i>) | T |
| Reptiles | Eastern indigo snake (<i>Drymarchon corais couperi</i>) | T |
| Reptiles | Gopher tortoise (<i>Gopherus polyphemus</i>) | ce |
| Reptiles | American alligator (<i>Alligator mississippiensis</i>) | T(S/A) |
| E- Endangered; T -Threatened; T(S/A) – Threatened due to similarity of appearance; ce – candidate species. | | |

Prior to the commencement of any development activity or as part of any required environmental process, detailed, site-specific, and species-specific surveys be performed in order to establish actual populations of listed species. These surveys help determine if species are present, what avoidance and minimization strategies are required, and what type permit and/or type and degree of mitigation may be required. Before mitigation is considered, it is important to consider avoidance and minimization tactics.

According to the FNAI, there are a number of state listed species that could potentially occur in the vicinity of the airport, including the alligator snapping turtle (*Macrochelys temminckii*) and the Suwannee cooter (*Pseudemys concinna suwanniensis*).

Floodplains

Floodplains are defined in Executive Order 11988, Floodplain Management. They include lowland areas adjoining inland and coastal waters, especially those areas subject to a one percent or greater chance of flooding in any given year.

The Federal Emergency Management Agency (FEMA) has produced flood insurance rate maps (FIRMs) for communities participating in the National Flood Insurance Program. Detailed maps illustrate the 100- and 500-year base flood elevations (areas with a 1% or greater chance of flooding). Descriptions of zones delineated on these maps include, Zone A areas of 100-year flood, Zone B - areas between limits of 100- and 500-year flood, Zone C - areas of minimal flooding, and Zone D - areas of undeterminable but possible flood hazards.

Base flood elevation (BFE) is the computed elevation to which floodwater is anticipated to rise during the base flood. Base flood elevations are shown on FIRMs and on the flood profiles. The BFE is the regulatory requirement for the elevation or flood proofing of structures. The relationship between the BFE and a structure's elevation determines the flood insurance premium. The Wakulla County Airport is located in Zone A15 with a base flood elevation of 15 feet. If any improvements to the airport encroach on the base floodplain, compensation will be required for the loss of floodplain storage.

Coastal Barriers

The Coastal Barriers Act of 1982 prohibits federal financial assistance for development within the coastal barrier resources system, which consists of undeveloped coastal barriers along the Atlantic and Gulf Coasts. Maps that identify lands included in this system are available for inspection in the offices of the U.S. Fish and Wildlife Service.

Wakulla County Airport is located to the north of Ochlockonee Bay and to the west of Levy Bay. Because the Ochlockonee Bay has already been developed, it is not considered a coastal barrier resource system. Levy Bay is listed as a coastal resource barrier, though airport development will not impact the barrier. Therefore, coastal barrier resource systems will not be of concern when implementing Airport Master Plan recommendations.

Coastal Zone Management

The Coastal Zone Management Act requires that all federal projects occurring in applicable coastal zone areas comply with management guidelines established in the Coastal Zone Management Program. Procedures for determining consistency with approved coastal zone management programs are contained in the National Oceanic and Atmospheric Administration (NOAA) Regulations (15 Code of Federal Regulations [CFR] Part 930).

Because of Wakulla County's location on the Gulf of Mexico, it is under the jurisdiction of the coastal zone management program and must obtain a consistency determination for projects that may impact the coastal zone management plan. When planning and designing runway expansion, coastal management zones must be taken into consideration.

Water Quality

The Federal Water Pollution Control Act, commonly referred to as the Clean Water Act (CWA) establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The CWA was initially enacted in 1948 and was called the Federal Water Pollution Control Act, but the Act was significantly reorganized and expanded in 1972.

Under the CWA, the Environmental Protection Agency (EPA) has implemented pollution control programs such as setting wastewater standards for different industries. They have also set water quality standards for all contaminants in surface waters.

The CWA made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit is obtained. EPA's National Pollutant Discharge Elimination System (NPDES) permit program controls discharges. Point sources are discrete conveyances such as pipes or man-made ditches. Industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters. Permitting requirements for construction that exceeds one acre are specified by NPDES and are administered by the Florida Department of Environmental Protection (FDEP). There are currently no permits at Wakulla County Airport, though they would need to go through the NPDES permit program before construction could begin to pave the runway.

The required stormwater management system and wetland impacts from implementation of the Master Plan would require an Environmental Resource Permitting (ERP) from the Northwest Florida Water Management District and FDEP.

The waters and wetlands in the vicinity of the airport and the Ochlocknee Bay are listed by FDEP as impaired waters. Furthermore, the airport is included in the limits of the Outstanding Florida Waters (OFW) of the St. Marks Wildlife Refuge. The airport would not discharge any stormwater to an Aquatic Preserve. Additional stormwater management may be required as a result of the OFW designation and the impaired waters designation.

Development of Regional Impact (DRI) Review

Florida Statutes Chapter 380.06 defines developments of regional impact as “developments which, because of their character, magnitude, or location, are presumed to have a substantial effect upon the health, safety, or welfare of citizens of more than one county.” Projects that fall under this broad definition include airport expansions. The following types of airport projects have been specifically called out as being DRIs:

- A new commercial service or general aviation airport with paved runways
- A new commercial service or general aviation paved runway
- A new passenger terminal facility
- Lengthening of an existing runway by 25 percent or more or strengthening the runway to the extent that the result would be an increase in aircraft size or number of jet aircraft using the airport
- An increase in the number of gates by 25 percent or 50,000 square feet, whichever is greater, at a commercial service airport or a general aviation airport with regularly scheduled flights

Per Florida Statute, the proposed enhancements to the Wakulla County Airport will require a DRI to be completed. The following guidance was taken from the *Guidebook for Airport Master Planning*:

The DRI process is begun when an airport, as the developer, contacts the Regional Planning Council(s) (RPC) and requests a pre-application conference. The pre-application conference will take place between the developer and various state and regional agencies identified by the RPC. The pre-application meeting will establish the parameters of the Application of Development Approval (ADA). When requesting the pre-application meeting, the developer should also request from the RPC prior to the

meeting a list and explanation of the methodologies acceptable to the region for ADA review.

In order to implement the DRI process for the Wakulla County Airport the airport manager or county will need to coordinate with the Apalachee Regional Planning Council to request a pre-application conference. During the DRI process the guidelines in Chapter 380.06, F.S. must be followed.

Social Impacts

The development proposed in this plan will displace multiple private inhabited and vacant residential properties and two vacant privately owned business properties. Additionally the plan will require the acquisition of undeveloped land as well as the closure of an unpaved access road to a housing subdivision. The road that will be closed is not a primary access to the neighborhood.

The owners of the four privately owned residences have stated that they are willing to sell their properties to Wakulla County for development at the airport to occur. The two privately owned business properties include a closed internet café and a dilapidated hangar facility. Both businesses are no longer in operation and their owners have indicated that they are willing to sell the properties.

The closure of the road will in no way impact the residents who own property in the sub-division, as Wakulla County has said that they will provide a paved cul-de-sac for residents to use. The acquisition of this road for airport development should not be viewed as a negative social impact as access will not be changed in a negative way.

The recommendations in this Master Plan associated with both airside and landside developments all are necessary to make the airport as financially sustainable as possible. Due to the airport's close proximity to the numerous sport fishing and recreational areas, as well as the established Tarpine Community, it is possible that the Wakulla County Airport could act as an economic stimulator for the surrounding area. This development is not expected to alter the character of the area, but to support the existing community focus for economic development compatible with the local environment and the adjacent aviation related community.

It is possible that the Wakulla County Airport could see substantial economic benefits by developing the airport and its facilities. Potential income sources include:

- Growth in the number of based aircraft
- Relocation and utilization by aviators from nearby airports
- Increase in site based and itinerant operations, which will fuel the local economy through additional sales and taxes

Conclusion

When developing future development at the Wakulla County Airport, all specified environmental factors and processes should be followed. This is to ensure that the airport and its property are compliant with federal, state, and local standards that will allow them to be able to receive funding.

Capital Improvement Plan

Introduction

This Master Plan has identified the projects necessary for the Wakulla County Airport to address licensing standard deficiencies and become an economically viable airport. Specific improvements to both airside and landside elements of the Airport are recommended for implementation throughout the first ten years of the 20-year planning horizon with a near term focus on those projects needed to address licensing standards. The projects included in the development plan form the basis of the Capital Improvement Program (CIP).

The CIP includes projects that represent the facility's planned growth through the first ten years of the 20-year planning horizon. Additionally, the proposed facilities reflect strategic development initiatives intended to maximize the safety and utilization of the airport. As part of the development process, project phasing and cost estimates were developed and included in the CIP to manage and plan for the implementation requirements associated with these development projects.

