

Green Aerotropolis

Dr. John D. Kasarda describes how Panama City, Florida is leading the way

A path-breaking endeavor to construct the world's first green aerotropolis is rapidly progressing in Northwest Florida. The St. Joe Company, Florida's largest landholder, is partnering with the Panama City-Bay County Airport and Industrial District (Airport Authority), environmental groups, and public and private-sector organizations to develop 75,000 acres of land centered around a new international airport. The 4,000-acre airport, scheduled to open in mid 2010, and its surrounding 71,000 acres have been designed to serve simultaneously as a catalyst for economic development, a model for 21st-century sustainability, and cornerstone for one of Florida's largest and most comprehensive environmental preservation efforts.

Like any major U.S. infrastructure initiative, the new airport and its broader aerotropolis faced considerable skepticism and more than a little opposition. Meeting airport and aerotropolis development challenges required immense resolve and some political clout.

Existing Airport Constraints

Nearly 20 years ago, the Airport Authority began considering options to ensure that the fast growing Panama City, Florida region would be effectively served by air for generations to come. The existing airport built in 1948 had a number of serious constraints. It is hemmed in by the Gulf of Mexico's St. Andrew Bay on one side and adjacent suburban development on the other. The airport's two runways do not meet federal safety standards—both have deficient runway safety areas (RSAs). Plus, the airport's 6,300-foot main runway is one of the shortest in the state of Florida and thus unable to support larger and higher-performance commercial aircraft operations, essentially precluding long-haul service.

The Airport Authority began studying options for lengthening the runway and establishing standard-sized RSAs. In 1996, it commissioned a federally required environmental assessment study for extending the runway 1,200 feet into St. Andrew Bay, bringing its total length to 7,500 feet.

Not surprisingly, the plan drew heavy fire from environmentalists who argued that the runway extension would cause significant damage to the bay. The Florida Department of Environmental Protection concurred, declaring that such a plan would never be approved. A subsequent plan to extend the runway across a major thoroughfare and into an existing residential community was also shelved for practical reasons.

Enter St. Joe

After exhausting options in the late 1990s to extend the primary runway, the Authority reached out to The St. Joe Company to generate a plan to relocate the airport to its 75,000-acre underdeveloped West Bay tract. St. Joe is a former paper company that had turned its attention to developing its vast Northwest Florida timberland holdings.

St. Joe agreed to donate 4,000 acres at the center of its West Bay tract (a former industrial pine forest) for the new airport. The company also agreed to encumber an additional 10,000 acres for environmental mitigation associated with the new airport.

Initial airport development is on just 1,300 acres, leaving a significant amount of land for future infrastructure expansion and inside-the-fence commercial development. Strategically located commercial and residential developments will eventually cover about 30 percent of the 71,000 acres on the tract beyond the airport property.

The West Bay initiative, which is the largest planned mixed-use development in the United States, is being carefully crafted as an aerotropolis. The airport core is 10 miles north of Panama City's popular beaches. The area west of the airport is slated to be a regional employment center for time-sensitive goods-processing industries. To the south, airport-related businesses such as rental car outlets and hotels will be clustered. The area east of the airport is designated for office buildings and, further east, an intermodal truck/rail facility will be linked to the airport area and the Port of Panama City. By design, residential structures will not be allowed in aircraft noise contours.

For aesthetics and to minimize negative environmental impacts, aerotropolis industrial, commercial and housing development will be in organized clusters rather than in sprawling strips. Likewise, instead of piecemeal development on smaller parcels scattered throughout the expansive aerotropolis, the plan calls for concentrated development, reserving huge areas of permanently protected lands.

The aerotropolis plan also creates conservation buffers along the rivers and creeks that feed into the bay – some as wide as 1,000 feet – more than 30 times the amount required by the law. Dominated by pine woods and wetlands, the preserved land has rich biodiversity of flora and fauna.

A notable component of the aerotropolis plan is the establishment of an Audubon Nature Center that will provide environmental educational programs, help manage mitigation and restoration efforts, and serve as a public gateway for low impact activities such as fishing, hiking, kayaking and bird watching on portions of the preservation lands.