Phasing

This section applies a general timeline of the proposed airport development projects. The schedule represents a prioritized airport development plan to increase economic development initiatives. The first phases of the project involve evaluating and acquiring the land for airport growth, followed by realigning the runway, and ending with safety and general facility enhancements.

The phasing of individual projects should undergo periodic review so that the development at the airport reflects the needed enhancements. It should be noted that other projects not foreseen in this report may be identified in the future and would therefore, potentially necessitate changes in the phasing of projects and the overall CIP. If Wakulla County would like to add new projects, this Master Plan will need to be modified if state funds are to be needed to fund the projects. Phasing for the projects included in the development plan is shown in **Table 4-1**.

Table 4-1
Airport Needs

| Project Name | Airport Priority | Years | Funding | Estimated Cost |
|---|-------------------------|--|----------------|-----------------------|
| Environmental Feasibility Study | 1 | 1-2 years | FDOT | \$125,000-\$150,000 |
| Land Acquisition | 2 | 2-4 years | FDOT | \$500,000-\$750,000 |
| Vegetative Buffer | 3 | 1-3 years | FDOT | \$2,000-\$5,000 |
| Fuel Farm | 4 | 2-5 years and based on demand and need | FDOT | TBD |
| PD&E Study | 5 | 2-6 years | FDOT | TBD |
| Runway and Taxiway Engineering and Realignment/Turf Movement Area Stabilization | 6 | 6-9 years | FDOT | TBD |
| Security Fencing and Gates | 7 | 7-10 years | FDOT | \$190,000 |
| Airfield Signage and Lighting | 8 | 7-10 years | FDOT | TBD |

Considerations

In order to determine the approximate funding requirements for the planning period, it is necessary to identify the potential development costs associated with the selected airport development plan.

The cost estimates presented in this section are based industry standards as well as regional cost estimates. Actual construction costs may vary based upon inflation, variations in labor and changes in the type or cost of materials used, as well as other unforeseeable economic factors. Further, grant assistance and eligibility may also vary from year to year. Therefore, a review of the development costs and overall CIP should occur as conditions warrant.

Estimated construction costs in dollars are shown in **Table 4-1**. This table does not represent a commitment for funding by the respective funding sources, only the projects that have been identified as part the development of this Master Plan Update. Funding of projects identified in this CIP will be sought from various funding sources available from both FDOT Central Office and FDOT District 3.

Project List

The objective of this section is to outline the CIP for the planning horizon and provide a brief description of the projects included. The project costs are only an estimate, as real costs may change as projects are implemented. The exact design and layout of certain facilities may also be required to change during the design process. Funding for improvements made at the Wakulla County Airport will come from FDOT. For general aviation projects where there is no federal funding available, FDOT usually covers 80 percent

of the total project cost. However, because Wakulla County is considered a Rural Area of Critical Economic Concern (RACEC) it is eligible to have 100 percent of costs paid for through the Rural Economic Development Initiative (REDI).

The projects identified in this CIP include those that are required to bring the Wakulla County Airport up to current licensing standards. If new projects are added, this Master Plan will need to be modified if State funds are needed to fund the projects.

The following are the recommendations of this Master Plan Update as well a narrative describing them, a justification for them to be completed, the project description, the estimated cost and funding source, and the priority that the project is to development at the airport.

| | |
|-----------------------|---|
| Title | Environmental Feasibility Study |
| Project Category | Land Acquisition |
| Narrative | An environmental study must be completed prior to purchasing the land proposed for airport development. |
| Justification | Additional land is needed for runway realignment. Prior to acquiring this land, an environmental due diligence must be completed to determine if the land is suitable to airport development. |
| Project Description | This environmental study will, at a minimum, review the requirements of state, local, and federal permitting; include a geotechnical engineering investigation that should include a soil survey and possibly a karst investigation; include the location and magnitude of wetlands; as well as any other potential environmental issues that may be present on the parcels identified for acquisition. |
| Cost (Funding Source) | \$125,000 - \$150,000 (funded by state grants and waived local match) |
| Airport Priority | 1 |

| | |
|-----------------------|--|
| Title | Land Acquisition |
| Project Category | Land Acquisition |
| Narrative | Purchase 16.2 acre parcel to the west of the existing runway, along with seven parcels to the north and south of the existing runway. |
| Justification | Additional land is needed for runway expansion. This is needed so that the primary surface area can be expanded to 250 feet, as required by Rule 14-60 F.A.C. |
| Project Description | <p>The 16 acre parcel to the west of the airport needs to be acquired for realignment of the runway. The parcel will allow the airport to shift its ARP so that the RSA is compliant with FDOT standards. Without the purchase of this parcel, developments at the airport will not be possible.</p> <p>An additional seven parcels (identified in the Airport Development section) need to be acquired to the north and south of the airport. These need to be acquired to provide adequate separation between the airport and residential properties and allow for the proposed runway realignment to be feasible.</p> |
| Cost (Funding Source) | \$500,000 - \$750,000 (funded by state grants and waived local match) |
| Airport Priority | 2 |

| | |
|--------------------------|---|
| Title | Vegetative Buffer |
| Project Category | Vegetative Buffer |
| Narrative | A vegetative buffer made up of approved native plants to minimize noise pollution and provide a visual buffer. |
| Justification | A buffer is needed to minimize the visual and auditory effects of the proposed airport enhancements on the households surrounding the airport. |
| Project Description | This buffer will be constructed using approved native species that will not attract wildlife or grow to heights that will endanger the safety of operation at the airport. The buffer will be located along the southern portion of the future airport property and be 100 feet in depth. |
| Cost (Funding Source) | \$2,000 (funded by state grants and waived local match) |
| Airport Priority | 3 |

| | |
|--------------------------|---|
| Title | Fuel Farm |
| Project Category | Economic Development |
| Narrative | A fuel farm is recommended to be developed at the airport to provide based and itinerant aircraft with fuel. |
| Justification | The airport currently has no way to generate income from itinerant aircraft who utilize the airport, developing a fuel farm may attract additional users to the airport and generate revenues for Wakulla County. |
| Project Description | A fuel farm will be constructed, as noted in the ALP, to help the airport generate income and attract additional users. |
| Cost (Funding Source) | TBD (funded by state grants and waived local match) |
| Airport Priority | 4 |

| | |
|--------------------------|--|
| Title | PD&E Study |
| Project Category | Engineering |
| Narrative | A Project Development and Environmental (PD&E) study needs to be completed prior to development at the airport. |
| Justification | To ensure that projects are developed with consideration of current engineering standards, project costs and minimization of social and environmental impacts, while involving the public throughout the entire study process. |
| Cost (Funding Source) | TBD |
| Airport Priority | 5 |

| | |
|--------------------------|--|
| Title | Runway and taxiway Realignment and Engineering |
| Project Category | Engineering |
| Narrative | Relocate Runway 18/36 to be complaint with FDOT licensing standards |
| Justification | This project includes the realignment of two existing roads as well as a complete design and realignment of Runway 18/36. The runway will increase in length from 2,572 feet to 2,706 feet. The runway should be developed as a turf runway until demand necessitates its pavement. By realigning the runway, the airport will become compliant with current FDOT licensing standards. |
| Cost (Funding Source) | TBD (funded by state grants and waived local match) |
| Airport Priority | 6 |

| | |
|--------------------------|--|
| Title | Security Fencing and Gates |
| Project Category | Equipment |
| Sub-Category | Security |
| Narrative | Install perimeter fencing around airport property. |
| Justification | There is currently no contiguous fencing around the airport property. The fencing will not only keep unwanted personas and animals out of the airfield, but make it possible to restrict access and collect user fees. |
| Cost (Funding Source) | \$190,000 (funded by state grants and waived local match) |
| Airport Priority | 7 |

| | |
|--------------------------|---|
| Title | Airfield Signage and Lighting |
| Project Category | Safety/Security |
| Narrative | Adding signage and lighting to make the airport more safe for users |
| Justification | Add standard basic runway and taxiway signs to improve safety and lighting to make operating at the airport easier. |
| Cost (Funding Source) | TBD (funded by state grants and waived local match) |
| Airport Priority | 8 |

Public Involvement

Introduction

Public involvement is an important aspect of any master planning process. The purpose of the public involvement process is to encourage information sharing between the airport sponsor and members of the community. The public is defined as anyone who has an interest in the airport whether it is as a user, tenant, employee, the FAA, other governmental agencies, elected and appointed officials, residents of the community, or passengers. For this master plan, there were three components of community involvement activities used:

1. Community Survey
2. Citizen Advisory Committee
3. Public Workshop

Community Survey

As part of the Wakulla County Airport Master Plan, a survey was developed to gauge citizens' perceptions of the airport. The survey was available online from April 15, 2013 through May 31, 2013. The survey was conducted using the website SurveyMonkey.com, and was available to the public on the Wakulla County Board of County Commissioners website, the City of St. Marks website, and the Wakulla County Chamber of Commerce website. The City of Sochoppy declined the request to make the survey available on their website. Additionally, the survey was announced at the April 15, 2013 Commission meeting. The survey was also distributed by members of the project advisory committee, the citizen group responsible for providing input and feedback throughout the project. Because the survey was conducted online and was not done as a random sample, the information is simply the opinion of those who responded. Therefore, there is no margin of error for the survey and the results are presented as they were received. In total, there were 209 respondents to the survey. After the survey was taken offline, the responses were tabulated and the results analyzed for inclusion in the Wakulla County Airport Master Plan.

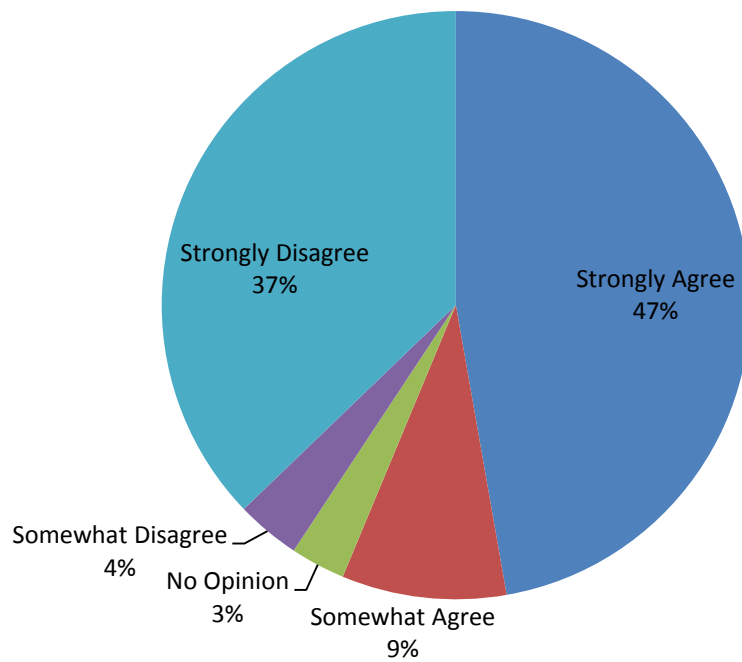
The survey included five questions related to the residence and airport usage of the respondents, such as the zip code of the respondent and whether the respondent currently uses the airport and if the respondent would use the airport if it were more developed. These questions were included as a way to correlate how

location and usage of the airport affects perceptions of the airport. Response to these survey questions varied. While many people who live in close proximity to the airport find it very useful and support further development, others believe that development will change the nature of the area or cause an increase in noise levels. Some respondents had never used the airport and did not live near it, but still wanted to see development at the airport as a means to bring jobs and tax revenue to the county.

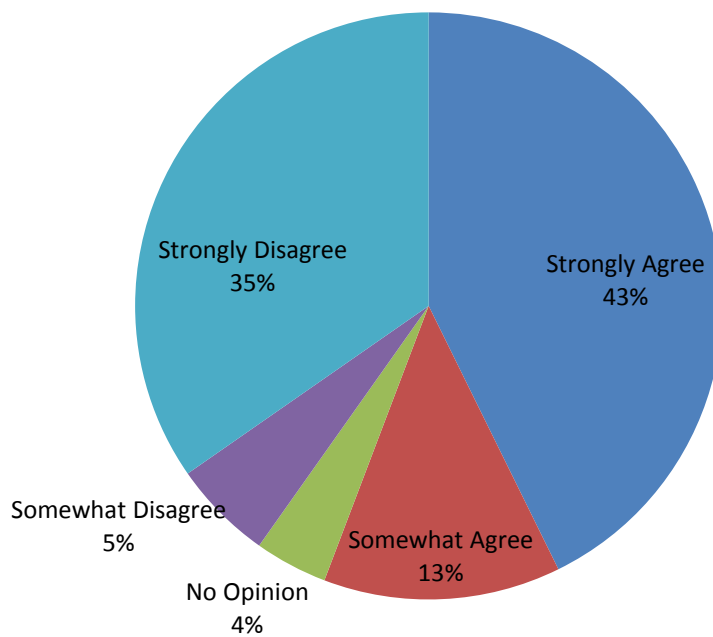
The survey also included six weighted statements that were used to determine how respondents felt about the airport. This section included statements like; “The airport contributes to the quality of life in Wakulla County,” “The airport adds to the economic viability of the County,” and “I support the Wakulla County Airport.” For each statement, respondents were able to select from a five-level Likert item that ranged from Strongly Disagree to Strongly Agree. The results show that 56 percent of respondents were in support (strongly agree and somewhat agree) of the airport, and 39 percent did not support (strongly disagree and somewhat disagree) the airport; the remaining five percent had no opinion. Fifty-six percent of respondents felt that the airport was a resource to the community, and 46 percent stated that it made a difference to them as to where they lived or worked. The results of the survey are provided graphically on the following three pages.

The Wakulla County Airport Master Plan process provided useful insight into how citizens of Wakulla County view the airport and these are summarized in the following response summary charts. The feedback received through the survey was considered and incorporated in the development of the master plan.

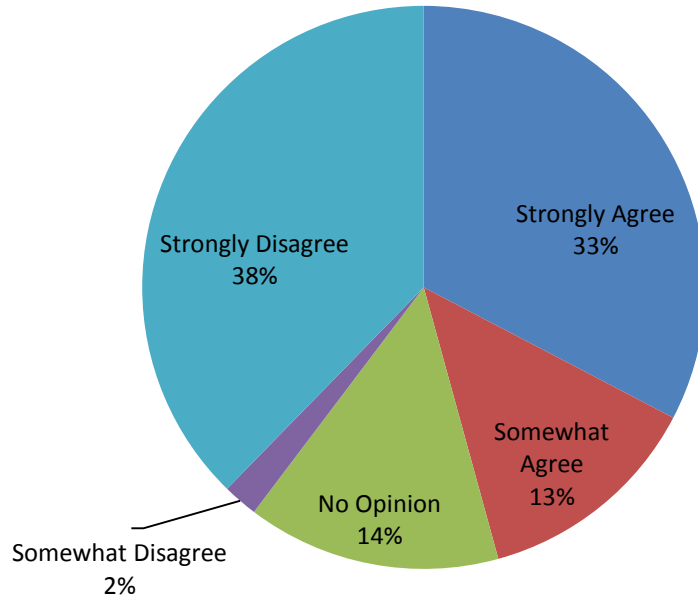
Statement: Much like a community center or library, the airport is a vital feature of Wakulla County.



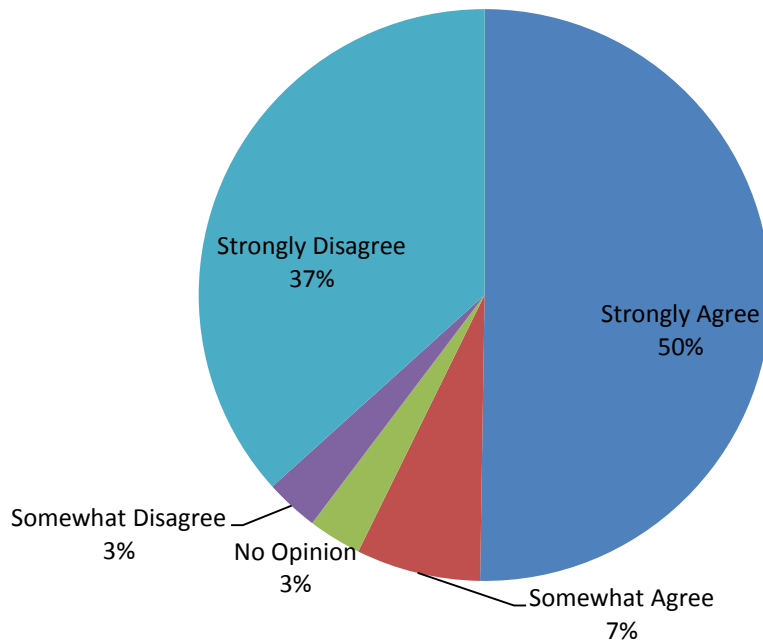
Statement: The airport contributes to the quality of life in Wakulla County.