New Airport Goes Green

Despite conservation efforts, the airport relocation process to West Bay was delayed numerous times by suits filed by environmental groups, which predicted serious damage to wetland areas and eventual ecological disaster as development progressed. This led to further negotiations with federal, state and local agencies along with significant inputs from the nation's most progressive environmental organizations, such as The Nature Conservatory and the Audubon Society. Florida's governors, state

legislature, and congressional delegations weighed in as well to support the project and seek environmental resolution.

In the end, it was formally agreed by all parties that with approval of the new airport and adoption of the broader preservation plan, 41,000 environmentally sensitive acres, including 33 miles of West Bay shoreline and 41 miles of creeks and tributaries, will be protected from development forever. Moreover, through restoration, much of the protected areas will be environmentally enhanced.

The agreement effectively places an unprecedented 62.5 square miles of shoreline and watershed into conservation, making West Bay among the most protected estuarine water-bodies in the world.

Without the airport relocation, this landmark conservation agreement would not have happened. Nor would the “smart growth” plan concentrating development and limiting sprawl have been implemented. Rather, spontaneous, haphazard, and environmentally damaging piecemeal development would have continued.

If substantially expanded conservation lands and orderly development were its only outcomes, the siting of the new airport would be a major step forward for Florida environmentalism. But there’s more: the Panama City Airport Authority has committed to designing, building and operating America’s first green airport.

The Authority has developed detailed plans for area wetlands mitigation, wildlife management, and on-site storm water management and wastewater treatment that greatly exceed minimum requirements set by Florida law.

For example, potential effects were calculated using a high-impact scenario, with the Authority and St. Joe committing to maximally mitigate sensitive land even if impacts turn out to be less than projected. As a result, environmental experts anticipate a 29 percent improvement in overall wetlands function.

Likewise, the Airport Authority has committed to build the first Leadership in Energy and Design (LEED)-certified passenger terminal in the United States. Plans are also in the works to make both the airport and the surrounding aerotropolis development carbon neutral.

Aerotropolis Components

The initial phase of the new airport anticipates a 10,000-foot primary runway with ramp access to a 1,400-acre industrial complex as well as a 5,000-foot crosswind runway. Land is reserved for a second-phase 8,400-foot parallel runway and additional aviation-related commercial uses.

The 112,000 sq. ft. main terminal with 7 gates is state of the art, but also reconfigurable to respond quickly as new demands or opportunities arise. For instance, most of the terminal's ticketing areas can easily be converted to retail or other commercial space.

Discussions are currently in progress to establish a higher educational cluster on airport property. The airport also has been selected by the U.S. Transportation Security Administration to be a test-bed for its latest technologies, including perimeter security.

Around the airport, St. Joe is planning for 4.4 million sq. ft. of commercial space. At full build-out, the aerotropolis plan contemplates 27,000 residential units and 37 million sq. ft. of industrial and commercial space.

To save business travel time and fuel, commercial and industrial clusters will be situated in proximity to the airport based on their firms' likely frequency of airport use. Likewise, wide airport access roads will facilitate flows of air travelers and goods to and from the airport, further easing highway congestion and emissions.

Closer to Panama City's beaches, upscale mixed-use residential communities are being developed based on new urbanism principles, including neighborhood scale, walkability and place identity.

The fact that a single organization (The St. Joe Company) controls the vast majority of aerotropolis land makes integrated planning and development much more feasible than where there are numerous landowners and jurisdictions. This gives St. Joe and its partners a special opportunity to create an aerotropolis from scratch that will be economically efficient, aesthetically pleasing, and environmentally sustainable.

Challenges Ahead

The Panama City-Bay County Airport Authority together with the St. Joe Company are moving forward in concert to open the new airport and commence significant aerotropolis development. Although all attempts to stay the project have been defeated and final briefings and arguments have been made in the pending litigation, final rulings have not been rendered. Construction, however, has been fully

underway since January 2008, and the site has been cleared and is being brought to grade. Runway paving will begin in November.

Attracting additional air service will be a necessity but difficult in the currently contracting U.S. commercial aviation market. A related challenge is getting the broader Northwest Florida region, which has other small commercial airports, to consolidate air service at the new Panama City International Airport so that air networks can be improved and more destinations (including international) served.

The present U.S. real estate market is also depressed, with Florida one of the hardest hit states. St. Joe is therefore in the process of shifting its approach away from sole developer to bringing in private-sector strategic partners to construct various parts of the aerotropolis.