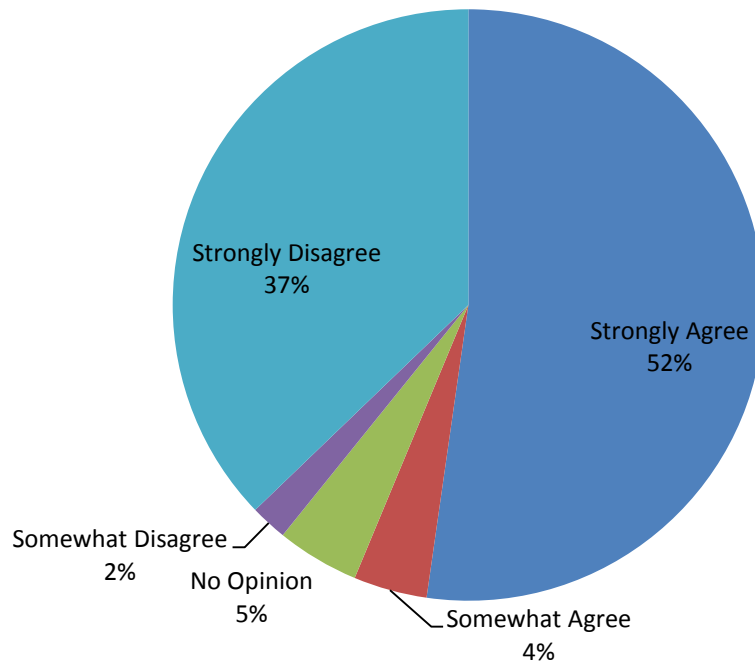
Statement: The airport makes a difference with me with regards to where I live or work.



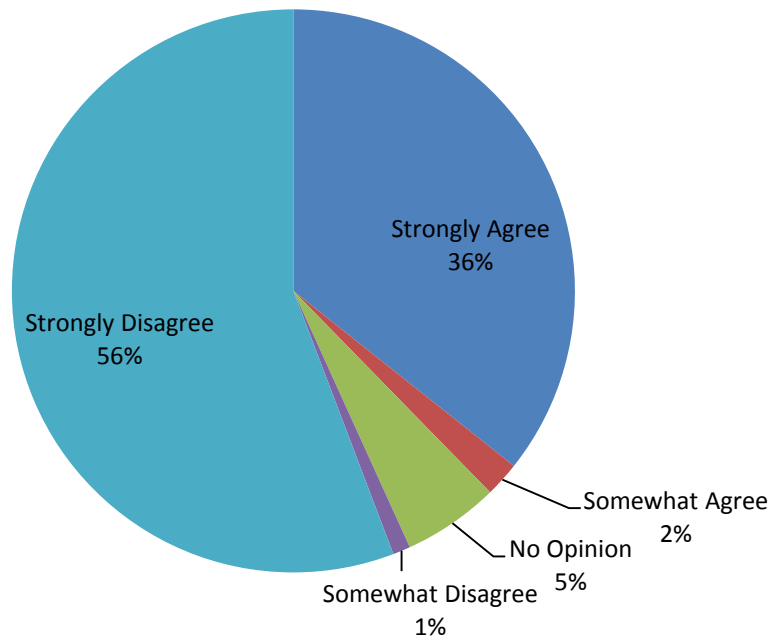
Statement: The airport adds to the County's economic viability.



Statement: I support the Wakulla County Airport.



Statement: I do not support the Wakulla County Airport.



Citizen Advisory Committee Meetings

The citizen advisory committee was composed of seven members of the public who have a direct interest in the future of the Wakulla County Airport. The committee was selected to include the entire array of opinions relative to the future of Wakulla County Airport and include airport supporters and those holding contrary opinions. The Committee was comprised of the following individuals:

- Mr. David Lansford
- Mr. Stanley Brown
- Ms. Carol Odell
- Mr. John Andrew Smith
- Mr. James Parham
- Mr. Tim Jordan
- Mr. Anthony Stevens

The committee held two meetings, one on June 18, 2013 and the other on August 6, 2013. These meetings were scheduled before and after the public workshop to give the advisory committee an opportunity to hear what the larger Wakulla County community had to say.

June, 18 2013

The first Advisory Committee meeting was held at the Wakulla Welcome Center in Panacea. Members of the advisory committee who were in attendance included:

- Mr. David Lansford
- Mr. Stanley Brown
- Ms. Carol Odell
- Mr. John Andrew Smith
- Mr. James Parham
- Mr. Tim Jordan

The County Administrator, Mr. David Edwards, and Consultant Project Manager, Jon Sewell were also in attendance. Additionally, two citizens, Mr. Walter Dixon and Mr. Dick Shepard, were in attendance at this meeting.

After a brief presentation of planning materials by the project team, each attendee was afforded the opportunity to provide their thoughts, background information, concerns and overall input to the planning process for the Airport. There was some concern over the cost of the full build out of the airport and the need for the proposed improvements was also questioned. Some attendees did not feel that the operations numbers that were presented were overstated and should be re-evaluated. There was a consensus supporting the proposed design of the runway and airport facilities as shown in the draft ALP as long as the vegetative buffer and conservation area was completed along the south end of the airport's property. The PowerPoint that was presented at this meeting is provided in **Appendix A**.

August 6, 2013

The second advisory committee meeting was also held at the Wakulla Welcome Center in Panacea. Members of the advisory committee who were in attendance included:

- Mr. David Lansford
- Mr. Stanley Brown
- Ms. Carol Odell
- Mr. Anthony Stevens
- Mr. John Andrew Smith
- Mr. James Parham

County representatives included Wakulla County Administrator Mr. David Edwards and Ms. Sheree Keeler and Consultant representatives included Jon Sewell and Zach DeVeau. Additionally, one citizen, Mr. Allan Fiefer, was in attendance. Mr. Tim Jordan was not in attendance but was interviewed so that he was able to provide his preferred method for development.

After a brief presentation by the project team, each attendee was given an opportunity to vote on their preferred course of action for the airport. The choices included five plan alternatives:

1. No Build
2. Return deed to Tarpine Community
3. Phased development
4. Full development
5. Relocate

Four members of the advisory committee voted to move for full development of the airport, two voted to return the deed to the Tarpine Community, and one wanted to return the deed and build a new airport. The PowerPoint that was presented at this meeting is provided in **Appendix A**. Additional informal meetings were held on May 9, 2013 and May 23, 2013 to provide some of the members of the advisory committee with additional information on the project.

Public Workshop

A public workshop was held on July 11, 2013 at the Wakulla Welcome Center in Panacea from 6:00 pm to 7:30 pm. To begin the meeting a presentation was given by the project team to introduce the project to attendees. Following the presentation, there was an open house where attendees were able to review the existing airport layout and facilities and proposed future layout and facilitates. Attendees were able to provide comments on the proposed development in order to guide the direction of the master plan. In total 38 people attended the meeting. From the comment forms that were submitted during the meeting, only four attendees expressed concern over development at the airport; the remainder of the comments were in support of development at the airport per the direction identified by the advisory. The PowerPoint that was presented at this meeting is provided in **Appendix A**.

Board of County Commissioners Workshop – November 7, 2013

As part of the Master Planning process, a draft of the proposed Wakulla County Airport Master Plan Update needed to be approved by the Wakulla County Board of County Commissioners. Before the Board could vote on the passage of the Master Plan, a Board Workshop was held to describe the alternatives for development at the airport to the County Commissioners. This Board Workshop was beneficial to the planning process in that it allowed the Board to be informed of the pros and cons of the development options so that they could make the best decision for the County. Jon Sewell, the consultant project manager, gave a presentation to the Board that identified the four proposed alternatives for development at the airport. Through discussions held after the presentation, it was determined that aspects of all of the development options could be combined to create the most preferable option. This option, which the County identified as a public/private partnership, has provision for the County to pave the runway, and if future conditions require it, have private entities provide additional services, such as hangars.

At the conclusion of the Board Workshop, the ALP was updated to accommodate these changes. The Master Plan and accompanying ALP that were presented to the BOCC on December 9, 2013 for adoption included this public/private option.

Board of County Commissioners Meeting – December 9, 2013

At the regularly scheduled Wakulla County Board meeting held on December 9, 2013, the Board was asked to vote on adopting the Wakulla County Airport Master Plan Update. Before the vote, the general public was given an opportunity to provide comments on the Master Plan. After the public provided their comments, the vote was held. The Board voted unanimously (5-0) to adopt the public/private partnership option that was identified during the Board Workshop on November 7, 2013. This development option is fully detailed, including the proposed development plan developed by the County Administrator, in the Alternative for Airport Development section of this Master Plan (pgs. 42-47).