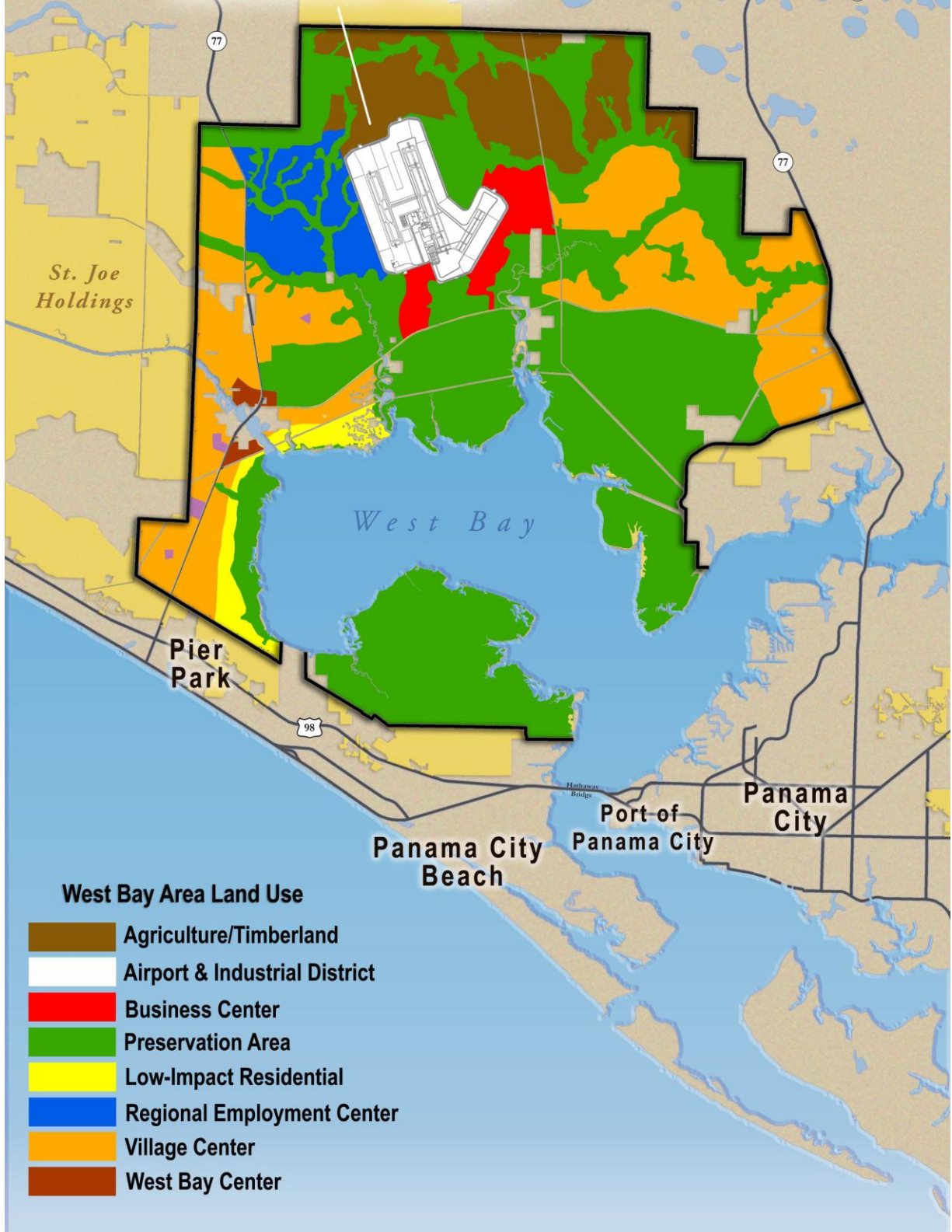
Pioneering endeavors such as creating the world's first green aerotropolis never come easy. Yet, this megaproject clearly demonstrates how new greenfield sites provide a unique opportunity for airports and their surrounding regions to transform into 21st-century exemplars of sustainable development.

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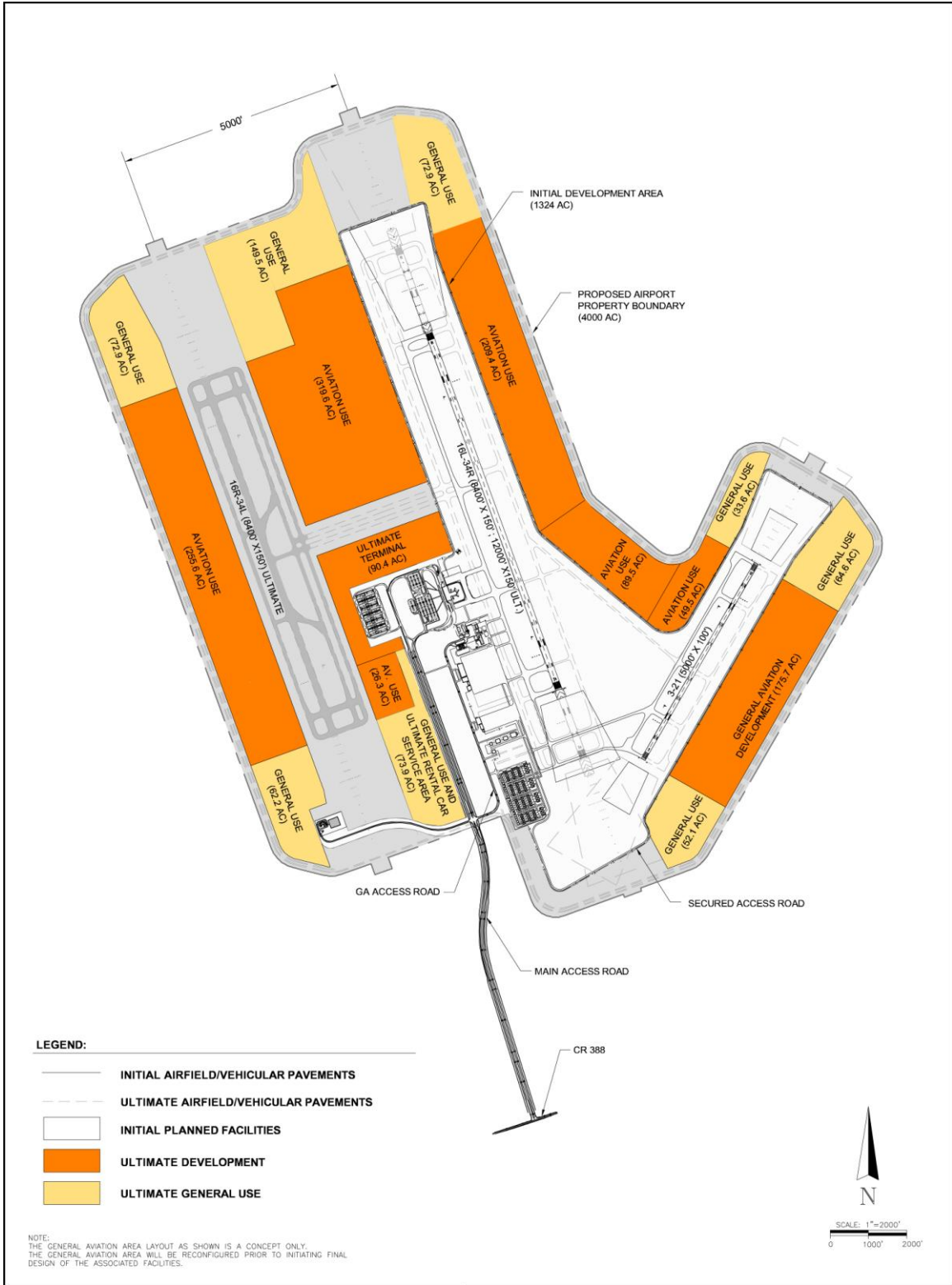
**Paving & Site Development
Panama City / Bay County International Airport**

Panama City / Bay County International Airport



West Bay Area Land Use

-  Agriculture/Timberland
-  Airport & Industrial District
-  Business Center
-  Preservation Area
-  Low-Impact Residential
-  Regional Employment Center
-  Village Center
-  West Bay Center



Panama City-Bay County
International Airport



Site Plan

Northwest Florida



- Primary Airport Service Area
- Public Land