Conclusion

The public involvement process undertaken as a key component of this Master Planning process satisfies the goal of providing meaningful opportunities for citizen involvement and the receipt of guidance from the community related to a County owned infrastructure asset. The input, ideas, and concerns of the citizens were fully considered and specific actions were incorporated into the overall plan for Wakulla County Airport based on this input, which confirms the success of the outreach process and the importance that the County placed on seeking their citizens participation.

Airport Layout Plan

Sheet 1 – Title Sheet

Sheet 2A – Existing Airport Layout Drawing

Sheet 2B – Future Airport Layout Drawing

Sheet 3 – Existing Land Use Drawing

Sheet 4 – Future Land Use Drawing

Sheet 5 – Exhibit “A” Property Drawing

Sheet 6 – Part 77 Surface Drawing

Sheet 7 – RPZ - Obstruction Drawing

Sheet 8 – Obstructions List Drawing

Appendix A

Technical Advisory Committee Meeting #1 PowerPoint

Technical Advisory Committee Meeting #2 PowerPoint

Public Workshop PowerPoint



WAKULLA COUNTY AIRPORT MASTER PLAN

Advisory Committee

History of Airport

- Deeded to County as an airport in 1963
- Tarpine developed in mid 1980s
- Master Plan Completed in 1989
- Airport Layout Plan commissioned in 2006 and completed in 2008
 - Motion to accept the projects contingent on full FDOT funding passed 5/0
- Approved to complete Master Plan Update in 2013

Master Plan Description

- Project initiation and meetings
- Inventory
- Aviation activity forecasts
- Demand/Capacity assessment
- Facility Requirements
- Airport alternatives and development plan
- Airport layout plan
- Financial plan
- Public Involvement
- Environmental overview

Inventory

- Runway 18/36
- Stenson Taxiway
- Runway end lights
- Displaced threshold lights
- Runway edge lights
- Five tie downs (aircraft parking)
- Fencing
- Lighting detection
- Two wind cones
- Two fire extinguishers
- Irrigation pump
- Two fire hydrants
- Automatic gate
- Rotating beacon

Aviation Activity Forecasts

- Florida Aviation Database

- 2000 – 5,475
- 2005 – 5,475
- 2010 – 5,475
- 2011 – 5,475
- 2012 – 5,523
- 2015 – 5,668
- 2020 – 5,919
- 2025 – 6,181
- 2030 – 6,454

Demand/Capacity Assessment and Requirements

- Runway
- Taxiway
- Runway safety area and runway protection zone
- Based aircraft
- Peak hour activity
- Parking (vehicle)
- Storage
- Office and/or FBO
- Vertical surfaces
- Imaginary surfaces

Airport Alternatives and Development Plan

- Do nothing
- Return deed to Tarpine
- Full development
- Relocate
- Other options?

Do Nothing

- Airport would remain property of Wakulla County and current operation would continue
- Current financial information

| | FY 2010-2011 | FY 2011-2012 | 2012 thru June 13 | Total |
|-----------------------|--------------|--------------|-------------------|---------------|
| General Fund | | | | |
| Revenue | \$1,200.00 | \$1,320.00 | \$1,320.00 | \$3,840.00 |
| Expenses | \$3,926.95 | \$4,281.73 | \$3,287.94 | \$11,496.62 |
| Total: | | | | (\$7,656.62) |
| Airport Grants | | | | |
| Revenue | \$11,940.26 | \$0.00 | \$0.00 | \$11,940.26 |
| Expenses | \$11,940.26 | \$0.00 | \$37,740.16 | \$49,680.42 |
| Total: | | | | (\$37,740.16) |
| Other Funding | | | | |
| Revenue | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Expenses | \$0.00 | \$14,760.00 | \$1,675.00 | \$16,435.00 |
| Total: | | | | (\$16,435.00) |
| Total: | | | | (\$61,831.78) |

Do Nothing Cont.

- Revenues from Tarpine

Return Deed to Tarpine

- County would not have a general aviation airport
- Transfer of ownership process
- Revenue to county would be zero

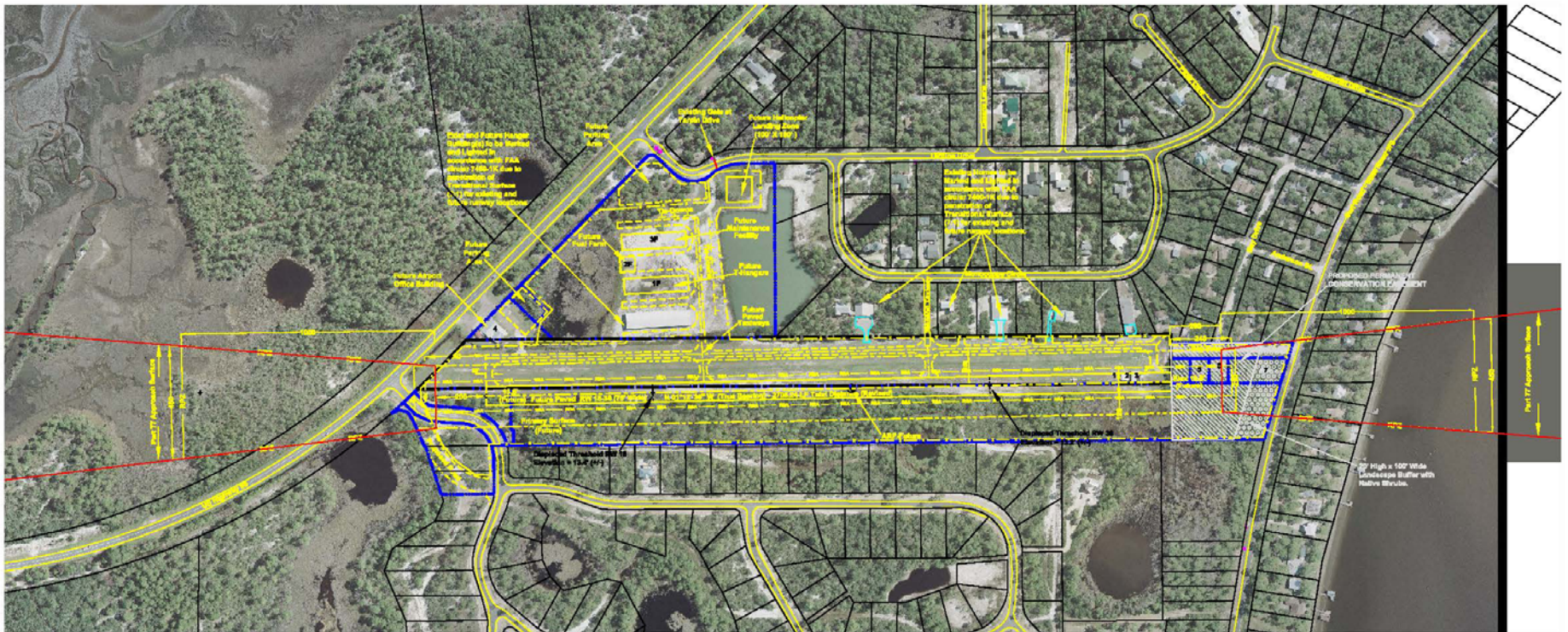
Full Development (Draft)

- Some revenues for development would come from FDOT
- Asphalt GA Runway – \$3,247,200 (\$1,200 x 2,706 ft)
- Taxiway – \$1,298,880 (\$16 x 81,180 sq/ft)
- Hangars (concrete block) – \$2,019,300 (\$100.97 x 20,000 sq/ft)
- Land Acquisition - \$1,000,000
- Environmental - \$120,000 to \$200,000
- Fuel Tank – \$360,000
- Potential revenues from development at build out:

| | Amount | Income | Assumptions |
|---------------------------|----------------------|---------|---|
| Fuel (profit/gallon) | 4,000 gallons | \$2,000 | assumes \$0.50 profit per gallon |
| Rent (including expenses) | 20 hangars | \$3,500 | assumes \$175.00 monthly rental |
| Landing Fees | 50 Units | \$1,250 | assumes \$25.00 monthly fee |
| Business Fees | Business Development | \$3,000 | assumes \$1,500.00 monthly business fee |
| Total: | | \$9,750 | |

Relocate

- Site selection
- Environmental permits and approvals
- Master plan and design
- Layout plan
- Construction
- Airport could still be deeded to Tarpine



Financial Plan

- Not in National Plan of Integrated Airport Systems (NPIAS)
- Must be State funded
- Funding through the Florida Aviation Database (FAD) and Joint Airport Capital Improvement Plan (JACIP)
- County can prioritize airport priorities as desired
- Need to properly address airport revenue from user fees or landing fees
- Additional funding
 - Florida aviation grant program
 - FDOT funds up to 80%

Environmental Overview

- NEPA guidelines
 - Coastal zone/barrier
 - Wetlands
 - Noise
 - Light
 - Wildlife
 - Floodplains
 - Water quality

Public Involvement

- Ongoing meetings with County staff and airport representatives
- Stakeholder meetings (5/9 and 5/23)
- Stakeholder meeting (6/18)
- Public meeting (7/11)
- Stakeholder meeting (in August)
- Board action (in September)

Community Input

- Does the County need an airport?
- Does the airport add an economic benefit?
- How should the airport be developed?
 - Additional or enhanced facilities?
- Would the County support the airport if funded by FDOT?



Wakulla County Airport Master Plan Update 2013



prepared by:



**Kimley-Horn
and Associates, Inc.**



Master Plan Description

- ▶ Project initiation and meetings
- ▶ Inventory
- ▶ Aviation activity forecasts
- ▶ Demand/Capacity assessment
- ▶ Facility Requirements
- ▶ Airport alternatives and development plan
- ▶ Airport layout plan
- ▶ Financial plan
- ▶ Public Involvement
- ▶ Environmental overview



Public Involvement

- ▶ Ongoing meetings with County staff and airport representatives
- ▶ Stakeholder meetings (5/9 and 5/23)
- ▶ Stakeholder meeting (6/18)
- ▶ Public meeting (7/11)
- ▶ Stakeholder meeting (8/6)
- ▶ Board workshop (9/12)
- ▶ Board action (10/7)



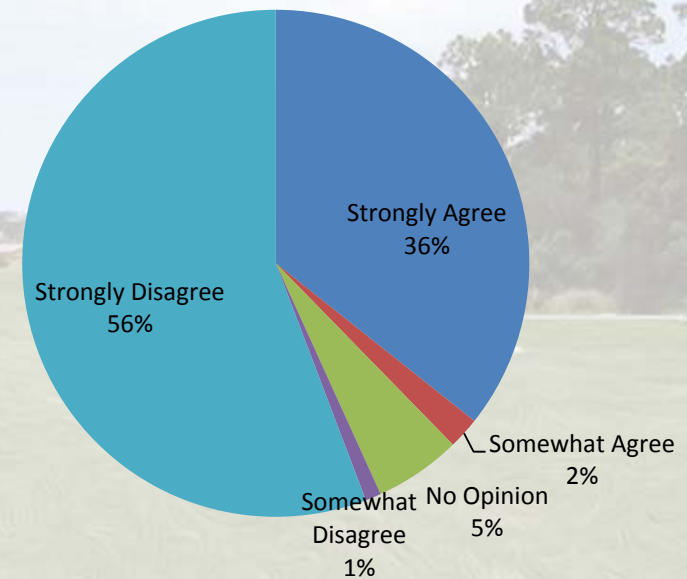
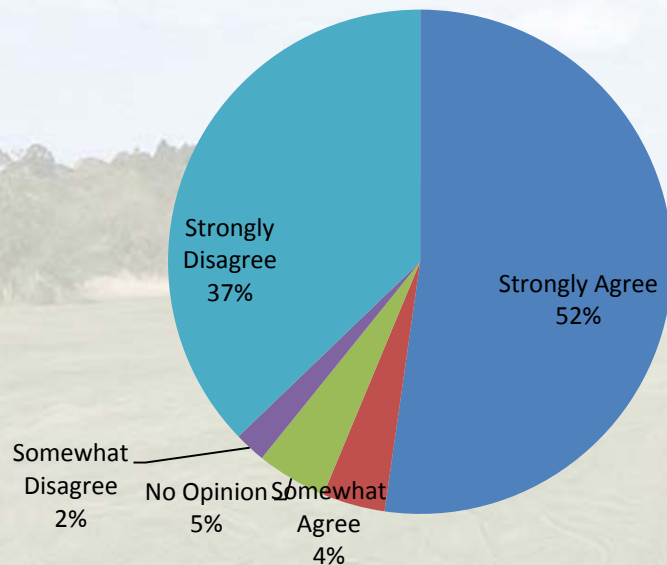
Comment Forms Form Public Meeting

- ▶ Comments included:
 - 20 forms indicated that they were in full support of developing the airport as shown in the ALP
 - Two felt that the presentation did not meet their expectations
 - One had concerns of the cost of development and flood zones
 - One wanted to maintain vegetation to prevent flooding of property

Survey Results

► I support the Airport

► I do not support the Airport





Options

- ▶ Do nothing
- ▶ Make full improvements to existing airport
- ▶ Phased development
- ▶ Wakulla/FDOT assist Tarpine in taking over airport
- ▶ Relocate



Things to Think About

- ▶ Current airport activity
- ▶ Almost entire airport is in new FEMA V-Zone
- ▶ Benefits and costs of airports

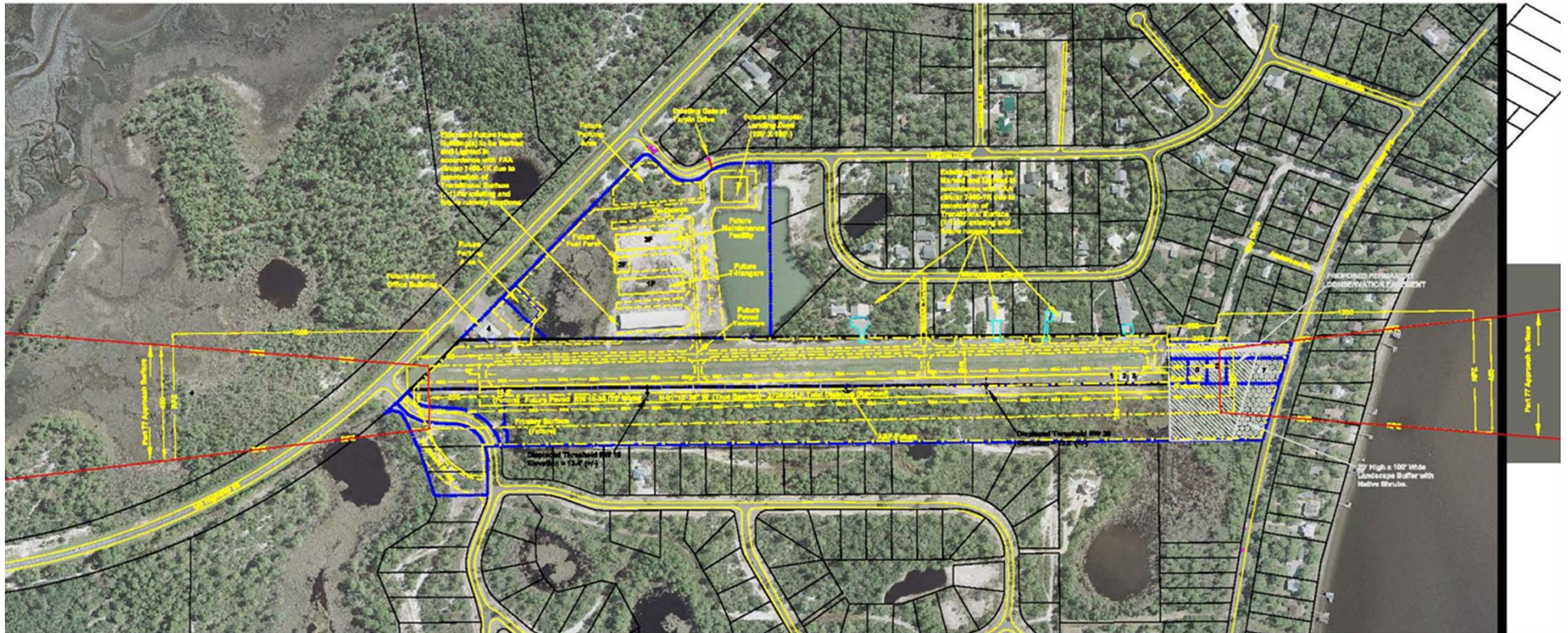


Do Nothing

- ▶ Not a true do nothing option
 - County would need to remove runway safety area intrusions to remain compliant with FDOT standards
 - To remain compliant there would still be land acquisition and site modification costs
 - Existing drainage issue repair
 - Would likely lead to temporary closure of the airport during the time needed to complete the improvements
 - Ability of the airport to operate is dependent on improvements being in the ALP



Airport Layout Plan





Full Development

- ▶ Full development of all recommended enhancements:
 - Runway - \$3,400,000
 - Land acquisition (includes existing T-hangar building) - \$1,000,000
 - Hangars (two 10 unit hangars) - \$1,000,000
 - Environmental - \$120,000 to \$200,000
 - Fuel farm - \$80,000
 - Total Cost: \$5,600,000 phased out over several years



Phased Development

Similar to full development but phased over time based on performance of the airport

- ▶ Phase I
 - Land acquisition
- ▶ Phase II (income generating)
 - Fuel Farm
 - T- hangars
- ▶ Phase III
 - Environmental
 - Design
 - Construction
 - Office/law enforcement facility
 - Total Cost: \$5,600,000 phased out over several years



Potential Monthly Revenues

| | Amount | Income | Assumptions |
|---------------------------|----------------------|------------------|---|
| Fuel (profit/gallon) | 4,000 gallons | \$2,000 | assumes \$0.50 profit per gallon |
| Rent (including expenses) | 20 hangars | \$3,500 | assumes \$175.00 monthly rental |
| Landing Fees | 50 Units | \$2,500 | assumes \$50.00 monthly fee |
| Business Fees | Business Development | \$3,000 | assumes \$1,500.00 monthly business fee |
| Total Monthly Income: | | \$11,000 | |
| Total Yearly Income: | | \$132,000 | |
| | | | |
| | | | |



Transfer Airport to Tarpine

- ▶ Tarpine, County, and heirs would work out details of transfer of ownership
- ▶ Airport would become private
- ▶ Approved by FDOT and FAA
 - Must meet “site approval” and “registration” requirements
 - Must be in compliance with Chapter 330 F.S. and Chapter 14-60 FAC
 - Costs associated with transfer of ownership



Relocate

- ▶ Consists of closing one airport and opening another
- ▶ Would still need to address transfer of ownership of the old airport
- ▶ Cost would be far greater than proposed development
- ▶ Airport would take years to open



Relocate – Airport Comparisons

- ▶ Carrabelle
 - 4,039 x 75 foot runway
 - 202 acres
- ▶ Quincy
 - 2,684 x 75 foot runway
 - 212 acres
- ▶ Perry
 - 4,378 x 150, 4,654 x 100, and 5,010 x 100 foot runways
 - 927 acres
- ▶ Apalachicola
 - 5,070 x 150, 5,350 x 150, and 5,265 x 150 foot runways
 - 1,100 acres



Considerations for Relocation

- ▶ Site Selection – 2 years, \$200,000 to \$300,000
 - Tall structures
 - Schools
- ▶ Environmental – 3 to 5 years, \$1,500,000
- ▶ Compatible land uses (i.e. residential)
- ▶ Design – 2 years, \$2,500,000
- ▶ Construction – 2 year, \$10,000,000
 - 3 T-hangars - \$1,500,000
 - 1 maintenance hangar - \$500,000
 - Office - \$250,000
 - Parking - \$250,000
- ▶ Total cost: \$16,000,000 +/- over 12 plus years



Discussion

- ▶ Do nothing
- ▶ Make full improvements
- ▶ Phased development
- ▶ Wakulla/FDOT assist Tarpine in taking over
- ▶ Relocate



Wakulla County Airport Master Plan Update 2013



prepared by:



**Kimley-Horn
and Associates, Inc.**



History of Airport

- ▶ Deeded to County as an airport in 1963
- ▶ Tarpine developed in mid 1980s
- ▶ Master Plan Completed in 1989
- ▶ Airport Layout Plan commissioned in 2006 and completed in 2008
 - Motion to accept the projects contingent on full FDOT funding passed 5/0
- ▶ Approved to complete Master Plan Update in 2013



Master Plan Description

- ▶ Project initiation and meetings
- ▶ Inventory
- ▶ Aviation activity forecasts
- ▶ Demand/Capacity assessment
- ▶ Facility Requirements
- ▶ Airport alternatives and development plan
- ▶ Airport layout plan
- ▶ Financial plan
- ▶ Public Involvement
- ▶ Environmental overview



Inventory

- ▶ Runway 18/36
- ▶ Stenson Taxiway
- ▶ Runway end lights
- ▶ Displaced threshold lights
- ▶ Runway edge lights
- ▶ Five tie downs (aircraft parking)
- ▶ Fencing
- ▶ Lighting detection
- ▶ Two wind cones
- ▶ Two fire extinguishers
- ▶ Irrigation pump
- ▶ Two fire hydrants
- ▶ Automatic gate
- ▶ Rotating beacon



Aviation Activity Forecasts

► Florida Aviation Database

- 2000 – 5,475
- 2005 – 5,475
- 2010 – 5,475
- 2011 – 5,475
- 2012 – 5,523
- 2015 – 5,668
- 2020 – 5,919
- 2025 – 6,181
- 2030 – 6,454

► Airport Manager

► Estimate:

– 3,600 per year



Demand/Capacity Assessment and Requirements

- ▶ Runway
- ▶ Taxiway
- ▶ Runway safety area and runway protection zone
- ▶ Based aircraft
- ▶ Peak hour activity
- ▶ Parking (vehicle)
- ▶ Storage
- ▶ Office and/or FBO
- ▶ Vertical surfaces
- ▶ Imaginary surfaces



Airport Alternatives and Development Plan

- ▶ Do nothing
- ▶ Return deed to Tarpine
- ▶ Full development
- ▶ Relocate
- ▶ Other options?



Do Nothing

- ▶ Airport would remain property of Wakulla County and current operation would continue
- ▶ Current financial information 2007 – June 2013

| | FY 2006-2007 | FY 2007-2008 | FY 2008-2009 | FY 2009-2010 | FY 2010-2011 | FY 2011-2012 | 2013 thru June 13 | Total |
|-----------------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------------|----------------|
| General Fund | | | | | | | | |
| Revenue | \$0.00 | \$1,740.00 | \$1,200.00 | \$1,565.00 | \$1,200.00 | \$1,320.00 | \$1,320.00 | \$8,345.00 |
| Expenses | \$0.00 | \$22,962.24 | \$15,342.26 | \$23,643.24 | \$3,926.95 | \$4,281.73 | \$3,287.94 | \$73,444.36 |
| Total: | | | | | | | | (\$65,099.36) |
| Airport Grants | | | | | | | | |
| Revenue | \$0.00 | \$32,150.00 | \$27,200.00 | \$4,716.09 | \$11,940.26 | \$0.00 | \$0.00 | \$76,006.35 |
| Expenses | \$32,150.00 | \$43,856.35 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$37,740.16 | \$113,746.51 |
| Total: | | | | | | | | (\$37,740.16) |
| Other Funding | | | | | | | | |
| Revenue | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Expenses | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$0.00 | \$14,760.00 | \$1,675.00 | \$16,435.00 |
| Total: | | | | | | | | (\$16,435.00) |
| Total: | | | | | | | | (\$119,274.52) |

Source: Greg James, Finance Director, Wakulla County Clerk of Court



Do Nothing Cont.

- ▶ Tax Revenues from Tarpine:
 - Tax revenue from 33 Tarpine residents is approximately \$71,250 per year
 - There are roughly 100 additional vacant lots that also generate revenue



Return Deed to Tarpine

- ▶ County would not have a general aviation airport
- ▶ Transfer of ownership process
- ▶ Revenue to County would be zero



Full Development (Draft)

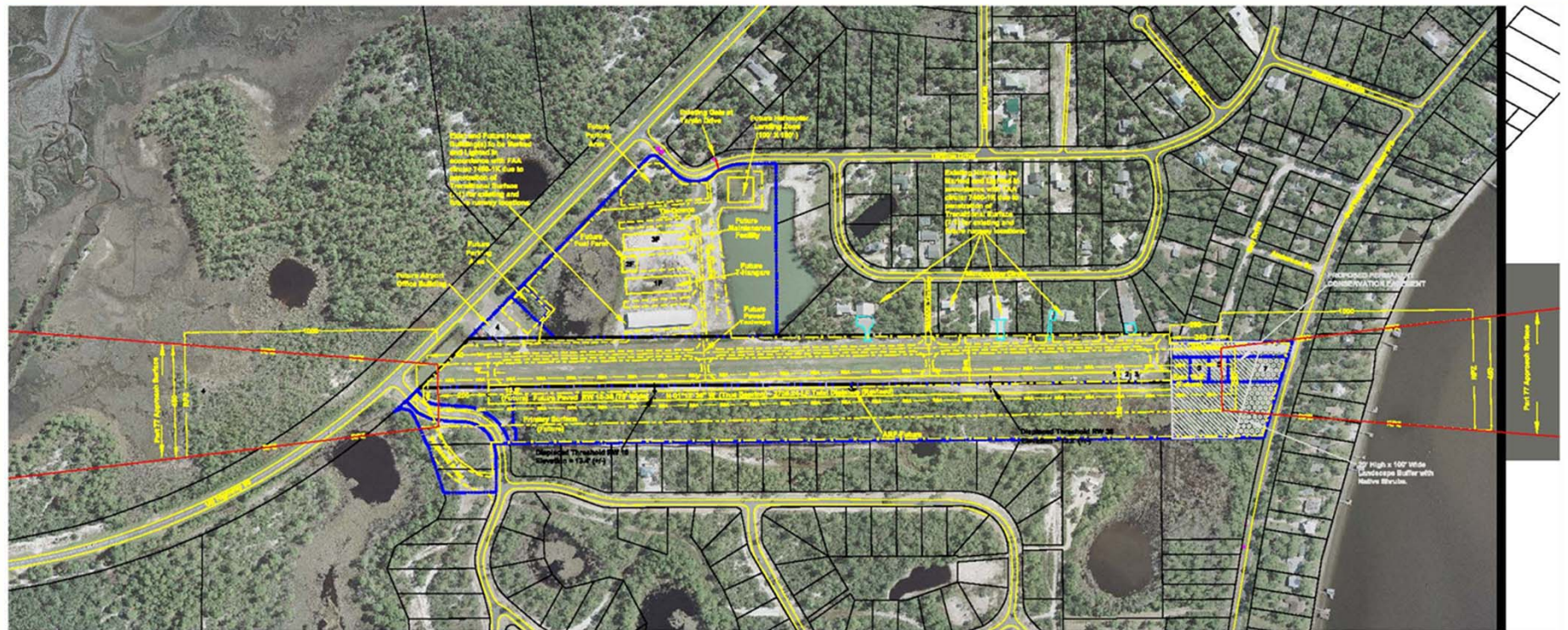
- ▶ Some revenues for development would come from FDOT
- ▶ Asphalt GA Runway – \$3,247,200 (\$1,200 x 2,706 ft)
- ▶ Taxiway – \$1,298,880 (\$16 x 81,180 sq/ft)
- ▶ Hangars (concrete block) – \$2,019,300 (\$100.97 x 20,000 sq/ft)
- ▶ Land Acquisition - \$1,000,000
- ▶ Environmental - \$120,000 to \$200,000
- ▶ Fuel Tank – \$360,000
- ▶ Potential revenues from development at build out:

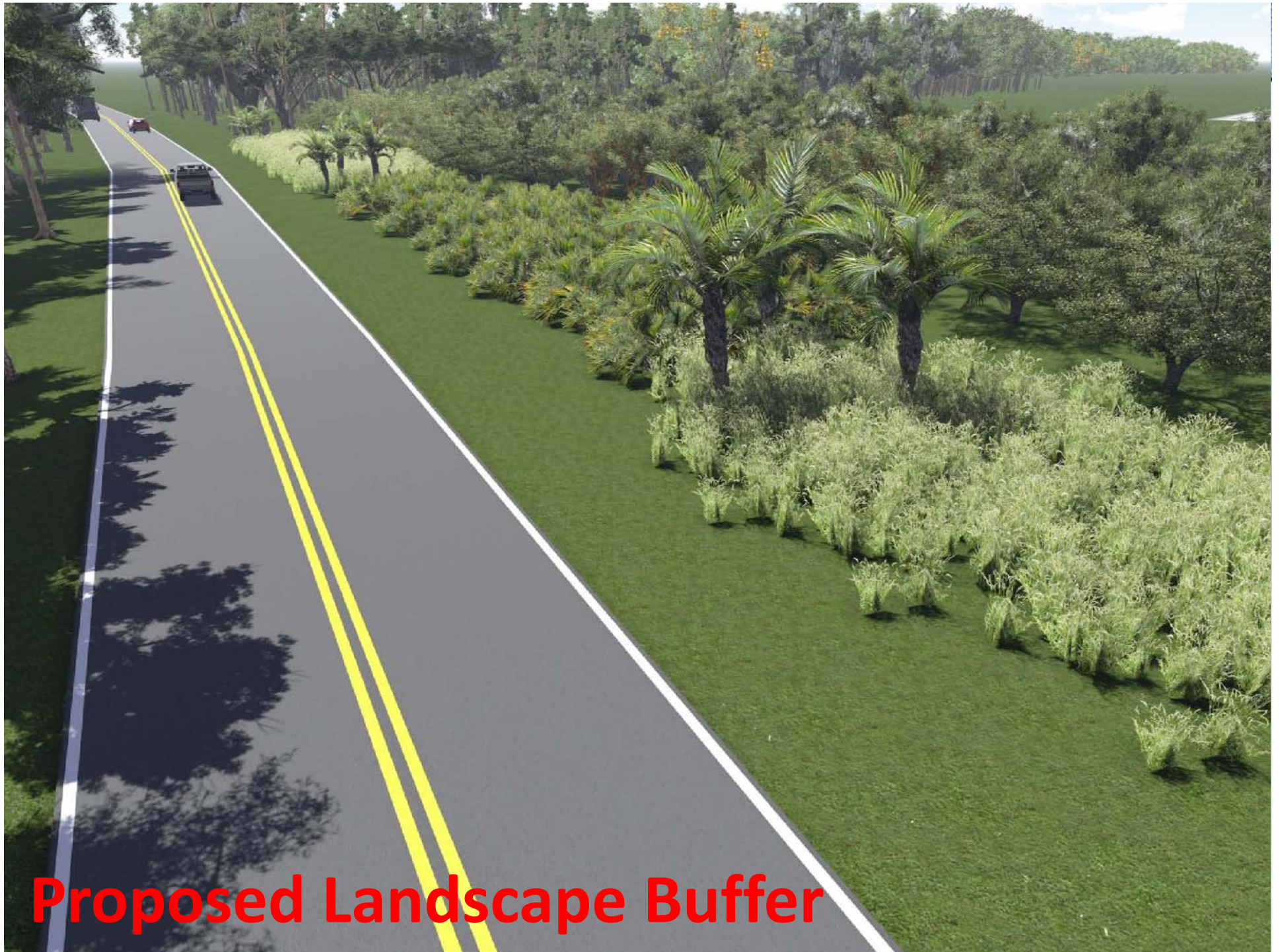
| | Amount | Income | Assumptions |
|---------------------------|----------------------|---------|---|
| Fuel (profit/gallon) | 4,000 gallons | \$2,000 | assumes \$0.50 profit per gallon |
| Rent (including expenses) | 20 hangars | \$3,500 | assumes \$175.00 monthly rental |
| Landing Fees | 50 Units | \$1,250 | assumes \$25.00 monthly fee |
| Business Fees | Business Development | \$3,000 | assumes \$1,500.00 monthly business fee |
| Total: | | \$9,750 | |



Relocate

- ▶ Site selection
- ▶ Environmental permits and approvals
- ▶ Master plan and design
- ▶ Layout plan
- ▶ Construction
- ▶ Airport could still be deeded to
Tarpine





Proposed Landscape Buffer

Proposed Landscape Buffer

An aerial photograph showing a proposed landscape buffer along a road. The road is on the left, with a white line and a yellow double line. A black car is driving on the road. The buffer consists of a strip of land between the road and a body of water. The buffer is divided into three sections. The top section contains shrubs and trees. The middle section contains trees. The bottom section contains shrubs. The water is on the right side of the image.

Shrubs:

Dwarf Wax Myrtle
Saw Palmetto
Lady Palm

Trees:

Dwarf
Palmetto

Shrubs:

Coontie
Cordgrass
Muhly Grass

Trees:

Florida Privet
Wax Myrtle

Trees:

Nellie R Stevens Holly



Financial Plan

- ▶ Not in National Plan of Integrated Airport Systems (NPIAS)
- ▶ Must be State funded
- ▶ Funding through the Florida Aviation Database (FAD) and Joint Airport Capital Improvement Plan (JACIP)
- ▶ County can prioritize airport priorities as desired
- ▶ Need to properly address airport revenue from user fees or landing fees
- ▶ Additional funding
 - Florida aviation grant program
 - FDOT funds up to 80%



Environmental Overview

- ▶ NEPA guidelines
 - Coastal zone/barrier
 - Wetlands
 - Noise
 - Light
 - Wildlife
 - Floodplain
 - Water quality



Public Involvement

- ▶ Ongoing meetings with County staff and airport representatives
- ▶ Stakeholder meetings (5/9 and 5/23)
- ▶ Stakeholder meeting (6/18)
- ▶ Public meeting (7/11)
- ▶ Stakeholder meeting (in August)
- ▶ Board action (in September)



Community Input

- ▶ Does the County need an airport?
- ▶ Does the airport add an economic benefit?
- ▶ How should the airport be developed?
 - Additional or enhanced facilities?
- ▶ Does the County support the airport if funded by FDOT?